Startup Genome

GEN GLOBAL ENTREPRENEURSHIP NETWORK

# The Global Startup Ecosystem Report GSER 2021

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# About Startup Genome

Startup Genome is the world-leading policy advisory and research organization for governments and public-private partnerships committed to accelerating the success of their startup ecosystems. We have advised more than 100 clients across more than 40 countries.

Startup Genome's mission is to accelerate startup success and ecosystem performance everywhere, working together with global thought leaders 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 more than a million companies across 150 cities.

Join us and boost startup success, economic growth, and job creation in your region. Follow our work at startupgenome.com and follow the company on LinkedIn and Twitter.

# About the 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.

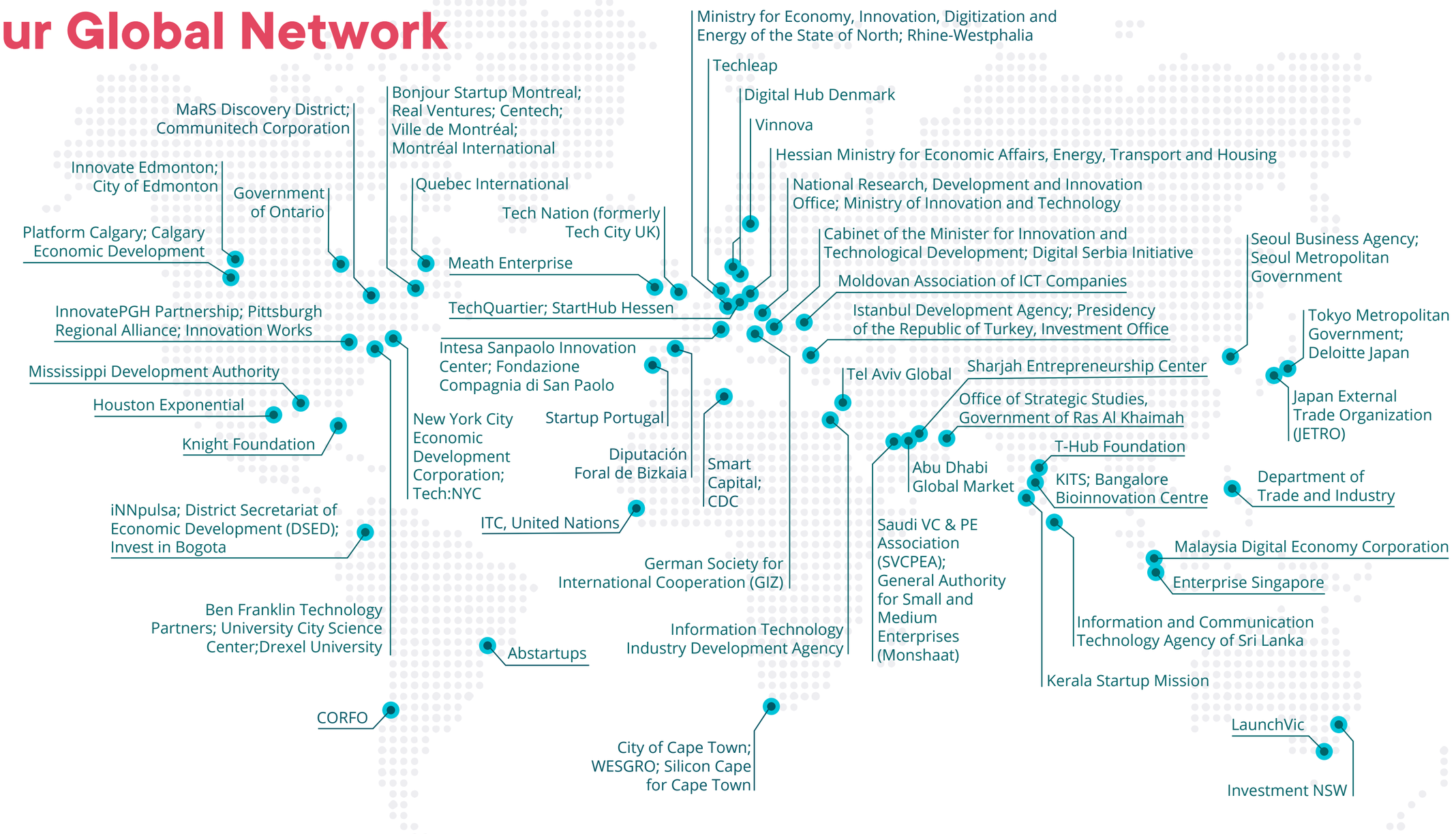
By fostering deeper cross-border collaboration and initiatives between entrepreneurs, investors, researchers, policymakers and entrepreneurial support organizations, GEN works to fuel healthier start and scale ecosystems that create more jobs, educate individuals, accelerate innovation and strengthen 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.

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Global Startup Ecosystem Report 2021

# Our Global Network




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# 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 start-up database, and delivers custom innovation programs to corporates and governments.

BELLA PRIVATE MARKETS

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

crunchbase

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

dealroom.co

Provides data-driven intelligence on high-growth companies.

hello tomorrow

A global non-profit organization on a mission to unlock the potential of deep technologies to solve the world's toughest challenges by highlighting, empowering and connecting the most promising deeptech entrepreneurs across the globe with the right enablers. They bring together a community of actors to facilitate collaboration between entrepreneurs, industries and investors in order to propel innovation from the lab to the market.

TECH NATION

Empowers ambitious tech entrepreneurs through growth programmes, digital entrepreneurship skills, a visa scheme for exceptional talent and by championing the UK digital sector through data, stories and media campaigns.

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# Global Innovation Policy Forum

The Policy Forum is made up of leading ecosystem development experts from our Members across the world, with a mix of officials from different levels of government and leaders of public/private innovation and ecosystem development agencies.

## Africa

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

## Asia

- **Edwin Chow**, Asst. CEO & Director, Enterprise Singapore (Singapore)
- **Jang Young Seung**, CEO, Seoul Business Agency (South Korea)
- **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, Greater Helsinki (Finland)
- **Johannes Velling**, Deputy Head of Department, Ministry of Economy, Innovation, Digitization and Energy (Germany)
- **Zekeriya Costu**, General Manager National Technology, Ministry of Industry and Technology (Turkey)

## Latin America

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

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## 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

- **Cheryll Watson**, Forum Co-Chair, Former Head of Innovate Edmonton (Canada)
- **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 Ortmans,** President, Global Entrepreneurship Network
- **Iain Klugman**, Executive Advisor to CEO Communitech & Strategic Advisor to Health Canada
- **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)

## Oceania

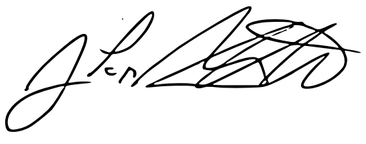
- **Kate Cornick**, CEO, LaunchVic (Australia)
- **Vic Crone**, CEO at Callaghan Innovation (New Zealand)

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Global Startup Ecosystem Report 2021

# Note From A Founder





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

Rarely has it felt so good to be wrong. Like other business leaders around the world, in spring 2020 I feared Covid-19 would cripple startup ecosystems and the crucial innovations brewing everywhere. But governments swept in with new policies and financial support faster and more effectively than we could have imagined. The same was true with funding. Where at first venture capital started to stutter, soon it grew—even surged—in sectors where the pandemic underscored new opportunities or tremendous need. As startups helped doctors treat homebound patients, teachers reach students, and small businesses continue to operate, it became glaringly obvious that founders would be critical to global resilience and recovery.

While the pandemic couldn't diminish startup energy, it did loosen Silicon Valley's grip on it. That's something we've all been working toward and need to celebrate! For decades, as the Bay Area soaked up tech talent, it dramatically drove up cost of living and salaries and made space the scarcest resource. Once the physical constraints of living near the office were removed, experienced talent from the Valley dispersed around the globe, reducing the strain on real estate. Cheaper and more available space is great for founders who continue to launch in the Bay Area. And the region's net out-migration is populating other startup ecosystems with the expertise and global relationships they need to grow even faster.

Those resources are turning up in cities and countries on six continents, where they are joined by record infusions of venture capital and a tech industry that is growing at its fastest rate since 1999—but with much stronger fundamentals. Big rounds this year and last are boosting Latin America's expanding herd of young unicorns. Africa welcomed its fourth unicorn in March, and opportunities for growth swell along with that continent's population, which is expected to reach nearly 2.5 billion by 2050.

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The democratization of startups began before Covid. Now, with digitalization greatly accelerated by the pandemic, geographic constraints are largely gone. Among my most exciting, gratifying experiences has been watching the world map fill up with startup hotspots and welcoming new ecosystems onto our rankings and into our programs. This year we are creating continental sections to further shine the spotlight on these emerging regions.

As our global community of founders becomes larger and more diverse, the challenges we face also are growing. Our greatest responsibility is to take on climate change, which threatens the survival of our planet. In his book *How to Avoid a Climate Disaster: The Solutions We Have and the Breakthroughs We Need*, Bill Gates talks about an innovation gap in developing solutions to climate change. But if we were to scale most existing green technologies we could reach, or almost reach, our net-zero goal. Therein lies the bigger problem: the Cleantech Scaleup Gap. That is the failure, so far, to scale all but a few Cleantech startups.

In response, Startup Genome has partnered with others to launch Entrepreneurship For Climate (E4C), a movement uniting entrepreneurs, startup ecosystems, funders, and policymakers to solve the four biggest challenges to scaling Cleantech startups so they achieve massive impact all around the world. The emphasis is on developing nations, which are disproportionately hurt by climate change.

I invite you to join us as we unite around this challenge. We are, for example, working with our member governments to enact demand-side policies—aligned across many cities and countries—that create a global commercialization path for the most effective ready-to-scale technologies. That, in turn, will create global leaders rather than simply increase the number of parallel small experiments, as supply-side policies tend to do.

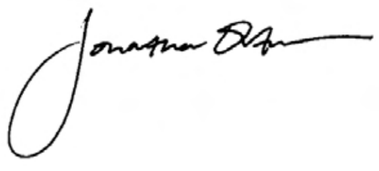
Part of our mandate, as entrepreneurs and supporters of startups, is to be more inclusive, to spread the wealth, and to assume responsibility for addressing climate change, lack of diversity, and other urgent global challenges. The pandemic spared—and then spurred—the startup economy. Now it is time for the startup economy to apply its strength and ingenuity to the world's most pressing problems.

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# A Word From GEN





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

Despite a global pandemic, we are seeing progress in the democratization of entrepreneurship. Startups are launching and thriving, and ecosystems are maturing across every continent. Cities like Tokyo, Philadelphia, and Toronto are rising rapidly in the ranking of Top 30 Ecosystems. Others are joining it for the first time. The progress is exciting: an inspiration to continue the hard work of removing barriers in more ecosystems around the world.

At the Global Entrepreneurship Network (GEN), building and strengthening nascent startup ecosystems— a global "rise of the rest," if you will—is our raison d'etre. When we started our work nearly 20 years ago we sought to shift the discussion from small business to new business, the most reliable job creator, and to elevate attention to entrepreneurship. Now we see new ecosystems and communities maturing every day, empowered from the bottom-up by communities and programs that make it easier for anyone, anywhere, to start and scale a company. Governments are prioritizing entrepreneurs; and community leaders and policymakers are working side-by-side to shape policies and programs that support founders, stimulate innovation, and create jobs.

Movement in the rankings of the Top 100 Emerging Ecosystems is evidence that these efforts are working. This report shows that the number of ecosystems generating in excess of $4 billion in Ecosystem Value has more than doubled in the past four years. Meanwhile, 91 ecosystems created at least one unicorn in 2020, with unicorns emerging for the first time in Mexico City, Montevideo (Uruguay), Dallas, Houston, Busan (South Korea), and Pune (India).

While the pandemic increased stress on many communities, industries, and value chains, it also put the spotlight on entrepreneurs as powerful economic drivers comfortable with uncertainty. The public and private sectors closely collaborated on solutions to pandemic-

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induced challenges. Massive job loss was paired with record rates of entrepreneurship as innovators adapted or pivoted their businesses to address challenges head-on and capitalize on fast-emerging opportunities. At the same time, governments expedited decision-making to provide emergency support to businesses that badly needed a reboot.

Looking forward, leaders are drawing on such lessons to rethink traditional approaches to economic growth in favor of more innovative, inclusive systems. They are studying the support systems that help entrepreneurs—particularly those from underrepresented groups—start and scale new companies. Some are doubling down on policies and programs to encourage the growth of resilient, inclusive economies in which founders are key players. Future editions of the Global Startup Ecosystem Report will document which regions do this best.

Through its diligence monitoring ecosystem trends, the extraordinary team at Startup Genome performs a task of utmost importance to all in this field. I invite our readers—whether you are a founder, investor, policymaker, or ecosystem builder—to join us as we level the playing field for entrepreneurs everywhere.

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Global Startup Ecosystem Report 2021

# State Of The Global Startup Economy

In March 2020 startups' prospects looked bleak. Consumer demand had cratered. Travel ceased. Struggling businesses shed workers or closed. Global VC spending dropped 17% in the first quarter compared to the preceding one, with the number of rounds down 5%, according to Crunchbase. In China alone the number of venture rounds plunged 74% in just two months.

Then everything changed. Covid-19, which made rapid adopters of us all, slashed a bright line between how we once lived and how we will live. It is a line across which entrepreneurs are uniquely positioned to ferry us. That is why, for many economies, startups are leading the way back to economic vitality.

The pandemic—dire for humans—has been fuel to technology's fire. Last year Internet capacity rose 35%, reports market-research firm Telegeography. Global broadband traffic in the fourth quarter increased more than 51% over the previous year: a combination of more subscribers using more data during Covid-19, according to OpenVault, which tracks broadband consumption. Global e-commerce shot up to $26.7 trillion, according to the United Nations, with countries like the Republic of Korea, the United Kingdom, and China experiencing especially dramatic spikes. The number of people buying food and household items online grew an average 30% worldwide.

Businesses, meanwhile, pivoted to remote work, with a corresponding bump in productivity of 3.1%, according to Goldman Sachs. Companies also sped up digitization of customer and supply-chain operations by three to four years, reports McKinsey & Company.

Investors surged into these and other opportunities. In the first half of 2020 venture funding worldwide was $148 billion. In the first half of 2021 it had soared 95% to $288 billion, with increases at every stage, according to Crunchbase. Startups also are benefiting from new

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investment channels, including democratizing startups like Robinhood; crowdfunding; and special purchase acquisition companies. (Although some increasingly are skeptical of SPACs.)

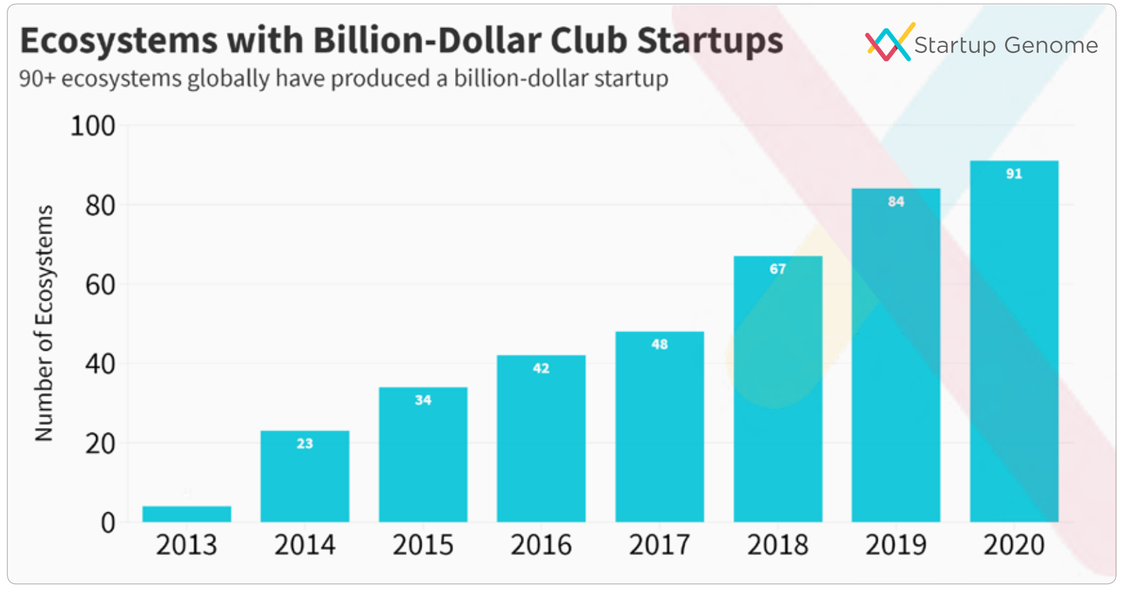
The term "unicorn"—an indicator of extreme rarity—is becoming a misnomer. As of August there were more than 800 startups around the world with valuations above $1billion, for a cumulative valuation in excess of $2.6 trillion, according to CB Insights. Just between October 2020 and June 2021 their number rose 43%. Although U.S. companies dominated, China, Canada, India, Germany, Israel, the United Kingdom, and France produced between 7 and 10 unicorns in the first half of 2021, according to Crunchbase. Meanwhile, VC-backed exits are smoking hot. Startup Genome's data show a 20% year-over-year growth in the dollar value of exits in startups globally.

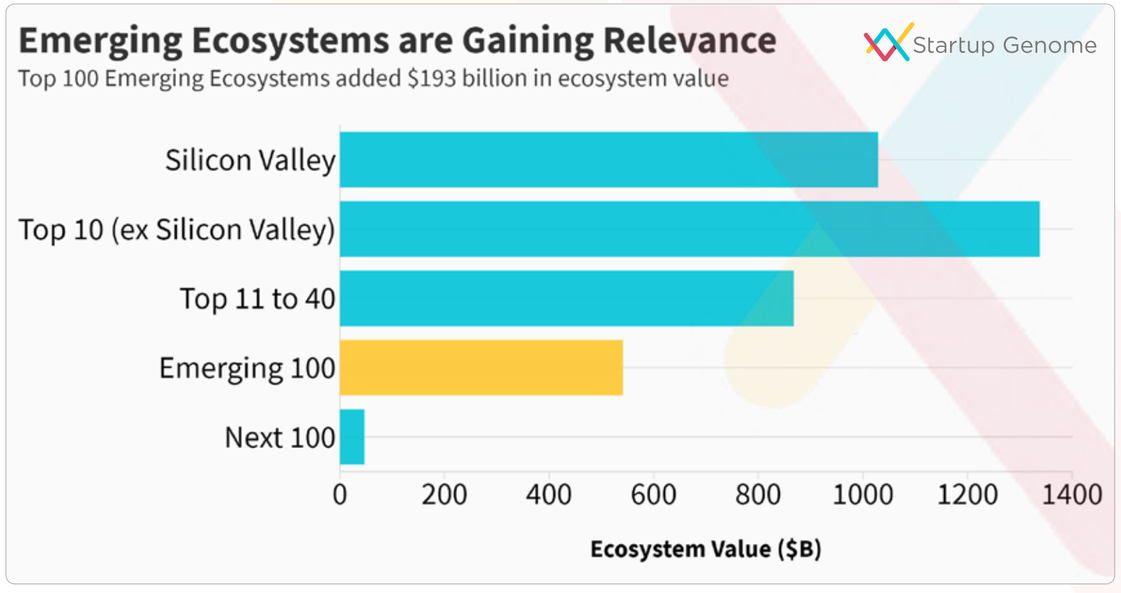
For entrepreneurial ecosystems, 2021 is turning out to be a year of remarkable growth and productivity. And the dispersal of success—already underway before the pandemic—has only accelerated.

## Hot Spots Everywhere

As far back as 1982 cities around the world—from Hong Kong to Bangalore-Karnataka to Xenia, Ohio—clamored for the mantel of "next Silicon Valley." While the Bay Area remains the pole star for tech entrepreneurs—attracting more than a third of U.S.-based VC money in the first quarter, according to Pitchbook—a constellation of global cities and regions competes in brightness.

Increasingly, the rise of the rest is a global phenomenon. The amount of venture capital flowing into U.S. companies in 2020 was down to 51% from 84% in 2004, according to the National Venture Capital Association. The rest of that money went globetrotting. Asia, in particular, has been strong. In China, which began its pandemic recovery relatively quickly, investments rose steadily, reaching more than $37 billion in the first five months of 2021, according to GlobalData. Indian startups raised $12.1 billion in the first half of this year,




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Venture Intelligence reports. As of August, India had spawned 24 unicorns in 2021—including six in just four days in April.

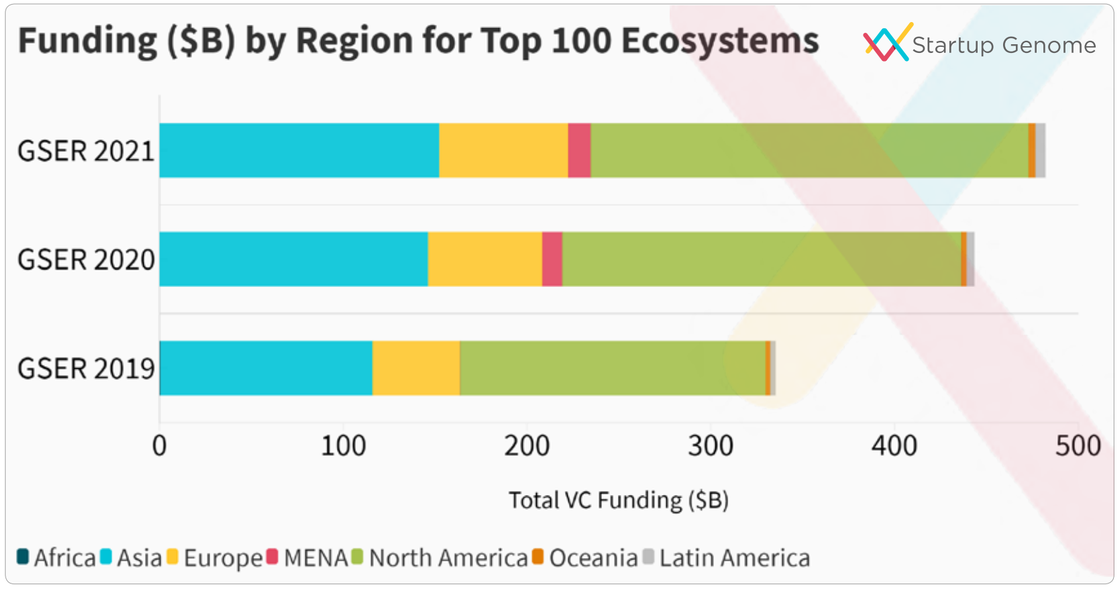
Funding for Latin American and African startups also is at record highs. Led by Fintech, Latin American companies raised around $6 billion in the first half of 2021, a 51% increase over the total in 2020, reports the Association for Private Capital Investment in Latin America. African startups, meanwhile, are projected to raise as much as $2.8 billion this year, with Nigeria and Kenya the epicenters, according to tech ecosystem accelerator AfricArena. Projections put African investment at more than $10 billion by 2025.

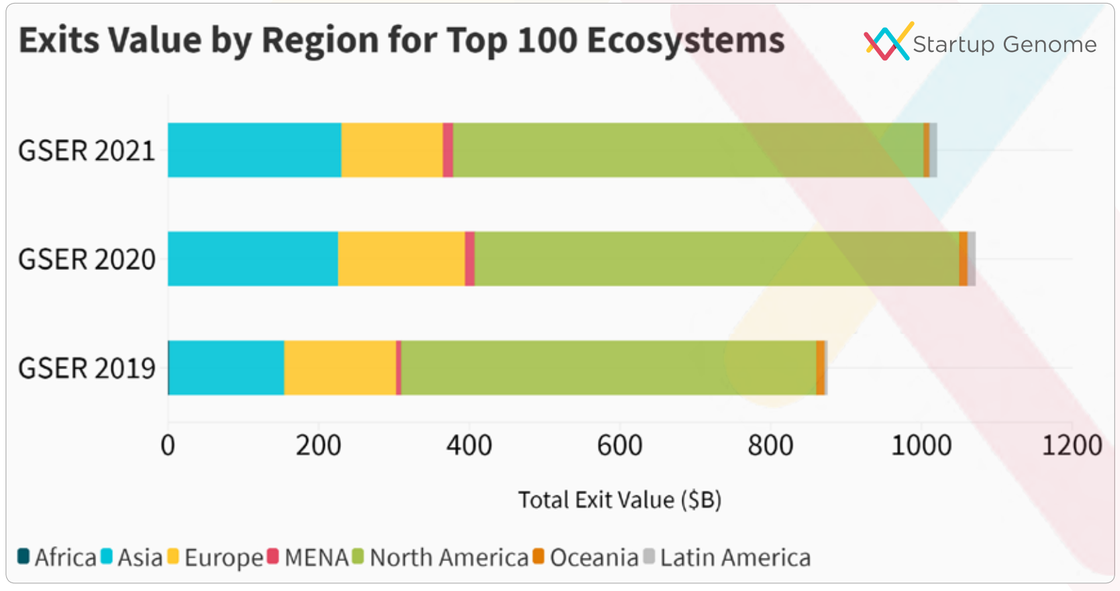
While funding around the world rose, the share received by women-led companies fell: down 27% in 2020 over 2019, according to Crunchbase. In better news, funding for Black founders in the United States—while still small—quadrupled in the first half of 2021, driven by an energized racial-justice movement.

More broadly, between 2018 and 2020 the democratization of technology funding created more than $540 billion in value in the 100 emerging ecosystems identified by Startup Genome. That's a 55% increase over the 2017 to 2019 period. Total early-stage funding in those regions was nearly $28 billion, compared to around $17 billion the year before. Among Startup Genome's 100 top ecosystems, 91 boasted a unicorn in 2020.

The following charts show the amount of total funding and exits in the top 100 global ecosystems over the last three years. While total funding and exit values have increased globally, the composition of the top performers is slowly changing. North America retains the largest share overall. But Asia and MENA are experiencing increases in their share of global funding and exits year-over-year.

Money is not the only resource flowing into global ecosystems. Silicon Valley experienced a net outward migration of technology and managerial talent, driven




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by both Covid-19 and an astronomically priced real-estate market. During the pandemic the number of people leaving overall rose 30%, according to a study by the California Policy Lab. Some—but not all—of those people are coming back; and the exodus from most other tech hubs proved temporary. Still, the forced adoption of remote work during the pandemic spotlighted the potential for companies everywhere to access a global workforce.

And, yes, despite the boom for startups and growth companies, the Big Five got even bigger. With an assist from the pandemic, Alphabet, Amazon, Apple, Facebook, and Google achieved a collective market cap exceeding $8 trillion. Entrepreneurs hoping to mine personal gold from those spectacularly rich hills may be out of luck. As of August, Crunchbase had reported just 12 acquisitions of entrepreneurial companies by the behemoths.

## All Industries Are Tech Industries

In most industries digitalization has been accelerating for decades. Covid floored it.

Some activities—ordering food with an app, facing off in online games, taking remote classes—people simply did more often. But other applications—among them, remote health monitoring, online fitness programs, and virtual events—attracted large audiences for the first time. In the B-to-B world, manufacturers and other companies with vulnerable workforces and supply chains sought to inoculate themselves with technology against further disruption.

Life Sciences—particularly telemedicine--emerged as one of the sweetest spots, with utilization 38 times higher than pre-Covid-19 and soaring investment, according to McKinsey. Startups whose products let patients draw their own blood or enable doctors to conduct remote ear exams are among those reinventing the house call. With more work performed and lives lived online, Cybersecurity startups prospered. Edtech and Gaming—both in decline as recently as 2019—experienced significant increases in Series A funding.

And Covid isn't the only crisis spurring innovation and behavioral change. Cleantech is on the rise as individuals and governments absorb the dire message of August's U.N. climate report. The United States, Canada, the United Kingdom, and South Korea are among those countries that have committed to make dramatic inroads against global warming. With relatively few Cleantech unicorns, opportunities for startups abound. Around 35% of cumulative emission reduction by 2070 will emerge from technologies currently in prototype or demonstration phases, according to the International Energy Agency. Technologies not yet commercially deployed at scale will account for another 40%.

Deep Tech—the innovation-rich, science-and-engineering-based sector with the greatest world-changing potential—remains the fastest riser, accounting for about 30% of capital invested in tech globally since 2015. That's good news for the thousands of startups that will leverage revolutions in things like AI & Big Data and Advanced Manufacturing & Robotics to build their own offerings. Startup ecosystems often cluster around universities, hospitals, and other research organizations that spin off intellectual property. Even with the pandemic, such institutions—as well as private companies—were in overdrive last year, with worldwide patent applications up 4% over 2019: the highest number ever, according to the World Intellectual Property Organization. For the second consecutive year, China was the most prolific filer.

## Critical Policies For Global Startup Ecosystems

Governments increasingly have been paving the bumpy terrain for entrepreneurs. Those efforts accelerated during the pandemic, as countries sought to protect not only small businesses—vulnerable because of their size—but also startups, which are vulnerable because of their youth.

The European Union, with anxious eyes on the United States and China, recently proposed a set of rules to encourage tech startups across its member countries. The rules deal with issues like stock options and

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immigration as well as more prosaic concerns, such as streamlining the legal process for creating a business to just one day. In February, Spain unveiled a 10-year plan covering around 50 measures that range from reducing regulations to retaining talent. A month later, Germany launched the $12 billion Future Fund, an equity fund to support innovative tech companies as they scale.

African countries have been rolling out their own Startup Acts for several years, with tax breaks, grants, and policies that—for example—provide founders with financial support during their startups' infancies. In December, Kenya introduced a bill that, among other things, establishes a National Innovation Agency to foster partnerships among startups, incubators, and investors. Ethiopia's proposed version covers everything from streamlining processes to increasing foreign investment to covering fees for registering intellectual property.

Such policy changes are everywhere. Brazil recently passed a law to shore up the legal framework for starting a business. India is partnering with accelerators to provide as many as 300 early-stage tech startups with funding, mentorship, and other resources. Last year Victoria, Australia launched a $2 billion fund to drive a decade's worth of investment in Life Sciences, Advanced Manufacturing, Cleantech and other sector startups.

Rarely in living memory have individuals, societies, and governments been so aware of startups' importance to our personal lives and economic well-being. Around the world conditions for entrepreneurship are getting better and better. As digital infrastructures improve, capital flows surge, and skilled virtual workforces rise, founders someday will be able to start and funders to invest almost anywhere. Even now, the choices are legion.

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Global Startup Ecosystem Report 2021

# Rankings 2021: Top 30 And Runners-Up

## The Most Comprehensive Research On Startup Ecosystems Globally

Startup Genome's coverage is growing. Our analysis expanded from 60 ecosystems in 2018 to nearly 300 in 2020. That has allowed us to rank the top 40 global startup ecosystems as well as 100 emerging startup ecosystems.

Our expanded list of ecosystems now includes regions that have traditionally received less coverage, including Central Asia, the Middle East, Africa, and Latin America. Our ranking of emerging ecosystems considers places that—while not yet giants—play a growing role in the global economy.

## Key Findings

- Despite a turbulent year, the same five global startup ecosystems from 2020 remain at the top of our rankings. Silicon Valley is #1 followed by New York City and London, which for two consecutive years have tied for #2. Beijing is #4. Boston is #5.
- This year's top performers excel in the Talent & Experience Success Factors. Places like New York City, London, and Boston are able to attract high-quality tech talent to their ecosystems.
- North America continues to dominate the Global Rankings, with 50% of the Top 30 ecosystems in this region. Asia is next with 27%. Europe has 17%.
- Tokyo is the sole new entrant to the Top 10, moving up six places to #9. The primary driver: an increase in successful exits contributing to a growth in Ecosystem Value. Three other ecosystems also climbed the ranks. Shenzhen broke into the Top 20, at #19. Philadelphia moved up an impressive 15 spots, rising from #43 last year to #28 this year. Salt Lake-Provo entered the Top 30, at #30.
- Aside from Tokyo and Philadelphia, this year's biggest movers are Toronto-Waterloo (up to #14 from #18 in 2020) and Seoul (up to #16 from #20).
- Two entrants joined our Runners-Up list: Research Triangle (the Raleigh-Durham-Chapel Hill area of North Carolina, in the United States) and Dublin, Ireland.

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

*Factors are tiered from 10-1*

| | Ranking | Performance | Funding | Connectedness | Market Reach | Knowledge | Talent |
|---|---|---|---|---|---|---|---|
| Silicon Valley | #1 | 10 | 10 | 10 | 10 | 10 | 10 |
| New York City | #2 (tie) | 10 | 10 | 10 | 10 | 5 | 10 |
| London | #2 (tie) | 9 | 10 | 10 | 10 | 7 | 9 |
| Beijing | #4 | 10 | 9 | 5 | 9 | 10 | 10 |
| Boston | #5 | 9 | 9 | 9 | 9 | 5 | 10 |
| Los Angeles | #6 | 9 | 10 | 3 | 9 | 7 | 9 |
| Tel Aviv | #7 | 8 | 9 | 8 | 10 | 4 | 8 |
| Shanghai | #8 | 10 | 7 | 1 | 9 | 10 | 9 |
| Tokyo | #9 | 8 | 9 | 1 | 8 | 9 | 9 |
| Seattle | #10 | 9 | 7 | 7 | 8 | 7 | 8 |
| Washington DC | #11 | 7 | 7 | 6 | 8 | 1 | 8 |
| Paris | #12 | 6 | 8 | 9 | 6 | 1 | 8 |
| Amsterdam-Delta | #13 | 6 | 6 | 9 | 7 | 1 | 7 |
| Toronto-Waterloo | #14 (tie) | 5 | 8 | 7 | 3 | 2 | 6 |
| Chicago | #14 (tie) | 5 | 6 | 6 | 6 | 1 | 7 |
| Seoul | #16 | 6 | 5 | 9 | 5 | 10 | 5 |
| Stockholm | #17 (tie) | 7 | 6 | 5 | 7 | 3 | 6 |
| Singapore | #17 (tie) | 4 | 8 | 6 | 6 | 1 | 5 |
| Shenzhen | #19 | 8 | 5 | 1 | 1 | 9 | 7 |
| Austin | #20 | 4 | 5 | 7 | 5 | 7 | 6 |
| San Diego | #21 | 5 | 3 | 1 | 7 | 6 | 7 |
| Berlin | #22 | 2 | 7 | 10 | 1 | 1 | 5 |
| Bangalore-Karnataka | #23 | 5 | 8 | 8 | 1 | 8 | 3 |
| Sydney | #24 | 4 | 4 | 8 | 5 | 1 | 4 |
| Hangzhou | #25 | 8 | 1 | 1 | 1 | 9 | 6 |
| Atlanta | #26 | 3 | 2 | 2 | 5 | 1 | 5 |
| Denver-Boulder | #27 | 1 | 4 | 5 | 3 | 4 | 4 |
| Philadelphia | #28 | 3 | 3 | 1 | 6 | 1 | 4 |
| Vancouver | #29 | 6 | 3 | 4 | 1 | 2 | 3 |
| Salt Lake-Provo | #30 | 7 | 1 | 1 | 7 | 1 | 1 |
| Dallas | #31 (tie) | 2 | 1 | 1 | 4 | 3 | 2 |
| Hong Kong | #31 (tie) | 1 | 2 | 1 | 8 | 1 | 2 |
| Montreal | #31 (tie) | 3 | 1 | 1 | 1 | 1 | 2 |
| Munich | #31 (tie) | 1 | 3 | 7 | 1 | 3 | 1 |
| Sao Paulo | #31 (tie) | 3 | 4 | 4 | 1 | 1 | 3 |
| Bern-Geneva | #36 (tie) | 1 | 1 | 5 | 1 | 1 | 1 |
| Delhi | #36 (tie) | 2 | 6 | 1 | 1 | 1 | 1 |
| Dublin | #36 (tie) | 1 | 1 | 3 | 1 | 1 | 3 |
| Melbourne | #36 (tie) | 1 | 1 | 4 | 2 | 1 | 2 |
| Research Triangle | #36 (tie) | 1 | 1 | 1 | 1 | 1 | 4 |

*31-35 and 36-40 are in alphabetical order*

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## Ecosystem Assessment And Reporting

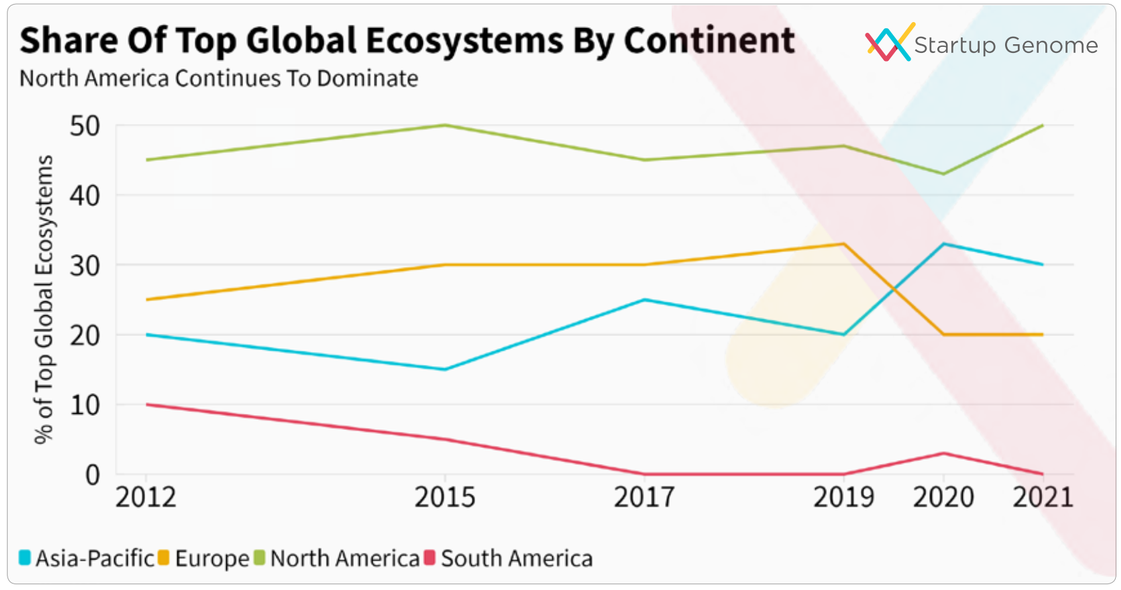
Developing ecosystems can be a fuzzy process. Working with 300 partners, we turned it into a science. Without reliable benchmarks or data, innovation policies and programs often fail to produce the expected economic impact. Our leading entrepreneurship and startup ecosystem assessment methodologies guide policy executives toward sound decisions that produce more talent, startups, and scaleups.

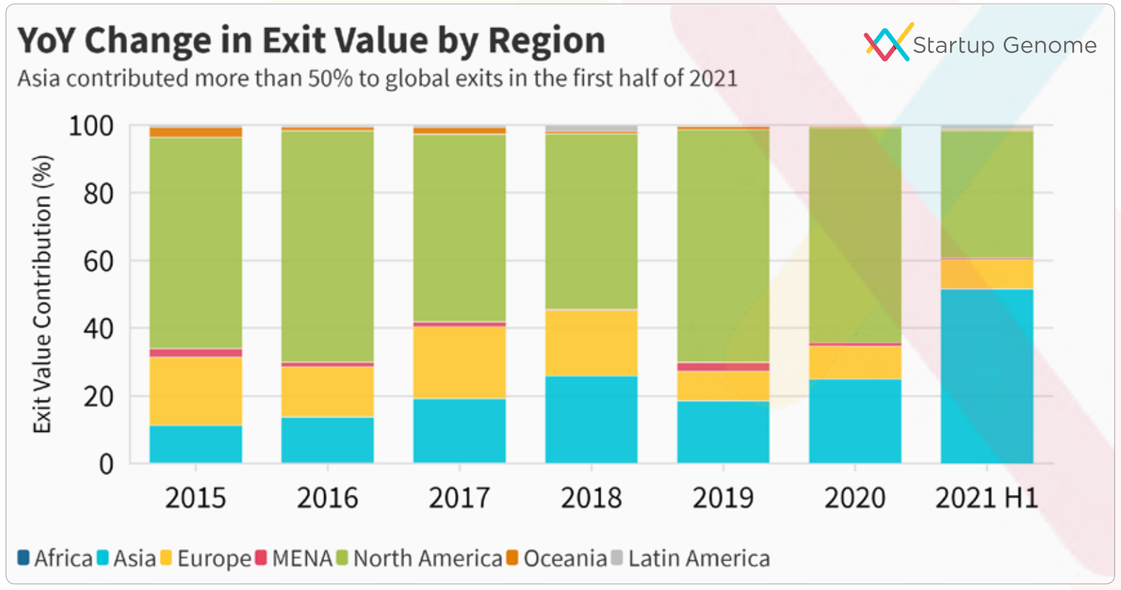
North America continues to dominate the Global Rankings, with 50% of the Top 30 ecosystems in this region. Asia is next with 27% and has the potential to catch up with North America as evidenced by the steady growth in exit value. Exits in the first half of 2021 alone total over $423.5 billion.

## Leaders

The top seven global ecosystems have remained the same for three consecutive years. Each leader is worth at least $110 billion in Ecosystem Value, with a median of $157 billion. In aggregate, the seven leaders account for an Ecosystem Value of over $2.2 trillion, up half a trillion dollars from last year. In comparison, the remaining top ecosystems, in aggregate, are worth $942 billion in Ecosystem Value.

London remains a vibrant and growing tech hub. Its position at #2, shoulder-to-shoulder with New York City, largely derives from extremely strong performance in Funding, Connectedness, and Access to Talent. Los Angeles, previously tied at #6 with Tel Aviv, edged ahead this year with an improvement in Funding and Exit Activity, which exceeded $50 million. Tel Aviv, at #7, continues strong, appearing in the top tier across nearly all our Success Factors: Performance, Funding, Experience, Connectedness, and Market Reach.




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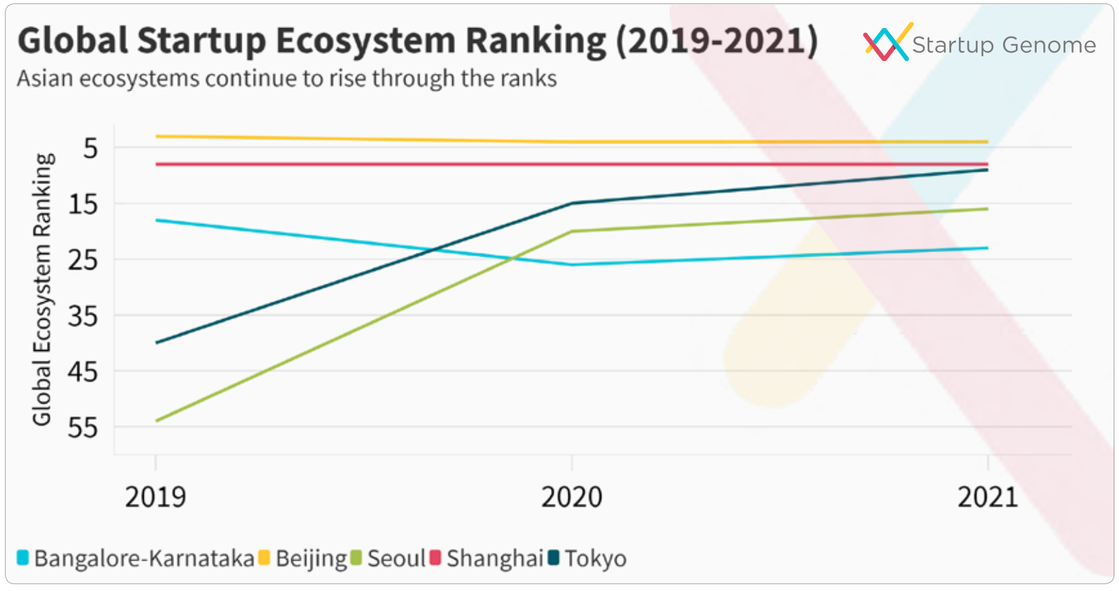
## Major Hubs And Rising Ecosystems

Tokyo has risen steadily over the years. In 2019 it was a Runner-Up; in 2020 it breached the Top 30; and this year it is #9. Tokyo excels in the Funding, Experience, and Knowledge Factors.

Asian ecosystems continue to show substantial progress. Seoul jumped to #20 in 2020 and this year landed at #16, thanks to strength in the Knowledge, Performance, and Experience Factors. Shenzhen and Hangzhou, in China, are following a similar trajectory. Shenzhen is #19 this year, up 28 spots from 2019, buoyed by substantial improvements in Connectedness and Market Reach. Hangzhou, which in 2019 was in the 50s, rose a whopping 37 spots to #25. Another Chinese ecosystem, Shanghai, remains strong at #8, a rank it has held for three consecutive years.

A few ecosystems are back stronger after a slight dip in the 2020 rankings. Toronto-Waterloo rose four spots to #14 based on gains in Performance, Funding, and Experience. Bangalore-Karnataka, at #23, improved enough in Funding, Connectedness, and Knowledge to return to the Top 25 after briefly slipping out. Sydney dropped a few spots in 2020; but this year it is back up to #24.

Some U.S. ecosystems, such as San Diego and Washington, D.C., have held steady in the global rankings. Philadelphia got a big boost, thanks largely to its strong Life Sciences ecosystem. However, a few mid-tier U.S. ecosystems risk falling behind as some of their global counterparts experience an influx of investment and international interest. Chicago, Austin, Atlanta, Seattle, and Denver-Boulder—while still in the Top 40—need to pick up the pace with investment and policy decisions that support tech entrepreneurs. In Europe, Berlin previously showed promising growth and remains in the Top 30. But this year it has been overtaken by other startup ecosystems with higher growth.




## Top 30 And Runners-Up

As in 2020, six countries boast two or more top startup ecosystems. The United States has 15 of the top startup ecosystems: one more than last year. China, India, Canada, Germany, and Australia all maintained their top ecosystems.

This year's Runners-Up (#31 to #40) include Dublin and the Research Triangle, which moved up the ranks; and São Paulo, which fell out of the Top 30. Other Runners-Up that have experienced impressive growth are Montreal, Dallas, and Delhi. Those ecosystems have seen an increase in early-stage funding, positioning them to become top performers. To the extent Runners-Up display gaps, it is generally in the Performance, Knowledge, and Experience Factors.

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# Understanding The Model: Why You Should Care About Measuring Your Startup Ecosystem

The goal of the Global Startup Ecosystem Report is to answer three key questions asked by founders, investors, and policymakers around the globe:

- Where are the world's top-performing ecosystems: the places early-stage startups have the best shot at building global success?
- Why are some ecosystems rising while others lag?
- How can ecosystems increase their chances of winning in the global startup revolution?

Startup Genome began in 2011 as a research project with Steve Blank, the father of the Customer Development Methodology, and Prof. Chuck Eesley at Stanford University. Since then we have been on a mission to codify and understand the Success Factors of ecosystems so that more places can create and capture value generated by the global startup revolution.

We have made—and continue to make—tremendous progress. This report represents by far the deepest and most comprehensive startup ecosystem research ever done by Startup Genome, the Global Entrepreneurship Network, and our field in general. Among other things, this year's report has:

- Nearly doubled the number of ecosystems studied since our last published rankings. This year we assessed more than 275 ecosystems across more than 100 countries to rank both the 40 top performing and also the 100 top emerging ecosystems. This expansion allowed us to cover more ecosystems in Africa and Latin America.
- Published our first ranking of the Top 100 Emerging Ecosystems, which follow the Top 40 in terms of performance. For the emerging ecosystems we weighted Success Factors slightly differently than for the top performers, emphasizing Factors that contribute most to ecosystems that are just beginning to grow. (For more information, please see Methodology.)
- Incorporated into our model several real-time data sources, including Google Trends (to track public discourse on startups); GitHub (to identify active programmers); and Meetup (to measure the number and frequency of local tech events).

Beyond the ranking, Startup Genome's broader Ecosystem Assessment Framework includes more than 100 metrics, which comprehensively capture and assess those Factors driving startup performance. For the 2021 rankings, we measured six Success Factors. (For more information, please see Methodology.) They are:

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

We began this section with three strategic questions related to identifying the most fertile ground for startups and how governments can help founders grow businesses there. From those questions emerge others, all of which our Ecosystem Assessment Framework can help answer. For example:

**For founders and startup executives:**

- Where should I launch my tech startup to maximize my chances of success?
- Where should I open a second office?
- Where can I get the most bang for my buck in terms of startup costs?

**For investors:**

- Where do startups have the best odds of raising additional funding?
- Which high-performing ecosystems have a gap in experienced local investors from which I might benefit?

**For policymakers:**

- How should I change local policies to support our startup ecosystem during the COVID-19 crisis?

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- How should I measure the progress of our startup ecosystem?
- What are the biggest gaps in our startup economy that we should address first?

## Key Concepts

### 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 Deep Tech, Life Sciences, and Cleantech.

### 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. Our rankings are based on six factors, highlighted in our Methodology section, as well as in each rankings section.

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# Success Factor Highlights

## Performance

### Key Findings

- Silicon Valley still reigns when it comes to Ecosystem Value creation and Exits. Others—including Shanghai, New York City, Boston, and London—grow stronger year over year.
- Chinese ecosystems continue to excel at launching successful startups. These startups move to the next stage of funding with relative ease.
- Runners-Up Salt-Lake-Provo, Wuxi, Guangzhou, and São Paulo are punching above their weight.

Startup Genome

| | Performance | | |
|---|---|---|---|
| | Exit | Ecosystem Value | Startup Success |
| Silicon Valley | 10 | 10 | 10 |
| New York City | 10 | 10 | 4 |
| London | 10 | 9 | 4 |
| Beijing | 9 | 10 | 10 |
| Boston | 10 | 9 | 5 |
| Los Angeles | 9 | 9 | 6 |
| Tel Aviv | 8 | 8 | 5 |
| Shanghai | 10 | 10 | 10 |
| Tokyo | 9 | 6 | 2 |
| Seattle | 8 | 8 | 9 |
| Washington DC | 8 | 5 | 8 |
| Paris | 4 | 8 | 1 |
| Amsterdam-Delta | 6 | 4 | 7 |
| Toronto-Waterloo | 7 | 3 | 6 |
| Chicago | 4 | 5 | 8 |
| Seoul | 5 | 6 | 5 |
| Stockholm | 6 | 7 | 7 |
| Singapore | 4 | 5 | 2 |
| Shenzhen | 7 | 9 | 5 |
| Austin | 4 | 3 | 8 |
| San Diego | 5 | 6 | 2 |
| Berlin | 2 | 6 | 3 |
| Bangalore-Karnataka | 1 | 8 | 10 |
| Sydney | 6 | 3 | 5 |
| Hangzhou | 7 | 8 | 6 |
| Atlanta | 3 | 4 | 4 |
| Denver-Boulder | 2 | 2 | 3 |
| Philadelphia | 6 | 3 | 1 |
| Vancouver | 4 | 5 | 10 |
| Salt Lake-Provo | 8 | 5 | 8 |
| Dallas | 5 | 2 | 3 |
| Hong Kong | 2 | 5 | 1 |
| Montreal | 7 | 1 | 7 |
| Munich | 3 | 2 | 7 |
| Sao Paulo | 2 | 8 | 2 |
| Bern-Geneva | 4 | 1 | 3 |
| Delhi | 1 | 7 | 10 |
| Dublin | 1 | 1 | 9 |
| Melbourne | 6 | 1 | 1 |
| Research Triangle | 1 | 2 | 8 |

**The Performance Success Factor Assesses:**

- **Ecosystem Value:** the economic impact of the ecosystem, calculated as the total exit valuation and startup valuations over two-and-a-half-years
- **Exits:** the number of exits over $50 million and $1 billion, as well as growth in the number of exits
- **Startup Success:** the number of successful startups in an ecosystem. Contributing metrics are early-stage success (ratio of Series B to Series A companies), late-stage success (ratio of Series C to Series A companies and the number of billion-dollar-club startups), and speed to exit (IPO and other).

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# Funding

## Key Findings

- Paris, Singapore, and Amsterdam-Delta perform very well in Quality and Activity of Funding relative to their global rankings.
- Philadelphia, Salt Lake-Provo, and Sharjah show promise, with more experienced investors in their ecosystems.
- Toronto-Waterloo, Singapore, and Bangalore-Karnataka perform strongly on Access.

| | Funding | |
|---|---|---|
| | Access | Quality & Activity |
| Silicon Valley | 10 | 10 |
| New York City | 10 | 10 |
| London | 10 | 10 |
| Beijing | 8 | 10 |
| Boston | 9 | 9 |
| Los Angeles | 10 | 9 |
| Tel Aviv | 9 | 9 |
| Shanghai | 7 | 9 |
| Tokyo | 9 | 8 |
| Seattle | 7 | 6 |
| Washington DC | 6 | 8 |
| Paris | 8 | 8 |
| Amsterdam-Delta | 7 | 7 |
| Toronto-Waterloo | 9 | 6 |
| Chicago | 6 | 7 |
| Seoul | 5 | 8 |
| Singapore | 8 | 7 |
| Stockholm | 6 | 4 |
| Shenzhen | 4 | 7 |
| Austin | 5 | 6 |
| San Diego | 4 | 3 |
| Berlin | 7 | 6 |
| Bangalore-Karnataka | 8 | 5 |
| Sydney | 4 | 4 |
| Hangzhou | 2 | 2 |
| Atlanta | 3 | 4 |
| Denver-Boulder | 5 | 3 |
| Philadelphia | 4 | 5 |
| Vancouver | 3 | 2 |
| Salt Lake-Provo | 1 | 3 |
| Dallas | 1 | 1 |
| Hong Kong | 2 | 6 |
| Montreal | 2 | 4 |
| Munich | 3 | 5 |
| Sao Paulo | 5 | 3 |
| Bern-Geneva | 3 | 1 |
| Delhi | 6 | 2 |
| Dublin | 2 | 2 |
| Melbourne | 1 | 1 |
| Research Triangle | 2 | 1 |

### The Funding Success Factor Assesses:

- **Access:** a function of early-stage funding volume and growth
- **Quality and 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 2021 and the number of new investors).

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# Market Reach

## Key Findings

- Of the Top 30 ecosystems, seven score high for the presence of globally leading companies. Hong Kong, Estonia, and Singapore are catching up quickly, hatching more of these companies in their ecosystems.
- New York City, Philadelphia, and Pittsburgh perform well on both local and global Market Reach.
- Many Chinese ecosystems appear to have stronger local than global Market Reach. The inverse is true in Japan.

Startup Genome

| | Market Reach | | |
|---|---|---|---|
| | Local Market Reach | Globally Leading Companies | Quality |
| Silicon Valley | 10 | 10 | 10 |
| New York City | 10 | 9 | 10 |
| London | 5 | 10 | 10 |
| Beijing | 7 | 10 | 2 |
| Boston | 10 | 9 | 10 |
| Los Angeles | 10 | 8 | 10 |
| Tel Aviv | 1 | 10 | 10 |
| Shanghai | 7 | 9 | 2 |
| Tokyo | 6 | 7 | 6 |
| Seattle | 10 | 6 | 10 |
| Washington DC | 10 | 5 | 10 |
| Paris | 5 | 7 | 6 |
| Amsterdam-Delta | 2 | 8 | 6 |
| Chicago | 10 | 3 | 10 |
| Toronto-Waterloo | 4 | 6 | 6 |
| Seoul | 3 | 7 | 3 |
| Stockholm | 2 | 8 | 3 |
| Singapore | 1 | 8 | 6 |
| Shenzhen | 7 | 5 | 2 |
| Austin | 10 | 2 | 10 |
| San Diego | 10 | 4 | 10 |
| Berlin | 5 | 3 | 3 |
| Bangalore-Karnataka | 5 | 3 | 2 |
| Sydney | 3 | 6 | 10 |
| Hangzhou | 7 | 6 | 2 |
| Atlanta | 10 | 2 | 10 |
| Denver-Boulder | 10 | 1 | 10 |
| Philadelphia | 10 | 3 | 10 |
| Vancouver | 4 | 1 | 6 |
| Salt Lake-Provo | 10 | 4 | 10 |
| Dallas | 10 | 1 | 10 |
| Hong Kong | 1 | 9 | 2 |
| Montreal | 4 | 4 | 6 |
| Munich | 5 | 2 | 3 |
| Sao Paulo | 4 | 5 | 2 |
| Bern-Geneva | 2 | 7 | 4 |
| Delhi | 5 | 2 | 2 |
| Dublin | 1 | 5 | 6 |
| Melbourne | 3 | 4 | 10 |
| Research Triangle | 10 | 1 | 10 |

### 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

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# Connectedness

## Key Findings

- European ecosystems—particularly Berlin, Amsterdam-Delta, and Paris—rank high on Local Connectedness. In Asia, Seoul and Bangalore-Karnataka perform well.
- Beijing, Salt Lake-Provo, and Stockholm are high-performing ecosystems that score fairly low in infrastructure, revealing an addressable gap.
- New Zealand and Zurich perform well in Local Connectedness relative to their overall ranks.

| | Connectedness | |
|---|---|---|
| | Local Connectedness | Infrastructure |
| Silicon Valley | 10 | 10 |
| New York City | 10 | 10 |
| London | 10 | 10 |
| Beijing | 6 | 1 |
| Boston | 8 | 10 |
| Los Angeles | 4 | 9 |
| Tel Aviv | 9 | 8 |
| Shanghai | 2 | 5 |
| Tokyo | 2 | 4 |
| Seattle | 7 | 4 |
| Washington DC | 6 | 8 |
| Paris | 9 | 9 |
| Amsterdam-Delta | 9 | 8 |
| Toronto-Waterloo | 7 | 3 |
| Chicago | 5 | 9 |
| Seoul | 9 | 8 |
| Stockholm | 7 | 1 |
| Singapore | 6 | 8 |
| Shenzhen | 3 | 3 |
| Austin | 8 | 3 |
| San Diego | 3 | 9 |
| Berlin | 10 | 8 |
| Bangalore-Karnataka | 8 | 6 |
| Sydney | 8 | 4 |
| Hangzhou | 1 | 1 |
| Atlanta | 4 | 6 |
| Denver-Boulder | 5 | 3 |
| Philadelphia | 1 | 9 |
| Vancouver | 4 | 6 |
| Salt Lake-Provo | 2 | 1 |
| Dallas | 3 | 4 |
| Hong Kong | 2 | 6 |
| Montreal | 1 | 3 |
| Munich | 7 | 6 |
| Sao Paulo | 4 | 6 |
| Bern-Geneva | 5 | 8 |
| Delhi | 1 | 2 |
| Dublin | 5 | 2 |
| Melbourne | 6 | 2 |
| Research Triangle | 3 | 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

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# Talent

## Key Findings

- Four out of the Top 5 top ecosystems—London, New York City, Boston, and Beijing—are highly focused on Life Sciences. Silicon Valley has greater access to Tech Talent than to Life Sciences Talent.
- Philadelphia, Shenzhen, Rhineland, and Copenhagen have significantly improved their Access and Quality of Tech Talent.
- Many Asian ecosystems perform well on the Cost of Tech Talent. Chennai, Mumbai, Bangalore-Karnataka, and Delhi also demonstrate strong Access and high Quality, as does São Paulo in Latin America.

**The Talent Success Factor Assesses:**

### Tech Talent

- **Access:** the percentage of engineers and employees with at least 2 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. Quality is also a proxy for experienced scaled teams in the ecosystem.
- **Cost:** Above this is referred to as cost efficiency average software engineer salaries. (Higher salaries lead to lower scores.)

Startup Genome

| | Talent | | | | | | |
|---|---|---|---|---|---|---|---|
| | Tech | | Life Sciences | | | Experience | |
| | Cost | Quality & Access | STEM Access | LS Access | LS Quality | Scaling Experience in Ecosystem | Startup Experience in Ecosystem |
| Silicon Valley | 5 | 10 | 2 | 5 | 10 | 1 | 2 |
| New York City | 3 | 10 | 10 | 10 | 5 | 6 | 8 |
| London | 5 | 10 | 10 | 10 | 10 | 10 | 10 |
| Beijing | 9 | 8 | 10 | 10 | 4 | 10 | 10 |
| Boston | 5 | 10 | 8 | 9 | 9 | 7 | 7 |
| Los Angeles | 3 | 10 | 7 | 7 | 7 | 6 | 7 |
| Tel Aviv | 6 | 5 | 6 | 8 | 2 | 8 | 7 |
| Shanghai | 9 | 7 | 10 | 9 | 3 | 10 | 10 |
| Tokyo | 1 | 7 | 10 | 9 | 1 | 10 | 10 |
| Seattle | 1 | 9 | 1 | 1 | 10 | 2 | 2 |
| Washington DC | 2 | 10 | 7 | 6 | 4 | 9 | 6 |
| Paris | 7 | 8 | 10 | 8 | 5 | 7 | 9 |
| Amsterdam-Delta | 2 | 7 | 5 | 9 | 9 | 4 | 3 |
| Toronto-Waterloo | 7 | 6 | 10 | 7 | 7 | 8 | 7 |
| Chicago | 2 | 9 | 2 | 6 | 5 | 3 | 1 |
| Seoul | 8 | 3 | 10 | 10 | 1 | 9 | 9 |
| Stockholm | 4 | 4 | 3 | 6 | 8 | 4 | 6 |
| Singapore | 8 | 3 | 5 | 3 | 10 | 5 | 5 |
| Shenzhen | 10 | 6 | 3 | 1 | 6 | 3 | 3 |
| Austin | 5 | 7 | 2 | 1 | 4 | 2 | 2 |
| San Diego | 6 | 8 | 4 | 2 | 8 | 2 | 2 |
| Berlin | 8 | 3 | 6 | 6 | 8 | 4 | 5 |
| Bangalore-Karnataka | 10 | 1 | 1 | 1 | 1 | 1 | 1 |
| Sydney | 6 | 6 | 10 | 8 | 7 | 6 | 8 |
| Hangzhou | 9 | 1 | 6 | 4 | 3 | 7 | 4 |
| Atlanta | 4 | 8 | 4 | 4 | 6 | 4 | 4 |
| Denver-Boulder | 3 | 4 | 2 | 4 | 3 | 3 | 3 |
| Philadelphia | 3 | 6 | 3 | 5 | 6 | 5 | 6 |
| Vancouver | 3 | 5 | 6 | 3 | 4 | 5 | 4 |
| Salt Lake-Provo | 6 | 2 | 1 | 2 | 2 | 3 | 1 |
| Dallas | 4 | 4 | 1 | 3 | 2 | 1 | 1 |
| Hong Kong | 9 | 2 | 7 | 7 | 5 | 7 | 8 |
| Montreal | 8 | 3 | 5 | 3 | 7 | 4 | 5 |
| Munich | 7 | 2 | 5 | 2 | 9 | 9 | 8 |
| Sao Paulo | 10 | 1 | 10 | 5 | 2 | 8 | 9 |
| Bern-Geneva | 1 | 2 | 3 | 8 | 8 | 6 | 4 |
| Delhi | 10 | 1 | 7 | 2 | 1 | 8 | 6 |
| Dublin | 5 | 4 | 4 | 4 | 3 | 3 | 3 |
| Melbourne | 7 | 5 | 10 | 7 | 7 | 9 | 9 |
| Research Triangle | 1 | 5 | 4 | 5 | 10 | 5 | 5 |

### 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.

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# Knowledge

## Key Findings

- Chinese ecosystems dominate the top tiers of Knowledge. Seoul, Tokyo, Bangalore-Karnataka, and Silicon Valley compete with China for the top spots.
- Despite their higher overall performance in Knowledge, Beijing, Shanghai, Brisbane, and Zurich rank low on the H-Index, which measures publications and research in Life Sciences.
- Top North American ecosystems like New York City and Boston; and up-and-coming ecosystems like Portland, San Diego, and Phoenix, have high H-Index scores but rank low on patents. That likely indicates a focus by founders on business model innovation rather than on leveraging tangible IP production.

| | Knowledge | |
|---|---|---|
| | Patents | Research |
| Silicon Valley | 9 | 10 |
| New York City | 5 | 10 |
| London | 8 | 7 |
| Beijing | 10 | 3 |
| Boston | 5 | 10 |
| Los Angeles | 6 | 10 |
| Tel Aviv | 8 | 2 |
| Shanghai | 10 | 3 |
| Tokyo | 9 | 6 |
| Seattle | 7 | 10 |
| Washington DC | 3 | 10 |
| Paris | 4 | 6 |
| Amsterdam-Delta | 3 | 5 |
| Toronto-Waterloo | 7 | 6 |
| Chicago | 2 | 10 |
| Seoul | 10 | 2 |
| Stockholm | 8 | 4 |
| Singapore | 6 | 2 |
| Shenzhen | 9 | 3 |
| Austin | 7 | 10 |
| San Diego | 6 | 10 |
| Berlin | 3 | 6 |
| Bangalore-Karnataka | 9 | 2 |
| Sydney | 3 | 4 |
| Hangzhou | 10 | 3 |
| Atlanta | 2 | 10 |
| Denver-Boulder | 5 | 10 |
| Philadelphia | 2 | 10 |
| Vancouver | 7 | 6 |
| Salt Lake-Provo | 1 | 10 |
| Dallas | 4 | 10 |
| Hong Kong | 1 | 1 |
| Montreal | 4 | 6 |
| Munich | 7 | 6 |
| Sao Paulo | 1 | 1 |
| Bern-Geneva | 4 | 4 |
| Delhi | 8 | 2 |
| Dublin | 5 | 1 |
| Melbourne | 2 | 4 |
| Research Triangle | 1 | 10 |

### 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

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# Rankings 2021: Top 100 Emerging Ecosystems

Startup Genome now assesses over 275 ecosystems across over 100 countries to rank the Top 30 globally, runners-up, and since 2020, the top Emerging Ecosystems. These are ecosystems that are 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

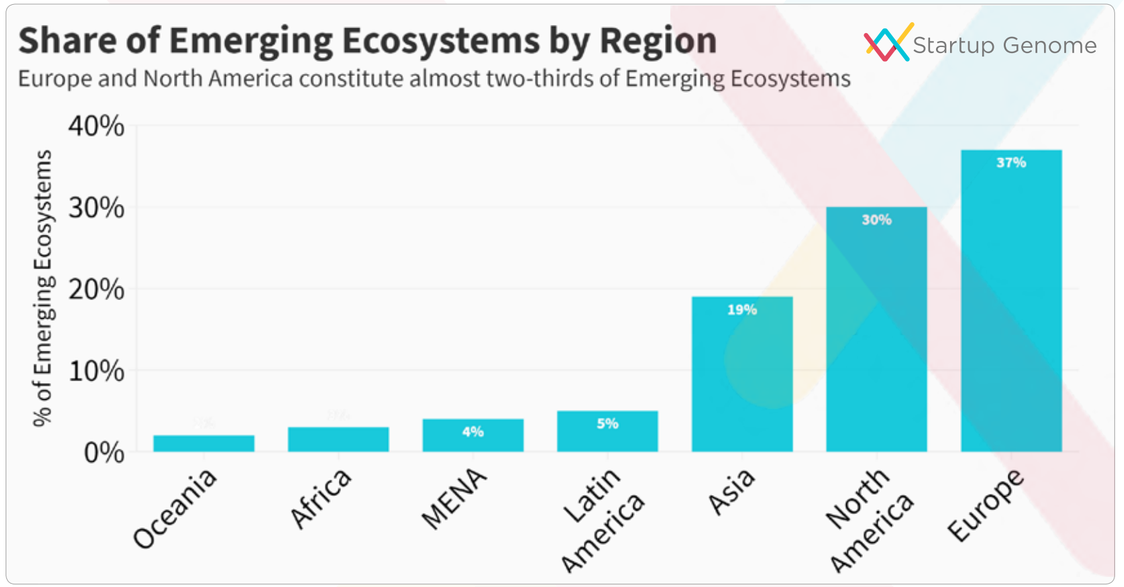
- Mumbai is once again the #1 Emerging Ecosystem. It outperformed all others in Performance, Funding, Experience, and Talent & Experience.
- Significant shifts occurred elsewhere in the Top 10.
  - Wuxi debuted at an impressive #7 after previously failing to break the Top 10.
  - Barcelona sprinted ahead of Madrid to #5. It is now followed by Estonia at #6, up from #14.
  - Miami joined the Top 10 at #10.
- Europe and Asia dominate the Top 10, with five and four emerging ecosystems, respectively. Philadelphia—a Top 10 Emerging Ecosystem last year—has graduated to the Top 30 Global.

The Top 100 Emerging Ecosystems are collectively worth over $540 billion in Ecosystem Value, which is a 55% increase from last year. While Europe and North America still boast the majority of emerging ecosystems, Latin America has three more in the Top 100 than last year, with Buenos Aires, Santiago-Valparaiso, and Rio de Janeiro joining Mexico City and Bogotá. The MENA

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region has four emerging ecosystems in the Top 100 this year - Dubai, Cairo, Riyadh, and Abu Dhabi.

The Top 100 Emerging Ecosystems created 124 billion-dollar startups in the period between 2011 and 2020, with 53 ecosystems contributing the majority. MENA started producing unicorns in 2016 and Latin America in 2018. Asia is currently in the lead. It accounts for 36% of the billion-dollar club, followed by North America with 30% and Europe with 27%.




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# Top 100 Emerging Ecosystems

Startup Genome

*Factors are tiered from 10-1*

| | Rank | Country | Continent | Performance | Funding | Market Reach | Talent |
|---|---|---|---|---|---|---|---|
| **Mumbai** | 1 | India | Asia | 10 | 10 | 9 | 10 |
| **Copenhagen** | 2 | Denmark | Europe | 10 | 10 | 10 | 8 |
| **Jakarta** | 3 | Indonesia | Asia | 10 | 10 | 9 | 8 |
| **Guangzhou** | 4 | China | Asia | 10 | 8 | 6 | 10 |
| **Barcelona** | 5 | Spain | Europe | 9 | 10 | 7 | 10 |
| **Estonia** | 6 | Estonia | Europe | 6 | 9 | 10 | 1 |
| **Wuxi** | 7 | China | Asia | 10 | 5 | 9 | 10 |
| **Madrid** | 8 | Spain | Europe | 9 | 10 | 9 | 10 |
| **Zurich** | 9 | Switzerland | Europe | 8 | 10 | 9 | 7 |
| **Miami** | 10 | United States | North America | 10 | 10 | 4 | 10 |
| **Dubai** | 11 | United Arab Emirates | MENA | 8 | 10 | 10 | 4 |
| **Brussels** | 12 | Belgium | Europe | 9 | 9 | 10 | 6 |
| **Bristol** | 13 | United Kingdom | Europe | 9 | 9 | 9 | 9 |
| **Manchester-Liverpool** | 14 | United Kingdom | Europe | 9 | 9 | 5 | 10 |
| **Istanbul** | 15 | Turkey | Europe | 7 | 10 | 9 | 9 |
| **Detroit** | 16 | United States | North America | 10 | 7 | 7 | 8 |
| **Lisbon** | 17 | Portugal | Europe | 9 | 6 | 10 | 1 |
| **Portland** | 18 | United States | North America | 10 | 8 | 9 | 5 |
| **Houston** | 19 | United States | North America | 9 | 8 | 6 | 9 |
| **Helsinki** | 20 | Finland | Europe | 7 | 10 | 3 | 9 |
| **Kuala Lumpur** | 21-30 | Malaysia | Asia | 8 | 8 | 9 | 6 |
| **Minneapolis** | 21-30 | United States | North America | 8 | 8 | 8 | 8 |
| **Pittsburgh** | 21-30 | United States | North America | 7 | 9 | 8 | 5 |
| **Milan** | 21-30 | Italy | Europe | 7 | 9 | 1 | 10 |
| **Moscow** | 21-30 | Russia | Europe | 6 | 8 | 1 | 10 |
| **Mexico City** | 21-30 | Mexico | Latin America | 6 | 9 | 4 | 9 |
| **Taipei City** | 21-30 | Taiwan | Asia | 7 | 7 | 6 | 9 |
| **Lithuania** | 21-30 | Lithuania | Europe | 2 | 7 | 10 | 1 |
| **Frankfurt** | 21-30 | Germany | Europe | 9 | 4 | 8 | 8 |
| **Hamburg** | 21-30 | Germany | Europe | 7 | 8 | 8 | 6 |
| **Phoenix** | 31-40 | United States | North America | 8 | 7 | 4 | 7 |
| **Nanjing** | 31-40 | China | Asia | 10 | 4 | 1 | 10 |
| **Tampa Bay** | 31-40 | United States | North America | 8 | 7 | 8 | 5 |
| **Chengdu** | 31-40 | China | Asia | 9 | 3 | 4 | 9 |

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# Top 100 Emerging Ecosystems (contd.)

*Factors are tiered from 10-1*

| | Rank | Country | Continent | Performance | Funding | Market Reach | Talent |
|---|---|---|---|---|---|---|---|
| **Edinburgh-Glasgow** | 31-40 | United Kingdom | Europe | 6 | 9 | 1 | 10 |
| **Vienna** | 31-40 | Austria | Europe | 5 | 7 | 9 | 5 |
| **Orlando** | 31-40 | United States | North America | 8 | 5 | 8 | 6 |
| **Columbus** | 31-40 | United States | North America | 8 | 3 | 8 | 7 |
| **Bogota** | 31-40 | Colombia | Latin America | 6 | 8 | 8 | 3 |
| **Bucharest** | 31-40 | Romania | Europe | 9 | 3 | 10 | 1 |
| **Oslo** | 41-50 | Norway | Europe | 6 | 8 | 3 | 6 |
| **Rhineland** | 41-50 | Germany | Europe | 5 | 7 | 1 | 9 |
| **New Zealand** | 41-50 | New Zealand | Oceania | 5 | 6 | 7 | 8 |
| **Charlotte** | 41-50 | United States | North America | 8 | 3 | 8 | 2 |
| **Birmingham** | 41-50 | United Kingdom | Europe | 5 | 6 | 1 | 9 |
| **Hartford** | 41-50 | United States | North America | 8 | 1 | 8 | 7 |
| **Lyon** | 41-50 | France | Europe | 6 | 6 | 1 | 8 |
| **Warsaw** | 41-50 | Poland | Europe | 3 | 8 | 2 | 7 |
| **Stuttgart** | 41-50 | Germany | Europe | 7 | 4 | 3 | 7 |
| **Santa Barbara** | 41-50 | United States | North America | 10 | 1 | 7 | 4 |
| **Nashville** | 51-60 | United States | North America | 6 | 6 | 3 | 5 |
| **Lagos** | 51-60 | Nigeria | Africa | 3 | 9 | 1 | 6 |
| **Las Vegas** | 51-60 | United States | North America | 6 | 6 | 1 | 5 |
| **Indianapolis** | 51-60 | United States | North America | 4 | 7 | 3 | 5 |
| **Cairo** | 51-60 | Egypt | MENA | 1 | 9 | 1 | 7 |
| **Sacramento** | 51-60 | United States | North America | 7 | 2 | 4 | 3 |
| **Cincinnati** | 51-60 | United States | North America | 3 | 4 | 7 | 6 |
| **Wuhan** | 51-60 | China | Asia | 7 | 1 | 1 | 8 |
| **Richmond** | 51-60 | United States | North America | 7 | 5 | 2 | 2 |
| **Buenos Aires** | 51-60 | Argentina | Latin America | 4 | 5 | 7 | 3 |
| **Chennai** | 61-70 | India | Asia | 4 | 4 | 1 | 8 |
| **Cleveland** | 61-70 | United States | North America | 5 | 1 | 7 | 4 |
| **Durham** | 61-70 | United Kingdom | Europe | 4 | 4 | 1 | 4 |
| **Ho Chi Minh City** | 61-70 | Vietnam | Asia | 2 | 5 | 2 | 7 |
| **Calgary** | 61-70 | Canada | North America | 4 | 5 | 2 | 3 |
| **Madison** | 61-70 | United States | North America | 5 | 1 | 7 | 4 |
| **Pune** | 61-70 | India | Asia | 6 | 4 | 1 | 2 |
| **Marseille** | 61-70 | France | Europe | 4 | 1 | 4 | 5 |

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# Top 100 Emerging Ecosystems (contd.)

Startup Genome

*Factors are tiered from 10-1*

| | Rank | Country | Continent | Performance | Funding | Market Reach | Talent |
|---|---|---|---|---|---|---|---|
| **Hyderabad** | 61-70 | India | Asia | 1 | 6 | 1 | 4 |
| **Ottawa** | 61-70 | Canada | North America | 3 | 3 | 1 | 7 |
| **Bangkok** | 71-80 | Thailand | Asia | 4 | 3 | 1 | 3 |
| **Antwerp** | 71-80 | Belgium | Europe | 3 | 5 | 3 | 2 |
| **St. Louis** | 71-80 | United States | North America | 2 | 6 | 1 | 3 |
| **Xiamen** | 71-80 | China | Asia | 4 | 1 | 1 | 8 |
| **Rome** | 71-80 | Italy | Europe | 1 | 3 | 1 | 5 |
| **Brisbane** | 71-80 | Australia | Oceania | 1 | 5 | 1 | 6 |
| **Nairobi** | 71-80 | Kenya | Africa | 1 | 6 | 1 | 2 |
| **Athens** | 71-80 | Greece | Europe | 1 | 2 | 2 | 4 |
| **Kansas City** | 71-80 | United States | North America | 2 | 2 | 1 | 4 |
| **Krakow** | 71-80 | Poland | Europe | 1 | 2 | 4 | 3 |
| **Cape Town** | 81-90 | South Africa | Africa | 1 | 2 | 1 | 5 |
| **Santiago-Valparaíso** | 81-90 | Chile | Latin America | 1 | 7 | 1 | 4 |
| **Malta** | 81-90 | Malta | Europe | 3 | 1 | 7 | 3 |
| **Jacksonville** | 81-90 | United States | North America | 5 | 1 | 6 | 4 |
| **Tianjin** | 81-90 | China | Asia | 5 | 1 | 2 | 7 |
| **Wilmington** | 81-90 | United States | North America | 3 | 5 | 1 | 1 |
| **Western Denmark** | 81-90 | Denmark | Europe | 1 | 2 | 2 | 3 |
| **Luxembourg** | 81-90 | Luxembourg | Europe | 1 | 4 | 3 | 1 |
| **Riyadh** | 81-90 | Saudi Arabia | MENA | 1 | 7 | 1 | 1 |
| **Rio de Janeiro** | 81-90 | Brazil | Latin America | 2 | 1 | 1 | 6 |
| **Abu Dhabi** | 91-100 | United Arab Emirates | MENA | 2 | 1 | 10 | 1 |
| **Prague** | 91-100 | Czechia | Europe | 1 | 5 | 2 | 2 |
| **Manila** | 91-100 | Philippines | Asia | 1 | 1 | 2 | 6 |
| **Memphis** | 91-100 | United States | North America | 3 | 1 | 7 | 2 |
| **Reykjavik** | 91-100 | Iceland | Europe | 3 | 1 | 4 | 1 |
| **Lille** | 91-100 | France | Europe | 4 | 1 | 3 | 2 |
| **Burlington** | 91-100 | United States | North America | 3 | 1 | 3 | 2 |
| **Omaha-Lincoln** | 91-100 | United States | North America | 1 | 1 | 5 | 2 |
| **Belfast** | 91-100 | United Kingdom | Europe | 1 | 1 | 1 | 2 |
| **Hanoi** | 91-100 | Vietnam | Asia | 1 | 3 | 1 | 3 |

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# Emerging Leaders

A few startup ecosystems stand out from the 100 Emerging Ecosystems based on key Factors.

**Top 10 Ecosystems By Ecosystem Value:**

| Ecosystems | Country | Ecosystem Value ($B) |
|---|---|---|
| Detroit | United States | 37.2 |
| Bucharest | Romania | 35.3 |
| Jakarta | Indonesia | 34 |
| Guangzhou | China | 26.4 |
| Nanjing | China | 17.4 |
| Miami | United States | 17 |
| Wuxi | China | 16.4 |
| Mumbai | India | 16.3 |
| Kuala Lumpur | Malaysia | 16.1 |
| Copenhagen | Denmark | 15.1 |

**Ecosystems With Four Or More Companies In The $1B Club In The Last 10 Years:**

| Ecosystems | Country | $B club since 2011 |
|---|---|---|
| Guangzhou | China | 10 |
| Jakarta | Indonesia | 5 |
| Nanjing | China | 5 |
| Wuxi | China | 7 |
| Chengdu | China | 4 |
| Mumbai | India | 4 |
| Miami | United States | 6 |
| Santa Barbara | United States | 4 |
| Detroit | United States | 4 |
| Copenhagen | Denmark | 4 |
| Manchester-Liverpool | United Kingdom | 4 |

**Top 10 Ecosystems With Total Early-Stage Funding:**

| Ecosystems | Country | ESF (2018-1H2020, $M) |
|---|---|---|
| Nanjing | China | 2067.3 |
| Guangzhou | China | 1157.6 |
| Zurich | Switzerland | 1026.1 |
| Mumbai | India | 843.5 |
| Brussels | Belgium | 777.6 |
| Barcelona | Spain | 718 |
| Jakarta | Indonesia | 695 |
| Miami | United States | 675 |
| Copenhagen | Denmark | 653 |
| Wuxi | China | 612.5 |

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Global Startup Ecosystem Report 2021

# Global Startup Sub-Sector Analysis

## Key Findings

- Deep Tech (Advanced Manufacturing & Robotics, Blockchain, Agtech & New Food, AI & Big Data) remains the fastest growing group globally. Fintech also has experienced substantial growth in the last five years.
- Startup Sub-sectors in the Growth Phase are increasing Series A funding deals at the impressive rate of 107% over five years. Mature Phase Sub-sectors have grown 33% over the same period. Decline Phase Sub-sectors have declined by 28%.
- Fintech, which was in the Mature Phase in 2019, is demonstrating a resurgence in Series A funding that is more characteristic of the Growth Phase, indicating new investments and innovation in this Sub-sector.
- Similarly, Edtech and Gaming, both on the edge of the Decline Phase in 2019, have experienced an increase in Series A funding that returned them to the Mature Phase.
- Series A growth rates are higher than in 2019. Exit growth rates slowed in the five-year period ending in 2020.

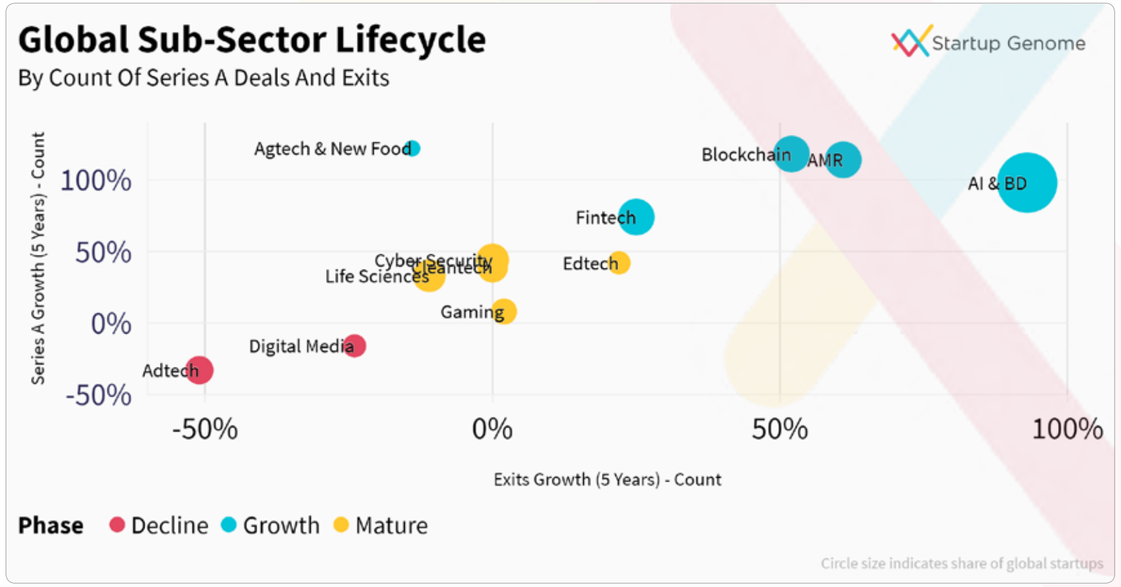



Figure 1. Global Sub-Sector Lifecycle By Count of Series A Deals And Exits

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# Global Trends In Startup Sub-Sectors

The Covid-19 pandemic created shifts in some Sub-Sectors. It revived several that were previously in decline, like Gaming and Edtech. And it caused deviations from typical lifecycle patterns, as seen in the growth of the Life Sciences Sub-Sector and—in Fintech—of insurance and lending. Figure 1 illustrates the current view of Sub-Sector Phases based on our 2019 methodology. It provides a summary of global exit and funding event counts and shows the relative share of each Sub-Sector as a percentage of the global startup population. Figure 2 offers an alternate perspective on the impact of Sub-Sectors globally: it measures their growth based on the amount of investment and exit value in each Sub-Sector. This second graph largely reflects the growth of Sub-Sectors in ecosystems with higher amounts of dollar investment and the impact of large exit events on growth. The bubble size in Figure 2 represents the Ecosystem Value added by a given Sub-Sector and indicates how attractive it is for global investors.

Interestingly, measured by both number of events and amount of funding, certain Sub-sectors continue to stand out. AI & Big Data, for example, and Advanced Manufacturing & Robotics are experiencing high growth by both metrics. These two lifecycle views also reveal which Sub-Sectors are generating outsized Ecosystem Value compared to their peers. For example, Life Sciences—which comprises just 8% of global startups—added $183 billion in Ecosystem Value in 2020. That is the second highest amount after AI & Big Data.

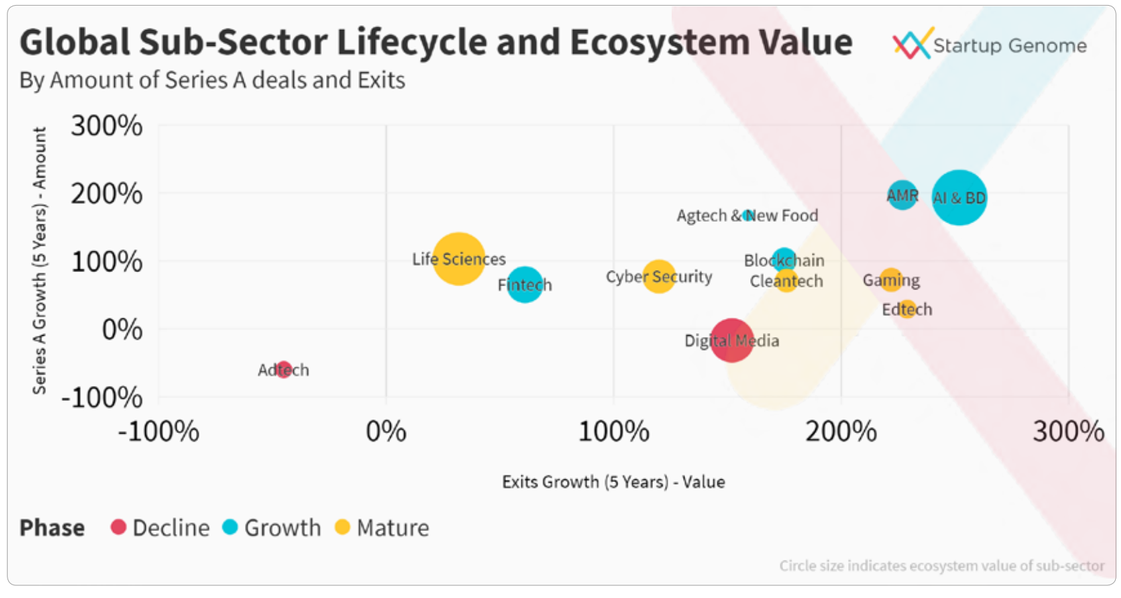



Figure 2. Global Sub-Sector Lifecycle By Amount of Series A Deals And Exits

**Top 4 Fastest-Growing Sub-Sectors**

**Early-Stage Funding Deals Over Five Years**

- Agtech & New Food (128%)
- Blockchain (121%)
- Advanced Manufacturing & Robotics (109%)
- AI & Big Data (98%)

**Declining Sub-Sectors**

- Adtech (-35%)
- Digital Media (-21%)

## Sub-Sector Definitions

Please see the Methodology section for a full list of our Sub-Sectors and their definitions. Note that Sub-Sectors are neither mutually exclusive nor comprehensive. Some startups operate in Sub-Sectors we did not cover. In addition, data from patents indicates a clear convergence of technologies, with AI, for example, increasingly interacting with other fields. Over time we would expect a similar convergence of Startup Sub-Sectors. More details appear in the Methodology.

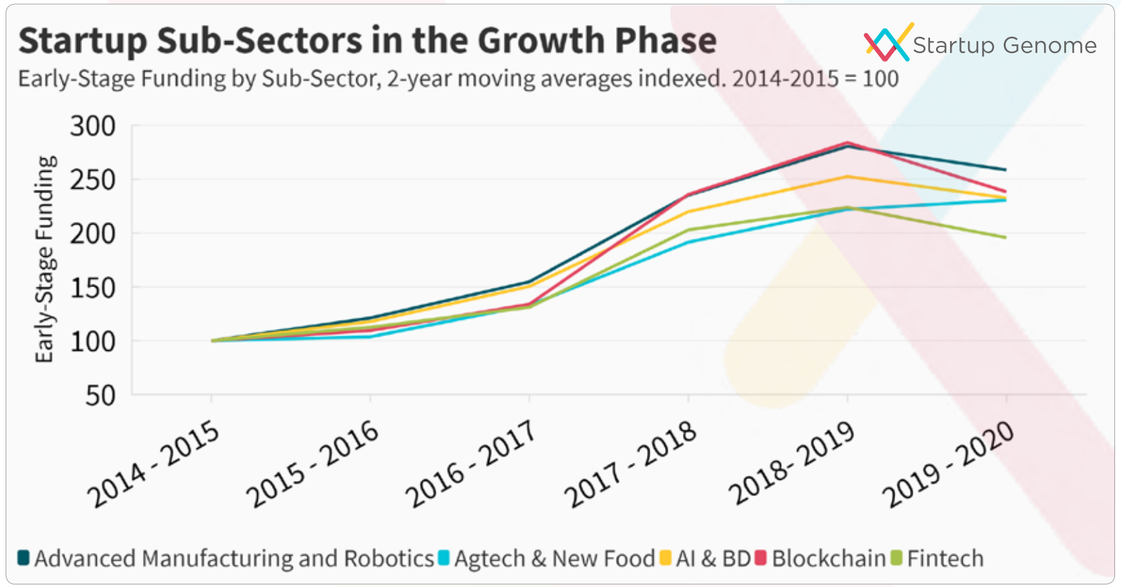
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# Sub-Sectors in Growth Phase

- Agtech & New Food
- Blockchain
- Advanced Manufacturing & Robotics
- AI & Big Data
- Fintech

The five Growth Sub-Sectors are increasing in size at an astounding pace, with an average 107% rise in early-stage funding deals over just five years and an average 43% growth in exits. Fintech is a new entrant to this group thanks to increased Series A investment atypical of its peer Mature Sub-Sectors.

Among Growth-Phase Sub-Sectors, AI, Big Data & Analytics is the largest, comprising 27% of all global startups. Agtech & New Food is the smallest, accounting for 2%. AI is the standout. On its own—separate from Big Data & Analytics—it is growing about twice as fast as the Sub-sector as a whole.



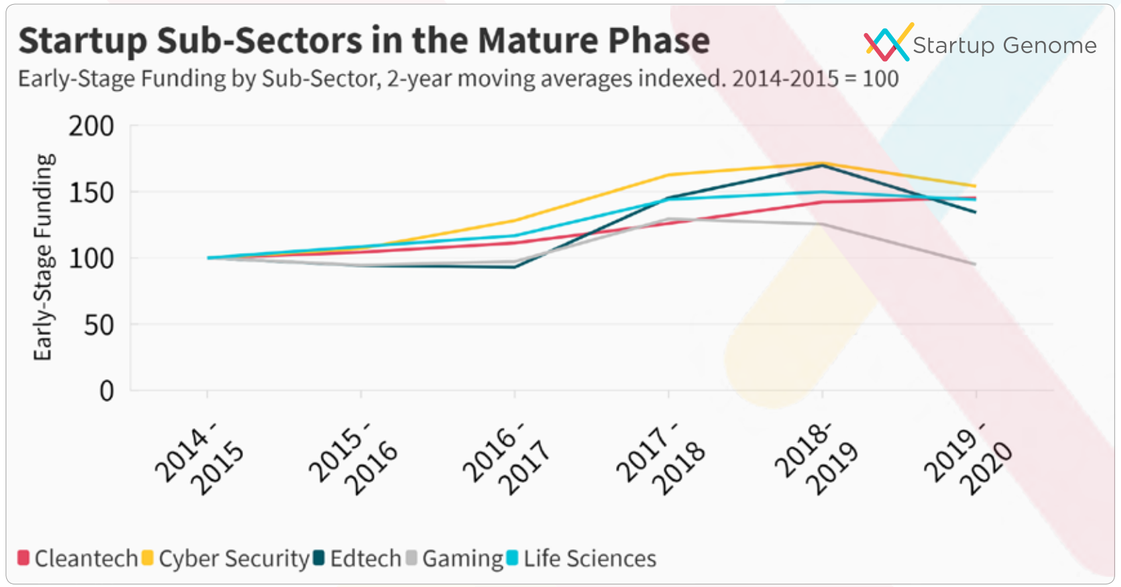

| Sub-Sector | Series A Deals 5-Year Growth | Exits 5-Year Growth | Share of Global Startups |
|---|---|---|---|
| Agtech & New Food | 128% | -14% | 2% |
| Blockchain | 121% | 52% | 10% |
| Advanced Manufacturing & Robotics | 109% | 61% | 10% |
| AI & Big Data | 98% | 93% | 27% |
| Fintech | 77% | 25% | 10% |

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# Sub-Sectors in Mature Phase

- Cybersecurity
- Edtech
- Cleantech
- Life Sciences
- Gaming

The composition of Mature Sub-Sectors has shifted since our last analysis in 2019. Cybersecurity, Cleantech, and Life Sciences remain in the Mature Phase. Edtech and Gaming are new entrants, returning from Decline in 2019. Collectively, these Sub-Sectors saw growth of 33% in Series A funding and 3% in exits over the past five years.



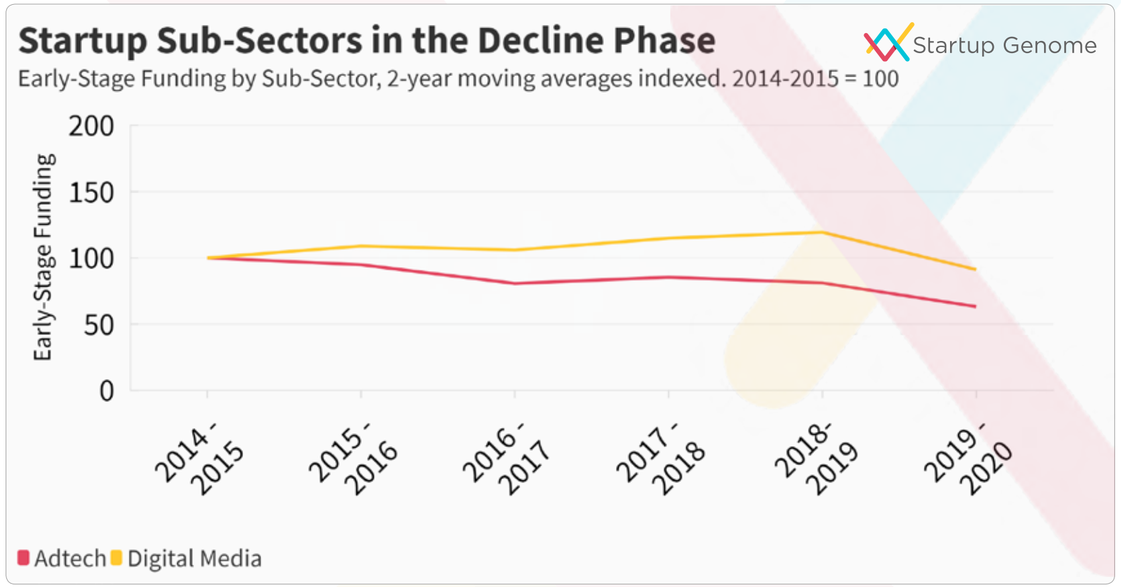

| Sub-Sector | Series A Deals 5-Year Growth | Exits 5-Year Growth | Share of Global Startups |
|---|---|---|---|
| Cybersecurity | 43% | 0% | 8% |
| Edtech | 39% | 22% | 4% |
| Cleantech | 38% | 0% | 7% |
| Life Sciences | 35% | -11% | 8% |
| Gaming | 8% | 2% | 5% |

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# Sub-Sectors in Decline Phase

- Adtech
- Digital Media

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. Gaming and Edtech--two Sub-Sectors previously in the Decline Phase--successfully re-entered the Mature Phase due to renewed early-stage investment interest. We predicted in 2019 that Gaming would be rejuvenated by the implementation of VR and AR. However, the most significant impact on both Gaming and Edtech was, more likely, COVID-19, which forced millions around the world to entertain themselves at home and required schools to shift to online instruction.




| Sub-Sector | Series A Deals 5-Year Growth | Exits 5-Year Growth | Share of Global Startups |
|---|---|---|---|
| Digital Media | -21% | -24% | 4% |
| Adtech | -35% | -51% | 6% |

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Global Startup Ecosystem Report 2021

# The Next Unicorn Could Come From Anywhere

*This contributed article was prepared by Dealroom, using their proprietary methodology and analysis, different and separate from Startup Genome's. The opinions expressed in this article do not necessarily reflect the views or position of Startup Genome.*

dealroom.co

The last 18 months have taught us that for digital-first companies, business can be done from anywhere. But the data shows that this is far from a new phenomenon. Unicorns - startups that reach a billion dollar valuation - have become an important currency in measuring tech ecosystems globally. But these days they are neither as scarce as their name suggests, nor a breed of company that only thrives in the rich entrepreneurial ground of Silicon Valley, as perhaps once assumed.

There are now almost 2,000 companies worldwide that have achieved unicorn status, either privately or at exit. The world has minted more than *two unicorns* per day in 2021.

As a $35 trillion industry, tech has a major impact on cities and local communities, affecting all sectors. Startups are a rapid and resilient job growth engine, with startup jobs growing on average 10% year on year worldwide. This is not just about Big Tech; our analysis shows that younger generations of startups are creating just as much value as older ones - and more than a quarter of all $1B+ companies achieved unicorn status this year alone.

And as the numbers suggest, unicorns are not purely the domain of mature global startup hubs. Bend (Oregan, US), Tirat Carmel (Israel), Nedre Vats (Norway), Glasgow (UK), Bello Horizonte (Brazil), Almaty (Kazakhstan), Thane (India), Accra (Ghana), Venlo (Netherlands), and Anhui (China) are just some of the cities to join the unicorn club in 2020/21.

Global venture capital is not letting up. In 2021, funding totals are on track to more than double 2020's total.

Increasingly international investing strategies mean that startups can be founded, funded and scaled anywhere in the world, which makes local support all the more crucial for fostering individual startup ecosystems. The ship has not yet sailed on capturing and nurturing tech value creation. And the next unicorn could come from anywhere.

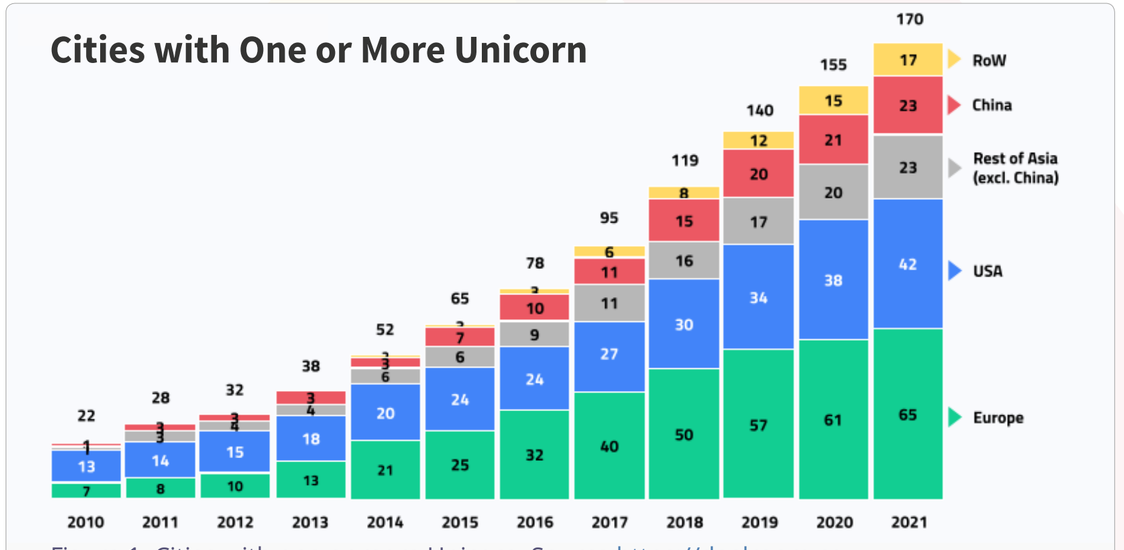



Figure 1. Cities with one or more Unicorn. Source:https://dealroom.co

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# Startup Founders Corner


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Global Startup Ecosystem Report 2021

# How Startups Can Build Sustainable Ecosystems

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



**YANN LECHELLE**

*Serial entrepreneur, Yann Lechelle is CEO of Scaleway, the leading Platform- and Infrastructure-as-a-Service provider in the European Union. He is an advisor, angel investor, and a strong advocate for the tech ecosystem in Paris, where he is a co-founding member of France Digitale and HUB AI Paris, as well as an Entrepreneur-in-Residence at INSEAD Business School.*

Thanks to the rise of Cleantech and the climate crisis, much attention has been paid lately to the health of the Earth's ecosystems and the natural cycles that provide us with healthy water, air, and soil. But it's not just our natural environment that depends on processes of renewal and reinvestment, so do startup ecosystems.

## A Healthy Startup Ecosystem Is Built Over Generations

Just as soil is enriched by the lifecycle of the many organisms that grow in it, a startup ecosystem is nurtured by the lifecycle of companies within it — a process that is driven by the recycling of entrepreneurs' time, effort and venture capital money. From time to time, a statistical rarity, founders will re-invest in promising ideas and people after exiting their companies successfully, when doing an IPO or going through merger & acquisition. A new generation of founders uses this recycled capital and mentorship to flourish, and the cycle is repeated.

In older ecosystems this cycle has repeated itself many times — Silicon Valley has had at least seven generations of founders — while younger ecosystems are still building up a strong 'soil' of knowledge and capital. In Paris, where I have worked for much of my 30-year career in tech, the ecosystem has had just three generations of entrepreneurs behind it. The more often entrepreneurs recycle their money and time within a local ecosystem, the richer it becomes (in nutriments, to keep with the soil analogy).

That's why I always encourage founders, particularly those located in younger ecosystems, to think about sustainability — both their own and their ecosystem's — when considering their goals and their company's trajectory.

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## Startups Run On Optimism And Grand Ideas

I admit the following is slightly schizophrenic. On the one hand, startups run on optimism and grand ideas, and no one ventures into a tech company unless they have world-changing ambitions. Entrepreneurs thrive on moonshots and do well by dismissing nay-sayers or realistic goals.

On the other hand, looking at the statistical distribution, one quickly sees that most entrepreneurial endeavours end up short and go bankrupt, leaving many entrepreneurs in disarray and burnt out. Many factors come into play, such as the dreaded product-market fit that often does not materialize. Financial support in successive funding rounds is an art and not a science that depends on exogenous factors out of the entrepreneurs control. Sometimes the technology or the market is simply not ready for even the best ideas to take off — think of all the social networks that fizzled out before Facebook.

Founders should understand that ecosystems exist at different stages of development, and market opportunities often depend on luck and timing. While you should dream big, ambition should be balanced against eco-systemic sustainability. Selling or rather "recycling" your business before it reaches global scale isn't a failure; it both shows the flair to read the moment and recycles talent, money, and skills back into the ecosystem. Founders and their ecosystems end up richer and healthier in the long term when entrepreneurs understand that maximum benefit comes through steady, multi-cycle development rather than one exceptional and unlikely hit.

The strongest companies — and the strongest ecosystems — are built by founders who can hold two contradictory ideas in their minds at the same time: they can both dream of building the next trillion dollar company that will change the world as we know it, and keep in mind the long-term health of both themselves and their local ecosystems. Take it from a 5-time founder and exiter of non-unicorns, a career in entrepreneurship often advances in cycles, and so does the growth of ecosystems. Sometimes the best way to win big in the long term is to factor in eco-systemic sustainability now.

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Global Startup Ecosystem Report 2021

# How To Divide Founder Equity

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



**THOMAS HELLMANN**

*Thomas Hellmann is the DP World Professor of Entrepreneurship and Innovation at the Saïd Business School, University of Oxford. An internationally acclaimed entrepreneurship scholar and educator, he also leads the Creative Destruction Lab at Oxford.*

Before investors and others take their stakes, startup founders must structure an agreement to divide the original founder equity. This is not only a legal necessity but also provides the foundation for a successful founding team.

There is no preset structure for such an agreement. Typically founders talk, look each other in the eye, and shake hands. Yet crafting such an agreement is not business-as-usual. Rather, it is a deeply personal process that requires assessing the relative worth of each founder. Also, the agreement will have long-lasting consequences. How, then, should founders approach this first critical test of how well the team works together?

## Is Equal The Same As Fair?

The biggest temptation is to settle quickly on an equal division of founder shares. Equal splits are simple, transparent, and many say they are fair. But are they, really? What if some founders are full-time and others part-time? What if some give up lucrative jobs, and others do not?

Noam Wasserman and I analysed the division of founder equity in 1,367 high-technology startup teams. We found that 32% of teams chose an equal split. Furthermore, 42% made the agreement within one day. We call this the "quick handshake."

## Is A Quick Handshake Best?

Of the startups we studied, 78% raised outside funds. Teams that split founder equity equally were less likely to raise money than those that forged more complex agreements. The question was, why? Do equal splits complicate fundraising? Or are they a symptom of some deeper problem?

We noted a strong positive correlation between equal

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splits and quick handshakes. The teams that split both equally and quickly had less success raising funds. That was not the case for teams that chose an equal split after lengthy negotiations. This suggests that the underlying issue is actually the quick handshake, which implies a reluctance to face difficult cofounder conversations.

## Do Initial Deals Ever Change?

In a separate study with Paul Schure, Chloe Tergiman, and Dan Vo, we used data from startups in British Columbia, Canada, to examine founders' stakes over time. We wanted to see how their *relative stakes* evolved. We observed that teams that chose an equal split at the start were less likely to change relative founder stakes. Such changes typically happen when companies raise outside capital; they are most common with larger rounds and companies that have lower (industry- and stage-adjusted) valuations. That suggests investors can exert considerable pressure on founding teams to recalibrate their relative ownership stakes.

So, discussions about relative equity stakes are hard but have long-lasting consequences. Founding teams, then, should focus on two key questions: when and how?

## When Is The Right Time?

Veikko Thiele and I developed a framework for deciding when to divide founder equity. Settling the agreement early creates clarity but risks founding a venture with the wrong people. Founder conflicts are one of the leading causes of entrepreneurial failure. So there may be a benefit to waiting.

Waiting too long, however, carries risks of its own. Lack of an agreement creates uncertainty and may undermine team commitment. Moreover, one of the founders could walk off with the idea to start the venture alone or with others. Consequently, potential co-founders should first assess team fit and determine who contributes what. After that, they should finalize the agreement.

## How To Structure The Negotiation?

To facilitate the negotiation, Marco Da Rin and I developed a practical five-principle tool:

*Define who is on the team.* This clarifies who is and is not part of the negotiation.

*Evaluate what each founder contributes.* It is important to listen and to appreciate what value each founder brings to the table.

*Distinguish between past and future contributions.* Teams often make the mistake of focusing mainly on past contributions. Instead, they should focus on future contributions, adopting a "first mile in a marathon" attitude.

*Account for backgrounds and opportunity costs:* Team members may have different qualifications, be at different career stages, and sacrifice different compensation packages and professional opportunities.

*Compensate implicit financial contributions.* Founders put resources into the venture, directly and indirectly. They may also ask for different salaries. Some mechanism is needed to recognize those considerations.

Our tool also demonstrates how to convert a verbal discussion about the five principles into a numerical proposal for splitting equity. It isn't always necessary to allocate all the founder equity upfront. Instead, founders can structure dynamic arrangements where stakes are earned over time. This makes stakes responsive to ongoing commitment and performance.

A quick handshake on an equal split is rarely the best way to structure founder equity. More nuanced, flexible arrangements will better support the team. Most importantly, difficult conversations upfront lay a strong foundation for the journey ahead.

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Global Startup Ecosystem Report 2021

# Accelerators: To Join Or Not To Join?

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



**SANDY YU**

*Sandy Yu is an assistant professor at the University of Minnesota's Carlson School of Management. Her research examines the impact of startup financing from sources such as venture capital, accelerators, and crowdfunding. Her work is supported by the Kauffman Foundation and the National Science Foundation.*

Accelerators appear to be an attractive option for startups because they offer support, expertise, and connections many entrepreneurs need. However, how much value do they really offer? And are they right for you?

I set out to investigate the impact of accelerators on startups' fundraising, exits, and longevity. This study was challenging for several reasons. Founders have different motivations for participating in accelerators; and accelerators themselves have different structures and goals. In addition, these programs offer a variety of benefits, including education and training, mentors, and investor networks, which can make it difficult to isolate the source of an "accelerator effect." However, by comparing startups that go through an accelerator against very similar startups that do not, I could start to answer more precisely questions about these programs' effectiveness.

My research drew data from 1,800 startups. Half graduated from 13 highly regarded accelerators across the United States. The other half are matched, non-accelerator startups founded in the same year and location, with similar founding teams, and—most importantly—similar business descriptions. I also looked at startups rejected in the final stage of the accelerator interview process: those that had almost participated. The goal was to determine how an accelerator might have affected company performance. Here are some takeaways:

## Do Accelerator Startups Raise More Money?

Generally, no. On average, accelerator startups raise less money than do their non-accelerator counterparts. With all the hype around these programs, that sounds like a surprising result. But keep in mind that there is a cost—in the form of equity—to join an accelerator. Founders with more resources in terms of funding, mentors, and

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networks are less likely to pay that cost. Consequently, accelerators are more likely to attract less-experienced founders who expect greater value from their willingness to sacrifice equity. As a result, their startups will likely raise less money in the long term. How much less? My research found accelerator startups raised $9 million dollars less funding across an average of three years after graduation than did their non-accelerator counterparts.

That does not mean you will raise less money if you join an accelerator. Only that a company very similar to yours that decides against joining one likely has more resources, and that may enable it to raise more money.

## Are Accelerator Startups More Likely To Succeed?

It depends. Accelerator startups fail more often and faster than do their non-accelerator counterparts. Their chances of going out of business are 150% higher, and they tend to close within one year after Demo Day. Furthermore, accelerator companies that shut down will have raised less money at their time-of-exit.

But that is not necessarily a bad thing. Those findings suggest accelerators help founders realize sooner rather than later that their startups—in their current form—are not viable. They do this through feedback: for example, from mentors, partners, and cohort-mates. Shutting down is often beneficial to the founder because there is an opportunity cost to pursuing a zombie startup rather than cutting one's losses. Interestingly, those accelerator startups that remain operational are more likely to be acquired, which can be a successful outcome.

## What Advantages Do Accelerators Offer?

From a policy perspective, accelerators can be a very good thing. The typical format of an accelerator can encourage founders to experiment, get feedback, and rapidly iterate. Given the short duration of such programs and the relatively small amount of seed investment offered, they are a low-cost way for participants to test their ideas—and also their desire to be entrepreneurs at all. Regions that want to increase entrepreneurship may find accelerators are just what they need.

## What Should Entrepreneurs Consider?

Accelerators are not one-size fits all, so think carefully about what you want from the experience. Know that participating in an accelerator does not automatically lead to more funding and/or better performance. If you are unsure about your idea or lack a trusted network to provide feedback, then an accelerator may help you fail fast and, hopefully, fail forward onto your next idea.

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Global Startup Ecosystem Report 2021

# The Government As An (Effective) Venture Capitalist

*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.*



**JESSICA BAI, SHAI BERNSTEIN, ABHISHEK DEV, and JOSH LERNER**

*Jessica Bai is a doctoral candidate, and Shai Bernstein and Josh Lerner are professors at Harvard University. Abhishek Dev is a doctoral candidate at Yale. Harvard Business School's Division of Research provided financial support for their work. Josh Lerner has advised institutional investors in private equity funds, private equity groups, and governments designing policies relevant to private equity.*

Government industrial policy traditionally targeted manufacturing. In recent decades, however, governments around the world increasingly have focused on innovation and the "knowledge economy," which translates as interest in tech startups. Public efforts to boost financing for such early-stage ventures—one mechanism that has been in use for years—expanded dramatically after the onset of the COVID crisis. Tens of billions of dollars were allocated to support entrepreneurial firms and venture funds across major industrialized nations.

The interest of policymakers in funding startups is understandable. Financial intermediaries in the private capital markets, especially venture capital firms, drive innovation and economic dynamism in the United States and, more recently, in China. But deciding which young, high-growth businesses to fund and if (and when) to refinance them is often difficult, given the many uncertainties surrounding new opportunities. The financing of these firms requires significant expertise, which public officials may lack.

Highly effective governments, we thought, might seek to correct such deficiencies by collaborating with private capital markets. To find out to what extent that was happening and also the results, we assembled the first comprehensive, detailed data set on the universe of such programs. Our data set comprised 775 national-level entrepreneurial finance programs in 66 countries operating between 1995 and 2019. The programs focused on financing domestic startups or intermediaries that fund them.

Our research found the overall scale of such efforts is large. Between 2010 and 2019, government entrepreneurial finance programs around the world averaged a cumulative annual budget of $156 billion. That compares to $153 billion in average annual global disbursements by traditional venture funds.

Our analysis also found that more private venture activity was associated with a subsequent increase in government financing. Moreover, when VCs increased investment in

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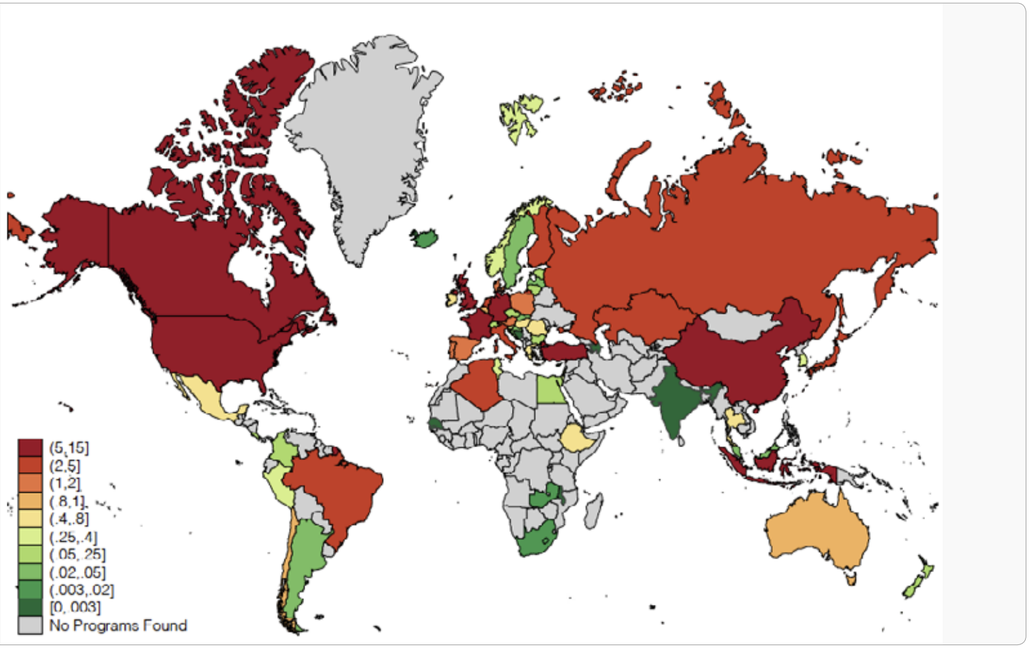



Figure 1. Average of annual budget (in billions of US dollars) of entrepreneurial finance policies active between 1995 and 2019 inclusive by nation.

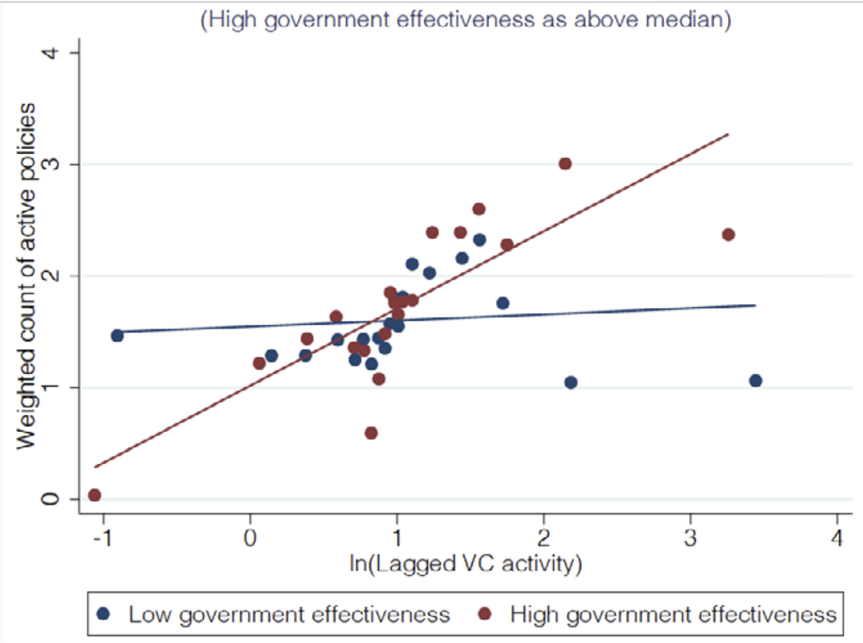



Figure 2. New venture policy introduction and patent applications. See working paper for details.

particular industries in a country, government funding programs targeted those industries as well.

Governments frequently structure such programs in three ways. They may involve private-sector actors in screening potential investments. They may fund intermediaries rather than directly fund companies. And they may require firms to raise matching funds from private investors before committing public funds. In addition, government programs were even more likely to rely on private capital markets when targeting earlier-stage companies, where the kind of judgment challenges noted above may be greater.

Overall we found that more-effective governments—as measured by scores computed by the World Bank and other observers—were likely to involve the private sector to a greater degree than less-effective ones. Collaborating with private funders may have increased those governments' abilities to head off problems.

Collaboration with the private sector also boosted innovation, an examination of U.S. patent filings shows. Across all innovation measures we examined—for instance, patents closer to the scientific frontier or those by new patentees—we found a meaningful improvement following the initiation of government funding programs. Those improvements were particularly concentrated among programs that targeted early-stage ventures or required collaboration with the private capital markets.

In short, governments can play an important role in supporting early-stage tech companies. But there is an important caveat: don't do it alone.

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Global Startup Ecosystem Report 2021

# Building Communities, One Entrepreneur At A Time

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



**PAULY SUCHY**

*Pauly Suchy is the Manager for Startup Programs at the Global Entrepreneurship Network, where he is responsible for running and growing GEN's key startup and investor programs. He is also the co-host of Creative Mornings Cleveland and the Black Entrepreneurship Summit.*

The degree of local connectivity among members of an entrepreneurship ecosystem is a reliable predictor of success for startups in that ecosystem. Research conducted for the 2018 edition of the Global Startup Ecosystem Report found that communities with high levels of local connectivity support more startups. Founders with high levels of connectivity grow revenue twice as fast as those with lower levels. In recent years, more and more programs have popped up around the world to increase connectivity and offer local startups an environment in which they have a better chance of thriving rather than take their chances in a massive sink-or-swim tech hub.

What is connectivity? A sense of community. Local relationships. Collisions--running into others from the community. Density--how closely startups work with each other.

The Global Entrepreneurship Network designed Startup Huddle to create that connective tissue. The program helps build startup communities by rallying local ecosystems at regular meetups, or "Huddles," and crowdsources solutions to challenges faced by startups.

Since launching in 2018, Startup Huddle has expanded to more than 100 communities with local chapters hosting hundreds of events. It has also directly supported hundreds of entrepreneurs and forged local and global connections for thousands of ecosystem players. In 2021 grassroots organizers launched more than 20 chapters as catalysts for resilient economies in which entrepreneurs are key players.

Johanna Cloete is one of these organizers. She launched Startup Huddle in Swakopmund, Namibia, this year to help her community overcome the economic consequences of the pandemic. As in many coastal destinations, the city's sandy beaches remained empty for the majority of 2020, straining the local tourism and hospitality

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sectors. Entrepreneurs scrambled to pivot businesses and explore new industries.

"If we face the impact of COVID-19 standing together as a community, we can support entrepreneurs to overcome its challenges," said Cloete. "Startup Huddle Swakopmund brings together entrepreneurial leaders and supporters to mitigate that impact, for the benefit of everyone."

The Startup Huddle format is consistent in each location. At a central meeting place, one or two early-stage startup founders give short presentations about their companies to a diverse audience. A question-and-answer session follows with peers, mentors, educators, and advisers, who provide constructive criticism focused on finding solutions and increasing founder know-how. With new founders cycling through each gathering and previous presenters joining the audience to give back, the community expands while connections deepen.

In Johannesburg, South Africa—one of the continent's top five startup ecosystems—organizers are proud of the program's impact on both entrepreneurs and community builders. Some startups have won pitch competitions with support from Startup Huddle. Others are inspired to launch the program in their cities.

"Startup Huddle has had a great impact on our community," said local organizer Mahlatse Tolamo. "We have seen our startups grow, personally and professionally."

In cities and towns of all sizes and at all stages of ecosystem development, the program is giving community builders a platform to address local needs. Entrepreneurs gain access to a global network of support and opportunities through GEN. The Station Foundation for Entrepreneurship, in Iraq, launched a chapter in Baghdad earlier this year and plans to expand as part of an effort to transform communities stigmatized by warfare and inequality.

"The need for an empowered private sector in Iraq has never been more apparent," said local organizer Ashley Barlow. "Through Startup Huddle and the Global Entrepreneurship Network, we are poised to highlight our talents and Iraq's growing entrepreneurship ecosystem to the international community. It will be a catalyst for opportunities that will help our startups grow, mature, and learn."

To find a Startup Huddle chapter near you or to launch one in your city, visit www.startuphuddle.co.

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GLOBAL ENTREPRENEURSHIP NETWORK

Global Startup Ecosystem Report 2021

# Regional Insights

# Africa

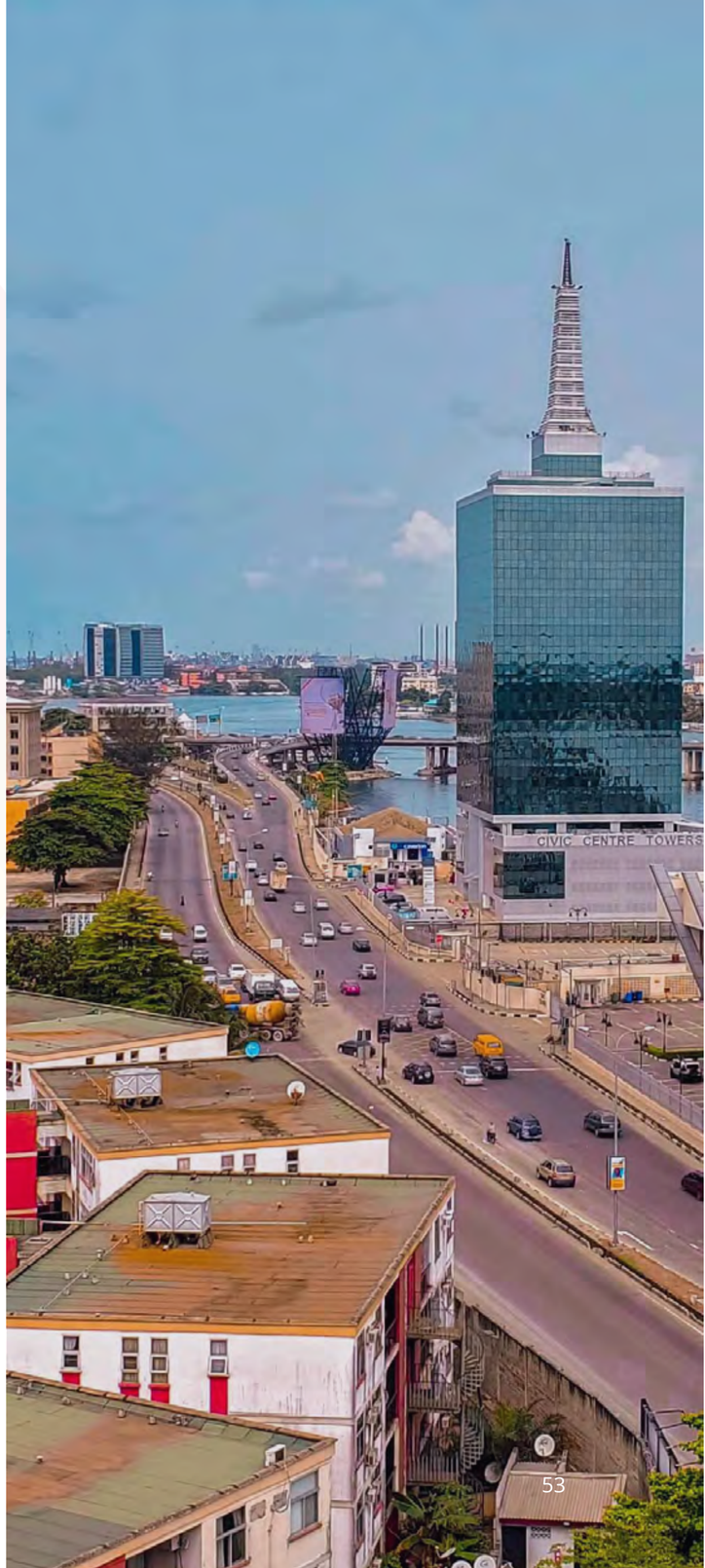

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Global Startup Ecosystem Report 2021

# African Entrepreneurs Innovate Their Way To Prosperity

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**IFEYINWA UGOCHUKWU**

*Ifeyinwa Ugochukwu is a Lawyer and the CEO of the Tony Elumelu Foundation, the leading philanthropy empowering young African entrepreneurs from all 54 African countries. She is a passionate advocate of the transformative power of entrepreneurship as the key to the economic development of Africa.*

Africapitalism is an economic philosophy developed by leading investor and philanthropist Tony O. Elumelu that emphasizes the private sector's role in Africa's advancement. In 2020, despite the ravages of a pandemic that pushed the continent into recession, the catalytic impact of entrepreneurs continued to deliver a much-needed economic transformation.

That transformation has been gaining ground since Kenya began developing its Silicon Savannah around 2007. Our own organization, the Tony Elumelu Foundation, which was created to empower entrepreneurs, has received just under a million applications for our flagship entrepreneurship program in that time frame. Our engine room, TEFConnect.com, is the largest online platform connecting the entire African entrepreneurship ecosystem. It is where the magic happens: application, training, mentoring, marketplace, community pages, and investor forum. It is arguably the most ambitious youth-focused pan-African entrepreneurship program on the continent. To date, we have disbursed over $45 million directly into the hands of more than 10,000 young entrepreneurs from all 54 African countries as non-returnable seed-capital investment. These entrepreneurs have gone on to generate 400,000 direct and indirect jobs.

Although funding fell dramatically at the start of the pandemic, startups in 2020 raised $1.1 billion in 319 VC deals, according to the African Private Equity and Venture Capital Association (AVCA). That is a record and more than twice the number in 2019. The first half of 2021 looks even better, with startups raising $1.19 billion, according to data from BFA Global. That is more than the first halves of the last two years combined.

Yet scaleups remain in short supply here in Africa. Fewer than 20 companies are valued at $200 million or more; and Africa has just four unicorns, of which three are from Fintech and the other from ecommerce. Foreign

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investors dominate funding for all four unicorns, a model pervasive throughout the continent. Foreign investment plays an outsize role in African startups, with more than 40% of VC deals over five years originating in North America, according to AVCA.

Governments, eager to improve their legal and regulatory frameworks to support tech entrepreneurs, are introducing legislation providing things like tax incentives, streamlined processes, and one-year-leave periods for entrepreneurs with the right to return to their previous jobs. Tunisia led the way in 2018 followed by Senegal. Nigeria, Rwanda, Ghana, Kenya and other countries are working on their own versions.,

Among the tailwinds lifting Africa's fortunes is the establishment last year of the African Continental Free Trade Area, a new market with as many as 1.3 billion people and GDP of $3.4 trillion, according to the World Bank. The integrated trade area favors both startups with multi-region focuses and Fintech companies that are helping to resolve cross-border payment and related issues.

But Fintech isn't the only area that African startups are innovating, as our foundation's alumni network demonstrated during the pandemic. A TEF entrepreneur in Sierra Leone developed a foot-powered hand-washing system for small communities, which was endorsed by the government. Another alumnus, in Madagascar, created an eco-friendly, low-cost soap gel that does not require rinsing with water, which helps the country's poorest residents. In Ghana, a Tony Elumelu Foundation entrepreneur launched a rapid Covid-19 test that incorporates symptom assessment, result updating, and location tracking: information that can be pushed to public health authorities.

These kinds of innovations, developed in a period of duress and in some of the world's most difficult business terrain, attest to the brilliance, resilience, and innovativeness of Africa's entrepreneurs. With a supportive business environment, sufficient seed capital, and tech-centric up-skilling, they will produce outstanding results with sustainable impact at all levels of society.

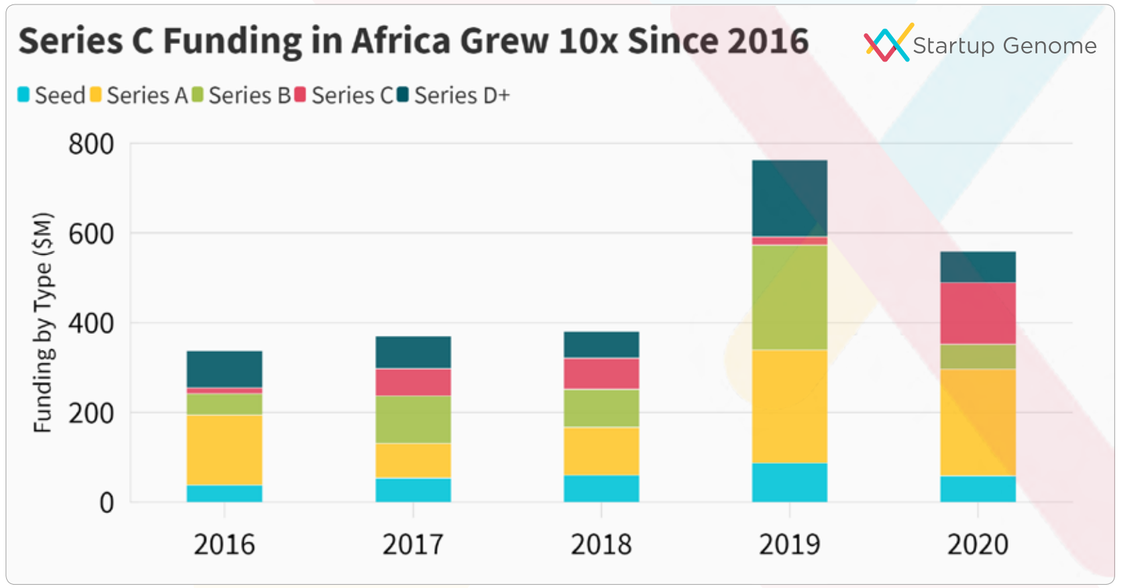
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Global Startup Ecosystem Report 2021

# Africa Insights & Rankings

## Key Findings

- Average early-stage funding in African startup ecosystems in this GSER period totaled $46.5 million, double the amount observed last year.
- African ecosystems are collectively worth $6.6 billion in value. Of that, $6 billion is concentrated in the Top 5: Cape Town, Lagos, Johannesburg, Nairobi, and Accra.
- Fintech dominates early-stage investment in Africa, with over $206 million invested in the Sub-Sector between January 2018 and June 2020.
- Exit value in Africa totaled over $1.1 billion, with the top three in Cape Town, Johannesburg, and Durban.




## Top 5 Performers

| #1 | #2 | #3 | #4 | #5 |
|---|---|---|---|---|
| Cape Town | Lagos | Johannesburg | Nairobi | Accra |

## Top Regional Challengers

| #1 | #2 | #3 | #4 | #5 |
|---|---|---|---|---|
| Kampala | Abuja | Abidjan | Durban | Kigali |

The Top Performers are identified by applying our Global Ranking methodology within a specific region, while the Regional Challengers are identified using the Emerging Ecosystems methodology.

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South Africa

# Cape Town

**MEMBERS:**
City of Cape Town / WESGRO / Silicon Cape

> Cape Town is a leading African digitech hub, home to almost two-thirds of all start-ups in South Africa. We have many support structures in place to assist and encourage entrepreneurship.

**Alderman James Vos**
Mayoral Committee Member for Economic Opportunities and Asset Management.




## Highlights

With an internet penetration of 63%, one of the largest open-access fiber networks in Africa, and a bustling community of investors, Cape Town is home to almost 60% of South Africa's startups. The city also has the continent's highest number of accelerators, with more than 20 programs and 25+ co-working spaces. Both the local and national government is dedicated to further growing the area's ecosystem. The Digital Economy unit at the Department of Economic Development and Tourism collaborates with the Western Cape Government, City of Cape Town, Wesgro, and various ecosystem organizations such as CiTi, Silicon Cape, LaunchLab, and Startupbootcamp, to launch initiatives aimed at positioning Cape Town as Africa's Tech Capital. The University of Cape Town, Stellenbosch University, CPUT, and the University of the Western Cape, in addition to six TVETs (Technical and Vocational Education and Training) in the region supply growing companies with a pipeline of talent. Cape Town is home to over 30 venture capital firms, including Naspers, one of the world's top tech investors, as well as an active community of angel investors. Naspers Foundry is a $100 million fund to support South African startups. The Technology Venture Capital (TVC) fund set up by the Department of Trade, Industry and Competition (DTIC) and managed by the International Development Corporation (IDC) provides support and seed capital for the commercialization of innovative ideas. Cape Town attracted $88 million in VC funding in 2020.

**TOTAL EARLY STAGE FUNDING**
**$105 m**
GLOBAL AVG.
$431 m

**ECOSYSTEM VALUE**
**$1.2 bn**
GLOBAL AVG.
$10.5 bn

**MEDIAN SEED ROUND**
**$140 k**

GLOBAL AVG.
$494 k

**MEDIAN SERIES A ROUND**
**$3 m**

GLOBAL AVG.
$2.7 m

**SOFT. ENGINEER SALARY**
**$32 k**

GLOBAL AVG.
$42.1 k

## Sub-sector Strengths

### Fintech

As the home of some of South Africa's largest financial institutions, Cape Town is a natural choice for innovative Fintech companies within the country. Payments startup Yoco has raised a total of $106 million over 5 rounds, including a Series C in July. Mobile financial services platform Jumo has raised $156.7 million over 11 rounds. Their latest round was a $55 million Series C in February 2020.

### Edtech

The acquisition of GetSmarter by 2U Inc in 2017 catalyzed the growth of the Edtech sub-sector in Cape Town. Local success stories include talent development and e-learning company Groundfloor Labs and Construct Education, a US-based Edtech company designing learning material for the local market. The University of Cape Town recently partnered with Valenture Institute to deliver South Africa's first accredited online high school. Edtech startup iXperience raised a US$2.5 million Series A funding in May 2021.

# Reasons to move your startup to Cape Town

## Tax Advantages

The corporate tax rate in South Africa is a flat 28%, below the average for Africa. Special dispensations are provided for companies in mining, oil and gas, and agriculture. Non-South African residents are only taxed on income from a South African source, making Cape Town a popular hub for digital nomads.

## Educated Workforce

There are 4 world-class universities, 2 globally recognised business schools,research councils and private and public coding schools within a 50km radius of Cape Town. Together they produce more than 12,000 STEM graduates and more than 500 coders a year. Software developers in Cape Town are 40–80% less expensive than in developed markets.

## 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 Philipi supports agricultural activities in the area and includes business incubation and skills development programs.

# Startup Community

STARTUP GENOME MEMBERS

MEMBER

### 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.

South Africa

# Johannesburg

| Regional Ecosystem Knowledge | Regional Ecosystem Talent & Experience | Regional Ecosystem Funding |
|---|---|---|
| #3 | #2 | #4 |

## Highlights

As South Africa's biggest metropolitan area and financial capital, Johannesburg hosts the headquarters of more than 70% of South African companies as well as the largest stock exchange and inland port in Africa. The city handles 30% of the country's exports and generates 15% of its wealth. These strong economic fundamentals are beginning to support a small but growing startup ecosystem. And estimated 450 startups call the city home, as do more than 200 startup support organizations. Johannesburg is also home to an array of active investors like Dazzle Angels, Edge Growth, Grovest, SA SME Fund, The People's Fund, and Kalon Venture Partners. The Seed Academy and the WDB Growth Fund both offer programs to support founders, including a fully funded business accelerator for women. The JamLab (The Journalism and Media Lab) accelerator is a 6-month program for digital entrepreneurs. The Riversands Incubation Hub acts as a bridge between small businesses and corporates. Acceleration platform Sw7 has accelerated over 200 tech businesses in Johannesburg and Cape Town. J&B Hive Accelerator aism to develop and inspire creative entrepreneurs. The City of Johannesburg's Opportunity Centre initiative provides advice on entrepreneurship and business support issues. A range of coworking spaces and makerspaces dot Johannesburg, including Workshop17 West Street, JoziHub, and 22 ON SLOANE, the largest startup campus in Africa. Johannesburg also hosts the annual Fak'ugesi Festival, a 10-day festival for innovators.

**TOTAL EARLY STAGE FUNDING**

**$55 m**

GLOBAL AVG.
$431 m

**ECOSYSTEM VALUE**

**$572 m**

GLOBAL AVG.
$10.5 bn

**MEDIAN SEED ROUND**

**$218 k**

GLOBAL AVG.
$494 k

**MEDIAN SERIES A ROUND**

**$ 0.99 m**

GLOBAL AVG.
$2.7 m

**SOFT. ENGINEER SALARY**

**$30 k**

GLOBAL AVG.
$42.1 k

## Sub-sector Strengths

### Fintech

Johannesburg is home to some of Africa's leading banks and financial institutions, as well as the headquarters for all the foreign banks operating in South Africa. Of the estimated 450 startups in the city, approximately 30% are Fintechs. Launched by investment company Rand Merchant Investment Holdings, AlphaCode is a club for Fintechs that offers grants and mentorship over a 12-month program. Insurtech company Pineapple raised a $5.4 million Series A in July 2021.

# Reasons to move your startup to Johannesburg

## Talent

The Johannesburg region is home to several educational and skill-building initiatives for aspiring entrepreneurs and technologists. The University of Pretoria's Gordon Institute of Business Science hosts the Entrepreneur Development Academy, which offers a year-long Social Entrepreneurship Program. The University of Johannesburg Centre for Entrepreneurship enrols 400 students a year. WeThinkCode partners with corporations to offer students free tuition and trains 300 coders per year.

## Business Environment

Johannesburg offers great quality of life, low cost of living, highly developed economic infrastructure, sound government policies, reasonable tax rates, and competitive business costs.

The Gambia

# The Gambia

**MEMBERS:**
International Trade Centre (ITC), United Nations

> With Covid-19, tech has become a key pillar of the government's agenda. As such we look forward to better private-public partnerships that will build confidence and growth in the sector.

**Beran Dondeh-Gillen**
Chair, IT Association of The Gambia (ITAG)




## Highlights

With approximately 115,000 micro, small and medium-sized enterprises contributing around 20% of its GDP, the Gambia has always been a business-minded country. Helped by the government's strong commitment to entrepreneurship, especially through the recently set up Enterprise Development Fund (EDF) and Commission on Local Content, a recent startup boom is looking to channel the energy of the young, dynamic population into more fast-growing, tech-focused companies. Startup Incubator Gambia, launched in 2015, was the first ever incubator and co-working space in the Gambia. Since then, new tech hubs were set up to support the ecosystem: the Disruptive Lab, The Hub, and the UNDP Accelerator Lab. Moreover, programs like the Empretec program, and the Start and Improve Your Business (SIYB) program offer high-quality short-term training to promising entrepreneurs in the country. Similarly, the Youth Empowerment Project (YEP) implemented by the UN International Trade Centre (ITC) and funded by the EU has been supporting the growth of the Gambian tech sector since 2018, including through the Andandorr accelerator. While Gambia's ecosystem is in the early stages of its development, success stories are beginning to emerge: e-commerce Sellox is becoming one of the most popular marketplaces for startups, boosted by the pandemic. Young Gambians from the diaspora are setting up innovative startups focused on key sectors like Healthtech and Fintech. InnovarX Global Health (IGH), for instance, is a healthcare provider that leverages e-health platforms to serve patients' needs. The tech sector is fueled by young graduates, mainly from the University of The Gambia, but also from tertiary training institutes such as Lasting Solutions.

**TOTAL EARLY STAGE FUNDING**
**N/A**
GLOBAL AVG.
$431 m

**ECOSYSTEM VALUE**
**N/A**
GLOBAL AVG.
$10.5 bn

**MEDIAN SEED ROUND**
**N/A**
GLOBAL AVG.
$494 k

**MEDIAN SERIES A ROUND**
**N/A**
GLOBAL AVG.
$2.7 m

**SOFT. ENGINEER SALARY**
**N/A**
GLOBAL AVG.
$42.1 k

## Sub-sector Strengths

### Fintech

Inclusive financial services are on the rise in The Gambia. Mobile payments are progressing steadily (QMoney, AfriMoney), as well as related services, such as Pay365's Ping Money and ANG Capital's 'Lebal ma'. Building on this favourable backdrop, the UN Capital Development Fund (UNCDF) is working to increase youth financial inclusion and access to finance in the Gambia with its YouthStart (YS) program. Gamswitch is also easing intra-bank payments for Gambian businesses.

### E-commerce

The World Economic Forum ranked the Gambia 10th in Africa for its ICT environment, ahead of much larger neighbors like Nigeria and Senegal. The government is supporting the further development of the E-commerce sub-sector with a range of incentives, including tax breaks on corporate and turnover tax, exempting direct inputs such as hardware from import tax. In parallel, social commerce on TikTok, Snapchat, WhatApp and Instagram has been taking off, leading to a boom in logistics and last-mile delivery services.

# Reasons to move your startup to The Gambia

## Affordable Skilled Labor

The Gambia offers abundant semi-skilled and unskilled labor. The average wages and costs are substantially lower than in many other West African countries. Additionally, English is the Gambia's official language, making working with local labor easier for international companies.

## Business Friendly Environment

The Gambia has made it easier to start a business in the country, and the process of conducting cross-border trade is significantly less complicated than in other Sub-Saharan African countries. The government has lowered the corporate tax rate, replaced the previous sales tax regime with a more streamlined VAT system, and adopted the Security Interests in Moveable Property Act, which implements a functional secured transactions system and establishes a centralized collateral registry.

## Regional Hub

The Gambia's membership in the Economic Community of West African States (ECOWAS) trading bloc ensures easy market access to over 300 million people for companies using it as a base for regional trade. The country also offers well-functioning customs and port services, low import duties with a duty waiver incentive scheme for eligible companies, and simplified customs procedures.

# Startup Community

STARTUP GENOME MEMBERS

MEMBER

**International Trade Centre (ITC), United Nations**

The International Trade Centre (ITC) is the only development agency that is fully dedicated to supporting the internationalization of small and medium-sized enterprises (SMEs). This means that the agency enables SMEs in developing and transition economies to become more competitive and connect to international markets for trade and investment, thus raising incomes and creating job opportunities, especially for women, young people, and poor communities. Established in 1964, the International Trade Centre (ITC) is the joint agency of the World Trade Organization and the United Nations.

Startup Genome

GEN GLOBAL ENTREPRENEURSHIP NETWORK

Global Startup Ecosystem Report 2021

# Regional Insights

# Asia

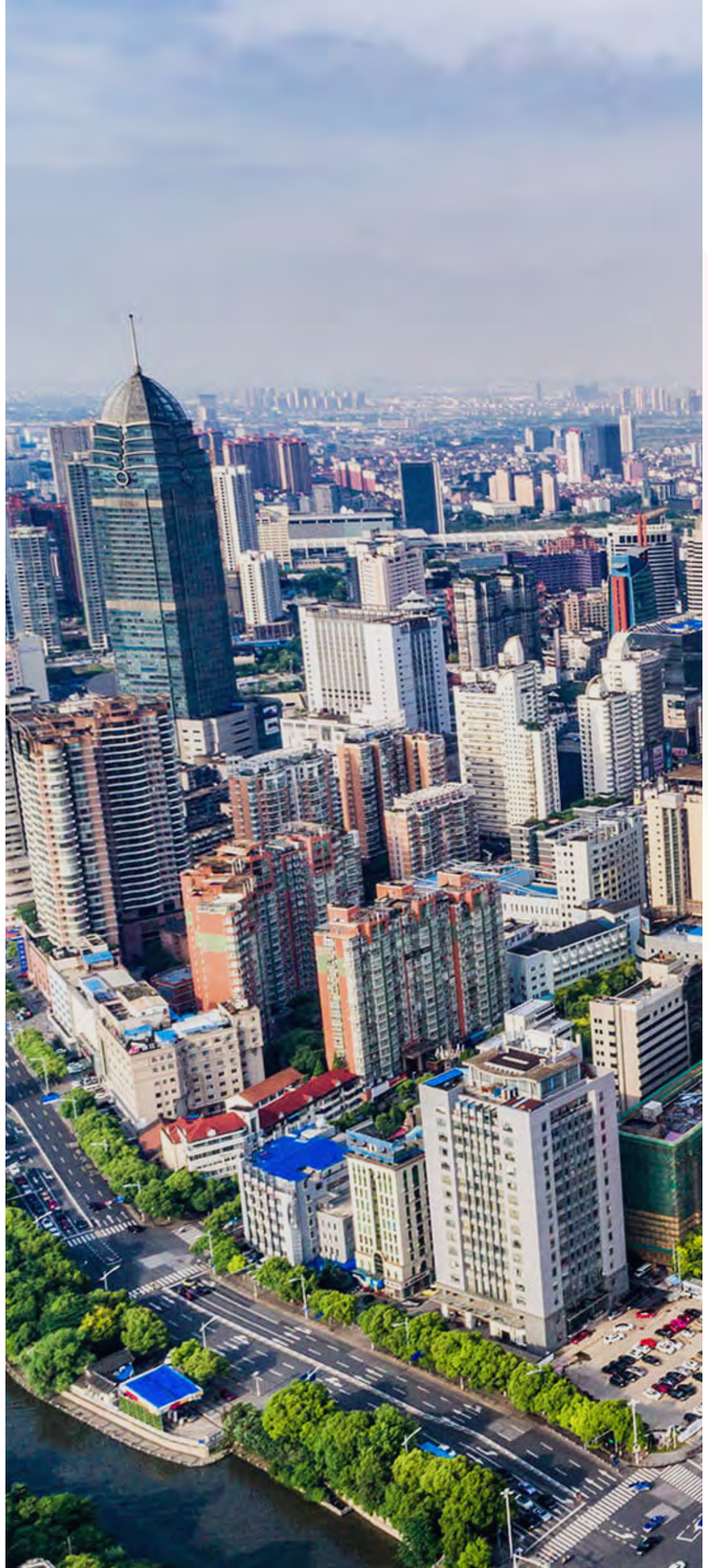

64 Understanding Diverse Markets In A Dynamic Region

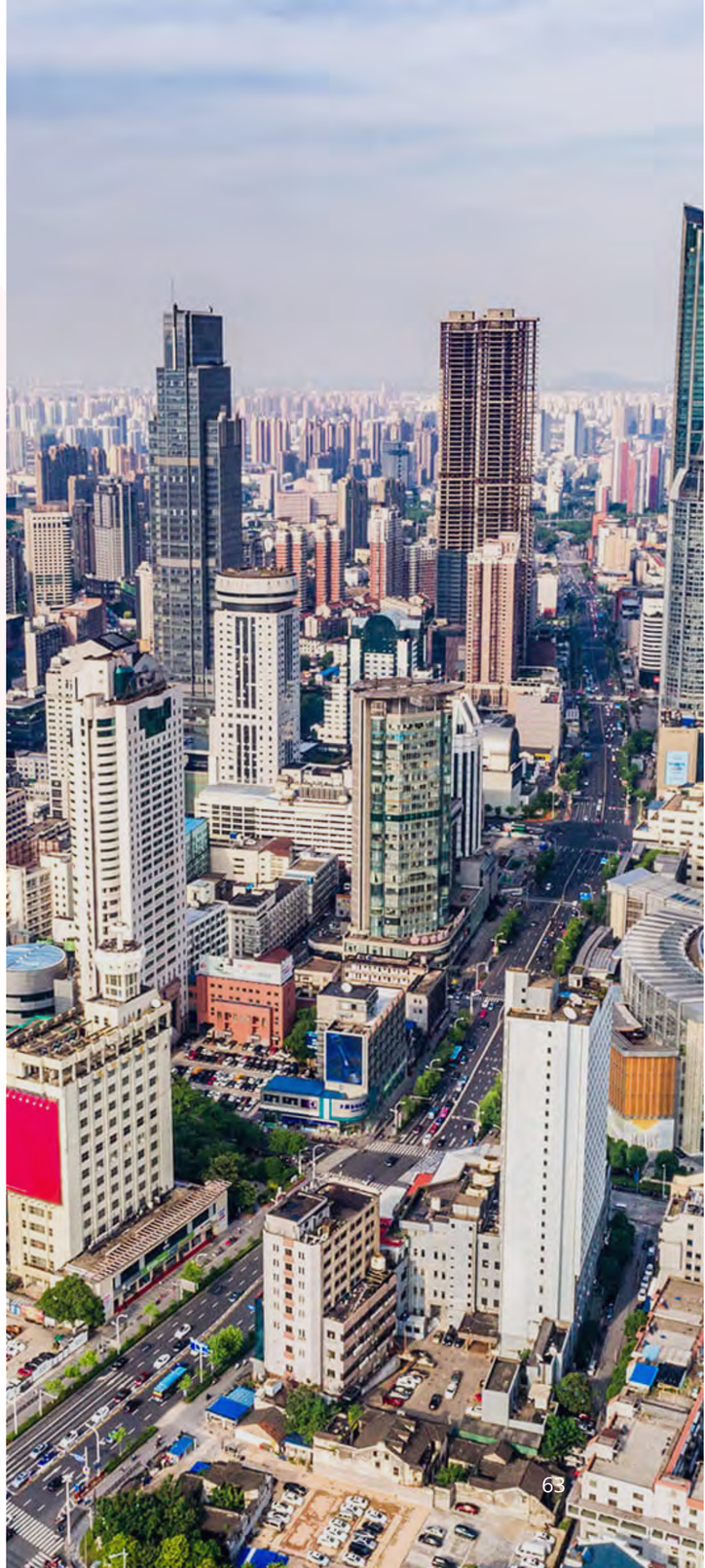
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Global Startup Ecosystem Report 2021

# Understanding Diverse Markets In A Dynamic Region

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



**PAUL ARK**

*Paul Ark works with pan-Asian venture capital firm Gobi Partners, spearheading ESG and sustainability initiatives in the company's operational and investment activities. Prior to joining Gobi Partners, he managed a $100 million global corporate venture-capital fund for Siam Commercial Bank's Digital Ventures group, one of the largest Fintech corporate VCs in Southeast Asia.*

Tech investors less familiar with the Asian hemisphere will find it easier to view the region's various startup ecosystems from the perspective of domestic-market size. On one hand there are countries such as China and India, each with  a home market of well over a billion people. That is sufficient for startups to achieve global scale even before extending beyond their home borders. Then there are the 10 countries that comprise the Southeast Asian market, also known as the Association of Southeast Asian Nations (ASEAN). Collectively, the regional ASEAN market is 660 million strong: larger than the North American, South American, or European markets. But each individual market consists of 100 million people or fewer. Also, there is signficant diversity of cultures, languages, religions, and levels of tech savviness and digital infrastructure development.

Between these two categories of ecosystem, China and India continue to attract the lion's share of venture capital, accounting for about two thirds of Asia's total funding. That is due to their vast consumer markets, rapidly growing economies, and development of global enterprises. Combined, China and India account for over a third of the world's population: two-thirds reside within a few hours' flight time. China and India also boast growing numbers of unicorn startups and are among the fastest growing markets for smartphone penetration, 5G technology roll-out, and smart cities development (especially China).

Prior to the pandemic, tech entrepreneurship in both countries was on a tear, with Chinese tech startups peaking in 2018 at almost 80% of Asia's total and India's peaking in the first half of 2020 at almost 30%. Chinese venture funding dropped by about 40% in the first half of 2020 but has since recovered completely, while India, in contrast, was hit badly by the Delta variant. Total venture funding into Indian startups in the first half of

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2021 dropped almost 50% compared to last year. Both markets boast a large number of local and global venture capital funds, ranging from traditional institutional funds to impact funds to corporate VC funds.

However, with the government's crackdown on consumer technology and promotion of a Deep Tech ecosystem independent of U.S. technologies, Chinese venture capital is shifting to sectors such as semiconductors, Healthtech, and Cleantech. India is playing catchup with China, investing heavily in consumer sectors such as grocery, food delivery, Gaming, and Edtech. Elsewhere in Asia, the pandemic has accelerated digital transformation in conservative markets such as Japan, formerly dominated by face-to-face meetings and use of hanko (stamps) for approval. There, software-as-a-service has taken off.

Turning to Southeast Asia, the region boasts an unusually attractive investment profile that combines developing world demographics (lots of young people) with developed world wealth and education. Also, its more than 660 million people represent a sizable economic bloc. But the region comprises 10 countries, 10 languages, and a wide diversity of cultural, historical, and religious backgrounds, making it challenging for startups to carve out a sizable, homogeneous market segment.

Startups in the ASEAN region attract money from a balance of global, regional, and local funds. There are plenty of Asia-originated funds with sizable assets under management and global operations or fund mandates. Well-known global players like Sequoia and 500 Startups also have a presence across the region.

Health, environmental, and social/political crises have heightened awareness around the broad spectrum of sustainability and ESG activities. That, in turn, has accelerated investment in already growing areas such as digital banking, Edtech, and Healthcare, which promise to alleviate or tackle the effects of such crises or disruptions. Startups in those industries are not just digitizing services but also extending them to people who previously lacked access. Entrepreneurs are targeting agriculture, food logistics, and alternative proteins. Another area of focus is the circular economy: technologies that make secondary use of materials through recycling or reprocessing and consequently reduce the waste going into landfills and oceans, much of it in Asia. Other startups are developing technologies that reduce the carbon footprint either through decarbonization or carbon capture/sequestration, especially important as air quality has declined to hazardous levels in Asia's capital cities in recent years.

Most ASEAN governments are very supportive of startups, some having even established government ministries to develop their local ecosystems. Singapore has been the most aggressive in this respect. Among other things, the Singaporean government set aside $300 million last year as part of an initiative to catalyze investment in Deep Tech startups. It has long implemented friendly policies to spur development of local startups and venture capital funds as well as to attract foreign entrepreneurs and VCs. That said, many ASEAN governments still have a ways to go to reduce the regulatory burden on startups and VC funds and to create conditions amenable to the same explosive growth and development of local startups present in more established tech ecosystems. Among other actions they must further ease entry and residency for foreign talent, streamline processes for starting and closing businesses, and establish more flexible termination and severance policies and creative non-cash compensation schemes.

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Global Startup Ecosystem Report 2021

# Mega Tech IPOs Head Toward $1 Trillion By 2025

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



**AMIT ANAND**

*Amit Anand is the Founding Partner of Singapore-based Jungle Ventures, which invests in and helps build tech leaders from South Asia. Under his leadership, Jungle, founded in 2012, has grown into one of the largest VC firms in the region, currently managing over $600 million.*

Venture money is pouring into South Asia, where tech companies have attracted more than $23.2 billion in the first half of 2021, a 150% jump over the same period last year. In one of the world's most promising VC markets, tech titans grab headlines as they prepare for their public market debuts through traditional IPOs or mergers with special purpose acquisition companies (SPACs).

In the last few months we've seen 10 years of entrepreneurship, innovation, and investment come to fruition Among the events: Zomato listed on India's stock exchange at a valuation exceeding $10 billion. Bukalapak raised $1.5 billion—making it Indonesia's largest IPO ever—when it debuted on the IDX exchange. Singapore-based Grab, with a valuation of around $40 billion, is going public through a merger with the SPAC Altimeter Growth Corp. Victory Park Capital is the sponsor of the SPAC taking public Indonesia's Kredivo at a valuation of $2.5 billion.

Sea Limited (Singapore), Zomato, and Bukalapak already have an aggregate market capitalization of more than $170 billion; and more than 10 other regional companies are in the IPO pipeline. With the successful execution of those listings at the intended valuations, South Asia's tech sector will likely add more than $125 billion in market capitalization, for an aggregate $250 billion to $300 billion by December 2022.

At Jungle Ventures, we are pleased to see these advanced-stage listings. But what excites us most is the region's robust pipeline. Today there are nearly 50 unicorns in South Asia. Large Indian companies such as Flipkart (majority owned by Walmart, last valued at $37 billion); PayTM (valued at $16 billion); and Byju's (valued at $16.5 billion) lead the pack.

These nearly 50 unicorns currently possess an aggregate valuation exceeding $300 billion and continue to grow at

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75% to 200% CAGR. Many plan to go public in the next two to three years. Even with conservative discounts to their valuation multiples, these companies' fast growth positions them for very large IPOs. And if just 70% go public successfully, their aggregate market capitalization can easily cross the $600 billion mark as listed companies.

We estimate more than 100 additional companies, each valued between $250 million and $1 billion and growing rapidly, will soon become unicorns. And we believe a significant majority of those will be IPO candidates by 2025, with an aggregate market capitalization of more than $200 billion as they list.

As we look forward to the next five years, it is clear that this $1 trillion of value will establish South Asia as the third largest tech hub globally, after the United States and China. The resulting windfall and available capital for the ecosystem's VCs and founders will drive value creation for decades to come.

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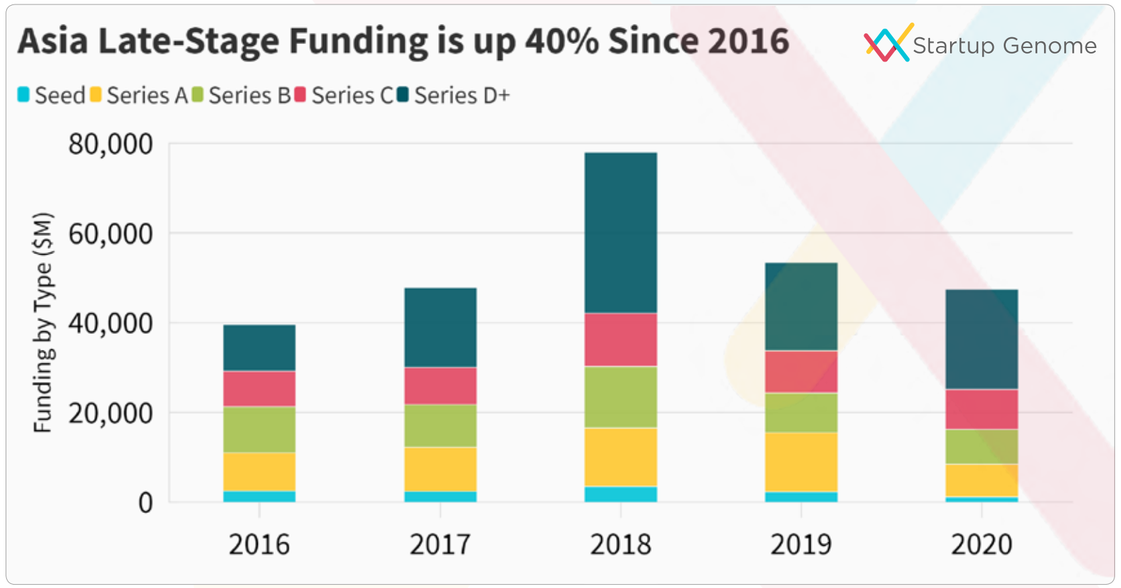
Startup Genome

Global Startup Ecosystem Report 2021

# Asia Insights & Rankings

## Key Findings

- Asian ecosystems continue to rise in the Global Startup Ecosystem Rankings with Tokyo (from #15 to #9), Seoul (#20 to #16), Shenzhen (#22 to #19), Bangalore-Karnataka (#26 to #23), and Hangzhou (#28 to #25) moving ahead.
- When it comes to the Knowledge Factor, Asia takes four of the Top 5 spots (Beijing, Shanghai, Seoul, and Guangzhou).
- Asian startup ecosystems are collectively worth $1.1 trillion in Ecosystem Value in this year's GSER period, about 30% of the global total.




## Top 5 Performers

| #1 | #2 | #3 | #4 | #5 |
|---|---|---|---|---|
| Beijing | Shanghai | Tokyo | Seoul | Singapore |

## Top Regional Challengers

| #1 | #2 | #3 | #4 | #5 |
|---|---|---|---|---|
| Mumbai | Jakarta | Guangzhou | Wuxi | Kuala Lumpur |

The Top Performers are identified by applying our Global Ranking methodology within a specific region, while the Regional Challengers are identified using the Emerging Ecosystems methodology.

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India

# Bangalore-Karnataka

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

> Bengaluru-Karnataka Innovation Ecosystem has catalysed, 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**
**$1.4 bn**
GLOBAL AVG.
$431 m

**ECOSYSTEM VALUE**
**$53 bn**
GLOBAL AVG.
$10.5 bn

## Highlights

Name a multinational tech titan— from Amazon to Uber to Microsoft — and chances are excellent it will have a headquarters in Bangalore. The city and surrounding state of Karnataka is the world's 4th largest technology and innovation cluster, and home to more than 400+ global R&D centers. The state government is working hard to leverage this tech dominance to create a thriving startup and innovation ecosystem. Already more than 4,000 startups call Karnataka home. The Government of Karnataka was the first Indian state to announce the establishment of a dedicated Startup Cell to promote the state as a startup destination. Through its Innovate Karnataka initiative it also provides financial support to startups through various funds, including the semiconductor venture fund, the bio venture fund, and the AVGC venture fund which focuses on companies in the animation, visual effects, gaming and comics (AVGC) sector and related businesses, and Idea2PoC grants, which provide early-stage funding to concepts which have yet to establish the proof of concept. Private investors are also betting on local startups. Local unicorns Swiggy and Flipkart have raised $1.5 billion and $7.5 billion respectively. The Tata Group recently finalized a $1.2 billion deal to acquire a majority stake in online grocery store BigBasket. Karnataka is also home to a number of successful tech unicorns like Byjus, CRED, Meesho, Groww, Dailyhunt, Digit Insurance, InMobi, Mu-Sigma, Razorpay, Udaan, ShareChat, BlackBuck and Unacademy. Karnataka also hosts a number of notable tech events, including the Bangalore Tech Summit which draws some of the best minds from across the globe to discuss the future of tech.

**MEDIAN SEED ROUND**
**$480 k**
GLOBAL AVG.
$494 k

**MEDIAN SERIES A ROUND**
**$3.9 m**
GLOBAL AVG.
$2.7 m

**SOFT. ENGINEER SALARY**
**$13 k**
GLOBAL AVG.
$42.1 k

## Sub-sector Strengths

### Fintech

In January 2020 The Bahrain Economic Development Board (EDB) and Karnataka government signed a pact to develop the state's Fintech ecosystem and promote partnerships between startups and corporates, universities, research institutions, and government agencies. Neo-banking platform Razorpay raised a $160 million Series E in April 2021 at a valuation of $2.84 billion. Digital lending platform KreditBee closed a $145 million Series C round in March.

### Life Sciences

With 60% of India's biotech companies, 35+ clinical research organizations and 7.5k biotech graduates annually, Karnataka is the biotech capital of India. Karnataka Innovation and Technology Society (KITS) acts as a liaison between industry and government and works closely with Bangalore Bioinnovation Centre (BBC) works closely to help implement schemes of the government of Karnataka. With Bangalore Helix biotechnology park and Bangalore bio cluster and pharma parks, the state boasts world-class facilities. Pandorum Technologies, an incubatee of BBC and a biotechnology company, raised $5.5 million in September 2020, getting their total to $9.2 million.

# Reasons to move your startup to Bangalore-Karnataka

## Tech Talent

With between 1,800 and 2,300 active startups, Bangalore is the hottest startup ecosystem in India, attracting IT job seekers from across the country. This influx of young talent makes it easy for startups to hire hardworking employees at low-cost.

## Access to Investors

Bangalore offers founders relatively easy access to a large number of venture capitalists and angel investors. Startups can also apply to the Karnataka Government for funds. Since setting up its startup policy in 2015, the state government has set up several funds totalling over Rs. 300 crores/$ 40.5M to back startups across different sectors such as biotechnology, tourism, and animation.

## Infrastructure

Karnataka, a leader in technological innovation, has 44% of India's R&D centres, including some of the biggest R&D centres, such as Google's first AI and machine learning focused center, Intel's largest 5G technology design center, GE's largest IoT R&D center, all of which are second only to their centres in the US, and Samsung's largest R&D center outside South Korea. The state's Startup Cell aims to create top tier incubation infrastructure and promote Bangalore and Karnataka as premier startup destinations.

# Startup Community

STARTUP GENOME MEMBERS

MEMBER

### Karnataka Innovation & Technology Society (KITS)

KITS is a nodal centre for implementing schemes of the Department of Electronics, IT, BT and S&T, Government of Karnataka & 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 centre catering to all the needs of start-ups in life science.

FEATURED ARTICLES FROM LOCAL AMBASSADORS

China

# Beijing #4

> Beijing's greatest innovation asset lies in its preeminent education resources. Among Beijing's yearly 200,000 college graduates, many enter the startup scene one way or another, making this city a leading innovation highland as today.

**Jordan Zhu**
Senior Manager at Innoway in the Global Incubation Department




## Highlights

Silicon Valley might be the most famous of all startup hubs, but in 2020 Beijing was actually the ecosystem with the most unicorn companies with 93 local startups valued at $1 billion or more, including the two most valued unicorns in the world, Alibaba spin off ANT Group (valued in April at around $200 billion) and TikTok parent company ByteDance (valued at $140 billion). Though the coronavirus pandemic rattled the Chinese economy, particularly in early 2020, pandemic related disruptions also provided opportunities for Beijing based startups. With students pivoting to remote listening, China's online education companies saw rapid growth. Yuanfudao, an EdTech giant based in Beijing, raised US$1 billion in funding. Xiaomawang, a coding education company, raised US$21.2 million. Other Chinese startups were able to thrive thanks to changing trends in consumer spending and habits driven by the pandemic. Beijing's Calorie Technology, which operates the Keep Fitness app, surged to more than US$1 billion in value in May 2020 and boasts 200 million registered users, for instance.

**TOTAL EARLY STAGE FUNDING**
**$10.8 bn**
GLOBAL AVG.
$548 m

**ECOSYSTEM VALUE**
**$445 bn**
GLOBAL AVG.
$13.68 bn

**MEDIAN SEED ROUND**
**$1455 k**
GLOBAL AVG.
$480 k

**MEDIAN SERIES A ROUND**
**$4.3 m**
GLOBAL AVG.
$3 m

**SOFT. ENGINEER SALARY**
**$42 k**
GLOBAL AVG.
$44 k

## Sub-sector Strengths

### AI, Big Data & Analytics

Beijing's startup ecosystem is ruled by AI, big data and analytics, and the city houses 1,070 AI companies, more than a quarter of China's total. Beijing tech hub Zhongguancun is home to 10 AI labs and 9,000 tech companies, including Baidu, Sina Corp and Lenovo. AI-based business risk control company Shumei Technology raised a total of $208 million in funding over 2 rounds, the last of which was a Series D round of $135 million in April.

### Fintech

Beijing is a global fintech powerhouse that is home to 13 public Fintech companies worth $16.35 billion in total and more than 60 highly well-funded Fintech startups, including JD DIgits and Baidu's fintech arm Du Xiaoman Finance, which provides short-term loans and other investment services.

# Reasons to move your startup to Beijing

## Funding Activity

Beijing is home to the greatest concentration of commercial bank headquarters in China. Incubators and accelerator programs are also plentiful and include both private and government programs. The Zhongguancun Science Park in Beijing is home to many of them, including Huailongsen International Enterprise Incubator, Innovation Works, Beijing Zhongguancun Shijingshan Science Park, Huailongsen International Enterprise Incubator, and Bo Ao Liang Chuang. Together these programs serve 3,000 startups annually, including both local and international companies.

# Startup Community

STARTUP GENOME PARTNERS

**91Maker / China Accelerator / Creative Young Community / Cyzone Innoway BJ / Dao Ventures / DayDay Up / Legend Star / Magma Partners / Makes-global / Noodle & Meetup / Plug and Play China / Sinavation Ventures / Startup Grind / Suhehui / Technode / Ventures Lab**

India

# Kerala

**MEMBERS:**
Kerala Startup Mission (KSUM)

> Kerala has a strong network connecting all the stakeholders in the startup ecosystem. The high literacy rates, skilled human resource, entrepreneurial environment and proactive government support makes Kerala a global destination for startups.

**Mr. John M Thomas**
Chief Executive Officer at Kerala Startup Mission




**TOTAL EARLY STAGE FUNDING**
**<$50 m**
GLOBAL AVG.
$431 m

**ECOSYSTEM VALUE**
**<$100 m**
GLOBAL AVG.
$10.5 bn

## Highlights

The pandemic may have posed plenty of challenges, but it didn't stop Kerala's entrepreneurs. According to cluster hub Kerala Startup Mission, 400 new companies were registered between March 2020 and April 2021 alone, a statistic that speaks to the energy of the growing ecosystem in the southern Indian state. Kerala Startup Mission offers a variety of programs to support entrepreneurs. Its women's empowerment initiative, Kerala Women In Nano Startups (K-WINS), launched in January 2020. Future Technologies Lab provides tools and equipment for R&D and connects startups and students. The Innovation Grant scheme provides financial assistance of up to INR 1,200,000 to help entrepreneurs transform ideas into fully-fledged businesses. Other support programs include Startup Leadership Academy, which connects students with leading figures in the world of entrepreneurship and business. The Accelerator for Electronics Technologies (ACE) supports startups striving to scale. The Green Innovation Fund, an accelerator program for social impact startups, launched in November 2020. The K - Accelerator Program provides industry exposure to startups that have started generating traction. India's first Super Fab Lab, built-in collaboration with MIT, opened in Kochi, Kerala in January 2020. Its state-of-the-art facilities enable researchers and entrepreneurs to develop cutting-edge innovations. The Kerala Technology Innovation Zone offers the best business development infrastructure in the state. The Seeding Kerala summit introduces high net worth individuals and leading investors from across India to Kerala's early-stage investment ecosystem. The 'Technology Conclave' aims to seed collaborations that will transform research knowledge into commercially viable products.

**MEDIAN SEED ROUND**
**$70 k**
GLOBAL AVG.
$494 k

**MEDIAN SERIES A ROUND**
**N/A**
GLOBAL AVG.
$2.7 m

**SOFT. ENGINEER SALARY**
**$6.8 k**
GLOBAL AVG.
$42.1 k

## Sub-sector Strengths

### Advanced Manufacturing & Robotics

Kerala Startup Mission has set up a Super Fablab in association with Center for Bits and Atoms, Massachusetts Institute of Technology, Boston establishing 22 fablabs, future technologies lab, hardware incubators, accelerators, and Center of Excellences. Maker Village, the largest hardware accelerator in India, has offered facilities and mentorship to 75 startups as of 2019. GenRobotics Innovations Pvt Ltd, which created Bandicoot, a manhole cleaning robot that has been adopted by major states of India, raised a $340,000 (INR 25 million) seed round in 2020.

### AI, Big Data & Analytics

Kerala Startup Mission (KSUM) has witnessed an increasing use of emerging technologies in startup products. This has helped startups to increase business and investments. Innovation in governance and solutions for social problems are addressed by the startups. The Kerala government launched AI and machine learning courses for graduates in 2020. Some startups in this sub-sector include Neuroplex, which specializes in computer vision and natural language processing, ZappyHire, an AI-driven hiring platform.

# Reasons to move your startup to Kerala

## Startup Support

Kerala is home to 40 incubators, 5 accelerators, and 280 Innovation & Entrepreneurship Development Centers (IEDCs, access to fablabs for rapid prototyping allow startups to build technology products. 2500 startups have been created through them. In addition, an International Entrepreneurial Exchange Programme connects local startups with leading ecosystems such as Silicon Valley and Tel Aviv.

## Government as an early adopter

The Kerala government facilitates purchases upto a value of $136,000 through the Direct Procurement and Public Procurement Preferences offered to startups. The program has benefitted more than 75 startups while 110 projects have been successfully implemented.

# Startup Community

STARTUP GENOME MEMBERS

MEMBER

### Kerala Startup Mission (KSUM)

Kerala Startup Mission (KSUM) is the state nodal agency of the Government of Kerala for entrepreneurship development and incubation activities in Kerala and one of the Top Performing States in the country.

Malaysia

# Kuala Lumpur

**MEMBERS:**
Malaysia Digital Economy Corporation

> The diversity of our talent pool, innovative ecosystem and first-rate infrastructure has catalysed Malaysia as the Heart of Digital ASEAN. Our startups also have an edge in Islamic Digital Economy and Digital Creative Content

**Mahadhir Aziz**
CEO, Malaysia Digital Economy Corporation (MDEC)




## Highlights

With the ASEAN region boasting a population of more than 650 million, Malaysia offers startups not just access to a market of nearly three times the size of the U.S. but also the talent and support needed to grow. Malaysia's lead agency in digital transformation, Malaysia Digital Economy Corporation (MDEC), is spearheading efforts in connecting Malaysian founders with ecosystem stakeholders ranging from accelerators and coworking spaces to investors, mentors, and corporate customers; they offer end-to-end support at every stage of their companies' growth. MDEC not only helps connect companies to investors, but its Founders Grindstone program also trains entrepreneurs in key fundraising skills such as preparing a pitch deck and investor relations. In 2020, MDEC introduced six different avenues for fundraising, thanks to which Malaysian startups have raised a total of $126 million as of August 2021. For eight years running Malaysia has been benchmarked #1 in the world by the Global Islamic Economy Indicator, with its vibrant Islamic Fintech ecosystem contributing greatly to its impressive performance. Working in collaboration with regulators, government agencies, and financial institutions, MDEC continues to build on the Islamic Digital Economy Ecosystem to position Malaysia as the Islamic Finance Hub 2.0. Malaysian startups have had a good start to 2021 in terms of fundraising. Notable funding news this year includes used car sales platform Carsome's US$200 million round in September, which made the company Malaysia's first unicorn, and ADA which raised a US$60 million corporate round in May.

**TOTAL EARLY STAGE FUNDING**
**$165 m**
GLOBAL AVG.
$548 m

**ECOSYSTEM VALUE**
**$16.1 bn**
GLOBAL AVG.
$13.68 bn

**MEDIAN SEED ROUND**
**$151 k**

GLOBAL AVG.
$480 k

**MEDIAN SERIES A ROUND**
**$1.1 m**

GLOBAL AVG.
$3 m

**SOFT. ENGINEER SALARY**
**$17 k**

GLOBAL AVG.
$44 k

## Sub-sector Strengths

### Gaming

Kuala Lumpur is a budding regional gaming hub, and several global companies, including PlayStation Studios, recently opened offices in the city. Malaysian gamers spent $786 million on video games in 2020, while Malaysian game developers brought in $1.77 million from exports in 2018. Malaysia hosts LEVEL UP KL, the largest conference for game developers in Southeast Asia. MDEC announced US$2.25 million in grants in April 2021, mainly to the digital creative content industry which has created over 10,000 jobs.

### Fintech

Malaysia was ranked 34 out of 134 countries in readiness to transition to a digitized economy by the Network Readiness Index 2020, . As of April 2019, there were close to 233 Fintechs in Malaysia. Islamic financing plays a large role in the sector, encompassing 37% of the banking system as of 2020. Ewallet firm TNG Digital raised fresh funding in July 2021 at a valuation of US$700 million. Kuala Lumpur also hosts the Malaysia Security Commission's SCxSC Fintech Conference.

# 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

The Malaysian government introduced a Fund of Funds totaling US$481 million to encourage foreign investors and VCs to invest in regional startups. MDEC's MTEP visa offers a 1-year pass for new entrepreneurs and a 5-year pass for established entrepreneurs. MDEC also received grant allocations of US$26.3m to spur content, product and market development for tech startups.

# Startup Community

STARTUP GENOME MEMBERS

MEMBER

**Malaysia Digital Economy Corporation**

Established in 1996, the Malaysia Digital Economy Corporation Sdn. Bhd. was the Government's response to the then new concept of "Digital Economy". Today, the global Digital Economy is estimated to be worth US$3 trillion, and MDEC continues its role to organise and lead Malaysia's Digital Economy forward.

STARTUP GENOME PARTNERS

**1337 / 500 Startups / Captii Ventures / Endeavor / Found8 / MBAN / MaGIC GAP / Malaysia Digital Hub / Petronas CVC / Proficeo / RHL Ventures / Redbeat Ventures / Selangor Accelerator Programme by SITEC / Startup Mamak / Sunway iLabs Incubator & Accelerator / UNCDF / Unicroach / Worq**

Japan

# Kyoto

**MEMBERS:**
Startup Capital Kyoto

> 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

Regional Ecosystem Bang for Buck
Top 30

Regional Ecosystem Funding
Top 30

**TOTAL EARLY STAGE FUNDING**
**$54 m**
GLOBAL AVG.
$431 m

**ECOSYSTEM VALUE**
**$424 m**
GLOBAL AVG.
$10.5 bn

## Highlights

Japan’s ancient capital, Kyoto pairs a centuries’ long tradition of excellence and innovation in craftsmanship with the dynamism and technical know-how of a university town, making it a natural home for original thinkers. Kyoto University, one of Japan’s most elite educational institutions, has been actively nurturing entrepreneurs in recent years. The Kyoto University Venture Fund was set up in 2007 and is now managed by Miyako Capital. The ecosystem is also home to The Kyoto Institute of Technology (KIT), which recently established Kyoto Startup Summer School34, an English language entrepreneurship program aimed at connecting entrepreneurs and educators. KIT’s Design Lab (D-lab) facilitates collaborations in the fields of architecture, design, innovation, and entrepreneurship. Venture capitalists are the main players investing in startups in the ecosystem, though recently both large corporations and government agencies have also formed funds to nurture fast-growing businesses. The number of accelerators in Kyoto is also increasing, providing startups with additional sources of mentorship and early-stage funding. Success stories are already emerging from this nexus of talent and institutional support. 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. It has since raised a total of $67 million at a valuation of more than $2 billion. Kyoto-based electric car manufacturer GLM is another local unicorn, while Hacarus, a maker of innovative AI tools, raised a $12.22 million Series B in November 2020.

**MEDIAN SEED ROUND**
**$886 k**
GLOBAL AVG.
$494 k

**MEDIAN SERIES A ROUND**
**$2.2 m**
GLOBAL AVG.
$2.7 m

**SOFT. ENGINEER SALARY**
**$45 k**
GLOBAL AVG.
$42.1 k

## Sub-sector Strengths

### Advanced Manufacturing & Robotics

The presence of more than 30 large manufacturers, including Kyocera, Shimadzu, and Horiba, has accelerated the growth of the advanced manufacturing and robotics startups in the Kyoto region. Plug and Play Kyoto works with corporate partners to support more than 133 startups in the sub-sector, while Monozukuri Venture offers comprehensive support to hardware startups, including early-stage funding and a prototyping facility. Success stories include Atmoph, an IoT startup manufacturing the window-type smart display, that raised a total of $5 million in funding and a recent Series B round of $1.4 million in November 2020.

### Life Sciences

The Kansai region (Osaka, Kobe and Kyoto metropolitan areas) is the heart of Japan’s biotech industry and home to biomedical clusters that include more than 300 life sciences companies, top medical institutions, and institutes for advanced research. Kyoto University is a mecca for regenerative medicine studies with Professor Shinya Yamanaka, currently the director of the Center for iPS Cell Research and Application(CiRA), who was awarded the Nobel Prize for his iPS study in 2012. Rege Nephro, a maker of renal disease therapeutics, and drug developer AlphaNavi Pharma both recently raised Series rounds, while Hacarus, a maker of AI tools for the medical field, has raised a total of $12 million, including an undisclosed round in April 2020.

# 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 others.

## Academic Powerhouse

There are more than 40 universities in Kyoto, accounting for 10% of Kyoto'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.

## Presence of global firms

Companies such as Kyocera, Shimadzu, NIDEC, Omron, Horiba and NISSHA have their roots in Kyoto, and their presence on the global stage links new entrepreneurs based here to the business world outside the city.

# Startup Community

STARTUP GENOME MEMBERS

MEMBER

### Startup Capital Kyoto

Startup Capital Kyoto is an initiative by JETRO Kyoto, Kyoto Prefecture and Kyoto Municipal City, in order to support overseas entrepreneurs starting their business in Kyoto. With its thousands of history and rich culture, Kyoto is an ideal place to live and start a business. In addition to start-up visas, Startup Capital Kyoto provides coworking space, assistance with company setup, various consultation services, and referrals to the ecosystem in Kyoto.If you start your business, why don't you start your business in Kyoto?

Philippines

# Manila

**MEMBERS:**
Department of Trade and Industry

> Despite setbacks due to Covid-19, startups remain a catalyst for innovation. Leveraging on our strengths, the Philippines will continue supporting startups by reducing barriers to entrepreneurship, providing the right conditions, and boosting their entrepreneurial potential.

**Undersecretary Rafaelita M. Aldaba**
Competitiveness and Innovation Group, Department of Trade and Industry




## Highlights

The Philippine startup ecosystem is rapidly developing with stronger government support particularly in high-growth services, such as AI, Big Data, and fintech, among others. Enabling policies such as the Philippine Innovation Act and the Innovative Startup Act aim to boost the country's innovation and entrepreneurship ecosystem through harmonized government support measures and policy reforms. These laws are consistent with the country's science and technology-based industrial policy, Inclusive Innovation Industrial Strategy (i3S), which aims to nurture innovative startups, especially those that can introduce new ideas, products, processes, and business models using Industry 4.0 technologies, like AI. In May 2021, the Department of Trade and Industry (DTI) launched the National AI Strategy Roadmap to position the Philippines as an AI center of excellence, a big data processing and analytics hub providing high-value services to the world. It will focus on building robust digital connectivity and data infrastructure, nurturing STEM-related professions, institutionalizing AI-related regulations, cybersecurity measures, and accelerating investments in AI R&D. Through a National Center for AI Research, the country aims to grow more AI startups by providing specialized incubation and commercialization support, fiscal incentives, linkages to multinational corporations, and targeted R&D grants. The Corporate Recovery and Tax Incentives for Enterprises (CREATE) Act has enhanced the country's attractiveness for investments by making its incentives more competitive and innovation focused. Under CREATE, the highest level of incentives (up to 17 years of combined Income Tax Holiday and Special Corporate Income Tax/Enhanced Deductions) will be provided to support innovative economy-stimulating activities.

**TOTAL EARLY STAGE FUNDING**
**$101 m**
GLOBAL AVG.
$431 m

**ECOSYSTEM VALUE**
**$584 m**
GLOBAL AVG.
$10.5 bn

**MEDIAN SEED ROUND**
**$217 k**

GLOBAL AVG.
$494 k

**MEDIAN SERIES A ROUND**
**$5 m**

GLOBAL AVG.
$2.7 m

**SOFT. ENGINEER SALARY**
**$8.6 k**

GLOBAL AVG.
$42.1 k

## Sub-sector Strengths

### Fintech

The fast-growing use of mobile banking, an enabling regulatory environment, and a high number of unbanked and underserved Filipinos allowed more fintech startups to prosper in the Philippines. Amidst the pandemic, several local fintech startups managed to increase volume of transactions and raised funding for expansion. PayMongo secured USD 12 million in a Series A financing round. Squidpay secured USD 2 million in Series A. NextPay has raised $1.6 million (around P80.6 million) in a seed round of funding.

### E-commerce

The acceleration of digital transformation paved the way for the growth of E-commerce in the Philippines. The country's revenue in e-commerce is estimated at over USD 5 million in 2021, with market volume projected to reach USD 8.8 million by 2025. Taking advantage of this momentum, the DTI launched the eCommerce Philippines 2022 Roadmap in January 2021, providing strategic direction to accelerate the sub-sector's growth. Great Deals E-Commerce, riding on the opportunity, raised a total of $41.3 million in funding.

# Reasons to move your startup to Manila

## Government Support

DTI, the Department of Information and Communications Technology (DICT), and the Department of Science and Technology (DOST) are implementing the Innovative Startup Act, to create a startup one-stop-shop, startup central portal, and startup ecozones. The law also established the Philippine Startup Development Program, to provide benefits such as grants, subsidies, visa support, and equity financing to eligible and qualified startups and startup enablers.

## Startup Funds

A Startup Grant Fund (SGF) has been created by DTI, DICT, and DOST to provide grants-in-aid for startups to overcome R&D roadblocks and to strengthen their IP. DTI is also administering a Startup Venture Fund (SVF) with the National Development Company (NDC), matching private sector investments and providing equity funding to support startups' establishment and expansion in key areas.

# Startup Community

STARTUP GENOME MEMBERS

MEMBER

### Department of Trade and Industry

The Department of Trade and Industry (DTI) 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 (CIG) 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 PARTNERS

**Department of Science and Technology** / **Department of Information and Communications Technology** / **Intellectual Property Office of the Philippines** / **Small Business Corporation** / **National Development Company** / **Philippine Exporters Confederation, Inc.** / **QBO Innovation Hub** / **AIM-Dado Banatao Incubator** / **IdeaSpace Foundation** / **StartUp Village** / **Launchgarage** / **Brainsparks** / **Philippine Fintech Association** / **Fintech Alliance of the Philippines**

South Korea

# Seoul #16

**MEMBERS:**
Seoul Business Agency

> The Seoul Metropolitan Government (SMG) has set the goal of turning Seoul into a “startup-friendly city for the youth” in our belief that young entrepreneurs are treasures of the city. We plan to enhance entrepreneurship training across Industry 4.0 sectors so that the city can give birth to more unicorn companies. We will also keep on supporting entrepreneurs beyond their start-up phase.

**Se Hoon Oh**
Mayor of Seoul




**TOTAL EARLY STAGE FUNDING**
**$2.5 bn**
GLOBAL AVG.
$431 m

**ECOSYSTEM VALUE**
**$47.2 bn**
GLOBAL AVG.
$10.5 bn

## Highlights

Seoul, already home to most of South Korea’s 11 unicorns, is aiming to become one of the world’s top 5 startup hubs by 2022. And the government is putting its money where its mouth is. In July the South Korean government announced plans to invest 114 trillion won ($94.5 billion) over the next 5 years into two ambitious new policies — the Digital New Deal and Green New Deal. Korean companies and local governments will contribute another $37.2 billion to the initiatives for a total of $132.6 billion. Complementary programs from the Seoul Municipal Government include the establishment of the IoT Incubation Center to support startups working to find solutions to urban problems, the creation of the Gyaepo Digital Innovation Park, and the creation of the Seoul App Business Center startup hub. The Seoul Global Startup Center supports foreign entrepreneurs moving to Seoul. The ecosystem also boasts plenty of privately run incubators and events. COMEUP 2020 was Korea’s biggest startup event to date attracting 1076 startups from 88 countries. Venture Capital World Summit helps connect entrepreneurs and investors. TIPS provides startups with incubation spaces in collaboration with universities and research institutes. Its angel matching fund scheme offers financial assistance to growing companies. Seoul startup success stories include global research firm and unicorn CB Insights, AI tutoring company Riid, which has raised a total of $248.1 million, and Fintech startup Viva Republica, currently valued at $7.4 billion.

**MEDIAN SEED ROUND**
**$485 k**
GLOBAL AVG.
$494 k

**MEDIAN SERIES A ROUND**
**$3.3 m**
GLOBAL AVG.
$2.7 m

**SOFT. ENGINEER SALARY**
**$47 k**
GLOBAL AVG.
$42.1 k

## Sub-sector Strengths

### AI, Big Data & Analytics

The big data analytics market in Korea was worth 1.674 trillion won (~$1.5 billion) in 2019, a 10.9 percent jump from just a year earlier. The market is predicted to be worth 2.569 trillion won (~$2.55 billion) by 2023. South Korea plans to invest $2 billion by 2022 in strengthening its AI research capabilities, including the development of 6 AI graduate schools. The government is also spending to strengthen its 5G and cloud computing infrastructure. Industrial AI company OnePredict has raised a total of $17.5 million in funding.

### Life Sciences

Finnish business accelerator Aalto Startup Center teamed up with the Korea Institute of Startup & Entrepreneurship Development (kised) to launch the Korean Startup Center in order to support Korean Life Sciences companies hoping to break into European markets. Standigm, an AI-based drug discovery and development company, raised a $44.5 million Series C round in March 2021.

### Gaming

South Korea’s game market size is projected to exceed 18 trillion won ($16.6 billion) in 2021, according to a white paper released by The Korea Creative Content Agency (KOCCA). In 2020, Korean gamers created around 265,000 jobs in the country. Seoul also hosts top global gaming event, the PAX Game Convention, which spotlights PC, online, arcade, console, VR/AR, and mobile gaming, as well as offering esports tournaments and talks with game developers. Game developer Npixel raised a ₩60 billion/$54 million Series A round in January 2020.

# Reasons to move your startup to Seoul

## Talent Pipeline

The Seoul Municipal Government (SMP) plans to train 1,600 technologists annually through six new industrial hubs, including Hongneung (Bio), Mapo (Fintech, Blockchain), and Gaepo and Yangjae (AI, Big Data). The SMP is also opening an “Innovation School” in the Gaepo Digital Innovation Park to train a total of 2,000 software engineers.

## R&D

Seoul is home to an incredible 22,000 research facilities, and 24.7% of Korean’s research personnel live in the city. South Korea invested almost 90 trillion won (US$83 billion) in research and development (R&D) last year, making it the fifth-largest spender among members of the Organization for Economic Cooperation and Development (OECD).

# Startup Community

STARTUP GENOME MEMBERS

MEMBER

**Seoul Business Agency**

SBA provides a variety of public services such as support for start-ups (including business of foreign residents in Seoul through Seoul Global Center), R&D, intellectual property, development of market outlet for small businesses, overseas export, SETEC(Trade exhibition for SMEs) and so forth. These services aim to help SMEs increase their market competitiveness.

STARTUP GENOME PARTNERS

**Born2Global Centre** / **Chain.Asia LLC** / **Dream Plus** / **InterValue Partners** / **Koisra Seed Partners** / **Korea Entrepreneurship Foundation** / **Medici Investment** / **Pathfinder H** / **Quantum Ventures Korea** / **Sema Translink Investment** / **Seoul Center for Creative Economy and Innovations** / **Seoul Startup Hub** / **Seoulz** / **Sopoong** / **Thenews.Asia** / **Venture Square**

China

# Shanghai #8

> Shanghai has a very impressive mix of global corporate innovation, startup co-working and investment hubs that helps startups connect dreams to innovation, make ideas to reality.

**Howard Wang**
Incubation Director, Shanghai Caohejing Innovation Center

| Global Ecosystem Knowledge | Global Ecosystem Performance | Global Ecosystem Talent & Experience |
|---|---|---|
| #2 | #3 | Top 10 |

## Highlights

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. Its startup ecosystem is particularly strong in the fintech, gaming and ecommerce subsectors. Shanghai was home to 42 unicorn companies worth more than $1 billion as of the end of last year. Despite its historical strengths the Shanghai ecosystem was already facing a funding crunch when it was hit hard by the coronavirus crisis in early 2020. Startups in the city raised just $7.5 billion in the first quarter of last year. However, thanks to China's success containing the outbreak, combined with a gusher of funding from the central bank to get the economy back on track, investment shot back up $13.2 billion and $12.2 billion in the next two quarters. In the final quarter of 2020, Shanghai was home to three of Asia's top 10 largest funding rounds, a $735.85 million Series B for electric car company Enovate motors, a $315 million Series E round for industrial parts e-commerce platform Zhenkunhang, and $310 billion for early-stage biotech startup LianBio. Online medical care and remote learning companies have been particularly hot thanks to the impact of Covid-19.

**TOTAL EARLY STAGE FUNDING**
**$5.1 bn**
GLOBAL AVG.
$431 m

**ECOSYSTEM VALUE**
**$157 bn**
GLOBAL AVG.
$10.5 bn

**MEDIAN SEED ROUND**
**$1440 k**
GLOBAL AVG.
$494 k

**MEDIAN SERIES A ROUND**
**$4.7 m**
GLOBAL AVG.
$2.7 m

**SOFT. ENGINEER SALARY**
**$37 k**
GLOBAL AVG.
$42.1 k

## Sub-sector Strengths

### Edtech

In response to the pandemic the number of online learners in China shot up last year, reaching 423 million by March 2020, an increase of 110.2% from the end of 2018. The Edtech sector boomed too, reaching USD $70.40 billion in 2020, a 12.3% increase from the previous year. Shanghai-based education company Zhangmen raised USD $400 million in October 2020, while Zhangmen, another Shanghai-based company in the subsector, reached unicorn status last year.

### Gaming

China boasts a massive domestic market of over 600 million gamers, while Shanghai recently broke ground on The Shanghai International New Cultural and Creative E-sports Center, a $898.2 million, 500,000 square meter e-sports event hub where teams and companies can be based and compete. The city also hosted the 'League of Legends' world championship last year, cementing its status as a global leader in e-sports. Shanghai-based game developer Moonton was acquired by ByteDance for $4 billion in March 2021.

# Reasons to move your startup to Shanghai

## Government Funding

In partnership with state-owned investing parties like Shanghai International Trust, Shanghai International Group, Shanghai Zhangjiang Hi-Tech Development, and the Shanghai Guosheng Group, the Shanghai government is offering $4.6 billion in special funds to encourage the growth of startups in the information technology, advanced manufacturing, new energy, and biomedicine sectors. Startups can receive additional government support in the form of rent reductions, entrepreneurship subsidies, and subsidies for innovation in line with the implementation of China's 2030 Innovation Megaprojects like 5G, smart city and AI.

# Startup Community

STARTUP GENOME PARTNERS

**ChinaAccelerator / Ether Capital / Founder Space / Innoclub / Innospace+ / Innospring / NakedHub / People Square / Shanghai valley / Sinavation Ventures / Startup Grind / Technode / Xnode**

China

# Shenzhen #19

> Shenzhen is expected to lead the way, with a digital economy that makes up 31% of its GDP, compared with the national average of 10%. Shenzhen's digital transformation could set the tone for China's broader economic policies and strategies.

**Richard Tan**
Founder of InnoSpace, China

**TOTAL EARLY STAGE FUNDING**

**$3.2 bn**

GLOBAL AVG.
$431 m

**ECOSYSTEM VALUE**

**$71 bn**

GLOBAL AVG.
$10.5 bn

## Highlights

No place is more emblematic of China's economic transformation than Shenzhen, widely touted as the Silicon Valley of China. Officially a special economic zone, Shenzhen is a city-level policy experimentation zone: the first of its kind. As such, it attracted government resources that helped GDP grow an average 20.7% over 40 years, surpassing even Hong Kong and Singapore. On average, Shenzhen has 8.5 state-level high-tech enterprises per square kilometer and 71 invention patents approved daily. In 2020 it boasted the third-highest concentration of China's 500 most valuable private companies, including Tencent, Huawei, and Vanke. Nearly 300 overseas Fortune 500 enterprises operate there. Under its five-year plan, Shenzhen has the mandate to become China's "core engine" of reform and to power growth and innovation in a region comprising nine Guangdong cities, Macau and Hong Kong. The goal is to build a global digital-pioneer city that will help catalyze China's transformation into a strong digital economy. Shenzhen's own digital economy makes up 31% of its GDP, compared with the national average of 10%. Within Shenzhen, Longhua District is spearheading the transformation. Among its promising plans and policies: Platform + Ecology, which encourages partnerships between Longhua's technology companies and traditional manufacturers to improve manufacturing productivity through digitization. Longhua also is constructing eight themed clusters of "application scenes" that together comprise its vision for the future, digitally empowered City.

**MEDIAN SEED ROUND**

**$1260 k**



GLOBAL AVG.
$494 k

**MEDIAN SERIES A ROUND**

**$3.9 m**



GLOBAL AVG.
$2.7 m

**SOFT. ENGINEER SALARY**

**$27 k**



GLOBAL AVG.
$42.1 k

## Sub-sector Strengths

### Fintech

Shenzhen, which is home to many of China's most important financial institutions, including the Central Bank's Digital Currency and Fintech Research Institutes, recently released an Action Plan to establish the city as both a global Fintech and sustainable finance center. Pilot reforms allow qualified domestic enterprises to go public overseas, as well as qualified foreign financial institutions to establish securities and fund management companies in Shenzhen. Shenzhen University WeBank Institute of Fintech offers both undergrad and graduate degrees in Fintech majors. ArchForce Financial Technology raised a $18.3 million Series B in March 2020.

### AI, Big Data & Analytics

The Shenzhen AI Industry Association calculates China's AI industry is now worth USD 50.75 billion. As of 2020, the number of AI-related companies in China reached 6,425. In June 2020 Shenzhen published draft regulations in order to establish a clear regulatory framework for the sub-sector. The municipal government also set up an AI ethics council. The Shenzhen Institute of AI and Robotics for Society is sponsored by 7 world-leading robotics and AI research institutions. Shenzhen is home to the International Artificial Intelligence Exhibition. AI chip maker Intellifusion raised nearly US$141 million in financing in April 2020. SmartMore Technology raised a $31 million Series B in June 2021, following a $100 million Series A in October.

# Reasons to move your startup to Shenzhen

## Dynamic Local Economy

The Shenzhen government is aiming to double the city's GDP and GDP per capita in 15 years with a goal of having GDP reach US$618 billion by 2025. Ambitious plans call for Shenzhen to become a benchmark smart city and a model city of digital China. The city is a center for high-end manufacturing, CleanTeach, and the marine economy with plans in place to form an additional 3 industrial clusters in specific digital sectors.

## Low Real Estate Costs

The costs of incorporating and maintaining a company in Shenzhen remain comparatively low. In late 2020 the cost of leasing office space was US$32 per square meter. Office space in the city has an overall vacancy rate of 18.4%.

## Attractive Tax Regime

With a corporate tax rate of just 15%, Shenzhen offers an attractive tax regime to companies based there. Tax holidays are also available for companies engaging in certain preferred sectors, such as IT and knowledge process outsourcing.

Singapore

# Singapore #18

**MEMBERS:**
Enterprise Singapore

> As the gateway to SE Asia, with the rise of Grab, Sea, GoTo and the GSG alumni network, Singapore's ecosystem is set to accelerate. It also has the right elements to be a hub for deep tech startups.

**Lim Ee-Ling**
Regional Director, Asia Pacific, 500 Startups




TOTAL EARLY STAGE FUNDING
**$2 bn**
GLOBAL AVG.
$431 m

ECOSYSTEM VALUE
**$22.5 bn**
GLOBAL AVG.
$10.5 bn

## Highlights

Singapore, a vibrant commercial hub ranked the most innovative city in Asia by Bloomberg and Insead, is a natural magnet for entrepreneurial talent and is now home to over 3,800 tech-enabled startups. The government has continually supported this growing ecosystem with programs and funding, especially for nascent deep tech sectors. The Singaporean government works closely with ecosystem players including universities, 190 accelerators/incubators and over 200 investors to provide all-rounded support including financing, mentorship and talent. With Singapore's strong foundation in science and technology, the Government has doubled its efforts to support deep tech startups in Singapore, including additional S$300mil to catalyse investments and increased its co-investment ceiling to S$4million for early stage deep tech startups. To actively facilitate international connections, the Open Innovation Network was launched to facilitate the co-development of innovative solutions between the startup community and the wider innovation ecosystem while the Global Innovation Alliance supports business internationalisation. Such efforts have propelled several startups to attain unicorn status. Notable unicorns include Carro and Patsnap, who secured US$360 million in June 2021 and US$300 million in March 2021 respectively.

MEDIAN SEED ROUND
**$600 k**

GLOBAL AVG.
$494 k

MEDIAN SERIES A ROUND
**$4.8 m**

GLOBAL AVG.
$2.7 m

SOFT. ENGINEER SALARY
**$48 k**

GLOBAL AVG.
$42.1 k

## Sub-sector Strengths

### Fintech

The Monetary Authority of Singapore (MAS) announced a S$125 million support package to sustain the growth of financial institutions and fintech firms amidst COVID-19. In efforts to further liberalize the financial industry, MAS has awarded licenses for digital banks, which include awardees in the startup space: Sea Group and Grab-Singtel consortium.

### Cleantech

Under the Singapore Green Plan 2030, the government has identified S$19 billion of green projects to be funded by green bonds. The sector is supported by various incubators and accelerator programs, such as Sustaintech Xcelerator which was launched by Temasek and other partners to identify and nurture climate innovators.

### Agtech & New Food

To enhance national food security, the government is investing S$144 million in research for urban agriculture, cultured meat and microbial protein production. It was also the world's first country to approve cell-cultured meat for human consumption in December 2020. As an emergent sector, more than 15 alternative protein startups have anchored themselves in Singapore.

# Reasons to move your startup to Singapore

## Government support

The Singaporean government backs entrepreneurship with startup-friendly policies in various aspects including grants for first-time entrepreneurs, talent placements and co-investments. To support growth in deep tech sectors, the government has earmarked S$25 billion for research and development investments in strategic domains as part of the Research, Innovation and Enterprise (RIE) 2025 plan.

## Talent development and attraction

Singapore welcomes entrepreneurs and tech talent to anchor themselves in Singapore with talent initiatives like Entrepass visas for foreign entrepreneurs while Tech@SG and TechPass provide visas for Singapore-based startups to hire foreign tech talents who are strategic to the startup's growth.

# Startup Community

STARTUP GENOME MEMBERS

MEMBER

### Enterprise Singapore

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

STARTUP GENOME PARTNERS

**Action Community for Entrepreneurship (ACE)** / **500 Startups** / **FocusTech Ventures** / **Starburst Accelerator** / **500 Ecosystems Singapore PTE. LTD.** / **Startup X PTE. LTD.** / **Trendlines Medical Singapore**

# Sri Lanka

**MEMBERS:**
Information and Communication Technology Agency of Sri Lanka

> Sri Lanka's Startup Development Strategy boasts of state-of-the-art technology parks, startup- friendly policies, a venture fund, and an entrepreneur visa, to name a few initiatives in our holistic approach to develop our startup ecosystem.

**Jayantha De Silva**
Secretary, Ministry of Technology




**TOTAL EARLY STAGE FUNDING**
**<$50 m**
GLOBAL AVG.
$548 m

**ECOSYSTEM VALUE**
**$132 m**
GLOBAL AVG.
$13.68 bn

## Highlights

Sri Lanka's innovation ecosystem is evolving rapidly as the government and other players look to nurture local talent, improve the business climate, and foster international connections. These efforts began to bear fruit when Sri Lanka was ranked in the top 20 Asian Economies on the Global Innovation Index in 2020. Sri Lanka ranks second in the region for ease of starting a business. A tropical paradise, the country also offers entrepreneurs a home base with a high quality of life that serves as a convenient entry point to massive neighboring economies. New laws recently designated Colombo Port City as a Special Economic Zone, making it an internationally focused business hub that offers incentives for companies to do business in Sri Lanka. The Ministry of Technology has commissioned five new technology parks in the country which will include incubator facilities for the establishment of startups and for creating high-income-generating jobs for youth by supporting technology-focused businesses. The identified cities include Galle, Kandy, Nuwara Eliya, and Kurunegala. An initiative to bolster ties between Sri Lanka and the EU got underway in 2020 with a series of meetings between European experts on innovation networks, incubation and acceleration, and startup funding and Sri Lankan stakeholders to identify collaboration opportunities between European and Sri Lankan startups. Notable companies emerging from the ecosystem include blockchain-as-a-service company NIFTRON, which recently raised over $100,000 in angel funding in April 2021 and nCinga, an enterprise solutions software company, had an exit of $15.5 million in 2019.

**MEDIAN SEED ROUND**
**$50 k**

GLOBAL AVG.
$480 k

**MEDIAN SERIES A ROUND**
**$1.06 m**

GLOBAL AVG.
$3 m

**SOFT. ENGINEER SALARY**
**$6 k**

GLOBAL AVG.
$44 k

## Sub-sector Strengths

### Cleantech

Sri Lanka is aiming to become an energy self-sufficient nation by 2030 by increasing the country's power generation capacity from 4,043 MW to 6,900 MW by 2025 with a focus on renewable energy. Proposed incentives for offshore wind and solar power plants, a 7-year tax holiday on renewable energy projects, and investment in sustainable energy projects are poised to further boost the sub-sector. Sri Lanka's current grid connectivity of 98% is high by regional standards. The Green Energy Champion is an advanced accelerator program for sustainable businesses.

### Agtech & New Food

In 2021, ICTA Sri Lanka and enpact e.V, Germany signed an MoU for knowledge-sharing activities and encouraging technology-focused investments and related services in Agtech and Watertech. Entrepreneurship support in this sub-sector include the Good Life Accelerator, and the ecosystem has seen recent successes in companies building cutting-edge technology in Agtech. Sensz Agro, a leading AgriTech startup, raised $50K in a seed round in Jan 2020. The startup was named a Top 5 Irrigation Solution impacting the Agricultural Sector by StartUs Insights.

# Reasons to move your startup to Sri Lanka

## Tax Incentives

Sri Lanka offers a 5 to 10-year tax holiday to private companies in certain sectors, and maintains a 0% corporate tax rate for the tech sector. There is zero capital gains and zero dividend withholding tax for foreigners. ICTA and PwC Sri Lanka, partnered recently to introduce an alternate Credit Evaluation Framework specifically for tech companies to expand their financing opportunities through local financial institutions.

## Startup Friendly Government

In October 2020, the Ministry of Finance introduced a procurement policy that requires any application software bids for the government under a value of LKR 2 million to exclusively go to tech startups. In 2021 the Digital Nomad visa program was introduced, enabling foreign individuals to work remotely from Sri Lanka for 1 year.

# Startup Community

STARTUP GENOME MEMBERS

MEMBER

**Information and Communication Technology Agency of Sri Lanka**

The Information and Communication Technology Agency is the lead agency in Sri Lanka for implementation of information and communications technology initiatives by the Government of Sri Lanka. It was established to develop the economy of Sri Lanka through ICT.

India

# Telangana

**MEMBERS:**
T-Hub Foundation

> Telangana is unique in the way it has created a world-class Innovation Ecosystem through pioneering efforts in Startups, research, high-calibre talent and policy framework.

**Ravi Narayan**
CEO, T-Hub




## 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 pandemic, Telangana's IT sector recorded an 18% growth rate year on year in 2020, compared with a national rate of 8.09%. Telangana may be a young state, but the roots of its success go deep. The state's capital, Hyderabad, boasts eight universities and is home to one of the largest populations of students seeking technical education in India. Hyderabad also hosts several research centers focused on pharma, biotech and defence-related technology. The state government is deploying a range of policies building on this strong foundation. The Telangana Social Startup Network (TSSN), for instance, aims to help establish 5,000 startups in the next 5 years, with a particular focus on social startups. Telangana startups also benefit from access to numerous local investors, including Hyderabad Angels, Anthill Ventures, Sri Capital, Endiya Partners, and Indian Angel Network. Earlier in their journey, startups can access a range of incubators and support programs. WE-Hub is India's only incubator for women. It has supported more than 3,000 female entrepreneurs since its establishment. The state also boasts two of the largest incubation centers in the country, IIIT Hyderabad and T-Hub. TiE Hyderabad Bio/Agri-Startup Demo Day brings together AgriBusiness incubators from across the country.

**TOTAL EARLY STAGE FUNDING**
**$120 m**
GLOBAL AVG.
$431 m

**ECOSYSTEM VALUE**
**$1.56 bn**
GLOBAL AVG.
$10.5 bn

**MEDIAN SEED ROUND**
**$150 k**
GLOBAL AVG.
$494 k

**MEDIAN SERIES A ROUND**
**$3 m**
GLOBAL AVG.
$2.7 m

**SOFT. ENGINEER SALARY**
**$12 k**
GLOBAL AVG.
$42.1 k

## Sub-sector Strengths

### Life Sciences

Telangana's Life Sciences sub-sector, dubbed Genome Valley, is already robust, accounting for 35-40% of India's pharma production. 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. A medical devices park is currently under development as part of the initiative. BioAsia, Asia's largest Biotech and Life-sciences forum, is held in Telangana.

### AI, Big Data & Analytics

In June 2020 Telangana became the first state in India to launch a policy framework for developing Hyderabad and the surrounding region into a global AI innovation hub, declaring 2020 the "Year of AI." Telangana Academy for Skill and Knowledge (TASK), Telangana State Council of Higher Education (TSCHE), Microsoft, and Nasscom FutureSkills have partnered to implement the March to Million initiative aimed at training 1M youth across India, including at least 30,000 youth in Telangana in the skills necessary to work in the growing AI sub-sector. Corporate Risk AI platform SignalX.ai has raised a total of $1.6 million in funding.

# Reasons to move your startup to Telangana

## Recruitment Assistance

To promote the growth of local idea-stage companies, the Telangana government offers recruitment assistance of INR. 10,000 per employee for their first year of operation.

## Performance Grant

Telangana-based startups that record a year-on-year growth rate of 15% as per their audited accounts during their first three years since incorporation are eligible for a grant of 5% on turnover, subject to a limit of $13600.

# Startup Community

STARTUP GENOME MEMBERS

MEMBER

### T-Hub Foundation

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

Japan

# Tokyo #9

**MEMBERS:**
Tokyo Metropolitan Government / Deloitte Japan

> Tokyo's startup ecosystem has continuously been expanding because of the digitalization in various industries even amidst COVID-19. Tokyo launched the "Tokyo Consortium" in 2020 with 220+ VCs, leading companies and universities etc, 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**
**$2.8 bn**
GLOBAL AVG.
$431 m

**ECOSYSTEM VALUE**
**$40.7 bn**
GLOBAL AVG.
$10.5 bn

## Highlights

For decades Japan has been known as an industrial powerhouse, but also an economy that's relatively closed to international talent. That's beginning to change as the government rolls out the welcome mat in an effort to boost local startups. A new startup visa is available in National Strategic Special Zones, including Tokyo. Depending on the area, successful applicants are granted a 6-month or 1-year temporary residence permit. In December 2020, Tokyo ranked third in the Mori Global Power Cities Index, which analyzes cities' attractiveness for relocation based on startup activity, levels of R&D, and livability. This new spirit of openness and innovation can be felt at Tokyo's many startup hubs and events. Venture Café Tokyo, founded on the principle of "serendipitous collision," connects founders, investors, and students. Non-profit Startup Lady Japan helps women conduct business locally and internationally. It runs a 60-day Startup Challenge and a 6-week startup boot camp featuring intensive workshops and mentorship. Tokyo also hosts the Gartner IT Symposium/Xpo, where IT executives and experts convene virtually to share insights, as well as the Tokyo Financial Information & Technology Summit, which focuses on data and technology in capital markets. Notable funding news coming out of the ecosystem includes the announcement of US$100 million in financing for mobile gaming company Playco in September 2020, bringing the company's valuation above $1 billion and adding it to the list of Japanese unicorns. Space technology company Axelspace raised a $24 million Series C in May 2021.

**MEDIAN SEED ROUND**
**$565 k**

GLOBAL AVG.
$494 k

**MEDIAN SERIES A ROUND**
**$2 m**

GLOBAL AVG.
$2.7 m

**SOFT. ENGINEER SALARY**
**$70 k**

GLOBAL AVG.
$42.1 k

## Sub-sector Strengths

### Advanced Manufacturing & Robotics

Japan has long dominated the Robotics sub-sector, leading the world in supplying industrial robots in 2017, according to the International Federation of Robotics. The city's startups are now exploring new frontiers by supplying robots and satellites to the growing global space industry, which is set to generate more than $1 trillion in revenue in 2040, according to Morgan Stanley. Space startup Gitai raised a $17.1 million Series B round in March 2021, while Axelspace raised a $23.8 million Series C in May.

### Fintech

Japan's fintech market is expected to grow by 51% annually to $11 billion by 2022, according to FinCity.Tokyo, an organization founded by the Tokyo Metropolitan Government to promote the city as a Fintech hub. Mobile banking startup Kyash raised a total of $68.9 million over 4 rounds. Online security brokerage service Folio offers has raised $87.5 million also over 4 rounds. Automated investment advice company Money Design has raised $107.2 million in funding, over 9 rounds.

### Life Sciences

Hundreds of Life Science startups have emerged from the University of Tokyo, and an increasing number of companies in the sub-sector are bringing solutions to clinical trials. BNV launched a $50 million+ fund primarily focused on healthcare startups. Mizuho Financial Group also established a ¥5 billion (~$47 million) investment fund for Life Sciences startups. More than 4,000 Japanese clinics and hospitals now use startup Micin's telemedicine solution. Microbiome analytics company bitBiome secured a JPY700 million (~US$6.6 million) Series B in September 2020. Fitness app maker Finc raised $46.1 million in February 2020. Drug development company Modalis Therapeutics raised JPY 3.24 billion (~$30.4 million) in its IPO in August 2020.

# Reasons to move your startup to Tokyo

## International Connections

In 2020 the Tokyo Metropolitan Government established Startup Ecosystem Tokyo Consortium, an association of businesses, universities and local governments aimed at nurturing local startups. Foreign investors are engaged in the effort, including U.S. startup workspace company Cambridge Innovation Center (CIC), which recently opened a hub in Tokyo. The JETRO Innovation Program aims to facilitate connections between Japanese Life Sciences startups and the Massachusetts Life Sciences ecosystem through 3 months of tailored mentoring, pitch preparation, and networking.

# Startup Community

STARTUP GENOME MEMBERS

MEMBER

### Tokyo Metropolitan Government

TMG aims to create the world's leading ecosystem where innovations are continuously generated through the organic collaboration of players such as large corporations, start-ups, universities, and accumulated funds and information by utilizing various resources in Tokyo. Also, the Tokyo Consortium has been established to support creating the ecosystem.

MEMBER

### Deloitte Japan

Deloitte Japan has supported 3,000 startups in Japan and supports the Tokyo ecosystem's creation through Morning Pitch and Open innovation support for large companies. Also, Deloitte Japan was entrusted with the Tokyo Innovation Ecosystem Formation Promotion Support Initiative for FY 2020 and worked with Startup Genome to organize data about the Tokyo ecosystem.

STARTUP GENOME PARTNERS

**Japan Venture Capital Association (KII, UTEC)** / **Keidanren** / **Keio University** / **Mitsubishi Estate** / **Mitsui Fudosan** / **Mori Building** / **Plug n Play** / **The University of Tokyo** / **Tokyo Chamber of Commerce and Industry** / **Tokyu** / **Tokyu Land Corporation** / **Waseda University**

Startup Genome

GEN GLOBAL ENTREPRENEURSHIP NETWORK

Global Startup Ecosystem Report 2021

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Global Startup Ecosystem Report 2021

# Europe's Booming Startup Ecosystems

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



**BRENT HOBERMAN**

*Brent Hoberman is Co-Founder and Executive Chairman of Founders Factory (global venture studios, seed and accelerator programs), Founders Forum (global community of founders, corporates and tech leaders), and firstminute capital (a $270 million seed fund with global remit, backed by more than 110 unicorn founders).*

Europe's startup ecosystem has thrived during a turbulent 18 months. Globally there are 79 ecosystems generating over $4 billion in value: more than double the number identified in 2017. A majority are in Europe.

Covid-19 crystallized European nations' state support of and belief in startup ecosystems as the lifeblood of our economies. Take the Future Fund, created by the government in the United Kingdom to propel companies through the pandemic. It is estimated to have supported 11% of U.K. equity deals announced last year, with roughly $1.4 billion. Such increases in state-backed funding have been widespread across the continent, contributing to Europe's success on the global scene. The average value created by European startup ecosystems in this year's GSER period is $6.3 billion, second only to North America.

Other factors are affecting Europe's startup ecosystem: among them sector tailwinds, Brexit, United States-China tensions, the emergence of new hotspots, and the prioritization of countries across Europe when scaling and seeking talent.

With the 26th UN Climate Change Conference around the corner and increased attention to individual governments' net-zero targets, Climatetech represents a significant investment opportunity. The EU Commission's partnership with Bill Gates to spend $1 billion building large-scale Cleantech demonstration projects and the U.K. government's $233 million pledge to Greentech are among the challenges likely to attract startups. This sector's momentum will only continue over the next decade.

It's great to see Europe taking three of the Top 5 spots for Connectedness. London, Berlin, and Amsterdam are thriving on their international relationships, cross-border funding, and exchange of ideas. But we don't yet know what impact the increased friction across Europe created by Brexit will have on the startup ecosystem.

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Some people argue that friction is a good thing, leading to better moats and bigger margins.

Global political forces may also affect Europe's tech ecosystems. As friction between China and the United States grows, will Europe become increasingly attractive not only to U.S. venture capital (as indicated by Sequoia's and Tiger Global's European presence here), but also to Chinese investment? Asian investment in Europe reached a record high earlier this year in terms of numbers of deals, according to data from GP Bullhound. Each country's receptivity to this extra-continental funding will shape the future of Europe's ecosystems.

Expansion priorities, too, are shifting. Once upon a time, if you established your company in the United Kingdom, France, and Germany, then 70% of your work was done. The emergence of new, top-performing hotspots across Europe has changed that. Dublin continues to flourish, thanks to Big Tech's presence and considerable state funding for early-stage entrepreneurs. (For the first time it is a Runner-Up in the Top 30 Global Ecosystems list.) Excitingly, Europe dominates the ranking of Top 10 Emerging Ecosystems, with five countries. Barcelona zipped past fellow Spaniard Madrid to #5, where it ties with Estonia, which rocketed up from #14.

Attracting technical talent is vital to European success. Over the past 18 months we have witnessed a huge tailwind in hiring diverse talent and funding underrepresented founders. But there remains much to do at a grassroots level to ensure we create a generation of diverse technical talent. Public- and private-sector partnerships will be key, as we discovered with our launch of 01 Founders: free-to-access coding schools with job guarantees for students of all ages. Each country also must establish favourable visa processes for entrepreneurs and technical talent to ensure it can compete in the talent race.

In sum, while it's no surprise to see the continued exponential growth of Europe's tech ecosystem, both in number of deals and total funding, individual countries have a lot in play. How countries respond to state funding of startups, the influx of U.S. and Chinese venture capital, Brexit, hiring environments, and the need to nurture talent will influence who produces the next batch of ecosystem success stories.

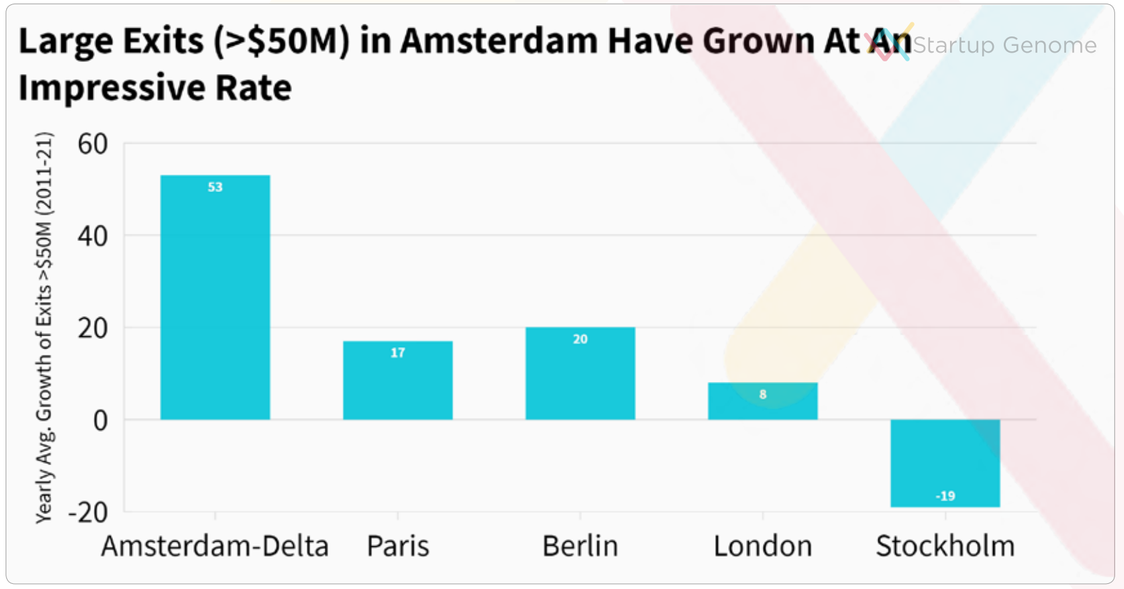
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Global Startup Ecosystem Report 2021

# The Explosive Growth Of The Amsterdam-Delta Startup Ecosystem

With about a tenth of the population of London, the larger area of Amsterdam (+100km) may be a relatively small delta region, but as a startup ecosystem it packs an increasingly big punch. Over the last decade, Amsterdam has been rising fast in terms of the overall value of its startup ecosystem.

Startups founded since 2000 in the city have a combined value of more than $86 billion, up from just $12 billion in 2015, the third largest total in Europe. Large exits of $50 million or more have also grown at an impressive rate compared to other European hubs. Since 2011, Amsterdam's region saw a whopping 53% average year-over-year growth, compared to London's rate of 8%.




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## What's Behind This Impressive Growth?

Veterans of the local startup scene point to a number of factors contributing to the area's success. First among them is the Netherlands' fundamental strengths as a home base for companies of all kinds. Centrally located with business friendly laws, strong infrastructure, and an extremely well educated workforce — over 90% of the Dutch population speaks English — Amsterdam is home to the headquarters of many multinational corporations, providing startups with a pool of expertise and talent to draw from. International graduates are allowed one year to find work or start a business post-graduation and the government runs an entrepreneur visa scheme that offers international entrepreneurs a 1-year visa to get their companies off the ground. The Netherlands also boasts a tolerant, open, cosmopolitan culture and an extremely high quality of life.

Beyond these fundamentals, the city — and the Netherlands as a whole — offers particular benefits for startups. The small local market forces companies to think globally from the outset, while budding startups also benefit from the city's dozens of accelerator and incubator programs, including several focused on women founders and diverse entrepreneurial talent. The entrepreneurial and collaborative spirit of Dutch culture certainly helps too.

> "There may be something in the Dutch culture that wants to challenge and redesign things and cherishes independence," notes Constantijn van Oranje, who serves as Envoy for the ecosystem hub Techleap.nl.

High-profile successes, such as Adyen and Takeaway.com, have also drawn attention and investor interest to the city's startup scene. As has the birth of the ecosystem's two latest unicorns, payment services provider Mollie and communications platform MessageBird, which both raised large rounds in the last quarter of 2020, raising the total number of Amsterdam unicorns to twelve since 2012. 2019 marked a record year in venture capital investment in the ecosystem, and despite the disruption of Covid-19, investment doubled again in 2020. Recent successes include Amsterdam-based sustainable online supermarket Picnic, which recently raised a $703.5 million Series D round from the Bill & Melinda Gates Foundation Trust to accelerate its growth.

This represents a massive improvement compared to the early years of the ecosystem when Dutch startups often struggled to attract foreign investment. "There has always been a lot of innovation in the Netherlands. It just took some time to connect it with new business and funding models. The VC simply wasn't there to support high growth ventures in the early days of Booking, Hyves, Galapagos, Bol.com," adds van Oranje.

Still, challenges remain in regards to particular stages and sub-sectors. Amsterdam generates more startups per capita than any other European hub (1.10 per 1,000 residents), but VC investment per capita trails Berlin, London, and Stockholm with a slower pace of growth. The ecosystem also relies heavily on local investors — 54% of capital flowing into the ecosystem comes from domestic sources, 25% from the rest of Europe, and just 21% from the rest of the world. Series A rounds seem to be particularly hard to come by, though the latest data shows startups are doing better in reaching rounds after Series A with 28% moving from Series A to B and 25% from Series B to C.

Techleap.nl managing director Maurice van Tilburg has noticed these trends as well. "Venture capital has become much more available. Still, tickets remain small and many Dutch software startups prefer to bootstrap, remaining under the radar for data analysts and limiting their growth," he says. "This is also how several of these large startups are suddenly discovered at a later funding round."

Sectors that are particularly hot for investment include AI and Big Data, which accounted for 36% of local deals from 2016 onwards. Fintech startups accounted for 20% of deals, revealing Amsterdam's strong legacy as a financial and trading center. Another notable sub-sector gaining momentum is Cleantech, which thus far has covered 10% of deals.

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## What Is Necessary To Keep This Momentum Going?

Local organizations such as Techleap.nl point to the need to improve the Netherland's tax regime to make it easier for early-stage businesses to attract talent with stock options and promote the reinvestment of investors' earnings. Providing additional funding for coding bootcamps, STEM programs, and other initiatives to develop the tech workforce will help ensure startups can find the diverse talent they need to continue to grow. Increased outreach to international talent could help on this front as well. Finally, programs focused on diversity and inclusion could widen the impact of an ecosystem that still trails comparable hubs in female participation.

With incredible talent, a strong culture of innovation, and increasing access to the funds necessary for companies to dream big, the future looks bright for Amsterdam startups. This momentum also seems to be lifting nearby ecosystems such as Rotterdam, Utrecht, and Eindhoven as well, meaning the entire Dutch startup ecosystem is poised to continue growing rapidly in the years to come.

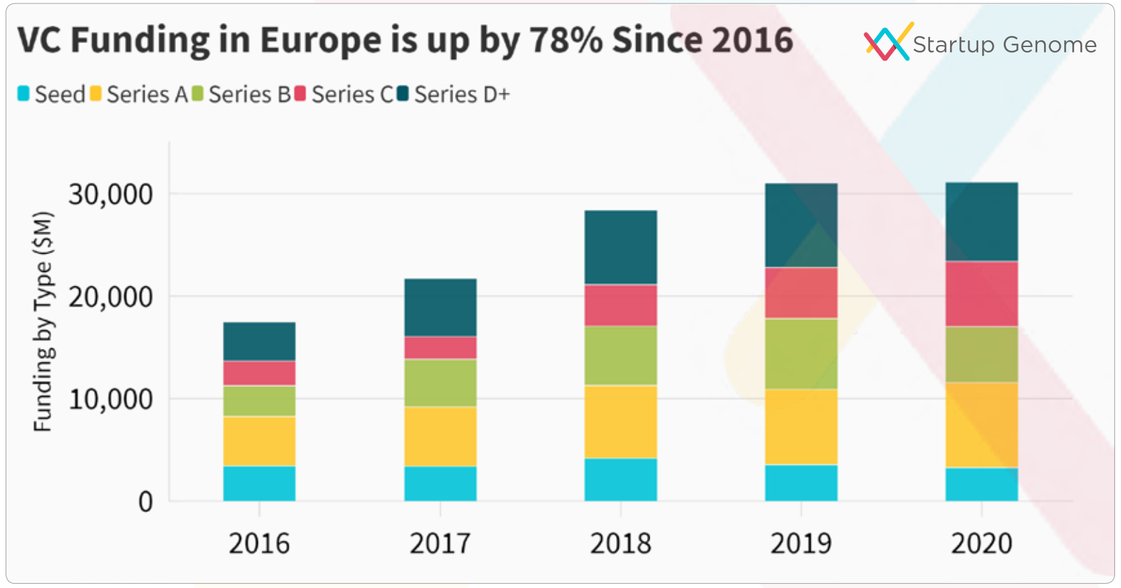
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Global Startup Ecosystem Report 2021

# Europe Insights & Rankings

## Key Findings

- Europe takes three of the Top 5 spots (London, Berlin, and Amsterdam-Delta) when it comes to Connectedness.
- The number of European billion-dollar exits tripled in 2020, from three to nine.
- The average Ecosystem Value is $6.3 billion, the highest after North America.




## Top 5 Performers

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

## Top Regional Challengers

| #1 | #2 | #3 | #4 | #5 |
|---|---|---|---|---|
| Copenhagen | Barcelona | Estonia | Madrid | Zurich |

The Top Performers are identified by applying our Global Ranking methodology within a specific region, while the Regional Challengers are identified using the Emerging Ecosystems methodology.

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Netherlands

# Amsterdam-Delta #13

> In the current crisis, the world is increasingly dependent on digital and technological solutions from startups and scaleups. In the Netherlands, we understand it is more important than ever to empower our leaders in tech to futureproof the world.

**Nils Beers**
Growth Expert and Entrepreneur-In-Residence, Accelerate Practice

## Highlights

In 2020, Dealroom named Amsterdam Europe's number 3 ecosystem in terms of the total value of tech companies founded in the city. The ecosystem is valued at US$83.3 billion, up from just US$11.1 billion in 2015. While success stories like Adyen and Takeaway.com may dominate media coverage of Amsterdam's vibrant startup scene, the city is working to make the ecosystem inclusive and ensure prosperity is broad based. In December 2020 the City of Amsterdam announced it will invest US$856,500 in RISE – Female Hub Amsterdam to empower women entrepreneurs and tech professionals. Over a dozen partner organisations, including StartupAmsterdam, TheNextWomen, Startupbootcamp, and The Code to Change, are backing the hub. In November 2020, 2 influential tech communities, the Founder Institute and WomenTech Network, announced they are partnering to create the Female Founder Program. Aimed at bridging the gap between Silicon Valley and Europe, the program prioritizes supporting women entrepreneurs. In December 2020 the final Women in AI ACCELERATE pitch event took place in an immersive VR environment. Amsterdam's startups also benefit from access to superior facilities and support services. Product is a space for scaling stage companies, while the Amsterdam Science Park is an internationally recognised hub for research, and entrepreneurship. Incubator Viisi Labs focuses on startups that develop sustainable FinTech. Incubator and social enterprise community center, Impact Hub, offers a suite of resources for founders.

**TOTAL EARLY STAGE FUNDING**
**$1.1 bn**
GLOBAL AVG.
$548 m

**ECOSYSTEM VALUE**
**$26.9 bn**
GLOBAL AVG.
$13.68 bn

**MEDIAN SEED ROUND**
**$446 k**

GLOBAL AVG.
$480 k

**MEDIAN SERIES A ROUND**
**$2.3 m**

GLOBAL AVG.
$3 m

**SOFT. ENGINEER SALARY**
**$74 k**

GLOBAL AVG.
$44 k

## Sub-sector Strengths

### Agtech & New Food

The government's Vision on Circular Agriculture sets out a vision to make the Netherlands a global leader in circular agriculture by 2030. In April 2021, leading AgTech company CropIn announced its first international office in Amsterdam. Wageningen University & Research ranks first in the world in the field of Agriculture and Forestry and regularly produces sub-sector spin-offs. AgTech smart village Hacchu Dachhu Incorporation raised €25 million/$28.55M in January 2020. Livestock monitoring software company Connecterra raised US$7.8 million in July 2020.

### Life Sciences

The Amsterdam Life Sciences District, centered around Amsterdam UMC and the Amsterdam Health and Technology Center (AHTC) is a magnet for talent. Healthcare incubator HealthInc offers an intensive 10-week program for early-stage Life Sciences startups at AHTC. Smart Health Amsterdam fosters collaboration between researchers, the business community, and policymakers. Drug development company NewAmsterdam Pharma raised US$192.5 million Series A in January 2021. In September 2020 cancer therapy company Lava Therapeutics raised $83 million in Series C funding.

# Reasons to move your startup to Amsterdam-Delta

## Welcoming International Talent

Highly skilled immigrants can qualify for the 30% tax reimbursement ruling, international graduates get one year to find work or start a business post-graduation, and there are entrepreneur visas available.

## Digital Connectedness

Amsterdam has one of the world's highest broadband concentrations and is also home to the best possible digital foundation: the Amsterdam Internet Exchange (AMS-IX) is one of the largest data transport hubs in the world.

## Tax Benefits

The government's R&D tax credit offers innovative companies compensation for part of their R&D expenditures. The Environmental Investment Deduction allows companies to deduct up to 36% of the cost for environmentally friendly investments. The Energy Investment Allowance allows companies to deduct 45.5% of the cost of energy-saving equipment, and a network of nearly 100 bilateral tax treaties helps firms avoid double taxation.

# Startup Community

FEATURED ARTICLES FROM
LOCAL AMBASSADORS

Serbia

# Belgrade and Novi Sad

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

> Improving education related to interactive media is the key for further development of the Serbian gaming industry. We are building the next generation of innovators, which are essential for ensuring our competitiveness in the global economy

**Vladimir Mastilović**
VP Digital Humans Technology at Epic Games, Founder and General Manager at 3Lateral and Digital Serbia Initiative Board Member

Startup Genome

**Regional Ecosystem Affordable Talent**

**Top 30**

## Highlights

Since Serbia's economic reform in 2018, Serbia and the region around its capital city have quietly grown into one of the premier investment locations in central and eastern Europe. The Financial Times has ranked Serbia number 1 in the world in greenfield FDI performance twice in the last 3 years, and the country creates the most FDI jobs per million inhabitants, according to the IBM Global Location Trends 2020 report. World-class companies investing in the country include Bosch, Michelin, Siemens, Microsoft, Panasonic, Cooper Tires, and many others. The dynamism and knowledge brought into Belgrade by this influx of foreign investment has now begun to percolate through the local startup ecosystem. Serbian Innovation Fund has introduced new programs, thus expanding funding opportunities for Serbian startups. Smart Start offers pre-seed grants of up to EUR 30,000 and aims to disburse up to US$1 million in financing for startups. In addition to granting schemes for startups (up to EUR80K), innovative projects of more mature companies (up to EUR300K), as well as technology transfer programs and innovation vouchers, Innovation Fund is launching the new acceleration program with international partners. The Katapult Enterprise Accelerator program will launch in fall 2021 and offers to match private funding rounds up to EUR 300,000. There is also growing interest of international and domestic investors for innovative companies in Serbia, which proves the advancement of the ecosystem and its recognition worldwide. This 'pay it forward' ethos is central to the Belgrade and Novi Sad ecosystem and can be found at all levels and across Serbia.

**TOTAL EARLY STAGE FUNDING**
**<$50 m**
GLOBAL AVG.
$548 m

**ECOSYSTEM VALUE**
**$439 m**
GLOBAL AVG.
$13.68 bn

**MEDIAN SEED ROUND**
**$246 k**

GLOBAL AVG.
$480 k

**MEDIAN SERIES A ROUND**
**$0.55 m**

GLOBAL AVG.
$3 m

**SOFT. ENGINEER SALARY**
**$30 k**

GLOBAL AVG.
$44 k

## Sub-sector Strengths

### Gaming

Over the last year Serbian development teams, most of whom are based in Belgrade or Novi Sad, have published 41 games (40% of which are mobile). The industry now employs more than 2,000 people, about a third of whom are women, and generated total annual revenue of approximately €120 million in 2020, an increase of €60 million compared to 2018. Microsoft showed off Belgrade-based Ebb Software's first-person shooter, Scorn, during last year's Microsoft Inside Xbox event. The game will be exclusive to Xbox.

### Blockchain

The Serbian Blockchain Initiative is a non-profit, non-governmental organization dedicated to promoting blockchain adoption in the country. Leveraging its great engineering and mathematics talent, Serbia has become one of the top destinations for R&D and blockchain based product development. Some recent successes include the acquisition of MVP Workshop by Celsius, a US$15.3M investment in Tenderly led by Accel, a US$3.4M investment in Solrise Finance, and former Serbian tennis player Ana Ivanovic's Equity Fund investment in Blinkin.id. Serbia is also home to the Serbian Blockchain Summit.

# Reasons to move your startup to Belgrade and Novi Sad

## Education

Serbia is well known for its world-class engineering excellence thanks, in part, to the country's unique approach to teaching computer science. More than 3,300 software engineers graduate every year from Serbia's 26 colleges, with the number of new graduates rising each year. But tech education isn't confined to tertiary education: coding is a mandatory subject since fifth grade of elementary school, over 35 grammar schools now teach specialized CS classes and talented high school students can pursue a 4-year program dedicated specifically to CS. In addition, there are more than 80 specialized high schools for computer science and electrical engineering in Serbia.

## Benefits to Off-Set Operational Costs

Serbia is one of the most open countries in the world that strongly supports international teams in the country with 70% deduction of tax and social contributions on salaries for foreigners and expats (with fast & easy process of getting work stay permits for foreign employees). 70% deduction also applies for a certain number of software developers and young people entering the job market. There is also 0% tax and contributions on salaries for startup founders for the first three years.

## Tax Incentives

The Government of Serbia offers a so-called "IP Box" incentive where there is only 3% CIT for revenues from IP created in Serbia, and R&D costs borne by startups are double-counted in income statements lowering the tax base. When combined, R&D an IP intensive companies effectively pay 0% CIT. Corporate investments into startups are also encouraged with a tax credit of 30% of the investment.

# Startup Community

STARTUP GENOME MEMBERS

MEMBER

### 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, where large companies and startups can cooperate and be partners in achieving economic growth and job creation. By building the innovation infrastructure, science-technology parks, startup centers and strengthening ties between science and industry, the Cabinet continually works towards making Serbia a regional innovation leader. Empowerment of female entrepreneurs and promotion of their innovative ideas is also one of the Cabinet's key missions.

MEMBER

### Digital Serbia Initiative

Digital Serbia Initiative is a non-governmental, non-profit organisation advocating transformation of Serbia into a digital society. In a digital Serbia each individual will be able to realise their full potential and present their talent and innovative skills on the global market.

STARTUP GENOME PARTNERS

**Business Technology Incubator (BITF)** / **Business Incubator Novi Sad** / **ICT Hub** / **Innovation Fund Serbia** / **SC Ventures** / **Science Technology Park Belgrade** / **Serbian Blockchain Initiative** / **Serbian Games Association** / **Startit** / **The Office of the Minister without Portfolio Responsible for Innovation and Technological Development of the Republic of Serbia** / **UNICEF Innovation Fund** / **Vojvodina ICT Cluster**

Germany

# Berlin

> Berlin is proud to be playing a role in fostering creativity and innovation. Together with other hubs worldwide, Berlin has always been open for thinkers and doers who work on making cities and society future proof. The Berlin Startup ecosystem welcomes you.

**Mr. Christian Rickerts**
Permanent Secretary of State, Berlin

## Highlights

Berlin may be down a few places in this year's ranking, but despite this temporary blip, the city remains one of Europe's hottest startup scenes. In 2019, German startups received a total of US$6.9 billion in investment, an all-time high. 60% of that went to Berlin-based startups, for a total of US$4.1 billion in funding. While this year's numbers may appear down from these highs, recent, large exits are likely not yet reflected in the data. Supply chain solutions provider Forto raised a hefty US$240 million in June 2021, and Choco raised US$100 million in Series B funding in July. Whatever the final tally of investment flowing into the city, Berlin retains its supportive culture and many startup support initiatives. Pre-seed startup accelerator the Founder Institute helps founders from idea through to the early company stage. Silicon Allee, through its Berlin Founders Fund, offers founders over US$28,000 in no-equity funding to develop their ideas over the course of a 1-year residency. Incubator Project Flying Elephant is also active in Berlin. Bitkom, Germany's digital association, represents more than 2,000 companies, including more than 500 startups and virtually all global players. It advocates for the digitization of the economy and society, and for faster rollout of digital infrastructure. WomenTech Network promotes gender diversity in tech and connects talent with top companies. Women Techmakers Berlin helps women learn new skills, meet fellow developers, and access coaching.

**TOTAL EARLY STAGE FUNDING**
**$2.3 bn**
GLOBAL AVG.
$548 m

**ECOSYSTEM VALUE**
**$36.9 bn**
GLOBAL AVG.
$13.68 bn

**MEDIAN SEED ROUND**
**$1000 k**
GLOBAL AVG.
$480 k

**MEDIAN SERIES A ROUND**
**$6.6 m**
GLOBAL AVG.
$3 m

**SOFT. ENGINEER SALARY**
**$69 k**
GLOBAL AVG.
$44 k

## Sub-sector Strengths

### Fintech

Axel Springer Plug And Play Accelerator, which has supported more than 100 startups so far, offers entrepreneurs experienced mentors, a wide network of contacts, workshops, and office space. fintexx, a community for women in finance, provides networking opportunities and aims to raise the visibility of women in the sub-sector. Commission-free broker Trade Republic raised US$900 million at a valuation of over US$5 billion in May 2021. Digital insurance startup Wefox raised US$650 million with a valuation of US$3 billion in June 2021.

### AI, Big Data & Analytics

In June 2021 Science & Startups, an alliance of startup services from four Berlin universities, announced it had received US$8.2 from the German Federal Ministry for Economic Affairs and Energy and the state of Berlin to fund AI spin-offs. The KI Association connects AI and Deep Tech companies with business and politics and promotes the ethical development of AI. The Big-Data.AI-Summit, Europe's leading conference on applications of AI and big data in business, is hosted in Berlin.

# Reasons to move your startup to Berlin

## Business Infrastructure

Berlin's new international airport makes the city quick and easy to reach from across Europe and the world. Berlin also boasts an excellent public transportation system. Office space is plentiful and rents are still lower than in most European capitals, which helps attract young talent to the city. Early-stage companies can take advantage of the city's many co-working spaces.

## Hassle-free Relocation

Berlin makes it simple for overseas talent to relocate to the city, with both Berlin Investment Bank and Berlin Partners helping entrepreneurs and companies by 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.

# Startup Community

STARTUP GENOME PARTNERS

**Factory Berlin / Finleap / Gruenderszene / Microsoft Ventures / Project A Ventures**

# 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

Startup Genome
Regional Ecosystem Bang for Buck
Top 30

## 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 without losing sight of its roots. Today, Biscay pursues entrepreneurship and innovation as the mainstays of economic and social change, through the Biscay Startup Bay strategy, with its International Entrepreneurship Centre as the guiding light of an entrepreneurship and innovation ecosystem that has become an international benchmark. Biscay Startup Bay is one of the world's best connected entrepreneurship hubs. It has solid links with the most advanced innovation and entrepreneurship hubs on an international level. Biscay works with entrepreneurship hubs in Boston, Tel Aviv and Helsinki which are acknowledged as leaders in innovation and concentration of start-ups. Connected to Latin America via a partnership with the South Summit. The participation of these world-leading actors in the Biscay Startup Bay ensures connections between leading corporations and innovation systems and start-ups, thus helping to further innovation at local and international businesses and corporations through open innovation structures. Those connections provide access to ground-breaking technologies and talent, and enhance reputation and brand positioning, among other values.

**TOTAL EARLY STAGE FUNDING**
**$81.9 m**
GLOBAL AVG.
$431 m

**ECOSYSTEM VALUE**
**$222 m**
GLOBAL AVG.
$10.5 bn

**MEDIAN SEED ROUND**
**$451 k**
GLOBAL AVG.
$494 k

**MEDIAN SERIES A ROUND**
**$2.2 m**
GLOBAL AVG.
$2.7 m

**SOFT. ENGINEER SALARY**
**$37 k**
GLOBAL AVG.
$42.1 k

## Sub-sector Strengths

### Energy Cluster

Biscay has trailblazing, leading global companies such as Iberdrola, Petronor and their entire chain of suppliers, and the presence of important international corporations with manufacturing plants and R&D centres in Biscay, such as Alstom, Siemens, General Electric and ABB. The Energy Intelligence Center is intended to be a Centre for the promotion of the competitiveness of companies in the sector based on competitive intelligence, technological development, the creation of knowledge and access to the most advanced markets.

### Mobility

In terms of volume, Biscay is one of the leading producers of mobility in the European Union, with a strong network of skilled suppliers located within a 300 km radius. More than 45% of all Spain's automotive industry output comes from the Basque Country. A stand-out feature of the sector is the new AIC-Automotive Intelligence Centre, a unique centre for adding value that is encouraging the whole sector to cooperate in areas such as knowledge generation, training, technology and industrial development.

# Reasons to move your startup to Biscay Startup Bay

## Tax system

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. The region offers the world's best taxation system for R&D intensive companies, including reductions on payable corporation tax.

## University Talent

With 57% of the workforce holding a university degree, Biscay is committed to receive professionals and digital nomads who wish to establish themselves in the region. Thanks to the city's compact size and livability, graduates, both local and international, often put down roots. Bilbao ranked third in the world in its capacity to retain talent, according to the Global Talent Competitiveness Index 2020.

# Startup Community

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 such as tax collection, urban planning, roads and public works, environment cultural heritage or social welfare.

Hungary

# Budapest

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

> We strongly believe that local talent combined with a vibrant startup ecosystem will significantly contribute to innovation in Hungary. The government is co-funding private investments of technological incubators and that of HiVentures, one of the largest VC in Europe.

**Tibor Gulyás**
Deputy State Secretary, Ministry for Innovation and Technology, Hungary




**TOTAL EARLY STAGE FUNDING**
**$85 m**
GLOBAL AVG.
$431 m

**ECOSYSTEM VALUE**
**$668 m**
GLOBAL AVG.
$10.5 bn

## Highlights

Startup.co.uk recently ranked Budapest the best European city for startups to launch post-Brexit, citing Hungary's super-low corporate tax rate, as well as the city's low cost of living and high quality of life. There are many other reasons to expect the city's buzzing startup scene to continue to grow, with more than 700 startups and scaleups already located in Budapest, supported by 50+ angel investors, creating a vibrant tech scene. Manufacturing startups, in particular, are attracted to the city due to its great transport links with the EU. The government also offers strong support for startups. It has recently streamlined the company formation process so that new businesses can set up in just 72 hours. The National Research, Development and Innovation (NRDI) Office and Ministry for Innovation and Technology (ITM), recently launched the Startup Factory incubator program with ~$6.6. million in co-funding tech investments. The government is funding VCs and nation-wide educational programs like Startup University. The city's tight-knit startup community also hosts regular tech events. Security BSides, for instance, is billed as the first grassroots, DIY, open security conference in the world. Another event, Crunch, is a conference for people interested in building the finest data-driven businesses. Successful companies emerging from the ecosystem include Bitrise providing application development technologies, raising a total over €20 million, and SEON Fraud Prevention, which raised a total of €11.6 million in funding. Programming school Codecool has raised a total of €14M over 4 rounds and Shapr3D continues the legacy of Hungarian graphics-based startups.

**MEDIAN SEED ROUND**
**$180 k**

GLOBAL AVG.
$494 k

**MEDIAN SERIES A ROUND**
**$0.43 m**

GLOBAL AVG.
$2.7 m

**SOFT. ENGINEER SALARY**
**$30 k**

GLOBAL AVG.
$42.1 k

## Sub-sector Strengths

### Artificial Intelligence

AI is expected to add 11-14% to Hungary's GNP by 2030, according to the government's National AI Strategy. The strategy sets a target of training at least 10% of society to gain an understanding of AI. Based on this strategy a National Data Assets Agency (Navu) and an AI National Laboratory was established recently. Hungary is already a European center for the development and testing of self-driving vehicles. AImotive, Europe's largest VC-backed automated driving company, has raised over $70 million.

### Fintech

Magyar Nemzeti Bank launched its Innovation Hub and Regulatory Sandbox framework in 2018 to safely test innovative financial solutions. MKB Bank's Fintechlab, one of the first local Fintech accelerators, has already incubated 22 startups, many of which relocated to Budapest from other regional hubs for the program. In 2020, electronic payment solutions company Barion raised a $2.2 million Series B round and Insurwiz, an insurtech company raised a $1.3 million Seed round.

# Reasons to move your startup to Budapest

## Central Location

Hungary is located in the heart of Europe and has been part of the Schengen zone since 2008. The Hungarian market of around 10 million people has strong links with other European countries, making it ideal as a business hub.

## 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 pharmaceutical, engineering, R&D, IT, and physics to look to Budapest when searching for talent.

## Startup-friendly Tax Policies

Since 2015 the KATA tax system, a flat-tax system where the self-employed pay a fixed monthly amount to cover all Hungarian tax obligations, has reduced tax payment for entrepreneurs. The corporate tax is a flat 9%, the lowest in Europe. There is no residential tax on non-citizens, a policy designed to bring more foreign investors into the country.

# Startup Community

STARTUP GENOME MEMBERS

MEMBER

### National Research, Development and Innovation Office

The mission of the Office is to develop research development and innovation (RDI) policy in Hungary and ensure that Hungary adequately invests in RDI by funding excellent research and supporting innovation to increase competitiveness.

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. The wide areas of the responsibilities of the Ministry include infrastructure, energy, and environmental policies and economic and competitiveness strategy.

Denmark

# Copenhagen

**MEMBERS:**
Digital Hub Denmark

> With a growth close to 40% since 2019 it's an incredibly exciting time for the Danish ecosystem. With record-breaking rounds, increased global attention and a very strong talent pool, Denmark's startup scene will only continue to grow.

**Ulla Brockenhuus-Schack**
Managing Partner at SEED Capital




## Highlights

Denmark has already churned out an impressive eight unicorn companies and its capital, Copenhagen, looks set to produce many more thanks to the city's combination of a supportive and experienced entrepreneurial community, hassle-free business environment, and highly educated workforce. The success of Copenhagen-founded companies like Just-Eat and Zendesk has produced a new generation of mentors and angel investors to support the city's early-stage companies. The ecosystem's newest unicorns Fintech Pleo, which just raised $150 million at a $1.7 billion valuation and Lunar which raised $249 million in a series D round to achieve unicorn status in July 2021. Entrepreneurs here also lean on a large network of tech-focused events, organizations, and investors. Every year TechBBQ gathers approximately 8,000 entrepreneurs and investors for the largest innovation summit in Denmark. Danish Startup Group (DSG) is a non-profit organization offering events, workshops, and networking opportunities. A new VC fund, 2150, launched in 2021 with the first close of a €200 million fund to back technologies aimed at reducing the carbon footprint of cities. Sector-specific events and organizations include Copenhagen Fintech Week, which connects startups with financial institutions, researchers, governments, and NGOs, and 2150, a new $228 million fund targeting sustainable tech startups in Copenhagen, London, and Berlin. PropTech Denmark is dedicated to nurturing tech-driven innovation in real estate. Danish proptech startups attracted more than $26M in investments in 2020. Two notable companies are LifeX which raised $6.9M in October 2020, and Proper, which closed a $4.6M seed round in March 2021.

**TOTAL EARLY STAGE FUNDING**
**$641 m**
GLOBAL AVG.
$431 m

**ECOSYSTEM VALUE**
**$15.1 bn**
GLOBAL AVG.
$10.5 bn

**MEDIAN SEED ROUND**
**$740 k**
GLOBAL AVG.
$494 k

**MEDIAN SERIES A ROUND**
**$1.9 m**
GLOBAL AVG.
$2.7 m

**SOFT. ENGINEER SALARY**
**$78 k**
GLOBAL AVG.
$42.1 k

## Sub-sector Strengths

### Healthtech

Health Tech Hub Copenhagen is a unique community and co-working space of leading health tech startups, determined to solve global health issues with solutions built on scalable software, technology and data. BioInnovation Institute, an initiative of the Novo Nordisk Foundation, will house up to 500 researchers and aims to attract international talent to the cluster. Biotech company Cytoki Pharma raised $45 million Series A in May 2021. MedTrace, which specializes in the diagnosis of heart diseases, raised $30 million also in May.

### Fintech

The number of Fintech jobs in Denmark grew to approximately 3,000 in 2019, up 44% since 2015. The amount of VC funds flowing into the sub-sector likewise skyrocketed with $540.7 million invested in the sub-sector in 2020, a growth rate of 106%. In April 2021 cluster Copenhagen Fintech announced a partnership with Infosys to provide masterclasses and hackathons to up-skill the ecosystem's tech talent. The Infosys Innovation Network (IIN) also provides members investment opportunities via the Infosys Innovation Fund. Banking app Lunar has raised a total of $122.1 million over 7 rounds.

# Reasons to move your startup to Copenhagen

## Ease of Relocation

Start-up Denmark provides a single point-of-entry for entrepreneurs wishing to relocate and grow their startups in Denmark. The program is targeted at early-stage companies and can accept up to 2 founders. Those accepted receive a residence and work permanently for up to 2 years, with the possibility of extension for an additional 3 years.

## Educated Talent

The Technical University of Denmark (DTU), one of the leading engineering institutions in Europe, and Copenhagen Business School, one of Europe's largest business schools, are both located in Copenhagen. Thanks to these institutions, startups will find an abundance of highly qualified talent to hire in the region.

# Startup Community

STARTUP GENOME MEMBERS

MEMBER

### 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. FORSLAG TIL TILLÆG: Our work includes a service for international investors looking to familiarize themselves with the Danish startup ecosystem; talents looking into new job opportunities and customers looking to explore the Danish world-leading products and services.

STARTUP GENOME PARTNERS

**TechBBQ / #CPHFTW / Accelerace (and Symbion) / Copenhagen Fintech / DTU Skylab / InnoFounder / LEO Innovation Lab / PreSeed Venture / Talent Garden Rainmaking / The Creators Community / The Danish Growth Fund / Thinkubator (and SingularityU) / Venture Cup**

Germany

# Frankfurt

**MEMBERS:**
TechQuartier / StartHub Hessen

> Frankfurt, recognized as one of the world's leading financial centres and home to numerous exciting fintech startups in its dynamic ecosystem, is not only an economic powerhouse but also a beautiful region.

**Dr. Philipp Nimmermann**
State Secretary, Ministry for Economic Affairs, Energy, Transport and Housing – State of Hessen




TOTAL EARLY STAGE FUNDING
**$146.6 m**
GLOBAL AVG.
$431 m

ECOSYSTEM VALUE
**$5.45 b**
GLOBAL AVG.
$10.5 bn

MEDIAN SEED ROUND
**$882 k**
GLOBAL AVG.
$494 k

MEDIAN SERIES A ROUND
**$2.3 m**
GLOBAL AVG.
$2.7 m

SOFT. ENGINEER SALARY
**$61.2 k**
GLOBAL AVG.
$42.1 k

## Highlights

This year the whole world has benefitted from one of the Frankfurt ecosystem's greatest success stories. BioNTech SE, the German company which along with its partner Pfizer, developed one of the first, highly effective vaccines against Covid-19 was founded by immigrants and is based in the nearby city of Mainz. The company's immigrant roots and cutting-edge innovation are emblematic of the best of the growing Frankfurt startup scene. A diverse, cosmopolitan city, Frankfurt attracts international talent whose entrepreneurial efforts are supported by a range of government and university programs. The Frankfurt Startup Fund has provided more than 120 local companies with loans of up to €50,000 for startup capital. A new statewide initiative, StartHub Hessen, aims to bring together players in the ecosystem, from companies to investors to mentors. The Frankfurt School of Finance & Management supports and trains local founders through its Centre for Research on Entrepreneurship and Mittelstand (CREAM), while its Blockchain Center is an internationally recognized pioneer in the space. Frankfurt also hosts a number of prominent industry and startup events including the Frankfurt CIO Summit for IT leaders, the International Conference on Green Energy Technologies, SafariFRM, Frankfurt Digital Finance and the Frankfurt Euro Finance Summit, which plays to Frankfurt's traditional strength as a financial hub. These efforts have paid off with significant recent successes for local companies. Mattress retailer Emma has been one of the fastest growing companies in Europe, while in January 2021, digital insurance platform Clark raised a €69M Series C round. Drone startup Wingcopter also raised a $22 million Series A to expand internationally.

## Sub-sector Strengths

### Fintech

Frankfurt is an international financial hub that is home to outstanding universities and a high concentration of financial and tech talent. The FinTech Digital Hub Frankfurt builds upon these strengths, bringing together talent from the financial and startup sectors. Well known local fintech companies include Clark, Thinksurance, Fincite, United Signals, CrowdDesk and creditshelf.

### 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 such as StartUpSecure|ATHENE have contributed to growth in the number of startups in the last three years. The city also hosts the European Cyber Security Summit.

### Greentech

Frankfurt is home to a prominent hub for Greentech talent and companies. The Green and Sustainable Finance Cluster Germany, co-managed by The Frankfurt School, brings together key players in the sub-sector. Piloted by Commerzbank's Main Incubator, the Impact Festival, the city's first large-scale event focused on Sustainability, was launched in 2021.

# Reasons to move your startup to Frankfurt

## It’s all about collaboration

Frankfurt is tapping into the power of synergy by building bridges with nearby startup clusters and talent pools. For example, neighboring cities Frankfurt and Darmstadt, both home to renowned universities and a strong financial sector, joined forces to create a tech hub to connect technical talent with the banking industry. Frankfurt’s central location in Europe also makes it a logistics hub, with data, people and physical goods streaming through the city continually.

# Startup Community

STARTUP GENOME MEMBERS

MEMBER

### TechQuartier

Located in the heart of Frankfurt, TechQuartier is a cross-industry innovation brokerage that brings together startups, companies and emerging talent to learn from each other. TechQuartier not only offers an inspiring place to work and collaborate, but is one of Germany’s largest digital hubs shaping Hessen’s startup infrastructure.

MEMBER

### StartHub Hessen

StartHub Hessen aims towards bringing an already thriving ecosystem even closer together and setting the ideal ground for founding and growth. Benefitting from a large network of companies, start-up centers, mentors and universities, founders are offered one-to-one consulting sessions, a database for easy access to public funding as well as deep insights into the ecosystem and its members. StartHub was initiated by the State of Hessen in 2020.

STARTUP GENOME PARTNERS

**Frankfurt Economic Development** / **Goethe University Frankfurt** / **Hessen Trade & Invest (HTAI)** / **Hessian Ministry of Economics, Energy, Transport and Housing** / **HIGHEST TU Darmstadt** / **ING-DiBa** / **Station FRM** / **WIBank**

Finland

# Greater Helsinki

**MEMBERS:**
City of Helsinki

> Helsinki startup ecosystem has showed great resilience during the pandemic. Venture capital flow into Helsinki-based startups keeps growing and the message is clear - there is quality in the ecosystem.

**Marja-Leena Rinkineva**
Director of Economic Development, City of Helsinki




## Highlights

With its small population of just 5.5 million, Finland has shown an impressive ability to turn out tech and startup success stories from Nokia to Rovio to Wolt. The greater Helsinki area is the epicenter of the country's startup scene. Helsinki's startup conference Slush is the largest single gathering of venture capital in Europe with 1,500 investors. Helsinki has created 4 unicorns and its startups generate more than 10% of all Finland's tech jobs. Currently the region is home to an additional 8 startups valued between $250 million and $1 billion that are on track to achieve unicorn status. This successful track record has attracted the interest of investors. Finnish startups receive the most venture capital per capita in Europe. Finland is also home to a large business angel network. Finland offers public funding to startups through Business Finland, Finnvera and other public sector organizations. In 2020 Finnish startups received a record $1 billion in investments. There are several startup hubs offering support for young companies to accelerate their business, such as the "Maria 01 Campus," which is currently home to 170+ startups and 14 VC funds. An ongoing expansion project will make it one of the largest startup campuses in Europe. Recent companies of note include food delivery platform Wolt, which raised US$535.23 million in January 2021, putting the company's valuation at US$3.19 billion, mobile game studio Metacore, and PropTech company Kodit.io, which has raised a total of US$132.2 million over 6 rounds.

**TOTAL EARLY STAGE FUNDING**
**$549 m**
GLOBAL AVG.
$548 m

**ECOSYSTEM VALUE**
**$6.6 bn**
GLOBAL AVG.
$13.68 bn

**MEDIAN SEED ROUND**
**$408 k**

GLOBAL AVG.
$480 k

**MEDIAN SERIES A ROUND**
**$2.7 m**

GLOBAL AVG.
$3 m

**SOFT. ENGINEER SALARY**
**$54 k**

GLOBAL AVG.
$44 k

## Sub-sector Strengths

### Digital Health

Healthcare in both the public and private sector in Finland is moving towards being fully digitized, and the coverage of electronic health records (EHR) across the country is now 100%. Aiforia, a maker of software for healthcare professionals, has raised a total of $25.57 million over 4 rounds. Health Incubator Helsinki (HIH) is a unique incubator program for research-based health sector teams and start-ups.

### AI, Big Data & Analytics

In February 2020 the Ministry of Finance launched the AuroraAI program to utilize AI to help people access government services more seamlessly. In November 2020 Finland launched an updated AI strategy to promote the development and adoption of AI technologies within local companies. Database-as-a-service platform Aiven has raised a total of $150 million over 4 rounds. Marketing analytics startup Supermetrics has raised €43.5 million/$49.68 million over 2 rounds.

### Gaming

In 2020 the Finnish Game Industry celebrated its 25th anniversary, an industry employing 3600 people in 200 studios with 2,4 Billion euros of total turnover. It is an international industry on creating global brands, raising several hundreds of millions capital and almost 30% of the employees comes abroad. The unique ecosystem of Finland supports the game development from Government grants to strong education with an active community.

# Reasons to move your startup to Greater Helsinki

## Access to talent

Finland’s educational system is consistently ranked among the best in the world, and the greater Helsinki region consistently ranks in the European top 10 for productivity and global competitiveness. Helsinki has the second-highest concentration of commercially successful app developers globally after only Silicon Valley. The Global Talent Competitiveness Index 2020 from INSEAD, Adecco, and Google ranked Finland seventh among 132 countries globally, citing the workforce’s strong technical skills among other strengths. Helsinki also invest heavily to creation of new business initiating several incubator programs with University of Helsinki.

## Startup Community

STARTUP GENOME MEMBERS

MEMBER

### City of Helsinki

The greater Helsinki area is comprised of three cities: Helsinki, Espoo ja Vantaa. The cities are the hotbed for world-conquering innovations and an ideal testing ground for bold new ideas. It is the perfect size for startups to test the waters and obtain first references by trying something that would not be possible elsewhere. The area provides an extremely stable and well-functioning business environment that a startup needs to be successful and a modern and attractive city for entrepreneurs to want to live and work in.

STARTUP GENOME PARTNERS

**City of Espoo** / **Helsinki Think Company** / **City of Vantaa** / **Maria01** / **NewCo Helsinki** / **Forum Virium** / **Arctic Startup** / **Business Finland** / **FiBan** / **Helsinki Partners**

Turkey

# Istanbul

**MEMBERS:**
Istanbul Development Agency / Presidency of the Republic of Turkey, Investment Office

> The last decade has witnessed the rise of a resilient, attractive and rapidly evolving startup ecosystem in Istanbul. We believe that out of this dynamism Istanbul will emerge as a leading attraction spot for global technology startups.

**Mustafa Varank**
Minister of Industry and Technology, Turkey




TOTAL EARLY STAGE FUNDING
**$181 m**
GLOBAL AVG.
$431 m

ECOSYSTEM VALUE
**$4.1 bn**
GLOBAL AVG.
$10.5 bn

## Highlights

Turkey has a population of 84 million as of 2021, of which half is under the age of 32, giving the country the largest youth population in the EU area. This young and digitally connected population makes Istanbul one of the best spots to test new ideas and products. Istanbul's vibrant startup scene is coalescing around a host of support organizations, events, and successful entrepreneurs. There are over 80 active organizations supporting startups in Istanbul, including Plug and Play Istanbul, Endeavor and Galata Business Angels. The city hosts various events all year round. These events include Take-Off, a pitching competition for early-stage startups; TEKNOFEST, the world's largest technology and aerospace festival and GAMING ISTANBUL, also known as GIST, which is an international game, e-sports and digital entertainment exhibit. VC-backed exits have given inspiration for both entrepreneurs and VC funds to invest in Istanbul's startups, recognizing their ability to deliver outsized returns to investors. Success stories emerging from this community-minded startup hub include AI-powered digital marketing platform Insider, which raised $32 million from international investors last year and grocery delivery startup Getir, which raised its valuation to $7.5 billion with a $555 million round in June 2021. Hepsiburada, a fast-growing e-commerce startup, saw its market value hit more than $4.2 billion after becoming the first Turkish firm to be listed on NASDAQ. Turkish startups received nearly $1.3 billion investment in the first half of 2021, with Dream Games and Hepsiburada joining the billion-dollar league that already included Peak, Getir and Trendyol.

MEDIAN SEED ROUND
**$150 k**

GLOBAL AVG.
$494 k

MEDIAN SERIES A ROUND
**$0.55 m**

GLOBAL AVG.
$2.7 m

SOFT. ENGINEER SALARY
**$18.2 k**

GLOBAL AVG.
$42.1 k

## Sub-sector Strengths

### Gaming

WePlay Ventures plans to invest in more than 30 gaming startups with ambitions to grow globally. When U.S-based gaming giant Zynga bought Turkish mobile gaming company Peak for $1.8 billion in June 2020, the acquisition marked the birth of Turkey's first unicorn. Dream Games raised $50 million Series A in March 2021 and $155 million Series B in June and with a valuation of $1 billion became Turkey's latest unicorn.

### AI, Big Data & Analytics

Turkey is the lead AI investor in the MEA region with a total investment amounting to $3.4 billion. Close to 200 AI startups have been founded in the last 5 years and the total funding size was $39 million in 2020. One of the most promising of these startups, Tarentum AI, has raised a total of $2.1 million in funding over 2 rounds.

# Reasons to move your startup to Istanbul

## Global Connections

With various accelerator programs and a wide range of events connecting the local players with the global entrepreneurial networks, the city is offering potential synergies for future collaborations. For entrepreneurs looking to expand their global footprint, Istanbul acts as a springboard to reach EMEA markets.

## Tech Talent

Istanbul's prominent universities, including Bogazici University, Istanbul Technical University and Yildiz Technical University, attract promising engineering talent and graduate around 55,000 STEM students annually. Affordable housing, status as an emerging startup ecosystem and a buzzing atmosphere mean that many graduates choose to make Istanbul their permanent home.

## Tax Incentives

Turkey offers a comprehensive investment incentives program to help accelerate returns on R&D investments, including project based grants at a rate of upto 50%. Technoparks support R&D activities, attract investments in high-technology fields and offer incentives like corporate income tax exemption, employers' share of social security premium support and employees' income tax exemptions.

# Startup Community

STARTUP GENOME MEMBERS

MEMBER

### Istanbul Development Agency

Istanbul Development Agency is a government agency with a view to "expediting the regional development, providing sustainability and closing the interregional and intraregional gaps by improving collaborations among the public & private industry and non-governmental organizations, fostering opportune and efficient use of resources and galvanizing the local potential". İDA implements programs and supports projects and activities for the development and strengthening of the startup ecosystem of Istanbul to make it one of the prominent international entrepreneurship hubs.

MEMBER

### Presidency of the Republic of Turkey, Investment Office

The Investment Office of the Presidency of the Republic of Turkey is the official organization for promoting Turkey's investment opportunities to the global business community and for providing assistance to investors before, during, and after their entry into Turkey. Directly reporting to the President of Turkey, the Investment Office is in charge of encouraging investments that further enhance the economic development of Turkey.

United Kingdom

# London #2

> London has an established position at the cutting edge of tech. Previously in Fintech, but now also AI and Healthtech. It's critical we leverage this advantage — attract the best talent and build a supportive ecosystem.

**Suranga Chandratillake**
Partner at Balderton Capital




## Highlights

London remains a tech powerhouse, with local startups in the British capital valued at an astronomical $47 billion, but the ecosystem faced considerable headwinds this year. In addition to the global disruption caused by the pandemic, the finalization of Britain's protracted and messy breakup from the EU left many commentators wondering whether London would retain its spot near the top of startup ecosystem rankings. So far, signs are good. VC investment into Britain is the third highest in the world, after the United States and China, and hit a record high of $15 billion in 2020. Despite the uncertainty surrounding Brexit, 63% of that funding came from overseas last year, up from 50% in 2016. Previous to Brexit, London excelled at attracting overseas talent, which led to concerns about the impact of the end of freedom of movement for Europeans. However, Britain boasts plenty of homegrown tech talent, and ecosystem insiders note that the end of the drawn-out Brexit process at least brings clarity, allowing startups to plan. Britain's new freedom to craft it's own regulatory regime could potentially offer benefits to the ecosystem as well. Finally, the City of London continues in its status as a global financial hub, suggesting the greater ecosystem will retain its dominance in the Fintech sector. Edtech is a growing sub-sector in London as well. The bottom line is that the gloomiest predictions regarding the impact of Brexit on Britain's biggest startup ecosystem don't seem set to have come to pass, though London startups have faced a year of adjustment and recalibration.

**TOTAL EARLY STAGE FUNDING**
**$8.5 bn**
GLOBAL AVG.
$548 m

**ECOSYSTEM VALUE**
**$142 bn**
GLOBAL AVG.
$13.68 bn

**MEDIAN SEED ROUND**
**$653 k**
GLOBAL AVG.
$480 k

**MEDIAN SERIES A ROUND**
**$4 m**
GLOBAL AVG.
$3 m

**SOFT. ENGINEER SALARY**
**$76 k**
GLOBAL AVG.
$44 k

## Sub-sector Strengths

### Fintech

Thanks to its status as a pre-eminent global financial hub, London hosts 2,183 fintech companies, more than New York or San Francisco. Those fintech companies raised more than £2.7 billion in investment last year, with an average early-stage investment of $486,000 per startup, compared to a global average of $286,000. Local success story Transferwise (now known as Wise) was founded in 2011. As of July 2020 it was valued at $5 billion, on par with Europe's biggest fintech companies, including Revolut and Klarna.

### Edtech

London's Edtech ecosystem is one of the largest in Europe with an estimated value of US$3.4 billion, and London is the one European city to feature in Dealroom's global Edtech top 10 by investment. Edtech VC firm Brighteye Ventures closed its second $54 million fund last year, bringing assets under management to more than US$112m, while Edtech startup Kano secured US$15.46 million in funding in March 2021.

# Reasons to move your startup to London

## Talent availability

Thanks to its proximity to world-class universities and educated, cosmopolitan workforce, London is a leading global talent hub. Of the world's top ten universities, four are located close to the city, and 54 percent of residents have a tertiary degree. According to Accenture's UK Tech Talent Tracker Report, there are 422,000 data analytics, artificial intelligence, blockchain, extended reality, and quantum computing professionals in the UK. About 37 percent of them are located in London.

## Tax incentives

While there is no difference between taxes paid by early-stage and established businesses in the UK, there are various dedications startups can use to reduce their tax bills. England also offers 24 Enterprise Zones, including the Royal Docks in southeast London, in which businesses are 100% tax exempt for their first five years (for a maximum discount of £275,000). Other schemes reduce tax on income from the development of patents and intellectual property and on UK taxpayers who invest in startups.

# Startup Community

STARTUP GENOME PARTNERS

**Tech Nation (formerly Tech City UK) / Accelerator Network / Balderton Capital / City of London / GEN / GSMA / KPMG / Level39 / MassChallenge / Microsoft Ventures / Microsoft for Startups / Northzone / Tech London Advocates / TechUK / Techstars London / Wayra London**

Ireland

# Mid-East Region

**MEMBERS:**
Meath Enterprise

> The Mideast startup and scaleup ecosystem is poised for significant growth as we emerge from the Covid crisis. We have seen significant experimentation in flexible business models and work patterns which we expect will accelerate development and improve sustainability in the years ahead.

**Michael Brougham PhD**
Regional Director at Enterprise Ireland

Startup Genome

Activation Phase
Ecosystem Performance

Top 10

TOTAL EARLY STAGE FUNDING
**<$50 m**
GLOBAL AVG.
$431 m

ECOSYSTEM VALUE
**$183 m**
GLOBAL AVG.
$10.5 bn

## Highlights

Traditionally a region of green fields and farms, the counties encircling Dublin have been growing steadily for decades. With easy access to the capital, government support for growing companies, and its historical strength in agriculture, the Mid-East Region has a growing reputation as a startup ecosystem, particularly for AgTech and food-related companies. The Regional Enterprise Development Fund (REDF), launched in 2017, supports new collaborative and innovative initiatives in the region. REDF has poured $9.48 million into the Mid-East for projects including the County Kildare Community Network co-working space, the Boyne Valley Food Innovation District, Clermont Enterprise Hub, and UCD Nova DAC AgTech innovation hub. Through the Agile Innovation Fund companies can access grants to cover up to 50% of eligible R&D costs through an online fast-track approval process. The Competitive Start Fund offers up to €50,000 for 10% in ordinary shares to accelerate the growth of startups in all sectors that are targeting global markets. Startups with the potential to create 10 jobs and €1 million in export sales within their first 3 years may be eligible for support from Enterprise Ireland as a High Potential Start-up (HPSU). Notable companies and events within the Mid-East Region ecosystem include EasyGo, a developer of EV charging units, which raised $12.16 million of venture funding in January 2021. Ireland's Tech Week is a nationwide festival of events showcasing tech innovation in the country.

MEDIAN SEED ROUND
**$470 k**

GLOBAL AVG.
$494 k

MEDIAN SERIES A ROUND
**$0.81 m**

GLOBAL AVG.
$2.7 m

SOFT. ENGINEER SALARY
**$56 k**

GLOBAL AVG.
$42.1 k

## Sub-sector Strengths

### Agtech & New Food

Boyne Valley Food Hub offers 790m² of enterprise space and food grade facilities for startups and scaling food businesses. A timeshare development kitchen and a food specific co-working and knowledge lab are also available. Thanks to the space and the country's larger Food Wise 2025 plan, the Agtech and New Food sub-sector is targeted to grow to $21.70 billion by 2025.

# Reasons to move your startup to Mid-East Region

## Educated Workforce

Ireland has one of the most educated workforces in the world with 53.5% of 30-34-year-olds having a tertiary degree compared to an EU average of 40%. Almost 30% of university students are enrolled in science, technology, engineering, and maths (STEM) courses.

## International Talent

The workforce is also dynamic and diverse — proportionally Ireland has the 4th highest international workforce in the EU. Ireland ranks 1st globally for attracting and retaining international talent. IDA Ireland works with the relevant Irish authorities to streamline employment permit applications and other visa matters for companies recruiting from outside the EU.

# Startup Community

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 enterprise development through the provision of business incubation and support services, collaboration, clustering, and creative thinking.

STARTUP GENOME PARTNERS

**EO Accelerator Ireland / Meath Enterprise Centre / Boyne Valley Food Hub / Arklow Enterprise Centre / Athy Enterprise Centre / Clane Project Centre / Kells Tech Hub / Maynooth Works / Wicklow Enterprise Centre / Kells Enterprise & Technology Centre / PFS Accelerator / Meath County Council / Wicklow 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 / Meath Local Enterprise Office / Enterprise Ireland / Mid-East Regional Skills Forum / Mid-East Action Plan for Jobs Committee / Industrial Development Authority - IDA / Media Ireland**

# Moldova

**MEMBERS:**
Moldovan Association of ICT Companies

> Moldova has made significant steps towards enhancing its startup ecosystem. Promoting a Tech friendly fiscal environment, Moldova is positioning itself on a niche connecting East and West where a flagship example is Tekwill, a private public partnership aiming to increase ICT industry competitiveness and develop its startup ecosystem.

**Ana Chirita**
Senior Project Coordinator of Tekwill, Strategic Projects Director of Moldovan Association of ICT Companies

Startup Genome

**Regional Ecosystem Affordable Talent**

**#4**

**TOTAL EARLY STAGE FUNDING**
**<$50 m**
GLOBAL AVG.
$431 m

**ECOSYSTEM VALUE**
**<$100 m**
GLOBAL AVG.
$10.5 bn

## Highlights

Thanks to initiatives from the EU, the national government, and a growing range of support organizations, Moldova's nascent startup ecosystem has been picking up steam in recent years. Since 2020 the European Union's EU4Moldova program has allotted EUR 770,000 in grants, as well as mentorship and training, to support startups and social entrepreneurship initiatives in the Cahul and Ungheni regions. Thus far 28 companies have been awarded between EUR 15,000 – EUR 30,000 each. The EU has also launched a new technical assistance project in Moldova to help the national government plan and execute development projects. Moldova is home to 11 business Incubators. As of 2019 they had together supported more than 100 startups. Prominent among the country's support organizations is Tekwill Academy, located within the Technical University of Moldova (UTM). A 4,000m² hub, it offers co-working spaces, tech labs for IoT and 3D printing, as well as community events. Together with Moldova Agroindbank, MasterCard, Startup Moldova, USAID and Sweden, Tekwill recently launched "FinTech Vertical 2021," a program dedicated to supporting the country's growing FinTech sector by connecting startups with existing financial services and IT players. In addition, Tekwill holds open days for students and others interested in learning more about the sub-sector.

**MEDIAN SEED ROUND**
**$100 k**

GLOBAL AVG.
$494 k

**MEDIAN SERIES A ROUND**
**N/A**

GLOBAL AVG.
$2.7 m

**SOFT. ENGINEER SALARY**
**$13 k**

GLOBAL AVG.
$42.1 k

## Sub-sector Strengths

### E-commerce

With high-speed internet reaching 98 percent of the population, Moldova is a hotspot for E-Commerce. The country's 1.4 million online shoppers are expected to drive US$168 million in revenue this year, with projected revenue reaching US$269 million by 2025. Fashion is the largest segment of the market, contributing around $49 million in revenue this year. Shoppers generally pay on receipt of goods rather than online at the time of purchase. In 2020 Innovation hub Tekwill launched an initiative to offer co-financing for companies using technology to boost E-Commerce in the country.

# Reasons to move your startup to Moldova

## Affordable Talent

Salaries are extremely low in Moldova with the average worker making $5,912 a year. A data scientist can expect to make $8,673 and a software engineer $5,912. In addition to these attractive costs for employers, the population is relatively well educated with a literacy close to 100% and 13% of adults holding a university degree.

## Low Cost of Living

It’s not just salaries that are low in Moldova. The cost of living is extremely affordable as well meaning foreign companies can retain Moldovan talent for a fraction of the cost typical for the US or Western Europe while still allowing for a good quality of life.

## Tax Incentives

Companies investing USD$250,000 or more are eligible for a reduction in corporate income tax for up to 5 years under certain conditions. In addition, the corporate income tax rate has decreased from 28% to 15% since 2007. Individual income tax has also been reduced, with the top rate now set at 20%.

## Openness to Foreign Investment

A number of foreign companies, including Lafarge, Sudzucker, Union Fenosa, and Metro Cash & Carry, have been operating successfully in Moldova. The country’s business environment compares favorably to many of its neighbors. The Heritage Foundation’s Index of Economic Freedom scored Moldova a 3.10 on scale from 1 to 5 with 1 being the best, compared to 3.24 for Ukraine, 4.11 for Belarus and 3.50 for Russia.

# Startup Community

STARTUP GENOME MEMBERS

MEMBER

### Moldovan Association of ICT Companies

Being established in 2006, ATIC is the action leading association and the voice of the Moldovan ICT industry that promotes the development of the ICT sector in Republic of Moldova through viable partnerships between companies, similar organizations, government, state institutions and international organizations. The association was founded to represent the industry on different policy and legislative issues and to facilitate the exchange of best-practices between members. ATIC mission is to protect and promote the Association members’ interests as well as facilitate a more favourable ICT business climate.

France

# Paris #12

> France has taken over Europe as the place where the most funding rounds happened in 2018. The next step is to turn our eurocentric scale-ups into global leaders.

**Nicolas Brien**
CEO at France Digitale

## Highlights

With more than 10,000 startups nationwide, France has ambitions to become Europe's largest startup ecosystem, with the government promising to invest $6 billion in the technology sector. One of the top attractions of Paris for startups is its central location with easy access to Europe's most important capitals. London, Amsterdam, Berlin, Madrid, Rome, and Luxembourg are all less than 3 hours away. The city also boasts 21 of the best-ranked business schools in the world, which provide companies with a large pool of highly skilled talent. This wealth of talent also drives the ecosystem's success as a center of innovation. Paris has the most research professionals, high-tech patents, and highest annual R&D spending in Europe. Paris is also a major business hub and hosts many corporate headquarters. Companies and labs are organized in 9 competitiveness clusters with over 4,300 members across sectors including cosmetics, high-tech healthcare, aeronautics, digital transformation, and sustainable cities. The city also hosts a number of top startup events, including Big Data & AI Paris, Hello Tomorrow Global Summit, and Viva Technology, Paris. Local success stories include online home improvement marketplace ManoMano, which has raised a total of $705.5 million over six rounds, crypto security company Ledger, which has raised a total of $468 million over eight rounds, and digital health insurance platform Alan, which has raised a total of $363.9 million over six rounds.

**TOTAL EARLY STAGE FUNDING**
**$3.5 bn**
GLOBAL AVG.
$431 m

**ECOSYSTEM VALUE**
**$47.1 bn**
GLOBAL AVG.
$10.5 bn

**MEDIAN SEED ROUND**
**$1100 k**

GLOBAL AVG.
$494 k

**MEDIAN SERIES A ROUND**
**$3.3 m**

GLOBAL AVG.
$2.7 m

**SOFT. ENGINEER SALARY**
**$64 k**

GLOBAL AVG.
$42.1 k

## Sub-sector Strengths

### Fintech

The Paris Fintech Forum is one of Europe's biggest FinTech events. Paris is also home to Euronext, the EU's biggest stock exchange by market capitalization ($4902 billion). Top-tier financial engineering programs at Paris Dauphine, Polytechnique, HEC and ESSEC business schools provide talent to the sub-sector. October, an online marketplace for business loans, raised $304.2 million in September 2020. AnaCap Financial Partners acquired payments platform Market Pay in a $362.93 million deal in February 2021.

### AI, Big Data & Analytics

The Paris region's "2021 AI plan" aims to spur investment in AI. It includes 3 AI challenges, each offering €1 million to develop innovative solutions in three fields: industry, health and citizen's life. The plan also funds AI proofs of concept in local SMEs and mid-caps, as well as the INNOV'up program, which makes Paris-based R&D centers eligible for funding and tax credits. Digital experience analytics platform ContentSquare raised a $500 million Series E in May 2021.

# Reasons to move your startup to Paris

## 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 underground, offer direct connections to 260 destinations in 191 countries.

## Supportive Ecosystem

An extensive network of 400+ incubators, digital fabrication labs,, and coworking spaces help international startups grow and succeed. The cost of office space in Paris is also well below that of other major international cities such as London, Tokyo, and San Francisco.

# Startup Community

STARTUP GENOME PARTNERS

**50 Partners / France Digitale / Numa / Station F / The Family**

Germany

# Rhineland

**MEMBERS:**
North-Rhine Westphalia State Government

> Rhineland's startup community has significantly evolved in the last 4 or 5 years. It feels like a true ecosystem with more people, better knowledge, stronger connections, and a focus on modernizing traditional German industries.

**Dr. Lorenz Gräf**
Founder at STARTPLATZ




## Highlights

Home to nearly 18 million inhabitants, 68 universities, around 711,600 SMEs, and a large number of global corporations, the Rhineland is also a growing German startup hub, with one in five German startups now coming out of the Aachen-Cologne-Bonn area. The region, a traditional engineering and manufacturing hub, is leveraging this expertise to become a center for next-gen manufacturing. Young companies will find a network of startup support organizations in the Rhineland to support their growth, including incubators such as Startplatz in Cologne or Co:Forward in Aachen. In 2016, the regional government established six regional "Digital Hubs" to support startups and connect them with large industrial companies. The state of North Rhine-Westphalia supports startups with a range of programs, including networking and coaching support and the Gründerstipendium.NRW, a monthly grant of €1,000 for up to one year to help founders get innovative business ideas off the ground. Another state program, known as Meistergründungsprämie (MGP), is targeted at master craftsmen and women looking to transition to self-employment and offers funding for startups and investments in existing businesses. 6 Rhineland universities have also been granted €150 million to further develop their startup centers. NRW.Global Business promotes investment projects in North Rhine-Westphalia and facilitates networking with international business partners.

**TOTAL EARLY STAGE FUNDING**
**$264 m**
GLOBAL AVG.
$431 m

**ECOSYSTEM VALUE**
**$2.7 bn**
GLOBAL AVG.
$10.5 bn

**MEDIAN SEED ROUND**
**$560 k**
GLOBAL AVG.
$494 k

**MEDIAN SERIES A ROUND**
**$2.8 m**
GLOBAL AVG.
$2.7 m

**SOFT. ENGINEER SALARY**
**$62 k**
GLOBAL AVG.
$42.1 k

## Sub-sector Strengths

### Advanced Manufacturing & Robotics

The Aachen-Cologne-Bonn area is a research and science center for the aerospace industry. Universities in the Rhineland graduate approximately 93,000 students a year in the fields of computer science, electrical engineering, and information technology, providing employers with a highly skilled workforce. CPS.HUB NRW, an "innovation engine for digital transformation," supports companies working to realize the potential of Industry 4.0, Smart Energy, or Connected Cars. Electric vehicle startup Next.E.GO Mobile raised a $57 million Series C in August 2021.

### AI, Big Data & Analytics

The Technical University of Dortmund is home to one of the largest computer science faculties in Germany. The Fraunhofer Institute for Intelligent Analysis and Information Systems (IAIS) is one of the leading AI institutes in Europe. The region hosts The Intelligence Future Days, a gathering focused on the future of AI. Low-code conversational AI platform Cognigy has raised a total of US$54 million over 6 rounds. Retail automation platform aifora has raised a total of €10/~$11.42M million over 2 rounds.

# Reasons to move your startup to Rhineland

## Educated Talent

The Rhineland is home to 68 universities where approximately 768,000 students enroll each year, 90,500 in the fields of computer science and electrical engineering. As a result, the region boasts a highly educated talent pool with sought-after technical skills for employers looking to hire.

## Globally Leading Companies

The Rhineland is the number 1 investment location in Germany. Around 20,000 foreign companies have already invested in the Rhineland, including 3M, BP, Ericsson, Ford, Huawei, QVC, UPS, Toyota, and Vodafone. 18 of the 50 highest-grossing German companies are also based in the region.

## Large Local Market

Approximately 160 million people live within a 500-kilometer radius of the state capital of Düsseldorf, almost a third of all consumers in the EU. The population of the Rhineland alone spends more than 360 billion euros annually.

# Startup Community

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, theatres, opera houses and concert halls. Discover the "diversity state".

STARTUP GENOME PARTNERS

**Digital Innovation Hub Düsseldorf/Rheinland GmbH / 1stMOVER / Agile Accelerator / Axa Startup Center / BLSW / Capnamic Ventures / Coparion / Founders Institute / Future Champions Accelerator / Gateway Gründungsservice der Universität zu Köln / Getstarted, Bitkom / Gründerzentrum RWTH Aachen / HEADQUARTER[S] Cologne / High-Tech Gründerfonds / Intelligent Venture Capital Management / MWIDE / NRW Bank Business Angel Initiative WIN / NRWalley / NUK – Neues Unternehmertum Rheinland / Pirate Summit / Jolly Rogers UG / Hub Aachen / S-UBG Group / STARTPLATZ / Startup Unit Düsseldorf / StartupDorf / Tengelmann Ventures / Vodafone Uplift**

Sweden

# Stockholm #17

> Stockholm has a mature value driven and true international startup ecosystem built on Swedish innovation excellence, equality values and pay-it-forward culture.

**Marie Wall**
Startup director, Deputy director at Ministry of Enterprise, Division for Research, Innovation and Access to Finance

## Highlights

The success of Swedish startups like Spotify, Skype, and Klarna has made Stockholm a globally renowned startup hub and attracted the attention of international investors. The city now 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. Local government and startup organizations are working to further improve the ecosystem and make the city even more attractive to talent. The City of Stockholm launched ‘Starta eget Stockholm’ in July 2020. The unique new service pairs entrepreneurs with a personalized advisor who can offer early-stage business coaching. The city covers the full cost of the program. The Stockholm Innovation Scholarship promotes innovation in the Stockholm region. Stockholm, which is home to 22 global multinational corporations, offers founders impressive opportunities for collaboration and connection as well. Kista Science City is the leading ICT cluster in Europe, housing world-leading ICT companies such as Ericsson and IBM, a range of startups, the leading universities of Stockholm, and Urban ICT Arena, a testbed for 5G and IoT technologies. New digital culture center Space will open in the heart of Stockholm in November 2021. Sthlm Fintech Week is an annual initiative focusing on building a stronger Swedish FinTech ecosystem. Notable funding news out of Stockholm includes cloud communications company Sinch’s announcement in May 2021 that it had raised another $1.1 billion in funding from Temasek and SoftBank.

**TOTAL EARLY STAGE FUNDING**
**$1 bn**
GLOBAL AVG.
$431 m

**ECOSYSTEM VALUE**
**$46 bn**
GLOBAL AVG.
$10.5 bn

**MEDIAN SEED ROUND**
**$640 k**

GLOBAL AVG.
$494 k

**MEDIAN SERIES A ROUND**
**$1.7 m**

GLOBAL AVG.
$2.7 m

**SOFT. ENGINEER SALARY**
**$58 k**

GLOBAL AVG.
$42.1 k

## Sub-sector Strengths

### Cleantech

Stockholm’s Climate Action Plan 2020–2023 sets out a plan to meet the city’s ambitious climate goals, including becoming fossil-free and climate-positive by 2040. Eco-city Stockholm Royal Seaport is one of the biggest urban development projects in Europe. The industrial district of Högdalen is another new center for CleanTech. It houses an advanced R&D center for innovations in recycling, waste management, and energy. Nordic Cleantech Open spotlights 25 innovative CleanTech startups annually. In June 2021 lithium-ion battery maker Northvolt raised $2.75 billion in funding.

### Life Sciences

Stockholm’s Hagastaden district is a growing Life Sciences hub. The Knut and Alice Wallenberg Foundation disburses an average of US$238 million yearly to finance research, primarily in the sub-sector. The Stockholm Life Science Conference hosts discussions of the future of Life Sciences. Investment syndicate Sciety focuses on Swedish Life Sciences. In January 2021 medtech company Capitainer raised US$3.7 million with Sciety. Pharmaceutical company Calliditas Therapeutics IPO’ed in June 2020 at a valuation of $935 million.

# Reasons to move your startup to Stockholm

## Tech Talent

Several prestigious colleges and universities, including the Royal Institute of Technology and the Stockholm School of Entrepreneurship, are located in Stockholm and turn out startup-ready graduates every year. The government prioritizes STEM in its education system to create a strong pool of tech talent.

## Shared Office Spaces

The introduction of new, more affordable shared office spaces has made it easier for founders to set up businesses in Stockholm, which is known for its red hot real estate market. Startups moving to Stockholm are now spoilt for choice when it comes to co-working spaces where they can launch and grow their businesses.

## Startup Community

STARTUP GENOME PARTNERS

**Epicenter / Impacthub / Northzone / SUP46 / Venturecup**

Italy

# Turin

**MEMBERS:**
Intesa Sanpaolo Innovation Center / Compagnia di San Paolo

> Turin is poised to become a top global Smart City. The concentration of tech companies, universities, and open innovation programs by local and global stakeholders make it an attractive innovation hub.

**Maurizio Montagnese**
Chairman, Intesa Sanpaolo Innovation Center

Startup Genome

Regional Ecosystem Bang for Buck

Top 25

## Highlights

Turin, in northwest Italy, may be best known for its long-standing tradition in automotive, 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. In 2020, Fondazione Compagnia di San Paolo, Intesa Sanpaolo Innovation Center, and Fondazione CRT, in partnership with Techstars, launched the Smart Mobility program. The program aims to attract and retain on the territory the best international startups that are shaping the future of mobility. The solid links established between accelerated startups and Turin's vibrant ecosystem are epitomized by the decision of Sheeva.AI, a US-based company, to set-up a subsidiary in Turin to spearhead business activities in Europe: Sheeva.AI is now recognized as an Innovative Startup as per the Italian law. The program – which has already graduated 20+ startups from 3 continents – will launch the next class in January 2022 with a deeper focus on Smart Cities. In Turin, startups can benefit from a substantial concentration of large corporates – including Stellantis, Iren, IVECO-CNH, Italdesign, Pininfarina – and innovative SMEs operating in the mobility space. Moreover, 'open lab' initiatives led by Turin Municipality – like Torino City Lab and CTE Next – provide an unparalleled testing infrastructure for urban innovations based on AI, 5G, and other 'exponential technologies'. Such a massive effort has been recognized by Harvard Alumni Entrepreneurs, which chose Turin as a reference for its commitment to experimentation and entrepreneurialism.

**TOTAL EARLY STAGE FUNDING**
**$48 m**
GLOBAL AVG.
$548 m

**ECOSYSTEM VALUE**
**$260.5 m**
GLOBAL AVG.
$13.68 bn

**MEDIAN SEED ROUND**
**$433.5 k**
GLOBAL AVG.
$480 k

**MEDIAN SERIES A ROUND**
**$0.95 m**
GLOBAL AVG.
$3 m

**SOFT. ENGINEER SALARY**
**$33.6 k**
GLOBAL AVG.
$44 k

## Sub-sector Strengths

### Smart Cities

Torino City Lab – a platform for testing next-generation urban innovations – since 2018 has run more than 50 trials with innovative companies like Mobileye, an Israeli advanced driver-assistance systems firm acquired by Intel, and Skypersonic, a US-based listed company that opened an R&D center in Turin, part of stakeholder group of CTE Next. Making cities smarter is not a fleeting fad in Turin: the city is the birthplace of Planet Smart City, the global leader in smart affordable neighborhoods.

### AI, Big Data & Analytics

Turin and its dynamic ICT sector are at the forefront of data-driven innovation. This leadership is corroborated by a recent accomplishment: Torino was chosen as one of the potential candidates to host the Italian Institute of Artificial Intelligence. As an industrial success story, Electra Vehicles – a Boston-based scale-up that develops AI-powered battery pack controls – will open a branch in Turin and recruit key personnel to drive the expansion in the European market.

# Reasons to move your startup to Turin

## Testing Infrastructure

Thanks the strategic role of ecosystem facilitators like the Intesa Sanpaolo Innovation Center and Compagnia di San Paolo, to to the Municipality and to consolidated corporates and high-tech SMEs, the city offers an open-air experimentation 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 2 top-tier universities that host 120K+ students. Politecnico di Torino, supported by I3P (the best public incubator worldwide according to UBI Global), is the hub of tech talent while Università degli Studi di Torino has 600 years of history and 157 degree programs.

## Tax incentives for Early-stage Investors

Italy offers one of the most generous schemes in Europe. Individual investors and limited companies can deduct 30% of equity investments in startups from their income tax, up to a limit of €1 million and €1.8 million respectively. Through the Italia Startup Visa, international founders can obtain a work permit to establish a subsidiary in Italy to access benefits for Italian Innovative Startups.

# Startup Community

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 the start-ups growth in domestic and international markets through acceleration programs and networking. In addition, Intesa Sanpaolo Innovation Center accelerates the implementation of the circular economy plan, to make Intesa Sanpaolo the driving force behind a new socially and environmentally aware economy.

MEMBER

### Compagnia di San Paolo

Established in Turin in 1563, Compagnia di San Paolo is a banking foundation acting as the major shareholder of Intesa Sanpaolo. One of the largest private foundations in Europe, it granted over €1.5B of philanthropic funds 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.

STARTUP GENOME PARTNERS

**VeM Venture Capital Monitor** / **Iban Italian Business Angel Network** / **Torino City Lab** / **Unione Industriale Torino** / **I3P** / **LIFTT**

Denmark

# Western Denmark

**MEMBERS:**
Digital Hub Denmark

> The robotics ecosystem in Denmark is one of the strongest in the world with unparalleled access to robotics knowledge, business accelerators and smart money. There is no better place to start a robotics company than right here.

**Esben Østergaard**
co-founder at Universal Robots and REInvest Robotics

Startup Genome

**Regional Ecosystem Talent & Experience**

**Top 30**

## Highlights

With its three university cities — Aarhus, Odense and Aalborg — and abundance of young, educated talent, Western Denmark is home to a buzzy startup scene. Aarhus boasts the highest startup survival rate in Denmark, while Aalborg welcomes around 1,000 new companies a year, either new startups or transplants from elsewhere. A host of organizations and events are attempting to harness this energy and further grow the region's ecosystem. The government's 'plug'n'play' registration system makes it possible to start a business in just a few hours. Danish Startup Group runs regular events to support first-time entrepreneurs and students interested in entrepreneurship, while a quick scan of directories like Meetup or TechStars Startup Digest reveals plenty of local developer meetups as well niche groups catering to product managers, those working in AI, or women in tech. Innovators are increasingly active in the ecosystem, but so are investors, particularly business angels. In Aarhus, #AARSOME, an interactive platform to connect founders and investors, aims to create more high-growth startups and boost the region's ecosystem. Western Denmark is also home to several notable startup events, including Techstars Startup Weekend Online Denmark, a 54-hour event at which entrepreneurs pitch ideas, flesh out business plans, and prototype solutions over the course of a weekend. The event culminates with demos on Sunday night. Venture Cup Denmark showcases entrepreneurship among university students and aims to help close the gap between the academic and business worlds.

**TOTAL EARLY STAGE FUNDING**
**$209 m**
GLOBAL AVG.
$431 m

**ECOSYSTEM VALUE**
**$1.2 bn**
GLOBAL AVG.
$10.5 bn

**MEDIAN SEED ROUND**
**$546 k**
GLOBAL AVG.
$494 k

**MEDIAN SERIES A ROUND**
**$2.7 m**
GLOBAL AVG.
$2.7 m

**SOFT. ENGINEER SALARY**
**$79 k**
GLOBAL AVG.
$42.1 k

## Sub-sector Strengths

### Advanced Manufacturing & Robotics

Odense has become a European hot spot for robotics and automation. 175 startups and scaleups, 40 higher education programs, and 10 research institutes call the city home. The robotic cluster, Odense Robotics, has 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.

### Gaming

As of 2018, over 150 Danish game developers and publishers generated revenues of over DKK 1 billion, compared to DKK 400 million only 10 years prior, and employed nearly 1,000 people. Students pursuing entrepreneurship receive advisory support at the Aalborg University Game Hub, proceeding to the Hub's facilities in the GrowAAL house for entrepreneurs as they scale. Bright Star Studios raised a total of $2.7M in funding over two rounds, most recently a Seed round of $2 million in May 2021.

# Reasons to move your startup to Western Denmark

## Openness to International Entrepreneurs

Start-up Denmark offers a single point-of-entry for talented entrepreneurs who wish to relocate and grow high-impact startups in Denmark. The programme is targeted at early-stage businesses and can accept up to 2 founders per company. Those accepted to the program receive a 2-year residence and work permit with the possibility of extension for an additional 3 years.

## Local Talent

With more than 33,000 students and around 1,600 Ph.D. students, Aarhus University is the second-largest university in Denmark, and the Aarhus University Hospital has been voted the best hospital in Denmark ten years in a row. Large universities are also located in Odense and Aalborg. This provides a great recruitment base for companies looking to hire skilled local talent.

# Startup Community

STARTUP GENOME MEMBERS

MEMBER

**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.

STARTUP GENOME PARTNERS

**AAU Incubator (SEA), Aalborg University / Agro Food Park Inkubator/Agro Business Park / AI Innovation House / Arsenalet / BrainsBusiness / Business Factory / AalborgSyndikatet / Center for Industrial Production / Danske Commodities (DC) Business Accelerator / Ecopark / Filmby Aarhus incl. Ideas Lab / Food ehub / Green Tech Center / Growing Investors / Ideas Lab / Incuba Science Parks incl. Incuba Startup Lab / IT Forum / LYNfabrikken / Novi / Odense Robotics / Odense Robotics Startup Hub / Office Lab / Robo Cluster / Startup Factory - Navitas / StartupWorks / TechBBQ / The city of Aarhus, Business Development / The Danish Growth Fund / UAS Denmark / VIA studentervæksthus Aarhus C / WeLoveStartups**

Startup Genome

GEN GLOBAL ENTREPRENEURSHIP NETWORK

Global Startup Ecosystem Report 2021

## Regional Insights

# Middle East & North Africa


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139 Insights & Rankings

140 Ecosystem Pages


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Global Startup Ecosystem Report 2021

# Entrepreneurial Growth In MENA

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



**AMAL DOKHAN**

*Amal Dokhan is an investor and ecosystem builder based in Saudi Arabia. She has managed multiple startup and corporate accelerators in Saudi and beyond leading thousands of entrepreneurs and innovators to commercialize their ideas and access the market.*

The vibrant startup ecosystem in the Middle East and North Africa (MENA) is a function of its status among the world's most digitally connected regions. Around 88% of MENA's population goes online daily, the World Economic Forum reports, and 94% owns a smartphone. Digital consumption is similarly high in some individual countries. Saudi Arabia, for example, ranks seventh globally in social-media engagement, with an average of seven accounts per individual.

This dynamic moment is just the beginning of a growth era. MENA has experienced a massive surge in both startup numbers and the size of funding opportunities. Companies are at all stages of the startup cycle, with many at the pre-seed and seed stages but also an increasing number at series A and Series B, as well as a few acquisitions. Startups have received more than $2 billion in investment in 2021, including some international financing.

In May 2021, capital deployed in MENA had doubled year-over-year, according to startup data platform Magnitt. Saudi startups dominated: they raised 40% of that month's capital through five deals. VC investments were up 761% over May 2020. At least seven companies have exited this year, with the rate of exits growing. And startups from ecosystems in new countries are joining the scene all the time.

Covid accelerated the rise of some sectors. For example, Healthcare benefited from increased demand, highlighting its value to consumers. The insurance sector also rode this wave.

In one megadeal this summer, Kitopi, a cloud kitchen startup, raised $415 million. The company, based in Dubai, has experienced year-over-year growth of 300%, breaking yearly, half-yearly, and quarterly funding records in 2021. That is a testament to the huge interest in the food and beverage industries. The remarkable rise of

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investor appetite for cloud kitchen startups, specifically, began in 2020 and 2021 as restaurant owners were pushed to close their front-of-house operations and users were forced to order-in during lockdowns What started as a pandemic pain point is becoming a tech- and data-driven wave across emerging venture markets.

In other sectors, Swvl, an Egyptian green mass-transit company based in Dubai, went public through a SPAC in July in a deal valued at about $1.5 billion. SoftBank Group has made its first investment in a Saudi Arabian company, leading a $125 million financing round for customer-communication platform Unifonic, which provides cloud-based software to send automated messages. Unifonic also flourished during the pandemic as businesses used it to send single-use passwords and shipping updates to customers. The company processed 10 billion transactions last year, charging a small fee for every message sent.

Governments, meanwhile, are introducing reforms to create more startup-friendly environments across MENA. They want to support a region full of entrepreneurs who are pushing the boundaries to global scale.

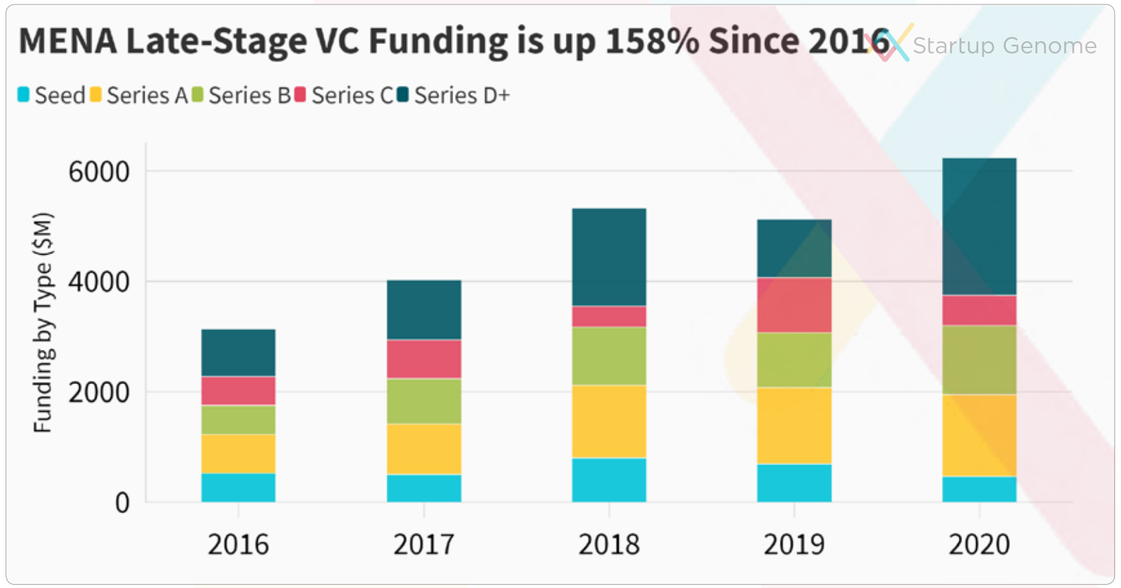
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Global Startup Ecosystem Report 2021

# MENA Insights & Rankings

## Key Findings

- The total number of late-stage funding rounds in MENA almost doubled in the last five years, while the total late-stage funding amount has grown 2x.
- Dubai jumped seven spots to #11 in the Top 100 Emerging Ecosystems.
- AI & Big Data is the leading Sub-Sector in MENA, with $3 billion invested in early-stage rounds and $8 billion in exit value between January 2018 and June 2020.
- Three UAE ecosystems rank in the MENA Top 10 in Performance: Dubai (#2), Abu Dhabi (#3), and Sharjah (#7). This Factor measures the size and performance of an ecosystem based on the accumulated tech startup value created from exits and funding.




## Top 5 Performers

| #1 | #2 | #3 | #4 | #5 |
|---|---|---|---|---|
| Tel Aviv | Dubai | Cairo | Riyadh | Abu Dhabi |

## Top Regional Challengers

| #1 | #2 | #3 | #4 |
|---|---|---|---|
| Amman | Bahrain | Casablanca | Sharjah |

The Top Performers are identified by applying our Global Ranking methodology within a specific region, while the Regional Challengers are identified using the Emerging Ecosystems methodology.

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United Arab Emirates

# Abu Dhabi

**MEMBERS:**
Abu Dhabi Global Market

> Abu Dhabi is the perfect launchpad for leading tech startups looking to scale globally. As a fintech hub, ADGM provides a holistic business environment, with globally recognized regulatory frameworks that improve ease of doing business and access to regional growth.

**Juma Al Hameli**
Chief Strategy and Business Development Officer, Abu Dhabi Global Market

Regional Ecosystem Bang for Buck
#2

Regional Ecosystem Performance
#3

Regional Ecosystem Knowledge
#4

**TOTAL EARLY STAGE FUNDING**
**$47 m**
GLOBAL AVG.
$548 m

**ECOSYSTEM VALUE**
**$1.8 bn**
GLOBAL AVG.
$13.68 bn

## Highlights

Abu Dhabi has proven itself as an epicentre where new frontiers thrive and continues to excel as a centre of technology and innovation excellence. The capital of the United Arab Emirates (UAE) is uniquely positioned to support the growth of innovative tech startups by providing an array of incentives and support programmes. The tech startup community can have direct access to funding, market and talent in one location through the Ghadan 21 programme, as well as the collective efforts of key government and ecosystem enablers, such as Abu Dhabi Global Market (ADGM), Hub71, the Abu Dhabi Investment Office, and ADQ, among others. These competitive advantages have afforded the UAE the number one spot in the region on the World Bank's global Ease of Doing Business ranking. ADGM, the emirate's premier international financial centre (IFC), serves its mandate as a vital enabler of finance and investments, and connects Abu Dhabi, the Middle East, Africa, South Asia and Asia with markets across the globe. Governing the entire 114 hectares of Al Maryah Island, ADGM comprises of four independent authorities – the ADGM Authority, the Registration Authority (RA), the Financial Services Regulatory Authority (FSRA) and ADGM Courts – which together ensure a business-friendly environment that operates in line with international best practices, recognised by major financial centres worldwide. As an IFC, ADGM offers a modern business infrastructure and holistic ecosystem that support companies, startups, financial institutions and SMEs to operate, innovate and grow seamlessly in the UAE and across the flourishing MENA region.

**MEDIAN SEED ROUND**
**$625 k**
GLOBAL AVG.
$480 k

**MEDIAN SERIES A ROUND**
**$20.6 m**
GLOBAL AVG.
$3 m

**SOFT. ENGINEER SALARY**
**$29.1 k**
GLOBAL AVG.
$44 k

## Sub-sector Strengths

### Fintech

ADGM provides a 'one stop shop' for Fintechs, including a RegLab and Digital Lab for startups to prototype innovative solutions in a regulatory sandbox, access data and seamlessly connect with financial institutions and regulators digitally. Abu Dhabi hosts leading regional Fintech events, including FinTech Abu Dhabi Festival, FinTech AD Innovation Challenge, FinTech Awards and FinTech100. In February 2021 open banking platform Tarabut Gateway raised $13 million, the largest Fintech seed round in the MENA region, and banking-as-service provider NymCard raised a $7.6 million Series A round.

### Agtech & New Food

The Agtech Incentives Programme allocated $271 million to support local Agtech companies. ADIO will invest $99.7 million over the next 3 years in AeroFarms, Madar Farms, RNZ, and Responsive Drop Irrigation, after their 2020 plans to establish R&D and production facilities in Abu Dhabi. ADIO's 'Innovation Programme' incentive pool was expanded to $545 million in 2020, and will provide incentives worth $41 million to NanoRacks, Pure Harvest Smart Farms, and FreshToHome. In 2020, Pure Harvest raised $50 million through a sukuk, an Islamic structured finance product.

# Reasons to move your startup to Abu Dhabi

## Openness to International Talent

The “Thrive in Abu Dhabi” programme, launched in February 2021, offers long-term Golden Visas and a pathway to citizenship for international talent in key sectors in Abu Dhabi. The UAE announced in November 2020 that foreign nationals will be allowed to own 100% of companies within the country. Abu Dhabi has also enacted legislation in June 2021 that permits foreign investors and entrepreneurs in 10 new sectors to establish and fully own onshore companies.

## Tax Advantages

There are no income or corporate taxes in Abu Dhabi. The only tax enforced is a 5% VAT, which does not impact a company’s turnover. Each of Abu Dhabi’s eight free zones are dedicated to a particular sector and offer shareholders a multitude of incentives and facilities to establish their operations within their jurisdiction.

## Startup Community

STARTUP GENOME MEMBERS

MEMBER

### Abu Dhabi Global Market

Established by UAE Federal Decree, ADGM’s jurisdiction extends across the entire 114 hectares of Al Maryah Island. ADGM’s three independent authorities - the Registration Authority (RA), the Financial Services Regulatory Authority (FSRA) and ADGM Courts - together ensure that its business-friendly environment operates in line with international best practices, recognised by major financial centres worldwide.

# Bahrain

**MEMBERS:**
Tamkeen

> Bahrain has made impressive progress in the startup space in recent years. Local startups played an important role in ensuring economic continuity through technological innovation during the COVID-19 pandemic by enabling existing businesses to embrace technology.

**Dr Jarmo Kotilaine**
Tamkeen




**TOTAL EARLY STAGE FUNDING**
**<$50 m**
GLOBAL AVG.
$431 m

**ECOSYSTEM VALUE**
**<$100 m**
GLOBAL AVG.
$10.5 bn

## Sub-sector Strengths

### Fintech

Fintech hub Bahrain FinTech Bay (BFB) has attracted more than 100 local and international partners, incubated 15 companies, and published 8 in-depth ecosystem reports. Its Venture Acceleration Platform is designed to catalyse the growth of fintech companies targeting the MENA region. The Georgetown FinTech Program is a 12-week course covering skills relevant to the sub-sector delivered by the Georgetown McDonough School of Business. BFB and the FinTech Association of Israel – FinTech Aviv are working together to facilitate communication between entrepreneurs and investors in both countries. In February 2021 open banking platform Tarabut Gateway secured a $13 million seed funding round.

## Highlights

With its diversified economy, young educated workforce, and ease of doing business, Bahrain was well positioned to play a regionally significant role in developing start-up entrepreneurship. Bahrain is an attractive location for founders from elsewhere, permitting 100% foreign ownership of business assets across the economy and levying no corporate or income taxes. A number of regional and local accelerators have established a presence in the Kingdom in recent years. Bahrain has particularly strong credentials in the area of FinTech, building on the country's long history as a regional financial hub. Bahrain FinTech Bay (BFB) is a dedicated FinTech-focused hub that has further benefited from proactive regulatory and institutional support from the Central Bank of Bahrain. The Build for Bahrain Acceleration Program, held by BFB in partnership with the U.S. State Department's Middle-East Partnership Initiative, offers its own 6-week acceleration program. BFB is also collaborating with Standard Chartered and the Supreme Council for Women to run SC Women in Tech Bahrain, an accelerator program targeted at helping female-led startups to scale. BFB has also entered into other partnerships in order to support particular sub-sectors within the Kingdom. Together with R3, a leading enterprise blockchain software provider, BFB will provide key resources for blockchain-based startups within the ecosystem. BFB has also joined forces with the Real Estate Regulatory Authority (RERA) to develop joint projects to bolster Proptech within the Kingdom.

**MEDIAN SEED ROUND**
**$59.5 k**
GLOBAL AVG.
$494 k

**MEDIAN SERIES A ROUND**
**$0.9 m**
GLOBAL AVG.
$2.7 m

**SOFT. ENGINEER SALARY**
**$33.4 k**
GLOBAL AVG.
$42.1 k

# Reasons to move your startup to Bahrain

## Attractive Business Environment

There are no taxes in Bahrain on income, sales, capital gains, or estates, with the exception of some businesses that operate in the oil and gas sector. The Kingdom makes it extremely convenient to establish a business and allows 100% foreign ownership of business assets. It is the only Gulf state to permit equal business freedoms across all sectors throughout the country.

## Highly Skilled Workforce

Bahrain is home to a young, highly skilled workforce with the best human capital development in the MENA region. Over 70% of tech industry employees are local Bahrainis, 60% are in the 18-24 age range, 90% are fluent in both English and Arabic, and 89% hold either a Bachelor's or a Master's degree. 44% hold a professional certification.

## Low Cost of Living

Bahrain's apartment rental costs are among the cheapest in the Gulf states making the cost of living lower than in many neighboring countries. Foreign real estate investors are allowed to purchase properties in specific areas of the country known as freehold areas. Bahrain's cost competitiveness is further boosted by convenient access to the rest of the Gulf region and beyond.

# Startup Community

STARTUP GENOME MEMBERS

MEMBER

**Tamkeen**

Tamkeen is a semi-autonomous government agency in Bahrain. It was founded in 2006 to provide assistance and training to private-sector businesses and individuals, and to promote development of that sector.

STARTUP GENOME PARTNERS

**Bahrain Fintech Bay** / **500 Startups** / **Al Doseri Investments** / **Bahrain Development Bank** / **Bahrain Fashion Incubator** / **Brinc** / **C5 Capital & C5 Accelerate** / **Corporate Hub** / **Economic Development Board** / **Environment Arabia** / **Flat6Labs Bahrain** / **Kickstart Bahrain** / **Level Z** / **Nest Accelerator** / **Osool** / **Rowad Program** / **Social Media Club** / **Startup MGZN** / **StartupBahrain** / **Tenmou - The Bahrain Business Angels Company** / **UNIDO - Bahrain** / **Yo Startups**

Egypt

# Cairo

**MEMBERS:**
Information Technology Industry Development Agency (ITIDA)

> As we progress in building ‘Egypt’, we are determined to build it in a way where the startup ecosystem is a strong partner. The government is committed to back entrepreneurs throughout their journey from idea to growth.

**H.E. Dr. Amr Talaat**
Minister of Communications and Information Technology, Egypt




TOTAL EARLY STAGE FUNDING
**$148 m**
GLOBAL AVG.
$548 m

ECOSYSTEM VALUE
**$1.5 bn**
GLOBAL AVG.
$13.68 bn

## Highlights

Home to a young, vibrant population, Egypt has been leading the innovation scene across MENA region with tech-powered solutions. Despite the pandemic, $190 million flowed into Egyptian startups in 2020, a 30% YoY surge, with 32% of investments coming from international firms. In addition, a number of VCs were attracted to establish presence in Egypt such as US-based VC, Openner, and UAE-based Global Ventures. Egyptian startups’ efforts are paying off. SWVL, a bus ride-sharing startup founded in Egypt, becomes the first startup to go public outside of Egypt, listing in the US Stock Market, NASDAQ, at a $1.5 billion valuation. This makes it the largest African unicorn debut on any US-listed exchange, surpassing Jumia’s debut of $1.1B on the NYSE. Other impressive exits include Japan’s Trend Micro acquisition of cybersecurity company SecureMisr, through its Cysiv subsidiary; California-based Bevy’s acquisition of event management software startup, Eventtus; Oman’s eMushrif acquisition of Edtech startup,Tareeqi; and Miami-based Aleph Holding acquisition of 86% of the digital media startup, Connect Ads. In Healthtech, Ibnsina Pharma, the second-largest pharmaceutical distributor in Egypt, acquired a 75% stake in the online pharmacy, 3elagi, and e-health startup, Vezeeta, raised a $40M Series D funding round. Government and private sector initiatives and associated regulatory reforms are propelling the ecosystem growth. In 2020, Egypt released a law to support projects and enterprises that have been operating for less than 7 years by providing tax, customs, and non-tax incentives. In addition, the law provides monetary incentives for corporations, investment funds, incubators, accelerators and all entities supporting startups and SMEs.

MEDIAN SEED ROUND
**$75 k**

GLOBAL AVG.
$480 k

MEDIAN SERIES A ROUND
**$1 m**

GLOBAL AVG.
$3 m

SOFT. ENGINEER SALARY
**$7 k**

GLOBAL AVG.
$44 k

## Sub-sector Strengths

### Fintech

Thanks to the government’s deregulation and drive for financial inclusion and universal mobile penetration (98.6%), investors are pouring money into Cairo’s Fintech startups. Digital financial solutions addressing SMEs, Tribal Credit, raised $34.3M in a Series A round and Paymob, the payment solutions startup, raised $18.5M in Series A. Telda, a 1-month old then digital banking service, raised a $5M pre-seed round led by Sequoia Capital. This is the first venture for Sequoia Capital in MENA.

### Logistics & Transportation

With Egypt set on embracing digital transformation, startups are working on transportation tech solutions to accommodate cities growth. In addition to SWVL’s impressive Nasdaq IPO, Egypt’s Trella raised $42M Series A led by Maersk. Halan delivery super app raised $15M in a Series A round and Bosta courier service closed a USD $6.7M Series A round. Y Combinator alumnus, Flextock, an e-commerce fulfillment startup, raised $3.25M, as one of the largest pre-seed rounds in MENA.

# Reasons to move your startup to Cairo

## Large Customer Market

With a young population of 20 million tech savvy consumers, Cairo provides a perfect testbed for innovation and an attractive market for scalability, like expansions of Amazon’s Souq and Uber’s Careem.

## Abundant Resources

Entrepreneurs can draw talent from over 170 universities and institutes producing 500K annual graduates, access a network of over 40 incubators/accelerators and 80 co-working spaces, and tap on ITIDA’s support to entrepreneurs.

# Startup Community

STARTUP GENOME MEMBERS

MEMBER

**Information Technology Industry Development Agency (ITIDA)**

The IT Industry Development Agency (ITIDA) is the executive arm of the Egyptian Ministry of Communication & Information Technology. Since its establishment in 2004, ITIDA’s core mission has been spearheading the development of Egypt’s IT industry to increase its global competitiveness and make it a key contributor to the country’s economic growth.

STARTUP GENOME PARTNERS

**500 Startups / A15 / AUC Venture Lab / Algebra Ventures / EdVentures / Endure / FEPS Business Incubator / Falak Startups / Flat6 Labs Cairo / Global Ventures / HIM angel / Ideavelopers / Innoventures / Kamelezer / Sawari Ventures / Seedstars / Technology Innovation and Entrepreneurship Center (TIEC) / The Cairo Angels**

United Arab Emirates

# Dubai

**MEMBERS:**
District2020

> As the future of Expo 2020 Dubai, District 2020 will provide an ideal home and an enabling environment where startups will become co-creators of solutions that accelerate industry growth.

**Nadimeh Mehra**
Vice President, District 2020 – Transition Unit, Expo 2020 Dubai




**TOTAL EARLY STAGE FUNDING**
**$445 m**
GLOBAL AVG.
$548 m

**ECOSYSTEM VALUE**
**$7.2 bn**
GLOBAL AVG.
$13.68 bn

## Highlights

Set to evolve from Expo 2020 and drive the world fair's legacy into the future, District 2020 will be a human-centric future city and a global innovation ecosystem. As a community where people, businesses, technologies, industries, R&D and academia connect, District 2020 will support Dubai's future agenda and the growth of the UAE's innovation-driven economy. District 2020's curated innovation ecosystem will actively facilitate growth opportunities by bringing together all stakeholders, including Fortune 500s, small and medium businesses, start-ups, entrepreneurs, innovators and enablers (incubators, accelerators, academia, VC, government) in key sectors. As a multi-stakeholder platform it will support businesses of all sizes to co-create, scale, and thrive within Dubai. District 2020 complements Dubai's bold vision for the future. It will play an integral role in the Dubai 2040 Plan, which outlines a new mode of thought for urban master planning, established as a transformative, human-centric plan by the visionary leadership of Dubai. District 2020 will provide a blueprint of how a future city is shaped through human-centricity and smart infrastructure whilst ensuring a more sustainable and balanced lifestyle. As a city of firsts, District 2020 will provide a living lab for global industry leaders, innovators and entrepreneurs looking to create and test new products and solutions and new ways of working, in a progressive live-work-play community. Dubai is the headquarters of the Egyptian ridesharing service provider Swvl, which became the first Middle East unicorn to list on Nasdaq in July 2021, valued at $1.5 billion. Local startups that have been acquired by global leaders including Uber's $3.1bn acquisition of Careem and Souq.com, which was acquired by Amazon in 2017 for $580m, which have put the UAE's startups in the spotlight.

**MEDIAN SEED ROUND**
**$500 k**

GLOBAL AVG.
$480 k

**MEDIAN SERIES A ROUND**
**$3.3 m**

GLOBAL AVG.
$3 m

**SOFT. ENGINEER SALARY**
**$37 k**

GLOBAL AVG.
$44 k

## Sub-sector Strengths

### Smart Logistics

The logistics industry comprises more than 14% of Dubai's GDP and this sub-sector is forecasted to grow at a rate of 4% through to 2022. Dubai was named among the world's top 5 shipping hubs according to the International Shipping Centre Development Index. District 2020 will soon be home to Siemens' global logistics headquarters and DP World will support learning and capacity building in logistics to fuel the ecosystem with talent and research.

### Industry 4.0 and Future Technologies

A front-runner in Industry 4.0, Dubai offers growth opportunities for investors across future-oriented sectors, driven by long-term strategies focused on AI, blockchain, 3D printing, IoT and its role as a testbed for concepts in a live setting. For instance, 25% of Dubai's buildings will use 3D printing by 2030, and the world's largest 3D printed building is already built here. The progressive government initiatives have enabled experimental concepts like the world's first autonomous flying taxi, Volocopter, and Hyperloop One.

# Reasons to move your startup to Dubai

## Talent Development

Dubai offers visa incentives for high value talent – five years for post-study residence & tech startup owners; and 10 years for specialists in STEM fields and for investors. In 2020, the UAE launched a new Remote Work Visa Program that allows people to live in the emirate for one year, and in 2021 the UAE decided to grant Emirati citizenship to investors, scientists, professionals, and creative talents.

## Unrivalled Startup Support

Successful applicants to District 2020's dedicated global entrepreneurship programme, Scale2Dubai,will have access to everything they need to thrive, including work space, business setup support, guidance, deal flow, funding, talent, banking services, IT infrastructure, and more. The equity-free programme is expected to support between 80 and 100 startups and small businesses annually. Other initiatives for supporting SMEs offer postponement of rent payments, easier access to SME financing, and remote assistance on navigating operational challenges through the Dubai SME government body and its Mohammed Bin Rashid Innovation Fund.

# Startup Community

STARTUP GENOME MEMBERS

MEMBER

### District2020

District 2020 will evolve from Expo 2020 Dubai as a human-centric future city centered on the needs of its urban community. It will provide a curated innovation-driven ecosystem that brings together global minds and embraces technology and digital innovation to support industry growth.

Saudi Arabia

# Riyadh

**MEMBERS:**
Saudi Venture Capital and Private Equity Association (SVCPEA)

> Driven by legislative transformation and youthful demographic, the Saudi ecosystem has seen transformational growth in VC-backed startups and is expecting a tenfold investment boom over the next five years, presenting unique entrepreneurial and investment opportunities.

**Qusai A. Alsaif**
CEO, Saudi Venture Capital & Private Equity Association




TOTAL EARLY STAGE FUNDING
**$146 m**
GLOBAL AVG.
$431 m

ECOSYSTEM VALUE
**$1 bn**
GLOBAL AVG.
$10.5 bn

## Highlights

Saudi Arabia's transformation from oil & gas powerhouse to an entrepreneurial hot spot for the MENA region is well underway. The government's Saudi Vision 2030 sets out ambitious targets for the Kingdom's entrepreneurial ecosystem, including increasing small businesses' contribution to the GDP from 20% to 35% by 2030 and boosting foreign direct investment from 3.8% to 5.7% of GDP. Saudi startups will soon also be able to leverage the Saudi Data and Artificial Intelligence Authority (SDAIA)'s DEEM, the largest government data cloud in MENA. The government has some high-profile international partners in these efforts. Saudi Arabia's Ministry of Communications and Information Technology (MCIT) partnered with Techstars to launch the Riyadh Techstars Accelerator in 2021 to help startups build and grow their business in the MENA region. Amazon recently announced a major expansion in Saudi Arabia that is set to create at least 1,500 new jobs in 2021. The online retail giant will increase its storage capacity in the Kingdom by 11%. The move speaks to the growing size and importance of E-commerce in Riyadh and the region. The ecosystem is further strengthened by local success stories and tech-focused events. A number of Riyadh-based companies saw an influx of funding even during the pandemic. In 2020, Nana, an online grocery platform, raised $18 million in a series B round in March, Morni, a roadside assistance platform, raised a Series B $9.1 million in December, and Jahez, a food delivery platform, raised $36.5 million in a Series A round in June 2020. Supported by MCIT and scheduled to take place in Riyadh in November, LEAP 21 aims to connect public and private organizations, drive female empowerment, and nurture the ecosystem's tech startups. In early 2020 restaurant management platform Foodics raised a US$20 million Series B funding round led by Sanabil Investments.

MEDIAN SEED ROUND
**$300 k**

GLOBAL AVG.
$494 k

MEDIAN SERIES A ROUND
**$2.3 m**

GLOBAL AVG.
$2.7 m

SOFT. ENGINEER SALARY
**$36.6 k**

GLOBAL AVG.
$42.1 k

## Sub-sector Strengths

### E-commerce

One of the most important drivers of growth in the country, E-commerce attracted 67% of overall funding for Saudi-based startups in the first half of 2020, more than any other sub-sector. Amazon's recent expansion into Saudi and the unicorn status of regional E-commerce giant Souk.com speak to the growth of the sub-sector. On-demand delivery service Mrsool placed above Facebook and Uber in the country's list of top Apple store downloads in 2019. B2B marketplace Sary raised a $30.5 million Series B round in May 2021.

### Fintech

Digital payments, credit scoring technologies, and crowdfunding platforms, are a major strength of the Kingdom's Fintech startups. Fintech boasted 155 startups in 2020 compared to 10 in 2018, and these startups raised approximately $168 million in the first half of 2021, a massive jump from $30 million in 2016. Buy-now-pay-later startup Tamara announced a $110 million Series A in April 2021, the largest investment ever raised by a Saudi startup. Digital secure wallet STC Pay has raised a total of $200 million in funding.

# Reasons to move your startup to Riyadh

## Access to Funding

In 2019, the Saudi government allocated US$19.2 billion in stimulus to support small and medium enterprises. Two government-backed funds of $1.1 billion and $750 million were also created to attract private sector participation in private equity funds and venture capital. Finally, The Ministry of Communications and the Ministry of Labor & Social Development have set aside US$2.66 million to support the tech sector. The Financial Technology Experimental Permit grants permission for the operation of equity crowdfunding platforms in the Kingdom.

## Ease of Doing Business

The government's Meras program provides the necessary services to set up a business in a single day. The recently established SME Authority plans to review regulations, remove obstacles, and facilitate access to funding for entrepreneurs.

# Startup Community

**STARTUP GENOME MEMBERS**

MEMBER

### Saudi Venture Capital and Private Equity Association (SVCPEA)

Saudi Arabia's Venture Capital and Private Equity Association (VCPEA), an industry body representing the Kingdom's private equity and venture capital sector. The association aims to foster closer collaboration between innovative, high growth businesses and venture capital and private equity companies.

UAE

# Sharjah

**MEMBERS:**
Sharjah Entrepreneurship Center

> In just five years, Sheraa has led Sharjah's development of a founder-focused ecosystem anchored in the belief that anyone is capable of bringing impactful change to their community and the world.

**Najla Al Midfa**
Chief Executive Officer, Sharjah Entrepreneurship Center (Sheraa)




## Highlights

With one of the most attractive investment climates and fastest-growing economies in MENA, Sharjah has attracted the attention of global investors and founders. Its strategic location in proximity to promising emerging markets, favorable business environment, and commitment to supporting startups has created a thriving innovation ecosystem. The emirate is home to several top-ranked higher education institutions and MENA's fastest growing technopark, Sharjah Research Innovation and Technology Park (SRTI Park). The Sharjah Entrepreneurship Center (Sheraa) launched in 2016 with a mandate to build a world-class entrepreneurship ecosystem in Sharjah. It's annual flagship event, the Sharjah Entrepreneurship Festival, nurtures a culture of innovation and cooperation in the ecosystem and has become one of the region's largest entrepreneurship events. Sheraa recently launched the Sharjah Startup Studio (S3), the first government-backed startup studio in the UAE. S3 supports social impact entrepreneurs and operates under a revenue-sharing model, in which entrepreneurs receive $30,000 in pre-seed funding but retain full ownership of their businesses. Investors' confidence in Sharjah continues to grow, with $220 million worth of projects initiating in 2020, a 60% increase between Q3 and Q4. This increase can be attributed to the ecosystem of support entities that help foreign investors access the emirate, such as the Sharjah Investors Services Center (SAEED), an initiative of Sharjah FDI (Invest in Sharjah). The Sharjah Government has also committed around $500 million in R&D investment to solidify the emirates' potential as an innovation leader. This investment led to the launch of SRTI Park. which offers a full-service support system, Open Innovation Lab, and makerspace.

**TOTAL EARLY STAGE FUNDING**
**<$50 m**
GLOBAL AVG.
$431 m

**ECOSYSTEM VALUE**
**<$100 m**
GLOBAL AVG.
$10.5 bn

**MEDIAN SEED ROUND**
**$540 k**
GLOBAL AVG.
$494 k

**MEDIAN SERIES A ROUND**
**$1.9 m**
GLOBAL AVG.
$2.7 m

**SOFT. ENGINEER SALARY**
**$50.3 k**
GLOBAL AVG.
$42.1 k

## Sub-sector Strengths

### Edtech

US$20 million was invested in the Middle East's Edtech sector in 2019. In 2020 the UAE allocated $2.8 billion to public higher education — roughly 15% of the total budget. Edtech is poised to grow, backed by the University City of Sharjah, one of the largest in the region. Sharjah is a pioneer in higher education, with 21 institutions of higher learning, multidisciplinary centers of excellence, and 30,000+ students with a digital mindset and an appetite for quality Edtech solutions.

### Digital & Creative Industries

Sharjah's legacy as a global cultural crossroad has built a thriving ecosystem that champions pioneering startups in publishing, digital content, and media. In 2019, Sharjah was crowned UNESCO World Book Capital, and it has two dedicated free zones - Sharjah Media City and Sharjah Publishing City – which provide startup support programs that enable entrepreneurial growth in digital media and other sub-sectors, and attracted 100 companies from 23 countries in 2020.

### Advanced Manufacturing & Robotics

With a strong manufacturing sector, Sharjah was ranked the 8th fastest-growing city in the world from 2015 to 2020 by the Economist Intelligence Unit. It recently established an advanced manufacturing and robotics center of excellence at the $150 million Sharjah Research Innovation and Technology Park. The center will work with founders, small and medium enterprises, and academia to pilot advanced manufacturing and robotics technologies in real-world demonstrations.

# Reasons to move your startup to Sharjah

## Highly Skilled Talent

Sharjah's University City is home to some of the region's finest higher education institutions. With the city's constant drive for innovation, these institutions have incorporated entrepreneurial learning into their curriculums, graduating a talent pool with 21st century skills. With over 30,000 students attending these elite universities, Sharjah has mass top-tier human capital available for businesses looking to scale.

## Business-friendly Regulatory Environment

A testbed for innovation and a launchpad for growth, Sharjah has one of the most secure and business-friendly regulatory environments for companies in the region. The Sharjah Entrepreneurship Center (Sheraa) and the Sharjah FDI Office (Invest in Sharjah) have partnered to launch an entrepreneurship card giving startups access to business consulting, discounted services, health insurance, and housing.

## Market Access and Infrastructure

Positioned at the nexus of Europe, Africa, and Asia and between the Arabian Gulf and the Indian Ocean, Sharjah provides a major advantage to both investors and entrepreneurs given the city's robust infrastructure and proximity to some of the world's fastest growing economies in the MENA region.

# Startup Community

STARTUP GENOME MEMBERS

MEMBER

### Sharjah Entrepreneurship Center

At 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.

Israel

# Tel Aviv #7*

**Ecosystem rank and metrics for Tel Aviv - Jerusalem**

**MEMBERS:**
Tel Aviv Global

> “Tel Aviv has shown tremendous growth and maturity with many startups evolving into scaleups, unicorns and public companies. As a leading global investment business, we are excited for the opportunities presented in one of the most dynamic and innovative markets in the world.

**Yifat Oron**
Senior Managing Director. Blackstone . Head of Tel Aviv Office




TOTAL EARLY STAGE FUNDING
**$4.5 bn**
GLOBAL AVG.
$431 m

ECOSYSTEM VALUE
**$61.6 bn**
GLOBAL AVG.
$10.5 bn

## Highlights

Tel Aviv might be of modest size but Israel’s high-tech capital is one of the leading cities in the world for innovation and technology. The beating heart of the “Startup Nation” boasts one startup for every 154 residents, the world’s highest ratio. Creative and experienced talent, a mix of local and international investors and 2,750 startups call this ecosystem home. The “Startup City” hosts 115 foreign R&D centers with a vast range of multinational companies using the city as a base for innovation. The well known tech giants like Google, Microsoft, Facebook, Amazon and Apple, together with Nike, Mastercard, Ford, booking.com, bosch, come for the talent and entrepreneurial spirit and benefits from the country’s high expenditure on R&D - the second-highest rate of R&D spend per capita in the world. A recent surge in VC money into Tel Aviv has only improved the conditions for growing companies. The ecosystem saw a 25% increase in capital raised in 2020, with over $6.8 billion flowing into its startups last year which doubled the number of unicorns in Tel Aviv. It is now home to more than 20 private companies worth more than $1 billion. With rounds of $200 or $300 million not uncommon, local success stories are numerous and include Monday.com, which raised $150 million from Zoom and Salesforce in June 2021 as part of its IPO, and mobility-as-a-service startup Moovit, which was acquired by Intel for $900 million in May 2020. Notable ecosystem events include Axis Tel Aviv, DLD, Fintech Week, and CybertechGlobal which provide local entrepreneurs the opportunity to network with leading members of the international startup scene.

MEDIAN SEED ROUND
**$1500 k**
GLOBAL AVG.
$494 k

MEDIAN SERIES A ROUND
**$5.8 m**
GLOBAL AVG.
$2.7 m

SOFT. ENGINEER SALARY
**$90 k**
GLOBAL AVG.
$42.1 k

## Sub-sector Strengths

### AI, Big Data & Analytics

Tel Aviv is seventh in the world by number of AI startups, with 714 companies and a total of $3 billion invested in 2020. A new AI plan calls for $1.6 billion to further grow the sub-sector over the next five years and has already unlocked initial funding of $168.2 million. In June 2021, ZenCity, an AI solution for governments, raised $30 million and digital adoption platform WalkMe raised $286.75 million in an IPO.

### Cybersecurity

2020 was a record-breaking year for Tel Aviv-based Cybersecurity companies, raising $2.9 billion in total. In just Q1 2021, the sub-sector raised $1.5 billion across 17 deals. Three unicorns continued their growth in 2021, enterprise networking and security company Cato Networks raised a total of $332 million, cloud infrastructure company Wiz raised a total of $350 million and Aqua Security raised a total of $265 million. Tel Aviv University hosts Cyber Week, one of the top cybersecurity events in the world.

# 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 been already 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.

# Startup Community

STARTUP GENOME MEMBERS

MEMBER

### Tel Aviv Global

Tel Aviv Global & Tourism is a municipal company that reports to 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.

STARTUP GENOME PARTNERS

**Future Block Coworking / Future Block Programs / Geektime / Microsoft Ventures / Microsoft for Startups / SOSA / Startup Nation Central / Techstars**

# Tunisia

**MEMBERS:**
Smart Capital / Caisse des Dépôts et Consignations (CDC)

> The recently launched Fund of Fund will help strengthen the role of the VC community and widen the opportunity for Tunisia based Startups to go global.

**Mr Alaya Bettaieb**
General Manager of Smart Capital The national operator of Startup Tunisia initiative




## Highlights

With 39% of its increasingly educated and urban population under the age of 24, Tunisia was ranked the most innovative country in Africa by the Bloomberg Innovation Index. It has been ranked first in Africa for the quality of its entrepreneurial environment. Startup investment in Tunisia increased 31% between 2017 to 2021, totalling US$38.2 million across 54 deals in the 2020-21 period. Tunisia has long been an exporter of talent, but increasingly the country has focused on capitalizing on its local human capital. GoMyCode, a fast-growing coding school, has trained 5,000 developers and opened three local offices, and launched branches in Morocco and Algeria. Innov'i – EU4Innovation is a 5-year program aimed at strengthening the innovation ecosystem in Tunisia. Major regulatory improvements in Tunisia include the 2018 Startup Act, designed to spur innovation, foster entrepreneurship and transform the country into a "Startup Nation." The law simplified the process of launching a startup, consolidated hubs and created a €200 million "Fund of Funds". The "Startup Tunisia" initiative aims to create 1,000 startups by 2024. These efforts have begun paying off in the form of ecosystem success stories. Tunisian-French SaaS startup Expensya raised a US$20 million Series B round in April 2021. Tunisia-founded Instadeep has raised US$7 million and was nominated as one of the 100 most promising AI startups in the world. It recently partnered with BioNTech to support the discovery and development of novel immunotherapies, including against COVID-19.

**TOTAL EARLY STAGE FUNDING**
**$6.7 m**
GLOBAL AVG.
$548 m

**ECOSYSTEM VALUE**
**$80 m**
GLOBAL AVG.
$13.68 bn

**MEDIAN SEED ROUND**
**$70 k**
GLOBAL AVG.
$480 k

**MEDIAN SERIES A ROUND**
**$0.15 m**
GLOBAL AVG.
$3 m

**SOFT. ENGINEER SALARY**
**$8.3 k**
GLOBAL AVG.
$44 k

## Sub-sector Strengths

### Artificial Intelligence

In 2016, the Tunisian government set out its 5-year development plan for AI. In 2019 the country was ranked 54th in the world for government AI readiness by the Oxford Insights Foundation and the International Development Research Centre. In July 2021 the Africa Internet of Things (IoT) and Artificial Intelligence (AI) Challenge was launched in Tunisia to encourage young African innovators to address these sub-sectors. Tunisia's first-ever national open data hackathon was held in 2020 with the support of the World Bank.

### Life Sciences

Tunisia announced an agreement with Britain to collaborate on the development of medicines in Tunisia in February 2021. In 2020, Make-IT in Africa, Tunisian Startups, and the Tunisia Ministry of Higher Education, and Scientific Research together launched the HealthTech Challenge COVID-19 to encourage all ecosystem players to join Tunisia's fight against COVID-19. The Sfax Technology Park-based cluster "HealthTECH" will represent Tunisia in the European "BETTEReHEALTH" project aimed at supporting the deployment of e-health in Africa.

# 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 logistic chain and provides a market of 500 million consumers.

## Educated Talent

The education system in Tunisia produces graduates armed with the linguistic, technical, communication, and behavioral skills necessary to work for foreign companies. The country produces 325,000 students per year, including 65,000 multilingual university graduates, 12,000 graduates in ICT, and 20,000 graduates in engineering. 35% of the population reaches tertiary education.

# Startup Community

STARTUP GENOME MEMBERS

MEMBER

### Smart Capital

SMART CAPITAL, a management company approved by the Financial Markets Council, is in charge of the implementation of STARTUP TUNISIA with its 3 components, Startup Act the law and its incentives, Startup Invest nurturing the funding mechanisms, and the Startup Ecosystem backing 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. Its mission is to deploy the STARTUP TUNISIA initiative.

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 supporting state policies in sustainable development goals and projects. The CDC distinguishes itself by its unique economic model characterized by its mode of governance, its investment doctrine and its risk management. Its status gives it the role of key player in the economic and social development of Tunisia to serve the interest on a long-term horizon.

Startup Genome

GEN GLOBAL ENTREPRENEURSHIP NETWORK

Global Startup Ecosystem Report 2021

# Regional Insights

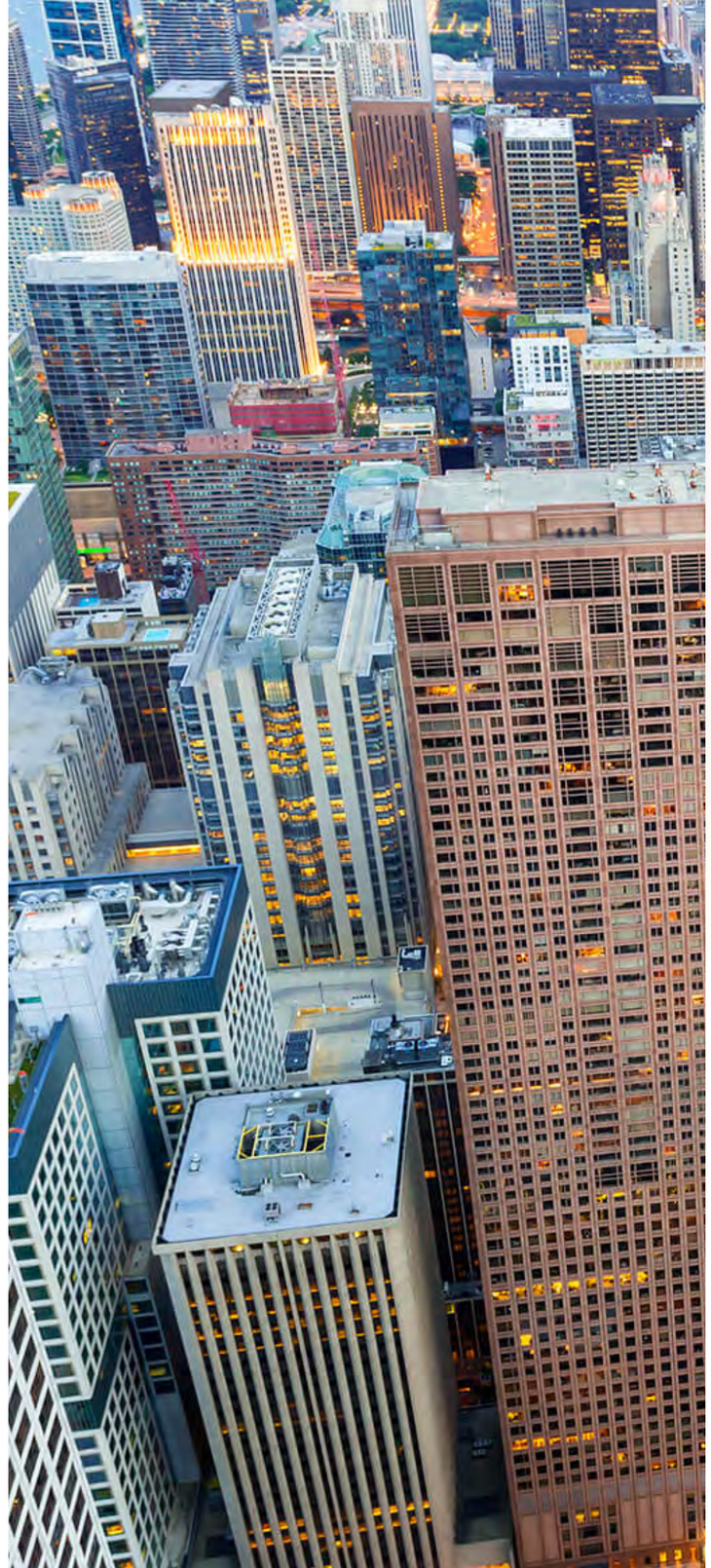
# North America


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Global Startup Ecosystem Report 2021

# The North American Startup Ecosystem In A Post-Pandemic Era

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



**JEFF HOFFMAN**

*Jeff Hoffman is an award-winning entrepreneur, investor, philanthropist, and chairman of the Global Entrepreneurship Network. He has led several successful startups, including Priceline.com/Booking.com and uBid.com.*

North America's startup community is in the midst of generational change. Established and emerging ecosystems are adjusting to a new era of entrepreneurship birthed from the side effects of the COVID-19 pandemic. Influencing factors include the decentralization of work, mass job losses, and a surge of diverse founders with distinctive needs and motivations.

The widespread exodus from offices in 2020 normalized a work-from-anywhere culture and allowed millions of North Americans to relocate from metropolitan cities to smaller communities. As more entrepreneurs and their employees shift to remote work, vibrant startup ecosystems are emerging in communities of all sizes. Consider Montreal, which climbed four spots in the GSER ranks. Or Kansas City, which now claims a spot in the GSER's Top 100 that it did not hold two years ago. At the Global Entrepreneurship Network, we are also seeing new demand to support and connect founders in areas not (yet) represented in the GSER. That includes Hawaii where, in 2021, all five counties will participate in Global Entrepreneurship Week for the first time.

Equally influential is the diverse cohort of entrepreneurs who have started companies in recent years. After record job losses in 2020, millions of North Americans considered entrepreneurship for the first time. In the United States alone, more than 551,000 startup applications were filed in July 2020, a 96% increase from the same month in 2019. While many of these founders were motivated by innovative ideas, new market opportunities, and newfound time, research from the Kauffman Foundation shows that the "opportunity share" of new entrepreneurs dropped 17% in 2020, suggesting a sharp increase in those starting businesses out of necessity to replace lost income.

Diverse genders, races, education levels, and professional backgrounds are represented in this group of new founders. The rate of new entrepreneurs grew across

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demographics, with the highest jumps among the Latino, Black, and immigrant communities, as well as among those with less than a high school education, according to Kauffman. These entrepreneurs are bringing unique perspectives and a fundamental mindset shift about what it takes to build the more resilient, inclusive, and sustainable entrepreneurial ecosystems needed for a strong post-pandemic economy.

As a result, we are starting to see market-driven demand for more accessible startup resources, such as investment and other financial support, for founders in communities traditionally underserved by the entrepreneurial support ecosystem. In 2020 and 2021 the Global Entrepreneurship Network partnered with Hello Alice; global investment firm KKR; and Baltimore Gas and Electric (BGE) to provide over $3 million in emergency funds to entrepreneurs. I am proud to report that approximately two-thirds of the recipients of that money are female, and more than half are of diverse ethnicities. That is just one example of greater representation in founder financing. But it is a hopeful one that signals growing inclusion in the broader startup ecosystem.

Entrepreneurs and the skills and ideas they hold are North America's greatest asset as we strive to build back our economy stronger than before. Highly intelligent, industrious, and innovative founders—whether or not they are new to entrepreneurship—are saying, "Let's go." They are eager to put in the work to create jobs, opportunities, and wealth for themselves and others. The startup ecosystems that adapt to their needs and to the needs of the post-pandemic economy will leave a strong legacy in what is sure to be a defining period in world history.

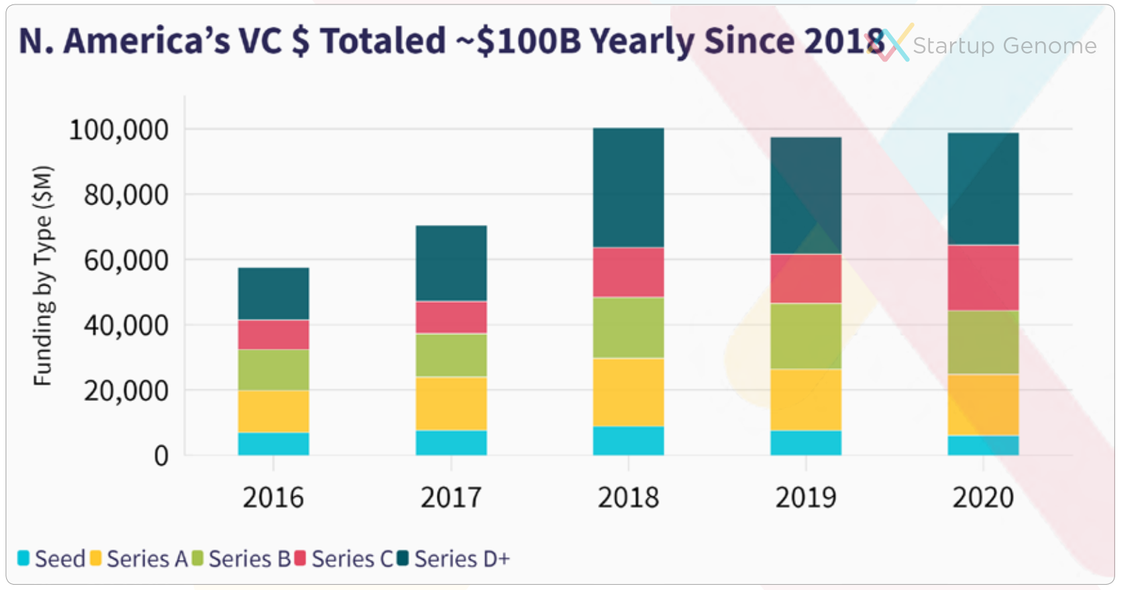
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Global Startup Ecosystem Report 2021

# North America Insights & Rankings

## Key Findings

- North America contributed more than 50% of global startup Ecosystem Value for the second year in a row.
- Silicon Valley, New York City, Boston, and Los Angeles alone contribute more than 70% to North America's total Ecosystem Value.
- North America saw a 20% increase in the number of exits above $50 million in 2020 and a 35% increase in the number of exits in excess of $100 million.
- North America produced more than 60% of global unicorns in 2020.
- When it comes to the Funding and Talent & Experience Success Factors, four out of the Top 5 ecosystems are from North America (Silicon Valley, New York City, Los Angeles, and Boston).
- Nine of the Top 20 Global Ecosystems are from North America.




## Top 5 Performers

| #1 | #2 | #3 | #4 | #5 |
|---|---|---|---|---|
| Silicon Valley | New York City | Boston | Los Angeles | Seattle |

## Top Regional Challengers

| #1 | #2 | #3 | #4 | #5 |
|---|---|---|---|---|
| Miami | Detroit | Portland | Houston | Minneapolis |

The Top Performers are identified by applying our Global Ranking methodology within a specific region, while the Regional Challengers are identified using the Emerging Ecosystems methodology.

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United States

# Austin #20

> As the Austin startup ecosystem has matured, our work at Tech Ranch has evolved to connect this ecosystem's future to the world, especially around the areas that have developed in Austin around impact innovation.

**Kevin Koym**
CEO and Founder of Tech Ranch Austin

## Highlights

Thanks to coronavirus disruption and the rise of remote work, many founders and tech workers have been reconsidering where they want to live this past year. Austin has been a popular choice among those relocating from other ecosystems. Austin is home to dozens of IT companies, including behemoths like Cell, IBM, and Google, 15 startup incubators, and at least 85 pharmaceutical and biotech corporations. Tesla set up a gigafactory in Austin and plans to employ more than 5,000 employees, making it Austin's largest tech employer. (Tesla's founder, Elon Musk, was among those who recently relocated from Silicon Valley to Texas.) The city boasts a moderate cost of living, a high quality of life, and a lively cultural scene. It also hosts two world-class startup events. SXSW South by Southwest is an annual showcase of the best in music, independent film, and interactive technologies that draws hundreds of thousands of attendees each year, including internationally prominent entrepreneurs and celebrities. Austin Startup Week is a five-day exhibition where entrepreneurs, investors and other startup insiders gather to connect and collaborate. VCs poured $2.26 billion into Austin startups in 2020. Impressive local success stories include Workrise, a maker of workforce management solutions, that has raised more than $750 million to date and currently has a valuation of $2.9 billion. Telemedicine startup Wheel closed $50 million in funding in May 2021.

**TOTAL EARLY STAGE FUNDING**
**$1.9 bn**
GLOBAL AVG.
$431 m

**ECOSYSTEM VALUE**
**$19.8 bn**
GLOBAL AVG.
$10.5 bn

**MEDIAN SEED ROUND**
**$640 k**
GLOBAL AVG.
$494 k

**MEDIAN SERIES A ROUND**
**$5.4 m**
GLOBAL AVG.
$2.7 m

**SOFT. ENGINEER SALARY**
**$86 k**
GLOBAL AVG.
$42.1 k

## Sub-sector Strengths

### Cybersecurity

With cybersecurity concerns frequently in the headlines, Austin's many Cybersecurity bootcamps, including The Cybersecurity Boot Camp at UT Austin, Evolve Security, FutureLearn and Heimdal Security, are training talent for jobs in the field. Area Cybersecurity startups are also attracting the attention of investors. Cloud video surveillance firm Eagle Eye Networks raised $40 million in October 2020. Living Security landed a $14 million Series B in March 2021. Anti-fraud platform SpyCloud raised $30 million in August 2020.

### Cleantech

An established center for Cleantech, Austin has over 200 Cleantech companies that employ ~20,000 people. University of Texas at Austin is one of the world's preeminent energy research institutions, while The University of Texas Clean Energy Incubator provides local Cleantech startups with resources to grow. Pecan Street Research Institut acts as a testbed for new smart grid technologies. Local success stories include Modernize, Hylliion, Ambiq Micro, and Bractlet.

# Reasons to move your startup to Austin

## Growing Job Market

Talent from across the U.S. is attracted to Austin by its red hot job market. Thanks to the region's mix of established businesses, SMEs, and tech startups, workers make 10 percent more than the national average, luring some of the nation's best talent and ensuring growing companies a steady stream of skilled workers.

## Low Cost of Living

Austin is not the lowest cost of living city in America, but prices in the city compare favorably to many much higher priced startup hubs. Combined with the area's relatively high median incomes of $74,860 and relatively low rents (the average monthly cost of a one bedroom is $1,068) this makes Austin feel like a steal to many transplants from expensive coastal cities.

## Quality of Life

In addition to its economic attractions, Austin is also famed for its bustling cultural scene and high quality of life. Billed as the Live Music Capital of the World, the city is bursting with bars, restaurants, and concerts. Austin also hosts several world-class festivals, most notably South by Southwest and Austin City Limits.

# Startup Community

STARTUP GENOME PARTNERS

**3 Day Startup / Austin Technology Incubator / BuiltIN / Capital Factory / Central Texas Angel Network / St. Edward's University / Tech Ranch / Techstars Austin / University of Texas Austin / WeWork**

United States

# Boston #5

> Boston is home to a buzzing startup ecosystem across many sectors—cleantech, biotech, and robotics. We strongly believe that our regional community thrives because of all the stakeholders that are committed to supporting local, early-stage companies.

**Dr. Emily Reichert**
CEO at Greentown Labs




**TOTAL EARLY STAGE FUNDING**
**$6.4 bn**
GLOBAL AVG.
$431 m

**ECOSYSTEM VALUE**
**$133 bn**
GLOBAL AVG.
$10.5 bn

## Highlights

Boston is home to exceptional tech talent and a storied history of innovation, particularly in biotech, but what really sets the city's startup ecosystem apart is its positive climate for women. In Massachusetts generally the number of women in tech grew at a 21.4% rate between 2009 and 2013, putting the state second nationally by this measure. In Boston specifically, 29% of startup founders are female, second only to Chicago, according to the Global Startup Ecosystem Ranking report. The leaders of several local ecosystem standouts such as Care.com are female, and when a local journalist recently attempted to pull together an exhaustive list of Boston startups led by women that raised venture funding in the previous decade, the crowdsourced effort came up with 164 women at 154 companies. The prominence of female founders shows up in the statistics on where VC dollars are going. According to Alice Rossiter, founder of live stream experience startup Alice's Table, in Boston more than 10% of companies "invested in by some top venture capital firms are women founded." Crunchbase puts the figure at 9%. Whichever number is correct, both favorably compare to a national average of 3% of VC dollars going to female founders. Boston is also home to several women-founded venture capital firms like Boston Seed Capital, Victress Capital, and Glasswing Ventures.

**MEDIAN SEED ROUND**
**$1000 k**
GLOBAL AVG.
$494 k

**MEDIAN SERIES A ROUND**
**$6 m**
GLOBAL AVG.
$2.7 m

**SOFT. ENGINEER SALARY**
**$90.8 k**
GLOBAL AVG.
$42.1 k

## Sub-sector Strengths

### Life Sciences

Boston has more than 1,100 Life Sciences companies, seven teaching hospitals, and five of the top six NIH-funded independent hospitals in the U.S. MLSC runs a $1 billion Life Sciences Initiative, which provides research grants, accelerator loans, tax incentives, etc. Boston Biotech companies pulled in a little over $616 million in total in March 2021. Notable successes include cancer early detection startup Mercy BioAnalytics's $27.3 million raise in January 2021, and machine learning based pharma company Reverie Labs's $25 million Series A round in February 2021.

### Advanced Manufacturing & Robotics

Boston has access to world-class talent from institutions like MIT and Harvard. Robotics companies employ more than 4,700 people. The city is also bringing more access to technology in classrooms through makerspaces and 3D printing facilities. The sub-sector had a strong start to the year, with Locus Robotics now a unicorn after its $150 million Series E raised in February, followed by another $50 million Series A round in September.

# Reasons to move your startup to Boston

## Tech Talent

The Boston region is home to around 60 colleges and universities, including world-leading institutions such as Harvard and MIT. 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 annual "Scoring Tech Talent" report. The particular focus on engineering at many of these universities produces a steady flow of highly qualified engineers for area startups.

## Access to Venture Capital

Boston, just behind Silicon Valley, consistently ranks towards the top of lists of most venture capital invested per capita in the U.S. The city is also home to many angel and super angel groups, creating a broad range of seed stage funding options for founders.

## Funding Research and 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.

# Startup Community

STARTUP GENOME PARTNERS

**4GenNow / Cambridge Innovation Center / Capital network / Mass Challenge / Pitchfull**

Canada

# Calgary

**MEMBERS:**
Platform Calgary / Calgary Economic Development

> As someone who has been on the leadership team of three Calgary tech unicorns while also bringing up my young family, I can vouch for this city as a great place to start and grow your business!

**Kelly Schmitt**
CEO of Benevity




## Highlights

Calgary, Canada's capital of energy and entrepreneurship, is rapidly transforming into a global tech hub. In 2020, Alberta tech startups attracted a record $455M in venture capital -- a 100 per cent increase from the previous year. Of that total, Calgary companies captured $353M over 33 venture deals. Calgary's business community is also actively investing in the city's digital transformation. Between 2021 to 2024, local companies are forecasted to spend $7.5 billion on innovation infrastructure. Much of this explains why the CBRE Scoring Tech Talent report recently ranked Calgary as one of the fastest growing tech talent pools in North America. Our startup support ecosystem collaborates extensively, rallying around a collective goal to triple the size of the tech sector to create 30,000 new jobs by 2031. The innovation ecosystem is further strengthened by the clear support of all orders of government through investments in the acceleration of the ecosystem, the creation of collaborative programming, and the development of a provincial innovation strategy. Ongoing partnerships between government, industry, and non-profits continue to make Calgary a business-friendly city that welcomes the world. Anchored by the new Platform Innovation Centre in the city's core, Calgary's innovation district is now the home of the city's startup community and the catalyst ensuring Calgary's innovation future.

**TOTAL EARLY STAGE FUNDING**
**$172 m**
GLOBAL AVG.
$431 m

**ECOSYSTEM VALUE**
**$1.5 bn**
GLOBAL AVG.
$10.5 bn

**MEDIAN SEED ROUND**
**$762 k**

GLOBAL AVG.
$494 k

**MEDIAN SERIES A ROUND**
**$2.4 m**

GLOBAL AVG.
$2.7 m

**SOFT. ENGINEER SALARY**
**$73 k**

GLOBAL AVG.
$42.1 k

## Sub-sector Strengths

### Cleantech

Home to Canada's energy sector, Calgary is a premier North American green energy hub and one of the top 15 cleantech markets globally. It also houses over 70% of Alberta's cleantech firms which are backed by progressive government policy and grants to build innovations that reduce the environmental footprint of various industries. Summit Nanotech recently closed a US$10 million Series A financing, while geothermal startup Eavor raised $40 million in March, with investments from BP and Chevron.

### Fintech

Calgary is a fast-growing fintech hub, developing solutions in debt management, insurtech, and paytech that attract capital and world-class talent. Building on the momentum of the $1B acquisition of Solium Capital by Morgan Stanley Shareworks, recent narwhal Symend and challenger bank Neo Financial have raised over $145M combined, breaking Series A and B funding records and cementing Calgary's opportunity to grow and scale fintech startups.

# Reasons to move your startup to Calgary

## Low cost of doing business

Calgary is a transportation hub with connections to global markets and offers cost advantages like the lowest corporate tax rate in Canada, no payroll tax, health care premiums or provincial sales tax. Energy and real estate cost far less than in other large Canadian cities. The City also waived or froze business and development permit fees until 2023, as part of the Council's plan to provide CAD 30 million in relief for businesses.

## Welcoming global talent

Calgary, the 3rd most multicultural city in Canada, attracts and retains top minds. Federal programs including the Global Talent Stream designed to expedite visas, and the Startup Visa program, combined with livability, helped Calgary welcome newcomers from 150 countries in the last decade and enabled growth-stage startups to move to Calgary and scale globally.

# Startup Community

STARTUP GENOME MEMBERS

MEMBER

### Platform Calgary

We're building shared prosperity by working to engage, activate and globalize Calgary's innovation ecosystem - building upon our city's potential to become a global hub for startups and innovation.

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.

STARTUP GENOME PARTNERS

**A100 / Alberta Enterprise Corporation / Alberta Innovation Corridor / Bow Valley College / Calgary Innovation Coalition / Creative Destruction Lab - Rockies / Innovate Calgary / Mount Royal University, Institute for Innovation and Entrepreneurship / National Angel Capital Organization / Rainforest Alberta / Southern Alberta Institute of Technology (SAIT) / Startup Calgary / University of Calgary, Hunter Hub for Entrepreneurial Thinking / Venture Capital Association of Alberta**

United States

# Chicago #15

> In bringing entrepreneurs from around the world to Chicago, we have found that this city has one of the most collaborative and diverse entrepreneurial communities in the world.

**Peggy Parfenoff**
President of WorldChicago

## Highlights

With 35 of the Fortune 500 headquartered in the city and a host of satellite offices for many of the world's biggest tech companies, Chicago has the bones of a thriving business hub. An infusion of VC cash, government initiatives, and a community of veteran entrepreneurs are building on this foundation to create a thriving startup ecosystem. The Chicago Technology Plan outlines 28 linked initiatives, including digitizing government services, broadband infrastructure, and innovation-friendly regulations, all designed to revitalize the city and transform it into a leading innovation hot spot. Venture Capitalists are investing in Chicago as well. Inflows of VC funds into Illinois grew 90 percent between 2016 and 2020, among the highest rates in the nation. The number of Chicago-based investors has also shot up in recent years. Lightbank, Chicago Ventures, Hyde Park Angels, and 1871, which offers Black entrepreneurs funding and support as they build their businesses, are all based in the city. The success of locally grown startups, including Braintree's acquisition by PayPal, IBM's purchase of Cleversafe and Merge Healthcare, and Groupon's IPO and subsequent strength, have also created a pool of experienced entrepreneurs willing to give back to the ecosystem and help nurture up-and-coming entrepreneurial talent. Chicago hosts a variety of tech industry events, including TECHSPO and ThinkChicago, which connects talent from Chicago's many universities to opportunities in the tech ecosystem. Chicago Venture Summit brings together investors around the country to explore opportunities in Chicago and the MidWest.

**TOTAL EARLY STAGE FUNDING**
**$1.3 bn**
GLOBAL AVG.
$431 m

**ECOSYSTEM VALUE**
**$28.6 bn**
GLOBAL AVG.
$10.5 bn

**MEDIAN SEED ROUND**
**$550 k**
GLOBAL AVG.
$494 k

**MEDIAN SERIES A ROUND**
**$3.1 m**
GLOBAL AVG.
$2.7 m

**SOFT. ENGINEER SALARY**
**$83.9 k**
GLOBAL AVG.
$42.1 k

## Sub-sector Strengths

### 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 from across the university to drive AI-powered innovation in sectors from finance to healthcare. Data analytics solutions company Ocient closed a $40 million Series B round in January 2021, bringing total invested capital to $65 million. Tempus Labs, which applies AI to healthcare, raised $450 million in December 2020, putting its valuation at $7.9 billion.

### Fintech

Chicago is the second-largest central business district in the United States and home to the Chicago Stock Exchange and eight Fortune 1000 financial services companies. The City's ChicagoNEXT program includes initiatives like the Blackstone Inclusive Entrepreneurship Challenge, ThinkChicago, and a new Fintech Committee. Success stories include Avant, an online lending platform which is valued close to $2 billion. In 2019, Snapsheet raised $29 million from Tola Capital in Series E round.

# Reasons to move your startup to Chicago

## World-class Universities

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.

# Startup Community

STARTUP GENOME PARTNERS

**1871 / Catapult Chicago / Matter Chicago / The Shift Chicago / University of Chicago / WorldChicago / mHUB**

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




## Highlights

With its educated population, high quality of life, and low cost of living, Edmonton is a magnet both to young tech talent and startups eager to hire them. The local innovation ecosystem is anchored by the University of Alberta, which is well known globally for its particular excellence in the field of AI and machine learning, as well as more than 20 startup support organizations and incubators. Innovate Edmonton acts as a community hub, connecting innovators with the skills, space, and advice they need to start and grow their businesses. Part of a global network of cities under the Techstars umbrella, Edmonton Startup Week brings together the city's entrepreneurs and business leaders for a 5-day celebration of big dreams and fresh ideas. ATB Entrepreneur Center offers entrepreneurs advice and banking solutions, as well as connecting them with necessary expertise.Local accelerators and incubators include the ATB X Accelerator, NAIT, Northern Alberta Business Incubator, and Innovate Edmonton, which offers support and programs to help entrepreneurs navigate the innovation system. In 2021, Innovate Edmonton also launched a new $5M fund for high-value accelerators with an Edmonton footprint. The Alberta LeanStack Accelerator Program is a 4-month program created by Alberta Innovates in partnership with LeanStack founder Ash Maurya. Recent ecosystem success stories include Jobber, a provider of home service management software, which announced a USD $60 million round in January 2021.

**TOTAL EARLY STAGE FUNDING**
**$89 m**
GLOBAL AVG.
$548 m

**ECOSYSTEM VALUE**
**$435 m**
GLOBAL AVG.
$13.68 bn

**MEDIAN SEED ROUND**
**$400 k**

GLOBAL AVG.
$480 k

**MEDIAN SERIES A ROUND**
**$4.2 m**

GLOBAL AVG.
$3 m

**SOFT. ENGINEER SALARY**
**$53.7 k**

GLOBAL AVG.
$44 k

## Sub-sector Strengths

### AI, Big Data & Analytics

The Alberta Machine Intelligence Institute is #3 in the world in the field of core AI and machine learning. The Alberta Data Institute helps innovators prepare and secure their data as they develop new technologies. A partnership between AltaML, supply chain startup Attabotics, and Alberta Machine Intelligence received a CA$3.25 million grant from the Opportunity Calgary Investment Fund to develop new AI/ML capabilities. AI and IoT company Nanoprecise Sci Corp raised a $4 million Series A in April 2021. Social Asset Management (SAM) raised $2.7 million in May 2020.

### Life Sciences

Alberta Innovates' Accelerating Innovations into Care (AICE) helps companies commercialize new Health tech. In June 2021 Alberta Enterprise invested $5 million in Amplitude Venture Capital's precision medicine venture fund to support the growth of Life Sciences companies in Alberta. Pharmaceutical knowledge database DrugBank is one of Edmonton's fastest-growing startups, currently serving customers in 24 countries. University of Alberta spinout and Merck Invention Accelerator participant Pacylex Pharmaceuticals is planning phase 1 trials of its new cancer-fighting drug.

# Reasons to move your startup to Edmonton

## Low Taxes

Edmonton has some of the lowest taxes in Canada, with no provincial sales tax, no payroll tax, no health care premiums, and some of the lowest personal and corporate income taxes in the country.

## Access to Affordable Tech Talent

Edmonton boasts one of Canada's youngest populations, including over 125,000 students. The city's universities produce more than 550 tech-sector graduates each year. The University of Alberta is consistently ranked in the global top 3 for AI and Machine Learning. Meanwhile, GDP per capita in Edmonton is $67,302 and the average cost of living is 37% cheaper than London, allowing startups in the city to access highly educated talent at reasonable cost.

# Startup Community

STARTUP GENOME MEMBERS

MEMBER

### Innovate Edmonton

The Innovate Edmonton division contributes to Edmonton's economic growth and diversification through the creation of new tech-enabled businesses, by helping high potential businesses scale up, and by inspiring action to fuel growth in our city's innovation and technology business community.

STARTUP GENOME PARTNERS

**Edmonton Research Park** / **TEC Edmonton** / **Startup Edmonton** / **University of Alberta Health Accelerator** / **Startup TNT** / **Valhalla Private Capital** / **Advanced Technology Centre**

United States

# Los Angeles #6

> We built a rock hard community, and seeing LA 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




## Highlights

Long known more for movie magic than technology and overshadowed as a startup hub by Silicon Valley to the north, Los Angeles has shifted in recent years to become not just one of America's top startup ecosystems, but a global hotspot as well. That shift has been partially driven by changes in taxation policy. Los Angeles has delivered more than $90 million in tax relief to local businesses since 2013, which has assisted with the growth in startups of all kinds. More than 212,000 new businesses have been licenced in the city over the last 5 years. Despite a tumultuous year Los Angeles companies managed to land $9 billion in VC funding in 2020. What sets the growing startup ecosystem in Los Angeles apart from many established tech hubs is its inclusivity. PledgeLA, an organization that includes more than 80 venture capitalists, entrepreneurs, mayor Eric Garcetti and the non-profit Annenberg Foundation, aims to increase diversity in the city's tech scene. For instance, recognizing that a "friends and family round," where wealthy personal contacts fund an entrepreneur's earliest efforts, is often an impossibility for minority founders, PledgeLA set up a South LA Fund to distribute $25,000 each to 20 companies led by Black or LatinX founders. Los Angeles is also amongst the top 20 cities with the highest number of female-owned businesses, which average a gross annual revenue of between $1 billion to $5 billion.

**TOTAL EARLY STAGE FUNDING**
**$5 bn**
GLOBAL AVG.
$431 m

**ECOSYSTEM VALUE**
**$119 bn**
GLOBAL AVG.
$10.5 bn

**MEDIAN SEED ROUND**
**$627 k**
GLOBAL AVG.
$494 k

**MEDIAN SERIES A ROUND**
**$5.2 m**
GLOBAL AVG.
$2.7 m

**SOFT. ENGINEER SALARY**
**$96 k**
GLOBAL AVG.
$42.1 k

## Sub-sector Strengths

### Life Sciences

L.A. County receives more than $1.15 billion in NIH funding, more than any other county in California. Appia Bio, Inc., an early-stage biotechnology company developing engineered allogeneic cell therapies for cancer patients, emerged from stealth made in May 2021 backed by $52 million in Series A funding.

### Gaming

Los Angeles based mobile gaming unicorn Scopely raised $340 million in Series E funding in October 2020 at a $3.3 billion valuation, nearly double the company's $1.7 billion valuation from March. Meanwhile, game studio Theorycraft Games raised a $37.5 million Series A round in March 2021, while fractional sports card trading startup Dibbs raised a $2.8 million seed round in October 2020.

### Adtech

The pandemic made 2020 a rough year for advertising and Adtech everywhere, but with the end in sight, the sub-sector is now rebounding with 51% of digital advertisers planning to increase their ad budgets in 2021. Popcorn, an L.A.-based platform that connects brands and podcasters, was acquired for $14.6 million by Entercom Communications in March.

# Reasons to move your startup to Los Angeles

## Startup Ecosystem

Los Angeles boasts a vibrant network of local incubators and accelerators, including Bixel Exchange's Startup Launch program for emerging startups and the Tech Talent Pipeline Program for underprivileged students. SAP Next-Gen supports startups aligned with the UN Sustainable Development Goals. Make in LA (MiLA) targets hardware startups and is housed at Toolbox LA, which boasts both maker spaces and a biotech lab. MuckerLab runs a mentor network and accelerator programme. Starburst is an aerospace accelerator with a branch in L.A.

# Startup Community

STARTUP GENOME PARTNERS

**Bixel / Bixel Exchange / Cross Campus / Mucker Capital / WeWork**

United States

# Miami

**MEMBERS:**
Knight Foundation

> There has never been a better time to be an entrepreneur than right now, or a better city to do it from than Miami.

**Marcelo Claure**
Chief Executive Officer of SoftBank Group International and Chief Operating Officer of SoftBank Group Corp

| Global Emerging Ecosystem Funding | Global Emerging Ecosystem Performance | Regional Ecosystem Talent & Experience |
|---|---|---|
| Top 10 | Top 10 | Top 20 |

## Highlights

Miami was already a vibrant international business hub before the pandemic struck. Thanks to a business-friendly climate, a coronavirus-related influx of talent, and the vision of local leaders, its startup scene is now on a rapid ascent. The 2017 federal tax policy changes made Florida, with its favorable tax structure — including one of the lowest corporate tax rates in the US (5.5%) and low sales and property taxes — an appealing alternative to high-tax states like California and New York. Covid exacerbated many coastal hubs' challenges, and in turn accelerated interest in Miami. In January 2021, SoftBank announced plans to invest $100 million in Miami-based startups, with its $5 billion Latin America Fund and $100 million Opportunity Fund already headquartered in Miami. Since then, renowned VC firms Founders Fund, Atomic, and General Catalyst have also decided to open offices here. In February 2021, the Knight Foundation announced $14.3 million in funding to expand computer and data science programs at Florida International University and the University of Miami to supply the ecosystem's growing tech talent demand. Many local organizations are creating spaces that are of, by, and for tech builders and connecting new arrivals with Miami's existing stakeholders. The Local Leaders Collective creates communities of founders helping each other through the entrepreneurial journey, and groups like Out in Tech and Haitians in Tech are creating on-ramps for more Miamians to participate in the city's startup community. Several hundred VCs and tech leaders from both in and out-of-state joined an impromptu inaugural Miami Tech Week in 2021, already slated to return in 2022.

**TOTAL EARLY STAGE FUNDING**
**$650 m**
GLOBAL AVG.
$431 m

**ECOSYSTEM VALUE**
**$17 bn**
GLOBAL AVG.
$10.5 bn

**MEDIAN SEED ROUND**
**$675 k**
GLOBAL AVG.
$494 k

**MEDIAN SERIES A ROUND**
**$2.3 m**
GLOBAL AVG.
$2.7 m

**SOFT. ENGINEER SALARY**
**$78 k**
GLOBAL AVG.
$42.1 k

## Sub-sector Strengths

### Life Sciences

Rapha Capital Management announced its $100 million Rapha Capital BioVentures (RCBV) focused on Investment in early-stage biotech startups in April 2021. Heru, a medtech spin out from the University of Miami's Bascom Palmer Eye Institute building an AI-powered platform to diagnose and correct vision problems, announced it had a $30 million Series A round in May 2021. Neocis, a maker of advanced robotics for dental surgery, raised a $72 million Series D round in October 2020.

### Blockchain

Blockchain.com, one of the most widely-used consumer crypto products, moved its U.S. headquarters to Miami in June 2021 and plans to hire aggressively in the city. The company also struck a deal with Israeli crypto trading platform eToro to bring 50 jobs to the area. In June, Borderless Capital announced it would move its headquarters to Miami and launch a $25 million fund focused on local cryptocurrency startups. Blockchain company QuickNode raised $5 million in seed funding in May 2021.

# Reasons to move your startup to Miami

## The Economic Landscape

Miami may be most famous for its sun and beaches, but the city boasts equally impressive economic infrastructure. A strategic gateway to the Americas and a privileged route for trade with Europe, Asia, and Africa, Miami offers Florida's number one deep-water container port, doing business with 250 ports in 100 countries. Miami International Airport is the top U.S. airport for international freight and second for international passengers. Miami-Dade County is home to more than 70 foreign consulates and trade offices, as well as more than 1,100 multinational corporations.

## Startup Community

STARTUP GENOME MEMBERS

MEMBER

### Knight Foundation

Knight Foundation is a national foundation with strong local roots. We invest in journalism, in the arts, and in the success of cities where brothers John S. and James L. Knight once published newspapers. Our goal is to foster informed and engaged communities, which we believe are essential for a healthy democracy.

STARTUP GENOME PARTNERS

**500 Startups** / **Miami Angels** / **Endeavor Miami** / **eMerge Americas** / **Venture Cafe Miami** / **Refresh Miami** / **Venture for America** / **Florida International University** / **University of Miami** / **LAB Miami** / **Babson WIN** / **Idea Center at Miami Dade College** / **CIC Miami** / **Code Fever** / **The Venture City** / **WeWork** / **WhereBy.Us**

United States

# Mississippi

**MEMBERS:**
Mississippi Development Authority

> Mississippi is well-known for our work with companies in the advanced manufacturing, agriculture and automotive sectors, but we have so much more to offer, especially in emerging technologies. Some of the areas we are focusing on include marine technology, renewable energy, information operations and biotechnology. These types of companies are especially important to Mississippi and would benefit greatly from locating here.

**Laura Hipp**
Interim Executive Director at Mississippi Development Authority

Startup Genome
Global Ecosystem Startup Experience
Top 20

TOTAL EARLY STAGE FUNDING
**$11.4 m**
GLOBAL AVG.
$431 m

ECOSYSTEM VALUE
**$50 m**
GLOBAL AVG.
$10.5 bn

## Highlights

Unlike other areas with over-crowded markets, the state of Mississippi offers businesses the freedom to build something new andi has an abundance of resources for businesses to start and scale. With eight public universities and 15 community colleges bridging the gap with the local business community, Mississippi businesses have fresh access to innovative talent and opportunities to commercialize cutting-edge research and development. A dynamic startup ecosystem is beginning to take root in Mississippi, thanks to the state's world-class universities, diverse talent, low cost of living and the energies of a handful of boosters. The recently launched Gulf Blue initiative brings together research scientists, federal agencies, industry partners and entrepreneurs to establish Mississippi as a global leader in blue technology, with an accelerator and 24-hour connected space to help new startups and innovators. Another forward-thinking initiative is that of startup veteran and Jackson native Dr. Nashlie Sephus, who is transforming 12 abandoned acres in her hometown into a new $25 million tech hub. These projects join a growing number of startup support programs that are changing the face of innovation and entrepreneurism in Mississippi. Mississippi's four renowned research universities, University of Mississippi, Mississippi State University, University of Southern Mississippi and Jackson State University partner with MDA developing a targeted innovation-driven economic development strategy that further leverages Mississippi's research expertise in sub-sectors including, Advanced Materials, Autonomy, Agriculture, Data Science, Sensors, Diagnostics, and Biomedical/healthcare while perfecting emerging technologies and preparing the next generation of talented workers to take on the jobs of the future. The diversity of the partnerships and programs centered around startups and innovation in Mississippi are bringing great change to the world - one brilliant idea at a time.

MEDIAN SEED ROUND
**$350 k**
GLOBAL AVG.
$494 k

MEDIAN SERIES A ROUND
**$2 m**
GLOBAL AVG.
$2.7 m

SOFT. ENGINEER SALARY
**$78.5 k**
GLOBAL AVG.
$42.1 k

## Sub-sector Strengths

### Life Sciences

The Mississippi Healthcare Innovation Conference is a collection of renowned innovators, educators and investors leading the future of healthcare in the U.S. Mississippi also is home to EnRICH, a "pre-accelerator" program for healthcare innovators at the state's Historically Black Colleges and Universities. The Healthcare Industry Zone Act provides tax exemptions to eligible healthcare companies that locate in Mississippi Healthcare Zones. Currently, three Industry-leading, Fortune 100 healthcare companies and numerous Fortune 500 healthcare companies have operations in the state.

### Advanced Manufacturing & Robotics

Mississippi's four research universities offer undergraduate degrees in 16 different engineering fields. The University of Mississippi's Center for Manufacturing Excellence partners with industry to produce skilled workers, like electronics engineering technician roles. The state's pro-business environment includes tax credits for eligible manufacturers, energy costs below the national average, low cost of doing business and sales tax exemptions on energy used in manufacturing. Local and Industry-leading shipbuilder Huntington Ingalls produces 70 percent of the U.S. Navy's fleet of warships.

# Reasons to move your startup to Mississippi

## Highly Trained Workforce

In 2016, the Mississippi Works Training Fund allocated $50 million over 10 years to enhance training opportunities at the state's 15 community colleges, which customize training programs to meet companies' needs. The state's four major public research universities offer world-class programs in biotech, aerospace, polymer science, and advanced manufacturing, and have a strong reputation for partnering with industry. The University of Mississippi Medical Center and School of Pharmacy also located in the state. Companies eligible for the state's Jobs Tax Credit may opt to monetize it to use for job training. Mississippi puts significant emphasis on digital education through MS Coding Academies.

## Startup Community

STARTUP GENOME MEMBERS

MEMBER

### Mississippi Development Authority

Mississippi Development Authority is Mississippi's premier economic and community development agency. Companies of every size – from homegrown Mississippi start-ups 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.

Canada

# Montréal

**MEMBERS:**
Bonjour Startup Montréal / Real Ventures / Centech / Ville de Montréal / Montréal International

> Montréal has become one of the most-watched ecosystems of North America over the last years. We welcome all entrepreneurs who want to create maximum social and economic impact for the city and its citizens.

**Liette Lamonde**
CEO, Bonjour Startup Montréal




## Highlights

The COVID-19 pandemic did not limit the ambitions of Montréal's startup ecosystem. In 2020, more than $1.2 billion was invested in startups through venture capital, thanks to megadeals such as AppDirect ($185M) and Sonder ($170M). The first two quarters of 2021 are continuing to be record-breaking for the metropolis with a 37% increase from last year's numbers, supported by funding rounds by Hopper ($170M) and AlayaCare (CAD 225M). This growth in venture capital is proof that the city's startups have international intentions. As stated by Chris Arsenault, partner at Inovia Capital: "What were early-stage tech companies 10 years ago, have grown into growth-stage companies." Montréal also saw two impressive exits, with Telehealth startup Dialogue going public at a valuation of $779M and Fintech company Nuvei going public at a valuation of $3.4B, raising $700M in the biggest initial public offering of a technology company in the history of the TSX. Montréal is also attractive to international investment and talent. In the first semester of 2021, foreign direct investment accounted for $1.86 billion and fDi Magazine (Financial Times) placed the city at first place in the FDI strategy category of the Tier 2 Cities of the Future 2020/2021 global ranking, and second, after San Francisco, in the Economic Potential category. Talent and affordability have a lot to play in these rankings as it is a pole of attraction for Quebec and foreign students with its four major universities and its deep research capacities. With all this in mind, Montréal is truly a top-tier ecosystem that plays among the best.

**TOTAL EARLY STAGE FUNDING**
**$706 m**
GLOBAL AVG.
$548 m

**ECOSYSTEM VALUE**
**$10.2 bn**
GLOBAL AVG.
$13.68 bn

**MEDIAN SEED ROUND**
**$700 k**
GLOBAL AVG.
$480 k

**MEDIAN SERIES A ROUND**
**$5 m**
GLOBAL AVG.
$3 m

**SOFT. ENGINEER SALARY**
**$64 k**
GLOBAL AVG.
$44 k

## Sub-sector Strengths

### Life Sciences

Greater Montreal has 620 organizations, 150+ research centers, 11 post-secondary institutions, and 80 multinational subsidiaries, many of which collaborate via open Innovation programs and AI-driven public-private partnerships. Innovators benefit from the lowest cost of clinical trials and R&D centers in North America, 29% tax credit for scientific research and experimental development, and newly added support organizations including Montreal General Hospital's Healthtech incubator and District3's BioHub accelerator. Local biotech Ventus Therapeutics raised a $100 million Series B round in April 2021.

### AI, Big Data & Analytics

Greater Montreal has seven AI accelerators, nine research centers, 17 corporate labs, AI-powered supply chain hub SCALE AI, the world's largest academic research center in deep learning MILA, and the Institute for Data Valorization IVADO. AI contributes to the strength of Montreal's Advanced Manufacturing & Robotics, Medtech, and Mobility sectors . Notable successes this year include Dialogue's IPO raising US$80 million in March, AlayaCare's US$185 million Series D in June, and HeyDay's US$48 million acquisition by Hootsuite after only three years post-launch.

# Reasons to move your startup to Montréal

## A Place to Be

Montréal is affordable, friendly and has a buzzing social scene. It ranks ninth best student city in the world, and best-ranked in North America. Praised for its laid back yet lively lifestyle, it has one of the most affordable markets in North America for tech talent and office space. For working, studying or starting your business, Montréal is the place to be.

## Export and Innovation Hub

Canada gives investors market access agreements through 15 trade agreements to 49 countries making Montreal an export hub supported by its port and airport, both close to the downtown area. 38% of local startups export internationally.

## Funding Support

Montreal is the investment capital in Canada with six of the 10 most active VCs in Canada in 2020 based in the city. There are also seven investment funds ($876M total) and access to $33M from PME MTL, Montréal's entrepreneurial support network.

# Startup Community

STARTUP GENOME MEMBERS

MEMBER

### Bonjour Startup Montréal

Bonjour Startup Montréal is a non-profit organization whose mission is to facilitate the creation, growth and influence of Montréal startups and position Montréal among the world's most dynamic ecosystems.

MEMBER

### Real Ventures

Real is a leading source of capital for game-changing entrepreneurs and a driving force behind emerging tech ecosystems.

MEMBER

### Centech

Centech is dedicated to accelerate the creation and growth of deep-tech companies that market globally.

MEMBER

### Ville de Montréal

MEMBER

### Montréal International

For more than 20 years, Montréal International (MI) has contributed to building Greater Montréal's international reputation and prosperity by acting as a driving force for economic development.

STARTUP GENOME PARTNERS

**FounderFuel / Techstars AI / Tandemlaunch / Montréal Inc. / MT Lab / BCF Ventures / Founder Institute / Ministère de l'économie et de l'innovation du Québec / Numana / Ivado / District 3 / La Base Entrepreneuriale / MTL Newtech / Notman House / PME MTL / Quartier de l'innovation / Réseau Capital / Startupfest / Cycle Momentum / Montreal InVivo**

United States

# New York City #2

**MEMBERS:**
New York City Economic Development Corporation / Tech:NYC

> The resiliency of the NYC tech ecosystem throughout the pandemic — seen through blockbuster IPOs, record fundraising rounds, and hiring commitments — proves we can stand toe-to-toe with any tech hub in the world. This report is reason to be optimistic that the entrepreneurial culture New York City is known for is stronger than ever.

**Julie Samuels**
Founder and Executive Director, Tech:NYC




## Highlights

New York trails only Silicon Valley in the number of venture deals completed in 2020 with the city raking in a total of between $12 and $20 billion. Combine the huge range of companies closing impressive deals with the city's traditional position as a hub for finance, fashion, media, and the arts, and it's clear New York City is one of the world's premier startup ecosystems. Key to New York's success is ensuring investment is shared beyond what is seen as traditional venture opportunities. Women.nyc offers a comprehensive set of business services to women entrepreneurs from underserved communities. This year, New York City also became the largest US city to recognize LGBTQ-owned companies as minority-owned businesses, making them eligible for billions in city contracts and business support services. Additional programs to support entrepreneurs include the Entrepreneurs Roundtable Accelerator which offers seed capital, mentoring, and co-working space, and Techstars NYC which connects founders with world-class resources to help them grow and scale. NY-based companies have investor support from Primary Venture Partners, a venture capital firm focused on transformative startups that has raised $404 million across six funds to date to invest in early- and late-stage NY-based startups, and Starta, which funds early-stage tech talent. New York City Economic Development Corporation's $1 billion LifeSci NYC program builds on the city's strong foundation across life sciences and aims to solidify New York as the public health capital of the world. New Energy Nexus New York is a not-for-profit accelerator focused specifically on clean energy companies looking to scale in New York.

**TOTAL EARLY STAGE FUNDING**
**$10.2 bn**
GLOBAL AVG.
$431 m

**ECOSYSTEM VALUE**
**$189 bn**
GLOBAL AVG.
$10.5 bn

**MEDIAN SEED ROUND**
**$810 k**
GLOBAL AVG.
$494 k

**MEDIAN SERIES A ROUND**
**$6 m**
GLOBAL AVG.
$2.7 m

**SOFT. ENGINEER SALARY**
**$106 k**
GLOBAL AVG.
$42.1 k

## Sub-sector Strengths

### AI, Big Data & Analytics

New York is home to the AI Summit, which brings together representatives from the world's leading organizations to discuss an AI-powered future. Real-time information discovery platform Dataminr closed a $475 million financing round in March 2021. AI startup Verbit raised $157 million in June 2021. AI and machine learning platform Dataiku raised a $400 million Series E in August 2021.

### Cybersecurity

New York City Economic Development Corporation's (NYCEDC) $100 million Cyber NYC initiative aims to transform New York into a global hub of cybersecurity innovation. As part of the initiative, NYCEDC partnered with Israeli VC firm Jerusalem Venture Partners (JVP) to launch the JVP accelerator program with the goal of connecting entrepreneurs to investors and other major cybersecurity players. Industrial cybersecurity company Claroty raised a $140 million Series D round in June 2021.

### Life Sciences

New York's LifeSci NYC program will spend $1 billion over the next five years to support Life Sciences, initiating a Request for Proposals (RFP) that invites nonprofit organizations or joint ventures led by nonprofit organizations to submit proposals for new or expanded facilities. BioLabs New York is partnering with NYU Langone Health to build biotech co-working, acceleration, and R&D facilities, to attract promising early-stage life sciences companies. Aetion, a real-world evidence (RWE) and outcomes-based analytics company, raised a $110 Series C round in May 2021.

# Reasons to move your startup to New York City

## Ease of Doing Business

NYC Business Quick Start, a new $11 million initiative from the Mayor's Office and the NYC Department of Small Business Services (SBS), is focused on cutting red tape to make New York City the easiest place in the United States to start a small business.

## World-class Talent

Approximately 3.2 million New Yorkers hold a bachelor's degree or higher, more than Los Angeles, San Francisco, Philadelphia, Washington DC, and Boston combined. New York is home to more than 1 million college students and some of the leading law, business, medical, engineering, maritime, design and fashion, and film schools in the country. In addition, 3.2 million immigrants from over 150 countries call New York home, broadening the skills and perspectives available to employers.

# Startup Community

STARTUP GENOME MEMBERS

MEMBER

### New York City Economic Development Corporation

NYCEDC is the City's primary vehicle for promoting economic growth across all its neighborhoods. NYCEDC's mission is to stimulate growth through expansion and redevelopment programs that encourage investment, generate prosperity, and strengthen the City's competitive position. NYCEDC serves as an advocate to the business community by building relationships with companies that allow them to take advantage of New York City's many opportunities.

MEMBER

### Tech:NYC

Tech:NYC is an engaged network of tech leaders working to foster a dynamic, diverse, and creative New York. It brings together principled 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.

STARTUP GENOME PARTNERS

**Starta Venture Accelerator / Blue Ridge Labs / Brooklyn Chamber of Commerce / Bunker Labs / Cela / Civic Hall / Coindesk/Consensus / Company (previously Grand Central Tech) / Entrepreneurs Roundtable Accelerator / Flatiron Partnership / Gary's Guide / Innovative Collective / Mayor's Office of International Affairs - NYC / MeetUp / New Lab / New York Angels / NY Fashion Tech Lab / NY Tech Alliance / NYC Blend / SAP / TechStars / Urban-X / VentureOut**

United States

# Philadelphia

**MEMBERS:**
Ben Franklin Technology Partners of Southeastern Pennsylvania / University City Science Center / Drexel University

> “ Taking advantage of the power of diverse talent, being creative and being inclusive, is going to attract people and make people want to come here.

**Jeff Marrazzo**
co-founder and CEO, Spark Therapeutics




## Highlights

With its underdog energy and vibrant population, Philadelphia is built on the foundation of innovation, from American democracy to cures for cancer. Millennials are relocating to Philadelphia at growth of 1.5 times the rest of the country. Alumni from Philadelphia’s universities launched more than 600 VC-backed companies in the past 10 years, raising an average of $6 million in their first round. Led by corporations like Comcast Corporation and established startup ecosystem partners like the Philly Startup Leaders‘ accelerator and the Science Center’s Launch Lane Accelerator, a vibrant network of startup support organizations and events support MVP-stage and early-stage tech-startups. Philly Tech Week is an annual week-long celebration showcasing local innovation. The 3rd most diverse US city for STEM, Philly’s startup scene is also inclusive. In November 2020 the city announced its Most Diverse Tech Hub initiative, investing $500,000 to retain Black and brown students and expose them to careers and entrepreneurship. In June 2020 Philly Startup Leaders committed $550,000 to underrepresented founders, with contributions from delivery company GoPuff and civic partners including Ben Franklin Technology Partners. In February 2021, Drexel University and the Science Center announced the $500,000 Raynier Institute & Foundation Seed Fund, supporting local underrepresented founders. VCs have noticed this energy. $1.8 billion was invested across 221 deals in Philadelphia in 2020 with an average disclosed round value of $8.1 million. Deals continue in 2021 with GoPuff, founded by two Drexel University alumni, announcing another $1.15 billion raise with an $8.9 billion valuation.

**TOTAL EARLY STAGE FUNDING**
**$994 m**
GLOBAL AVG.
$431 m

**ECOSYSTEM VALUE**
**$18.8 bn**
GLOBAL AVG.
$10.5 bn

**MEDIAN SEED ROUND**
**$550 k**
GLOBAL AVG.
$494 k

**MEDIAN SERIES A ROUND**
**$3.3 m**
GLOBAL AVG.
$2.7 m

**SOFT. ENGINEER SALARY**
**$81 k**
GLOBAL AVG.
$42.1 k

## Sub-sector Strengths

### AI, Big Data & Analytics

In 2021, Philadelphia was ranked 26th among North American cities for tech talent by CBRE. The city also ranked 10th for tech degree completion in North America. In June 2020 The Wharton School announced the establishment of Wharton AI for Business to support cutting-edge research in AI and help business leaders develop innovative applications for the technology. Fishtown Analytics, now rebranded to dbt Labs, announced a $150 million Series C round in June 2021.

### Life Sciences

CBRE ranked Philadelphia as the 7th top Life Sciences cluster in the USA, based on its jobs, lab space, and VC funding. Pennsylvania’s Keystone Innovation Zone (KIZ) tax credit program offers upto $15 million in tax credits annually. Philadelphia-based gene therapy pioneer Spark Therapeutics was purchased by Roche in 2019 for $4.3 billion. Biopharmaceutical company Carisma Therapeutics announced a $59 million Series B in March 2021, and data management platform HealthVerity raised $100 million in June 2021.

# Reasons to move your startup to Philadelphia

## Tech Talent

According to CBRE, Philadelphia ranks 13th in the number of tech-related workers nationally, with tech-related jobs making up 3.9% of Philadelphia's workforce. Its many academic institutions turned out more than 25,000 tech graduates between 2015 and 2019, and continues to attract a young talent pool with millennials comprising almost 28% of Philadelphia's population.

## Low Cost of Living

Compared to other nearby east coast tech hubs, Philadelphia offers a substantially lower cost of living, including affordable rents and home prices. The median home cost is $680,500 in New York and $714,400 in Washington, but only $153.400 in Philadelphia, for instance.

# Startup Community

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.

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 organization advances healthcare innovation from idea to the marketplace through startup support services, allocating capital, gathering the innovation community, and building inclusive STEM career pathways for Philadelphia youth and adults.

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 US research institutions with the highest level of research activity. In 2021, the Princeton Review ranked Drexel's Close School of Entrepreneurship #12 in the US for undergraduate entrepreneurship programs.

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 & Co-Founder at Duolingo




## Highlights

Pittsburgh is leveraging its technical strength in AI and autonomous systems to build a dynamic and diverse startup ecosystem. The birthplace of AI, Carnegie Mellon University, and regional partners are driving the future of AI across all innovation sectors. The city's many notable companies include Aurora Innovation — the $10B autonomous vehicle startup that acquired Uber ATG — as well as home-grown startup Argo AI, Motional, Waymo, and a dozen other mobility companies who have put down roots to solidify Pittsburgh as a global hub for self-driving technology. It's also home to AI XPrize finalist Marinus Analytics, a women-founded startup that uses facial recognition to disrupt human trafficking and cyber fraud. Pittsburgh is growing its startup ecosystem with a focus on inclusion, widening the tech talent pipeline to ensure more women and people of color can access careers in tech. Black Tech Nation (BTN) also offers education and funding for Black technologists to create a more welcoming, inclusive community. VCs are doing their part, too. Innovation Works, Magarac Venture Partners, and BTN Ventures are all prioritizing investment in diverse founders. Entrepreneurs are inspired in an ecosystem alongside Duolingo — a language learning app that IPO'd in August 2021 at $6.5B — as well as R&D offices for tech giants that choose Pittsburgh for their most challenging projects: Facebook Reality Labs, Amazon Alexa, and Google Cloud. Pittsburgh's startup ecosystem makes you part of a community of purpose-driven builders, makers, and innovators who work local but have global impact.

**TOTAL EARLY STAGE FUNDING**
**$180 m**
GLOBAL AVG.
$431 m

**ECOSYSTEM VALUE**
**$5.2 bn**
GLOBAL AVG.
$10.5 bn

**MEDIAN SEED ROUND**
**$75 k**
GLOBAL AVG.
$494 k

**MEDIAN SERIES A ROUND**
**$3.4 m**
GLOBAL AVG.
$2.7 m

**SOFT. ENGINEER SALARY**
**$81 k**
GLOBAL AVG.
$42.1 k

## Sub-sector Strengths

### Advanced Manufacturing & Robotics

Corporate innovation and academic R&D collide in Pittsburgh's 20+ robotics research centers to commercialize advanced technologies. Robotics leads the local investment scene, accounting for over half of all investments in 2020. Success stories include RE2 Robotics, a maker of robotic tech that improves workers' safety and efficiency; and Gecko Robotics, which raised a $40 million Series B round to develop robots for inspecting utilities. The Pittsburgh Robotics Network includes over 100 regional robotics companies.

### Life Sciences

Home to over 150 life sciences companies, multiple accelerators, and two major healthcare systems driving commercialization, Pittsburgh provides startups with access to world-class research through the University of Pittsburgh and Carnegie Mellon University. Gene therapy company Krystal Biotech raised $125.12 million in its second public offering in May 2020; immunotherapy startup BlueSphere Bio raised $105 million in a tranched Series B investment after spinning out of UPMC Enterprises.

### Cleantech

Pittsburgh is home to a UN Center of Excellence on High Performance Buildings and was the second city globally to commit to the UN Sustainable Development Goals. A founding member of the 2030 District Network to reduce energy use and carbon emissions, Pittsburgh has 73 cleantech companies, 35,000 employed in the region's energy industry, and over $103 million invested by the Department of Energy in university-based R&D in the last 5 years.

# Reasons to move your startup to Pittsburgh

## High-quality tech talent

Pittsburgh startups have access to a robust talent pool of 142,000 working in tech, advanced manufacturing, and life sciences companies. A pipeline of nearly 21,000 graduates with degrees in those fields stems from the 96 colleges, universities, and post-secondary institutions in the greater region, including three R-1 research universities.

## The Pittsburgh Innovation District

Defined in part by the overlapping campuses and historic collaboration of four research anchors — Carnegie Mellon, the University of Pittsburgh, Carlow University, and UPMC — the Innovation District is among the top 10 concentrations of R&D spending in the US and a premier source of talent, investment, research, and startup assets.

## COVID-19 Policy

In 2020, Governor Wolf allocated $225 million in CARES Act funding for small businesses in Pennsylvania through Community Development Financial Institutions (CDFIs) in addition to available federal resources. With the passage of the American Rescue Plan, there will be another $7.25 billion available in the U.S. through the Paycheck Protection Program and $15 billion in Targeted Economic Injury Disaster Loan Payments.

# Startup Community

STARTUP GENOME MEMBERS

MEMBER

### 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 southwestern Pennsylvania region and supports the growth of existing regional businesses.

MEMBER

### Innovation Works

Innovation Works (IW) is one of the top US investors in early-stage technology startups and supports the startup & entrepreneurial ecosystem within Southwestern Pennsylvania. IW provides the investment, programing – including software, hardware, and life science accelerators – and critical resources startups need to reach the next stage of growth in Pittsburgh.

Canada

# Québec City

**MEMBERS:**
Québec International

> The arrival of new international entrepreneurs and startups has promoted dynamism and innovation in Québec City's economy. The Groupe des incubateurs-accélérateurs de Québec, created in 2019, is helping to maximize the strengths of all stakeholders in order to accelerate the growth of local businesses.

**ALAIN CHANDONNET**
PH.D., President and CEO, INO

## Highlights

Québec City might not be the biggest city in Canada, but when it comes to tech innovation the city punches above its weight. Already home to more than 500 high-tech companies generating almost $2 billion in sales annually, the city's ecosystem is continuing to grow thanks to funding and support initiatives from both the public and private sector. The City of Québec, Secrétariat à la Capitale-Nationale, and Québec International have together laid out their vision to make Québec City the entrepreneurial capital of the country within 5 years. More than $75.8 million has been committed to this Entrepreneurial Vision – Québec 2023 project, which includes various forms of funding and support for startups. Efforts to make this growth inclusive are underway. In August 2020 the Canadian government announced $4.2 million in funding to support Indigenous businesses, including 18 Québec-based projects. Femmessor, which supports women-owned businesses, received $23.4 million investment in 2021. The private sector is doing its part too. In June Montréal-based AQC Capital announced the creation of a new $64 million fund to back tech startups in Québec and help support their international ambitions. To get a fuller picture of existing players in the ecosystem, incubator-accelerator Le Camp undertook a project of mapping the Québec City ecosystem. The initiative showcased the region's vibrant companies and pinpointed clusters of strength, including Life Science, AI, and Innovative Manufacturing.

**TOTAL EARLY STAGE FUNDING**
**<$50 m**
GLOBAL AVG.
$431 m

**ECOSYSTEM VALUE**
**$541 m**
GLOBAL AVG.
$10.5 bn

**MEDIAN SEED ROUND**
**$636 k**
GLOBAL AVG.
$494 k

**MEDIAN SERIES A ROUND**
**$3.5 m**
GLOBAL AVG.
$2.7 m

**SOFT. ENGINEER SALARY**
**$63.5 k**
GLOBAL AVG.
$42.1 k

## Sub-sector Strengths

### AI, Big Data & Analytics

Québec City is already home to more than 80 companies that produce or use AI solutions, but efforts to further bolster the sub-sector continue. The Université Laval and Québec's Ministère de l'Économie et de l'Innovation are together creating the Institute Intelligence and Data (IID) to accelerate innovation in AI. The Government of Québec is providing $2.9 million in funding to the Consortium for Research and Innovation in Aerospace in Quebec (CRIAQ) to support adoption of AI in the aerospace sector. SCALE.AI facilitates cross-sector collaboration and provides funding to help Canadian companies stay ahead of the AI curve. Rendez-vous IA Québec provides a forum to discuss breakthroughs in AI.

### Life Sciences

Québec VITAE is a cluster dedicated to developing the Life Sciences sub-sector in the Québec City region. Incubator-accelerator Le Camp supports local startups, including Life Sciences companies such as diagnostic solutions maker BioMark Diagnostics. In October 2020 vaccine company Medicago received a grant worth $129.1 million from the Government of Canada to support the country's Covid-19 response. "Des succès inspirants!" conferences offer networking opportunities to those working in the sub-sector.

# Reasons to move your startup to Québec City

## Educated Workforce

Quebec City is home to 5 universities, including Université Laval, the oldest French-language university in North America, as well as 22 vocational schools and specialized institutes. Together these institutions graduate 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 that carries out R&D in Québec can benefit from these tax credits.

## Cost of Living

Compared to similar cities in North America, Québec City offers a reasonable cost of living. For example, the median selling price for a home in Quebec City is $196,957, compared to $258,388 in Montreal, $515,550 in Toronto, and $990,581 in Vancouver. Average rental costs are also lower than in Calgary, Edmonton and Ottawa.

# Startup Community

STARTUP GENOME MEMBERS

MEMBER

### 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.

STARTUP GENOME PARTNERS

**BDC / PwC Québec / ROBIC / Ville de Québec / Quebec City Group if incubators / Quantino / Entrepreneuriat Laval**

United States

# Seattle #10

> Founders appreciate the dynamic world-class tech ecosystem Seattle offers. We're generous leaders in AI, Cloud, IoT, Robotics, Big Data, Fintech, Biotech, VR/XR, and more for you to connect with.

**Brett Greene**
CEO and Founder of New Tech Northwest




## Highlights

The home town of Amazon and Microsoft was well situated to weather the coronavirus crisis with one of the highest proportions of tech workers in the U.S. No wonder investors have been pouring money into Seattle's vibrant startup ecosystem. Over the last two years the area's venture capital firms have raised more than $1 billion for their next round of early stage funds including Madrona VII ($300 million), West River Group ($150 million), Maveron VII ($180 million), Frazier Healthcare IX ($419 million), Voyager V ($100M), and Founders' Co-op IV ($25M). Those new funds add to existing funds, including Ignition VI ($200 million), Tola Capital II ($300 million), Arch Venture Partners ($400 million). Seattle startups brought in $3.2 billion in venture capital through the first three quarters of 2020, according to Pitchbook, putting the city on track to easily break its previous high of $3.6 billion in 2019. "Mega-deals" of over $100 million are also on pace to set a record this year, with 167 deals already completed in Q1. Angel and seed deals hit a Q1 record for deal count. Seattle is also home to highly successful accelerators, including Amazon's Alexa Accelerator, a program that connects entrepreneurs building voice-first products to the resources of Amazon's Alexa team. The local Techstars accelerator is also the most successful city in the program's history in terms of dollars raised by graduates, which include three unicorns: Zipline ($1.2 billion), Outreach ($1.1 billion), and Remitly ($1 billion).

**TOTAL EARLY STAGE FUNDING**
**$3 bn**
GLOBAL AVG.
$431 m

**ECOSYSTEM VALUE**
**$49 bn**
GLOBAL AVG.
$10.5 bn

**MEDIAN SEED ROUND**
**$1200 k**
GLOBAL AVG.
$494 k

**MEDIAN SERIES A ROUND**
**$4.5 m**
GLOBAL AVG.
$2.7 m

**SOFT. ENGINEER SALARY**
**$105 k**
GLOBAL AVG.
$42.1 k

## Sub-sector Strengths

### AI, Big Data & Analytics

The University of Washington, a national leader in the field of machine learning and Big Data, has helped nurture these subsectors in the Seattle area with creative programs including its Washington Fund, an early-stage venture fund that aims to invest in promising startups spinning out of local research institutions, and New Embark facility. Several startups have spun out of the university's Computer Science department. Local machine learning startup OctoML raised a $28 million Series B in March of this year.

### Life Sciences

Success in a particular sector tends to breed further success in the sector, with Seattle's life sciences companies being a prime example of this virtuous cycle. After Juno Therapeutics, a developer of novel immunotherapies, was sold to Calgene for $9 billion just five years after it spun out of the Seattle-based Fred Hutchinson Cancer Research Center, it's co-founders reinvested some of that payday in engineered cell startup Sana Biotechnology, which recently raised over $700 million.

# Reasons to move your startup to Seattle

## Talent

More than 130 research centers are now located in Seattle, and more than 50 percent of all new leases in the city last year were for technology companies. At the time of this writing there were more than 19,000 engineering job openings on LinkedIn within the broader area. The tech talent pool in the ecosystem is clearly broad, deep, and growing.

## University talent

The University of Washington is one of the nation's premier research universities and home to 286 specialized research centers. The school receives more than $1 billion in total research grants and contracts each year, which means that more than 2 percent of all federal research funding currently goes to UW. In addition, the school has also benefited from private funding, including a gift of $40 million to the university's distinguished School of Computer Science and Engineering by late Microsoft co-founder Pail Allen.

## Accelerators, incubators

There are 25 startup accelerators, incubators and other programs supporting the next wave of founders in the Seattle area. These include traditional accelerator programs like Techstars, but also newer studio models, like PSL and Madrona Venture Labs, which recruit talent from big tech companies to join growing startups.

# Startup Community

STARTUP GENOME PARTNERS

**ARI / Alliance of Angels / Angel Resource Institute / Fledge / Lighter Capital / MS Accelerator / Microsoft Ventures / Microsoft for Startups / New Tech Northwest / SURF Incubator / Seattle Angel Conference / Seven Peaks Ventures / Startup Grind / Startup Seattle / Techstars**

United States

# Silicon Valley - Bay Area #1

> Despite rising real estate prices and increased scrutiny, Silicon Valley remains a vibrant place for startups. In fact, the external forces acting on Silicon Valley are changing how companies develop products and manage teams.

**Robert Siegel**
Partner at XSeed Capital and Lecturer in Management, Stanford Graduate School of Business




## Highlights

Despite an outflux of some talent thanks to the cluster's sky-high costs and pandemic-related remote work, Silicon Valley is still home to an estimated 40,000 startups and 1,000 VC firms, as well as many iconic tech companies. A third of total venture funding in the U.S. — more than $25 billion — flowed into the Valley in the first quarter of 2021. It is indisputably the world's top startup ecosystem. Stanford University is the seed that spawned the Valley and it continues to play a major role in the ecosystem. Stanford alumni generate nearly $3 trillion in economic impact each year, which amounts to approximately 4% of the world's total GDP. Other local universities like University of California at Berkeley, San Jose State, and several community colleges contribute to the ecosystem's dominance and staff its startups. Silicon Valley offers some of the world's best networking. It's successful startups, when they grow up to become corporate giants, often continue to be based in the area. This attracts not only plentiful talent but other entities as well, from corporations like Walmart to the incubators of foreign governments. This concentration of people and ideas results in an incredibly vibrant ecosystem. The area's energy is reflected in its many startup focused events, such as TECHSPO Silicon Valley, Palo Alto meetup 106 Miles, and Startup Grind, which describes itself as a "global community for entrepreneurs" and organizes monthly events for ecosystem players.

**TOTAL EARLY STAGE FUNDING**
**$22 bn**
GLOBAL AVG.
$431 m

**ECOSYSTEM VALUE**
**$1029 bn**
GLOBAL AVG.
$10.5 bn

**MEDIAN SEED ROUND**
**$1000 k**
GLOBAL AVG.
$494 k

**MEDIAN SERIES A ROUND**
**$8.8 m**
GLOBAL AVG.
$2.7 m

**SOFT. ENGINEER SALARY**
**$119 k**
GLOBAL AVG.
$42.1 k

## Sub-sector Strengths

### AI, Big Data & Analytics

VCs continue to pour money into Silicon Valley AI companies. SambaNova Systems, a maker of software and hardware to run AI applications, raised a $676 million Series D round led by SoftBank Vision Fund 2 in April. The company is now worth more than $5 billion. Threat detection and response company Vectra AI recently raised a $130 million round, while Placer.ai raised a $50 million Series B, also in April.

### Fintech

Both Silicon Valley behemoths and upstarts are innovating in the subsector. Google, for instance, has partnered with more than a half a dozen banks for its Cache project and is set to launch checking accounts for consumers next year. Tribal Credit, which handles payments for SMBs in emerging markets, closed a $34.3 million round in April, while teen banking startup Step raised a $100 million Series C also in April and boasts celebrity backers including Jared Leto and Will Smith.

### Life Sciences

Life Sciences startups continue to attract large funding rounds in Silicon Valley. Following its latest raise in July 2020, ALX Oncology has raised a total of $166 million over 4 rounds. Drug discovery and development company Eikon Therapeutics closed a $148 million Series A in May, and Biomea Fusion, which develops precision drugs to treat cancer, closed a $56 million Series A round in January before raising $153 million with its Apri IPO.

# Reasons to move your startup to Silicon Valley - Bay Area

## Legal Support

Silicon Valley has efficient laws, policies, and regulations to safeguard business interests, trade secrets, and ownership of ideas. 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. U.S. VC funds invested $69 billion in startups in the first quarter of 2021. Fully a third of that went to companies based in Silicon Valley or nearby San Francisco. 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.

## Startup Community

STARTUP GENOME PARTNERS

**Engine / GSV / Manos Accelerator / Parisoma / Rocketspace**

Canada

# Toronto-Waterloo #14

**MEMBERS:**
MaRS Discovery District / Communitech Corporation

> The Toronto-Waterloo corridor is Tulip's home and it's been essential to our growth. The access to talent, capital, and customers is world-class — and it's a wonderful place to live.

**Ali Asaria**
CEO, Tulip Retail




## Highlights

The Toronto-Waterloo corridor is one of the fastest-growing and densest innovation clusters in the world. Between 2013 and 2018, the region created more tech-sector jobs than New York, Seattle and Boston combined. It is home to 20 percent of Canada's university students, many of them attending the University of Toronto and the University of Waterloo. This ecosystem is also rich with some of North America's leading innovation hubs, including MaRS and Communitech In the face of many pandemic-related challenges, the Toronto-Waterloo corridor nevertheless excelled, attracting record investment, while also boosting the economy, relieving front-line workers and creating jobs. In 2020, the region pulled in $4.4 billion in V.C. funding and fostered several new unicorns, such as Clearco and PointClickCare Hundreds of the region's companies also pivoted their everyday business practices — for financial survival, but also to join the fight against COVID-19. And Toronto and Waterloo remain hotbeds for talent. With what's widely considered the most diverse population on the planet, the corridor represents 17 percent of Canada's GDP and roughly 275,000 tech workers. The result of this sustained progress is a still-thriving ecosystem. With unprecedented investment, strong public institutions, favourable immigration policies and one of the most-vaccinated citizenries on the globe, the Toronto-Waterloo corridor is well-positioned to advance the Canadian and global economies post-pandemic.

**TOTAL EARLY STAGE FUNDING**
**$2.3 bn**
GLOBAL AVG.
$548 m

**ECOSYSTEM VALUE**
**$20.8 bn**
GLOBAL AVG.
$13.68 bn

**MEDIAN SEED ROUND**
**$500 k**
GLOBAL AVG.
$480 k

**MEDIAN SERIES A ROUND**
**$4.4 m**
GLOBAL AVG.
$3 m

**SOFT. ENGINEER SALARY**
**$70 k**
GLOBAL AVG.
$44 k

## Sub-sector Strengths

### AI, Big Data & Analytics

Few countries command as much trust as Canada. Global concerns about how technology is developed and used have created opportunities for Corridor tech companies to lead in sectors where trust is critical: Applied AI, fintech, cybersecurity, healthcare, sustainability and smart cities, among others. Waterloo and Toronto have pushed "Tech for Good" to the top of the country's tech agenda.

### Life Sciences

The Toronto-Waterloo corridor is home to the University of Toronto (famous for the discovery of insulin and stem cells) and the University of Waterloo, soon to be equipped with a $35-million innovation health facility, offering wet labs, biosafety labs and product development space for 75 ventures. In the first nine months of 2020, the region's 600 life-sciences firms raised more than $1 billion, translating to $54 billion in annual revenue.

# Reasons to move your startup to Toronto-Waterloo

## Strong social values

Canada's quality of life and social values provide a safety net that is actually a trampoline — a jumping-off point for startups to solve big problems and capitalize on opportunities. Tobi Lütke (Shopify), Martin Basiri (ApplyBoard), Michael Katchen (Wealthsimple) and Joshua Liu (SeamlessMD) are among many who typify this ethos.

## Rich and diverse talent pools

Companies located in Toronto-Waterloo benefit from open and welcoming communities, as well as a highly diverse and talented workforce. The Universities of Toronto and Waterloo bookend the corridor, and produce some of the world's best graduates for growth companies in AI, cybersecurity, health and medical technologies, and fintech.

## Data privacy and sovereignty

Canada possesses robust and evolving data privacy and sovereignty laws making it an ideal place to build a company and store data for advanced applications. Data privacy equivalency status with key economic zones and countries continues to make Canada a compelling geographic zone for customers and businesses alike.

# Startup Community

STARTUP GENOME MEMBERS

MEMBER

### MaRS Discovery District

MaRS brings together the innovation community to grow the economy and make an impact. From advisory services to connections to talent, capital, customers and more, MaRS offers a range of high-value services that help high-growth companies succeed. We also provide access to the MaRS ecosystem, a curated community of entrepreneurs, investors, corporates, academics and government partners.

MEMBER

### Communitech Corporation

Communitech was founded in 1997 by a group of entrepreneurs who came together to help one another build successful companies to help ensure the future prosperity of Canada. They created an organization to support the entire "Community of Tech" and gave us a mission to help companies start, grow and succeed.

STARTUP GENOME PARTNERS

**Brookfield Institute / Centre for Social Innovation / City of Toronto / Creative Destruction Lab / DMZ / Haltech / Innovation Factory / Invest Toronto / Next 36 / OneEleven / RIC Centre / The Founder City Project / Venture Lab / World Canada**

United States

# Washington, D.C. #11

> Startups in Washington, D.C., have a refreshing focus on taking on significant global challenges and bringing their unique entrepreneurship lens to problems historically left to governments.

**Donna Harris**
Cofounder, 1776 General Partner, 1776 Ventures

## Highlights

Washington, D.C. may be more well known for politics than entrepreneurship, but the numbers suggest the U.S. capital is actually an undersung startup hub. The area is home to more than 1,000 tech startups, and it ranks first in the nation for growth in entrepreneurship, according to the Kauffman Foundation. Various rankings have named Washington, D.C. the third most future-ready economy among American cities, third best tech city in the nation, and the country's top city for social entrepreneurs working to solve social challenges. Washington, D.C. was ranked number 2 in North American on the 2020 Scoring Tech Talent by CBR. Local government initiative #innoMAYtion hopes to build on this momentum by encouraging local entrepreneurs to help solve the city's challenges and create opportunities for its residents. 1776's Challenge Cup, a worldwide competition organized by local startup incubator 1776, spotlights the globe's most promising startups. Finally, DC Startup Week attracts over 10,000 entrepreneurs for 5 days of connection, collaboration, and celebration. Success stories to emerge from the ecosystem include risk management firm Interos, which has raised a total of $128.4 million over 3 rounds, and international student loan company MPOWER Financing, which has raised $375 million over 13 rounds.

**TOTAL EARLY STAGE FUNDING**
**$2.1 bn**
GLOBAL AVG.
$431 m

**ECOSYSTEM VALUE**
**$28.9 bn**
GLOBAL AVG.
$10.5 bn

**MEDIAN SEED ROUND**
**$625 k**
GLOBAL AVG.
$494 k

**MEDIAN SERIES A ROUND**
**$5 m**
GLOBAL AVG.
$2.7 m

**SOFT. ENGINEER SALARY**
**$96 k**
GLOBAL AVG.
$42.1 k

## Sub-sector Strengths

### Cybersecurity

Companies headquartered in Washington, D.C. won more than 22% of the $656 billion the federal government awarded in prime contracts in 2020. Threat intelligence platform ThreatQuotient has raised a total of $87.6 million in funding over 9 rounds. Cybersecurity solutions provider Two Six Technologies, which resulted from the merger of Two Six Labs and IST Research, raised $18.9 million in February 2021. The company counts the Department of Defense and intelligence community among its clients.

### Edtech

Education is one of the most important sub-sectors in the Washington, D.C. region, accounting for $3.9 billion of GDP and 44,000 jobs. Post-secondary education alone accounts for 27,000 jobs. Student lifecycle and retention management company Full Measure Education raised a $10 million Series A in June 2021. Edtech company EVERFI raised a total of $251 million before selling its higher education business to Florida's Vector Solutions for $100 million.

# Reasons to move your startup to Washington, D.C.

## Skilled Workforce

Washington, D.C. is the most educated city in the U.S. according to the Census Bureau and ranks #1 in the country for high-tech employment concentration. Neighboring states Maryland and Virginia lead the nation in concentration of bachelor's degrees in STEM disciplines. The area is home to more than 10 colleges and universities, and 50% of residents have a college degree compared to 33% nationally.

## Startup Community

STARTUP GENOME PARTNERS

**1863 Ventures / Acceleprise / Beacon DC / Conservation X Labs / DC Fashion Foundation / Halcyon Incubator / PeaceTech Accelerator / Village Capital / Women's Business Center (DCWBC)**

Startup Genome

GEN GLOBAL ENTREPRENEURSHIP NETWORK

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Global Startup Ecosystem Report 2021

# Tech Entrepreneurship On The Rise In Oceania

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



**LEIGH JASPER**

*Leigh Jasper is currently the CEO of Saniel Ventures, and a non-executive director of SEEK Ltd, Salta Properties, Buildxact and the Burnet Institute. He was the co-founder and CEO of Aconex between May 2000 and August 2019, where he led global growth for Aconex, expanding the business into Asia, North America, South America, the Middle East and Europe.*

Proximity to Asia, ease of doing business, talent and a global mindset imposed by a relatively small domestic market are behind an increasing prominence for startup ecosystems in Oceania. More than 1,000 companies received an aggregate $2 billion in early stage funding between 2018 and 2020.

My hometown of Melbourne in Victoria has a rapidly growing ecosystem with 2,100 startups. In three years Victoria's startup ecosystem has more than tripled in value to over US$7 billion. It employs roughly 40,000 people, with close to an 11% increase in jobs year-over-year between 2018 and 2020. Sydney, the capital of New South Wales, remains the largest ecosystem in Oceania, with more than 60% of Australia's tech startups and half of Oceania's early-stage funding and exit value.

Across the region, AI and Big Data are the strongest sectors, followed by Fintech and the related industry Blockchain. While comprising just 7% of startups, Fintechs are raising significant capital to support very high growth rates. Between 2019 and 2020, almost 80% of the $2 billion allocated to Australian startups was for funding rounds led by Victorian Fintech companies. However, Life Sciences remains Victoria's largest sector in terms of density, accounting for 18% of all startups.

Fintech also dominates the region's unicorns. They include Airwallex, a platform facilitating cross-border payments whose valuation has tripled in two years; and Judo Bank, a digital challenger bank that joined the billion-dollar-club in 2020. However our unicorns focus on a range of sectors, for example graphic design platform Canva, whose user base ballooned during the pandemic, and has just achieved a phenomenal valuation of $55 billion.

Between 2018 and 2020 Oceania saw more than 350 exits totalling roughly $8.7 billion. This year the market heated up. Jack Dorsey's U.S. based Square announced in August that it was buying digital payments business

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Afterpay for $29 billion. Two months earlier A Cloud Guru, an online training startup founded by two brothers in Melbourne, was acquired by U.S. company Pluralsight for $2 billion, one of the largest tech deals in Australian history. In June, Sinch, based in Sweden, picked up SMS marketing startup MessageMedia for $1.3 billion.

Regional governments, meanwhile, have been investing heavily in entrepreneurship. Last November Victoria's government allocated $186.2 million to LaunchVic, the state's startup agency. The government also is investing in innovation more broadly with the $2 billion Breakthrough Victoria Fund to drive investment in translational research, innovation, and commercialisation. New South Wales recently announced the creation of a second Sydney Startup Hub. The first hub, opened in 2018, is home to around 500 startups and has attracted almost $300 million in investment. And the Australian national government is supporting startups through policies that include the R&D tax incentive.

Funding levels in Oceania have continued to increase, although there is a way to go to be on par with some of the world's leading ecosystems. Specific attention to some of the issues around funding are being systematically addressed for example, those by Victoria's government who are doing a lot of work through LaunchVic, to catalyse early-stage investment. The region is also attracting the eyes of global VC firms such as Sequoia Capital and Sapphire Ventures, which have invested in two Victorian unicorns: Airwallex and the employee-experience platform Culture Amp. In the 10 years since backing Atlassian, a Sydney-based software company, Accel Partners has invested in the HR Tech company Pyn and emarketing business Campaign Monitor, as well as in Victorian scaleup 99designs. Insight Venture Partners, Tiger Global and others have put money into SafetyCulture, the Queensland-based garage startup now worth upwards of $1.6 billion.

Venture capital is itself a growing industry in Oceania. Among the region's own heavy-hitters are Blackbird Ventures, Brandon Capital Partners and AirTree Ventures. Home-grown entrepreneurs seeking to share their success and expertise with new founders include Paul Bassat, co-founder of the job-search platform SEEK, who now drives venture capital firm Square Peg, an investor in dozens of the best Australian startups. Investments by Craig Winkler, founder of accounting software company MYOB, helped build Xero, a New Zealand player in the same industry, into the powerhouse it is today.

Meanwhile, the pandemic has raised a tailwind for companies in several sectors. Victorian scaleup Mr Yum, for example, has seen a meteoric rise with a QR code menu app for the events and hospitality industry. Online health applications including booking services like HealthEngine and HotDoc have been instrumental in Australia's vaccine rollout. And in New Zealand, PredictHQ is flourishing. That's no surprise: startups which are the embodiment of technology and entrepreneurial thinking are now at the forefront of helping businesses prepare for an uncertain future.

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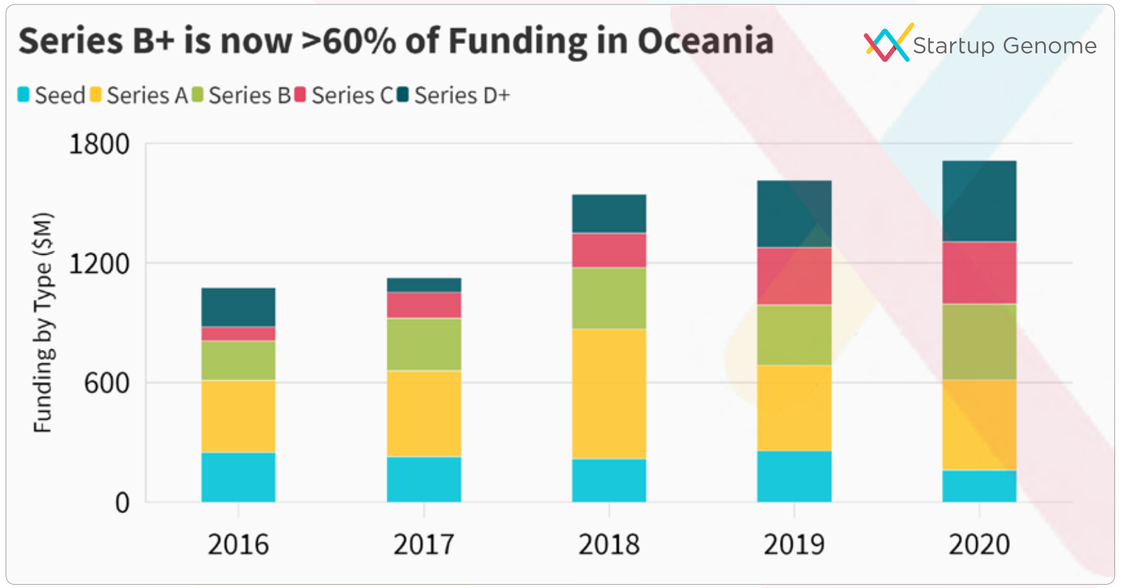
Startup Genome

Global Startup Ecosystem Report 2021

# Oceania Insights & Rankings

## Key Findings

- Early-stage funding in Oceania between 2018 and 2020 totaled over $2 billion, a 35% increase from the previous two-and-a-half-year period.
- Oceanic startup ecosystems are collectively worth over $30 billion in value, with 90% concentrated in Sydney, Melbourne, and New Zealand.
- Two Oceanic ecosystems, Sydney and Melbourne, are in the top 25 ecosystems globally for Connectedness and Talent.




## Top 5 Performers

| #1 | #2 | #3 | #4 | #5 |
|---|---|---|---|---|
| Sydney | Melbourne | New Zealand | Brisbane | Perth |

## Top Regional Challengers

| #1 | #2 |
|---|---|
| Adelaide | Canberra |

The Top Performers are identified by applying our Global Ranking methodology within a specific region, while the Regional Challengers are identified using the Emerging Ecosystems methodology.

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Australia

# Melbourne

**MEMBERS:**
LaunchVic

> The growth of our local startup sector continues to go from strength to strength. In the past year we have had some of the largest exits and acquisitions on record including Square's commitment to acquire Afterpay for a record $39 billion.

**Kate Cornick**
CEO at LaunchVic




**TOTAL EARLY STAGE FUNDING**
**$529 m**
GLOBAL AVG.
$431 m

**ECOSYSTEM VALUE**
**$7.6 bn**
GLOBAL AVG.
$10.5 bn

## Highlights

Melbourne's maturing startup scene is home to more than 2,100 startups, nearly 500 investors, and close to 50 accelerators including , and continues to grow. According to Dealroom, year-over-year startup job growth reached 10.75% between 2018 and 2020, translating to more than 5,900 jobs created. Total VC investments in Melbourne surged to a record of over US$1 billion in 2019-2020. Local leaders are committed to continue supporting the city's startup scene. The State's $2 billion Breakthrough Victoria Fund will drive investment in translational research, innovation and commercialisation outcomes to accelerate growth in key industry sectors and create jobs. Victoria's startup agency, LaunchVic, received record funding of $110.5 million in the government's 2020-2021 budget to continue its work to drive the long-term success of Victoria's startup ecosystem. Of this, $60.5 million was allocated to the Victorian Startup Capital Fund - a Fund of Funds designed to catalyse investment in early-stage startups, and $10 million was earmarked for the Women's Angel Sidecar Fund to support female founders. Private funding will provide significant supplemental support to all these programs. In addition to this the city also offers small business grants to support innovative, market-ready products. The University of Melbourne's MAP Accelerator Program and the Wade Institute's VC Catalyst program support startups making a positive impact on the world. With 60,000 people in its network, Startup Victoria based in Melbourne is the largest grassroots startup community for founders in Australia and aims to create more and better founders.

**MEDIAN SEED ROUND**
**$400 k**
GLOBAL AVG.
$494 k

**MEDIAN SERIES A ROUND**
**$3.5 m**
GLOBAL AVG.
$2.7 m

**SOFT. ENGINEER SALARY**
**$65 k**
GLOBAL AVG.
$42.1 k

## Sub-sector Strengths

### Life Sciences

Melbourne is home to four Biotech unicorns, Clinuvel Pharmaceuticals; Mesoblast; Polynovo; and Telix Pharmaceuticals and the city attracts approximately 40% of the nation's Life Sciences funding annually. With five of Australia's largest independent medical research institutes and two top-ranked universities for biomedical research, Melbourne was ranked among the top 5 Life Sciences hubs in Asia in 2021 by CBRE.

### Fintech

More than 200 Fintech startups, and, as of Q4 2020, five homegrown Fintech unicorns are headquartered in Melbourne. These include Airwallex, Afterpay, Judo Bank, MYOB and PEXA. In August, Square announced its intentions to acquire Afterpay for $39 billion which would be the largest public M&A deal in Australia's history and the largest cross-border Fintech deal globally. Groups such as Fintech Australia support startups looking to pilot digital solutions in partnership with some of Melbourne's largest financial and insurance corporations. Melbourne's annual industry conference Intersekt is the leading Fintech gathering in Australia.

# Reasons to move your startup to Melbourne

## Tax Incentives

The AusIndustry R&D Tax Incentive provides targeted R&D tax offsets designed to encourage more companies to engage in R&D. The Victorian Budget 20/21 includes $250 million for direct wage subsidies and $836 million in payroll tax relief to encourage employers to hire new workers.

## Dynamic, Educated Workforce

Melbourne is projected to become the largest Australian city as early as 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. The University of Melbourne is the highest-ranked university in Australia and the 4th highest in the Asia-Pacific region. The Financial Times ranked Melbourne Business School the highest among Australian MBA programs.

# Startup Community

STARTUP GENOME MEMBERS

MEMBER

**LaunchVic**

With the help of startup founders, entrepreneurs and investors, corporates and universities, we aim to build a startup ecosystem that can strengthen the economy, encourage more people to work with and for startups, and represent all Victorians.

STARTUP GENOME PARTNERS

**Potential(x) / ygap First Gens Accelerator Program / ASTN HeadStart / Cyrise / SBE Australia, Springboard Tech / SBE Australia, Springboard Life Sciences / SBE Australia, E3 / Runway Hq / ACMI X / BioMelbourne Network / Inspire9 / Rome2rio / Runway Geelong / Startup Bootcamp / Startup Victoria / York Butter Factory**

Australia

# Sydney #24

**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**
Chief Executive Officer, Investment NSW




## Highlights

Anchored by business software leader Atlassian, and local unicorns Canva and Zip Co, Sydney's startup ecosystem is growing fast. While entrepreneurs benefit from the city's dynamic, educated workforce, what truly sets Sydney apart is its tight-knit tech community centered around a handful of innovation centers and accelerators. The Sydney Startup Hub opened in 2017 and generated more than $280 million in investment and over 1000 jobs in its first 2 years in operation. The innovation hub functions as the nerve center of the ecosystem, so far hosting more than 1,500 events. Sydney, with its 6 local universities, is home to a cluster of quantum research groups. Since December 2020 Sydney Quantum Academy has been working to build on that strength by supporting established companies, startups like Q-CTRL, and government-backed enterprises like Silicon Quantum Computing. Significant recent activity in the ecosystem includes an announcement in July 2021 that payments company Airwallex will locate its second Australian engineering hub in Sydney. In March 2021 online HR services startup Employment Hero raised A$45 million ($35 million) in Series D funding, and in May 2020 ELMO Cloud HR & Payroll raised A$70 million /~$48.3 million. In February 2021 SIGGRAPH Asia announced that Sydney would host its 2023 conference.

**TOTAL EARLY STAGE FUNDING**
**$922 m**
GLOBAL AVG.
$431 m

**ECOSYSTEM VALUE**
**$17.4 bn**
GLOBAL AVG.
$10.5 bn

**MEDIAN SEED ROUND**
**$525 k**
GLOBAL AVG.
$494 k

**MEDIAN SERIES A ROUND**
**$4 m**
GLOBAL AVG.
$2.7 m

**SOFT. ENGINEER SALARY**
**$71 k**
GLOBAL AVG.
$42.1 k

## Sub-sector Strengths

### Fintech

Australia is ranked equal first in the world for technological readiness, and more than 60% of Australia's fintech companies are headquartered in Sydney. Success stories emerging from the ecosystem include Athena Home Loans, which raised A$90 million/~$69.3 Series D in May 2021, and buy-now-pay-later company Zip Co, which has raised more than $800 million to fund its international expansion.

### Digital & Creative Industries

Home to 39% of the nation's creative businesses, 42% of creative industry jobs, and 70% of the industry exports, New South Wales (NSW) has the largest creative sector in Australia. NSW's creative industries, including digital technologies, add significant value to other sectors, like health, tourism, retail and education. Sydney and NSW also have a strong film industry with some big movies developed in Sydney. Canva, a digital platform helping users create with custom templates and design, raised a $71 million venture round in April 2021.

# Reasons to move your startup to Sydney

## Supportive Business Environment

NSW's long-term infrastructure investment will maximise benefits for businesses looking to launch in the state, providing $48 million for startups and scaleups through the Tech Central initiative, and a $20 billion commitment to the new Western Sydney Airport and nearby Aerotropolis. NSW prides itself as a cultural hub with over 200 languages spoken, rich cultures, and education and viewpoints rarely seen in one place.

## Educated Workforce

Sydney is home to more of Australia's leading universities, research institutes, and technical colleges than any other Australian city. The city's six universities include Australia's oldest university, the University of Sydney. This means Sydney boasts a young, diverse, highly educated workforce for companies seeking talent.

# Startup Community

STARTUP GENOME MEMBERS

MEMBER

### Investment NSW

Investment NSW leads the economic, jobs and investment conversation across New South Wales (NSW). Its work includes boosting trade, investment and tourism, developing industry, supporting jobs growth, improving service delivery to the community and increasing living standards, now and into the future.

FEATURED ARTICLES FROM LOCAL AMBASSADORS

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GEN GLOBAL ENTREPRENEURSHIP NETWORK

Global Startup Ecosystem Report 2021

## Regional Insights

# Latin America

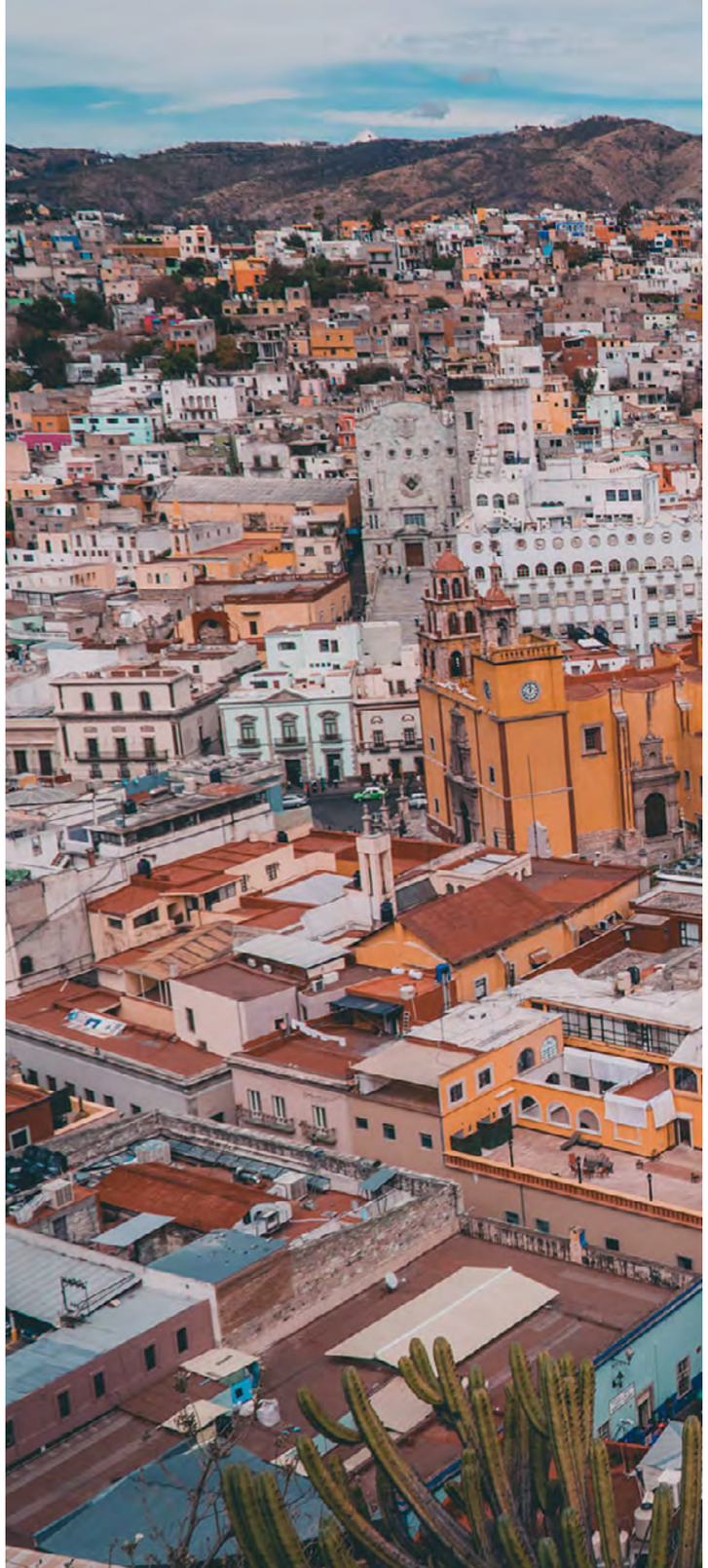

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Global Startup Ecosystem Report 2021

# It's Just The Beginning: How Latin America's Startups Are Breaking Records

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



**FLORIAN HAGENBUCH**

*Florian Hagenbuch is Founder and co-CEO of Loft, a digital real-estate platform in Latin America. In 2012 he co-founded Printi, Latin America's leading online printing marketplace, and eventually sold the business to Vistaprint. An active angel investor, Hagenbuch is passionate about entrepreneurship and advises a number of global early-stage companies.*

Latin America already is among the world's most digitally active regions, with Internet usage exceeding that in China or India. Rapid acceleration in the pace of technological advancement feeds a proliferation of startups in industries including Fintech, e-commerce, and Real Estate.

Despite such challenges as poverty and social inequality, the region represents a giant market with enormous room for growth and advancement. Capitalization of the technology market in Latin America, as a percentage of GDP, is growing at 65% per year compared to 11% in the United States and 40% in China, according to a study by Atlantico VC. Latin American, and Caribbean tech startups, considered as a single startup ecosystem, are projected to reach $2 trillion in value by 2030, reports IDB Lab, the Inter-American Development Bank's innovation arm.

Brazil is a particular hotspot with 13,000 startups: 20 times as many as a decade ago. Entrepreneurs have been taking advantage of its first-in-class ecosystem to raise $5.2 billion in the year-to-date through July 2021: surpassing all of 2020 and charting a record high for that country. São Paulo, Brazil's largest city, is home to more unicorns than Seoul, Jakarta, Amsterdam, or Hong Kong. It has almost as many as Berlin and nearly twice the number of Austin and Miami combined, according to CB Insights.

Other dynamic hubs include Mexico City, Rio de Janeiro, Bogotá, Buenos Aires, and Medellin. Santiago is known as "Chilecon Valley" for its outreach to global entrepreneurs and other startup-friendly policies. Even Uruguay, which rarely figures on the world stage given its small size, last year spawned a unicorn: the Fintech dLocal.

Fintech is the dominant sector, corresponding to—among other factors—a large population of unbanked and under-banked consumers and the strain that

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e-commerce has placed on disproportionately cash-based economies. Healthtech also is showing strength, with companies like Mexico's Sofia and Brazil's Alice raising significant rounds during the pandemic.

Many of the region's fastest-growing companies target industries with the largest and most-lasting impacts on people's lives. Real Estate, a vast industry late to the digitization game, is Latin America's second largest startup sector, according to Statista.

Loft, the São Paulo-based company I co-founded in 2018, became a unicorn within 18 months of launch, raised $525 million in its Series D earlier this year, and has become one of the world's largest platforms for buying and selling residential real estate. We did this by bringing transparency and reliability to a historically opaque and relationship-driven industry.

The opportunity is immense. Today, Latin America accounts for just 4% of global early-stage funding. But that is changing rapidly as the global investor community's enthusiasm for the ecosystem grows. The region is attracting some of the most well-respected names in early-stage funding and beyond. Companies that are doubling down on Latin America include D1 Capital Partners, DST Global, Tiger Global Management, Baillie Gifford, CPPIB, Advent International, and Silver Lake.

And the recent wave of later-stage companies such as Nubank, Brazil's digital-banking giant; and Rappi, a delivery service based in Colombia, is fueling international investors' enthusiasm. They demonstrate that Latin America has a lot to offer beyond the seed stage, where it has traditionally attracted the few foreign investors drawn to the region.

The explosive growth in foundings, fundings, and financial success stories proves that Latin American's startup ecosystems have hit an inflection point. The market is huge. The winds of digital change are blowing more strongly than ever. This is just the beginning.

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Global Startup Ecosystem Report 2021

# Scaleups Will Take Over Latam

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



**PATRICK ALEX**

*Patrick Alex leads Access to Capital for the Endeavor office in Chile. A German native, he has been on the ground in the LatAm ecosystem for the last 4 years, previously as a VC at regional fund Nazca and for the last 2 years at Endeavor. He is also the host of The Emerging Markets Enthusiast Podcast, where he interviews leading entrepreneurs and VCs on their journey building and investing in tech scale-ups in emerging markets.*

If you haven't paid attention to Latin America's startup and scaleup ecosystem then you are missing some remarkable developments. The last 5 years have been magical for the region, with dozens of new unicorns and unprecedented venture capital activity. And this is just the beginning. Startups and scaleups will take over Latin America, just as they have done in more mature markets. Their domination here may be even faster and more complete.

The United States and China have spawned tech companies that already are the most valuable in the world. As recently as 10 or 20 years ago, some of those companies did not exist. Latin America is starting to experience a similar trend, with Mercado Libre leading the way. The ecommerce giant is followed by tech companies like Magalu and Nubank, whose much-anticipated IPO might lead to a $100 billion market cap.

The same extraordinary progress is visible within individual countries. In Chile, for example, NotCo and Cornershop recently achieved unicorn status: the first two startups to do so. Both founded in 2015, they already are among the top 20 companies in Chile by market capitalization. Others--for example, Betterfly, Xepelin, and Fintual--will soon top the rankings. Brazil, Mexico, Argentina, Colombia, Uruguay, and Peru are all building strong ecosystems, with startups and scaleups reaching impressive marks. As happened elsewhere, the current generation of entrepreneurs will drive and expand these ecosystems, creating an enduring multiplier effect.

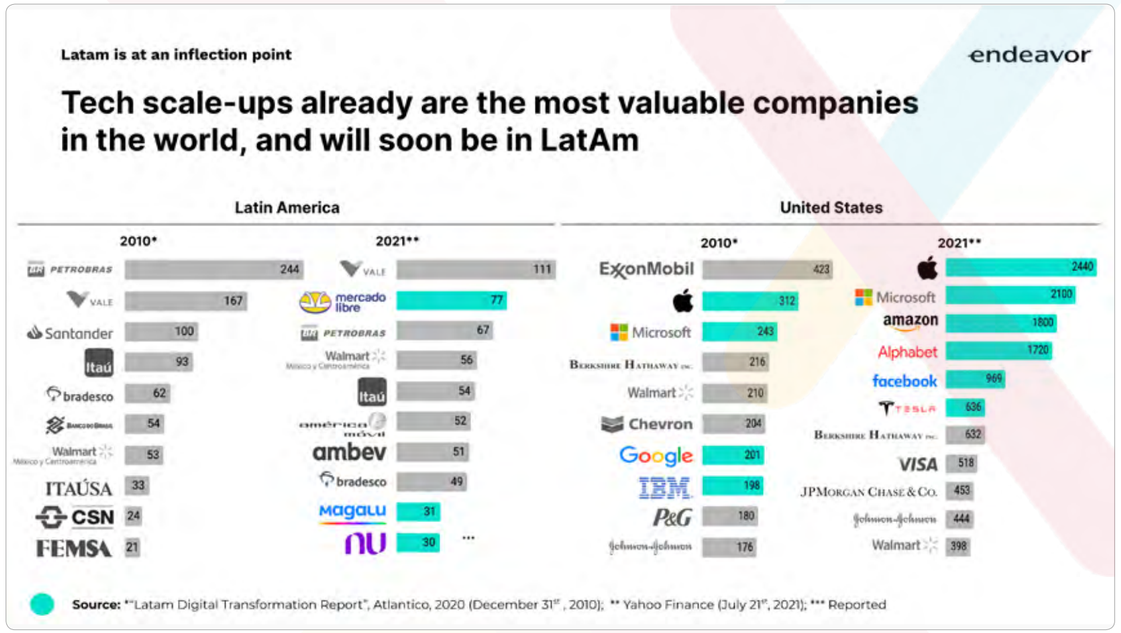
There is plenty of room for growth. Venture capital in Latam significantly lags its potential. Currently it is 14% the rate of the United States, proportional to GDP. But the market is huge (600 million people) and dominated by incumbents: great companies from the last century. Meanwhile, the rate of Internet adoption, especially among young people, is among the highest in the world. And Latin America now can claim those two words

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conservative investors look for: a track record. Four years ago there were no unicorns in Latam. Now there are more than 20, most backed by local and international investors.

We expect that in less than 5 years, at least 5 of the top 10 companies in Latin America will be tech startups, as is already true in the United States and China. The process in Latam will move even faster than in those countries. It took Apple 35 years to become the world's most valuable company, in 2011. Mercado Libre achieved that status for Latam in less than 20 years. Brazil's Nubank might surpass it in less than 10.

More than great companies, these startups and scaleups will solve tremendous problems in the region, from access to financial services to better health care and transportation. They will also create hundreds of thousands of high-paying jobs. The transformation is occurring in every sector, everywhere. Local scaleups will take over Latam, while creating a much better place for all.




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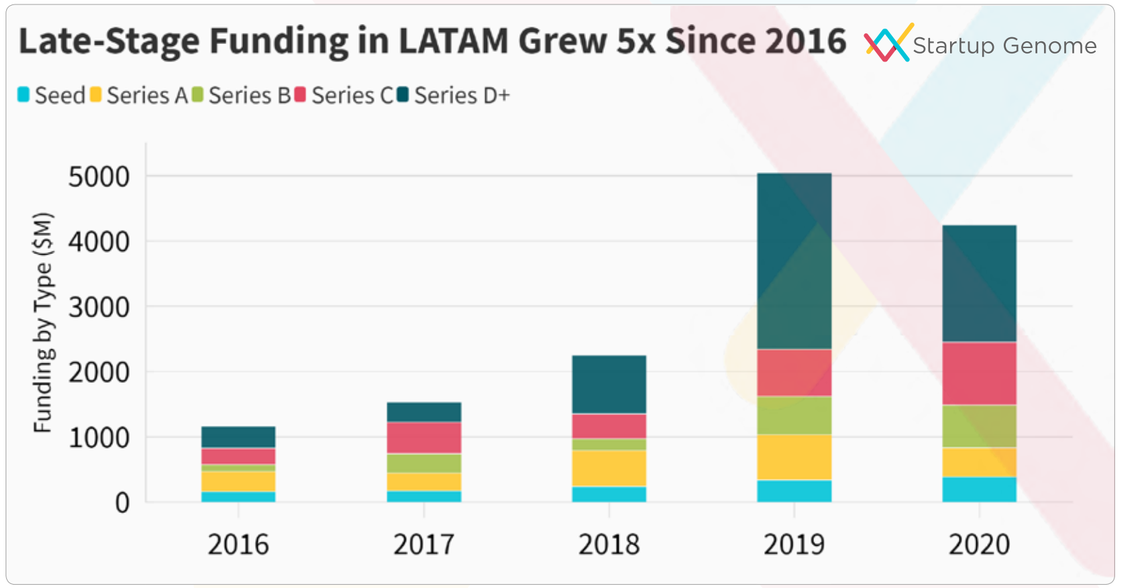
Startup Genome

Global Startup Ecosystem Report 2021

# Latin America Insights & Rankings

## Key Findings

- Late-stage funding (Series B and beyond) in Latin America has increased by 5X from 2015 to 2020.
- Early-stage funding (Seed and Series A) in the same period has more than doubled.
- The majority of early-stage funding in Latin America between January 2018 and June 2020 was in AI & Big Data, with $248.5 million invested in the Sub-Sector.




## Top 5 Performers

| #1 | #2 | #3 | #4 | #5 |
|---|---|---|---|---|
| Sao Paulo | Mexico City | Bogotá | Buenos Aires | Santiago-Valparaiso |

## Top Regional Challengers

| #1 | #2 | #3 | #4 | #5 |
|---|---|---|---|---|
| Rio de Janeiro | Montevideo | Curitiba | Belo Horizonte | Monterrey |

The Top Performers are identified by applying our Global Ranking methodology within a specific region, while the Regional Challengers are identified using the Emerging Ecosystems methodology.

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Colombia

# Bogotá

**MEMBERS:**
iNNpulsa Colombia / District Secretariat of Economic Development (DSED) / Invest in Bogota

> We can't wait for the entire ecosystem to meet Bogotá; the capital city of Colombia and one of South America's most lively and emerging cities. Full of culture, art, history, flavors, opportunities, and unique experiences, Bogotá is the ideal city to host Devcon and our entire community
>
> **Aya Miyaguchi**
> Executive Director at Ethereum Foundation




TOTAL EARLY STAGE FUNDING
**$256 m**
GLOBAL AVG.
$431 m

ECOSYSTEM VALUE
**$4.7 bn**
GLOBAL AVG.
$10.5 bn

## 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. Startups in Bogotá raised the second-highest amount of those in any city in the region between 2010 and 2019 — US$1.76 billion —according to Invest in Bogota. The Colombian capital is increasingly drawing 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. This energy and interest is in part in response to a number of moves by the government, including its January 2021 Entrepreneurship Law aimed at streamlining the process of setting up a company and supporting small and growing businesses. The government's Business Growth Management Unit (iNNpulsa Colombia) aims to accelerate high-potential ventures with financing and other initiatives, including its new CEmprende laboratory and Apps.CO, a digital entrepreneurship program created in partnership with the ICT Ministry of Colombia. Bogotá is also home to a range of other startup support organizations and events. The Founder Institute, one of the world's largest pre-seed accelerators, has programs in Bogotá. HubBOG offers co-working space, training, and mentorship. Its Angel Investors Club has graduated more than 140 startups, including Tappsi, TransmiSITP, LasPartes.com, LentesPlus, and Undertrail. Open Innovation Summit brings together startup ecosystem players in Bogotá, while Devcon gathers the community around Ethereum and blockchain technology.

MEDIAN SEED ROUND
**$300 k**

GLOBAL AVG.
$494 k

MEDIAN SERIES A ROUND
**$3.9 m**

GLOBAL AVG.
$2.7 m

SOFT. ENGINEER SALARY
**$23 k**

GLOBAL AVG.
$42.1 k

## Sub-sector Strengths

### Fintech

According to data from EY, Colombia has the highest Fintech adoption rate in Latin America, with 76% of the population using Fintech services and the subsector growing at about 120% a year. Colombia is also home to the first regulatory "sandbox" in Latin America. 64% of Colombian Fintech companies are in Bogotá. Between 2016 and 2021 they raised around US$250 million. Notable examples include OmniLatam, Zinobe, Treinta, Simetrik, Valiu, Tpaga, and Minka. Buy now pay later company ADDI raised US$65 million in May 2021.

### E-commerce

According to the Colombian Chamber of E-Commerce (CCCE), the number of people who purchased items online increased 259% between 2012 to 2018. Colombia is the 32nd largest market for E-commerce globally with total revenue of US$6 billion. The CCCE also organizes The E-Commerce Day Bogotá, a sub-sector-specific training and networking event. On-demand delivery startup Rappi raised US$500 million at a US$5.25 billion valuation in July 2021. Laika, an E-commerce platform for pets, closed a US$12 million Series A in June 2021.

### Proptech

Between 2016 and 2021, Bogotá's Proptech startups raised approximately USD$200 million, according to Invest in Bogotá. Colombia Proptech promotes technological development in the real estate sector in the country. According to its count, there are more than 60 Proptech startups in the country with the most important clustering in Bogotá. On average these companies have grown 170% in 2021. Colombian real estate startup Habi raised a USD$100 million Series B round in July 2021.

# Reasons to move your startup to Bogotá

## Government Reforms

Colombia's new Orange Law aims to promote the construction of cultural and creative infrastructure. The Youth Entrepreneurship Law grants benefits like exemption from the commercial registration fee and first year renewal, to companies with major founders or investors aged between 18 and 35 years old. The Entrepreneurship Law will provide a modern regulatory framework to facilitate creation and growth of startups and new jobs.

## Tax Incentives

Colombia offers a 100% income tax exemption for seven years for eligible startups in the "Orange Sector" that generate intellectual property. There is a 100% income tax exemption for companies that invest at least USD$283,000 in the agricultural industry. Companies in Free Trade Zones enjoy benefits like 20% income tax rate and no customs duties (VAT or tariff) on goods introduced to the Free Trade Zone.

## Young, Talented Workforce

The Bogotá region has one of the largest workforces in Latin America, with 6.3 million economically active workers and 2.5 million people between the ages of 15 and 28. In 2019, more than 190,000 students graduated from higher education in the region.

# Startup Community

STARTUP GENOME MEMBERS

MEMBER

### iNNpulsa Colombia

iNNpulsa 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.

Argentina

# Buenos Aires

Regional Ecosystem Performance — Top 5

Regional Ecosystem Funding — Top 5

Regional Ecosystem Talent & Experience — Top 5

## Highlights

With its top rated universities and cosmopolitan spirit, Buenos Aires is fast becoming a top South American startup hub. And while Argentina has faced financial instability in the past, today's entrepreneurs are responding to that history with ingenuity and innovation. Their efforts are supported by a suite of startup-friendly laws and initiatives. The Entrepreneur's Law, passed in 2017, laid the foundation for growth. The law provided tax incentives and interest-free loans to entrepreneurs, funded startup support organizations, and created the Fiduciary Fund for the Development of Venture Capital (FONDCE) to finance funds investing in promising startups. Forming a company in Buenos Aires can now generally be done in just a day. The Law of Promotion of Software created tax cuts to spur the tech industry. As a result, the number of IT companies based in Argentina more than doubled between 2003 and 2013. Reforms passed in 2019 cut the tax rate to 15% for 10 years for the "knowledge-based economy," including engineering and R&D. It's not just the government supporting the ecosystem. Organizations such as Startup Buenos Aires help local entrepreneurs connect, learn, and grow their businesses. Academia Buenos Aires offers a 2-month training course that teaches lean startup methodology, design thinking, and other essential startup skills. IncuBAte offers equity-free funding, mentorship, and coworking space to up to 100 startups per round. Combine these initiatives with the city's strategic location and the entrepreneurial spirit, and it's no surprise that Buenos Aires' profile as a startup hub is rising fast.

**TOTAL EARLY STAGE FUNDING**

**$88 m**

GLOBAL AVG.
$431 m

**ECOSYSTEM VALUE**

**$1.7 bn**

GLOBAL AVG.
$10.5 bn

**MEDIAN SEED ROUND**

**$200 k**

GLOBAL AVG.
$494 k

**MEDIAN SERIES A ROUND**

**$1.6 m**

GLOBAL AVG.
$2.7 m

**SOFT. ENGINEER SALARY**

**$13 k**

GLOBAL AVG.
$42.1 k

## Sub-sector Strengths

### Fintech

Argentina's history of financial instability means the country has a high rate of distrust in the traditional banking system. Nearly half of the population is unbanked or underbanked. This has created many opportunities for innovative financial services products aimed at unmet customer needs, which has spurred the growth of FinTech companies in the country. Notable startups in the sub-sector include digital payments company Ripio Credit Network and free-free mobile banking company Uala, which has raised a total of $544 million over 7 rounds.

### Blockchain

Similar to FinTech, Blockchain technology offers a way for Argentine companies and consumers to protect themselves from financial instability and corruption. The Argentine government uses Blockchain technology to record daily official bulletins. This interest has led Buenos Aires to become one of the most important Blockchain hubs in Latin America. The city hosts sub-sector events such as the Latin American Bitcoin and Blockchain Conference, while local Blockchain companies such as Flixxo, RSK, Bitfarms, and Decentraland have attracted significant interest and funding. Crypto exchange Buenbit raised an $11 million Series A round 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.

## Convenient Location

Buenos Aires is just 1 hour ahead of U.S. East Coast time, 4 hours behind London, and 4 hours ahead of Silicon Valley, making it a strategic location for teams working remotely or serving a variety of international clients.

Chile

# Santiago-Valparaíso

**MEMBERS:**
CORFO

> I would like to invite investors to bet on Chile. We are an entrepreneurial, innovative, and resilient country, which contributes to the resolution of global problems, with local solutions, helping in the construction of a better future for all.

**Pablo Terrazas**
VP of CORFO




## Highlights

With 72% of Chilean adults telling pollsters that starting a business is a career path, entrepreneurship is now in the country's DNA. Over the last decade, a network of public and private initiatives have been working to transform Chile into one of Latin America's most vibrant startup ecosystems. During the last 10 years, CORFO has funded 12,824 companies with a total sum of USD$716,051,332 in grants (this includes Start-Up Chile and other innovation and entrepreneurship grants to boost the startup flow in the country). In terms of venture capital, this public organization has supported the VC industry with USD$740,991,564 in matching funds. During the first half of 2021, news within the ecosystem includes 2 unicorns (Cornershop, an on-demand grocery delivery service with a $3 billion valuation and NotCo, a producer of plant-based meat and dairy substitutes valuated in $1,5 billion); the Fintech Xepelin raising a historical series A of $230 million, and the Insurtech Betterflys's $60 million round. Others highlights include the fintechs Fintual, Global66, and Quansa raising $15 million, $12 million, and $3.6 million respectively, Agtech Protera which raised $10 million, and reusable packaging company Algramo's recent $8.5 million Series D. The main challenge of the Chilean ecosystem today is venture capital for scaling the startups' operations. The successful cases of fundraising were mainly made by foreign investors that bet on domestic entrepreneurs.

**TOTAL EARLY STAGE FUNDING**
**$98.6 m**
GLOBAL AVG.
$431 m

**ECOSYSTEM VALUE**
**$661 m**
GLOBAL AVG.
$10.5 bn

**MEDIAN SEED ROUND**
**$80 k**
GLOBAL AVG.
$494 k

**MEDIAN SERIES A ROUND**
**$1 m**
GLOBAL AVG.
$2.7 m

**SOFT. ENGINEER SALARY**
**$29 k**
GLOBAL AVG.
$42.1 k

## Sub-sector Strengths

### AI, Big Data & Analytics

The Ministry of Science, Technology, Knowledge, and Innovation of Chile launched the National AI Policy in February 2021 which will be Chile's roadmap for the development and adoption of AI. According to Accenture, AI will add $63 billion to Chile's economy by 2035. In November 2020 the National Energy Commission and the National Electricity Coordinator began developing an AI tool to monitor the security of the national electric system.

### Fintech

The number of Fintech startups in Chile increased almost 60% between July 2019 and March 2021. In November 2020 a draft bill regulating Fintech in the securities market was introduced to spur innovation, inclusion, and competition within the sub-sector. Benefits platform Betterfly raised a $60 million Series B round in June 2021, LATAM's largest-ever insurtech round. Passive investment platform Fintual raised $15 million in June 2021.

### Agtech & New Food

The public-private campaign "Chile Keeps on Going for You" launched in August 2020 to strengthen Chile's image as a reliable international supplier. Number of Agtech startups increased 144% between December 2019 and July 2021, including the unicorn NotCo, Protera supported by Bimbo to create protein-based food ingredients; and "The Live Green Company", a sustainable plant-based food company backed by Sigma Alimentos, a unit of Mexican conglomerate Alfa SAB.

# Reasons to move your startup to Santiago-Valparaíso

## Tax Advantages

Chile is a tax-friendly country that has signed free trade agreements with more than 30 countries, as well as Double Taxation Avoidance Agreements. Reforms in 2019 simplified accounting requirements for startups and stipulated exemptions to Chilean corporate tax when company owners are subject to final taxes in Chile (either global complementary tax or additional tax taxpayers).

## Business-Friendly Ecosystem

Chile is reportedly a leading innovation and entrepreneurial hub and among the best LATAM countries for business, with a significant early-stage funding ecosystem comprising seed capital, angel networks, co-working spaces, innovation labs and mentors. A gap in Series A and later-stage funding offers an opportunity for foreign investors to invest in innovative Chilean B2B startups.

## Top Travel Destination:

Chile is a paradise for nature lovers and outdoor enthusiasts. They are the best consecutive adventure and green tourism destinations according to the last World Travel Awards, and Santiago is the ideal destination for conventions and events. It is an invitation to live, work, develop projects and enjoy the great adventure of Latin America.

# Startup Community

STARTUP GENOME MEMBERS

MEMBER

### CORFO

CORFO is the Chilean Economic Development Agency. It was founded in 1939 in order to improve Chile´s competitiveness, by encouraging innovation, investment, and entrepreneurship policies (including Start-Up Chile, the first seed accelerator founded by a public agency in the world). CORFOdeploys its policies through different programs, as well as in different productive sectors. By doing so, not only does it help to diversify the country’s productive matrix by adding new solutions, but also encourages better socio-economic development as well as a sustainable future.

Brazil

# São Paulo

> Tech entrepreneurship has never been so strong in São Paulo than ever before. The city is home of 12 of 20 Brazilian unicorns, and concentrates the vast majority of VC firms and large corporations in the country.

**Felipe Matos**
President at ABStartups and CEO of Sirius Education




TOTAL EARLY STAGE FUNDING

**$902 m**

GLOBAL AVG.
$548 m

ECOSYSTEM VALUE

**$49 bn**

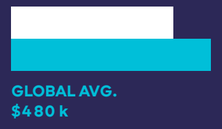
GLOBAL AVG.
$13.68 bn

## Highlights

Buzzing São Paulo, home to some 45 million people and with a landmass larger than the UK, already hosts the South-American headquarters of tech powerhouses like Google, Uber and Airbnb. Now the Brazilian state's startup scene is gaining momentum as well. According to KPMG, Brazilian startups raised a record-setting $2.7 billion in the second quarter of 2021. The acquisitions market in the country is hot as well, with Twilio buying Teravoz in January 2020 and Etsy buying Elo7 in June for $217 million. Brazil currently has 9 active unicorns, including Nubank, Fifth Andar, 99, Stone, and Gympass. The São Paulo government is working to ensure the state benefits from this influx of investment by streamlining processes and improving internet access. It is now possible to start a company in just 5 days. Many of Brazil's best accelerators and incubators are located in the state, including Google's only Latin-American incubator. Banks Itaú and Bradesco have incubators in São Paulo. In 2013, the State of São Paulo invested US$ 3.8 billion in R&D, 73.7% of national R&D expenditure. São Paulo is also home to an extensive network of public and private research institutions, as well the São Paulo Technological Park System and one of Brazil's leading research support agencies, the Research Support Foundation of São Paulo (Fapesp). São Paulo-based Positive Ventures recently raised a $10 million fund to invest in social impact startups. 4 of the 10 best universities in Latin America are located in São Paulo.

MEDIAN SEED ROUND

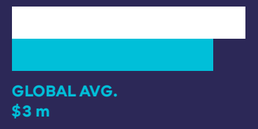
**$391 k**



GLOBAL AVG.
$480 k

MEDIAN SERIES A ROUND

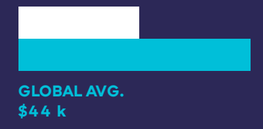
**$3.5 m**



GLOBAL AVG.
$3 m

SOFT. ENGINEER SALARY

**$23 k**



GLOBAL AVG.
$44 k

## Sub-sector Strengths

### Fintech

São Paulo is the financial capital of Brazil, while data from the World Bank shows that for every 100 Brazilians, there are 113 cellular subscriptions. Unsurprisingly then, Fintechs brought in the largest share of VC investment in Brazilian startups in 2020. Unicorn lending company Creditas has raised a total of $594 million over 9 rounds. Digital banks are growing at an average rate of 147% per year in Brazil. One, unicorn Nubank, has raised a total of $2.3 billion over 12 rounds. Another unicorn, Neon, raised a total of $420.3 million over 6 rounds.

### Proptech

The São Paulo real estate market is booming with turnover in the construction industry in the state nearly doubling in value over the last 5 years. The annual gross revenue of real estate services in the state jumped from US$ 2.15 billion to US$ 3.2 billion from 2007 to 2011. As a result São Paulo is home to the highest concentration of Proptech companies in the country. Rental services startup Yuca has raised a total of $14.7 million over 2 rounds. Real estate platform Loft, a unicorn, has raised a total of $788 million over 5 rounds. Another real estate platform, QuintoAndar, raised $755.3 million over 8 rounds and achieved unicorn status.

# Reasons to move your startup to São Paulo

## Government Support

The Brazilian government runs over 20 initiatives aimed at developing the country's startup ecosystem. InovAtiva Brasil, a public program jointly carried out by the Ministry of Economy and Brazilian Support Service to Micro and Small Enterprises (SEBRAE), offers free support to startups, connecting them to market and investment opportunities. It is the largest acceleration program in Latin America.

## Access to Funding

São Paulo-based startups can access a range of public funding programs, such as Desenvolve SP, which offers various credit facilities with competitive interest rates. Banco do Povo Paulista (BPP) is a microcredit program developed by the government of São Paulo that offers loans up to US$2,000 to individuals and small businesses at interest rates of 0.35% per month and loans of up to US$4,900 for cooperatives.

# Startup Community

FEATURED ARTICLES FROM
LOCAL AMBASSADORS



# Methodology, Framework, And Acknowledgments


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Global Startup Ecosystem Report 2021

# Methodology

The Startup Genome quantitative 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 data sets that make up this infrastructure:

- Startup Genome proprietary data:
  - Interviews with more than 100 experts
  - 2017-2019 Startup Ecosystem Survey with more than 10,000 participants per year
- Crunchbase: Global data set on funding, exits, and locations of startups and investors
- Dealroom: Global data set 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 (2017-2021). StartupGenome.com Database
- Crunchbase (2017-2021). Crunchbase.com Database
- Dealroom.co BV. (2017-2021). Dealroom.co Database
- CB Insights (2019-2021). Cbinsights.com Database
- Orb Intelligence Inc. (2017-2021). orb-intelligence.com Database

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- PitchBook (2018-2021), 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 Time Frames

- Ecosystem Value, Exit Value, and Startup Valuation: sum of exits and funding rounds of 2018, 2019, and the first half of 2020.
- Based on our previous analysis we assessed that it takes one year for half of the seed rounds to find their way into major data sources. Therefore, we use the first half of 2020 as the latest period for which earlier-stage metrics can be computed to create reliable benchmarks at the ecosystem level.
- Early-Stage Funding: Sum of all Seed and Series A investments in 2018, 2019, and the first half of 2020, corrected for obviously missing rounds.

# 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%
- Talent & Experience: 20%
- Knowledge: 5%

We calculated an Ecosystem Index Value for each Factor, based on the Sub-Factor and metrics detailed below. The ecosystem 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 accounts for 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 startup valuations during the time frame without double-counting
- 37.5% Exits
  - 80% Volume of Exits (80% log of number of exits of

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more than $50 million and 20% log of number of exits of more than $1 billion)

- 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)
  - 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 2020; and 50% Log of total number of large—over $100 million in AUM—VCs and CVCs in Q1 2020)
  - 10% Experience of Investors (50% number of investors with above average exit rates in Q1 2020; and 50% average years of experience of investors in Q1 2020)
  - 20% New Investor (50% log of total number of new investors with less than five years of activity in Q1 2020; and 50% ratio of active investors in Q1 2020)

**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 $1 billion by metro population (in M)
  - 20% Log of ratio of exits over $50 million in 2017, 2018, and the first half of 2019 to funding Series A in 2017, 2018, and the first half of 2019
- 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
  - 60% Log of Life Sciences-focused measure of accelerators and incubators
  - 10% Log of count of Research & Development Hospitals
  - 10% Count of Research & Development Locations
  - 10% Log of average amount of Life Sciences-specific grants
  - 10% Log of count of Life Sciences-specific research organizations

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## Experience & Talent

### 37.5% Talent

Assesses the talent to which early-stage startups have access

- 90% Tech Talent
  - 90% Quality & Access
    - 70% Log of count of exits over $50 million from 2010 to 2019
    - 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 salaries—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 that 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 from 2010 to 2020
- 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 more than $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% Life Sciences three-year moving average growth of patents
  - 10% Life Sciences 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 to produce patents in complex technology classes, based on a PageRank algorithm

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- 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 factors that are more influential in ecosystems 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 time frame without double-counting
- 20% Exits
  - 80% Volume of Exits (80% log of number of exits of more than $50 million and 20% log of number of exits of more than $1 billion)
  - 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 2017-1H2019)
  - 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 $1 billlion by Metro population (in M)
  - 20% Log of ratio of exits over $50 million in 2017-1H2019 to Funding Series A on 2017-1H2019

### Talent

**50% Talent**

Assesses the talent to which early-stage startups have access

- 80% Tech Talent
  - 50% Quality & Access
    - 70% Log of count of exits over $50 million from 2009 to 2018
    - 10% Share of top Github coders to total Github coders
    - 20% Log of count of coders on Github.com with more than 10 followers

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- 50% Cost
  - 50% Log of software engineer salaries—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 from 2010 to 2020
- 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 more than $1 billion
  - 40% Log of number of exits of $50 million

## Notes On Reason For Changes of Ecosystem Value

Our constant endeavour at Startup Genome is to improve the quality of research and data to help our members and our readers gain the best 'on the ground' knowledge about the world of startup ecosystems. With that aim in mind, we have significantly improved our data set in terms of both exhaustiveness and quality. As we improved the data, one key outcome was an increase in the Ecosystem Value. The major factors that influenced those changes 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 conducted by our team to ensure the tech classification is accurate. This resulted in more companies being tagged as tech and hence more deals added to our data set. This contributed approximately 8% to the Ecosystem Value increase.
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 back to 1995 are now included in our data set. This added about 8.5% to the Ecosystem Value of the top 100 ecosystems
3. Increasing Unicorn Data: We made enormous strides in expanding unicorn coverage in our data set. This includes incorporating CB insights unicorns and billion-dollar exits (after in-depth checks by our team). That contributed about a 36% increase in Ecosystem Value to 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.

## Ecosystem Page Metrics

**Ecosystem Value**

A measure of economic impact, calculated as the value of exits and startup valuations over 2018, 2019, and the first half of 2020

**Total Early-Stage Funding**

Total Seed and Series A funding in tech startups in 2018, 2019, and the first half of 2020

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### 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 two-and-a-half-year time period (2018, 2019, and the first half of 2020)

### Median Seed

Median of Seed rounds in tech startups in the ecosystem for a two-and-a-half-year time period (2018, 2019, and the first half of 2020)

## 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 Deep Tech, Life Sciences, and Cleantech.

### 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:** Early-stage startup access to customers allowing them to scale and "Go-Global"
- **Connectedness:** Connectedness within the ecosystem and the supporting infrastructure
- **Resource Attraction:** The gravitational pull of an ecosystem drawing in entrepreneurs and startups from elsewhere
- **Startup Experience:** The depth and diversity of the pool of prior startup experience in an ecosystem
- **Talent:** 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:** 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: a total addressable market of $30 billion USD or more; development of a globally new or globally leading or niche product; a mission to change the world, get rich or create a great product
  - **Founders with Experience in Sub-Sector:** Founders who considered their graduate or

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postgraduate degrees to be directly relevant to their startups

- **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:** Number of quality relationships between local founders, meaning they know each other and can call upon one 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 based on 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 includes different types of analytics and digital tools used in 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

Agriculture Tech 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.

### Artificial Intelligence (AI), Big Data & Analytics

AI, Big Data & Analytics refers to an area of technology devoted to extracting meaning from large sets of raw data, 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 the 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

Construction Tech can improve construction companies' processes and methods, offering productivity gains, cost savings, better safety, shorter lead times, and maximised resources. Property tech helps organizations and individuals research, buy, sell, rent, lease, and manage real estate. Applications include searching for property, listing available properties, setting up viewing dates, and finalizing lease agreements and deals.

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### Consumer Electronics or Home Electronics (includes Wearables, Smart Devices)

Consumer Electronics or Home Electronics comprises 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)

Education Tech is 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, gambling machines, and associated services.

### Government Tech (Govtech)

Govtech is the technology infrastructure used by governments and government institutions to improve public service to citizens. It increases transparency and maximizes public welfare and involvement.

### Life Sciences

Life Sciences is the sector concerned with diagnosing, treating, and managing diseases and conditions. It includes startups in Biotech, Pharma, and Medtech (also referred to as medical devices).

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# Key Author Bios

## Startup Genome

### JF Gauthier

Founder & CEO. JF is the world's leading voice in innovation ecosystem development, having advised more than 100 governments and private-public partnerships across 35 countries. He has founded five businesses and led others across two continents and three sectors (Tech, Life Sciences and Cleantech), achieving two exits plus one at scaleup stage. He is also an active angel investor and previously worked in corporate innovation, advising IBM, Cisco, Agilent/HP, J&J, and Abbott for the firm of Kim Clark (former dean of Harvard Business School) alongside Clayton Christensen and other thought leaders. Harvard MBA.

### Marc Penzel

Founder and President. Marc is leading global growth and impact. Prior to founding Startup Genome, he co-led the startup ecosystem development unit at Silicon Valley-based Startup Compass. At PwC, KPMG, and Bayer Group's internal management consultancy, Marc advised top executives across various sectors. He also founded a nonprofit organization to catalyze social innovation and was appointed Expert in Entrepreneurship, IT and Future of Economic Progress by the World Economic Forum. In 2017, his work to develop startup ecosystems everywhere has led him to receive a U.S. Visa for Individuals with Extraordinary Ability.

### Stephan Kuester

Stephan works with clients in government and private industry consortia all around the world, advising on the creation and the acceleration of tech and innovation clusters and related public and private policy. Prior to his role at Startup Genome, Stephan headed up the International Consulting practice at UK ecosystem agency Tech Nation (fka Tech City UK) in London and served as Managing Director of Digital Switzerland. Previous to his work in the digital ecosystems space, Stephan worked as an Executive Director for professional services firms Arthur Andersen and Ernst & Young. Stephan holds an MSc in Economics and studied at the University of Bonn, Germany and the London School of Economics (LSE).

### Malavika Kumaran

Malavika leads the research team to help our global partners develop evidence-based innovation policies and catalyze their regional startup ecosystems. Malavika has an Honours B.Sc in Economics from the University of Toronto, and has experience in analytics, product management, and data governance. Previously, she worked at MaRS Discovery District, North America's largest urban innovation hub, leading research in the areas of inclusive innovation and the future of work.

## Global Entrepreneurship Network (GEN)

### Jonathan Ortmans

Founder and president of the Global Entrepreneurship Network, working to foster healthier local entrepreneurship ecosystems in more than 170 countries while connecting them into one global ecosystem. In 2008, he launched GEN's cornerstone initiative, Global Entrepreneurship Week, enabling millions of people to explore their potential through thousands of local GEW activities and competitions each November. Through building GEW, Ortmans assembled a broad multi-disciplinary coalition that is the backbone of GEN operations, including entrepreneurs, investors, policymakers, researchers and affiliated support organizations. He serves as a longtime advisor to the Kauffman Foundation and chairs the Global Entrepreneurship Congress.

# Partners and Collaborators

## Global Partners

### TNW

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

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a co-working label, a global start-up database, and delivers custom innovation programs to corporates and governments.

**Bella Private Markets**

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

**Crunchbase**

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

**Dealroom.co**

Provides data-driven intelligence on high-growth companies.

**Hello Tomorrow**

A global non-profit organization on a mission to unlock the potential of deep technologies to solve the world's toughest challenges by highlighting, empowering and connecting the most promising deeptech entrepreneurs across the globe with the right enablers. They bring together a community of actors to facilitate collaboration between entrepreneurs, industries and investors in order to propel innovation from the lab to the market.

**Tech Nation (formerly Tech City UK)**

Empowers ambitious tech entrepreneurs through growth programmes, digital entrepreneurship skills, a visa scheme for exceptional talent and by championing the UK digital sector through data, stories and media campaigns.

## Startup Genome Network Members

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Bangalore Bioinnovation Centre

**Kerala**

Kerala Startup Mission

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University of Texas Austin

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Central Texas Angel Network

St. Edward's University

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Business Incubator Novi Sad

ICT Hub

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SC Ventures

Science Technology Park Belgrade

Serbian Games Association

Serbian Blockchain Initiative

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Alberta Innovation Corridor

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Station Houston

TMCx

Unconventional Capital

University of Houston - Hatch Pitch

**Jerusalem, Israel**

Alynnovation

AtoBe

BioJerusalem

BioHouse

Startup Nation Central

Jumpspeed Ventures

Masschallenge Jerusalem

Made in JLM

Bizmax

Ourcrowd

HUJI Innovate

JVP

VLX

Labs/02

Haddasah Accelerator (by IBM)

BioGiv

PICO Partners

QueenB

LevTech

Cornerstone Venture Partners

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Groundup Ventures

Fresh.fund

JerusML

MakeGamesJLM

**London, United Kingdom**

MassChallenge

Techstars London

Balderton Capital

Wayra London

Accelerator Network

City of London

KPMG

TechUK

GSMA

Level39

Tech London Advocates

GEN

Microsoft Ventures

Northzone

Microsoft for Startups

**Manila, Philippines**

Department of Science and Technology

Department of Information and Communications Technology

Intellectual Property Office of the Philippines

Small Business Corporation

National Development Company

Philippine Exporters Confederation, Inc.

QBO Innovation Hub

AIM-Dado Banatao Incubator

IdeaSpace Foundation

Startup Village

Launchgarage

Brainsparks

Philippine Fintech Association

Fintech Alliance of the Philippines

**Melbourne, Australia**

Potential(x)

ygap First Gens Accelerator Program

ASTN HeadStart

Cyrise

SBE Australia, Springboard Tech

SBE Australia, Springboard Life Sciences

SBE Australia, E3

Runway Hq

ACMI X

BioMelbourne Network

Inspire9

Runway Geelong

Rome2Rio

Startup Bootcamp

Startup Victoria

York Butter Factory

**Miami, United States**

500 Startups

Miami Angels

Endeavor Miami

eMerge Americas

Venture Cafe Miami

Refresh Miami

Venture for America

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Florida International University

University of Miami

LAB Miami

Babson WIN

Idea Center at Miami Dade College

CIC Miami

Code Fever

The Venture City

WeWork

WhereBy.Us

**Mid-East Region, Ireland**

EO Accelerator

Meath Enterprise Centre

Boyne Valley Food Hub

Arklow Enterprise Centre

Athy Enterprise Centre

Clane Project Centre

Kells Tech Hub

Maynooth Works

Wicklow Enterprise Centre

Kells Enterprise & Technology Centre

PFS Accelerator

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**

FounderFuel

Techstars AI

Tandemlaunch

Fondation Montréal Inc.

MT Lab

BCF Ventures

Ministère de l'économie et de l'innovation du Québec

Techno-Montréal

Ivado et Montréal international

Founder Institute

District 3

MTL Newtech

Notman House

Numana

PME MTL

Quartier de l'innovation

Réseau Capital

Startup Fest

**New York City, United States**

Starta Venture Accelerator

Blue Ridge Labs

Brooklyn Chamber of Commerce

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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

**Nur-Sultan, Kazakhstan**

AIFC

Arkley VC

Astana Business Campus

Astana Hub - International Technopark of IT-startups

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Astana IT University

Astana Medical University

Bridge Group

I2BF Global Ventures

MOST Business Incubator

Mua Incubator

Nazarbayev University

QazTech Ventures

Verny Capital

**Quebec City, Canada**

BDC

PwC Québec

ROBIC

Ville de Québec

Quebec City Group if incubators

Quantino

Entrepreneuriat Laval

**Rhineland, 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

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**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

**Taipei City, Taiwan**

AppWorks

BE Accelerator

BE Capital

Business Incubator Center, NTUST

CDIB Accelerator

Center for Innovation Taipei

Center of Industry Accelerator and Patent Development Strategy (IAPS)

Center of Innovative Incubator, NTHU

Chung-Yuan Incubation Center (CYIC)

DigiSpace

Garage+

InnoSquare

ITRI Open Lab & Incubator

KAFNU Taipei

NCU Innovation & Incubation Center

NTU Innovation Incubation Center

NTUT Innovation & Incubation Center

SOSV-MOX

SparkLabs Taipei

Star Rocket

Startup Lab at NCTU

Taidah Entrepreneurship Center (TEC)

Taiwan Startup Stadium

Techstars

Yang-Ming Incubation Center (YMIC)

**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,

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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

Brookfield 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

**Vancouver, Canada**

Launch Academy

Sauder S3i

entrepreneurship@UBC

Creative Destruction Lab West

Highline BETA

RADIUS SFU

SFU Venture Labs

SFU Innovates

Wavefront

Spring

New Ventures BC

Small Business BC

Foresight

LifeScience BC

Bio Enterprise BC/Can

**Western Denmark**

AalborgSyndikatet

AAU Incubator (SEA), Aalborg University

Agro Food Park Inkubator/Agro Business Park

AI Innovation House

Arsenalet

Brains Business

Business Factory

Center for Industri

Danske Commodities (DC) Business Accelerator

Ecopark

Filmby Aarhus incl. Ideas Lab

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Food ehub

Green Tech Center

Growing Investors

Ideas Lab

Incuba Science Parks incl. Incuba Startup Lab

It-forum (netværk)

Lynfabrikken

Novi

Odense Robotics

Odense Robotics Startup Hub

Office Lab

Robo Cluster

Startup Factory - Navitas

StartupWorks

TechBBQ

The City of Aarhus, Business Development

The Danish Growth Fund

UAS Denmark

VIA studentervæksthus Aarhus C

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