



# The Global Startup Ecosystem Report

## GSER 2022

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About

# Startup Genome



Startup Genome is the world-leading policy advisory and research organization for public and private organizations committed to accelerating the success of their startup ecosystem. We have advised more than [125 clients](#) across six continents in 45+ countries to date.

Startup Genome's mission is to accelerate startup success and ecosystem performance everywhere. We work together with global thought leaders and practitioners to define and execute robust policies and programs that drive lasting change. Our impact is rooted in over a decade of independent research with data on three million companies across 280 cities.

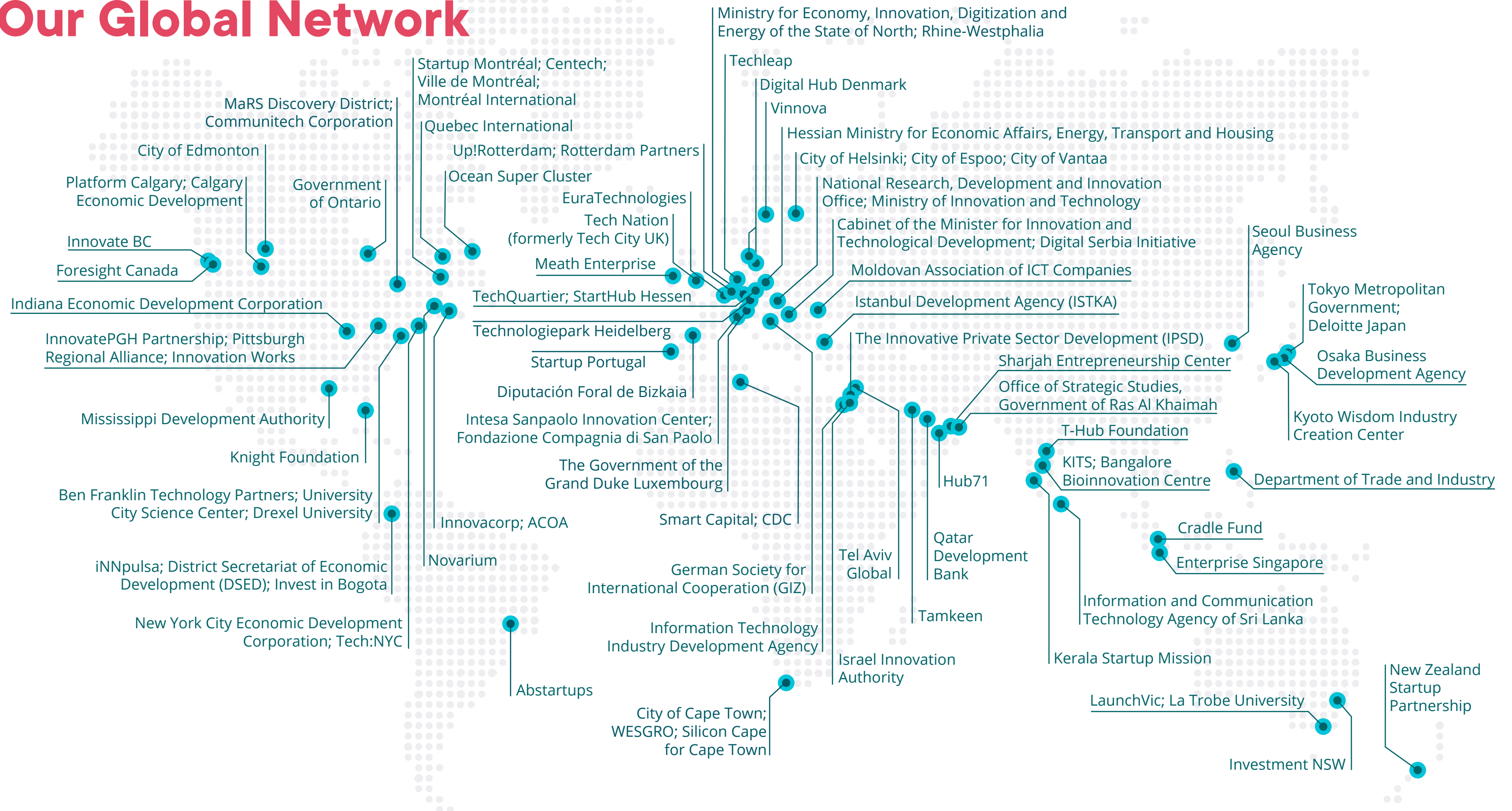
Working side-by-side with 300 partner organizations, our frameworks and methodologies have become instrumental in building foundations for startups and startup ecosystems to grow. Many of the world's leading governments and innovation-focused organizations have joined our knowledge network to cut through the complexities of startup ecosystem development and fuel sustained economic growth. Considered the new science of startup ecosystem assessment, we point to key gaps in startup ecosystems and prioritize actions to take in addressing them.

Join us and boost startup success, economic growth, and job creation in your region. Follow our work at [startupgenome.com](https://startupgenome.com), and on [LinkedIn](#) and [Twitter](#). Public and private startup community leaders looking to accelerate the growth of their startup ecosystem can reach us at [contact@startupgenome.com](mailto:contact@startupgenome.com).



## Global Startup Ecosystem Report 2022

# Our Global Network





# Discover More in Sub-Sector Editions





About

# Global Entrepreneurship Network



The [Global Entrepreneurship Network](#) operates a platform of projects and programs in 180+ countries aimed at making it easier for anyone, anywhere to start and scale a business. By fostering deeper cross-border collaboration and initiatives between entrepreneurs, investors, researchers, policymakers, and entrepreneurial support organizations, GEN works to fuel healthier start and scale ecosystems that create more jobs, educate individuals, accelerate innovation, and strengthen economic growth. GEN's comprehensive global footprint of national operations and global verticals in policy, research, and programs ensures members have uncommon access to the most relevant knowledge, networks, communities, and programs relative to size of economy, maturity of ecosystem, language, culture, geography, and more.





## Global Startup Ecosystem Report 2022

# About Our Global Partners



TNW is a global digital brand that informs, inspires, and connects people who love tech, through media, events, and spaces. Primarily known for its media outlet and award-winning tech events, TNW also incorporates a co-working label, a global startup database, and delivers custom innovation programs to corporates and governments.



Provides actionable advice on private capital challenges. Combining rigorous academic approaches with real world industry expertise, its expert team focuses on complex, customized projects that require thorough analysis, whether quantitative or qualitative in nature, to help its clients assess or design strategies, improve performance, and chart winning strategies for the future.



Everyday investors, journalists, founders, and the global business community turn to Crunchbase for information on startups and the people behind them.



The foremost data provider on startups, growth companies, and tech ecosystems globally. Dealroom.co now works with many of the world's most prominent investors, entrepreneurs and government organizations to provide transparency, analysis and insights on startups and venture capital activity.



(formerly Tech City UK): Empowers ambitious tech entrepreneurs through growth programs, digital entrepreneurship skills, a visa scheme for exceptional talent, and by championing the UK digital sector through data, stories, and media campaigns.



## Global Startup Ecosystem Report 2022

# Global Innovation Policy Forum

### Africa

- **Adenike Adeyemi**, Executive Director, Fate Foundation (Nigeria)

### Asia

- **Edwin Chow**, Asst. CEO & Director, Enterprise Singapore (Singapore)
- **Seow Hui**, Director of Startup Development Division, Enterprise Singapore (Singapore)
- **Wensheng Wu**, General Manager, GEI (China)
- **Jitendra Kumar**, Managing Director, Bangalore Bioinnovation Centre (Karnataka)

### Europe

- **Gerard Grech**, CEO, Tech Nation (fka Tech City UK) (United Kingdom)
- **Constantijn Van Oranje-Nassau**, Envoy, TechLeap (The Netherlands)
- **Darja Isaksson**, Director General, Vinnova (Sweden)
- **Ruben Nieuwenhuis**, Co-Founder, StartupAmsterdam (The Netherlands)
- **Santtu von Bruun**, Vice-Director of Economic Development, City of Helsinki (Finland)
- **Johannes Velling**, Director General “Digitalization and Foreign Trade”, Ministry of Economic Affairs, Innovation, Digitization and Energy (Germany)
- **Zekeriya Costu**, General Manager National Technology, Ministry of Industry and Technology (Turkey)
- **Isidro Laso**, Innovation, Research, Education, Culture, and Youth, European Commission

### Latin America

- **Rocio Fonseca Chamorro**, Chief Innovation Officer, CORFO - Chilean Economic Development Agency (Chile)
- **Felipe Matos**, President, Brazilian Startup Association (Brazil)

### Middle East & North Africa

- **Sharon Landes-Fischer**, CEO, Tel Aviv Global (Israel)
- **Sagi Dagan**, VP Growth, Israel Innovation Authority (Israel)
- **Fabian Vandenreydt**, Advisor to the Chairman, Abu Dhabi Global Market (Abu Dhabi)
- **Saleh Al-Rashid**, Governor, Monshaat (Riyadh)



## North America

- **Justin Kreamer**, Senior Vice President, New York City Economic Development Corporation (United States)
- **Francis Bilodeau**, Senior Assistant Deputy Minister, ISED (Canada)
- **Dan Herman**, Co-founder MyJupiter Inc. and former Head of Strategy, Innovation Canada
- **Chandra Briggman**, President/CEO, Activation Capital (United States)
- **Mark Anthony Thomas**, President, Pittsburgh Regional Alliance (United States)
- **Jonathan Ortman**, President, Global Entrepreneurship Network
- **Iain Klugman**, Executive Advisor to the CEO Communictech
- **Carolyn Hull**, General Manager of the Economic and Workforce Development, City of Los Angeles (Los Angeles)
- **Anne Bermonte**, Director, Ontario Ministry of Economic Development (Ontario)

- **Cheryll Watson**, Forum Co-Chair, Former Head of Innovate Edmonton (Canada)
- **Mathieu Gervais**, Assistant Deputy Minister, Office of the Assistant Deputy Minister for Science and Innovation (Québec)

## Oceania

- **Kate Cornick**, CEO, LaunchVic (Australia)
- **Vic Crone**, CEO at Callaghan Innovation (New Zealand)



## Global Startup Ecosystem Report 2022

**Note From A Founder**

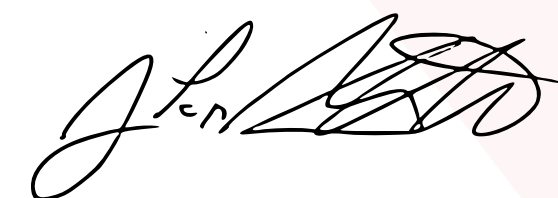
“The world of tech startups is changing. More importantly, tech startups are changing the world.”

This is the 10th anniversary of Startup Genome’s ambitious mission, and how the world has changed! In 2012, we published our first Global Startup Ecosystem Report (GSER). It was the beginning of a collaboration with hundreds of ecosystem leaders and supporters, intent on identifying the drivers of entrepreneurial success. That year, Western and English-speaking cities dominated the top 20. Not a single Chinese ecosystem and just one each from India and the Middle East ranked high. The 2022 report, by contrast, reveals thriving ecosystems in every part of the world. We may need a new name for unicorns, which today proliferate on six continents.

The COVID-19 pandemic accelerated both the growth and importance of startups, as companies rushed to digitize and sought virtual solutions to physical problems. Artificial Intelligence has become the playdough of

progress, incorporated by roughly 40% of tech startups in their products. With a few fluctuations, all this change is permanent. Even when the danger recedes, no business will give up its newfound reach and efficiency.

Tech startups don’t just provide tools for digital transformation; they also embody it. Software firms have led the dispersion of talent around the globe. Startup ecosystems attract people from everywhere but also enable their departure for other cities. That is the case with Silicon Valley, which has shed a lot of high-quality talent, with many engineers and others returning to their home countries. This has further elevated Silicon Valley as the most globally connected ecosystem and the nexus of the global startup ecosystem. With fewer employees on-site, Silicon Valley has more space — its #1 constraint is to accommodate more founders, startups



**JF GAUTHIER**  
Founder and CEO, Startup Genome



and supporters, whose interactions and collisions are the catalysts of innovation. This has happened — albeit to a lesser degree — in every top startup ecosystem.

So, the world of tech startups is changing. More importantly, tech startups are changing the world.

## Startups as Agents of Change

The Arab Spring of 2011 demonstrated how the products of tech companies connect resisters of oppression and amplify their messages. And startups themselves always empower those with fewer economic opportunities. Visiting Saudi Arabia a few years ago, I was pleased to see accelerators with more female founders than male ones. While the government has made progress in modernizing the economy and has reduced workplace segregation, the best option for women desiring true independence is often to launch their own companies. Not only do those entrepreneurs create offices more hospitable for themselves and their female employees, they also, in some cases, develop products that promote the empowerment of women. [WSM](#) (formerly Fixtag) is one example. That out-of-the-gate success is a mobile-phone repair service targeting women, who previously discarded their devices rather than risk men viewing their photos and other private data.

More broadly, tech startups model many of the values we admire in democratic governments. And 10 years from now, their founders may have the power to disseminate those values within autocracies, while their growing wealth and reputation earn political influence. Imagine if instead of its oligarchs, who owe their fortunes to the Kremlin, Russia produced 20,000 tech millionaires dedicated to flat organizations, cooperation, and meritocracies. Then imagine those founders funding opposition candidates and fighting the system. But while entrepreneurs are among the world's most effective change agents, they can't do it alone. We supporters of tech startups must show up for founders especially in countries where change is most needed. It is our responsibility to assist them with investment, collaboration, mentoring, and other means to make them drivers of change.

## Tech's Role in Fighting Climate Change

In addition, innovations by tech companies may be our best bet to prevent global disaster, given countries' failure to negotiate or legislate their way out of climate change. But those innovations will succeed only if Cleantech startups scale. That requires, among other things, demand-side policies to overcome market fragmentation and capital that is comfortable with the industry's long-term horizons. Startup Genome's leadership on this issue

includes launching Entrepreneurship for Climate with partners, and working with them on global hypergrowth programs in Canada, Sweden, and China.

Ecosystem leaders appear to feel less urgency about a different issue: diversity and inclusion. A common excuse is that they must focus on creating billion-dollar businesses and the associated jobs before worrying about who holds those jobs. But with the industry booming and IT vacancies high, it is time to invest real money in recruiting and developing under-represented talent. TechConnect is one organization tackling this problem. Its ambitious program is upskilling or reskilling 50,000 people from under-represented groups so they can each get a tech job. Similar programs have been taking shape in New York City and Israel. It is time for all of us to develop and fund such reskilling and upskilling programs.

In addition to our first GSER report, 10 years ago we also published foundational research on what drives the success and failure of startups. While the global startup revolution has matured and changed the world, those underlying conclusions remain true. We invite our partners and government and business leaders to apply those lessons as they build the engines that will power their economies and — I hope — transform their societies for decades to come.



## Global Startup Ecosystem Report 2022

# A Note From GEN

“Entrepreneurship is percolating everywhere, and competition on the global leaderboard is fierce.”

In April 2022, the global startup community hit a milestone. Thousands of people from 180 countries came together in person for the first time since the onset of the COVID-19 pandemic. The convening point was GEN’s Global Entrepreneurship Congress (GEC), a gathering of startup champions working together to build one inclusive global entrepreneurship ecosystem underpinned by a shared engine of innovation and economic growth.

The event was a testament to how far we have come in understanding the virus and learning to adapt to it, thanks in large part to research data and entrepreneurialism. Humankind has leveraged knowledge and skills to innovate through the worst of the pandemic. In its wake, startup ecosystem research is providing data that will inform economic strategies and intensify global competition for talent and investment.

Rewind 10 years, and the global ecosystem had a small handful of star players. Entrepreneurship was accessible to a select few. Today, people are identifying and solving problems on a massive scale. Entrepreneurship is percolating everywhere, and competition on the global leaderboard is fierce. Groundbreaking advancements to reduce barriers are taking place in cities and countries previously dismissed in conversations about startups and innovation — so much so that these cities are now strong challengers to global frontrunners.

This is a remarkable story of people, passion and grit, but also of data. Finding better ways of doing things demands the painstaking work of collecting and analyzing information, constantly adapting to new knowledge and standing strong to conclusions no matter how contrary they seem to intuition. This has been the work of Startup



A handwritten signature in black ink, reading "Jonathan Ortman".

**JONATHAN ORTMANS**  
Founder and President, Global  
Entrepreneurship Network (GEN)





**“This generation of  
leaders is hungry  
to democratize  
opportunities through  
entrepreneurship.”**

Genome over the past 10 years — providing innovation ecosystems with data to understand what it takes to compete in the race to the top.

GEN is proud to stand alongside Startup Genome to present the Global Startup Ecosystem Report (GSER) as both a guide to innovation performance and a prompt to leaders to develop ecosystem strategies from evidence-based analysis, not gut. The GSER informs decisions by government ministers and staff within our GEN policy communities, it guides our national managing directors in over 85 countries, and it fuels our global program strategies and verticals. It offers a roadmap to those seeking to maximize the performance of their ecosystem and the entrepreneurs within it.

As we saw at the GEC, this generation of leaders is hungry to democratize opportunities through entrepreneurship. Thanks to the GSER, we know where cities stand at this important junction in history. The report demonstrates that more cities are placing entrepreneurs at the center of economic policy and connects the dots for policymakers seeking to be more competitive on the global stage in a post-pandemic world.

Above all, it offers all ecosystems, regardless of size or wealth, insights and opportunities to level the playing field in a new world order where rules and assumptions have changed. As such, we consider the report to be a

call to action, encouraging readers to be a part of a new generation of dreamers, doers, and risk-takers working toward inclusive prosperity for all.



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## Global Startup Ecosystem Report 2022

# The State of the Global Startup Economy

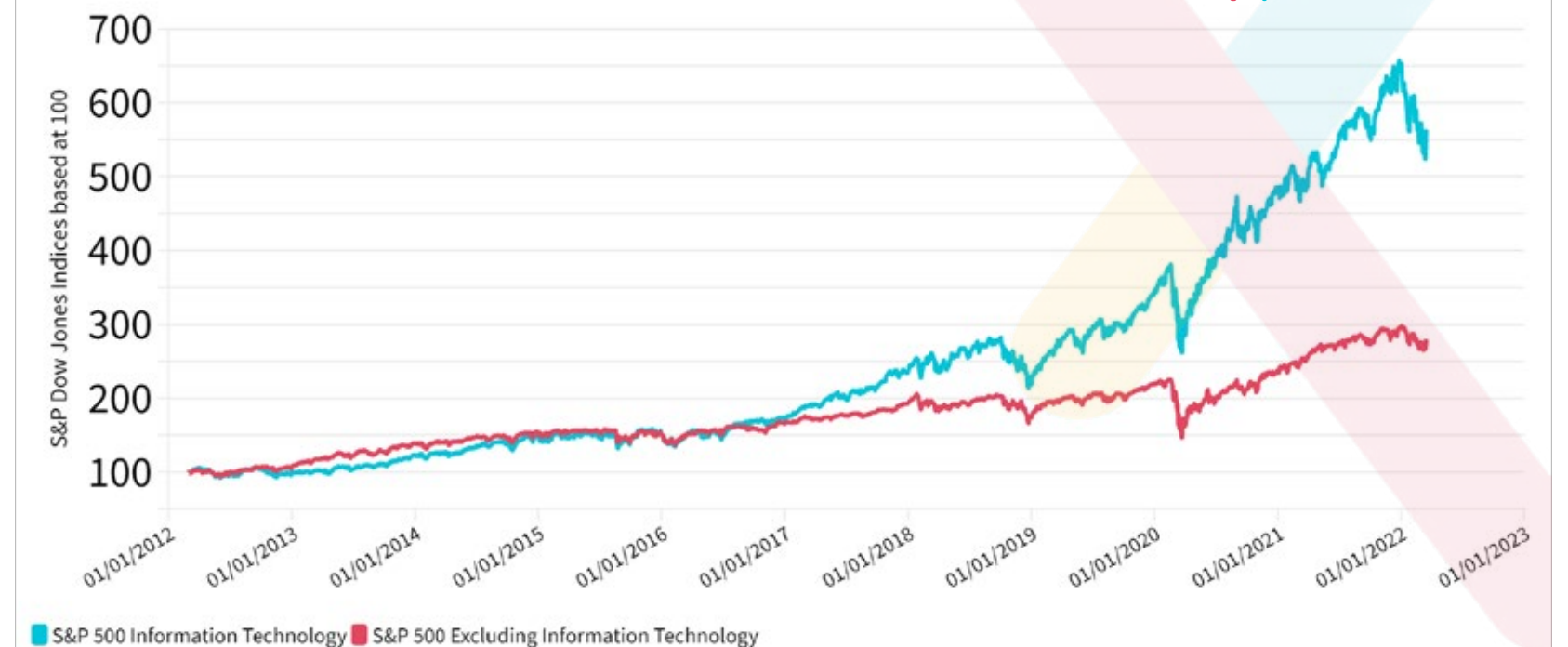
When Startup Genome published its [first Global Startup Ecosystem Report](#) in 2012, the entrepreneurial universe was a much smaller place. Six of the top 10 hubs were in the United States, and just one Asian city — Bangalore — broke the top-20 ranking. Four ecosystems accounted for the year's whopping nine unicorns (a term that would not even be coined until 2013). Almost two-thirds of early-stage funding was concentrated in North America.

That year, Statista valued the entire global software market at around \$350 billion. Only one tech business appeared on Fortune's list of top-50 largest global companies.

Ten years, \$1.65 trillion in funding, 1,227 unicorns, a global pandemic, and massive revolutions in everything from AI and social media to autonomous vehicles and precision medicine later, and the situation is very different. Today, the digital economy is the economy — or at least the economy's future.

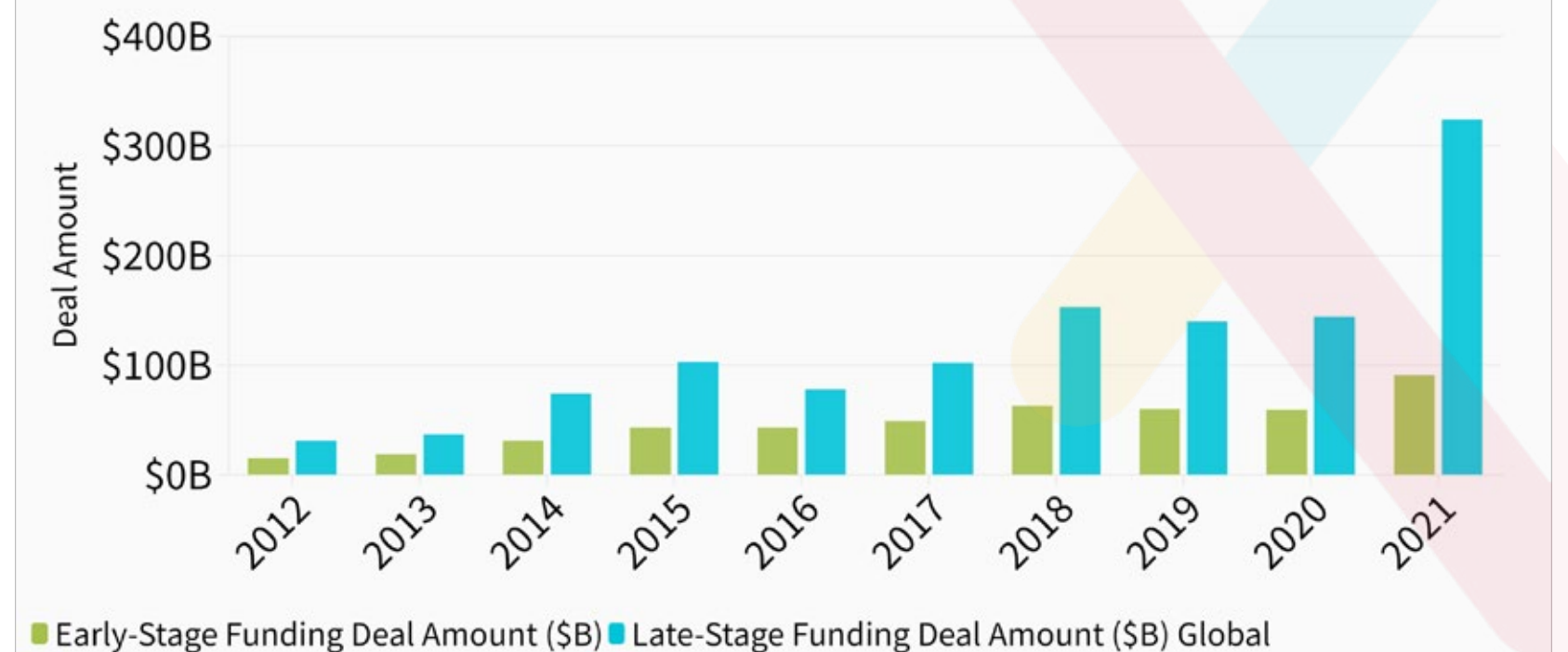
## Performance of Tech Companies and Non-Tech Companies

Tech Companies Grew 2.3X More Since the Pandemic Than Non-Tech Companies Startup Genome



## Global VC Deal Amount by Stage

Late-Stage Funding Has More Than Doubled From 2020 to 2021 Startup Genome





The World Economic Forum estimates that 70% of new value created globally over the next 10 years will be based on digital business models. In 2023, for the first time, more than half of GDP will be driven by “digitally transformed” enterprises, according to Statista. PWC projects that gains from AI alone will contribute \$15.7 trillion to the global economy by 2030.

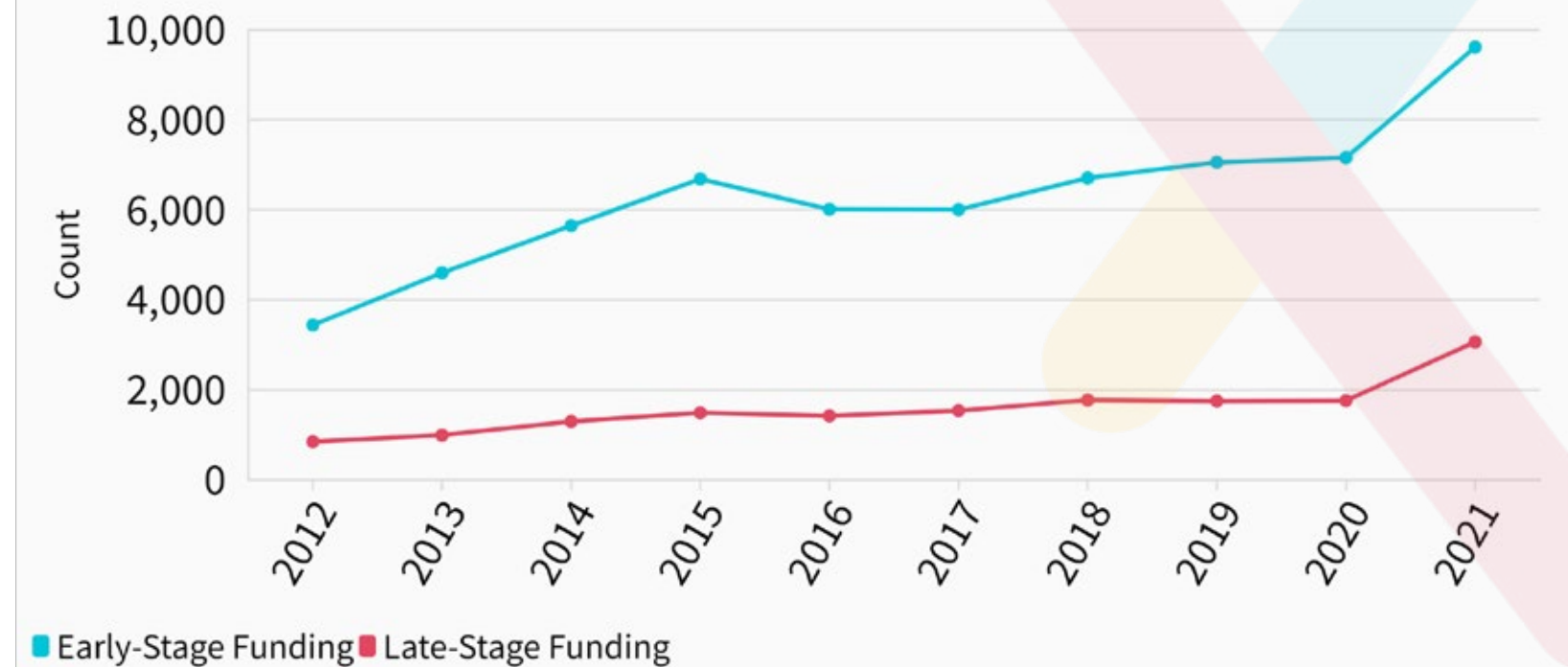
Despite the early shadow it cast on startups, COVID-19 ultimately boosted the sector by accelerating digitization. Since the pandemic, tech companies grew 2.3 times more than their non-tech counterparts. While about 90% of startups completely fail, Startup Genome research demonstrates that only 1.5% of startups — or about 15% of those that survive — produce a successful exit of \$50 million or more across the top eight U.S. startup ecosystems.

In line with that value, startups have been raising a lot more money. Since 2012, global average Series A rounds have tripled to more than \$18 million. Post-money valuations are up, on average, by 239% over 10 years, with the biggest growth in later rounds. Just since 2019, post-money valuations have risen by 125% (Series B) and 159% (Series C). In 2022, high inflation, rising interest rates, and global conflict have led to volatile markets and a financial market correction.

However, inflation has not been a global phenomenon. Overall, deal inflation in 2021 was dramatic in both

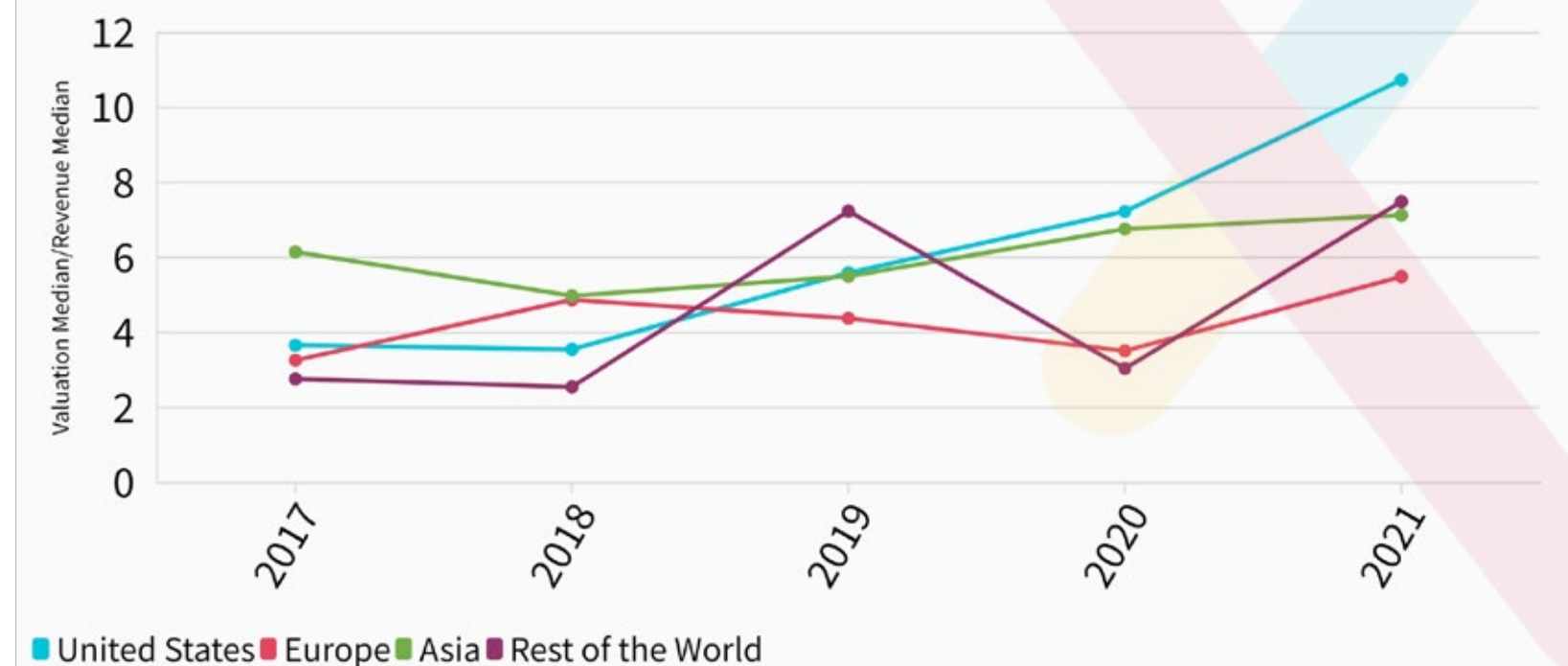
## Global Early-Stage and Late-Stage Funding Deals

Since 2017, the Number of Late-Stage Funding Deals Has More Than Doubled



## Global Exit Deals: Valuation Median Over Revenue Median

In 2021, Inflation Was Particularly High in the U.S. and the "Rest of the World"





late-stage rounds (Series B+) and exits, with the ratio of pre-money valuation to revenue increasing by about 50% for both. However, these ratios show little to no inflation in Asia and, for late-stage rounds, a drop in the “Rest of the World.”

While inflation in funding valuations fuel an acceleration in the growth of entrepreneurial ecosystems and innovation in general — with larger checks essentially meaning more money is invested in startups for the same percentage dilution — it is not without risks for startup ecosystems. It often spells lower returns for investors for the affected vintage investments. For startups (and for investors) this raises the specter of down rounds as the market goes back to near-historical valuations

before their next round. We have seen this before — in 2000–2001 and in 2008–2009. Raising interest rates in response to global inflation combined with the war in Ukraine seem to have already put a stop to 2021’s exuberance. In this context, startups will benefit from adopting adjusting their growth strategy by reducing their burn in order to lengthen their runway and delay their need for capital, and do so rapidly and assertively.

## The Continued Rise of Deep Tech

As for major innovation trends, the rising digits tell the story: Web3, Industry 5.0, Supply Chain 4.0. And, of course, 5G. Innovations in — among many other sectors — digital finance, AI-discovered molecules, and climate-

change mitigation are remaking not just business, but also the social and physical worlds.

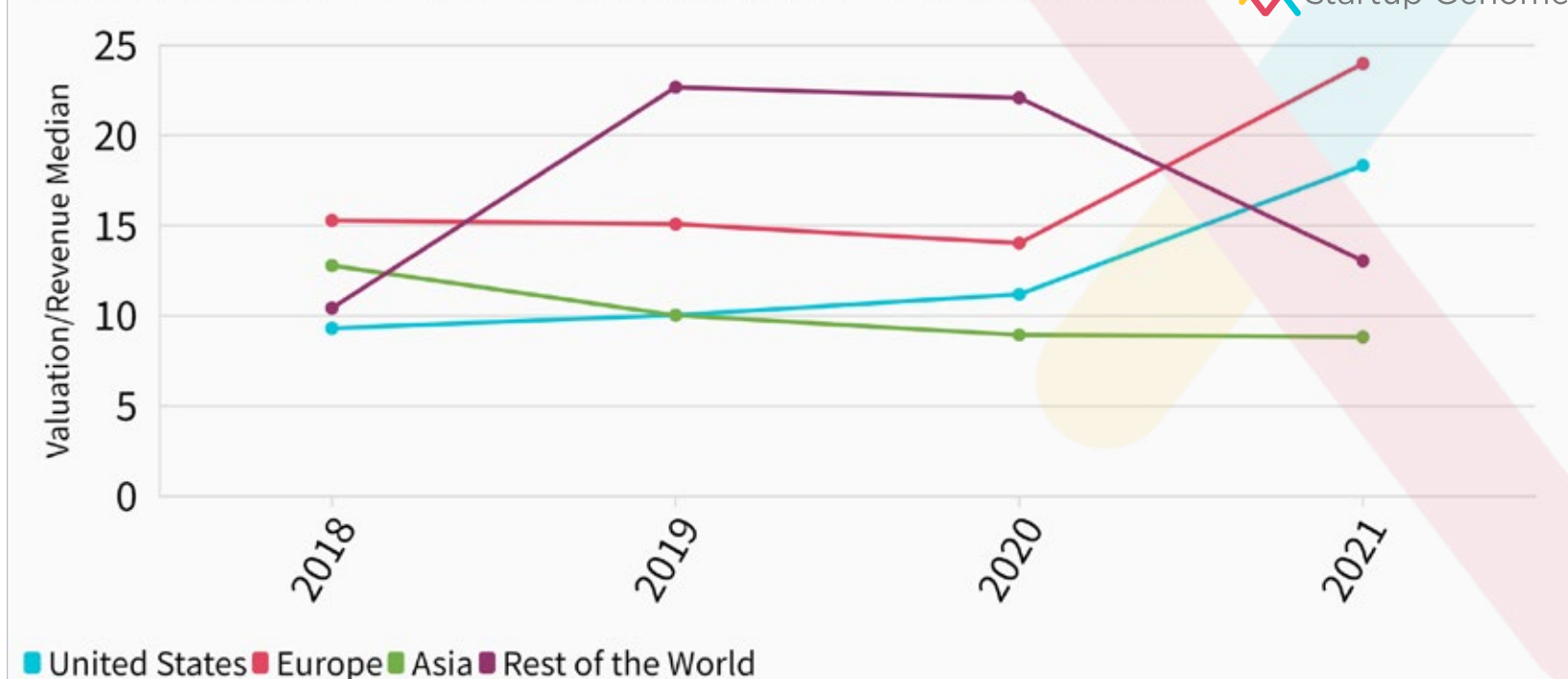
In 2018, Startup Genome was first to report the accelerated rise of Deep Tech sub-sectors. Over the last four years, when including AI in Deep Tech, the growth of Global Startup Ecosystems has been almost completely driven by Deep Tech.

## Talent

And just as two decades ago Silicon Valley reinvented the culture of place with open offices and spaces optimized for collaboration, so today’s startups are leading our new culture of placeless-ness. In the

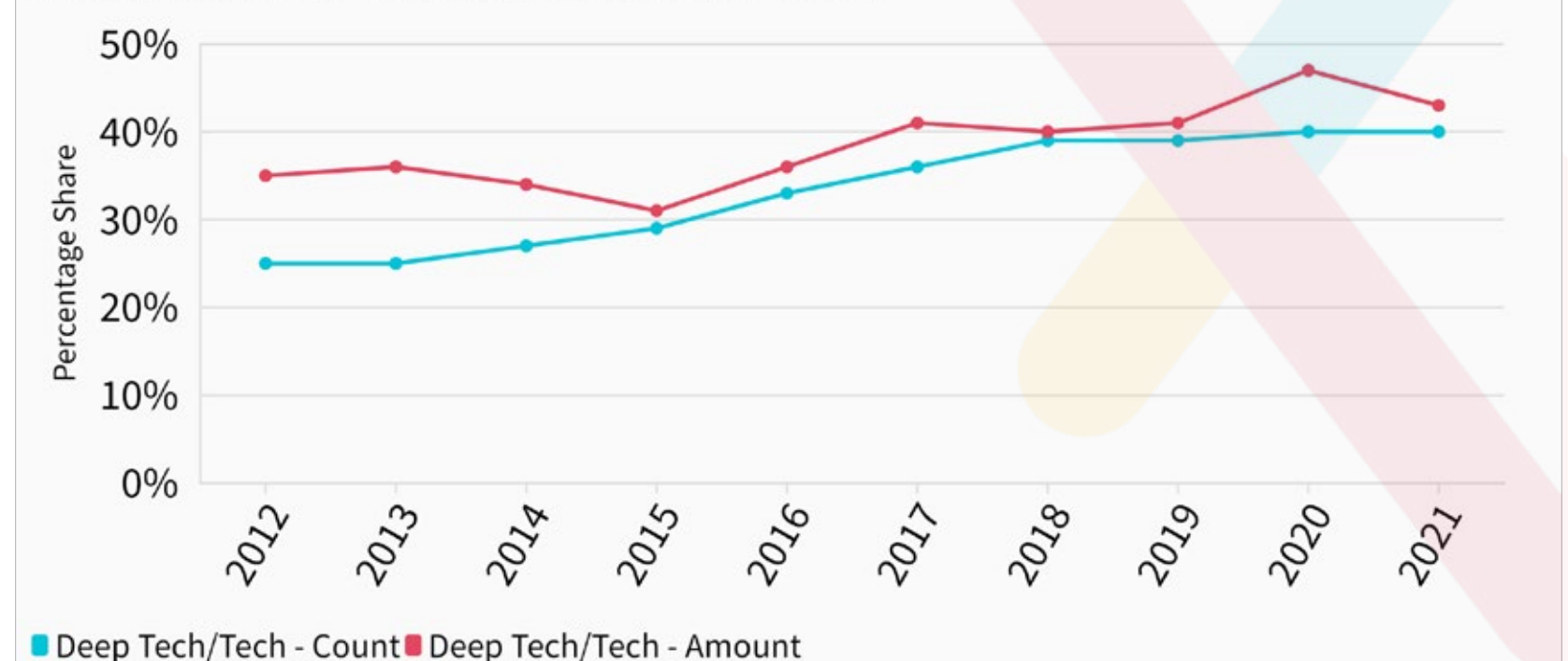
### Valuation Over Revenue Median for Series B+ Deals by Region

Europe and U.S. Series B+ Valuations Had an Average Inflation of 85% in 2020-21



### Share of Deep Tech Versus Tech

In 2021, the Share of Deep Tech Was 1.5x More Than in 2012





COVID-19 pandemic, tech companies both facilitated and pioneered new ways of working, including the virtual-first model, popularized by companies including Dropbox, which makes remote the default. Investment is also no longer tied to location, with some venture capitalists using Zoom to perform due diligence on far-flung investments, geographically expanding their reach.

However, by rendering talent and capital more fluid, technology has paradoxically made geography more important than ever. Now that founders, talent, and investors can be anywhere, polestars like Silicon Valley, London, and Beijing must compete with hundreds of expanding constellations, each with its own legal, economic, and lifestyle advantages.

Here are some overarching themes that affected established and emerging ecosystems in recent months.

## India Rising

The startup landscape has shifted substantially, with India surging close behind the United States and China. The country has seen a rapid rise in the number of large exits and early-stage rounds, and a substantial increase in Ecosystem Value. India minted 44 unicorns in 2021, raised a total of \$72 billion in exits (up from \$1.8 billion in 2020). The nation's total dollar exit amount has multiplied 38x from 2020 to 2021.

Like Silicon Valley in the United States, Bangalore no longer is the only game in town. Six of seven Indian ecosystems tracked by GSER — including Chennai, Pune, Telangana, and Kerala — climbed the rankings, benefitting from a dispersion of the tech economy. Delhi and Mumbai re-joined Bangalore in the top 40. Overall Bengaluru, Mumbai, and Delhi went up almost 10 ranks each.

India has a vast domestic market that has recently grown even more dependent on technology, fueling gains. But the country's rise is not just a local phenomenon. Writing in *Medium*, Dev Khare, a partner at Lightspeed India, estimated that 30% of the country's unicorns already were or are poised to go global — and not just those in the usual-suspect SaaS space. In India, the conversation is shifting from whether the country's entrepreneurs can build unicorns to whether they can build global category leaders.

The virtuous cycle of ecosystems is also on display in India, as successful businesses feed new entrants. For example, Zomato, a food-delivery service whose July 2021 IPO was oversubscribed by a factor 35, pledged to invest \$1 billion in startups over two years. In March 2022, CEOs and executives of unicorns that include Rivigo, Cars24, and Lead School announced they were joining forces to support early-stage companies with the new Bharat Founders Fund.

India's government, meanwhile, has invested in ecosystem-creation initiatives and other startup-friendly policies. Its most ambitious project is India Stack, a nationwide technology infrastructure for authentication and digital payments that is ushering in a cashless economy. That creates a base of more than 1 billion users, potentially galvanizing Fintech, digital commerce, and other startups in the process. Such companies are emerging as the “backbone” of new India, said Prime Minister Narendra Modi when he proclaimed January 16 National Startup Day.

## China Slowing

India's embrace of the tech sector stands in contrast to China. In 2021, Beijing cracked down on companies such as Didi, Tencent, and Meituan over issues including anti-competitiveness and data privacy. Jack Ma retreated into near invisibility following regulators' actions against Alibaba and the suspension of Ant Group's IPO. Global investors were among those who suffered when Beijing went after its Edtech industry in July 2021. In December 2021, the Chinese government raised constraints on overseas IPOs.

Such developments, as well as China's strict COVID-19 policies and tensions with the United States and Europe, are affecting its young startups. In 2021, China saw growth in early-stage funding, and smaller exits (\$50



to \$100 million) slowed down significantly relative to the rest of the world. As for foreign investments, GSER numbers show that most major Chinese ecosystems have a significantly lower ratio of non-local to local investors in deals over the last 10 years than their counterparts, for example in comparison to India. That said, China saw large exits over \$1 billion and large and late-stage funding rounds grow very fast in 2021. China has seen a 22% increase in the dollar amount of late-stage funding investment from 2020 to 2021 and a 21% increase in the number of exits over \$1 billion from 2020 to 2021.

Overall, the performance of Chinese startup hubs is declining for the first time since GSER has tracked them. Eight of the 13 cities studied fell one or more spots in this year's rankings, and two (Wuxi and Xiamen) are down 21 positions. But the same hands that are smacking down Goliaths are raising up some Davids. China's government announced in July 2021 that by 2025 it intends to develop 10,000 "Little Giants" — innovative startups intended to fill gaps in strategic industries rather than to scale globally. In addition to financial and regulatory incentives, Little Giants benefit from the government's seal of approval, which has attracted some venture capital.

Undoubtedly, China remains a startup powerhouse. Technology companies in China raised \$39 billion in total VC rounds in 2021, 25% more than in 2020.

## Hot Spots Everywhere

India and China may be the big stories of 2021, but dozens of other intriguing narratives proliferated around the globe. Continuing a trend of declining funding share that began in 2016, North America accounted for less than half of early-stage funding in 2021, with Europe and Asia both taking a bite of the total. VC activity in Latin America nearly doubled from the previous year.

Record amounts of tech venture funding were raised in Asia (\$87.4 billion), North America (\$219.6 billion) and Latin America (the world's fastest growing region at \$12.9 billion). Australian startup funding tripled to \$10 billion, and African startups raised \$4.8 billion — a 96% increase from 2020 to 2021.

A record 540 companies achieved unicorn status in 2021, with 113 ecosystems producing at least one billion-dollar-plus behemoth. Twenty-two ecosystems — including Brisbane, Luxembourg, Santiago-Valparaíso, and Ho Chi Minh City — achieved their first unicorns in the period examined for the GSER.

More governments are enacting policies to make themselves alluring to entrepreneurs. Brazil's new Legal Framework for Startups, for example, is an ambitious plan that includes provisions for a "regulatory sandbox" that frees companies from some constraints as they experiment with innovative technologies and business

models. Spain has plans to pass a "startup law" by the end of 2022 that includes several tax incentives and hacks through red tape impeding founders and investors. The U.S. Innovation and Competition Act, working its way through Congress, includes \$10 billion for new technology hubs.

A growing number of countries also are introducing digital nomad visas to attract newly footloose tech talent to their hubs. Latvia, Romania, and Cape Verde are among the most recent to do so, and in 2021, the Portuguese island of Madeira opened a digital nomad village. And with crypto-companies luring talent from traditional tech, Bitcoin-friendly places including El Salvador — which has declared the digital currency legal tender — may appeal to founders and workers excited by Web3 projects.

## The Age of Geopolitics

The importance and dispersal of tech startups has amplified the influence — for both good and ill — of geopolitics. Where once the sector was sufficiently small to avoid the kind of pressures experienced by large industries such as energy and travel, those garage-spawned entrepreneurs have grown into a major economic force. Keeping their heads down is no longer an option.



**Global Cumulative Number of Ecosystem With One or More Unicorns**

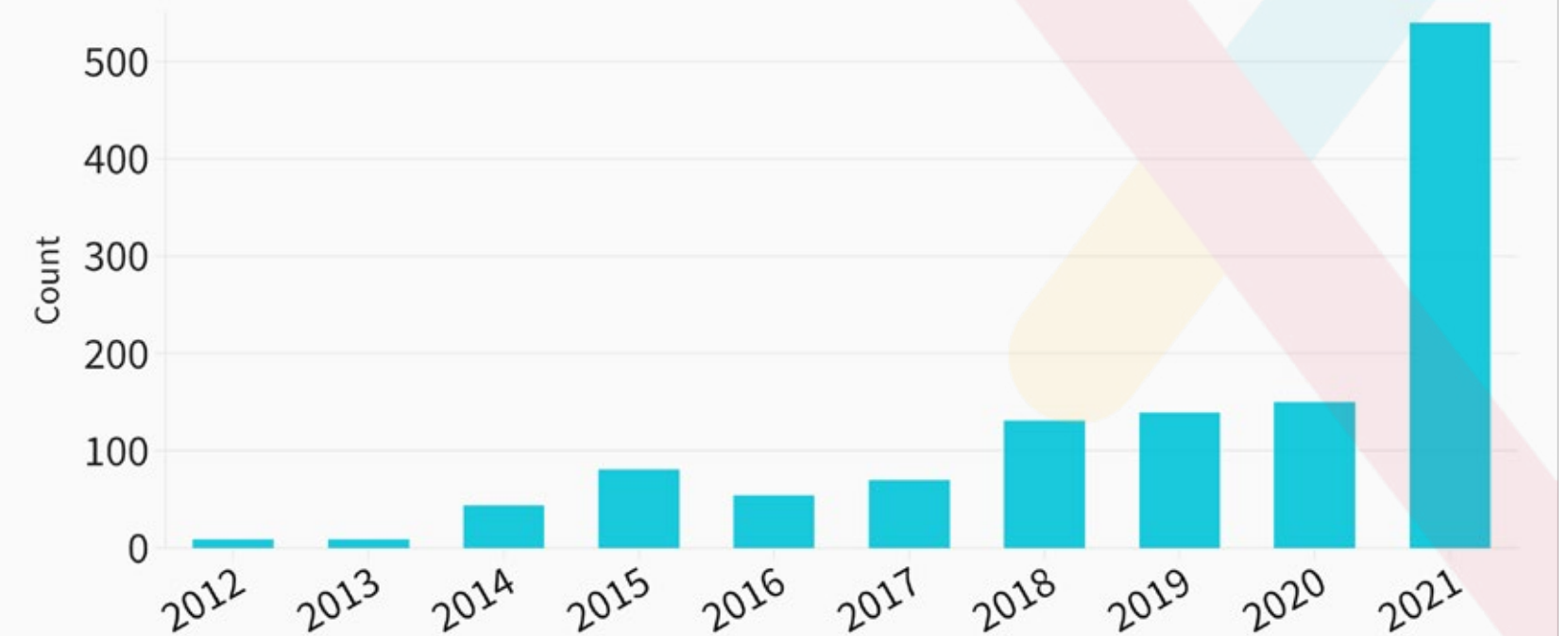
113 Ecosystems Have Created at Least One Unicorn

Startup Genome

**Number of Unicorns Created Globally by Year**

A Record 540 Tech Startups Achieved Unicorn Status in 2021

Startup Genome



U.S.-China tensions over everything from 5G to social media loom especially large, reflecting those nations' widely divergent views on markets and the flow of information. The rise of India may reflect, in part, investors' appreciation of India's digital economy as an unaligned alternative to that of China or the United States. European leaders also worry about China's investment in and acquisition of their countries' tech companies, its protected market, and its threats to privacy and security.

In Russia, the war has spotlighted cryptocurrencies' ability to help oligarchs avoid sanctions. Meanwhile, Russia's own tech sector is suffering because of its actions in Ukraine. By March 2022, between 50,000 and

70,000 tech workers and entrepreneurs had left Russia, according to a report cited in the New York Times, with another 70,000 to 100,000 expected to follow. Much of that fleeing talent initially landed in countries that take Russians without visas, including Georgia, Turkey, and the United Arab Emirates.

Increasingly, tech companies risk moral hazard by accepting work associated with the military or immigration. Three years after employee protests compelled Google to walk away from a valuable Pentagon contract to develop AI for drones, the company is once more pursuing military work. Conversely, Cleantech surged in 2021, with a 176% rise in post-money valuations. The potential for an innovation created in

one ecosystem to virtuously affect every nation on the planet is not lost on investors or the public.

Recently, pundits have been predicting the end of globalization. The proliferation and dispersion of startups points to a different future. More regions with more companies that are funded from everywhere, staffed from everywhere, and attract customers from everywhere will reduce inequality and create opportunities that almost all will find irresistible. Ten years ago, just a few places strove to put a startup in every garage. Someday we'll see a unicorn in every stable.

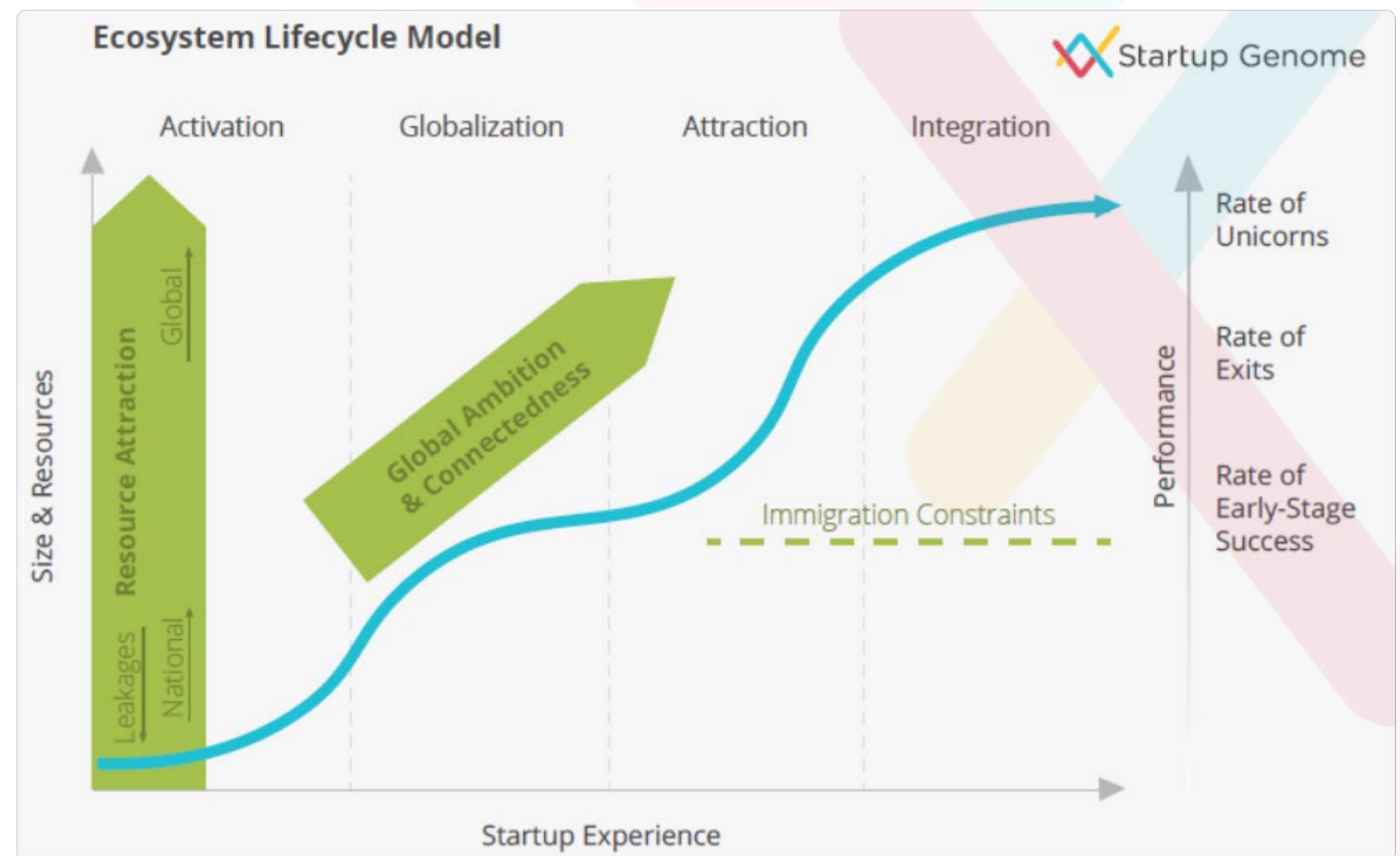


## Global Startup Ecosystem Report 2022

# Ecosystem Lifecycle Analysis

The evolution of startup ecosystems is a complex and multifaceted process. Like their ecological analogues, they evolve through different phases. Each phase has different features, resource characteristics, and needs. Following Startup Genome's taxonomy, startup ecosystems go through four phases of development: Activation, Globalization, Expansion, and Integration. Each of them has very distinct characteristics and key triggers that allow them to develop from one stage to the next.

Lifecycle phases are valuable in determining which strategies to apply. Through our years of assessment and consulting, Startup Genome has found that fundamentally different strategies correlate with lifecycle phases (Norm Strategies). Ecosystems that don't sync their initiatives with their lifecycle phase may be doing the right thing but at the wrong time, inadvertently wasting time and money for no improvement in the startup ecosystem. Our [ecosystem assessment services](#) can help ecosystems determine the correct strategies for the stage they are at, and ultimately help them progress to further stages.





## Activation Phase

### Characteristics:

- i. Limited Startup Experience (founder know-how, experienced investors, advisors, and mentors, and community behaviors that support startup success)
- ii. Low Startup Output of around 1,000 or fewer startups
- iii. Challenges: lack of Startup Experience and resource leakages to later-stage ecosystems make it difficult to grow

### Objective:

Focus on increasing the Startup Output and Early-Stage Funding. Activate entrepreneurial-minded people and grow a more connected local community that helps each other. Pick one or two startup subsectors (e.g. Agtech) that build on local economic strengths and develop focused programs to accelerate ecosystem growth and develop pockets of success leading to sizeable exits.

## Globalization Phase

### Characteristics:

- i. Trigger to this phase: increased Startup Experience led to the production of a series of regionally impressive triggers, usually above \$100 million (higher in leading nations)
- ii. Output of 800 to 2,000 startups (depending on population)
- iii. Series of exits trigger national (or regional) resource attraction (startups, entrepreneurs, talent, investors) from earlier-phase ecosystems, but still leaks resources to top ecosystems globally

### Objective:

Focus on increasing Global Connectedness with founders of top ecosystems, the Success Factor that defines an ecosystem's scaleup potential, and supporting startups to increase their early Global Market Reach, which realizes an ecosystem's scaleup potential. Urgently address remaining Success Factor gaps.

## Attraction Phase

### Characteristics:

- i. Usually more than 2,000 startups (depending on population)
- ii. Trigger to this phase: a series of globally impressive triggers, usually unicorns and exits above \$1 billion (higher in leading nations)
- iii. Billion-dollar triggers produce Global Resource Attraction
- iv. Very few Success Factor gaps remain

### Objective:

Use Global Resource Attraction to significantly expand the size of the ecosystem and fill remaining gaps, removing barriers to immigration and directing attraction through well-designed policy programs.



## Integration Phase

### Characteristics:

- i. More than 3,000 startups
- ii. Global Resource Attraction produces a high and self-sustainable degree of Global Connectedness and flow of knowledge into the ecosystem that sustainably keep its startups integrated in the global fabric of knowledge. It is able to produce leading-edge business models and the skills necessary to achieve high Global Market Reach

### Objective:

Integrate the ecosystem within the global, national, and local flows of resources and knowledge inside and outside of the startup ecosystem, optimizing laws and policies to sustain its competitiveness and growth, and spreading its benefits (e.g. culture, source of competitiveness, capital, innovation) to other sectors of the economy and parts of the nation.



## Global Startup Ecosystem Report 2022

# Global Startup Ecosystem Ranking 2022 (Top 30 + Runners-Up)

## Key Findings

- The same five ecosystems remain at the top of the ranking as in 2020 and 2021, but Beijing has dropped one place, with Boston taking its former place at #4. [Silicon Valley](#) is #1, followed by [New York City](#) and [London](#) tied at #2, [Boston](#) at #4, and [Beijing](#) at #5.
- Seoul entered the global top 10 ecosystems for the first time, up six places from #16 in 2021 and #20 in 2020.
- Several Indian ecosystems have risen in the rankings, most notably [Delhi](#), which is 11 places higher than in 2021, entering the top 30 for the first time at #26. Bangalore has moved up one place from last year, to #22.
- Overall, China's ecosystems have declined in the rankings, a reflection of the relative decline in early-stage funding in comparison to other ecosystems.
- [Helsinki](#) has risen more than 20 places from last year, joining the runners-up category at joint #35.
- A record 540 companies achieved unicorn status in 2021, up from 150 in 2020.
- In 2021, Brazil saw 237% growth in the dollar amount of Series B+ rounds compared to 2020. The nation's total exit amount for 2021 was \$49 billion, a huge leap from \$1 billion in 2020.
- Asia experienced a 312% increase in the dollar amount of exits over \$50 million from 2020 to 2021.
- In 2021, the dollar amount of exits in London grew 413% from 2020. The ecosystem's Series B+ rounds increased 162% in terms of dollar amount from 2020, and it saw 55% more \$50 million+ exits in 2021 versus 2020.

## The Most Comprehensive Research of Startup Ecosystems Globally

Startup Genome's coverage of ecosystems is growing. Our analysis — which expanded from 60 ecosystems in 2018 to 150 in 2019 and to nearly 300 today — has allowed us to rank the top 40 global startup ecosystems as well as 100 emerging startup ecosystems.

We have expanded our list of ecosystems and it now includes regions that have traditionally received less coverage, including Central Asia, Middle East, Africa, and Latin America. We have also expanded our list to talk about the top 100 Emerging Ecosystems. Although these ecosystems are outside the list of highest performing ecosystems, their impact and importance is significant in the global economy.



## Global Startup Ecosystem Ranking (Top 30 + Runners-Up)

	Overall Ranking	Performance	Funding	Connectedness	Market Reach	Knowledge	Talent + Experience
Silicon Valley	1	10	10	10	10	10	10
New York City	2 (tie)	10	10	9	10	5	10
London	2 (tie)	9	10	10	10	6	10
Boston	4	10	9	8	9	7	9
Beijing	5	10	8	3	9	10	10
Los Angeles	6	9	10	7	9	7	9
Tel Aviv	7	9	8	10	10	6	8
Shanghai	8	9	6	1	9	10	9
Seattle	9	8	7	6	8	8	8
Seoul	10	7	9	7	5	8	7
Washington DC	11	8	6	8	7	3	8
Tokyo	12	5	8	1	4	9	9
San Diego	13	8	4	3	8	7	6
Amsterdam-Delta	14	5	7	10	6	1	7
Paris	15	1	8	7	1	1	8
Berlin	16	6	7	8	4	1	6
Toronto-Waterloo	17	1	9	9	3	1	7
Singapore	18	1	9	4	8	1	5
Chicago	19	4	6	5	6	1	7
Sydney	20	7	5	6	5	1	5

Factors scored 1 to 10, with 1 the lowest and 10 the highest. For more information, please see Methodology.

contd.



## Global Startup Ecosystem Ranking (Top 30 + Runners-Up)

	Ranking	Performance	Funding	Connectedness	Market Reach	Knowledge	Talent + Experience
Stockholm	21	2	5	3	7	3	6
Bangalore - Karnataka	22	5	7	5	2	5	2
Shenzhen	23	7	1	1	1	9	7
Denver-Boulder	24	3	5	9	3	3	4
Austin	25	2	5	6	5	5	4
Delhi	26	8	6	1	4	1	3
Philadelphia	27	6	2	1	7	1	4
São Paulo	28	6	3	3	6	1	4
Salt Lake-Provo	29	7	1	1	8	1	2
Vancouver	30	4	4	4	1	1	3
Atlanta	31 (tie)	2	4	4	3	1	5
Copenhagen	31 (tie)	1	1	1	7	1	2
Dallas	31 (tie)	4	1	2	6	3	3
Helsinki	31 (tie)	3	2	1	1	1	1
Miami	31 (tie)	3	3	1	5	1	1
Hangzhou	36 (tie)	5	1	1	1	10	5
Melbourne	36 (tie)	1	1	2	1	1	3
Montreal	36 (tie)	1	1	1	1	1	1
Mumbai	36 (tie)	6	3	1	1	1	2
Munich	36 (tie)	1	2	5	1	4	1

Factors scored 1 to 10, with 1 the lowest and 10 the highest. For more information, please see Methodology.



## Ecosystem Assessment & Reporting

Developing ecosystems can be a fuzzy business. Together with 300 partners, we made it a science. Without reliable benchmarks or data, innovation policies and programs often don't result in expected economic impact. Our leading entrepreneurship and startup ecosystem assessment methodologies guide policy executives toward sound decisions to develop more talent, startups, and scaleups.

This year's ranking is perhaps Startup Genome's most interesting to date, with a multitude of ecosystems showing significant movement, and two key themes emerging: the rise of India and the slowing of China's growth in early-stage funding compared to other ecosystems.

India's ecosystems show overall growth in Ecosystem Value, and collectively Delhi, Mumbai, Bangalore, and Pune generated 25 unicorns between 2019 H2 and the end of 2021. Regardless of this growth, North America continues to dominate the Global Rankings, with 47% of the top 30 ecosystems in this region. Asia is next with 30%. In North America in 2021, exits over \$50 million made up a total of \$698 billion. In Asia, exits over \$50 million made up \$531 billion.

## Global Leaders

The top five global ecosystems remain largely the same as in previous years, but with the notable difference that Beijing has dropped one place since 2021, trading places with Boston for #4. In aggregate, the top five ecosystems now account for an Ecosystem Value of \$3.8 trillion. The remaining 25 of the top 30 ecosystems, in aggregate, are worth \$2.3 trillion in Ecosystem Value.

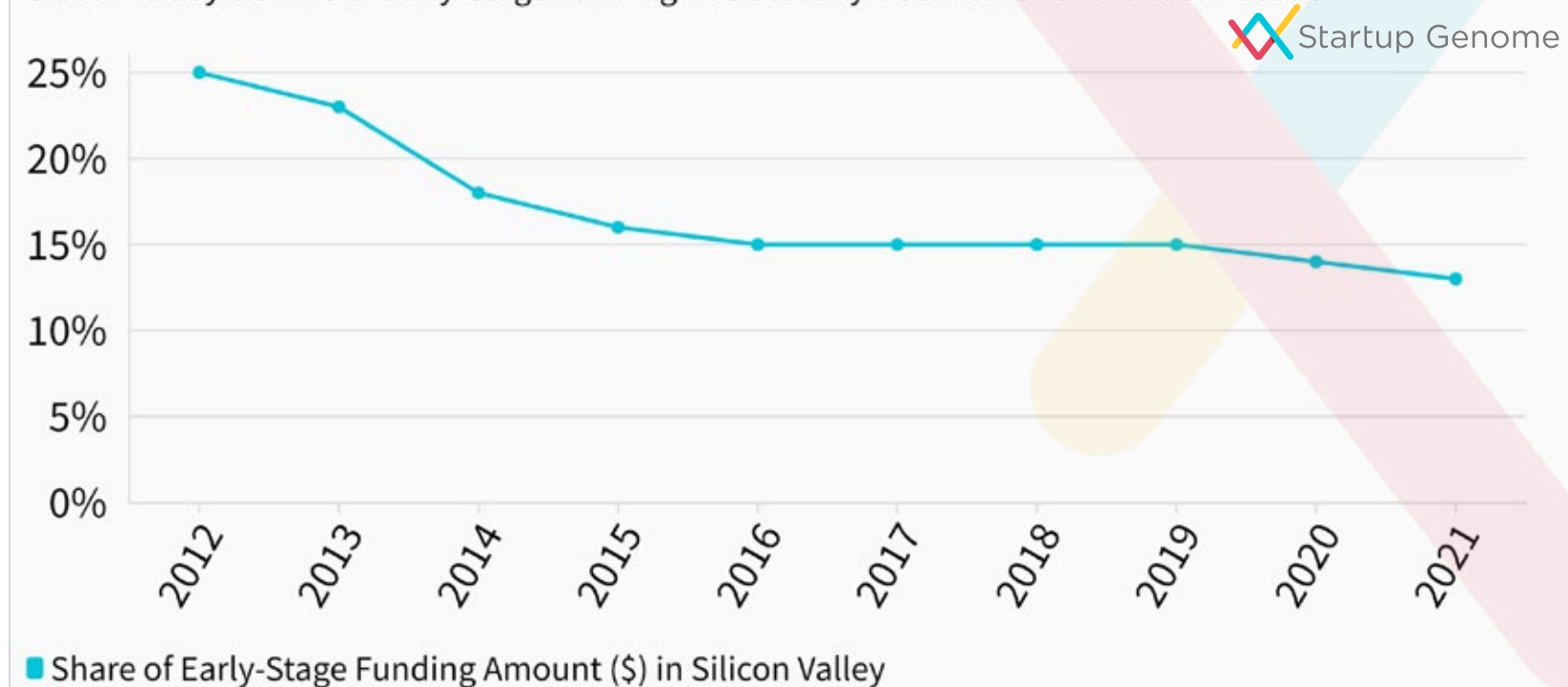
Silicon Valley is undoubtedly still the world's global leading ecosystem, but its share of early-stage investment by dollar amount has declined from 25% in 2012 to 13% in 2021. As early-stage funding is a leading indicator of

the future of tech, this trend suggests that the growth of tech in the rest of the world will continue to be faster than in Silicon Valley. Silicon Valley's share of number of exits over \$1 billion has also halved since 2012.

New York and London remain leading tech hubs, and their joint position at #2 largely derives from strong scores in Knowledge in both ecosystems. Los Angeles holds its place at #6 but shows a significant increase in Connectedness this year. Tel Aviv also held steady from last year, remaining at #7. The Israeli ecosystem saw three \$1 billion exits in the period examined, crossing \$100 billion in total Ecosystem Value this year.

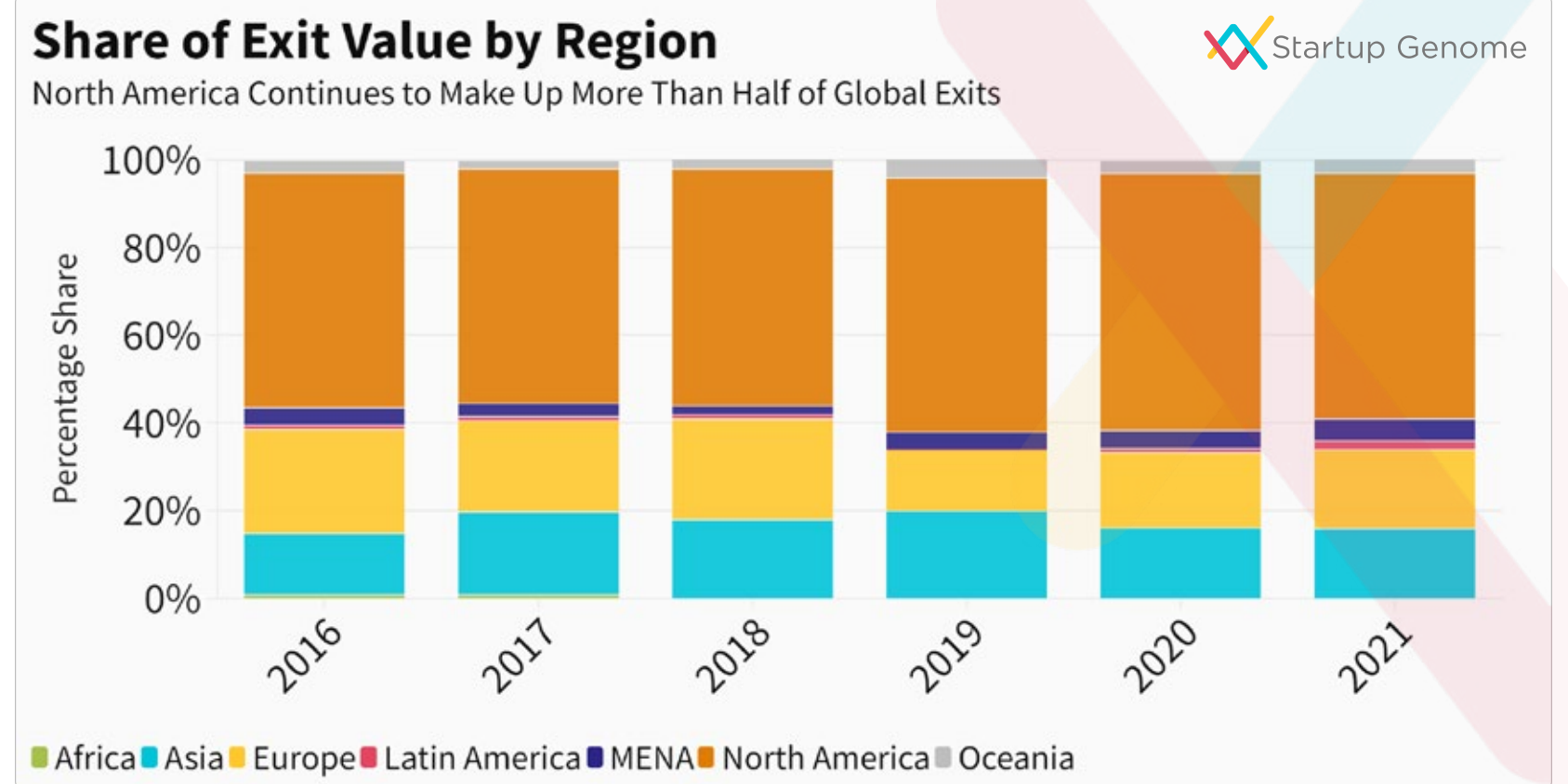
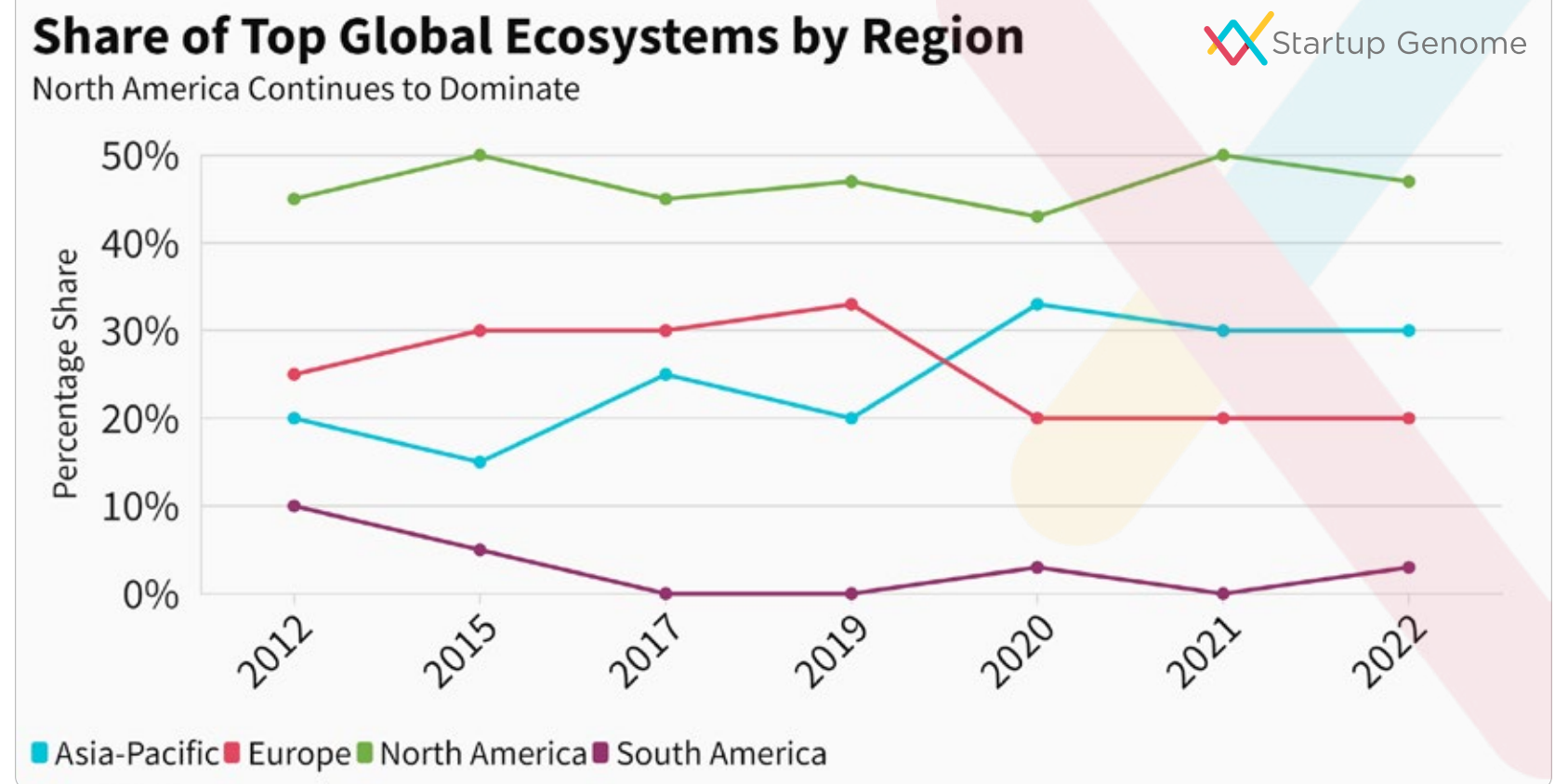
### Silicon Valley Share of Global Early-Stage Funding Amount

Silicon Valley's Share of Early-Stage Funding Has Steadily Declined Over the Last Decade





Thanks to five \$1 billion+ exits, Seoul has moved into the top 10 for the first time. The Korean ecosystem has moved up an impressive 10 places since 2020 and six spots from 2021. Its biggest exit, e-commerce platform [Coupang's](#) March 2021 \$60 billion IPO, makes up approximately 42% of its Ecosystem Value.





## Hot Spots & Rising Ecosystems

India is showing significant changes in this year's ranking. Delhi has moved up an impressive 11 places, coming in at #26, the first time that the ecosystem has entered the top 30 and a result of increased early-stage funding and three \$1 billion+ exits. Bangalore is just ahead at #22, an increase of one place from last year. The ecosystem saw eight \$50 million+ exits — three more than in the GSER 2021 period — and improved in Market Reach.

Mumbai isn't far behind, up to tied #36 this year thanks to two new unicorns and three \$1 billion+ exits in the GSER 2022 time period, increasing its overall Ecosystem Value. Chennai, and Kerala climbed the rankings significantly

— up 21 places and 20 respectively — and Pune and Telangana also added to India's overwhelmingly successful year.

Berlin confirms its place as a leading European ecosystem by moving up six places from last year, to #16, with five \$1 billion+ exits. The German capital has now produced 14 unicorns.

On the other side of the Atlantic, San Diego moved up eight places from last year's ranking, to #13. Its strong Life Sciences sub-sector was a major element in the change, contributing three of its four \$4 billion+ exits and many of its 25 \$50 million+ exits.

## Top 30 & Runners-Up

Sydney shows Oceania's biggest leap in the rankings, moving up four places from last year to #20. Its \$67 billion Ecosystem Value is in large part due to Canva's \$39 billion valuation.

Denver-Boulder moved up three places from 2021, taking #24. The Colorado ecosystem is increasing in both value and count in early-stage funding, and has shown significant growth in Connectedness.

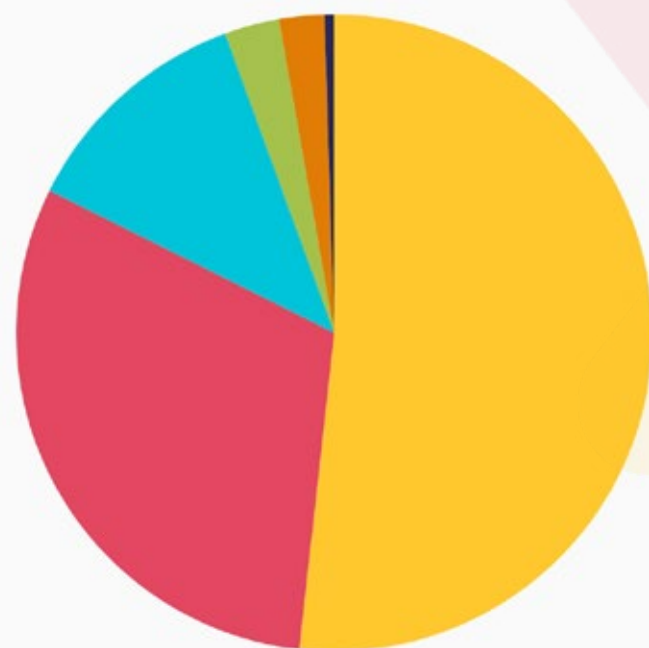
Miami moved up nine places in ranking since last year, to #33. The number of \$50 million+ exits here increased from four in the 2021 GSER period to 11 this year. It also recorded two \$1 billion+ exits.

Both Copenhagen and Helsinki have moved into the runners-up category this year, with Helsinki making a giant leap to joint #31 from #59. Copenhagen saw two \$1 billion+ exits in the period analyzed, including [Unity's](#) \$13.7 billion valuation at IPO in September 2020. Helsinki saw seven exits over \$50 million, including food delivery company [Wolt's](#) \$8.1 billion November 2021 acquisition by DoorDash. Helsinki also gained two unicorns in the period considered.

### Number of Unicorns by Region

North America Has Produced More Than Half of the World's Unicorns

Startup Genome



■ North America ■ Asia ■ Europe ■ MENA ■ Latin America ■ Oceania

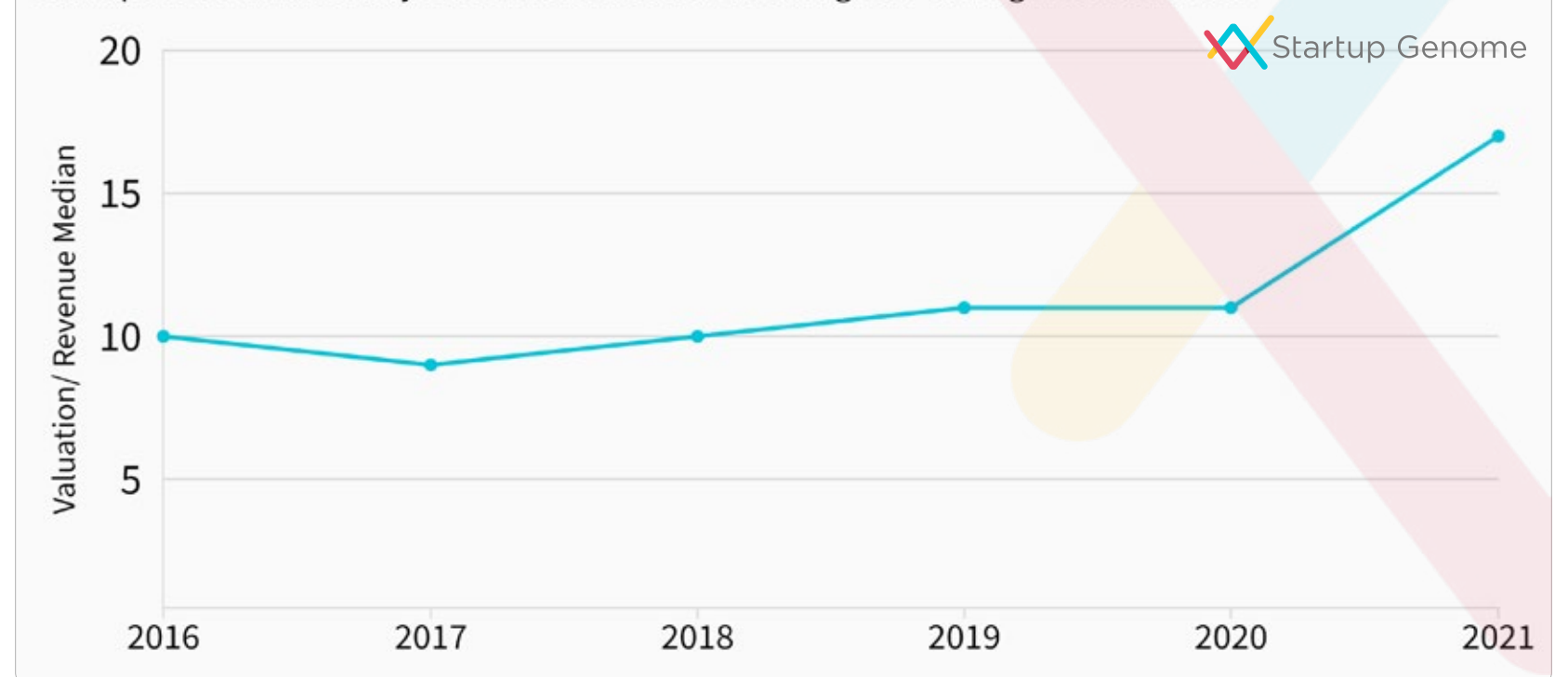


## Increasing Valuation Amounts

Global ecosystems have seen an uptick in post-money valuation. In 2021, companies were exiting at inflated valuations. In both Series B+ and Series C+ deals, there was a huge uptick in the median deal size to revenue and also the median valuation to revenue. Many VCs were writing larger checks as a response to higher competition, which meant a larger runway for startups with lower revenues. The first quarter of 2022 has already seen a pull-back from those levels, perhaps spurred in part by the Federal Reserve introducing interest rate hikes.

### Global Valuation/Revenue Median for Series B+ VC Deals

Startups With Traditionally Lower Revenues Received Higher Funding Rounds in 2021





## Success Factor Highlights

To create the 2022 rankings, we measured six Success Factors in each ecosystem:

- Performance
- Funding
- Market Reach
- Talent & Experience
- Connectedness
- Knowledge

Each of these Factors is assessed and awarded a score of 1 to 10, with 1 the lowest and 10 the highest. For more information, please see [Methodology](#).

## Performance

### Key Findings

- The top five ecosystems in terms of Performance are also the overall global leaders: Silicon Valley, London, New York, Boston, and Beijing.
- Tel Aviv is producing the same level of large exits as Los Angeles and London.
- San Diego jumped four ranks from last year, to #13 and Delhi jumped six places in the Exit factor. Both had growth in \$50 million+ exits.

Startup Genome	Rank	Performance		
		Exit	Ecosystem Value	Startup Success
Silicon Valley	1	10	10	9
New York City	2 (tie)	10	10	6
London	2 (tie)	9	10	9
Boston	4	10	9	9
Beijing	5	10	10	10
Los Angeles	6	9	9	6
Tel Aviv	7	9	8	7
Shanghai	8	9	9	10
Seattle	9	8	8	5
Seoul	10	5	9	2
Washington DC	11	8	5	8
Tokyo	12	6	5	1
San Diego	13	9	7	9
Amsterdam-Delta	14	4	4	8
Paris	15	1	6	1
Berlin	16	5	7	4
Toronto-Waterloo	17	2	3	3
Singapore	18	1	7	1
Chicago	19	4	4	7
Sydney	20	7	5	8
Stockholm	21	2	5	6
Bangalore - Karnataka	22	3	8	8
Shenzhen	23	5	7	9
Denver-Boulder	24	3	6	4
Austin	25	2	3	3
Delhi	26	7	7	7
Philadelphia	27	7	3	6
São Paulo	28	6	8	3
Salt Lake-Provo	29	8	4	4
Vancouver	30	6	4	4
Atlanta	31 (tie)	3	3	5
Copenhagen	31 (tie)	4	2	1
Dallas	31 (tie)	7	2	2
Helsinki	31 (tie)	4	1	10
Miami	31 (tie)	6	2	5
Hangzhou	36 (tie)	1	7	10
Melbourne	36 (tie)	3	1	2
Montréal	36 (tie)	3	1	5
Mumbai	36 (tie)	5	4	8
Munich	36 (tie)	1	3	2

### The Performance Success Factor Assesses:

- **Ecosystem Value** – A measure of the economic impact of the ecosystem, calculated as the total exit valuation and startup valuations over a two-and-a-half-year time period.
- **Exits** – The number of exits over \$50 million and \$1 billion, as well as the growth of exits.
- **Startup Success** – How many startups succeed in the ecosystem. Measured in early-stage success (ratio of Series B to Series A companies), late-stage success (ratio of Series C to A companies and number of billion-dollar club startups), and speed to exits (both to IPO and other exits).



## Funding

### Key Findings

- In the Access factor, Seoul jumped up four places from 2021, and Sydney by two.
- Washington DC is showing particular strength in Quality & Activity.
- Tel-Aviv is ranking high in both the number of deals and amount of funding. Its strength in early-stage funding indicates the ecosystem's innovation.



	Rank	Funding	
		Access	Quality & Activity
Silicon Valley	1	10	10
New York City	2 (tie)	10	10
London	2 (tie)	10	10
Boston	4	9	9
Beijing	5	7	10
Los Angeles	6	10	9
Tel Aviv	7	8	5
Shanghai	8	5	9
Seattle	9	7	6
Seoul	10	9	8
Washington DC	11	6	8
Tokyo	12	8	9
San Diego	13	4	2
Amsterdam-Delta	14	6	7
Paris	15	8	8
Berlin	16	7	7
Toronto-Waterloo	17	9	6
Singapore	18	9	8
Chicago	19	6	7
Sydney	20	6	4
Stockholm	21	5	5
Bangalore-Karnataka	22	8	3
Shenzhen	23	1	7
Denver-Boulder	24	5	4
Austin	25	6	6
Delhi	26	7	2
Philadelphia	27	3	5
São Paulo	28	5	1
Salt Lake-Provo	29	2	3
Vancouver	30	4	3
Atlanta	31 (tie)	4	4
Copenhagen	31 (tie)	2	2
Dallas	31 (tie)	1	1
Helsinki	31 (tie)	3	3
Miami	31 (tie)	3	4
Hangzhou	36 (tie)	1	1
Melbourne	36 (tie)	2	1
Montréal	36 (tie)	2	3
Mumbai	36 (tie)	3	6
Munich	36 (tie)	3	5

### The Funding Success Factor Assesses:

- **Access** - A function of early-stage funding volume and growth.
- **Quality & Activity** - The number of local investors; those investors' experience (average years investing and exit ratio); and their level of activity (percentage of investors active in the first quarter of 2022 and the number of new investors).



Market Reach

Key Findings

- In addition to the largest tech economies, Tel-Aviv, Shanghai, and Stockholm are among the top ecosystems generating Globally Leading Companies. These are the startups that reach new countries and customers.
- Delhi and Bangalore have moved up in their score for Globally Leading Companies since last year, as have Berlin, Stockholm, and São Paulo.
- Commercialization of IP, reflected in the Quality factor, is strong in Tel-Aviv, San Diego, Seattle, and Singapore.

Startup Genome	Rank	Market Reach		
		Local Market Reach	Globally Leading Companies	Quality
Silicon Valley	1	10	10	10
New York City	2 (tie)	10	10	10
London	2 (tie)	5	10	10
Boston	4	10	9	10
Beijing	5	7	9	3
Los Angeles	6	10	8	10
Tel Aviv	7	1	10	10
Shanghai	8	7	8	3
Seattle	9	10	4	10
Seoul	10	3	7	3
Washington DC	11	10	3	10
Tokyo	12	6	5	5
San Diego	13	10	5	10
Amsterdam-Delta	14	2	7	6
Paris	15	4	5	6
Berlin	16	5	5	6
Toronto-Waterloo	17	4	6	5
Singapore	18	1	9	10
Chicago	19	10	2	10
Sydney	20	2	6	5
Stockholm	21	2	8	3
Bangalore-Karnataka	22	5	6	3
Shenzhen	23	7	3	3
Denver-Boulder	24	10	1	10
Austin	25	10	2	10
Delhi	26	5	7	3
Philadelphia	27	10	3	10
São Paulo	28	3	7	3
Salt Lake-Provo	29	10	3	10
Vancouver	30	4	6	5
Atlanta	31 (tie)	10	1	10
Copenhagen	31 (tie)	1	9	3
Dallas	31 (tie)	10	3	10
Helsinki	31 (tie)	1	8	3
Miami	31 (tie)	10	2	10
Hangzhou	36 (tie)	7	1	3
Melbourne	36 (tie)	2	5	5
Montréal	36 (tie)	4	5	5
Mumbai	36 (tie)	5	5	3
Munich	36 (tie)	5	1	6

The Market Reach Success Factor Assesses:

- **Global Leading Companies** - A function of scaleups and unicorns in the ecosystem. Measured in terms of the ratio of companies valued at over \$1 billion to GDP; the ratio of \$1 billion exits to GDP; and the ratio of large exits to funding (exits over \$50 million to Series A rounds).
- **Local Reach** - Size of local markets, proxied as a function of country GDP.
- **IP Commercialization** - An indicator of how much policy encourages the commercialization of tangible IP, measured at the country level.



# Connectedness

## Key Findings

- LA, Toronto-Waterloo, Copenhagen, and Helsinki have improved in Local Connectedness from last year.
- LA, San Diego, Paris, and Philadelphia rank highly in Infrastructure for research in technology and Life Sciences.

Connectedness			
	Rank	Local	Infrastructure
		Connectedness	
Silicon Valley	1	10	10
New York City	2 (tie)	10	10
London	2 (tie)	9	10
Boston	4	8	10
Beijing	5	6	1
Los Angeles	6	8	9
Tel Aviv	7	10	8
Shanghai	8	1	5
Seattle	9	7	5
Seoul	10	8	8
Washington DC	11	8	8
Tokyo	12	3	4
San Diego	13	4	9
Amsterdam-Delta	14	10	8
Paris	15	7	9
Berlin	16	9	8
Toronto-Waterloo	17	10	3
Singapore	18	5	8
Chicago	19	5	9
Sydney	20	7	5
Stockholm	21	6	1
Bangalore-Karnataka	22	6	6
Shenzhen	23	3	3
Denver-Boulder	24	9	3
Austin	25	7	3
Delhi	26	1	2
Philadelphia	27	3	9
São Paulo	28	4	6
Salt Lake-Provo	29	2	1
Vancouver	30	5	6
Atlanta	31 (tie)	4	6
Copenhagen	31 (tie)	3	7
Dallas	31 (tie)	4	4
Helsinki	31 (tie)	3	6
Miami	31 (tie)	2	4
Hangzhou	36 (tie)	1	1
Melbourne	36 (tie)	5	2
Montréal	36 (tie)	2	3
Mumbai	36 (tie)	1	2
Munich	36 (tie)	6	6

## The Connectedness Success Factor Assesses:

- Local Connectedness** - A function of the number of tech meetups in the ecosystem.
- Infrastructure** - A Life Sciences-focused metric that considers the number of accelerators and incubators, research grants, and R&D anchors (for example, top research hospitals and corporate R&D labs) in the ecosystem.



# Talent

## Key Findings

- The top ecosystems in the Startup Experience are no longer just the global leaders. Tokyo and Paris follow right after the world's biggest ecosystems in this category.
- The U.S. still dominates in terms of Scaling Experience, with most of the high-scoring ecosystems in this category coming from the country.
- The acquisition of talent has been easier with things moving online, but there is still a wide range of scores within Access to Talent, particularly within Life Sciences. The cost of talent is rising with startups being more open to remote technical staff members.

## The Talent Success Factor Assesses:

### Tech Talent

- **Access** - The percentage of engineers and employees with at least two years of startup experience at time of hiring.
- **Quality** - A function of the number and density of top developers on GitHub, English proficiency, and history of exits.

Startup Genome	Rank	Talent						
		Tech		Life Sciences			Experience	
		Cost	Quality & Access	STEM Access	LS Access	LS Quality	Scaling Experience in Ecosystem	Startup Experience in Ecosystem
Silicon Valley	1	5	10	3	5	10	10	10
New York City	2 (tie)	7	10	10	10	9	9	10
London	2 (tie)	4	9	10	10	6	10	10
Boston	4	5	9	10	9	9	9	9
Beijing	5	9	8	10	10	4	10	10
Los Angeles	6	4	10	7	7	8	9	9
Tel Aviv	7	5	5	6	8	3	7	8
Shanghai	8	9	8	10	9	4	10	9
Seattle	9	2	10	2	2	10	8	7
Seoul	10	8	3	10	10	2	5	8
Washington DC	11	3	9	7	7	4	9	7
Tokyo	12	1	7	10	9	1	8	9
San Diego	13	6	9	5	2	8	6	5
Amsterdam-Delta	14	1	7	6	9	9	6	5
Paris	15	8	7	10	8	5	3	8
Berlin	16	8	4	6	6	8	6	7
Toronto-Waterloo	17	7	6	10	8	7	3	7
Singapore	18	8	3	5	4	10	2	7
Chicago	19	1	8	3	6	5	8	6
Sydney	20	4	7	10	8	7	4	3
Stockholm	21	5	4	4	7	8	7	6
Bangalore-Karnataka	22	10	1	1	1	2	2	5
Shenzhen	23	9	6	4	1	6	7	8
Denver-Boulder	24	1	4	2	5	3	1	4
Austin	25	3	6	3	1	4	1	5
Delhi	26	10	1	7	3	1	3	4
Philadelphia	27	2	5	4	6	7	4	2
São Paulo	28	10	1	10	6	2	4	4
Salt Lake-Provo	29	4	4	2	2	2	8	1
Vancouver	30	6	6	6	4	5	3	2
Atlanta	31 (tie)	3	8	4	5	5	6	3
Copenhagen	31 (tie)	3	2	1	3	10	5	2
Dallas	31 (tie)	2	5	1	4	3	5	1
Helsinki	31 (tie)	6	1	2	2	7	2	4
Miami	31 (tie)	3	2	3	3	1	4	3
Hangzhou	36 (tie)	9	2	7	5	3	7	6
Melbourne	36 (tie)	6	5	10	8	7	1	1
Montréal	36 (tie)	7	3	6	4	7	2	1
Mumbai	36 (tie)	10	3	1	1	1	5	2
Munich	36 (tie)	7	2	5	3	9	1	3

Quality is also a proxy for experienced scaled teams in the ecosystem.

- **Cost** - Cost efficiency average software engineer salaries. (Higher salaries lead to lower scores.)
- **Life Sciences Talent**
  - **Access** - Number of STEM students and graduates, number of Life Sciences-focused universities and degree programs.
  - **Quality** - A function of Life Sciences quality of instruction and research at local universities as measured by the Shanghai Rankings.
- **Experience**
  - **Scaling Experience** - The cumulative number of significant exits (over \$50 million and over \$1 billion) over 10 years for startups founded in the ecosystem.
  - **Startup Experience** - The cumulative number of early-stage companies started and funded at the Series A stage.



Knowledge

Key Findings

- Silicon Valley, Beijing, and Tokyo are top patent producers, and the complexity of patents is adding to their strong scores.
- Research quality, an important factor in more specialized sectors such as AI and Life Sciences, is strong in leading U.S. ecosystems. London, Paris, Berlin, and Toronto-Waterloo follow closely behind.

Startup Genome	Knowledge		
	Rank	Patents	Research
Silicon Valley	1	9	10
New York City	2 (tie)	6	10
London	2 (tie)	8	7
Boston	4	7	10
Beijing	5	10	4
Los Angeles	6	7	10
Tel Aviv	7	9	2
Shanghai	8	10	4
Seattle	9	8	10
Seoul	10	9	2
Washington DC	11	3	10
Tokyo	12	9	6
San Diego	13	7	10
Amsterdam-Delta	14	5	5
Paris	15	5	6
Berlin	16	3	6
Toronto-Waterloo	17	5	6
Singapore	18	6	2
Chicago	19	2	10
Sydney	20	3	4
Stockholm	21	8	4
Bangalore-Karnataka	22	8	2
Shenzhen	23	10	4
Denver-Boulder	24	4	10
Austin	25	6	10
Delhi	26	6	2
Philadelphia	27	2	10
São Paulo	28	1	1
Salt Lake-Provo	29	1	10
Vancouver	30	5	6
Atlanta	31 (tie)	1	10
Copenhagen	31 (tie)	2	3
Dallas	31 (tie)	4	10
Helsinki	31 (tie)	3	2
Miami	31 (tie)	1	10
Hangzhou	36 (tie)	10	4
Melbourne	36 (tie)	2	4
Montréal	36 (tie)	5	6
Mumbai	36 (tie)	4	2
Munich	36 (tie)	7	6

The Knowledge Success Factor Assesses:

- **Research** - Based on the H-Index, a measure of publication impact, this metric looks at the production of Life Sciences research at the country level.
- **Patents** - The volume, complexity, and potential of Life Science patents generated in the ecosystem.



## Global Startup Ecosystem Report 2022

# Rankings 2022: Top 100 Emerging Ecosystems

Emerging ecosystems are startup communities at earlier stages of growth, and our [ranking methodology](#) is adapted to reflect this, to showcase the strengths in these ecosystems that have high potential to be global top performers in the coming years.

## Key Findings

- Oslo is in the top 20 Emerging Ecosystems (#19), a huge leap of over 20 places from last year, and a reflection of two unicorns — industrial IoT platform [Cognite](#) and online grocery [Oda](#) — helping to increase its Market Reach.
- Minneapolis has moved up 18 places from last year, to #4. Six exits over \$50 million and one \$1 billion+ exit helped to improve its Performance score.
- Manchester-Liverpool has moved up eight places from 2021, to #6. A \$1 billion+ exit and [Matillion](#) — an integration platform for cloud data warehouses — becoming a unicorn add \$7.8 billion to its Ecosystem Value.

- India's recent success is reflected in both Chennai (tied #31–40) and Pune (tied #51–60) moving up in the rankings. The Chennai ecosystem saw a \$1 billion exit in business software startup [Freshworks](#), which moved to Silicon Valley after founding in India.
- Mumbai's has moved out of the Emerging Ecosystems ranking and into the global overall rankings (tied #36). Three exits over \$1 billion (including Nykka's \$7 billion valuation at IPO) and six unicorns contributed to the move.
- Pittsburg moved up 10 spots from last year to #13, aided by Duolingo's \$3.6 billion exit.
- Prague has moved up more than 40 spots, to tied

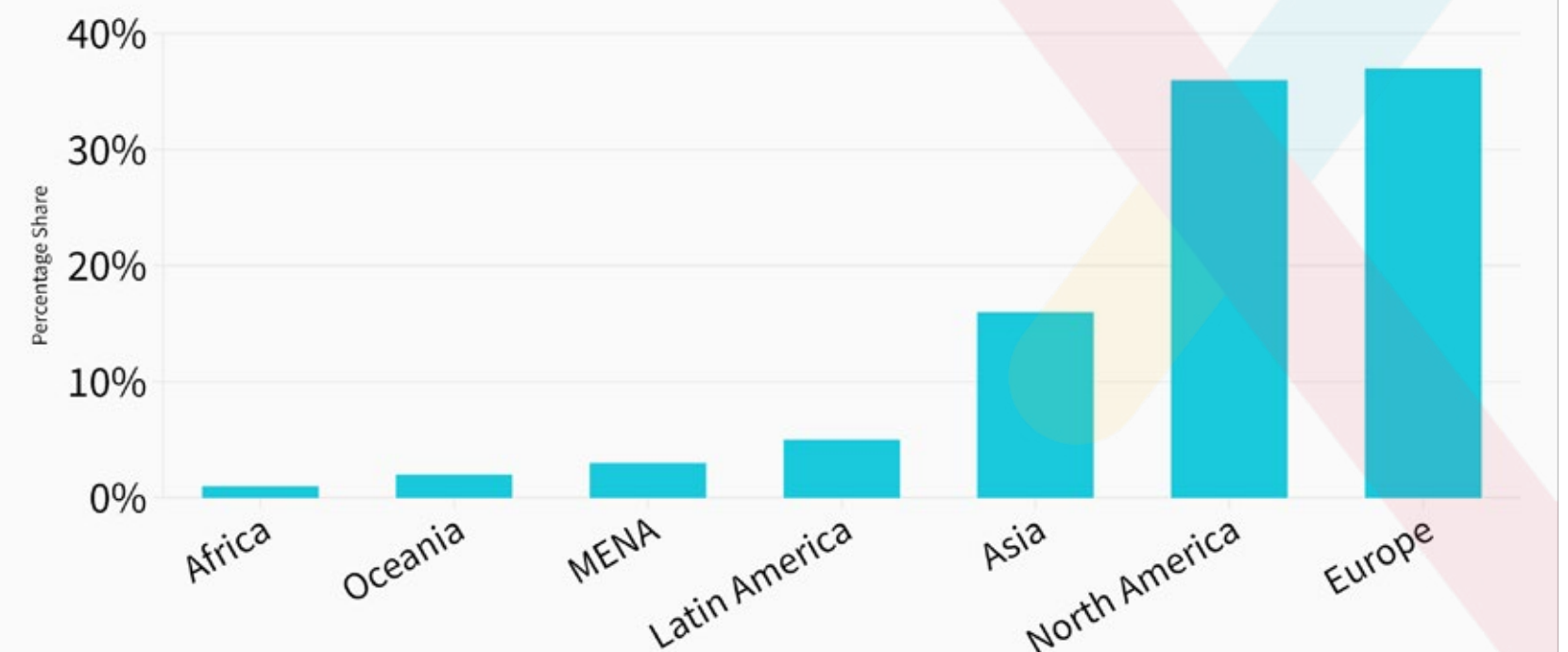
#41-50, thanks to three exits over \$50 million and one over \$1 billion. These big exits are helping to increase its ranking in Performance and Market Reach.

The top 100 Emerging Ecosystems are collectively worth over \$1 trillion in Ecosystem Value, which is a 96% increase from last year. Europe and North America still boast the majority of emerging ecosystems, and Latin America, MENA, and Africa have held steady in the number of ecosystems in the top 100 from last year, with five, four, and three respectively. Asia has 17 entries in the Emerging Ecosystems ranking versus 18 last year. Oceania has the same two entries in the top 100 as last year: New Zealand and Brisbane.

### Share of Emerging Ecosystem by Continent

Europe is Home to More Than a Third of the World's Emerging Ecosystems

Startup Genome





## Top 100 Emerging Ecosystems

	Rank - Tier	Region	Country	Performance	Funding	Market Reach	Talent & Experience
Detroit	1	North America	United States	10	8	10	10
Hong Kong	2	Asia	Hong Kong	9	10	10	10
Dublin	3	Europe	Ireland	10	8	10	10
Minneapolis	4	North America	United States	10	8	10	9
Houston	5	North America	United States	9	9	7	9
Manchester-Liverpool	6	Europe	United Kingdom	9	9	4	10
Guangzhou	7	Asia	China	10	5	4	10
Research Triangle	8	North America	United States	9	9	8	10
Barcelona	9	Europe	Spain	8	10	1	9
Brussels	10	Europe	Belgium	9	10	2	10
Zurich	11	Europe	Switzerland	7	10	2	8
Jakarta	12	Asia	Indonesia	10	10	2	2
Pittsburgh	13	North America	United States	9	9	10	8
Istanbul	14	Europe	Turkey	9	10	3	7
Dubai	15	MENA	United Arab Emirates	9	10	6	1
Portland	16	North America	United States	10	5	10	7
Wuxi	17	Asia	China	10	3	6	8
Madrid	18	Europe	Spain	6	10	1	10
Oslo	19	Europe	Norway	8	8	6	9
Phoenix	20	North America	United States	8	7	8	7

Factors scored 1 to 10, with 1 the lowest and 10 the highest. For more information, please see Methodology.

contd.



## Top 100 Emerging Ecosystems

	Rank - Tier	Region	Country	Performance	Funding	Market Reach	Talent & Experience
Bristol	21-30	Europe	United Kingdom	7	8	3	10
Frankfurt	21-30	Europe	Germany	8	6	6	9
Geneva	21-30	Europe	Switzerland	8	8	4	6
Kuala Lumpur	21-30	Asia	Malaysia	9	9	4	4
Moscow	21-30	Europe	Russia	6	9	1	8
Nanjing	21-30	Asia	China	10	2	3	8
Nashville	21-30	North America	United States	7	6	10	7
Metro Rhein-Ruhr	21-30	Europe	Germany	6	8	3	9
Santa Barbara	21-30	North America	United States	10	2	9	7
Tampa Bay	21-30	North America	United States	7	6	10	7
Birmingham	31-40	Europe	United Kingdom	5	6	3	10
Chengdu	31-40	Asia	China	10	1	4	9
Chennai	31-40	Asia	India	9	4	1	6
Edinburgh-Glasgow	31-40	Europe	United Kingdom	5	9	2	9
Estonia	31-40	Europe	Estonia	4	9	7	1
Indianapolis	31-40	North America	United States	4	7	7	7
Milan	31-40	Europe	Italy	6	9	1	8
New Zealand	31-40	Oceania	New Zealand	8	6	1	9
St. Louis	31-40	North America	United States	6	6	6	5
Taipei City	31-40	Asia	Taiwan	7	8	1	5

Factors scored 1 to 10, with 1 the lowest and 10 the highest. For more information, please see Methodology.

contd.



## Top 100 Emerging Ecosystems

	Rank - Tier	Region	Country	Performance	Funding	Market Reach	Talent & Experience
Charlotte	41-50	North America	United States	6	3	10	5
Columbus	41-50	North America	United States	7	1	7	6
Hartford	41-50	North America	United States	5	1	9	7
Kansas City	41-50	North America	United States	5	5	7	5
Las Vegas	41-50	North America	United States	5	5	8	5
Lisbon	41-50	Europe	Portugal	5	7	3	4
Mexico City	41-50	Latin America	Mexico	3	10	2	4
Orlando	41-50	North America	United States	2	6	8	8
Prague	41-50	Europe	Czechia	7	4	7	3
Sacramento	41-50	North America	United States	5	3	7	6
Bucharest	51-60	Europe	Romania	8	5	1	1
Cincinnati	51-60	North America	United States	2	4	8	7
Hamburg	51-60	Europe	Germany	2	7	2	8
Lyon	51-60	Europe	France	3	5	1	8
Pune	51-60	Asia	India	7	5	1	1
Stuttgart	51-60	Europe	Germany	6	4	2	8
Vienna	51-60	Europe	Austria	1	8	1	7
Warsaw	51-60	Europe	Poland	3	8	1	6
Wilmington	51-60	North America	United States	3	7	7	1
Wuhan	51-60	Asia	China	8	1	4	5

Factors scored 1 to 10, with 1 the lowest and 10 the highest. For more information, please see Methodology.

contd.



## Top 100 Emerging Ecosystems

	Rank - Tier	Region	Country	Performance	Funding	Market Reach	Talent & Experience
Brisbane	61-70	Oceania	Australia	4	3	1	9
Buenos Aires	61-70	Latin America	Argentina	5	6	2	1
Buffalo	61-70	North America	United States	7	1	9	1
Calgary	61-70	North America	Canada	1	7	1	5
Lagos	61-70	Africa	Nigeria	3	9	1	2
Lille	61-70	Europe	France	8	1	3	1
Lithuania	61-70	Europe	Lithuania	1	7	7	1
Luxembourg	61-70	Europe	Luxembourg	2	4	10	1
San Bernardino	61-70	North America	United States	7	1	9	2
Telangana	61-70	Asia	India	2	7	1	1
Belfast	71-80	Europe	United Kingdom	5	1	3	2
Burlington	71-80	North America	United States	4	1	8	4
Cairo	71-80	MENA	Egypt	1	10	1	3
Cleveland	71-80	North America	United States	1	2	6	6
Durham	71-80	Europe	United Kingdom	4	2	1	6
Marseille	71-80	Europe	France	4	1	3	6
New Orleans	71-80	North America	United States	6	1	9	1
Santiago-Valparaiso	71-80	Latin America	Chile	1	7	1	2
Tianjin	71-80	Asia	China	8	1	3	4
Xiamen	71-80	Asia	China	6	1	4	6

Factors scored 1 to 10, with 1 the lowest and 10 the highest. For more information, please see Methodology.

contd.



## Top 100 Emerging Ecosystems

	Rank - Tier	Region	Country	Performance	Funding	Market Reach	Talent & Experience
Bogotá	81-90	Latin America	Colombia	4	6	1	1
Charlottesville	81-90	North America	United States	3	1	9	3
Ho Chi Minh City	81-90	Asia	Vietnam	1	5	1	1
Jacksonville	81-90	North America	United States	3	1	9	5
Madison	81-90	North America	United States	2	1	9	1
Omaha-Lincoln	81-90	North America	United States	1	1	8	3
Ottawa	81-90	North America	Canada	1	3	1	5
Reno	81-90	North America	United States	2	1	8	1
Riyadh	81-90	MENA	Saudi Arabia	1	7	1	1
Valencia	81-90	Europe	Spain	3	4	1	1
Albuquerque	91-100	North America	United States	1	1	7	1
Athens	91-100	Europe	Greece	2	1	1	4
Bangkok	91-100	Asia	Thailand	4	2	1	1
Basel	91-100	Europe	Switzerland	6	1	1	1
Gothenburg	91-100	Europe	Sweden	2	2	1	3
Mannheim-Heidelberg	91-100	Europe	Germany	5	1	1	1
Richmond	91-100	North America	United States	1	1	9	1
Rio de Janeiro	91-100	Latin America	Brazil	3	1	1	4
San Antonio	91-100	North America	United States	1	1	6	1
Western Denmark	91-100	Europe	Denmark	1	1	1	4

Factors scored 1 to 10, with 1 the lowest and 10 the highest. For more information, please see Methodology.



### Top 10 Ecosystems by Ecosystem Value:

Ecosystems	Ecosystem Value (\$B)
Detroit	\$90.6
Kuala Lumpur	\$71.8
Hong Kong	\$63.5
Jakarta	\$61.9
Nanjing	\$44.6
Guangzhou	\$38.6
Bucharest	\$36.9
Wuxi	\$32.8
Tianjin	\$26.2
Minneapolis	\$23.9

### Emerging Ecosystems with Four or More Unicorns in the Last 10 Years:

Ecosystems	Number of Unicorns
Phoenix	4
Tianjin	4
Mexico City	5
Hong Kong	7
Jakarta	7
Wuxi	7
Guangzhou	9
Nanjing	10

### Top 10 Emerging Ecosystems by Total Early-Stage Funding:

Ecosystems	Early-Stage Funding (\$M)
Zurich	\$1,365.4
Jakarta	\$1,284
Guangzhou	\$1,134.3
Hong Kong	\$1,022.3
Barcelona	\$857.3
Mexico City	\$811.5
Phoenix	\$742.4
Nanjing	\$721.8
Research Triangle	\$680
Dublin	\$679.8



## Global Startup Ecosystem Report 2022

# Global Startup Sub-Sector Analysis

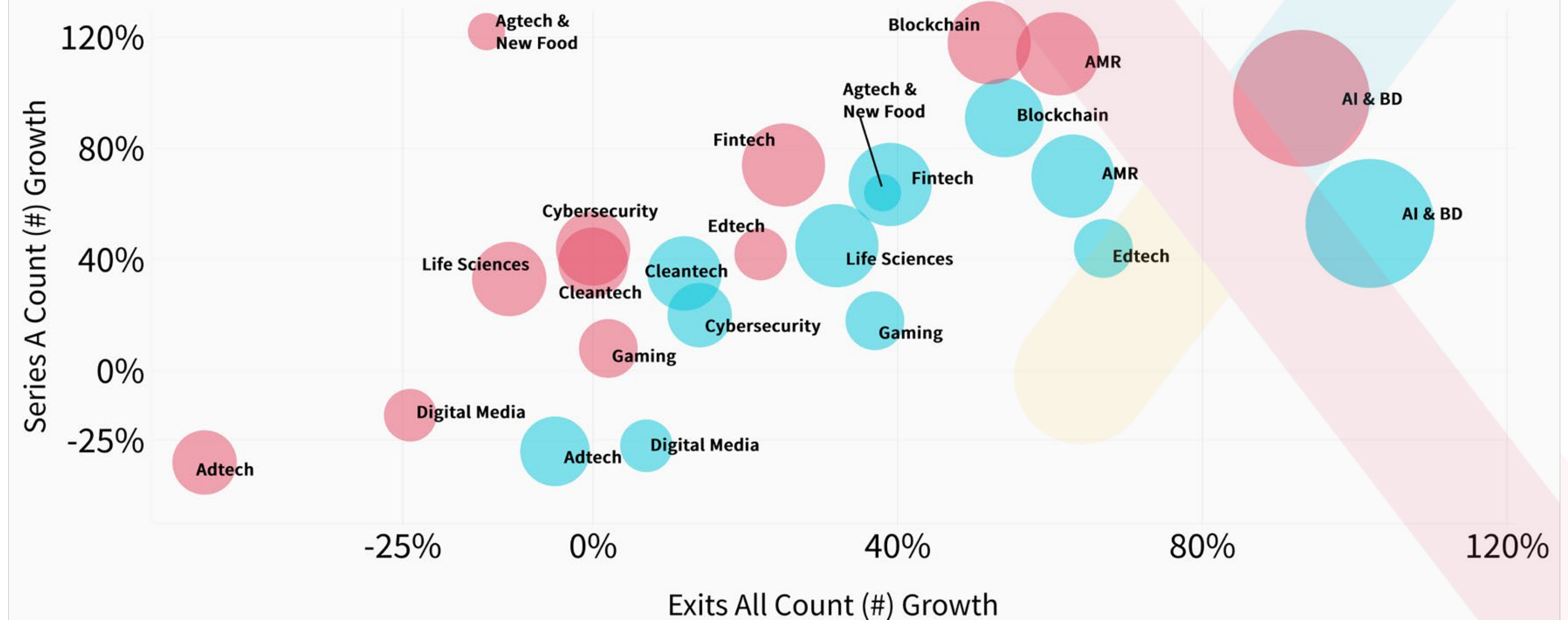
## Key Findings

- Since the GSER 2021, there has been an overall increase in the growth of exits and a general slowing in the growth of Series A rounds. The increase in the growth of exits has helped investors hold dry powder (marketable securities that are highly liquid and considered cash-like), as revealed in the record high VC investment amounts.
- Cybersecurity has received growing attention, as a side effect of the acceleration in digital transformation. Exit growth in this sub-sector has increased by 14% since the GSER 2021.
- All sub-sectors have accelerated in growth overall, with the largest growth in AI & BD, Blockchain, Fintech, and Advanced Manufacturing.
- AI & BD is becoming an overarching vertical that is increasingly overlapping with other industries both in terms of the amount of investment and count. In 2014, the overlap in the investment amount was outperforming the count, showing fewer investments in AI and tech. In 2020, the trend is the opposite, indicating competition among global AI startups to attract funds.
- Cleantech is the only sub-sector that has seen a considerable increase in count at both Series A (by 35%) and exit (by 12%, both 2016-2017 vs. 2020-2021), indicating increased innovation and investor focus on this topic.
- Advanced Manufacturing has grown by 70% in early-stage funding (2016-2017 vs. 2020-2021), driven by supply chain needs and a focus on improving efficiency and productivity through automation, monitoring, and failure prediction.



# Global Sub-Sector Lifecycle

By Count of Series A Deals and Exits

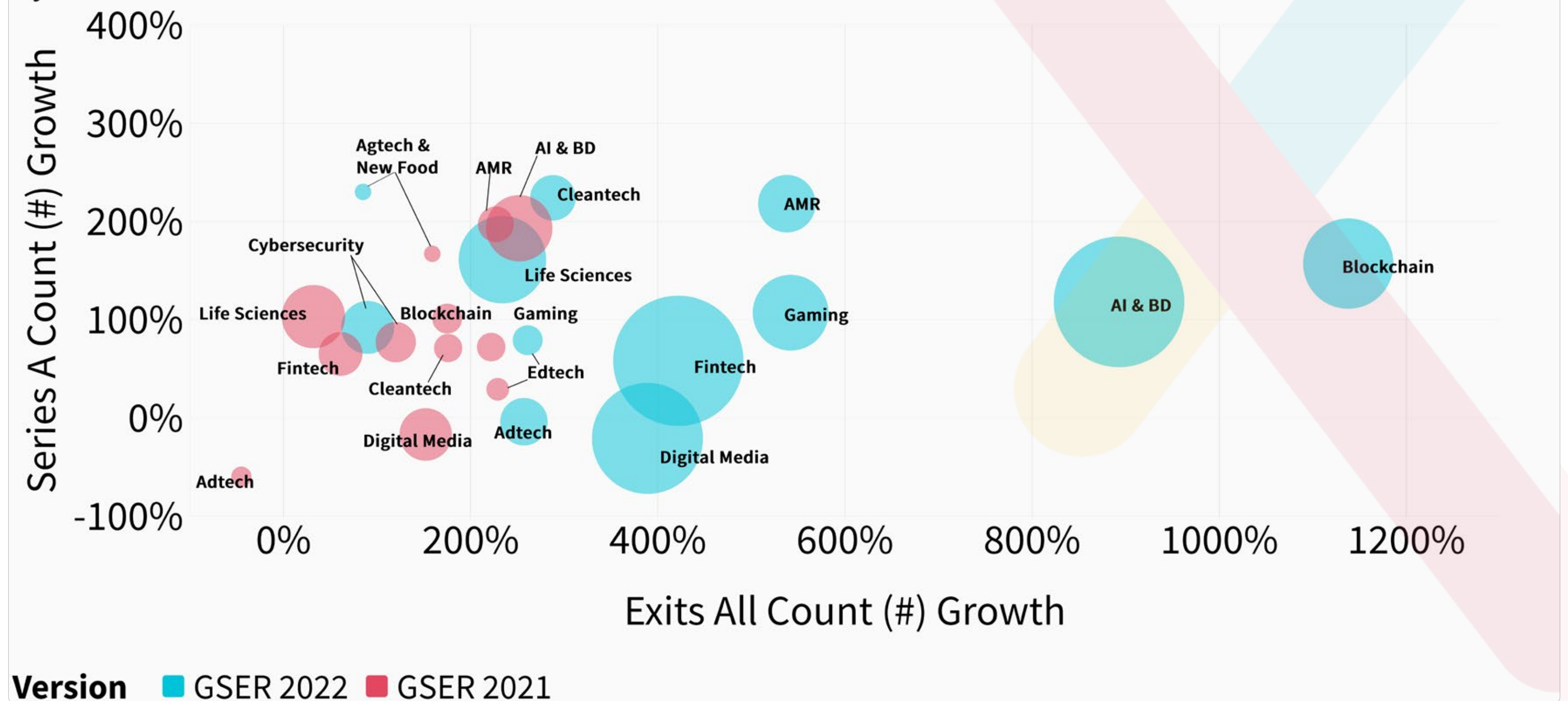


**Version** ■ GSER 2022 ■ GSER 2021



# Global Sub-Sector Lifecycle

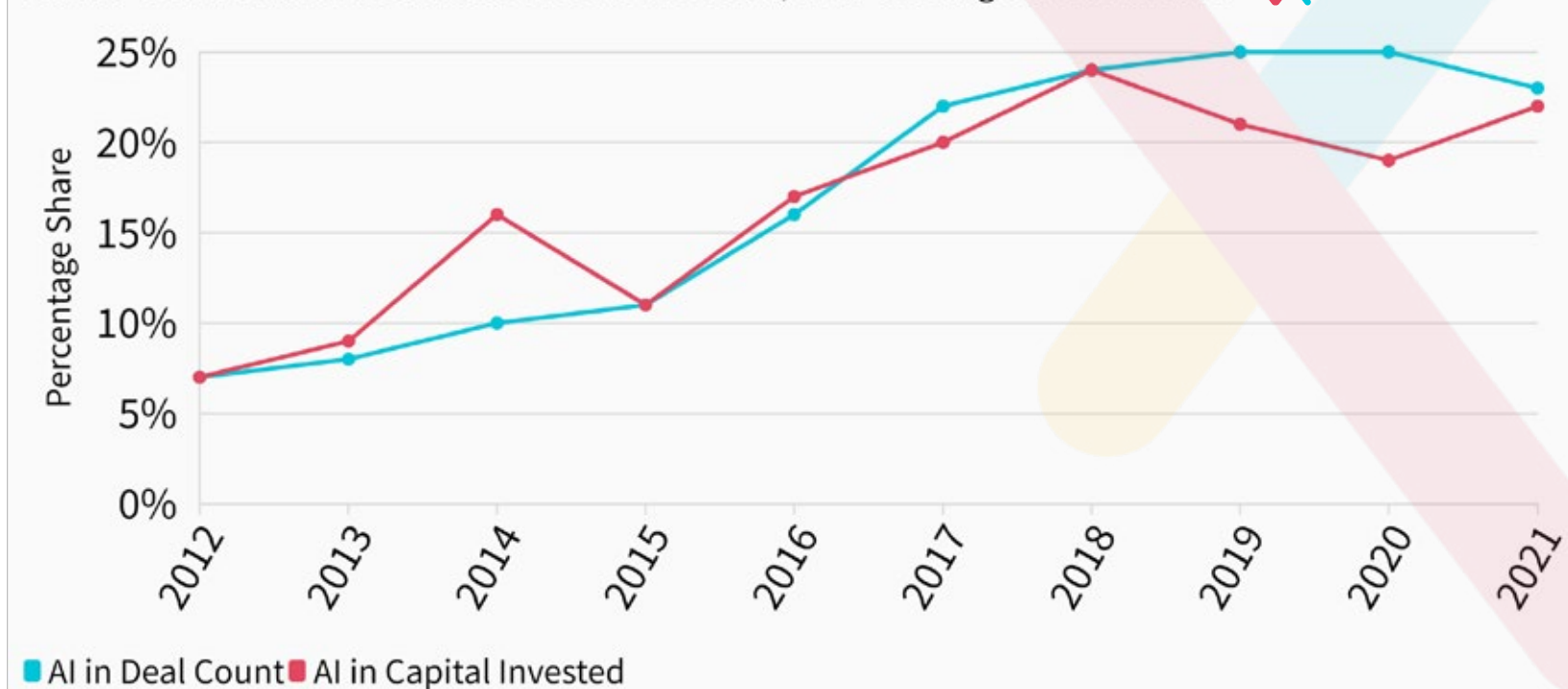
By Amount of Series A Deals and Exits





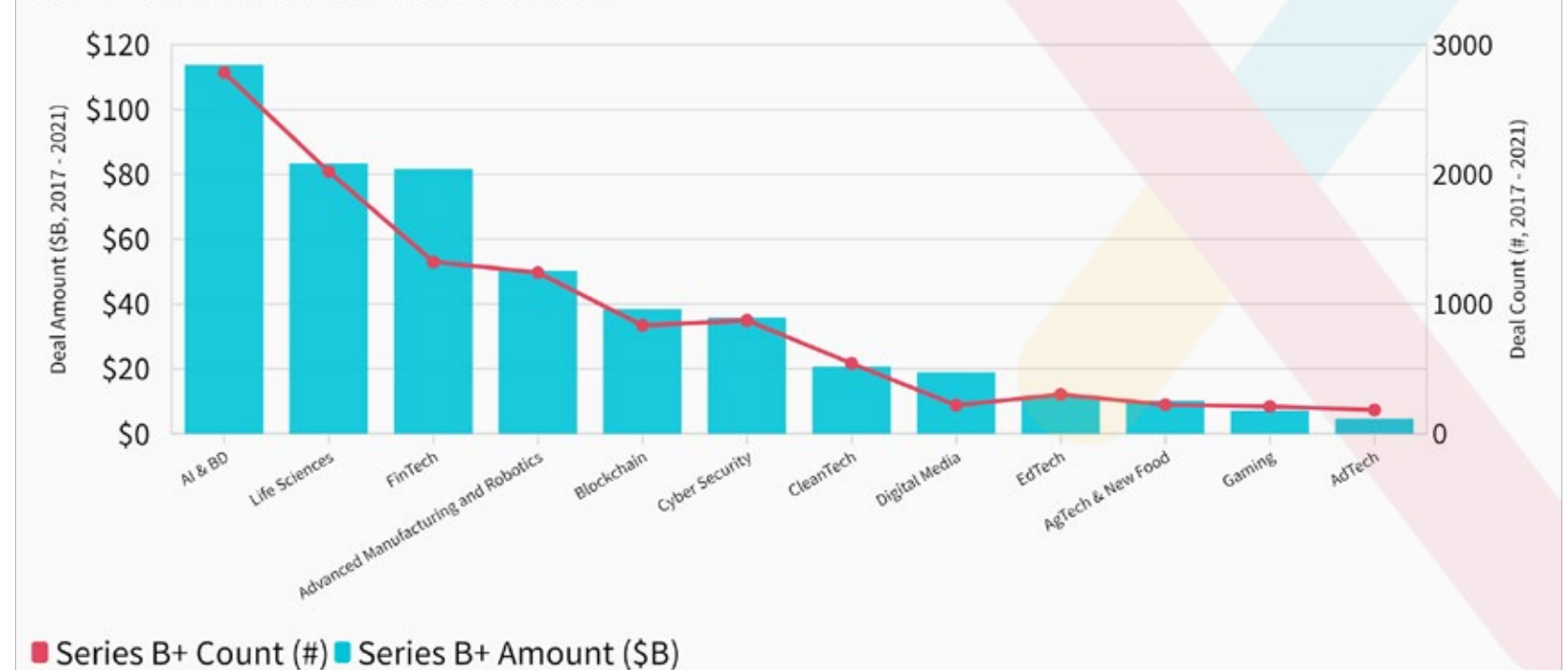
## Percentage Overlap of AI Deals With All Tech Deals

All Sub-Sectors Have Accelerated in Growth Overall, With the Largest Growth in AI



## Series B+ Deals by Sub-Sector

AI&BD Leads in Both Count and Amount



## Global Trends in Startup Sub-Sectors

The impact of the COVID-19 pandemic continues to be reflected in sub-sector trends. In the period considered, global supply chains were heavily disrupted, as they continue to be in 2022. AI & BD and Advanced Manufacturing saw growth as manufacturers, logistics companies, and retailers all aimed to improve the efficiency and productivity of their processes. Examples include Silicon Valley-based [Nuro](#), the developer of a fully autonomous, on-road vehicle used for autonomous delivery, which raised \$600 million in a late-stage funding

round in 2021; and [4paradigm](#), a Beijing AI platform that raised \$750 million in 2021.

More broadly, AI & BD's increasing overlap with other industries both in terms of amount invested and deal count demonstrates how much machine learning is a part of many aspects of our daily lives. Data-driven decision-making and algorithmic processes are quickly becoming the norm.

As the pandemic accelerated the digital transformation and remote learning became the new normal in much of the world, the growth of Edtech is perhaps not surprising.

The U.S and China invested the most in Edtech venture capital deals, with India third. India is second behind the U.S in the amount invested in Edtech at seed stage. However, China's strong position may be impacted by the nation introducing prohibitive Edtech policies.

As of July 2021, Chinese companies teaching academic curriculum must be nonprofit and can't pursue IPOs or take foreign capital. Listed companies are prohibited from issuing stock or raising money in capital markets to invest in tutoring institutions, and foreign firms are banned from acquiring or holding shares in tutoring institutions, among other restrictions. Given that the



nation is home to more than 400 million students — the largest Edtech market globally — these policies have real potential to slow growth in the sub-sector.

Blockchain has seen a 91% growth at early-stage funding over the last five years, and 12% since last year. The technology continues to be mainly used in the banking and financial services sector, where it is transforming traditional models. However, Blockchain-based solutions are also being used to build more resilient supply chains, ensure secure health data exchanges, and improve the hospitality industry, among many other applications.

### Percentage Change in Early-Stage Funding Deals Over Five Years

#### Fastest-Growing Sub-Sectors

Advanced Manufacturing and Robotics	70%
AI & BD	53%
Blockchain	91%
Edtech	44%

#### Declining Sub-Sectors

Adtech	-29%
Digital Media	-27%



Sub-Sectors in Growth Phase

The four sub-sectors in the Growth stage are increasing in size at an astounding pace, with an average 64% rise in number of early-stage funding deals over five years and an average 71% growth in exits.

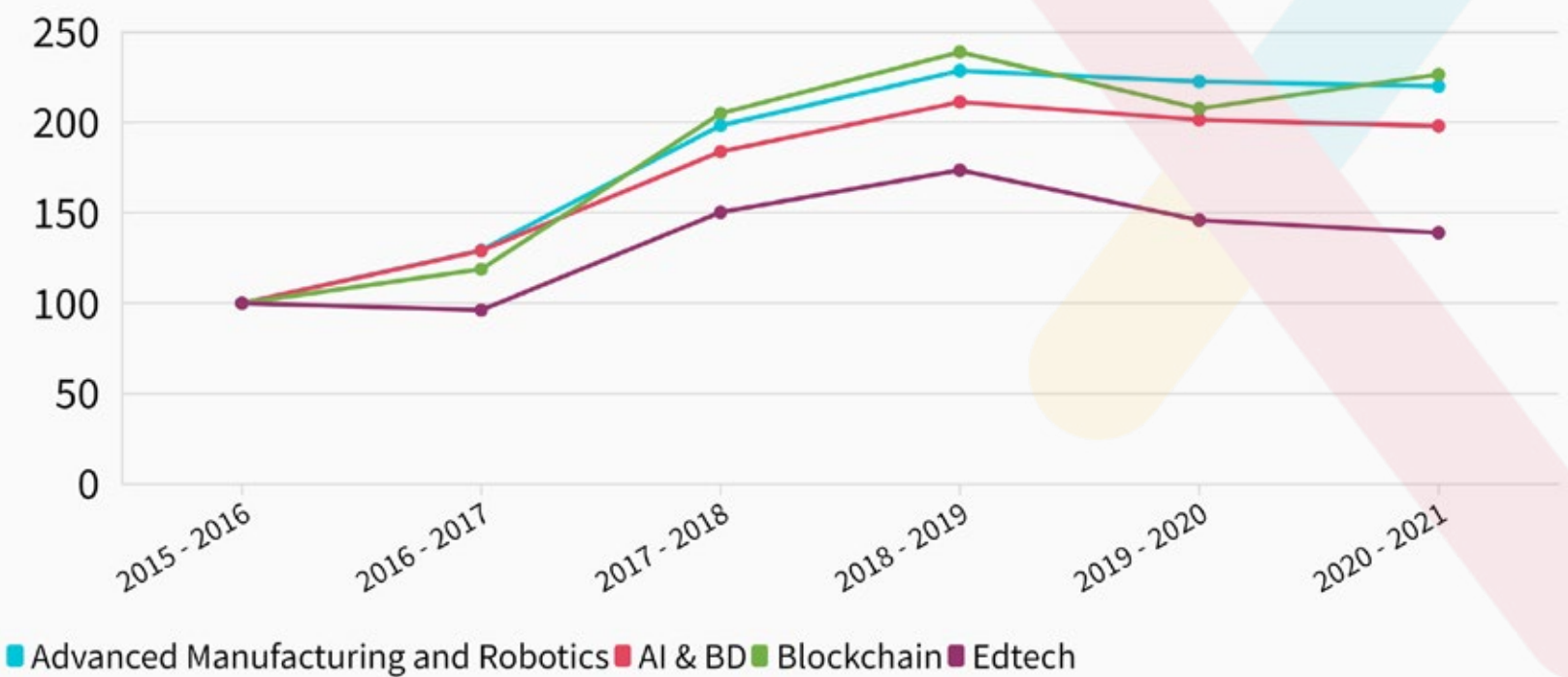
Edtech has moved from the Mature phase last year to Growth this year, a reflection of 67% growth in the Exit count and a 44% growth in Series A count. Overall, Edtech startups grew 5%, which is a representative of a rise in the number of scale-ups.

Among Growth-phase sub-sectors, AI & BD is the largest, comprising 24% of all global startups. The sub-sector has grown 74% since last year, with 84% in AI. The huge percentage increase in growth is a reflection of the total VC amount invested.

- Advanced Manufacturing and Robotics
- AI & BD
- Blockchain
- Edtech

Startups Sub-Sectors in Growth Phase

Early-Stage Funding by Sub-Sector 2-Year Moving Average Indexed Year 2015-2016



Sub-Sector	Series A Deals: Five-Year Growth	Exit Deals: Five-Year Growth	Share of Global VC-Funded Startups
Advanced Manufacturing & Robotics	70%	63%	10%
AI & BD	53%	102%	24%
Blockchain	91%	54%	9%
Edtech	44%	67%	5%

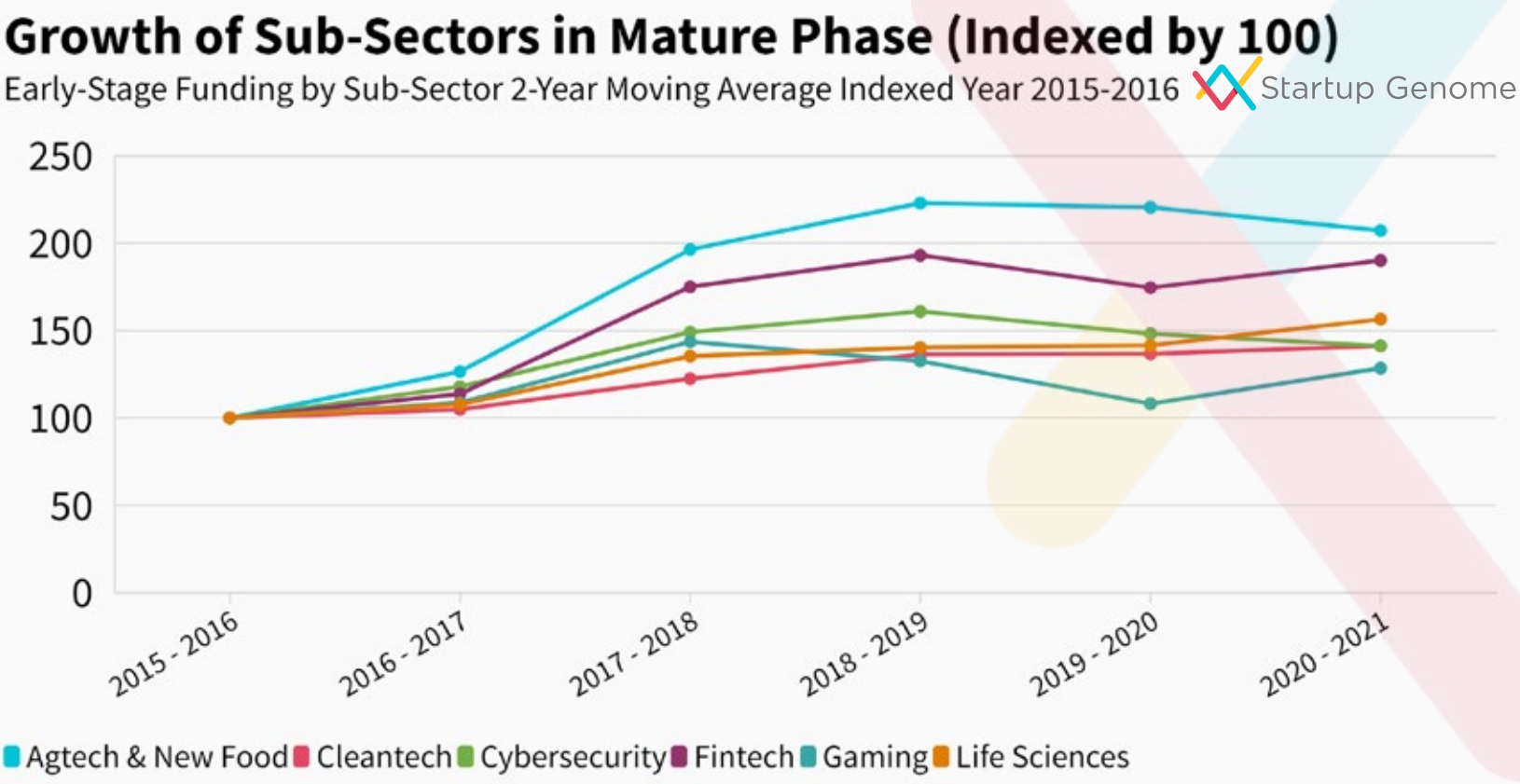


## Sub-Sectors in Mature Phase

The sub-sectors in the Mature phase have changed somewhat since last year’s report. Cybersecurity, Cleantech, Gaming, and Life Sciences remain in the Mature phase, and Fintech has moved from Growth to Mature. Edtech and Agtech & New Food have moved from Mature to Growth.

Collectively, the Growth-phase sub-sectors saw growth of 37% in Series A funding and 31% in exits over the past five years.

- Agtech & New Food
- Cleantech
- Cybersecurity
- Fintech
- Gaming
- Life Sciences



Sub-Sector	Series A Deals: Five-Year Growth	Exit Deals: Five-Year Growth	Share of Global VC-Funded Startups
Agtech & New Food	64%	38%	2%
Cleantech	35%	12%	8%
Cybersecurity	20%	14%	6%
Fintech	67%	39%	10%
Gaming	18%	37%	5%
Life Sciences	45%	32%	10%



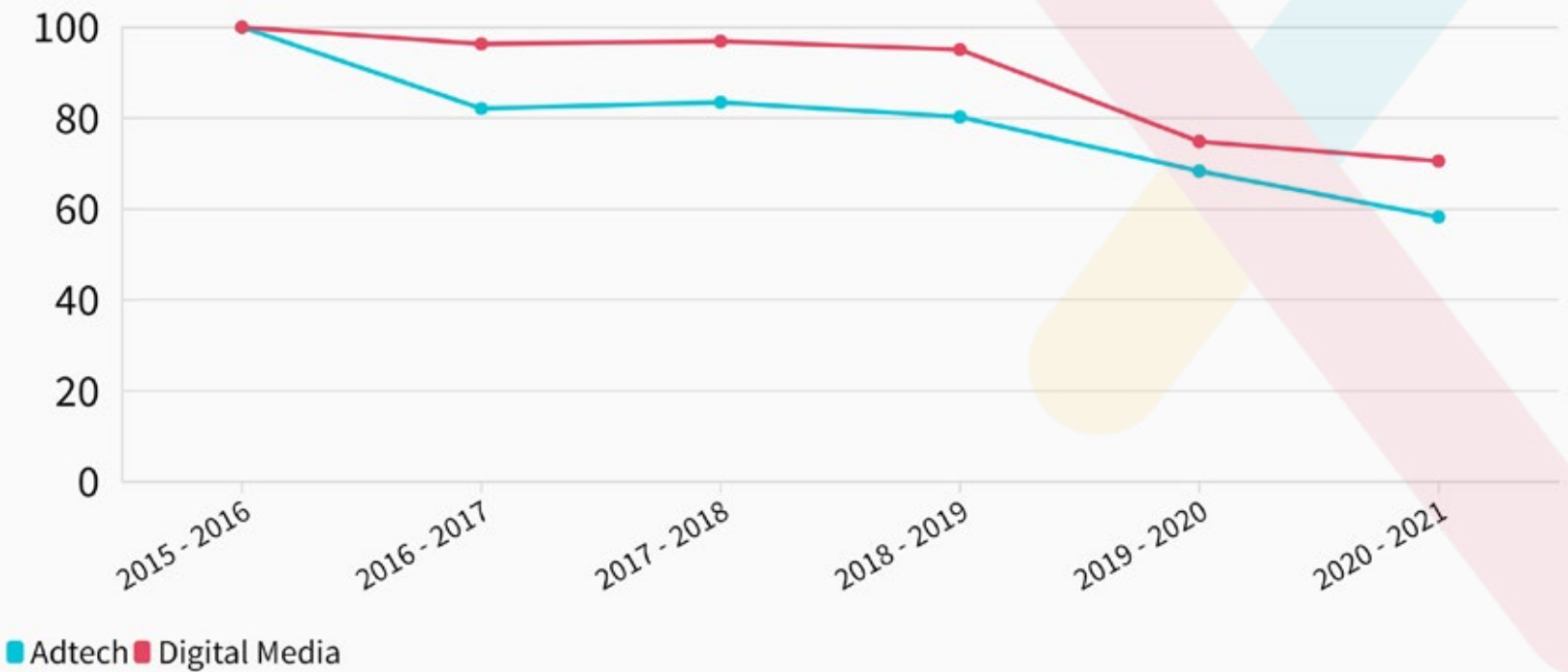
## Sub-Sectors in Decline Phase

In the last five years, Adtech and Digital Media underperformed compared to other startup sub-sectors, indicated by a decrease in the growth rates of Series A deals and exits.

- Adtech
- Digital Media

### Startups Sub-Sectors in Decline Phase

Early-Stage Funding by Sub-Sector 2-Year Moving Average Indexed Year 2015-2016



Sub-Sector	Series A Deals: Five-Year Growth	Exit Deals: Five-Year Growth	Share of Global VC-Funded Startups
Adtech	-29%	-5%	7%
Digital Media	-27%	7%	4%



# Startup Founders' Corner

- 55 Why Founders Should Be Open and Direct About Their Values
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- 65 How to Get Mentoring Right





## Global Startup Ecosystem Report 2022

# Why Founders Should Be Open and Direct About Their Values

**JOEL SOLOMON**

Joel Solomon is a founding partner of [Renewal Funds](#), Canada's largest mission venture capital firm, a co-producer of the [Just Economy Institute](#), and the co-author of *The Clean Money Revolution: Re-Inventing Power, Purpose & Capitalism*.

At Renewal Funds, the mission-driven venture capital fund where I am a founding partner, we believe our actions paint our lifetime choices onto the canvas of people and planet. Both our personal and professional choices impact the legacy that we leave to the next generation. Neither your net worth nor the size of your startup's exit is the demonstration of who you are in this lifetime. Rather, your legacy is how you contributed to the future we are all creating together.

As investors, our job is to find businesses and entrepreneurs that are working on solutions that will help shape the future for the better. And we're not shy about sharing this vision with founders who come to us seeking investment, the LPs who invest in our fund for this very reason, and the broader entrepreneurial community we operate in. We hope that everything about our firm conveys this ethic, from how we are as individuals to how we treat our potential partners.

*This contributed article was prepared by the authors in a personal capacity. The opinions expressed in this article are the authors' own and do not necessarily reflect the views or position of Startup Genome.*

We find this works as a sorting filter, allowing others to choose whether they want to do business with us or not, and vice versa. Being clear and direct about our values also helps create the basic soil in which healthy relationships can grow. In business there will always be difficulties, hard choices, and necessary trade-offs. Even the most aligned collaborators sometimes see the world differently. Being transparent about your values from the start helps everyone treat each other with respect and come to decisions we can all live with.

## Declare Your Commitments Loudly and Early

We recommend being clear and committed on the subject of values from the very beginning. From the start, ask yourself why? What inspires your passion for your entrepreneurial idea? Does it contribute to the betterment of humanity, planetary well being, and future



generations? Am you clear on why you're devoting your life to this venture?

Understanding your personal why is an essential first step, but we also encourage founders to share that why and set up systems to make sure their business decisions align with that purpose. That's why we participate in a number of different accreditation organizations like the B Corporation, a private certification of for-profit companies of their social and environmental performance. We don't force this structure upon founders, but we strongly encourage it and provide support to help them understand the option.

Such structures help founders validate and track their impact and describe what they're doing so that others can understand it. They drive you to ask yourself whether your product, business, workplace culture, supply chain, and externalities all contribute to humanity and express

your point of view in making the world better for future generations.

Setting up your business as a B Corp means making a public commitment to your values and focusing on the ultimate outcomes of your products and services beyond the bottom line. It creates a kind of systemic feedback loop in which commitment to your mission begets impact that only strengthens that commitment to your mission.

This commitment to values should also shine through in who you choose to work with and how you treat those collaborators. Being loud about your values when hiring or looking for investors sends a fair signal to those who have a very different type of philosophy about your standards and expectations. As with every relationship, sometimes things don't work out as you expect, but giving a very honest and straightforward picture of what is important to you helps you find people with similar commitments and can save much confusion and heartache down the line.

## Living Your Values Helps Change the World

Today, there is an explosion of people who are concerned about the future and who are dedicating

their lives to thinking about challenges and coming up with solutions. Sometimes that work involves deeply technical innovations. Other times, it includes a consumer product that affects everyday people shopping at the grocery store. Entrepreneurs are innovating our cities, our transportation system, our energy systems. Renewal Funds has invested in everything from marketplaces for consumers electrifying their homes to carbon-neutral snack foods. Entrepreneurship is a huge world full of all kinds of people that see things differently.

We may have different points of view, different skill sets, and different reasons for why we do things. There are nearly infinite ways to be a mission-driven founder. But I urge you to lead from your values and declare those commitments loudly and early.

In practical terms, that makes finding like-minded collaborators and running your company in line with your mission go more smoothly. But it also shapes the culture around us. If we live in accordance with our deepest values and treat those we work with in line with our values, it brings those deepest values into the pragmatic world of making money and buying and selling. And it allows each of us to be the most positive influence on that world that we can be.

**“Your legacy is how you contributed to the future we are all creating together.”**



## Global Startup Ecosystem Report 2022

# What You Need to Know Before You Start Fundraising

**DHAVAL CHADA**

Prior to co-founding Justos, which is redesigning insurance in Latin America, Dhaval Chada co-founded and exited a startup to ClassPass, where he then ran a business division and headed Latin American operations. He advises Lever VC, an early-stage fund focused on alternative protein, and has invested in early-stage Fintech startups. Dhaval is a certified coach, and he occasionally works with founders in an advisory capacity.

Ever since we raised our Series A round in 2021, founders all over Latin America have been reaching out to me to ask how we did it and to see if I might want to be an angel investor in their startups. Since I'm not able to help everyone and am certainly not able to invest in as many companies as I'd like, I thought I'd share the main tips I have found myself offering to all of them:

## Make a List (AKA Do Your Homework)

Target at least 30 funds, although I would recommend 50–100. You only need one lead, but it's hard to know who it might be ahead of time. Find funds by looking at who invested in similar companies around the world. Look them up on Crunchbase and LinkedIn. Check out their websites. Make a spreadsheet. See who you know in common, and then ask them for a warm introduction.

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## Prepare Yourself for Rejection (Be Resilient)

Almost every fundraising process ever is mostly made up of rejections. Make sure you're ready for this psychologically. If you don't meditate, exercise, journal, or have other types of self-care practices, now is a good time to start them. In this day and age, a startup CEO without a self-care routine is like an athlete showing up to play for FC Barcelona without training.

## Iterate

Start the process with the funds you are least excited or hopeful about. Learn from these interactions. VCs are smart people with a lot of potentially transformative advice for your company. Listen to what they have to say and then iterate on your business, on your story, and on your deck.



## Run a Tight Ship

Make a clear timeline and then stick to it. For example, week one is for first meetings, week two for second meetings, week three for partner meetings, and week four for negotiating and signing term sheets. This creates momentum, urgency, and FOMO.

## Don't Misrepresent or Oversell Your Startup

VCs do this all day every day. They see thousands of deals. You're probably on your first or second round — at best, your fifth. They will smell inauthenticity a mile away.

Plus, it's not ethical to lie or misrepresent. Focus on the facts and play the game by the rules! If you have a partner meeting, you can mention that. If you have an offer, mention that too. And if you have a term sheet, that's something else you can talk about. But don't disclose which funds and what amounts — you can always say that you want the market to price you.

## Don't be Overeager

If a VC doesn't respond to you, don't email them until you're moving to the next step of your timeline. When you do follow up, simply ask them if they would like to

move to the next stage. That's it — one email. If you have really important updates, then share them in that email, but keep in mind that important updates mean significant progress on a key business KPI or on a key fundraising metric.

## Focus on Key Milestones

Your first key milestone is a meeting. Your deck is only useful insofar as it gets you the meeting. From there, your next milestone is to meet everyone else you need to meet. This could be in one or many more meetings. Then, your goal is to get an offer, and then a term sheet. If someone makes you an offer, ask for it in writing, preferably as a term sheet. The more term sheets you get, the better your outcome is likely to be.

## Focus on General Partners

You want to meet with partners who have enough influence that they can push a deal through quickly.

The more junior someone is, the more research and backing up they need to do to make a strong case. Junior investors don't have the experience or clout to bet on intuition, so find someone who does.

## Optimize for Relationships

Whether the VC is your top choice or not, make sure you build a good relationship. Do not optimize for valuation (at least in the early stages). There are far more important things that you should focus on, such as who you want to work with (trust, value add, etc), as well as other terms like liquidation preferences, board seats and scope, and the size of the stock option pool. Talk to your lawyers to understand what else is important and what you consider negotiable.

I hope this helps you to raise the rounds you need to to build amazing companies. Go get 'em!



“Almost every fundraising process ever is mostly made up of rejections.”

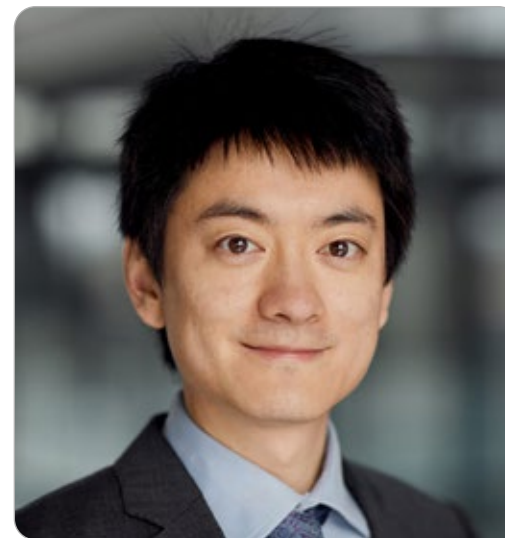


## Global Startup Ecosystem Report 2022

# Diversity in Startups: When it Helps and When it Hurts

**MARI SAKO**

A Professor of Management Studies at the Saïd Business School at the University of Oxford, Mari Sako is a scholar and teacher in global strategy. She also studies the impact of AI on professional services, and moderates the AI stream at Creative Destruction Lab (CDL) Oxford.

**MATTHIAS QIAN**

A post-doc at the Saïd Business School at the University of Oxford, Matthias Qian's studies focus on Technology Entrepreneurship and make use of the advances in machine learning on big data. He completed his DPhil and MPhil at the University of Oxford and his undergraduate degree at the Humboldt Universität zu Berlin.

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In entrepreneurial communities, “diversity is important to be successful ventures” is a deeply held pearl of wisdom. But the question is how to achieve this diversity. As one mentor recently commented, lack of diversity — in the traditional sense of gender or race and in terms of disciplinary specialisms — is a common theme among founding teams struggling to connect with mentors and investors. Is there scientific evidence that diversity is good and homogeneity bad, and if so from where should founding teams derive diversity? We investigated this problem by focusing on diversity in disciplinary specialisms, which we call knowledge domains.

Venture founders in very early stages look to mentors and accelerators to connect with a variety of contacts including potential clients, employees, investors, and even co-founders. For example, Entrepreneur First's six-month program includes a step in which founders meet potential co-founders. With tech startups that are founded on an idea, often a scientific idea with a potential for commercialization, mentors play a crucial



role in matchmaking. Often, this involves identifying people who have the knowledge and expertise that complement those of the founding team.

Moreover, according to a U.S. survey,<sup>1</sup> venture capitalists, especially those investing in early-stage ventures, consider the founding team as the most important factor contributing to venture success or failure. While investors may look for clarity of thought, execution capability, ability to deal with adversity, etc., they also need to judge whether the founding team is uniquely qualified to solve a problem. We think that more is known about founders' mindset and cognitive skills, and less is known about how their disciplinary specialisms come together in the early stages of venture growth to enable the team to grow and obtain funding.

Our research looked at the diversity of knowledge domains within and between different constituents. Specifically, we investigated knowledge diversity in founders' ties to co-founders, their ties to other founders in the same ecosystem, and their ties to early joiners.

Below, we raise three practical questions and answer them in light of this research.<sup>2</sup>

## Is Knowledge Diversity in Founding Teams Best for All Ventures?

No. Rather, it depends on the venture's stage in the entrepreneurial process and its ecosystem location.

First, access to diverse knowledge is important at the very early stages of ideation and exploration before the founding team refines its product-market fit. Over time, knowledge diversity becomes less valuable as founding teams progress to strategy formulation and implementation. This is because rapid strategy formulation and execution require a shared understanding. Knowledge-similar founding teams — for example, a team with coders only — find it easier to achieve this than knowledge-dissimilar teams. In the

latter, founders with different mental models need more time to deliberate and come to an agreement.


Second, consider how nascent or mature an ecosystem is. Knowledge diversity is important in nascent ecosystems, but it becomes less so as ecosystems mature. Imagine a location where you are one of the very first to set up a Fintech venture. In nascent ecosystems, the venture depends on being connected to many contiguous areas — finance, technology, regulation, business development, etc. — to establish itself in an ill-defined Fintech market. As the Fintech ecosystem becomes more mature, ventures might spend less time on exploration and knowledge-similar founding teams do well in focusing on execution.

## From Where Can Founders Access Diverse Knowledge?

One important source of diverse knowledge is via social ties to other people in the venture ecosystem. Our research looked at connections among founders in the same geographically bound ecosystem, for instance in London or in San Francisco. A founder is seen to be connected to another founder if they attended the same university or worked for the same employer. We also investigated whether each connection is between people of the same knowledge domain or different knowledge domains.

**“Access to diverse knowledge is important at the very early stages of ideation and exploration.”**





“Connections matter, but diverse connections matter even more.”

We found that ventures whose founders with more social ties grew faster. Being well connected is therefore a good idea in itself, and this is well known. However, we also found that ventures whose founders had more social ties to people in different knowledge domains grew faster. In other words, connections matter, but diverse connections matter even more. For example, having worked for the same company helps, but knowing another founder who had worked in different functions facilitates access to skills and expertise she does not have as a founder.

## What Do Early Joiners Bring to Ventures?

The other important source of diverse knowledge is of course early joiners. Early hiring may help founders free up their time on functional activities, for example, business development, product architecting, financial planning, etc. The first hires may also bring expertise and skills that founders do not have. A scientist-only founding team without commercial experience can do with help from business development experts. In legal tech, a rapidly growing startup in San Francisco founded by two founders, both lawyers, engaged in waves of recruitment for coders and product architects as the venture grew.

In summary, here are some tips for early venture founders.

- **First, start with a knowledge-similar founding team.**

This helps you accelerate the process of articulating a clear value proposition, a narrative, and an overall strategy that all co-founders can buy into. Execution is also easier with a common understanding.

- **Next, access diverse sources of knowledge and advice in your social ties.**

Mentors and accelerators help make connections, but often direct social ties — people you know from your past educational and employment history — yield valuable benefits for growth and funding.

- **Third, when you are ready to hire your first employee, look for talent with the necessary knowledge that is lacking in your founding team.**

Founders, of course, should also consider delegating part of their portfolio of tasks to early joiners.

1. Gompers, P. A., Gornall, W., Kaplan, S. N., & Strebulaev, I. A. 2020. “How do venture capitalists make decisions?” *Journal of Financial Economics*, 135(1): 169-190.
2. The evidence is based on the analysis of 350 Fintech and Lawtech startups in London, New York, and San Francisco Bay Area. See our paper [“Knowledge Similarity Among Founders and Joiners: Impact on Venture Scaleup in Fintech and Lawtech”](#) for more details.



## Global Startup Ecosystem Report 2022

# Three Essentials To Creating a Strong Sense of Community in Emerging Ecosystems

*This contributed article was prepared by the authors in a personal capacity. The opinions expressed in this article are the authors' own and do not necessarily reflect the views or position of Startup Genome.*

**DAMILOLA TEIDI-AYOOLA**

As the Director of Startup Support (Incubation and Acceleration) at Co-creation Hub, Damilola Teidi-Ayoola's work involves building strong pan-African programs that support technology companies in Africa and directly providing support to startups. She also engages with various key stakeholders to create an enabling ecosystem for high growth companies to thrive on the continent.

Entrepreneurship is a lonely journey. It doesn't matter how many co-founders you have or how supportive your parents are — I've worn those shoes and I can tell you. Starting and growing a company is a tough journey. To navigate it, you need a sense of community including other founders who understand and can help when you run into challenges.

Community is a key ingredient for both the success of individual startups and for the ecosystem as a whole. Both online and offline hubs serve as points of knowledge exchange, places where founders, innovators, and other ecosystem players can learn from each other and discover opportunities for co-creation.

A good example is a Nigerian civic organization called BudgIT, which was born out of a hackathon. The idea was simple: How can we translate the Nigerian budget in a way the common person can understand? Through the power of community and co-creation, a team of designers and developers that were at CcHUB at the

time supported the founders to build an app in which citizens could visualize slicing up the budget any way they wanted. They created the app within 24 hours. When it was released, it became so popular quickly that it crashed. BudgIT has gone on to become a leading civic organization spanning multiple locations and a large workforce. The physical gathering at the hackathon and the power of the community, made up the early days of what is a successful company today.

There are many more of such stories of community impact within strong startup ecosystems. Community is also a source of information. As a founder, if there's a new program, a meetup, or opportunity that might benefit you, you are more likely to learn about it if you are plugged into your local startup community. But how do you create community?

As Director of Startup Support at Co-creation Hub (CC Hub), an innovation center headquartered in Lagos, Nigeria, part of my job involves engaging in activities that





“Don’t wait for  
someone else to  
organize it. Start  
organizing things  
yourself.”

help nurture community both in our ecosystem and in other ecosystems around Africa. From my experience, I have learned that there are a few essential building blocks of strong startup communities, especially for community building in emerging ecosystems.

## 1. Initiative — Don’t Wait For Someone Else To Do It

I recently traveled to Botswana and Namibia, where I engaged with founders. In both places, I heard the same question again and again: We are working in silos. How can we come together, and how can we create more avenues where we can share opportunities and ideas?

I offered the same answer again and again: Don’t wait for someone else to organize it. Start organizing things yourself. That’s how you create communities. Start by organizing simple things like monthly or bi-monthly meetups, or by creating an online platform where founders can get the resources they need to start a business. Perhaps the platform could have a forum section to promote discussion and knowledge sharing.

You may think you need government support or permission from certain stakeholders or organizations. But sometimes these things come later, so just start. The numbers may be small at first, but over time they

will grow. Eventually you will be too big to be ignored. Governments and large organizations will start to pay attention and ask how they can support the ecosystem you are building. Because you have already built a community together, you will be able to voice your opinions together, which may lead to better policies.

## 2. Infrastructure — Online & Offline Infrastructure Support Each Other

The startup community in Lagos is now very strong but it wasn’t always like that. Infrastructure development plays a role in building communities and ecosystems. About nine years ago, CcHUB constituted a consortium of core implementation partners, which included MainOne, Technovision, and the Lagos state government. With the buy-in of the state, Mainone initiated the laying of the fiber optic cable for iHQ, which covered Yaba, where CcHUB is located.

This meant the internet was better in this neighborhood, and the area quickly became home to over 30 technology companies. If there was an event in the area, everyone could quickly come together and a tech community started to spring up.



Offline infrastructure builds intangible community, and that intangible sense of community leads to stronger offline infrastructure. It is a positive feedback loop.

### 3. Insight — Share Your Failures As Well As Your Wins

Meetups, forums, associations, and hackathons are all great ways to start building community. But for these sorts of initiatives to be as impactful as possible, those participating must be open and honest about sharing not just their learnings, but also their struggles and failures.

In the early days of the ecosystem in Lagos, stories about the experience of building a company and the entrepreneurial journey in Nigeria came from founders such as IROKO founder Jason Njoku. These founders were very generous and transparent, sharing their challenges and successes both through blog posts and at events. Jason's candor made him very popular, but his sharing also contributed to helping the community thrive and grow.

A willingness to share honest insights brings people together and spurs discussion. Sharing your journey, including the difficulties and the failures, can inspire people and help them avoid mistakes.

Sometimes I speak to busy founders who see meetups, incubation programs, or being part of a hub, as a waste of time. But in emerging ecosystems, success is usually shared. Our ecosystems lift us up and support us when we struggle. They supply our co-founders and many of our greatest ideas. Community isn't a waste of time — it's an essential component. It is well worth devoting our time to building a stronger sense of community together.

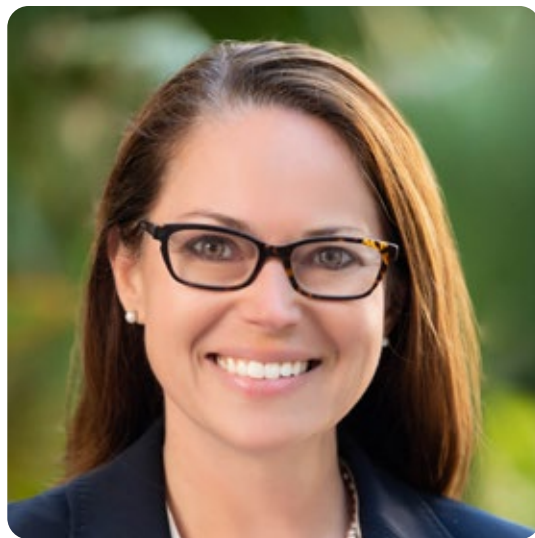


“Community isn’t a waste of time — it’s an essential component.”



## Global Startup Ecosystem Report 2022

# How to Get Mentoring Right

**SUSAN AMAT**

As Executive Director of GEN Accelerates, Susan Amat, MBA, Ph.D., supports capacity-building and program development for entrepreneur support organizations and governments. She is also the CEO and founder of Venture Hive, a software and training company that supports innovation management and entrepreneurship programs. A serial entrepreneur, she built several businesses in the entertainment industry.

Mentoring has been completely bastardized in the startup ecosystem. There are accelerators and incubators that bring in someone to have 10 half-hour meetings with founders over the course of a day and call it mentoring. Take it from someone who started her career as a founder who relied on mentors, wrote her Ph.D. thesis on mentoring, and has since spent decades in entrepreneurial education — that's not mentoring.

I have dedicated my career to designing mentor programs and training mentors to be data driven and to create a transparent, yet confidential, process. Mentoring isn't coaching. It's not consulting on your business's trickiest problems. It's not having someone with a golden resume off whom to bounce ideas. It's deeper than that. Mentoring is a long-term commitment to building an individual, to helping them reach their goals and developing themselves so that, eventually, they can operate independently of their mentor.

Mentoring involves a deep, personal connection and commitment between two people over long periods of

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time. People might have multiple mentors at one time. Mentors may come and go depending on your stage of life or career. But these relationships are always about more than business. They are about helping you become the person you want to become.

How do you find and form such a valuable mentor relationship? Forget half-hour meetings and occasional calls to discuss specific business challenges. Instead, successful mentoring relationships are built on a handful of essential principles. Many people in the startup world get mentoring totally wrong. Here's how to get it right.

## Start with Transparency & Alignment On Goals

The most important component of a successful mentoring relationship is alignment of expectations. Do you want to talk through personal challenges? Discuss leadership issues? Tackle tough ethical calls? How often do you want to talk? Once a week, once a month, or whenever you



happen to be freaking out? There is a whole spectrum of mentorship relationships, but all of the good ones rest on both parties agreeing on what they're trying to accomplish together and roughly how they're going to organize these efforts. Transparency from the very beginning is essential.

Mentors should ask questions to ensure alignment from the start, but if they don't do this, the responsibility falls to mentees. If your mentor is not clear in laying out their expectations, you should take the initiative and ask questions like: What frequency would you like our meetings to have? How would you like me to share information with you? Should we set up regular touch points?

## Focus on the Human, Not the Bio

Many universities and large organizations run mentorship programs in which they match people based on shared background and goals. You two are both women in

engineering? Great, you're a match. Go forth and mentor! These programs are rarely effective because job title and biographical details aren't actually the right criteria for successful mentor matching. Mentoring shouldn't be an effort to create a mini-me.

I have often worked with founders who will be impressed with someone's background and will pursue them as a mentor based on their resume. That rarely works either. There are many people with impressive LinkedIn accounts with whom you will not click in real life. Finding the right mentor is about personality fit, mutual respect, and a meeting of the minds — not about who has the most impressive credentials or the biography that seems most aligned to your goals on paper.

## Build Your Relationship Capital

Great mentoring relationships are grown over time, as mentees reveal themselves to be respectful, appreciative, open-minded, and forthcoming. Too many entrepreneurs will have one or two meetings with a mentor, never follow up, and then out of nowhere a year later, reach out for help or an introduction. Nobody wants to work with that person.

As a mentee, you should follow up after every meeting, keep mentors up to date on your progress, express appreciation, and offer feedback if you think the

relationship could work better. Great mentors are in high demand and they all want the same thing — honest, accountable, transparent mentees who follow through on discussions and ideas. There are plenty of disruptors with bold ideas out there who they could mentor. What will set you apart is being honest, open, and respectful because, unfortunately, those qualities are rare.

## Be Organized

Successful mentoring relationships might be built on respect and personal connection, but that doesn't mean you should leave your organized professional hat at the door. I recommend to both mentors and mentees that, after every meeting, they put notes together about what was discussed and next steps. Before a meeting is set, put together a basic agenda outlining what will be discussed. Bringing professionalism to your mentor relationship helps you get the most out of every hour and also conveys how much you cherish the relationship.

Mentorship isn't just a bit of advice or consulting. There are plenty of great people out there available to hire to talk through a particular business challenge. Mentoring is more than that. It is sacred. And if you treat your mentor in a way that elicits the right level of sharing and openness, you will find that you have a champion not just for your current business, but for your life.



“Transparency from  
the very beginning is  
essential.”



# Regional Insights

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# Africa

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## Regional Insights

# Africa

Investment in African tech startups in 2021 was unprecedented, at \$1.6 billion total (excluding MENA countries) — a 113% increase from 2020. It's looking like 2022 will be an even bigger record-breaker, with total VC investment in Q1 at \$1.1 billion.

Fintech is the continent's most successful sub-sector, accounting for \$571 million in funding and producing all three of the region's unicorns. In March 2021, Lagos-based Fintech Flutterwave raised \$170 million in a Series C round at a valuation of \$1 billion. In spring 2022, it became the highest valued African startup to date at \$3 billion. Lagos mobile payment platform OPay secured a \$400 million Series C round in August 2021, taking its valuation to \$2 billion. Dakar-based Wave Mobile Money is the region's third unicorn. Nairobi online-processing company DPO Group also made headlines when it exited at \$288 million in July 2020.

Lagos is the region's leading ecosystem and has a strong Fintech industry, but mobile payment usage is high across much of Africa. Kenyans have made mobile wallet and phone payments a critical part of their everyday lives to the degree that transactions account for 87% of the nation's GDP. In Ghana, such transactions make up 82% of GDP. Kenya is easily the larger market, but Ghana has become the fastest-growing mobile money market on the continent in recent years.

Successful local founders — including Olugbenga Agboola (Flutterwave), Gregory Rockson (mPharma), and Shola Akinlade (Paystack) — are putting their support behind startups, further accelerating the rapidly growing African startup ecosystem. Governments throughout Africa are also recognizing the potential for the tech industry and have begun taking concrete steps to show support. The Nigeria Startup Bill aims to create clear and thoughtful regulations that will help boost the tech ecosystem and solidify the potential of the digital economy.

### Top Performers

1	Lagos
2	Nairobi
3	Cape Town
4	Johannesburg
5	Accra

### Top Regional Challengers

1	Kampala
2	Dakar
3	Abuja
4	Addis Ababa
5	Pretoria



# Africa

## Regional Insights

### Key Findings

- Africa produced three unicorns in the GSER 2022 time period, all Fintechs.
- Lagos is the most successful startup ecosystem in the region, producing two unicorns — Flutterwave and OPay.
- Investment in African tech startups increased 113% from 2020 to 2021, at \$1.6 billion total.
- Africa has seen 110% growth in Series B+ rounds from 2020 to 2021.

### African VC Funding by Stage

Investment in Africa Has Increased 113% From 2020 to 2021

Startup Genome





Ghana

Accra

"Accra is a burgeoning startup center, home to an ecosystem that cuts across many sectors, including Fintech, Agtech, and Edtech. A melting pot of cultures, it encourages wide and deep relationships, networks, and ideas that nurture the ever-growing ecosystem."

**Simon R Turner**  
Managing Director, Founder Institute Ghana and founding partner, The Groundbreaking Organization



TOTAL EARLY STAGE FUNDING  
(2019H2-2021)

\$21 m

GLOBAL AVG.  
\$687 m



Amount (\$)    Count (#)

Exits

(2017-2021)

ECOSYSTEM VALUE  
(2019H2-2021)

\$259 m

GLOBAL AVG.  
\$28.6 bn

EARLY-STAGE FUNDING GROWTH TIER  
(2018/19 VS. 2020/21)



Calculated on a scale of  
1 (lowest) to 10 (highest)

Highlights

With approximately 57% of the population of Ghana under the age of 25, Accra is one of the world’s youngest cities. This youthful energy, combined with the fact Ghana boasts the fastest internet connection in the region and the highest mobile phone penetration, is transforming Accra into a vibrant startup hub.

The startup scene clusters around a handful of co-working spaces and startup organizations. The Accra Digital Centre provides an enabling environment and programs for startups. Co-working space Impact Hub Accra houses over 50 startups and provides a venue for tech events. Pan-African entrepreneur training school and incubator MEST has a hub in Accra, and the Ghana Tech lab is building a launch platform for young tech talent here. Since its founding in 2018, the company has trained 3,933 Ghanaians and incubated 68 startups.

Launching in 2022, YouStart is a vehicle by the Government of Ghana to help young people develop commercially viable businesses, gain access to capital and mentoring, and enable them to launch businesses. It provides youth-led enterprises with loans of up to GH¢50,000 (\$6,700) and associations and groups with loans up to GH¢100,00 ced (\$13,400).

Ghana’s ecosystem benefits from the presence of local investors such as Sangu Delle, who runs Golden Palm Investment and Africa Health Holdings, Walter Baddo and Peter Orth of 4DX Ventures, Kwamina Afful of Pave Investments, and Ato Bentsi-Enchill of Black Adam Africa Capital Management. Healthtech mPharma raised \$35 million through a combination of debt and equity in January 2022.

MEDIAN SEED ROUND  
(2019H2-2021)

\$100 k



GLOBAL AVG.  
\$671 k

MEDIAN SERIES A ROUND  
(2019H2-2021)

\$70 k



GLOBAL AVG.  
\$4.7 m

SOFT. ENGINEER SALARY  
(2021)

\$7 k



GLOBAL AVG.  
\$46 k

TOTAL VC FUNDING  
(2017-2021)

\$132 m



GLOBAL AVG.  
\$4.5 bn

TIME TO EXIT  
(2017-2021)

4.5 years



GLOBAL AVG.  
9.4 years



# Sub-Sector Strengths

## Fintech

Thanks in large part to the increasing accessibility of mobile phones in the country, Ghana's quick-growing Fintech sub-sector is dominated by payments. In June 2021, the Bank of Ghana announced the development of a Central Bank Digital Currency, popularly referred to as the e-Cedi, to accelerate Ghana's transition to a cash-lite economy. In January 2022, the government of Ghana launched PAPPS, a payment system to facilitate easy cross-border payments within Africa. The NextGen Ghana Fintech Accelerator targets early-stage Fintechs. Mobile financial services company Zeepay raised a \$7.9 million Series A in June 2021. Corporate credit line startup Float raised a \$17 million seed round in January 2022.



## Reasons to Move Your Startup to Accra

### Access to Talent

Thanks to local educational institutions including KNUST and Ashesi, Ghana offers companies a diverse and highly skilled workforce. Accra, with its young, energetic population of some 2.5 million people, is the country's entrepreneurial hub. 57% of Ghana's population is under the age of 25.

### Infrastructure

Ghana boasts the fastest internet in Africa, and Accra Digital Centre provides tech startups with first-class infrastructure including office space, a mobile applications laboratory (mLab), and an innovation hub (iHub) to further develop the tech ecosystem.



South Africa

# Cape Town

MEMBERS:

City of Cape Town / WESGRO / Silicon Cape

"Greater Cape Town's tech sector is notably dynamic, with a high percentage of companies reaching scale in the past decade and actively supporting other local tech companies."

Endeavor Insight



TOTAL EARLY STAGE FUNDING  
(2019H2-2021)

\$204 m

GLOBAL AVG.  
\$687 m



Amount (\$) Count (#)

Exits

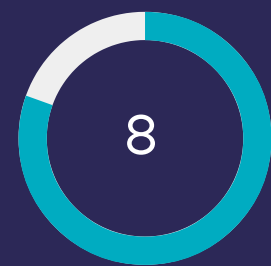
(2017-2021)

ECOSYSTEM VALUE  
(2019H2-2021)

\$2.8 bn

GLOBAL AVG.  
\$28.6 bn

EARLY-STAGE FUNDING GROWTH TIER  
(2018/19 VS. 2020/21)



Calculated on a scale of  
1 (lowest) to 10 (highest)

## Highlights

Cape Town's 450 tech firms, including both giants like Takealot and Amazon and early-stage companies, collectively employ more than 40,000 people. And more businesses are moving to the South African ecosystem. Cape Town is one of the world's fastest-growing regions in terms of foreign investment, according to a report from fDi Intelligence.

Knife Fund III is a new fund managed by Cape Town-based VC firm Knife Capital. The fund invests in high-growth sectors in South Africa with strong potential for expansion within Africa and internationally. Swiss investment company Crypto Valley Venture Capital (CV VC) set up its first African office in Cape Town to invest in Blockchain-focused African startups. CV VC and its partners are looking to invest in 100 startups over the next four years. The new office will also serve as a hub for transferring know-how and experience from Swiss Crypto Valley to the Cape Town ecosystem. Private equity and venture capital conference SuperReturn Africa 2022 is scheduled to take place in Cape Town in December. Notable recent funding deals include Adtech startup Adbot's R7 million (\$500,000) raise in November 2021, and games publisher Carry1st's \$20 million Series A in January 2022.

The Women in Business program from the Cape Innovation & Technology Initiative exposes female entrepreneurs to the latest technology resources to grow their business. BioCiTi is a specialized biotech incubator for African entrepreneurs. TECHSPO Cape Town brings together developers, marketers, designers, and innovators annually.

MEDIAN SEED ROUND  
(2019H2-2021)

\$570 k



GLOBAL AVG.  
\$671 k

MEDIAN SERIES A ROUND  
(2019H2-2021)

\$2.5 m



GLOBAL AVG.  
\$4.7 m

SOFT. ENGINEER SALARY  
(2021)

\$30 k



GLOBAL AVG.  
\$46 k

TOTAL VC FUNDING  
(2017-2021)

\$722 m



GLOBAL AVG.  
\$4.5 bn

TIME TO EXIT  
(2017-2021)

10.1 years



GLOBAL AVG.  
9.4 years



# Sub-Sector Strengths

## **Fintech**

Cape Town is one of Africa’s leading financial centers. The latest Global Financial Centers Index shows the city moving up eight positions to rank 54th worldwide, and much of Cape Town’s improvement in these rankings is down to its Fintech innovation. Intelligent banking startup JUMO raised \$120 million in venture financing in November 2021. Payments company Yoco raised an \$83 million Series C in July 2021.

## **Edtech**

Injini is a nonprofit organization founded by the Cape Innovation & Technology Initiative and partners to accelerate Edtech solutions in Africa. Injini launched the first pan-African Edtech Think Tank in April 2022. Cape Town will host Edtech conference InnovateEDU in May 2022. The University of Cape Town opened an online high school, which began educating students in January 2022. Edtech solutions provider HyperionDev raised R50 million (\$3.5 million) via equity crowdfunding in March 2022. Learning marketplace iXperience raised a R35 million rand (\$2.5 million) Series A in May 2021.



# Reasons to Move Your Startup to Cape Town

## **Business-Friendly Environment**

Cape Town’s diversity, infrastructure, world-class universities, and vibrant environment make it an ideal home base for startups. 38% of South Africa’s developers call the city home. Cape Town also boasts more than 16 co-working spaces, including a lounge on top of Table Mountain that entrepreneurs can access for free on Tuesdays. The city is also investing in key infrastructure, including thousands of meters of fiber-optic cable.

## **Low Cost of Living**

Cape Town is both beautiful and affordable. A 2021 study by Money.co.uk named Cape Town the sixth most affordable city to relocate to in the world. Cape Town also placed 178 in the 2021 Mercer Cost of Living City ranking, which included 206 cities from around the world. The cost of living in Cape Town is lower than in Kigali, Kampala, and Dar Es Salaam.

## **Key Economic Zones**

Cape Town has identified 2 key economic zones for development. The Atlantis Special Economic Zone (ASEZ) is dedicated to supporting green and circular economy businesses in renewable energy, recycling, and waste management, transportation, and smart agriculture. A second zone in Philippi supports agricultural activities in the area and includes business incubation and skills development programs.



# Selected Startup Organizations

## STARTUP GENOME MEMBERS

### City of Cape Town

Cape Town, or the Mother City, is South Africa’s oldest city, its second-most populous and the legislative capital. It is made up of a diverse population, a rich history, world famous tourist attractions and an exciting calendar of international and local events.

MEMBER

### WESGRO

As the official tourism, trade and investment promotion agency for Cape Town and the Western Cape, Wesgro assists investors and businesses looking to branch out into the province. Regardless of the sector your company operates in – be it wine, technology, agriculture or another sector – Cape Town and the Western Cape have all the elements necessary to make your investment a success.

MEMBER

### Silicon Cape

Silicon Cape is a non-profit, community-driven initiative that supports and catalyses the creation of a vibrant, sustainable tech and entrepreneurial ecosystem in South Africa. The vision is for Silicon Cape to develop the Western Cape as an innovation hub for Africa and the world by fostering an inclusive ecosystem for tech enabled start-ups in the region. This by connecting stakeholders to resources and each other for mutual benefit; curating cohort communities and networks; amplifying the stories from within the community for peer learning; and by advocating on behalf of the collective.

MEMBER



South Africa

# Johannesburg

"Johannesburg is the nerve center of the national and increasingly the subcontinent's economy."

The Centre for Development and Enterprise



## Highlights

More than 70% of South African companies are located in Johannesburg, as is the largest stock exchange in Africa, and the city generates 15% of South Africa's wealth. Johannesburg is leveraging its position as the country's financial capital to build a startup ecosystem to rival the better-known scene in Cape Town.

Ericsson South Africa, the local arm of the Swedish telecommunications company, set up office in Johannesburg's fast-growing Waterfall development, as the area increasingly attracts growing interest from technology firms. Vantage Data Centers, a U.S.-headquartered data center specialist, announced in 2021 that it plans to build what it claims will be the largest data center campus in Africa in Johannesburg.

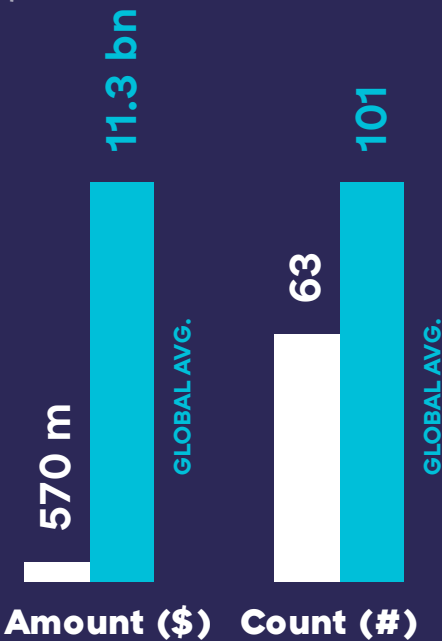
A host of startup support organizations are nurturing the emerging startup community, including the Seed Academy and the WDB Growth Fund's accelerator for women, J&B Hive Accelerator for creative entrepreneurs, and a range of co-working spaces and makerspaces such as Workshop17 West Street and JoziHub. 22 ON SLOANE is the largest startup campus in Africa. The Opportunity Centre initiative by the City of Johannesburg provides walk-in assistance and advice on entrepreneurship and business support issues. The Irish Tech Challenge South Africa, launched in February 2022, offers South African tech businesses the chance to travel to Ireland to network with Irish tech companies. Johannesburg is also home to many active investors, including Dazzle Angels, Edge Growth, Grovest, SA SME Fund, the People's Fund, and Kalon Venture Partners.

Online payments solution provider Ozow raised \$48 million at Series B in November 2021.

TOTAL EARLY STAGE FUNDING  
(2019H2-2021)

\$77 m

GLOBAL AVG.  
\$687 m



Exits  
(2017-2021)

ECOSYSTEM VALUE  
(2019H2-2021)

\$962 m

GLOBAL AVG.  
\$28.6 bn

EARLY-STAGE FUNDING GROWTH TIER  
(2018/19 VS. 2020/21)



Calculated on a scale of 1 (lowest) to 10 (highest)

MEDIAN SEED ROUND  
(2019H2-2021)

\$333 k



GLOBAL AVG.  
\$671 k

MEDIAN SERIES A ROUND  
(2019H2-2021)

\$1.1 m



GLOBAL AVG.  
\$4.7 m

SOFT. ENGINEER SALARY  
(2021)

\$29 k



GLOBAL AVG.  
\$46 k

TOTAL VC FUNDING  
(2017-2021)

\$341 m



GLOBAL AVG.  
\$4.5 bn

TIME TO EXIT  
(2017-2021)

10.7 years



GLOBAL AVG.  
9.4 years



# Sub-Sector Strengths

## **Fintech**

As South Africa's largest city, Johannesburg is home to leading African banks as well as international financial players including HSBC, Citibank, RBS, and JP Morgan Chase Bank. Johannesburg rose 11 positions to ranked #50 as a Fintech center in the 2022 Global Financial Centers Index. Financial services company Rand Merchant Investment Holdings launched AlphaCode, a club for Fintech startups that offers grant-funding and mentorship. South Africa Reserve Bank's ProjectKhoka aims to build a proof-of-concept wholesale payment system for interbank settlement using a tokenized South African rand. Insuretech company Pineapple raised \$5.4 million Series A in July 2021.



## Reasons to Move Your Startup to Johannesburg

### Entrepreneurial Talent

Johannesburg's top tier technical and business schools such as UCT, Stellenbosch University, and Witwatersrand University, produce a steady stream of talented, tech-savvy developers, designers and digital marketers interested in pursuing careers in startups.

### Access to Funding

Access to funding for startups is steadily improving in Johannesburg as a growing pool of high net worth individuals, families, and venture capital firms become more aware of early-stage venture capital instruments as an alternative asset class. Local corporations are beginning to look beyond internal innovation and product development programs to pursue partnerships with startups.



# Nigeria Lagos

"When you step into Lagos, you can touch the entrepreneurial energy. The ecosystem is a representation of a nation in which people are determined to succeed. This resilience coupled with the attractiveness of Nigeria's market has catapulted the city to becoming the top startup city in Africa."

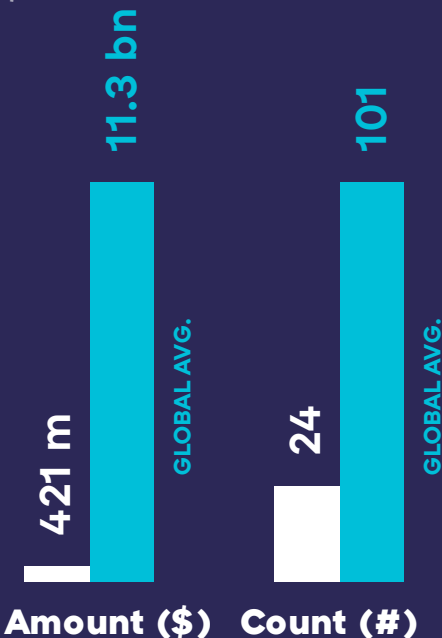
**Damilola Teidi-Ayoola**  
Director of Startup Support, Co-creation Hub



## TOTAL EARLY STAGE FUNDING (2019H2-2021)

**\$529 m**

GLOBAL AVG.  
\$687 m



## Exits (2017-2021)

## ECOSYSTEM VALUE (2019H2-2021)

**\$9 bn**

GLOBAL AVG.  
\$28.6 bn

## EARLY-STAGE FUNDING GROWTH TIER (2018/19 VS. 2020/21)



Calculated on a scale of  
1 (lowest) to 10 (highest)

## Highlights

One of the world's fastest-growing megacities, Lagos attracts 77 new residents from other parts of Nigeria every hour. The city is the heart of Nigeria's growing startup ecosystem. Yaba, the center of Lagos's technology industry, is close to two universities, the University of Lagos and the Yaba College of Technology, and has grown rapidly in large part thanks to its fast, reliable internet access.

Co-creation Hub hosts a number of programs to support the ecosystem, including The Creators' Circle, a quarterly networking event for creative economy professionals, and an incubation program for startups. Participating startups receive \$25,000, access to follow-on funding of up to \$250k from Growth Capital, free office space, free credits for partner products, business support, and networking. The Lagos State government's Eko Digital Initiative plans to equip over 120,000 primary and secondary school students with tech skills. GreenHouse Capital, a corporate venture capital arm of Google for Startups, invests in early-stage Fintech and Big Data startups operating in sub-Saharan Africa, as well as foreign startups targeting the African market. Recent notable funding news out of Lagos includes mobility Fintech Moove's \$65 million Series A in March 2022, and embedded finance platform TradeDepot's \$68 million debt financing and \$42 million Series B in December 2021.

Art Of Technology is the largest tech conference in Nigeria. The most recent edition took place in December 2021. Lagos Tech Fest, which brings together entrepreneurs, innovators, and investors, was held in February 2022. Union Bank and GreenHouse Capital hosted the UnionX Innovation Challenge in March 2022.

## MEDIAN SEED ROUND (2019H2-2021)

**\$157 k**



GLOBAL AVG.  
\$671 k

## MEDIAN SERIES A ROUND (2019H2-2021)

**\$9.5 m**



GLOBAL AVG.  
\$4.7 m

## SOFT. ENGINEER SALARY (2021)

**\$13 k**



GLOBAL AVG.  
\$46 k

## TOTAL VC FUNDING (2017-2021)

**\$1.8 bn**



GLOBAL AVG.  
\$4.5 bn

## TIME TO EXIT (2017-2021)

**6.3 years**



GLOBAL AVG.  
9.4 years



# Sub-Sector Strengths

## Fintech

In October 2021, Nigeria became the first African nation to launch a digital currency, the eNaira. Despite a Central Bank ban on banks and financial institutions dealing in or facilitating transactions in cryptocurrencies, Nigeria ranked #7 in the 2021 Global Crypto Adoption Index, compiled by research firm Chainalysis. GreenHouse Labs, an accelerator focused on early-stage, women-led startups in sub-Saharan Africa offers a Fintech accelerator. Nigeria Fintech Week, organized by the Fintech Association of Nigeria, is held annually in October. Mobile money company OPay closed a \$400 million Series C in August 2021, with the company valued at \$2 billion. Payment app PalmPay raised a \$100 million Series A the same month.



## Reasons to Move Your Startup to Lagos

### Young, Tech-Savvy Market

The median age in Nigeria is 18, and the country has high smartphone penetration. A 2020 McKinsey & Company analysis described these factors as “the perfect recipe for a thriving Fintech sector.”

### Dedicated Startup Support

The Lagos State Science Research and Innovation Council empowers research and innovation initiatives through funding and network access. The Lagos State Employment Trust Fund (LSETF) is focused on improving access to finance, strengthening the institutional capacity of MSMEs, and formulating policies designed to improve the business environment in Lagos State. LSETF also develops programs designed to train unemployed Lagos residents. Lagos Innovates is a series of programs to support innovation-driven startups in Lagos State.



Kenya

Nairobi

"The momentum of Nairobi's startup ecosystem is growing, with an increasing number of hubs and talented entrepreneurs."

Enpact



TOTAL EARLY STAGE FUNDING  
(2019H2-2021)

\$180 m

GLOBAL AVG.  
\$687 m



Amount (\$) Count (#)

Exits

(2017-2021)

ECOSYSTEM VALUE  
(2019H2-2021)

\$2 bn

GLOBAL AVG.  
\$28.6 bn

EARLY-STAGE FUNDING GROWTH TIER  
(2018/19 VS. 2020/21)



Calculated on a scale of 1 (lowest) to 10 (highest)

Highlights

One of Africa's most mature startup ecosystems, Nairobi is home to more than 200 startups, as well as the regional offices of tech giants Google, IBM, Intel, and Microsoft. In 2020, a StartUp Bill was introduced with the goal of encouraging entrepreneurial growth and to create a more favorable environment for innovation.

In 2021, Silicon Valley-based VC firm Flourish Ventures opened a new office in Nairobi to invest in Fintech startups across Africa. In March 2022, Antler East Africa, the Nairobi office of VC firm Antler, closed a \$13.5 million fund to invest in early-stage startups in the region. Adanian Labs' 2022 Cohort Venture Building Program will select five innovative startups in sub-sectors including Blockchain and AI and offer them support, mentorship, access to partnerships, and funding. Future of Work 2022 is an accelerator program for young African entrepreneurs featuring self-guided training, extensive virtual support, and mentorship. In April 2022, Google announced Nairobi would be the site of its first African product development center, to serve the 800 million Africans who are projected to be connected to the internet by the end of the decade.

iHub was founded in 2010 to accelerate the region's tech industry and remains a central node in the Nairobi ecosystem. Kijiji is a co-working space that supports socially minded businesses. Kayana supports female entrepreneurs, and UTU House / Nairobi Game Development Centre supports the Gaming sub-sector. Wasoko, which connects small shops to the digital economy, has raised \$143.6 million in funding over 10 rounds, including a March 2022 \$125 million Series B round.

MEDIAN SEED ROUND  
(2019H2-2021)

\$175 k



GLOBAL AVG.  
\$671 k

MEDIAN SERIES A ROUND  
(2019H2-2021)

\$1.9 m



GLOBAL AVG.  
\$4.7 m

SOFT. ENGINEER SALARY  
(2021)

\$14 k



GLOBAL AVG.  
\$46 k

TOTAL VC FUNDING  
(2017-2021)

\$180 m



GLOBAL AVG.  
\$4.5 bn

TIME TO EXIT  
(2017-2021)

7.3 years



GLOBAL AVG.  
9.4 years



# Sub-Sector Strengths

## **Fintech**

The Money & Blockchain Summit connects Fintech leaders and blockchain innovators from across Africa. Silicon Valley-based venture capital firm Flourish Ventures opened an office in Nairobi to target African Fintech startups. Financial health platform ImaliPay raised a \$3 million seed round in April 2022. Open finance infrastructure startup Credrails raised a \$2.5 million seed round in February 2022. Financial serviced platform Koa raised a \$2.4 million venture round in March 2022.

## **Artificial Intelligence**

In June 2021, Ada Labs Africa and AI Center of Excellence (AICE) announced an initiative with NVIDIA to contribute to the digitization of the African continent through various AI projects. AICE has started training the first cohort of 40 AI engineers as part of the initiative and has launched a CEO roundtable series to demystify AI for African executives. The companies are aiming to train over 4,000 AI engineers in five cities across Africa over the next three years. Nairobi-based commodity data and analysis service Gro Intelligence has raised \$85 million in venture funding to support its global expansion.



# Reasons to Move Your Startup to Nairobi

## **Expat-Friendly Environment**

Nairobi ranked #1 in Africa and #12 globally in the InterNation's Expat City Ranking 2021. Social life and ease of finding affordable housing are among the factors considered, with Nairobi ranking fourth in Getting Settled and sixth in Finance and Housing. More than 80% of expats surveyed said they have no trouble finding housing, and there is overall satisfaction in regards to their financial situation, disposable income, and Nairobi's affordability.

## **Startup Support**

In 2021, the Federal Development Ministry (BMZ) launched the DeveloPPP Ventures to empower Kenyan startups by providing grants of up to €100,000 (\$106,000). With the support of impact investment specialist Seedstars and business incubator NaiLab, the program is aimed at young entrepreneurs contributing to sustainable development and improving living conditions for locals. In addition, startups receive tailored support from experts.



# Asia

- 83 Top Performers & Top Regional Challengers
- 84 Key Findings
- 85 Ecosystem Pages



## Regional Insights

# Asia

The World Bank's final Doing Business report, released in 2020, named three Asian ecosystems in the top places to do business in the world: Singapore at #2, Hong Kong at #3, and Korea at #4. Asia is a hugely varied region that is home to a vast array of tech startups, and Beijing is a longstanding leader in the GSER rankings. This year, however, the landscape is looking a little different.

India has seen a rapid rise in the number of large exits and early-stage rounds, and a substantial increase in Ecosystem Value. The nation produced 44 unicorns in 2021, and exits rose to \$14 billion — a 10-fold increase over 2020. Delhi and Mumbai joined Bangalore in the top 40. Ecosystem-creation initiatives and startup-friendly policies are helping to drive this movement.

Meanwhile, the region's major player, China, is experiencing the impact of government regulation. In 2021, Beijing cracked down on companies over issues

including anti-competitiveness and data privacy. Global investors suffered when the Chinese government went after its Edtech industry in July, and it raised constraints on overseas IPOs in December. In 2021, China saw growth in large exits over \$50 million decline, particularly in early-stage funding, although Beijing and Shenzhen saw an increase in exits over \$1 billion. In 2021, Bangalore beat out both Beijing and Shanghai in the amount of venture capital raised and number of rounds, according to London & Partners and Dealroom.

China remains a startup powerhouse — venture investment in 2021 rocketed above \$130 billion, about 50% higher than in 2020, according to Bloomberg — but Asia's tech startup story is no longer as straightforward as it once was.

### Top Performers

1	Beijing
2	Shanghai
3	Seoul
4	Tokyo
5	Singapore

### Top Regional Challengers

1	Hong Kong
2	Guangzhou
3	Jakarta
4	Wuxi
5	Nanjing



# Asia

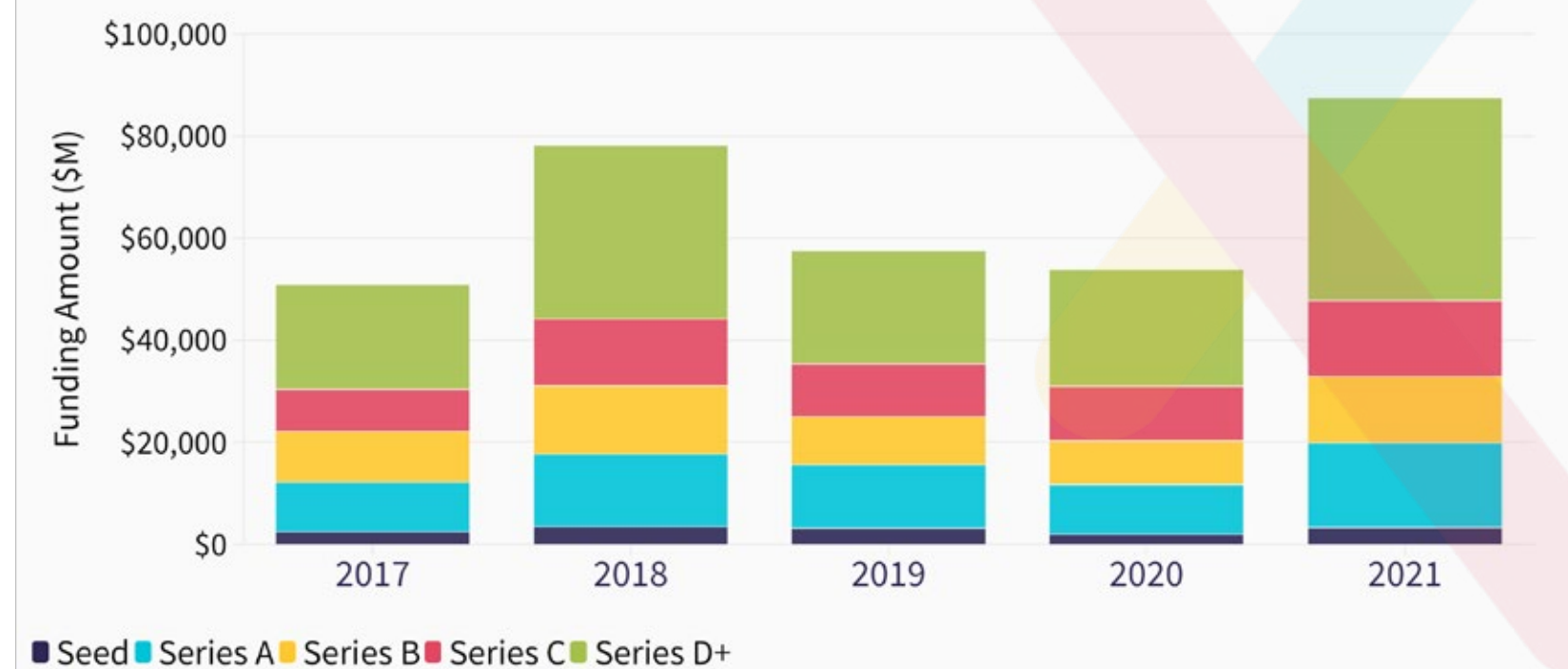
## Regional Insights

### Key Findings

- Asia saw a 312% increase in the dollar amount of exits over \$50 million from 2020 to 2021.
- Early-stage funding deal amount increased by 69% from 2020 to 2021.
- Seoul entered the global top 10 ecosystems for the first time, up six places from #16 in 2021 and #20 in 2020.
- Several Indian ecosystems have risen in the rankings, most notably Delhi, which is 11 places higher than in 2021, entering the top 30 for the first time at #26. Bangalore has moved up one place from last year, to #22.
- Japan has seen 113% growth in exit amount from 2020 to 2021, as well as 25% growth in dollar amount at Series B+ rounds. For context, the global median growth in exits is 77%.
- Beijing has dropped one place from 2021, coming in at #5 globally, due to decline in growth of early-stage funding.
- The performance of Chinese startup hubs is declining for the first time since GSER has tracked them. Eight of the 13 cities studied fell in this year's rankings.

### Asian VC Funding By Stage

Investment in Asia Has Increased 62% From 2020 to 2021





India

Bangalore-Karnataka

MEMBERS:  
Karnataka Innovation & Technology Society (KITS) / Bangalore Bioinnovation Centre

"Bengaluru-Karnataka Innovation Ecosystem has catalyzed and scaled up startups at an unprecedented pace. This nurturing ecosystem has steadily given birth to numerous unicorns and is now evidencing signs of logarithmic growth."

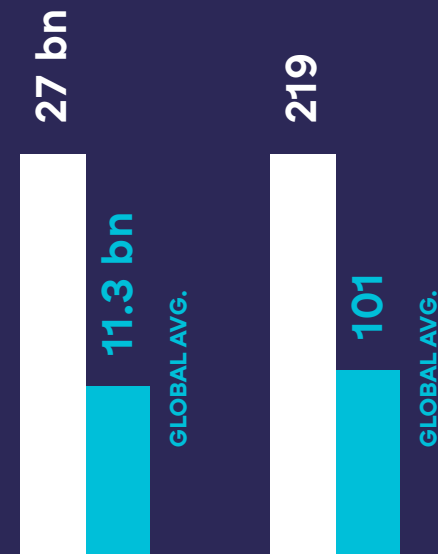
Dr C. N. Ashwath Narayan  
Minister of Science & Technology, Higher Education & Information Technology and Biotechnology, Government of Karnataka



TOTAL EARLY STAGE FUNDING  
(2019H2-2021)

\$2.1 bn

GLOBAL AVG.  
\$687 m



Amount (\$) Count (#)

Exits

(2017-2021)

ECOSYSTEM VALUE  
(2019H2-2021)

\$105 bn

GLOBAL AVG.  
\$28.6 bn

EARLY-STAGE FUNDING GROWTH TIER  
(2018/19 VS. 2020/21)



Calculated on a scale of  
1 (lowest) to 10 (highest)

Highlights

Bangalore has been described as the world’s fastest-growing tech hub and the Indian city is home to the R&D centers of some of the world’s most famous tech companies, including Amazon, Microsoft, Facebook, and Google. Its IT sector employs over four million people, and accounts for an estimated \$130 billion in exports every year.

The Government of Karnataka was the first Indian state government to establish a dedicated Startup Cell to promote its ecosystem. Innovate Karnataka provides financial support to startups through various funds and Idea2PoC grants, which provide early-stage funding to concepts that have yet to establish proof of concept. The Karnataka Digital Economy Mission launched the Beyond Bengaluru Startup Grid in November 2021 to support startups in the state outside of Bengaluru, and a startup incubation center set up by the Bangalore Chamber of Industry and Commerce opened in February 2022. The Maruti Suzuki Incubation Program aims to help startups develop industry-ready solutions and become large-scale businesses. Karnataka took home 30% of the total startup awards at the National Startup Awards 2021, during Startup India Innovation Week.

Notable recent funding deals in the ecosystem include online learning platform Vedantu’s \$2 million Series E in February 2022, electric scooter company Ather Energy’s ₹4.2 billion (\$55.7 million) Series D in January 2022, and food delivery service Swiggy’s \$700 million round, also in January.

Karnataka hosts India’s flagship tech event, the Bangalore Tech Summit. Summit Up, a two-day event for female entrepreneurs took place in December 2021.

MEDIAN SEED ROUND  
(2019H2-2021)

\$655 k



GLOBAL AVG.  
\$671 k

MEDIAN SERIES A ROUND  
(2019H2-2021)

\$5 m



GLOBAL AVG.  
\$4.7 m

SOFT. ENGINEER SALARY  
(2021)

\$13 k



GLOBAL AVG.  
\$46 k

TOTAL VC FUNDING  
(2017-2021)

\$21 bn



GLOBAL AVG.  
\$4.5 bn

TIME TO EXIT  
(2017-2021)

6.2 years



GLOBAL AVG.  
9.4 years



# Sub-Sector Strengths

## **Fintech**

Bengaluru ranks eighth among cities globally in the amount of VC investment attracted by its Fintech sub-sector, according to an analysis by research firm London & Partners and Dealroom. The Karnataka Digital Economy Mission, in partnership with India's top financial technology companies, is creating a roadmap for the growth of the sub-sector. San Francisco-based Fluxon Apps will set up a new hub in Bengaluru by the end of 2022. Online payments solution Razorpay raised a \$375 million Series F in December 2021.

## **Life Sciences**

Bangalore Bioinnovation Centre is the largest Life Sciences hub in India. It is a joint initiative of the Department of Biotechnology, the Government of India, and the Department of Electronics, IT, BT and S&T, and the Government of Karnataka. It works closely with Karnataka Innovation & Technology Society, a nodal center for implementing schemes of the Department of Electronics, IT, BT and S&T, the Government of Karnataka and its Startup Cell. Telehealth startup Mfine raised a ₹3.6 billion (\$48.4 million) Series C in September 2021.



# Reasons to Move Your Startup to Bangalore-Karnataka

## **Location and Infrastructure**

Karnataka is well connected to all major markets through two international airports, 14 national highways, a rail network, and several ports. The Bengaluru - Mumbai Economic Corridor and Chennai - Bengaluru Industrial Corridor pass through the state. Karnataka ranked #3 in the Institute for Competitiveness Export Preparedness Index 2021. Karnataka hosts 44% of India's R&D centers, including Google's first AI and machine learning focused center and Intel's largest 5G technology design center.

## **Tech Talent**

Bengaluru is home to a quarter of India's digital talent, more than any other city in the country, according to a report by Nasscom and consulting firm Zinnov's enterprise decision-making platform Draup. 90,000 engineers graduate from Bangalore's universities every year. Bangalore was named the most liveable city among 111 cities in India in the Union Housing and Urban Affairs' 'Ease of Living Index' report 2021.

## **Access to Funding**

Karnataka accounted for 45% of total FDI in India for the first half of fiscal year 2021-2022. While startup activity is increasing in Delhi and smaller cities, funding remains heavily skewed towards Bengaluru and its seasoned entrepreneurs, a March 2022 Mint analysis shows. The Karnataka government also provides seed funding of up to ₹5 million (\$66,300) for startups in the state.



# Selected Startup Organizations

## STARTUP GENOME MEMBERS

### Karnataka Innovation & Technology Society (KITS)

Karnataka Innovation & Technology Society (KITS) is a nodal center for implementing schemes of the Department of Electronics, IT, BT and S&T, Government of Karnataka, and its startup cell.

MEMBER

### Bangalore Bioinnovation Centre

Bangalore Bioinnovation Centre (BBC) is a joint initiative of the Department of Biotechnology, Government of India, and Department of Electronics, IT, BT and S&T, Government of Karnataka. It is a state-of-the-art translational research and entrepreneurship center catering to the needs of startups in Life Sciences.

MEMBER

“Bangalore-Karnataka has ranked as the #22 startup ecosystem globally and also improved in Market Reach. We are incredibly proud of this progress, significantly driven by our local Members, Bangalore Bioinnovation Centre and the Karnataka Innovation & Technology Society.”

**Marc Penzel, Founder & President of Startup Genome**



China

# Beijing #5

"Beijing is a vibrant city for venture capital and startups. With a large pool of talent from top universities, the presence of multiple technology corporations, and access to capital, it has ample resources to help startups to grow."

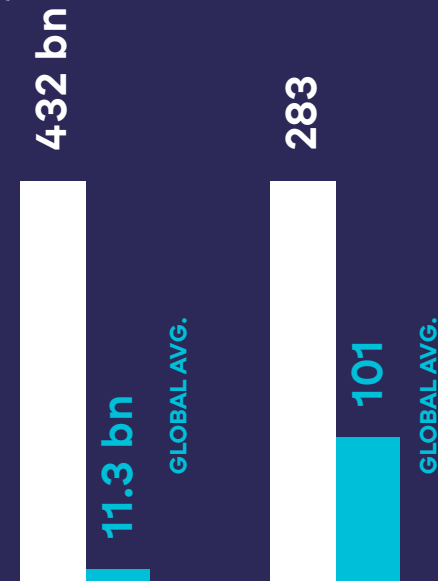
Heng Teck Yong  
Partner, Pegasus Capital



TOTAL EARLY STAGE FUNDING  
(2019H2-2021)

\$9.5 bn

GLOBAL AVG.  
\$687 m



Amount (\$) Count (#)

Exits

(2017-2021)

ECOSYSTEM VALUE  
(2019H2-2021)

\$795 bn

GLOBAL AVG.  
\$28.6 bn

EARLY-STAGE FUNDING GROWTH TIER  
(2018/19 VS. 2020/21)



Calculated on a scale of  
1 (lowest) to 10 (highest)

## Highlights

The Beijing 2022 Winter Olympics spotlighted not just athletic greatness, but also Beijing’s growing status as a startup and technology hub. The Games showcased advances in 5G, AI and Robotics, self-driving vehicles, telemedicine, and smart venue management. China Unicom, the event’s official telecommunications service provider, built an intelligent vehicle networking system that supported a self-driving car to carry the Olympic torch. It also helped test four types of unmanned vehicles including buses and delivery vehicles.

Meanwhile, China is accelerating its ambitious program to support startups in industries such as chipmaking and biotech. The Ministry of Industry and Information Technology is set to name approximately 3,000 "little giant" startups in 2022. The designation provides startups with special incentives and signals to investors, employees, and potential corporate partners that the companies enjoy a special endorsement by the government.

China is building Huairou Science City in the northeastern suburbs of Beijing to provide laboratories and infrastructure for advanced research. In March 2022, five experimental stations opened to users. More than 50 applications have been received from domestic and foreign teams, according to the Huairou Park of the Institute of Physics, Chinese Academy of Sciences. The 5th International Conference on Network Technology will be held in Beijing in October 2022.

Notable recent funding news out of Beijing includes Edtech Fenbi’s \$390 million Series A in February 2021, augmented reality startup Nreal’s \$60 million Series C in March 2022, and security threat intelligence company ThreatBook’s ¥300 million yuan (\$47 million) Series E, also in March 2022.

MEDIAN SEED ROUND  
(2019H2-2021)

\$1.5 m



GLOBAL AVG.  
\$671 k

MEDIAN SERIES A ROUND  
(2019H2-2021)

\$10 m



GLOBAL AVG.  
\$4.7 m

SOFT. ENGINEER SALARY  
(2021)

\$45 k



GLOBAL AVG.  
\$46 k

TOTAL VC FUNDING  
(2017-2021)

\$86 bn



GLOBAL AVG.  
\$4.5 bn

TIME TO EXIT  
(2017-2021)

8 years



GLOBAL AVG.  
9.4 years



# Sub-Sector Strengths

## **AI, Big Data & Analytics**

Beijing is home to 1,070 AI companies, over a quarter of China's total. Tech hub Zhongguancun alone hosts 10 AI labs and 9,000 tech companies. The IEEE International Conference on Computer Communication and Artificial Intelligence is held in Beijing. Xiaoice's AI referee and coaching system not only helped train domestic athletes for the Beijing 2022 Winter Olympic Games, but also participated in judging more than 40 test events. AI and IoT platform Terminus Technologies raised a \$93 million Series B in September 2021. AI startup Aibee raised \$100 million in venture funding in March 2022.

## **Fintech**

Beijing has ranked #1 among global Fintech hubs for three consecutive years by the Global FinTech Hub Report. Co-organized by Tsinghua University PBC School of Finance and more than 30 other colleges and universities, and sponsored by Tsinghua University Fintech Research Institute, the 2021 China Fintech Research Conference was held in Beijing to promote research around Fintech. The Fintech World Forum will take place in Beijing in June 2022. Blockchain startup Cobo raised a \$40 million Series B in September 2021.



# Reasons to Move Your Startup to Beijing

## **Infrastructure for Advanced Research**

A cluster of advanced research institutions is currently being constructed in Huairou Science City. The cluster will accommodate 5,000 people on a site spanning approximately one square kilometer with laboratories and other facilities for cutting-edge science.

## **Research Funding**

The National Natural Science Foundation of China has set up the Research Fund for International Scientists (RFIS) to support foreign scientists who are ready to conduct basic research in China. RSIF offers scientists up to \$125,000 per year per project and is open to all research areas within the NSFC's funding scope. Projects are expected to start in 2023.



India

Kerala

MEMBERS:

Kerala Startup Mission

"Startup India places Kerala as one of the top Indian states for startup environments. Kerala Startup Mission is dedicated to fostering global entrepreneurship to strengthen the startup community in the state, as well as across the nation."

Shri Pinarayi Vijayan

Honorable Chief Minister & Honorable Minister for IT



TOTAL EARLY STAGE FUNDING  
(2019H2-2021)

\$27 m

GLOBAL AVG.  
\$687 m



Amount (\$) Count (#)

Exits

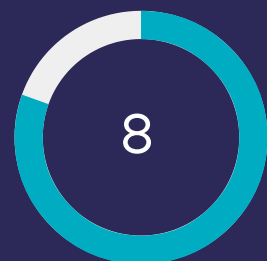
(2017-2021)

ECOSYSTEM VALUE  
(2019H2-2021)

\$133 m

GLOBAL AVG.  
\$28.6 bn

EARLY-STAGE FUNDING GROWTH TIER  
(2018/19 VS. 2020/21)



Calculated on a scale of  
1 (lowest) to 10 (highest)

Highlights

Kerala has dubbed 2022 the Year of Entrepreneurs, and has set an ambitious goal of creating 15,000 startups over the next five years. Various government initiatives such as Innovation and Entrepreneurship Development Centers (IEDCs), Young Innovators Programs, and incubation and acceleration programs are joining in the effort. Kerala is also looking to set up a venture capital fund for startups in the state. Women entrepreneurs will get particular support, including dedicated loans.

The state's 2022 budget emphasized the importance of entrepreneurship and earmarked ₹2,500 crore (\$331.4 million) to upgrade skills in the state. Kerala University of Digital Sciences, Innovation and Technology (Digital University Kerala) trains industry-ready talent. Kerala has also opened a launch pad program for startups from across the world to come to Kerala and explore the Indian market. A Technology Innovation Zone in Kochi houses incubators, accelerators, labs, centers of excellence, and community spaces, including India's first Super Fablab, built in collaboration with Massachusetts Institute of Technology.

Started in 2016 by Kerala Startup Mission (KSUM), Seeding Kerala showcases opportunities to invest in startups from Kerala. At the latest Seeding Kerala Summit investments of ₹80 crore (\$10.6 million) were announced. 46 investors participated in the invite-only summit, including representatives of top funds, angel networks, 30 corporate houses, and family offices. KSUM has accredited 23 IEDCs at local colleges and universities to incubate startup ideas.

Conferences including Huddle Global, Seeding Kerala, and the IEDC summit offer networking and learning opportunities to Kerala's startup scene.

MEDIAN SEED ROUND  
(2019H2-2021)

\$420 k



GLOBAL AVG.  
\$671 k

MEDIAN SERIES A ROUND  
(2019H2-2021)

\$4.5 m



GLOBAL AVG.  
\$4.7 m

SOFT. ENGINEER SALARY  
(2021)

\$5 k



GLOBAL AVG.  
\$46 k

TOTAL VC FUNDING  
(2017-2021)

\$43 m



GLOBAL AVG.  
\$4.5 bn

TIME TO EXIT  
(2017-2021)

N/A



GLOBAL AVG.  
9.4 years



# Sub-Sector Strengths



## Advanced Manufacturing & Robotics

Kerala is an ideal base for Advanced Manufacturing and Robotics companies thanks to its many support facilities. These include a network of 22 fablabs, 20 IoT labs, an MSME Cluster spread across the state, and Maker Village. The state's electronics manufacturing and industrial clusters help startups to scale their manufacturing activities. Values-driven startups including electric boat maker Navalt are inspiring others in the sub-sector. Inker Robotics uses technology and automation to preserve the area's traditional puppetry.



## AI, Big Data & Analytics

Thanks to the efforts of local startup Cyber Square, Kerala was the first Indian state to introduce coding into the curriculum from Class I onwards. Initiatives including Future Technologies Lab, Digital Hub, Design Incubator, and Digital University have brought talent into the sub-sector. Working with the Kerala police, Digital University Kerala launched a training program called Capacity Building in Responsible Artificial Intelligence and Data Analytics for the Police Department in 2022. Online grocery BigBasket acquired the enterprise business unit of Deep Tech company Agrima Infotech, which was incubated by Kerala Startup Mission.



## Blockchain

Kerala Blockchain Academy is an initiative of the Government of Kerala under the Kerala University of Digital Sciences, Innovation and Technology to provide Blockchain training, research, and consultancy. UAE based Blockchain startup Kingspin Technology Services is expanding in Kerala by setting up an offshore delivery center in Kochi.

# Reasons to Move Your Startup to Kerala

## Government Support

In the 2021–22 budget, Kerala's Finance Minister proposed setting up startup innovation zones and a dedicated Venture Capital Fund to activate the growth of startups in the state. Kerala Startup Mission, the central agency of the Government of Kerala, provides various grants for startups. KSUM's Fund of Funds has supported 11 startups through its Kerala Specific Angel Fund, the first of its kind in the country. KSUM has also implemented a scheme that enables government departments to procure directly from startups.

## Tech Talent

Kerala has focused on upskilling and reskilling talent through initiatives including Digital University, Kerala BlockChain Academy, FFS, School of Products, and Super Fablabs. These programs offer hands-on experience and provide startups with a pool of skilled talent to hire from, as well as provide training to potential founders.



# Selected Startup Organizations

## STARTUP GENOME MEMBERS

MEMBER

### Kerala Startup Mission

Kerala Startup Mission (KSUM) is the state nodal agency of the Government of Kerala for entrepreneurship development and incubation activities.

“Startup Genome is thrilled to see such incredible growth in the Kerala startup community — up 20 spots in the overall ranking! With Open Financial Technologies, Kerala has recently joined the ranks of ecosystems that have produced a unicorn and we could not be more proud of the hard work and dedication of the team at Kerala Startup Mission.”

**Marc Penzel, Founder & President  
of Startup Genome**

## KEY ECOSYSTEM PLAYERS

### TiE – Global Entrepreneurship Organization

TiE Global is a nonprofit organization devoted to entrepreneurs, at all stages, from incubation, throughout the entrepreneurial lifecycle. TiE efforts lies in its five foundational programs, Mentoring, Networking, Education, Funding, and Incubation.

### Anil Joshi

Managing Partner at Unicorn India Ventures, an SEBI approved venture fund. The investment thesis of the Fund is to invest in incubation stage, accelerator stage, seed stage, start-up stage, early stage and growth stage companies in India.

### Nasscom

NASSCOM is the premier trade body and chamber of commerce of the Tech industry in India and comprises over 3000 member companies including both Indian and multinational organizations.

### Saji Gopinath

Dr. Saji Gopinath currently heads Kerala University of Digital Sciences, Innovation And Technology as its Vice Chancellor. He also serves in the Academic Board of Project Management Institute (PMI).



Malaysia

Kuala Lumpur

MEMBERS:

Cradle Fund

"Malaysia offers a safe, conducive and vibrant environment for startups to initiate and grow their business. Through the SUPER roadmap, there are various initiatives and interventions such as funding, talent, innovation, policies, and market access that enhance the ecosystem and ensure startups in Malaysia experience a fantastic growth journey."

Rafiza Ghazali

Group CEO, Cradle Fund



TOTAL EARLY STAGE FUNDING  
(2019H2-2021)

\$198 m

GLOBAL AVG.  
\$687 m



Amount (\$) Count (#)

Exits

(2017-2021)

ECOSYSTEM VALUE  
(2019H2-2021)

\$72 bn

GLOBAL AVG.  
\$28.6 bn

EARLY-STAGE FUNDING GROWTH TIER  
(2018/19 VS. 2020/21)



Calculated on a scale of  
1 (lowest) to 10 (highest)

Highlights

Kuala Lumpur offers startups a strategic location to over 674 million potential customers within the ASEAN market.<sup>1</sup> The city’s unrivaled connectivity, infrastructure, and talent, as well as strong government support, provide an ideal environment for companies to grow.<sup>2</sup> As such, the city has been consistently ranked as one of the world’s most promising emerging startup hubs.<sup>3</sup> Kuala Lumpur is currently home to several successful startups including drone technology company Aerodyne, Fintechs Jirnexu and Capbay, and e-commerce unicorn Carsome.

Several government agencies support the ecosystem with funding, including Cradle Fund, MDeC, Penjana Kapital, Malaysia Venture Capital Management, Modal Perdana, and Malaysia Debt Ventures. To further encourage innovation, the government has adopted policies including the National Technology and Innovation Sandbox to nurture and encourage innovation in the country. Malaysia’s 2022 budget allocates RM 230 million (\$54 million) to support women entrepreneurs. Another RM 150 million (\$35 million) has been set aside to promote entrepreneurship among young people.

The Malaysia Startup Ecosystem Roadmap (SUPER) 2021-2030 is a key government initiative. By coordinating efforts among all main stakeholders, SUPER, under the purview of Cradle Fund, serves as the true north of all other national laws and rules pertaining to startups, with the goal of providing a friendly, effective, and efficient environment for startups. Under SUPER, the Mystartup platform was initiated to serve as a central depository of information on Malaysia’s ecosystem.

In addition, the Malaysia Digital Industry Blueprint (MyDIGITAL) is intended to support the digital economy. MyDIGITAL’s goals include attracting unicorns and increasing the number of startups.

MEDIAN SEED ROUND  
(2019H2-2021)

\$215 k



GLOBAL AVG.  
\$671 k

MEDIAN SERIES A ROUND  
(2019H2-2021)

\$3.3 m



GLOBAL AVG.  
\$4.7 m

SOFT. ENGINEER SALARY  
(2021)

\$16 k



GLOBAL AVG.  
\$46 k

TOTAL VC FUNDING  
(2017-2021)

\$6.6 bn



GLOBAL AVG.  
\$4.5 bn

TIME TO EXIT  
(2017-2021)

8.2 years



GLOBAL AVG.  
9.4 years



# Sub-Sector Strengths

## Gaming

Kuala Lumpur is a budding regional Gaming hub. According to Report Linke, it is currently among the six most significant countries for mobile gaming in Southeast Asia. Several global companies, including PlayStation Studios, have recently opened offices in the city. Malaysia hosts LEVEL UP KL, the largest conference for game developers in Southeast Asia, and Galaxy Racer, the largest esports and Gaming organization in the world, will open its Asia Pacific headquarters here in 2022. The company plans to invest RM 42 million (\$10 million) in the country within the next five years and will organize esports events and tournaments to boost its Gaming ecosystem.

## Fintech

The Network Readiness Index 2021 ranked Malaysia 38 out of 134 countries in readiness to transition to a digitized economy. According to Mordor Intelligence, the highly competitive Malaysian Fintech market is among the largest in Asia. The awarding of digital banking licenses to five consortiums by Bank Negara Malaysia is expected to bring new interest to the Kuala Lumpur Fintech industry. These digital banks will cater to the region's previously underserved market, estimated to be over 290 million unbanked adults.

## E-commerce

Malaysia is an attractive market for e-commerce in Southeast Asia due to its dynamic economy and developed infrastructure for digital technologies. eCommerce revenue in Malaysia reached a total of \$4 billion in 2020. According to GlobalData's eCommerce Analytics, Malaysia's eCommerce market saw a 24.7% growth in 2021. The market is expected to reach \$12.6 billion by 2024, increasing at a CAGR of 14.3% between 2020 and 2024. 9 Unicorn Carsome raised \$290 million in a Series E funding, valuing the used-car online marketplace at \$1.7 billion.

# Reasons to Move Your Startup to Kuala Lumpur

## Educated Workforce

With nearly 40% of Malaysia's population under the age of 25, the Kuala Lumpur region has a strong pipeline of skilled young talent. Over 330,000 students are enrolled in more than 240 institutions of higher learning. This talent pool is diverse, and multilingual. Most Malaysians speak English fluently.

## Supportive Business Environment

Malaysia offers startups well-developed infrastructure, advanced telecommunication services, high broadband penetration, a robust financial sector, and a business-friendly regulatory framework. The country has a mobile penetration rate of 142.1% and 127.4% internet penetration rate, making Malaysians a digitally savvy market segment for startups to penetrate.



# Selected Startup Organizations

## STARTUP GENOME MEMBERS

MEMBER

### Cradle Fund

Established in 2003 with a mandate to fund high-caliber technology, Cradle Fund has supported over 1,000 Malaysian Technology-Based companies across multiple sectors and holds the highest commercialization rate amongst funding agencies in the country. Cradle Fund’s program offerings are not restricted to monetary aid, but also include commercialization support and various other value-added services to accelerate growth.

“We celebrate the success stories and progress in the Malaysian ecosystem showing great strides in entrepreneurship, high quality employment, and economic growth. It’s thrilling to see the hard work of Cradle Fund, MDEC, and other key players in this vibrant ecosystem come to fruition, with the ecosystem ranking as a Top 25 Emerging Ecosystem globally.”

**Stephan Kuester, Head of Ecosystem  
Strategy of Startup Genome**

## KEY ECOSYSTEM PLAYERS

### Cradle Fund

With a mandate to fund high-caliber technology, Cradle Fund has supported over 1,000 startups across multiple sectors. Cradle Fund’s program offerings include fuinding, commercialization support, and various other value-added services to accelerate growth.

### Malaysia Venture Capital Management (MAVCAP)

Mavcap supports the development of the Malaysian VC ecosystem via public-private partnership, locally and internationally, investing and championing local techpreneur to the global scale.

### Malaysia Digital Economy Corporation (MDEC)

MDEC’s aspiration is to firmly establish Malaysia as the Heart of Digital ASEAN, a regional digital powerhouse launching global champions to lead the Fourth Industrial Revolution.

### Malaysian Research Accelerator for Technology & Innovation (MRANTI)

MRANTI is focused on accelerating growth and nurturing partnerships; to generate impactful research, viable inventions, and ready-to-use technologies.

### Malaysian Business Angel Network (MBAN)

MBAN is the official trade association and governing body for angel investors and angel clubs in Malaysia. It aims to put forward the agenda of angel investing in an all inclusive manner for the benefit of members, the angel ecosystem and start-ups.



# Japan Kyoto

MEMBERS:

Kyoto Startup Ecosystem Promotion Council

"Kyoto has a wide range of industrial communities such as biotechnology, precision machining, robotics, AI, games, foods, etc. It also has a concentration of university research institutes and the optimal environment for startups, working, and living that is close to history, culture, and nature. People with drive and ambition will be able to achieve wonderful new things in ‘Startup Capital Kyoto’."

Akimasa Yamashita

Vice-Governor, Kyoto Prefectural Government



TOTAL EARLY STAGE FUNDING  
(2019H2-2021)

\$39 m



Exits  
(2017-2021)

ECOSYSTEM VALUE  
(2019H2-2021)

\$471 m

\$28.6 bn

EARLY-STAGE FUNDING GROWTH TIER  
(2018/19 VS. 2020/21)



Calculated on a scale of 1 (lowest) to 10 (highest)

## Highlights

Kyoto is both Japan’s ancient capital and a bustling university town, hosting 34 universities and a thriving researcher cluster. This combination of traditional craftsmanship and modern innovation makes for fertile soil for a successful startup ecosystem.

Startups in Kyoto benefit from a range of startup support organizations and events. Plug and Play Kyoto holds the Winter/Spring 2022 Kyoto Summit, a three-month accelerator program that supports domestic and international startups looking to partner with Japanese corporations. JETRO, together with the Japanese Government, offers top global accelerator programs and strongly supports the overseas expansion of Japanese startups. Fourteen Kyoto startups participated in the program, the second-largest number in Japan after Tokyo. Kyoto Smart City Expo is an international event that provides an opportunity to foster innovation.

Founders of Notion Labs, a San Francisco-based maker of a popular workplace productivity platform, completely revamped the product after moving to Kyoto in 2018. Today, the company has raised more than \$343 million over five rounds; the latest was an October 2021 \$275 million Series C. In 2021, solid-state battery developer QuantumScape announced it will open a new R&D center in Kyoto Research Park to develop and manufacture its batteries for electric vehicles. FLOSFIA, a spin-off from a research of Kyoto University that is developing semiconductor devices for electric vehicles, raised a ¥1 billion (\$8 million) Series E round in March 2021. Adtech startup AdInte raised ¥5.2 billion (\$45.5 million) of venture funding in January 2022. Asia’s first fusion energy startup, Kyoto Fusioneering, has raised \$18.6 million to date.

MEDIAN SEED ROUND  
(2019H2-2021)

\$574 k



GLOBAL AVG.  
\$671 k

MEDIAN SERIES A ROUND  
(2019H2-2021)

\$1.9 m



GLOBAL AVG.  
\$4.7 m

SOFT. ENGINEER SALARY  
(2021)

\$42 k



GLOBAL AVG.  
\$46 k

TOTAL VC FUNDING  
(2017-2021)

\$275 m



GLOBAL AVG.  
\$4.5 bn

TIME TO EXIT  
(2017-2021)

10.6 years



GLOBAL AVG.  
9.4 years



# Sub-Sector Strengths



## Advanced Manufacturing & Robotics

Monozukuri Hardware offers comprehensive support to hardware startups. Kyoto University's On-site Laboratory Initiative enables academic departments and centers in both medical research and materials science to establish laboratories in collaboration with overseas partners.



## Life Sciences

The Kansai region (Osaka, Kobe, and Kyoto metropolitan areas) is the heart of Japan's biotech industry and home to more than 300 Life Sciences companies, top medical institutions, and institutes for advanced research. Kyoto University is home to the Center for iPS Cell Research and Application. The Kansai Regenerative Medicine Industrial Consortium coordinates collaborations between companies and startups and provides R&D facilities to support these projects. Biotech company Thyas raised a ¥2.1 billion (\$16.9 million) Series B in February 2022.



# Reasons to Move Your Startup to Kyoto

## Startup Visa program

The Startup Visa program provides support to foreign entrepreneurs to set up their business in Kyoto, including immigration assistance, free co-working space, a subsidy for company registration fee, and other services.

## Academic Powerhouse

There are 34 universities in Kyoto, with students accounting for around 10% of the city's population. Kyoto University, one of the world's top 30 universities according to the Shanghai Rankings, supports the startup ecosystem through a range of programs including incubation, venture funding, and industry-academia collaboration. Five hundred enterprises and organizations are active within Kyoto Research Park. Many research institutions are clustered in Keihanna Science City. Kyoto's universities and enterprises have produced 11 Nobel Prize-winning researchers. Many research institutions are clustered in Keihanna Science City.

## Dedicated Startup City

The Keihanshin region, which includes Osaka, Kyoto, and Kobe, was designated a Global Startup City by the Government of Japan. Many large companies including Kyocera, Shimadzu, NIDEC, Omron, Horiba, and NISSHA have roots in Kyoto, and their presence on the global stage links new entrepreneurs based in the ecosystem to the global business world.



# Selected Startup Organizations

## STARTUP GENOME MEMBERS

MEMBER

### Kyoto Startup Ecosystem Promotion Council

Kyoto Startup Ecosystem Promotion Council unites local government, economic organizations, industrial support institutions, universities, and financial institutions. We are committed to creating an environment that fosters entrepreneurs and promotes a startup ecosystem.

“The Kyoto Wisdom Industry Creation Center worked in concert with Startup Genome to showcase Kyoto’s thriving entrepreneurial ecosystem in the #GSER2022. It’s great to see Kyoto rank as a Top 20 Asian Ecosystem in Knowledge, measured by research and patent activity and reflective of its great capacity in high innovative technology development.”

**Stephan Kuester, Head of Ecosystem  
Strategy of Startup Genome**

## KEY ECOSYSTEM PLAYERS

### Kyoto University

Kyoto University advances open innovation dialogues and activities with various domestic and overseas stakeholders, building a world-class startup ecosystem with local and regional communities. It continues to champion innovation culture, and promote entrepreneurial spirit and activities.

### Plug and Play Kyoto

Japan’s second location of Silicon Valley headquartered global innovation platform. Since its opening in 2019, it has been working closely with industry-leading corporations and innovative startups in the field of healthcare and new materials.

### Startup Capital Kyoto

A joint initiative by JETRO Kyoto, Kyoto Prefecture and City of Kyoto to support overseas entrepreneurs starting a business. Startup Capital Kyoto provides information such as company setup procedures, consultation services, and referrals.

### Narimasa Makino (Monozukuri Ventures)

Narimasa Makino, CEO of Monozukuri Ventures is a seasoned venture capitalist with 15 years of experience working with various successful international entrepreneurs.



Philippines  
Manila

MEMBERS:

Department of Trade and Industry

"The Philippine startup ecosystem is thriving in the new normal as seen in the unfettered growth of investments. Home to a great pool of creative talents and with more focused government support, the Philippines is now a real emerging startup destination."

Dr. Rafaelita M. Aldaba

Undersecretary for Competitiveness and Innovation Group, Department of Trade and Industry



TOTAL EARLY STAGE FUNDING  
(2019H2-2021)

\$292 m

GLOBAL AVG.  
\$687 m



Amount (\$) Count (#)

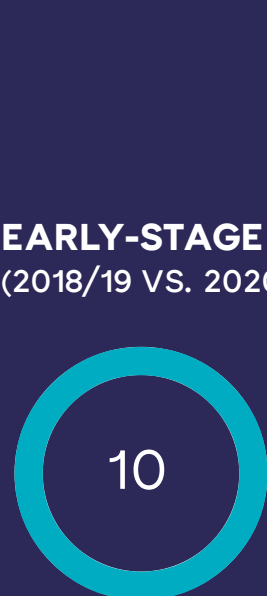
Exits

(2017-2021)

ECOSYSTEM VALUE  
(2019H2-2021)

\$2 bn

GLOBAL AVG.  
\$28.6 bn



Calculated on a scale of  
1 (lowest) to 10 (highest)

EARLY-STAGE FUNDING GROWTH TIER  
(2018/19 VS. 2020/21)

Highlights

Over the last few years, a number of regulatory reforms have helped enhance the competitiveness of the Philippine startup ecosystem. In 2021, the ecosystem raised \$1 billion in funding, a 179% growth on the previous year. Two local Fintech startups are valued at more than \$1 billion, with Mynt achieving "double unicorn" status in November 2021 after raising \$300 million and Voyager Innovations raising a total of \$210 million in its latest funding round. Kumu raised a \$73.6 million Series C and GrowSari, an e-commerce startup, raised \$77.5 million in its latest funding round.

With the potential contribution of startups to the economy, the Philippine government has been focusing on building a robust startup ecosystem through the implementation of such policies as the Ease of Doing Business Act, which streamlined government processes, systems, and procedures; the Revised Corporation Code, which allows the incorporation of one-person corporations; and the Innovative Startup Act and Philippine Innovation Act, which provide benefits and incentives for startup and innovative enterprises.

To continue fostering innovation and collaboration, the annual Philippine Startup Week (PHSW), the country's premier startup networking conference, is held to celebrate and showcase the Filipino startup community. Aside from various community-organized events across the country, PHSW includes three main events: the Department of Science and Technology's Technology Business Incubation Summit, the Department of Information and Communications Technology's InnovNation event, and the Department of Trade and Industry's Slingshot Conference. The IGNITE innovation conference by TechShake, dentsu X, and Brainsparks also supports the startup ecosystem.

MEDIAN SEED ROUND  
(2019H2-2021)

\$150 k



GLOBAL AVG.  
\$671 k

MEDIAN SERIES A ROUND  
(2019H2-2021)

\$5 m



GLOBAL AVG.  
\$4.7 m

SOFT. ENGINEER SALARY  
(2021)

\$8 k



GLOBAL AVG.  
\$46 k

TOTAL VC FUNDING  
(2017-2021)

\$575 m



GLOBAL AVG.  
\$4.5 bn

TIME TO EXIT  
(2017-2021)

8.4 years



GLOBAL AVG.  
9.4 years



# Sub-Sector Strengths

## Fintech

Philippines Fintech Map 2022 identifies more than 220 Fintech companies in the country, of which 27% are in lending. With sustained demand for digital banking solutions and a shift towards digital transformation, the Philippines mobile wallet and payment market is expected to record a CAGR of 24.1%, reaching \$19.8 billion by 2025. The PayMongo Accelerator Program, launched in 2021, is the first such program in the Philippines, and is backed by Silicon Valley-based Y Combinator. Philippine Digital Asset raised a \$50 million Series B in February 2022. The same month, PayMongo raised \$31 million in Series B funding.

## E-commerce

E-commerce adoption in the Philippines increased to 80% in 2021, up from 70% in 2019 and 76% in 2020. The E-commerce Philippines 2022 Roadmap envisions one million e-commerce businesses by the end of 2022, as well as a digitally literate workforce to support the expanding sub-sector. In 2021, the Philippines had over a million thriving e-commerce enterprises, exceeding the Roadmap's target. Great Deals e-commerce, a Filipino end-to-end e-commerce service platform, raised a \$30 million in Series B funding in May 2021.



# Reasons to Move Your Startup to Manila

## Tax Incentives

The 2021 Corporate Recovery and Tax Incentives for Enterprises Act (CREATE Act) provides export-oriented enterprises and domestic enterprises engaged in strategic activities as defined under the Strategic Investment Priority Plan (SIPP) with the following incentives: income tax holiday, VAT and customs duty exemptions to be followed by a Special Corporate Income Tax or Enhanced Deductions up to a maximum period of 17 years.

## Support for Foreigners

Foreign businesses employing foreign nationals enjoy fiscal incentives, and in March 2022, the Foreign Investment Act was amended to allow foreign nationals to own an MSME with a minimum paid-in capital of \$100,000.

## Government Startup Programs

The government provides assistance to startups through incubation and acceleration programs. The IDEA, ADVANCE, and Global Acceleration Programs were designed to help startups validate their solutions, commercialize, scale up, and expand globally. The government also provides funding support through the Startup Grant Fund, which helps startups in overcoming R&D roadblocks, and the Startup Venture Fund, which provides equity funding to startups.



# Selected Startup Organizations

## STARTUP GENOME MEMBERS

MEMBER

### Department of Trade and Industry

The Department of Trade and Industry is the agency of the Philippine government responsible for realizing the country’s goal of developing globally competitive and innovative industry and services sectors that contribute to inclusive growth and sustainable development. Its Competitiveness and Innovation Group has been established to grow and develop the Philippine innovation and entrepreneurship and startup ecosystems towards generating more and better opportunities for employment and entrepreneurship in the country.

“Startup Genome and the Department of Trade and Industry, Philippines have been working closely together to highlight Manila in the GSER. We are excited to capture their progress in funding as a Top 25 Asian Ecosystem and Top 15 Asian Emerging Ecosystem for early stage funding and investor activity.”

**Stephan Kuester, Head of Ecosystem  
Strategy of Startup Genome**

## KEY ECOSYSTEM PLAYERS

### QBO

The Philippines’ first public-private partnership platform, which serves as an innovation hub for Filipino startups.

### Phildev Foundation

A nonprofit innovation organization that accelerates science and technology for national development through initiatives, programs, and partnerships.

### Gobi-Core PH Fund

A joint-venture partnership between Gobi Partners and Core Capital with a \$10-million fund. Gobi-Core PH Fund aims to invest in seed-stage and pre-Series A startups in the Philippines.

### Foxmont Capital Partners

A VC firm dedicated to investing in Filipino-focused or Filipino-founded early-stage technology startups that have proven that they can scale effectively and lead the Philippine digital evolution.

### National Development Council

NDC was created to function as the government’s investment arm. It has allocated a venture fund for Philippine startups in the seed to Series B stage.



Japan

Osaka

MEMBERS:

Osaka Business Development Agency

"In 2025, the Osaka-Kansai Expo will be held under the theme of Designing a Future Society that Shines with Life and the concept of a testing ground for a future society. We will make the most of this impact to attract people, goods, investment, and technology from all over the world."

Hirofumi Yoshimura

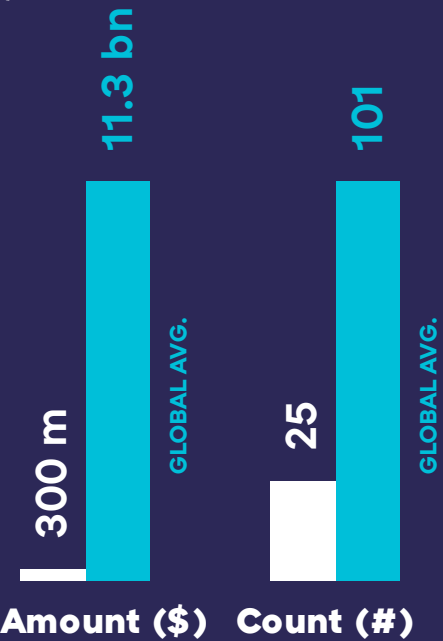
Governor of Osaka Prefecture and Ichiro Matsui, Mayor of Osaka City



TOTAL EARLY STAGE FUNDING  
(2019H2-2021)

\$61 m

GLOBAL AVG.  
\$687 m



Exits

(2017-2021)

ECOSYSTEM VALUE  
(2019H2-2021)

\$392 m

GLOBAL AVG.  
\$28.6 bn

EARLY-STAGE FUNDING GROWTH TIER  
(2018/19 VS. 2020/21)



Calculated on a scale of  
1 (lowest) to 10 (highest)

Highlights

With its cluster of leading universities, research institutes, and companies, the Osaka region has all the essential ingredients to become a thriving startup hub. The ecosystem features particularly deep expertise in Life Sciences and Deep Tech thanks to its advanced R&D capabilities and long history with these industries. The Japanese government has designated Kansai, the region of Osaka, Kobe, and Kyoto, one of the country’s four Global Startup Cities. Osaka is working towards its goal of creating 300 startups that can scale globally by 2024.

The 2025 Osaka Kansai Expo will showcase cutting-edge technologies under the theme of "Designing Future Society for Our Lives," while also introducing the world to Osaka’s startup ecosystem . The event will serve as a laboratory for the future of society, with a particular focus on innovations in advanced mobility, Life Sciences, and sustainable development.

Launched in July 2021, Biocommunity Kansai (BioCK) aims to further develop Osaka’s potential as a global Life Sciences hub by nurturing connection, community, and information sharing both within the ecosystem and among international collaborators. One of Japan’s largest urban redevelopment projects, Umekita 2nd Project, is scheduled to open in 2024 in front of Osaka Station, the largest terminal in western Japan. As the node of the Kansai region, Osaka was designated as a Super City Special National Strategic Zone in March 2022 by the government, and will function as a base for the creation of new industries in health, medicine, the environment, energy, and other fields by attracting capital, technology, and human resources from Japan and abroad.

MEDIAN SEED ROUND  
(2019H2-2021)

\$923 k



GLOBAL AVG.  
\$671 k

MEDIAN SERIES A ROUND  
(2019H2-2021)

\$2 m



GLOBAL AVG.  
\$4.7 m

SOFT. ENGINEER SALARY  
(2021)

\$44 k



GLOBAL AVG.  
\$46 k

TOTAL VC FUNDING  
(2017-2021)

\$372 m



GLOBAL AVG.  
\$4.5 bn

TIME TO EXIT  
(2017-2021)

11.4 years



GLOBAL AVG.  
9.4 years



# Sub-Sector Strengths

## Life Sciences

Osaka boasts a concentration of Life Sciences companies, including Takeda and Shionogi Pharmaceutical. Osaka University is highly ranked for immunology and biomedical engineering, and biotech ventures originating from the university include Luxna Biotech, which raised a \$10.73 million Series B in December 2021. The International Hub for Healthcare Innovation in Nakanoshima will open in 2024, housing activity in regenerative medicine, genomic medicine, and AI and IoT. Light Touch Technology invented the world’s first noninvasive blood glucose sensor, and Cuorips, which is developing a treatment for heart failure, raised ¥100 million (\$800,000) in March 2021.

## Advanced Manufacturing & Robotics

Many international manufacturing companies, including Panasonic, KEYENCE, Daikin Industries, and Iwatani are present in Osaka. The 2025 Osaka Kansai Expo will showcase innovative new mobility technology including electric vertical take-off and landing (eVTOL) vehicles — “flying cars.” Microwave Chemical raised a total of ¥4.2 billion (\$33.7 million) over seven rounds. Circuit design company ArchiTek has raised over ¥1billion (\$8 million) over two rounds.



# Reasons to Move Your Startup to Osaka

## Dedicated Support

Kansai has government-led startup support, including acceleration programs by stage. Startup visas for up to one year are available in Osaka. The Application Support Desk for International Founders helps entrepreneurs from outside Japan apply for the Startup Visa and set up their business in Osaka. Osaka Landing Pad, a platform to attract startups and investors from abroad, was formed in 2022.

## Quality of Life

Osaka is both safe and friendly. The city consistently ranks near the top of The Economist’s annual Safe Cities Index and placed second in its Global Liveability Index 2021. It is one of the most welcoming Japanese cities for foreigners. Although it is Japan’s second largest city after Tokyo, land prices are about half of those in Tokyo. Kobe and Kyoto are a 30-minute trip away.



# Selected Startup Organizations

## STARTUP GENOME MEMBERS

MEMBER

### Osaka Business Development Agency

Osaka Business Development Agency is a public organization that supports small and medium-sized enterprises in Osaka, helping them strengthen their management capabilities and expand their sales channels, including startups. Support focuses on international business promotion, business startup and venture business support, and business succession. It operates Osaka Innovation Hub, a hub for startup support in Osaka, in collaboration with Osaka Prefecture and Osaka City.

“As global economic transformation specialists and policy advisors, we’re extremely proud of how Osaka has performed in the 2022 Global Startup Ecosystem Report.

Working with our local partner, Osaka Business Development Agency, we are eager to share the stories behind this success.”

**Stephan Kuester, Head of Ecosystem  
Strategy of Startup Genome**

## KEY ECOSYSTEM PLAYERS

### Osaka Innovation Hub

A hub for ecosystem players in Osaka. Supporting communities and commercialization of business plans. Fostering entrepreneurs and promoting development of the startup ecosystem in Osaka and Kansai.

### Hankyu Hanshin Properties Corp.

As a regional developer, Hankyu Hanshin Properties is working to create a place and ecosystem for exchange and co-creation between startups and various people from industry, government, and academia to revitalize Osaka Umeda.

### Co-creation Bureau, Osaka University

One of the top national universities in Japan, excelling in the creation of startups in Life Sciences. Strongly promoting the discovery of promising research seeds and the verification of their commercialization.

### Japan Startup Support Association

A community of 38 angel investors in which senior entrepreneurs nurture their juniors.

### LINK-J West

LINK-J aims to promote and support open innovation by creating networks and ecosystem in the life science realm. In order to realize these aims, they host activities that facilitate exchange and cooperation as well as training and support.



South Korea

# Seoul #10

MEMBERS:

Seoul Business Agency

"Seoul is a city that dreams, a city that achieves dreams, and a city that makes dreams. A city where startups and youths become stars through innovation and creativity."

Hyun Woo Kim

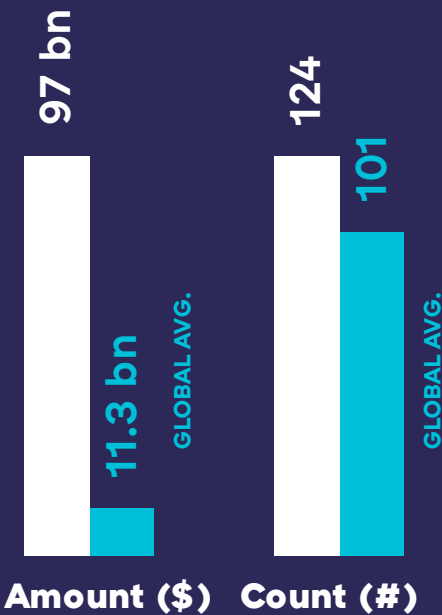
CEO, Seoul Business Agency



TOTAL EARLY STAGE FUNDING  
(2019H2-2021)

\$2.3 bn

GLOBAL AVG.  
\$687 m



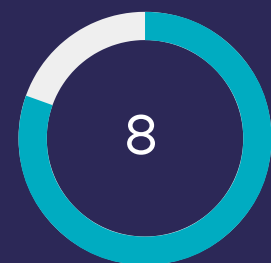
Exits  
(2017-2021)

ECOSYSTEM VALUE  
(2019H2-2021)

\$177 bn

GLOBAL AVG.  
\$28.6 bn

EARLY-STAGE FUNDING GROWTH TIER  
(2018/19 VS. 2020/21)



Calculated on a scale of  
1 (lowest) to 10 (highest)

## Highlights

Seoul has experienced the “second venture boom,” with numbers related to startups and venture investment continuously reaching record highs. In 2021 VC funding increased by 34% compared to the previous year, to \$7.7 billion. Venture investment in Korean startups grew 78% year-on-year in 2021 to surpass \$6.4 billion. Seoul accounts for 56% of the total amount of investment, hitting a record high of \$3.5 billion. The total of unicorns founded in Korea rose to 18, according to the Korean government, with 15 out of 18 unicorns based in Seoul. Korea produced seven new unicorns in 2021, its largest ever number in a year. Newly minted Korean unicorns include virtual asset exchanges Dunamu and Bithumb, real estate brokerage Zigbang, food delivery startup Kurly, used goods trading platform Carrot Market, and content platform Ridi.

The Seoul Metropolitan Government launched an investment promotion agency, Invest Seoul in February 2022 to help international businesses successfully relocate to Seoul. The initiative aims to attract \$30 billion in foreign direct investment by 2030. Seoul has also set up a start-up ladder, a special plan for strategic collaborations between existing companies and startups.

As a successful deep-technology hub, Seoul has seven major industrial clusters such as Biotechnology (Hong-neung), AI and Big Data (Yangjae), Fintech (Yeouido), Robots (Suseo), and IoT (G-valley). The online integrated platform Startup Plus was launched in April 2022 to provide services to startups, including matching with investors and technology transactions. Global startup festival Try Everything takes place in Seoul each year.

MEDIAN SEED ROUND  
(2019H2-2021)

\$518 k



GLOBAL AVG.  
\$671 k

MEDIAN SERIES A ROUND  
(2019H2-2021)

\$2.6 m



GLOBAL AVG.  
\$4.7 m

SOFT. ENGINEER SALARY  
(2021)

\$45 k



GLOBAL AVG.  
\$46 k

TOTAL VC FUNDING  
(2017-2021)

\$19 bn



GLOBAL AVG.  
\$4.5 bn

TIME TO EXIT  
(2017-2021)

8 years



GLOBAL AVG.  
9.4 years



# Sub-Sector Strengths

## **AI, Big Data & Analytics**

Korea raised \$1.15 billion in AI & Big Data in 2021. The data market was valued at \$16 billion in 2020, according to the Korean government. AI startup Upstage raised \$25.5 million at Series A, and Voyagerx \$24.2 million. Seoul has operated AI Yangjae Hub since 2017 with the goal of creating an AI industry ecosystem in which AI graduate schools, research institutes, and businesses can work together. Seoul has plans to designate Yangjae as a special zone for AI and ICT.

## **Life Sciences**

More than \$2 billion was invested in Korean Life Sciences startups in 2021. Lunit, an AI medical service, raised \$8.3 million from global investors and healthtech wearables startup Huinno raised \$4 million. The National Biobank of Korea is one of the biggest biobanks in the world. The project aims to establish a national digital library of genomic and health data by 2028.

## **Advanced Manufacturing & Robotics**

A leader in manufacturing, Korea is in an optimal position to compete in the Fourth Industrial Revolution. The government's Roadmap for Proactive Deregulation of the Robotics Industry was laid out in October 2020. Its budget for robot-related R&D, distribution and demonstration, and talent development was \$160 million in 2021, a 29% increase from the previous year. Seoul Robotics raised a \$12 million bridge round in July 2021. Service robot maker Bear Robotics raised an \$81 million Series B in March 2022.

# Reasons to Move Your Startup to Seoul

## **Abundance of Top Talents**

Korea was ranked first in the proportion of population who attained tertiary education in the age 25–34 among OECD countries in 2021. Seoul is a home to 54 universities, and the Seoul Metropolitan Government aims to foster 40,000 future talents by 2025 through Seoul Software Academy (SeSac), a technical training center.

## **Innovative City**

More than 70% of the world's largest corporate brands are concentrated in Seoul, including Samsung, LG, and Hyundai. Seoul has an optimal business atmosphere with high-speed communication network (5G) and free public wifi. Seoul was ranked the fourth-most active cluster in science and technology in 2021, according to the Global Innovation Index (WIPO). In 2019, Korea invested \$102 billion in R&D, making it the fifth-largest spender among OECD countries.



# Selected Startup Organizations

## STARTUP GENOME MEMBERS

MEMBER

### Seoul Business Agency

Seoul Business Agency provides a variety of public services, including nurturing promising startups and providing financial and administrative support for R&D, IPR, and global market reach. These services aim to help SMEs enhance their global competitiveness.

“Startup Genome is thrilled to see Seoul entering the global top 10 startup ecosystems for the first time. We’re proud of the innovative work and the long term commitment of our local partners, the Seoul Business Agency and the Seoul Metropolitan Government, which have been instrumental in supporting the high tech and the creative potential that so much makes Seoul an exciting place to create and grow the most innovative of new tech ventures.”

**Stephan Kuester, Head of Ecosystem  
Strategy of Startup Genome**

## KEY ECOSYSTEM PLAYERS

### Try Everything

Try Everything is a global, grand festival for startups with the goal of revitalizing the startup environment. The festival symbolizes the startup mindset of “have no fear of failure, and try everything.”

### Seoul Startup Hub

Seoul Startup Hub supports follow-up investment and global expansion by verifying and selecting excellent companies verified by private accelerators together with investors, and fostering them with Hub Partners, an institution specializing in startup support.

### Korea Venture Investment Corp

A Korean government agency managing sovereign-backed VC Fund of Funds.

### Korea International Trade Association (KITA)

The largest private economic organization, with over 70,000 member firms. KITA aims to help entrepreneurs grow beyond borders by connecting them with a network of business partners around the globe.

### Startup Alliance

A nonprofit organization with a goal to enrich the Korean startup ecosystem and help Korean startups go global.



China

# Shanghai #8

"Shanghai has an abundant pool of innovative and high quality talent that is highly receptive to diverse ideas. There is strong demand for this talent from both startups and corporations."

**Daryoush Ziai**  
CEO, Schindler China



## Highlights

Shanghai may have centuries of culture behind it, but this Asian metropolis is looking to the future. Juniper Research ranked Shanghai as the world’s #1 Smart City for 2022, based on its transportation and infrastructure, energy and lighting, city management, technology, and urban connectivity.

As a global financial hub and location of one of the world’s busiest container ports, Shanghai is China’s gateway to the world. The city’s population of 24 million includes a large base of sophisticated and cosmopolitan consumers, as well as 250,000 expats. It is no surprise then that the city is a popular home base for foreign companies. Mercedes-Benz Group opened an R&D center in Shanghai in March 2022. The center, its second R&D facility in China, will focus on connectivity, automated driving, and big data. SMIC announced it will invest \$8.87 billion to build a chip plant in Shanghai.

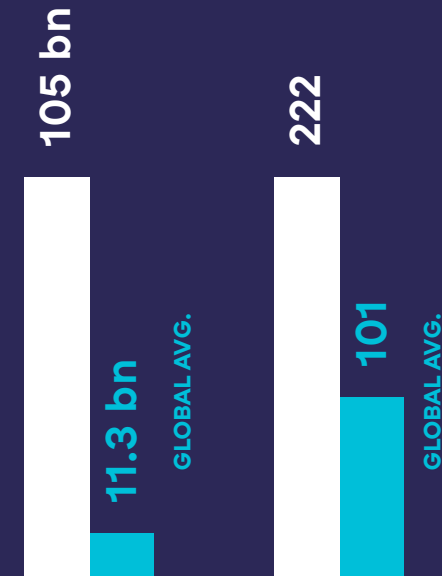
The Venture Capital World Summit was held in Shanghai in March 2022. MWC Shanghai, Asia’s most influential event for the connectivity industry, is scheduled to take place here in July. IEEE ICIT, one of the flagship conferences of the IEEE Industrial Electronics Society, will be held in the city in August. Non-profit Asian Association of Business Incubation (AABI) held its 2021 AABI Summit and Awards Ceremony in Shanghai in November 2021.

Notable recent funding rounds out of Shanghai include self-driving tech firm Zongmu’s ¥1 billion (\$14.9 million) Series E, AI startup Pateo’s ¥300 million (\$44.6 million) raise, and Moee Robot’s ¥100 million (\$14.9 million) Series B.

### TOTAL EARLY STAGE FUNDING (2019H2-2021)

**\$4.5 bn**

GLOBAL AVG.  
\$687 m



Amount (\$) Count (#)

### ECOSYSTEM VALUE (2019H2-2021)

**\$250 bn**

GLOBAL AVG.  
\$28.6 bn

### EARLY-STAGE FUNDING GROWTH TIER (2018/19 VS. 2020/21)



Calculated on a scale of  
1 (lowest) to 10 (highest)

### MEDIAN SEED ROUND (2019H2-2021)

**\$1.6 m**



GLOBAL AVG.  
\$671 k

### MEDIAN SERIES A ROUND (2019H2-2021)

**\$10 m**



GLOBAL AVG.  
\$4.7 m

### SOFT. ENGINEER SALARY (2021)

**\$36 k**



GLOBAL AVG.  
\$46 k

### TOTAL VC FUNDING (2017-2021)

**\$52 bn**



GLOBAL AVG.  
\$4.5 bn

### TIME TO EXIT (2017-2021)

**10 years**



GLOBAL AVG.  
9.4 years

## Exits

(2017-2021)



# Sub-Sector Strengths

## Gaming

Shanghai is developing into an esports center. Research from Shanghai Jiao Tong University ranked the city second in the world and first in Asia for esports. High-profile offline esports event Intel World Open was held in the city in January 2022. Los Angeles-based game developer Riot Games is opening a new studio in Shanghai. Mobile games developer Moonton was acquired by ByteDance for \$4 billion in March 2021.

## Healthtech

Shanghai is home to more than 240,000 healthcare professionals, and 18 of the top 20 global pharmaceutical companies have their China headquarters or research centers in Shanghai. The city’s 14th Five-Year Plan (2021-25) for the sector aims to grow biopharma-related manufacturing and establish six industrial parks. Simbay Park, a biotech-focused industrial park, is one of 12 municipal-level startup incubators in Shanghai. Biotech startup Igenesix raised a ¥100 million (\$14.9 million) Series C in March 2022.



# Reasons to Move Your Startup to Shanghai

## Global Connections

Long known as the Pearl of the Orient, Shanghai is a fashionable metropolis and major Asia-Pacific transport hub with excellent connectivity. Modern and international, it is one of the most open cities in China. Almost 700 regional headquarters of multinational corporations are located in the city. As well as being an international financial, trade, and shipping center, Shanghai is also a scientific and technological innovation center.

## Financial Incentives

Enterprises registered in Shanghai or that have set up regional headquarters in Shanghai receive a startup subsidy of ¥5 million (\$743,000). The subsidy is paid over three years in three installments of 40%, 30%, and 30%. Eligible recognized regional headquarters are also granted a three-year rent subsidy equal to 30% of the total rent. Multinationals with regional headquarters in Shanghai and an annual turnover of more than ¥500 million (\$74.3 million) are entitled to an additional lump sum incentive, again paid over a three-year period.



China

# Shenzhen

"With a young, entrepreneurial, and highly innovative population, Shenzhen has grown to become a prominent technology hub, producing more than 30 unicorns. The epicenter of China's manufacturing, Shenzhen is stepping up efforts to become an international science and technology innovation center."

Yuepeng Ma

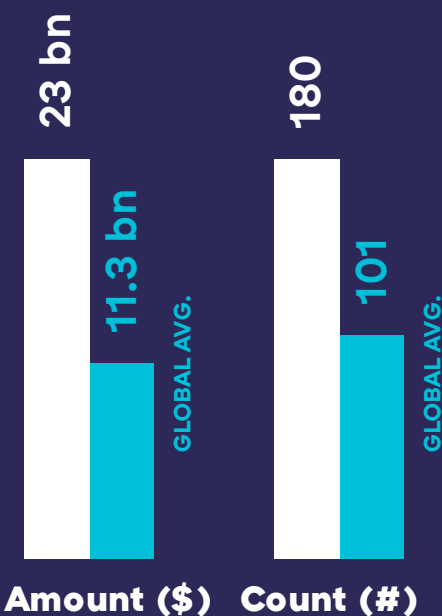
Founder, Valleygroove Venture Capital



TOTAL EARLY STAGE FUNDING  
(2019H2-2021)

\$1.4 bn

GLOBAL AVG.  
\$687 m



Exits

(2017-2021)

ECOSYSTEM VALUE  
(2019H2-2021)

\$97 bn

GLOBAL AVG.  
\$28.6 bn

EARLY-STAGE FUNDING GROWTH TIER  
(2018/19 VS. 2020/21)



Calculated on a scale of  
1 (lowest) to 10 (highest)

## Highlights

A global manufacturing hub, Shenzhen is sometimes referred to as the Silicon Valley of hardware. Many of China's most valuable private companies, including Tencent and Huawei, operate there, as do nearly 300 overseas Fortune 500 enterprises. The metropolis is leveraging its manufacturing dominance to build a world-class innovation ecosystem. Shenzhen plans to invest more than ¥700 billion (\$108 billion) in R&D over the next five years. The opening of the XPeng Motors' Shenzhen R&D center signals the city's intention to seriously compete in the electric vehicle industry.

The city is also focused on becoming an international VC center. Shenzhen offers a ¥5 million (\$785,500) incentive to newly established or relocated private equity or VC firms that invest ¥400 million (\$59.5 million) in unlisted companies within three years. Investors in seed or startup-stage technology companies receive 10% of the investment back after two years. The maximum rebate is ¥1 million (\$149,000). Shenzhen was home to 4,308 registered private equity firms as of the end of 2021, the second highest total in China. 2022 has already seen several large deals including drone company MicroMultiCopter Aero Technology's ¥300 million (\$45 million) Series E, IT solution provider Uwintech's ¥180 million (\$27 million) Series C, and AI-powered drug discovery firm Artivila Therapeutics' ¥100 million (\$14.9 million) seed round.

MEDIAN SEED ROUND  
(2019H2-2021)

\$1.5 m



MEDIAN SERIES A ROUND  
(2019H2-2021)

\$7.2 m



SOFT. ENGINEER SALARY  
(2021)

\$23 k



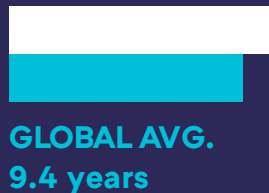
TOTAL VC FUNDING  
(2017-2021)

\$16 bn



TIME TO EXIT  
(2017-2021)

10.5 years





# Sub-Sector Strengths

## **AI, Big Data & Analytics**

Shenzhen released plans to support the development of its AI industry, making it the first local government in China to establish policies for the sub-sector. These policies include measures to encourage public institutions and companies to invest in AI R&D and adopt AI to solve current challenges. The government is also encouraging universities to establish AI courses and cooperate with industry to develop the AI workforce. SmartMore Technology, which develops AI for manufacturing, raised a \$200 million Series B in June 2021. Logistics solution provider Multiway Robotics raised a ¥100 million (\$14.9 million) Series A in February 2022. Inspection robot maker Youibot raised ¥100 million (\$14.9 million) in venture funding in May 2022.

## **Fintech**

Shenzhen's banking and insurance authority has committed to expanding financial accessibility for small businesses in the ecosystem, this includes supporting the stabilization of foreign trade growth and increasing the availability of financing for SMEs. The city's banking authority also aims to use financial innovation to better service technology enterprises. The 2022 International Conference on Financial Innovation, Financial Technology and Information Technology will be held in July in Shenzhen.



# Reasons to Move Your Startup to Shenzhen

## **Educated Workforce**

According to forecasts by GlobalData, Shenzhen will produce more people with further education per year than its near neighbor Hong Kong by 2023, with the gap only continuing to widen in future years. Shenzhen is forecast to have 17.1% more people with further education qualifications than Hong Kong in 2025.

## **Openness to Trade**

Shenzhen recently streamlined regulations to facilitate cross-border trade. In April 2022, the city reformed its Qualified Domestic Enterprise Investment program to allow both domestic and foreign entities to apply and raised its quota from \$5 billion to \$10 billion. In February 2022, the Shenzhen Qualified Foreign Limited Partnership regulation was updated to expand the asset classes allowed in order to attract a broader spectrum of FDI and increase flexibility for investors to manage their assets.

## **Business-Friendly Environment**

Rather than the national 25% corporate tax rate, the law allows for a reduced rate of 15% in Shenzhen. Tax holidays are also available for companies in preferred sectors, such as IT outsourcing, knowledge process outsourcing, computer and information services, and R&D. The main airport in Shenzhen is expected to handle more than 70 million passengers by 2025, while the Port of Shenzhen will accommodate up to 33 million containers in the same period. Shenzhen plans to develop at least 280,000 units of public housing over the next five years and will increase investment in hospitals and education.



Singapore

# Singapore #18

MEMBERS:

Enterprise Singapore

"Singapore's start-up ecosystem is home to regional unicorns, top talent, and sophisticated investors. It is the ideal base to address Southeast Asia's trillion-dollar digital commerce and climate-tech opportunities."

Steve Melhuish

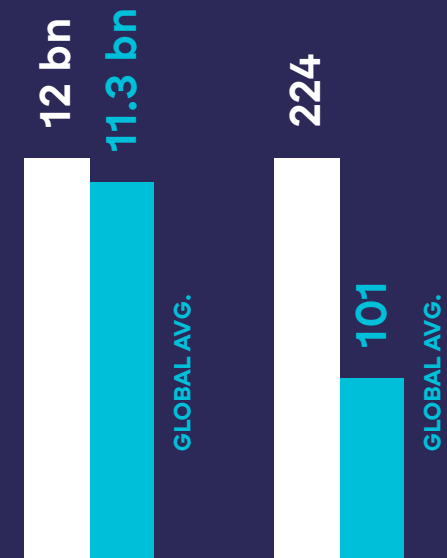
Co-founder, PropertyGuru Group and impact investor



TOTAL EARLY STAGE FUNDING  
(2019H2-2021)

\$3.2 bn

GLOBAL AVG.  
\$687 m



Amount (\$) Count (#)

Exits

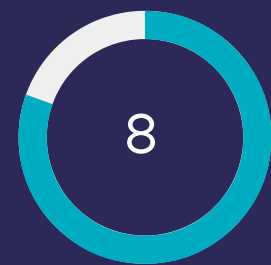
(2017-2021)

ECOSYSTEM VALUE  
(2019H2-2021)

\$89 bn

GLOBAL AVG.  
\$28.6 bn

EARLY-STAGE FUNDING GROWTH TIER  
(2018/19 VS. 2020/21)



Calculated on a scale of  
1 (lowest) to 10 (highest)

## Highlights

With its rising middle class, pro-business environment, and booming internet economy, Singapore is an attractive hub for startups. Department of Statistics and Enterprise Singapore data shows that there are close to 4,000 startups in Singapore, over 220 VCs, and over 200 accelerators. Singapore minted 11 new unicorns in 2021, and many global corporations have set up innovation centers here in recent years.

In 2021, 52% of equity funding generated in Southeast Asia was from Singapore, according to Enterprise Singapore. Investors are attracted to Singapore's position as an entry to Southeast Asia and to Singapore's high-quality startups. Enterprise Singapore provides support programs under Startup SG and Enterprise Singapore's investment arm, SEEDS Capital, has co-invested in 160 Singapore-based startups.

The government allocated an additional S\$300 million in the 2020 budget to support the growth of tech startups in key emerging sectors including Advanced Manufacturing, Life Sciences, and Agtech. Cleantech is also quickly growing here, with startups including VFlow Tech, Terrenus Energy, and Red Dot Analytics bringing attention to the region. To support sustainable growth, the Singapore Government announced in its 2021 budget that it will issue green bonds on select public infrastructure projects, with up to S\$19 billion in public sector green projects identified. In 2022, it was announced that \$35 billion in green bonds will be issued by 2030 to fund green public sector projects.

MEDIAN SEED ROUND  
(2019H2-2021)

\$850 k



GLOBAL AVG.  
\$671 k

MEDIAN SERIES A ROUND  
(2019H2-2021)

\$6 m



GLOBAL AVG.  
\$4.7 m

SOFT. ENGINEER SALARY  
(2021)

\$45 k



GLOBAL AVG.  
\$46 k

TOTAL VC FUNDING  
(2017-2021)

\$17 bn



GLOBAL AVG.  
\$4.5 bn

TIME TO EXIT  
(2017-2021)

6.8 years



GLOBAL AVG.  
9.4 years



# Sub-Sector Strengths

## **AI, Big Data & Analytics**

The Singapore government has been ramping up and encouraging investment in tech startups, including companies focused on AI, Big Data, and Analytics. Follow-on investments are expected through programs such as Startup SG Equity. Hosted by the National University of Singapore, AI Singapore is a national AI program to anchor Singapore's AI capabilities. Innovation intelligence startup PatSnap raised \$300 million in March 2021, bringing its valuation to more than \$1 billion, and AI-driven tech company Advance Intelligence Group raised a \$400 million Series D in September 2021, making both companies unicorns.

## **Life Sciences**

Singapore's biomedical innovation ecosystem has grown nearly six times over the past decade, with over 360 biomedical startups and SMEs established in the region to date. Enterprise Singapore reported that a record \$600 million was raised in related funding between January and September 2021. Doctor Anywhere raised a \$65.7 million Series C round in August 2021, one of the largest private funding rounds ever raised by a healthtech company in Southeast Asia.

## **Agtech & New Food**

The Singapore government has dedicated \$45.2 million to its new Agri-food Cluster Transformation Fund, which is focused on supporting farmers through technology and boosting domestic food production. In February 2022, Nex Gen Foods raised \$100 million in the largest Series A deal for a plant-based meat company globally to date. The startup was founded in the U.S. but is now headquartered in Singapore.

# Reasons to Move Your Startup to Singapore

## **Government Support**

Enterprise Singapore, a Singapore government agency under the Ministry of Trade and Industry, has a suite of startup-friendly policies, including grants for first-time entrepreneurs, talent placements, and co-investments. Together with other government agencies, it works closely with private sector ecosystem partners such as VCs and accelerators to support growth in Deep Tech sectors. Global support organizations and investors including 500 Startups, Plug and Play, Sequoia, and many more have a presence in Singapore, connecting the ecosystem to the global community.

## **Talent Development & Attraction**

Singapore welcomes entrepreneurs and tech talent with initiatives including the Entrepass visa for foreign founders. In addition, Tech@SG and TechPass provide visas for Singapore-based startups to attract global tech talent. Large corporations including Dyson and biotechnology company BioNTech have set up headquarters in Singapore to tap into the diverse and growing engineering and science talent. Semiconductor manufacturing company GlobalFoundries is building a new S\$5.4 billion plant in Singapore.



# Selected Startup Organizations

## STARTUP GENOME MEMBERS

MEMBER

### Enterprise Singapore

Enterprise Singapore is a government agency championing enterprise development. We work with committed companies to build capabilities, innovate, and internationalize. We also support the growth of Singapore as a hub for global trading and startups.

“Ranking as the #18 Global Startup Ecosystem overall, Singapore is a leading example of a thriving startup community. It is thrilling to closely collaborate with Enterprise Singapore to take a data-centric approach to studying this success.”

**Stephan Kuester, Head of Ecosystem  
Strategy of Startup Genome**

## KEY ECOSYSTEM PLAYERS

### Action Community for Entrepreneurship (ACE)

ACE is the national voice for the Singapore startup ecosystem, and a key trade association representing the interests of startups in Singapore. ACE constantly seeks to build a vibrant and sustainable startup ecosystem.

### NUS Enterprise

NUS Enterprise, the entrepreneurial arm of the National University of Singapore, plays a key role in advancing innovation and entrepreneurship through entrepreneurial education, industry partnerships, support, and outreach.

### SGInnovate

SGInnovate is a Singapore government-backed Deep Tech ecosystem builder and investor. SGInnovate supports the development of talent and helps emerging tech startups to commercialize research, build solutions, and tackle the most pressing challenges.

### 500 Global

500 Global is a venture capital firm that invests early in founders building fast-growing technology companies. It has backed over 2,600 companies, including 41 companies valued at \$1+ billion.

### Quest Ventures

Quest Ventures is a top venture capital firm in Asia. Its portfolio includes 100+ companies in more than 150 cities, creating opportunities for more than 4,400 employees, and its Enterprise and ESG efforts impact thousands more.



# Sri Lanka

**MEMBERS:**

Information and Communication Technology Agency of Sri Lanka

"Sri Lanka's Startup Development Strategy boasts of startup-friendly policies, non-collateral based debt finance, and the development of state-of-the-art technology parks, to name a few initiatives in our holistic approach to develop the startup ecosystem and establish Sri Lanka as a hub for new technology."

**Jayantha De Silva**

Chairman, Information and Communication Technology Agency of Sri Lanka



**TOTAL EARLY STAGE FUNDING**  
(2019H2-2021)

**\$12 m**

GLOBAL AVG.  
\$687 m



**Exits**  
(2017-2021)

**ECOSYSTEM VALUE**  
(2019H2-2021)

**\$228 m**

GLOBAL AVG.  
\$28.6 bn

**EARLY-STAGE FUNDING GROWTH TIER**  
(2018/19 VS. 2020/21)



Calculated on a scale of 1 (lowest) to 10 (highest)

## Highlights

Thanks to its low cost of living, sunny weather, and natural beauty, Sri Lanka placed #2 in Club Med's worldwide ranking of countries for digital nomads in 2021. The Sri Lankan government is building on the island's appeal to become both a top destination for remote tech workers and an up-and-coming startup hub.

In July 2021, Sri Lanka's government approved a new Digital Nomad Visa that will allow remote workers to live and work in the country for one year. It is planned to come into effect in 2022. To further attract digital nomads, the Nomad4LK digital nomad ambassador competition was held at the AsiaBerlin Summit 2021 in Germany. The winner was provided a return air ticket to Colombo, co-working, uninterrupted connectivity hosted by SLTMobitel, and 14 weeks of accommodation.

Startup SL, the national online platform for startups, aims to create 1,000 new startups by 2025. It offers two years free membership to startups and innovators. Sri Lanka plans to build three techno parks by 2023, in addition to two already under construction. The technopark currently being built in Galle will have 350,000 square feet for tech companies with 5G telecom facilities. In November 2021, Colombo: Hatch was awarded the Best Co-Working Space honor at the Global Startup Awards.

Notable recent deals in the ecosystem include Fintech Moneta's \$325,000 seed round in November 2021 and Blockchain startup EXIP's initial coin offering in December 2021.

**MEDIAN SEED ROUND**  
(2019H2-2021)

**\$51 k**



**MEDIAN SERIES A ROUND**  
(2019H2-2021)

**\$427 k**



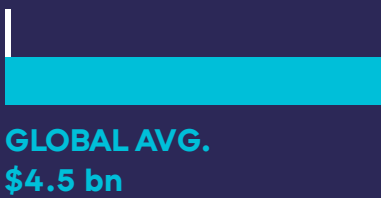
**SOFT. ENGINEER SALARY**  
(2021)

**\$6 k**



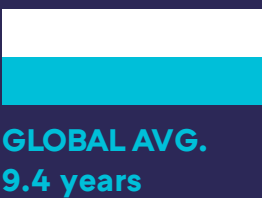
**TOTAL VC FUNDING**  
(2017-2021)

**\$84 m**



**TIME TO EXIT**  
(2017-2021)

**9.4 years**





# Sub-Sector Strengths

## **Cleantech**

The Sri Lankan government is aiming to become energy self-sufficient by 2030 and to increase the country's power generation capacity from the existing 4,043 MW to 6,900 MW by 2025, with a significant increase in renewable energy. Sri Lanka has already achieved a grid connectivity of 98%, relatively high by South Asian standards.

## **Agtech & New Food**

In 2021, ICTA Sri Lanka and enpact e.V, Germany signed a knowledge-sharing agreement encouraging technology-focused investments in the Agtech sub-sector. In January 2022, the Bill and Melinda Gates Foundation met with the Information and Communication Technology Agency of Sri Lanka to plan for the development of Farmer Data Management Systems and Digital Strategy. Smart irrigation system SenzAgro has raised \$77,700 in funding over three rounds.



# Reasons to Move Your Startup to Sri Lanka

## **Tax Incentives**

Sri Lanka offers international businesses looking to enter the country a five to ten-year tax holiday and maintains a 0% corporate tax rate for the tech sector. There are zero capital gains and zero dividend withholding tax for foreigners.

## **Startup-Friendly Environment**

In 2021, Club Med ranked Sri Lanka as the second-best destination for digital nomads, after Thailand. The government has approved a digital nomad visa program that enables foreigners to work remotely from Sri Lanka for one year. It is set to launch in 2022. The government also passed a Personal Data Protection Bill to ensure accountability for citizen data privacy and protection.



# Selected Startup Organizations

## STARTUP GENOME MEMBERS

MEMBER

### Information and Communication Technology Agency of Sri Lanka

Information and Communication Technology Agency (ICTA) of Sri Lanka is the apex ICT institution of the government. In terms of the Information and Communication Technology Act No. 27 of 2003, (ICT Act) as amended by Act No. 33 of 2008, ICTA has been mandated to take all necessary measures to implement the Government's Policy and Action Plan in relation to ICT, in terms of the Section 6 of the ICT Act.

“The Information and Communication Technology Agency of Sri Lanka has collaborated with Startup Genome to uncover the vibrant Sri Lankan entrepreneurial ecosystem in the #GSER2022. We are excited to share that the area ranks in Affordable Talent as a Top 5 Global Ecosystem and the #2 Asian Ecosystem, making Sri Lanka an important location for international startups seeking to adapt and to develop their products for the large opportunity in the South East Asia Region.”

**Stephan Kuester, Head of Ecosystem  
Strategy of Startup Genome**

## KEY ECOSYSTEM PLAYERS

### Lankan Angel Network

Sri Lanka's largest network of angel investors. Founded in 2012, with the purpose of bringing together the Sri Lankan investor and mentor community and to scale the startup ecosystem.

### Yarl IT Hub

Yarl IT Hub is an organization by the community for the community, focused on being a catalyst for entrepreneurship and innovation development in the Northern Province of Sri Lanka.

### BOV Capital

A Sri Lanka/Singapore-based VC fund that invests in technology startups from seed stage to Series A. We focus on investing in early-stage ventures with a proven product-market fit that can demonstrate scaling.

### John Keells X

A corporate startup accelerator and open innovation program run by John Keells Holdings PLC, Sri Lanka's largest listed conglomerate operating in diverse industry verticals.

### Hatch Works Pvt Ltd

Providing startups with all the guidance and support services they might need to innovate, grow, and succeed.



India

Telangana

MEMBERS:

T-Hub Foundation

"Telangana is at the forefront of building a world class innovation ecosystem through a mix of passionate entrepreneurs, high quality talent availability, supportive government policy, and access to capital."

M. Srinivas Rao

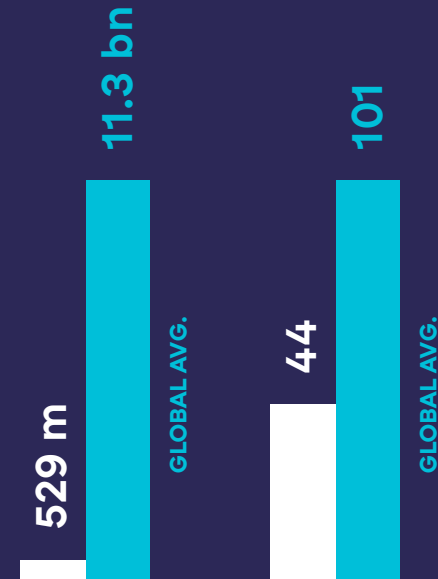
CEO, T-Hub



TOTAL EARLY STAGE FUNDING  
(2019H2-2021)

\$273 m

GLOBAL AVG.  
\$687 m



Amount (\$) Count (#)

Exits

(2017-2021)

ECOSYSTEM VALUE  
(2019H2-2021)

\$4.8 bn

GLOBAL AVG.  
\$28.6 bn

EARLY-STAGE FUNDING GROWTH TIER  
(2018/19 VS. 2020/21)



Calculated on a scale of  
1 (lowest) to 10 (highest)

Highlights

Telangana, India’s newest state, displays all the energy, growth, and path-breaking thinking you’d expect from a young, upstart ecosystem. Despite the COVID-19 pandemic, Telangana’s IT sector recorded a 13% growth rate year-on-year in 2021, compared with a national rate of 8%. Telangana achieved the third rank in the country in terms of percentage increase in Gross State Domestic Produce (GSDP) at current prices between 2014–15 and 2020–21.

Many global and large Indian organizations in a range of industries have chosen Telangana’s capital, Hyderabad, as their location. Hyderabad boasts eight universities and is home to one of the largest populations of students seeking technical education in India. The city is also home to several research centers focused on pharmaceuticals, biotech, and defense-related technology. It also has a strong Life Sciences scene, and is dubbed the vaccine capital of the world, with over a third of the global vaccine output produced here.

The state government is focused on investing in digital and innovation friendly initiatives, and policies have created a nurturing ecosystem for startups. The Telangana ecosystem has over 6,500 registered startups including four unicorns and several startups building products and services at a global scale. T-Hub, one of the country’s largest startup enablers, plays a pivotal role in building a robust startup and founder ecosystem in partnership with corporates, academia, investors, government and other ecosystem players. Telangana startups also benefit from access to numerous local investors, including Hyderabad Angels, Anthill Ventures, Sri Capital, Endiya Partners, and Indian Angel Network.

MEDIAN SEED ROUND  
(2019H2-2021)

\$393 k



GLOBAL AVG.  
\$671 k

MEDIAN SERIES A ROUND  
(2019H2-2021)

\$3.3 m



GLOBAL AVG.  
\$4.7 m

SOFT. ENGINEER SALARY  
(2021)

\$7 k



GLOBAL AVG.  
\$46 k

TOTAL VC FUNDING  
(2017-2021)

\$1.5 bn



GLOBAL AVG.  
\$4.5 bn

TIME TO EXIT  
(2017-2021)

7.2 years



GLOBAL AVG.  
9.4 years



# Sub-Sector Strengths

## Life Sciences

Telangana's Life Sciences sub-sector, dubbed Genome Valley, accounts for 35–40% of India's pharma production. The ecosystem is home to four of the world's top five vaccine manufacturers. Telangana has over 20 pharma-focused incubators, more than 200 pharmaceutical startups, and more than 600 Life Sciences companies. The government's Genome Valley 2.0 initiative aims to further grow Telangana into a world-class R&D hub, with the goal of doubling the region's Life Science ecosystem to \$100 billion in 10 years.

## AI, Big Data & Analytics

With its dense cluster of high-quality research institutions, the presence of Deep Tech industry leaders, a rich culture of co-innovation with startups, and a proactive government leadership, Hyderabad is poised to become a global AI innovation hub. Telangana was the first Indian state to launch an actionable policy framework for Artificial Intelligence. The Government of Telangana runs an accelerator program for AI startups and has partnered with corporations in an AI initiative. An AI research center was launched with a focus on healthcare and mobility domains.

## Agtech & New Food

Agriculture and related sectors grew by 20% in Telangana in 2021. Telangana is home to more than 16 agricultural-focused educational institutes, over 200 Agtech startups, and more than 12 agricultural innovation hubs. Initiatives including AI for Agricultural Innovation, the National eGovernance Plan for Agriculture, and AG-HUB are driving growth in this sub-sector. The Government of Telangana has partnered with the World Economic Forum's Centre for the Fourth Industrial Revolution (C4IR) to achieve digital transformation in agriculture.

# Reasons to Move Your Startup to Telangana

## Access to Talent

Telangana is home to 20 universities, providing a steady stream of educated talent. To promote the growth of local idea-stage companies, the Telangana government offers recruitment assistance of INR10,000 (\$130) per employee in the first year of operation. Of trained personnel, 50% are recruited in Telangana, which is the highest for a state skilling program in the country.

## Policy Incentives

Telangana-based startups are supported by the government in terms of operational ease, reimbursement of recruitment assistance, performance grants, reimbursement of patent expenditure, and reimbursement of international marketing costs.



# Selected Startup Organizations

## STARTUP GENOME MEMBERS

MEMBER

### T-Hub Foundation

T-Hub leads India’s pioneering innovation ecosystem, which powers next-generation products and new business models. Since its incorporation in 2015, it has provided 1,100+ national and international startups with access to better technology, talent, mentors, customers, corporations, investors, and government agencies.

“The research is clear, India’s startup ecosystems are on the rise. Telangana is at the forefront of this growth, driven by strong infrastructure, exceptional talent and proactive state government initiatives. We are honored to work with the T-Hub Foundation to highlight Telangana’s thriving innovation community.”

**Marc Penzel, Founder & President  
of Startup Genome**

## KEY ECOSYSTEM PLAYERS

### Telangana State Innovation Cell

A unique initiative of the Government of Telangana to promote a culture of innovation and entrepreneurship.

### WE Hub

India’s first and only state-led incubator for women entrepreneurs. WE Hub provides access to technical, financial, and government support to startup, scale up, and accelerate.

### Research and Innovation Circle of Hyderabad

A facilitator fostering collaboration across the research and innovation space and taking research to market. Serves as a link among research institutions, academia and industry, investors, and incubators.

### Darwinbox

With over 650 customers serving a total of 1.5 million employees, Darwinbox became the first Hyderabad-headquartered startup to reach unicorn status in 2022.

### CIE IIIT Hyderabad

A technology incubator with over 13 years of experience in nurturing and growing Deep Tech startups in Medtech, tech4social, visual informatics, data engineering, machine learning, language technologies, Gaming, and robotics.



Japan  
**Tokyo #12**

MEMBERS:

Tokyo Metropolitan Government

"Tokyo's startup ecosystem has continuously been expanding through digitalization in various industries. Tokyo launched the Tokyo Consortium in 2020, and is working as a leading member of a strong community of more than 270 leading companies, investors, incubators, universities, governments, and more to enter the new era together with startups."

Eiichirou Kodama

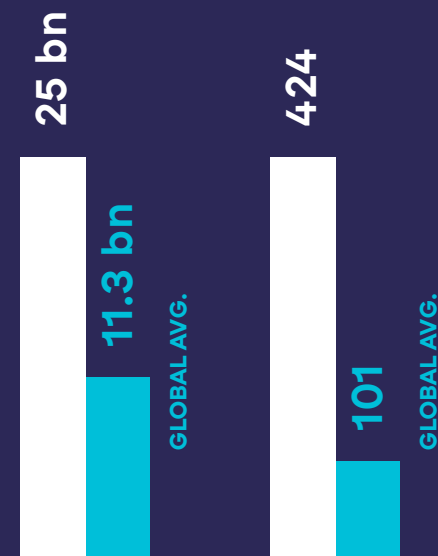
Director General for Global Financial City Strategy, Office of the Governor for Policy Planning, Tokyo Metropolitan Government



TOTAL EARLY STAGE FUNDING  
(2019H2-2021)

**\$3 bn**

GLOBAL AVG.  
\$687 m



Amount (\$) Count (#)

Exits

(2017-2021)

ECOSYSTEM VALUE  
(2019H2-2021)

**\$62 bn**

GLOBAL AVG.  
\$28.6 bn

EARLY-STAGE FUNDING GROWTH TIER  
(2018/19 VS. 2020/21)



Calculated on a scale of  
1 (lowest) to 10 (highest)

Highlights

Tokyo's latest startup boom kicked off in 2014 in response to the acceleration of digital technology, as well as coordinated efforts by the Tokyo Government, Cabinet Office, and Ministry of Economy, Trade and Industry to nurture local startups.

Changes in policy have helped Tokyo's ecosystem to flourish. The Kishida Cabinet named 2022 the "first year of startup creation," and various regulations are also being streamlined to promote startup formation and growth. These include changes to allow autonomous driving, shortening the time from approval of listing to IPO to approximately 21 days, and deregulation around crowdfunding. The Tokyo Metropolitan Government announced its Startup Collaboration Strategy in February 2022.

Universities and support organizations are also supporting local startups. The J-Startup project aims to help Japanese startups reach global markets, and the University of Tokyo is set to establish a ¥60 billion (\$500 million) fund for startups spun out from universities. The result of all these efforts is that the number of people who are looking to find a career in a startup is increasing, according to a 2021 report from Amateras Startup Review.

Much of the momentum in the Tokyo ecosystem is the result of the entrance of overseas crossover investors. For example, software company SmartHR raised ¥15.6 billion (\$129 million) from a total of eight companies, including Light Street Capital and Sequoia Capital Global Equities. News app SmartNews raised a \$230 million Series F in September 2021. Successful entrepreneurs are also beginning to act as angel investors and advisors to younger generations.

MEDIAN SEED ROUND  
(2019H2-2021)

**\$789 k**



GLOBAL AVG.  
\$671 k

MEDIAN SERIES A ROUND  
(2019H2-2021)

**\$2.7 m**



GLOBAL AVG.  
\$4.7 m

SOFT. ENGINEER SALARY  
(2021)

**\$67 k**



GLOBAL AVG.  
\$46 k

TOTAL VC FUNDING  
(2017-2021)

**\$15 bn**



GLOBAL AVG.  
\$4.5 bn

TIME TO EXIT  
(2017-2021)

**8.7 years**



GLOBAL AVG.  
9.4 years



# Sub-Sector Strengths



## Advanced Manufacturing & Robotics

Tokyo's startups are supplying robots and satellites to the growing space industry, which is expected to generate more than \$1 trillion worldwide in 2040, according to Morgan Stanley. The Japanese robotics market is expected to grow from around ¥1 trillion (~\$8.3 billion) in 2010 to around ¥10 trillion in 2035. Space resource exploration company Ispace Technologies has raised \$174.8 million, including an undisclosed Series C round in October 2021. Spiber, which is developing microbially fermented materials, raised \$221.4 million in September 2021 from a private equity round.



## Fintech

According to Yano Research Institute's FinTech Market 2019 report, Tokyo is the third largest global financial center after New York and London. That year, the Fintech market in the country was estimated at \$3.2 billion with forecasts that it could increase to over \$10 billion by 2022. Mobile banking startup Kyash raised a \$41.3 million Series D in March 2022. Online security brokerage service Folio has raised \$100.8 million over five rounds. Automated investment advice company Money Design has raised \$94 million over nine rounds.



## Life Sciences

Foreign investors are increasingly interested in Japanese Life Sciences startups, many in Tokyo. In 2021, U.S. and European venture investors closed eight Life Sciences deals in the country, totaling \$98 million. In February 2022, Belgian venture capital firm Newton Biocapital launched a €150 million fund to harness synergies between European and Japanese Life Sciences startups, and FTI Venture Partners is a Life Sciences-focused venture capital firm with offices in Tokyo and Boston. Personalized nutrition startup Bisu raised a \$3.3 million seed round in October 2021.

# Reasons to Move Your Startup to Tokyo

## Large Market

Tokyo, the capital of Japan, is one of the largest cities in the world, with a population of approximately 14 million. Its gross metropolitan product was \$965.4 billion in 2018. With Japan's overall household assets rising to \$27 trillion as of 2020, the market holds great potential for both business-to-business and direct-to-consumer companies.

## High Demand for Digitalization

There is a customer market for digital products in Tokyo, which is home to 2,964 major companies with capital of ¥1billion or more. The city also has a large number of Fortune Global 500 company headquarters. According to a 2021 survey, 90% of companies say they will increase or maintain their IT investment, indicating that the needs of technology companies are very high.

## Dedicated Support

The Japanese government dedicated 2022 as the "first year of startup creation," with a dedicated supplementary budget and various deregulations to promote the startup economy. The Business Development Center TOKYO offers a one-stop support center for those starting out. The Tokyo Consortium brings together more than 270 players in a supportive business community.



# Selected Startup Organizations

## STARTUP GENOME MEMBERS

### Tokyo Metropolitan Government

TMG aims to create the world’s leading ecosystem, one where innovations are continuously generated through the organic collaboration of players including corporations, startups, universities, and others. The Tokyo Consortium also supports creating this ecosystem.

MEMBER

“Tokyo is highlighted in the GSER, the world’s paramount report on enriching startup and economic growth. Ranking as #12 Global Startup Ecosystem overall with incredible support from the Tokyo Metropolitan Government and the wider Tokyo Startup Ecosystem Consortium.”

**Stephan Kuester, Head of Ecosystem  
Strategy of Startup Genome**

## KEY ECOSYSTEM PLAYERS

### CIC Japan G.K.

The largest innovation center in Japan, home to 250+ startups, VCs, researchers, and other organizations passionate about innovation.

### Keio Innovation Initiative, Inc.

A VC firm established by Keio University, supporting startups that create innovative new businesses by utilizing the excellent research results of universities and research institutes.

### Plug and Play Japan

A subsidiary of Plug and Play that aims to build a world-class platform that drives innovation. It connects leading corporations with startups to support them in expanding their possibilities from Japan to the world, and from the world to Japan.

### The University of Tokyo

Japan’s top university, a world-class center for research, and a vibrant academic community.

### The University of Tokyo Edge Capital Partners

VUTEC works with academia in Japan and abroad, including the University of Tokyo. It supports science and technology startups that are pioneering frontiers to solve global issues with capital, talent, and knowledge.



# Europe

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## Regional Insights

# Europe

European startups and scale-ups are largely concentrated in the UK, Germany, and France, with nearly two-thirds of the continent's top 1,000 startups and scale-ups founded in one of these countries. In 2021, both Germany and the Netherlands experienced a year-over-year growth of more than 200%, and Spain grew more than 400%. The proportion of funds invested outside of the UK also increased. Estonia is one of the smallest countries in Europe, but the country has 1,048 startups per capita and has raised €1,967 per capita in investments, both exceeding any other country in Europe.

The amount of capital invested in startups, deal volumes, and exits all reached their all-time highs throughout 2021. Europe experienced over 10,000 venture deals in 2021, totaling almost €103 billion. Nearly 2,900 deals were first-time venture financings, totaling €9.9 billion. To put these figures in perspective, Europe experienced

approximately 2,400 venture deals in 2020, totaling €3.6 billion. 2021 brought nearly five times the number of deals and over 28 times the valuation of the previous year.

2021 also brought the largest total equity value that European tech startups have ever seen. According to Dealroom and Atomico, this total equity value exceeded \$3 trillion for the first time in 2021 (accounting for startups in both the public and private markets).

Stockholm battery manufacturer Northvolt raised \$2.75 billion in a July 2021 funding round, Helsinki-founded food delivery company Wolt was acquired for \$8.1 billion in November, and Fintech Klarna raised \$1 billion in March, making it the highest-valued private Fintech company in Europe at the time.

One driver of growth is the interest of international investment firms. SoftBank, Tiger Global, Coatue, and Balderton Capital among others have sought out European startups, and Balderton Capital alone secured approximately \$1.3 billion for two new funds in 2021.

### Top Performers

1	London
2	Amsterdam-Delta
3	Paris
4	Berlin
5	Stockholm

### Top Regional Challengers

1	Dublin
2	Manchester-Liverpool
3	Barcelona
4	Brussels
5	Zurich



# Europe

## Regional Insights

### Key Findings

- European VC funding was 128% higher in 2021 than in 2020, with increases at every stage.
- Early-stage funding deal amount has increased by 47% from 2020 to 2021.
- The number of exits over \$50 million has increased by 68% from 2020 to 2021.
- Helsinki shot up more than 20 spots, from #59 in 2021 to tied #31 this year. The ecosystem saw seven exits over \$50 million, including food delivery company [Wolt's](#) \$8.1 billion November 2021 acquisition by DoorDash, and gained two unicorns in the period considered.
- Copenhagen is also tied at #35, up from #43 in last year's ranking. The Danish capital saw two \$1 billion+ exits, including [Unity's](#) \$13.7 billion valuation at IPO in September 2020.
- In 2021, the dollar amount of exits in London grew 413% from 2020. The ecosystem's Series B+ rounds

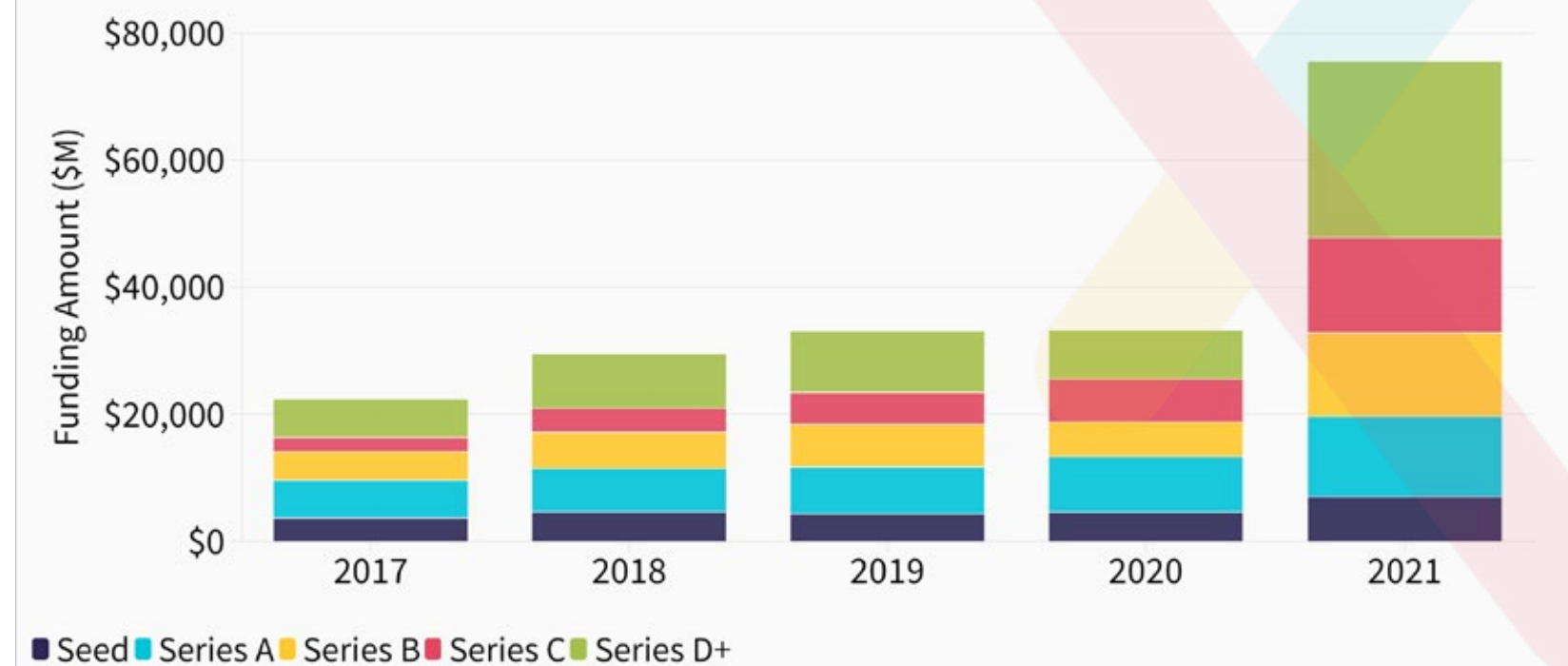
increased 162% in terms of dollar amount from 2020, and it saw 55% more \$50 million+ exits in 2021 versus 2020.

- In the Emerging Ecosystems rankings, Oslo moved up 22 places since last year, to #19. The Norwegian ecosystem produced two unicorns in the period

examined — industrial IoT platform [Cognite](#) and online grocery [Oda](#) — helping to increase its Market Reach.

### European VC Funding by Stage

Investment in Europe Increased 128% From 2020 to 2021





## Global Startup Ecosystem Report 2022

# London's Tech Scene: A World-Class Ecosystem Competing on a Global Scale

*This contributed article was prepared by the authors in a personal capacity. The opinions expressed in this article are the authors' own and do not necessarily reflect the views or position of Startup Genome.*

Tech hubs are springing up around the world, as the sector and demand for talent continue to grow and the way we work evolves into a more seamless hybrid experience. But few cities can claim to feature all the necessary ingredients to become world-class tech hubs.

London is one of the rare few that can. The city's tech sector continues to go from strength to strength, and London is now one of the top tech hubs in the world. In 2021, the enterprise value of London's startups, via IPOs or acquisitions, soared to a record-breaking \$88 billion.

Although 2021 was an unparalleled year for investment in startups around the world, London stands out. Companies based in London secured £25.5 billion (\$33.3 billion) and 20 new unicorns were created here in 2021. Additionally, in March 2022, the UK's tech scene was valued at \$1 trillion, a milestone shared with the U.S. and China.

This growth further consolidates London's position as a

globally mature tech hub with a unique combination of factors that encourage innovation.

Let's dive into some of the top reasons why London is such an ideal location for companies to scale. These include access to investment, the existing tech ecosystem, a well-established history of innovation, a highly skilled workforce, and a consumer market open to new experiences and technology.

## London's Tech Gold Rush

Access to investment is one of the main drivers behind London's tech boom. In particular, late-stage investment is on the rise. Megarounds (\$100 million+ rounds) are now becoming the norm, with London seeing a threefold growth in 2021. Fintech firm Revolut, clean energy supplier Octopus, and online events platform Hopin have all raised significant funding rounds in the last year.

More and more venture capital firms have opened offices

in London to be closer to their UK and EU customer base. U.S.-based Sequoia and Expa are examples of VC firms lured by the city's potential. Startups benefit from the proximity of a large number of VC funds looking to invest in the next potential unicorn or "futurecorn."

The London ecosystem also benefits from UK government incentives for tech and the presence of accelerators. One example of a government-led initiative is innovation funding, available for UK-based companies, which provides funding for research, testing, and collaboration with other organizations. Innovate UK awarded grants worth £3.1 billion (\$3.9 billion) during 2020-21 and had a 21% award rate during the same year.

In the latest edition of the US News Best Countries index, the UK came in at #8, with particularly strong scores in areas that are relevant to technology and business, including agility, connectivity to the rest of the world, educated population, entrepreneurship, quality of digital infrastructure, and legal framework.



Eileen Burbidge, partner at London VC firm Passion Capital, says “It’s fantastic to see that London tech companies are attracting large volumes of capital across all stages of the funding journey as a sign that our tech ecosystem is truly flourishing and our entrepreneurs are second to none.”

## Strength in Fast-Growing Sectors

The city’s strengths as a tech hub make it an ideal place for startups in fast-growing sectors including Fintech, Cleantech, Edtech, and PropTech.

As the impact economy grows, so does the number of impact-focused startups — those with a goal of achieving positive, measurable change on societal and environmental issues. Investment into UK impact startups grew ninefold in the period between 2014 and 2019, with Cleantech and Climatetech firms attracting the most funding.

## A Magnet for Skills

Together with the nearby university cities of Oxford and Cambridge, both less than two hours away from the capital, London is part of the so-called Golden Triangle for skilled talent. London is home to four of the world’s top 40 universities and provides unparalleled access to world-class talent and research.

London is also the most attractive city for digital talent. A global survey by Boston Consulting Group shows that London continues to be the first choice for tech workers willing to relocate to a city in a different country. The city’s multiculturalism and diverse knowledge of markets, languages, and cultures are ideal for companies looking to scale globally.

## Tech-Savvy, Conscious Consumers & Excellent Market Access

Many of London’s strengths for tech would be of little relevance if not for its tech-savvy and conscious consumer market. London is a testing lab for many innovative ideas and industries, from music and entertainment to fashion and retail. Londoners are open to new experiences and welcome the integration of technology to everyday products and services.

A growing strength on the consumer side is that people in the UK are increasingly conscious about how they spend their money, preferring companies, services and products that are sustainable and ethical. A study by Accenture found that a third of UK adults expect brands to report on the environmental impact of their business.

Additionally, London provides excellent access to global markets. As well as having easy access to UK and European consumers, startups in London can benefit from dedicated support and connections in the city’s cosmopolitan ecosystem when looking to scale to international markets. For example, [Tech Nation](#), a UK growth platform for tech companies and leaders, and Startup Genome undertook an Asia Market Expansion Study.

The data-based analysis of Asian ecosystems was intended to assist UK-based scale-ups assessing the best ecosystem for geographic market expansion. It found that Singapore was the most favorable location, thanks to its connectedness and outstanding soft-landing support, and that UK scale-ups are also well-positioned to access Seoul, Tokyo, Melbourne, and Sydney.

## For Tech Startups and Investors, London Has Much to Offer

London is a global epicenter for tech. Its fast and solid growth in the sector, particularly during the challenging landscape of the COVID-19 pandemic, is a testament to the city’s ability to adapt, innovate, and reinvent. When combined with the amount of excellent talent and strength in fast-growing sectors, London’s tech ecosystem is only set to get better.



## Global Startup Ecosystem Report 2022

# Discover Portugal: An Unbeatable Value Proposition for Startups

Portugal's startup ecosystem is on the rise and the decision makers and organizations that power it have no intention of slowing down. The community continues to make strides toward attracting and retaining more international talent while forging partnerships with big corporations, making it easier than ever for startups to access markets throughout Europe and beyond.

The Portuguese startup ecosystem dates back to the early 2000s. Since then, the availability of top-tier talent backed by highly ranked universities, a thriving community with seven unicorns, and a world-class digital infrastructure has popularized Portugal as a destination for startups from around the world. In 2016, the Portuguese government galvanized the country's startup ecosystem with the creation of [Startup Portugal](#) as part of a national strategy to foster entrepreneurship through increased structural support, funding, and internationalization efforts.

## A Booming and Vibrant Entrepreneurial Community

With over 2,200 registered startups and counting, Portugal's startup community is booming. In 2021, Portugal's startup ecosystem garnered over \$1 billion in funding — a growth rate of 100% over the previous year. The amount of total VC funding invested in the ecosystem has grown an impressive 15x from 2017 to 2021, mainly in late-stage funding, which has grown by 55x. Private funding and co-investing initiatives like [200M Fund](#) ensure that local and foreign private resources continue to flow into Portugal's thriving startup community.

Portugal's largest cities, Lisbon and Porto, are part of the [Scale Cities Alliance](#). This collaboration among public ecosystem builders from 13 European cities aims to create Europe's most connected technology hubs. Further, a national network of incubators makes it possible to start up and develop a concept with support even outside of the major hubs.

*This contributed article was prepared by the authors in a personal capacity. The opinions expressed in this article are the authors' own and do not necessarily reflect the views or position of Startup Genome.*

Lisbon is also the home of Web Summit, the world's leading tech conference, which brings together thousands of founders and investors from around the globe for an invaluable networking opportunity. In 2021, the [Europe Startup Nations Alliance](#) (ESNA), an initiative of the Portuguese Government, was announced at the conference. Headquartered in Lisbon, ESNA has the mission of supporting European governments with improving structural conditions for startups. Also in 2021, the Regional Government of Madeira, through Startup Madeira, launched Digital Nomads Madeira Islands, an initiative that aims to attract digital nomads to the Atlantic islands of Madeira and Porto Santo.

Startup Portugal provides support to entrepreneurs through its [One Stop Shop](#), which has all the information needed to set up operations in Portugal and assists entrepreneurs and investors both online and offline on a one-to-one basis. The organization also hosts Above and Beyond Hangout, which brings the entrepreneurial community together to discuss a relevant topic each

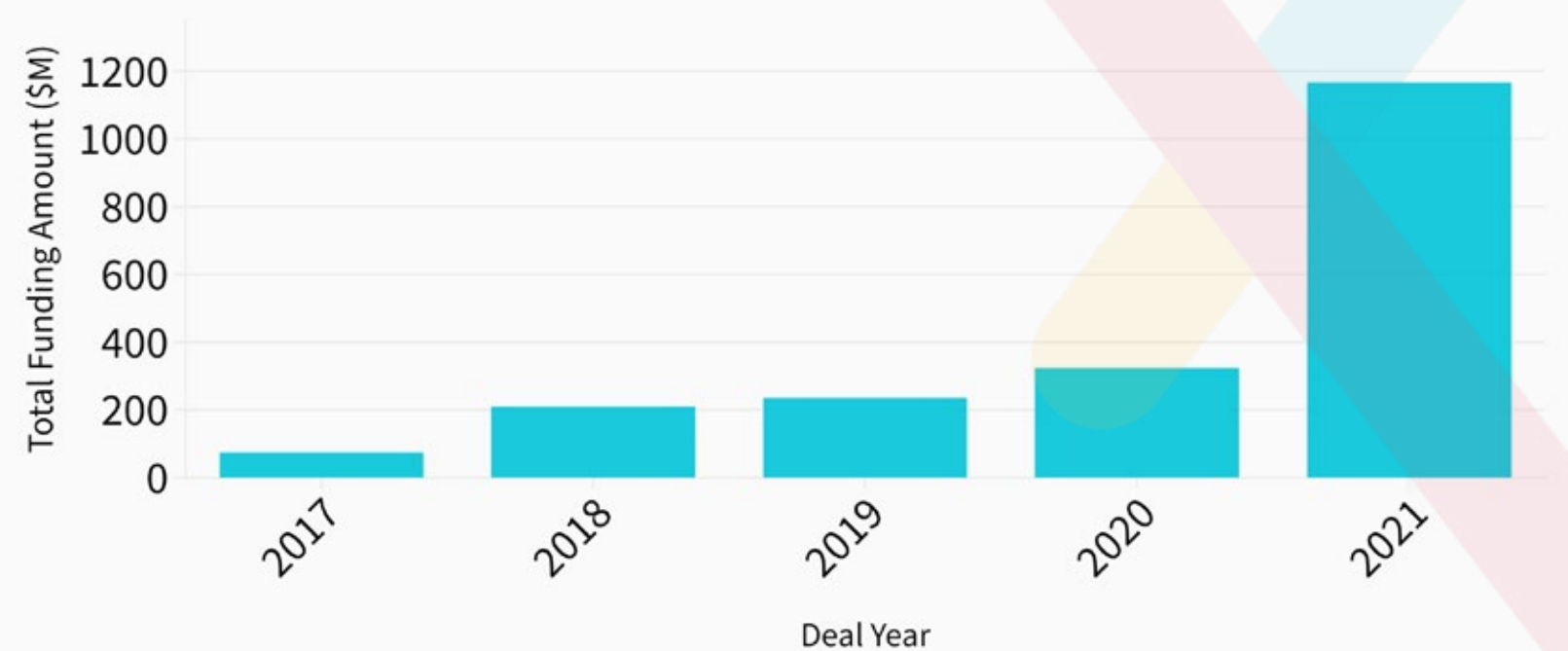


month. [Startup Grind](#) is also active in several Portuguese regions.

All these initiatives are paying off. Portugal has produced several unicorns to date: [SWORD Health](#), a world-renowned digital physiotherapy company; [OutSystems](#), a low-code enterprise development platform; [Farfetch](#), an online platform for luxury fashion; [Feedzai](#), a RiskOps platform for financial risk management; [Talkdesk](#), a cloud-based contact center and AI software provider; and [Remote](#), which provides global HR solutions. Digital asset platform [Anchorage](#) which was founded in the U.S. and has a Porto office, also achieved unicorn status in 2021.

### Portugal's Total VC Funding Amount by Year

Total VC Funding Raised Has Grown 15x From 2017 to 2021



## A Magnet for Top-Tier Talent

At its core, Portuguese society offers an attractive sense of stability. Ranked #4 in the Global Peace Index, Portugal is known for fostering a diverse, inclusive society that benefits from a sense of freedom. Globally ranked #3 for expat quality of life by the InterNations Expat Insider survey, talented workers from around the globe flock to Portugal.

Portugal's global attractiveness is complemented by thriving sources of local talent. Four Portuguese universities are ranked in the 2021 Financial Times European Business School Rankings and seven are

featured in the QS World University Rankings. Additionally, Portuguese university graduates are poised for international success, as the country ranks #7 globally in English proficiency, according to the EF English Proficiency Index. Aspiring tech talent and those looking to upskill have access to Academia de Código and the local chapters of 42, Ironhack,

and Le Wagon among other workshops and bootcamps. Since the GSER 2021, the moving average of patent production has increased by 71%, showing activation of innovation.

An open society and quality educational environment are woven together by government policy that actively encourages startup activity. Popular incentives include Startup and Tech Visa programs, two options that fast track residency for those bringing investment, talent, and innovation into the country. The Startup Voucher program, which will be relaunched this year for founders looking to create startups for the digital and green economy, helps young entrepreneurs breathe life into their ideas by minimizing risk and lowering the barriers of entrepreneurship, making it more accessible. Public-private intermediaries like Startup Portugal ensure the smooth flow of information, resources, and support among startups, investors, incubators, and the government.

## World-Class Infrastructure

In a 2021 OECD report, Portugal ranked #11 globally in fiber optic connectivity. Additionally, Portugal was the first country in the world to provide all public schools with fiber optic internet access. Additionally, 5G access is expanding throughout the country. NOS, a regional telecommunications service provider, collaborated with



Amazon Web Services (AWS) to launch the 5G Accelerator, an investment fund designed to “stimulate research and development in the use of 5G by the community of entrepreneurs in Portugal.”

In addition to its technical infrastructure, Portugal offers a rich network of institutional knowledge. A national network of over 160 incubators ensure that entrepreneurs can receive the support and resources they need to thrive. According to IDC’s Startup & Entrepreneurial Ecosystem Report, 65% of founders stated that they relied on incubator support during the early stages of their startups.

## A Global Gateway to European Markets

Situated at the southwestern tip of Europe, Portugal is the ideal portal for startups looking to enter or expand into the continent, a market of over 500 million people. As the closest European country to the U.S., Canada, and Brazil, doing business in Portugal also allows startups to stay in sync with some of the world’s most prominent economies. Portuguese startups adopt an international-first strategy earlier in their lifecycle, which can be a more efficient path to success.

With a coastline of more than 2,000 kilometers, Portugal holds one of the largest exclusive economic zones in the world, which extends over 1.7 million square kilometers, including a great diversity of ecosystems and resources. The Portuguese maritime triangle (mainland, Madeira, and the Azores) constitutes 48% of all marine waters under the jurisdiction of the Member States of the European Union in spaces adjacent to the European continent.

Portugal’s continental shelf (extended beyond 200 nautical miles), is under a process of delimitation with the United Nations, which will increase the area to 4,100,000 square kilometers (in addition to the Exclusive Economic Zone), for the purposes of conservation, management, and exploitation of natural marine soil and subsoil resources, making Portugal even more attractive to new ventures related to the Blue Economy.

Portugal is the perfect beachhead for European expansion. Geographically efficient with world-class talent, communities, and infrastructure, Portugal is an unbeatable value proposition that startups around the world would do well to consider.



## Global Startup Ecosystem Report 2022

# How Startups are Creating a Future-Proof Economy in Rotterdam

Home to Europe's largest port and an extensive network of waterways, roads, and rail lines, Rotterdam, the second-largest city in the Netherlands, has earned the nicknames "gateway to Europe" and "gateway to the world."

The city of Rotterdam is part of the Metropolitan Region Rotterdam the Hague (MRDH), an entrepreneurial hotbed of 23 municipalities. This combined startup ecosystem employs 25,000 people — one fifth of all startup jobs in the Netherlands — and has a market value of over \$3.6 billion. Rotterdam is also closely connected to nearby Amsterdam and the rest of the thriving Dutch business community.

Thanks to strategic regional and national partnerships, the region hosts a thriving community of over 1,600 active startups with prominent clusters in Smart Logistics, Life Sciences, and Cleantech.

With the support of a variety of programs, initiatives, and organizations, Rotterdam's startup scene is driving a transition toward a future-proof economy — one that is digital, circular, carbon-neutral, and diverse. In Rotterdam, actions speak louder than words, and a spirit of "make it happen" permeates the diverse population of 600,000 people, which represents 170 nationalities.

## Unparalleled Digital Connectivity

Stijn Koster, Vice President Hosting Services at Ubisoft and founder of i3D.net, highlights digital connectivity as the primary driver for being based in Rotterdam. "The city of Rotterdam is internationally well positioned and connects directly to all major internet hubs in Europe through various sea and land cables," he says. "Within the city, a high diversity of fiber and wireless connectivity allows us to work from home, the office or anywhere else. Perfect digital connectivity is an essential condition for a hosting company like i3D.net to be able to operate successfully."

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[i3D.net](#), a gaming-industry network solutions provider acquired by Ubisoft — along with NightBalance, a digital health scale-up acquired by Philips — is just one example of the high-profile exits and acquisitions produced by Rotterdam's dynamic startup ecosystem.

## A Serious Playground for Innovation

When it comes to size, Rotterdam hits the sweet spot: large enough to test and validate ideas at scale yet small enough to minimize the distance between startups and their consumers. The city contains several "serious playgrounds," such as [BlueCity](#), a former water park resort that is now a bustling waterfront business park. A poster child project for the circular economy, BlueCity houses over 30 startups that are experimenting and innovating toward a sustainable future.



[The Makers District](#) is another ideal waterfront location for forward-thinking founders. Here, startups can launch new ideas in concert with established corporations that are experimenting with new products and processes. A window into Rotterdam’s vision of a future-proof economy, the Makers District is more than an innovative physical location — it fosters the encouraging and collaborative business environment that thriving entrepreneurs need.

Innovation hubs, coworking spaces, and additional startup support services can be found throughout Rotterdam. Founders are never far from knowledge resources and stimulating environments where innovation, talent, and funding coalesce. [Up!Rotterdam](#), a public-private partnership to support founders in scaling up, launched in 2019. Working with over 50 co-creation parties, including the cities of Delft and Schiedam, Up!Rotterdam helps local startups access talent, capital, and international markets. The annual [Upstream](#) festival — a multi-day, region-wide event that promotes sustainable growth — made headlines by attracting more than 2,200 visitors and 90 investors with over \$36.5 billion in assets under management (AUM) in 2021.

## A Collaborative Core of Universities, Incubators, and Alumni Networks

Innovation in the greater Rotterdam metropolitan area is powered by world-class education and research institutions, including Erasmus University Rotterdam — which ranks in the top 3% of the best universities in the world — Rotterdam University of Applied Sciences, and nearby Delft University of Technology.

The Rotterdam School of Management (Erasmus University) and Delft University of Technology share a powerful collaboration that fuses the worlds of business and technology — the perfect recipe for producing future founders. Between the two universities, nearly 30% of the student body is enrolled in STEM programs and coursework. Both universities have business incubators, and UBI Global ranks the YES!Delft incubator, which also operates in Rotterdam, among the top five business incubators in the world. YES!Delft serves over 200 startups, providing them with access to an exclusive ecosystem of mentors, experts, investors, and corporate partners.

The Graduate Entrepreneur Fund ensures that Rotterdam’s collective entrepreneurial acumen and capital transcends generations. Established by influential

alumni from Erasmus University of Rotterdam, Erasmus Medical Center, and the Delft University of Technology, the fund has raised nearly \$60 million to support founders in early stages.

## Rotterdam Startups Make It Happen

American-Dutch scholar and economist Jan de Vries credits the Netherlands for giving rise to the first modern economy in the 16th and 17th centuries. That historic entrepreneurial spirit is imbued within Rotterdam’s DNA and lives on today, serving a new purpose of creating a future-proof society that is digital, circular, and sustainable. Rotterdam is a city of frontrunners and pioneers who continuously drive change. Start your business in Rotterdam and be a part of the “make it happen” culture that makes true innovation possible.



Netherlands

Amsterdam-Delta #14

"The Netherlands is home to Europe’s biggest tech companies and world-class startups. A great part of the ecosystem’s success is about the community and its leaders being willing to pass on their knowledge and capital gains to the next generation."

Constantijn van Oranje

Envoy, Techleap.nl



TOTAL EARLY STAGE FUNDING (2019H2-2021)

\$1.9 bn

GLOBAL AVG. \$687 m



Amount (\$) Count (#)

Exits

(2017-2021)

ECOSYSTEM VALUE (2019H2-2021)

\$54 bn

GLOBAL AVG. \$28.6 bn

EARLY-STAGE FUNDING GROWTH TIER (2018/19 VS. 2020/21)



Calculated on a scale of 1 (lowest) to 10 (highest)

Highlights

Amsterdam may be a smaller city by population than London or Paris, but its startups have produced outsized value given the size of the ecosystem. According to Dealroom, between 2010 and the first quarter of 2021, the total enterprise value of tech companies created in the Amsterdam region increased from \$10 billion to \$100 billion, making the ecosystem one of the fastest-growing in Europe.

The Dutch capital is also open, dynamic, and community minded. Rockstart and Startupbootcamp, two of Europe’s best-performing accelerators, were founded in Amsterdam. Holland in the Valley is an initiative to strengthen ties between the Netherlands and the Bay Area at multiple levels. ScaleNL helps Dutch tech entrepreneurs scale to the US via a network, platform, programs, and funding. Techleap is leading the Global Entrepreneur Initiative to connect successful Dutch founders living abroad to founders in the Netherlands who want to expand.

Amsterdam’s Cleantech startups had a particularly strong 2021. In September, Picnic raised €600 million (\$650 million) from the Bill & Melinda Gates Foundation to further its ambition of building the most sustainable European grocery delivery company. Urban e-bike company VanMoof raised a \$128 million Series C the same month.

In July 2021, neobank Bunq announced the largest ever Series A round raised by a European Fintech. The €193 million (\$209 million) deal took the company’s value to approximately €1.6 billion (\$1.73 billion). Other notable funding news in the ecosystem include online fashion outlet Otrium’s \$120 million Series C in March 2021, and mobility Fintech company Moove’s August 2021 \$100 million deal.

MEDIAN SEED ROUND (2019H2-2021)

\$492 k



GLOBAL AVG. \$671 k

MEDIAN SERIES A ROUND (2019H2-2021)

\$3.6 m



GLOBAL AVG. \$4.7 m

SOFT. ENGINEER SALARY (2021)

\$67 k



GLOBAL AVG. \$46 k

TOTAL VC FUNDING (2017-2021)

\$9.2 bn



GLOBAL AVG. \$4.5 bn

TIME TO EXIT (2017-2021)

10.7 years



GLOBAL AVG. 9.4 years



# Sub-Sector Strengths

## Agtech & New Food

The Dutch government’s Vision on Circular Agriculture sets out its ambition to be a global leader in circular agriculture by 2030. Wageningen University and Research (WUR) ranks #1 in the world in the field of Agriculture and Forestry, according to QS World University Rankings 2021. In 2021, leading Agtech organization Cropin announced the opening of its first international office in Amsterdam. App-only supermarket Crisp raised a €30 million Series B in March 2021.

## Life Sciences

Amsterdam-Delta’s Life Sciences ecosystem includes two internationally renowned universities, University of Amsterdam and Vrije Universiteit Amsterdam, as well as Amsterdam University Medical Centre and the Netherlands Cancer Institute. The Netherlands is the top European importer and exporter of medical devices. Hubs including Amsterdam Science Park and the Amsterdam Life Sciences District offer opportunities for collaboration, and the European Medicines Agency is also located here. LUMICKS raised a €77.6 million (\$84 million) Series D in April 2021, and clinical data platform Castor raised a \$45 million Series B in July 2021.



# Reasons to Move Your Startup to Amsterdam-Delta

## Talent

The Amsterdam-Delta region offers companies access to a large pool of talented, highly motivated, well-educated, and multilingual potential employees. 44% of the population have attended higher education institutions, 80% speak English, and 90% speak two or more languages.

## Competitive Economic Climate

The business climate in the Amsterdam-Delta region is welcoming for startups. Entrepreneurs from outside the EU can apply for a startup visa, and many highly skilled migrants qualify for a 30% personal tax income advantage. The Netherlands is stable and prosperous, and its capital city is open, creative, and dynamic.

## Established Startup Hub

The area has a long history as a successful business hub and as a center of global trade, so there is an established infrastructure of services, accelerators, and co-working spaces. These business essentials combine with the Dutch entrepreneurial mindset to create a fast-growing startup culture.



Serbia

# Belgrade and Novi Sad

MEMBERS:

Cabinet of the Minister for Innovation and Technological Development / Digital Serbia Initiative

"More and more great Serbian companies are finally getting the international attention they deserve. We believe the blockchain ecosystem will inspire the next generation of companies and drive innovation worldwide, and we are on a mission to help that happen."

Miljan Tekić

co-founder and COO, Tenderly



TOTAL EARLY STAGE FUNDING  
(2019H2-2021)

\$38 m

GLOBAL AVG.  
\$687 m



Amount (\$) Count (#)

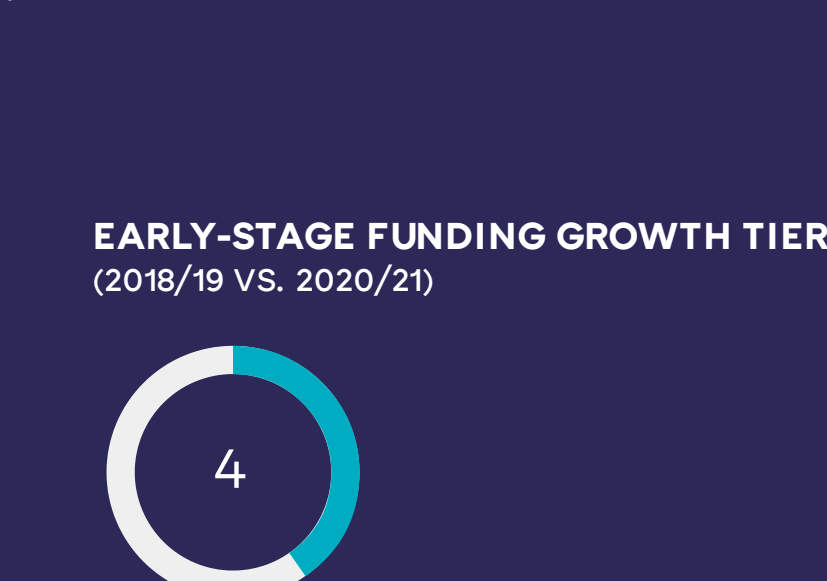
Exits

(2017-2021)

ECOSYSTEM VALUE  
(2019H2-2021)

\$677 m

GLOBAL AVG.  
\$28.6 bn



Calculated on a scale of  
1 (lowest) to 10 (highest)

## Highlights

Serbia's strength as a startup hub lies in its wealth of tech talent and proactive government support of the ecosystem. These advantages are beginning to pay off — 2021 was the most successful ever for the Serbian ecosystem, with local startups attracting over €123 million (\$135 million) in investments, an increase of 600% year over year. In addition, the Serbian tech sector exceeded \$1.7 billion in export revenue in 2021.

The Government's Strategy for the Startup Ecosystem Development of the Republic of Serbia for the period from 2021 to 2025 aims to accelerate the development of the startup scene and encourage innovation. It includes the introduction of entrepreneurship education at all levels, as well as the improvement of infrastructure and support programs, with an overall goal of Serbia creating up to 1,200 active startups that attract worldwide investors.

The Science Fund, which supports AI research and applications, aims to invest €5 million (\$5.5 million) in grants to startups by the end of 2022, and Serbia has established Science Technology Parks working with universities in four cities: Belgrade, Niš, Novi Sad, and Čačak. Established in 2021, the Institute for Artificial Intelligence Research and Development of Serbia is headquartered in Novi Sad.

The Innovation Fund's new acceleration program, Katapult, provides mentoring, financial support, and networking opportunities to both ideation and growth stage companies. Founded in 2021, the DSI Business Angel Group supports startups with both expert advice and early-stage investments up to €200,000 (\$219,000). Games developer Nordeus was acquired by Take Two Interactive for \$378 million in 2021.

MEDIAN SEED ROUND  
(2019H2-2021)

\$224 k



GLOBAL AVG.  
\$671 k

MEDIAN SERIES A ROUND  
(2019H2-2021)

\$555 k



GLOBAL AVG.  
\$4.7 m

SOFT. ENGINEER SALARY  
(2021)

\$23 k



GLOBAL AVG.  
\$46 k

TOTAL VC FUNDING  
(2017-2021)

\$79 m



GLOBAL AVG.  
\$4.5 bn

TIME TO EXIT  
(2017-2021)

10.6 years



GLOBAL AVG.  
9.4 years



# Sub-Sector Strengths

## Gaming

Serbian development teams, most of which are based in Belgrade and Novi Sad, published 35 games in 2021. The industry employs more than 2,200 people — a third of whom are women — and generated approximately €200 million (\$218 million) in 2021, €80 million (\$87 million) more than in 2020. Game Funding Bootcamp introduces companies to potential sources of funding. In June 2021, developer Nordeus was acquired by U.S. video game holding company Take-Two Interactive for \$378 million in cash and shares, one of the largest deals ever in the sub-sector.

## Blockchain

Serbia has become a top destination for R&D and Blockchain-based product development. The Serbian Blockchain Initiative is an NGO dedicated to promoting Blockchain, and a 2021 law on digital assets legalized cryptocurrency trading and mining, as well as obliging many cryptocurrency service providers to obtain a license. Ethereum Blockchain development platform Tenderly raised \$58.6 million in venture funding in 2021. Tempus Finance raised \$27.9 million through a token sale in December 2021, and UNQ Club, a platform for NFT asset management, raised \$3 million in venture funding the same month.



# Reasons to Move Your Startup to Belgrade and Novi Sad

## Engineering Talent

More than 42,000 people are employed in the technology sector in Serbia. Every year the country's 26 colleges and universities graduate over 3,000 engineers. There are 44 specialized IT courses in Serbian high schools, and programming is a compulsory subject for all students over the age of 11, who have a curriculum that includes Scratch, Python, and Pygame.

## Tax Incentives

Startup founders pay no tax on their salary for the first three years after founding a business. From 2022, a new incentive will lower tax by 70% and eliminate mandatory contributions for salaries on R&D projects. Entering IP rights as a non-pecuniary contribution to the capital of a company is exempt from capital gains tax on the transfer. Companies that invest in the capital of an innovative startup receive a tax credit of 30% of the investment, reducing tax liability. A fund-of-funds mechanism offers €5 million (\$5.5 million) in matching funds for every new VC that incorporates in Serbia in 2022 through the Serbia Ventures program.

“Belgrade and Novi Sad have had an incredible performance in the 2022 Global Startup Ecosystem Report. Working with our local partners, the Cabinet of the Minister for Innovation and Technological Development and the Digital Serbia Initiative, we are proud to tell the stories behind this sustained momentum.”

**Stephan Kuester, Head of Ecosystem Strategy of Startup Genome**



# Selected Startup Organizations

## STARTUP GENOME MEMBERS

### Cabinet of the Minister for Innovation and Technological Development

The Cabinet of the Minister for Innovation and Technological Development’s goal is the digitalization and development of intelligent and efficient infrastructure, making the country an attractive location for entrepreneurship. By building the innovation infrastructure, science-technology parks, and startup centers, and by strengthening ties between science and industry, the Cabinet is working towards making Serbia a regional innovation leader. Empowerment of female entrepreneurs and promotion of their innovative ideas is one of the Cabinet’s key missions.

MEMBER

### Digital Serbia Initiative

Digital Serbia Initiative is a non-governmental, non-profit organization advocating for the transformation of Serbia into a digital society. Founded by the leading digital players in the country, Digital Serbia Initiative combines the forces of more than 30 member-organizations from all sectors relevant for the growth of a digital ecosystem. It aims to create a business environment that serves the digital economy by investing in strategic programs in the areas of formal and informal education, startup ecosystem development, legal and regulatory frameworks, digital infrastructure and public dialogue on digital transformation.

MEMBER

## KEY ECOSYSTEM PLAYERS

### Katapult

An acceleration program that supports startups in the early stage of product development and market positioning, aiming to accelerate their growth and raise additional investments.

### Tenderly Garaža

Tenderly Garaža is a community of tech startup founders with the goal of peer sharing and learning.

### Serbia Innovates

ICT Hub’s Innovation cluster support project is financed by USAID and aims to develop the first Serbian supercluster in a domain such as high-tech agriculture and food production, gaming and VR, or Web3 and blockchain.

### TS Ventures Fund

TS Ventures Fund was established in 2021 by the company Telekom Serbia as the first Corporate Venture Fund in this part of Europe. Its primary goal is to support and invest in early-stage startups.

### Venture an Idea

The Venture an Idea project is led by Digital Serbia with the support of the USAID. Through the promotion of entrepreneurial thinking, the project offers opportunities for younger generations to start their own startups.



Germany  
**Berlin #16**

"Berlin is the city of startups. They are crucial partners in addressing and solving the challenges we face today and tomorrow. Berlin welcomes innovators from all over the world to work on a better and sustainable future."

**Stephan Schwarz**  
Senator for Economics, Energy and Public Enterprises



**TOTAL EARLY STAGE FUNDING**  
(2019H2-2021)

**\$3.5 bn**

GLOBAL AVG.  
\$687 m



Amount (\$)    Count (#)

**Exits**

(2017-2021)

**ECOSYSTEM VALUE**  
(2019H2-2021)

**\$94 bn**

GLOBAL AVG.  
\$28.6 bn

**EARLY-STAGE FUNDING GROWTH TIER**  
(2018/19 VS. 2020/21)



Calculated on a scale of  
1 (lowest) to 10 (highest)

**Highlights**

One of Europe’s hottest startup senses is only getting hotter. In 2021, €10.5 billion (\$11.6 billion) flowed into Berlin’s startups, compared with \$6.9 billion for all German startups in 2019. Berlin’s ecosystem accounted for 60% of the total capital invested in Germany. The number of deals also rose 60% year-on-year to 503, including Germany’s largest transaction ever: Berlin-based delivery service Gorillas raised €861 million in September. This was one of eight financing rounds of more than €500 million (\$551 million) in Berlin in 2021.

The health sector saw a particular spike in deal making in 2021. Berlin startups in the space closed 57 financing rounds, receiving a total of €519 million (\$566 million). A recent healthcare industry study by the WifOR Institute and SNPC ranked Berlin among the top three locations worldwide.

The government is looking to take additional steps to bolster startups. In June 2021, Germany announced unlocking €10 billion (\$12 billion) to support startups in their growth phase. The money is to be distributed via an investment fund and is intended to address difficulties startups face when trying to raise venture capital.

Startup support organizations within the ecosystem include Berlin Partner, which supports companies looking to expand. WomenTech Network promotes gender diversity in tech and connects talented professionals with top companies and startups that value diversity. At the GREENTECH FESTIVAL participants from around the world discuss solutions to the climate crisis.

**MEDIAN SEED ROUND**  
(2019H2-2021)

**\$1.3 m**



GLOBAL AVG.  
\$671 k

**MEDIAN SERIES A ROUND**  
(2019H2-2021)

**\$7 m**



GLOBAL AVG.  
\$4.7 m

**SOFT. ENGINEER SALARY**  
(2021)

**\$62 k**



GLOBAL AVG.  
\$46 k

**TOTAL VC FUNDING**  
(2017-2021)

**\$23 bn**



GLOBAL AVG.  
\$4.5 bn

**TIME TO EXIT**  
(2017-2021)

**6.8 years**



GLOBAL AVG.  
9.4 years



# Sub-Sector Strengths

## Fintech

One in ten of all new startups in Germany since 2018 are Fintech companies, and of the 639 Fintech companies in the country, 28% are in Berlin. Much of the success in nurturing Fintech startups can be attributed to a thoughtful approach to regulation, which makes it easy to avoid compliance issues. Trade Republic raised €747 million (\$824 million) in May 2021, digital banking platform Solarisbank raised a €190 million (\$210 million) Series D round in July 2021, and N26 raised €775 million (\$855 million) in October 2021.

## AI, Big Data & Analytics

Berlin is a leader in developing AI solutions for the health sector. The annual revenue of AI companies in Berlin is expected to reach over €2 billion (\$2.2 billion) by 2025. In June 2021, Science & Startups announced it would receive €6.85 million (\$8.2 million) from the German Federal Ministry for Economic Affairs and Energy to fund spin-offs in AI. In March 2021, appliedAI launched German AI Startup Landscape, a centralized database of AI startups, corporations, and SMEs. Virtual customer service agent builder Ultimate.ai closed a \$20 million Series A round in December 2021.



# Reasons to Move Your Startup to Berlin

## Ease of Relocation

Berlin makes it simple for overseas talent to relocate to the city, with both Berlin Investment Bank and Berlin Partners offering funding programs for startups and offering guidance to founders. Municipal services for registering a business and other processes are available in English to simplify setting up a startup for non-German speakers.

## A Dynamic Economy

Germany offers many advantages to startups, including its large domestic market, spirit of innovation, location at the heart of European transport networks, and highly skilled workers. Germany is a leader in science and research with 62,105 patent applications in 2020. With a per capita spending power of €24,412 in 2021, Germany ranks among the countries with the highest purchasing power in Europe.

## Diverse & Multicultural Community

Germany is a country of immigrants. In 2020 alone, almost 1.2 million people came to live in the country from abroad. Berlin's diverse and family-friendly culture make it an attractive option for those looking to relocate.



# Biscay Startup Bay

MEMBERS:

Diputación Foral de Bizkaia

"As Biscay we are absolutely committed to developing and helping startups, that is the reason why we have decided to implement Biscay Startup Bay Strategy to create in Bilbao one of the most connected ecosystems in the South of Europe."

Koldo Atxutegi

FDI Director



TOTAL EARLY STAGE FUNDING  
(2019H2-2021)

\$42 m

GLOBAL AVG.  
\$687 m



Amount (\$) Count (#)

Exits

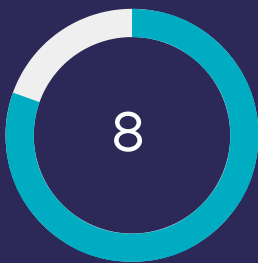
(2017-2021)

ECOSYSTEM VALUE  
(2019H2-2021)

\$471 m

GLOBAL AVG.  
\$28.6 bn

EARLY-STAGE FUNDING GROWTH TIER  
(2018/19 VS. 2020/21)



Calculated on a scale of  
1 (lowest) to 10 (highest)

## Highlights

At the turn of the 20th century Biscay was an economic and financial benchmark region in Europe, with growth based on shipbuilding and steel mills and one of the busiest ports in Europe. It has proved capable of transforming itself from an industrially based territory to an international reference point for business and tourism.

Today, Biscay pursues entrepreneurship and innovation as the mainstays of economic and social change, through the Biscay Startup Bay strategy, with its BAT – B Accelerator Tower as the guiding light. This center for innovation and entrepreneurship is based on a multi-sectoral, multi-corporation approach with the involvement of trailblazing local companies and leading corporations on a global scale. Biscay Startup Bay is one of the world's best connected entrepreneurship hubs and it has solid links with the most advanced innovation and entrepreneurship hubs globally.

Bilbao-Biscay was named the best medium-sized European city for direct foreign investment by fDi Intelligence. The University of the Basque Country ranked second in Spain for startup creation in 2021, spinning out 12 companies that year. Its researchers have applied for more than 1,000 patents in the last five years. The Basque Research and Technology Alliance is a collaboration between 16 technology and research centers. The organization's 3,700 research staff members bring in €300 million in investment annually and apply for 100 patents a year. The Be Basque Talent Network, the largest talent network in the world, is made up of 6,500 professionals who have links with the Basque Country.

MEDIAN SEED ROUND  
(2019H2-2021)

\$337 k



MEDIAN SERIES A ROUND  
(2019H2-2021)

\$1.8 m



SOFT. ENGINEER SALARY  
(2021)

\$36 k



TOTAL VC FUNDING  
(2017-2021)

\$180 m



TIME TO EXIT  
(2017-2021)

12.6 years





# Sub-Sector Strengths

## **Cleantech**

Biscay is an established knowledge hub and an industrial reference center in the field of energy. The two main focus areas are the Smart Grids, led by Iberdrola, the third utility in the world; and Hydrogen, led by Petronor, Repsol group's refinery. The Global Smart Grids Innovation Hub, which aims to be a world reference in smart grids, launched in October 2021. The Basque Hydrogen Corridor (BH2C) is a broad public-private collaboration strategy to develop 35+ projects all along the hydrogen value-chain and to advance in the decarbonisation of the energy, mobility, and other industrial sectors.

## **Industry 4.0 and Future Technologies**

Biscay's commitment to Industry 4.0 is based on a sound fabric of business that incorporates innovative technologies which enable it to address the new challenges which are set to transform the sector. The industrial fabric of Biscay contains all the abilities and skills needed to move firmly in the right direction, with newly-incorporated firms and innovation projects that incorporate concepts, methods and technologies based on Industry 4.0 in all aspects.



# Reasons to Move Your Startup to Biscay Startup Bay

## **Tax Incentives**

The Biscay Bay region has become a "living lab" for new ways of thinking about taxation. Thanks to its independent regulatory powers on taxation, Biscay has a number of tax measures designed to strengthen its economic ecosystem and channel it towards support for innovation, entrepreneurship, and alternative financing. Biscay is firmly oriented towards the production economy and provides smooth, close-up service via the Provincial Council of Biscay.

## **Educated Talent**

Biscay is committed to receiving professionals and digital nomads, and offers the conditions necessary to attract, establish ties with and retain highly qualified people in the innovation and knowledge process. Bilbao was ranked the world's fourth best city for talent retention in the Global Talent Competitiveness Index 2021. Bizkaia Talent is a talent agency in the service of individual specialists and businesses wishing to set up in the territory. It provides a comprehensive orientation service for talented individuals arriving in Biscay who need help in setting up in business.

## **Infrastructure**

The BAT Tower, the network of technology parks, venues for promoting digital innovation, company nurseries, scaleups, and incubators provides infrastructure to encourage the setting up of technology-based firms and help accelerate development.



# Selected Startup Organizations

## STARTUP GENOME MEMBERS

MEMBER

### Diputación Foral de Bizkaia

The government of the Historical Territory of Bizkaia is the Provincial Council, one of the main institutions of the Basque Country. It is headed by the General Deputy and carries out a wide series of functions including tax collection, urban planning, roads and public works, environment cultural heritage, and social welfare.

“Startup Genome is proud to collaborate with Diputación Foral de Bizkaia in their efforts to drive economic growth through entrepreneurship. Bilbao’s leadership is taking impressive and well-coordinated action which will continue to position Biscay Startup Bay as a fast-growing hub for innovation.”

**Marc Penzel, Founder & President  
of Startup Genome**

## KEY ECOSYSTEM PLAYERS

### BAT - B ACCELERATOR TOWER

Far more than an entrepreneurship centre, the BAT community is connected to more than 140 international hubs where key agents interact to create solutions that will allow them to grow and lead new challenges.



# Hungary Budapest

## MEMBERS:

National Research, Development and Innovation Office / Ministry of Innovation & Technology

"We strongly believe that the abundance of local talent combined with a vibrant startup ecosystem will significantly contribute to innovation in Hungary. We have to continue funding the investment activities of the best private technological incubators."

## Tibor Gulyás

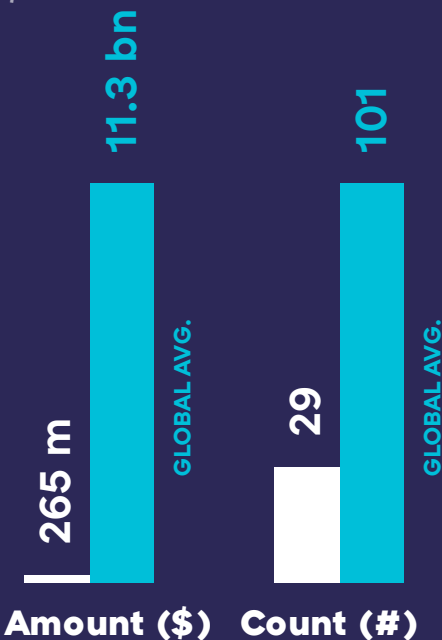
Deputy State Secretary, Ministry for Innovation and Technology



## TOTAL EARLY STAGE FUNDING (2019H2-2021)

**\$211 m**

GLOBAL AVG.  
\$687 m



## Exits (2017-2021)

## ECOSYSTEM VALUE (2019H2-2021)

**\$1.6 bn**

GLOBAL AVG.  
\$28.6 bn

## EARLY-STAGE FUNDING GROWTH TIER (2018/19 VS. 2020/21)



Calculated on a scale of  
1 (lowest) to 10 (highest)

## Highlights

Budapest is a lively cultural center and home to a thriving startup ecosystem. More than 900 startups, over 50 angel investors, and a growing array of startup support organizations call the Hungarian capital city home. In 2021, Startups.co.uk named Budapest the number one city in which to launch a business post-Brexit.

The government also offers strong support for startups. Hiventures is one of the largest government funded VC in Europe, managing a startup fund of over \$220 million with over 400 investments. NRDI Office and Ministry for Innovation and Technology (ITM), recently launched the Startup Factory incubator program with approximately \$6.6. million in co-funding investments of eight technological incubators to be continued in 2022. Four thousand students have enrolled in the Startup University program at over 20 universities. Startup Hungary is an entrepreneur-led organization launched to supercharge the startup community and to support high-growth potential tech companies in Hungary.

Incubator Design Terminal helps innovative Hungarian startups enter the international market, and CEU iLab's incubator program provides founders with mentorship and funding opportunities. Seon fraud-management software company has secured a \$91 million investment in 2022, a valuation estimated at \$0.5 billion. Bitrise, a platform for mobile app development, has raised five rounds, including \$60 million at Series C in November 2021.

## MEDIAN SEED ROUND (2019H2-2021)

**\$325 k**



GLOBAL AVG.  
\$671 k

## MEDIAN SERIES A ROUND (2019H2-2021)

**\$1.4 m**



GLOBAL AVG.  
\$4.7 m

## SOFT. ENGINEER SALARY (2021)

**\$30 k**



GLOBAL AVG.  
\$46 k

## TOTAL VC FUNDING (2017-2021)

**\$444 m**



GLOBAL AVG.  
\$4.5 bn

## TIME TO EXIT (2017-2021)

**10.6 years**



GLOBAL AVG.  
9.4 years



# Sub-Sector Strengths

## **Artificial Intelligence**

The Continental Artificial Intelligence Development Centre is an active player in Hungary's AI ecosystem, housing more than a thousand people working in R&D-related activities. OTP Bank has partnered with data center AI company SambaNova Systems to build Europe's fastest AI supercomputer. ViroFighter, a robot developed by the European Knowledge Centre in cooperation with Budapest nonprofit ELTE-Soft in 2021, is capable of disinfecting a room autonomously.

## **Fintech**

Around 24% of Hungarian Fintech companies work in financial software development and system integration, while 21% are involved in payment services and 20% in data analysis and business intelligence services. The World FinTech Festival, a satellite event of the Singapore FinTech Festival, is held in Budapest.



# Reasons to Move Your Startup to Budapest

## **Skilled Workforce**

The education system in Hungary is skill-centered and practical, producing high-quality, workforce-ready graduates. 90% of students speak English and two-third of the startup workforce are STEM graduates. This has led many companies in sectors such as pharmaceuticals, engineering, R&D, and IT to look to Budapest when searching for talent.

## **Low Cost of Living**

Compared to ecosystems in Western Europe and the United States, Budapest is a cheap place to found and operate a startup. The Cost of Living Index for the city is 56.5, compared to 100 for New York. The cost of housing, utilities, and education are all very low compared to many other tech hubs.

## **Startup-Friendly Policies**

At just 9%, Hungary's corporate tax rate is among the lowest in Europe, and a new company can be registered and receive a VAT number in 72 hours. The KATA flat-tax system allows self-employed individuals to pay a fixed monthly amount to cover all their Hungarian tax obligations. As of 2020, the monthly amount ranged from Ft 50,000 (\$165) to Ft 75,000 (\$248) for those not employed by any other company.



# Selected Startup Organizations

## STARTUP GENOME MEMBERS

MEMBER

### National Research, Development and Innovation Office

The Office is responsible for the execution of research development and innovation (RDI) policies in Hungary and to ensure that Hungary adequately invests in RDI by funding excellent research and supporting innovation.

MEMBER

### Ministry of Innovation & Technology

The Ministry is responsible for creating the national RDI strategy and defining policies in the field of research, innovation, and higher education. Its responsibilities include infrastructure, energy, environmental policies, and economic and competitiveness strategy.

“Ranking as a Top 25 European Ecosystem in Affordable Talent, the Budapest startup community shows their strengths in the GSER 2022. The dedication of the National Research, Development and Innovation Office and the Ministry of Innovation & Technology to improving the local innovation ecosystem is commendable.”

**Marc Penzel, Founder & President of Startup Genome**



Denmark

Denmark

MEMBERS:

Digital Hub Denmark

"Denmark is one of the most digitalized countries in the world, making it an attractive market to foster innovation and adopt disruptive technologies. With growing international interest, we will continue to adopt new measures to facilitate entry into the Danish ecosystem."

Simon Kollerup

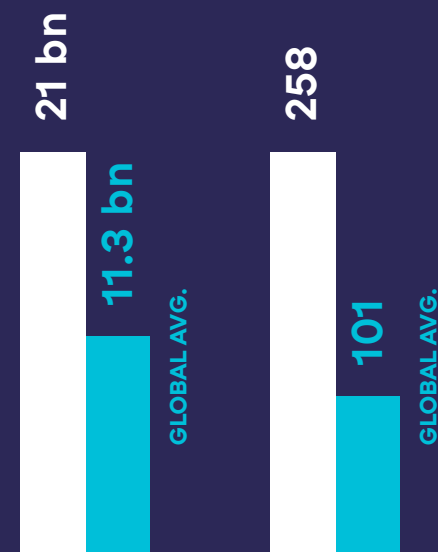
Minister for Industry, Business, and Financial Affairs



TOTAL EARLY STAGE FUNDING  
(2019H2-2021)

\$1.1 bn

GLOBAL AVG.  
\$687 m



Amount (\$)    Count (#)

Exits

(2017-2021)

ECOSYSTEM VALUE  
(2019H2-2021)

\$38 bn

GLOBAL AVG.  
\$28.6 bn

EARLY-STAGE FUNDING GROWTH TIER  
(2018/19 VS. 2020/21)



Calculated on a scale of  
1 (lowest) to 10 (highest)

Highlights

Internationally, Denmark’s startup scene may be best known for Copenhagen-founded unicorns including Zendesk, Trustpilot, and Pleo, but there are several other flourishing clusters of specialized tech knowledge. Aarhus is Denmark’s youngest city by population, Odense is a hub for robotics, and Jutland offers both urban life and nature. Collectively, Denmark’s cities form a vibrant and nurturing startup ecosystem that in 2021 was home to more than 4,300 startups and scaleups and 30 active VC investors. The nation has produced 10 unicorns to date.

The robust ecosystem, educated talent pool, and relatively low tax rate of 22% for foreign investors have attracted the interest of international corporations. IBM has a software development center in Copenhagen, Apple built a sustainably-powered data center in Viborg, and in December 2021, Meta/Facebook announced plans to expand its Odense data center campus.

Denmark has a formal governance model across its strongest digital tech ecosystems (Fintech, Healthtech, Robotics, Createch, Proptech, Agtech, and Edtech) that is governed by a steering committee for the Danish Digital Ecosphere, with leaders from the strongest ecosystems and Digital Hub Denmark. Together they work to attract talent, investors, and customers to the 1,100 tech startups and scaleups in the ecosphere.

In July 2021, Copenhagen-based Dixa, which creates customer engagement software, raised \$105 million in a Series C round. Aarhus-founded ViaBill has raised \$177.3 million over four rounds, including \$120 million at an unknown series round in February 2022.

MEDIAN SEED ROUND  
(2019H2-2021)

\$1.2 m



GLOBAL AVG.  
\$671 k

MEDIAN SERIES A ROUND  
(2019H2-2021)

\$4.7 m



GLOBAL AVG.  
\$4.7 m

SOFT. ENGINEER SALARY  
(2021)

\$74 k



GLOBAL AVG.  
\$46 k

TOTAL VC FUNDING  
(2017-2021)

\$5.9 bn



GLOBAL AVG.  
\$4.5 bn

TIME TO EXIT  
(2017-2021)

10.6 years



GLOBAL AVG.  
9.4 years



# Sub-Sector Strengths

## Life Sciences

Denmark is one of the fastest-growing European nations for biotech investment, second only to the Netherlands for pace of growth in 2021. Health Tech Hub Copenhagen is a community and co-working space for leading Healthtech startups. BioInnovation Institute, an initiative of the Novo Nordisk Foundation, operates an incubator and supports early-stage Life Sciences projects and startups. Cancer therapy developer IO Biotech raised \$100.1 million in its November 2021 IPO, and Bioproduction startup 21st.Bio raised \$97.1 million in December 2021.

## Advanced Manufacturing & Robotics

Odense, Denmark, is one of the top robotics hubs in Europe, hosting 175 startups and scaleups, 40 higher education programs, and 10 research institutes. Robotics cluster Odense Robotics achieved the EU-certified Gold Label for Cluster Management Excellence. DTU Skylab is the Technical University of Denmark's living lab for innovation and entrepreneurship where students, researchers, and corporate partners can collaborate on innovative solutions for real-world challenges. Blue Ocean Robotics raised DKK 335 million (\$51 million) in January 2022.

## Fintech

In 2015, Denmark was home to 70 Fintech companies. By the end of 2021, it was home to more than 250. Copenhagen Fintech is one of the leading Fintech hubs in the Nordics, with more than 200 members, strong connections to the corporate sector, and a lively co-working space. Expense management tools developer Pleo raised a \$350 million Series C in December 2021, putting the company's pre-money valuation at \$4.35 billion. Digital bank Lunar has raised \$371.3 million in funding over nine rounds.

# Reasons to Move Your Startup to Denmark

## Ease of Doing Business

You can register a company in Denmark in 15 minutes with an electronic application and just DKK 1 (\$0.15). Companies are tax exempt until their working capital exceeds DKK 50,000 (\$7,300). The government's Start-up Denmark initiative is a one-point-of-entry for both EU and non-EU entrepreneurs to relocate and grow high-impact startups in Denmark. If accepted to the program, up to two founders receive a residence and work permit for up to two years, with the possibility of a three-year extension.

## Educated Talent

Copenhagen is home to the Technical University of Denmark, one of the leading engineering institutions in Europe; Copenhagen Business School, one of Europe's largest business schools; the IT University; and Aalborg University, which has been ranked as Europe's best engineering university for five years in a row. Thanks to these institutions and more, there is an abundance of highly qualified talent to hire in Denmark.

## Supportive Community

Denmark has a tight-knit startup ecosystem that is easy to tap into. There are numerous platforms that assist startups looking to enter the Danish market and soften the transition. Copenhagen Fintech, Copenhagen Health Tech Hub, Odense Robotics, Vision Denmark, PropTech Denmark, EdTech Denmark, Agro Food Park, and the national industry association for startups are some examples.



# Selected Startup Organizations

## STARTUP GENOME MEMBERS

### Digital Hub Denmark

Digital Hub Denmark works to make Denmark an even better digital playground. The hub will support the digital ecosystem in Denmark by matching private companies, researchers, tech-entrepreneurs, and students in the development of new digital products, services, and business models. Digital Hub Denmark connects great ideas with robust experience.

MEMBER

“We are excited to see Denmark’s rapid progress in developing a united and well-coordinated startup ecosystem. In each of Denmark’s core areas of innovation, be it Proptech or Robotics, you will find truly inspiring and highly innovative companies that are scaling globally.”

**Marc Penzel, Founder & President  
of Startup Genome**

## KEY ECOSYSTEM PLAYERS

### Matrikel1

Houses some of the most promising Danish startups and the most prominent investors from pre-seed to Series A.

### TechBBQ

The largest startup event in Scandinavia. TechBBQ brings together talent, entrepreneurial minds, and international investors to foster innovation in the Danish ecosystem.

### Odense Robotics

Denmark’s national robotics, automation, and drone cluster brings together the entire ecosystem to drive innovation and growth in the industry nationwide.

### The Kitchen

Aarhus University’s startup hub, dedicated to helping entrepreneurs and innovators grow.

### The Association of Tech Startups in Denmark

A member-driven political organization that works to create the best conditions for tech startups and scale-ups, and ensure the growth of tech companies in Denmark.



Germany

Frankfurt

MEMBERS:

TechQuartier / StartHub Hessen

"Frankfurt has a dynamic and increasingly mature ecosystem. A first unicorn in 2021 is an expression of this. With numerous talents, innovative ideas and promising start-ups the region has great potential."

Tarek Al-Wazir

Minister of Economics, Energy, Transport and Housing and Vice Minister-President, State of Hessen



TOTAL EARLY STAGE FUNDING  
(2019H2-2021)

\$242 m

GLOBAL AVG.  
\$687 m



Amount (\$) Count (#)

Exits

(2017-2021)

ECOSYSTEM VALUE  
(2019H2-2021)

\$11 bn

GLOBAL AVG.  
\$28.6 bn

EARLY-STAGE FUNDING GROWTH TIER  
(2018/19 VS. 2020/21)



Calculated on a scale of  
1 (lowest) to 10 (highest)

# Highlights

Frankfurt is the economic and geographical center of the FrankfurtRheinMain region and one of the most important data traffic hubs in the world. Its 43,000 companies employ 650,000 people. Over 40% of sales revenue attributable to the 100 highest-grossing software companies in Europe is generated in the Frankfurt region. Cosmopolitan and fast-growing, Frankfurt is an ideal home for innovative startups looking for world-class talent and industry partners.

Entrepreneurs in Frankfurt are supported by a range of government and university programs. StartHub Hessen and TechQuartier are key players that connect founders, investors, mentors, and corporate innovators. The Hessian Center for AI brings together 13 universities to drive research, education, practice and leadership in AI, including the AI Startup Rising project, which supports startups from the ideation to scaling stage.

Some of Frankfurt’s biggest startup success stories include drone manufacturer Wingcopter and cloud foundation platform meshcloud. Mattress retailer Emma is among the fastest growing companies in Europe and has expanded internationally. Insurance platform Clark became the region’s first unicorn in 2021, and BioNTech SE — which along with Pfizer developed one of the first vaccines against COVID-19 — is based in the nearby city of Mainz.

In December 2021, Wingcopter received an undisclosed amount of funding from a Japan-based venture capital firm dedicated exclusively to investments within the drone technology ecosystem, further to the \$22 million Series A it raised in January 2021.

MEDIAN SEED ROUND  
(2019H2-2021)

\$549 k



GLOBAL AVG.  
\$671 k

MEDIAN SERIES A ROUND  
(2019H2-2021)

\$4.7 m



GLOBAL AVG.  
\$4.7 m

SOFT. ENGINEER SALARY  
(2021)

\$60 k



GLOBAL AVG.  
\$46 k

TOTAL VC FUNDING  
(2017-2021)

\$1.3 bn



GLOBAL AVG.  
\$4.5 bn

TIME TO EXIT  
(2017-2021)

10.2 years



GLOBAL AVG.  
9.4 years



# Sub-Sector Strengths

## **Fintech**

As an international financial hub Frankfurt offers Fintech startups proximity to established banks and a large talent pool. The City of Frankfurt and the State of Hesse are actively promoting the sub-sector. FinTech Digital Hub Frankfurt brings together talent from the financial and startup sectors. The Safe Financial Big Data Cluster, managed by TechQuartier, enables cross-institutional use of financial market data while preserving data sovereignty. Fintech investor CommerzVentures closed its third fund at €300 million (\$327 million) in March 2022. The fund has invested in 28 companies to date.

## **Cybersecurity**

Digital Hub Cybersecurity, based in Darmstadt, is linked to the Fraunhofer SIT and Germany's National Center for Applied Research ATHENE, Europe's largest cluster for applied cybersecurity. Incubation and funding programs including StartUpSecure|ATHENE have contributed to growth in the number of Frankfurt Cybersecurity startups. The city also hosts the European Cyber Security Summit.

## **Cleantech**

Frankfurt was among the first German cities to adopt a Master Plan to achieve 100% renewable energy supply by 2050. This continued interest in sustainability has helped Frankfurt become a prominent hub for Cleantech talent and companies. Approximately one third of the region's startups are focused on sustainability and climate. The Green and Sustainable Finance Cluster Germany, co-managed by the Frankfurt School, brings together key players. Impact Festival is the flagship event for B2B sustainability startups in Hessen. Examples of local Cleantech companies include Africa GreenTec, which delivers solar powered containers to rural areas of Africa.

# Reasons to Move Your Startup to Frankfurt

## **Access to Talent**

Frankfurt is home to some 230,000 students studying at 53+ research institutes and 25+ universities, including several excellent universities like TU Darmstadt and Goethe University. As a result the region boasts a highly qualified workforce. A dense network of ties connects universities and innovative companies ensuring close links between research and industry.

## **Access to Major Players**

A major European financial center, Frankfurt is home to the European Central Bank, Deutsche Bundesbank, Frankfurt Stock Exchange, Deutsche Bank, DZ Bank, KfW, and Commerzbank, as well as major players in other industries.

## **Strategic Connections**

Frankfurt has built bridges with nearby startup clusters and talent pools. The city joined with neighboring Darmstadt, also home to renowned universities and a strong financial sector, to create a tech hub and to connect technical talent with the banking industry. Frankfurt's central location in Europe also makes it a logistics hub, with data, people, and goods streaming through the city continually.



# Selected Startup Organizations

## STARTUP GENOME MEMBERS

### TechQuartier

TechQuartier is a community-based innovation manager and ecosystem builder for startups and corporates to develop digital solutions together. Our community consists of more than 500 startups plus scaleups, corporates, investors, universities, regulators, public administration and institutions.

MEMBER

### StartHub Hessen

StartHub Hessen is the central platform for startups and the Hessen startup ecosystem. We help startups and other players with networking and visibility, and provide an overview of funding options.

MEMBER

## KEY ECOSYSTEM PLAYERS

### Impact Festival

Europe’s largest B2B platform for sustainable innovation and technology, accelerating green transformation and connecting innovators, companies, and investors.

### ATHENE Digital Hub Cybersecurity

A project of the National Research Centre for Applied Cyber Security ATHENE in Darmstadt, which has become Germany’s leading innovation community for cybersecurity startups.

### Frankfurt Forward

A project of the Frankfurt Economic Development Agency, Frankfurt Forward is the independent matchmaker and innovation driver for the FrankfurtRhineMain startup ecosystem.

“Ranking as a Top 30 Global Emerging Ecosystem, Frankfurt continues to punch above its weight class. It is inspiring to see how coordinated action from a diverse group of leaders and experts can result in accelerated economic performance and entrepreneurial growth.”

Marc Penzel, Founder & President of Startup Genome



Finland

Helsinki Metropolitan Area

MEMBERS:  
City of Helsinki / City of Espoo / City of Vantaa

"Helsinki Metropolitan Area delivers the kind of innovation the world needs. We believe in trust-based and radically multidisciplinary collaboration that drives purpose-based growth. Innovation is driven by the well-being of empowered people."

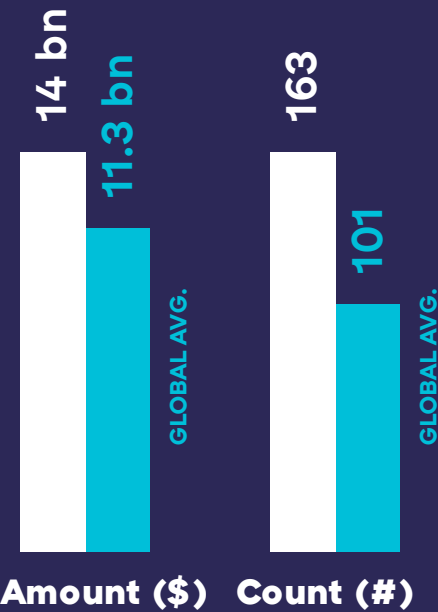
Harri Paananen  
Director of Economic Development, City of Espoo



TOTAL EARLY STAGE FUNDING  
(2019H2-2021)

\$950 m

GLOBAL AVG.  
\$687 m



Exits  
(2017-2021)

ECOSYSTEM VALUE  
(2019H2-2021)

\$25 bn

GLOBAL AVG.  
\$28.6 bn

EARLY-STAGE FUNDING GROWTH TIER  
(2018/19 VS. 2020/21)



Calculated on a scale of  
1 (lowest) to 10 (highest)

Highlights

Finland may have a population of just 5.5 million, but the country has a proven ability to turn out global startup success stories from Nokia and Rovio to Wolt and KONE. Some 4,000 startups are currently located in the country, and the Helsinki Metropolitan Area is the beating heart of its startup scene.

Slush, a student-run tech conference, brings international and domestic entrepreneurs and investors to Helsinki every November. Junction started out here as a single hackathon, but has developed into a series of tech events around the world. The Otaniemi-Keilaniemi area in Espoo is an innovation hub — home to startups, corporations, and R&D institutions including Aalto University and the Technological Research Centre of Finland VTT.

In recent years, several domestic venture capital funds with more than €100 million (\$109 million) in assets have emerged in Finland. Longtime players in the local investment scene have also successfully marketed the nation to global investors. Finnish companies received €929 million (around \$1 billion) in private investment in the first half of 2021, an all-time high. The average investment in Helsinki area startups is now \$408,000 at seed stage and \$2.7 million at Series. A. Many Helsinki area accelerators and incubators, including Nordea Startup Accelerator and Kiuas, invest in early-stage startups. Government start-up grants offer new entrepreneurs around €700 (\$763) per month for 12 months while they get their businesses off the ground. With its track record of producing unicorns, Finland also now has serial entrepreneurs who are reinvesting the money they made from successful exits in the country’s ecosystem.

MEDIAN SEED ROUND  
(2019H2-2021)

\$746 k



GLOBAL AVG.  
\$671 k

MEDIAN SERIES A ROUND  
(2019H2-2021)

\$2.4 m



GLOBAL AVG.  
\$4.7 m

SOFT. ENGINEER SALARY  
(2021)

\$54 k



GLOBAL AVG.  
\$46 k

TOTAL VC FUNDING  
(2017-2021)

\$4.8 bn



GLOBAL AVG.  
\$4.5 bn

TIME TO EXIT  
(2017-2021)

8.9 years



GLOBAL AVG.  
9.4 years



# Sub-Sector Strengths

## Digital Health

Finland is a global leader in Digital Health, with Bayer, Thermo Fisher Scientific, Fujitsu, and GE Healthcare choosing the country for R&D centers of excellence. Business Finland's €12 million (\$13.1 million) E3 initiative aims to combat future pandemics. CleverHealth Network brings together government, clinicians, companies, and startups to develop health solutions. Finland will host the 2022 Healthcare Information and Management Systems Society European Health Conference. Success stories include Deep Sensing Algorithms, makers of the world's first rapid COVID-19 detection technology that analyzes exhaled breath. Aiforia, a provider of AI-based solutions for clinical diagnostics, raised a €17.5 million (\$19.1 million) Series B in September 2021.

## AI, Big Data & Analytics

According to Business Finland, there are over 300 AI startups in Finland and the top 30 companies are doubling their growth each year. The number of people working at AI startups in Finland is shooting up 33% each year. The Finnish AI Accelerator, the Tampere AI Hub, and the AI Academy at University of Turku are all driving AI commercialization in the country. Finnish universities offer top-level AI education. The Finnish Center for Artificial Intelligence is a community of AI experts in Finland, initiated by Aalto University, University of Helsinki, and VTT Technical Research Centre of Finland. Database-as-a-service platform Aiven raised a \$60 million Series C in October 2021, putting the company's pre-money valuation at \$1.9 billion.

## Gaming

Finland is home to Scandinavia's biggest gaming industry. AMD, Nvidia, EA, Ubisoft, Unity, and Zynga all have a presence in Finland. More than 3,000 people are employed in the Gaming industry in Finland and nearly one quarter of Finland's game developers are foreign born. Over 20 universities in the country offer programs in Gaming, attracting students from around the world. Gaming startup Return Entertainment closed a €5.3 million (\$5.8 million) funding round in February 2022. Mobile game studio Metacore has raised \$218 million over six rounds.

# Reasons to Move Your Startup to Helsinki Metropolitan Area

## Quality of Life

Finland has been ranked the world's happiest country for the five years in a row, and Espoo, just west of Helsinki, has been ranked as one of Europe's most sustainable cities. Human wellbeing is among the best in the world. According to BMI Research, Finland will remain one of the world's most politically stable countries at least through 2025. Finland is also a high-trust society: in 2019, 64% of the population reported trusting the government, compared to an OECD average of 45%.

## Access to Talent

Finland's educational system is among the best in the world, and the Helsinki area consistently ranks in the European top 10 for productivity and global competitiveness. The Global Talent Competitiveness Index 2021 from INSEAD ranked Finland #7 among 134 countries globally, citing the workforce's strong technical skills among other strengths. Aalto University rose 15 places in the QS World University Rankings from 2020 to 2021 and now ranks #63 worldwide in research impact. The Otaniemi-Keilaniemi area is home to 800 companies and R&D actors, including Aalto University and the VTT Technological Research Centre of Finland.

## Ease of Doing Business

Finland's corporate tax rate of 20% is among the lowest in the EU and the lowest among the Nordic countries. Finland is also offering new tax deductions for companies operating in the country. Business Finland provides low-interest loans and grants to innovative companies with global growth potential, as well as funding for R&D work carried out by companies, research organizations, and the public sector. The Aalto Entrepreneurship Society has helped nurture startup success stories such as Wolt and accelerator Kiuas.



# Selected Startup Organizations

## STARTUP GENOME MEMBERS

MEMBER

### City of Helsinki

Helsinki is a city for all, a place for good life. It is a smart, safe, and compact city that is known for its combination of urban culture and nature. Helsinki cherishes its open, participatory culture that is a source for its innovative and creative atmosphere. A hotbed for innovation, and an ideal testing ground for bold new ideas, it is the perfect size for startups to test the waters and obtain first references. Helsinki provides a stable and well-functioning business environment that nurtures startups to success and is a modern and attractive location for entrepreneurs.

## KEY ECOSYSTEM PLAYERS

### Aalto University

Aalto University is where science and art meet technology and business. The university is home to a vibrant entrepreneurial ecosystem powered by student-led activities and research and innovation hubs.

### Helsinki Education Hub (HEH)

Helsinki Education Hub aims to be a global model for sharing and enhancing education and learning technology by connecting and facilitating international expertise, talent, and networks.

### City of Espoo

Espoo-based startups electrified the creation of a new Finnish innovation culture at the end of the 2000s, when Nokia hit hard times. Today, many of Finland’s most promising Deep Tech startups come from Espoo, and most of Finland’s unicorns were born here. Finland’s key sustainable innovation players and most valuable companies are located in Espoo. Big players like Nokia, Kone, and VTT make Espoo #6 among European cities that applied for most patents in 2020, and Espoo is #8 in Europe in capital invested (2020). The city has repeatedly been recognized by the European Commission for using innovation to improve the lives of citizens.

### Kiuas

Kiuas is the leading startup accelerator in Finland. The student-driven accelerator provides early-stage startups with invaluable support, networks, and tools to progress to the next level.

### Maria01

An entrepreneurial community and a selection-based campus for tech teams.

### Slush

Slush is the world’s leading startup event, connecting founders with what and whom they need while building a new, inclusive, and more purposeful culture of entrepreneurship.

MEMBER

### City of Vantaa

Vantaa is an innovative city of sustainable growth and was elected as the rising innovative city in Europe in 2021. Aviapolis is also a logistics hub and an innovative future airport city, combining residential area, business opportunities, and the airport. To enhance the dialogue between the city, businesses and higher education institutions, Vantaa operates within business ecosystems. The purpose of these Key Business Clusters is to create connections between companies of all sizes, from startups to industry leaders. The aim is to create new business opportunities by sharing knowledge, new ideas, and innovations.

“The Helsinki Metropolitan Area has risen more than 20 places from last year, joining the runners-up category as the #35 startup ecosystem globally. We celebrate this incredible surge of activity alongside the City of Helsinki, City of Espoo, and City of Vantaa.”

**Marc Penzel, Founder & President of Startup Genome**



# Turkey Istanbul

## MEMBERS:

Istanbul Development Agency

"The last decade has witnessed the rise of a resilient, attractive, and rapidly evolving startup ecosystem in Istanbul. Out of this dynamism, Istanbul will emerge as a leading attraction spot for global technology startups."

## Mustafa Varank

Minister of Industry and Technology



## TOTAL EARLY STAGE FUNDING (2019H2-2021)

**\$475 m**

GLOBAL AVG.  
\$687 m



Amount (\$) Count (#)

## Exits

(2017-2021)

## ECOSYSTEM VALUE (2019H2-2021)

**\$17 bn**

GLOBAL AVG.  
\$28.6 bn

## EARLY-STAGE FUNDING GROWTH TIER (2018/19 VS. 2020/21)



Calculated on a scale of  
1 (lowest) to 10 (highest)

# Highlights

Turkey is home to nearly 42 million digitally savvy young people, and Istanbul is the hotspot for these digital natives. More than 80 active organizations supporting startups call the city home, including Plug and Play Istanbul and Endeavor. The city also hosts various startups events, including pitching competition Take-Off, aerospace festival TEKNOFEST, and international gaming exhibit GAMING ISTANBUL.

The state is nurturing this growing ecosystem through various means. Istanbul Development Agency's \$30 million regional venture capital fund expands funding opportunities, retaining Development and Investment Bank of Türkiye's \$95.5 million fund of funds. Following the legalization of equity-based crowdfunding, six new platforms are set to begin operations. 2021 was a record year for fundraising in Istanbul, both in the number of deals and total investment. With 294 deals totaling \$1.55 billion, Istanbul was second in MENA for both metrics, and fourth in Europe for number of deals. Total investment skyrocketed 948% year-over-year while deal count was up 47%, according to startups.watch.

Amongst 2021 exits, online shopping company Hepsiburada took the lead with its \$761 million exit via a secondary transaction on a NASDAQ IPO. Since Peak Games became the country's first unicorn in 2020, the country has gained five more. One of them, Trendyol, raised an additional \$1.85 billion in 2021, becoming Turkey's first decacorn. Grocery delivery startup Getir has become "the hottest new idea in online retail," according to the Financial Times. It was the country's second decacorn. AI-powered digital marketing platform Insider is the latest addition to the unicorn club.

## MEDIAN SEED ROUND (2019H2-2021)

**\$250 k**



GLOBAL AVG.  
\$671 k

## MEDIAN SERIES A ROUND (2019H2-2021)

**\$1.7 m**



GLOBAL AVG.  
\$4.7 m

## SOFT. ENGINEER SALARY (2021)

**\$15 k**



GLOBAL AVG.  
\$46 k

## TOTAL VC FUNDING (2017-2021)

**\$2 bn**



GLOBAL AVG.  
\$4.5 bn

## TIME TO EXIT (2017-2021)

**8.5 years**



GLOBAL AVG.  
9.4 years



# Sub-sector Strengths

## **Gaming**

When San Francisco-based Zynga bought Turkish mobile gaming company Peak for \$1.8 billion in June 2020, the acquisition created Turkey's first unicorn. Istanbul's Gaming ecosystem has become the second-largest gaming cluster in Europe, with 165 studios. Turkish Gaming companies closed \$265 million in funding in 2021, with valuations up 80% year-over-year. Dream Games raised a \$225 million Series C in January 2022 to become the sub-sector's second unicorn with a value of \$2.75 billion. Spyke Games received \$55 million in Seed funding in January 2022.

## **AI, Big Data & Analytics**

Istanbul is home to 73% of Turkey's AI startups. The National AI Strategy released recently a five-year plan to modernize regulations and expand access to quality data and infrastructure advantages through Turkey's tech base, Informatics Valley. AI-focused higher education continues to grow in the city, which now has three bachelors degrees and nine masters-level programs on AI and data science. The state-backed Tech-InvesTR VC Program nurtures early-stage companies. AI-supported real estate startup Tiko's 2021 \$65 million round is the country's largest Series A to date. No-code AI platform Cameralyze raised a \$3 million seed round in February 2022. Logistics company Yolda.com raised a \$5 million seed round in December 2021.

## **Fintech**

Fintech is the busiest sub-sector in the country, with 589 active startups targeting 70.3 million digital banking customers. Approximately 9% of all new Turkish startups are in Fintech. Türkiye Wealth Fund forecasts that the annual value of Turkish financial services exports will increase from \$2 billion to \$16 billion by 2036. Regulatory reforms enabling branchless and service model banking were completed by the start of 2022. Fifteen VC funds and startup support mechanisms owned by financial institutions are set to invest in the sub-sector. The Istanbul Financial Center aims to become a major business district serving Fintechs and financial firms. Fintech Tarfin raised an \$8 million Series A in December 2021.

# Reasons to Move Your Startup to Istanbul

## **Supportive Community**

Traditional Turkish values like generosity, loyalty, and strong community networks mean successful tech entrepreneurs maintain strong relationships with the Istanbul ecosystem, acting as mentors, angels, or serial entrepreneurs. The CEOs of Yemeksepeti, Pozitron, and Mynet founded the country's first angel investor network, Galata Business Angels, and serve as board members and managers of startup support organizations.

## **Young Tech Talent**

With half of the population under the age of 32, Turkey has the largest youth population in Europe. Many of those tech-savvy young people select Istanbul as a destination for higher education, creating a vast pool of talent for employers. State-led 1 Million Coders initiative is entering its third year, and global coder training platform 42's Istanbul branch has joined it to nurture the talent pool with fresh minds.

## **Globally Connected**

With various accelerator programs and a wide range of international events, Istanbul acts as a bridge connecting east and west and local players with global entrepreneurial networks. Examples include the state-led startup summit, Take-Off, and StartupIstanbul, which hosts over 500 startups and 300 investors from 80 countries. Istanbul Technical University's incubation center, ITU Seed, is gearing up to launch an international startup accelerator program.



# Selected Startup Organizations

## STARTUP GENOME MEMBERS

MEMBER

### Istanbul Development Agency

Istanbul Development Agency is a government agency with a view to expediting regional development, providing sustainability, and closing interregional and intraregional gaps by improving collaboration among public sector and private industry and non-governmental organizations, fostering opportune and efficient use of resources and galvanizing the local potential. It implements programs and supports projects and activities for the development and strengthening of Istanbul’s startup ecosystem to make it a prominent international entrepreneurship hubs.

“Startup Genome is thrilled to see more and more global startup success stories born out of Istanbul. The on-demand delivery company Getir is a great example but there is so much more happening. The dedication of the Istanbul Development Agency helped place Istanbul as a Top 15 Emerging Ecosystem.”

**Marc Penzel, Founder & President  
of Startup Genome**

## KEY ECOSYSTEM PLAYERS

### TEKNOFEST

TEKNOFEST is Turkey’s aerospace and technology festival, organized with the partnership of numerous organizations. It hostis technology competitions in 35 different categories.

### ITU Seed

ITU Seed supports tech-based incentives as an ecosystem prescribing pre-incubation, acceleration, Big Bang, and incubation phases to entrepreneurs at the idea or development stage.

### Endeavor Turkiye

Endeavor Turkiye aims to create multiplier effect by inspiring high-growth entrepreneurs to dream bigger, supporting and investing in them to scale faster, and providing a platform to pay it forward.

### BTM

A social structure that offers all kinds of support on entrepreneurship and innovation in the processes of commercialization of new business ideas and their growth after commercialization.

### startups.watch

A research platform that provides a full understanding on trends, transactions, and what’s next via tracking startup ecosystems.



France  
Lille

MEMBERS:

EuraTechnologies

"If Lille were a country, it would make the headlines of the Wall Street Journal. It has the largest startup IPO in OVHcloud, the largest industrial startup in Exotec, and the largest European startup incubator in EuraTechnologies."

Nicolas Brien

Chairman of the Board, EuraTechnologies



TOTAL EARLY STAGE FUNDING  
(2019H2-2021)

\$75 m

GLOBAL AVG.  
\$687 m



Amount (\$) Count (#)

Exits

(2017-2021)

ECOSYSTEM VALUE  
(2019H2-2021)

\$7 bn

GLOBAL AVG.  
\$28.6 bn

EARLY-STAGE FUNDING GROWTH TIER  
(2018/19 VS. 2020/21)



Calculated on a scale of  
1 (lowest) to 10 (highest)

Highlights

The Lille Metropolitan startup ecosystem is one of the largest in France, reaching beyond Lille to the British and Belgian borders in the north, and down to Paris in the south. Of the 26 French unicorns to date, two are based in Lille. Cloud computing company OVHcloud had the largest startup IPO in French history and entered the SBF 120 index only three months after listing on Euronext.

The local and regional governments are invested in developing startups and offer financial support to accompany startups through the incubation and acceleration phase and beyond. Lille remains very affordable compared to Paris even though it's only an hour commute to Paris or London, and barely 30 minutes to Brussels. The region is recognized as the largest retail hub in Europe and startups can gain access to mentorship and partnership opportunities with large corporate groups such as Auchan, Leroy Merlin, and Decathlon.

The ecosystem includes France's top three industrial startups: Exotec, Innovafeed, and Ynsect. Also present are tech companies including IBM, OVHcloud, CapGemini, SopraSteria; renowned research institutes INRIA and CEA Tech; investment and venture capital firms Cr dit Agricole, Assurances BPCE, FINOVAM, Finorpa, Jezby Venture, and many business angels.

Lille hosts the largest annual conference dedicated to digital security and trust issues in Europe: the FIC. Lille is also the third largest university city in France, with over 152,000 students. Stanford University's Center for Professional Development plays a large role in the ecosystem through the Stanford-Lille Innovation and Entrepreneurship program.

MEDIAN SEED ROUND  
(2019H2-2021)

\$1.2 m



GLOBAL AVG.  
\$671 k

MEDIAN SERIES A ROUND  
(2019H2-2021)

\$4.2 m



GLOBAL AVG.  
\$4.7 m

SOFT. ENGINEER SALARY  
(2021)

\$38 k



GLOBAL AVG.  
\$46 k

TOTAL VC FUNDING  
(2017-2021)

\$810 m



GLOBAL AVG.  
\$4.5 bn

TIME TO EXIT  
(2017-2021)

9.4 years



GLOBAL AVG.  
9.4 years



# Sub-Sector Strengths



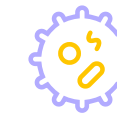
## Cybersecurity

Lille is one of France's biggest Cybersecurity hubs. A Cybersecurity campus at EuraTechnologies will open in September 2022, and the ecosystem is home to companies including OverSoc, Cryptr, Paprwork, Allistic, DataTrust, Résistez aux Hackeurs, and Vade. The International Forum on Cybersecurity (FIC) brings together 13,000 national and international visitors over three days in Lille each year.



## Agtech & New Food

The Lille ecosystem has a strong Agtech sector. In-field data-based platform Sencrop (which has raised over \$30 million to date), digital optimization outfit Alvie, agricultural mechanization tool Karnott, and algae-based air purification startup Bioteos are just some examples of the enterprises using nearby land and working with local farmers to test their innovations. Several startups are developing solutions to answer the challenges of feeding populations and improving the environment as climate change accelerates.



## Life Sciences

The Clinical Investigation Centre for Innovative Technology studies biosensors and e-health with the aim of developing innovative technologies and facilitating the creation of new companies. The Eursanté health cluster hosts 4,000 public and private researchers and 80 research centers. The Health Entrepreneurship Program, developed by Lille University and Eursanté, is a multidisciplinary degree that gives students an understanding of the Life Sciences innovation ecosystem and its challenges. Eursanté runs the Life Sciences-focused Eursanté Bio-Incubator and Bio-Accelerator for worldwide startups willing to establish a presence in the Lille region.

# Reasons to Move Your Startup to Lille

## Large Talent Pool

With over 152,000 university students in the larger metropolitan area, Lille has one of the largest talent pools in Europe. Renowned schools such as the EDHEC, IESEG, SKEMA, UC Leuven, UT Compiègne, Centrale Lille, HEI, ISA, and Elisa Aerospace, among others, are within a 30-minute commute.

## Vibrant Ecosystem

Lille offers an ecosystem of like-minded partners, investors, and entrepreneurs who strive for excellence through sustainable and inclusive innovation. Large corporations, research centers, and investment firms work with startups to provide concrete support through feedback on product-market fit, partnerships, and financial agreements.

## Affordability and Strategic Location

Lille is an hour from Paris, but the cost of renting office space is around 80% lower than in the French capital. Lille offers direct rail access to many European cities, with the Eurostar to London; the Thalys to Brussels, Amsterdam, and Cologne; and the French SNCF to Paris, the rest of France, and several European countries. The Lille and Charleroi airports are both close by.



# Selected Startup Organizations

## STARTUP GENOME MEMBERS

MEMBER

### EuraTechnologies

EuraTechnologies is Europe’s largest startup incubator and accelerator, spread over 150 000 m2 in four cities (Lille, Roubaix, Willems, Saint-Quentin). EuraTechnologies supports the development of all tech entrepreneurs thanks to its unique 13 years track record in supporting entrepreneurship and innovation, in France and abroad.

“Lille continues to gain in success and visibility as a hub for startup success. The Agtech startup Sencrop recently made headlines by raising one of the largest funding rounds in Agtech in Europe. We are proud to collaborate closely with EuraTechnologies to celebrate and accelerate their impressive journey.”

**Marc Penzel, Founder & President  
of Startup Genome**

## KEY ECOSYSTEM PLAYERS

### EuraTechnologies

EuraTechnologies is leading a new generation of startup incubators and accelerators. We love creating unicorns... but our primary goal is to create jobs, by building thriving companies that make a positive impact.

### Hiptown

Hiptown is a co-working space in the heart of the city, where fulfillment rhymes with efficiency. Its goal is to enhance spaces by making people happier and more fulfilled in their work environment.

### Plaine Images

Plaine Images is a startup incubator and accelerator dedicated to creative industries. We do everything we can to make the best business ideas come true!

### Finovam Gestion

Finovam Gestion is a venture capital firm approved by the AMF which takes minority stakes in innovative SMEs with high growth potential.

### Jezby Ventures

Jezby Ventures seeks to invest in the SaaS, technology, cloud infrastructures and energy sectors. It guarantees real speed and agility in the support of innovative projects and eclectic entrepreneurs who act in the public interest.



United Kingdom

# London #2

"It's fantastic to see that London tech companies are attracting large volumes of capital across all stages of the funding journey as a sign that our tech ecosystem is truly flourishing and our entrepreneurs are second to none."

**Eileen Burbidge**  
Partner, Passion Capital



## Highlights

London remains Europe’s startup capital and ranked fourth globally for VC investment in 2021. The city’s tech companies raised an all-time high of \$25.5 billion in VC funding last year, more than double its 2020 total. An influx of capital into the U.K. capital from Silicon Valley is driving much of this boom. Cleantech has been a particularly hot sub-sector with \$1.7 billion pumped into London-based Cleantech companies in 2021. London is the #2 city globally for the number of Cleantech rounds raised by startups.

Local VC firms include Balderton Capital, which focuses on backing European technology companies. In November 2021, it announced it had raised a second, \$600 million fund. Early-stage VC firm Passion Capital announced its third, \$62.5 million fund in March 2021.

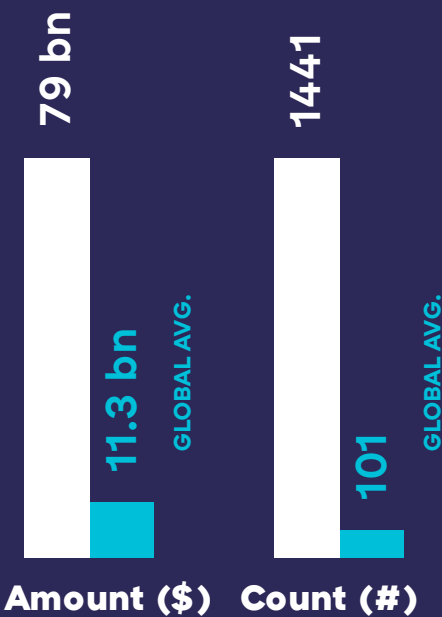
Unsurprisingly given this flood of investment, London gained 20 new unicorns in 2021, more than any other previous year. These include Insuretech Marshmallow, SaaS company TrueLayer, and Fintech Starling Bank. London’s total unicorn count now stands at 75, making it the unicorn capital of Europe. In January 2022, Wayve, a provider of autonomous vehicle software, raised a \$200 million Series B round that drew participation from Microsoft, Eclipse Ventures, and Balderton Capital, among others.

London Tech Week is the UK’s tech flagship event, where global founders, investors, and more come together to discuss all things tech. Black Girls In Tech Fest is a networking and recruitment event to create pathways for Black women in tech. Tech Nation provides coaching, content, and community for founders, leaders, and scaling companies.

### TOTAL EARLY STAGE FUNDING (2019H2-2021)

**\$14 bn**

GLOBAL AVG.  
\$687 m



### Exits (2017-2021)

### ECOSYSTEM VALUE (2019H2-2021)

**\$314 bn**

GLOBAL AVG.  
\$28.6 bn

### EARLY-STAGE FUNDING GROWTH TIER (2018/19 VS. 2020/21)



Calculated on a scale of  
1 (lowest) to 10 (highest)

### MEDIAN SEED ROUND (2019H2-2021)

**\$714 k**



### MEDIAN SERIES A ROUND (2019H2-2021)

**\$6.2 m**



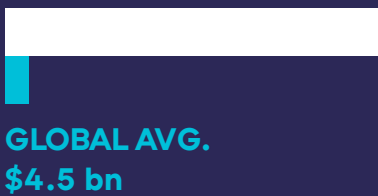
### SOFT. ENGINEER SALARY (2021)

**\$69 k**



### TOTAL VC FUNDING (2017-2021)

**\$68 bn**



### TIME TO EXIT (2017-2021)

**9.5 years**





# Sub-Sector Strengths

## **Fintech**

London-based Fintechs raised \$11.7 billion in 2021, which accounted for 46% of total VC investment for the year. Barclays Accelerator, a Fintech-focused accelerator powered by Techstars, reached a \$4 billion valuation in 2021. The government plans to support the sub-sector with new visa pathways for foreign workers, enhancing the regulatory toolbox, reforming market-listing rules, and exploring a central-bank digital currency. Revolut raised an \$800 million Series E in July 2021. Payment solutions provider SaltPay raised a \$370 million Series C in November 2021, and Blockchain-based lending platform Celsius Network raised a \$350 million Series B the same month.

## **Edtech**

The U.K.'s Edtech sub-sector attracted a flood of American money in 2021. More than 40% of all Edtech investment into Europe goes to the U.K. EdTech World Forum and London Edtech Week are key events. Student recruitment platform Unibuddy raised a £14.5 million (\$18.9 million) Series B in July 2021. Apprenticeship startup Multiverse raised a \$130 million Series C in September 2021. Online teaching platform Atom Learning raised a £19 million (\$24.7 million) Series A in December 2021.



# Reasons to Move Your Startup to London

## **Access to Funding**

Compared with other international tech hubs, startups in London have access to deeper pools of capital, with an average seed round of \$653,000, compared to a global average of \$494,000. As of the close of 2021, London was home to over 1,370 VC firms, more than any other European city. Several global investment firms have increased their presence in London recently. Index Ventures announced a \$3.1 billion fund for European startups in July 2021, while Silicon Valley-based VC Sequoia Capital also expanded its footprint in the UK capital.

## **Government Support**

The mayor of London's £1 million (\$1.3 million) Resilience Fund challenges innovators to develop solutions to some of London's most pressing problems. London & Partners offers support and advice for scale-up companies looking to set up shop in London. Its Business Growth Programme supports pre-seed and seed stage startups and SMEs that employ between five and 10 people. The program also runs an accelerator program for mission-driven businesses working towards the UN's Sustainable Development Goals. Selected companies gain access to corporates, mentors, workshops, and business advice.



Germany

Mannheim-Heidelberg

MEMBERS:

Heidelberg Technology Park / NEXT MANNHEIM

"Heidelberg and Mannheim are great locations for fast growing startups like Getsafe. The universities provide us with excellently trained employees and quality of life is a big plus. In addition, both cities offer a good infrastructure for entrepreneurs."

Christian Wiens

Founder and CEO, Getsafe



TOTAL EARLY STAGE FUNDING  
(2019H2-2021)

\$100 m

GLOBAL AVG.  
\$687 m



Amount (\$) Count (#)

Exits

(2017-2021)

ECOSYSTEM VALUE  
(2019H2-2021)

\$2.3 bn

GLOBAL AVG.  
\$28.6 bn

EARLY-STAGE FUNDING GROWTH TIER  
(2018/19 VS. 2020/21)



Calculated on a scale of  
1 (lowest) to 10 (highest)

Highlights

The Mannheim-Heidelberg startup ecosystem has grown up around the region’s venerable universities and the many international corporations based in the area, including BASF, SAP, Roche, John Deere, Daimler-Benz, and Bombardier. Today, the southwest German area is a hub for Life Sciences research and innovation. Additionally, top-notch Artificial Intelligence startups are on the rise.

Through Medtech centers CUBEX ONE and CUBEX41, Heidelberg Technology Park, and the BioRN BioTech Cluster, startups can access labs and offices in close proximity to leading research institutes. The Inspire Living Lab has been created as a testing platform with 26 beds within Mannheim University Hospital. Startups and SMEs can test and improve their products in the clinical routine and take advantage of user feedback from doctors, nurses, and patients.

The Mannheim-Heidelberg startup ecosystem offers accelerator programs for Life Sciences, Artificial Intelligence, and Industry Tech. Startups can apply for pre-seed funding from the state of Baden-Württemberg, and Heidelberg Startup Partners and MAFINEX Founders Club arrange business angel speed dating and VC networking events to arrange additional funding.

Mannheim-Heidelberg has produced multiple notable investment deals and exits recently. AI startup Aleph Alpha raised a €23 million (\$25 million) Series A in July 2021, and Swedish giant Klarna acquired local Fintech Stocard in a €113 million (\$123 million) deal the same month. Decision intelligence platform Parentos closed a €3.5 million (\$3.8 million) seed round in September 2021, and digital insurance company Getsafe raised a \$93 million Series B round in October 2021.

MEDIAN SEED ROUND  
(2019H2-2021)

\$700 k



GLOBAL AVG.  
\$671 k

MEDIAN SERIES A ROUND  
(2019H2-2021)

\$3 m



GLOBAL AVG.  
\$4.7 m

SOFT. ENGINEER SALARY  
(2021)

\$62 k



GLOBAL AVG.  
\$46 k

TOTAL VC FUNDING  
(2017-2021)

\$787 m



GLOBAL AVG.  
\$4.5 bn

TIME TO EXIT  
(2017-2021)

11.4 years



GLOBAL AVG.  
9.4 years



# Sub-Sector Strengths

## Life Sciences

With two university hospitals and extensive research activities in the fields of drug development, diagnostics and medical technology, Life Sciences startups play a prominent role in the Mannheim-Heidelberg region. In Mannheim, the MMT Campus is home to research projects including M2OLIE, Hybrid-OR, and Inspire Living Lab. In Heidelberg, the Life Sciences cluster BioRN spearheaded the launch of BioLabs Heidelberg. Clinical-stage biopharmaceutical company Exciva raised a €9 million (\$9.8 million) Series A round in October 2021.

## AI, Big Data & Analytics

Mannheim-Heidelberg is a hotspot for machine learning in Germany. The Heidelberg Collaboratory for Image Processing is a joint institution of the University of Heidelberg and companies including Bosch and Bayer. It is one of the leading research institutions in the field of computer vision. Together with local universities and other research institutions, it forms the starting point for innovative startups in the fields of computer vision, natural language processing, and optimization. A large part of the current financing rounds can be traced back to these areas.



# Reasons to Move Your Startup to Mannheim-Heidelberg

## International Research

Heidelberg is home to Germany's oldest university and 57 Nobel laureates are connected to the city. Mannheim University is one of Germany's most prolific business schools. Other research institutes include the German Cancer Research Center, the European Molecular Biology Lab, and various Max Planck Institutes and Fraunhofer Societies. The strong research orientation leads to an international crowd and an influx of highly qualified workers.

## Economic Powerhouse

The greater Mannheim-Heidelberg region is one of the strongest economic regions in Europe. Its 160,000 companies include 10 of the largest German companies. Startups find a vibrant scene and optimal infrastructure in the industry-specific technology and startup centers. This includes the direct connection to the European road and rail system as well as the proximity to Frankfurt Airport.

## Quality of Life

Situated on the Rhine and Neckar rivers, at the foot of mountains, the region is praised for its quality of life. In addition to nature, the 500,000 inhabitants of the cities of Mannheim and Heidelberg and the 2.4 million inhabitants of the metropolitan region enjoy a wide range of cultural offerings and a vibrant nightlife. Together with the moderate cost of living compared to other metropolises, this is a great starting point for international hires.



# Selected Startup Organizations

## STARTUP GENOME MEMBERS

MEMBER

### Heidelberg Technology Park

Heidelberg Technology Park has been the nucleus of the regional biotech ecosystem since 1984. Neighboring Heidelberg University and Clinics, German Cancer Research Center, and the Max-Planck-Institute for Medical Research, it offers 100,000 square meters of laboratories, clean rooms, and offices to startups in the fields of biotechnology, medical technology, Artificial Intelligence, and electronics. Heidelberg Technology Park maintains a network of experts and investors and numerous support services for entrepreneurs.

## KEY ECOSYSTEM PLAYERS

### Life Science Accelerator Baden Württemberg

Supported by the state of Baden-Wuerttemberg the Life Science Accelerator recruits pre-seed to seed-stage teams working on BioTech, MedTech, and digital health products. Participating teams get support by mentors and industry experts.

### Mannheim Medical Technology Campus (MMT Campus)

The Campus provides a unique concentration of industry, hospital and research facilities, all within walking distance. Industry, healthcare and research professionals develop medical devices in a joint, digital and international approach.

### KI-Garage ("AI Garage")

KI-Garage ("AI garage") by Baden-Württemberg Stiftung is aimed at scientists and entrepreneurs in the field of artificial intelligence. Participants receive business support, technological expertise and access to venture capital.

### Up2B Accelerator

The Up2B Accelerator supports startups from the field of industrial tech. After completing the five short programs, startups leave with contacts to pilot customers and investors, equipped with the knowledge to build and grow a B2B business.

### BioLabs Heidelberg

BioLabs Heidelberg offers fully-equipped laboratory and office space with access to capital and industry partners. Originating from Boston, the co-working lab provider for biotech startups touches European soil for the first time in Heidelberg.

### NEXT MANNHEIM

NEXT MANNHEIM is the brand under which the City of Mannheim combines and promotes a wide range of activities in the areas of start-up ecosystem, cultural urban development and internationalization. Thanks to the interdisciplinary exchange between the tech, creative, cultural and urban innovation sectors combined with the economically strong region, one of the most attractive locations in Germany for startups and a diverse innovation ecosystem has been created.

MEMBER

“We eagerly anticipate what’s ahead for the Mannheim-Heidelberg startup ecosystem. With some of the most impressive success stories like Unser, Getsafe or Stocard, the ecosystem can no longer be considered a hidden champion. We look forward to be working with Technologiepark Heidelberg, Next Mannheim, and other important players in the region to continue to accelerate local ecosystem performance over time.”

**Marc Penzel, Founder & President  
of Startup Genome**



Germany

Metro Rhein-Ruhr

MEMBERS:

North-Rhine Westphalia State Government

“The interaction of globally operating industry, the densest university and research landscape in middle Europe, and a huge number of hidden champions and innovative founders make Metro Rhein-Ruhr a highly networked and active ecosystem with great potential for further growth.”

Dr. Johannes Velling

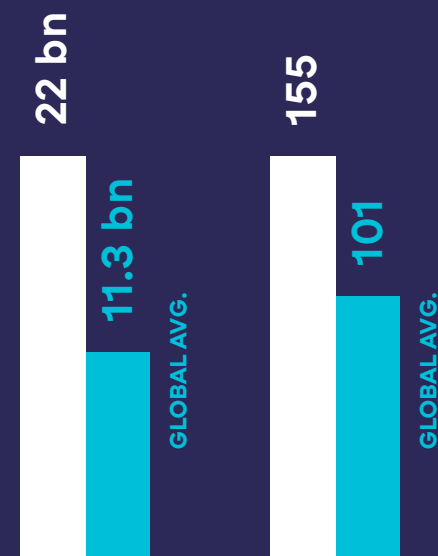
Director General Digitalization and Foreign Economics, Ministry of Economic Affairs, Innovation, Digitalization and Energy of the State of North Rhine-Westphalia



TOTAL EARLY STAGE FUNDING  
(2019H2-2021)

\$380 m

GLOBAL AVG.  
\$687 m



Amount (\$) Count (#)

Exits

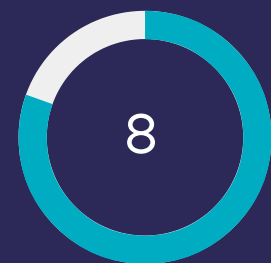
(2017-2021)

ECOSYSTEM VALUE  
(2019H2-2021)

\$5.5 bn

GLOBAL AVG.  
\$28.6 bn

EARLY-STAGE FUNDING GROWTH TIER  
(2018/19 VS. 2020/21)



Calculated on a scale of  
1 (lowest) to 10 (highest)

Highlights

Nearly one in five German startups now comes out of the state of North Rhine-Westphalia. The Metro Rhein-Ruhr region is the hub of this activity, leveraging its history as a manufacturing center and research location to become a hotbed of innovation in Industrial Technologies, Cleantech, and AI.

Demand for Advanced Manufacturing solutions is high across Germany, where 84% of manufacturers plan to invest €10 billion (\$10.9 billion) per year into smart manufacturing technologies through 2025. The Exzellenz Start-up Center NRW initiative contributes to this need for innovation by supporting the transfer from scientific results to industry applications. It is investing €150 million (\$164 million) through 2024 in Exzellenz Start-up Centers at universities in Aachen, Cologne, Bochum, Dortmund, Munster, and Paderborn to smooth the path from academic research to thriving startup.

Incubators including Startplatz in Düsseldorf and Cologne, and Co:Forward in Aachen support startups in the area. With Scale-up.NRW, the region recently launched an ambitious program to help companies through the transition from startup to scaleup and expansion into global markets — the first of its kind in Europe. In addition, the region is characterized by a broad network of Digital Hubs, which connect startups with corporates and SMEs. The state-owned agency NRW.Global Business supports investors in tax and legal matters, provides detailed information on industry clusters, and helps identify suitable locations for projects.

MEDIAN SEED ROUND  
(2019H2-2021)

\$1.2 m



GLOBAL AVG.  
\$671 k

MEDIAN SERIES A ROUND  
(2019H2-2021)

\$4.7 m



GLOBAL AVG.  
\$4.7 m

SOFT. ENGINEER SALARY  
(2021)

\$62 k



GLOBAL AVG.  
\$46 k

TOTAL VC FUNDING  
(2017-2021)

\$1.4 bn



GLOBAL AVG.  
\$4.5 bn

TIME TO EXIT  
(2017-2021)

9.8 years



GLOBAL AVG.  
9.4 years



# Sub-Sector Strengths



## Advanced Manufacturing & Robotics

The Metro Rhein-Ruhr ecosystem is a powerhouse for Industry 4.0, with its huge concentration of German corporations and globally active Mittelstand making it a great base for product ideation and design, testing, and first client acquisition. CPS.HUB NRW is an innovation engine for digital transformation, which involves more than 500 ecosystem players, including startups and research institutions. It supports companies in using Industry 4.0, Smart Energy, and connected cars. Automation specialist Essert GmbH has plans to move to Cologne, and electric vehicle company Next.E.GO Mobile SE, headquartered in Aachen, raised a \$57 million Series C in August 2021.



## Artificial Intelligence

The Technical University of Dortmund's Faculty of Computer Science is one of the largest in Germany and has a particular expertise in Machine Learning. The Fraunhofer Institute for Intelligent Analysis and Information Systems, is also a leader in AI, Machine Learning, and Big Data. These institutions are among the partners of the Competence Center Machine Learning Rhine-Ruhr (ML2R), a nationwide node for cutting-edge research in Machine Learning. The competence platform KI.NRW is developing the region into one of Germany's leading locations for applied AI.



# Reasons to Move Your Startup to Metro Rhein-Ruhr

## Industry Partners

With its high density of industrial and commercial enterprises, as well as around 711,600 SMEs, Metro Rhein-Ruhr offers startups countless customers and cooperation partners for tech innovation.

## Highly Skilled Talent

There are around 770,400 students enrolled in the ecosystem's 67 universities in the region — four times as many students as in Berlin. More than 93,000 of them are studying computer science or electrical engineering, creating a large talent pool for local businesses.

## Scaling Success

The new Scale-up.NRW program supports companies that are the difficult inflection point from startup to scaling company, significantly expanding the support for companies seeking to pursue their scaling journey from their home base in Metro Rhein-Ruhr.



# Selected Startup Organizations

## STARTUP GENOME MEMBERS

MEMBER

### North-Rhine Westphalia State Government

North Rhine-Westphalia is thrilling. Nowhere else in Germany are industrial and rural regions so close to each other. There is hardly any other region on earth with a similar concentration of museums, theaters, opera houses, and concert halls. Discover the "diversity state."

“Metro Rhein-Ruhr shines in this 10th anniversary edition of the GSER. Building on a decade of well designed policies put in place by our long standing partner, the Ministry of Economic Affairs, Innovation, Digitalization and Energy, amplified through the close collaboration of many stakeholders in this large and policentric region and building on the deeply routed technical expertise of its founders, the ecosystem is striving and well on its way to becoming one of the leading startup regions in Europe.”

**Stephan Kuester, Head of Ecosystem  
Strategy of Startup Genome**



Ireland

Mid-East Region

MEMBERS:

Meath Enterprise

"The Mid-East region is one of the fastest growing innovation ecosystems in Ireland, supporting startups and scaleups across multiple sectors, from Agtech & New Food, Life Sciences, AI and robotics to name but a few, to create maximum social and economic impact in the years ahead."

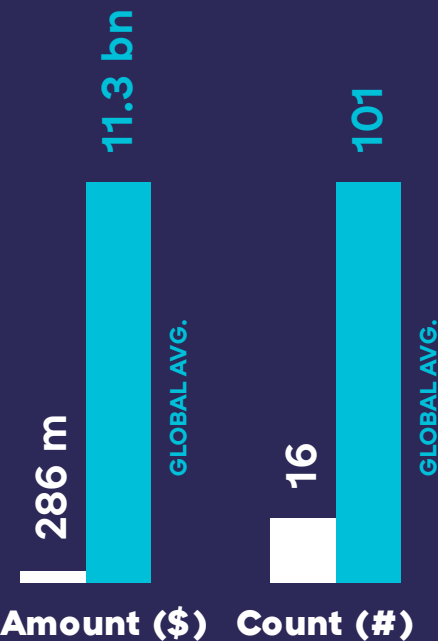
Gary O'Meara

CEO, Meath Enterprise, and Chair, CEAI - Ireland's Enterprise Hub Network



TOTAL EARLY STAGE FUNDING  
(2019H2-2021)

\$3.4 m



Exits  
(2017-2021)

ECOSYSTEM VALUE  
(2019H2-2021)

\$412 m

GLOBAL AVG.  
\$28.6 bn

EARLY-STAGE FUNDING GROWTH TIER  
(2018/19 VS. 2020/21)



Calculated on a scale of  
1 (lowest) to 10 (highest)

Highlights

Traditionally a region of green fields and farms, the counties encircling Dublin have a growing reputation as a startup ecosystem, particularly for innovation in Agtech and food-related companies.

The Mid-East Regional Enterprise Plan to 2024 was launched by the Department of Enterprise, Trade and Employment in March 2022. It aims to develop and implement innovative enterprise and ecosystem development projects in the region such as the Boyne Valley Food Innovation District. The Kildare Community Network will receive over €2.5 million (\$2.7 million) in funding for a co-working space to cluster Irish and international technology companies and provide mentorship and support. The GENESIS-Incubation Programme is an eight-week program for founders developed by MERITS and Kildare Local Enterprise Office.

INFORMBIO is a new collaborative project to develop a low carbon roadmap for Ireland's bioeconomy led by Munster Technological University with Teagasc, NUI Galway, and the Central Statistics Office of Ireland. The nearly €1 million (\$1.1 million) project was launched in March 2022 and will run for four years with the goal of positioning Ireland as a front-runner among EU member states in developing its bioeconomy.

Designed to support the international growth efforts of Irish companies, the Agile Innovation Fund allows companies to access up to 50% of the cost of innovation projects up to a total cost of €300,000 (\$327,000) with fast-track approval.

Kildare-based EV Charging Network developer EasyGo has raised \$39 million to date, including a \$26.9 million in October 2021. Medtech company Perfuze raised a €22.5 million (\$24.5 million) Series A round in February 2022.

MEDIAN SEED ROUND  
(2019H2-2021)

\$119 k



GLOBAL AVG.  
\$671 k

MEDIAN SERIES A ROUND  
(2019H2-2021)

N/A



GLOBAL AVG.  
\$4.7 m

SOFT. ENGINEER SALARY  
(2021)

\$56 k



GLOBAL AVG.  
\$46 k

TOTAL VC FUNDING  
(2017-2021)

\$52 m



GLOBAL AVG.  
\$4.5 bn

TIME TO EXIT  
(2017-2021)

10.4 years



GLOBAL AVG.  
9.4 years



# Sub-Sector Strengths

## Agtech & New Food

AgTechUCD is an innovation center based at the UCD Lyons Research Farm that supports the Agtech sub-sector. In 2021, AgTechUCD launched its first accelerator, offering early-stage startups training, mentorship, and networking. The New Zealand – Ireland Agritech Summit 2022 will bring together researchers, innovators, and investors from New Zealand and Ireland to discuss relevant research, technologies, and applications from both countries.



# Reasons to Move Your Startup to Mid-East Region

## Highly Educated Talent

The three counties of the Mid-East region border Dublin, which has five universities and four Institutes of Technology producing approximately 26,800 graduates every year. Maynooth University is Ireland's fastest growing university in terms of student numbers, with over 11,000 currently enrolled.

## Research & Development

Maynooth University hosts seven research institutes, including the Hamilton Institute, a world-leading research unit focused on drones, A.I. and Robotics, and the Innovation Value Institute, which was co-developed with Intel. The country's flagship Nanoscience Institute is located at Dublin's Trinity College. The Conway Institute at UCD, which specializes in biomedical research, and the Clarity Research center, specializing in Sensor Web, are in close proximity to the ecosystem.

## Government Support

Ireland offers startups and SMEs a range of grants, loans, tax breaks, and other funding. The Short-Term Enterprise Allowance supports individuals who have been made unemployed and plan to start their own business. The Start-up Refunds for Entrepreneurs scheme allows entrepreneurs to claim back income tax when starting a business. New businesses are also eligible for a corporate tax exemption during their first three years.



# Selected Startup Organizations

## STARTUP GENOME MEMBERS

MEMBER

### Meath Enterprise

Meath Enterprise is a commercially focused local government (not-for-profit) enterprise-development company with a remit/mission to drive local, regional and national innovation and enterprise development through the provision of business incubation and support services, collaboration, clustering, and creative thinking. We work with partners across all sectors from Government, Education, Corporate, SME and Social Enterprise to deliver step-change ecosystem development projects such as the Boyne Valley Food Innovation District, the new Digital Innovation and Smart Agri Hub and many other world class startup incubation and coworking projects, services and facilities.

“Startup Genome is proud to collaborate with Meath Enterprise in their efforts to drive lasting entrepreneurial, employment, and economic growth. Our data-driven approach coupled with Mid-East Region Ireland’s forward-thinking policy leaders will continue to bring additional success stories and progress to the local startup community.”

**Marc Penzel, Founder & President  
of Startup Genome**



France

# Paris #15

"France's startup ecosystem has transformed over the last few years. Today, we see leading entrepreneurs and investors from around the world gravitating towards France, resulting in record levels of funding that are powering new innovations and high-growth companies."

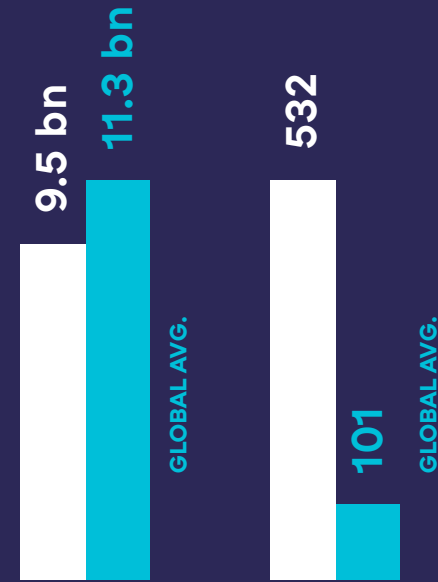
Roxanne Varta  
Director, Station F



TOTAL EARLY STAGE FUNDING  
(2019H2-2021)

\$5 bn

GLOBAL AVG.  
\$687 m



Amount (\$) Count (#)

Exits

(2017-2021)

ECOSYSTEM VALUE  
(2019H2-2021)

\$89 bn

GLOBAL AVG.  
\$28.6 bn

EARLY-STAGE FUNDING GROWTH TIER  
(2018/19 VS. 2020/21)



Calculated on a scale of  
1 (lowest) to 10 (highest)

## Highlights

Paris has advanced its quest to become Europe's largest startup ecosystem: the French capital's greater metro area is now home to 12,000 startups, more than London and Berlin.

The government is working hard to build on this momentum. In October 2021, President Emmanuel Macron presented a €30 billion (\$33 billion) France 2030 plan. Nearly €15 billion is dedicated to startups, including €5 billion for DeepTech startups and €1 billion for digital job training.

Launched by the French president in 2021, the Scale-Up Europe initiative brings together over 300 founders, investors, researchers, and corporations with the goal of making Europe home to ten tech giants valued at more than €100 billion (\$109 billion) by 2030. A February 2022 Scale-up Europe conference was aimed at increasing European venture capital funds' capacity to provide late-stage funding to EU-based startups and scale-ups by creating a pan-European fund of funds.

La French Tech, a movement to promote the French tech scene launched in April 2022 in partnership with Jobteaser. It seeks to create a job board dedicated to startup jobs. VivaTec is an annual technology conference held in Paris. In 2021, Station F, a flagship entity for the tech community in France, launched an online component called Launch by Station F. The program enables entrepreneurs from anywhere to learn the basics to start a company. In February 2022, Ankorstore, which sells anything from homeware to food and fashion, raised an additional €250 million (\$272 million) in new investment, raising its valuation to €1.75 billion (\$191 billion) and making it France's second unicorn.

MEDIAN SEED ROUND  
(2019H2-2021)

\$1.4 m



GLOBAL AVG.  
\$671 k

MEDIAN SERIES A ROUND  
(2019H2-2021)

\$5 m



GLOBAL AVG.  
\$4.7 m

SOFT. ENGINEER SALARY  
(2021)

\$52 k



GLOBAL AVG.  
\$46 k

TOTAL VC FUNDING  
(2017-2021)

\$23 bn



GLOBAL AVG.  
\$4.5 bn

TIME TO EXIT  
(2017-2021)

9.2 years



GLOBAL AVG.  
9.4 years



# Sub-Sector Strengths

## **Fintech**

Finance for Tomorrow launched in 2017 with the goal of making green and sustainable finance a key driver in the development of Paris as a financial center. The 2021 edition of its flagship event, Climate Finance Day, focused on accelerating the deployment of sustainable finance and democratizing its impact. Spendesk has raised a total of \$311.8 million in funding over seven rounds, including a €100 million (\$109 million) Series C in January 2022. P2P payment startup Lydia has raised a total of \$262.6 million in funding over seven rounds.

## **AI, Big Data & Analytics**

The 10th edition of Big Data & AI Paris, a major European AI event, took place in Paris in September 2021. Startup studio Kamet invests in Parisian startups engaged in sectors like Big Data analytics and IoT. Digital experience analytics platform Contentsquare has raised a total of \$812 million in funding over five rounds. AI-driven decision automation and optimization company Shift Technology has raised a total of \$545 million over 10 rounds, including a \$220 million Series D in November 2021.



# Reasons to Move Your Startup to Paris

## **Highly Educated Workforce**

With 21 of the best-ranked business schools in the world, and three of the top five best-ranked master's degrees in management, there is a pool of highly skilled talent in Paris. The French capital is particularly rich in engineering talent, which comes in cheap compared to Silicon Valley, thanks in part to tax incentives for innovative projects.

## **Access to Large Markets**

Startups in Paris enjoy unrivaled access to one of the largest domestic markets in Europe, and easy access to a European market of more than 500 million consumers. The city is also a convenient gateway to African and Asian markets. A high-speed rail network offers fast and frequent connections to all major European cities. The area's three international airports, all connected to the city center via the metro, offer direct connections to 260 destinations in 191 countries.

## **Government Support**

The local and national governments support startups with tax incentives and other initiatives, such as infrastructure projects. French corporate tax has been progressively lowered since 2018, from 33% to 25% in 2022, which is close to the OECD average. France also beats the UK and Germany for its effective corporate tax rate on R&D. Companies spending on scientific and technical research benefit from a tax credit equivalent to 30% of their initial investment, up to €100 million (\$109 million) per year.



Sweden

# Stockholm

"I am truly impressed by the level of skill and execution among up-and-coming entrepreneurs in Sweden. There is no doubt that entrepreneurs will find solutions to address the most pressing challenges of our time and I'm sure that Stockholm will be a key factor in us succeeding."

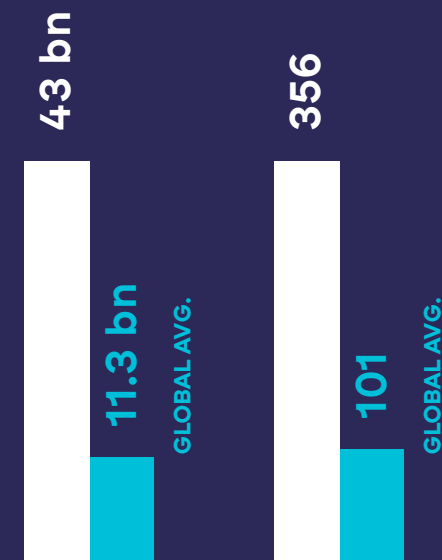
**Omid Ekhlas**  
CEO and founder, Techarenan



TOTAL EARLY STAGE FUNDING  
(2019H2-2021)

\$1.3 bn

GLOBAL AVG.  
\$687 m



Amount (\$)    Count (#)

**Exits**

(2017-2021)

ECOSYSTEM VALUE  
(2019H2-2021)

\$63 bn

GLOBAL AVG.  
\$28.6 bn

EARLY-STAGE FUNDING GROWTH TIER  
(2018/19 VS. 2020/21)



Calculated on a scale of  
1 (lowest) to 10 (highest)

## Highlights

The success of Swedish startups such as Spotify and Skype has made Stockholm a globally renowned startup hub and attracted the attention of international investors. Klarna has raised \$3.7 billion in funding over 33 rounds, including a secondary market round in December 2021. Open banking platform Tink was acquired by Visa for €1.8 billion (\$1.96 billion) in January 2021. Cloud communications company Sinch raised \$1.1 billion in May 2021.

Stockholm produces the most unicorns per capita after Silicon Valley and is home to more than 1,000 diverse startups with an average valuation of \$3.6 million. Government and startup support organizations are not resting on their laurels, however, and continue to nurture the ecosystem with a range of initiatives.

In September 2021, UNICEF established a global center for innovation in Stockholm. The Stockholm Innovation Scholarship is awarded to five innovators in different categories: simplify everyday life, creative industries, life sciences and health, travel and tourism, and social impact and sustainability. Vinnova is the Swedish Government's innovation agency and expert authority in innovation policy. The Knowledge Foundation (KK-stiftelsen) funds research and competence development at Sweden's colleges and universities. Sthlm Fintech Week is an annual event for the Swedish Fintech ecosystem. Kista Science City is the leading ICT cluster in Europe, hosting companies including Ericsson and IBM, as well as a range of startups and universities. Kista is also home to the Urban ICT Arena, where smart technology is created, tested, and displayed in a real urban environment.

MEDIAN SEED ROUND  
(2019H2-2021)

\$950 k



GLOBAL AVG.  
\$671 k

MEDIAN SERIES A ROUND  
(2019H2-2021)

\$2.7 m



GLOBAL AVG.  
\$4.7 m

SOFT. ENGINEER SALARY  
(2021)

\$58 k



GLOBAL AVG.  
\$46 k

TOTAL VC FUNDING  
(2017-2021)

\$5.7 bn



GLOBAL AVG.  
\$4.5 bn

TIME TO EXIT  
(2017-2021)

9.4 years



GLOBAL AVG.  
9.4 years



# Sub-Sector Strengths

## **Cleantech**

Sweden has become a leader in renewable energy thanks in part to the country's ambitious goal of reaching net-zero emission by 2045. Stockholm in particular has benefited from holistic city planning, close public-private ties, and the region's target to go CO2 free by 2040. The city's growing demand for new fuels has pushed it to become a leader in biogas, ocean power, and smart grids. Eco-city Stockholm Royal Seaport is due to be completed in 2030. Lithium-ion battery maker Northvolt raised \$2.75 billion in June 2021 to expand capacity to meet increasing demand for electric cars.

## **Life Sciences**

Sweden's Life Sciences companies benefit from the country's high innovation capacity, world-leading universities, and public-private collaboration. Business Sweden accelerates the growth and innovation of Swedish Life Sciences companies. The government has created an office of Life Sciences to develop a national strategy for the Life Sciences. SISP is a national platform supporting both incubators and Life Sciences startups. Investment syndicate Sciety provides capital market services with a focus on Swedish Life Sciences.



# Reasons to Move Your Startup to Stockholm

## **Global Outlook**

Stockholm's ecosystem is notably international, with large numbers of foreign players hailing from diverse backgrounds. English is the language of business in the ecosystem, and multiculturalism is viewed as a business strength. Sweden's open economy fosters innovation and competition. The government proactively invests to promote the growth of promising sectors and trade with growing markets such as the Baltic region, India, and Brazil.



Italy  
**Turin**

MEMBERS:

Intesa Sanpaolo Innovation Center / Fondazione Compagnia di San Paolo

"Turin has turned into an international hub for innovators. It has what it takes to attract high-potential startups eager to settle and thrive in our fast-evolving ecosystem."

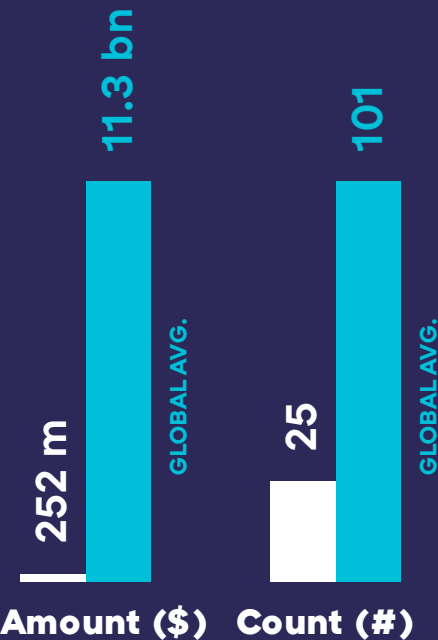
Francesco Profumo

Chairman, Fondazione Compagnia di San Paolo



TOTAL EARLY STAGE FUNDING  
(2019H2-2021)

\$104 m



Exits

(2017-2021)

ECOSYSTEM VALUE  
(2019H2-2021)

\$654 m

GLOBAL AVG.  
\$28.6 bn

EARLY-STAGE FUNDING GROWTH TIER  
(2018/19 VS. 2020/21)



Calculated on a scale of  
1 (lowest) to 10 (highest)

Highlights

Turin, in northwest Italy, may be best known as an automotive center, but local stakeholders are working hard to transform the city into a test bed for cutting-edge technologies, particularly in the field of Smart Cities.

Startups in Turin benefit from its concentration of large corporations, including Stellantis, Iren, IVECO–CNH, Italdesign, and Pininfarina, as well as innovative SMEs. Open lab initiatives led by Turin Municipality, such as CTE Next, provide unparalleled testing infrastructure.

Thanks to a strategic partnership between Fondazione Compagnia di San Paolo, Intesa Sanpaolo Innovation Center, and Fondazione CRT, Turin has hosted the Torino Cities of the Future Techstars Accelerator since 2020. This program has graduated 35 companies from three continents which have launched 30 partnerships with local stakeholders and have raised more than \$47 million.

Opened in November 2021, the ESA Business Incubation Centre Turin aims to nurture innovative Space Economy companies. Startups will receive €50,000 for product development and IP management, coaching, and fundraising support.

There is no shortage of qualified investors in Turin. Neva SGR combines the strength of Intesa Sanpaolo Group with the best practices of international VC firms. It has raised €250 million (\$271 million) to invest in Fintech and Deep Tech startups, including the Italian aerospace company D-Orbit. Tech investment boutique LIFTT has an investment target of €90 million over the next five years and has already finalized 25 investments, including Newcleo, a disruptor in next-generation nuclear reactors. Turin has been included in the National Accelerators Network run by CDP Venture Capital, which supports the growth of the Italian venture capital ecosystem.

MEDIAN SEED ROUND  
(2019H2-2021)

\$340 k



GLOBAL AVG.  
\$671 k

MEDIAN SERIES A ROUND  
(2019H2-2021)

\$1.7 m



GLOBAL AVG.  
\$4.7 m

SOFT. ENGINEER SALARY  
(2021)

\$32 k



GLOBAL AVG.  
\$46 k

TOTAL VC FUNDING  
(2017-2021)

\$166 m



GLOBAL AVG.  
\$4.5 bn

TIME TO EXIT  
(2017-2021)

10.8 years



GLOBAL AVG.  
9.4 years



# Sub-Sector Strengths

## Smart Cities

Turin is the birthplace of Planet Smart City, the global leader in smart affordable neighborhoods. Torino City Lab, a platform for testing next-generation urban innovations, has run more than 50 trials with innovative companies including Mobileye, an Israeli advanced driver-assistance systems firm acquired by Intel, and Skypersonic, a U.S.-based listed company that opened an R&D center in Turin.

## AI, Big Data & Analytics

Thanks to a fast-moving ICT sector, Turin is at the forefront of data-driven innovation. In 2020, Intesa Sanpaolo, Google, and TIM created the Opening Future program to support the development of digital skills for schools and businesses. The project includes the creation of a Center of Excellence dedicated to AI at OGR in Turin, an industrial space turned into an innovation hub where industry, schools, universities, startups, and local institutions can share knowledge and develop solutions.



# Reasons to Move Your Startup to Turin

## Testing Infrastructure

Thanks the cooperation of ecosystem facilitators including the Intesa Sanpaolo Innovation Center and Fondazione Compagnia di San Paolo, the municipality, corporations, and high-tech SMEs and startups, Turin has become an open-air laboratory where autonomous vehicles and drones are being safely deployed under 5G coverage in a dedicated area.

## Access to Talent

Turin is a hotbed of highly-skilled, internationally-oriented talent thanks to its two top-tier universities that host 110K+ students. Politecnico di Torino, supported by I3P (the best public incubator worldwide according to UBI Global), is a hub of tech talent, while Università degli Studi di Torino has 600 years of history and 159 degree programs.

## International Startup Programs

Turin has become recognized as a go-to place for world-class acceleration, incubation, and venture-building initiatives. More than 10 international programs are located in Turin, eight of which are opening their doors 2022. These new entries into the ecosystem include ESA BIC Turin (space economy), Magic Spectrum (5G & IoT), and VENTO – Venture Originator (industry-agnostic).



# Selected Startup Organizations

## STARTUP GENOME MEMBERS

MEMBER

### Intesa Sanpaolo Innovation Center

Intesa Sanpaolo Innovation Center is a subsidiary of Intesa Sanpaolo Banking Group dedicated to innovation. It invests in applied research projects and, through the management company Neva SGR, in high-potential startups. Intesa Sanpaolo Innovation Center supports startups' growth in domestic and international markets through acceleration programs and networking. In addition, it accelerates the implementation of the circular economy plan, to make Intesa Sanpaolo the driving force behind a new socially and environmentally aware economy.

## KEY ECOSYSTEM PLAYERS

### CTE-Next

CTE NEXT is a technology transfer center that provides spaces, technology assets and high-skilled partners to support testing of innovative solutions in strategic sectors for Turin using 5G and AI, IoT and Blockchain.

### I3P

I3P, the incubator of Politecnico di Torino, supports high-tech startups founded by university researchers and external entrepreneurs, providing strategic consulting, mentoring and fundraising support.

### Neva SGR

Neva aims to be the Italian market maker of the VC investments to boost the tech economy. The First fund, launched in 2020, raised €250 million from 130 subscribers, invested in 20 startups for €80 million.

### LIFTT S.p.A.

LIFTT S.p.A. is a not-only-profit operating VC founded by Fondazione Compagnia di San Paolo and Politecnico di Torino. It is specialized in technology transfer 'from university to industry'.

MEMBER

### Fondazione Compagnia di San Paolo

Established in Turin in 1563, Fondazione Compagnia di San Paolo is a banking foundation acting as the major shareholder of Intesa Sanpaolo. It is one of the largest private foundations in Europe, as evidenced by its €1.5 billion of philanthropic grants in the last decade. As part of its mission to promote cultural, civic, and economic development, the foundation is today one of the leading ecosystem developers in the Italian landscape.

### Torino Cities of the Future Techstars Accelerator

Torino Cities of the Future Techstars Accelerator is the first program launched by Techstars in Italy. It aims to attract international startups to connect them with the fast-evolving local ecosystem.

“A heightened level of early-stage funding and investor activity resulted in Turin ranking as a Top 40 European Ecosystem and Top 35 European Emerging Ecosystem in Funding. Startup Genome is excited to collaborate with Intesa Sanpaolo Innovation Center and Fondazione Compagnia di San Paolo to showcase Turin to the global startup community.”

**Marc Penzel, Founder & President of Startup Genome**



# Latin America

181 Top Performers & Top Regional Challengers

182 Key Findings

183 Ecosystem Pages



## Regional Insights

# Latin America

Latin America was the fastest growing region in the world in terms of venture funding in 2021, according to Crunchbase. An estimated \$19.5 billion was invested in the region, more than triple the prior year's already record-setting levels, and there were 300% more exits over \$50 million in 2021 than in 2020. Fintech, transportation and logistics, and e-commerce are largely driving this growth.

As in much of the world, the COVID-19 pandemic catalyzed the decentralization of startup ecosystems in Latin America. While São Paulo remains the region's major hub, there are increasing amounts of startup communities throughout Brazil and elsewhere in Latin America, with significant activity springing up in Curitiba, Porto Alegre, and Belo Horizonte, as well as Santiago and Guadalajara.

Justos, a São Paulo-based insurtech, raised both a \$2.8 million seed round and a \$35.8 million Series A in 2021, and the same ecosystem also produced the region's highest exit that year — Nubank's \$41.5 billion IPO. Overall, Brazil In 2021, saw 237% growth in the dollar amount of Series B+ rounds compared to 2020 and its total exit amount for 2021 was \$49 billion, a huge leap from \$1 billion in 2020. The Brazilian government has shown its support for startups through the June 2021 introduction of the Legal Framework for Startups, which includes provisions for a "regulatory sandbox" that frees companies from some constraints as they experiment with innovative technologies and business models.

Mexico City's e-commerce startup Valoreo secured both \$50 million in debt and equity and a \$30 million Series A in 2021. The company plans to acquire other Latin American e-commerce startups with a long-term goal of improving the region's consumer options.

While the region remains far behind North America and Asia in its share of global Ecosystem Value, Latin America is growing at an impressive rate.

## Top Performers

1	São Paulo
2	Mexico City
3	Buenos Aires
4	Santiago
5	Rio de Janeiro

## Top Regional Challengers

1	Bogotá
2	Curitiba
3	Belo Horizonte
4	Guadalajara
5	Porto Alegre



# Latin America

## Regional Insights

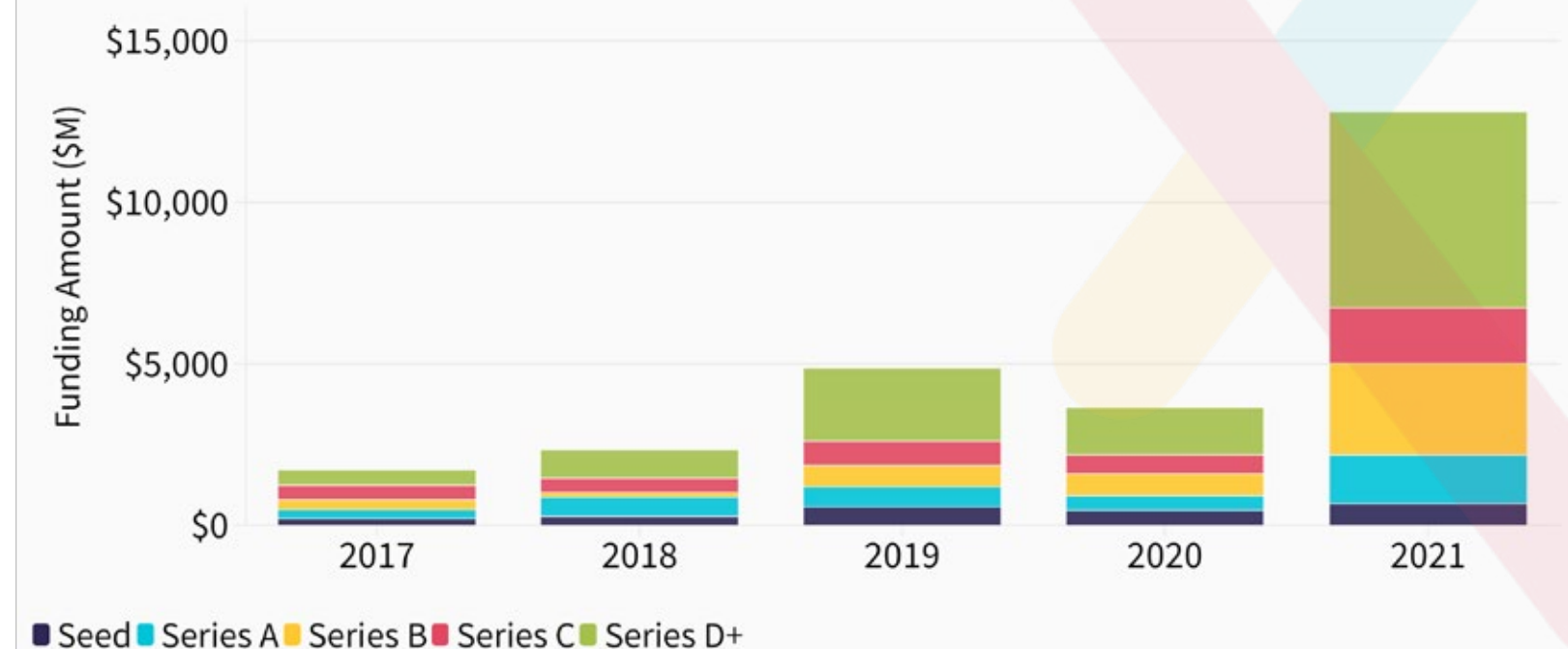
### Key Findings

- Latin America experienced a 128% increase in early-stage funding from 2020 to 2021.
- The region achieved over \$47 billion in exits over \$50 million, an astounding increase from below \$1 billion in 2020.
- Ranking at #28, São Paulo is Latin America's most successful ecosystem. Its rise three places from last year is in part a reflection of it producing 12 unicorns and two \$2 billion+ exits, including Fintech Nubank's \$41 billion December 2021 IPO.
- In 2021, Brazil saw 237% growth in the dollar amount of Series B+ rounds compared to 2020. The nation's total exit amount for 2021 was \$49 billion, a huge leap from \$1 billion in 2020.

### Latin American VC Funding by Stage

Investment in Latin America Increased 252% From 2020 to 2021

Startup Genome





Colombia

Bogotá

**MEMBERS:**  
iNNpuls Colombia / District Secretariat of Economic Development (DSED) / Invest in Bogota

"The entrepreneurship ecosystem in Colombia is shifting towards more specialization. We also seek to consolidate even further the impact ecosystem and to make Colombia a regional hub for entrepreneurs and investors."

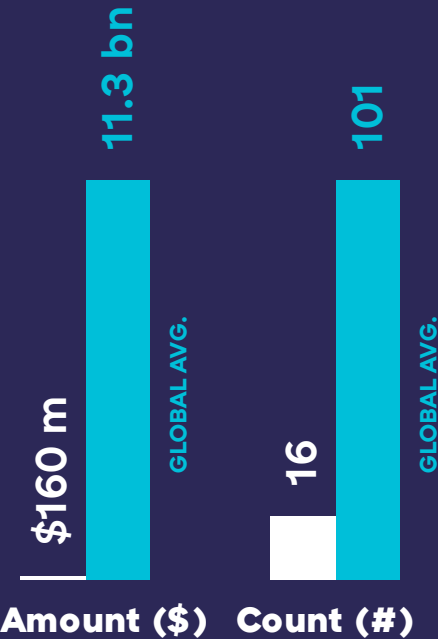
**Francisco J. Noguera**  
President, iNNpuls Colombia



TOTAL EARLY STAGE FUNDING  
(2019H2-2021)

\$294 m

GLOBAL AVG.  
\$687 m



**Exits**  
(2017-2021)

ECOSYSTEM VALUE  
(2019H2-2021)

\$9.8 bn

GLOBAL AVG.  
\$28.6 bn

EARLY-STAGE FUNDING GROWTH TIER  
(2018/19 VS. 2020/21)



Calculated on a scale of  
1 (lowest) to 10 (highest)

Highlights

Thanks to a host of government reforms and the energy of its vibrant young population, Bogotá is consolidating its position as a major Latin American startup hub. Colombia has become a stable and investment-friendly country that attracts substantial foreign direct investment. The Financial Times’ ‘American Cities of the Future 2021/22’ ranked Bogotá as the second most important city in Latin America, based in large part on the city’s ability to attract foreign capital. Colombia also ranked fifth among Latin American countries in the Global Innovation Index 2021 and fourth in the region in the World Economic Forum’s Global Connectivity Index.

Bogotá-based startups raised nearly \$1.6 billion in 2021, a record high and an increase of 144% compared to 2020. Among the hottest sectors for investment were transportation and Fintech. Financing sources for entrepreneurs in the Colombian capital include at least 21 risk capital funds and banks, 11 corporate ventures, and three angel investor networks that actively support startups.

This energetic growth of the ecosystem was in part enabled by the approval of an entrepreneurship law in January 2021, which eased the regulatory burdens on companies and supported the development of local talent making it easier to found and grow startups in the country.

In recent years, a host of local and international startup organizations have emerged to further nurture the ecosystem. For instance, The Founder Institute, one of the world’s largest pre-seed accelerators, offers programs in Bogotá.

MEDIAN SEED ROUND  
(2019H2-2021)

\$400 k



GLOBAL AVG.  
\$671 k

MEDIAN SERIES A ROUND  
(2019H2-2021)

\$5 m



GLOBAL AVG.  
\$4.7 m

SOFT. ENGINEER SALARY  
(2021)

\$22 k



GLOBAL AVG.  
\$46 k

TOTAL VC FUNDING  
(2017-2021)

\$3 bn



GLOBAL AVG.  
\$4.5 bn

TIME TO EXIT  
(2017-2021)

8.3 years



GLOBAL AVG.  
9.4 years



# Sub-Sector Strengths

## Fintech

Bogotá now ranks third in the Global Fintech Index's list of the best technology-based financing ecosystems in Latin America, behind just Sao Paulo and Mexico City. Bogotá was also included in the Global Financial Centers Index 2021, an international ranking of 166 top financial centers worldwide. Virtual payment platform Tpaga raised a \$10 million Series A in February 2022, and financial tools maker Bold raised a \$55 million Series G the same month.

## E-commerce

Colombia's e-commerce market grew 22% in 2021 and is now the 32nd largest market worldwide with an annual revenue of \$7 billion. In July 2021, on-demand delivery company Rappi raised more than \$500 million in Series funding, putting its valuation at \$5.25 billion. Restaurant supply startup Frubana raised a \$100 million Series C in November 2021. E-commerce platform Tul raised \$181 million in venture funding in January 2022, putting the company's pre-money valuation at \$619 million.

## Proptech

Colombia Tech Report 2021 named Proptech as the third sector with the highest investment growth in Colombia. The Colombia Proptech Association supports the Colombian Proptech ecosystem. Real estate platform Habi raised a \$100 million Series B in June 2021 to expand its footprint into Mexico. It was the largest fundraising round ever raised by a female-led Latin American startup and the second-largest Series B round raised by a Colombian company.

# Reasons to Move Your Startup to Bogotá

## World-Class Talent

Bogotá has a workforce of more than 6 million people. According to the Global Cities of the Future, Bogotá ranks #7 in the world in human talent. Bogotá is also an inclusive city where more than 70% of startups have women on their board of directors. The Financial Times FDI intelligence ranking of the top 10 cities in Latin America placed Bogotá at #2, above Santiago de Chile, São Paulo, and Buenos Aires.



# Selected Startup Organizations

## STARTUP GENOME MEMBERS

### iNNpuls Colombia

iNNpuls Colombia is the innovation and entrepreneurship Government agency under the leadership of the Ministry of Commerce, Industry and Tourism, created in 2012 to support and promote extraordinary business growth, that is, business initiatives that can grow quickly, profitably, and sustainably through innovation and high-impact entrepreneurship, with the objective of strengthening this country as an entrepreneurial nation.

MEMBER

### District Secretariat of Economic Development (DSED)

The DSED is the entity, within the Bogotá Mayor’s Office, in charge of leading and promoting a smart and sustainable economic growth, by formulating, managing, and implementing economic development programs and policies, to strengthen employment, competitiveness, internationalization and access to capital, connecting all economic sectors and companies of the city.

MEMBER

### Invest in Bogota

Invest in Bogota is the investment promotion agency for Bogotá, a public-private partnership between the Bogotá Chamber of Commerce and the Bogotá City Government. It recently became the articulator of the city’s entrepreneurship ecosystem.

MEMBER



# Argentina

## Buenos Aires

"Argentina's capital (and largest city) has long fostered the entrepreneurial spirit thanks to its prominent universities, affordability, and a currently rising number of venture capital investments."

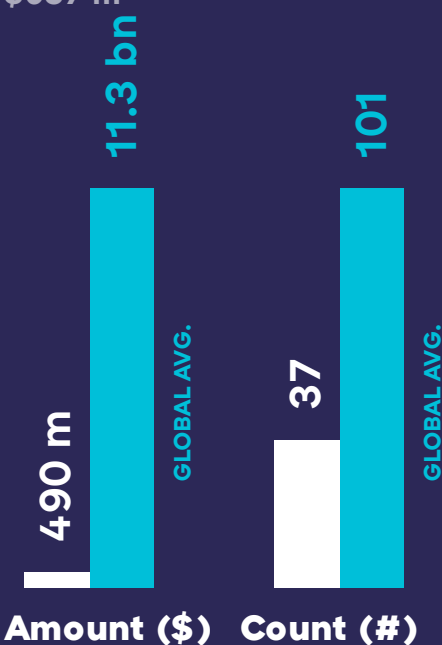
Inc. magazine



TOTAL EARLY STAGE FUNDING  
(2019H2-2021)

**\$222 m**

GLOBAL AVG.  
\$687 m



**Exits**

(2017-2021)

ECOSYSTEM VALUE  
(2019H2-2021)

**\$7 bn**

GLOBAL AVG.  
\$28.6 bn



EARLY-STAGE FUNDING GROWTH TIER  
(2018/19 VS. 2020/21)



Calculated on a scale of  
1 (lowest) to 10 (highest)

## Highlights

Buenos Aires is known as a lively cultural center, but Argentina's capital is also rapidly turning into an exciting startup hub. Since 2008, accelerators and incubators financed by the Buenos Aires City Government and public-private investment schemes have supported more than 30,000 entrepreneurs in the city. Academia Buenos Aires offers the Emprende course, in which entrepreneurs learn lean startup methodology, design thinking, and other business skills, and the Buenos Aires Institute of Technology offers an entrepreneurship course. Incubator program incuBAte finances up to 100 startups per round and offers equity-free funding, mentorships, networking, and coworking spaces to participants.

Startups also benefit from Buenos Aires' pool of educated, international talent. The city is home to many distinguished universities and more than 40% of young adults here have completed tertiary education. The city also boasts the highest level of English proficiency in Latin America. The National Trust Fund for Entrepreneurial Capital (FONDCE) is composed of ten funds with a minimum of \$30 million allocated to each. FONDCE provides zero interest loans to new businesses. Argentina-based companies can also sell equity and offer convertible notes online via crowdfunding to raise funds. Recent notable fundraising news out of the ecosystem includes e-commerce platform Tiendanube's \$500 million Series E in August 2021, which put the company's pre-money valuation at \$2.6 billion.

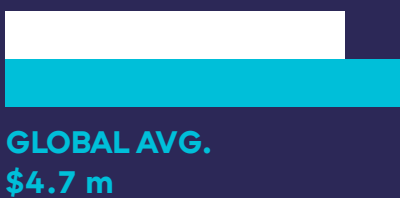
MEDIAN SEED ROUND  
(2019H2-2021)

**\$410 k**



MEDIAN SERIES A ROUND  
(2019H2-2021)

**\$4 m**



SOFT. ENGINEER SALARY  
(2021)

**\$15 k**



TOTAL VC FUNDING  
(2017-2021)

**\$1.3 bn**



TIME TO EXIT  
(2017-2021)

**8.3 years**





# Sub-Sector Strengths

## **Fintech**

The Argentine central bank's Transferencias 3.0 initiative was launched in 2021, with a goal to increase the amount of digital transactions. The Argentine Chamber of Fintech's Fintech Women initiative identifies and aims to overcome barriers for women in the sub-sector. Fintech industry body Camara Argentina de Fintech includes over 300 companies employing almost 15,000 people. Crypto exchange Lemon Cash raised a \$16.3 million Series A in July 2021, and digital banking startup Ualá raised a \$350 million Series D in August 2021.

## **Blockchain**

Buenos Aires has begun building a public Blockchain-based digital identity platform to give the city's residents control over their personal data. Digital payments startup Ripio was the first Bitcoin payment processor in Latin America, and now offers a digital wallet, exchange, and credit services. Ripio raised a \$50 million Series B in September 2021 to expand operations in Mexico, Colombia, and Uruguay. Cryptocurrency exchange Buenbit raised an \$11 million Series A in July 2021.



# Reasons to Move Your Startup to Buenos Aires

## **Tech Talent**

Argentina offers free, quality tertiary education, and the University of Buenos Aires, with its 300,000 students, is the top ranked university in South America. Universities in the country are even free to foreign students from the Mercosur area (Argentina, Brazil, Paraguay, Uruguay, and Venezuela). The population has the highest level of English proficiency in Latin America. Because of its large workforce of highly educated, internationally oriented developers and engineers, Argentina has become a major global outsourcing hub.

## **International Appeal**

Argentina's capital city is the regional headquarters of over 30 global companies and hosts one of the largest entrepreneurial ecosystems in the region. A cosmopolitan cultural hub, the city attracts both local and international talent. With more than 50 universities offering excellent and affordable education, Buenos Aires is popular with international students, according to the QS Best Student Cities Ranking. The Nestpick Index rated the city the best urban destination for digital nomads in Latin America and among the best 35 globally.

## **Convenient Location**

Buenos Aires is just one hour ahead of U.S. East Coast time, four hours behind London, and four hours ahead of Silicon Valley, making it a strategic location for teams working remotely or serving a variety of international clients.



Mexico

# Mexico City

"This highly concentrated market is becoming home to a new wave of entrepreneurs looking for opportunities outside the costly, competitive confines of Silicon Valley."

Insights by Stanford Business



TOTAL EARLY STAGE FUNDING  
(2019H2-2021)

\$916 m

GLOBAL AVG.  
\$687 m



Amount (\$) Count (#)

Exits

(2017-2021)

ECOSYSTEM VALUE  
(2019H2-2021)

\$22 bn

GLOBAL AVG.  
\$28.6 bn

EARLY-STAGE FUNDING GROWTH TIER  
(2018/19 VS. 2020/21)



Calculated on a scale of  
1 (lowest) to 10 (highest)

## Highlights

With over 21 million residents, a rich history, top-tier schools, and a vibrant tech and cultural scene, Mexico City draws talented individuals from all over Mexico and the world. This pool of young, educated talent has led to the development of both a thriving startup ecosystem and a nearshoring boom of U.S. and Canadian companies looking to hire in Mexico’s capital city. The city was selected by Bloomberg to receive subsidies to accelerate its digital transformation, including funds to hire new innovation specialists and set up world-class training initiatives.

Mexico City’s educational institutions and startup support organizations are working to further foster the city’s entrepreneurial ecosystem. The National Centre for the Support of Small and Medium Businesses (CENAPYME) offers training, consulting, and incubation services. Several universities host technological development laboratories. The International Finance Corporation, in partnership with the Government of Japan, has launched an initiative called Mexican Companies for Equity (Empresas Mexicanas por la Equidad, or EM-X). The peer-learning platform will share information and best practices to promote gender inclusion, and is expected to benefit over 450,000 employees.

Notable recent funding news out of the Mexico City ecosystem includes Latin American pre-owned car marketplace Kavak’s \$700 million Series E in September 2021, which put the company’s valuation at \$8.7 billion, and Fintech Konfio’s \$110 million Series E the same month.

MEDIAN SEED ROUND  
(2019H2-2021)

\$500 k



GLOBAL AVG.  
\$671 k

MEDIAN SERIES A ROUND  
(2019H2-2021)

\$9.5 m



GLOBAL AVG.  
\$4.7 m

SOFT. ENGINEER SALARY  
(2021)

\$19 k



GLOBAL AVG.  
\$46 k

TOTAL VC FUNDING  
(2017-2021)

\$4.3 bn



GLOBAL AVG.  
\$4.5 bn

TIME TO EXIT  
(2017-2021)

7.5 years



GLOBAL AVG.  
9.4 years



# Sub-sector Strengths

## Fintech

The Bank of Mexico plans to put its own digital currency into circulation by 2024, and most Mexican Fintechs are concentrated in Mexico City. Fintech Mexico offers collaboration space to promote Fintech innovation in Mexico. FINNOSUMMIT, the largest collaboration platform in Fintech and Insurtech in Latin America, is held in Mexico City, Miami, and Bogotá. The 2022 Mexico City edition will be held in June. Bitso, the largest cryptocurrency platform in Latin America, raised a \$250 million Series C in May 2021. Corporate credit card startup Clara raised a \$70 million Series B in December 2021.



# Reasons to Move Your Startup to Mexico City

## Strategic Location

Foreign investors are attracted to Mexico's strategic location bordering the U.S., as well as its major ports serving both the Atlantic and Pacific oceans. Most of Mexico can be reached in under five hours by plane with non-stop flights to the country's major tech hubs from major U.S. cities.

## Advantageous Trade Deals

Mexico benefits from a network of free trade agreements, including the U.S.-Mexico-Canada Agreement (USMCA) and the Pacific Alliance, an economic community that includes Chile, Colombia, and Peru. The USMCA, which came into force in 2020, contains a number of the provisions of the North American Free Trade Agreement that it replaced, including granting U.S. and Canadian investors most-favoured-nation treatment when setting up operations or acquiring companies in Mexico.

## Cost-Effective Tech Talent

The Mexican government opened 120 tuition-free specialist technology universities between 2006 and 2012. Every year, over 130,000 engineers graduate in Mexico. With its talent pool of over 700,000 developers, Mexico offers startups a deep pool of software engineering talent within Latin America, and the average salary of a remote software developer from Mexico is far less than the cost of a developer in the U.S. This means that by nearshoring software development to Mexico, companies can save approximately 67% in labor costs.



Brazil

Rio de Janeiro

"There is a steady flow of talent, local accelerator programs such as Entropia and government-backed Rio Criativo, and potential investors, thanks in part to Rio de Janeiro being a center for the oil and gas industry."

TNW



TOTAL EARLY STAGE FUNDING  
(2019H2-2021)

\$137 m

GLOBAL AVG.  
\$687 m



Amount (\$) Count (#)

Exits  
(2017-2021)

ECOSYSTEM VALUE  
(2019H2-2021)

\$2.2 bn

GLOBAL AVG.  
\$28.6 bn

EARLY-STAGE FUNDING GROWTH TIER  
(2018/19 VS. 2020/21)



Calculated on a scale of  
1 (lowest) to 10 (highest)

Highlights

Rio de Janeiro’s startup ecosystem may still be smaller than the scene in buzzing São Paulo, but in recent years local authorities have made huge efforts to make the city attractive to young, tech-savvy talent. They have good raw materials to work with. Already a tropical beach paradise and cultural hotspot, Rio de Janeiro has invested in improved security, 4G connectivity, and better transportation links in recent years. These improvements are helping Rio take part in Brazil’s startup boom. A record \$6.4 billion in venture funding flowed into the country from January to October 2021, triple the amount raised in all of 2019, according to data from PitchBook.

Held in January, Rio Innovation Week 2022 brought together entrepreneurs, investors, executives, and government representatives to discuss the impact of technology on business and society. Columbia Global Centers - Rio Center is a hub for Columbia University initiatives relevant to Brazil, including programs focused on entrepreneurship and commerce.

Recent notable funding deals include Proptech startup EmCasa’s \$21 million Series B in July 2021, media company Bemobi’s 1.09 billion real (\$203.63 million) IPO in February 2021, and home health startup Beep Saúde’s 110 million real (~\$?) of venture funding in April 2021, which put the company’s pre-money valuation at 560 million real (~\$?). Payment processor Plug Pagamentos, which participated in prestigious incubator Y Combinator, closed a \$2.7 million seed round in November. Part of a general Fintech boom in Brazil, Plug aims to make online commerce simpler and easier in the country.

MEDIAN SEED ROUND  
(2019H2-2021)

\$374 k



GLOBAL AVG.  
\$671 k

MEDIAN SERIES A ROUND  
(2019H2-2021)

\$4.9 m



GLOBAL AVG.  
\$4.7 m

SOFT. ENGINEER SALARY  
(2021)

\$25 k



GLOBAL AVG.  
\$46 k

TOTAL VC FUNDING  
(2017-2021)

\$521 m



GLOBAL AVG.  
\$4.5 bn

TIME TO EXIT  
(2017-2021)

10 years



GLOBAL AVG.  
9.4 years



# Sub-Sector Strengths

## Blockchain

Rio de Janeiro is taking strides towards becoming a global Blockchain hub. It is set to become the first Brazilian city to accept property tax payments in crypto in 2023. The city is also considering offering a discount of 10% on property taxes paid with Bitcoin. There are plans for a new municipal committee for crypto investments to develop a feasible approach for channeling city funds into cryptocurrencies in compliance with existing laws. In January 2022, Rio de Janeiro announced that it would hold 1% of its treasury in cryptocurrency.



# Reasons to Move Your Startup to Rio de Janeiro

## Infrastructure Improvements

Rio de Janeiro state's three-year R7.4 billion (\$1.4 billion) infrastructure plan lays out investments in infrastructure, socio-economic development, health, education, public safety, tourism, the environment, and culture. New projects include a 23-km bus rapid transit lane in the Baixada Fluminense area, the recovery of 882 km of roads in the state, building at least 5,000 housing units, and updates to schools.



Brazil

São Paulo

"São Paulo is the epicenter of the fastest growing startup region in the world: Latin America. The recent blockbuster listing of Nubank will be soon followed by others such as Kavak and Creditas. This in turn will fuel a whole new generation of talent and investment, further accelerating the growth of the region."

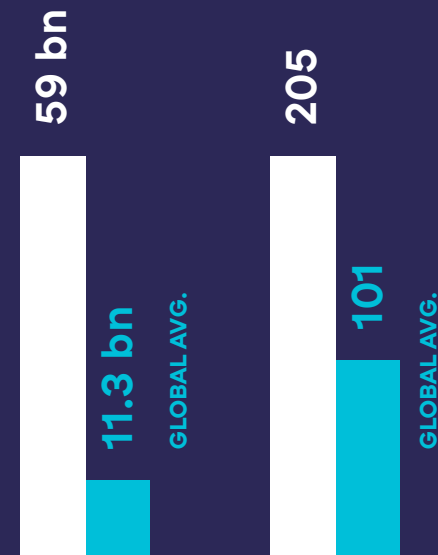
Dhaval Chadha  
co-founder and CEO, Justos



TOTAL EARLY STAGE FUNDING  
(2019H2-2021)

\$1.5 bn

GLOBAL AVG.  
\$687 m



Amount (\$) Count (#)

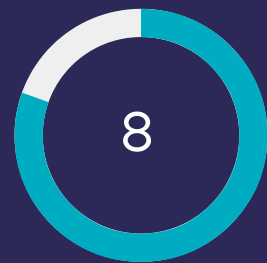
Exits  
(2017-2021)

ECOSYSTEM VALUE  
(2019H2-2021)

\$108 bn

GLOBAL AVG.  
\$28.6 bn

EARLY-STAGE FUNDING GROWTH TIER  
(2018/19 VS. 2020/21)



Calculated on a scale of  
1 (lowest) to 10 (highest)

Highlights

The largest city in Brazil, São Paulo is home to more than 20 million residents. Its size and density offer founders a large market and the opportunity to connect with fellow innovators. No wonder São Paulo is home to 2,770 startups, the highest number by far in Brazil, including 11 unicorns valued at \$1 billion or more.

The University of São Paulo is ranked in the top 100 in the World University Rankings. With some of the best academic programs in STEM fields, the city’s businesses benefit from this talent pipeline. São Paulo hosts the innovation and data centers of global titans such as Microsoft, Google, and Facebook, and is also the regional headquarters for Airbnb, Netflix, and Amazon. 63% of all companies operating in Brazil have a São Paulo location.

São Paulo is also the Latin American base for many of the world’s biggest banks, improving access to capital for the city’s growing companies. SoftBank has committed to investing \$8 billion in Latin America through two dedicated funds, and top American VC firm Andreessen Horowitz is also investing in the region. São Paulo also boasts a number of homegrown VC firms, including Kaszek, which recently announced a \$475 million early-stage fund and a \$525 million fund for later-stage investments. São Paulo-based Positive Ventures secured \$10 million for its latest fund to invest in startups delivering environmental or social impact. In 2021, insurtech Justos raised both a \$2.8 million seed round and a \$35.8 million Series A. São Paulo also produced the region’s highest exit that year: Nubank’s \$41 billion IPO.

MEDIAN SEED ROUND  
(2019H2-2021)

\$432 k



GLOBAL AVG.  
\$671 k

MEDIAN SERIES A ROUND  
(2019H2-2021)

\$4.8 m



GLOBAL AVG.  
\$4.7 m

SOFT. ENGINEER SALARY  
(2021)

\$22 k



GLOBAL AVG.  
\$46 k

TOTAL VC FUNDING  
(2017-2021)

\$13 bn



GLOBAL AVG.  
\$4.5 bn

TIME TO EXIT  
(2017-2021)

8.4 years



GLOBAL AVG.  
9.4 years



# Sub-Sector Strengths

## **Fintech**

São Paulo is the financial heart of both Brazil and South-America. Many of the world's biggest banks have their Latin American headquarters in São Paulo, giving Fintech startups access to top industry players. Digital bank Neon raised a \$300 million Series D in February 2022, putting the company's pre-money valuation at \$700 million.

## **Proptech**

São Paulo is home to the highest concentration of Proptech companies in Brazil. Real estate marketplace Quinto Andar raised a \$420 million Series E in August 2021, putting the company's pre-money valuation at \$4.68 billion. Loft, another marketplace, raised a \$525 million Series D in March 2021. Rental services startup Yuca raised \$10 million in venture funding in June 2021.

## **Agtech & New Food**

The state of São Paulo is an agricultural powerhouse and the world leader in the production of sugar, sugarcane ethanol, and orange juice. Agtech companies are working to innovate this important sector. São Paulo-based tech firms have received 50 grants from the Research for Innovation in Small Businesses program to develop new Agtech solutions, including digitizing pest traps and monitoring fields for improved efficiency. Farmer-focused financing platform Agrolend raised a \$14 million Series A in January 2022.

# Reasons to Move Your Startup to São Paulo

## **Large, Affluent Market**

The State of São Paulo is responsible for a third of Brazil's entire GDP and has an economy the size of the entire country of Mexico. The city alone has an economy comparable in size to Belgium. 63% of international companies doing business in Brazil are based in São Paulo.

## **Global and Regional Connections**

São Paulo is home to some of the busiest and best connected airports in South America. Guarulhos International and Congonhas welcome flights from all over the world and are often used as a layover point by those traveling elsewhere in South America. Brazil is part of the Southern Common Market (MERCOSUR) so companies in Brazil have direct access to Argentina, Paraguay, and Uruguay and seven other member states.



# MENA

195 Top Performers & Top Regional Challengers

196 Key Findings

197 Ecosystem Pages



## Regional Insights

# MENA

MENA's geographic location provides access to large markets in Europe, Africa, and Asia, and it is home to a large, young population. In a context of geopolitical instability and high unemployment, many of these young people are increasingly seeking new opportunities and looking to improve the world via entrepreneurship. SMEs make up 94% of registered companies in the region and are vital to MENA's economy. However, only 3% of these have access to global funding. Since the first GSER in 2012, MENA has experienced rapid transformation – it has doubled its global share of early-stage funding to 4%, a value of \$3.8 billion. In 2021, MENA experienced a 640% increase in the number of \$50 million+ exits compared to 2012.

The region saw a record year of investment activity in 2021. \$13 billion was raised in total VC rounds over 890 deals, and MENA experienced a 23% increase in the number of Series B+ deals from 2020.

Israel has made a name for itself as a “Startup Nation,” with a particular focus on tech, and Tel Aviv is a consistent leader in the GSER rankings. The ecosystem saw three \$1 billion+ exits in the period analyzed, and its Ecosystem Value crossed \$100 billion, helping it to secure its spot at #7. Israel accounts for 84% of the region's share in total VC funding in 2021, followed by the United Arab Emirates (UAE) at 8% share. Despite its small population of approximately 8.6 million people, Israel is paving the way in tech innovation, both in MENA and globally.

MENA's other leading startup ecosystems include the UAE, Egypt, and Saudi Arabia. Cairo has seen 156% increase in total VC funding round dollar amount from 2020 to 2021, and from 2017 to 2021, the overall number of VC funding rounds in the ecosystem increased by 60%. AI&BD is the most successful sub-sector in the region, with 38% total capital invested. Fintech startups are also thriving here — Saudi Arabian Fintech Tamara saw the region's biggest 2021 deal in a \$110 million Series A, and Egyptian digital payment startup Paymob raised \$18.5 million at Series A.

### Top Performers

1	Tel Aviv
2	Dubai
3	Cairo
4	Riyadh
5	Abu Dhabi

### Top Regional Challengers

1	Amman
2	Sharjah
3	Casablanca
4	Bahrain
5	Tunis



# MENA

## Regional Insights

### Key Findings

- MENA saw a 60% increase in early-stage funding from 2020 to 2021.
- The region experienced 89% growth in \$50 million+ exits from 2020.
- Tel Aviv remains MENA's leading startup ecosystem, ranking at #7. Its Ecosystem Value crossed \$100 billion this year, and the Israeli city scored well in Knowledge, with the count of patents increasing by 169 % since last year.
- In 2021, UAE experienced 144% growth in the dollar amount of Series B+ rounds compared to 2020.
- Saudi Arabia produced its first Fintech unicorn in late 2020, when [STC Pay](#) was valued at \$1.3 billion.

### Mena VC Funding by Stage

Investment in Mena Increased 104% From 2020 to 2021





United Arab Emirates

# Abu Dhabi

MEMBERS:

Hub71

"Abu Dhabi's innovation ecosystem is an undeniable catalyst for achieving sustainable economic growth. Advancing diverse sectors through the creative minds of entrepreneurs stems from our work of building a self-sustaining ecosystem that startups, investors, businesses, and government can capitalize on in the pursuit of scaling disruptive technologies with real-world impact."

H.E. Mohamed Ali Al Shorafa Al Hammadi

Chairman of Hub71 and the Abu Dhabi Department of Economic Development (ADDED)



TOTAL EARLY STAGE FUNDING  
(2019H2-2021)

\$97 m

GLOBAL AVG.  
\$687 m



Amount (\$) Count (#)

Exits

(2017-2021)

ECOSYSTEM VALUE  
(2019H2-2021)

\$4 bn

GLOBAL AVG.  
\$28.6 bn

EARLY-STAGE FUNDING GROWTH TIER  
(2018/19 VS. 2020/21)



Calculated on a scale of  
1 (lowest) to 10 (highest)

## Highlights

According to Hub71, Abu Dhabi's global tech ecosystem, tech startups in its community secured AED 30 million (\$8.2 million) across more than 20 corporate deals in 2021, with startups ramping up AED 1.5 billion (\$40.8 million) in venture capital investment since the ecosystem's inception in 2019. The aggregate valuation of Hub71 startups soared to AED 5.9 billion (\$1.6 billion), demonstrating the growing impact of the local startup ecosystem on the UAE's capital city.

Hub71 and Hewlett Packard Enterprise are collaborating on a series of programs to nurture tech startups. The Abu Dhabi Investment Office (ADIO) is partnering with Microsoft and Plug and Play on a range of initiatives to help founders successfully scale their businesses. These include the Microsoft Growth X Accelerator, a virtual accelerator program, and engagement initiative Highway to 100 Unicorns. In 2021, the Khalifa Innovation Center became the first entity in the city to receive a license from the Abu Dhabi Department of Economic Development to operate as an incubator. As part of the Emirates Blockchain Strategy 2021, the UAE government is adopting Blockchain technology to conduct transactions with the aim of moving more than half of the government's transactions to the Blockchain. In May 2021, telecommunications company Etisalat launched a Blockchain-based platform to prevent fraud in relation to trade invoices.

Recent fundraising news out of the ecosystem includes digital freight network TruKKer's \$96 million Series B in February 2022.

MEDIAN SEED ROUND  
(2019H2-2021)

\$1.3 m



GLOBAL AVG.  
\$671 k

MEDIAN SERIES A ROUND  
(2019H2-2021)

\$14 m



GLOBAL AVG.  
\$4.7 m

SOFT. ENGINEER SALARY  
(2021)

\$33 k



GLOBAL AVG.  
\$46 k

TOTAL VC FUNDING  
(2017-2021)

\$207 m



GLOBAL AVG.  
\$4.5 bn

TIME TO EXIT  
(2017-2021)

10 years



GLOBAL AVG.  
9.4 years



# Sub-Sector Strengths

## **Fintech**

Abu Dhabi Global Market (ADGM) is the city’s international financial center and free zone. It embraces digital-first offerings and sustainable finance frameworks. The ADGM Digital Lab provides access to resources including data, APIs, and reference architectures for Fintechs, financial institutions, and regulators. The ADGM RegLab is a regulatory framework for testing innovative Fintech solutions. It is the world’s second most active Fintech sandbox and offers the world’s first fully digital courtroom. ADGM also organizes a number of Fintech events, including the Fintech Abu Dhabi Festival and the FinTech Awards. Open banking platform Tarabut Gateway has raised \$25 million, including a February 2021 \$13 million seed round.

## **Agtech & New Food**

The UAE currently imports more than 85% of its food, making improving food security a top priority. Abu Dhabi has been at the heart of that push. Last year, the Abu Dhabi Investment Office announced more than AED 500 million (\$136 million) in incentives to bring global Agtech companies to the city. ADQ recently announced plans to build an Agtech Park in Al Ain with the aim of positioning the UAE as the region’s leading farming hub. Hydroponic technology company Pure Harvest Smart Farms raised \$64.5 million in October 2021.



# Reasons to Move Your Startup to Abu Dhabi

## **Startup Support**

Hub71’s Incentive Program is designed to reduce the cost of setting up and growing tech companies in Abu Dhabi, offering subsidies on housing, office space, and insurance for seed- and growth-stage companies up to AED 500K (\$136,000) for one year. ADGM’s Tech Startup Licence provides incentives for up to three years. Three and five-year business visas are available for entrepreneurs based at Hub71. ADGM and Hub71 link founders to a growing community of venture capital funds, banks, investors, regulators and corporate and government partners to provide capital for growth and opportunities to scale.

## **Rule of Law**

Startups in the UAE benefit from the country’s strong rule of law through the direct application of English common law, a strong judiciary, quick judgments facilitated by world’s first e-courts, and strong enforceability of judgments.



# Selected Startup Organizations

## STARTUP GENOME MEMBERS

MEMBER

### Hub71

Hub71 is a global tech ecosystem, a community of highly innovative tech startups and companies at all stages of growth in Abu Dhabi.

“As a policy advisor and provider of research to the entrepreneurial, employment, and economic growth of Abu Dhabi, we are thrilled to see the accelerated development of the startup scene in Abu Dhabi and to share success stories and great practices developed in coordination with Hub71 in the Global Startup Ecosystem Report.”

**Stephan Kuester, Head of Ecosystem  
Strategy of Startup Genome**



Bahrain

# Bahrain

MEMBERS:  
Tamkeen

"The growth within the ecosystem is another example in Bahrain's long history of economic dynamism, bolstered by an attractive environment, ease of business set up, dedicated and talented workforce, innovative regulation, and a readiness to embrace entrepreneurship and innovation."

Husain Mohamed Rajab  
CEO, Tamkeen



TOTAL EARLY STAGE FUNDING  
(2019H2-2021)

\$19 m

GLOBAL AVG.  
\$687 m



Exits  
(2017-2021)

ECOSYSTEM VALUE  
(2019H2-2021)

\$564 m

GLOBAL AVG.  
\$28.6 bn

EARLY-STAGE FUNDING GROWTH TIER  
(2018/19 VS. 2020/21)



Calculated on a scale of  
1 (lowest) to 10 (highest)

## Highlights

Bahrain offers an exceptional, mature regulatory framework within a unified jurisdiction. Both local and international companies benefit from a liberal business climate, zero corporate taxes, and a welcoming culture. The InterNations Expat Insider 2021 survey named Bahrain the best place for expatriates to work and live in the Middle East. The Golden Residency Visa, launched in early 2022, offers a new flexible option for investors, entrepreneurs, and other highly talented individuals looking to settle and do business in Bahrain.

Bahrain has long been a regional trailblazer of economic diversification and today less than 20% of the country's GDP comes from oil and gas. In reflection of the ongoing economic change, the number of startups in Bahrain has grown at a compound annual growth rate of 46% since 2018. Blockchain and cryptocurrency are fast growing areas, with Bahrain-founded crypto exchange Rain raising a \$111.85 million Series B in January 2022. Bahrain is also quickly embracing NFTs — the Kingdom hosted MENA's first NFT exhibition in March 2022 and the Bahrain Institute of Banking and Finance announced the launch of NFTs with an education linked use case the same month.

Hope Ventures has launched a series of initiatives designed to support promising high-growth businesses led by local entrepreneurs, and also created Beban, a reality TV show on the most watched Arabic TV network, in which 12 entrepreneurs pitch to investors, to engage youth in the startup domain. Tamkeen, which aims to drive economic growth by supporting enterprises and individuals, released a 2021-2025 strategy that includes ramping up support for startups.

MEDIAN SEED ROUND  
(2019H2-2021)

\$53 k



GLOBAL AVG.  
\$671 k

MEDIAN SERIES A ROUND  
(2019H2-2021)

\$3.1 m



GLOBAL AVG.  
\$4.7 m

SOFT. ENGINEER SALARY  
(2021)

\$30 k



GLOBAL AVG.  
\$46 k

TOTAL VC FUNDING  
(2017-2021)

\$145 m



GLOBAL AVG.  
\$4.5 bn

TIME TO EXIT  
(2017-2021)

N/A



GLOBAL AVG.  
9.4 years



# Sub-Sector Strengths

## **Fintech**

Bahrain has over 120 Fintech startups, with clusters in payments and crypto. Bahrain's Al Waha Fund of Funds is investing in the \$50 million VentureSouq's FinTech Fund in response to a rise in demand for digital payments. Fintech Infinios was formed in 2014 and is licensed and regulated by the Central Bank of Bahrain as an ancillary services provider. Open banking platform Tarabut Gateway raised a \$13 million seed round in February 2021, the largest Fintech seed round in MENA to date. Later that year, it raised \$12 million in Pre-Series A funding.

## **Blockchain**

Bahrain is a growing Blockchain hub that pioneered crypto-friendly regulation in the region. Blockchain infrastructure provider Binance was granted a crypto-asset service license in Bahrain in March 2022. Inablr is building a Blockchain-based investment platform that is set to launch in Bahrain in 2022. Bahrain FinTech Bay, MENA's largest Fintech hub, and R3, a leading enterprise Blockchain software provider, have partnered to provide tools for MENA Blockchain-based startups to test, validate, and implement their products and accelerate their expansion within the ecosystem. CoinMENA raised a \$9.5 million seed round in November 2021.



# Reasons to Move Your Startup to Bahrain

## **Business-Friendly Environment**

The Kingdom allows 100% foreign ownership for nearly all business activities within the national jurisdiction. Operating costs for businesses are substantially lower than in much of the rest of the GCC region, in the case of manufacturing by 20–56%.

## **Skilled Labor Force**

Bahrain is ranked first in MENA in the UN Human Development Index, which means companies in the country gain access to the most skilled local talent in the GCC. The Bahraini government supports a network of technical programs, such as the MENA Fintech Academy, to upskill the local labor force. Enterprises hiring recent university graduates can receive a wage subsidy of up to 70%. In March 2022, Tamkeen established a collaboration with the technology training academy General Assembly and the Bahrain Institute of Banking & Finance to provide specialized tech training for around 1,200 Bahraini nationals.

## **Low Taxes**

The government of Bahrain doesn't collect corporate taxes on businesses outside the oil and gas industry. There are also no personal income taxes and no wealth or capital gains taxes in the country.



# Selected Startup Organizations

## STARTUP GENOME MEMBERS

MEMBER

### Tamkeen

Tamkeen empowers Bahrainis to become employees of choice and enables the private sector to become the key engine of economic growth. It works with enterprises to innovate, grow, transform, digitalize, and internationalize. It also supports Bahraini talents with their training needs, ensuring their competitiveness both locally and internationally.

“We are thrilled to see Bahrain’s startup ecosystem ranking as a Top 10 MENA Ecosystem in Performance, Funding, and Affordable Talent. Our local partner Tamkeen and other key stakeholders have supported founders in Bahrain for many years with highly progressive policies and have build great conditions for tech entrepreneurs to start and grow their businesses from Bahrain.”

**Stephan Kuester, Head of Ecosystem  
Strategy of Startup Genome**

## KEY ECOSYSTEM PLAYERS

### Tamkeen

Tamkeen empowers Bahrainis to become employees of choice and enables the private sector to become the key engine of economic growth.

### Bahrain Fintech Bay

FinTech Bay is one of the largest FinTechs Hub in MENA that incubates impactful FinTech initiatives through innovation labs, acceleration and educational opportunities.

### Tenmou

“Tenmou”, is a tech-focused angel investor and ecosystem builder, investing in Bahrain and its people. Tenmou provides both mentorship and capital to high-potential, innovative Bahraini entrepreneurs from the seed stage.

### Hope Fund

Hope Fund supports local youth initiatives by unique growth opportunities and access to tools and resources to build a better future for themselves through skills development and entrepreneurship support.



# Egypt Cairo

**MEMBERS:**

Information Technology Industry Development Agency (ITIDA)

"Egypt's digital transformation strategy had a direct impact on the betterment of the local entrepreneurship scene, making not only major cities economically competitive but local communities too."

**Dr. Amr Talaat**

Minister of ICT



**TOTAL EARLY STAGE FUNDING**  
(2019H2-2021)

**\$435 m**

GLOBAL AVG.  
\$687 m



**Amount (\$)** **Count (#)**

**Exits**

(2017-2021)

**ECOSYSTEM VALUE**  
(2019H2-2021)

**\$2.7 bn**

GLOBAL AVG.  
\$28.6 bn

**EARLY-STAGE FUNDING GROWTH TIER**  
(2018/19 VS. 2020/21)



Calculated on a scale of  
1 (lowest) to 10 (highest)

## Highlights

Egypt's startup ecosystem is among the most vibrant in Africa and has been experiencing rapid growth in recent years. In its third quarter 2021 Africa Funding Report, Digest Africa reported that Egypt had the highest number of deals in Africa and third highest total funding. The Egyptian ecosystem saw a 168% year-on-year increase in capital investment in 2021 to reach a new record of \$491 million, according to Magnitt's 2021 Egypt Venture Investment Report.

In 2020, an investment law designated areas in need of development. Companies in these areas can deduct 50% of investment costs, and firms in certain industries, such as renewable energy, will not be subject to taxes or customs duties on equipment purchases. In April 2022, the General Authority for Investment and Freezones, the Financial Regulatory Authority, and the Information Technology Industry Development Agency signed a cooperation protocol to make it easier for local and international VCs to invest in Egyptian startups.

In September 2021, Plug and Play and ITIDA announced the opening of an accelerator and incubator to develop Egyptian startups. The three-year agreement outlined an accelerator program that will run two cycles each year, targeting a total of 60 companies. The incubator will provide support to 60 early-stage startups each year, split into two cycles.

Four major tech funds launched in 2021: Algebra Ventures' \$90 million fund, Sawari Ventures' \$28 million fund, Benya and Openner's \$50 million fund, and Sequence Ventures' EGP 500 million (\$2.7 million) Deep Tech fund. Cairo Angels also announced the first close of its \$5 million micro-VC fund.

**MEDIAN SEED ROUND**  
(2019H2-2021)

**\$165 k**



GLOBAL AVG.  
\$671 k

**MEDIAN SERIES A ROUND**  
(2019H2-2021)

**\$1.2 m**



GLOBAL AVG.  
\$4.7 m

**SOFT. ENGINEER SALARY**  
(2021)

**\$7 k**



GLOBAL AVG.  
\$46 k

**TOTAL VC FUNDING**  
(2017-2021)

**\$836 m**



GLOBAL AVG.  
\$4.5 bn

**TIME TO EXIT**  
(2017-2021)

**5.7 years**



GLOBAL AVG.  
9.4 years



# Sub-Sector Strengths

## Fintech

In September 2021, the government passed a law allowing the Central Bank of Egypt (CBE) to give out banking licenses to Fintech firms. Egyptian Fintech companies raised \$159 million across 32 deals in 2021, a 300% increase on the previous year, according to the CBE. The National Bank of Egypt, Banque Misr, and Banque du Caire jointly launched a EGP 1 billion (\$55 million) Fintech fund in September 2021. Cairo-based Thndr raised a \$20 million Series A in February 2022.

## Logistics & Transportation

Incubator Logivators launched in 2021 to support Egyptian startups in the Logistics & Transportation sub-sector. Egypt is home to 33 Logistics startups, 88% of which are based in Cairo Fulfillment services startup Flextock raised \$3.25 million of pre-seed funding in May 2021. In September 2021, ride-hailing app Halan closed a \$120 million venture funding round, becoming Egypt’s first ever mega deal. In March 2022, Swvl became the first company launched from Africa and the second in MENA to list on the Nasdaq via a SPAC merger.



# Reasons to Move Your Startup to Cairo

## Market Access

Egypt’s strategic location and extensive international trade network make it an ideal platform for companies doing business in MENA and Africa. With a young population of 20 million tech savvy consumers, Cairo provides a perfect testbed for innovation and an attractive market for scalability.

## Young, Skilled Talent

Egypt’s population of about 102 million people, is rapidly growing, providing companies with a large and growing domestic market and vast talent pool to recruit from. Over half of the country’s population is under 30, and many of them are multi-lingual and technically skilled.

## Abundant Resources

Entrepreneurs can draw talent from over 170 universities and institutes producing 500,000 annual graduates, as well as access a network of over 40 incubators and accelerators and 80 co-working spaces. The IT Industry Development Agency (ITIDA) is also on tap to support entrepreneurs.



# Selected Startup Organizations

## STARTUP GENOME MEMBERS

### Information Technology Industry Development Agency (ITIDA)

The IT Industry Development Agency (ITIDA) is the executive arm of the Egyptian Ministry of Communication and Information Technology. Established in 2004, ITIDA's core mission is to spearhead the development of Egypt's IT industry to increase its global competitiveness and make it a key contributor to the country's economic growth.

MEMBER

“Startup Genome is proud to partner with the Information Technology Industry Development Agency to review Cairo's startup ecosystem performance and individual ecosystem success factors. The results, ranking Cairo as a Top 15 Global Ecosystem and #2 MENA Ecosystem in the Affordable Talent category, combined with a large domestic market, make Cairo an exciting ecosystem for regional founders and investors alike.”

**Stephan Kuester, Head of Ecosystem  
Strategy of Startup Genome**

## KEY ECOSYSTEM PLAYERS

### American University in Cairo - Venture Labs

Egypt's first university-based startup accelerator program and leading accelerator in Africa and Middle East.

### Technology Innovation and Entrepreneurship Center (TIEC)

TIEC drives economic growth by providing knowledge and financial support to entrepreneurs and startups. Since 2010, it has sought to unleash creative solutions and innovative ideas that make impact in Egypt.

### Cubit Ventures

An early-stage venture fund backing tech startups driving digital transformation in Egypt. Cubit Ventures is capitalizing on Egypt's imminent economic ascent coupled with an accelerated digital adoption across all sectors.

### Cairo Angels

Egypt's first formal angel investment network. Formed in 2012, it invests in and supports early-stage startups in Egypt and across MENA. Cairo Angels facilitates due diligence, negotiates terms, and finalizes deal closing.

### Algebra Ventures

Egypt's leading tech VC firm. Algebra Ventures partners with founders to build transformative companies, and supports them by providing multi-stage capital, assisting with strategy and operations, and helping to build star teams.



Qatar

# Doha

MEMBERS:

Qatar Development Bank

"In line with Qatar National Vision 2030, QDB's strategy is focused on promoting the private sector and the local entrepreneurship ecosystem, while offering access to capital, capabilities, and international markets."

Abdulrahman Hesham Al Suwaidi

Acting CEO, Qatar Development Bank



TOTAL EARLY STAGE FUNDING  
(2019H2-2021)

\$12 m

GLOBAL AVG.  
\$687 m



Amount (\$) Count (#)

Exits

(2017-2021)

ECOSYSTEM VALUE  
(2019H2-2021)

\$123 m

GLOBAL AVG.  
\$28.6 bn

EARLY-STAGE FUNDING GROWTH TIER  
(2018/19 VS. 2020/21)



Calculated on a scale of  
1 (lowest) to 10 (highest)

## Highlights

Qatar is one of the richest countries in the world in terms of GDP per capita. Thanks to investment from both the public and private sectors, Doha's startup ecosystem has been growing steadily in recent years. To achieve Qatar's 2030 vision of diversifying the economy away from reliance on hydrocarbons, the Qatari government has invested heavily in founders and innovators. It has been joined by many startup support organizations in nurturing Doha's ecosystem.

2021 marked the second consecutive year of growth of Qatar's VC ecosystem. Funding grew by 92% compared to 2020, to reach a record high. Startups graduating from accelerator programs accounted for 46% of the 24 deals in Qatar in 2021.

Qatar Development Bank (QDB) provides financial and advisory services, as well as acceleration and incubation programs through affiliated entities including Qatar Business Incubation Center. In March 2021, QDB launched Scale 7, the first business incubator for fashion, film, and other cultural entrepreneurs. Ithmar, a seed-funding program from QDB, provides entrepreneurs with equity capital and is Shari'a compliant. Qatar University's QU Innovation & Entrepreneurship Strategy (2018-2023) aims to support the ecosystem's development. The Qatar Science and Technology Park's (QSTP) Product Development Fund provides up to 50% of the total budget of local high-tech startups, and has awarded grants to 26 companies.

The Research to Startup program was created by QSTP to support the research community in Qatar by bridging the gap between academia and industry. It provides a pathway to commercialize intellectual property and launch startups. So far 45 startups have participated in the program.

MEDIAN SEED ROUND  
(2019H2-2021)

\$302 k



GLOBAL AVG.  
\$671 k

MEDIAN SERIES A ROUND  
(2019H2-2021)

\$5 m



GLOBAL AVG.  
\$4.7 m

SOFT. ENGINEER SALARY  
(2021)

\$39 k



GLOBAL AVG.  
\$46 k

TOTAL VC FUNDING  
(2017-2021)

\$64 m



GLOBAL AVG.  
\$4.5 bn

TIME TO EXIT  
(2017-2021)

N/A



GLOBAL AVG.  
9.4 years



# Sub-Sector Strengths

## Fintech

One third of all funding deals in Qatar in 2021 were in Fintech. Investors in all of these deals were based locally, with Qatar Fintech Hub leading the charge. Fintech was identified as crucial to the long-term development of Qatar’s financial sector in the country’s Second National Development Strategy 2018–2022. The Qatari Fintech market is projected to grow at a compound annual growth rate of 19.6% to reach \$2 billion by 2025, according to the Global Islamic Fintech Report 2021. The government is streamlining regulations and providing funding to boost the sub-sector.

## Logistics & Transportation

Qatar’s growing population and hosting of global events including the FIFA World Cup 2022 have led to a huge infrastructure boom. The Doha Metro, a new road network, Hamad Port, and Hamad International Airport are all being constructed or expanded. The Al Wukair Logistics Park supports SMEs with light industrial workshops, storage units, and open yards. Logistics & Transportation accounted for 26% of all capital deployed in Qatar in 2021. Logistics and supply chain solutions company GWC was announced as the official logistics provider for the FIFA World Cup Qatar 2022.



# Reasons to Move Your Startup to Doha

## Access to Capital

Qatar offers startups diverse sources of funding, including venture capital, regulator-backed accelerator and incubator programs, and angel investors. Qatar Development Bank facilitates funding through its QAR 365 million (\$100 million) VC fund. ELV8, a 12-month growth accelerator program from Qatar Science and Technology Park in partnership with Plug and Play, provides mentorship and funding opportunities for Qatari startups to expand internationally.



# Selected Startup Organizations

## STARTUP GENOME MEMBERS

MEMBER

### Qatar Development Bank

Qatar Development Bank was established in 1997 under the name Qatar Industrial Development Bank, and it is a development entity 100% owned by the government. It was established to support investment in and develop local industries, and to drive economic development and diversification in the State of Qatar with a focus on the private sector.

“Qatar Development Bank worked in collaboration with Startup Genome to showcase Doha’s growing entrepreneurial ecosystem in the #GSER2022. Based on QDB’s strategic effort to enhance economic diversification and facilitate growth opportunities, Startup Genome is very proud to finally put this emerging startup ecosystem on the global map.”

**Marc Penzel, Founder & President  
of Startup Genome**

## KEY ECOSYSTEM PLAYERS

### Qatar Business Incubation Center (QBIC)

QBIC is a unique mixed-use business incubation center providing support services to help entrepreneurs and companies who either have an idea to start a business or want to grow an existing business.

### Digital Incubation Center

DIC was created to boost ICT innovation in Qatar, particularly among young people at the critical early stages of starting or growing a technology-related business.

### Qatar Fintech Hub

QFTH brings together talented entrepreneurs, investors and enablers to develop disruptive technologies so that great visions become reality. It launches incubation and acceleration programs for Fintech startups.

### Doha TechAngels

DTA is Qatar’s first private angel fund and is registered with Qatar Financial Center (QFC). It’s focused on providing seed funding for early stage technology startups in Qatar, the Middle East, and beyond.

### Qatar Science & Technology Park

QSTP provides a free zone and technology park that hosts leading global tech companies, mentor and support a network of startups and rising tech ventures, and have a value chain of acceleration, incubation, and funding programs.



Palestine

# Palestine

**MEMBERS:**  
Innovative Private Sector Development (IPSD)

"Palestine is a place for innovation, creation, and entrepreneurship. New ideas, emerging leaders, and non-traditional solutions serve as pillars of the ecosystem."

**Tamer Baransi**  
Chairperson of Palestinian Information Technology Association of Companies (PITA)

## Highlights

Thanks to the market’s small size and surrounding geopolitical tension, Palestinian entrepreneurs face more than their fair share of challenges. But despite these obstacles, a new wave of interest in entrepreneurship is cresting.

In the past, Palestinian talent was largely cut off from mentoring and collaboration, but that is changing. The ecosystem has a higher than average sense of community, and an array of support organizations provide assistance to founders. There is also increasing support from the Palestinian diaspora’s tech entrepreneurs and business professionals. The pool of talent is also broadening, with increasing numbers of women and young people participating in the ecosystem.

Projects including the World Bank’s Innovative Private Sector Development Project (IPSD) help to link local founders to regional markets and offer grants for early-stage investors. The ISPD’s efforts to bridge the long-standing funding gap is good news for cash-starved startups and a sign that Palestinian leadership is increasingly committed to leveraging entrepreneurship to drive economic development. The Palestinian government has further demonstrated its commitment to boosting the ecosystem through regulatory changes to enable the growth of Fintech startups.

There is huge opportunity in the traditional pillars of the Palestinan economy, including AgriTech, Energy, and Tourism and Hospitality. Still untapped by digital transformation, these sectors provide ample opportunity for entrepreneurs to develop and test solutions that could be scaled to the entire Arab market. Challenges remain for Palestinian entrepreneurs, but the essential seeds of a thriving ecosystem have been planted. If tended carefully, they may bear fruit for the entire economy.

**TOTAL EARLY STAGE FUNDING**  
(2019H2-2021)

\$9.5 m

GLOBAL AVG.  
\$687 m



Amount (\$) Count (#)

**Exits**

(2017-2021)

**ECOSYSTEM VALUE**  
(2019H2-2021)

\$66 m

GLOBAL AVG.  
\$28.6 bn

**EARLY-STAGE FUNDING GROWTH TIER**  
(2018/19 VS. 2020/21)



Calculated on a scale of  
1 (lowest) to 10 (highest)

**MEDIAN SEED ROUND**  
(2019H2-2021)

\$210 k



GLOBAL AVG.  
\$671 k

**MEDIAN SERIES A ROUND**  
(2019H2-2021)

\$475 k



GLOBAL AVG.  
\$4.7 m

**SOFT. ENGINEER SALARY**  
(2021)

\$7 k



GLOBAL AVG.  
\$46 k

**TOTAL VC FUNDING**  
(2017-2021)

\$12 m



GLOBAL AVG.  
\$4.5 bn

**TIME TO EXIT**  
(2017-2021)

N/A



GLOBAL AVG.  
9.4 years



# Sub-Sector Strengths

## **Fintech**

In 2021, the Palestine Monetary Authority (PMA) formed the Financial Tech Advisory Group, and regulators launched the Strategic Framework for Islamic Financial Services to encourage digital transformation and Fintech integration among Islamic banks. The PMA has also launched a campaign to raise awareness of e-payment and e-Wallet services. As a result, several programs supporting Fintech startups were launched, including initiatives from Intersect Innovation Hub powered by Bank of Palestine and Flow Accelerator in partnership with the National Bank.

## **Edtech**

EdTech Hub, which was established in 2020 in partnership between Palestine Techno Park and Eummena, provides workshops and programs to contribute to the development of Palestinian students. Numerous startups focused on Edtech have emerged, including in Arabic online coding skills development for children Jeel Code; coaching platform Coachwhizz; and Hessa, which connects college tutors to school age children.

## **Healthtech**

Many of Palestine's tech startups address healthcare issues, including telemedicine (Tebfact and Tanaffas), appointment-booking systems (Doctor On Time), and companies focused on the prevention of chronic diseases (Wikaya and Dawsat). Jerusalem-based SynergyMed is dedicated to the development of non-surgical solutions for the treatment of cancer tumors.

# Reasons to Move Your Startup to Palestine

## **Local Connectedness**

The Palestinian ecosystem boasts a strong sense of community. Founders benefit from a great deal of assistance from others in the ecosystem, as well as from established connections to regional and international networks, particularly in the MENA region and U.S. This includes strong ties to many universities, including New York University, University of California Berkeley, University of Chicago, and the London School of Economics and Political Science.

## **Skills**

Education is especially high among Palestinian founders, with more than 55% having a university degree, and more than 19% having graduate degrees. Among funded founders, 61% hold a university degree at the time of founding. Palestine is also home to a very high percentage of young people, as well as a particularly motivated and talented population of educated and entrepreneurial young women.



# Selected Startup Organizations

## STARTUP GENOME MEMBERS

MEMBER

### Innovative Private Sector Development (IPSD)

The Innovative Private Sector Development (IPSD) is a \$22 million Ministry of National Economy project funded by the World Bank and implemented by DAI. IPSD aims to support Palestinian startups, SMEs, and entrepreneurs from the West Bank and Gaza through developing a dynamic startup finance ecosystem, improving businesses access and linkages to international and regional markets, promoting government reforms and automating business registration, streamlining and providing a framework for home-based businesses, supporting businesses to survive the COVID-19 pandemic, and supporting a pilot developing an outsourcing hub in Gaza.

## KEY ECOSYSTEM PLAYERS

### IBTIKAR Fund

A \$30 million VC fund to invest in Palestinian entrepreneurs both from within Palestine and from the broader MENA region. Ibtikar focuses on early-stage companies (seed and pre-Series A) building scalable tech and tech-enabled business.

### The Palestinian Private Sector

Bank of Palestine and Paltel Group each have created innovation hubs that house incubators who provide mentoring, training, co-working space and access to funding.

### Palestine Monetary Authority

Monshati, the first electronic platform launched in Palestine to support financial and administrative capabilities of the entrepreneurs of micro, small and medium enterprises by enabling them to access sources of financing.

### Palestinian Universities

Islamic University in Gaza and An-Najah University in Nablus house incubators; while Birzeit University created a technology park that houses incubation programs, co-working spaces and innovation labs to promote a collaborative business environment.

### Ministry of National Economy

The Ministry's Innovative Private Sector Development aims to improve economic opportunities for individuals and firms in the West Bank and the Gaza Strip, through the development of the entrepreneurship ecosystem.



UAE

# Sharjah

MEMBERS:

Sharjah Entrepreneurship Center

"With its commitment to being the first believers in tomorrow's ambitious founders, Sheraa is cultivating an ecosystem that is feeding UAE's development of some of the world's most innovative companies."

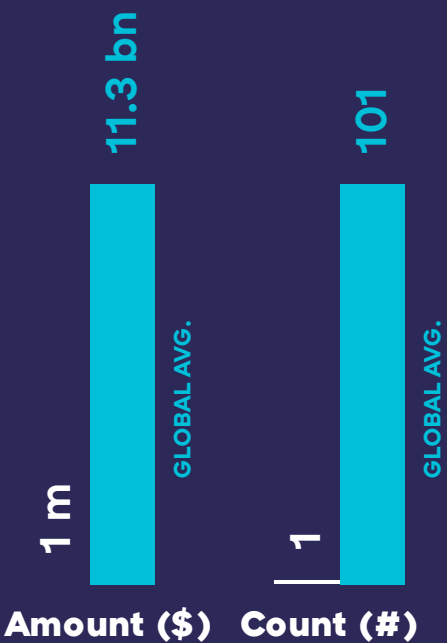
Najla Al Midfa

CEO, Sharjah Entrepreneurship Center (Sheraa)



TOTAL EARLY STAGE FUNDING  
(2019H2-2021)

\$8.7 m



Exits

(2017-2021)

ECOSYSTEM VALUE  
(2019H2-2021)

\$208 m

GLOBAL AVG.  
\$28.6 bn

EARLY-STAGE FUNDING GROWTH TIER  
(2018/19 VS. 2020/21)



Calculated on a scale of  
1 (lowest) to 10 (highest)

## Highlights

As one of the fastest-growing economies in MENA, boasting one of the most attractive investment climates, Sharjah has drawn the attention of global investors and entrepreneurs.

Its strategic location in proximity to promising emerging markets, favorable business environment, and commitment to supporting startups has created a thriving ecosystem. The city is a hub for talent, with several top-ranked higher education institutions; MENA's fastest growing technopark, Sharjah Research Innovation and Technology Park (SRTIP); the dedicated business set-up and market-access center Sharjah Investors Services Center (SAEED); and the ecosystem builder Sharjah Entrepreneurship Center (Sheraa).

Sheraa launched Sharjah Startup Studio (S3) in February 2021 to accelerate the region's digital transformation. The first government-backed startup studio in the UAE, S3 takes a hands-on approach to venture building. S3 helps startups hone their value proposition, find product-market fit, develop their product, and support their entry into the market.

The annual Sharjah Entrepreneurship Festival (SEF), a landmark entrepreneurial event organized by Sheraa, brings the entrepreneurship community together for two days, and has attracted leading speakers from around the world to share their stories.

Sharjah's thriving entrepreneurship ecosystem is part of the UAE's wider efforts to establish the country as an entrepreneurial nation by 2031. As of mid-2020, startups and SMEs already accounted for 94% of all operating companies, contributing over 60% of the GDP. The National Agenda for Entrepreneurship, spearheaded by the recently-appointed Minister of Entrepreneurship and SMEs, includes 29 initiatives and incentive packages to have one million startups and 10 locally incubated unicorns established in the country.

MEDIAN SEED ROUND  
(2019H2-2021)

\$350 k



GLOBAL AVG.  
\$671 k

MEDIAN SERIES A ROUND  
(2019H2-2021)

\$2.3 m



GLOBAL AVG.  
\$4.7 m

SOFT. ENGINEER SALARY  
(2021)

\$40 k



GLOBAL AVG.  
\$46 k

TOTAL VC FUNDING  
(2017-2021)

\$91 m



GLOBAL AVG.  
\$4.5 bn

TIME TO EXIT  
(2017-2021)

8 years



GLOBAL AVG.  
9.4 years



# Sub-Sector Strengths

## Edtech

The COVID-19 pandemic caused a seismic transformation in education in the Gulf, pushing 72% of educational institutions in the region to bring forward their digital roadmap by at least a year, according to an IDC survey. With the support of the University City in Sharjah, the sub-sector is poised to grow further. Examples of local Edtech startups include the digital English language educator Englease, online learning platform Almentor, and Little Thinking Minds, which provides Arabic language literacy tools.

## Cleantech

In line with the UAE's agenda on environmental sustainability, Sharjah continues to invest in the sector, targeting zero waste-to-landfill by 2022. Sharjah Sustainable City is set to be the first net-zero community in the emirate, and the Sharjah's BEEAH Group works to pioneer sustainable technologies. Sharjah is also home to Cleantech startups including environmentally friendly cleaning product manufacturer Kyma, The Concept, which designs and produces sustainable solutions including smart trays, and Cycled Technologies, a smart bin that helps users sort their recyclables.

## Digital & Creative Industries

Sharjah was named the UNESCO Capital of Arab Culture in 1998, and the World Book Capital in 2019. Sharjah Media City (Shams) is a free zone dedicated to creative startups and the Emirates Reprographic Rights Management Association protects copyrights of content creators, authors, and publishers. The Access Sharjah Challenge, launched in December 2021 by Sheraa, connects digital startups to relevant entities in Sharjah and across the UAE with the aim of contributing to the development and growth of the nation's creative economy.

# Reasons to Move Your Startup to Sharjah

## Diverse Ecosystem

Women comprise 70% of UAE's university graduates and 44% of the region's workforce. Within Sheraa's portfolio of 122 startups alone nearly 50% are female-led. With more women investors, dedicated support services, and a more inclusive, diverse ecosystem, there has never been a better time for a woman to open a business in the UAE.

## Highly Skilled Talent

Sharjah's University City is home to over 30,000 students and some of the region's best educational institutions. These institutions have incorporated entrepreneurial learning into their curriculums, ensuring students graduate with 21st-century skills. In partnership with the American University of Sharjah and the University of Sharjah, Sheraa has developed university startup hubs to upskill and nurture the entrepreneurial mindset among students and recent graduates.

## Growing Investment

A strong economy helps entrepreneurs grow their businesses faster and attract talent, and the UAE's is thriving. With over AED 4 billion (\$1.2 billion) in registered venture capital, and having accounted for 46% cent of the total venture capital received in the Middle East and Africa in 2021, the nation has established itself as the most attractive market in the region.



# Selected Startup Organizations

## STARTUP GENOME MEMBERS

MEMBER

### Sharjah Entrepreneurship Center

At Sharjah Entrepreneurship Center (Sheraa), we believe in human potential. We have faith in humanity’s ability to generate positive change, and we are on a mission to unleash a generation of entrepreneurs who will build a better future for our societies and beyond.

“The growth of the Sharjah startup ecosystem is becoming more and more visible, ranking as a leading ecosystem in the MENA region across several indicators. Attending the Sharjah Entrepreneurship Festival, the region’s biggest celebration of entrepreneurship, gives you a great sense of the Emirates’ trajectory. It’s been a pleasure to work with the Sharjah Entrepreneurship Center and continue to monitor their growth and success.”

**Marc Penzel, Founder & President  
of Startup Genome**



Israel

# Tel Aviv #7\*

Ecosystem rank and metrics for Tel Aviv - Jerusalem

MEMBERS:

Tel Aviv Global

"There's great talent here [...] We've made a number of investments in companies we believe will help us improve, and that's the reason I continue to come back here."

Doug McMillon

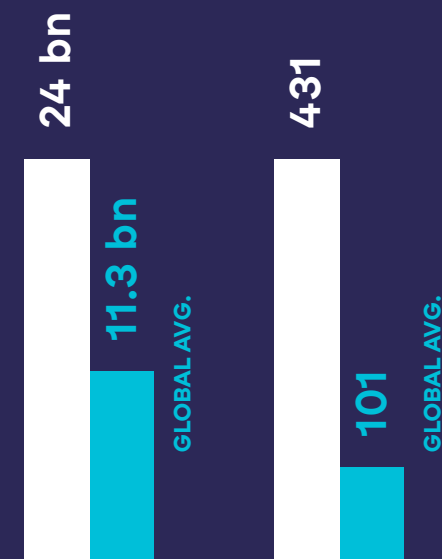
CEO, Walmart



TOTAL EARLY STAGE FUNDING  
(2019H2-2021)

\$5.5 bn

GLOBAL AVG.  
\$687 m



Amount (\$) Count (#)

Exits

(2017-2021)

ECOSYSTEM VALUE  
(2019H2-2021)

\$120 bn

GLOBAL AVG.  
\$28.6 bn

EARLY-STAGE FUNDING GROWTH TIER  
(2018/19 VS. 2020/21)



Calculated on a scale of  
1 (lowest) to 10 (highest)

## Highlights

Israel, the Startup Nation, has more startups per capita than any nation in the world thanks to its tight-knit entrepreneurial community, impressive R&D capabilities, educated population, and strong government support. Tel Aviv is the heart of this red-hot ecosystem, with a significant majority of the country's tech ventures concentrated within its greater metropolitan area, and nearly 3,000 within the city limits. Startup Genome ranked Tel Aviv #2 in the 2021 GSER: Cleantech Edition and #4 in its GSER: Agtech and New Food Edition.

Tel Aviv's startups have together been valued at \$120 billion. The city's startups raised a record-breaking \$20 billion in 2021 — a whopping 63% of the national total. The same year, Tel Aviv gained 30 new unicorns, and 20 of its scaling companies went public, raising \$4 billion. With hundreds of active investors and venture capital funds in the country's central region, the message is clear: watch this space.

Diverse Multinationals including Volkswagen, Anheuser-Bosch, Apple, Citibank, and over 130 others have established innovation centers in Tel Aviv. In addition to the high concentration of talent, the companies enjoy over 30 different grants and tax incentive programs for R&D activity, including conditional grants, reduced tax rates, tax exemption, and other tax-related benefits offered by the state. Overall, Israel is ranked #2 in the world in R&D expenditure per capita. Israel invests about 4.1% of its GDP in R&D, twice the OECD average.

In January 2022, Israel launched a \$70 million program to promote entrepreneurship among Arab communities, and is advancing numerous initiatives to promote diversity and inclusion.

MEDIAN SEED ROUND  
(2019H2-2021)

\$2 m



GLOBAL AVG.  
\$671 k

MEDIAN SERIES A ROUND  
(2019H2-2021)

\$7.5 m



GLOBAL AVG.  
\$4.7 m

SOFT. ENGINEER SALARY  
(2021)

\$85 k



GLOBAL AVG.  
\$46 k

TOTAL VC FUNDING  
(2017-2021)

\$30 bn



GLOBAL AVG.  
\$4.5 bn

TIME TO EXIT  
(2017-2021)

7 years



GLOBAL AVG.  
9.4 years



# Sub-Sector Strengths

## **AI, Big Data & Analytics**

Israel ranks third in the world by number of AI and machine learning startups, with the majority concentrated in Tel Aviv. Eleven Israeli-founded companies were featured in the 2021 AI 100 finalists report from research firm CB Insights. A committee on AI has released a comprehensive plan to promote AI in Israel. An initial 550 million shekels (\$168.2 million) of the 5.26 billion shekels (\$1.6 billion) in funding proposed by the plan was approved in April 2021. ZenCity, a Tel Aviv-based AI solution for governments, raised \$30 million in June 2021, and AI chipmaker Hailo, also in Tel Aviv, raised a \$136 million Series C in October 2021.

## **Cybersecurity**

In 2021, Israeli Cybersecurity startups raised an impressive \$8.8 billion, more than triple the amount raised in 2020. In Tel Aviv alone, the sub-sector also produced a record 9 new unicorns in 2021, and one out of every three Cybersecurity unicorns in the world is now an Israeli company. Orca Security raised a \$550 million Series C round in October. Cloud security startup Wiz raised \$250 million in private funding, also in October, bringing its valuation to \$6 billion.



# Reasons to Move Your Startup to Tel Aviv

## **Intellectual Property Incentives**

A company that creates IP assets in Israel, or is willing to transfer some IP to Israel, is entitled to reduced corporate, dividend, and capital gains tax rates. The country's Angel's Law also provides tax benefits and deductions to single investors who invest in Israeli companies during their initial R&D (seed) stage.

## **Employment Aid Programs**

The Israeli Ministry of Economy offers wage subsidies for new employees for a specific period of up to several years depending on the program. Subsidy rates range from 10 to 40% depending on the employee's background (i.e. students, workers from minority groups), and the amount of time the employee has already been working in the position.

## **R&D Grant Programs**

The Innovation Authority operates more than 40 R&D grant programs for multinational companies, individual entrepreneurs, research institutions, and NGOs. The programs offer a unique, customized, and comprehensive incentive toolbox, including Innovation Labs programs, which offer up to a 50% deduction in R&D expenses for specific sub-sectors.



# Selected Startup Organizations

## STARTUP GENOME MEMBERS

### Tel Aviv Global

Tel Aviv Global & Tourism is a municipal company under the Mayor’s Office at the Tel Aviv-Yafo Municipality. It facilitates the global quantum leap taken by the city of Tel Aviv-Yafo in creating economic and tourism growth.

MEMBER

“Tel Aviv is showcased in the GSER, ranking as the #7 Global Startup Ecosystem. Working with our local partner, Tel Aviv Global, we share the talent and funding success stories as well as consistently outstanding supportive policies that have fueled this growth.”

**Stephan Kuester, Head of Ecosystem  
Strategy of Startup Genome**

## KEY ECOSYSTEM PLAYERS

### Yossi Vardi

A pioneer of Israeli hi-tech, Yossi has helped build over 85 companies over a 50 year career, and advances innovation through industry events and collaboration.

### Hila Ovil-Brenner

20 years of experience as an entrepreneur, investor, and advisor to startups; Hila is currently Managing Director at TechStars Tel Aviv and Founder of the non-profit, Yazamiyot - Women Entrepreneurs.

### CityZone

CityZone is a living lab for entrepreneurs advancing solutions to urban challenges in cooperation with the Tel Aviv municipality, Tel Aviv University, and the Atidim Corporate Park in Tel Aviv.

### 8200 EISP

An exclusive community of successful entrepreneurs, industry experts, and investors that provides support for early-stage ventures, founded by alumni of the elite 8200 military intelligence unit.

### EcoMotion

A platform for smart-mobility startups to connect with global industry, entrepreneurs, academia, government, investors, and 13,000 community members.



Tunisia

Tunisia

MEMBERS:

Smart Capital / Caisse des Dépôts et Consignations (CDC)

"Tunisia’s young talents and best minds are shaping our country’s future. Our duty is to accelerate the change to let the Tunisian dream come true."

Nizar Ben Neji

ICT Minister



TOTAL EARLY STAGE FUNDING  
(2019H2-2021)

\$5.5 m

GLOBAL AVG.  
\$687 m



Amount (\$) Count (#)

Exits

(2017-2021)

ECOSYSTEM VALUE  
(2019H2-2021)

\$26 m

GLOBAL AVG.  
\$28.6 bn

EARLY-STAGE FUNDING GROWTH TIER  
(2018/19 VS. 2020/21)



Calculated on a scale of  
1 (lowest) to 10 (highest)

## Highlights

With access to Europe, Africa, and the Middle East, as well as trade agreements with the EU and much of Africa and an increasingly educated workforce, Tunisia has much to offer entrepreneurs. The Tunisian government actively supports startups, with the Tunisia Startup Act of 2018 streamlining the process of starting and running a business here and providing a stipend for founders during the first year of activity. The act also established fast-tracking of international patents.

Startup investment in Tunisia increased 31% between 201\7 to 2021, totalling \$38.2 million across 54 deals in the 2020-21 period. Startup Tunisia is a referral initiative that offers DEAL grants of up to TND 200,000 (\$67,000) to assist with the launch of new startup support programs. Digital innovation hub The DOT opened in June 2021 with the mission to accelerate the digital transformation of Tunisian society. 2021 also saw the launch of 40 new startup support programs across the ecosystem, including incubators such as CoStarT, coworking spaces including Coworky and Hive12, and entrepreneurial training programs such as Foundup.

Seed and early-stage VC firm Flat6Labs has increased its Tunisia-based Anava Seed Fund (ASF) from \$3 million to \$10 million. ASF was launched in 2017 in partnership with the Tunisian American Enterprise Fund, BIAT Bank, and Meninx Holding. Tunisia’s Expensya, a maker of expense-management software, raised a \$20 million Series B in May 2021. Wattnow, a smart energy management solution, raised a \$1.3 million pre-Series A in March 2022.

MEDIAN SEED ROUND  
(2019H2-2021)

\$71 k



GLOBAL AVG.  
\$671 k

MEDIAN SERIES A ROUND  
(2019H2-2021)

\$50 k



GLOBAL AVG.  
\$4.7 m

SOFT. ENGINEER SALARY  
(2021)

\$7 k



GLOBAL AVG.  
\$46 k

TOTAL VC FUNDING  
(2017-2021)

\$21 m



GLOBAL AVG.  
\$4.5 bn

TIME TO EXIT  
(2017-2021)

15 years



GLOBAL AVG.  
9.4 years



# Sub-Sector Strengths

## Artificial Intelligence

The Tunisian national roadmap 2020–2023 stresses facilitating startups’ access to markets, and includes investments in AI R&D, policy reforms to enable development in the sub-sector, and a focus on international cooperation. In July 2021, the Africa Internet of Things (IoT) and Artificial Intelligence (AI) Challenge was launched in Tunisia to provide young innovators with training and support. In January 2022, Tunisia-founded enterprise AI startup InstaDeep raised a \$100 million Series B.

## Life Sciences

Startup support organization Connect’Innov’s mission is to support and promote Life Sciences innovation, particularly in telehealth and biotech. Life Sciences cluster HealthTECH will represent Tunisia in the European BETTEReHEALTH project, which is funded by the European Commission, and aims to support the development of telehealth solutions in developing countries. In February 2021, Tunisia reached an agreement with Britain to develop the Tunisian biotech industry with the aim of producing vaccines and manufacturing medicines in Tunisia.



# Reasons to Move Your Startup to Tunisia

## Ideal Location

Tunisia enjoys a privileged geographical position at the junction of the eastern and western Mediterranean basin, making it a regional hub for investment, trade, and production. Sharing a border with Algeria and Libya, and an under three hour flight from European capitals and major Middle Eastern cities, Tunisia is at the heart of the Euro-Mediterranean logistics chain, and provides an ideal platform to access markets of 500 million consumers.

## Entrepreneurship Education

Entrepreneurship education has rapidly advanced in Tunisia over the last decade and is now an important feature of the country’s higher education curriculum, with every university offering a module covering entrepreneurship and entrepreneurial culture. Student enterprise clubs, business plan contests, and best entrepreneurial ideas competitions complement in-class instruction and have driven high interest in entrepreneurship among young people.

“Tunisia is highlighted in the GSER for its accessible, highly-skilled talent. We worked with Smart Capital and Caisse des Dépôts et Consignations to study the ecosystem, which ranks in the **Affordable Talent category as a Top 15 Global Ecosystem and #1 MENA Ecosystem.**”

**Stephan Kuester, Head of Ecosystem Strategy of Startup Genome**



# Selected Startup Organizations

## STARTUP GENOME MEMBERS

### Smart Capital

Smart Capital, a management company approved by the Financial Markets Council, is in charge of the implementation of Startup Tunisia’s three components: Startup Act, the law and its incentives; Startup Invest, which oversees funding; and Startup Ecosystem, which backs supporting structures such as incubators, accelerators, and startup studios. Smart Capital operates under the authority of both the Ministry of Communication Technologies and Digital Transition and the Ministry of Economy, Finance and Support for Investment.

MEMBER

### Caisse des Dépôts et Consignations (CDC)

Caisse des Dépôts et Consignations (CDC) is a public institution created in 2011. As the Private Equity arm of the government, it supports state policies in sustainable development goals and projects. The CDC distinguishes itself by its unique economic model, and is characterized by its mode of governance, its investment doctrine, and its risk management. It is a key player in the long-term economic and social development of Tunisia.

MEMBER

## KEY ECOSYSTEM PLAYERS

### Flat6Labs Tunis

Flat6Labs Tunis, launched in 2017, is a seed and startup program seeking to promote the growth of Tunisian startups and provide a source of supply to the industry of Venture Capital in Tunisia.

### United Gulf Financial Services North Africa

A licensed asset management company that provides services through different business platforms: private equity, asset management, advisory, and corporate finance.

### The Dot

A digital innovation hub that aims to support and sustain the innovation ecosystem and digital transformation in Tunisia through a community of innovative startups, startup support organizations, government, universities, and students.

### TunisianStartups

TunisianStartups works on connecting the local startup ecosystem, including startups, investors, and support structures, and connecting the Tunisian ecosystem with other ecosystems all over the world.

### Collège des Startups

The governance body in charge of granting Startup Labels, entitling startups to the various benefits provided by law. It is composed of nine independent people from the public and private sectors.



# North America

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## Regional Insights

# North America

With Silicon Valley, New York, and Boston located here, North America is the global leader in producing startups, making up 47% of the share of global leaders. But as in other regions, North American founders are increasingly choosing to set up outside of established leading ecosystems and are creating new thriving hubs of innovation. Silicon Valley's global share of dollar amount in early-stage investment has declined from 25% in 2012 to 13% in 2021. As early-stage funding is a leading indicator of the future of tech, this trend suggests that the growth of tech elsewhere will continue to be faster than in Silicon Valley.

More than 300 North American tech startups achieved unicorn status in 2021, an impressive leap from fewer than 100 in 2020 and a large proportion of the 540 total global tech unicorns. The region saw 105% growth in \$50 million+ exits from 2020 to 2021. Early-stage funding

increased 43% since 2020, but Series B+ saw a much bigger increase at 140% in the same period.

The region's largest exit was cryptocurrency exchange Coinbase, which was valued at \$85 billion when it posted shares directly on the Nasdaq in April 2021. Databricks, the developer of a unified data analytics platform, secured the region's biggest deal when it raised \$1.6 billion in an August 2021 Series H round.

Toronto-Waterloo is Canada's leading ecosystem, ranking at #17. The area has the highest concentration of AI startups in the world, including genetic therapy company Deep Genomics and AI chip manufacturer Tenstorrent. Vancouver and Montréal are thriving startup ecosystems, with Vancouver producing five unicorns in the GSER 2022 time range, including online identity marketplace Trulioo, legal software startup Clio, and NFT company Dapper Labs, and Montréal producing four, including travel app Hopper.

U.S. investors were holding an average of 101% more dry powder in 2021 than 2020, from \$252 million to \$507 million. The total dry powder for active investors was up by 20% in terms of amount from 2020 to 2021.

## Top Performers

1	Silicon Valley
2	New York City
3	Boston
4	Los Angeles
5	Seattle

## Top Regional Challengers

1	Detroit
2	Minneapolis
3	Houston
4	Research Triangle
5	Pittsburgh

Later-stage funding increased 137% in amount and 39% in the number of rounds in the same period, and early-stage funding saw a 43% growth in amount.



# North America

## Regional Insights

### Key Findings

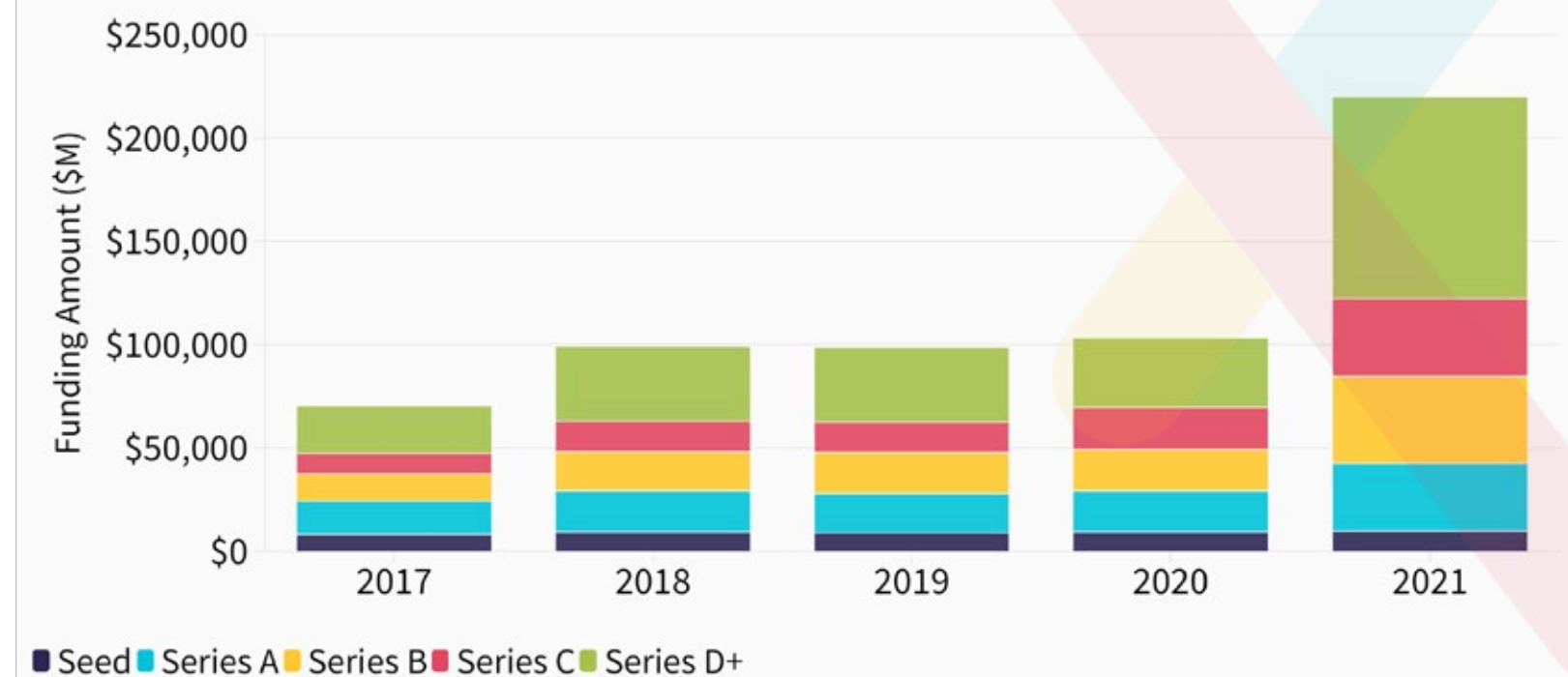
- North America remains the world's leading region, making up 47% of the share of global leaders.
- Silicon Valley's global share of dollar amount in early-stage investment has declined from 25% in 2012 to 13% in 2021, suggesting that the growth of tech in the rest of the world will continue at a faster pace than in Silicon Valley.
- Of the 540 unicorns created globally in 2021, more than 312 were North American. In 2020, North America produced 83.
- Denver-Boulder moved up three places from 2021, taking #24. The Colorado ecosystem is increasing in both value and count in early-stage funding, and has shown significant growth in Connectedness.
- Miami moved up into the runners-up category, at tied #31. Eleven \$50 million+ exits took place here, as well as two \$1 billion+ exits. Miami can also attribute some of its rise in the rankings to early-stage funding — it experienced a 15% increase in early-stage funding

deal count and an impressive 149% in deal amount. For context, the median early-stage deal amount increase for U.S. ecosystems is 19%.

### North American VC Funding by Stage

Investment in North America Increased 113% From 2020 to 2021

Startup Genome





## Global Startup Ecosystem Report 2022

# Local Connectedness Is Driving Indiana's Thriving Startup Ecosystem

Indiana is an ecosystem of movers and shakers: friendly people who undertake and accomplish big things. The state is an affordable, affable startup hub where entrepreneurs and their supporters weave dense webs of local relationships. Yet its startups, universities, and corporations are focused on some of the fastest growing global tech sectors, particularly those that address pressing issues such as health and climate change.

In Indianapolis, that combination of local performance and global promise soon will start generating \$100-million-plus — and even unicorn-sized — scales-ups annually, according to an assessment by Startup Genome.

That potential has ignited investment: in 2021 Indiana startups broke records, raising \$1.4 billion in 159 deals. About 30% of seed rounds clocked in at \$1 million-plus: a larger percentage than in comparable ecosystems. In addition, the number of Indiana startups progressing from Seed to Series A was 13% higher than their peers, as revealed by a Startup Genome assessment. [Elevate](#)

[Ventures](#), which has funded 462 Indiana startups in 87 counties across the state, is the major force in this space.

Last year, 57 startups were involved in M&A activity, according to Indiana accelerator [TechPoint](#). The ecosystem has produced three \$50-million-plus exits in three years. Indiana's dominant sub-sector, Life Sciences, has attracted the lion's share of investment, raising \$434 million in 2021. That included new funding for [On Target Laboratories](#), which has earned FDA approval for an imaging agent used during cancer surgery. Co-founder Dr. Phillip Low has already notched one biopharmacy unicorn in Endocyte, and On Target Laboratories has raised more than \$80 million in aggregate. The overall Life Sciences sub-sector exported a record \$12.7 billion worth of products in 2021.

## The Strength of Schools

The success of Life Sciences startups attests, in part, to the vision of investors such as Elevate Ventures,

*This contributed article was prepared by the authors in a personal capacity. The opinions expressed in this article are the authors' own and do not necessarily reflect the views or position of Startup Genome.*

BioCrossroads, IU Ventures, and Purdue Ventures. But it also reflects the strength of Indiana's first-rate universities, which produce industry-changing innovations.

In 1980, Indiana Senator Birch Bayh spearheaded the law that established universities' ownership of patents, making Indiana the birthplace of modern technology transfer. That tradition continues. For example, MBX Biosciences, which has raised about \$60 million, is developing a treatment for endocrine disorders based on discoveries made by its co-founder, the serial entrepreneur Richard DiMarchi, at his laboratory at Indiana University.

Purdue University and Indiana University offer world-class degrees and research facilities in Life Sciences, but the state's universities also are strong in other sub-sectors — Cleantech, Artificial Intelligence, and Industry 4.0 are among the ecosystem's fastest growing. In fact, Indiana's universities outperform institutions in every comparable ecosystem except Michigan's for all tech



sub-sectors, according to Startup Genome’s assessment.

Good tech workers are notoriously hard to find. But Purdue University, Indiana University, and the University of Notre Dame, among other institutions, have strong reputations and draw top students from across the country and internationally, creating a deep pool of engineering and business talent for Indiana’s startups. Students come for the education. Graduates stay for the low cost of living and quality of life.

## The Corporate Contribution

Indiana’s corporations — including Eli Lilly and Company, Anthem, and Salesforce Marketing Cloud — also attract talent to the state and invest in the ecosystem. Steve Case, the former AOL CEO who is an evangelist for widespread entrepreneurship, touts Salesforce’s 2013 acquisition of homegrown email marketing startup ExactTarget for \$2.5 billion as a milestone in Indiana’s development as a tech hub.

Corporations are customers and collaborators too. Manufacturing thrives in Indiana, and companies in that field are rapidly adopting Industry 4.0 technologies, encouraged by the state’s Manufacturing Readiness Grants. The co-founders of [MITO Materials](#) — Haley Marie Keith and her husband, Kevin Keith, who made *Forbes’* 30 Under 30 list 2021 — moved their specialty

chemical company from Oklahoma to Indianapolis to be at the center of midwestern manufacturing.

Haley says, “Corporate venture partners in Fintech, Agtech, and science are a rapidly growing capital pool. Indiana’s ecosystem of strong corporations give companies who grow here access to corporations that can be customers, mentors, collaborators, and investors. The Heritage Group hosted a manufacturing and materials based accelerator that initially drew us back to Indiana, and our company success has skyrocketed, in large part due to Heritage Group’s corporate contributions.”

Indiana’s strong agricultural economy has attracted Agtech startups from around the world, including [Taranis](#), a global business formerly based in Israel. A combination of conditional tax credits and the opportunity to operate from America’s largest commodity crop production region lured the company, which combines aerial imagery and AI to help growers’ decision-making. Overall, Indiana’s expanding Agtech sub-sector raised \$78 million last year.

## A Wealth of Connections

Among Indiana’s greatest assets is its high degree of local connectedness. That famous “Hoosier hospitality” has forged a strong sense of community and relationships among founders, investors, and experts, and this is what strengthens the ecosystem. Connections with global

networks are expanding as expat Hoosiers interact with Indiana alumni groups and investment networks, and many who leave Indiana for Silicon Valley or New York eventually move back to the state, bringing their experience and contacts with them.

At the end of the day, it is the entrepreneur’s experience that matters most in an ecosystem. [NanoBio Designs](#), a developer of genetic detection devices, recently relocated to Indianapolis from Des Moines, Iowa. COO Ryan Skaar credits Elevate Ventures, AgriNovus, the Indiana Economic Development Corporation and its Small Business Development Center, Purdue University, and others for helping the company raise money and grow. “This support system was a huge reason why we were able to establish our startup in Indiana,” says Skaar. “We are thankful for the timely introductions that allowed us to plug in.”



Canada

Atlantic Canada

MEMBERS:  
Innovacorp / Atlantic Canada Opportunities Agency

"Atlantic Canada attracted us with venture capital, non-dilutive dollars, research partners, talent, ocean access and an incredibly welcoming business community. This is the ideal region for us to develop our ocean climate technology."

Mike Kelland  
CEO and co-founder, Planetary Technologies



TOTAL EARLY STAGE FUNDING  
(2019H2-2021)

\$275 m

GLOBAL AVG.  
\$687 m



Amount (\$) Count (#)

Exits

(2017-2021)

ECOSYSTEM VALUE  
(2019H2-2021)

\$4.4 bn

GLOBAL AVG.  
\$28.6 bn

EARLY-STAGE FUNDING GROWTH TIER  
(2018/19 VS. 2020/21)



Calculated on a scale of  
1 (lowest) to 10 (highest)

Highlights

Atlantic Canada — made up of the eastern provinces of New Brunswick, Newfoundland and Labrador, Nova Scotia, and Prince Edward Island — continues to demonstrate that it is a fast-growing and successful ecosystem, boasting innovation in Oceantech and several other sectors. The region is producing globally leading companies such as CarbonCure Technologies, a Carbon Xprize winner that has been touted by its investor Bill Gates on CBS’s 60 Minutes. SaaS platform Introhive has raised over \$125 million and was listed in the Deloitte Technology Fast 500 ranking for three consecutive years.

The ecosystem is home to 16 universities and many support programs that provide startups with a wealth of resources to support their growth. More than 80% of graduates from Innovacorp’s acceleration program have secured early-stage equity investment. PEI BioAlliance is adding a bioscience manufacturing incubator to the resources it offers its flourishing bioscience cluster. Industrial biotech companies are coming from around the world to join the AscendBio scale up program. CDL Oceans is a global ocean technology accelerator. A company from its most recent cohort, Planetary Technologies, won a \$1 million Xprize Carbon Removal Milestone Award in April 2022.

Female-focused seed-stage fund Sandpiper Ventures is the newest venture capital fund based in Atlantic Canada. It closed the first CA\$10 million (\$8 million) of a planned CA\$20 million (\$16 million) funding round for its flagship SV Fund in September 2021.

Recent Atlantic Canada fundraising success stories include Newfoundland-based Mysa’s November 2021 \$20.3 million Series B, and in January 2022, Saint John, New Brunswick-based TrojAI raised a CA\$3 million (\$2.4 million) seed round.

MEDIAN SEED ROUND  
(2019H2-2021)

\$913 k



GLOBAL AVG.  
\$671 k

MEDIAN SERIES A ROUND  
(2019H2-2021)

\$3 m



GLOBAL AVG.  
\$4.7 m

SOFT. ENGINEER SALARY  
(2021)

\$47 k



GLOBAL AVG.  
\$46 k

TOTAL VC FUNDING  
(2017-2021)

\$1.3 bn



GLOBAL AVG.  
\$4.5 bn

TIME TO EXIT  
(2017-2021)

9.5 years



GLOBAL AVG.  
9.4 years



# Sub-Sector Strengths



## Life Sciences

The BioFuture 2030 report plots a course to double the number of Life Sciences companies in the region and almost quadruple annual sales to CA\$1.1 billion (\$881 million) by 2030. Medical device developer Adaptiiv raised a \$4 million Series A round in July 2021. ABK Biomedical has raised \$50 million to fund the development of its liver cancer radiation therapy.

## Blue Economy

Atlantic Canada is one of the world's leading ecosystems for Blue Economy startups. It is home to Canada's Ocean Supercluster — which has approved projects with a total value of more than CA\$320 million (\$256 million). The Ocean Startup Project has provided more than CA\$1.4 million to entrepreneurs developing solutions to address ocean industry challenges. Planetary Technologies raised CA\$7.8 million for its technology to remove carbon using direct ocean capture while restoring ocean health and generating green hydrogen.



## Cybersecurity

The Canadian Institute of Cybersecurity, based at the University of New Brunswick, is home to a host of Cybersecurity companies including Sonrai Security, which raised \$50 million in an October 2021 Series C round. Fraud detection unicorn Verafin was founded in St. John's, Newfoundland, and was acquired by Nasdaq for \$2.75 billion in February 2021.

# Reasons to Move Your Startup to Atlantic Canada

## Supportive Ecosystem

Atlantic Canada's close-knit ecosystem partners strive to support and connect founders to experts they need to accelerate growth. The percentage of immigrant and female founders is higher than the global average. The collaborative and inclusive ecosystem is supported by 31 higher educational institutions, including 16 universities, that provide a reliable pipeline of educated talent.

## Global Impact

Atlantic Canada is strategically located for access to both Europe and North America: four hours behind London and four hours ahead of Los Angeles. Its founders are creating solutions for the world's most urgent problems, especially in the areas of Life Sciences, Cybersecurity, and the Blue Economy.

## Living Well

Atlantic Canada is home to four cities ranked in the top 10 best communities in Canada by Maclean's: Halifax, Charlottetown, Moncton, and Fredericton. Affordable real estate, low crime rates, proximity to ocean and nature. In Atlantic Canada, it's possible to work all day, surf at night. The region boasts a full-stack lifestyle.



# Selected Startup Organizations

## STARTUP GENOME MEMBERS

### Innovacorp

Innovacorp is Nova Scotia’s early stage venture capital organization. Early stage investment is at the core of their business model. They also give entrepreneurs access to world-class incubation facilities, expert advice and other support to help accelerate their companies. Target industries include information technology, clean technology, life sciences and ocean technology.

MEMBER

### Atlantic Canada Opportunities Agency

The Atlantic Canada Opportunities Agency (ACOA) is working to make Atlantic Canada a hotbed for successful innovation-based startups. As an agency of the Government of Canada, ACOA is making it easier for high-potential firms by helping them access capital, operational experience, technical knowledge, mentorship, and a network of professionals ready to support and guide them through each stage of growth.

MEMBER

## KEY ECOSYSTEM PLAYERS

### Creative Destruction Lab

CDL is a seed-stage program for massively scalable, science- and technology-based ventures. The program employs a unique, objective-setting focused mentoring process that matches seed-stage founders with experienced entrepreneurs and investors.

### New Brunswick Innovation Foundation

NBIF is an independent, private organization focused on venture capital & applied research funding. We help innovators in NB solve globally relevant problems through research, advice, access to capital & reinvest to further economic growth.

### Innovation PEI

Innovation PEI is the lead development Economic Development Agency for the province of Prince Edward Island. Innovation PEI supports, and works within the ecosystem, to create a vibrant, innovative and agile environment for business growth.

### Genesis

Genesis helps build amazing companies. As Newfoundland and Labrador’s pre-eminent innovation hub, Genesis is known for its incubator program, Enterprise, and has expanded to support startups from ideation all the way to scaling.

“Atlantic Canada’s startup ecosystem has been thriving and has now produced a multi-billion-dollar exit. With the hard work of organizations like Innovacorp and the Atlantic Canada Opportunities Agency, we know more big success is on the way!”

**JF Gauthier, Founder & CEO of Startup Genome**



United States

# Austin

"Austin has been a tech and startup hub for a couple of decades, but with the overwhelming amount of talent and capital now available, we are now considered the third leg of the stool in the startup world, along with Silicon Valley and Boston."

**Mitch Jacobson**

Executive Director, ATI, SW-ICORPS, UT LaunchPad



**TOTAL EARLY STAGE FUNDING**  
(2019H2-2021)

**\$1.8 bn**

GLOBAL AVG.  
\$687 m



**Amount (\$)** **Count (#)**

**Exits**

(2017-2021)

**ECOSYSTEM VALUE**  
(2019H2-2021)

**\$42 bn**

GLOBAL AVG.  
\$28.6 bn

**EARLY-STAGE FUNDING GROWTH TIER**  
(2018/19 VS. 2020/21)



Calculated on a scale of  
1 (lowest) to 10 (highest)

## Highlights

With low taxes, sunny weather, a vibrant cultural scene, and comparatively low cost of living, Austin is quickly becoming one of the leading startup ecosystems in the U.S. Austin ranked first in CompTIA's 2020 Tech Town USA index, which praised Austin as a "favorable alternative" to the Bay Area and New York for startups. The city is also cemented as a tech hub, with Tesla among the 10 tech companies that relocated to the city in 2021 alone.

Venture funding boomed in Austin in 2021, with local startups closing 387 deals valued at a record-setting \$4.9 billion, according to PitchBook data. That represents 211% growth compared to 2020. Austin had five of the top 10 venture capital funding deals in Texas in that year, with notable funding rounds including ICON Technology's \$207 million Series B in August and Elligo Health Research's \$135 million Series E in September. LiveOak Venture Partners, which makes early-stage investments in technology and technology-driven services, raised its largest fund to date, \$210 million, in late 2021.

The city is also home to SXSW South by Southwest, one of the largest and most anticipated tech events of the year, and Austin Startup Week attracts thousands of visitors from around the world. Local government also fosters innovation through events such as Austin Fast Start, a pitch competition for early-stage startups from the City of Austin's Economic Development Department in partnership with the Austin Young Chamber.

**MEDIAN SEED ROUND**  
(2019H2-2021)

**\$990 k**



GLOBAL AVG.  
\$671 k

**MEDIAN SERIES A ROUND**  
(2019H2-2021)

**\$6.5 m**



GLOBAL AVG.  
\$4.7 m

**SOFT. ENGINEER SALARY**  
(2021)

**\$85 k**



GLOBAL AVG.  
\$46 k

**TOTAL VC FUNDING**  
(2017-2021)

**\$10 bn**



GLOBAL AVG.  
\$4.5 bn

**TIME TO EXIT**  
(2017-2021)

**9 years**



GLOBAL AVG.  
9.4 years



# Sub-Sector Strengths

## **Cybersecurity**

In 2020, 7% of U.S. cybersecurity funding was captured by Texas, with many companies in the sub-sector clustered in Austin. The Cybersecurity Boot Camp at UT Austin is training local talent for jobs in the field. SparkCognition, which creates AI software solutions including products for cybersecurity, closed a \$123 million Series D in January 2022 at a valuation of more than \$1.4 billion, and protective intelligence software platform company Ontic raised a \$40 million Series B in November 2021.

## **Cleantech**

Austin is a Cleantech hub, with over 200 companies that employ approximately 20,000 people in the sub-sector. This includes carbon capture startup Earthly Labs, which was acquired by Chart Industries for \$62 million in December 2021. Founded in 2001, Austin's ATI Clean Energy Incubator (CEI) is one of the longest-established energy and Cleantech incubators in the U.S, and its parent institution, the University of Texas, claims to do more energy research than any other university in the world.



# Reasons to Move Your Startup to Austin

## **Business Friendly Environment**

Austin's tech community is welcoming and collaborative, with many established players willing to serve as resources for anyone new or thinking of moving to the city. More concretely, Texas is one of seven states in the U.S. with no corporate income tax, allowing startups to benefit from increased purchasing power, lower operating costs, and potentially higher profits.

## **Educated Workforce**

The University of Texas is one of the 40 best universities in the world and among the top 20 American universities, as ranked by Times Higher Education. It is known for producing engineers and developers, as well as turning out graduates specialized in pharmaceuticals, biotech, and green energy.



United States

Boston #4

"Boston has an incredible density of talent from veteran entrepreneurs, universities, investment capital, pillar companies, and a supportive ecosystem. It's a magical combination of the key ingredients to fuel startups."

David Chang  
General Manager of Expert Network, Hunt Club, Founding Member, TBD Angels



TOTAL EARLY STAGE FUNDING  
(2019H2-2021)

\$8.7 bn

GLOBAL AVG.  
\$687 m



Amount (\$) Count (#)

Exits

(2017-2021)

ECOSYSTEM VALUE  
(2019H2-2021)

\$266 bn

GLOBAL AVG.  
\$28.6 bn

EARLY-STAGE FUNDING GROWTH TIER  
(2018/19 VS. 2020/21)



Calculated on a scale of  
1 (lowest) to 10 (highest)

Highlights

With its incredible strength in Life Sciences and Robotics and world-leading universities, Boston is a startup powerhouse. The ecosystem is consistently in the top five global leaders in the GSER rankings, a result of its strong talent, funding, and experience, among other factors.

In 2021, the top 10 funding events in the ecosystem alone added up to more than \$7 billion, more than double 2020's total. Amazon aggregator Thrasio led the way, raising \$1.85 billion overall in 2021, and Devoted Health raised \$1.15 billion in October. VC deal sizes are also ballooning in the ecosystem — 2021 saw \$28 billion raised from 133 VC deals in Massachusetts.

The Boston ecosystem is particularly welcoming to women, with several local ecosystem standouts headed by female leaders, including Care.com. Around 10% of startups here are founded by women, which compares favorably to a national average of 3% of VC dollars going to female founders. Boston is also home to several women-founded venture capital firms including Boston Seed Capital, Victress Capital, and Glasswing Ventures.

Standout events in Boston's business event calendar include Startup Week, an annual celebration of entrepreneurship and innovation, and the ecosystem is home to a large number of support organizations, including nonprofit accelerator MassChallenge and seed-to-Series A incubator TIE ScaleUp.

MEDIAN SEED ROUND  
(2019H2-2021)

\$1.5 m



GLOBAL AVG.  
\$671 k

MEDIAN SERIES A ROUND  
(2019H2-2021)

\$8.3 m



GLOBAL AVG.  
\$4.7 m

SOFT. ENGINEER SALARY  
(2021)

\$90 k



GLOBAL AVG.  
\$46 k

TOTAL VC FUNDING  
(2017-2021)

\$51 bn



GLOBAL AVG.  
\$4.5 bn

TIME TO EXIT  
(2017-2021)

8.9 years



GLOBAL AVG.  
9.4 years



# Sub-Sector Strengths

## Life Sciences

Home to over 1,000 Life Sciences companies, Boston is among the world’s top Life Sciences hubs. The greater Boston area is home to five leading National Institutes of Health-funded hospitals and boasts the highest per-capita government biotech funding in the country. Life Sciences companies in Massachusetts raised a record high of more than \$13 billion in 2021. The Massachusetts Life Sciences Center offers a tax incentive program and has awarded more than \$241 million to relevant companies in the state.

## Advanced Manufacturing & Robotics

Robotics companies employ more than 4,700 people. In July 2021, accelerator The Founder Institute announced partnerships with NASA Ames Research Center and MassRobotics for a Founder Institute AI & Robotics Accelerator program in Boston. Digital surgery company Activ Surgical has raised a total of \$85.4 million over five rounds, and Realtime Robotics raised a total of \$47.2 million over five rounds. In September 2021, Locus Robotics raised a further \$50 million, taking its total funding to around \$300 million and making the company a unicorn.



# Reasons to Move Your Startup to Boston

## Support and Mentorship

Boston’s strong track record of success means newer founders can access abundant support and mentorship from experienced entrepreneurs. Established ecosystem members are willing to share advice on what it takes to grow a company, as well as connect founders to suppliers, financing, employees, and more.

## Tech Talent

The Boston region is home to around 60 colleges and universities, including world-leading institutions Harvard and MIT. The particular focus on engineering at many of these universities produces a steady flow of highly qualified engineers. It’s no surprise then that Boston made the top 10 markets in the U.S. and Canada for technology talent, according to CBRE’s 2021 Scoring Tech Talent report.

## Funding Research & Development

Several institutions outside of the universities also invest heavily in R&D in the Boston area. CARB-X pledged to invest up to \$550 million in antibacterial R&D between 2016 and 2021, while restaurant technology company Toast is set to invest \$1 billion in hardware and software R&D over five years.



Canada

Calgary

MEMBERS:  
Platform Calgary / Calgary Economic Development

"Calgary is an exciting place to be for those in the tech and innovation space. Not only is the city breaking VC records, we're leading the continent in tech talent growth. Momentum is on Alberta's side."

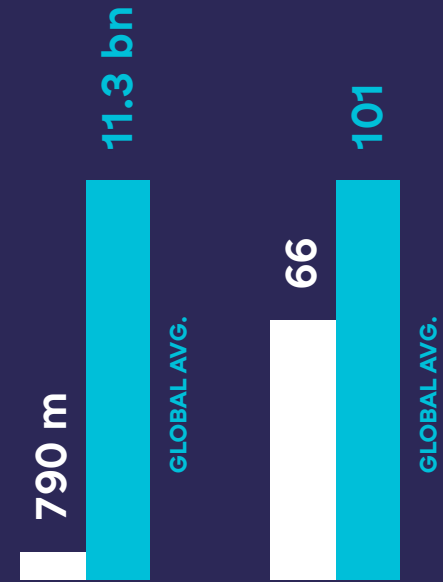
Doug Schweitzer  
Minister of Jobs, Economy and Innovation



TOTAL EARLY STAGE FUNDING  
(2019H2-2021)

\$247 m

GLOBAL AVG.  
\$687 m



Amount (\$) Count (#)

Exits

(2017-2021)

ECOSYSTEM VALUE  
(2019H2-2021)

\$2.5 bn

GLOBAL AVG.  
\$28.6 bn

EARLY-STAGE FUNDING GROWTH TIER  
(2018/19 VS. 2020/21)



Calculated on a scale of  
1 (lowest) to 10 (highest)

## Highlights

Calgary is rapidly transforming into a global tech hub. Almost 90% of venture capital investment in Alberta came from 66 Calgary companies, totaling \$500 million in deals. From Amazon Web Services' multibillion-dollar investment in a Data Center Region in Calgary to tech giants Infosys and Mphasis, Calgary is attracting major investments from global companies. These big fish poise Calgary's startup ecosystem for big things.

Accelerators and incubators are also flocking to Calgary. The likes of Thrive by SVG Ventures, Plug and Play, Avatar Innovations, Creative Destruction Labs – Rockies, Life Sciences Innovation Hub, and Alberta Catalyzer are all part of Calgary's tech ecosystem supporting the burgeoning startup scene. The innovation ecosystem is further strengthened by support from all orders of governments, including funding for an Energy Transition Centre located in the city's downtown core and the Platform Innovation Centre, as the nucleus of Calgary's innovation hub. Moreover, Mphasis, alongside the Government of Alberta and the University of Calgary launched the Quantum City Centre of Excellence in 2021.

Attracting and developing world-class tech talent in Alberta is Calgary's top priority, supported by Calgary's five post-secondary institutions, the Alberta Advantage Immigration Program, and the Startup Visa Program. According to LinkedIn Talent Insights, Calgary is seeing the fastest growth in tech talent in North America. Emerging as one of North America's most important innovation hubs, Calgary is where bright minds and big ideas come together with an unmatched spirit to solve global challenges.

MEDIAN SEED ROUND  
(2019H2-2021)

\$555 k



GLOBAL AVG.  
\$671 k

MEDIAN SERIES A ROUND  
(2019H2-2021)

\$799 k



GLOBAL AVG.  
\$4.7 m

SOFT. ENGINEER SALARY  
(2021)

\$68 k



GLOBAL AVG.  
\$46 k

TOTAL VC FUNDING  
(2017-2021)

\$930 m



GLOBAL AVG.  
\$4.5 bn

TIME TO EXIT  
(2017-2021)

10 years



GLOBAL AVG.  
9.4 years



# Sub-Sector Strengths

## **Cleantech**

Home to Canada's energy sector, Calgary is one of the world's top Cleantech markets. Startup Genome's 2021 GSER: Cleantech Edition named Calgary an "Ecosystem to Watch" and ranked it in the top 30 of 280 cities worldwide. Calgary is home to over 70% of Alberta's Cleantech firms, which are supported by sector-specific laboratories and centers of excellence, research institutions, and accelerators and incubators. Local tech companies are getting noticed, including Validere, a Blackrock-backed Calgary-based company, which raised \$43 million in Series B funding in March 2022.

## **Fintech**

Calgary is a fast-growing Fintech hub, with companies developing solutions in debt management, insurtech, and paytech that attract capital and world-class talent. Building on the momentum of unicorns Solium Capital by Morgan Stanley Shareworks and Benevity, Neo Financial also reached unicorn status in 2022. Bright stars Symend and Helcim have raised over \$215 million combined and are cementing Calgary's place as one of Canada's hottest Fintech ecosystems.



# Reasons to Move Your Startup to Calgary

## **Low Cost of Doing Business**

A transportation hub with connections to global markets, Calgary offers cost advantages including the lowest corporate tax rate in Canada, as well as no payroll tax, health care premiums, or provincial sales tax. This means that residents pay the lowest overall taxes in Canada. Average home prices, rent, and energy costs are far lower than in other large Canadian cities.

## **Global Talent**

Calgary, the third most multicultural city in Canada, attracts and retains top minds from around the world. Federal programs including the Global Talent Stream expedite visas, and the Startup Visa program has helped Calgary welcome newcomers from 150 countries in the last decade. This influx of talent helps growth-stage startups to get started in Calgary and scale globally.

**"Calgary's startup Ecosystem Value grew an impressive 62% since the last GSER, with strong contributions of its Cleantech and Fintech sectors. We praise the leadership of Platform Calgary and Calgary Economic Development in supporting this success."**

**JF Gauthier, Founder & CEO  
of Startup Genome**



# Selected Startup Organizations

## STARTUP GENOME MEMBERS

### Platform Calgary

Platform Calgary brings together the resources of Calgary’s tech ecosystem to help startups launch and grow. Through collaboration and targeted programming, we are a hub for technology-focused economic diversification and job creation.

MEMBER

### Calgary Economic Development

Calgary Economic Development works with business, government, and community partners to position Calgary as the location of choice for the purpose of attracting business investment, fostering trade, and growing Calgary’s workforce.

MEMBER

## KEY ECOSYSTEM PLAYERS

### Bow Valley College Centre for Entertainment Arts

A Centre for Entertainment Arts providing students with the skills and knowledge to enter the global animation, visual effects (VFX), and gaming industries.

### Mount Royal University Institute of Innovation and Entrepreneurship

The Institute develops capabilities of high-impact talent through program learning, co-operative education, entrepreneurship, live-client case studies, community service learning and field schools.

### Plug and Play Alberta

A global accelerator offering three streams: sustainability, health and a sector agnostic stream.

### SAIT School for Advanced Digital Technology (SADT)

SADT offers fast-track digital learning for new students, recent grads and alumni, and upskilling through Continuing Education, Professional Studies and Corporate Training.

### University of Calgary Hunter Hub for Entrepreneurial Thinking

A community hub that supports entrepreneurial student experiences via programming and events, funding opportunities, cultivating networks, and a dedicated collision space.



United States

# Chicago #19

"VC firms in the city, the nation, and around the globe should take note; Chicago's startup system is primed to be a world leader."

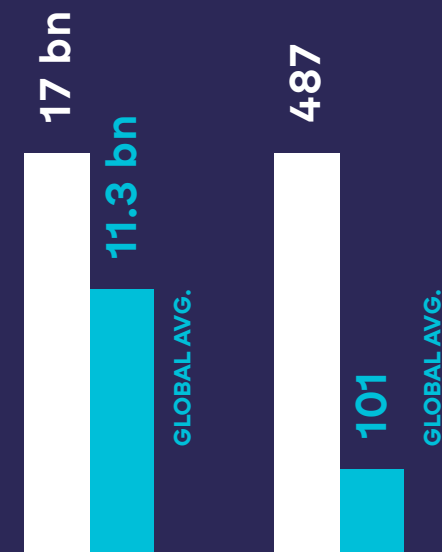
Forbes



TOTAL EARLY STAGE FUNDING  
(2019H2-2021)

\$1.7 bn

GLOBAL AVG.  
\$687 m



Amount (\$) Count (#)

Exits

(2017-2021)

ECOSYSTEM VALUE  
(2019H2-2021)

\$49 bn

GLOBAL AVG.  
\$28.6 bn

EARLY-STAGE FUNDING GROWTH TIER  
(2018/19 VS. 2020/21)



Calculated on a scale of  
1 (lowest) to 10 (highest)

## Highlights

Home to corporate behemoths like Walgreens and State Farm, Chicago has long been an industrial hub. Recently it's become a unicorn factory as well. In 2021, 12 Chicago-based startups reached over \$1 million in valuation, bringing the total numbers of unicorns to come out of the ecosystem so far to 20.

Chicago startups raised \$7 billion across 372 venture deals in 2021—by far the highest total for the ecosystem since PitchBook began tracking such statistics in 2006. New funds also emerged here in 2021, including LongJump, CAST US by Cleveland Avenue, and TechRise by P33.

Logistics platform ShipBob raised \$200 million at Series E in June 2021, peer-to-peer review company G2 raised \$157 million at Series D the same month, and marketing and sales automation platform ActiveCampaign raised \$240 million Series C in April 2021.

Chicago's startup scene is notably diverse. Women founders raised over \$257 million in 2021, nearly triple the \$80 million raised in 2019. The median deal size rose from \$2.5 million in 2019 to \$8.5 million in 2021. The same year, TechRise awarded nearly \$1 million in seed funding to more than 42 early-stage Black- and Latino-founded startups. In February 2022, highly regarded incubator 1871 launched a new accelerator program for Black-owned businesses, and a month later LongJump, a first-check venture fund that invests in Chicago's underrepresented founders, made its first investments. Notable startup events include the annual TECHSPO Chicago, and 2022 sees the city hosting the Venture Capital World Summit.

MEDIAN SEED ROUND  
(2019H2-2021)

\$1 m



GLOBAL AVG.  
\$671 k

MEDIAN SERIES A ROUND  
(2019H2-2021)

\$5 m



GLOBAL AVG.  
\$4.7 m

SOFT. ENGINEER SALARY  
(2021)

\$88 k



GLOBAL AVG.  
\$46 k

TOTAL VC FUNDING  
(2017-2021)

\$11 bn



GLOBAL AVG.  
\$4.5 bn

TIME TO EXIT  
(2017-2021)

10.7 years



GLOBAL AVG.  
9.4 years



# Sub-Sector Strengths

## Fintech

Launched in 2010, The Trading Show was the first high-frequency trading conference in the U.S. The annual event is now a leading Fintech event. The Chicago Payments Symposium provides an opportunity for payments ecosystem leaders to connect. Investment management technology startup Enfusion received a \$150 million minority investment from ICONIQ Growth in January 2021, “Super app” maker M1 Finance hit \$1.45 billion valuation after raising a \$150 million Series E in July 2021, and Zero Hash raised a \$105 million Series D in January 2022.

## AI, Big Data & Analytics

The Center for Applied Artificial Intelligence at the University of Chicago’s Booth School of Business brings together MBA students and researchers to drive AI-powered innovation, and the monthly Big Data & Analytics Roundtable provides a forum to discuss tools and applications of Big Data and Analytics across industries and functions. CCC Intelligent Solutions has raised a total of \$150 million over two rounds, and Big Data analytics startup Ocient raised a \$40 million Series B in January 2021.



# Reasons to Move Your Startup to Chicago

## Low Costs

Chicago boasts a lower cost of living than many of the country’s big coastal tech hubs, and Illinois’ flat-rate income tax is attractive to employees, especially when compared with New York and California. Office rents in the city are about half the rate of those in San Francisco, making operating costs more reasonable.

## Talent Pipeline

The greater Chicago region is home to some of America’s best MBA and engineering programs, which provide a talent pipeline for local businesses. The University of Chicago, Northwestern, Loyola University, DePaul University, and Columbia College all run popular entrepreneurial programs. The program at Northwestern’s Kellogg School of Management, The Garage, is currently incubating more than 60 student-founded startups. The City of Chicago works with local universities through programs including P33 to connect talent to job opportunities.

## Diverse Talent

Chicago has earned a reputation as being one of the best cities for female entrepreneurship. Approximately 30% of Chicago-based startups have either a woman or person of color as a founder or CEO, and the ecosystem has the largest percentage of female startup leaders in the U.S. At least eight Black-led or founded startups raised significant funds here in 2021.



Canada

Edmonton

MEMBERS:

Innovate Edmonton

"The world needs what Edmonton offers: a passionate and vibrant innovation ecosystem committed to the principles of equity, diversity and inclusion, aimed at solving some of the world's biggest challenges - climate emergency, public health, digital education and inclusion, food security and social and cultural innovation."

Catherine Warren

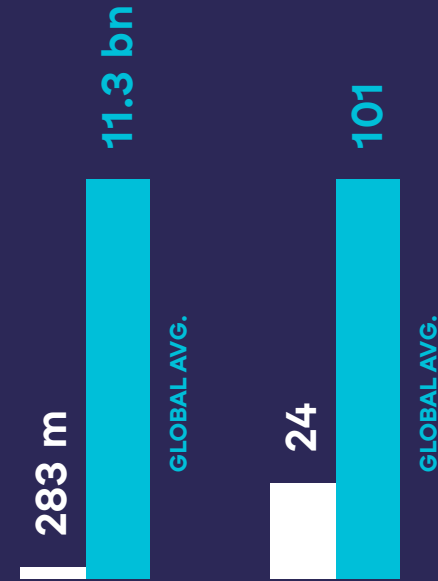
Innovate Edmonton CEO



TOTAL EARLY STAGE FUNDING  
(2019H2-2021)

\$134 m

GLOBAL AVG.  
\$687 m



Amount (\$) Count (#)

Exits  
(2017-2021)

ECOSYSTEM VALUE  
(2019H2-2021)

\$641 m

GLOBAL AVG.  
\$28.6 bn

EARLY-STAGE FUNDING GROWTH TIER  
(2018-19 VS 2020-21)



Calculated on a scale of  
1 (lowest) to 10 (highest)

# Highlights

Alberta saw a record year in 2021, with venture capital investment pulling in CA\$561 in deals. This reflects Edmonton's growing reputation as a low-cost, high quality-of-life destination for startups looking to access young, educated talent.

The Edmonton ecosystem is anchored by the University of Alberta, which is known for its particular excellence in AI and machine learning. It is also home to more than 20 startup support organizations and incubators, including Innovate Edmonton, Edmonton Startup Week, and ATB Entrepreneur Center.

In November 2021, the Alberta Scaleup and Growth Accelerator Program announced that it is investing CA\$35 million over three years to launch four new accelerators. One of these is Alberta Catalyzer, a pre-accelerator run by Platform Calgary and Innovate Edmonton. It welcomed its first cohort of 35 startups in January 2022 and intends to support 180 founders through the year. The Community Safety and Wellness Accelerator, a program that will work with the Edmonton Police Foundation, is targeted at AI and machine learning startups in the community safety and wellness space. Plug and Play Alberta is focused on developing the Alberta Innovation Corridor — an emerging hub of industries including AI, Life Sciences, and Cleantech across Edmonton and Calgary. The fourth, Alberta Accelerator by 500, is powered by 500 Global and will nurture seed-stage tech companies in Alberta.

Prominent funding deals in Edmonton include service scheduling software maker Jobber's \$60 million equity round in January 2021 and 3D-printing tech company Otech's \$30 million debt financing deal in March 2021.

MEDIAN SEED ROUND  
(2019H2-2021)

\$588 k



GLOBAL AVG.  
\$671 k

MEDIAN SERIES A ROUND  
(2019H2-2021)

\$2.1 m



GLOBAL AVG.  
\$4.7 m

SOFT. ENGINEER SALARY  
(2021)

\$54 k



GLOBAL AVG.  
\$46 k

TOTAL VC FUNDING  
(2017-2021)

\$212 m



GLOBAL AVG.  
\$4.5 bn

TIME TO EXIT  
(2017-2021)

8.8 years



GLOBAL AVG.  
9.4 years



# Sub-Sector Strengths

## **AI, Big Data & Analytics**

The University of Alberta is ranked #3 in the world for AI and machine learning research, and the Alberta Machine Intelligence Institute (Amii) is a world leader in research and part of the Pan-Canadian AI Strategy, the world's first national AI strategy. Google DeepMind set up its first international office in Edmonton, and Edmonton.AI is building a business ecosystem for AI and machine learning-based products and services. Crisis alert startup Samdesk raised a CA\$13.5 million Series A in September 2021.

## **Life Sciences**

Alberta Health Services has its headquarters in the Edmonton region, making the city a strategic location for Life Sciences startups. In June 2021, Alberta Enterprise announced it invested \$5 million in Amplitude's precision medicine venture fund to support the growth of Life Sciences companies in Alberta. Support organizations include Applied Pharmaceutical Innovation, which provides expertise, services and infrastructure to support researchers and startups in drug development, and the University of Alberta's Health Innovation Hub.



# Reasons to Move Your Startup to Edmonton

## **Skilled Talent**

With seven post-secondary institutions and over 100,000 enrolled students in the region, Edmonton offers startups a ready pool of highly skilled talent. The University of Alberta is a global leader in high-tech research and is home to one of the world's largest nanotechnology research centers. Edmonton's diverse and welcoming atmosphere attracts many international students, who bring fresh perspectives.

## **Affordability**

The cost of living in Edmonton is 49% less expensive than in San Francisco, and 24% less than in Toronto. The combined federal/provincial corporate income tax rate is 23% for general businesses and 11% for small businesses with revenues below \$500,000. This is the lowest tax rate in Canada and among the lowest corporate tax rates in North America.



# Selected Startup Organizations

## STARTUP GENOME MEMBERS

MEMBER

### Innovate Edmonton

Innovate Edmonton was born of a visionary city council ready to invest in economic diversification. With an accessible and inclusive approach, Innovate Edmonton aligns with the City of Edmonton’s Economic Action Plan, the United Nations Sustainable Development Goals, and modern Environment, Social, and Governance principles. Through three program divisions — Startup Edmonton, Scaleup Edmonton, and Accelerate Edmonton — it supports founders through all stages of growth and promotes inclusive innovation aimed at solving the world’s biggest issues. Innovate Edmonton showcases Edmonton on a global stage and generates economic, environmental, and social benefits for Edmontonians.

“Edmonton’s startup ecosystem grew an impressive 48% since the last GSER. The leadership of the City of Edmonton has been instrumental in fostering success.”

**JF Gauthier, Founder & CEO  
of Startup Genome**

## KEY ECOSYSTEM PLAYERS

### Edmonton Regional Innovation Network

Funded by Alberta Innovates, ERIN is a coalition of organizations in the Edmonton region building a collaborative innovation ecosystem that efficiently connects entrepreneurs to resources.

### Alberta Machine Intelligence Institute

Amii, a world-leading AI institute, advances leading-edge research in AI and translates scientific advancement into industry adoption, now supporting 100+ companies and thousands of AI practitioners.

### Startup TNT

Startup TNT’s mission is to be the best seed-stage investor in your town. It does this by building, nurturing, and sustaining an awesome startup community. It catalyzes investment capital into the most promising startups from the community.

### Alberta Women Entrepreneurs

A not-for-profit organization dedicated to helping women achieve their entrepreneurial aspirations. AWE provides access to capital, connections, and capacity through its unique programs and services.



United States  
Indiana

MEMBERS:  
Indiana Economic Development Corporation

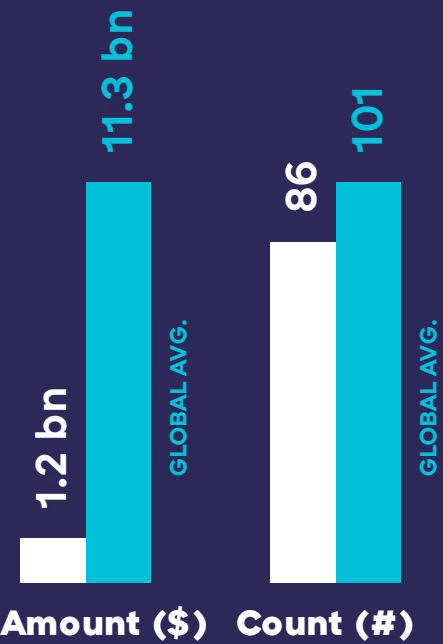
"The camaraderie and support from the entrepreneur community in Indiana is unmatched and when coupled with myriad public and private programming plus economic incentives, growing our business here was an easy decision."

Erik Coyne  
Founder, Folia



TOTAL EARLY STAGE FUNDING  
(2019H2-2021)

\$282 m



Exits

ECOSYSTEM VALUE  
(2019H2-2021)

\$2.9 bn

GLOBAL AVG.  
\$28.6 bn

EARLY-STAGE FUNDING GROWTH TIER  
(2018/19 VS. 2020/21)



Calculated on a scale of  
1 (lowest) to 10 (highest)

Highlights

Indiana is a leading participant in the Midwest’s entrepreneurship boom. Its strengths include a business-friendly climate, tight-knit community, top-notch universities, and successful entrepreneurs who invest in new startups. A 2021-2022 Startup Genome assessment found that Indiana’s Local Connectedness was above the global average.

In 2021, venture investment into the state’s startups passed \$1.4 billion across 159 deals, largely due to the sizable growth rounds of a few local scale-ups. That represents an 186% increase over 2020. The same year, Indianapolis-based Sixty8 Capital launched a new \$20 million fund aimed to provide early-stage funding for underrepresented founders.

The Indiana Economic Development Corporation (IEDC) supports entrepreneurs through the Indiana Small Business Development Center (SBDC) and the Indiana Procurement Technical Assistance Center (PTAC) among other initiatives. In 2021, the Indiana SBDC helped secure \$132.6 million in funding for 389 startups. In 2021, 47 foreign-owned businesses committed to locating or growing in Indiana. Elevate Ventures is an IEDC supported venture development organization with an aim to build sustainable entrepreneurship cultures in Indiana. Since 2011, it has invested \$132.5 million in 462 Indiana startups with \$1.7 billion in private co-investment. IU Ventures assists Indiana University students and faculty to advance high-potential venture opportunities with initiatives including IU Founders & Funders Network, IU Philanthropic Venture Fund, and the IU Angel Network. The Heritage Group Accelerator offers mentorship, collaboration, and R&D assistance for selected startups.

The Central Indiana Corporate Partnership is dedicated to the region’s continued economic growth, offering activities and programs that further develop Indiana’s advanced industries and talent.

MEDIAN SEED ROUND  
(2019H2-2021)

\$870 k



GLOBAL AVG.  
\$671 k

MEDIAN SERIES A ROUND  
(2019H2-2021)

\$1.8 m



GLOBAL AVG.  
\$4.7 m

SOFT. ENGINEER SALARY  
(2021)

\$70 k



GLOBAL AVG.  
\$46 k

TOTAL VC FUNDING  
(2017-2021)

\$855 m



GLOBAL AVG.  
\$4.5 bn

TIME TO EXIT  
(2017-2021)

10.2 years



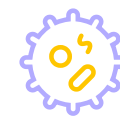
GLOBAL AVG.  
9.4 years



# Sub-Sector Strengths

## Industry 4.0 and Future Technologies

In 2021, about 43% of companies who responded to a survey by Conexus Indiana and the Indiana University Kelley School of Business Center for Excellence in Manufacturing had successfully implemented or piloted an Industry 4.0 technology, compared to just 20% of companies who said the same in 2020. The survey showed rapid adoption of 3D printing, collaborative robots, and machine vision. The Energy INSights program uses AI and data science to improve sustainability at Indiana manufacturers, and SMEs can participate at no cost.



## Life Sciences

Indiana's Life Sciences industry contributed more than \$79 billion in economic impact in 2021. VC investment into the sub-sector increased from \$262 million in 2020 to \$434 million in 2021, a record high. In another record, more than \$12.7 billion in Life Sciences products were exported from the state the same year. iA, a provider of pharmacy fulfillment solutions, plans to open its headquarters in Indianapolis. Pharmaceutical company List Biotherapeutics will open a \$110 million plant, and Stevanato Group and INCOG Pharma have also announced plans to open in the state.



## Cleantech

Cleantech was identified as Indiana's strongest performing sub-sector in early-stage funding in a Startup Genome assessment. Energy Systems Network and Battery Innovation Center have partnered with AWS to launch Energy Insights, which develops sustainable multifamily projects under the Moving Forward project and incubates energy startups in a world-class laboratory.

# Reasons to Move Your Startup to Indiana

## Local Connectedness

Indiana's ecosystem is welcoming and supportive, and there are dedicated initiatives to foster connections. Entrepreneurs get quickly connected to resources and Indiana entrepreneurial ecosystem builders believe that the fast and seamless flow of talent, information, and resources among actors in the system is essential for the ecosystem to grow and thrive.

## Business-Friendly Climate

Indiana is one of the best states in the U.S. for long-term fiscal stability and low cost of doing business. The Indiana Technical Assistance Program helps small businesses grow by providing up to \$15,000 in services from qualified professionals. The Venture Capital Investment Tax Credit program improves access to capital for Indiana companies. The state offers two tax incentives targeted at encouraging investments in R&D: a credit against Indiana state income tax liability and refunded sales tax on R&D equipment.

## Innovative Public-Private Partnerships

The Indiana ecosystem demonstrates commitment to sector development through innovative public-private partnerships including Central Indiana Corporate Partnership, AgriNovus Indiana, Ascend Indiana, BioCrossroads, Conexus Indiana, Energy Systems Network and TechPoint.



# Selected Startup Organizations

## STARTUP GENOME MEMBERS

MEMBER

### Indiana Economic Development Corporation

The Indiana Economic Development Corporation (IEDC) is charged with growing the state economy, driving economic development, and helping businesses launch, grow, and locate in the state. Led by Secretary of Commerce Brad Chambers and governed by a 15-member board chaired by Governor Eric J. Holcomb, the IEDC manages initiatives including performance-based tax credits, workforce training grants, innovation and entrepreneurship resources, public infrastructure assistance, and talent attraction and retention efforts.

“Indiana’s startup ecosystem grew an impressive 28% since the last GSER, with an Ecosystem Value reaching almost \$3 billion. Now a Global Top 40 Emerging Ecosystem we know it will continue to thrive thanks to the leadership of the Indiana Economic Development Corporation.”

**JF Gauthier, Founder & CEO  
of Startup Genome**



United States

# Los Angeles #6

"We built a rock hard community, and seeing L.A. now, as one of the top startup cities in the world, is a testament to the power of community."

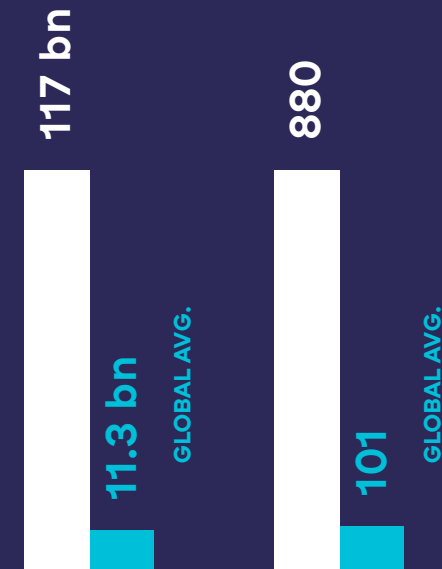
**Cam Kashani**  
Cofounder and CEO at COACCEL: The Human Accelerator



TOTAL EARLY STAGE FUNDING  
(2019H2-2021)

**\$5.9 bn**

GLOBAL AVG.  
\$687 m



Amount (\$) Count (#)

**Exits**

(2017-2021)

ECOSYSTEM VALUE  
(2019H2-2021)

**\$297 bn**

GLOBAL AVG.  
\$28.6 bn

EARLY-STAGE FUNDING GROWTH TIER  
(2018/19 VS. 2020/21)



Calculated on a scale of  
1 (lowest) to 10 (highest)

## Highlights

Long known for movies rather than technology, and overshadowed as a startup hub by nearby Silicon Valley, Los Angeles has shifted in recent years to become not just one of North America's top startup ecosystems, but a global hotspot. What sets the growing startup ecosystem apart from many established tech hubs is its inclusivity. Los Angeles ranked sixth in Smart Asset's Best Places for Black Entrepreneurs 2022 study, which compared 57 U.S. metro areas. The number of Black-owned businesses increased by more than 41% over the past two years.

New venture capitalist firms and funds are furthering powering the ecosystem. Upfront Ventures has raised \$176.5 million for a new fund. Wonder Ventures has raised a new \$31 million early-stage fund focused exclusively on L.A. startups. Jumpstart Nova, which invests exclusively in Black-founded and Black-led health companies and has roots in L.A., has raised \$55 million. Haven Ventures, a new Fintech fund focused on seed and pre-seed startups, is cutting checks of up to \$1 million. New all-female, minority-led VC firm Emmeline Ventures is in the process of securing its initial fund, and Emmeline has already announced its first deal: \$30,000 toward a seed round for Blockchain startup Clutch Wallet.

The annual Upfront Summit hosts more than 1,000 investors, entrepreneurs, and ecosystem leaders. The latest edition took place in Los Angeles in March 2022. TECHSPO Los Angeles 2022 is scheduled for July. The Montgomery Summit, one of the premier technology conferences in the U.S., will take place in Santa Monica in May.

MEDIAN SEED ROUND  
(2019H2-2021)

**\$1 m**



GLOBAL AVG.  
\$671 k

MEDIAN SERIES A ROUND  
(2019H2-2021)

**\$7 m**



GLOBAL AVG.  
\$4.7 m

SOFT. ENGINEER SALARY  
(2021)

**\$94 k**



GLOBAL AVG.  
\$46 k

TOTAL VC FUNDING  
(2017-2021)

**\$39 bn**



GLOBAL AVG.  
\$4.5 bn

TIME TO EXIT  
(2017-2021)

**9.4 years**



GLOBAL AVG.  
9.4 years



# Sub-Sector Strengths

## Life Sciences

UCLA has more than 350 medical research centers, labs, and institutes, and receives approximately \$1 billion in research funding annually. The Los Angeles Biomedical Research Institute at UCLA influences healthcare advancements throughout the world. Biopharma company ACELYRIN raised a \$250 million Series B in November 2021. Biotech startup Appia Bio launched in May 2021, backed by a \$52 million Series A.

## Gaming

According to CBRE, of the 60 esports teams active in the U.S. in 2021, 16 are headquartered in Greater Los Angeles, making the area home to the highest concentration of esports teams in the country. Six of the 10 most valuable esports teams are headquartered in Los Angeles, according to Forbes. Future Forum: The Future of Esports was held here in December 2021. Avatar technology company Genies raised a \$150 million Series C in April 2022, valuing the company at \$1 billion. Video game engine Mythical Games raised a \$150 million Series C in November 2021.

## Cleantech

L.A. Cleantech Incubator (LACI) offers incubator programs to help Cleantech startups gain access to capital and scale with a special emphasis on underrepresented communities such as women and people of color. It has supported 281 startups that have gone on to raise a total of \$636 million and secured state funding to identify a satellite green workforce training hub in South LA in anticipation of launching a training program in fall 2022.

# Reasons to Move Your Startup to Los Angeles

## Creative Talent

A global hub for the entertainment, culture, media, and fashion industries, Los Angeles is one of the creative capitals of the world. One out of every six people in the region is employed in a creative field, providing startups with a vast pool of creative talent and energy to draw from.



United States

# Miami

MEMBERS:

Knight Foundation

"Miami's pursuit of becoming what I call 'the capital of capital' is about not just financial capital, but also our rich ecosystem of human, social and cultural capital. It is clear that the confluence of these forms of capital will play a critical role in our Miami being definitive of what a competitive 21st century city can look like, where everyone is at the table of opportunity."

Francis Suarez

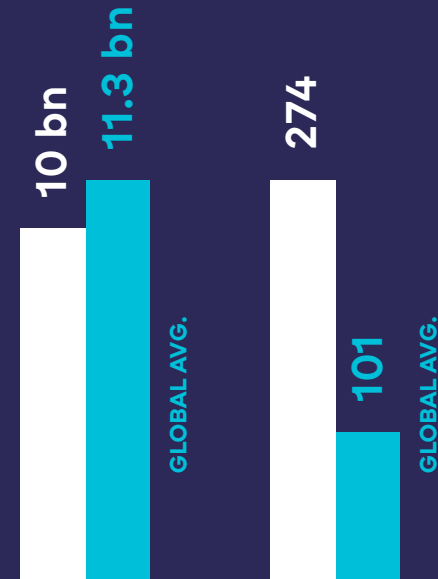
Mayor, City of Miami



TOTAL EARLY STAGE FUNDING  
(2019H2-2021)

\$1.9 bn

GLOBAL AVG.  
\$687 m



Amount (\$) Count (#)

ECOSYSTEM VALUE  
(2019H2-2021)

\$36 bn

GLOBAL AVG.  
\$28.6 bn

EARLY-STAGE FUNDING GROWTH TIER  
(2018/19 VS. 2020/21)



Calculated on a scale of  
1 (lowest) to 10 (highest)

## Highlights

Miami's sunny weather and low taxes made it an attractive option when many people switched to remote work, and the city is quickly evolving into a hot startup destination. In 2021, venture funding in Miami shot up to a record \$5.6 billion, up from \$940 million in 2013. In January 2021, Japanese conglomerate SoftBank announced plans to invest \$100 million into Miami-based startups. It has since blown way past that number, pumping more than \$250 million into the city's startups.

To keep up with growing demand for tech talent and local interest in careers in tech, Miami Dade College (MDC) will use \$15 million in grant funding from the John S. and James L. Knight Foundation and government partners to hire faculty members and launch programs in AI, data analytics, and cloud computing. The Knight Foundation also committed \$17 million to Florida International University, the University of Miami, and CodePath to accelerate tech talent development. IBM's Global University Programs group is spending \$10 million to prepare students for tech careers and is opening an AI Center at MDC.

eMerge Americas organizes an annual tech conference that anchors Miami Tech Week, as well as executive summits, pitch competitions, and other events. The Startup Studio, a program to help bridge the funding gap for minority founders, disburses \$50,000 grants. Fintech KEO World raised \$500 million in a debt financing round in February 2022, and HealthCare.com has raised \$244 million over seven rounds, including a February 2022 \$31.5 million Series C.

MEDIAN SEED ROUND  
(2019H2-2021)

\$750 k



GLOBAL AVG.  
\$671 k

MEDIAN SERIES A ROUND  
(2019H2-2021)

\$4.4 m



GLOBAL AVG.  
\$4.7 m

SOFT. ENGINEER SALARY  
(2021)

\$75 k



GLOBAL AVG.  
\$46 k

TOTAL VC FUNDING  
(2017-2021)

\$7.6 bn



GLOBAL AVG.  
\$4.5 bn

TIME TO EXIT  
(2017-2021)

9.6 years



GLOBAL AVG.  
9.4 years

## Exits

(2017-2021)



# Sub-Sector Strengths

## Life Sciences

Rapha Capital Management announced a \$100 million venture fund focused on early-stage biotech startups in April. Its first investment in December was \$3 million in convertible note financing for DELIVER Therapeutics. Heru, a spinout from the University of Miami's Bascom Palmer Eye Institute, is building an AI-powered platform for eye diagnostic and vision correction. The company closed a \$30 million Series A in May 2021.

## Blockchain

Miami investments in Blockchain skyrocketed 2,061% in 2021. In June, crypto solutions provider Blockchain.com announced it was moving its U.S. headquarters here, and cryptocurrency trading platform eToro and cryptocurrency exchange FTX will both open offices in Miami by the end of 2022. The Bitcoin 2021 conference featured speakers including Jack Dorsey and cryptographer Nick Szabo, and Bitcoin 2022 expanded to four days. Green NFT platform OneOf raised a \$63 million seed round in May 2021, and Recur raised a \$50 million Series A in September 2021.



# Reasons to Move Your Startup to Miami

## Higher Education

Florida boasts five of the top 100 public universities in the country, including the University of Florida, which was ranked in the top five in 2021. U.S. News and World Report has ranked Florida's higher education system the best in the nation for five consecutive years. Florida's 2021–2022 budget invests an additional \$64.5 million in state colleges and an additional \$130 million in state universities.

## Low Taxes

Florida levies no state income tax, making the overall tax burden in the state just 6.97%, the sixth-lowest in the U.S.

## Access to Venture Capital

With its risk-friendly, pro-business atmosphere, Miami has become a fast-growing venture capital center. Dozens of venture capital funds have offices in the city, and Miami has added more than 20 venture capital funds in the past three years, including Softbank's Latin American operations, Founders Fund, Atomic, and Andreessen Horowitz.



# Selected Startup Organizations

## STARTUP GENOME MEMBERS

MEMBER

### Knight Foundation

We are social investors who support a more effective democracy by funding free expression and journalism, arts and culture in community, research in areas of media and democracy, and in the success of American cities and towns where the Knight brothers once published newspapers.

“Miami’s startup ecosystem has grown by leaps and bounds, jumping up nine spots in the GSER ranking and producing two \$1 billion+ exits. The Knight Foundation has been a tangible supporter of Miami and we’re honored to join them in highlighting this growth.”

**JF Gauthier, Founder & CEO  
of Startup Genome**

## KEY ECOSYSTEM PLAYERS

### University of Miami

A private research university with more than 17,000 students from around the world, the University of Miami is a vibrant and diverse academic community focused on teaching, learning, and the discovery of new knowledge.

### Florida International University

Florida International University is a Top 50 public university that drives real talent and innovation in Miami and globally. Very high research (R1) activity and high social mobility come together at FIU to uplift and accelerate learner success.

### Miami Dade College

As democracy’s college, Miami Dade College changes lives through accessible, high-quality education. MDC Tech offers a pathway for students to learn tech skills via degrees or professional development opportunities that lead to employment.

### CodePath

CodePath.org is a 501 (c)(3) nonprofit increasing diversity in tech by transforming college C.S. education for underrepresented minorities and underserved populations.

### Tech Equity Miami

Tech Equity Miami is deploying \$100 million over five years into initiatives that remove entry barriers into the tech industry and expand economic opportunities in Greater Miami.



United States

Mississippi

MEMBERS:

Mississippi Development Authority

"Mississippi is becoming recognized for groundbreaking work in the Blue Economy, renewable energy and biotechnology. Companies in these areas will find our state offers the competitive advantages needed to excel in today’s dynamic economy."

Laura Hipp

Deputy Director, Mississippi Development Authority

Startup Genome

North American Ecosystem in Affordable Talent

Top 15

TOTAL EARLY STAGE FUNDING

(2019H2-2021)



ECOSYSTEM VALUE

(2019H2-2021)



EARLY-STAGE FUNDING GROWTH TIER

(2018/19 VS. 2020/21)



Highlights

With its streamlined regulatory environment, and a robust, integrated research and development ecosystem that includes four major public research universities, military laboratories, and private sector firms, Mississippi has hung up the welcome sign for business. The state’s technology sectors focus on the development and commercialization of emerging technology-intensive projects, and dedicated workforce development programs aggressively support these initiatives.

A 2021 Tax Foundation study calculated the total effective state and local tax rate for eight types of business facilities and found that the tax rate on new businesses in Mississippi would be lower than in Florida and Texas for all eight business types.

CoBuilders, Mississippi’s first statewide accelerator and pitch competition, kicked off in March 2022. The Women and Minority Entrepreneur Development Program focuses on supporting companies led by women and minority founders, which is particularly relevant here as Mississippi has one of the highest minority populations in the U.S. Jackson State University opened its Women’s Business Center in February 2022.

Over the last two decades, Innovate Mississippi has connected more than 1,500 startups to over \$181 million in seed and venture capital. Launched in August 2021, the South Mississippi Angel Fund gathered investors to create a \$1 million fund for early-stage companies in South Mississippi.

The ACCELERATE Conference on Technology Innovation is an annual gathering for stakeholders in the Mississippi ecosystem. REDe Entrepreneurship Summit is an annual event designed to inspire students to become entrepreneurs. The MSU Startup Summit is one of the Southeast’s top student startup competitions.

MEDIAN SEED ROUND

(2019H2-2021)



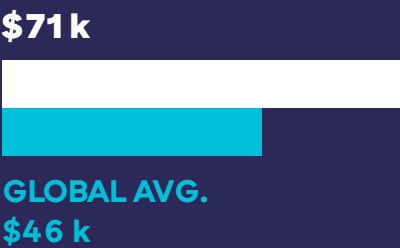
MEDIAN SERIES A ROUND

(2019H2-2021)



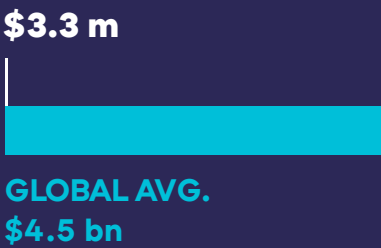
SOFT. ENGINEER SALARY

(2021)



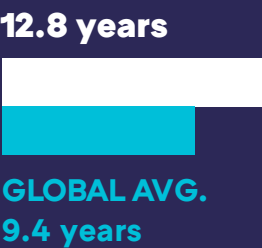
TOTAL VC FUNDING

(2017-2021)



TIME TO EXIT

(2017-2021)





# Sub-Sector Strengths



## Life Sciences

Mississippi is an established base for Life Sciences thanks to its strong healthcare workforce, two medical schools, five four-year institutions with nursing schools, and many training programs. Pioneering research conducted in the state has led to innovations in fields from organ transplants to nanotechnology. Spectra Laboratories, a subsidiary of Fresenius Medical Care North America, has started work on a state-of-the-art laboratory in Southaven. Jackson-based Biopharmaceutical company Nitrase Therapeutics raised a \$7 million Series A in November 2021.



## Advanced Manufacturing & Robotics

Mississippi is a dynamic Advanced Manufacturing hub. The sub-sector employs some 140,000 people in the state. Milwaukee Tool is investing \$60 million in advanced technology and manufacturing equipment to expand its facilities in Mississippi and open a new one in Granada by the end of 2022. The company also opened a \$7 million facility in Clinton in 2021. Together, these investments will create 1,200 new jobs in the state.



# Reasons to Move Your Startup to Mississippi

## Business-Friendly Environment

Mississippi's four major public research universities offer undergraduate degrees in 16 engineering fields. They also partner with industry to train highly skilled electronics engineering technicians. Manufacturers operating in Mississippi for at least two years may be eligible for investment tax credits. Mississippi also boasts energy costs around 20% below the national average and exempts energy used in manufacturing from sales tax. Mississippi is home to the largest transformer manufacturer in the U.S. and Huntington Ingalls, which manufactures 70% of the Navy's warships.

## State Support

Mississippi offers Rural Business Development Grants of up to \$100,000 to help emerging businesses in rural communities start up or expand. The complementary Rural Community Development Initiative facilitates housing and community and economic development projects. The Advantage Jobs Program provides cash rebates to encourage businesses creating high-quality jobs to set up or expand in Mississippi. Those new jobs must meet or exceed the average annual wage of the state or the county in which the company is located.

## Access to International Markets

Mississippi's transport network includes 20 highways; 76 airports, including two international airports; dozens of rail systems serving 2,500 miles of track; and 15 ports along Mississippi's three navigable waterways. The Mississippi River borders the state to the west, the Tennessee Tombigbee Waterway borders it to the east, and the Gulf of Mexico forms its southern border. Mississippi boasts two deep-water ports along the Gulf of Mexico, allowing companies convenient access to international markets.



# Selected Startup Organizations

## STARTUP GENOME MEMBERS

MEMBER

### Mississippi Development Authority

Mississippi Development Authority (MDA) is Mississippi’s premier economic and community development agency. Companies of every size — from homegrown Mississippi startups to international corporations — depend on MDA’s team of employees for business development assistance, support with business incentives, and access to talent from workforce training programs, colleges, and universities.

“Startup Genome is honored to work with the Mississippi Development Authority to support the growth of their startup ecosystem. Mississippi’s tight-knit entrepreneurial innovation community is the result of industry, university, capital and tech talent working together to produce thriving businesses and more jobs for the state.”

**JF Gauthier, Founder & CEO  
of Startup Genome**



Canada

Montréal

MEMBERS:  
Startup Montréal / Centech / Montréal International / Ville de Montréal

"Montréal demonstrates a strong dynamic of innovation and a high level of performance and attractiveness for both entrepreneurs and investors. Access to capital, talent, and high quality support from key private and public stakeholders working together allows our ecosystem to stand out globally in several cutting-edge sectors."

Guillaume Caudron  
CEO Réseau Capital, Quebec VC & PE association



TOTAL EARLY STAGE FUNDING  
(2019H2-2021)

\$857 m

GLOBAL AVG.  
\$687 m



Amount (\$) Count (#)

Exits

(2017-2021)

ECOSYSTEM VALUE  
(2019H2-2021)

\$24 bn

GLOBAL AVG.  
\$28.6 bn

EARLY-STAGE FUNDING GROWTH TIER  
(2018/19 VS. 2020/21)



Calculated on a scale of  
1 (lowest) to 10 (highest)

# Highlights

Montréal offers a strategic location and highly educated talent. With its world-renowned cultural life and safe neighborhoods, it’s a great place to live and work. A strategic gateway to European markets and other North American startup hubs, Montréal is just 90 minutes by air from New York, Boston, and Toronto, and less than an hour from the U.S. border. It is home to seven universities and more than 200,000 students, including 35,500 international students. These universities rank first in Canada for research funding, taking in more than \$1.34 billion yearly. Local companies recruit from a bilingual, tech-savvy talent pool.

Montréal’s startups attracted \$1.6 billion in funding in 2021, a new record for the city. BKR Capital, the first Canadian VC fund dedicated to Black-led businesses, recently opened an office in Montréal. Female-led fund Accelia Capital is also based here.

With dedicated task forces, collective briefs, monthly meetings, and an annual ecosystem partners’ event, founders benefit from a host of startup support organizations that collaborate on a daily basis. MILA, the Quebec AI institute, has joined forces with BDC Capital to nurture AI-related startups. Aerospace group Aéro Montréal and incubator Centech are working together to foster sustainable innovation within the aerospace supply chain. Aéro Montréal also organizes the Global Aerospace Supply Chain Summit. Cycle Momentum and Innovacorp have allied to boost their mentoring and networking offerings. Women Techmakers Montréal was created by Google to highlight women in technology.

MEDIAN SEED ROUND  
(2019H2-2021)

\$1 m



GLOBAL AVG.  
\$671 k

MEDIAN SERIES A ROUND  
(2019H2-2021)

\$6.8 m



GLOBAL AVG.  
\$4.7 m

SOFT. ENGINEER SALARY  
(2021)

\$63 k



GLOBAL AVG.  
\$46 k

TOTAL VC FUNDING  
(2017 - 2021)

\$5 bn



GLOBAL AVG.  
\$4.5 bn

TIME TO EXIT  
(2017 - 2021)

10.4 years



GLOBAL AVG.  
9.4 years



# Sub-Sector Strengths

## Life Sciences

The Montréal Life Sciences cluster links government, research, and industry. Home to 16 research centers and 14 world-class university research chairs in Life Sciences-related fields, CA\$590 million was invested in Life Sciences in Montréal in 2021, representing 30% of all VC investment in the region during the period. Montréal General Hospital launched a new health tech incubator in September 2021.

Congruence Therapeutics' raised a CA\$63 million Series A in February 2022, and Ventus Therapeutics raised a \$140 million Series C the same month.

## AI, Big Data & Analytics

More than 600 researchers and 14,000 university students in AI-related programs call Montréal home. The International Center of Expertise for the Advancement of Artificial Intelligence (ICEMAI) is one of two global centers of expertise. It supports the responsible use of AI and analyzes Canada's capacity to commercialize and adopt AI-related technologies. The Quebec government made a CA\$100 million investment in Sherbrooke Quantique, an innovation zone focused on quantum computing. Concordia University is launching an Applied AI Institute. AI-based travel app Hopper raised a Secondary Market round of \$35 million in February 2022. 2022 saw a new partnership between AI Sweden and AI-research institute MILA.

## Fintech

Montréal is a hotbed for sustainable finance. The city ranked first in Canada and third in North America among the 78 financial centers considered for the Global Green Finance Index 7. Montréal will host the second annual Sustainable Finance Summit in 2022. Fintech Cadence has partnered with Fintel Connect to support startups in the sub-sector. The CA\$120 million the Station FinTech Montréal Accelerator launched in 2021.

Opportunity Fund invests in later-stage Fintech startups. Fintech platform Zapper raised a \$15 million Series A in May 2021. Crypto exchange Shakepay raised a CA\$44 million Series A in January 2022.

# Reasons to Move Your Startup to Montréal

## Educated Talent

Montréal is home to several of Canada's best universities, including McGill University (currently ranked joint 27th in the world and second in Canada). Five new programs have been created in recent months to further support the transfer of academic talent towards entrepreneurship. In February 2022, the startup ecosystem welcomed hyper-growth program Hypercroissance Québec to provide tailored support to its most promising scaleups.

## Quality of Life

Montréal is a hub for creativity, arts and culture. Extremely safe and dynamic, the city offers residents excellent public transportation and easy access to nature. The cost of living in Montréal is lower than in other major Canadian cities including Vancouver and Toronto. Montréal tied for first place in North America with Boston in the QS Best Student Cities 2022 Rankings, and it ranked ninth globally.

## Government Support

Montréal offers strong governmental support, funding programs, and three new provincial strategies to support innovation. Quebec's 2022-23 budget extended a temporary increase in the tax credit relating to investment and innovation through 2023. The increase was implemented to accelerate the province's post-pandemic economic recovery. In February 2022, Quebec announced two new innovation zones, one specializing in quantum science and one in digital technologies. The government plans to invest more than \$150 million in these innovation zones.



# Selected Startup Organizations

## STARTUP GENOME MEMBERS

<div>MEMBER</div> <div><h3>Startup Montréal</h3><p>Startup Montréal is a not-for-profit organization born from the merger of Bonjour Startup Montréal with Montréal inc. Through collaborative projects, we extend Montreal’s startup ecosystem outreach and multiply its positive impact.</p></div>	<div>MEMBER</div> <div><h3>Centech</h3><p>Centech is dedicated to accelerate the creation and growth of deep-tech companies that market globally.</p></div>	<div>MEMBER</div> <div><h3>Montréal International</h3><p>For the past 25 years, Montréal International (MI) has contributed to building Greater Montréal’s international reputation and prosperity by acting as a driving force for economic development.</p></div>	<div>MEMBER</div> <div><h3>Ville de Montréal</h3><p>As a higher education town and a cosmopolitan city, Montréal is a breeding-ground for talents and an economic hub of knowledge. It also stands out because of it’s exceptional cultural vitality and world-renowned creative force.</p></div>
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## KEY ECOSYSTEM PLAYERS

<div><h3>Montréal International</h3><p>For 25 years, Montréal International has contributed to building Greater Montréal’s international reputation and prosperity by acting as a driving force for economic development.</p></div>	<div><h3>Startup Montréal</h3><p>Startup Montréal is a not-for-profit organization created through the merger of Bonjour Startup Montréal with Montréal inc. Through collaborative projects, it extends Montréal’s startup ecosystem outreach and multiplies its positive impact.</p></div>	<div><h3>Réseau Capital</h3><p>The venture capital and private equity association that brings together all stakeholders involved in the Quebec investment chain.</p></div>
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“The leadership of Startup Montréal, Centech, Montréal International, and Ville de Montréal in accelerating Montréal’s startup ecosystem has had tremendous impact. We are especially excited about Montréal’s four recent unicorns and a 138% growth since the last GSER that deserves it a Top 40 Global Ecosystem ranking.”

**JF Gauthier, Founder & CEO of Startup Genome**



United States

New York City #2

MEMBERS:

New York City Economic Development Corporation / Tech:NYC

"Record investment in New York startups is a testament to our city's unmatched entrepreneurial talent. Local tech continues to drive the city's economy — a win for all New Yorkers."

Jason Myles Clark

Executive Director, Tech:NYC



TOTAL EARLY STAGE FUNDING (2019H2-2021)

\$14 bn

GLOBAL AVG. \$687 m



Amount (\$) Count (#)

Exits

(2017-2021)

ECOSYSTEM VALUE (2019H2-2021)

\$371 bn

GLOBAL AVG. \$28.6 bn

EARLY-STAGE FUNDING GROWTH TIER (2018/19 VS. 2020/21)



Calculated on a scale of 1 (lowest) to 10 (highest)

Highlights

2021 was a red hot year for venture capital in America's second-largest tech hub. New York-based VC firms raised an estimated \$1.6 billion in funds in 2021, and venture-backed startups in the region raised more than \$55 billion — up from \$20.2 billion in 2020. The ecosystem also saw two of the largest traditional IPOs by deal size for venture-backed, NYC-based startups in the last decade: UiPath, which was founded in Bucharest before moving to the U.S., and Oscar Health. Five New York-based tech companies raised more than \$300 million in 2021: robotic process automation startup UiPath, Healthtech startup Ro, risk-detection AI company Dataminr, text message marketing startup Attentiv, and website building startup Squarespace, which also went public in 2021. Corporate card startup Ramp joined New York's unicorn club when it raised \$115 million in an April 2021 Series B round, reportedly becoming New York City's fastest-growing startup. It has since increased its total fundraising to \$1.4 billion over eight rounds.

New York-based WeWork is partnering with chambers of commerce and Tech:NYC to launch WeWork Growth Campus NYC to provide entrepreneurs with space and resources. WeWork has pledged \$25 million and will provide space in 11 locations. In 2021, the Queens Chamber of Commerce created Queens Tech Council, a tech industry group that advocates for tech companies in the borough and works to raise awareness that tech careers are accessible to everyone. Tech Year NYC, a pilot program created by Tech:NYC in partnership with Girls Who Code and the NYC Mayor's Office of Youth Employment, will provide paid work and mentorship opportunities at tech companies for 1,000 students.

MEDIAN SEED ROUND (2019H2-2021)

\$1.2 m



GLOBAL AVG. \$671 k

MEDIAN SERIES A ROUND (2019H2-2021)

\$8.1 m



GLOBAL AVG. \$4.7 m

SOFT. ENGINEER SALARY (2021)

\$102 k



GLOBAL AVG. \$46 k

TOTAL VC FUNDING (2017-2021)

\$88 bn



GLOBAL AVG. \$4.5 bn

TIME TO EXIT (2017-2021)

8.6 years



GLOBAL AVG. 9.4 years



# Sub-Sector Strengths

## **AI, Big Data & Analytics**

NYC-based AI companies received \$8.7 billion across 292 deals in 2021. AI Summit New York will bring together representatives from the world’s leading organizations to discuss an AI-powered future. A coalition of NYC government agencies and businesses opened the nation’s first Cyberattack Defense Center in 2021. EDC’s Cyber NYC initiative has invested in growing the cyber workforce while NYC-based cybersecurity firms are attracting investor attention.

## **Life Sciences**

In 2021, NYC’s annual life sciences VC and National Institutes of Health funding both touched all-time highs at \$1.4 billion and \$2.8 billion, respectively. NYC announced in June 2021 that it would be doubling its investment in the Life Sci NYC initiative to \$1 billion to cement New York as a global leader in Life Sciences. As of 2021, NYC’s total lab exclusive inventory totaled about 1.9 million square feet and is projected to grow to 4.64 million square ft by 2025.

## **Blockchain**

Mayor Eric Adams took his first three paychecks in cryptocurrency and has stated that he wants NYC to be the “center of cryptocurrency.” NYC is now home to over 250 blockchain startups and a growing pool of blockchain talent. Several of the largest blockchain employers in the world, including IBM, R3, and Coinbase, are also growing their footprint in NYC. In 2021, NYC accounted for almost half of all Blockchain investments nationally.

# Reasons to Move Your Startup to New York City

## **Dedicated Support**

NYC Business Quick Start is an effort to position NYC as the most business-friendly large city. It offers businesses a single point of contact to help navigate regulations and cuts through red tape to reduce processing time by 50%. New York SCORE provides free expert mentoring to entrepreneurs, and Empire State Development’s Small Business Division also offers resources. NYC Department of Small Business Services offers free legal services. WE Legal helps female entrepreneurs access resources on business-related topics.

## **High-Quality Talent**

NYC’s talent pool is over 4 million people, and roughly 3.2 million hold a bachelor’s degree — more than Los Angeles, San Francisco, Philadelphia, Washington DC, and Boston combined. 47% of the workforce is made up of immigrants and almost 200 languages are spoken in NYC. The workforce is cultivated by 100+ institutes of higher learning and numerous workforce training programs. Programs including Tech Talent Pipeline, a no-cost service to help companies find diverse, talented candidates, further strengthen the ecosystem.

## **Tax Benefits**

START-UP NY offers new and expanding businesses the opportunity to operate tax-free for 10 years on or near eligible university or college campuses in New York. These companies’ employees will pay no state or local personal income taxes for the first five years on income up to \$200,000 for individuals. Businesses also gain access to advanced research laboratories and industry expertise through these partnerships.



# Selected Startup Organizations

## STARTUP GENOME MEMBERS

### New York City Economic Development Corporation

New York City Economic Development Corporation creates shared prosperity across New York City’s five boroughs by strengthening neighborhoods and creating good jobs. NYCEDC works with and for communities to provide them with the resources they need to thrive, and we invest in projects that increase sustainability, support job growth, develop talent, and spark innovation to strengthen the City’s competitive advantage.

MEMBER

### Tech:NYC

Tech:NYC is an engaged network of tech leaders working to foster a dynamic, diverse, and creative New York. We bring together New Yorkers to support a successful technology ecosystem, attract and retain top-tier talent, and celebrate New York and the companies that call it home.

MEMBER

## KEY ECOSYSTEM PLAYERS

### AlleyCorp

AlleyCorp is a \$600M+ evergreen venture fund founded by serial entrepreneur Kevin Ryan that incubates and invests in transformational companies in New York City.

### Per Scholas

Per Scholas’ mission is to advance economic equity through rigorous training for tech careers and to connect skilled talent to leading businesses.

### Cornell Tech

Cornell Tech is Cornell University’s groundbreaking campus for technology research and computer science and engineering education in NYC.

### Company Ventures

Company is a one-million square foot innovation campus located in midtown NYC, and Company Ventures is the venture ecosystem that sits at the heart of the building, investing in New York’s most talented founding teams.

### Newlab

Newlab helps build, test, and scale world-changing technologies that support of the health of the planet through investment, venture building, and structured collaboration with industry and government partners.

“New York’s Ecosystem Value has doubled since the last GSER, an impressive feat, thanks to the continued leadership of NYC’s Economic Development Corporation and Tech:NYC. As the #2 Global Startup Ecosystem the city remains a pinnacle of startup community success.”

**JF Gauthier, Founder & CEO  
of Startup Genome**



United States

Philadelphia

**MEMBERS:**  
Ben Franklin Technology Partners of Southeastern Pennsylvania / University City Science Center / Drexel University

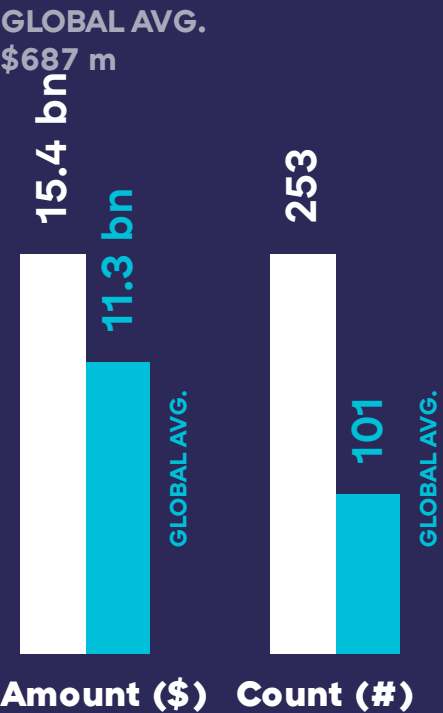
"Philly gave us an unfair advantage. The unique combination of access to talent and customers, and the supportive community of fellow founders, investors, and leaders, has kept us one step ahead of our competition since day one."

**Mark Switaj**  
Founder and CEO, Roundtrip



TOTAL EARLY STAGE FUNDING  
(2019H2-2021)

\$1.3 bn



**Exits**  
(2017-2021)

ECOSYSTEM VALUE  
(2019H2-2021)

\$46 bn

GLOBAL AVG.  
\$28.6 bn

EARLY-STAGE FUNDING GROWTH TIER  
(2018/19 VS. 2020/21)



Calculated on a scale of  
1 (lowest) to 10 (highest)

Highlights

Outside of tech circles Philadelphia may be best known as the home of cheesesteaks and Rocky, but the city is also a vibrant Life Science hub and a particularly attractive home base for female entrepreneurs. The Philadelphia metro area ranked 13th in SmartAsset’s Best Cities for Women in Tech report for 2021, and PitchBook data shows that Philly is the fourth-best place to raise capital as a woman. In 2021, more than 3,600 companies with at least one woman founder collectively received \$54.8 billion, and 931 companies with all women founders collectively raised \$6.4 billion. The bianual Women in Tech Summit serves this community of female entrepreneurs.

The ecosystem’s proportion of venture capital funding is growing. In 2021, Philadelphia startups closed 441 deals valued at \$8.1 billion, a 299% increase on 2020. In the fourth quarter of 2021, \$2.6 billion was invested in 90 deals across the ecosystem, while already in Q1 2022, dbt Labs closed a \$222 million Series D at a \$4.2 billion valuation. Local fundraising success stories include Gopuff’s \$1.2 billion Series G in March 2021 and Houwzer’s \$100 million debt financing round in February 2022.

University City Science Center’s Launch Lane accelerator helps startups transition from prototype to sales and customer acquisition. During 2021, 54% of companies supported by Science Center, and more than a third of Ben Franklin’s 39 companies receiving seed-stage investments in the region, were minority-led ventures , The annual Philly Tech Week events showcase innovation happening throughout the region.

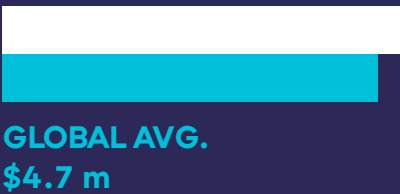
MEDIAN SEED ROUND  
(2019H2-2021)

\$525 k



MEDIAN SERIES A ROUND  
(2019H2-2021)

\$5 m



SOFT. ENGINEER SALARY  
(2021)

\$80 k



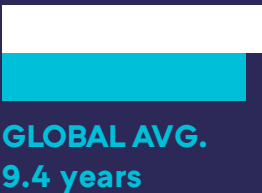
TOTAL VC FUNDING  
(2017-2021)

\$10 bn



TIME TO EXIT  
(2017-2021)

10.1 years





# Sub-Sector Strengths

## **AI, Big Data & Analytics**

The Wharton School and Penn Engineering hosts the annual Women in Data Science (WiDS) @ Penn Conference, and Wharton AI for Business supports cutting-edge research in AI. Data transformation tool startup dbt Labs has raised \$414.4 million in funding over four rounds to date, including a \$222 million Series D in February 2022. Collaborative data platform Crossbeam raised \$76 million at Series C in October 2021, and Guru, the maker of a knowledge-management solution, has raised \$70.7 million in funding over six rounds.

## **Life Sciences**

University City Science Center provides commercialization support for STEM founders, and its Launch Lane accelerator early-stage healthcare startups transition their prototypes to sales. In 2021, the Center announced a capital fund to address health inequities. Fund for Health, a partnership between Penn Medicine and the Wharton Social Impact Initiative, invests in early-stage businesses working to improve the social health determinants of people from financially disadvantaged backgrounds. Gene therapy company Passage Bio has raised \$379.5 million over three rounds, and Aro Biotherapeutics has raised \$101 million.



# Reasons to Move Your Startup to Philadelphia

## **Diverse & Skilled Talent**

CBRE ranked Philadelphia #26 in its 2021 tech talent ranking. The City of Philadelphia Mayor's Office runs PHL: Most Diverse Tech Hub, an initiative to support underrepresented founders, foster connections between higher education and local companies, and provide on-the-job training and internships for Black and brown Philadelphians transitioning to tech careers.

## **Research Hub**

Home to several leading science institutions and many innovative startups, Philadelphia is a leader in research and innovation. In December 2021, Spark Therapeutics announced that it will invest \$575 million in a cell and gene therapy innovation center.<sup>26</sup> In March 2022, it was announced that Drexel University and Gattuso Development Partners will build an 11-story complex in University City that will become Philadelphia's largest Life Sciences research laboratory.

**“Startup Genome is honored to work with Ben Franklin Technology Partners, University City Science Center and Drexel University in accelerating ecosystem growth, job creation and impact in Philadelphia. We are excited about Philadelphia’s startup community’s future because of the increasing investment in its innovative entrepreneurs.”**

**JF Gauthier, Founder & CEO  
of Startup Genome**



# Selected Startup Organizations

## STARTUP GENOME MEMBERS

MEMBER

### Ben Franklin Technology Partners of Southeastern Pennsylvania

Ranked among the most active seed and early stage investors in the US, Ben Franklin Technology Partners of Southeastern Pennsylvania is a venture development organization that helps high-growth innovative enterprises plant and nurture their roots in the Philadelphia region. The nonprofit has supported more than 2,000 companies to deliver an economic impact of more than \$5 billion and over 32,000 jobs created in the Philadelphia region.

## KEY ECOSYSTEM PLAYERS

### Philly Startup Leaders

Created by founders for founders, this 501(c)3 supports current and future entrepreneurs by providing them with the education, mentorship, and network needed to scale their businesses.

### 1Philadelphia

1Philadelphia is a coalition of community partners working together to create an equitable tech industry in Philadelphia.

MEMBER

### University City Science Center

The University City Science Center is Philadelphia’s premier catalyst of entrepreneurial activity, healthcare innovation, and economic growth. Established in 1963, the nonprofit has been globally recognized by The Brookings Institution as a best-in-class investor, mentor, and economic development partner for young technology companies. Working alongside industry partners and leading research and academic institutions across the globe, the Science Center has supported over 1,000 early-stage companies. Today, the mission-driven organization advances healthcare innovation from idea to the marketplace through proven startup support services and builds inclusive STEM career pathways for Philadelphia youth and adults.

### Philadelphia Alliance for Capital and Technologies (PACT)

The go-to resource for fast-growing companies, as well as a driver of entrepreneurship and innovation in the Philadelphia region and a leader in creating access and equity for underrepresented founders.

### Independence Health Group

This leading health insurance company has built a reputation for seeking innovative partnerships with world-class organizations in Philadelphia and across the country to enable better health for all.

MEMBER

### Drexel University

Drexel is a comprehensive global research university with a unique model of experiential learning that combines academic rigor with one of the nation’s premier cooperative education programs. Drexel is classified as “R1: Doctoral Universities” by the Carnegie Classification of Institutions of Higher Education, a designation given to U.S. research institutions with the highest level of research activity. In 2021, the Princeton Review ranked Drexel’s Close School of Entrepreneurship #12 in the U.S. for undergraduate entrepreneurship programs.

### Comcast NBCUniversal LIFT Labs

Startup accelerator and strategic innovation programs give global founders access to the company’s network of mentors and brands to foster rapid breakthroughs in media, entertainment and connectivity.



United States

Pittsburgh

MEMBERS:

InnovatePGH Partnership / Pittsburgh Regional Alliance / Innovation Works

"Duolingo was founded in Pittsburgh due to talent, technology, and lifestyle. It's a great place to start a business, and a great place to live once the workday is done."

Luis von Ahn

CEO and co-founder, Duolingo



TOTAL EARLY STAGE FUNDING  
(2019H2-2021)

\$196 m



Exits  
(2017-2021)

ECOSYSTEM VALUE  
(2019H2-2021)

\$11.6 bn

GLOBAL AVG.  
\$28.6 bn

EARLY-STAGE FUNDING GROWTH TIER  
(2018/19 VS. 2020/21)



Calculated on a scale of  
1 (lowest) to 10 (highest)

Highlights

Pittsburgh’s growing ecosystem saw significant exits and funding rounds in 2021, including Aurora Innovation, a \$11 billion autonomous vehicle startup that went public in November. Startups Argo AI, Motional, Waymo, and a dozen other mobility companies have further solidified Pittsburgh’s standing as a global hub for self-driving technology. A funding boom in Life Sciences, Robotics, and Cleantech is also helping to diversify the city’s startup ecosystem, with one example of success being Cognition Therapeutics raising \$45 million in its October 2021 IPO. This Life Sciences company is developing a pipeline of cutting-edge Alzheimer’s treatments.

Pittsburgh is home to two world-class research universities - Carnegie Mellon University (CMU) and the University of Pittsburgh — as well as two other major research institutions and dozens of other post-secondary institutions. The ecosystem continues to be home to one of the greatest concentrations of research and tech talent in the U.S., and a community of purpose-driven builders, makers, and innovators has grown up around this nucleus.

Pittsburgh’s tech startup community also has a focus on ensuring diversity in the sector. Black Tech Nation offers education and funding for Black technologists, and its new \$50 million fund will focus on early-stage startups with Black founders. Other VCs are also doing their part — Innovation Works and Magarac Venture Partners are prioritizing investment in diverse founders, and Next Act Fund backs early-stage, women-owned or -led companies.

Local success stories inspiring and anchoring the ecosystem include language-learning app Duolingo, which IPO’d in August 2021 at \$6.5 billion, and corporate bases including Facebook Reality Labs, Amazon Alexa, Bosch, Philips, Apple, and Google.

MEDIAN SEED ROUND  
(2019H2-2021)

\$50 k



GLOBAL AVG.  
\$671 k

MEDIAN SERIES A ROUND  
(2019H2-2021)

\$4.7 m



GLOBAL AVG.  
\$4.7 m

SOFT. ENGINEER SALARY  
(2021)

\$80 k



GLOBAL AVG.  
\$46 k

TOTAL VC FUNDING  
(2017-2021)

\$1.5 bn



GLOBAL AVG.  
\$4.5 bn

TIME TO EXIT  
(2017-2021)

10.4 years



GLOBAL AVG.  
9.4 years



# Sub-Sector Strengths



## Advanced Manufacturing & Robotics

Anchored by research and deployment hubs like the Advanced Robotics for Manufacturing Institute, CMU's National Robotics Engineering Center, and the airport's Neighborhood91 Innovation Campus, this sub-sector will see significant growth thanks in part to CMU's planned robotics innovation and advanced manufacturing centers. Recent rounds of funding are accelerating the sector's growth - autonomous trucking company Locomotion raised \$34 million in July 2021, and Gecko Robotics raised a \$73 million Series C in March 2022.



## Life Sciences

Pittsburgh's 1,000+ Life Sciences researchers have received \$714 million in NIH funding to date, and the University of Pittsburgh is driving growth by developing Pitt BioForge, a biomanufacturing facility for gene therapies and other novel treatments LifeX, AlphaLabHealth, and Optum Studio are amongst a growing group of accelerators and incubator programs providing investment, mentoring, workshops, and space to support life science startups.



## Cleantech

Pittsburgh is home to a robust energy ecosystem, including a UN Center of Excellence on High Performance Buildings, the Energy Innovation Center, and the National Energy Technology Laboratory. The Department of Energy has invested over \$103 million in Cleantech R&D in the region since 2017, and Pittsburgh will host the 2022 Clean Energy Ministerial. Watt Fuel Cell Corp raised \$67 in December 2021, by far the largest deal in Pittsburgh that year, and RoadRunner raised a \$70 million Series D in January 2022.

# Reasons to Move Your Startup to Pittsburgh

## High-Quality Tech Talent

A robust talent pool of 142,000 people work in Tech, Advanced Manufacturing, and Life Sciences companies, and a pipeline of graduates flows from the 79 universities and post-secondary institutions in the region, which include two R-1 research universities. Pittsburgh is among the top 10 markets in North America for quality and cost of tech talent pool, with 59% of tech talent educated at a top 25 university.

## The Pittsburgh Innovation District

Centered around the campuses of Pittsburgh's three top research engines, the Innovation District is among the top 10 concentrations of R&D spending in the U.S. Carnegie Mellon (CMU) and the Richard King Mellon Foundation are investing \$150 million in the area, which will fund a new science building on CMU's campus and a new robotics center and Advanced Manufacturing institute.

## Affordability

Pittsburgh is one of the most affordable tech hubs in the country. With a median home price of \$170,000, buying a house here is vastly cheaper than in many other top ecosystems. Pittsburgh's commercial real estate market offers companies similar value. Rent is at least half the price of larger coastal hubs such as Boston and San Francisco.



# Selected Startup Organizations

## STARTUP GENOME MEMBERS

### InnovatePGH Partnership

InnovatePGH is a next-generation public-private partnership built to accelerate Pittsburgh’s status as a global innovation leader. Powered by a coalition of civic, university, and business leaders, the partnership is Pittsburgh’s platform to rapidly translate the city’s R&D strengths into a high-growth, inclusive, and equitable tech-based economy.

MEMBER

### Pittsburgh Regional Alliance

The Pittsburgh Regional Alliance (PRA) is the economic development affiliate of the Allegheny Conference on Community Development. The PRA attracts strategic investment opportunities and diverse talent to the 10-county Pittsburgh region – comprising 10 southwestern Pennsylvania counties – and supports the growth of existing regional businesses.

MEMBER

### Innovation Works

Innovation Works (IW) is one of the top U.S. investors in early-stage technology startups and supports the startup and entrepreneurial ecosystem within Southwestern Pennsylvania. IW provides the investment, programming — including the AlphaLab (software), AlphaLab Gear (hardware), and AlphaLab Health (life sciences) accelerators — and critical resources startups need to reach the next stage of growth in Pittsburgh.

MEMBER

## KEY ECOSYSTEM PLAYERS

### Carnegie Mellon University

A world-class research university producing and commercializing innovations in Robotics, AI, and Machine Learning.

### LifeX

A capital growth company on a mission to drive the development and growth of life sciences startups in Pittsburgh.

### Pittsburgh Robotics Network

A network of leading companies accelerating the growth of the region’s robotics cluster.

### University of Pittsburgh

A leading research university discovering and deploying the next generation of life-saving technologies.

### Ascender

A community of innovators helping entrepreneurs start and build companies through programming, mentorship, coaching, incubation, and a co-working space.

“InnovatePGH Partnership, Pittsburgh Regional Alliance, and Innovation Works have worked closely with Startup Genome to showcase Pittsburgh’s entrepreneurial ecosystem in the GSER 2022. Its Ecosystem Value has grown 29% as it reached the #13 Emerging Ecosystem globally, up from #23 last year.”

**JF Gauthier, Founder & CEO  
of Startup Genome**



Canada

Québec City

MEMBERS:

Québec International / LE CAMP

"At Desjardins, we are convinced that entrepreneurship is first and foremost a human adventure that requires building trusted relationships. The Québec ecosystem offers to all innovative companies, beyond funding, relevant support adapted to their challenges."

Marc Villeneuve

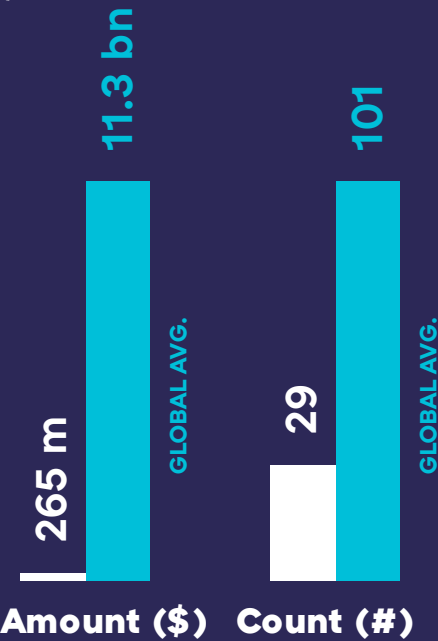
VP Business Development and Outreach, Business Services, Desjardins



TOTAL EARLY STAGE FUNDING  
(2019H2-2021)

\$56 m

GLOBAL AVG.  
\$687 m



Exits  
(2017-2021)

ECOSYSTEM VALUE  
(2019H2-2021)

\$1.2 bn

GLOBAL AVG.  
\$28.6 bn

EARLY-STAGE FUNDING GROWTH TIER  
(2018/19 VS. 2020/21)



Calculated on a scale of  
1 (lowest) to 10 (highest)

Highlights

Québec City might not be the biggest city in Canada, but when it comes to tech innovation, the city punches above its weight. Home to more than 500 high-tech companies and with an Ecosystem Value of \$1.2 billion, the city has hugely evolved in recent years.

The economic impact of Le CAMP, the city’s biggest accelerator-incubator, has grown by a factor of 12x since 2016, and is now at CA\$208 million (\$160 million). Two other great examples of success are the November 2019 IPO of enterprise software startup Coveo, which raised \$227 million at a valuation of \$1.7 billion and LeddarTech, which creates environmental sensing platforms for autonomous vehicles and has raised \$347.5 million over 10 rounds, including a February 2022 \$116 million Series D round.

Québec City rolls out the welcome mat for immigrant entrepreneurs. Funded founders who have secured investment from angel investors, venture capital funds, or business incubators are eligible for Canadian permanent residency through the country’s Start-Up Visa program.

The private sector is doing its part to support the ecosystem as well. In June 2021, Montréal-based AQC Capital announced the creation of a new CA\$64 million (\$49 million) fund to back tech startups throughout the province of Québec and help support their international ambitions.

There is a strong cohesion between all the local stakeholders and a real desire to accelerate the success of local startups. Québec City’s goal is to become one of the fastest growing tech ecosystems in Canada.

MEDIAN SEED ROUND  
(2019H2-2021)

\$1.5 m



GLOBAL AVG.  
\$671 k

MEDIAN SERIES A ROUND  
(2019H2-2021)

\$15 m



GLOBAL AVG.  
\$4.7 m

SOFT. ENGINEER SALARY  
(2021)

\$52 k



GLOBAL AVG.  
\$46 k

TOTAL VC FUNDING  
(2017-2021)

\$319 m



GLOBAL AVG.  
\$4.5 bn

TIME TO EXIT  
(2017-2021)

11.7 years



GLOBAL AVG.  
9.4 years



# Sub-Sector Strengths

## AI, Big Data & Analytics

With more than 60 researchers, the Institute Intelligence and Data (IID) of Laval University is leading innovation in AI and data sciences. Active in fundamental and applied research in aerospace, insurance, genomics, Life Sciences, computer vision, and manufacturing, IID is driving and guiding more than CA\$12 million (\$9.2 million) of projects. The Québec City area is also home to the \$1 billion+ project Qscale Campus, a high-performance computing center with energy recovery that will provide a complete offer for companies.

## Life Sciences

The Québec Life Sciences and health technology sector promotes ambitious collaborations. GSK and Medicago, two global biopharmaceutical companies, have their vaccine production facilities in the region. Québec’s Life Sciences Strategy aims to position Québec as one of North America’s top five Life Sciences hubs by 2027.



# Reasons to Move Your Startup to Québec City

## Skilled Talent

Québec City’s network of higher education institutions offers approximately 700 programs. The city’s five universities include Université Laval, the oldest French-language university in North America, and there are 22 vocational schools and specialized institutes. Together, these institutions graduate approximately 20,000 students each year.

## Tax Credits

Québec’s investment and innovation tax credit (C3i) encourages businesses from all sectors to acquire manufacturing and processing equipment, hardware, and software. To encourage the retention of intellectual properties developed in Québec, a deduction was introduced for the commercialization of innovations developed in the province. Any person who carries out R&D in Québec can benefit from these tax credits. The C3i also provides a credit of up to 20% to qualified corporations that invest in certain property before 2025.

## Cost of Living

The real estate market in the Québec City area is still among the most favorable in Canada. Single-family homes in the greater Québec City cost the least in the country among comparable regions. In addition, the region also ranks second in terms of the cost of rental housing in Canada.



# Selected Startup Organizations

## STARTUP GENOME MEMBERS

### Québec International

Québec International is the economic development agency for the Québec City provincial capital region. We work everyday to develop and showcase our local businesses and professionals. We are here to support you, whether you are an entrepreneur, a professional, or an investor.

MEMBER

### LE CAMP

A major player in the entrepreneurial technology ecosystem of Québec since 2016, LE CAMP is an accelerator-incubator dedicated to tech businesses, from market validation to international growth. Located in the heart of Québec City, LE CAMP offers high-level support programs and services, regardless of the startup’s location. It is also a place of incubation and animation of the technological entrepreneurial ecosystem of the Québec City region.

MEMBER

## KEY ECOSYSTEM PLAYERS

### Le CAMP

Growth accelerator for the tech startups

### Quantino

DeepTech Incubator

### Anges Québec

Angel network for early stage investment.

### 2 Degrés

Greentech Incubator

### Desjardins Capital

A seed and early-stage venture capital firm.

“With leadership from Québec International and LE CAMP, the Québec City startup ecosystem has accelerated to produce great success such as Coveo and LeddarTech and many more are on their way.”

**JF Gauthier, Founder & CEO of Startup Genome**



United States

# San Diego #13

“San Diego has become a diversified ecosystem for several industries ripe for entrepreneurs.”

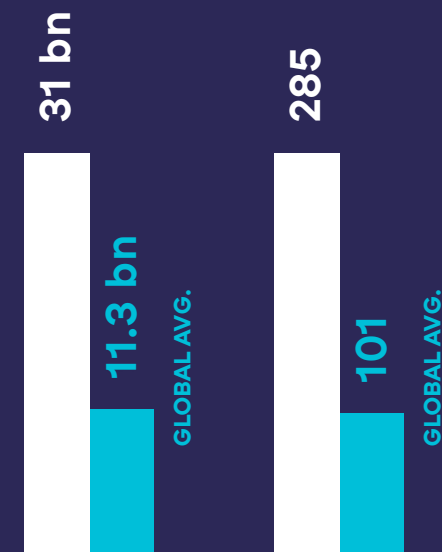
Forbes



TOTAL EARLY STAGE FUNDING  
(2019H2-2021)

\$2.8 bn

GLOBAL AVG.  
\$687 m



Amount (\$) Count (#)

Exits

(2017-2021)

ECOSYSTEM VALUE  
(2019H2-2021)

\$94 bn

GLOBAL AVG.  
\$28.6 bn

EARLY-STAGE FUNDING GROWTH TIER  
(2018/19 VS. 2020/21)



Calculated on a scale of  
1 (lowest) to 10 (highest)

## Highlights

With an average 266 days of sunshine per year, well-maintained infrastructure, and a business-friendly environment, there’s much to attract entrepreneurs to San Diego.

In 2021, San Diego County raised a record \$9.6 billion in startup investment, up 55% from 2020, which was also a record. A strong Life Sciences scene contributed to this success: VC funding in the sub-sector totalled a record \$43.3 billion in 2021. DNA sequencing startup Element Bioscience raised \$276 million in a July 2021 Series C round, and rapid diagnostics startup Cue Health raised \$200 million in a September 2021 IPO.

In other tech sectors, defense tech startup Shield AI raised \$210 million in a Series D round in August 2021, bringing its total raised to \$348.1 million, productivity software startup ClickUp raised \$400 million in an October 2021 Series C round, and logistics tech provider Flock Freight raised \$215 million in a Series D round the same month.

Launched in 2018 and informed by a partnership with the Brookings Institution, the San Diego Regional Economic Development Corporation’s Inclusive Growth Initiative sets the goal of 50,000 new quality jobs in small businesses by 2030. Qualified sites within North County can take advantage of an extension of the U.S. Foreign-Trade Zone program that offers international traders, importers, and exporters opportunities to take advantage of special customs privileges, lowering barriers to global trade.

MEDIAN SEED ROUND  
(2019H2-2021)

\$1.1 m



GLOBAL AVG.  
\$671 k

MEDIAN SERIES A ROUND  
(2019H2-2021)

\$10 m



GLOBAL AVG.  
\$4.7 m

SOFT. ENGINEER SALARY  
(2021)

\$92 k



GLOBAL AVG.  
\$46 k

TOTAL VC FUNDING  
(2017-2021)

\$16 bn



GLOBAL AVG.  
\$4.5 bn

TIME TO EXIT  
(2017-2021)

10.1 years



GLOBAL AVG.  
9.4 years



# Sub-Sector Strengths

## Life Sciences

San Diego is in the top 12 markets in the U.S. for Life Sciences. SeedFolio, a seed-stage VC firm focused on Life Science startups, launched in March 2021 and has made direct investments in more than 45 companies. BioLegend, which develops antibodies and reagents for biomedical research, was acquired by PerkinElmer for \$5.7 billion in September 2021. PerkinElmer’s existing state-of-the-art campus in San Diego will become a global Center of Excellence for research reagent content development for the combined company. Nalu Medical raised \$104 million in February 2022 for its system to treat chronic nerve pain.

## Cleantech

San Diego’s Cleantech sector supports nearly 40,000 jobs and has an economic impact of \$8.2 billion. The city ranked #21 in the Startup Genome Report: Cleantech Edition. Innovative Cleantech startups include Wildcat Discovery Technologies, which develops advanced materials for rechargeable and primary batteries and has raised \$70 million to date, and Clean Air Power, which is developing technology for natural gas to power vehicles. Cleantech San Diego is a member-based business association that positions the greater San Diego region as a global leader in the Cleantech economy.



# Reasons to Move Your Startup to San Diego

## Cost of Living

San Diego is just over 100 miles from downtown Los Angeles, but offers 10% cheaper cost of living. This means that entrepreneurs can easily access many of the business networking opportunities that the City of Angels has to offer at a more affordable rate. San Diego is also approximately 18% cheaper than San Francisco.

## Business-Friendly Environment

In recent years, the City of San Diego has concentrated on improving its business assistance programs, cutting costs, and changing policies to help businesses launch and expand. It has reduced permit processing time, reduced fees and modified codes to provide businesses with regulatory relief. Its Online Business Portal further assists entrepreneurs.



United States

# Seattle #9

"Seattle hits the startup ecosystem trifecta: top notch talent, thriving accelerators and incubators, and a growing number of VCs and angel investors. Seattle is poised to continue its impressive growth trajectory as the place for starting and building the next big businesses in tech."

Oren Etzioni

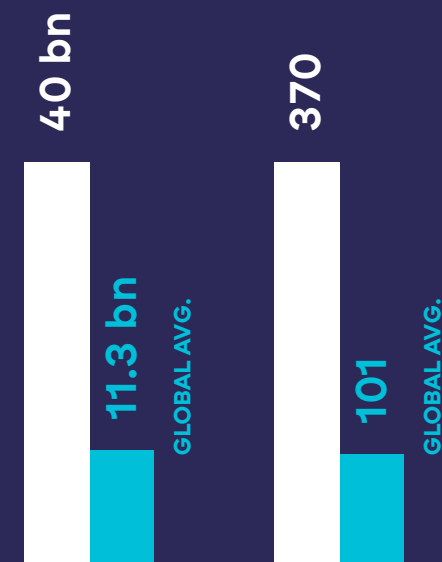
CEO, Allen Institute for AI (AI2)



TOTAL EARLY STAGE FUNDING  
(2019H2-2021)

\$3.8 bn

GLOBAL AVG.  
\$687 m



Amount (\$) Count (#)

## Exits

(2017-2021)

ECOSYSTEM VALUE  
(2019H2-2021)

\$109 bn

GLOBAL AVG.  
\$28.6 bn

EARLY-STAGE FUNDING GROWTH TIER  
(2018/19 VS. 2020/21)



Calculated on a scale of  
1 (lowest) to 10 (highest)

## Highlights

The hometown of Microsoft and Amazon has attracted one of the largest concentrations of tech talent in the U.S. That influx is benefitting more than these behemoths. Washington state saw \$8.5 billion invested in 549 venture capital deals in 2021 — a 77% increase over the \$4.8 billion raised in 401 deals in 2020, and much of this activity took place in Seattle. Real estate platform Flyhomes raised a \$150 million Series C in June. Zenoti, a maker of software for spas, raised a \$80 million Series D, also in June, and games developer Rec Room raised a \$145 million round in December.

There are now 16 unicorn startups in the ecosystem. Together, they raised more than \$2.5 billion in 2021, more than all the startups in Washington state managed to raise in 2018.

The University of Washington, China's Tsinghua University, and Microsoft together created the Global Innovation Exchange (GIX), where students work in teams to solve real-world challenges by developing a market-ready product. GIX opened in 2016 with a master's degree in technology innovation, and has since launched additional degree and certificate programs.

The Buerk Center promotes entrepreneurship across the University of Washington. Ready Set Raise, an equity-free accelerator for women, launched in 2018.

At the annual Seattle Angel Digital Conference, investors pool funds to invest in one promising startup. Since 2012, the conference has educated 430 new investors and invested \$4.5 million in 35 startups. GeekWire hosts Startup Day, the GeekWire Summit, the GeekWire Awards, and other meetups.

MEDIAN SEED ROUND  
(2019H2-2021)

\$1.4 m



GLOBAL AVG.  
\$671 k

MEDIAN SERIES A ROUND  
(2019H2-2021)

\$7 m



GLOBAL AVG.  
\$4.7 m

SOFT. ENGINEER SALARY  
(2021)

\$114 k



GLOBAL AVG.  
\$46 k

TOTAL VC FUNDING  
(2017-2021)

\$16 bn



GLOBAL AVG.  
\$4.5 bn

TIME TO EXIT  
(2017-2021)

9 years



GLOBAL AVG.  
9.4 years



# Sub-Sector Strengths

## **AI, Big Data & Analytics**

The University of Washington is a leader in the field of machine learning and Big Data. Thanks to its entrepreneurial environment and programs to support founders, the university has spun out many tech startups. The W Fund is an early-stage venture fund that aims to invest approximately \$20 million by 2026 in such startups. Outreach, another AI-driven sales startup, raised a \$200 million Series G in June 2021. AI-fueled sales platform Highspot raised a \$248 million Series F in January 2022.

## **Life Sciences**

Seattle was ranked #11 in Startup Genome's Life Sciences Edition. The city is home to the Fred Hutchinson Cancer Research Center, the Bill & Melinda Gates Foundation, and the University of Washington. Five Washington-based biotech companies entered the public markets in 2021, leading the nation in both deal volumes and total proceeds. Sana Biotechnology raised \$587 million in its January 2021 IPO. Apis Health Angel Conference launched in 2021 to connect investors and health-related startups.



# Reasons to Move Your Startup to Seattle

## **Talent Pool**

The Seattle region added more than 48,000 tech jobs from 2016 to 2020, an increase of more than 35%, and a faster growth rate than any other large U.S. tech market, according to a CBRE report. The University of Washington has more than 60,000 students and supplies the ecosystem with graduates. Seattle University, Bellevue College, a network of community colleges adds to the pipeline. Non-profit Ada Developers Academy partners with local tech companies to train women and nonbinary people to be software developers.



United States

# Silicon Valley - Bay Area #1

"The global pandemic led to new tech and innovation hubs, and the new paradigm of remote and hybrid companies is even further enforcing the distribution of Silicon Valley's ethos into a truly global phenomenon. This enables a much broader set of people to connect with the unique essence of startup creation, bringing innovation to the edges of our human network."

Na'ama Moran

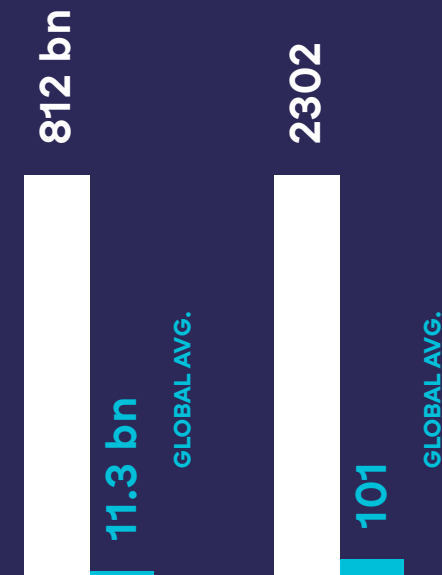
Co-founder and CEO, Cheetah Technologies



TOTAL EARLY STAGE FUNDING  
(2019H2-2021)

\$25 bn

GLOBAL AVG.  
\$687 m



Amount (\$) Count (#)

Exits

(2017-2021)

ECOSYSTEM VALUE  
(2019H2-2021)

\$2 tn

GLOBAL AVG.  
\$28.6 bn

EARLY-STAGE FUNDING GROWTH TIER  
(2018/19 VS. 2020/21)



Calculated on a scale of  
1 (lowest) to 10 (highest)

## Highlights

Despite years of hand-wringing about costs and efforts to build “the next Silicon Valley” elsewhere, Silicon Valley continues its reign as the world’s pre-eminent startup ecosystem. A much discussed flight of tech workers during the COVID-19 pandemic is not reflected in the numbers. In 2022, the number of residents employed in tech in the region actually rose from 25% to 29%, according to the 2022 Silicon Valley Index. Silicon Valley remained the top ecosystem for venture investing, with \$105 billion in capital flowing to the area’s startups in 2021, double the 2020 total. Thanks to Stanford University and the region’s other top educational institutions, the ecosystem is well supplied with fresh talent.

Silicon Valley also continues to offer some of the world’s best networking opportunities and hosts a huge array of startup-focused gatherings and events, including TECHSPO Silicon Valley, Palo Alto founders meetup 106 Miles, and Founders Summit 2022. Venture Capital World Summit will be held in July 2022. The Women of Silicon Valley conference is set to bring together more than 2,700 tech industry professionals in June, and BIOMEDevice Silicon Valley 2022 will gather Life Sciences innovators in November. TiE Silicon Valley is organizing TiEcon 2022 for 50,000 global attendees in May.

Silicon Valley produces a steady stream of huge funding deals. Recent rounds include online learning platform Course Hero’s \$380 million Series C in December 2021, customer experience assurance platform \$350 million private equity round in January 2022, and Web3 startup Aptos’ \$200 million seed round in March 2022.

MEDIAN SEED ROUND  
(2019H2-2021)

\$1.5 m



GLOBAL AVG.  
\$671 k

MEDIAN SERIES A ROUND  
(2019H2-2021)

\$11 m



GLOBAL AVG.  
\$4.7 m

SOFT. ENGINEER SALARY  
(2021)

\$119 k



GLOBAL AVG.  
\$46 k

TOTAL VC FUNDING  
(2017-2021)

\$247 bn



GLOBAL AVG.  
\$4.5 bn

TIME TO EXIT  
(2017-2021)

7.6 years



GLOBAL AVG.  
9.4 years



# Sub-Sector Strengths

## **AI, Big Data & Analytics**

The AI Accelerator Summit brings together leaders in AI hardware and architecture from large organizations and startups in Silicon Valley. The world's leading AI and Big Data event, AI & Big Data Expo 2022, will take place in Santa Clara. SambaNova Systems, which builds advanced software, hardware, and services to run AI applications, raised a \$676 million Series D in April 2021, raising its valuation to more than \$5 billion. AI-powered customer service platform Uniphore raised a \$400 million Series E in February 2022.

## **Fintech**

Fintech Mercury provides venture debt to early-stage startups, with an aim of lending out \$200 million in 2022 and up to \$1 billion the following year. Mercury is offering 25% to 50% of a startup's equity round in debt. All-in-one payment solution for insurance Ascend raised both a \$250 million debt financing round and a \$30 million Series A in January 2022. Digital-asset trading platform FalconX raised a \$210 million Series C in August 2021.

## **Life Sciences**

After a name change and shift from oncology to immunology, AltruBio relaunched with a \$63 million Series A in April 2021. Gene-editing company Graphite Bio One completed a \$230 million IPO on the Nasdaq in June 2021.

# Reasons to Move Your Startup to Silicon Valley - Bay Area

## **Ideal Startup Environment**

Silicon Valley provides entrepreneurs with everything necessary to found a startup, including world-leading venture capital, talent, and networking opportunities. Startups can draw from the area's deep pool of talented engineers, marketers, designers, and executives. The area is also home to many world-leading tech behemoths, offering growing companies opportunities for partnerships and growth.

## **Legal Support**

The world's #1 startup hub offers efficient laws, policies, and regulations to safeguard business interests and IP. These act as a necessary shield for tech businesses, especially the ones that are starting small.

## **Easy Financing Opportunities**

Silicon Valley may be a legendarily high-cost ecosystem, requiring large amounts of capital to get a startup off the ground, but it is also the worldwide epicenter of startup financing. The area also boasts the highest concentration of billionaires per capita in the world, which means startups have access to a huge range of experienced angel investors willing to bet on unique and innovative ideas.



Canada

Toronto-Waterloo #17

MEMBERS:  
MaRS Discovery District / Communitech Corporation

"As new Canadians, we built ApplyBoard to democratize access to education for students worldwide. We chose the Toronto-Waterloo corridor because we could easily access a diverse and global community of talented people."

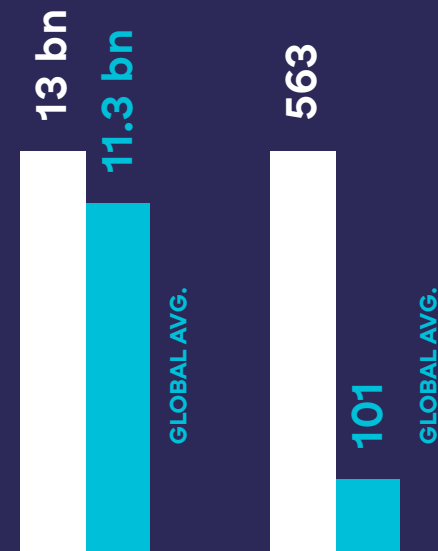
Martin Basiri  
CEO and cofounder, ApplyBoard



TOTAL EARLY STAGE FUNDING  
(2019H2-2021)

\$2.7 bn

GLOBAL AVG.  
\$687 m



Amount (\$) Count (#)

Exits

(2017-2021)

ECOSYSTEM VALUE  
(2019H2-2021)

\$46 bn

GLOBAL AVG.  
\$28.6 bn

EARLY-STAGE FUNDING GROWTH TIER  
(2018/19 VS. 2020/21)



Calculated on a scale of  
1 (lowest) to 10 (highest)

Highlights

With more than 300,000 tech workers, the Toronto-Waterloo corridor is home to North America’s third-largest and fastest-growing innovation ecosystem. Anchored by the cities of Toronto (recognized as one of the most multicultural on the planet) and Waterloo (home to the well-regarded University of Waterloo), the corridor boasts excellent transit connectivity and leading innovation hubs including MaRS and Communitech, as well as deep reservoirs of wealth. Nearly half of the venture capital deployed in Canada in 2021, a record CAD\$7.7 billion, went to companies based in Toronto and Waterloo.

The corridor’s millennial population is growing at lightning speed — more than 21% per year — and the quality of talent based here ranks alongside the globe’s elite tech regions. More broadly, Canada’s favorable immigration policies, public institutions, and social-democratic values have attracted a steady influx of highly-skilled newcomers to the area. In 2021, the Toronto region ranked as the best city in the world for working women, second in the world for safety, and sixth in the world for remote workers.

ApplyBoard, an Edtech company that helps place international students, closed a \$375 million Series D round in June 2021. Deep Genomics, which creates genetic therapies using AI, raised \$180 million in Series C funding a month later, and Cleantech startup GaN Systems raised \$150 million in November. Password manager 1Password has raised \$920 million over three rounds, with its most recent a \$620 million Series C in January 2022.

MEDIAN SEED ROUND  
(2019H2-2021)

\$700 k



GLOBAL AVG.  
\$671 k

MEDIAN SERIES A ROUND  
(2019H2-2021)

\$6.5 m



GLOBAL AVG.  
\$4.7 m

SOFT. ENGINEER SALARY  
(2021)

\$70 k



GLOBAL AVG.  
\$46 k

TOTAL VC FUNDING  
(2017-2021)

\$12 bn



GLOBAL AVG.  
\$4.5 bn

TIME TO EXIT  
(2017-2021)

9.1 years



GLOBAL AVG.  
9.4 years



# Sub-Sector Strengths

## **AI, Big Data & Analytics**

Few countries command as much trust as Canada, and global debates about the creation and use of new technology have created opportunities for Toronto-Waterloo tech companies to lead in sectors where trust is critical. Applied AI, Cybersecurity, Fintech, Healthtech, sustainability and Smart Cities are just some examples. The Toronto region's public and private institutions — governed by robust laws — remain role models in the Tech for Good movement.

## **Life Sciences**

The Toronto-Waterloo corridor is a global life-sciences powerhouse, boasting some of the world's best hospitals, and more than 8,000 related companies. The foundation of this success comes from the University of Toronto (famous for the discovery of insulin and stem cells) and the University of Waterloo, which has the largest post-secondary co-op program in the world, with nearly 20,000 co-op students enrolled over three semesters in more than 120 programs.



# Reasons to Move Your Startup to Toronto-Waterloo

## **Building for Humanity**

Canada's reputation as a progressive nation provides a rock-solid foundation for founders to build trust into their technologies and tackle some of the world's biggest challenges. CEOs Tobi Lütke (Shopify), Michele Romanow (Clearco), and Joshua Liu (SeamlessMD) are some vocal local champions of this ethos.

## **Global Community**

Toronto-Waterloo represents 230 nationalities and 180 languages spoken. By 2025, Canada will welcome more than 1.3 million new Canadians. The region is an open destination, where newcomers can find people from their native community and also join dozens more. Local universities attract tens of thousands of international students every year, and consistently produce world-class graduates for high-growth companies.

## **From Lab to Market**

Toronto-Waterloo is enviably equipped to turn student talent into professionals, and to turn ideas into prosperous companies. In 2020, MaRS-supported ventures raised \$2.4 billion while generating \$1.5 billion in revenue and almost 23,000 jobs. The University of Waterloo's Innovation Area, a \$35-million space offering wet and biosafety labs for 75 ventures, is set to open in 2023.



# Selected Startup Organizations

## STARTUP GENOME MEMBERS

### MaRS Discovery District

MaRS is North America’s largest urban innovation hub. A registered nonprofit, MaRS supports high-growth startups and scale-ups tackling key issues in health, Cleantech, Fintech, and other sectors. In addition, MaRS convenes members of the tech ecosystem to drive breakthrough discoveries, grow the economy, and make an impact by solving real problems for real people — in Canada and around the world.

MEMBER

### Communitech Corporation

Founded in 1997, Communitech was built by tech founders who saw the need for a community of support to help ensure the future prosperity of Canada. As Canada’s tech supercharger, we help founders hire and retain the smartest, brightest and most experienced people; access growth financing at every stage; sell to the biggest customers at home and around the world; and connect with the right people at the right time.

MEMBER

## KEY ECOSYSTEM PLAYERS

### University of Waterloo

The University of Waterloo integrates work experience with academic and research excellence, delivering a unique entrepreneurial culture. Innovators can access support, mentorship, funding and connections from over 45 programs.

### University of Toronto

The University of Toronto is where talent, ideas, research and ambition converge to build the next generation of global entrepreneurs.

### Vector Institute

The Vector Institute is an independent, not-for-profit corporation dedicated to advancing artificial intelligence, excelling in machine learning and deep learning.

### CANhealth

The CAN Health Network is a Canada-first approach to technology adoption. By breaking down barriers to entry into the health care sector for Canadian companies, their solutions can be quickly validated, procured and scaled across the country.

### Creative Destruction Lab (CDL)

Creative Destruction Lab (CDL) is a nonprofit organization that delivers an objectives-based program for massively scalable, seed-stage, science- and technology-based companies.

“Toronto-Waterloo is Canada’s leading startup ecosystem, ranking as **#17** globally due to an impressive growth of 128% since the last GSER. It is an honor to work with ecosystem leaders Communitech Corporation and MaRS Discovery District to support this thriving local startup community.”

**JF Gauthier, Founder & CEO  
of Startup Genome**



United States

Washington, D.C. #11

"The greater D.C. region is beginning to get more attention from Silicon Valley and New York City investors. Cyber continues to be a major player, along with other tech sectors benefiting from the growth of Amazon's HQ2. Food services, hospitality, healthcare, and other sectors are also gaining traction."

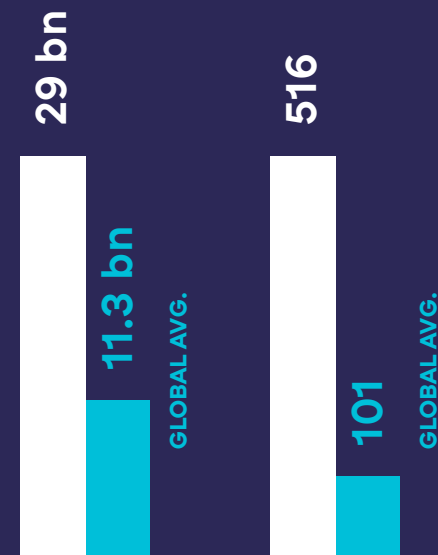
Jack McDougle  
President and CEO, Greater Washington Board of Trade



TOTAL EARLY STAGE FUNDING  
(2019H2-2021)

\$2.2 bn

GLOBAL AVG.  
\$687 m



Amount (\$) Count (#)

Exits

(2017-2021)

ECOSYSTEM VALUE  
(2019H2-2021)

\$56 bn

GLOBAL AVG.  
\$28.6 bn

EARLY-STAGE FUNDING GROWTH TIER  
(2018/19 VS. 2020/21)



Calculated on a scale of  
1 (lowest) to 10 (highest)

Highlights

Washington, D.C. may be more well known for politics than for entrepreneurship, but the U.S. capital has been gaining a reputation as a startup hub. The ecosystem benefits from a growing tech talent pool and proximity to federal government departments, as well as an abundance of Fortune 1000 companies headquartered in the area.

Investors have taken notice. Companies in the District of Columbia, Maryland, Virginia region raised \$4.9 billion in 334 deals in 2021, more than double the \$1.96 billion raised in 2020. The top five deals in 2021 alone amounted to more than \$800 million. Robotic Research Group/RR.IA's December deal for \$228 million was by far the largest amount raised in D.C. in 2021.

In March 2021, Gender Equality in Tech (GET) Cities, led by Break Through Tech and SecondMuse, in partnership with Melinda French Gates' Pivotal Ventures, launched GET DC as its next city hub, working to propel more women and marginalized groups into tech careers. In January 2022 the D.C. regional chapter of the Indus Entrepreneurs (TiE), founded by a group of Indian American entrepreneurs, announced the second TiE DC University PitchFest for university students across the region.

The ecosystem also hosts DC Startup Week, an annual conference for the region's entrepreneurial community, and SATELLITE, a top conference for space and satellite thought leaders.

MEDIAN SEED ROUND  
(2019H2-2021)

\$775 k



GLOBAL AVG.  
\$671 k

MEDIAN SERIES A ROUND  
(2019H2-2021)

\$6.2 m



GLOBAL AVG.  
\$4.7 m

SOFT. ENGINEER SALARY  
(2021)

\$88 k



GLOBAL AVG.  
\$46 k

TOTAL VC FUNDING  
(2017-2021)

\$13 bn



GLOBAL AVG.  
\$4.5 bn

TIME TO EXIT  
(2017-2021)

10.5 years



GLOBAL AVG.  
9.4 years



# Sub-Sector Strengths

## **Edtech**

Education is one of the largest and most important industries in D.C., accounting for \$3.9 billion of GDP. In October 2021, Edtech giant Blackboard merged with software company Anthology in an effort to create the most comprehensive and modern Edtech ecosystem available. Class Technologies has raised a total of \$164 million in funding over four rounds, including a \$105 million Series B in July 2021.

## **Cybersecurity**

The Washington, D.C. region has become a leading Cybersecurity industry cluster, thanks in part to its proximity to the national security agencies that frequently serve as customers for local Cybersecurity startups. Data protection company Virtru has raised a total of \$139.8 million over six rounds, including a \$60 million Series C in January 2022. AI-powered DNS threat protection startup DNSFilter raised a \$30 million Series A in July 2021.



# Reasons to Move Your Startup to Washington, D.C.

## **Tech Talent**

The Washington, D.C. area is one of the most educated metropolitan areas in the U.S, with 51.4% of adults obtaining bachelor's degrees or higher. The ecosystem also boasts one of the highest concentrations of STEM professionals in the country, according to CBRE's 2021 Scoring Tech Talent report. The region has the fourth-largest tech talent labor pool in North America, with more than 265,000 tech workers making up 8.8% of the total workforce. Women make up 32.3% of the tech workforce, which compares favorably with the national average of 27%.

## **Government Support**

In December 2021, the DC REACH initiative was launched to promote financial inclusion for underserved communities, small businesses, and residents through greater access to credit and capital. It aims to remove structural barriers to capital and credit, and create solutions that help more Washingtonians buy homes, start businesses, and build wealth.



# Oceania

- 279 Top Performers & Top Regional Challengers
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- 283 Ecosystem Pages



## Regional Insights

# Oceania

Oceania has seen 50% growth in \$50 million+ exits between 2020 and 2021. Early-stage funding in the region has increased by 80% in the same period. Oceania created five new unicorns in the GSER 2022 time range, including Fintech [Airwallex](#), people and culture analytics platform [Culture Amp](#), and enterprise compliance checking platform [SafetyCulture](#).

The region's leading sub-sector is Fintech, which makes up 31% of Oceania's total VC funding from 2017 to 2021.

Sydney is Oceania's biggest ecosystem, with the majority of Australia's tech startups based here. The ecosystem moved up four places from last year, to #20 in the global rankings, and its \$67 billion Ecosystem Value is in large part due to design platform [Canva's](#) \$39 billion valuation.

Melbourne is also a regional leader. The ecosystem saw two \$1 billion+ exits ([MessageMedia](#) and business-to-business payment solutions provider [Optal](#), which was acquired by [Wex](#)) and its Knowledge factor increased from last year due to a 21% increase in the count of patents. New Zealand has also shown huge growth since last year, with seven exits over \$50 million and a doubling in Ecosystem Value to \$4.6 billion.

### Top Performers

1	Sydney
2	Melbourne
3	New Zealand
4	Brisbane
5	Perth

### Top Regional Challengers

1	Perth
2	Canberra
3	Adelaide



# Oceania

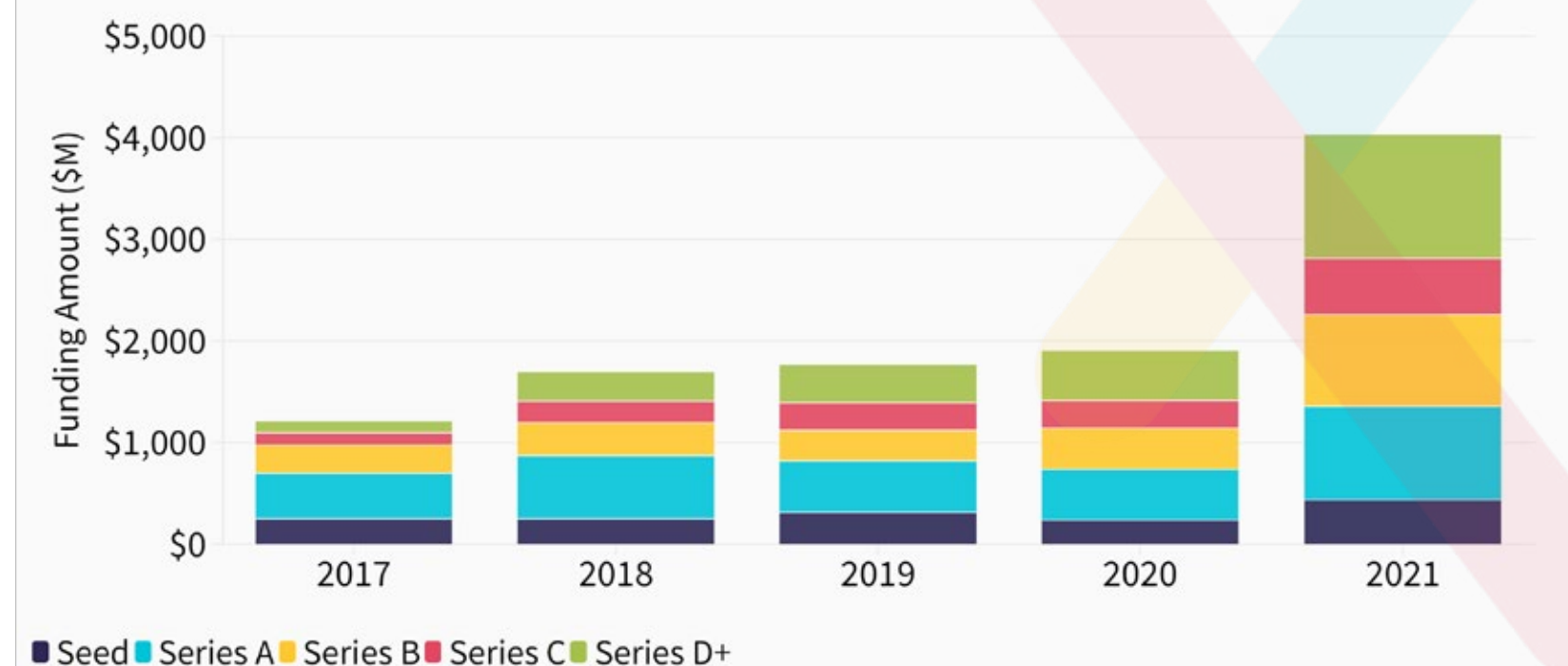
## Regional Insights

### Key Findings

- Oceania has seen 50% growth in \$50 million+ exits between 2020 and 2021.
- Early-stage funding in the region has increased by 80% in the same period.
- Oceania produced five unicorns, including Fintech [Airwallex](#), people and culture analytics platform [Culture Amp](#), and enterprise compliance checking platform [SafetyCulture](#).
- Sydney moved up four places from last year, to #20.
- New Zealand experienced seven exits over \$50 million and doubled its Ecosystem Value to \$4.6 billion since 2020.

### Oceania VC Funding by Stage

Investment in Oceania Increased 112% From 2020 to 2021





## Global Startup Ecosystem Report 2022

# How La Trobe University is Accelerating Startup Success

Victoria's ascent as a startup ecosystem owes much to its universities' R&D prowess. [La Trobe University](#), based in Melbourne, produces not just innovations but also founders skilled in bringing innovations to market.

La Trobe's Innovation and Entrepreneurship suite of programs speaks to everyone, from students contemplating startup life to new founders seeking validation for their technologies to SME owners in the thick of scaling up. Its influence — in the form of startups launched, skills developed, and connections forged — is felt in Victoria, throughout Australia, and around the world.

## Thinking Global From Day One

Australian entrepreneurs in particular need a global attitude from day one. With a small domestic market, many startups scale by designing products and strategies for international customers and by building international networks. La Trobe's Global Markets Accelerator program,

which ran through 2022, exemplifies how the university is able to help export-minded founders learn the ropes and make the contacts to do business abroad.

The program, sponsored by AusIndustry, drew on experts in the ecosystems of India, Southeast Asia, the countries of the APEC and the EU, and the United Kingdom. Following an eight-week feasibility study, participants advanced to a six-month immersion in their chosen markets, which included the invaluable experience of time spent on the ground. There nascent founders embedded with one of La Trobe's premier innovation partners: the Innovation Factory, a rapidly expanding tech hub in Indonesia; IMEC, the number-one university-linked accelerator in Europe; and Tech-Hub, an Indian ecosystem that has worked with more than 1,800 national and international startups. International coaches, expert professionals, and interns provided by La Trobe also supported the founders.

Startups left the accelerator with informed, country-specific strategies and with the contacts — potential

*This contributed article was prepared by the authors in a personal capacity. The opinions expressed in this article are the authors' own and do not necessarily reflect the views or position of Startup Genome.*

customers, distributors, investors, board members, and employees — required to execute on them. All 14 Australian startups in the program's first cohort developed solutions to universal problems, including a virtual-reality system for lonely seniors and a platform where education providers can recruit teachers quickly. All 14 substantially grew sales in their chosen markets, even amid the turmoil of a pandemic.

"Our coaches ensured we had rock-solid foundations," said one Accelerator participant. "As opportunities started to present themselves, we were required to pivot and adapt. We are looking forward to seeing what we can achieve because of what we have been exposed to."

## Nurturing Local Innovation

Closer to home, Startup Central Victoria — whose second cohort is ongoing — comprises a series of free events and programs helping founders seize opportunities and leverage resources in the City of Greater Bendigo and five



other local government areas. It launched in 2021 with a Regional Opportunities Forum that attracted 57 aspiring entrepreneurs intrigued by such promising local sectors as robotics, Agtech, and small-town revitalization. A hackathon divided entrepreneurially curious participants into teams, provided them with mentors, and challenged them to design startups from scratch, sharpening skills and developing new ones in the process.

Startup Central Victoria also offered an online Accelerator for 15 startups and scaleups. That program “has given me the space to think about how I can grow our graphic design business,” said Rebecca Rose, from Castlemaine. “I have felt very supported, and it has inspired me to become more active in the region instead of relying on our Melbourne-based clients.”

La Trobe supports not just entrepreneurs-in-the-making but also established ones struggling to survive. When COVID-19 closed down or slashed revenue at many local small businesses, La Trobe swiftly recognized that digitization could be a lifeline. In concert with several partners, it rapidly developed a free, online program, COVID-19 Industry Response, for business owners eager to adapt their business models, incorporate new technology, and upskill themselves and their employees in preparation for the digital future. The program ran four times and helped 1,500 entrepreneurs. “I enrolled hoping that I would get at least one new skill,” said one

participant, from an agriculture company. “I got skills, confidence, and a feeling of I’m not alone.”

## Building Community

The keystone of startup ecosystems is community: passionate founders and their creative teams supporting, advising, and collaborating with one another. La Trobe’s newest program provides just that. It brings together the university’s aspiring entrepreneurs with like-minded founders at Fishburners, Victoria’s number-one co-working space and hub for tech startups.

La Trobe Fishburners Founders Hub is a 100% virtual community where founders on the same journey learn from both company-building veterans and one another. Connections forged here will power some of Australia’s next great success stories. “Being a part of a connected ecosystem is at the heart of startup success,” said Nicole O’Brien, CEO of Fishburners. “We are incredibly excited to be joining forces with La Trobe and its ambitious University City of The Future development. We can’t wait to work together to connect and support entrepreneurs across Victoria.”

The startup journey must begin somewhere. At La Trobe, it’s with Student Pathways to Entrepreneurship. For those excited by the prospect of starting or joining a new business, this ongoing program is an introduction

to the ecosystem and its disparate members. Through workshops, programs, events, and internships, students prepare for careers in this creatively engrossing domain.

“The internship ... has been great to practice and transfer my skills and experience into a new industry,” said one student who found placement at an Edtech startup. “The team made me feel so welcome and has been great learning about a new way of working.”

La Trobe’s relationships with industry provide additional ballast for its innovation and entrepreneurship programs. Partner companies co-locate on La Trobe campuses, collaborate on R&D, and support the university’s workforce and startup development efforts. The resulting networks of established and emerging innovators are transforming this community and the world.



Australia

# Melbourne

MEMBERS:

LaunchVic

"A globally renowned creative and education hub with access to world-class education, Melbourne is now home to numerous unicorns. Our talent, creativity, and thriving startup community make Melbourne a great place to build and scale global startups."

Dr Kate Cornick

CEO, LaunchVic



TOTAL EARLY STAGE FUNDING  
(2019H2-2021)

\$816 m

GLOBAL AVG.  
\$687 m



Amount (\$) Count (#)

Exits

(2017-2021)

ECOSYSTEM VALUE  
(2019H2-2021)

\$17 bn

GLOBAL AVG.  
\$28.6 bn

EARLY-STAGE FUNDING GROWTH TIER  
(2018/19 VS. 2020/21)



Calculated on a scale of  
1 (lowest) to 10 (highest)

## Highlights

Victoria is home to more than 2,600 startups that are rapidly becoming the beating heart of a new economy — the startup sector is now the same size as Victoria’s tourism sector. The state capital, Melbourne is a thriving hub for startups across an array of sub-sectors including Life Sciences, SaaS, AI, Blockchain, Advanced Manufacturing, IoT, Big Data, and Fintech.

Victoria consistently ranks highly for the quality of its educational intuitions. It’s home to the University of Melbourne, Australia’s highest ranked university at #37, along with Monash University at #58 in the top 400 universities according to the QS World University Rankings 2022. RMIT University has been ranked #2 in the world for research that has impacted the development of Blockchain technology, and its Blockchain Innovation Hub is the world’s first research center focused on the social science of Blockchain.

LaunchVic, the state’s lead startup agency, continues to create infrastructure to support the growth of the ecosystem. Its initiatives include the AU\$10 million Alice Anderson Fund, an angel sidecar for women-led startups, and the Victorian Startup Capital Fund, a fund of funds set to unlock AU\$240 million (\$168 million) to support Victorian early-stage startups with high growth potential. LaunchVic has also helped launch dozens of programs. Three of the latest, which were created in partnership with Agriculture Victoria, hope to boost the local Agtech sub-sector. Farmers2Founders, Rocket Seeder, and SproutX will each receive AU\$600,000 (\$420,000) to run pre-accelerator programs.

MEDIAN SEED ROUND  
(2019H2-2021)

\$670 k



GLOBAL AVG.  
\$671 k

MEDIAN SERIES A ROUND  
(2019H2-2021)

\$3.9 m



GLOBAL AVG.  
\$4.7 m

SOFT. ENGINEER SALARY  
(2021)

\$63 k



GLOBAL AVG.  
\$46 k

TOTAL VC FUNDING  
(2017-2021)

\$3.1 bn



GLOBAL AVG.  
\$4.5 bn

TIME TO EXIT  
(2017-2021)

9.3 years



GLOBAL AVG.  
9.4 years



# Sub-Sector Strengths

## Life Sciences

In 2021, CBRE ranked Melbourne as one of the top five Life Sciences hubs in Asia-Pacific, and the University of Melbourne as second globally for university-related biomedical research. Five of Australia's largest medical research institutes are located here, and there are several research and innovation initiatives, including incubator Melbourne Connect and Bio Innovation Hub. Regenerative medicine company Mesoblast has raised \$412.3 million over seven rounds. Medtech startup Seer raised a AU\$34 million (\$24 million) Series A in August 2021, and Ena Respiratory has raised a total of AU\$50 million (\$35 million).

## Fintech

Melbourne is home to more than 400 Fintech startups, and unicorns AfterPay, Airwallex, Judo Bank, MYOB, and PEXA were all founded here. Melbourne is also the location of the annual Intersekt conference, which brings the Australian Fintech community together. In 2021, global banking-as-a-service platform Railsbank established its first office in Melbourne, and financial services platform Airwallex raised a \$100 million Series E. Business payments startup Zeller raised an AU\$100 million (\$70 million) Series B in March 2022.



# Reasons to Move Your Startup to Melbourne

## Dynamic, Educated Workforce

Melbourne is projected to become the largest Australian city by 2031 and is home to one of the most educated workforces in the country. More than half of all Victorians aged 20–64 hold some form of post-secondary qualification, while almost 30% aged 15–74 have a university degree. It's also a multicultural city with close links to Asian markets.

## World-Class Universities

The University of Melbourne is the highest-ranked university in Australia and #33 in the world. The Financial Times ranked Melbourne Business School the highest among Australian MBA programs. QS Best Student Cities Rankings 2022 named Melbourne Australia's best student city.

## Government Support

The Victorian government reduced the employer rate of payroll tax from 2.02% to 1.2125% in 2021. The Business Event Sponsorship Program provides up to AU\$10,000 (\$7,400) to support those hosting conferences. The 2021–2022 Victorian budget allocates AU\$484.5 million (\$361 million) through 2025 towards new job creation initiatives, with dedicated funds for small business services and support initiatives and funds to revitalize Melbourne's central business district. The AU\$2 billion (\$1.49 billion) Breakthrough Victoria Fund is investing in projects in health and Life Sciences, Advanced Manufacturing, digital technologies, Agtech & New Food, and clean economies.



# Selected Startup Organizations

## STARTUP GENOME MEMBERS

### LaunchVic

LaunchVic is fuelling the growth of Victoria’s startup ecosystem. Through our expertise, we help to build the capability and confidence of Victoria’s most important asset — its people — to start, grow, invest in, or work for globally ambitious startups.

MEMBER

“Melbourne’s startup Ecosystem Value has grown by 129% since the last GSER, producing two billion-dollar exits to reach US\$17 billion. A big factor in this growth has been the leadership of LaunchVic, deserving Kate Cornick the Global Policy Champion award at GEC this year.”

JF Gauthier, Founder & CEO  
of Startup Genome

## KEY ECOSYSTEM PLAYERS

### Giant Leap

Giant Leap Fund is Australia’s first venture capital fund that is 100% dedicated to investing in impact startups – rapidly scalable businesses that blend financial returns with real and measurable social and environmental benefits.

### Startmate

We accelerate the most ambitious founders, operators and investors through our programs, propelled by a highly-trusted mentor-driven community, and backed by the best angels, venture funds and tech startups in the region.

### Startup Victoria

Startup Victoria exists to create more founders, better founders

### Hatch Quarter

Melbourne-Based Innovation Hub and Startup Incubator.

### Scale Investors

Scale Investors is Australia’s first and only network of angel investors committed to investing in and empowering exceptional women entrepreneurs.



New Zealand

New Zealand

MEMBERS:

The New Zealand Startup Partnership

"New Zealand’s dynamic startup ecosystem is positioning our entrepreneurs to meet global challenges and deliver economic and social impact with record investment into early-stage markets in 2021."

Stuart Nash

Minister for Economic and Regional Development



TOTAL EARLY STAGE FUNDING  
(2019H2-2021)

\$358 m

GLOBAL AVG.  
\$687 m



Amount (\$) Count (#)

Exits

(2017-2021)

ECOSYSTEM VALUE  
(2019H2-2021)

\$4.7 bn

GLOBAL AVG.  
\$28.6 bn

EARLY-STAGE FUNDING GROWTH TIER  
(2018/19 VS. 2020/21)



Calculated on a scale of  
1 (lowest) to 10 (highest)

## Highlights

New Zealand offers entrepreneurs a strong sense of community, a business-friendly regulatory environment, and a high-quality lifestyle. Both the startup ecosystem and broader community are value-driven and focused on sustainability. Auckland is a particular hotspot for startups, with 50% of New Zealand’s tech employees located there, according to NZTech. Technology is New Zealand’s second largest export sector, and ICT exports grew 23% between 2020 to 2021. It recently got easier for international tech workers to move to New Zealand — in December 2021, the Government updated immigration rules to make it possible for the sector to recruit 600 specialized workers from overseas.

New Zealand has historically been capital-starved, but recent moves by the government and foreign investors have significantly increased access to early-stage funding. The Elevate Fund, established in 2020 by New Zealand Capital Growth Partners, has invested approximately \$150 million into six VCs — only engaging in deals that also include outside investors. 2021 delivered record growth for the number of deals completed and the amount of capital invested. Early-stage investors provided funding of \$257 million, across 174 deals, representing a 63% growth in funding compared to the previous year. The median deal size for follow on investment increased from \$769k to \$1 million. Early-stage investors are increasingly focused on Deep Tech, which received 41% of startup investment (\$106 millon), across 33% of deals.

Launched in March 2022, Electrify Accelerator is New Zealand’s first accelerator focussed on women-led startups. Ecosystem success stories include retail software company Vend’s 2021 NZ\$4.55 million (\$350 million) exit, medical device company Alimetry’s NZ\$11.3 million (\$10.9 million) deal in March 2022, and architecture platform ArchiPro’s \$35 million Series A, also in March.

MEDIAN SEED ROUND  
(2019H2-2021)

\$1 m



GLOBAL AVG.  
\$671 k

MEDIAN SERIES A ROUND  
(2019H2-2021)

\$3.7 m



GLOBAL AVG.  
\$4.7 m

SOFT. ENGINEER SALARY  
(2021)

\$58 k



GLOBAL AVG.  
\$46 k

TOTAL VC FUNDING  
(2017-2021)

\$1.1 bn



GLOBAL AVG.  
\$4.5 bn

TIME TO EXIT  
(2017-2021)

10.2 years



GLOBAL AVG.  
9.4 years



# Sub-Sector Strengths

## Enterprise Software

A January 2022 market analysis by Gartner Group forecast 7.4% year-on-year growth for ICT in 2022, led by enterprise software and devices. Auckland-based PredictHQ, which provides businesses with demand intelligence to understand the impact of events, has raised \$33.5 million over three rounds.

## Agtech & New Food

The New Zealand government has allocated more than NZ\$50 million towards lowering agricultural emissions, developing a national farm planning system, and helping farmers meet freshwater and greenhouse gas requirements by 2025. The 2035 Oceania Summit scheduled to be held in October 2022 in Auckland will discuss how agrifood tech innovation and on-farm applications can help address the challenge posed by climate change. Farmote Systems, a maker of a pasture management system for dairy farms, has raised \$926,600 in funding over three rounds.



# Reasons to Move Your Startup to New Zealand

## Quality of Life

New Zealand outperforms the global average in income, jobs, education, health, environmental quality, social connections, civic engagement, and life satisfaction, according to the OECD Better Life Index. Average household net-adjusted disposable income per capita in New Zealand is more than \$8,000 above the OECD average. Wellington ranked #11 in the Numbeo Cost of Life Rankings 2022. New Zealand also benefits from a strong sense of community — 95% of people believe that they know someone they could rely on in time of need.

## Ease of Doing Business

New Zealand offers entrepreneurs and companies stability, streamlined regulations, limited bureaucracy, and a favorable tax environment. The R&D Tax Incentive allows businesses to claim a 15% tax credit on eligible costs, reducing the income tax they need to pay. Loss-making businesses can apply to have this tax credit refunded or carried forward. Consumer spending has been growing steadily over the last several years.



# Selected Startup Organizations

## STARTUP GENOME MEMBERS

MEMBER

### The New Zealand Startup Partnership

The consortium of partners leading participation in this year’s report illustrate the close working within New Zealand’s startup ecosystem. We bring knowledge and experience from diverse areas including angel and seed capital, community engagement, the technology and innovation sector, trade and enterprise, and central government. Collectively we strive to build an excellent environment for startups and their founders, especially where they want to make a positive impact to society, the economy and the environment. “E hara taku toa, i te toa takitahi, he toa takitini.” (“Success is not the work of one but the work of many”—Māori proverb.)

“With leadership from The New Zealand Startup Partnership the startup ecosystem has achieved tremendous growth, including seven exits and a doubling of its ecosystem value. New Zealand went up seven ranks to join the Top 35 Emerging Ecosystems.”

**JF Gauthier, Founder & CEO  
of Startup Genome**

## KEY ECOSYSTEM PLAYERS

### Angel Association New Zealand

Angel Assn NZ supports New Zealand born, world changing businesses delivering exponential financial, social and economic returns. They are working to increase the quantity, quality, and success of venture investment in New Zealand.

### Callaghan Innovation

Callaghan Innovation is New Zealand’s innovation agency. They partner with businesses of all sizes to activate innovation and help businesses grow through innovation funding, capability support, and providing R&D solutions to help commercialisation.

### Global Entrepreneurship Network New Zealand

GEN NZ’s mission is to connect entrepreneurs to the people and resources they need to thrive. They are building an accessible, diverse, and sustainable ecosystem in Aotearoa New Zealand that generates significant economic and social returns.

### New Zealand Trade and Enterprise

Te Taurapa Tūhono, New Zealand Trade and Enterprise is the government’s international business development agency. They connect local and international business to grow a productive, sustainable and inclusive economy.

### New Zealand Tech

NZTech is a purpose driven not-for-profit, non-governmental organisation funded by members who are collectively working to help create a more equitable, sustainable and prosperous Aotearoa New Zealand underpinned by good tech.



Australia  
**Sydney #20**

MEMBERS:

Investment NSW

"Sydney has the best of both worlds — world-leading economic strength and lifestyle, making it the best place in the world to grow a startup."

Amy Brown

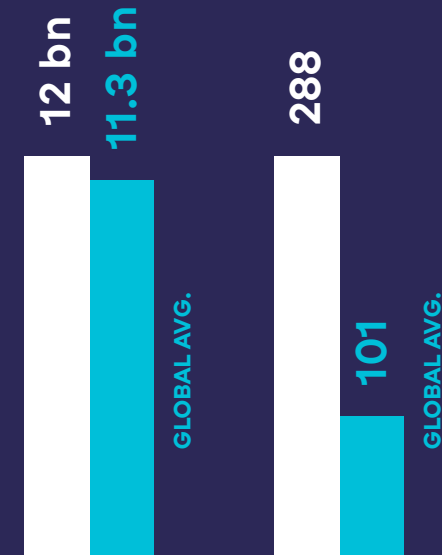
Secretary, Department of Enterprise, Investment and Trade, and CEO, Investment NSW



TOTAL EARLY STAGE FUNDING  
(2019H2-2021)

**\$1.3 bn**

GLOBAL AVG.  
\$687 m



Amount (\$) Count (#)

Exits

(2017-2021)

ECOSYSTEM VALUE  
(2019H2-2021)

**\$68 bn**

GLOBAL AVG.  
\$28.6 bn

EARLY-STAGE FUNDING GROWTH TIER  
(2018/19 VS. 2020/21)



Calculated on a scale of  
1 (lowest) to 10 (highest)

Highlights

Sydney's close-knit but fast-growing startup ecosystem had a banner year in 2021. More than AU\$10 billion (\$7.6 billion) was invested in Australian firms across 682 deals, three times the AU\$3.1 billion (\$2.3 billion) invested in 2020. Among the largest of these deals was the \$231.5 million that Sydney-based sustainable Bitcoin mining company Iris Energy raised in its Nasdaq IPO in November. Plant-based meat company v2food raised an AU\$14.9 million (\$113 million) Series B in August 2021, while Harrison.ai raised a AU\$129 million (\$98 million) Series B in December 2021. Not long after, in February 2022, HR platform Employment Hero raised AU\$181 million (\$137 million) in a Series F round, which put its pre-money valuation at AU\$1.07 billion.

Home to unicorns Canva and Zip Co, Sydney's startup ecosystem is also attracting international investment. Early-stage investment firm The Fund announced in 2021 that it is expanding to Australia. The Fund is targeting \$3.5 million and will invest in approximately 40 startups.

The Network Readiness Index, which ranks the application and impact of information and communication technology in economies around the world, placed Australia #13 out of the 130 economies on its 2021 list. The UNCTAD Technology and Innovation Report 2021 ranked Australia #12 overall and first in skills. SIGGRAPH Asia announced that Sydney would host its 2023 conference and exhibition.

MEDIAN SEED ROUND  
(2019H2-2021)

**\$835 k**



GLOBAL AVG.  
\$671 k

MEDIAN SERIES A ROUND  
(2019H2-2021)

**\$5.4 m**



GLOBAL AVG.  
\$4.7 m

SOFT. ENGINEER SALARY  
(2021)

**\$76 k**



GLOBAL AVG.  
\$46 k

TOTAL VC FUNDING  
(2017-2021)

**\$5.9 bn**



GLOBAL AVG.  
\$4.5 bn

TIME TO EXIT  
(2017-2021)

**9 years**



GLOBAL AVG.  
9.4 years



# Sub-Sector Strengths

## **Fintech**

Of over 800 Australian Fintech startups, 60% are located in Sydney. Australia ranks sixth in the world and second in Asia in Fintech, according to analytics firm Finexable. The 2020-21 Federal Budget included AU\$9.6 million (\$7.3 million) to help Fintechs expand into international markets and AU\$6.9 million (\$5.2 million) for industry-led Blockchain pilots to reduce regulatory compliance costs. In July 2021, payments company Airwallex announced that its second Australian engineering hub will be located in Sydney.

## **Cleantech**

Sydney is a thriving innovation center for renewable energy and Cleantech companies. With an estimated 35% annual growth rate, the renewable energy industry in New South Wales attracts billions of dollars in investment and is set to become the leading state for clean energy production, decarbonisation, and halving emissions by 2030. Sydney is also home to EnergyLab, Australia and New Zealand's largest climatetech startup accelerator.



# Reasons to Move Your Startup to Sydney

## **Supportive Business Environment**

The AU\$250 million (\$189 million) Jobs Plus Program is designed to support companies that want to expand their footprint in NSW. The program reduces the costs and risks of establishing a business in the state.

## **Educated Workforce**

Sydney is home to many of Australia's leading universities, research institutes, and technical colleges. Two of Sydney's six universities are members of the Group of Eight, a coalition of the eight world-leading, research-intensive Australian universities. More than two-thirds of New South Wales workers hold a bachelor's degree, and the average age of the workforce is 40.

## **Quality of Life**

The 2021 Cities of Choice ranking placed Sydney at #10 in the world for quality of life, with it being cited as an example of a "comfortable city." The NSW Government is extending Sydney's affordable rental housing scheme, and the city aims to add over 10,000 affordable rental properties in the next 15 years, with 600 currently in the pipeline.



# Selected Startup Organizations

## STARTUP GENOME MEMBERS

MEMBER

### Investment NSW

Investment NSW is the New South Wales (NSW) government’s economic development and attraction agency, with a mandate to reinforce NSW as the most desirable place in the world to visit, study, invest and do business. It helps drive the state’s economic growth and transformation by showcasing NSW business, events, tourism and education for new markets and investors in Australia and around the world.

“Ranking as a Top 20 Global Startup Ecosystem Sydney has grown tremendously, producing an impressive 22 exits over \$50 million. The leadership of Investment NSW is an asset for the ecosystem.”

**JF Gauthier, Founder & CEO  
of Startup Genome**



# Methodology, References & Acknowledgments

293 Methodology

302 References

366 Acknowledgments



## Global Startup Ecosystem Report 2022

# Methodology

The Startup Genome quantitative data infrastructure includes data on over three million companies, nearly 300 ecosystems, and survey data from more than 10,000 startup executives across the globe — the Voice of Entrepreneurs.

Below is a description of the main datasets that make up this data science infrastructure:

- Startup Genome proprietary data:
  - Interview of 100+ Experts
  - 2017-2021 Startup Ecosystem Survey with more than 10,000 participants per year
- Dealroom: global dataset on funding, exits, and locations of startups and investors
- Crunchbase: global dataset on funding, exits, and locations of startups and investors
- PitchBook: private capital market data provider

- Local partners (accelerators, incubators, startup hubs, investors):
  - list of startups
  - list of local exits and funding events

## Data Sources

### Primary Data Sources

- Startup Genome LLC (2017-2022). StartupGenome.com Database
- Dealroom.co BV. (2017-2022). Dealroom.co Database
- Crunchbase (2017-2022). Crunchbase.com Database
- CB Insights (2019-2022). Cbinsights.com Database
- Orb Intelligence Inc. (2017-2021). orb-intelligence.com Database
- PitchBook (2018-2022), a private capital market data provider Database

### Secondary Data Sources

- Forbes 2000
- Github API
- International IP Index
- Meetup.com
- OECD, R&D Spending
- Other sources from Life Sciences Rankings
- Salaries data from Glassdoor, Salary.com, and PayScale
- Shanghai Rankings
- Techboard
- Times Higher Education Rankings
- Top 800 R&D Hospitals, Webometrics
- USPTO
- WIPO
- World Bank, Ease of Doing Business



## Selected Data Timeframes

## Ranking Methodology (For Top Ecosystems)

### Overall Ranking

The overall global ecosystem ranking is a weighted average of the following factor scores:

- Performance: 30%
- Funding: 25%
- Market Reach: 15%
- Connectedness: 5%
- Experience & Talent: 20%
- Knowledge: 5%

We calculated an ecosystem index value for each factor, based on the sub-factor and metrics detailed below. The ecosystems scores were multiplied by the above weights to establish the overall rank of each ecosystem. The weights of the factors were determined from 2017-2020 through correlation analyses and modeling work based on linear regression analyses, using factor indexes as independent variables with the performance index as dependent variable. Finally, adding the actual Performance Index to the ranking formula serves to

include the influence of unobserved factors on the performance of an ecosystem.

### Ranking Details

#### Performance

Captures the actual leading, current, and lagging indicators of ecosystem performance.

- 50% Ecosystem Value
  - Log of sum of all exits and estimated startups valuations during the timeframe without double-counting
- 37.5% Exits
  - 80% Volume of Exits (80% log of number of exits of \$50M+ and 20% log of number of exits of \$1B+)
  - 20% Exit Growth Index (scored from 1 to 10)
- 12.5% Startup Success
  - 60% Growth-Stage Success (100% Ratio of Series C-to-A Startups)
  - 30% Speed to Exit (50% average company age at exit and 50% average company age at IPO)
  - 10% Early-Stage Success (Ratio of Series B-to-A Startups)

#### Funding

Quantifies funding metrics important to the success of early-stage startups.

- 90% Access
  - 90% Early-Stage Funding Volume (80% log of count and 20% log of sum of total early-stage funding deals). Time range for Seed rounds is Jul 01, 2018 to Dec 31, 2020 and for Series A time range is Jul 01, 2019 to Dec 31, 2021
- 10% Log of Early-Stage Funding Growth
- 10% Quality and Activity
  - 70% Volume of Investors (50% log of total number of VCs and CVCs [in Q1 2022]; and 50% log of total number of large \$100 million+ AUM VCs and CVCs [in Q1 2022])
  - 10% Experience of Investors (50% number of investors with above average exit rates [in Q1 2022] and 50% average years of experience of investors [in Q1 2020])
  - 20% New Investor (50% log of total number of new investors (in Q1 2022, with less than five years of activity) and 50% ratio of active investors [in Q1 2022])



## Market Reach

Measures early-stage startup access to customers allowing them to scale and “Go-Global.”

- 60% Globally Leading Companies
  - 50% Ratio of billion-dollar club to GDP (B)
  - 30% Ratio of exits over 1B by Metro population (in M)
  - 20% Log of Ratio of Exits over \$50 million in the first half of 2019, 2020, and 2021 to Funding Series A in the first half of 2019, 2020, and 2021
- 30% Local Market Reach
  - Log of GDP of country
- 10% Quality
  - Log of Commercialization of Tangible IP Assets (tiers from 1 to 10, score based on the International IP Index, measured at the country level)

## Connectedness

Measures how connected the ecosystem is to the global fabric of knowledge within the ecosystem (Local Connectedness and Innovation Infrastructure).

- 90% Local Connectedness
  - 60% Log of Count of Meetup Groups on meetup.com

- 40% Log of Ratio of Number of Meetup Groups from meetup.com by population (in M)
- 10% Infrastructure
  - 90% Log of Life Sciences-focused measure of accelerators and incubators
  - 10% Log of Count of Research and Development Hospitals

## Experience & Talent

### 37.5% Talent

Assesses the talent early-stage startups have access to.

- 90% Tech Talent
  - 90% Quality & Access
    - 70% Log of Count of Exits over 50M 2012-2021
    - 10% Share of top github coders to total github coders
    - 10% Log of Count of Github coders on github.com with more than 10 followers
    - 10% English Proficiency Score
- 10% Cost
  - 50% Log of software engineer salary — lower is better — from Glassdoor, Salary.com, and PayScale

- 50% Log of Funding Runway: Ratio of Median Series A funding rounds by software engineer salary
- 10% Life Sciences
  - 50% STEM Students: Log of Number of STEM students
  - 40% Life Sciences Access
    - 70% Log of Number of Life Sciences disciplines
    - 30% Log of Number of institutes which have Life Sciences related disciplines
- 10% Life Sciences Quality
  - 25% Average of CNCI score from Shanghai Rankings
  - 25% Average of TOP score from Shanghai Rankings
  - 25% Average IC score from Shanghai Rankings
  - 25% Average PUB Score from Shanghai Rankings

### 62.5% Experience

Captures the degree of startup experience in an ecosystem.

- 80% Startup experience in ecosystem
  - Log of Count of Funding of Series A in 2012-2021 (10 years)



- 20% Scaling Experience in Ecosystem (the cumulative number of significant exits, over \$50 million and \$1 billion, over 10 years for startups founded in the ecosystem)
  - 60% Log of number of exits of \$1 billion+
  - 40% Log of number of exits of \$50 million+

### Knowledge

Measures innovation through research and patent activity.

- 80% Patents (the volume, complexity, and potential of patents in Life Sciences created in the ecosystem, further described in the Life Sciences section of the Methodology)
  - 50% Log of Tier of number of Life Sciences patents in ecosystem
  - 30% LS three year moving average growth of Patents.
  - 10% LS technology potential, a measure calculated at the technology class level globally and calculated for each ecosystem based on the technologies it produces
    - 20% Complexity of Technology Class, based on a PageRank algorithm
    - 30% Global Growth of Technology Class

- 50% Size of Technology Class (log of number of global patents in class)
- 10% Complexity Score of patents, a measure of the capacity of the ecosystem for producing patent in complex technology classes, based on a PageRank algorithm
- 20% Research (H-index, a measure of publication impact, this metric looks at the production of Life Sciences research at the country level)

## Emerging Ecosystems Rankings

Emerging ecosystems are those ecosystems following the top 40 global ecosystems in performance. The factor weights used to rank these ecosystems are slightly different from those used with top ecosystems (detailed in our methodology section) to reflect their emerging status and emphasize the factors that influence more in ecosystems that are just beginning to grow.

The Emerging ecosystem ranking is a weighted average of the following factor scores:

Performance: 45%

Funding: 30%

Market Reach: 15%

Experience & Talent: 10%

## Emerging Ecosystem Ranking Details:

### Performance

Captures the actual leading, current, and lagging indicators of ecosystem performance.

- 70% Ecosystem Value
  - Log of sum of all exits and estimated startups valuations during the timeframe without double-counting
- 20% Exits
  - 80% Volume of Exits (80% log of number of exits of \$50M+ and 20% log of number of exits of \$1B+)
  - 20% Exit Growth Index (scored from 1 to 10)
- 10% Startup Success
  - 80% Growth-Stage Success (50% Ratio of Series C-to-A Startups and 50% log of unicorns from 2H2019-2021)
  - 10% Speed to Exit (50% average company age at exit and 50% average company age at IPO)
  - 10% Early-Stage Success (Ratio of Series B-to-A Startups)

### Funding

Quantifies funding metrics important to the success of early-stage startups.



- 100% Access
  - 90% Early-Stage Funding Volume (80% log of count and 20% log of sum of total early-stage funding deals)
  - 10% Log of Early-Stage Funding Growth

### Market Reach

Measures early-stage startup access to customers allowing them to scale and “Go-Global.”

- 100% Globally Leading Companies
  - 50% Ratio of Billion dollar club to GDP (B)
  - 30% Ratio of exits over 1B by Metro population (in M)
  - 20% Log of Ratio of Exits over 50M in 2H2019-2021 to Funding Ser A on 2H2019-2021

### Talent

#### 50% Talent

Assesses the talent early-stage startups have access to.

- 80% Tech Talent
  - 50% Quality & Access
    - 70% Log of Count of Exits over 50M 2012-2021
    - 10% Share of top github coders to total github coders

- 20% Log of Count of Github coders on github.com with more than 10 followers
- 50% Cost
  - 50% Log of software engineer salary — lower is better — from Glassdoor, Salary.com, and PayScale
  - 50% Log of Funding Runway: Ratio of Median Series A funding rounds by software engineer salary
- 20% Life Sciences
  - 100% STEM Students: Log of Number of STEM students

### 50% Experience

Captures the degree of startup experience in an ecosystem

- 80% Startup Experience in Ecosystem
  - Log of Count of Funding of Series A in 2012-2021 (10 years)
- 20% Scaling Experience in Ecosystem (the cumulative number of significant exits, over \$50 million and \$1 billion, over 10 years for startups founded in the ecosystem)
  - 60% Log of number of exits of \$1 billion+
  - 40% Log of number of exits of \$50 million+

## Notes on Changes in Ecosystem Value

Our constant endeavor at Startup Genome is to improve our quality of research and data to help our members and our readers gain absolute, on the ground knowledge into the world of startup ecosystems. With that aim in mind, we have significantly improved our data set — both in terms of exhaustiveness and quality. As we improved the data, one of the key outcomes was an increase in Ecosystem Value. The major factors that influenced this are:

1. Technology Startup Classification: We have made significant improvements in our classification of technology companies by adding more comprehensive classification criteria and tags from multiple sources. We have added CB Insights data and introduced in-depth checks to ensure the tech classification is accurate. This resulted in more companies being tagged as tech and hence more deals added to our dataset. This contributed approximately 8% to Ecosystem Value.
2. Increasing the Age Criteria: We concluded that older startups are more likely to receive higher and late-stage funding rounds. With that in mind, for exits over \$100 million we included companies with formation dates that go back to 1995. Similarly, for rounds later than Series B, companies with formation dates until



1995 are now included in our dataset. This added about 8.5% to the Ecosystem Value of the top 100 ecosystems

3. Increasing Unicorns Data: We have made enormous strides in expanding unicorns coverage in our dataset. This includes incorporating CB Insights unicorns and \$1 billion+ exits (after in-depth checks). This contributed to about 36% in the increase in Ecosystem Value of the top ecosystems.
4. Fine Combing through Big Deals: As a final check, we scrupulously worked on the larger deals of each ecosystem to make sure that deal was valid, reflected the true value, and belonged to that particular ecosystem.
5. From this year onwards, we are including exits larger than \$500 million that took place after 2018. These large exits stay in their ecosystem, mostly in the form of dry powder for investors to expand their portfolios, an important effect to take into account.
6. In previous years, we have only considered the ecosystem that a startup is founded in. From this year, we have also added the value of the top five startups and/or unicorns to the ecosystem where the startup is headquartered. The intention is to attribute both where a startup is born and where it creates attraction.

## Ecosystem Page Metrics

### Ecosystem Value

A measure of economic impact, calculated as the value of exits and startup valuations over the first half of 2019, 2020, 2021.

### Total Early-Stage Funding

Total Seed and Series A funding in tech startups in the first half of 2019, 2020, and 2021.

### Software Engineer Salary

Average software engineer salary (lower is better): from Glassdoor, Salary.com, and PayScale; as well as local sources when applicable.

### Median Series A

Median of Series A rounds in tech startups in the ecosystem for a 2.5 year time period (first half of 2019, 2020, and 2021).

### Median Seed

Median of Seed rounds in tech startups in the ecosystem for a 2.5 year time period (first half of 2019, 2020, and 2021).

## Key Concepts and Definitions

### Ranking

The ranking compares ecosystems based on where early-stage startups will most likely build globally successful companies.

### Startup

Steve Blank defines a startup as a “temporary organization designed to search for a repeatable and scalable business model.” We use this definition to look at new businesses in sectors and sub-sectors that include Software, Hardware, Health, and Energy.

### Ecosystem

A cluster of startups and related entities that draw from a shared pool of resources and generally reside within a 60-mile (100-kilometer) radius of a central point in a particular region. The goal of the ecosystem is to launch and grow companies.

### Ecosystem Success Factor Model

Our principal analytical tool measures the dimensions that contribute to startup performance. We look at multiple factors for our rankings: one measuring actual performance, with other Success Factors associated with performance, each composed of sub-factors and



metrics. These factors are highlighted in our Ranking Methodology section.

- **Performance:** A combination of leading, lagging, and current indicators that capture economic outcomes in a startup ecosystem.
- **Funding:** The level and growth of early-stage funding, looking at both access and quality.
- **Market Reach:** Measures early-stage startup access to customers allowing them to scale and “Go-Global.”
- **Connectedness:** Measures how connectedness within the ecosystem and the supporting infrastructure
- **Resource Attraction:** The gravitational pull of an ecosystem in drawing in entrepreneurs and startups from elsewhere.
- **Startup Experience:** The depth and diversity of the pool of prior startup experience in an ecosystem.
- **Talent:** Measures the accessibility, quality, and cost of software engineering expertise.
- **Founder:** Success factors related to the startup founder, under his or her control, or internal to the startup as opposed to external (a function of the ecosystem)
  - **Founder DNA:** The background, experience, ambition, and motivation of local founders.

- **Founder Go-Global Strategy:** Measures whether a startup is going global from the outset or first targets its local market, and whether its customer acquisition team is located, targeted, and skilled to succeed.
- **Founder with High Ambition:** Founders who expressed all of the following attributes: Total Addressable Market of \$30 billion USD or more; developing a globally-new, or one of the globally-leading or niche products; and the mission to change the world, get rich or create a great product.
- **Founders with Experience in Sub-Sector:** Founders who considered their graduate or postgraduate degree to be directly relevant to their startup.
- **Local Connectedness:** A multi-variable assessment of the local community, including sense of community, relationships, and collisions between founders, investors, and experts.
  - **Sense of Community Index:** A sub-factor of Local Connectedness capturing the degree to which founders informally receive help from investors, experts, and fellow founders.
  - **Number of Relationships Between Founders:** The number of quality relationships between local founders, where they know each other and can call upon the other for help “this week”.

- **Collision Index:** A sub-factor of Local Connectedness capturing the number of tech events on Meetup.com and the density of tech events per startup in the ecosystem.

## Sector and Sub-Sector Definitions

Below are our definitions for each startup sub-sector analyzed here. Note that sub-sectors are not mutually exclusive nor comprehensive — some startups are in sub-sectors we did not consider.

In addition, at least from patents, the data shows a clear tech convergence. Technology like AI software are increasingly inter-related, and we would expect a similar convergence overtime for Startup sub-sectors.

### Advertising Tech (Adtech)

Advertising Tech captures different types of analytics and digital tools used in the context of advertising and marketing. Extensive and complex systems are used to direct, convey, or monitor advertising to target audiences of any size and scale.

### Advanced Manufacturing & Robotics

Advanced Manufacturing involves smart technology to improve traditional manufacturing of products and/or



processes. Robotics is the science and technology of robots, their design, manufacture, and application.

### **Agriculture Tech (Agtech) & New Food**

Agtech captures the use of technology in agriculture, horticulture, and aquaculture with the aim of improving yield, efficiency, and profitability through information monitoring and analysis of weather, pests, and soil and air temperature. New Food includes technologies that can be leveraged to create efficiency and sustainability in designing, producing, choosing, delivering, and consuming food. This is informed by [Forward Fooding's](#) definition of Food Tech.

### **Artificial Intelligence, Big Data & Analytics**

AI, Big Data & Analytics refers to an area of technology devoted to extracting meaning from large sets of raw data, e.g. often including simulations of intelligent behavior in computers.

### **Blockchain**

Blockchain is a decentralized data storage method secured by cryptography. Cryptocurrencies are one of many innovations utilizing Blockchain. Companies building their product/architecture on top of this decentralized and encrypted technology are defined as Blockchain companies.

### **Cleantech**

Cleantech consists of sustainable solutions in the fields of Energy, Water, Transportation, Agriculture, and Manufacturing that include advanced materials, smart grids, water treatment, efficient energy storage, and distributed energy systems.

### **Construction and Property Tech (Proptech)**

Construction Technology refers to technology that can improve the construction processes and methods including productivity gains, cost savings, improved safety, shorter lead times and maximized resources etc. Proptech refers to the technology that helps organizations and individuals research, buy, sell, rent, lease and manage real estate. Methods include searching for property, listing available properties, setting up viewing dates and finalizing the lease agreements and deals.

### **Consumer Electronics or Home Electronics (includes Wearables, Smart Devices)**

Consumer Electronics or Home Electronics are electronic or digital equipment intended for everyday use, including smart devices used for entertainment, communications, and home-office activities as well as other wearables.

### **Cybersecurity**

Cybersecurity is the body of technologies, processes, and practices designed to protect networks, computers, programs, and data from attack, damage, or unauthorized access.

### **Education Tech (Edtech)**

Edtech refers to an area of technology devoted to the development and application of tools (including software, hardware, and processes) intended to redesign traditional products and services in education.

### **Fintech**

Fintech aims to improve existing processes, products, and services in the Financial Services industry (including insurance) via software and modern technology.

### **Gaming**

Gaming involves the development, marketing, and monetization of video games and gambling machines, as well as associated services.

### **Government Tech (Govtech)**

Govtech is the infrastructure of technology that the governments and government institutions use to provide specific services to its citizens with the aim of improving public service. This technology enables



the government to effectively operate in a way that increases transparency and maximizes public welfare and involvement.

## Life Sciences

Life Sciences is the sector concerned with diagnosing, treating, and managing diseases and conditions. This includes startups in Biotech, Pharma, and Medtech (also referred to as medical devices).



## References

Nominal GDP driven by digitally transformed and other enterprises worldwide from 2018 to 2023, <https://www.statista.com/statistics/1134766/nominal-gdp-driven-by-digitally-transformed-enterprises/#:~:text=While%20in%202018%2C%20digitally%20transformed,of%20the%20overall%20nominal%20GDP>

Tarush Bhalla. (2022, March 28). Indian unicorn founders band together to launch Bharat founders fund, <https://economictimes.indiatimes.com/tech/funding/indian-unicorn-founders-band-together-to-launch-bharat-founders-fund/articleshow/90477954.cms?from=mdr=>

Takashi Kawakami. (2022, March 22). Shenzhen emerges from lockdown as China wavers on 'zero COVID', <https://asia.nikkei.com/Spotlight/Coronavirus/Shenzhen-emerges-from-lockdown-as-China-wavers-on-zero-COVID>



Chris Metinko. (2022, January 12). Venture funding in Asia shatters record for year and quarter—Thanks in large part to China, <https://news.crunchbase.com/news/asia-china-2021-vc-startup-funding/>

Joanna Glasner. (2022, January 21). North American startup funding scaled unprecedented heights in 2021, <https://news.crunchbase.com/news/na-vc-startup-funding-2021-recap/>

Natasha Lomas. (2022, January 26). Q&A on Spain's startup law, coming later this year, <https://techcrunch.com/2022/01/26/spain-startup-law-interview-francisco-polo/>

Jerry Zremski. (2022, February 03). Bill that would create tech hubs could help WNY in other ways, [https://buffalonews.com/news/local/bill-that-would-create-tech-hubs-could-help-wny-in-other-ways/article\\_6adb-4c0a-c92f-11eb-8534-c3e72c94bf2b.html](https://buffalonews.com/news/local/bill-that-would-create-tech-hubs-could-help-wny-in-other-ways/article_6adb-4c0a-c92f-11eb-8534-c3e72c94bf2b.html)

New digital nomad visas (updated): More countries see restless internationals as key to prosperity. (2022, April 1), <https://dispatcheseurope.com/new-digital-nomad-visas-more-countries-see-restless-internationals-as-key-to-prosperity/>

Terry Ward. (2021, February 1). Madeira to digital nomads: Come work with us, <https://edition.cnn.com/travel/article/madeira-portugal-digital-nomads/index.html>

El Salvador's leader wants to go in even bigger on bitcoin. (2022, March 27), <https://www.npr.org/2022/03/27/1086851329/el-salvadors-leader-wants-to-go-in-even-bigger-on-bitcoin?t=1650626318546>

Carrie Kahn. (2020, October 16). Europe's awakening to China's tech dominance, <https://hir.harvard.edu/europe-awakening-china-tech-dominance/>

Agatha Kratz, Janka Oertel. (2021, April 15). Home advantage: How China's protected market threatens Europe's economic power, <https://ecfr.eu/publication/home-advantage-how-chinas-protected-market-threatens-europes-economic-power/>

Amy Borrett. (2021, April 21). Is Chinese investment in Europe's technology industry a threat?, <https://techmonitor.ai/policy/geopolitics/is-chinese-investment-europe-technology-industry-threat>

Arjun Kharpal. China has 'zero chance' of acquiring 'vulnerable' Europe tech firms as EU urges states to take stakes, <https://www.cnbc.com/2020/04/16/chinese-takeover-of-europe-tech-firms-face-increased-scrutiny.html>

Olga Kharif. (2022, March 15). Crypto sleuths claim to have sniffed out digital wallet with millions tied to sanctioned Russian oligarchs and officials, <https://fortune.com/2022/03/15/crypto-sleuths-found-digital-wallet-millions-sanctioned-russian-oligarchs-officials/>

Cade Metz, Adam Satariano. (2022, April 13). Russian tech industry faces 'Brain drain' as workers flee, <https://www.nytimes.com/2022/04/13/technology/russia-tech-workers.html>

Daisuke Wakabayashi, Kate Conger. (2021, November 5). Google wants to work with the Pentagon again, despite employee concerns, <https://www.nytimes.com/2021/11/03/technology/google-pentagon-artificial-intelligence.html>

Ramon O'Callaghan. (2021, April 28). The beginning of the end for globalization?, <https://www.pbs.up.pt/en/articles-and-events/artigos/the-beginning-of-the-end-for-globalization/>



Adam S. Posen. (2022, March 17)The end of globalization?, <https://www.foreignaffairs.com/articles/world/2022-03-17/end-globalization>

## Global Trends in Startup Sub-Sectors

Tianjia Miao. (2022, January 21). Can EdTech be the path forward for China's education industry?, <https://insights.grcglobalgroup.com/can-edtech-be-the-path-forward-for-chinas-education-industry/>

Banking is only the beginning: 65 big industries blockchain could transform. (2022, March 09), <https://www.cbinsights.com/research/industries-disrupted-blockchain/>

## Diversity in Startups: When it Helps and When it Hurts

Gompers, P. A., Gornall, W., Kaplan, S. N., & Strebulaev, I. A. 2020. "How do venture capitalists make decisions?"- Journal of Financial Economics, 135(1): 169-190.

Mari Sako, Matthias Qian, Mark Verhagen. (2022, January 10). "Knowledge similarity among founders and joiners: Impact on venture Scaleup in Fintech and Lawtech," [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=4003043](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4003043)

## Regional Insights: Africa

Funding Report 2021. (2022, January 28), <https://disrupt-africa.com/funding-report/>

Nigeria Startup Bill (NSB) | Home, <https://startupbill.ng>

## Regional Insights: Asia

Doing business 2020-Sustaining the pace of reforms. (2019, October 24), <https://www.worldbank.org/en/news/feature/2019/10/24/doing-business-2020-sustaining-the-pace-of-reforms>

Jeanny Yu, Abhishek Vishnoi. (2021, July 7). As China's tech crackdown widens, investors may take a 'sell first, talk later' approach, <https://fortune.com/2021/07/07/china-tech-crackdown-value-investors-didi-tencent-alibaba-baidu-jd-meituan/>

Tracy Qu. (2022, January 6). China's tech crackdown moves into new year with fines on Alibaba, Tencent, <https://www.scmp.com/tech/big-tech/article/3162387/china-tech-crackdown-fresh-antitrust-fines-alibaba-and-tencent-signal>

Shen Lu. (2021, August 3). Beijing is killing China's once-thriving ed tech sector, <https://www.protocol.com/bulletins/beijing-killing-edtech>

China to Close Loophole Used by Tech Firms for Foreign IPOs. (2021, December 01), <https://www.bloomberg.com/news/articles/2021-12-01/china-plans-to-ban-loophole-used-by-tech-firms-for-foreign-ipos>

Coco Liu. (2022, January 10). China Venture Funding Hits Record \$131 Billion Despite Crackdown, <https://www.bloomberg.com/news/articles/2022-01-09/china-venture-funding-hits-record-131-billion-despite-crackdown>

## Regional Insights: Europe

Winning formula: How Europe's top tech start-UPS get it right. (2021, August 18), <https://www.mckinsey.com/industries/technology-media-and-telecommunications/our-insights/winning-formula-how-europes-top-tech-start-ups-get-it-right>

Lorenzo Chiavarini. (2021, November 14). A UiPath to success: Central and Eastern European startups coming of age, <https://dealroom.co/blog/central-and-eastern-european-startups-2021>

Alex Wilhelm, Anna Heim. (2022, January 25). Venture capitalists fell in love with Europe last year, <https://techcrunch.com/2022/01/25/venture-capitalists-fell-in-love-with-europe-last-year/>



European startups 2021: The year in numbers. (2021, December 28), <https://www.entrepreneur.com/article/404306>

Andrii Degeler. (2022, February 6). The year in megarounds: Top 20 European tech funding deals of 2021 <https://tech.eu/2021/12/21/the-year-in-megarounds-top-20-european-tech-funding-deals-of-2021/>

## London's Tech Scene: A World-Class Ecosystem Competing on a Global Scale

UK Unicorn companies: Britain's \$1B businesses | 2022 | Beauhurst. (2021, July 29), <https://www.beauhurst.com/research/unicorn-companies/>

2021: the year London tech reached new heights. (2022, January), <https://dealroom.co/uploaded/2022/01/Dealroom-London-report-2022-Jan.pdf>

UK Research and Innovation (UKRI) | Innovate UK, [https://www.ukri.org/councils/innovate-uk/?\\_ga=2.120878856.129082643.1651670886-893287941.1651670886](https://www.ukri.org/councils/innovate-uk/?_ga=2.120878856.129082643.1651670886-893287941.1651670886)

United Kingdom | Rankings. <https://www.usnews.com/news/best-countries/united-kingdom>

Rainer Strack, Orsolya Kovács-Ondrejko, Jens Baier, Ádám Kotsis, Pierre Antebi, and Kate Kavanagh. (2021, November). Decoding the Digital Talent Challenge, <https://web-assets.bcg.com/d2/18/0a32c603453db57ec3c890387b0c/bcg-decoding-the-digital-talent-challenge-nov-2021-rev.pdf>

Rebecca Smithers. (2019, December 30). UK ethical consumer spending hits record high, report shows, <https://www.theguardian.com/environment/2019/dec/30/uk-ethical-consumer-spending-hits-record-high-report-shows>

Lanna Deamer. Investment into UK impact startups surges, <https://startups magazine.co.uk/article-investment-uk-impact-startups-surges>

Fiona Briggs. (2022, April 21) Two thirds of UK adults are concerned about the outlook for the environment, Accenture shows, <https://www.retailtimes.co.uk/two-thirds-of-uk-adults-are-concerned-about-the-outlook-for-the-environment-accenture-shows/>

## Discover Portugal: An Unbeatable Value Proposition for Startups

"Creating Europe's Most Connected Tech Hubs - Scale Cities Alliance." Dealroom.Co, 17 Feb. 2021, <https://dealroom.co/blog/distributed-startup-ecosystems-scale-startup-city-alliance>

"Global Peace Index Map » The Most & Least Peaceful Countries." Vision of Humanity, <https://www.visionofhumanity.org/maps/>

"Expatriate Insider 2021 Survey Results: Portugal." Relocate Magazine, <https://www.relocatemagazine.com/articles/expat-insider-2021-survey-results-portugal>

European Business School Rankings 2021, <https://rankings.ft.com/rankings/2869/european-business-school-rankings-2021>

QS world University rankings 2022, <https://www.topuniversities.com/university-rankings/world-university-rankings/2022>

EF English proficiency index | The world's largest ranking of countries and regions by English skills, <https://www.ef.com/wwen/epi/>



Startup & Entrepreneurial Ecosystem Report, Portugal 2021, <https://idcportugal.com/portugal-the-best-place-to-startup/startup-entrepreneurial-ecosystems-report-2021/>

## A Global Gateway to European Markets

Startup & Entrepreneurial Ecosystem Report, Portugal 2021, <https://idcportugal.com/portugal-the-best-place-to-startup/startup-entrepreneurial-ecosystems-report-2021/>

National Strategy for the Sea 2021-2030 | Government - Portuguese Republic, <https://www.portugal.gov.pt/pt/gc22/comunicacao/documento?i=estrategia-nacional-para-o-mar-2021-2030>

## How Startups are Creating a Future-Proof Economy in Rotterdam

Rankings | Erasmus University Rotterdam. <https://www.eur.nl/en/about-eur/rankings>

Repetti, Edoardo. "YES!Delft among the Top 5 Business Incubators in the World." YES!Delft, 7 Nov. 2019, <https://www.yesdelft.com/news/yesdelft-among-the-top-5-business-incubators-in-the-world/>

Graduate Entrepreneur Fund Raises €56M to Convert Innovations from Universities of Delft and Rotterdam into Commercial Success | Silicon Canals. 20 Apr. 2022, <https://siliconcanals.com/crowdfunding/graduate-entrepreneur-fund-raises-56m/>

## Regional Insights: Latin America

Joanna Glasner. (2022, January 21). Here's what's driving Latin America's rank as the world's fastest-growing region for venture funding, <https://news.crunchbase.com/news/latin-america-venture-growth-startups-2021-monthly-recap/>

Distribution of unicorns in Latin America as of April 2021, by industry. (2021, April 23), <https://www.statista.com/statistics/1095766/unicorn-distribution-in-latin-america-by-industry/>

Isabela Fleischmann EN, Imelda Vera, Adam Critchley. (2022, March 08). The Cities Competing to Become Latin America's Silicon Valley, <https://www.bloomberglinea.com/2022/03/09/the-cities-competing-to-become-latin-americas-silicon-valley/>

Renata Campetti Amaral, Anna Mello, Monica Pereira-Cavalcanti, Heloísa Barroso Uelze, Danielle Gomes De Almedina Valois. (2021, July 04). Brazil: Legal framework

for startups sanctioned. (2021, November 26), <https://www.globalcompliancenews.com/2021/07/04/brazil-legal-framework-for-startups-sanctioned18062021/>

Nick Bonyhady. (2022, February 28). \$10 billion flows to Australian start-UPS in banner year, <https://www.smh.com.au/technology/10-billion-flows-to-australian-startups-in-banner-year-20220228-p5a0bb.html>

Chisom Udemezue, Wole Hammond. (2022, February 10). Four inspiring things emerging in the African tech space, <https://www.weforum.org/agenda/2022/02/four-inspiring-things-emerging-in-the-african-tech-space/>

## Regional Insights: MENA

Qais Sabri. (2022, February 23). For the MENA startup ecosystem to grow, a regulatory framework for SMEs to become creditworthy is needed, <https://www.entrepreneur.com/article/420060>

Nermeen Abbas. (2021, April 28). These are Mena's top 10 largest funding rounds of 2021 so far, <https://www.forbesmiddleeast.com/innovation/startups/menas-10-largest-funding-rounds-of-2021-so-far>



## Regional Insights: North America

Taylor Tepper. (2021, April 14). Coinbase IPO: Here's What You Need To Know, <https://www.forbes.com/advisor/investing/cryptocurrency/coinbase-ipo-direct-listing/>

## Regional Insights: Oceania

New South Wales' (NSW) Government | Sydney startup hub. (2019, July 5), <https://invest.nsw.gov.au/invest/establish/sydney-startup-hub>

## Ecosystem Pages

Leading Public Research Hub | Eurasante, <https://lille.eurasante.com/lille-northern-france-health-cluster/a-leading-healthcare-cluster-in-europe/leading-public-research-hub/>

Eurasanté, the health cluster in northern France, deeply European. (2021, July 8), <https://www.euoffice.lillemetropole.fr/en/node/133>

Health Entrepreneurship Program | University of Lille, <https://health-entrepreneurship.univ-lille.fr/>

Go Global Lille | Event, <https://www.vlaio.be/nl/events/go-global-lille-210126>

Dynamic startup ecosystem | NRW.Global Business, <https://www.nrwinvest.com/en/nrw-as-location/this-speaks-well-for-nrw/dynamic-startup-ecosystem/>

Germany - Advanced Manufacturing | International Trade Administration. (2021, November 16), <https://www.trade.gov/knowledge-product/germany-advanced-manufacturing>

7 - Developing our higher education institutions to become the leading academies for start-UPS in Germany | gründen.nrw, <https://www.xn--grnden-4ya.nrw/en/about-us/7-unsere-hochschulen-zu-den-fuehrenden-grunderhochschulen-deutschland-weiterentwickeln>

Our mission | NRW.global Business, <https://www.nrwinvest.com/en/about-us/our-mission/>

Industry 4.0 | Economy NRW, <https://www.wirtschaft.nrw/industrie-40>

Robotics expert coming to North Rhine-Westphalia. (2020, May 25), <https://www.nrwinvest.com/en/about-us/news/detail/news/detail/News/robotics-expert-coming-to-north-rhine-westphalia/>

German EV startup Next E.Go Mobile closes €48M funding: Know more here. (2021, August 30), <https://siliconcanals.com/news/startups/next-e-go-mobile-closes-48m/>

Competence Center Machine Learning Rhine-Ruhr (ML2R) | About, <https://www.ml2r.de/en/about/>

Fraunhofer Institute for Intelligent Analysis and Information Systems (IAIS) | About Us. (2021, June 30), <https://www.iais.fraunhofer.de/en/institute/about-us.html>

Fraunhofer Institute for Industrial Mathematics (ITWM) | AI Initiative Rhineland-Palatinate: AI Pilot for Mobility. (2022, May 12), <https://www.itwm.fraunhofer.de/en/fields-of-application/ki-lotsin-rlp.html>

Dynamic startup ecosystem | NRW.global business, <https://www.nrwinvest.com/fr/site-nrw/avantages-de-la-rhenanie-du-nord-westphalie/digital-location-nrw/>

Mid-East Regional Enterprise Plan to 2024. (2022, March 3), <https://enterprise.gov.ie/en/Publications/Mid-East-Regional-Enterprise-Plan-to-2024.html>



Minister English launches mid-east regional enterprise plan for Kildare, Meath and Wicklow. (2022, March 03), <https://enterprise.gov.ie/en/News-And-Events/Department-News/2022/March/202203031.html>

Caoimhe Harney. (2022, March 3). Kildare Community Network Will Receive €2.5m For Co-Working Spaces, <https://www.kfmradio.com/news/localnews/kildare-community-network-will-receive-e2-5m-for-co-working-spaces/>

GENESIS- Incubation Programme | Local Enterprise Office, <https://www.localenterprise.ie/Kildare/Enterprise-Development/MERITS/GENESIS-Incubation-Programme.html>

MERITS - GENESIS, Incubation Programme | Local Enterprise Office. (2022, March 21), <https://leokildare.submit.com/show/188>

New €1 million Project aims to develop Low Carbon Roadmap for Ireland's Bioeconomy | Agriculture and food development authority. (2022, April 01), <https://www.teagasc.ie/news--events/news/2022/inform-bio-project.php>

Enterprise Ireland Agile Innovation Fund | Local Enterprise Office, <https://www.localenterprise.ie/CorkNorthWest/Financial-Supports/Agile-Innovation-Fund/>

Agile Innovation Supports Webinar | supportingSMEs. (2021, September 22), <https://supportingsmes.gov.ie/events/agile-innovation-fund-webinar.html>

EasyGo Charging Limited, <https://my.pitchbook.com/profile/459419-14/company/profile#general-info>

Perfuze, [https://www.crunchbase.com/organization/perfuze/company\\_financials](https://www.crunchbase.com/organization/perfuze/company_financials)

AgTechUCD Innovation Centre | LinkedIn, <https://ie.linkedin.com/company/agtech-ucd>

AgTechUCD Announces Winners of Inaugural Accelerator Programme for AgTech and FoodTech Start-ups | Knowledge Transfer Ireland (KTI). (2022, January 19), <https://www.knowledgetransferireland.com/News/AgTechUCD-Announces-Winners-of-Inaugural-Accelerator-Programme-for-AgTech-and-FoodTech-Start-ups.html>

Winners revealed for AgTechUCD's inaugural accelerator programme for start-UPS | University College Dublin (UCD). (2022, January 19), <https://www.ucd.ie/newsandopinion/news/2022/january/19/winnersrevealedforagtechucdsinauguralacceleratorprogrammeforstart-ups/>

Charles O'Donnell. (2022, March 4). ICMSA: 'Every Co-op should be paying 45c/L' for February milk, <https://www.agriland.ie/farming-news/icmsa-every-co-op-should-be-paying-45c-l-for-february-milk/>

Mid East | Industrial Development Agency (IDA) Ireland, <https://www.idaireland.com/doing-business-here/locations/mid-east>

Barrie Dowsett. (2022, February 23). What financial help is available for small businesses and start-UPS in Ireland?, <https://www.myriadassociates.ie/news/2022/what-financial-help-is-available-for-small-businesses-and-start-ups-in-ireland/>

Nick Bonyhady. (2022, February 28). \$10 billion flows to Australian start-UPS in banner year, <https://www.smh.com.au/technology/10-billion-flows-to-australian-start-ups-in-banner-year-20220228-p5a0bb.html>

Iris Energy Pty Ltd., <https://my.pitchbook.com/profile/462279-70/company/profile#general-info>

Harrison-AI Pty Ltd., <https://my.pitchbook.com/profile/343679-14/company/profile#general-info>

Employment Hero Pty. Ltd., <https://my.pitchbook.com/profile/101505-16/company/profile#general-info>



Catherine Shu. (2021, June 15). Early-stage venture firm the fund launches in Australia, <https://techcrunch.com/2021/06/15/early-stage-venture-firm-the-fund-launches-in-australia/>

Network Readiness Index 2021 Australia, <https://networkreadinessindex.org/wp-content/uploads/reports/australia.pdf>

Clovis Freire, Bob Bell, Daisuke Maruichi and Laura Cyron. Technology and Innovation Report 2021 | unctad.org, [https://unctad.org/system/files/official-document/tir2020\\_en.pdf](https://unctad.org/system/files/official-document/tir2020_en.pdf)

Özgür Töre. (2021, February 17). Sydney Wins to Host A Tech Event in 2023, <https://ftnnews.com/mice/41245-sydney-wins-to-host-a-tech-event-in-2023>

FinTech Startups in Sydney. (2022, April 9), <https://tracxn.com/explore/FinTech-Startups-in-Sydney>

Sydney as a global fintech hub showcased at world fintech festival 2021. (2021, November 9), <https://www.investment.nsw.gov.au/resources/media-releases/sydney-as-a-global-fintech-hub-showcased-at-world-fintech-festival-2021/>

Edmund Tang. (2021, August 16). Global Fintech rankings 2021: Australia now ranks 6th in the world, <https://www.austrade.gov.au/news/economic-analysis/global-fintech-rankings-2021-australia-now-ranks-6th-in-the-world>

Daniel Teper, Grant Wardell-Johnson, Stuart Fuller. (2022, January 28). KPMG recommendations for a vibrant Financial and Regulatory Tech sector, <https://home.kpmg/au/en/home/insights/2021/01/fintech-regtech-kpmg-submission-to-senate-select-committee.html>

Stephen Withers. (2021, July 6). Airwallex plans Sydney engineering hub, <https://itwire.com/strategy/airwallex-plans-sydney-engineering-hub.html>

Jobs Plus Program | NSW Government. (2022, April 12), <https://www.nsw.gov.au/projects/jobs-plus-program#about-the-program>

Sydney facts. (2019, July 5) | NSW Government, <https://invest.nsw.gov.au/why-nsw/sydney-facts>

Talented workforce | NSW Government. (2019, July 5), <https://invest.nsw.gov.au/why-nsw/talented-workforce>

Affordable rentals set to increase in Sydney. (2022, May 24), <https://www.nsw.gov.au/news/affordable-rentals-set-to-increase-sydney>

ClebMed Asia | Home, <https://www.clubmed.co.uk/l/blog/digital-nomad-index>

Startup Sri Lanka | About Us, <https://www.startupsrilanka.lk/about-startup-sl-2/>

Startup Sri Lanka | Accelerating Sri Lanka's Startup Culture, <https://www.startupsrilanka.lk/2021/06/30/accelerating-sri-lankas-startup-culture/>

Sri Lanka begins work on tech park to attract foreign investments. (2022, February 18), <https://www.news.cn/asiapacific/20220218/d866bbba4efc4a21870d9f14c39e9eaa/c.html>

Sri Lanka to set up three new 'techno parks' by 2023. (2021, November 12), <https://economynext.com/sri-lanka-to-set-up-three-new-techno-parks-by-2023-87907/>

Gunaratna, G. (2021, November 24). Sri Lanka : A first for Sri Lanka and South Asia: Hatch awarded best Co-working space in the world at global startup awards 2021, [https://www.colombopage.com/archive\\_21B/Nov24\\_1637725711CH.php](https://www.colombopage.com/archive_21B/Nov24_1637725711CH.php)



oDoc Private Limited, <https://my.pitchbook.com/profile/265068-91/company/profile#general-info>

Moneta | FinTech Hive Pvt. Ltd., <https://my.pitchbook.com/profile/483377-86/company/profile#general-info>

EXIP, <https://www.crunchbase.com/organization/exip>

International Trade Administration (ITA) | Sri Lanka - Country Commercial Guide | Energy, <https://www.trade.gov/country-commercial-guides/sri-lanka-energy>

MoU signed between ICTA Sri Lanka and enpact e.V, Germany to collaborate between startup ecosystems and webinar on AgriTech and WaterTech. (2021, April 19), <https://mfa.gov.lk/mou-signed-between-icta-sri-lanka-and-enpact-e-v-germany-to-collaborate-between-startup-ecosystems-and-webinar-on-agritech-and-watertech/>

Bill and Melinda Gates Foundation to assist Sri Lanka. (2022, January 7), <https://colombogazette.com/2022/01/07/bill-and-melinda-gates-foundation-to-assist-sri-lanka/>

SenzAgro (Pvt) Ltd, [https://www.crunchbase.com/organization/senzagro-solutions/company\\_financials](https://www.crunchbase.com/organization/senzagro-solutions/company_financials)

Sri Lanka's startup ecosystem. (2021, September 23), <https://www.themorning.lk/sri-lankas-startup-ecosystem-2/>

Digital nomad visa to be introduced shortly. (2022, February 19), <https://www.themorning.lk/digital-nomad-visa-to-be-introduced-shortly/>

ICT industry lauds Govt. move to pass Personal Data Protection Bill; first in South Asia. (2022, March 18), <https://www.ft.lk/front-page/ICT-industry-lauds-Govt-move-to-pass-Personal-Data-Protection-Bill-first-in-South-Asia/44-732137>

The Scalers | Bangalore. (2022, January 27), <https://thescalers.com/bangalore/>

Narayan launches BCIC's startup incubation centre in Bengaluru. (2022, February 8), <https://www.hindustan-times.com/india-news/narayan-launches-bcic-s-startup-incubation-centre-in-bengaluru-101644259503960.html>

Maruti Suzuki announces winners of incubation program with IIM Bangalore. (2022, February 25), <https://economictimes.indiatimes.com/industry/auto/auto-news/maruti-suzuki-announces-winners-of-incubation-program-with-iim-bangalore/articleshow/89819404.cms>

C N Ashwath Narayan. (2022, January 28). Karnataka's startup symphony is here to stay, <https://www.deccanherald.com/opinion/panorama/karnataka-s-startup-symphony-is-here-to-stay-1075341.html>

Vedantu, [https://www.crunchbase.com/organization/vedantu-innovations/company\\_financials](https://www.crunchbase.com/organization/vedantu-innovations/company_financials)

Vedantu Innovations Private Limited, <https://my.pitchbook.com/profile/103391-02/company/profile#general-info>

Ather Energy, <https://www.crunchbase.com/organization/ather-energy>

Swiggy, [https://www.crunchbase.com/organization/swiggy/company\\_financials](https://www.crunchbase.com/organization/swiggy/company_financials)

Bengaluru Tech Summit 2022 | Home, <https://www.bengalurutechsummit.com/>

IIM Bangalore's startup hub hosts an event empowering women entrepreneurs. (2022, March 12), <https://www.thehindu.com/brandhub/iim-bangalores-startup-hub-hosts-an-event-empowering-women-entrepreneurs/article65214819.ece>



Mahesh Kulkarni. (2021, July 9). Bengaluru among top 15 global cities in attracting VC funds in fintech sector, <https://www.deccanherald.com/state/top-karnataka-stories/bengaluru-among-top-15-global-cities-in-attracting-vc-funds-in-fintech-sector-1006717.html>

Karnataka sets up task group for fintech growth. (2021, November 18), <https://timesofindia.indiatimes.com/city/bengaluru/karnataka-sets-up-task-group-for-fintech-growth/articleshow/87768666.cms>

Ayushman Baruah. (2021, November 23). Global startups tap Indian tech talent, <https://www.livemint.com/companies/start-ups/global-startups-tap-indian-tech-talent-11637608785588.html>

Razorpay, [https://www.crunchbase.com/organization/razorpay/company\\_financials](https://www.crunchbase.com/organization/razorpay/company_financials)

Bangalore Bioinnovation Centre (BBC) | Home, <https://www.bioinnovationcentre.com/>

Mfine | Novocura Tech Health Services Private Limited, <https://my.pitchbook.com/profile/185366-17/company/profile#deal-history>

Invest in Karnataka - Business opportunities in Karnataka | Invest India, <https://www.investindia.gov.in/state/karnataka>

Choose Karnataka | Invest Karnataka, <https://www.investkarnataka.co.in/choose-karnataka/>

Shilpa Phadnis. (2022, February 17). Bengaluru has quarter of India's digital talent, <https://timesofindia.indiatimes.com/city/bengaluru/bengaluru-has-quarter-of-indias-digital-talent/articleshow/89627120.cms>

Aparajita Saxena. (2022, March 11). Is moving to Bangalore the new cool?, <https://yourstory.com/2022/03/moving-to-bangalore-twitter-trend-offices-reopening-social-media/amp>

Anusha Ravi Sood. (2022, February 3). Why Bengaluru isn't losing any sleep over Delhi becoming India's 'startup capital', <https://theprint.in/economy/why-bengaluru-isnt-losing-any-sleep-over-delhi-becoming-indias-startup-capital/819792/>

Niti Kiran. (2022, March 10). Delhi has more startups, but funds flow to Bangalore, <https://www.livemint.com/companies/news/delhi-wears-the-startups-crown-but-bengaluru-still-dons-the-unicorn-hat-11646806939701.html>

Karnataka govt announces seed funding of up to Rs 50 lakh to 200 startups. (2022, January 16), <https://www.deccanherald.com/state/top-karnataka-stories/karnataka-govt-announces-seed-funding-of-up-to-rs-50-lakh-to-200-startups-1071768.html>

Startup Aarhus | About, Retrieved from <https://start-upaarhus.com/about/>

Sabine Müller. (2021, September 16). The Danish startup database, <https://dealroom.co/blog/the-danish-startup-database#:~:text=In%202021%2C%20Denmark%20is%20home,1%2C600%20funding%20rounds%20and%20exits>

Emiliano Bellini. (2020, September 4). Apple data center in Denmark powered by 50 MW of solar, <https://www.pv-magazine.com/2020/09/04/apple-data-center-in-denmark-powered-by-50-mw-of-solar>

Dan Swinhoe. (2021, December 13). Meta/Facebook to expand Odense data center campus in Denmark, <https://www.datacenterdynamics.com/en/news/meta-facebook-to-expand-odense-data-center-campus-in-denmark/>

Dixa, [https://www.crunchbase.com/organization/dixa/company\\_financials](https://www.crunchbase.com/organization/dixa/company_financials)

ViaBill, [https://www.crunchbase.com/search/funding\\_rounds/field/organizations/funding\\_total/viabil](https://www.crunchbase.com/search/funding_rounds/field/organizations/funding_total/viabil)

Laura Rodriguez Bernate. (2022, February 25). Danish Biotech: A rapid rise, <https://dealroom.co/blog/danish-biotech-a-rapid-rise>



BioInnovation Institute (BII) | About, <https://bii.dk/about/>

Blue Ocean Robotics, [https://www.crunchbase.com/organization/blue-ocean-robotics/company\\_financials](https://www.crunchbase.com/organization/blue-ocean-robotics/company_financials)

4 Companies to Know in Denmark's Booming Fintech Sector. (2021, January 8), <https://fintechbaltic.com/3470/nordics/4-companies-to-know-in-denmarks-booming-fintech-sector/>

Pleo, <https://www.crunchbase.com/organization/pleo-company>

Lunar, [https://www.crunchbase.com/organization/lunar-bank/company\\_financials](https://www.crunchbase.com/organization/lunar-bank/company_financials)

Ministry of Foreign Affairs of Denmark | Launch Your Startup In Denmark, <https://investindk.com/our-services/start-up-denmark>

Fifth year in a row: AAU is Europe's best engineering university | Aalborg University (AAU). (2021, October 28), <https://www.news.aau.dk/news/fifth-year-in-a-row--aau-is-europe-s-best-engineering-university.cid524516>

Danish Tech Startups | The Association of Tech Startups in Denmark, <https://www.techstartup.dk/>

Bojan Stojkovski. (2022, March 22). With gaming and blockchain as focal points, Serbian startup ecosystem attracts record levels of investments, <https://therecursive.com/with-gaming-and-blockchain-as-focal-points-serbian-startup-ecosystem-attracts-record-levels-of-investments/>

The Government of Serbia has adopted a strategy for the development of startup ecosystems. (2021, December 11), <https://serbia-business.eu/the-government-of-serbia-has-adopted-a-strategy-for-the-development-of-startup-ecosystems/>

Serbian gov't adopts startup ecosystem development strategy. (2021, December 10), [https://www.tanjug.rs/full-view\\_en.aspx?izb=703711](https://www.tanjug.rs/full-view_en.aspx?izb=703711)

Serbia Creates Opportunities | Home, <https://innovations.serbiacreates.rs/>

Science Fund of the Republic of Serbia | Home, <https://fondzanauku.gov.rs/?lang=en>

A new opportunity for Serbian gaming startups in the Katapult accelerator. (2021, November 02), <https://sga.rs/en/news/a-new-opportunity-for-serbuan-gaming-startups-in-the-katapult-accelerator/>

Katapult Accelerator | Homepage, <https://katapult-accelerator.rs/>

The first in a series of investments through the "Digital Serbia" Initiative: 200,000 euros for the startup Tapni. (2021, September 22), <https://www.dsi.rs/prva-u-nizu-investicija-kroz-inicijativu-digitalna-srbija-200-000-evra-za-startap-tapni/>

Nordeus, <https://www.crunchbase.com/organization/nordeus>

Cabinet of the Minister for Innovation and Technological Development; Digital Serbia Initiative

Victoria Kuzmanova. (2021, June 3). Gaming studio Nordeus acquired by Take-Two Interactive in a huge exit for Serbia, <https://therecursive.com/gaming-studio-nordeus-acquired-by-take-two-interactive-in-a-huge-exit-for-serbia/>

Serbian Blockchain Initiative (SBI) | About, <https://sbi.rs/about>

Freeman Law | Serbia and Cryptocurrency, <https://freemanlaw.com/cryptocurrency/serbia/>



Mary Ann Azevedo. (2022, March 2). Blockchain infra startup tenderly raises \$40M after seeing 500% YoY revenue growth, <https://techcrunch.com/2022/03/02/blockchain-infra-startup-tenderly-raises-40m-after-seeing-500x-yoy-revenue-growth/>

Milena Radivojević. (2021, December 27). By selling tokens, domestic Tempus secured \$ 27.9 million - for the development of its DeFi protocol, <https://www.netokracija.rs/tempus-defi-srbija-193709>

UNQ Club, <https://my.pitchbook.com/profile/491036-14/company/profile#general-info>

Sujata Sangwan. (2022, March 25). UAE-based Hub71 leads AED 1.5B investments for Abu Dhabi startups, <https://yourstory.com/2022/03/mubadala-hub71-investments-abu-dhabi-tech-fintech-blockchain-crypto-currency-startups/amp>

HUB71 joins forces with Hewlett Packard Enterprise to accelerate development of Abu Dhabi's Tech Start-up Community. (2021, November 30), <https://www.hub71.com/en/whats-happening/articles/press-releases/hub71-joins-forces-with-hewlett-packard-enterprise-to-accelerate-development-of-abu-dhabi-s-tech-startup-community/>

ADIO accelerates opportunities in Abu Dhabi for startups through partnerships with Microsoft and Plug and Play. (2021, January 12), <https://www.prnewswire.com/news-releases/adio-accelerates-opportunities-in-abu-dhabi-for-startups-through-partnerships-with-microsoft-and-plug-and-play-301206006.html>

The United Arab Emirates' Government portal | Blockchain in the UAE government. (2021, November 11), <https://u.ae/en/about-the-uae/digital-uae/blockchain-in-the-uae-government>

Sandy Bhadare. (2021, May 26). UAE welcomes new blockchain platform, <https://iclg.com/ibr/articles/16377-uae-welcomes-new-blockchain-platform>

TruKker Technologies DMCC, <https://my.pitchbook.com/profile/175652-74/company/profile#deal-history>

Richie Santosdiaz. (2022, February 4). Fintech, Digital and the UAE 2022 – Expo 2020 Dubai, <https://thefintechtimes.com/fintech-digital-and-the-uae-2022-expo-2020-dubai/>

Abu Dhabi's fintech opportunity. (2021, February 2), <https://www.arabianbusiness.com/comment/458149-abu-dhabis-fintech-opportunity>

The Abu Dhabi Global Market | Financial Services Regulatory Authority, <https://www.adgm.com/financial-services-regulatory-authority>

The Abu Dhabi Global Market | The ADGM RegLab, <https://www.adgm.com/setting-up/reglab/overview>

How Abu Dhabi is enabling growth of its fintech space. (2021, August 31), <https://www.arabianbusiness.com/industries/banking-finance/467815-how-abu-dhabi-is-enabling-growth-of-its-fintech-space>

Turner, J. (2022, January 24). AgTech in Abu Dhabi: Driving a new way forward for food security, <https://www.investmentmonitor.ai/sectors/agribusiness/agtech-in-abu-dhabi-driving-a-new-way-forward-for-food-security>

Pure Harvest Smart Farms, Ltd., <https://my.pitchbook.com/profile/167642-02/company/profile#general-info>

Sarah Williams. (2020, July 20). Abu Dhabi's bid to create a complete ecosystem for start-UPS, <https://citymonitor.ai/economy/investment/abu-dhabi-s-bid-create-complete-ecosystem-start-ups>



The Abu Dhabi Global Market | Tech Startup | Overview, <https://www.adgm.com/setting-up/tech-startup/overview#:~:text=Abu%20Dhabi%20is%20an%20ideal%20launch%20pad%20for%20tech%20start-ups&text=Already%20a%20well%2Destablished%20business,breadth%20of%20the%20private%20sector.&text=Abu%20Dhabi's%20unrivalled%20global%20connectivity%20is%20the%20nexus%20of%20three%20continents>

Noor Radhi, Fatima Al Ali, Saifuddin Mahmood and Hasan Alkoofi, Hassan Radhi & Associates. (2021, July 1). Doing Business in Bahrain: Overview, [https://uk.practicallaw.thomsonreuters.com/9-500-6281?transitionType=Default&contextData=\(sc.Default\)&firstPage=true](https://uk.practicallaw.thomsonreuters.com/9-500-6281?transitionType=Default&contextData=(sc.Default)&firstPage=true)

Bahrain tops GCC rankings as best place for expats to live | Economic Development Board (EDB) Bahrain. (2021, May 19), <https://www.bahrainedb.com/latest-news/bahrain-tops-gcc-rankings-as-best-place-for-expats-to-live#:~:text=Despite%20the%20pandemic%2C%20Bahrain%20remains,%2C%20compared%20with%2054%25%20globally>

Bahrain launches 'golden' permanent residency visas to lure talent. (2022, February 22), <https://economictimes.indiatimes.com/nri/migrate/bahrain-launches-golden-permanent-residency-visas-to-lure-talent/article-show/89747572.cms>

Ministry of Finance and National Economy | Bahrain Economic Report | Quarterly - Q4 2021. (2022, March), [https://www.mofne.gov.bh/Files/cdoc/CI2036-BEQ%20Q4%202021%20\[EN\].pdf](https://www.mofne.gov.bh/Files/cdoc/CI2036-BEQ%20Q4%202021%20[EN].pdf)

Zahraa Hussain. (2022, March 17). Bahrain holds region's first NFT MENA exhibition. (2022, March 17), <https://www.bna.bh/en/news?cms=q8FmFJgiscL2fwlz-ON1%2BDgi4YsSbf2vydTxwwYh3umQ%3D>

The BIBF Launches the First-Ever Educational Linked NFTs in the World. (2022, March 6), <https://www.bibf.com/the-bibf-launches-the-first-ever-educational-linked-nfts-in-the-world/>

Bahrain Institute of Banking and Finance | The BIBF Launches the First-Ever Educational Linked NFTs in the World. (2022, March 6), <https://www.bibf.com/the-bibf-launches-the-first-ever-educational-linked-nfts-in-the-world/>

Hope Ventures is set to launch its first series of entrepreneurial initiatives by September 2021. (2021, August 3), <https://www.startupbahrain.com/news/hope-ventures-is-set-to-launch-its-first-series-of-entrepreneurial-initiatives-by-september-2021/>

Hope Fund | Beban, <https://hopefund.bh/beban/>

Fareed Rahman. (2022, January 6). Bahrain's Al Waha Fund of Funds to invest in Mubadala-backed FinTech fund, <https://www.thenationalnews.com/business/start-ups/2022/01/06/bahrains-al-waha-fund-of-funds-to-invest-in-mubadala-backed-fintech-fund/>

Infinios | About us, <https://infinios.com/about-us/#our-story>

Tarabut Gateway W.L.L., <https://my.pitchbook.com/profile/458485-57/company/profile#general-info>

Binance wins cryptocurrency license in Bahrain. (2022, March 15), <https://www.pymnts.com/cryptocurrency/2022/binance-wins-cryptocurrency-license-in-bahrain/>

Bahraini startup allows sukuk ownership for \$1,000 on a blockchain-based platform. (2021, September 13), <https://www.arabnews.com/node/1927956/business-economy>

Bahrain FinTech Bay partners with with blockchain specialist R3. (2021, April 13), <https://thestartupscene.me/INVESTMENTS/Bahrain-FinTech-Bay-Partners-with-with-Blockchain-Specialist-R3>

[https://www.crunchbase.com/organization/coinmena/company\\_financials](https://www.crunchbase.com/organization/coinmena/company_financials)



Economic Development Board (EDB) | Conducive business environment. (2022, February 20), <https://www.bahrainedb.com/why-bahrain/conducive-business-environment>

Tamkeen, (2022, March 21)

Tamkeen | Login, <https://www.tamkeen.bh/tamkeen-announces-plan-to-train-1200-bahrainis-in-coding-and-other-emerging-technology-skills-in-collaboration-with-the-worlds-leading-technology-academy-general-assembly-an/>

0% Corporate Tax Rate and Other Benefits to Doing Business in Bahrain. (2021, March 23), <https://www.bahrainedb.com/bahrain-pulse/advantages-0-corporate-income-taxes>

Young Enterprise Initiative (YEi) | Why France, <https://www.yeifrance.com/why-france.html>

Regis Leleu. (2021, August 2). Why investing in France tops the agenda for foreign businesses <https://www.intertrustgroup.com/insights/why-investing-in-france-tops-the-agenda-for-foreign-businesses/>

Moritz Zimmermann. (2021, June 16). Digital SME joins president Macron in Paris to launch scale-up Europe, <https://www.digitalsme.eu/digital-sme-joins-president-macron-in-paris-to-launch-scale-up-europe/>

Romain Dillet. (2021, October 21). Station F adds an online program to educate the next generation of entrepreneurs – TechCrunch, <https://techcrunch.com/2021/10/21/station-f-adds-an-online-program-to-educate-the-next-generation-of-entrepreneurs/>

Ankorstore, [https://www.crunchbase.com/organization/ankorstore/company\\_financials](https://www.crunchbase.com/organization/ankorstore/company_financials)

Marie Mawad, Adam Green. (2021, February 18). France's deeptech opportunity, <https://sifted.eu/articles/france-deeptech-opportunity/>

Daniel Adeyemi. (2021, November 1). The dawn of Ghana's tech ecosystem: Here's what you should know, <https://techcabal.com/2021/07/30/ghana-tech-startup-ecosystem/>

VICTOR OLUWOLE, (2022, February 9), Top 10 African countries with the fastest fixed broadband, Business insider Africa, <https://africa.businessinsider.com/local/markets/top-10-african-countries-with-the-fastest-fixed-broadband/n4mrdkz>

Alexandra Connerty. (2020, November 27). Want to launch a business in Africa? These four cities are great places to start, <https://startupguide.com/want-to-launch-a-business-in-africa-these-four-cities>

Aiden Smith. (2021, November 22). Ghana tech lab: The next generation of innovators, <https://borgenproject.org/ghana-tech-lab/>

Ghana YouStart programme to start by April 2022. (2022, March 10), <https://empowermentopportunities.com/2022/03/ghana-youstart-programme-to-start-by-april-2022.html>

Government to support entrepreneurs to grow and expand businesses through Youstart. (2022, January 30), <https://mofep.gov.gh/news-and-events/2022-01-30/government-to-support-entrepreneurs-to-grow-and-expand-businesses-through-youstart>

mPharma, <https://my.pitchbook.com/profile/104346-10/company/profile#general-info>

Kwami Ahiabenu. (2022, March 17). Ghana's financial technology (FinTech) state of play 2022, <https://thebftonline.com/2022/03/17/ghanas-financial-technology-fintech-state-of-play-2022/>



Victoria Bright, Justice Oteng, Elsie Gyan. (2022, March 24). Fintech 2022 | Trends and Developments, <https://practiceguides.chambers.com/practice-guides/fintech-2022/ghana/trends-and-developments/O10284>

Applications opened to startups for the NextGen Ghana Fintech accelerator 2022. (2022, February 21), <https://www.digitaltimes.africa/funding/applications-opened-to-startups-for-the-nextgen-ghana-fintech-accelerator-2022/>

Zeepay, <https://my.pitchbook.com/profile/129198-88/company/profile#general-info>

Tage Kene-Okafor. (2022, January 17). Ghanaian fintech float raises \$17M seed to power cash flow for commerce in Africa, <https://techcrunch.com/2022/01/17/ghanaian-fintech-float-raises-17m-seed-to-power-cash-flow-for-commerce-in-africa/>

The great debate: Why Ghana is the country for your tech startup! (2020, July 16), <https://medium.com/the-gps/the-great-debate-why-ghana-is-the-country-for-your-tech-startup-e30cc3ac295>

Madanmohan Rao. (2021, January 24). Startup guide Nairobi: How 'Silicon Savannah' is a hub of creativity, tech and impact. (2021, January 25), <https://yourstory.com/2021/01/startup-guide-nairobi/amp>

Google to set up first Africa product development centre in Nairobi. (2022, April 20), <https://www.moneycontrol.com/news/world/google-to-set-up-first-africa-product-development-centre-in-nairobi-8384661.html>

Silicon Valley-based VC firm flourish ventures opens Nairobi office targeting Fintech. (2021, March 16), <https://kenyanwallstreet.com/silicon-valley-based-vc-firm-flourish-ventures-opens-nairobi-office-targeting-fintech/>

Tage Kene-Okafor. (2022, March 9). Antler East Africa closes \$13.5M fund to invest in early-stage startups, <https://techcrunch.com/2022/03/09/antler-east-africa-closes-13-5m-fund-to-invest-in-early-stage-startups/>

Five Kenyan tech start-UPS to join global innovation Adanian labs venture building programme 2022. (2022, February 2), <https://www.zawya.com/en/press-release/five-kenyan-tech-start-ups-to-join-global-innovation-adanian-labs-venture-building-programme-2022-ayv4vztk>

Village capital future of work Africa 2022 accelerator program for young African entrepreneurs. (2022, April 18), <https://www.opportunitiesforafricans.com/village-capital-future-of-work-africa-2022-accelerator-program/>

Wasoko, [https://www.crunchbase.com/organization/wasoko/company\\_financials](https://www.crunchbase.com/organization/wasoko/company_financials)

Money and blockchain summit at Africa Tech Summit Kigali 2020. (2020, February 19), [https://www.africatechsummit.com/kigali/money-and-blockchain-summit/?utm\\_source=techpoint&utm\\_medium=website&utm\\_campaign=africa+tech+summit](https://www.africatechsummit.com/kigali/money-and-blockchain-summit/?utm_source=techpoint&utm_medium=website&utm_campaign=africa+tech+summit)

ImaliPay, [https://www.crunchbase.com/organization/imalipay/company\\_financials](https://www.crunchbase.com/organization/imalipay/company_financials)

Credrails, [https://www.crunchbase.com/organization/credrails/company\\_financials](https://www.crunchbase.com/organization/credrails/company_financials)

Koa, [https://www.crunchbase.com/organization/koa-60bd/company\\_financials](https://www.crunchbase.com/organization/koa-60bd/company_financials)

Ada labs Africa and AI center of excellence (AICE) lead next generation of artificial intelligence (AI) innovation in Africa with NVIDIA. (2021, June 9), <https://www.highereducationdigest.com/ada-labs-africa-and-ai-center-of-excellence-aice-lead-next-generation-of-artificial-intelligence-ai-innovation-in-africa-with-nvidia/>

Brian Ngugi. (2021, January 14). Nairobi analytics firm GRO raises Sh9.2bn in venture funding, <https://www.businessdailyafrica.com/bd/markets/capital-markets/nairobi-analytics-firm-gro-raises-sh9-2bn--3257554>

Conrad Onyango. (2021, December 31). Africa: Which cities in the continent are most sought after by expats?,



<https://www.theafricareport.com/160542/africa-which-cities-in-the-continent-are-most-sought-after-by-ex-pats/>

Development ministry launches startup support program with €100K grant for Kenyan entrepreneurs. (2021, June 4), <https://www.seedstars.com/content-hub/newsroom/development-ministry-launches-startup-support-program-with-100k-grant-for-kenyan-entrepreneurs/>

Aanu Adeoye. (2021, July 16). Lagos finally grows into its role as Africa's Silicon Valley, <https://restofworld.org/2021/tech-hubs-lagos/>

Co-Creation Hub, <https://www.crunchbase.com/organization/co-creation-hub-nigeria>

Creators' circle: Lagos Meetup | Co-Creation Hub. (2022, April 14), <https://cchubnigeria.com/creators-circle-lagos-meetup/>

Startups | Co-Creation Hub. (2018, December 19), <https://cchubnigeria.com/startups/>

Gbenga Salau. (2021, March 13). Lagos targets over 120,000 pupils for tech skills in 2021, <https://guardian.ng/news/lagos-targets-over-120000-pupils-for-tech-skills-in-2021/>

GreenHouse Capital, <https://my.pitchbook.com/profile/168055-12/investor/profile#general-info>

Moove, [https://www.crunchbase.com/organization/moove-africa/company\\_financials](https://www.crunchbase.com/organization/moove-africa/company_financials)

TradeDepot, [https://www.crunchbase.com/organization/tradedepot/company\\_financials](https://www.crunchbase.com/organization/tradedepot/company_financials)

AOT Lagos, <https://aotlagos.com/#about>

Lagos tech fest 2022, <https://tech.eventhive.ng/>

GreenHouse capital, <https://greenhouse.capital/acceleration/unionx/>

Nigeria launches eNaira digital currency amid hope, scepticism. (2021, October 26), <https://gadgets360.com/cryptocurrency/news/nigeria-enaira-digital-currency-cryptocurrency-launch-roll-out-2588276>

The launch of greenhouse lab: Nigeria's first female-focused tech accelerator. (2020, June 21), <https://greenhousecapital.medium.com/the-launch-of-greenhouse-lab-nigerias-first-female-focused-tech-accelerator-302bb79ed6bf>

GreenHouse lab announces 2021 cohort for founders-backed Fintech accelerator. (2021, August 19), <https://greenhousecapital.medium.com/greenhouse-lab-announces-2021-cohort-for-founders-backed-fintech-accelerator-c563be2d9c0a>

Nigeria Fintech Week 2021 | Home, <https://nigeriafintechweek.org/>

Abubakar Idris. (2021, September 14). The world's biggest VCs are now vying for stakes in Nigeria's tech sector, <https://restofworld.org/2021/the-worlds-biggest-vc-are-now-vying-for-stakes-in-nigerias-tech-sector/>

PalmPay, [https://www.crunchbase.com/organization/palmpay/company\\_financials](https://www.crunchbase.com/organization/palmpay/company_financials)

Nigeria population (2021), <https://www.worldometers.info/world-population/nigeria-population/>

Eyitope (Topsy) Kola-Oyeneyin, Mayowa Kuyoro, Tunde Olanrewaju. (2020, September). Harnessing Nigeria's fintech potential, <https://www.mckinsey.com/~media/McKinsey/Featured%20Insights/Middle%20East%20and%20Africa/Harnessing%20Nigerias%20fintech%20potential/Harnessing-nigerias-fintech-potential-vF.pdf>

Lasric | Home, <https://lasricportal.lagosstate.gov.ng/about>



Lagos State Employment Trust Fund (LSETF) | Overview, <https://lsetf.ng/content/overview>

Lagos State Employment Trust Fund (LSETF) | Lagos innovates, <https://lsetf.ng/content/lagos-innovates>

City of Johannesburg | General information, [https://www.joburg.org.za/work\\_/Pages/Work%20in%20Joburg/Invest%20In%20Joburg/Invest%20in%20Joburg%20October%202019/General-information.aspx](https://www.joburg.org.za/work_/Pages/Work%20in%20Joburg/Invest%20In%20Joburg/Invest%20in%20Joburg%20October%202019/General-information.aspx)

Lungile Msomi. (2022, February 14). Ericsson is latest tech company to move to Waterfall Hub, <https://techcentral.co.za/ericsson-latest-tech-company-to-move-to-waterfall-hub/207780/>

Duncan McLeod. (2021, October 18). Interview: Why Vantage Data Centers is betting \$1-billion on South Africa, <https://techcentral.co.za/interview-why-vantage-data-centers-is-betting-1-billion-on-south-africa/203648/>

Madanmohan Rao. (2019, September 18). Startup guide Johannesburg: Why some entrepreneurs call this South African city 'JoHustleBurg', <https://yourstory.com/2019/09/startup-guide-johannesburg-south-africa/amp>

City of Johannesburg | Opportunity Centres, [https://www.joburg.org.za/departments\\_/Pages/Opportunity%20Centres/Opportunity-Centres.aspx](https://www.joburg.org.za/departments_/Pages/Opportunity%20Centres/Opportunity-Centres.aspx)

Department of Foreign Affairs | New tech challenge fund to drive south African-Irish innovation partnership. (2022, February 21), <https://www.dfa.ie/irish-embassy/south-africa/news-and-events/news-archive/new-tech-challenge-fund-to-drive-south-african-irish-innovation-partnership.html>

The 5 most popular Fintech startups in South Africa 2021. (2021, December 19), <https://fintechnews.africa/40476/fintech-south-africa/the-5-most-popular-fintech-startups-in-south-africa-2021/>

Richie Santosdiaz. (2020, May 27). Here are four cities in Africa emerging as FinTech hubs, <https://thefintech-times.com/here-are-four-cities-in-africa-emerging-as-fintech-hubs/>

City of Johannesburg | Business information, [https://www.joburg.org.za/work\\_/Pages/Work%20in%20Joburg/Invest%20In%20Joburg/Invest%20in%20Joburg%20October%202019/Business-information.aspx](https://www.joburg.org.za/work_/Pages/Work%20in%20Joburg/Invest%20In%20Joburg/Invest%20in%20Joburg%20October%202019/Business-information.aspx)

Conrad Onyango. (2022, March 29). Cape Town closing in on top spot in Africa's financial hubs rankings, <https://mg.co.za/business/2022-03-29-cape-town-closing-in-on-top-spot-in-africas-financial-hubs-rankings/>

Pineapple, [https://www.crunchbase.com/organization/pineapple/company\\_financials](https://www.crunchbase.com/organization/pineapple/company_financials)

Startup Universal | Country Guide - South Africa. (2021, November 1), <https://startupuniversal.com/country/south-africa/>

Stephen Shankland. (2022, February 15). In Silicon Valley, Big Tech Gets Bigger but Leaves Many Families Behind, <https://www.cnet.com/news/in-silicon-valley-big-tech-gets-bigger-but-leaves-many-behind/>

Eric J. Savitz. (2022, January 12). Venture capital funding doubles in 2021, smashing records, <https://www.barrons.com/articles/venture-capital-funding-doubles-in-2021-smashing-records-51641936776>

Techspo Silicon Valley 2022 · | Technology Expo (June 2 - 3, 2022) | (Internet ~ Mobile ~ AdTech ~ MarTech ~ SaaS). (2014, September 22), <https://techsposv.com/>

The Silicon Valley Startup Guide, <https://www.rocketspace.com/the-silicon-valley-startup-guide-download>



Founders Summit 2022, <https://siliconvalley.um.dk/events/founders-summit-2022>

Elio Assuncao. Silicon Valley 2022 Q3 venture capital world summit, <https://vcworldsummit.com/silicon-valley-2022-q3/>

Sarah K. White. (2021, January 5). 20 worthwhile conferences for women in tech, <https://www.cio.com/article/217732/conferences-for-women-in-tech.html>

TiE Silicon Valley celebrates 30th anniversary, announces TiEcon 2022, world's largest entrepreneurship conference. (2022, March 23), <https://www.prnewswire.com/news-releases/tie-silicon-valley-celebrates-30th-anniversary-announces-tiecon-2022-worlds-largest-entrepreneurship-conference-301509122.html>

Course Hero, [https://www.crunchbase.com/organization/coursehero/company\\_financials](https://www.crunchbase.com/organization/coursehero/company_financials)

Cyara, [https://www.crunchbase.com/organization/cyara/company\\_financials](https://www.crunchbase.com/organization/cyara/company_financials)

Aptos, [https://www.crunchbase.com/organization/aptos-96b4/company\\_financials](https://www.crunchbase.com/organization/aptos-96b4/company_financials)

AI accelerator summit, <https://aiacceleratorsummit.com/location/siliconvalley>

AI & Big Data Expo | North America (2021, April 13), <https://www.ai-expo.net/northamerica/>

SambaNova Systems nabs \$676M Series D. (2021, April), [https://startuparound.com/read/1618334408.270656/SambaNova-Systems-Nabs-\\$676M-Series-D](https://startuparound.com/read/1618334408.270656/SambaNova-Systems-Nabs-$676M-Series-D)

SambaNova Systems nabs \$676M Series D. (2021, April 13), <https://vcnewsdaily.com/sambanova-systems/venture-capital-funding/qcnrgbbqxy>

SambaNova Systems Raises \$676M in Series D, Surpasses \$5B Valuation and Becomes World's Best-Funded AI Startup. (2021, April 13), [https://www.vcaonline.com/news/news.asp?ID=2021041301#.YKfx\\_qgzZPY](https://www.vcaonline.com/news/news.asp?ID=2021041301#.YKfx_qgzZPY)

Uniphore, [https://www.crunchbase.com/organization/uniphore/company\\_financials](https://www.crunchbase.com/organization/uniphore/company_financials)

Connie Loizos. (2022, March 15). Startup banking service Mercury jumps into debt lending to take on Silicon Valley bank, <https://techcrunch.com/2022/03/15/startup-banking-service-mercury-jumps-into-debt-lending-to-take-on-silicon-valley-bank/>

Ascend, [https://www.crunchbase.com/organization/ascend-276c/company\\_financials](https://www.crunchbase.com/organization/ascend-276c/company_financials)

FalconX, [https://www.crunchbase.com/organization/falconx/company\\_financials](https://www.crunchbase.com/organization/falconx/company_financials)

Heather McKenzie. (2022, January 6). Top life sciences startups to watch in 2022, <https://www.biospace.com/article/top-life-sciences-startups-to-watch-in-2022/>

Graphite Bio | Home, <https://graphitebio.com/>

Jennifer Martin. (2021, July 28). Why do entrepreneurs go to Silicon Valley?, <https://usv.edu/blog/why-do-entrepreneurs-go-to-silicon-valley/>

Stephanie Horan. (2022, February 17). Best places for Black entrepreneurs - 2022 study - SmartAsset, <https://smartasset.com/data-studies/best-places-for-black-entrepreneurs-2022>

Harri Weber. (2022, January 7). Upfront Ventures secures \$177 million for new continuation fund, <https://dot.la/upfront-ventures-new-continuation-fund-2656248005.html>

Wonder ventures launches \$31 million fund focused exclusively on LA startups. (2022, April 21), <https://dot.la/wonder-ventures-fund-la-startups-2656401946.html>



Pat Maio. (2022, January 13). Jumpstart Nova will fund Black health care startups with a new \$55 million fund, <https://dot.la/jumpstart-health-2656392190/particle-2>

Minnie Ingersoll. (2022, January 12). Crosslink partner Joe Guzel on Co-founding a new Fintech fund, Haven Ventures, <https://dot.la/joe-guzel-starting-haven-ventures-2656378496.html>

Haven Ventures, <https://my.pitchbook.com/profile/490027-96/investor/profile>

Harri Weber. (2022, April 7). Female-led Emmeline Ventures launches, backs crypto wallet startup, <https://dot.la/emmeline-ventures-2657111315.html>

Upfront Ventures, <https://upfront.com/summit>

Harri Weber. 2022, January 5). Upfront summit postponed to march over omicron fears, <https://dot.la/upfront-summit-postponed-to-march-2656221992.html>

Techspo Los Angeles 2022 | Technology Expo (July 11 - 12, 2022) | (Internet ~ Mobile ~ AdTech ~ MarTech ~ SaaS). (2014, September 22), <https://techspola.com/>

The Montgomery Summit 2022. (2014, September 22), <https://www.montgomerysummit.com/wp-content/uploads/The-Montgomery-Summit-2022-Fact-Sheet.pdf>

The Montgomery summit. (2021, November 8), <https://marchcp.com/montgomery-summit/>

Los Angeles County Economic Development Corporation (LAEDC) | Research and Development, <https://laedc.org/wtc/chooselacounty/research-development/>

ACELYRIN, [https://www.crunchbase.com/organization/acelyrin/company\\_financials](https://www.crunchbase.com/organization/acelyrin/company_financials)

Appia bio launches with \$52 million series a financing and establishes scientific advisory board. (2021, May 11), <https://www.biospace.com/article/releases/appia-bio-launches-with-52-million-series-a-financing-and-establishes-scientific-advisory-board/>

Annlee Ellingson. (2021, October 6). Video games drive demand for real estate in Los Angeles, <https://www.bizjournals.com/losangeles/news/2021/10/06/video-games-drive-real-estate-los-angeles.html>

Christian Hetrick. (2022, April 12). Genies raises \$150 million to make avatars for the Metaverse, <https://dot.la/genies-avatar-raise-silver-lake-2657143980.html>

Mythical Games, [https://www.crunchbase.com/organization/mythical-games/company\\_financials](https://www.crunchbase.com/organization/mythical-games/company_financials)

Sarah Pilla. (2022, January 12). Program prioritizes diversity in climate startups, <https://spectrumnews1.com/ca/la-west/environment/2022/01/12/los-angeles-cleantech-incubator-prioritizes-diversity-in-climate-startups>

LOS ANGELES CLEANTECH INCUBATOR REQUEST FOR PROPOSALS. (2022, January 12), <https://lincubator.org/wp-content/uploads/April-2022-EIR-RFP-final.pdf>

Nat Rubio-Licht. (2021, November 15). LA's Greentech industry is growing, <https://labusinessjournal.com/02-weekly/la-greentech-industry-growing/>

Los Angeles cleantech incubator expands free zero-emissions shuttle service in Leimert Park. (2022, March 14), <https://lincubator.org/leimert-park-ev-pilot-extended/>

28 small business ideas for Los Angeles, California in 2021. (2021, January 1), <https://www.startupguys.net/25-low-cost-business-ideas-for-los-angeles-ca-usa/>

Ma Si. (2022, February 23). Beijing 2022 promotes key tech on major stage, <https://www.chinadaily.com.cn/a/202202/23/WS621583aca310cdd39bc884b4.html>



China ramps up its support for startups in selected industries. (2022, February 8), <https://www.business-times.com.sg/government-economy/china-ramps-up-its-support-for-startups-in-selected-industries>

Kirana Aisyah. (2022, May 5). Robust development in China's robotics industry, <https://opengovasia.com/robust-development-in-chinas-robotics-industry/>

A Major Science Facility in Huairou Science City in Beijing Opens for Reservation, [http://english.beijing.gov.cn/latest/news/202203/t20220308\\_2626028.html](http://english.beijing.gov.cn/latest/news/202203/t20220308_2626028.html)

ICNT 2022-Beijing, China(国际创新创业大赛), <https://www.icnt.org/>

Fenbi, [https://www.crunchbase.com/organization/fenbi-wang/company\\_financials](https://www.crunchbase.com/organization/fenbi-wang/company_financials)

Nreal, [https://www.crunchbase.com/organization/nreal-ai/company\\_financials](https://www.crunchbase.com/organization/nreal-ai/company_financials)

ThreatBook, [https://www.crunchbase.com/organization/threatbook/company\\_financials](https://www.crunchbase.com/organization/threatbook/company_financials)

Beijing. (2019, November 6), <https://geip.sg/network/beijing/>

CCAI 2022 | Beijing, <https://www.ccai.net/>

Ccai 2022, <https://www.ccai.net/program.html>

Xie Jun. (2022, February 15). Chinese tech company develops AI coach to help athlete win at Beijing 2022, <https://www.globaltimes.cn/page/202202/1252328.shtml>

Terminus Technologies, [https://www.crunchbase.com/organization/terminus-technologies-co/company\\_financials](https://www.crunchbase.com/organization/terminus-technologies-co/company_financials)

Aibee, [https://www.crunchbase.com/organization/alibee/company\\_financials](https://www.crunchbase.com/organization/alibee/company_financials)

Global FinTech Hub Report 2021 Released, Beijing Ranked Top for Third Consecutive Year, [http://english.beijing.gov.cn/investinginbeijing/Investment-news/202110/t20211013\\_2511666.html#:~:text=Global%20FinTech%20Hub%20Report%202021,Top%20for%20Third%20Consecutive%20Year&text=The%20Academy%20of%20Internet%20Finance,Global%20FinTech%20Hub%20Report%202021](http://english.beijing.gov.cn/investinginbeijing/Investment-news/202110/t20211013_2511666.html#:~:text=Global%20FinTech%20Hub%20Report%202021,Top%20for%20Third%20Consecutive%20Year&text=The%20Academy%20of%20Internet%20Finance,Global%20FinTech%20Hub%20Report%202021)

China Fintech Research Conference, <http://conference.fter50.org.cn/>

FinTech world forum | FTWF Beijing, <https://bj.fintech-wf.com/>

FinTech World Forum, <https://www.eventbrite.com/e/fintech-world-forum-tickets-268688714177?aff=erelexpmlt>

Cobo, [https://www.crunchbase.com/organization/cobo/company\\_financials](https://www.crunchbase.com/organization/cobo/company_financials)

Beijing Huairou science city has initially formed a scientific and technological innovation ecology. (2021, May 22), <https://www.tellerreport.com/business/2021-05-22-beijing-huairou-science-city-has-initially-formed-a-scientific-and-technological-innovation-ecology.rjS359EUKd.html>

Research fund for international scientists call for proposals FY 2022, <https://bic.nsfc.gov.cn/Show.aspx?AI=1592>

Record sums for German startups – Berlin stays ahead. (2022, January 13), [https://www.ey.com/de\\_de/news/2022-pressemitteilungen/01/ey-startup-barometer-2022](https://www.ey.com/de_de/news/2022-pressemitteilungen/01/ey-startup-barometer-2022)

Best chances to raise money in Berlin. (2022, February 3), <https://reason-why.berlin/article/best-chances-to-raise-money-in-berlin/>



Healthcare Industry Study Puts Berlin in Top 3 Worldwide. (2021, December 06), <https://reason-why.berlin/article/healthcare-industry-study-puts-berlin-in-top-3-worldwide/>

Stefan Nicola, Birgit Jennen. (2021 June 22). Germany Sets up \$12 Billion Fund to Finance Technology Startups, <https://www.bloomberg.com/news/articles/2021-06-22/germany-sets-up-12-billion-fund-to-finance-technology-startups>

Berlin wins multiple strategy awards 2021 from FDI intelligence, <https://www.berlin-partner.de/en/news/detail/was-fuer-ein-jahr-was-fuer-eine-ehre>

Women in Tech Global Conference 2022, <https://www.womentech.net/en-in/node/17>

Greentech Festival | Home. (2022, May 5), <https://greentechfestival.com/>

Derin Cag. (2021, November 2). 1 in 10 of all new startups in Germany are Fintech companies, <https://fintechmagazine.com/financial-services-finserv/1-10-all-new-startups-germany-are-fintech-companies>

Solarisbank, [https://www.crunchbase.com/organization/solarisbank-ag/company\\_financials](https://www.crunchbase.com/organization/solarisbank-ag/company_financials)

AI applications in Digital Health: Berlin leads the way in developing and piloting artificial intelligence solutions in the hitech health sector. (2021, September 28), <https://reason-why.berlin/article/ai-applications-in-digital-health/>

Model project for Start-UPS in the Field of artificial intelligence. (2021, June 10), <https://www.fu-berlin.de/en/exzellenz/aktuelles/meldungen/2021/210610-science-and-start-ups.html>

AI Startup Landscape 2021. (2021 March 09), <https://www.appliedai.de/hub/2021-ai-german-startup-landscape>

Natasha Lomas. (2020, December 3). Ultimate.ai scores \$20M for a supportive approach to customer service automation, <https://techcrunch.com/2020/12/03/ultimate-ai-scores-20m-for-a-supportive-approach-to-customer-service-automation/>

5 reasons to set up a business in Germany. (2021, October 4), <https://www.make-it-in-germany.com/en/working-in-germany/setting-up-business/reasons>

Klarna, [https://www.crunchbase.com/organization/klarna/company\\_financials](https://www.crunchbase.com/organization/klarna/company_financials)

Tink, <https://my.pitchbook.com/profile/90916-12/company/profile#deal-history>

Ingrid Lunden. (2021, May 25). Sinch, a Swedish customer engagement giant, raises \$1.1B, SoftBank and Temasek participating, <https://techcrunch.com/2021/05/25/sinch-a-swedish-customer-engagement-giant-raises-1-1b-softbank-and-temasek-participating/>

Spotify's Nest Proves a Fertile Breeding Ground for Unicorns (2021, April 26), <https://www.bloomberg.com/news/articles/2021-04-26/spotify-s-nest-proves-a-fertile-breeding-ground-for-unicorns>

UNICEF establishes key global innovation center in Stockholm. (2021, September 27), <https://www.unicef.org/innovation/press-releases/unicef-establishes-key-global-innovation-center-stockholm>

Stockholm innovation scholarship, <https://www.visit-stockholm.com/o/stockholm-innovation-scholarship/>

Vinnova | We open the way for innovation that makes a difference, <https://www.vinnova.se/en/our-activities/we-open-up-for-innovation/>

Innovation in Sweden. (2021, November 3), <https://sweden.se/work-business/business-in-sweden/a-country-of-innovation>



Sthlm Fintech Week | About, <https://sthlmfintechweek.com/about-us/>

Kista Science City), <https://kista.com/english/>

Cleantech in Stockholm, [https://www.investstockholm.com/investment\\_opportunities/cleantech/](https://www.investstockholm.com/investment_opportunities/cleantech/)

Cleantech innovation in Stockholm. (2012, April 28), <https://neweuropeaneconomy.com/fdi/cleantech-innovation-in-stockholm/>

Anna Ringstrom, Supantha Mukherjee. (2021, June 9). Sweden's Northvolt raises \$2.8 bln to supercharge EV battery output, <https://www.reuters.com/business/energy/battery-maker-northvolt-raises-275-bln-expand-factory-2021-06-09/>

Life Science, <https://www.business-sweden.com/markets/sweden/life-science/>

LIFE SCIENCE INCUBATION, <https://www.sisp.se/start/life-science-inkubation>

The Sciety syndicate invests MSEK 31 in Capitainer. (2022, January 18), <https://sciet.com/the-sciety-syndicate-invests-msek-31-in-capitainer/>

InnocentMugenga.(2021,Decmeber20).WhyStockholm is a great city for entrepreneurs, <https://www.visitstockholm.com/live-work/start-business/why-stockholm-is-a-great-city-for-entrepreneursand-wantrepreneurs/>

Why So Many Businesses Relocate to Sweden. (2021, January 04), <https://www.europeanbusinessreview.com/why-so-many-businesses-relocate-to-sweden/>

John Egan. (2021, December 30)4 innovative Austin startups gallop into the \$1 billion 'unicorn' club, <https://austin.culturemap.com/news/innovation/12-30-21-four-austin-area-startups-gallop-into-the-1-billion-unicorn-club/>

Jeff Ramage. (2021, October 19). The future 5 of Austin tech, Q4 2021, <https://www.builtinaustin.com/2021/10/19/austin-future-5-startups-q4-2021>

Nicole Cobler. (2022, January 14). Austin's big year for VC funding, <https://www.axios.com/local/austin/2022/01/14/austin-venture-capital-funding-startups>

Brent Wistrom. (2022, January 14). Numbers are in: Let's break down a record-breaking 2021 for Austin startups and VCs, <https://www.bizjournals.com/austin/inno/stories/inno-insights/2022/01/14/austin-startups-and-vcs-set-new-records-in-2021.html>

ICON, <https://www.crunchbase.com/organization/icon3d>

Elligo health research raises \$135M in series E financing. (2021, September 24), <https://www.finsmes.com/2021/09/elligo-health-research-raises-135m-in-series-e-financing.html>

Christine Hall. (2021, November 17)LiveOak venture partners takes in \$210M aimed at Texas entrepreneurs, <https://techcrunch.com/2021/11/17/liveoak-venture-partners-takes-in-210m-aimed-at-texas-entrepreneurs/>

Austin Young Chamber | Austin Fast Start pitch competition 2022, <https://austinync.org/austin-fast-start/>

Cybersecurity research report 2021 | Report: The Rise Of Global Cybersecurity Venture Funding. (2021, May 25), <https://about.crunchbase.com/cybersecurity-research-report-2021/>

SparkCognition Announces \$123 Million Series D Funding and a Unicorn Valuation to Accelerate AI Adoption Across Industries. (2022, January 25),



<https://www.google.com/url?q=https://aithority.com/saas/sparkcognition-announces-123-million-series-d-funding-and-a-unicorn-valuation-to-accelerate-ai-adoption-across-industries/&sa=D&source=docs&ust=1646766688029923&usg=AOvVaw04E08exU6r6blpxOfp0HzB>

Ontic raises \$40M in series B funding. (2021, November 17), <https://www.finsmes.com/2021/11/ontic-raises-40m-in-series-b-funding.html>

Austin Chamber | Clean technology. (2019, June 6), <https://www.austinchamber.com/economic-development/key-industries/clean-energy-power#:~:text=Austin%20has%20over%20200%20existing%20clean%20technology%20companies%20that%20employ%2020%2C000%20people>

Earthly Labs, <https://my.pitchbook.com/profile/170253-82/company/profile#general-info>

Energy | Austin Technology Incubator, <https://ati.utexas.edu/companies/energy/>

Mary Ann Azevedo. (2021, April 9). 6 VCs talk the future of Austin's exploding startup ecosystem, <https://techcrunch.com/2021/04/09/6-vcs-talk-the-future-of-austins-exploding-startup-ecosystem/>

Best universities in the United States 2022. (2021, September 2), <https://www.timeshighereducation.com/student/best-universities/best-universities-united-states>

The City of San Diego | Why San Diego?, <https://www.sandiego.gov/economic-development/sandiego>

Mike Freeman. (2022, April 15). San Diego startups see steep drop in investment after record year, <https://www.sandiegouniontribune.com/business/story/2022-04-14/san-diego-startups-see-steep-drop-in-investment-after-record-year>

Newmark Completes \$145 Million Sale of San Diego Office Portfolio with Life Science Redevelopment Potential. (2022, April 1), <https://rew-online.com/newmark-completes-145-million-sale-of-san-diego-office-portfolio-with-life-science-redevelopment-potential/>

Emily Olsen. (2021, September 28). Cue Health picks up \$200M in IPO and more digital health fundings, <https://www.mobihealthnews.com/news/cue-health-picks-200m-ipo-and-more-digital-health-fundings>

Shield AI, [https://www.crunchbase.com/organization/shield-ai/company\\_financials](https://www.crunchbase.com/organization/shield-ai/company_financials)

ClickUp, [https://www.crunchbase.com/organization/clickup/company\\_financials](https://www.crunchbase.com/organization/clickup/company_financials)

Flock Freight, [https://www.crunchbase.com/organization/flock-freight/company\\_financials](https://www.crunchbase.com/organization/flock-freight/company_financials)

ArcGIS StoryMaps | Smart Economic Development is Inclusive Economic Development. (2022, April 19), <https://storymaps.arcgis.com/stories/970be612bbc2416eaf-f22548b54ddc74>

San Diego North Economic Development Council | Business Assistance, <https://www.sdnedc.org/business-assistance/>

George Lurie. (2022, January 4). New VC Firm Targets Early Life Science Startups, <https://www.sdbj.com/news/2022/jan/04/new-vc-firm-targets-early-life-science-startups/>

<https://my.pitchbook.com/profile/97057-00/company/profile#general-info>

Nalu Medical, [https://www.crunchbase.com/organization/nalu-medical/company\\_financials](https://www.crunchbase.com/organization/nalu-medical/company_financials)

Cleantech San Diego | Facts | San Diego's Regional Cleantech Economy. (March 18), <https://cleantechsandiego.org/facts/>

Wildcat Discovery Technologies, <https://www.crunchbase.com/organization/wildcat-discovery-technologies>



Clean Air Power, <https://www.crunchbase.com/organization/clean-air-power>

Cleantech San Diego (CTSD) | Home, <https://cleantech-sandiego.org/>

4 Reasons to Move Your Business to San Diego. (2022, January 29), <https://www.justaguything.com/4-reasons-to-move-your-business-to-san-diego/>

Numbeo | Cost of Living Comparison Between San Francisco, CA and San Diego, CA, United States, [https://www.numbeo.com/cost-of-living/compare\\_cities.jsp?country1=United+States&city1=San+Francisco%2C+-CA&country2=United+States&city2=San+Diego%2C+-CA#:~:text=Cost%20of%20Living%20Comparison%20Between%20San%20Francisco%2C%20CA%20and%20San,you%20rent%20in%20both%20cities\)](https://www.numbeo.com/cost-of-living/compare_cities.jsp?country1=United+States&city1=San+Francisco%2C+-CA&country2=United+States&city2=San+Diego%2C+-CA#:~:text=Cost%20of%20Living%20Comparison%20Between%20San%20Francisco%2C%20CA%20and%20San,you%20rent%20in%20both%20cities))

Delilah Alvarado. (2022, January 4). These 10 Boston tech companies raised a combined \$7B+ in 2021, <https://www.builtinboston.com/2022/01/04/biggest-boston-tech-fundings-2021>

Raphael Santos. Top 10 US states that received most of 2021's venture capital funding, <https://www.airswift.com/blog/top-us-states-vc-backed-2021>

MassChallenge | About, <https://masschallenge.org/about>

TiE ScaleUp | Home, <https://www.tiescaleup.org/>

Rachael Green. (2021, October 27). Boston named world's top biotech hub as the city's leading biotech companies continue to make major breakthroughs, <https://finance.yahoo.com/news/boston-named-worlds-top-biotech-122424885.html>

Rowan Walrath. (2021, December 29). These were the top 10 VC deals in Mass. biotech in 2021, <https://www.bizjournals.com/boston/news/2021/12/29/top-10-venture-capital-deals-boston-biotech-2021.html>

Founder institute, NASA Ames and MassRobotics partner to launch AI and robotics accelerator in Boston, <http://www.spaceref.com/news/viewpr.html?pid=57748>

Activ Surgical, [https://www.crunchbase.com/organization/omniboros/company\\_financials](https://www.crunchbase.com/organization/omniboros/company_financials)

Realtime robotics, <https://www.crunchbase.com/organization/realtime-robotics-inc>

2021 Scoring Tech Talent. (2021, July 14), <https://www.cbre.com/en/insights/reports/scoring-tech-talent-in-north-america-2021>

Will the "Golden age" of tech investment last? Three venture capitalists dive in during a conversation moderated by the Polsky center's Steve Kaplan. (2021, October 22), <https://polsky.uchicago.edu/2021/10/22/will-the-golden-age-of-tech-investment-last-three-venture-capitalists-dive-in-during-a-conversation-moderated-by-the-polsky-centers-steve-kaplan/>

Jim Dallke. (2022, January 14). Chicago startups raised a record \$7 billion in 2021, <https://www.bizjournals.com/chicago/inno/stories/inno-insights/2022/01/14/chicago-tech-companies-raised-a-record-7b-in-2021.html>

Pete Wilkins. (2021, December 16). Why Chicago Became A Top 3 Start-Up City In 2021, <https://www.forbes.com/sites/peterandrewwilkins/2021/12/16/why-chicago-became-a-top-3-start-up-city-in-2021/?sh=27f6d91c5bff>

Query Builder, [https://www.crunchbase.com/search/funding\\_rounds/field/organizations/last\\_funding\\_type/shipbob](https://www.crunchbase.com/search/funding_rounds/field/organizations/last_funding_type/shipbob)

Query Builder, [https://www.crunchbase.com/search/funding\\_rounds/field/organizations/last\\_funding\\_type/g2-crowd](https://www.crunchbase.com/search/funding_rounds/field/organizations/last_funding_type/g2-crowd)

ActiveCampaign, [https://www.crunchbase.com/organization/activecampaign/company\\_financials](https://www.crunchbase.com/organization/activecampaign/company_financials)



The Chicago model: Building a global innovation powerhouse in America's heartland. (2021, December 9), <https://techcrunch.com/sponsor/wbc/the-chicago-model-building-a-global-innovation-powerhouse-in-americas-heartland/>

LongJump | Home, <https://longjump.vc/>

Elio Assuncao. Chicago 2022 venture capital world summit, <https://vcworldsummit.com/chicago-2022-q2/>

CCC Information Services, <https://www.crunchbase.com/organization/ccc-information-services>

Rick Whiting. (2021, January 25). Big data analytics start-up Ocident raises \$40M in early-round funding, <https://www.crn.com/news/applications-os/big-data-analytics-startup-ocient-raises-40m-in-early-round-funding>

David Roeder. (2021, December 26). Tech economy comes up big despite Chicago's trials, <https://chicago.suntimes.com/2021/12/27/22847092/chicago-tech-economy-big-year-2021-technology-businesses>

P33 | Home, <https://p33chicago.com/>

Flyhomes, [https://www.crunchbase.com/organization/flyhomes/company\\_financials](https://www.crunchbase.com/organization/flyhomes/company_financials)

Zenoti, [https://www.crunchbase.com/organization/zenoti/company\\_financials](https://www.crunchbase.com/organization/zenoti/company_financials)

Rec Room, [https://www.crunchbase.com/organization/against-gravity/company\\_financials](https://www.crunchbase.com/organization/against-gravity/company_financials)

John Cook. (2022, January 14). The 2021 venture capital numbers are simply mind-boggling: Record investments recorded in Washington State, <https://www.geekwire.com/2022/the-2021-venture-capital-numbers-are-simply-mind-boggling-record-investment-levels-recorded-in-washington-state/>

Program - Global innovation exchange-tsinghua international education, <https://goglobal.tsinghua.edu.cn/en/news/program.en/J7K6CCDVe>

Foster School of Business | Startup resources. (2021, November 18), <https://foster.uw.edu/centers/buerk-ctr-entrepreneurship/start-up-resources/>

Natasha Mascarenhas. (2020, October 19). Ready set raise, an accelerator for women built by women, announces third class, <https://techcrunch.com/2020/10/19/ready-set-raise-an-accelerator-for-women-third-class/>

Seattle Angel Conference (SAC) 20 | Overview, <https://www.seattleangelconference.com/conferences/sac-20/sac-20-overview>

Charlotte Schubert. (2022, February 21). Seattle angel conference launches new health startup competition to help educate angel investors, <https://www.geekwire.com/2022/seattle-angel-conference-launches-new-health-startup-competition-to-help-educate-angel-investors/>

New Tech Northwest | Events, <https://www.newtech-northwest.com/resource-guide/events/>

Seattle startups ecosystem 2019 | Tech companies in Seattle, Seattle tech companies, Built in Seattle | HunterTech. (2019, May 19), <http://huntertechglobal.com/2019/05/19/5-things-know-seattle-startup-ecosystem-2019-tech-companies-in-seattle/>

The W Fund | About, <https://www.thewfund.com/about/>

Outreach, [https://www.crunchbase.com/organization/outreach/company\\_financials](https://www.crunchbase.com/organization/outreach/company_financials)

Highspot, [https://www.crunchbase.com/organization/highspot-2/company\\_financials](https://www.crunchbase.com/organization/highspot-2/company_financials)

Charlotte Schubert. (2021, October 20). Biotech boom: How life sciences emerged from 'the doldrums' in Seattle and Washington State, <https://www.geekwire.com/2021/biotech-boom-life-sciences-emerged-doldrums-seattle-washington-state/>



Julie Weed. (2021, October 12). As big tech grows in the pandemic, Seattle grows with it, <https://www.nytimes.com/2021/10/12/business/seattle-real-estate-corona-virus.html>

Women in tech program expanding to DC. (2021, March 2), <https://news.cornell.edu/stories/2021/03/women-tech-program-expanding-dc>

Michaela Althouse. (2022, January 14). The DMV region raised an eye-popping \$5B in venture capital in 2021, <https://technical.ly/startups/dc-q4-2021-vc-report/>

2021 biggest venture capital funding deals in the Washington, D.C. Metro area. (2021, December 22), <https://mocabizscene.com/articles/top-5-biggest-venture-capital-deals-dc-area>

Arun Kumar. (2022, January 22). TiE DC announces free pitch competition for student startups, <https://www.americanbazaaronline.com/2022/01/20/tie-dc-announces-free-pitch-competition-for-student-startups-448399/>

DC Startup Week 2022 | Home, <https://www.dcstartup-week.org/>

Tech conferences: The best tech events guide for 2022. (2022, February 24), <https://www.bizzabo.com/blog/technology-events>

Washington DC | Higher education, <https://dceconomicstrategy.com/coresectors/higher-education/>

Michaela Althouse. (2021, September 14). DC-born blackboard is merging with Florida's anthology to create a giant edtech company, <https://technical.ly/startups/blackboard-anthology-merger/>

Janice Bitters Turi. (2021, December 20). Edtech startups flocked to the public markets during the pandemic. Here's what that could mean for 2022, <https://news.crunchbase.com/news/edtech-startups-ipo-spac-vc-eoy-forecast-2022/>

Class Technologies, [https://www.crunchbase.com/organization/class-technologies/company\\_financials](https://www.crunchbase.com/organization/class-technologies/company_financials)

Erran Carme, Bini Byambasuren & Jonathan Aberman. Cybersecurity Startup Founders in Greater Washington, DC. (2018), [https://www.american.edu/kogod/research/publications/upload/cyber\\_founders\\_report.pdf](https://www.american.edu/kogod/research/publications/upload/cyber_founders_report.pdf)

Virtru, [https://www.crunchbase.com/organization/virt-ru/company\\_financials](https://www.crunchbase.com/organization/virt-ru/company_financials)

DNSFilter, [https://www.crunchbase.com/organization/dnsfilter/company\\_financials](https://www.crunchbase.com/organization/dnsfilter/company_financials)

Jeff Clabaugh. (2021, July 15). DC area ranks third nationwide in report on tech talent, <https://wtop.com/business-finance/2021/07/dc-metro-no-3-on-scoring-tech-talent-report/>

Mayor Bowser and U.S. Department of Treasury announce DC reach initiative to give more Washingtonians a fair shot by improving access to credit and capital. (2021, December 13), <https://mayor.dc.gov/release/mayor-bowser-and-us-department-treasury-announce-dc-reach-initiative-give-more>

Attracting tech titans to the Cape Town CBD. (2021, August 30), <https://www.capetownccid.org/news/attracting-tech-titans-cape-town-cbd>

Ben Bierman. (2022, February 20). SA's 'Silicon Valley': Tech startups are revolutionising the SME landscape, <https://www.iol.co.za/business-report/opinion/sas-silicon-valley-tech-startups-are-revolutionising-the-sme-landscape-a657e5c2-e3c3-4e6d-9a38-99f481806760>

IFC invests in knife capital fund III to support South Africa's digital entrepreneurs (2022, February 10), <https://pressroom.ifc.org/all/pages/PressDetail.aspx?ID=26817>



Swiss Crypto Valley Venture Capital Sets Up Office in South Africa to Invest in African Blockchain Startups. (2021, July 14), <https://bitcoinke.io/2021/07/crypto-valley-vc-enters-africa/>

Charles Mulungi. (2021, July 8). Swiss investment company CV VC builds up a blockchain ecosystem in South Africa, <https://www.busiweek.com/swiss-investment-company-cv-vc-builds-up-a-blockchain-ecosystem-in-south-africa/>

SuperReturn Africa | Private equity & venture capital conference, <https://informaconnect.com/superreturn-africa/>

Adbot, [https://www.crunchbase.com/organization/adbot-7276/company\\_financials](https://www.crunchbase.com/organization/adbot-7276/company_financials)

Carry1st, [https://www.crunchbase.com/organization/adg-technology-inc/company\\_financials](https://www.crunchbase.com/organization/adg-technology-inc/company_financials)

Cape innovation & technology initiative (CiTi) top tech tools for women in business programme for South African women entrepreneurs. (2022, April 5), <https://www.opportunitiesforafricans.com/citi-top-tech-tools-for-women-in-business-programme-2022/>

Call for applications: Top tech tools for women in business programme. (2022, May 6), <https://www.citi.org.za/entrepreneur-incubation/entrepreneurial-enterprise-development/women-in-business/>

BioCiti. (2022, May 6), <https://www.citi.org.za/biociti/>

Techspo Cape Town 2022 | Technology Expo | (Internet ~ Mobile ~ AdTech ~ MarTech ~ SaaS), <https://allevents.in/cape%20town/techspo-cape-town-2022-technology-expo-internet~-mobile~-adtech~-martech~-saas/80002354638479>

Cape Town to overtake Casablanca as Africa's top financial hub. (2022, March 31), <https://techcabal.com/2022/03/31/cape-town-to-overtake-casablanca/>

JUMO, [https://www.crunchbase.com/organization/jumo-2/company\\_financials](https://www.crunchbase.com/organization/jumo-2/company_financials)

Yoco, [https://www.crunchbase.com/organization/yoco/company\\_financials](https://www.crunchbase.com/organization/yoco/company_financials)

Bolstering innovative EdTech to improve Africa's education system. (2022), <https://www.citi.org.za/news/bolstering-innovative-edtech-to-improve-africas-education-system/>

InnovateEDU 2022 | Home, <https://www.innovateedu.co.za/>

Book tickets for InnovateEDU 2022, <https://www.quick-et.co.za/events/144524-innovateedu-2022/#/>

Nicole McCain. (2021, July 22). UCT to launch online private high school, with first intake in 2022, <https://www.news24.com/news24/southafrica/news/uct-to-launch-online-private-high-school-with-first-intake-in-2022-20210721#:~:text=UCT%20to%20launch%20online%20private%20high%20school%2C%20with%20first%20intake%20in%202022,-22%20Jul%202021&text=The%20University%20of%20Cape%20Town,students%20set%20for%20January%202022.&text=UCT%20will%20open%20an%20online%20high%20school%20in%202022>

HyperionDev, [https://www.crunchbase.com/organization/hyperiondev/company\\_financials](https://www.crunchbase.com/organization/hyperiondev/company_financials)

Cape Town edtech iXperience raises R35-million in funding. (2021, September 10), <https://techcentral.co.za/cape-town-edtech-ixperience-raises-r35-million-in-funding/107088/>

The 50 best startup cities in 202. (2021, May 11), <https://www.valuer.ai/blog/top-50-best-startup-cities?/#cape>



Oluthando Keteyi. (2021, December 04). Cape Town named as 6th most affordable city to relocate to in the world, <https://www.iol.co.za/travel/south-africa/western-cape/cape-town-named-as-6th-most-affordable-city-to-relocate-to-in-the-world-f622ca4e-0085-4fc5-8e27-13359b6cb796>

Mercer 2021 cost of living city ranking: Where is Cape Town and Joburg?. (2021, July 5), <https://www.intergate-immigration.com/blog/mercer-2021-cost-living-city-ranking-cape-town-joburg/>

London tech set to reach new heights in 2022 following record year for VC investment. (2022, January 13), <https://media.londonandpartners.com/news/london-tech-set-to-reach-new-heights-in-2022-following-record-year-for-vc-investment>

Balderton Capital launches £450M fund focused on early-stage European startups. (2021, November 17), [https://www.uktech.news/news/london-vc-balderton-capital-launches-new-fund-20211117#:~:text=Balderton%20Capital%20based%20in%20London,\(nearly%20%C2%A3450%20million\)](https://www.uktech.news/news/london-vc-balderton-capital-launches-new-fund-20211117#:~:text=Balderton%20Capital%20based%20in%20London,(nearly%20%C2%A3450%20million))

Passion Capital, [https://www.crunchbase.com/organization/passion-capital/investor\\_financials](https://www.crunchbase.com/organization/passion-capital/investor_financials)

Robert Scammell. (2022, January 19). Autonomous car startup Wayve raises \$200m in Microsoft-backed round, [https://www.uktech.news/news/https://www.cbinsights.com/research/wayve-series-b-funding/?utm\\_source=dlvr.it&utm\\_medium=twitter-vc-balderton-capital-launches-new-fund-20211117#:~:text=Balderton%20Capital%20based%20in%20London,\(nearly%20%C2%A3450%20million\)](https://www.uktech.news/news/https://www.cbinsights.com/research/wayve-series-b-funding/?utm_source=dlvr.it&utm_medium=twitter-vc-balderton-capital-launches-new-fund-20211117#:~:text=Balderton%20Capital%20based%20in%20London,(nearly%20%C2%A3450%20million))

London tech week | Home, <https://londontechweek.com/>

Black girls in Tech Fest 2022, <https://www.eventbrite.co.uk/e/black-girls-in-tech-fest-2022-tickets-244072536527?aff=ebdssbdestsearch>

Tech Nation | About Us, <https://technation.io/about-us/>

London tech set to reach new heights in 2022 following record year for VC investment. (2022, January 13), <https://media.londonandpartners.com/news/london-tech-set-to-reach-new-heights-in-2022-following-record-year-for-vc-investment>

Barclays Accelerator, powered by Techstars, reaches \$4bn market cap valuation | Growth | Barclays (2021, September 16), <https://home.barclays/news/2021/09/The-Accelerator-was-a-game-changer-for-us/>

Barclays Accelerator, <https://rise.barclays/accelerator/barclays-accelerator/>

Gina Clarke. (2021, October 1). How London became a global hub for Fintech, <https://time.com/6102902/london-fintech/>

Revolut, [https://www.crunchbase.com/organization/revolut/company\\_financials](https://www.crunchbase.com/organization/revolut/company_financials)

SaltPay, [https://www.crunchbase.com/organization/saltpay/investor\\_financials](https://www.crunchbase.com/organization/saltpay/investor_financials)

Celsius Network, [https://www.crunchbase.com/organization/celsius-network/company\\_financials](https://www.crunchbase.com/organization/celsius-network/company_financials)

Ollie A Williams. (2021, January 15). Silicon Valley Shifts To London In U.K. Tech Boom, <https://www.forbes.com/sites/oliverwilliams1/2021/01/15/silicon-valley-shifts-to-london-in-uk-tech-boom/?sh=7302a754e0ea>

EdTech conference – EdTech conference in London UK Europe is the EdTech world forum 2022 as one of leading educational technology conference as EdTech events 2022 as elearning conference 2022, <https://edtechconferences.london/>

London EdTech Week | Home. (2022, April 26), <https://londonedtechweek.com/>



Unibuddy, [https://www.crunchbase.com/organization/unibuddy/company\\_financials](https://www.crunchbase.com/organization/unibuddy/company_financials)

Multiverse, [https://www.crunchbase.com/organization/whitehat/company\\_financials](https://www.crunchbase.com/organization/whitehat/company_financials)

Atom Learning, [https://www.crunchbase.com/organization/atom-learning/company\\_financials](https://www.crunchbase.com/organization/atom-learning/company_financials)

London maintains its crown as one of the world's top startup hubs. (2021, September 22), <https://media.londonandpartners.com/news/london-maintains-its-crown-as-one-of-the-worlds-top-startup-hubs>

Tech London | Resilience, <https://tech.london/resilience>

Scott Carey, Thomas Macaulay. (2019, April 25). How the UK government supports technology startups, <https://www.computerworld.com/article/3557898/how-the-uk-government-supports-technology-startups.html>

Nick Ismail. (2021, June 16). London & partners Q&A — driving economic growth and inclusion in the London startup ecosystem, <https://www.growthbusiness.co.uk/london-partners-qa-driving-economic-growth-and-inclusion-in-the-london-startup-ecosystem-2559396/>

Impact cohort, <https://www.business.london/business-growth-programme/impact>

Number of startups in Brazil by city 2021. (2021, November 10), <https://www.statista.com/statistics/802685/geographical-distribution-start-ups-city-brazil/>

Sao Paulo - The new home for top startups of Brazil. (2022, March 30), <https://blog.wurkr.io/blog/sao-paulo-the-new-home-for-top-startups-of-brazil>

Monica Hernandez. (2020, December 1). How the Brazilian startup ecosystem is driving innovation in the space industry, <https://hackernoon.com/how-the-brazilian-startup-ecosystem-is-driving-innovation-in-the-space-industry-wl4o31hc>

Why expand your business to Sao Paulo, Brazil?. (2020, July 16), <https://www.bizlatinhub.com/why-expand-your-business-to-sao-paulo-brazil/>

Mary Ann Azevedo. (2021, May 24). The LatAm funding boom continues as Kaszek raises \$1B across a duo of funds – TechCrunch, <https://techcrunch.com/2021/05/24/the-latam-funding-boom-continues-as-kaszek-raises-1b-across-a-duo-of-funds/>

Mary Ann Azevedo. (2021, April 27). Brazil's positive ventures closes on \$10M fund for impact investing –

TechCrunch, <https://techcrunch.com/2021/04/27/brazils-positive-ventures-closes-on-10m-fund-for-impact-investing/>

Neon, <https://my.pitchbook.com/profile/170920-90/company/profile#general-info>

QuintoAndar, <https://my.pitchbook.com/profile/58423-24/company/profile#general-info>

Loft, <https://my.pitchbook.com/profile/234177-04/company/profile#general-info>

Yuca, <https://my.pitchbook.com/profile/432452-17/company/profile#general-info>

Yuri Vasconcelos. (2020, January), The rise of agtechs, <https://revistapesquisa.fapesp.br/en/the-rise-of-agtechs/>

Sao Paulo is catching the eye of investors and entrepreneurs. (2019, October 8), <https://www.en.investe.sp.gov.br/news/post/sao-paulo-is-catching-the-eye-of-investors-and-entrepreneurs/>

Agrolend, <https://my.pitchbook.com/profile/462007-27/company/profile#general-info>



Yashini Sagoenie, Petra Smits, Ernst-Jan Bakker. Fintech in Brazil. (2019, February), <https://www.rvo.nl/sites/default/files/2019/03/Fintech%20in%20Brazil.pdf>

Kameron Tyte, Sharmaine Escalaw. Latin America Entry Points, <https://latamstartups.org/wp-content/uploads/2021/11/LatAm-Startups-Brazil-2021-White-Paper.pdf>

Stephanie L. (2019, April 1). Everything you need to know about Buenos Aires' tech startup scene, <https://www.topuniversities.com/student-info/careers-advice/everything-you-need-know-about-buenos-aires-tech-startup-scene>

Countries advocated for science, innovation and new technologies to play a more active role in policies for the region's economic, productive and social development. (2021, December 15), <https://www.cepal.org/en/pressreleases/countries-advocated-science-innovation-and-new-technologies-play-more-active-role>

Despegar.com, <https://my.pitchbook.com/profile/53513-56/company/profile#general-info>

Tiendanube, <https://my.pitchbook.com/profile/90805-78/company/profile#general-info>

Hero MotoCorp expands operations in Buenos Aires, Argentina. (2021, December 3), <https://www.thehindubusinessline.com/companies/hero-motocorp-expands-operations-in-buenos-aires-argentina/article37818406.ece>

Accenture acquires ergo to expand data & AI capabilities and accelerate data-led transformation on the cloud. (2022, April 21), <https://newsroom.accenture.com/news/accenture-acquires-ergo-to-expand-data-and-ai-capabilities-and-accelerate-data-led-transformation-on-the-cloud.htm>

U.S. Embassy | TechGirls 2022 open call. (2021, November 24), <https://ar.usembassy.gov/techgirls-2022-open-call/>

Maria Luz Pereyra. (2021, April 28). Why Argentina is a regional hub for entrepreneurship, <https://argentinadelivers.com/why-argentina-is-a-regional-hub-for-entrepreneurship/>

Growth in Argentine fintech ecosystem continues unabated. (2021, October 14), <https://www.bnamericas.com/en/features/growth-in-argentine-fintech-ecosystem-continues-unabated>

Connect Americas | Argentina: The Argentine Chamber of Fintech creates "Fintech Women", a space to connect

women with the ecosystem, <https://connectamericas.com/service/argentina-argentine-chamber-fintech-creates-fintech-women-space-connect-women-ecosystem>

Investigating LATAM's Fintech boom: Argentina. (2022, March 29), <https://www.auxadi.com/news/latam-fintech-argentina/>

Lemon, <https://my.pitchbook.com/profile/442355-59/company/profile#general-info>

Ualá, [https://www.crunchbase.com/organization/uala/company\\_financials](https://www.crunchbase.com/organization/uala/company_financials)

Argentina and Cryptocurrency. (2022, February 22), <https://freemanlaw.com/cryptocurrency/argentina/>

Andrés Engler. (2022, March 31). Buenos Aires to create digital identity platform, <https://www.coindesk.com/business/2022/03/31/buenos-aires-to-launch-a-self-sovereign-digital-identity-protocol/>

Jonathan Moed. (2018, October 11). Which Fintech Startup Holds The Key To Argentina's Future?, <https://www.forbes.com/sites/jonathanmoed/2018/10/11/which-fintech-startup-holds-the-key-to-argentinas-future/?sh=2bdd6c67a3ad>



Ripio, <https://my.pitchbook.com/profile/64018-18/company/profile#general-info>

Buenbit, [https://www.crunchbase.com/organization/buenbit/company\\_financials](https://www.crunchbase.com/organization/buenbit/company_financials)

Back to BA | Buenos Aires, a great city to live, visit, study and do business, <https://backtoba.economist.com/>

Camila Souza. (2014, August 29). 6 Damn Good Reasons to Startup in Buenos Aires, <https://tech.co/news/reasons-startup-buenos-aires-2014-08>

Sophia Wood. (2018, July 25). 4 reasons why Buenos Aires is the best place to launch your startup, <https://medium.com/hackernoon/4-reasons-why-buenos-aires-is-the-best-place-to-launch-your-startup-d5f2070613ca>

10 reasons startups love Amsterdam | StartupAmsterdam. (2022, May 3), <https://www.iamsterdam.com/en/business/startupamsterdam/why-amsterdam/why-startups-love-amsterdam>

ACE Incubator | Homepage, <https://ace-incubator.nl/>

Business incubators and accelerators and business strategy support | StartupAmsterdam. (2022, February 23), <https://www.iamsterdam.com/en/business/startupamsterdam/startup-guide/accelerators-and-incubators>

DutchTechSF | Home, <https://dutchtechsf.com/>

Intertraffic Amsterdam 2022 ITSUP – calling all startups!. (2021, December 15), <https://www.intertraffic.com/press-releases/intertraffic-amsterdam-2022-itsup-calling-all-startups/>

Vishal Singh. (2021, October 27). 9 Amsterdam-based startups that raised more than €10M in Q3 2021 and are hiring right now, <https://siliconcanals.com/news/startups/9-amsterdam-startups-that-raised-over-10m/>

These 10 Amsterdam-based startups raised funding in Q1 2021 and are hiring like crazy right now. (2021, April 13), <https://siliconcanals.com/news/startups/amsterdam-startups-hiring-now/>

Government of the Netherlands | Plan of action - supporting the transition to circular agriculture. (2019, November 30), <https://www.government.nl/ministries/ministry-of-agriculture-nature-and-food-quality/documents/policy-notes/2019/11/30/plan-of-action---supporting-transition-to-circular-agriculture>

CropIn expands with a permanent address in Amsterdam (2021, May 04), <https://www.cropin.com/news/cropin-expands-with-a-permanent-address-in-amsterdam/>

Wageningen University & Research | Rankings, <https://www.wur.nl/en/Education-Programmes/rankings.htm>

Investment in WUR spin-off boosts development of sustainable alternative to palm and coconut oil. (2021, July 6), <https://www.wur.nl/en/news-wur/Show/Investment-in-WUR-spin-off-boosts-development-of-sustainable-alternative-to-palm-and-coconut-oil.htm>

Visma strengthens portfolio for SMEs in The Netherlands with acquisition of Brincr (2021, February 19), <https://www.mynewsdesk.com/visma/pressreleases/visma-strengthens-portfolio-for-smes-in-the-netherlands-with-acquisition-of-brincr-3122245>

Life sciences and health industry in Amsterdam. (2021, November 1), <https://www.iamsterdam.com/en/business/key-sectors/life-sciences-and-health>

Pole position initiative, <https://www.techleap.nl/what-we-do/pole-position-initiative>

These 9 Amsterdam startups pivoted their business models during the COVID-19 pandemic and stayed successful. (2021, December 10), <https://siliconcanals.com/news/startups/amsterdam-startups-pivoted/>



Vinod Sreeharsha. (2021, October 31). Investment in Brazilian startups is booming, <https://www.wsj.com/articles/investment-in-brazilian-startups-is-booming-11635692400>

Rio innovation week 2022, <https://abesssoftware.com.br/en/eventos/rio-innovation-week-2022/>

Rio innovation week. (2022, January 1), <https://dndi.org/events/2022/rio-innovation-week/>

Rio innovation week, <https://www.sympla.com.br/evento/rio-innovation-week/1259610>

Columbia Global Centers | Rio de Janeiro, <https://globalcenters.columbia.edu/rio>

Columbia Global Centers | Entrepreneurship and business, <https://globalcenters.columbia.edu/content/rio-entrepreneurship-and-business>

Columbia Global Centers | Applied sciences, <https://globalcenters.columbia.edu/content/rio-applied-sciences>

EmCasa, [https://www.crunchbase.com/organization/emcasa/company\\_financials](https://www.crunchbase.com/organization/emcasa/company_financials)

Bemobi, <https://my.pitchbook.com/profile/117698-95/company/profile#general-info>

Beep Saúde, <https://my.pitchbook.com/profile/434738-35/company/profile#general-info>

Ak=lex Wilhem. (2021, November 17). Plug raises \$2.7M to make payment acceptance in Brazil less terrible, <https://techcrunch.com/2021/11/17/plug-raises-2-7m-to-make-payment-acceptance-in-brazil-less-terrible/>

Shomik Sen Bhattacharjee. (2022, March 28). Rio de Janeiro will begin accepting property tax in crypto by 2023, <https://gadgets360.com/cryptocurrency/news/rio-de-janeiro-crypto-property-tax-nft-bitcoin-payment-2848233>

Rio de Janeiro mayor plans to invest 1 per cent of the city's treasure reserves in cryptocurrency. (2022, January 15), <https://indianexpress.com/article/technology/crypto/rio-de-janeiro-mayor-plans-to-invest-1-per-cent-of-the-citys-treasury-in-cryptocurrency-7724723/>

Rio de Janeiro will allow its citizens to pay taxes in cryptocurrencies. (2022, March 31), <https://timesofindia.indiatimes.com/business/cryptocurrency/blockchain/rio-de-janeiro-will-allow-its-citizens-to-pay-taxes-in-cryptocurrencies/articleshow/90558109.cms>

Bitcoin booming in Brazil. (2022, April 1), <https://www.numbrs.com/bitcoin-booming-in-brazil/>

Rio de Janeiro state to launch an infra tender 'every 15 days'. (2021, August 16), <https://www.bnamerica.com/en/news/rio-de-janeiro-state-to-launch-an-infra-tender-every-15-days>

Cody Kimmel. (2022, January 31). Deep dive into Mexico City's tech ecosystem, <https://coderslink.com/company/blog/mexico-city-tech-ecosystem-the-gateway-to-lat-in-americas-engineers/>

The epicentre of entrepreneurship: Mexico City's booming startup and fintech scene. (2022, February 22), <https://openinnovation.bbva.com/en/news/the-epicentre-of-entrepreneurship-mexico-citys-booming-startup-and-fintech-scene/>

Bloomberg will help boost digital innovation in 6 cities. (2021, June 29), <https://www.bloomberg.com/latam/blog/bloomberg-ayudara-a-potenciar-innovacion-digital-en-6-ciudades/>

IFC Launches Initiative with Firms in Mexico to Boost Opportunities for Women in Workforce. (2022, April 7), <https://pressroom.ifc.org/all/pages/PressDetail.aspx?ID=26926>



Top startups in Mexico City to watch in 2022. (2021, December 9), <https://worldfinancialreview.com/top-startups-in-mexico-city-to-watch-in-2022/>

Konfio, [https://www.crunchbase.com/organization/konfio/company\\_financials](https://www.crunchbase.com/organization/konfio/company_financials)

Anthony Harrup (2021, December 30). Bank of Mexico plans to launch digital currency by 2024, <https://www.wsj.com/articles/bank-of-mexico-plans-to-launch-digital-currency-by-2024-11640896506>

Fintech Ecosystem In Mexico, <https://itrade.gov.il/mexico/files/2021/08/Fintech-Mexico-0038.pdf>

Finnovista | Finnosummit 2022, <https://www.finnovista.com/summit/finnosummit2022/>

Nina Bambysheva, Maria Abreu. Mexican Bitcoin Exchange Bitso Raises \$250 Million, Becomes Latin America's First Crypto Unicorn. (2021, May 5), <https://www.forbes.com/sites/ninabambysheva/2021/05/05/mexican-bitcoin-exchange-bitso-raises-250-million-becomes-lat-in-americas-first-crypto-unicorn/?sh=61527d7d64af>

Clara, [https://www.crunchbase.com/organization/clara-79e7/company\\_financials](https://www.crunchbase.com/organization/clara-79e7/company_financials)

Jesus Lopez. (2021, April 8). What's a Good Reason to Outsource Software Development to Mexico?, [https://coderslink.com/company/blog/reason-to-outsource-software-developers-to-mexico/?sl=permanent?utm\\_source=Direct%20-%2020688&source=Blog](https://coderslink.com/company/blog/reason-to-outsource-software-developers-to-mexico/?sl=permanent?utm_source=Direct%20-%2020688&source=Blog)

Jason Mitchell. (2022, January 21). Advantage Mexico: Post-covid trends set to work in Latin American country's favour, <https://www.investmentmonitor.ai/analysis/mexico-nearshoring-economy-investment-covid>

Steve Taplin. (2022, April 13). Mexico Is Flooded With Top Software Development Talent, <https://www.forbes.com/sites/forbestechcouncil/2022/04/13/mexico-is-flooded-with-top-software-development-talent/?sh=7f8f83fd4960>

Joe O'Halloran. (2022, January 24). Shanghai rated world's number-one smart city for 2022, <https://www.computerweekly.com/news/252512366/Shanghai-rated-worlds-number-one-smart-city-for-2022>

Mercedes-Benz opens new R&D centre in Shanghai. (2022, March 18), <https://www.reuters.com/business/autos-transportation/mercedes-benz-opens-new-rd-centre-shanghai-2022-03-18/>

SMIC to invest \$8.87 billion for new chip plant in Shanghai. (2021, September 3), <https://gadgets360.com/mobiles/news/smic-chip-manufacturing-plant-factory-new-shanghai-to-invest-usd-8-87-billion-2528602>

Elio Assuncao. Shanghai 2023 Venture Capital World Summit, <https://vcworldsummit.com/shanghai-2023/>

MWC Shanghai | Home. (2022, April 28), <https://www.mwcshanghai.com/>

ICIT 2022 | Shanghai | 23rd IEEE International Conference on industrial technology, <https://2022.ieee-icit.org/>

Overview, <http://www.aabi.info/index.html>

2021 AABI summit and awards ceremony was successfully held!, <http://www.aabi.info/news/1061.html>

Zongmu, [https://www.crunchbase.com/organization/zongmu/company\\_financials](https://www.crunchbase.com/organization/zongmu/company_financials)

Pateo, [https://www.crunchbase.com/organization/pateo-group/company\\_financials](https://www.crunchbase.com/organization/pateo-group/company_financials)

Moee Robot, [https://www.crunchbase.com/organization/moee-robot/company\\_financials](https://www.crunchbase.com/organization/moee-robot/company_financials)



Shanghai marches ahead with further development of esports industry. (2022, January 23), <https://www.globaltimes.cn/page/202201/1246698.shtml>

Intel World Open Beijing playoff announced. (2022, January 17), <https://hawk.live/posts/intel-world-open-beijing-playoff-announced>

Aaron Orr. (2021, July 30). Riot games set to open new studio in China, <https://www.pocketgamer.biz/asia/news/76966/riot-games-set-to-open-new-studio-in-china/>

ByteDance acquires gaming studio Moonton at around \$4 billion valuation: Sources. (2021, March 22), <https://www.reuters.com/article/us-bytedance-videogames-mooton-idUSKBN2BE0ES>

J.P. Morgan hosts global healthcare conference, Shanghai forum. (2021, October 11), <https://www.jpmorganchina.com.cn/en/news/jp-morgan-hosts-global-healthcare-conference-shanghai-forum>

Li Yan. (2022, November 02). China's financial hub sees biopharmaceuticals ride boom in new medications, <https://www.ecns.cn/m/business/2022-02-11/detail-ihavnavn5799650.shtml>

Shanghai FTZ bio-tech park recognized for start-up incubation. (2021, December 6), [https://en.china-shftz.gov.cn/2021-12/06/c\\_688148.htm](https://en.china-shftz.gov.cn/2021-12/06/c_688148.htm)

Igenesis, [https://www.crunchbase.com/organization/igenesis/company\\_financials](https://www.crunchbase.com/organization/igenesis/company_financials)

WorldSkills Shanghai 2022, [https://worldskills2022.com/en/hosts/shanghai\\_1/#1](https://worldskills2022.com/en/hosts/shanghai_1/#1)

China unveils massive tax incentives and subsidies to spur foreign investment. (2022, March 21), <https://www.mondaq.com/china/sales-taxes-vat-gst/1173938/china-unveils-massive-tax-incentives-and-subsidies-to-spur-foreign-investment>

Guo Rui. (2021, May 7). China's tech hub Shenzhen to invest US\$108 billion in R&D over 5 years, <https://www.scmp.com/news/china/science/article/3132651/chinas-tech-hub-shenzhen-invest-us108-billion-rd-over-5-years?module=inline&pgtype=article>

XPeng opens Shenzhen R&D center, aims to expand to over 500 employees in coming year. (2021, May 07), <https://cnevpost.com/2021/05/07/xpeng-opens-shenzhen-rd-center/>

City aims to build intl. VC center\_Latest News-Shenzhen government online. (2022, April 8), [https://www.sz.gov.cn/en\\_szgov/news/latest/content/post\\_9685128.html](https://www.sz.gov.cn/en_szgov/news/latest/content/post_9685128.html)

MicroMultiCopter Aero Technology Co, [https://www.crunchbase.com/organization/micromulticopter-aero-technology-co/company\\_financials](https://www.crunchbase.com/organization/micromulticopter-aero-technology-co/company_financials)

Uwintech, [https://www.crunchbase.com/organization/uwintech/company\\_financials](https://www.crunchbase.com/organization/uwintech/company_financials)

Artivila Therapeutics, [https://www.crunchbase.com/organization/artivila-therapeutics/company\\_financials](https://www.crunchbase.com/organization/artivila-therapeutics/company_financials)

Alexander Chipman Koty. (2021, July 29). Artificial intelligence in China: Shenzhen releases first local regulations, <https://www.china-briefing.com/news/artificial-intelligence-china-shenzhen-first-local-ai-regulations-key-areas-coverage/>

SmartMore Technology, [https://www.crunchbase.com/organization/smartmore-technology/company\\_financials](https://www.crunchbase.com/organization/smartmore-technology/company_financials)

Multiway Robotics, [https://www.crunchbase.com/organization/multiway-robotics/company\\_financials](https://www.crunchbase.com/organization/multiway-robotics/company_financials)

Youibot, [https://www.crunchbase.com/organization/youibot/company\\_financials](https://www.crunchbase.com/organization/youibot/company_financials)



Shenzhen to expand financial inclusion for SMEs in 2022. (2022, february 25), <https://thepaypers.com/payments-general/shenzhen-to-expand-financial-inclusion-for-smes-in-2022--1254833>

Conference on Control Science and Electric Power Systems (CSEPS 2022) | International Conference on financial innovation, FinTech and information technology (FFIT 2022), [https://www.allconfs.org/meeting/index\\_en.asp?id=11597](https://www.allconfs.org/meeting/index_en.asp?id=11597)

Cara Lyttle. (2021, October 12). How Shenzhen moved out of Hong Kong's shadow, <https://www.investment-monitor.ai/analysis/shenzhen-moved-out-of-hong-kong-shadow>

Guilherme Campos. (2021, February 03). Why you should invest in Shenzhen and the Greater Bay Area, <https://www.china-briefing.com/news/why-you-should-invest-in-shenzhen-and-the-greater-bay-area/>

Iris Deng. (2021, June 11). Shenzhen's five-year plan to drive tech innovation amid US-China rivalry, <https://www.scmp.com/tech/policy/article/3137009/chinese-hi-tech-hub-shenzhen-gears-steady-economic-expansion-over-next?module=inline&pgtype=article>

Colombia Foreign Direct Investment: % of GDP | CEIC, <https://www.ceicdata.com/en/indicator/colombia/foreign-direct-investment--of-nominal-gdp>

What is the state of the entrepreneurial ecosystem in Colombia?. (2022, February 08), <https://impactotic.co/en/entrepreneurship-ecosystem-in-colombia-2021/>

US, main investor in historic year for Bogota-based startups. (2022, March 4), <https://www.prnewswire.com/news-releases/us-main-investor-in-historic-year-for-bogota-based-startups-301496005.html>

<https://en.investinbogota.org/>

Andrea Zúñiga, Isabela Ramírez, Juan Camilo Rodríguez. ENTREPRENEURSHIP LAW: A NEW STEP FOR BUSINESS GROWTH AND ECONOMIC REACTIVATION IN COLOMBIA, <https://cms.law/en/col/publication/entrepreneurship-law-a-new-step-for-business-growth-and-economic-reactivation-in-colombia>

Starting up in Bogota, Colombia: A guide for foreign entrepreneurs, (2020, January 24),

<https://www.idgconnect.com/article/3581348/starting-up-in-bogota-colombia-a-guide-for-foreign-entrepreneurs.html>

Starting up in Bogota, Colombia: A guide for foreign entrepreneurs. (2020, January 24), <https://www.idgconnect.com/article/3581348/starting-up-in-bogota-colombia-a-guide-for-foreign-entrepreneurs.html>

Three Bogota Fintech Startups That Will Give a Lot of Buzz in the Coming Years. (2021, July 1), <https://www.pr.com/press-release/839546>

Bogota included in the global financial centres index. (2022, January 28), <https://finance.yahoo.com/news/bogota-included-global-financial-centres-190000968.html>

Global Financial Centres Index | Wikipedia. (2008, January 15), [https://en.wikipedia.org/wiki/Global\\_Financial\\_Centres\\_Index](https://en.wikipedia.org/wiki/Global_Financial_Centres_Index)

Tpaga S.A.S., <https://my.pitchbook.com/profile/172718-74/company/profile#general-info>

Bold, [https://www.crunchbase.com/organization/bold-0f3e/company\\_financials](https://www.crunchbase.com/organization/bold-0f3e/company_financials)

The eCommerce market in Colombia | ecommerceDB, <https://ecommercedb.com/en/markets/co/all>

Katie Tincello. (2021, July 21). Rappi raises over \$500M in Series F, <https://latamlist.com/rappi-raises-over-500m-in-series-f/>

Tul SAS, <https://my.pitchbook.com/profile/435934-45/company/profile#general-info>



Frubana, [https://www.crunchbase.com/organization/frubana/company\\_financials](https://www.crunchbase.com/organization/frubana/company_financials)

Habi | INVERSIONES MCN SAS, <https://my.pitchbook.com/profile/342182-98/company/profile#general-info>

Female Founded Startup Habi Leads in Male-Dominated Proptech Field. (2022, January 12), <https://www.lexology.com/library/detail.aspx?g=c379ec-cf-e1d0-4847-b3d9-982089a70e9c>

Mónica Sánchez. (2021, April 29). 10 reasons why Bogota is the strongest Latam cities business, <https://en.investinbogota.org/BogotaBigIdeas/10-reasons-make-bogota-stronger>

Bogota: At the top 10 of the foreign direct investment ranking. (2021, June 29), <https://cafeto.co/bogota-at-the-top-10-of-the-foreign-direct-investment-ranking/>

EdTech Hub | Palestine Techno Park (PTP), <https://www.technopark.ps/en/article/215/EdTech-Hub>

Kansai's Industrial Potential Pioneers the Future, <https://www.kouiki-kansai.jp/material/files/group/7/innovativekansaienglish.pdf>

Startup City Project Japan | Home, <https://jp-ecosystem.startup-db.com/>

Japan Association for the 2025 World Exposition, <https://www.expo2025.or.jp/en/>

Osaka University, <https://nturanking.csti.tw/ranking/bySchoolName/Osaka%20University>

Luxna Biotech, <https://www.cbinsights.com/company/luxna-biotech>

Award-Winning Startups Showcase Japanese Innovation At CES 2022. (2022, February 16), <https://www.forbes.com/sites/japan/2022/02/16/award-winning-startups-showcase-japanese-innovation-at-ces-2022/?sh=66b5bb31428a>

Cuorips Inc. | Home, <https://cuorips.co.jp/en/>

Ashish Dangwal. (2022, March 20). Flying cars in 3 years? Japan sets 2025 target for 'Innovation of the century', to run eVTOL services during Osaka world expo, <https://eurasianimes.com/flying-cars-in-3-years-japan-sets-2025-target-for-innovation-of-the-century-to-run/>

Microwave Chemical | Home, <https://mwcc.jp/en/>

ArchiTekAI | Home, (2018, September 16), <https://architek.ai/en/business-home-en/>

Foreign entrepreneurship promotion & support Desk - Accepting applications for the foreign entrepreneurship promotion project (AKA "Startup Visa"), <https://www.sansokan.jp/startupvisa/en/>

Osaka Landing Pad | Home, <https://osakalandingpad.com/>

Safe cities index 2021, <https://safecities.economist.com/safe-cities-2021-whitepaper/>

The Global Liveability Index 2021. (2021, May 26), <https://www.eiu.com/n/campaigns/global-liveability-index-2021/>

Startup ecosystem | Home, <https://www.innovation-osaka.jp/startup-ecosystem/>

Turkish startups snag \$1.55B funding in 2021. (2022, January 25), <https://www.pymnts.com/startups/2022/turkish-startups-snag-record-1-55b-funding-in-2021-a-948-pct-increase/>

Timur Sirt. (2022, January 21). Turkish startups notch record \$1.5B funding in buoyant 2021, <https://www.dailysabah.com/business/tech/turkish-startups-notch-record-15b-funding-in-buoyant-2021>



Turkish Startup Investments Review | Q3 2021. (2022, January 21), <https://home.kpmg/content/dam/kpmg/tr/pdf/2021/11/turkish-startup-investments-review-2021-q3.pdf>

Istanbul Development Agency (ISTKA), (2022, March 23)

Startups.watch | Corporate Venturing Platform, <https://startups.watch>

Dream Games, [https://www.crunchbase.com/organization/dream-games/company\\_financials](https://www.crunchbase.com/organization/dream-games/company_financials)

Spyke Games, [https://www.crunchbase.com/organization/spyke-games/company\\_financials](https://www.crunchbase.com/organization/spyke-games/company_financials)

National Artificial Intelligence Strategy 2021-2025, <https://cbddo.gov.tr/SharedFolderServer/Genel/File/TRNationalAIStrategy2021-2025.pdf>

Cameralyze, [https://www.crunchbase.com/organization/cameralyze/company\\_financials](https://www.crunchbase.com/organization/cameralyze/company_financials)

Yolda.com, [https://www.crunchbase.com/organization/yolda/company\\_financials](https://www.crunchbase.com/organization/yolda/company_financials)

Istanbul financial center to support Turkey's ambition to become a top 10 global economy. (2021, October 7), <https://www.prnewswire.com/in/news-releases/istanbul-financial-center-to-support-turkey-s-ambition-to-become-a-top-10-global-economy-848640786.html>

Istanbul Fintech Week, <https://istanbulfintechweek.com/>

Tarfin, [https://www.crunchbase.com/organization/tarfin/company\\_financials](https://www.crunchbase.com/organization/tarfin/company_financials)

42 ISTANBUL | 42 Istanbul, <https://www.42istanbul.com.tr/42-istanbul/>

Eden Baniel. (2022, January 5). The Tel Aviv tech hub: A home to innovation and scalability, <https://youappi.com/the-tel-aviv-tech-hub-a-home-to-innovation-and-scalability-youappi/>

Invest In Israel | Investment incentives, [https://investinisrael.gov.il/BusinessInIsrael/Pages/Investment\\_incentives.aspx](https://investinisrael.gov.il/BusinessInIsrael/Pages/Investment_incentives.aspx)

Deloitte Israel | The Israeli Technological Eco-System. (2020, January 1), [https://www2.deloitte.com/il/en/pages/innovation/article/the\\_israeli\\_technological\\_eco-system.html](https://www2.deloitte.com/il/en/pages/innovation/article/the_israeli_technological_eco-system.html)

Ricky Ben-David. (2022, January 27). Israel launches \$70m program to promote tech entrepreneurship in Arab community, <https://www.timesofisrael.com/israel-launches-70m-program-to-promote-tech-entrepreneurship-in-arab-community/>

Ciaran Bruder. (2022, January 21). Inside what makes Tel Aviv's amazing startup ecosystem tick, <https://websummit.com/blog/tel-aviv-startup-ecosystem-city-guide-accelerator-funding-vc>

11 Israeli companies make list of top 100 AI startups redefining industries. (2021, April 11), <https://nocamels.com/2021/04/11-israeli-companies-top-100-ai-startups/>

Amitai Ziv. (2021, April 12). Israel is lagging on AI. It will now invest billions to bridge the gap, <https://www.haaretz.com/israel-news/tech-news/.premium-the-ai-nation-israel-to-appoint-artificial-intelligence-czar-1.9703391>

Zencity raises \$30m to help governments better tune in to citizen needs (2021, June 29), <https://www.smartcitiesworld.net/news/news/zencity-raises-30m-to-help-governments-better-tune-in-to-citizen-needs-6567>

Ingrid Lunden. (2021, October 12). AI chipmaker Hailo raises \$136M as it doubles down new opportunities for AI modules in edge devices – TechCrunch, <https://techcrunch.com/2021/10/12/hailo-raises-136m-ai-chips/>



Yonit Wiseman. (2022, January 4). Israel's cybersecurity startups post another record year in 2021 – TechCrunch, <https://techcrunch.com/2022/01/04/israels-cybersecurity-startups-post-another-record-year-in-2021/>

Ricky Ben-David. (2022, January 20). Israeli cybersecurity firms raised record \$8.8b in 2021, exports reached \$11b, <https://www.timesofisrael.com/israel-cybersecurity-firms-raised-record-8-8b-in-2021-exports-reached-11b/>

Government Of Canada | Introduction - Atlantic Canada. (2019, January 29), <https://www.nrcan.gc.ca/environment/resources/publications/impacts-adaptation/reports/assessments/2008/ch4/10339>

CarbonCure's concrete solution featured on CBS' 60 minutes. (2021, March 10), <https://www.carboncure.com/concrete-corner/carboncures-concrete-solution-featured-on-cbs-60-minutes/>

Introhive, [https://www.crunchbase.com/organization/introhive/company\\_financials](https://www.crunchbase.com/organization/introhive/company_financials)

Introhive named to Deloitte technology fast 50™ for third consecutive year. (2021, November 17), <https://www.newswire.ca/news-releases/introhive-named-to-deloitte-technology-fast-50-tm-for-third-consecutive-year-881836441.html>

Accountability Report 2020-2021. (2021, November 17), [https://innovacorp.ca/sites/default/files/publications/Innovacorp\\_Accountability\\_Report\\_2020\\_2021.pdf](https://innovacorp.ca/sites/default/files/publications/Innovacorp_Accountability_Report_2020_2021.pdf)

Investing in training and infrastructure for PEI's bioscience sector. (2022, March 10), <https://www.newswire.ca/news-releases/investing-in-training-and-infrastructure-for-peis-bioscience-sector-835219423.html>

Government of Canada supports growing biotechnology cluster in Cape Breton. (2021, April 16), <https://www.canada.ca/en/atlantic-canada-opportunities/news/2021/04/government-of-canada-supports-growing-biotechnology-cluster-in-cape-breton.html?cid=>

Charlize Alcaraz. (2021, October 1). Sandpiper ventures closes first \$10 million of its \$20 million CAD target fund, <https://betakit.com/sandpiper-ventures-closes-first-10-million-of-its-20-million-cad-target-fund/>

Mysa, [https://www.crunchbase.com/organization/mysa/company\\_financials](https://www.crunchbase.com/organization/mysa/company_financials)

TrojAI, [https://www.crunchbase.com/organization/trojai/company\\_financials](https://www.crunchbase.com/organization/trojai/company_financials)

Peter Moreira. Biotech sector takes flight in NS, <https://entrevestor.com/home/entry/life-sciences-takes-flight-in-ns>

Adaptiiv Medical Technologies Inc., <https://my.pitchbook.com/profile/160961-41/company/profile#general-info>

ABK Biomedical Inc., <https://my.pitchbook.com/profile/59883-40/company/profile#deal-history>

Canada's ocean supercluster announces \$3.3M precision fish harvesting project. (2022, February 4), <https://oceansupercluster.ca/precision-fish-harvesting-project/>

Ocean startup project invests \$1.4-Million in 40 ocean tech companies. (2021, October 31), <https://huddle.today/2021/10/06/ocean-startup-project-invests-1-5-million-in-40-ocean-tech-companies/>

Carbon removal startup planetary technologies announces \$7.8M in funding, offer of 3,000 carbon credits. (2022, March 17), <https://www.businesswire.com/news/home/20220317005935/en/Carbon-Removal-Startup-Planetary-Technologies-Announces-7.8M-in-Funding-Offer-of-3000-Carbon-Credits>

University of New Brunswick | Canadian Institute for Cybersecurity, <https://www.unb.ca/cic/>

Sonrai Security, [https://www.crunchbase.com/organization/sonrai-security/company\\_financials](https://www.crunchbase.com/organization/sonrai-security/company_financials)



NASDAQ completes acquisition of Verafin. (2021, February 11), <https://verafin.com/news/nasdaq-completes-acquisition-of-verafin>

NASDAQ to buy financial fraud detection firm Verafin for \$2.75 billion, <https://www.cnbc.com/2020/11/19/nasdaq-to-buy-financial-fraud-detection-firm-verafin-for-2point75-billion.html>

Why do business in Halifax?. (2017, April 27), <https://www.halifax.ca/business/doing-business-halifax/why-do-business-halifax>

Colin R. Singer. (2022, February 22). Four Atlantic Canadian cities make 2021 top 10 best communities in Canada, <https://www.immigration.ca/four-atlantic-canadian-cities-make-2021-top-10-best-communities-in-canada>

Robert Hogue. (2021, December 21). The great affordability squeeze? Home buyers confront rising ownership costs, <https://thoughtleadership.rbc.com/the-great-affordability-squeeze-home-buyers-confront-rising-ownership-costs/>

Ellen Farrell, PhD. (2021, December 21). Atlantic Entrepreneurial Ecosystem: Vibrant and Globally Aspiring, [https://www.smu.ca/webfiles/AtlEntreEcosystemFinal-Report2018\\_WEB.pdf](https://www.smu.ca/webfiles/AtlEntreEcosystemFinal-Report2018_WEB.pdf)

HaliFACTs - A look at technology ecosystems on Canada's East Coast. (2021, August 19), <https://www.peerledger.com/blogs/halifacts-a-look-at-technology-ecosystems-on-canadas-east-coast>

Kansai | J-startup city, <https://j-startup-city.go.jp/city/kansai/>

Plug and play Japan, <https://japan.pluginandplaytech-center.com/summit/summit-upcoming/#sec-schedule-kyoto-01>

2021 Year Startup City Acceleration Program, [https://www.jetro.go.jp/services/startup\\_city.html](https://www.jetro.go.jp/services/startup_city.html)

Six top overseas accelerators intensively support 109 Japanese startups selected from eight base cities nationwide!. (2021, November 4), <https://prtimes.jp/main/html/rd/p/000000088.000071241.html>

Kyoto smart city expo 2022, <https://www.showsbee.com/fairs/Kyoto-Smart-City-Expo.html>

Scooter Doll. (2022, February 23). QuantumScape opens R&D center in Japan to expand solid-state battery development, <https://electrek.co/2022/02/23/quantumscape-opens-rd-center-in-japan-to-expand-solid-state-battery-development/>

FLOSFIA, [https://www.crunchbase.com/organization/flofia/company\\_financials](https://www.crunchbase.com/organization/flofia/company_financials)

Addinte Co. Ltd., <https://my.pitchbook.com/profile/183632-05/company/profile#deal-history>

Mike Butcher. (2022, February 3). Kyoto Fusioneering secures \$11.7M to build out its fusion reactor technologies – TechCrunch, <https://techcrunch.com/2022/02/03/kyoto-fusioneering-secures-11-7m-to-build-out-its-fusion-reactor-technologies/>

Started recruiting companies to participate in the “Monozukuri Hardware Cup 2022” pitch contest for hardware startups aiming for the world. (2022, January 6), <https://prtimes.jp/main/html/rd/p/000000016.000076450.html>

Imahori Takahiro. (2022, March 3). Monozukuri hardware cup 2022 will be held! The winner is SUN METALON, <https://hardwarecup.monozukuri-startup.jp/2022/03/monozukuri-hardware-cup-2022-report/>

On-site laboratories, <https://www.kyoto-u.ac.jp/en/about/operation/designated/on-site-laboratories>

Establishment of new ‘on-site lab’ approved (28 September 2021), <https://www.kyoto-u.ac.jp/en/news/2021-09-28-1>



Thyas Co. Ltd., a Kyoto University spin-off, Closes JPY 2.1B Series B Financing from Eight Roads Ventures/F-Prime to Develop Novel iPSC-derived Immune Cell Platform (2022. February 28), <https://thyas.co.jp/post-18727/?lang=en>

How to apply for startup VISA(NSSZ), <https://www.kyoto-obc.jp/en/startupvisa/sougyou/>

Shanghai Ranking | Universities, <https://www.shanghairanking.com/institution/kyoto-university>

Fintech Philippines report 2022 highlights the rise of crypto and advent of Digibanks. (2022, January 17), <https://fintechnews.ph/54791/fintechphilippines/fintech-philippines-report-2022-highlights-the-rise-of-crypto-and-advent-of-digibanks/>

Anri Ichimura. Filipino Startup PayMongo Launches Accelerator Program to Support MSMEs, <https://www.esquiremag.ph/money/industry/paymongo-accelerator-progra-a00304-20210802>

PDAX, [https://www.crunchbase.com/organization/pixo-22df/company\\_financials](https://www.crunchbase.com/organization/pixo-22df/company_financials)

PayMongo, [https://www.crunchbase.com/organization/paymongo/company\\_financials](https://www.crunchbase.com/organization/paymongo/company_financials)

DIGITAL 2021 GLOBAL OVERVIEW REPORT, <https://www.esquiremag.ph/money/industry/paymongo-accelerator-progra-a00304-20210802>

eCommerce Philippines 2022 Roadmap, [https://ecommerce.dti.gov.ph/madali/images/eCommerce\\_Philippines\\_Roadmap\\_2022.pdf](https://ecommerce.dti.gov.ph/madali/images/eCommerce_Philippines_Roadmap_2022.pdf)

Philippines, <https://taxsummaries.pwc.com/philippines/corporate/tax-credits-and-incentives>

Timothy Standen. (2022, March 30). The Philippines amends its foreign investment act, <https://www.aseanbriefing.com/news/the-philippines-amends-its-foreign-investment-act/#:~:text=On%20March%202%2C%202022%2C%20President,7042>

Intesa Sanpaolo Innovation Center and Fondazione Compagnia di San Paolo, (March, 2022 21)

ESA boosts space entrepreneurship in Turin. (2021, December 20), <https://commercialisation.esa.int/2021/11/esa-boosts-space-entrepreneurship-in-turin/>

Space economy: The ESA BIC Turin opens the call to support space related startups, <https://www.i3p.it/en/news/space-economy-esa-bic-turin-apre-la-call-per-supportare-le-startup-del-settore-spaziale>

Standort Frankfurt am Main. (2021, March 24), <https://frankfurt-business.net/standort-frankfurt/>

IT/Telecommunications, <https://www.frankfurt-tourismus.de/messe/en/Why-Frankfurt/Economic-Key-Industries/IT-Telecommunications>

Why choose Frankfurt?, <https://www.messefrankfurt.com/frankfurt/en/location/why-messe-frankfurt.html>

Startup community. (2021, June 15), <https://techquarter.com/startup-community/>

hessian.AI | AISR, <https://hessian.ai/tag/aisr/>

Sophie Deistler. (2021, November 9). Clark buys the finance group, <https://www.startbase.com/news/clark-kauft-die-finanzen-group/>

Ishveena Singh. (2021, December 1). Japan-based drone fund invests in Wingcopter, <https://dronedj.com/2021/12/01/wingcopter-drone-fund/>

FinTech archive, <https://frankfurt-main-finance.com/en/category/fintech-frankfurt-am-main/>

Megha Paul. (2022, March 1). Climate fintech space on radar as CommerzVentures closes €300 million fund, <https://tech.eu/2022/03/01/climate-fintech-space-on-radar-as-commerzventures-closes-eur300-million-fund>



National Research Center for Applied Cybersecurity | ATHENE, <https://www.athene-center.de/>

Frankfurt, a German pionner with a “100% renewable” roadmap. (2020, December 28), <https://energy-cities.eu/best-practice/frankfurt/>

Klaus Fichter, Yasmin Olteanu. (2020, December 28). Green Startup Monitor 2022, <https://www.borderstep.de/wp-content/uploads/2022/03/GreenStartupMonitor2022.pdf>

TechQuartier and StartHub Hessen, (2022, March 08)

Research & development, <https://www.frm-united.com/location-factors/frankfurtrheinmain-as-a-business-location/research-and-development/>

About the city, [https://myguide.city/destination/frankfurt-am-main/nodes/frankfurt\\_am\\_main\\_city/node/about-the-city](https://myguide.city/destination/frankfurt-am-main/nodes/frankfurt_am_main_city/node/about-the-city)

Digest Africa briefs: The most funded startups in Tunisia, <https://digestafrica.com/digest-africa-briefs-the-most-funded-startups-in-tunisia>

Startup Tunisia | Deal, [https://startup.gov.tn/en/startup\\_ecosystem/flywheel/deal#:~:text=DEAL%20is%20a%20grant%20that,stability%20of%20their%20business%20model](https://startup.gov.tn/en/startup_ecosystem/flywheel/deal#:~:text=DEAL%20is%20a%20grant%20that,stability%20of%20their%20business%20model)

Smart Capital and CDC, (2022, March 18),

Expanding its footprint in Africa: Flat6Labs announces second close of its Tunisia seed fund with the participation of Sawari ventures. (2021, September 29), <https://www.flat6labs.com/expanding-its-footprint-in-africa-flat6labs-announces-second-close-its-tunisia-seed-fund-with-the-participation-of-sawari-ventures/>

Zubair Naeem Paracha. (2021, May 2). Tunisia’s Exensya raises \$20 million to grow its expense management software, <https://www.menabytes.com/exensya-20-million/>

Tunisia: Startup Wattnow secures \$1.3M in pre-series a round. (2022, March 11), <https://en.africanmanager.com/tunisia-startup-wattnow-secures-1-3m-in-pre-series-a-round/>

OECD AI policy observatory Portal, <https://oecd.ai/en/dashboards/policy-initiatives/%2F%2Faipo.oecd.org%2F2021-data-policyInitiatives-27134>

Mohamed Alaa El-Din. (2021, July 6). Africa IoT, AI challenge further expands in continent, <https://dailynews-egypt.com/2021/07/06/africa-iot-ai-challenge-further-expands-in-continent/>

Tage Kene-Okafor. (2022, January 25). Tunisian enterprise AI startup InstaDeep raises \$100M from AI capital, BioNTech, Google – TechCrunch, <https://techcrunch.com/2022/01/25/tunisian-enterprise-ai-startup-instadeep-raises-100m-from-alpha-biontech-google/>

Tunisia-founded enterprise AI startup InstaDeep raises \$7 million series a. (2019, May 12), <https://www.menabytes.com/instadeep-series-a/>

Startup Tunisia official partners, <https://startup.gov.tn/en/sso-partners>

Tunisia: Sfax technopark-based “Healthtech” Represents Tunisia in “Bettterehealth. (2021, March 19), <https://allafrica.com/stories/202103190461.html>

Tunisia, Britain to strengthen cooperation in biotechnology industries - Xinhua | English.news.cn, [https://www.xinhuanet.com/english/2021-02/02/c\\_139713922.htm](https://www.xinhuanet.com/english/2021-02/02/c_139713922.htm)

Entrepreneurship, SMEs and Local Development, [https://www.oecd.org/cfe/leed/OECD%20Tunisia\\_UniversityEntrepreneurshipReport\\_FINAL.pdf](https://www.oecd.org/cfe/leed/OECD%20Tunisia_UniversityEntrepreneurshipReport_FINAL.pdf)

Egypt’s startups raise \$491m across 147 transactions hitting all-time-high volume of foreign investors. (2022, March 28), <https://www.egypttoday.com/Article/3/114247/Egypt-s-startups-raise-491m-across-147-transactions-hitting-all>



Egypt's new investment law: What to expect, <https://thestartupscene.me/MenaEcosystems/Egypt-s-New-Investment-Law-What-To-Expect#:~:text=According%20to%20Article%2011%20in,money%20in%20these%20underdeveloped%20areas>.

Egypt wants VCs to invest here directly — and is looking at regulatory changes to make it possible. (2022, April 7), <https://enterprise.press/stories/2022/04/07/egypt-wants-vcs-to-invest-here-directly-and-is-looking-at-regulatory-changes-to-make-it-possible-68695/>

Silicon Valley-based plug and play to invest in Egypt's startup ecosystem. (2021, September 23), <https://enterprise.press/stories/2021/09/23/silicon-valley-based-plug-and-play-to-invest-in-egypts-startup-ecosystem-54172/>

Tawanda Karombo. (2021, July 2). Egyptian start-UPS are Africa's new venture capital darlings, <https://qz.com/africa/2027988/egypt-attracts-startup-funding-after-banking-regulatory-changes/>

Yassin Mohammad. (2022, February 20). Investments in Egyptian fintech companies grow by 300% in 2021, <https://www.arabnews.com/node/2028431/business-economy>

Egypt's startup scene in 2021 (Part II): The year start-up investment diversified. (2022, January 9), <https://enterprise.press/whatsnexts/egypts-startup-scene-2021-part-ii-year-startup-investment-diversified/>

Thndr, <https://my.pitchbook.com/profile/436302-37/company/profile#contact-info>

Fintech law to expand customer base of non-banking activities: FRA. (2022, February 16), <https://dailynews-egypt.com/2022/02/16/fintech-law-to-expand-customer-base-of-non-banking-activities-fra/>

Wesam Osama. (2021, September 14). The Logivators incubator is open for all logistic startups in Egypt, <https://startupsweb.com/blog/2021/09/08/logivators-incubator-logistic-startups-egypt/>

The Egyptian Startup Ecosystem Report 2021. (2021, September 14), [https://mcit.gov.eg/Upcont/Documents/Reports%20and%20Documents\\_26102021000\\_Egyptian-Startup-Ecosystem-Report-2021.pdf](https://mcit.gov.eg/Upcont/Documents/Reports%20and%20Documents_26102021000_Egyptian-Startup-Ecosystem-Report-2021.pdf)

Flextock, <https://my.pitchbook.com/profile/458382-61/company/profile#general-info>

Tage Kene-Okafor. (2022, March 31). All eyes are on Swvl as it starts trading on a SPAC combination – TechCrunch, <https://techcrunch.com/2022/03/31/all-eyes-are-on-swvl-as-it-starts-trading-on-a-spac-combination/>

Egypt - Market overview, <https://www.trade.gov/country-commercial-guides/egypt-market-overview>

How is Egypt extending its trade network?. (2021, February 15), <https://oxfordbusinessgroup.com/overview/strategic-connections-egypt-continues-leverage-its-location-heart-mena-region-build-0>

Egypt population 2021 (Demographics, maps, graphs), <https://worldpopulationreview.com/countries/egypt-population>

Saifaddin Galal. (2021, March 30). Egypt: Total population by age group 2021, <https://www.statista.com/statistics/1230371/total-population-of-egypt-by-age-group/>

Lauren O'Neil. (2022, March 21). Toronto is now the third-largest tech hub in North America, <https://www.blogto.com/tech/2022/03/toronto-third-largest-tech-hub-north-america/>



Toronto, the quietly booming tech town. (2022, March 21), <https://www.nytimes.com/2022/03/21/technology/toronto-tech-boom.html>

Toronto ranked as North America's fastest growing tech market. (2021, May 6), <https://www.investontario.ca/spotlights/toronto-ranked-north-americas-fastest-growing-tech-market>

Colin R. Singer. (2017, February 24). Toronto declared most diverse city in world (Audio, <https://www.immigration.ca/toronto-declared-most-diverse-city-in-world-audio>)

University of Waterloo. (2021, November 20), <https://www.timeshighereducation.com/world-university-rankings/university-waterloo>

Isabelle Kirkwood. (2022, January 25). Toronto shattered venture funding records in 2021 as city grew accustomed to billion-dollar quarters, <https://betakit.com/toronto-shattered-venture-funding-records-in-2021-as-city-grew-accustomed-to-billion-dollar-quarters>

Becky Robertson. (2021, October 26). Toronto was just ranked the top business city on earth for working women, <https://www.blogto.com/city/2021/10/toronto-ranked-top-business-city-working-women/>

Tamara Hardingham-Gill. (2021, September 17). Toronto ranked 2nd 'safest city' in the world for 2021: Report, <https://www.ctvnews.ca/lifestyle/toronto-ranked-2nd-safest-city-in-the-world-for-2021-report-1.5589711>

Brooke Houghton. (2021, December 20). Toronto just ranked in the top 10 best cities for remote workers in the world & here's why, <https://www.narcity.com/toronto/toronto-just-ranked-in-the-top-10-best-cities-for-remote-workers-in-the-world--heres-why>

Kevin Crowley. ApplyBoard raises another CDN\$375M, <https://www.communitech.ca/technews/applyboard-raises-another-cdn375m.html>

Deep Genomics, [https://www.crunchbase.com/organization/deep-genomics/company\\_financials](https://www.crunchbase.com/organization/deep-genomics/company_financials)

Lauren O'Neil. (n.d.). ApplyBoard raises another CDN\$375M, <https://www.communitech.ca/technews/applyboard-raises-another-cdn375m.html>

Fabian Dawson. (2022, February 14). Canada eyes 1.3 million immigrants to overcome labour pains, <https://www.thestar.com/news/canada/2022/02/14/canada-eyes-13-million-immigrants-to-overcome-labour-pains.html>

Meaningful innovation: Mars impact report. (2022, March 24), <https://www.marsdd.com/impact/>

Year-end 2021 - Canadian VC & PE market overview. (2022, March 1), <https://www.cvca.ca/research-insight/market-reports/year-end-2021-canadian-vc-pe-market-overview>

Quantum. (2022, February 27), <https://www.ucalgary.ca/entrepreneurial/quantum>

Alberta advantage immigration program. (2022, February 8), <https://www.alberta.ca/alberta-advantage-immigration-program.aspx>

Startup visa (SUV) » platform Calgary, <https://www.platformcalgary.com/programs-and-events/suv/>

Canada's thriving tech workforce is outpacing the U.S. | LinkedIn, <https://www.linkedin.com/pulse/canadas-thriving-tech-workforce-outpacing-us-riva-gold/>

Alberta cleantech report 2021: The state of cleantech in Alberta. (2021, September 22), <https://foresightcac.com/learn/alberta-cleantech-report-2021-the-state-of-cleantech-in-alberta/>

Validere, [https://www.crunchbase.com/organization/validere-technologies/company\\_financials](https://www.crunchbase.com/organization/validere-technologies/company_financials)



Amanda Stephenson. (2020, February 22). Neo financial becomes Calgary's latest \$1 billion tech 'unicorn' | CBC news, <https://www.cbc.ca/news/canada/calgary/neo-financial-unicorn-calgary-venture-capital-1.6442174>

Neo Financial, [https://www.crunchbase.com/organization/neo-financial/company\\_financials](https://www.crunchbase.com/organization/neo-financial/company_financials)

Symend, [https://www.crunchbase.com/organization/symend/company\\_financials](https://www.crunchbase.com/organization/symend/company_financials)

Helcim Inc., [https://www.crunchbase.com/organization/helcim/company\\_financials](https://www.crunchbase.com/organization/helcim/company_financials)

Fiscal Plan Moving Forward 2022-25, <https://open.alberta.ca/dataset/6d0f1358-beb5-4bb7-8da1-a350a138039c/resource/36771cab-bee0-44b5-99ad-a03d88da653c/download/budget-2022-fiscal-plan-2022-25.pdf>

Melbourne to host major international tech events - Invest Victoria. (2022, March 21), <https://www.invest.vic.gov.au/news-and-events/news/2021/december/melbourne-to-host-major-international-tech-events>

Pat Daniel. (2021, October 22). RMIT second in the world for blockchain, <https://coinculture.com/au/tech/rmit-rank-2-globally-for-blockchain/>

Fund of funds. (2020, November 12), <https://launchvic.org/fund-of-funds>

\$1.8 MILLION FUNDING TO HATCH AGTECH'S NEXT BIG IDEAS. (2020, November 12), <https://launchvic.org/files/1.8-Million-Funding-to-Hatch-AgTechs-Next-Big-Ideas-10-Feb-2022.pdf>

A boost for bio and tech innovation in Victoria - Invest Victoria. (2022, March 21), <https://www.invest.vic.gov.au/news-and-events/news/2021/march/a-boost-for-bio-and-tech-innovation-in-victoria>

Mesoblast, [https://www.crunchbase.com/organization/mesoblast/company\\_financials](https://www.crunchbase.com/organization/mesoblast/company_financials)

Seer, [https://www.crunchbase.com/organization/seer-5904/company\\_financials](https://www.crunchbase.com/organization/seer-5904/company_financials)

Ena Respiratory, [https://www.crunchbase.com/organization/innavac/company\\_financials](https://www.crunchbase.com/organization/innavac/company_financials)

FinTech startups in Melbourne. (2022, March 6), <https://tracxn.com/explore/FinTech-Startups-in-Melbourne>

Intersekt 2021. (2022, May 13), <https://www.intersekt-festival.com/>

Digital innovation futures Victoria. (2021, April 19), <https://dif.vic.gov.au/editorial/3649-a/global-fintech-sets-up-melbourne-office>

Airwallex, [https://www.crunchbase.com/organization/airwallex/company\\_financials](https://www.crunchbase.com/organization/airwallex/company_financials)

Zeller, [https://www.crunchbase.com/organization/zeller/company\\_financials](https://www.crunchbase.com/organization/zeller/company_financials)

Best universities in Australia 2022. (2021, September 3), <https://www.timeshighereducation.com/student/best-universities/best-universities-australia>

Business school rankings, <https://rankings.ft.com/rankings/2866/mba-2022>

2021-2022 state budget, <https://www.victorianchamber.com.au/cdn/41nmr4mixts0g8w0>

Business event sponsorship program - City of Melbourne, <https://www.melbourne.vic.gov.au/business/grants-tenders/business-events-sponsorship/Pages/business-events-sponsorships.aspx>

Business event sponsorship recipients - City of Melbourne, <https://www.melbourne.vic.gov.au/business/grants-tenders/business-events-sponsorship/Pages/business-events-sponsorship-recipients.aspx>



Report on the 2021–22 Budget Estimates, [https://www.parliament.vic.gov.au/images/stories/committees/paec/2021-22\\_Budget\\_Estimates/Report/PAEC\\_59-12\\_2021-22\\_Budget\\_Estimates.pdf](https://www.parliament.vic.gov.au/images/stories/committees/paec/2021-22_Budget_Estimates/Report/PAEC_59-12_2021-22_Budget_Estimates.pdf)

Startup Telangana – Official Portal, <https://startup.telangana.gov.in/>

Telangana IT, industries sectors buck Covid, show growth. (2021, June 10), <https://www.thehindubusinessline.com/news/telangana-it-industries-sectors-buck-covid-show-growth/article34783508.ece>

Express News Service. (2021, September). Telangana’s GSDP rose by 94% from 2014-15: Niti Aayog report, <https://www.newindianexpress.com/states/telangana/2021/sep/02/telanganas-gsdp-rose-by-94-from-2014-15-niti-aayog-report-2353072.html>

Full text of Prime Minister Kishida’s statement of belief. (2021, October 8), <https://www.nikkei.com/article/DGXZQOUA0787N0X01C21A0000000/>

Yuko Matsumoto. (2021, December 30). IPO, shortening from approval to listing to about 21 days Japan Securities Dealers Association policy, <https://www.nikkei.com/article/DGXZQOUB293VX0Z21C21A2000000/>

Investment-type CF issuance easing plan Financial Services Agency, up to less than 100 million yen alone. (2021, February 18), <https://www.nikkei.com/article/DGXZQODF184300Y1A210C2000000/>

Metropolitan Government Structural Reform Portal Site | Tokyo (2022, March 30), [https://shintosei.metro.tokyo.lg.jp/post\\_cp5\\_220204/](https://shintosei.metro.tokyo.lg.jp/post_cp5_220204/)

J-startup, <https://www.j-startup.go.jp/en/>

Shoko Takahashi, Ken Ebihara, Yasufumi Fujii, Yukari takamura, Toshihiko Yamazaki. (2021, September 30). The University of Tokyo to establish a 60 billion yen fund for start-ups from universities, <https://www.nikkei.com/article/DGXZQOUE284UZ0Y1A920C2000000/>

Kiyotaka Fujioka. (2021, July 30). Key points of startup career change activities in 2021 Korona-ka, <https://amater.as/article/2021/02/23/2021covid/>

SmarterHR raises 15.6 billion yen from US Sequoia etc. (2021, June 8), <https://www.nikkei.com/article/DGXZQOUC087JC0Y1A600C2000000/>

SmartNews, [https://www.crunchbase.com/organization/smartnews-inc/company\\_financials](https://www.crunchbase.com/organization/smartnews-inc/company_financials)

The 4th venture boom and three “environmental changes” that began with the listing of Mercari. (2019, December 4), <https://diamond.jp/articles/-/222103?page=2>

Space: Investing in the final frontier. (2020, July 24), <https://www.morganstanley.com/ideas/investing-in-space>

Future market forecast for the robot industry toward 2035, <https://www.nedo.go.jp/content/100080673.pdf>

Japan’s robotics market sees boom amid pandemic. (2021, July 10), <https://www.japantimes.co.jp/news/2021/07/10/business/tech/japan-robot-industry/>

Ispace Technologies, <https://www.crunchbase.com/organization/ispacetechnologies-inc->

Spiber raises 34 billion yen, the largest emerging group. (2021, September 9), <https://www.nikkei.com/article/DGKKZO75582660Y1A900C2TB2000/>

Japan Fintech, <https://www.trade.gov/market-intelligence/japan-fintech>

Monthly Market Report vol.1 – November 2020. (2020, November 9), <https://fincity.tokyo/wp-content/uploads/2020/11/1604888710-7041ae1e28863fe098eab163e812bf4f.pdf>



Kyash, [https://www.crunchbase.com/organization/kyash-inc/company\\_financials](https://www.crunchbase.com/organization/kyash-inc/company_financials)

FOLIO, [https://www.crunchbase.com/organization/folio-8c62/company\\_financials](https://www.crunchbase.com/organization/folio-8c62/company_financials)

MONEY DESIGN, <https://www.crunchbase.com/organization/money-design-co-ltd>

Jonathan Smith. (2022, February 18). Belgian VC fund leads investment wave in Japanese biotech, <https://www.labiotech.eu/trends-news/newton-biocapital-vc-fund-japan/>

BISU, <https://www.crunchbase.com/organization/bisuhealth>

ITR announces the results of “IT Investment Trend Survey 2022”. (2021, November 11), <https://www.itr.co.jp/company/press/211111PR.html>

Overseas financial Corporation business establishment subsidy Program|Promotion of growth Strategies|Office of the governor for policy planning -Tokyo metropolitan government-, <https://www.seisakukikaku.metro.tokyo.lg.jp/en/pgs/gfct/nurturing-players/establishment-subsidy.html>

Business development center TOKYO | Support for companies in all sectors | Invest Tokyo, [https://www.startup-support.metro.tokyo.lg.jp/for\\_foreign/bdc\\_tokyo/en/](https://www.startup-support.metro.tokyo.lg.jp/for_foreign/bdc_tokyo/en/)

Top page | Startup ecosystem Tokyo consortium, <https://www.ecosystem.metro.tokyo.lg.jp/en/>

Tax incentives | Supports for foreign companies | Invest Tokyo, [https://www.investtokyo.metro.tokyo.lg.jp/en/for\\_foreign/tax\\_incentive/](https://www.investtokyo.metro.tokyo.lg.jp/en/for_foreign/tax_incentive/)

Program to increase foreign entrepreneurs | Business development center TOKYO | Supports for foreign companies | Invest Tokyo, [https://www.startup-support.metro.tokyo.lg.jp/for\\_foreign/bdc\\_tokyo/en/fhr/](https://www.startup-support.metro.tokyo.lg.jp/for_foreign/bdc_tokyo/en/fhr/)

Patty Tascarella. Pittsburgh fund focused on women investors and women-led startups invests in 3 Portfolia funds, <https://www.bizjournals.com/pittsburgh/news/2021/02/08/next-act-invests-in-portfolia-funds.html>

Locomation, [https://www.crunchbase.com/organization/locomation/company\\_financials](https://www.crunchbase.com/organization/locomation/company_financials)

Gecko Robotics, [https://www.crunchbase.com/organization/gecko-robotics/company\\_financials](https://www.crunchbase.com/organization/gecko-robotics/company_financials)

Pitt BioForge at Hazelwood green positions Pittsburgh as a national leader in life sciences manufacturing — Life sciences Pittsburgh. (2021, November 17), <https://www.lifesciencespittsburgh.com/lsp-community/2021/11/16/pitt-bioforge-at-hazelwood-green-positions-pittsburgh-as-a-national-leader-in-life-sciences-manufacturing>

Pittsburgh economic development resources, <https://www.visitpittsburgh.com/about-us/relocation/commercial-real-estate/economic-development/>

Workshops & Seminars, <https://lifexglobal.com/workshops-seminars/>

Pittsburgh: Natural resources & renewable energy innovations. (2020, September 3), <https://pittsburghregion.org/key-industries/energy/>

DOE will host 2022 joint international clean energy and mission innovation ministerials in Pittsburgh, Pennsylvania. (2021, November 4), <https://www.energy.gov/articles/doe-will-host-2022-joint-international-clean-energy-and-mission-innovation-ministerials>

Pittsburgh VC made a comeback in Q4, but remained far behind national trends for 2021. (2022, January 14), <https://technical.ly/startups/pittsburgh-vc-report-q4-2021/>



RoadRunner Recycling, [https://www.crunchbase.com/organization/roadrunner-recycling/company\\_financials](https://www.crunchbase.com/organization/roadrunner-recycling/company_financials)

2021 Scoring Tech Talent. (2021, July 14), <https://www.cbre.com/en/insights/reports/scoring-tech-talent-in-north-america-2021>

Innovation excellence and world-class talent, <https://www.pittsburgh-id.com/innovation-excellence>

CMU, R.K. Mellon Foundation Announce Historic Partnership, (2021, May 20), <https://www.cmu.edu/news/stories/archives/2021/may/rkm-grant.html>

Cost of living comparison between San Francisco, CA, United States and Pittsburgh, PA, United States, [https://www.numbeo.com/cost-of-living/compare\\_cities.jsp?country1=United+States&country2=United+States&city1=San+Francisco%2C+CA&city2=Pittsburgh%2Cc+PA&tracking=getDispatchComparison](https://www.numbeo.com/cost-of-living/compare_cities.jsp?country1=United+States&country2=United+States&city1=San+Francisco%2C+CA&city2=Pittsburgh%2Cc+PA&tracking=getDispatchComparison)

Nancy Dahlberg. SoftBank committed to invest \$100M in Miami startups. It's now at \$250M – and counting, <https://refreshmiami.com/softbank-committed-to-invest-100m-in-miami-startups-its-now-at-250m-and-counting/#:~:text=In%20January%2C%20during%20a%20CafecitoTalk,or%20planning%20to%20move%20here>

CBSMiami.com Team. (2022, February 23). Miami Dade College gets \$15 million boost for tech programs, <https://miami.cbslocal.com/2022/02/23/miami-dade-college-gets-15-million-boost-for-tech-programs/>

Rob Wile. (2021, May 12). IBM gives Miami Dade College \$10M for advanced tech classes, <https://www.govtech.com/education/higher-ed/ibm-gives-miami-dade-college-10m-for-advanced-tech-classes.html>

Rhea Kelly. (2021, April 27). Miami Dade College and IBM initiative to support faculty training, Next-Gen skills -- Campus technology, <https://campustechnology.com/articles/2021/04/27/miami-dade-college-and-ibm-initiative-to-support-faculty-training-next-gen-skills.aspx>

Events: Emerge Americas 2022, <https://www.miamibeachconvention.com/events/emerge-americas-2022>

The premier tech event in Miami. (2022, May 6), <https://emergeamericas.com/>

Turner, J. (2022, March 3). Why South Florida is emerging as a major hub for tech investment, <https://www.investmentmonitor.ai/tech/why-south-florida-is-emerging-as-a-major-hub-for-tech-investment>

HealthCare.com, <https://www.crunchbase.com/organization/healthcare-com>

Rapha capital management announces first managed venture fund focused on investment in early-stage biotech startups. (2021, April 15), <https://www.prnewswire.com/news-releases/rapha-capital-management-announces-first-managed-venture-fund-focused-on-investment-in-early-stage-biotech-startups-301269313.html>

Nancy Dahlberg. (2021, May 20). Miami-based medtech startup Heru, a Bascom Palmer spin-out, raises a \$30 million series a, <https://www.refreshmiami.com/miami-based-medtech-startup-heru-a-bascom-palmer-spin-out-raises-a-30-million-series-a/>

Alexandra Semenova. (2022, February 16). Miami sees blockchain-focused venture capital deals skyrocket in 2021, <https://finance.yahoo.com/news/miami-sees-blockchain-focused-venture-capital-deals-skyrocket-in-2021-140408441.html>

Crypto company Blockchain.com moves U.S. headquarters to Miami. (2021, June 3), <https://www.prnewswire.com/news-releases/crypto-company-blockchain-com-moves-us-headquarters-to-miami-301304969.html>

Ashley Portero. (2021, June 7). Crypto trading platform eToro to establish US hub in Miami, <https://www.bizjournals.com/southflorida/news/2021/06/07/crypto-trading-platform-etoro-to-establish.html>



EToro is the latest crypto exchange moving to Miami. (2021, June 6), [https://markets.businessinsider.com/news/stocks/etoro-is-the-latest-crypto-exchange-moving-to-miami-10211467?utm\\_medium=ingest&utm\\_source=markets](https://markets.businessinsider.com/news/stocks/etoro-is-the-latest-crypto-exchange-moving-to-miami-10211467?utm_medium=ingest&utm_source=markets)

Ira Puranik. (2021, June 4). Bitcoin 2021: The mega crypto conference in Miami, <https://www.moneycontrol.com/news/business/cryptocurrency/bitcoin-2021-the-mega-crypto-conference-in-miami-6985761.html>

Paxton Boyd. (2021, June 4). Bitcoin 2021, world's largest cryptocurrency conference, kicks off in Miami, <https://www.nbcmiami.com/news/local/bitcoin-2021-worlds-largest-cryptocurrency-conference-kicks-off-in-miami/2466247/>

Bitcoin 2022. (2022, May 13), <https://b.tc/conference/>

OneOf, [https://www.crunchbase.com/organization/oneof/company\\_financials](https://www.crunchbase.com/organization/oneof/company_financials)

RECUR, [https://www.crunchbase.com/organization/recur/company\\_financials](https://www.crunchbase.com/organization/recur/company_financials)

UF ranked No. 5 on the 2022 U.S. news & world report list of top public schools » college of nursing » University of Florida. (2021, September 14), <https://nursing.ufl.edu/2021/09/14/uf-ranked-no-5-on-the-2022-u-s-news-world-report-list-of-top-public-schools>

These U.S. states have the best education systems, <https://www.usnews.com/news/best-states/rankings/education>

Fiscal Year 2021-2022 Budget, <https://www.flgov.com/wp-content/uploads/2021/06/FY-21-22-Budget-Highlights-6.2.21-FINAL.pdf>

Jim Probasco. (2010, February 7). 9 states with no income tax, <https://www.investopedia.com/financial-edge/0210/7-states-with-no-income-tax.aspx#citation-48>

Ignacio Peña, Tomás R.V. Gutiérrez, Milagros Gutiérrez Oyhanarte. (2021, October). A Bridge To The Future, <https://publications.iadb.org/publications/english/document/A-Bridge-to-the-Future-How-the-Rise-of-the-Miami-Startup-Ecosystem-can-Become-a-Platform-to-Transform-the-Americas.pdf>

Lisa Johnson. (2022, March 18). NDP MLA introduces private member's bill to create venture capital fund, <https://edmontonjournal.com/news/politics/ndp-introduce-private-members-bill-to-create-venture-capital-fund>

Kerry McAthey. (2021, November 24). Alberta puts \$35M behind business accelerators to help drive tech sector growth, [https://edmonton.ctvnews.ca/alberta-](https://edmonton.ctvnews.ca/alberta-puts-35m-behind-business-accelerators-to-help-drive-tech-sector-growth-1.5678980)

[puts-35m-behind-business-accelerators-to-help-drive-tech-sector-growth-1.5678980](https://edmonton.ctvnews.ca/alberta-puts-35m-behind-business-accelerators-to-help-drive-tech-sector-growth-1.5678980)

Charles Mandel. (2022, January 12). Platform Calgary and innovate Edmonton launch new pre-accelerator, Alberta catalyzer, <https://betakit.com/platform-calgary-and-innovate-edmonton-launch-new-pre-accelerator-alberta-catalyzer/>

Plug and play Alberta, <https://www.plugandplaytech-center.com/alberta/>

Alberta accelerator by 500. (2021, September 17), <https://programs.500.co/alberta-accelerator>

Ingrid Lunden. (2021, January 12). Jobber raises \$60M as its platform for home services professionals hits 100K users – TechCrunch, <https://techcrunch.com/2021/01/12/jobber-raises-60m-as-its-platform-for-home-service-professionals-hits-100k-users/>

Orchard Technologies Inc., <https://my.pitchbook.com/profile/264308-95/company/profile>

Edmonton.AI, <https://edmonton.ai/>

CSRankings: Computer science rankings, <https://csrankings.org/#/fromyear/2000/toyear/2022/index?ai&mlining&world>



AI | Research + innovation, <https://www.ualberta.ca/research/our-research/key-strengths/ai.html#:~:text=The%20University%20of%20Alberta%20has,of%20Canada's%20national%20AI%20hubs>

Samdesk, [https://www.crunchbase.com/organization/sam/company\\_financials](https://www.crunchbase.com/organization/sam/company_financials)

Life sciences, <https://edmontonglobal.ca/life-sciences/>

Alberta Enterprise Corporation. (2021, June 17). Alberta enterprise Corporation invests \$5 million to grow Alberta health innovations, <https://www.newswire.ca/news-releases/alberta-enterprise-corporation-invests-5-million-to-grow-alberta-health-innovations-843011909.html>

Edmonton, Canada startup ecosystem. (2021, March 5), <https://www.startupblink.com/blog/edmonton-canada-startup-ecosystem/>

Edmonton vs San Francisco comparison: Cost of living. (2021, December 4), <https://livingcost.org/cost/edmonton/san-francisco>

Edmonton vs Toronto comparison: Cost of living & salary. (2021, December 4), <https://livingcost.org/cost/edmonton/toronto>

Taxes. (2021, March 30), <https://edmontonglobal.ca/taxes/>

Aerodyne Group, <https://www.crunchbase.com/organization/aerodyne-america>

Jirnexu, <https://www.crunchbase.com/organization/jirnexu>

CapBay, <https://www.crunchbase.com/organization/capital-bay>

Carsome, <https://www.crunchbase.com/organization/carsome>

Malaysia's startup ecosystem is becoming competitive, but more work needs to be done. (2022, January 31), <https://www.businesstoday.com.my/2022/02/02/malaysias-startup-ecosystem-is-becoming-competitive-but-more-work-needs-to-be-done/>

Budget Speech 2022. (2021, October 29), <https://budget.mof.gov.my/pdf/2022/ucapan/bs22.pdf>

Malaysia Startup Ecosystem Roadmap 2021 - 2030, [https://www.mosti.gov.my/wp-content/uploads/repository/penerbitan/2021/\(SUPER\)%20Malaysia%20Startup%20Ecosystem%20Roadmap%202021-2030.pdf](https://www.mosti.gov.my/wp-content/uploads/repository/penerbitan/2021/(SUPER)%20Malaysia%20Startup%20Ecosystem%20Roadmap%202021-2030.pdf)

Southeast Asia gaming market - Growth, trends, COVID-19 impact, and forecasts (2022 - 2027). (2022), [https://www.reportlinker.com/p06227800/Southeast-Asia-Gaming-Market-Growth-Trends-COVID-19-Impact-and-Forecasts.html?utm\\_source=GNW](https://www.reportlinker.com/p06227800/Southeast-Asia-Gaming-Market-Growth-Trends-COVID-19-Impact-and-Forecasts.html?utm_source=GNW)

Li Mei Foong. (2021, July 6). Malaysia's video games take on global boss fight, <https://the-ken.com/sea/story/malaysias-pixel-sized-video-game-sector-in-a-global-boss-fight/>

The gaming industry: A new game of growth. (2020, December 8), <https://www.mida.gov.my/the-gaming-industry-a-new-game-of-growth/>

PREMIER ONLINE GAME DEVELOPERS CONFERENCE IN SOUTHEAST ASIA. (2021, October 1), <https://mdec.my/levelupkl/>

George Miller. (2022, January 13). Galaxy racer to invest RM42 million (US\$10 million) into Malaysia's Esports ecosystem, <https://europeangaming.eu/portal/latest-news/2022/01/13/107100/galaxy-racer-to-invest-rm42-million-us10-million-into-malaysias-esports-ecosystem/>

Malaysia - Network readiness index, <https://networkreadinessindex.org/country/malaysia/>



Business friendly environment - Why greater KL, <https://www.investkl.gov.my/why-greater-kl/business-friendly-environment>

Aleph Alpha, [https://www.crunchbase.com/organization/aleph-alpha/company\\_financials](https://www.crunchbase.com/organization/aleph-alpha/company_financials)

Paretos, [https://www.crunchbase.com/organization/paretos/company\\_financials](https://www.crunchbase.com/organization/paretos/company_financials)

Getsafe, <https://www.crunchbase.com/organization/getsafe>

Stocard, <https://my.pitchbook.com/profile/55752-49/company/profile#general-info>

Heidelberg is calling for life sciences start-UPS. (2021, August 16), <https://www.gesundheitsindustrie-bw.de/en/article/press-release/heidelberg-calling-life-sciences-start-ups>

Exciva, [https://www.crunchbase.com/organization/exciva/company\\_financials](https://www.crunchbase.com/organization/exciva/company_financials)

SaaS startup paretos raises €3,5 million for innovative AI platform, <https://www.leapartners.de/en/detail/saas-startup-paretos-raises-eur35-million-for-innovative-ai-platform/>

LEA-backed aleph Alpha secures €23 million series a funding to build Europe's largest, sovereign AGI models, <https://www.leapartners.de/en/detail/lea-backed-aleph-alpha-secures-eur23-million-series-a-funding-to-build-europes-largest-sovereign-agi-models/>

University of Heidelberg | Nobel Prize winners related to Heidelberg, <https://www.uni-heidelberg.de/de/universitaet/geschichte/heidelberger-nobelpreistraeger/nobelpreistraeger-mit-bezug-zu-heidelberg>

University of Heidelberg | History, <https://www.uni-heidelberg.de/en/university/history>

Metropolitan Region Rhine-Neckar | Facts and figures, <https://en.m-r-n.com/zahlen-und-fakten>

The financial times places Bilbao as the 8th best medium-sized European city for foreign investment, <https://bizkaia talent.eus/en/bilbao-octava-inversion-extranjera/>

Invest in the Basque Country. (2021, January 8), <https://www.spri.eus/en/invest-in-the-basque-country/>

Investment and talent attraction among the core strategic issues of the provincial Council of Bizkaia for the next four years, <https://www.bizkaia talent.eus/en/atraccion-talento-ejes-bizkaia/>

Global smart grids innovation hub, <https://www.iberdrola.com/innovation/global-smart-grids-innovation-hub>

Kate Roll, Abhinav Chugh. (2022, March 4). The Biscay model: Innovation in taxation could advance the SDGs. An expert explains, <https://www.weforum.org/agenda/2022/03/biscay-model-taxation-advance-sdgs/>

Bilbao: The world's fourth best city for talent retention, <https://www.bizkaia talent.eus/en/bilbao-capacidad-retener-talento/>

Bizkaia launches the talent attraction programme to promote the hiring of professionals who are working outside the Basque Country, <https://www.bizkaia talent.eus/en/programa-atraccion-talento-2022/>

SHARJAH INVESTORS SERVICES CENTER (SAEED), <https://investinsharjah.ae/en/saeed/>

Sheraa develops new formula for building startups with the launch of Sharjah startup studio. (2021, February 21), <https://www.zawya.com/en/press-release/sheraa-develops-new-formula-for-building-startups-with-the-launch-of-sharjah-startup-studio-akk28nif>

Small and Medium Enterprises (SMEs), <https://u.ae/en/information-and-services/business/small-and-medium-enterprises/small-and-medium-enterprises>



National agenda for entrepreneurship and SMEs, <https://www.moec.gov.ae/en/uae-business-ecosystem>

Alicia Buller. (2021, May 27). How the pandemic accelerated the Gulf's edtech revolution, <https://www.computerweekly.com/news/252501473/How-the-pandemic-accelerated-the-Gulfs-edtech-revolution>

Healthcare, Pharma, EdTech, agritech among Sharjah's high-growth sectors. (2021, May 22), <https://www.khaleejtimes.com/local-business/healthcare-pharma-edtech-agritech-among-sharjahs-high-growth-sectors>

Englease, <https://www.crunchbase.com/organization/englease-com?msclkid=70dbcb59cf6111e-c8eb4454031348715>

Almentor, <https://www.crunchbase.com/organization/almentor-net>

Little Thinking Minds, <https://www.crunchbase.com/organization/little-thinking-minds>

KEY SECTORS- Invest In Sharjah, <https://investinsharjah.ae/en/key-sectors/>

BEEAH Group | UAE. (2022, May 16), <https://www.beeahgroup.com>

Kyma - Home. (2022, March 7), <https://mykyma.com/>

The Concept, <https://www.crunchbase.com/organization/the-concept>

Cycled Technologies, <https://www.crunchbase.com/organization/cycled-technologies>

Abdul Kareem. (2018, May 2). May 3, 1998: Sharjah is Arab cultural capital, <https://gulfnews.com/today-history/may-3-1998-sharjah-is-arab-cultural-capital-1.2215474>

Sharjah world book capital (SWBC). (2021, May 31), <https://en.unesco.org/creativity/policy-monitoring-platform/sharjah-world-book-capital-swbc>

Business setup in Sharjah, UAE | Company registration in Free Zone - Sharjah media city (Shams), <https://www.shams.ae/>

Amjad Saleh. (2022, June 3). UAE reinforces support for reprographic rights with launch of ERRa, <https://www.wam.ae/en/details/1395303027144>

Hatem Mohamed, Hassan Bashir. (2021, December 15). Sheraa's access Sharjah challenge paves the way for a new era in UAE's creative economy, <https://www.wam.ae/en/details/1395303003514>

Michael Burke. (2018, December 30). Six reasons why UAE attracts global startups, <https://www.entrepreneur.com/article/325341>

UAE ranks first in venture capital investment for startups in the region in 2021, up 93 per cent. (2022, January 26), <https://www.moec.gov.ae/en/-/uae-ranks-first-in-venture-capital-investment-for-startups-in-the-region-in-2021-up-93-per-cent>

Metrics & reports – Elevate ventures, <https://elevateventures.com/metrics/>

Alex Brown. (2022, February 28). VC Investment Surpasses \$1B in 2021, <https://www.insideindianabusiness.com/articles/vc-investment-surpasses-1b-in-2021>

Ron Miller. (2021, May 10). Indy VC firm Sixty8 capital launches \$20M fund aimed at underrepresented founders – TechCrunch, <https://techcrunch.com/2021/05/10/indy-vc-firm-sixty8-capital-launches-20m-fund-aimed-at-underrepresented-founders/>

2021: Fifth consecutive record-breaking year for economic development. (2022, January 31), <https://iedc.in.gov/news/details/2022/01/31/fifth-consecutive-record-breaking-year-new-strategic-plan-to-guide-efforts>



Apple announces plans for Central Indiana center, 500 jobs. (2021, April 26), [https://www.wthitv.com/archive/apple-announces-plans-for-central-indiana-center-500-jobs/article\\_6b05df32-856e-5804-a9e6-9eec-1d164e60.html](https://www.wthitv.com/archive/apple-announces-plans-for-central-indiana-center-500-jobs/article_6b05df32-856e-5804-a9e6-9eec-1d164e60.html)

IU investment opportunities | About IU ventures. (2022, February 8), <https://iuventures.com/about/>

IU entrepreneurs | Information for startups. (2022, May 10), <https://iuventures.com/venture-summit/>

The heritage group accelerator to impact the Indiana startup community. (2022, March 29), <https://www.businesswire.com/news/home/20220329005306/en/The-Heritage-Group-Accelerator-to-Impact-the-Indiana-Startup-Community>

The First Signpost on the Road from Early Adoption to Widespread Application of Industry 4.0 Technologies. (2022, March 29), <https://www.conexusindiana.com/wp-content/uploads/2022/01/2021-Industry-4.0-ReportFINAL.pdf>

Laura Miller. (2022, January 28). New study: Tech adoption among Indiana advanced manufacturers more than doubles from 2020 to 2021, <https://www.conexusindiana.com/2022/01/new-study-tech-adoption-among-indiana-advanced-manufacturers-more-than-doubles-from-2020-to-2021/>

Wes Mills. Survey: Growing Adoption of Industry 4.0 Tech, <https://www.insideindianabusiness.com/articles/survey-growing-adoption-of-industry-4-0-tech>

Raquel Bahamonde. (2022, March 2). New energy insights program, in partnership with IEDC and AWS, to reduce energy costs for Indiana manufacturers, <https://energy-systemsnetwork.com/2022/03/energyinsights/#:~:text=Energy%20Insights%20is%20designed%20to,to%20further%20optimize%20energy%20efficiency>

Susan Orr. (2022, March 25). EMC2 plans to help manufacturers go high-tech, <https://www.ibj.com/articles/aiming-for-industry-4-0>

Area Development News Desk. (2021, March 10). IA establishes Indianapolis, Indiana, global headquarters - Area development, <https://www.areadevelopment.com/newsItems/3-10-2021/ia-headquarters-indianapolis-indiana.shtml>

John Tuohy. (2021, November 16). South Korean life-science firm to open plant in fishers with 210 jobs, <https://www.indystar.com/story/news/local/hamilton-county/2021/11/16/fishers-indiana-jobs-list-bio-therapeutics-south-korean-pharma-genome-company-open-plant-employ-210/8626931002/>

New energy insights program, in partnership with IEDC and AWS, to reduce energy costs for Indiana manufacturers. (2022, March 2), <https://www.cicpindiana.com/new-energy-insights-program-in-partnership-with-iedc-and-aws-to-reduce-energy-costs-for-indiana-manufacturers/>

Moving forward. (2019, February 19), <https://energysystemsnetwork.com/projects/moving-forward/>

The Battery Innovation Center | Home. (2022, March 31), <https://bicindiana.com/>

Indiana technical assistance program (INTAP). (2022, January 18), <https://isbdc.org/indiana-technical-assistance-program-intap/>

Samantha Horton. (2022, January 18). State initiative aims to help Indiana small businesses, entrepreneurs grow, <https://www.wfyi.org/news/articles/state-initiative-aims-to-help-indiana-small-businesses-entrepreneurs-grow>

Indiana Economic Development Corp | VENTURE CAPITAL INVESTMENT TAX CREDIT (VCI), <https://iedc.in.gov/indiana-advantages/investments/venture-capital-investment-tax-credit>



Indiana Economic Development Corp | RESEARCH & DEVELOPMENT INCENTIVES, <https://iedc.in.gov/indiana-advantages/investments/r-d-tax-credit>

Central Indiana Corporate Partnership | Home. (2020, December 3), <https://www.cicpindiana.com/>

AgriNovus Indiana | Home. (2021, April 28), <https://agrinovusindiana.com/>

Michael Mazerov. (2022, February 16). Commentary: Mississippi Should Invest in Its People, Not Chase the False Promise of Tax “Competitiveness”, <https://www.cbpp.org/sites/default/files/2-15-22sfp.pdf>

“CoBuilders” statewide accelerator initiative underway in Mississippi. (2022, February 12), <https://www.technovation.biz/cobuilders-statewide-accelerator-initiative-underway-in-mississippi/>

CoBuilders | Home, <https://www.cobuilders.ms/>

Nineteen Mississippi small business owners complete women and minority entrepreneurial development program. (2021, December 14), <https://www.wlbt.com/2021/12/14/nineteen-mississippi-small-business-owners-complete-women-minority-entrepreneurial-development-program/>

Dustin Cardon. (2022, February 16). JSU women’s business center and FedEx program, MSU COVID-19 pandemic funding, <https://www.jacksonfreepress.com/news/2022/feb/16/jsu-womens-business-center-and-fedex-program-msu-c/>

Ron Starner. (2021, November). How Mississippi became a thriving hub for startups: Dig beneath the surface and you’ll find innovation popping up all over the state.: | Site selection magazine, <https://siteselection.com/issues/2021/nov/how-mississippi-became-a-thriving-hub-for-startups.cfm>

Local investors form south Mississippi angel fund. (2021, August 5), <https://spotonmississippi.com/ms-business/512300/local-investors-form-south-mississippi.html>

Local investors form south Mississippi angel fund • Innovate Mississippi. (2021, August 4), <https://www.innovate.ms/local-investors-form-south-mississippi-angel-fund/>

COTI | About, <https://accelerate.innovate.ms/about/>

Accelerate: 2021 conference on technology innovation - Innovate MS, <https://accelerate.innovate.ms/>

REDe entrepreneurship summit, <https://business.olemiss.edu/event/rede-entrepreneurship-summit/>

Box, <https://app.box.com/s/q3ij1z64ponqzohukae7vheshmmfur1c>

Mississippi State University | Startup summit 2022, <https://ecenter.msstate.edu/summit/#about>

MISSISSIPPI DEVELOPMENT GUIDE VOL. 6, <https://mississippi.org/wp-content/uploads/2021-Mississippi-Development-Guide.pdf>

Spectra laboratories opens new facility in Mississippi. (2021, August 19), <https://www.prnewswire.com/news-releases/spectra-laboratories-opens-new-facility-in-mississippi-301359027.html>

Nitrase Therapeutics, [https://www.crunchbase.com/organization/nitrome-biosciences/company\\_financials](https://www.crunchbase.com/organization/nitrome-biosciences/company_financials)

Nicole Cornett. (2021, December 6). Mighty Mississippi: Where innovation powers advanced manufacturing, <https://www.expansionsolutionsmagazine.com/mighty-mississippi-advanced-manufacturing/>

Milwaukee tool to expand manufacturing presence in MS. (2021, April 21), <https://www1.milwaukeeetool.com/News/Press-Releases/Milwaukee-Tool-to-Expand-Manufacturing-Presence-in-MS>



Mississippi: Milwaukee tool expands in Grenada and Clinton. (2021, November 29), <https://businessfacilities.com/2021/11/mississippi-milwaukee-tool-expands-in-grenada-and-clinton/>

2022 STATE AGENCY GRANTS & LOANS FOR MISSISSIPPI MUNICIPALITIES. (2021, November 29), <https://www.mmlonline.com/media/2169/2022-grants-loans-booklet.pdf>

Employment incentives: State of Mississippi incentives, [https://www.employmentincentives.com/state\\_incentives/Mississippi/ms\\_tax\\_incentives.htm](https://www.employmentincentives.com/state_incentives/Mississippi/ms_tax_incentives.htm)

University of Mississippi Medical Center | About, <https://www.umc.edu/UMMC/About-Us/About-Us-Overview.html>

Maya Kosoff. (2021, December 27). Here's how much VC funding New York startups raised this year | The Org, <https://theorg.com/iterate/heres-how-much-vc-funding-new-york-startups-raised-2021>

Sophia Kunthara. (2022, February 23). NYC notches a banner year for venture funding as Big Apple's start-up scene ripens, <https://news.crunchbase.com/news/nyc-startup-venture-funding/>

Oscar Health Inc., <https://my.pitchbook.com/profile/58034-35/company/profile#general-info>

Joanna Glasner. (2021, September 3). New York sees startup funding spike in 2021, <https://news.crunchbase.com/news/new-york-sees-startup-funding-spike-in-2021/>

Ellen Glover. (2021, November 30). The top 5 NYC tech sectors to watch in 2022, <https://www.builtinnyc.com/2021/11/30/nyc-tech-sectors-to-watch-2022>

Ramp, [https://www.crunchbase.com/organization/ramp-financial/investor\\_financials](https://www.crunchbase.com/organization/ramp-financial/investor_financials)

Jacob Kaye. (2022, February 10). Tech industry group kicks off in queens — Queens daily eagle, <https://queen-seagle.com/all/2022/2/10/tech-industry-group-kicks-off-in-queens>

Mission of queens tech council | Queens tech council mission — Queens tech council, <https://www.queensstechcouncil.com/mission>

Tech year NYC. (2022, May 9), <https://avc.com/2022/05/tech-year/>

The AI Summit New York | Home. (2022, February 10), <https://newyork.theaisummit.com/>

Deanna Paul. (2021, July 8). WSJ news exclusive | New York City opens cyberattack defense center, <https://www.wsj.com/articles/new-york-city-opens-cyberattack-defense-center-11625778530>

[www.wsj.com/articles/new-york-city-opens-cyberattack-defense-center-11625778530](https://www.wsj.com/articles/new-york-city-opens-cyberattack-defense-center-11625778530)

New York City Life Sciences Report YE 2021. (2022, March 3), <https://www.cbre.com/en/insights/reports/new-york-city-life-sciences-report-ye-2021>

A Recovery for All of Us: New York City Invests \$1 Billion in Life Sciences. (2021, June 9), <https://www1.nyc.gov/office-of-the-mayor/news/414-21/recovery-all-us-new-york-city-invests-1-billion-life-sciences>

New York City Life Sciences Report YE 2021. (2022, March 3). A Recovery for All of Us: New York City Invests \$1 Billion in Life Sciences, <https://www1.nyc.gov/office-of-the-mayor/news/414-21/recovery-all-us-new-york-city-invests-1-billion-life-sciences>

Mayor Adams to receive first paycheck in cryptocurrency. (2022, January 20), <https://www1.nyc.gov/office-of-the-mayor/news/041-22/mayor-adams-receive-first-pay-check-cryptocurrency>

Blockchain startups in New York City. (2020, April 14), <https://tracxn.com/explore/Blockchain-Startups-in-New-York-City>



Akayla Gardner. (n.d.). New York City Leads Crypto-VC Funding Race Over Silicon Valley, <https://www.bloomberg.com/news/articles/2022-02-01/new-york-leads-crypto-vc-funding-race-over-silicon-valley>

Penny Laughlin. (2022, January 26). NYC business quick start serves small businesses, <https://metropolisny.com/2022/01/nyc-business-quick-start-serves-small-businesses/>

Adam Uzialko. (2019, May 28). Running a business in New York? What you need to know - businessnewsdaily.com, <https://www.businessnewsdaily.com/8775-doing-business-in-new-york.html>

U.S. Census Bureau QuickFacts: New York City, New York, <https://www.census.gov/quickfacts/newyorkcitynewyork>

NYC | Language access, <https://www1.nyc.gov/site/planning/about/language-access.page>

National Center for Education Statistics | Home, <https://nces.ed.gov/>

START-UP NY offers major incentives for new biz. (2013, October 24), <https://dumbo.is/bloggng/start-up-ny-offers-major-incentives-for-new-biz>

START-UP NY program | Empire State development. (2021, February 10), <https://esd.ny.gov/startup-ny-program#:~:text=START%2DUP%20NY%20offers%20new,and%20experts%20in%20key%20industries>

New Zealand's Startup Partnership, (2022, March 31)

Overview of the New Zealand technology sector. (2020, November 22), <https://nztech.org.nz/info-hub/about-the-sector/>

HON DR DAVID CLARK. (2021, December 13). New border exception to support rapidly growing tech sector, <https://www.beehive.govt.nz/release/new-border-exception-support-rapidly-growing-tech-sector>

Rebecca Bellan. (2021, December 28). Sectors where New Zealand startups are poised to win – TechCrunch, <https://techcrunch.com/2021/12/28/sectors-where-new-zealand-startups-are-poised-to-win/>

PWC, Startup Investment, Autumn 2022 (AANZ, NZGCP)

Electrify accelerator announced, NZ's only accelerator for women-led startups. (2022, March 10), <https://nztech.org.nz/2022/03/01/electrify-accelerator-announced-nzs-only-accelerator-for-women-led-startups/>

Alimetry Ltd, <https://my.pitchbook.com/profile/464401-09/company/profile#general-info>

ArchiPro Ltd, <https://my.pitchbook.com/profile/489424-51/company/profile#general-info>

Rob O'Neill. (2022, January 19). Gartner forecasts strong growth for NZ ICT, led by enterprise software and devices, <https://www.reseller.co.nz/article/694493/gartner-forecasts-strong-growth-nz-ict-led-by-enterprise-software-devices/>

PredictHQ, <https://www.crunchbase.com/organization/predicthq>

Budget 2021: Farming groups react to agriculture spend. (2021, May 20), <https://www.nzherald.co.nz/the-country/news/budget-2021-farming-groups-react-to-agriculture-spend/2BCQYKKV6ZHRUM77BU7RG45EAI/>

New Zealand expertise serves up new agri-food-tech event. (2021, August 5), <https://www.aucklandnz.com/news/new-zealand-expertise-serves-new-agri-food-tech-event>

Farmote Systems, [https://www.crunchbase.com/organization/farmote-systems/company\\_financials](https://www.crunchbase.com/organization/farmote-systems/company_financials)



Quality of life index by city 2020 mid-year, <https://www.numbeo.com/quality-of-life/rankings.jsp>

OECD better life index, <https://www.oecdbetterlifeindex.org/countries/new-zealand/>

Will Elton. (2017, October 26). 5 reasons to start a business in New Zealand, <https://zegal.com/blog/post/5-reasons-start-business-new-zealand/>

Kerala to celebrate 2022 as 'Year of entrepreneurs': State minister P Rajeeve. (2021, December 9), <https://www.newindianexpress.com/states/kerala/2021/dec/09/kerala-to-celebrate-2022-as-year-of-entrepreneurs-state-minister-p-rajeeve-2393714.html>

Kerala to create over 15,000 startups, 2,00,000 jobs in five year: CM Vijayan. (2022, February 19), <https://www.livemint.com/news/india/kerala-to-create-over-15-000-startups-2-00-000-jobs-in-five-year-cm-vijayan-11645269563301.html>

Binu Paul. (2021, May 28). Kerala opens up govt market for startup consortiums, mulls state VC fund, <https://www.techcircle.in/2021/01/19/kerala-opens-up-govt-market-for-startup-consortiums-mulls-state-vc-fund>

Seeding Kerala | Kerala startup investor summit, <https://seedingkerala.com/>

Startups attract Rs80 crore investments at seeding Kerala summit. (2022, February 4), <https://www.thehindubusinessline.com/news/start-ups-attract-80-crore-investments-at-seeding-kerala-summit/article64966466.ece>

Kerala startup mission to begin incubators in 23 colleges. (2022, March 7), <https://www.newindianexpress.com/states/kerala/2022/mar/07/kerala-startup-mission-to-begin-incubators-in-23-colleges-2427143.html>

State meets all conditions for start-up launch: Minister. (2022, March 5), <https://www.thehindu.com/news/national/kerala/state-meets-all-conditions-for-start-up-launch-minister/article65193260.ece>

Kerala Startup Mission, (2022, March 23)

Inker robotics uses automation to revive Kerala's 4,000-year-old puppetry art form. (2021, February 12), <https://economictimes.indiatimes.com/tech/tech-bytes/inker-robotics-uses-automation-to-revive-keralas-4000-year-old-puppetry-art-form/article-show/80877309.cms?from=mdr>

Shenoy Karun. (2021, October 17). Kerala: Kerala leads in artificial intelligence, coding for children | Kochi news - Times of India, <https://timesofindia.indiatimes.com/city/kochi/kerala-leads-in-artificial-intelligence-coding-for-kids/articleshow/87076432.cms>

Kerala police to get training in AI, data analytics. (2022, March 5), <https://economictimes.indiatimes.com/news/india/kerala-police-to-get-training-in-ai-data-analytics/articleshow/90009361.cms>

Kerala police to get training in AI, data analytics. (2022, March 5), <https://economictimes.indiatimes.com/news/india/kerala-police-to-get-training-in-ai-data-analytics/articleshow/90009361.cms>

Online grocery seller BigBasket acquires Kerala startup Agrima Infotech. (2022, February 19), [https://www.business-standard.com/article/companies/online-grocery-seller-bigbasket-acquires-kerala-startup-agrima-infotech-122021900706\\_1.html](https://www.business-standard.com/article/companies/online-grocery-seller-bigbasket-acquires-kerala-startup-agrima-infotech-122021900706_1.html)

BigBasket acquires Kerala-based startup Agrima Infotech. (2022, February 19), <https://economictimes.indiatimes.com/tech/startups/bigbasket-acquires-kerala-based-startup-agrima-infotech/articleshow/89688169.cms>

Blockchain startup enters Kerala. (2021, December 1), <https://www.newindianexpress.com/cities/kochi/2021/dec/01/blockchain-startup-enters-kerala-2390144.html>

KSUM to offer grants to boost start-up ecosystem. (2021, February 14), <https://www.thehindu.com/news/cities/Kochi/ksum-to-offer-grants-to-boost-start-up-ecosystem/article33837351.ece>



Binu Paul. (2021, January 19). Kerala opens up govt market for startup consortiums, mulls state VC fund, <https://www.techcircle.in/2021/01/19/kerala-opens-up-govt-market-for-startup-consortiums-mulls-state-vc-fund>

Results of Analysis of Changes to the Korean Start-up Ecosystem, <https://drive.google.com/file/d/1sVR-Gy3g-l-eWu6YOxZZAjegruaVGjH1J/view>

A Total of More than 1.3 Trillion Won in Venture Funds was Raised in 2022, <https://drive.google.com/file/d/1oXYUXhz5LpnZnoxZPcx5GZjj-BhzYGAj/view>

Number of Korean Unicorns Hit New Record of 18 in 2021, [https://drive.google.com/file/d/1EpTUdhuX-ruKvkyeUY\\_MB\\_6tba5hnCSjE/view?usp=sharing](https://drive.google.com/file/d/1EpTUdhuX-ruKvkyeUY_MB_6tba5hnCSjE/view?usp=sharing)

Seoul Business Agency, (2022, March 24)

STARTUP RECIPE INVESTMENT REPORT 2021, <https://drive.google.com/file/d/1cST0tZJlxUWnavfPOK-NmNUHUc9msAYln/view?usp=sharing>

Digital New Deal Harness the Winds of Change, Bringing Innovation!. (2022, April 22), <https://drive.google.com/file/d/1hCmveApaHbKebAbQJ5Xsn563byr9DuTH/view?usp=sharing>

The secret to startups succeeding from the get-go, <https://drive.google.com/file/d/109DF7TK-Kp-76wA7mCCN5ttqfNsEqEm7Q/view?usp=sharing>

AI startup voyager X raises over \$25 mn in series a funding round. (2022, April 22), [https://drive.google.com/file/d/1fild4lrTbPHLi179An3r03PUkj\\_XuY-C/view?usp=sharing](https://drive.google.com/file/d/1fild4lrTbPHLi179An3r03PUkj_XuY-C/view?usp=sharing)

Seoul to set up a global AI hub in Yangjae - Seoul metropolitan Government.pdf. (2021, December 28), <https://drive.google.com/file/d/1dYq731pP6kHYSkMQkALmA-NEo1ZEO2XgS/view?usp=sharing>

HUINNO, [https://www.crunchbase.com/organization/huinno-inc/company\\_financials](https://www.crunchbase.com/organization/huinno-inc/company_financials)

Startups and big data set to fuel genomic medicine in Korea, <https://www.nature.com/articles/d42473-021-00589-3>

South Korea | Manufacturing technology - Smart factory. (2021, August 13), <https://www.trade.gov/country-commercial-guides/south-korea-manufacturing-technology-smart-factory>

Korea moves fast to advance into a global powerhouse in the robotics IndustryView details | Industry trends | InvestKOREA. (2021, December 8), [https://www.invest-korea.org/ik-en/bbs/i-308/detail.do?ntt\\_sn=490763](https://www.invest-korea.org/ik-en/bbs/i-308/detail.do?ntt_sn=490763)

[https://www.invest-korea.org/ik-en/bbs/i-308/detail.do?ntt\\_sn=490763](https://www.invest-korea.org/ik-en/bbs/i-308/detail.do?ntt_sn=490763)

Seoul robotics raises \$12M in bridge round investment from Korean government. (2021, July 15), <https://www.globenewswire.com/news-release/2021/07/15/2263617/0/en/Seoul-Robotics-Raises-12M-in-Bridge-Round-Investment-from-Korean-Government.html>

Jeong-Soo Hwang. (2022, March 16). Service robot maker bear robotics raises \$81 mn in series B, <https://www.kedglobal.com/korean-startups/newsView/ked202203160011>

Education-policy-Outlook | Korea, <https://drive.google.com/file/d/1ltQg6cWgdhwb1jcWMdRYlrAYP6zO8134/view?usp=sharing>

Seoul Business Agency, (2022, March 24)

Why Seoul, [https://drive.google.com/file/d/1BzZsdDm-viZdea3f\\_FQsXsS4laliqpzHd/view](https://drive.google.com/file/d/1BzZsdDm-viZdea3f_FQsXsS4laliqpzHd/view)

Soumitra Dutta, Bruno Lanvin, Sacha Wunsch-Vincent, Lorena Rivera León, Vanessa Behrens. Global Innovation Index2021, <https://drive.google.com/file/d/1NoBX-tZVynsJl336z2uiWJKZKb2xrR3tG/view>



S. Korea's R&D spending 5th largest among OECD members in 2019. (2020, December 9), [https://drive.google.com/file/d/16THBL7BRjkvkic7\\_C42ErqeoYZsV6Usd/view](https://drive.google.com/file/d/16THBL7BRjkvkic7_C42ErqeoYZsV6Usd/view)

Budapest – the 'go-to' city for entrepreneurs. (2021, August 8), <https://www.eurostartentreprises.com/en/business-advice/budapest-the-go-to-city-for-entrepreneurs#:~:text=Manufacturing%20startups%20are%20also%20attracted,with%20the%20surrounding%20EU%20market>

Rebecca O'Keeffe. (2021, December 22). A Guide To Working In The Budapest Tech Scene, <https://www.information-age.com/guide-to-working-in-budapest-tech-scene-123498245/>

Julia Watts. (2021, May 19). The Top 10 European Cities For Start-ups To Launch In After Brexit, <https://startups.co.uk/analysis/best-european-cities-for-startups/>

Hungary | Start-up funding for young entrepreneurs, <https://national-policies.eacea.ec.europa.eu/youthwiki/chapters/hungary/39-start-up-funding-for-young-entrepreneurs>

Budapest's 13 best startup accelerators & incubators [2022]. (2022, January 20), <https://www.starterstory.com/budapest-accelerators-incubators#8-ceu-ilab>

Bitrise, [https://www.crunchbase.com/organization/bitrise/company\\_financials](https://www.crunchbase.com/organization/bitrise/company_financials)

Continental Is Increasing The Role Of Its Hungarian R&D Team In The Value Chain. (2021, June 7), <https://hipa.hu/continental-is-increasing-the-role-of-its-hungarian-r-d-team-in-the-value-chain>

SambaNova systems set to propel OTP bank into the age of artificial intelligence. (2022, January 11), <https://ffnews.com/newsarticle/sambanova-systems-set-to-propel-otp-bank-into-the-age-of-artificial-intelligence/>

Eszter Mrázik. (2021, April 8). ViroFighter: Hungarian Disinfection Robot Built To Combat The Coronavirus, <https://dailynewshungary.com/virofighter-hungarian-disinfection-robot-built-to-combat-the-coronavirus/>

Hungary's Fintech Sector Expanding Rapidly. (2021, May 27), <https://bbj.hu/business/tech/fintech/hungarys-fintech-sector-expanding-rapidly>

World FinTech festival in Budapest 2021, <https://www.budapestfintechsummit.hu/>

CFTE joins the Central Bank of Hungary for the world Fintech festival in Budapest at Singapore Fintech 2021. (2021, November 10), <https://blog.cfte.education/cfte-joins-the-mnb-for-wff-in-budapest-with-sff-2021/>

Lóránt Dénes. (2022, May 11). The price is right! What is the cost of living in Budapest? (2020), <https://info-budapest.com/cost-of-living-in-budapest-hungary/>

Hungary, Budapest - Cost of living. (2022, April), [https://www.xpatulator.com/cost-of-living-review/Hungary-Budapest\\_94.cfm](https://www.xpatulator.com/cost-of-living-review/Hungary-Budapest_94.cfm)

KATA tax in Hungary explained (updated 2022), <https://www.thatbudapest.life/kata-tax-in-hungary-explained>

Finland population (2021), <https://www.worldometers.info/world-population/finland-population/>

Heikki Väänänen. (2020, November 23). Why Finland is Such A Great Place For Business, <https://www.worldometers.info/world-population/finland-population/>

Asaf Fybish. (2022, March 4). Top Finnish startups to watch in 2022, <https://startupstash.com/finnish-startups/>

Startup Environment | Finland, <https://www.business-finland.fi/en/do-business-with-finland/startup-in-finland/startup-environment>

Growing ecosystem: Finland is one of the hottest startup hubs in Europe. (2021, September 13), <https://www.nordea.com/en/news/growing-ecosystem-finland-is-one-of-the-hottest-startup-hubs-in-europe>



A Record-Breaking Start to the Year: Nearly One Billion Euro Invested in Finnish Companies by Private Equity Investors in the First Half of the Year. (2021, November 29), [https://paaomasijoittajat.fi/en/a-record-breaking-h1\\_2021/](https://paaomasijoittajat.fi/en/a-record-breaking-h1_2021/)

Top 12 Accelerators and Incubators Investing in Finland. (2022, May 18), <https://www.failory.com/startups/finland-accelerators-incubators>

Start-up grants - Ministry of Economic Affairs and Employment, <https://tem.fi/en/start-up-grants>

M. Klein. (2020, July 2). Greater Helsinki ranked among the top emerging startup ecosystems, <https://www.businessfinland.fi/en/whats-new/news/2020/greater-helsinki-ranked-among-the-top-emerging-startup-ecosystems>

Giant multidisciplinary E3 project initiating in Finland. (2022, November 2), <https://www.iaqe.fi/post/giant-multidisciplinary-e3-project-initiating-in-finland>

Meri Sipilä. Health and wellbeing | Finland, <https://www.businessfinland.fi/en/do-business-with-finland/explore-key-industries/health-wellbeing/in-brief>

Mia Eloranta. (2022, March 17). Accelerating health-care tech in a post-pandemic world: Finland leads the

way with ground-breaking innovations, <https://www.businessfinland.fi/en/whats-new/news/cision-releases/2022/finland-leads-the-way-with-ground-breaking-innovations>

Aiforia Announces Closing of €17.5M Series B Funding Round. (2021, September 16), <https://www.aiforia.com/blog/series-b-closing>

Laura Kinnunen. AI, <https://www.businessfinland.fi/en/do-business-with-finland/explore-key-industries/ict-digitalization/ai>

ARTIFICIAL INTELLIGENCE FROM FINLAND, [https://www.businessfinland.fi/48e1b3/contentassets/ae-0c06e01168487692e9992cce810b4a/ai\\_from\\_finland\\_web.pdf](https://www.businessfinland.fi/48e1b3/contentassets/ae-0c06e01168487692e9992cce810b4a/ai_from_finland_web.pdf)

Finnish Center for Artificial Intelligence | Home, <https://fcai.fi/>

Aiven Ltd., <https://my.pitchbook.com/profile/182199-43/company/profile#general-info>

O. Aula. Gaming, <https://www.businessfinland.fi/en/do-business-with-finland/explore-key-industries/consumer-business/gaming>

How Helsinki became the European capital of games. (2021, February 10), <https://www.myhelsinki.fi/en/business-and-invest/invest/how-helsinki-became-the-european-capital-of-games>

Ana Kessler. (2022, February 16). Finnish startup raises €5.3 million to develop cloud-native games, <https://80.lv/articles/finnish-startup-raises-eur5-3-million-to-develop-cloud-native-games/>

Metacore, <https://my.pitchbook.com/profile/110776-96/company/profile#general-info>

John Helliwell, Richard Layard, Jeffrey D. Sachs, Jan-Emmanuel De Neve, Lara B. Aknin, Shun Wang; and Sharon Paculor. (2022, February 16). World Happiness Report 2022, <https://happiness-report.s3.amazonaws.com/2022/WHR+22.pdf>

Espoo: One of the most sustainable cities in Europe » circular city funding guide. (2021, February 10), <https://www.circularcityfundingguide.eu/case-studies/espoo-one-of-the-most-sustainable-cities-in-europe/#:~:text=Espoo%2C%20the%20second%20largest%20city,University%20in%202016%20and%202017>

Facts & Figures | Enter Espoo, <https://www.enterespoo.fi/facts-figures>



Maija Palomäki. Business environment, <https://www.businessfinland.fi/en/do-business-with-finland/invest-in-finland/business-environment>

The Finnish education system & education services and solutions. (2021, April 26), <https://toolbox.finland.fi/themes/education-and-know-how/the-finnish-education-system-education-services-and-solutions/>

Bruno Lanvin, Felipe Monteiro. The Global Talent Competitiveness Index 2021, <https://www.insead.edu/sites/default/files/assets/dept/fr/gtci/GTCI-2021-Report.pdf>

Eeva Räisänen. (2021, September 6). Aalto University rises to 112th in the world in QS ranking | Aalto University, <https://www.aalto.fi/en/news/aalto-university-rises-to-112th-in-the-world-in-qs-ranking#:~:text=Aalto%20University%20has%20placed%20112,ranks%20second%20among%20Finnish%20universities>

Aalto Entrepreneurship Society | Home, <https://www.aaltoes.com/>

Qatar Development Bank, Qatar Venture Investment Report 2021

Abdul Ali. (2021, July 30). How Qatar is building world-class startup ecosystem?, <https://www.qatarstalk.com/2021/07/30/how-qatar-is-building-world-class-startup-ecosystem/>

Ithmar (Seed funding), <https://tdv.motc.gov.qa/digital-entrepreneurship/Ithmar-%28Seed%20Funding%29>

Product Development Fund (PDF). (2022, April 20), <https://qstp.org.qa/product-development-fund/>

Research to Startup Program. (2022, April 19), <https://qstp.org.qa/research-to-startup/>

Sachin Kumar. (2021, May 17). Qatar's initiatives have potential to attract fintech firms, <https://thepeninsulaqatar.com/article/17/05/2021/Qatar%E2%80%99s-initiatives-have-potential-to-attract-fintech-firms>

Qatar, a new destination for FinTech in the region. (2021, October 11), <https://thefintechtimes.com/qatar-a-new-destination-for-fintech-in-the-region/>

Logistics role enabling Qatar's MSME sector. (2021, August 24), <https://gwclogistics.com/news/logistics-role-enabling-qatars-msme-sector>

GWC announced as regional supporter and official logistics provider for FIFA World Cup Qatar 2022™. (2021, September 21), <https://www.fifa.com/tournaments/mens/worldcup/qatar2022/media-releases/gwc-announced-as-regional-supporter-and-official-logistics-provider-for-fifa-wor>

ELV8 Program. (2021, October 25), <https://qstp.org.qa/elv8/>

James McLeod. (2019, November 6). Quebec AI start-up Coveo surpasses \$1-billion valuation mark after \$227-million financing round, <https://financialpost.com/entrepreneur/fp-startups/quebec-ai-startup-coveo-surpasses-1b-valuation-mark-after-227m-financing-round>

LeddarTech, [https://www.crunchbase.com/organization/leddartech/company\\_financials](https://www.crunchbase.com/organization/leddartech/company_financials)

Immigrate with a start-up visa: About the process. (2022, April 30), <https://www.canada.ca/en/immigration-refugees-citizenship/services/immigrate-canada/start-visa/about.html>

New fund from AQC Capital - \$64 M available to boost the ambitions of Quebec start-ups. (2021, June 3), <https://www.bloomberg.com/press-releases/2021-06-03/new-fund-from-aqc-capital-64-m-available-to-boost-the-ambitions-of-quebec-start-ups>

Projects | Institute Intelligence and Data | University of Laval. (2020, September 15), <https://iid.ulaval.ca/en/projects/>



Jean-Luc Doumont. (2021, July 21). QScale: Investment of \$870 million for a data center in Lévis, <https://www.actionti.com/publications/qscales-investissement-de-870-m-pour-un-centre-de-donnees-a-levis/>

An \$867 million data center will be built in Lévis. (2021, July 13), <https://ici.radio-canada.ca/nouvelle/1808698/centre-traitement-donnees-haute-intensite-levis-qscales-investissement-867-millions>

Louis Gagne. (2021, July 13). An \$867 million data center will be built in Lévis, <https://ici.radio-canada.ca/nouvelle/1808698/centre-traitement-donnees-haute-intensite-levis-qscales-investissement-867-millions>

2017-2027 QUÉBEC LIFE SCIENCES STRATEGY, <https://numerique.banq.qc.ca/patrimoine/details/52327/2977378>

Tax credit for investment and innovation, <https://www.revenuquebec.ca/en/businesses/income-tax/corporation-income-tax-in-french-only/corporation-tax-credits-in-french-only/tax-credits-a-corporation-may-be-entitled-to-in-french-only/tax-credit-for-investment-and-innovation/>

DISCOVER THE REGION OF QUEBEC THANKS TO ECONOMIC STATISTICS, <https://www.quebecinternational.ca/fr/statistiques-economiques-quebec>

Isabelle Kirkwood. (2022, January 29). Venture funding for Montreal tech sector grew steadily in 2021, with \$1.6 billion raised, <https://betakit.com/venture-funding-for-montreal-tech-sector-grew-steadily-in-2021-with-1-6-billion-raised/>

Startup Montréal, Centech, Montréal International, Ville de Montréal, (2022, March 31)

BDC Announces Strategic Partnership With Mila Providing Entrepreneurs Access To World-Class AI Resources. (2022, January 27), <https://mila.quebec/en/bdc-announces-strategic-partnership-with-mila-providing-entrepreneurs-access-to-world-class-ai-resources/>

Aéro Montréal and the Québec Aerospace Industry at the Heart of a Sustainable Supply Chain. (2021, October 26), <https://www.newswire.ca/news-releases/aero-montreal-and-the-quebec-aerospace-industry-at-the-heart-of-a-sustainable-supply-chain-815170234.html>

Cycle Momentum and Innovacorp Partner to Accelerate Innovative Clean Technology Companies. (2021, November 23), <https://innovacorp.ca/news/cycle-momentum-and-innovacorp-partner-accelerate-innovative-clean-technology-companies>

Cycle Momentum and Innovacorp Partner to Accelerate Innovative Clean Technology Companies. (2021, November 23), <https://innovacorp.ca/news/cycle-momentum-and-innovacorp-partner-accelerate-innovative-clean-technology-companies>

Joseph Czikk. (2021, September 17). Montreal General Hospital to launch new health tech incubator, <https://www.montrealintechology.com/montreal-general-new-health-tech-incubator/>

Ventus Therapeutics U.S. Inc., <https://my.pitchbook.com/profile/433460-80/company/profile#general-info>

Artificial intelligence | Montreal, a global hub for AI. (2022, May 6), <https://www.montrealinternational.com/en/keysectors/artificial-intelligence/>

Why Artificial Intelligence Giants are Heading North to Montréal, [https://www.montrealinternational.com/app/uploads/2019/02/ai\\_industry\\_profile\\_2021-2.pdf](https://www.montrealinternational.com/app/uploads/2019/02/ai_industry_profile_2021-2.pdf)

International Centre of Expertise in Montreal on Artificial Intelligence | Home. (2022, April 6), <https://ceimia.org/en/>

Concordia Launches Applied AI Institute. (2022, March 22), <https://indocanadaeducation.org/2022/03/22/concordia-launches-applied-ai-institute/>



Hopper, [https://www.crunchbase.com/organization/hopper/company\\_financials](https://www.crunchbase.com/organization/hopper/company_financials)

Charlize Alcaraz. (2022, February 17). Mila partners with AI Sweden to bolster AI R&D in Canada and Sweden, <https://betakit.com/mila-partners-with-ai-sweden-to-bolster-ai-rd-in-canada-and-sweden/>

Montreal, North American leader in sustainable finance. (2021, October 12), <https://www.montrealinternational.com/en/news/montreal-north-american-leader-in-sustainable-finance/>

Sustainable Finance Summit 2022 Speakers, <https://www.sommet-financedurable.com/en/conferenciers-2022>

Fintech Cadence Announces Partnership with Fintel Connect. (2022, February 2), <https://www.prnewswire.com/news-releases/fintech-cadence-announces-partnership-with-fintel-connect-301473641.html>

The Montreal FinTech station launches a unique acceleration program with Highline beta to drive technological innovation. (2021, March 23), <https://www.stationfintech.com/en/read-news-and-publications/the-montreal-fintech-station-launches-a-unique-acceleration-program-with-highline-beta-to-drive-technological-innovation>

Station FinTech | FinTech accelerator, <https://www.stationfintech.com/en/fintech-accelerator>

Rebecca Szkutak. (2021, June 8). Diagram Ventures Raises CA\$120 Million Opportunity Fund To Double-Down On Its Successful Studio Bets, <https://www.forbes.com/sites/rebeccaszkutak/2021/06/08/diagram-ventures-raises-ca120-million-opportunity-fund-to-double-down-in-its-successful-studio-bets/?sh=61ae4e8d2571>

Zapper, [https://www.crunchbase.com/organization/defizap/company\\_financials](https://www.crunchbase.com/organization/defizap/company_financials)

Shakepay, [https://www.crunchbase.com/organization/shakepay/company\\_financials](https://www.crunchbase.com/organization/shakepay/company_financials)

Study in Montreal. (2015, December 1), <https://www.topuniversities.com/university-rankings-articles/qs-best-student-cities/montreal>

Montreal ranked #1 student city in North America. (2021, August 4), [https://www.mcgill.ca/desautels/channels/news/montreal-ranked-1-student-city-north-america-332239#:~:text=In%20the%20recently%20released%20QS,\(with%20Boston%20and%20Paris\)](https://www.mcgill.ca/desautels/channels/news/montreal-ranked-1-student-city-north-america-332239#:~:text=In%20the%20recently%20released%20QS,(with%20Boston%20and%20Paris))

Josh Scott. (2022, February 14). Following Recent Merger, Startup Montreal Announces Program To Spur

Late-Stage Growth, <https://betakit.com/following-recent-merger-startup-montreal-announces-program-to-spur-late-stage-growth/>

Vesna Poljicak. (2018, December 19). Montreal safest city among 20 major cities in Canada and the United States, [https://www.montrealinternational.com/en/news/montreal-safest-city-among-20-major-cities-in-canada-and-the-united-states/#:~:text=United%20States,-By&text=According%20to%20the%20most%20recent,compared%20to%20the%204.72%20average\)](https://www.montrealinternational.com/en/news/montreal-safest-city-among-20-major-cities-in-canada-and-the-united-states/#:~:text=United%20States,-By&text=According%20to%20the%20most%20recent,compared%20to%20the%204.72%20average))

Sheridan Cahoon. (2022, April 14). Cost of living in Montreal - Moving to Montreal in 2022, <https://www.thebrokebackpacker.com/cost-of-living-in-montreal-canada/>

Bo Lang. (2021, December 14). What is the quality of life in Montreal?, <https://theflatbkny.com/canada/what-is-the-quality-of-life-in-montreal/>

Quebec budget 2022-23: Highlights. (2022, March 22), [https://www.ey.com/en\\_ca/tax/tax-alerts/2022/tax-alert-2022-no-16](https://www.ey.com/en_ca/tax/tax-alerts/2022/tax-alert-2022-no-16)

Quebec unveils two 'innovation zones' east of Montreal, including Canada's first quantum computer. (2022, February 3), <https://montreal.ctvnews.ca/quebec-unveils-two-innovation-zones-east-of-montreal-including-canada-s-first-quantum-computer-1.5766996>



Paige Gross. (2021, February 22). The Philly region ranked 13th on this 2021 list of best cities for women in tech, <https://technical.ly/startups/philly-women-in-tech-13/>

Paige Gross. (2022, January 14). Let's take a look at Philly's \$8B year: Q4 2021 venture capital data is in, <https://technical.ly/startups/philadelphia-q4-2021-vc-report/>

S.E. Slack. (2021, January 22). Women in Tech Summit: Dates, News, Rumors, and Everything Else To Know, <https://www.lifewire.com/women-in-tech-summit-5095906>

Gloria Bell. (2021, October 27). Why women in tech summit's 10th anniversary is a Philly startup success story, <https://technical.ly/startups/women-in-tech-summit-anniversary/>

Taylor Allen. (2022, January 20). Philly's venture capital boom sees new heights, <https://www.axios.com/local/philadelphia/2022/01/20/philadelphia-venture-capital-boom>

Gopuff, [https://www.crunchbase.com/organization/gopuff/company\\_financials](https://www.crunchbase.com/organization/gopuff/company_financials)

Houwzer, [https://www.crunchbase.com/organization/houwzer-2/company\\_financials](https://www.crunchbase.com/organization/houwzer-2/company_financials)

Science Center | Launch Lane. (2020, October 20), <https://sciencecenter.org/programs/launch-lane>

1 Million Cups (1MC) Philadelphia | PA event for entrepreneurs, <https://www.1millioncups.com/philadelphia>

Philly Tech Week (PTW) 2022. (2022, May 6), <https://2022.phillytechweek.com/>

Women in data science @ Penn conference 2022 | Wharton Customer Analytics. (2022, April 27), <https://wca.wharton.upenn.edu/events-conferences/women-in-data-science-penn-conference-2022-2/>

Dbt Labs, [https://www.crunchbase.com/organization/dbt-labs/company\\_financials](https://www.crunchbase.com/organization/dbt-labs/company_financials)

Crossbeam, [https://www.crunchbase.com/organization/crossbeam/company\\_financials](https://www.crunchbase.com/organization/crossbeam/company_financials)

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Michael Butler. (2021, October 5). 20+ resources to boost Philly health startups, <https://technical.ly/startups/resources-health-startups/>

Paige Gross. (2021, July 21). University City Science Center is launching a VC arm to invest in health equity startups, <https://technical.ly/startups/science-center-vc/>

Passage Bio, [https://www.crunchbase.com/organization/passage-bio/company\\_financials](https://www.crunchbase.com/organization/passage-bio/company_financials)

Aro Biotherapeutics, [https://www.crunchbase.com/organization/aro-biotherapeutics/company\\_financials](https://www.crunchbase.com/organization/aro-biotherapeutics/company_financials)

Paige Gross. (2020, November 24). City Gov is pumping half a million dollars into diversifying Philly's tech talent, <https://technical.ly/diversity-equity-inclusion/most-diverse-tech-hub-diversify-philadelphia-talent/>

Sam Markowitz. (2021, May 19). Philadelphia aims to become the 'Most diverse tech hub' in the country, <https://technical.ly/civic-news/most-diverse-tech-hub-video/>

SEA will see 50M middle class consumers by 2022. Understanding Southeast Asia's Emerging Middle Class, Bain & Company, 2019

Southeast Asia's Internet sectors continue to see strong growth, hitting \$100 billion in 2020, and are on track to cross \$300 billion by 2025". e-Conomy SEA 2020, Google, Temasek and Bain & Company, 2020

Headquarters | Economic Development Board (EDB) | Singapore. (2021, December 6), <https://www.edb.gov.sg/en/our-industries/headquarters.html>



Startup SG | Singapore: The Futuristic Nation Beyond 2021. (2022, January 25), <https://www.startupsg.gov.sg/news/27944/singapore-the-futuristic-nation-beyond-2021>

Tessa Oh. (2022, March 23). Alpina Holdings, Terrenus Energy win 6th solar tender from HDB, <https://www.businesstimes.com.sg/companies-markets/alpina-holdings-terrenus-energy-win-6th-solar-tender-from-hdb>

Shannon Williams. (2021, June 3). Red Dot Analytics to commercialise AI tech that dramatically improves data centre sustainability, <https://datacenternews.asia/story/red-dot-analytics-to-commercialise-ai-tech-that-dramatically-improves-data-centre-sustainability>

Nisha Ramchandani. (2021, February 16). Budget 2021: Government to issue green bonds on certain public infrastructure projects, <https://www.businesstimes.com.sg/government-economy/singapore-budget-2021/budget-2021-government-to-issue-green-bonds-on-certain>

Cheryl Tan. (2022, February 19). Budget 2022: \$35 billion in green bonds to be issued by 2030 to fund green public sector projects, <https://www.straitstimes.com/singapore/budget-2022-35-billion-in-green-bonds-to-be-issued-by-2030-to-fund-green-public-sector-projects>

AI Singapore (AISG) | About us, <https://aisingapore.org/about-us/>

Nathaniel Fetalvero. (2021, April 16). Deep Dive: How PatSnap joined the unicorn club, <https://www.techinasia.com/deep-dive-patsnap-joined-unicorn-club>

Cheryl Tan. (2021, December 20). Local biomedical companies raise record \$820m from Jan to Sept this year, <https://www.straitstimes.com/singapore/health/biomedical-companies-in-spore-raise-record-820m-from-jan-to-sept-this-year>

Digital Health Platform Doctor Anywhere Closes S\$88 Million Series C Round to Deepen Southeast Asia Expansion. (2021, August 31), <https://finance.yahoo.com/news/digital-health-platform-doctor-anywhere-020000386.html>

New \$60 million fund to support transformation and growth of local agri-food sector, <https://www.sfa.gov.sg/docs/default-source/default-document-library/sfa-media-release---new-60-million-fund-to-support-transformation-and-growth-of-local-agri-food-sector.pdf>

Next Gen Foods Pte Ltd., <https://my.pitchbook.com/profile/439873-39/company/profile#contact-info>

Ang Hwee Min. (2022, March 25). Dyson opens new global HQ at St James power station, to invest S\$1.5 billion in Singapore operations over next 4 years, <https://www.channelnewsasia.com/singapore/dyson-global-headquarters-hq-st-james-power-station-2585726>

Tang See Kit. (2021, May 10). BioNTech to produce mRNA vaccines in Singapore, its new regional headquarters, <https://www.channelnewsasia.com/business/biontech-vaccines-mrna-singapore-regional-headquarters-1354216>

Choo Yun Ting. (2021, June 23). Chip giant GlobalFoundries to build new \$5.4 billion plant in S'pore, add 1,000 high-value jobs, <https://www.straitstimes.com/business/chips-giant-globalfoundries-to-increase-capacity-in-spore-add-1000-high-value-jobs>



## Global Startup Ecosystem Report 2022

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TNW is a global digital brand that informs, inspires, and connects people who love tech, through media, events, and spaces. Primarily known for its media outlet and award-winning tech events, TNW also incorporates a co-working label, a global startup database, and delivers custom innovation programs to corporates and governments.

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Meath County Council

Meath Local Enterprise Office

Meath County Chamber

Louth-Meath Education & Training Board

Maynooth University

Kildare Chamber of Commerce

Kildare County Council

Kildare Local Enterprise Office

Kildare-Wicklow Education & Training Board

Wicklow Chamber of Commerce

Wicklow County Council

Wicklow Local Enterprise Office

Enterprise Ireland

Mid-East Regional Skills Forum

Mid-East Action Plan for Jobs Committee

Industrial Development Authority - IDA

Media Ireland

**Montréal, Canada**

BCF Ventures

CEIM

CEuMontréal

Creative Destruction Lab

Cycle Momentum

District 3

Esplanade

EVOL



Fintech Cadence  
Founder Institute  
FounderFuel  
Futurpreneur Canada  
Groupe 3737  
HEC Montréal  
Investissement Québec International  
IVADO  
Ministère de l'Économie et de l'Innovation du Québec  
MILA  
Montréal InVivo  
Montréal NewTech  
MT Lab  
Next AI  
Notman House  
PME MTL  
Polytechnique Montréal  
Quartier de l'innovation  
Réseau Mentorat  
Startupfest  
TandemLaunch

Techstars AI  
V1 studio  
Zu

**New York City, United States**

Starta Venture Accelerator  
Blue Ridge Labs  
Brooklyn Chamber of Commerce  
Bunker Labs  
Cela  
Civic Hall  
Coindesk/Consensus  
Company  
Entrepreneurs Roundtable Accelerator  
Flatiron Partnership  
Gary's Guide  
Innovative Collective  
Mayor's Office of International Affairs  
MeetUp  
New Lab  
New York Angels

NY Fashion Tech Lab  
NY Tech Alliance  
NYC Blend  
SAP  
Techstars  
URBAN-X  
VentureOut

**New Zealand**

Angel HQ  
Angel Association New Zealand  
ArcAngels  
BizDojo  
Blackbird Ventures  
Brandon Capital Partners  
Bridgewest Ventures  
Callaghan Innovation  
Creative HQ  
COIN South  
Flux Accelerator  
Lightning Lab



Enterprise Angels

Equitise

Flying Kiwi Angels

GD1

Global Entrepreneurship Network

Icehouse Ventures

KiwiNet

Kōkiri

Ministry of Awesome

Movac

New Zealand Trade and Enterprise

New Zealand Growth Capital Fund

Northland Inc

SODA Inc

Sprout

Startup Dunedin

StartupWeekend

Startup Queenstown Lakes

The Factory

ThincLab

TIN Network

WNT Ventures

ZeroPoint Ventures

### **Québec City, Canada**

BDC

PwC Québec

ROBIC

Ville de Québec

Québec City Group of incubators

Quantino

Entrepreneuriat Laval

### **Metro Rhein-Ruhr, Germany**

1stMOVER

:agile Accelerator

Axa Startup Center

BLSW

Capnamic

Coparion

Founders Institute

Future Champions Accelerator

Gateway Gründungsservice der Universität zu Köln

Getstarted, Bitkom

Gründerzentrum RWTH Aachen

HEADQUARTER[S] Cologne

High-Tech Gründerfonds

Hub Aachen

Intelligent Venture Capital Management

MWIDE

NRW Bank Business Angel Initiative WIN

NRWalley

NUK – Neues Unternehmertum Rheinland

Pirate Summit / Jolly Rogers UG

S-UBG

STARTPLATZ

Startup Dorf

Startup Unit Düsseldorf

Tengelmann Ventures

Vodafone Uplift



## Seattle, United States

Startup Seattle

ARI

Lighter Capital

New Tech Northwest

Techstars

Fledge

Microsoft Ventures

Seattle Angel Conference

Alliance of Angels

Startup Grind

Seven Peaks Ventures

Angel Resource Institute

Microsoft for Startups

SURF Incubator

## Shanghai, China

ChinaAccelerator

Ether Capital

Innoclub

Innospace+

NakedHub

People Square

Startup Grind

Technode

Xnode

## Sharjah, UAE

Sharjah Media City (Shams)

## Singapore

Action Community for Entrepreneurship

500 Startups

FocusTech Ventures

Starburst Accelerator

500 Ecosystems Singapore PTE. LTD.

Startup X PTE. LTD.

Trendlines Medical Singapore

## Tel Aviv, Israel

Future Block Programs

Future Block Coworking

Techstars

Startup Nation Central

Geektime

SOSA

Microsoft Ventures

Microsoft for Startups

## Tokyo, Japan

Plug n Play

Japan Venture Capital Association (KII, UTEC),

Keidanren,

Keio University,

Mitsubishi Estate,

Mitsui Fudosan,

Mori Building,

Tokyo Chamber of Commerce and Industry,

Tokyu,

Tokyu Land Corporation,

The University of Tokyo,

Waseda University



**Toronto-Waterloo, Canada**

- Centre for Social Innovation
- Invest Toronto
- Next 36
- OneEleven
- DMZ
- City of Toronto
- World Canada
- Brook eld Institute
- The Founder City Project
- Venture Lab
- RIC Centre
- Innovation Factory
- Haltech
- Creative Destruction Lab

**Turin, Italy**

- VeM Venture Capital Monitor
- Iban Italian Business Angel Network
- Torino City Lab
- Unione Industriale Torino
- I3P
- LIFTT





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