



# THE GLOBAL STARTUP ECOSYSTEM REPORT 2023

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# The Global Startup Ecosystem Report 2023 (GSER 2023) is a comprehensive analysis of the current state of startup ecosystems worldwide.

Now in its 11th year, the GSER provides insights into the world's leading startup ecosystems, emerging trends, and key challenges facing entrepreneurs. It is based on extensive research and analysis of data from 3.5 million startups across 290 global ecosystems and over a decade of independent research and providing policy advice to more than 145 clients in over 50 countries to date.

With the GSER 2023, we hope to provide valuable perspective on the global startup landscape and actionable recommendations for entrepreneurs, investors, policymakers, and other stakeholders looking to drive innovation and economic growth even in these challenging times.

- **3.5 million**  
STARTUPS
- **290**  
GLOBAL ECOSYSTEMS
- **10+ years**  
INDEPENDENT RESEARCH
- **145**  
CLIENTS
- **50**  
COUNTRIES





# About Startup Genome

Startup Genome is the world-leading policy advisory and research organization for public and private organizations committed to accelerating the success of their startup ecosystem. We have advised more than 145 clients across six continents in 50+ countries to date.

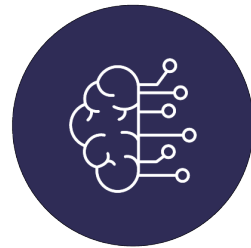
Startup Genome's mission is to catalyze startup success and ecosystem performance everywhere. We work with global thought leaders to define and execute robust policies and programs that drive lasting change, identifying gaps and recommending practical actions to address them. Many of the world's leading governments and innovation-focused organizations have joined our knowledge network to cut through the complexities of startup-ecosystem development and fuel sustained economic growth.

Working side-by-side with 300 partner organizations, our frameworks and methodologies have become instrumental in building foundations for regions to grow. Working with us automatically connects your ecosystem to the leading experts and practitioners in the global innovation economy.



# Our Services

We work with forward-looking governments and private sector organizations to accelerate the success of their startup ecosystems to fuel the growth of more startups, sustainable economic growth, and job growth.



## Knowledge Exchange

- Establishing a global network of innovation policy makers in 50+ countries
- Providing access to latest research and policy best practices, and facilitating shared learning
- Organizing member meetings and leadership workshops for networking and collaboration



## Positioning

- Enhancing ecosystem visibility and strategic positioning
- Focusing on attracting entrepreneurs, talent, and investors through targeted efforts
- Achieving global reach through our reports, events, and media outreach



## Assessment

- Utilizing renowned frameworks and data science capabilities for decision-making
- Assessing ecosystem performance and strengths through data analysis
- Benchmarking against peers for competitive advantage and growth opportunities



## Strategy

- Developing strategies for ecosystem development and differentiation
- Conducting scenario modeling to determine economic impact
- Creating clear and aligned upon multi year roadmaps for implementation



## Execution

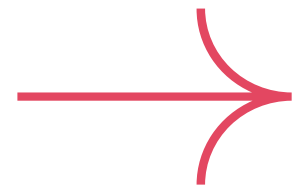
- Supporting local leadership in executing key policies and programs
- Measuring and reporting the impact of initiatives
- Delivering services in collaboration with global thought leaders

**Want to speak with someone from our team to find out more?**

Contact Adam Bregu, Director of Business Development and Partnerships at [adam@startupgenome.com](mailto:adam@startupgenome.com)



# Discover More in Our Other Reports



Our data-driven reports showcase startup ecosystems around the world and take a closer look at specific areas of technology. They offer unique insights and expert opinions alongside rankings and data interpretation.







# About Global Entrepreneurship Network

The Global Entrepreneurship Network operates a platform of projects and programs in 180+ countries aimed at making it easier for anyone, anywhere to start and scale a business.

By fostering deeper cross-border collaboration and initiatives between entrepreneurs, investors, researchers, policymakers, and entrepreneurial support organizations, **GEN** works to fuel healthier start and scale ecosystems that create more jobs, educate individuals, accelerate innovation, and strengthen economic growth. GEN's comprehensive global footprint of national operations and global verticals in policy, research, and programs ensures members have uncommon access to the most relevant knowledge, networks, communities, and programs relative to size of economy, maturity of ecosystem, language, culture, geography, and more.



# About Our Global Partners



**TNW** is a European digital brand that informs, inspires, and connects people who work in tech through media, events, and spaces. Primarily known for its media outlet and award-winning tech events, TNW also incorporates a coworking network and delivers custom innovation programs to corporates and governments.



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



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



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



## A Note From a Founder

**“Technology doesn’t just drive economic growth, job creation, and innovation. It is helping to save the planet too. This mission cannot be put on hold while we wait out rocky economic times.”**

**JF GAUTHIER**  
Founder and CEO  
Startup Genome

There’s no way to sugarcoat it: The technology sector is in the midst of an unprecedented slowdown. After a period of exuberant inflation in valuations, a correction was inevitable. And it’s proving to be dramatic.

Silicon Valley’s VCs and their limited partners (LPs), a nexus of the global startup ecosystem, have all but stopped investing. When the financial markets crashed in 2008–2009, total Series A funding dropped 31% (from 2007 to 2009). Compared to the records achieved in 2022, Series A funding in February 2023 was down more than 60%, while exits over \$50 million are down 80%. The dramatic shutdown and nail-biting rescue of Silicon Valley Bank in March only underlined the level of the turmoil in the sector.

We’ve been here before. The 2001 dot-com crash was billed as “the end tech.” Within a few years we had already proven that prediction to be completely wrong.



# As a community, we must continue to develop and scale innovative solutions to our pressing environmental challenges.

## How the Downturn Differs from Earlier Crises

Unlike in 2000, when a website's great popularity justified sky-high valuations despite the lack of a revenue model, we have since together proven that we can build hugely profitable companies and the fundamentals of late-stage startups are sound.

Looking back at the Great Recession years, Series A investments made in 2008 and 2009 actually produced a much higher ratio of exits per dollar invested than in 2006 and 2007 — 35X vs. 25X! This is arguably because valuations come down during a recession while fewer

startups close Series A deals, leading to a less crowded competitive landscape and much easier access to top talent.

Data-driven analysis of historical returns does not show a rationale for the current dramatic contraction of LP and VC investments. Keen investors want to go against the flow and invest aggressively while others sit on the sidelines.

The COVID-led growth in tech impacted countries to very different degrees — explained at least partially by how restrictive local health guidelines were — and this is reflected in movement in the global rankings. India is up due to its world-leading growth in 2021 and 2022, and this trajectory may well continue — up to now it is experiencing less of a slowdown than elsewhere. China however, grew at a significantly slower pace.

Some critics have been rooting for the crisis to take Silicon Valley down a peg or two. But anyone vested in entrepreneurial innovation should root for a Silicon Valley that can continue to lead and strengthen the global startup revolution by investing in and partnering with great people and organizations all around the world.

## Why We Need to Maintain Investment in Startups

Given current challenges, the world needs the tech sector to continue to produce innovative solutions. Technology doesn't just drive economic growth and job

creation, it stands to save the planet too. This mission cannot be put on hold while we wait out rocky economic times. Join us in thanking Europe for leading and maintaining the flow of Cleantech investment despite the downturn and in calling for all other regions to join in a bigger way. As a community, we must continue to develop and scale innovative solutions to our pressing environmental challenges.

The same urgency applies to the need for our community to build a more equitable startup revolution by broadening the reach and use of technology to include those who are currently underrepresented or underserved by innovation. To some, diversity, equity, and inclusion might appear less urgent during a crisis. It isn't. Whatever the economic situation, all of us need to pause and think. Are we changing and resisting our natural tendency to hire and invest in people who look like us and have a similar background? And are we supporting programs that retrain and upskill a broader spectrum of people so they too can participate in the great economic opportunities we produce? Programs like Tech Grounds in Amsterdam and SNC's Scale-up Velocity in Israel have proven it can be done. Such programs are needed in every startup hub around the world.

As threatening as the slowdown appears, let's remember the old saying "never waste a good crisis" applies. As tech stakeholders keep level heads and continue to build innovative companies that make a positive contribution, our sector will emerge from the current turbulence stronger and more impactful than ever.





# A Note From Global Entrepreneurship Network

**“Entrepreneurship is messy, and while ecosystems benefit from systems thinking, big and creative ideas bubble up from disorder and serendipity.”**

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

The Global Entrepreneurship Network (GEN) is proud to partner with Startup Genome for the eighth year on this highly regarded research, which benchmarks and monitors the state of startup ecosystems worldwide. GEN's work empowering entrepreneurs in nearly 200 nations tells the same story and echoes similar conclusions as this 2023 report.

## Trouble is Opportunity

As investor Jack Templeton once said, “trouble is opportunity” — a fitting quote for these turbulent times. Research from the Kauffman Foundation shows that while recessions and bear markets bring pain and can lead to short-term declines in business formation, they do not have a significant negative impact on the creation or survival of new businesses. Over half of the companies on the 2009 Fortune 500 list, and just under half of the 2008 Inc. list, launched during a recession or bear market. Airbnb, Uber, WhatsApp, Slack, and Square started in 2008–2009 with other success stories such as Instagram following in 2010. The research also shows that startup job creation is much less volatile and sensitive to downturns than job creation in the overall economy.



The economy, much like farming, must endure fallow years. For centuries, farmers have planned around fields being fallow 25% of the time and adapted to hard growing seasons with conditions too wet, dry, or nutrient deficient. For startups and their ecosystems there is much to learn in lean economic times: redundancies to eliminate, and efficiencies to gain, usually resulting in more investable cohorts when bullish capital returns.

## Inclusivity Accelerates Innovation

Simple math tells us economies suffer when anyone is left out. Innovation ecosystems benefit from wide engagement by the most diverse array of communities. In fact, world-changing ideas emerge faster when we acknowledge unconscious bias and meaningfully engage people with unique experiences and histories. After all, by definition, entrepreneurship is messy, and while ecosystems benefit from systems thinking, big and creative ideas bubble up from disorder and serendipity.

## Lightning-Speed Resilience

We must keep studying and listening to entrepreneurs as our North Star. Recently, GEN convened 100 founders from 55 nations to compete for funding, mentoring, and support. In reality, they did most of the teaching. The pace at which innovators in numbers are calmly adapting to major global developments is staggering. Shocks to the global entrepreneurial ecosystem are being absorbed faster than ever, which is good news

## Innovation ecosystems benefit from wide engagement by the most diverse array of communities.

for economists. We are no longer concerned about a big bubble bursting, but rather about adjusting to regular bouts of bumpy air that keeps everyone on their toes. The actions of fast-adapting entrepreneurs result in shorter-term macroeconomic disruption.

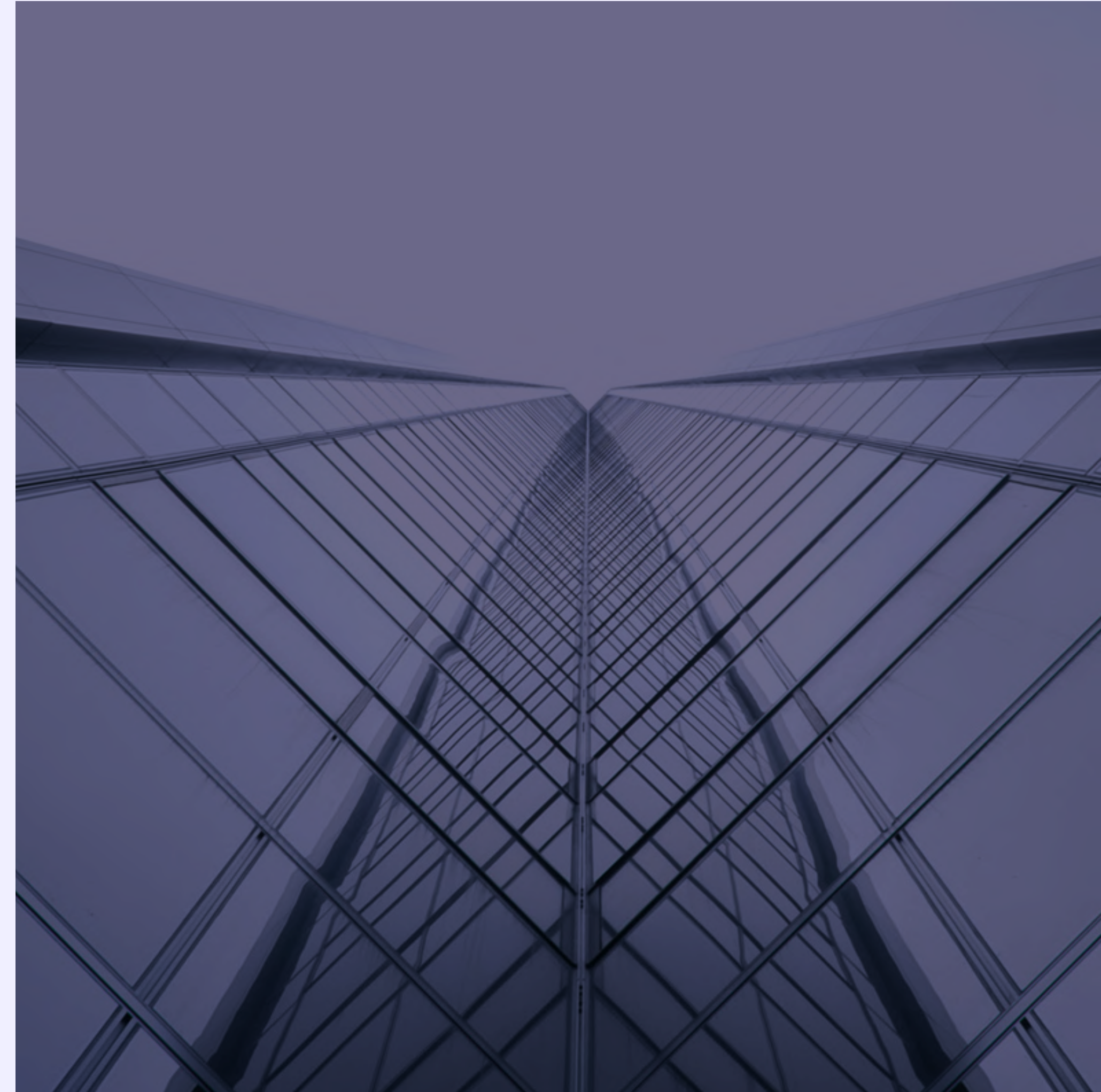
Despite recent downturns in investment, the state of the global entrepreneurship ecosystem is strong. Provided we continue to welcome everyone, encourage experimentation, and let our most fearless founders guide us along the path to solving the world's biggest challenges, global economic growth will keep pace with the solutions society needs to address climate change and geopolitical divides and create sustainable local economies for all.





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# The State of the Global Startup Economy

2021 was a benchmark year for tech startups, with widespread global growth. The trend continued through the first quarter of 2022, after which the impacts of global conflict, supply-chain disruptions, the European energy crisis, and rising inflation and interest rates led to uncertainty and unstable markets. However, midway through 2023, inflation is slowing and economic growth appears to be holding up.

## A Recession is a Good Time to Invest in Startups

A recession can bring out the gloom in investors — they dwell on sharp declines in portfolios and focus on the dark clouds of high inflation, layoffs, bank failures, and other economic jitters. Yet in spite of all the volatility in this and previous downcycles, markets recover. In fact, much of the recovery is due to entrepreneurs who respond to the downturn, looking for specific solutions. Demonstrating ingenuity and perseverance, they can help drive the market, pulling it out of downward trends.

For more than a decade, near-0% interest rates proved a safe haven for startups with ample VC funding sources. This led to the overvaluation of startups, generating record funding and exit valuations, and a high number of unicorns. The U.S. inflation rate for the first half of 2023 is lower than the previous year's rates, but a 15-year era of low interest rates and growing valuations came to an abrupt end in 2022. And this is not specific to the U.S. In March 2023, the European Central Bank predicted that inflation would average 5.3% in 2023, 2.9% in 2024, and 2.1% in 2025. Inflation excluding energy and food was predicted to average 4.6% in 2023.

This context has impacted the rate of returns among startups, causing investments to retreat. Yet, counterintuitively, high interest rates can benefit startups since they concentrate capital and talent into ventures that create value, weeding out the less competitive ventures. In response to rising interest rates, the risk appetites of investors have shrunk dramatically. As traditional VC markets cool and capital becomes increasingly harder to raise, many startups consider crowdfunding, debt, and



**It's a known thing that the best companies come in times of crisis or downtimes. They started leaner, in a more reasonable ecosystem and in a more reasonable atmosphere. There's still a lot of money that was raised, and that will eventually be deployed. Certain companies that start now, in two years will have really great potential to succeed."**

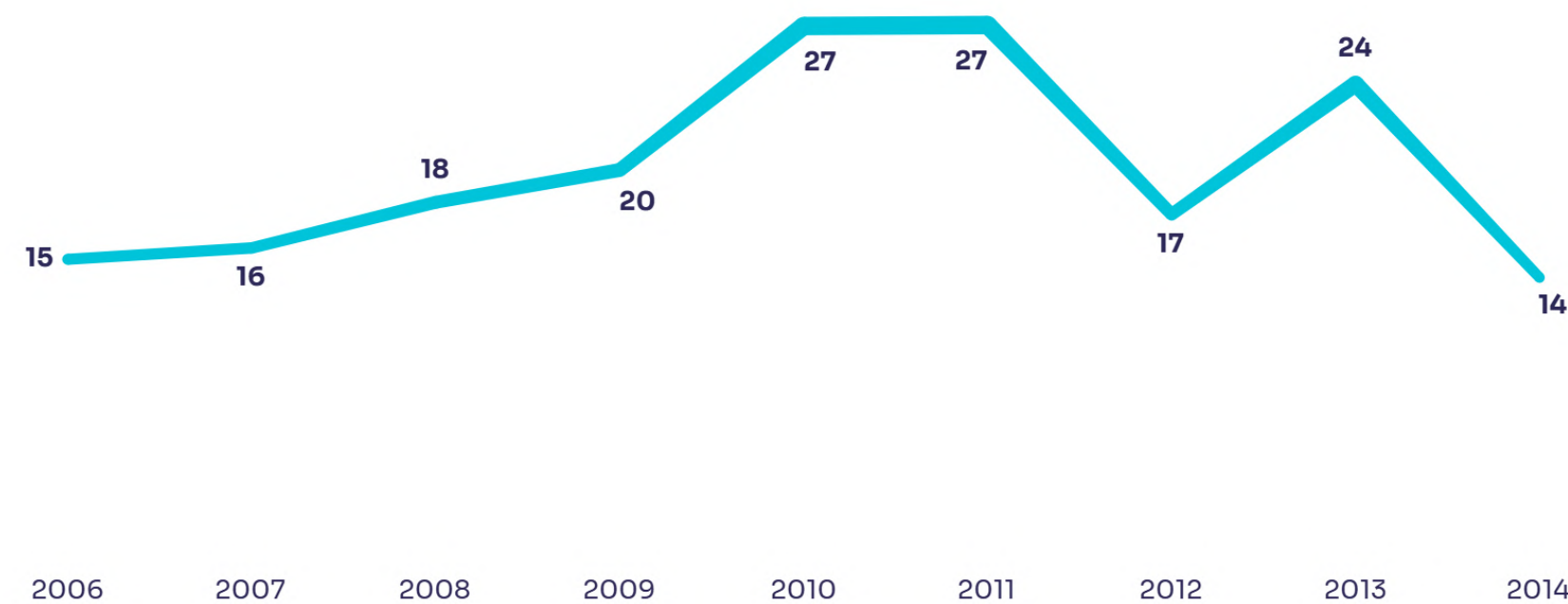
**Michal Michaeli**, International Economic Development & Tel Aviv  
Tech Director, Tel Aviv Global & Tourism (R.A.)



## Startups Funded During a Recession Show a Similar Ratio Than During Other Periods

Total Exit Amount (\$) / Series A Funding (\$) by Series A Deal Year, 2006–2014\*

Source: Startup Genome, 2023

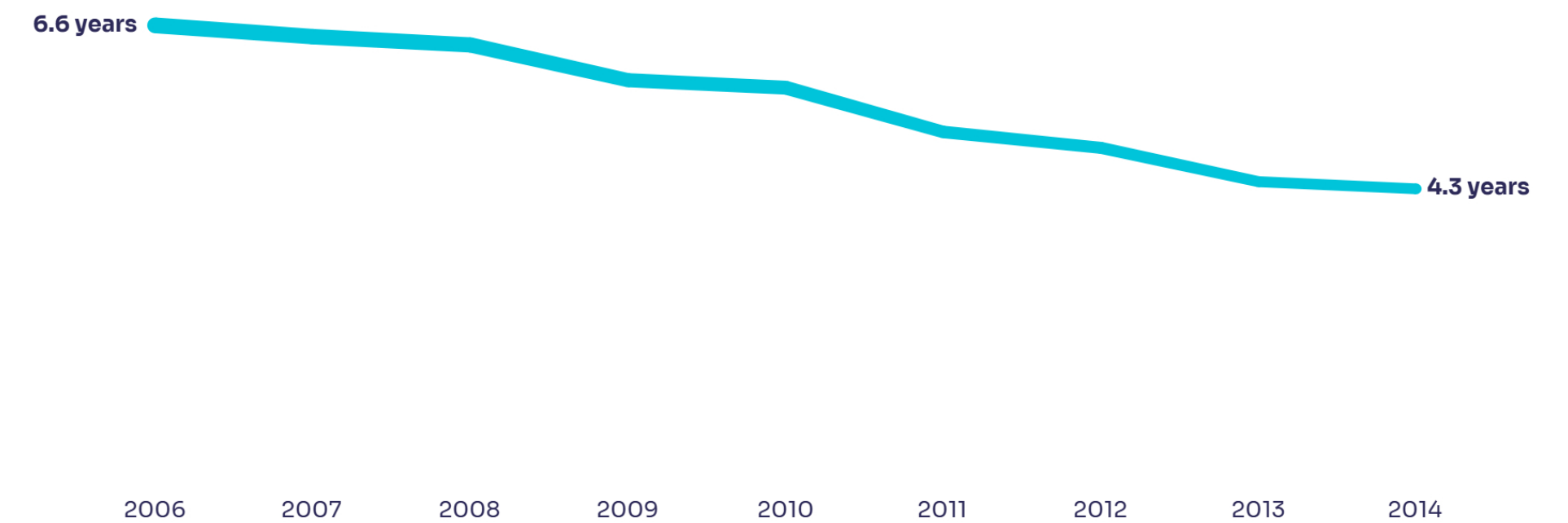


\* Time range selected in reflection of time required to move from Series A to exit.

## The Average Number of Years To Move From Series A to Exit Is Decreasing

For Startups Receiving a Series A Deal 2006–2014\*

Source: Startup Genome, 2023



\* Time range selected in reflection of time required to move from Series A to exit.

loans as alternative financing options. Meanwhile, VC investors are holding on to cash reserves to invest in startups after years of low interest rates.

Tech companies have laid off hundreds of thousands of the tech workers they hired in 2021's boom time in recent months — in March, Crunchbase put the number so far in 2023 at around 135,000 workers in U.S.-based tech companies (or tech companies with a large U.S. workforce). While state governments, especially California's, are reeling from loss of revenue and face budget deficits after years of surpluses, the spark of these layoffs could

create an explosion of startups. There is a new level of availability of top-notch talent with tech know-how and industry expertise looking for new projects.

Historical trends further corroborate the idea that economic downturn can be a good thing for new ventures. Startups funded during the Great Recession had slightly higher exit multiples over total money invested than those funded during economic expansions. From 1997 spanning a decade, VC returns for recession-year startup investments were 13% higher than for all but one of the years.



**Be lean and mean these months. Make sure costs and revenues are balanced. These are the years to build and grow strong for the better days to come."**

Ruben Nieuwenhuis, Co-Founder, Cupola XS





**Dr. Christopher Haley**  
Head of Research, Startup Genome

## How to Attract Skilled Talent to Your Ecosystem

Great talent is critical for startup growth, a fact widely recognized by successful founders and supported by our data. Ecosystems with greater overall talent typically perform better overall.

But finding and retaining the right talent can be difficult. Education systems have largely failed to generate the supply needed to keep up with the demand for tech talent, especially in software engineering. Additionally, the pandemic rapidly

accelerated the pace of digital transformation, vastly increasing demand. Data from survey respondents in our **ecosystem assessment services** shows that the difficulty in recruiting experienced software engineers has increased noticeably in most ecosystems since 2019. In addition, startups are also competing for talent within a global marketplace: the shift towards greater remote working has widened the labor market but also intensified competition. Furthermore, after years of supplying talent to more mature markets, some countries are making active policy measures to attract their diaspora back home. Many Eastern European countries are an example of this.

However, there are opportunities for startups and scaleups, not least since the downturn in the tech industry has led to mass layoffs. This presents a pool of skilled and experienced workers, many of whom also have valuable industry networks. Ensuring that this talent doesn't rest dormant is beneficial to everyone.

## Talent-Attraction Initiatives

So what can ecosystem leaders do? Around the globe, we can see a number of successful policies being used to attract, train, and retain talent. Ecosystem marketing is important in "selling" an ecosystem to international workers. One successful example is La French Tech, a state-supported initiative intended

to create a unified brand for French startups, which is both more recognizable overseas than individual programs and also creates a sense of internal unity within France. Effective remuneration also matters — resource-constrained startups can rarely compete with established firms on base salaries and need to offer stock options and other incentives as part of an overall package. Several geographies, including the E.U., still have to address the issue of stock options to stay competitive in this area, and location within a jurisdiction with favorable tax treatment is another consideration.

Most OECD countries have long had visa programs directed at experienced business people with capital to invest. However, the newer slew of startup visas typically focus on entrepreneurs with scalable business ideas in the early stages. In our view, the best schemes outsource the judgment of scalability to private sector investors or entrepreneurs, give a decision in a very short timeframe, and permit the entry of the entrepreneur's family. However, entrepreneur visas do not directly help firms looking for *employees*. For that, visa schemes need to be extended to target workers. The U.S. O-1 visa and the U.K.'s Global Talent visa are examples that do this.

Orientation and soft-landing schemes aim to reduce the administrative overheads of moving overseas,

and can help attract talent. Examples include Estonia's Work in Estonia portal, which provides not only assistance with visas, a jobs board, and advice on adapting to local culture, but also a list of schools to support tech workers with young families. IN Amsterdam takes a similar approach. This one-stop-shop allows international newcomers to the Amsterdam area to deal with all the bureaucracy of relocation in one building.

## Nurturing the Next Generation

Talent attraction is important to the success of an ecosystem, but it's also vital that strategies are in place to ensure that the next generation of talent is being developed. For young people to develop the mindset for working in a startup or founding one themselves, technical training must be accompanied by practical experience and entrepreneurial education. One interesting initiative doing just this is Communitech in Waterloo, Canada. Started in 1997, this hub in the university town of Waterloo-Kitchener brings together higher-education institutions, corporations, innovative startups, and government agencies. Communitech leverages existing university initiatives such as co-op programs to help build entryways into the startup ecosystem.





**My advice to investors is not to stop — these solutions are too important for our common future. So keep investing, but be patient — you cannot count on a fast exit. You have to trust and be brave, and invest in startups with the solutions, for example, for the climate. We need these startups and we need their solutions, so be more active in your investments.”**

Stina Lantz, CEO, SISP and Program Manager, Ignite Sweden

Between 2006 and 2014, the exit amount/Series A deal amount ratio remained around 20, and this includes the recession years of 2008–2009. This indicates that even during downturn years, startups that achieved Series A funding were able to multiply by 20 the value of the Series A amount by the time of exit. Tangible examples of successes born in a recession include **Spotify** raising a Series A in 2008, **Twitter** doing the same in 2007, and **Flipkart** in 2009.

VC funding began its downward trend in the first quarter of 2022, dropping 13% in total amount raised from Q4 2021. Overall, 2022 would decline by 35% from the previous year, though it remained higher than it was during the pandemic highpoint of 2020.

Recessions dry up sources of capital as banks and VC investors are less willing to provide funds, resulting in fewer funding rounds, lower valuations, and a longer

period to materialize. Startups are especially vulnerable to economic slowdowns: the flow of capital funding ebbs, companies have to refocus on sustaining growth and cutting back on costs, and the combination of these factors puts increasing pressure on leaders to achieve their aims.

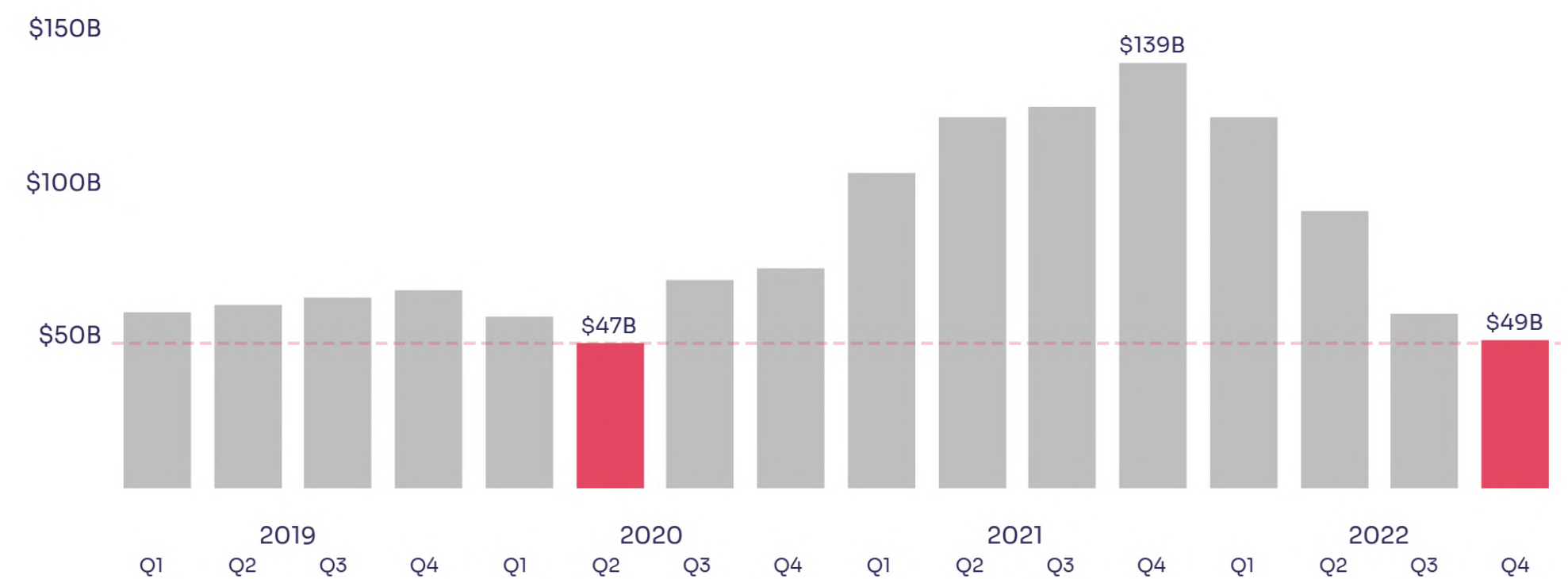
### Global Differences in Funding

The outlook for new startups, though, is not so bleak. While late-stage funding dropped sharply in 2022, and inflated late-stage valuations underwent a correction, early-stage funding remained largely stable. VC investors are turning their attention toward providing seed funding as they look for innovation in new startups. Globally, although fewer startups were funded in 2022, they received larger sums. The early-stage deal count decreased more than the deal amount from 2021 to

### Q4 2022 Total VC Funding Was Almost on Par With the Lowest Quarter of the Previous Four Years

Global Startup Total VC Funding Deal Amount (\$B)

Source: Startup Genome, 2023

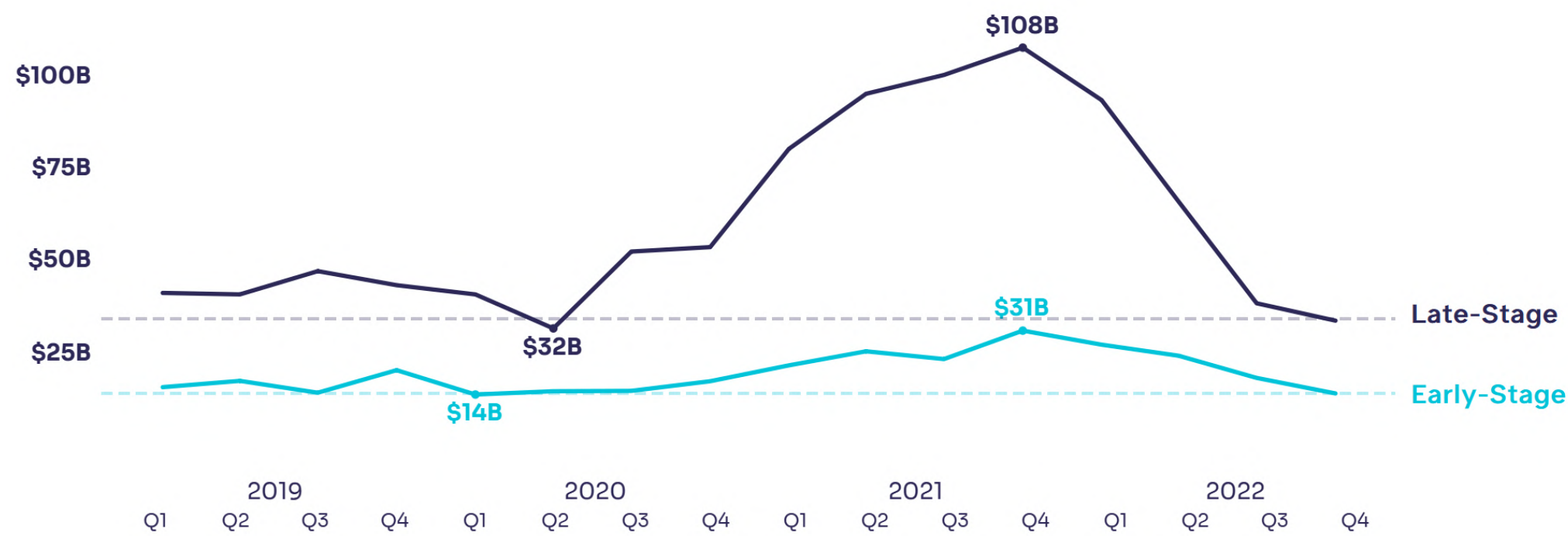




## Both Early-Stage and Late-Stage Funding Have Seen a Correction Since Q4 2021

Global Startup Funding Deal Amount (\$B) by Stage

Source: Startup Genome, 2023



2022 — there was an 18% decline in the number of early-stage deals, but a 17% decline in deal amount, meaning that the average deal size grew 2% from 2021 to 2022, from \$4,400 to \$4,500.

However, it's a different story for North America, which saw a 26% decline in early-stage funding, the steepest drop of any region. Home to a large percentage of mature ecosystems, investors here chose to continue funding established companies rather than take a risk with new startups.

Latin America, one of the harder-hit regions, experienced a 62% drop in total VC funding from 2021 to 2022,

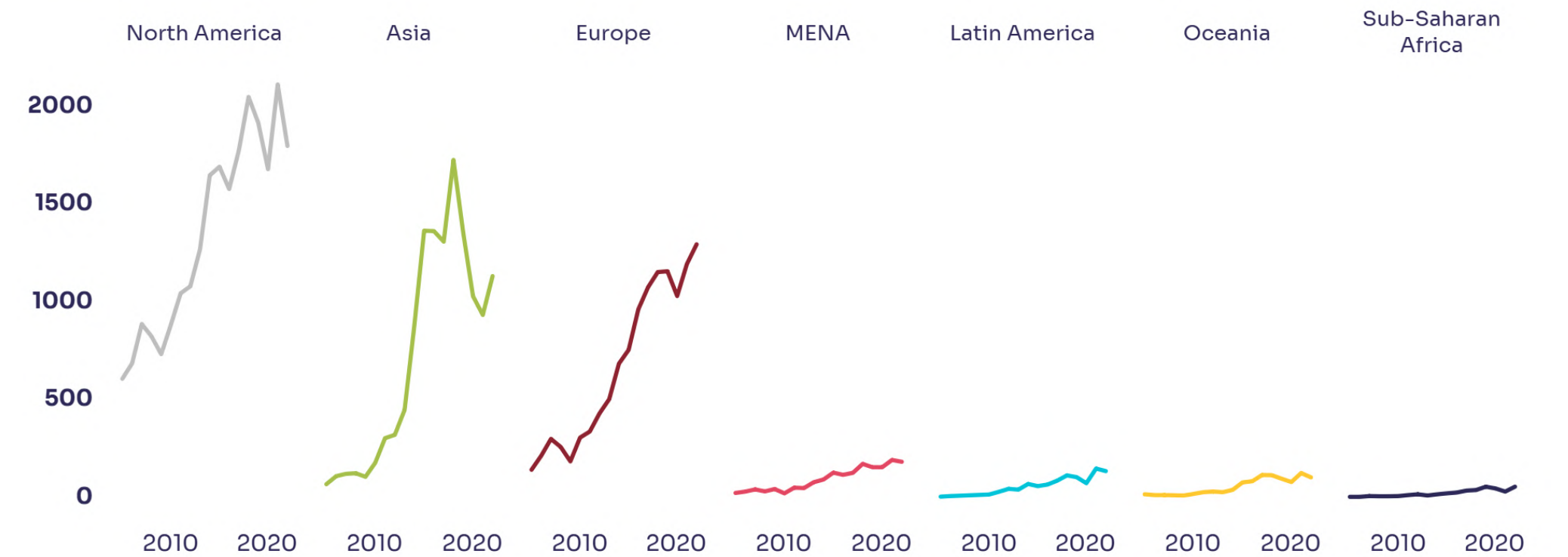
coupled with a 54% drop in total deal count and a 72% drop in deal amount for Series B+ funding. The number of exits over \$50 million plunged to a mere 7% of the 2021 number, while the deal amount for exits over \$1 billion dropped by over 90%.

Asia has had smoother sailing. While most regions suffered sharp declines in total early-stage funding amount in 2022, Asia barely saw a ripple. The amount of early-stage funding declined by only 1%. Similarly, its 5% decline in early-stage deal count was minor compared to the 18% global average. The number of Series A deals decreased for all regions except Asia,

## While Most Regions Decreased From 2021 to 2022, Europe Achieved a New Record in Series A Deal Count

Series A Funding Deal Count (#) by Region, 2005–2022

Source: Startup Genome, 2023



Europe, and sub-Saharan Africa: in these regions the Series A deal count increased from 2021 to 2022, at rates of 21%, 9%, and 92% respectively.

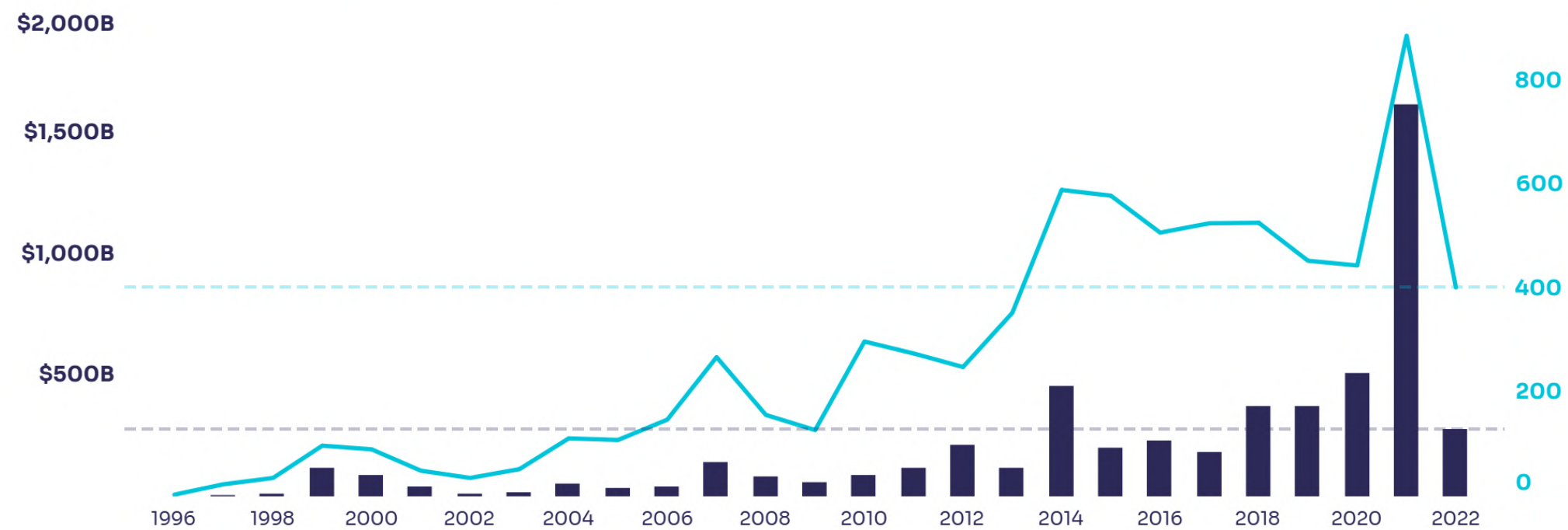


## In 2022, the Number of Exits Over \$50 Million Was the Lowest Since 2013

Exits Over \$50M, Deal Count (#) and Amount (\$B)

Source: Startup Genome, 2023

■ Exit Amount (\$B) Over \$50M    ■ Exit Count (#) Over \$50M

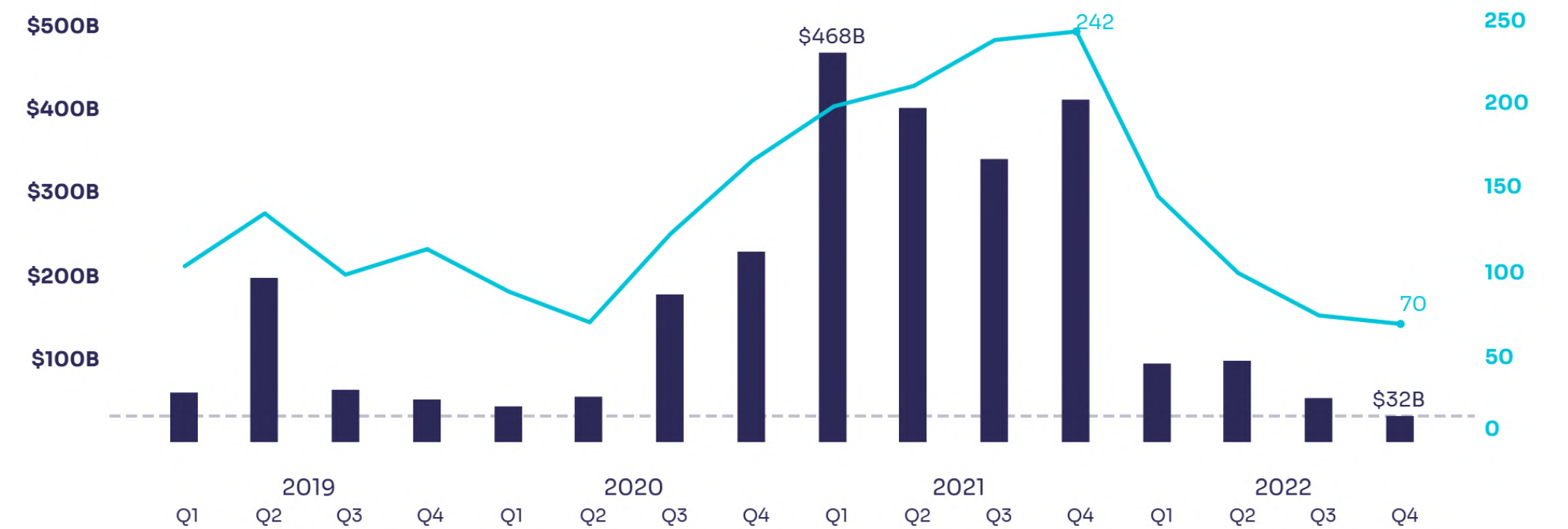


## In 2022, Exits Over \$50 Million Fell Below Pre-COVID Levels

Exits Over \$50M, Deal Count and Amount (\$B)

Source: Startup Genome, 2023

■ Exit Amount (\$B) Over \$50M    ■ Exit Count (#) Over \$50M



There was also a significant drop in global exits in 2022. The biggest tech exit of the year was **Miami-based MSP Recovery's** \$32.6 billion IPO, which pales in comparison to 2021's biggest exit, which was nearly five times larger (**Beijing-based Kuaishou's** \$150 billion IPO).

A dramatic decrease in the count of exits over \$50 million and their overall amount began in Q4 2021 and continued into the following year to the extent that the figure for Q4 2022 was below pre-COVID levels. Latin America was

the hardest hit region, with exits in 2022 valued at only 7% of its 2021 figure. MENA, meanwhile, was the least affected region, having retained 84% of its 2021 value. Exits over \$1 billion collapsed to pre-COVID levels for both deal count and amount. The most affected regions in terms of deal count were Europe and North America, the regions with the highest number of exits. The decline in deal amount was steepest in Latin America and Asia, whereas the deal count in MENA rose 3%.

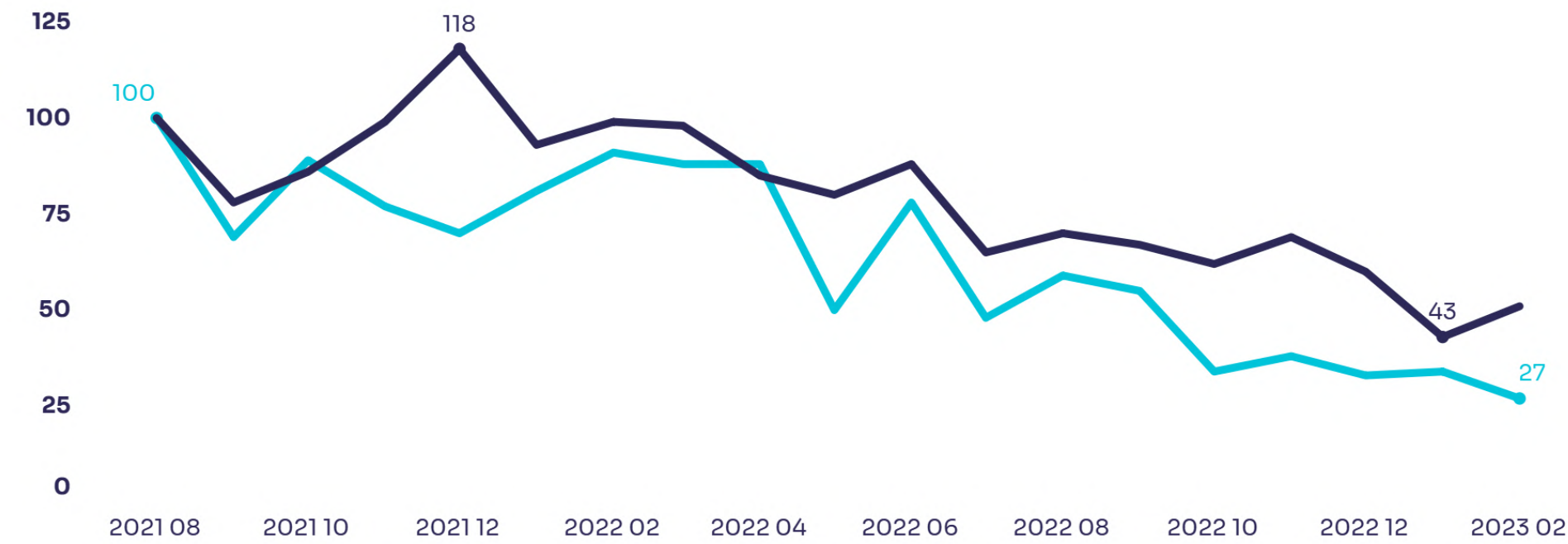


## Silicon Valley Contracted by 73% For Series A Deal Count, Above the Global Average

Silicon Valley vs Global Series A Deal Count (#)

Source: Startup Genome, 2023

■ Series A (Global - w/o S.V.) ■ Series A (Silicon Valley)



**Silicon Valley** was no exception. From a monthly peak reached in August 2021, the Silicon Valley Series A deal count began a decline that continued into Q1 2023 (the most recent confirmed numbers at the time of writing). In February 2023, it reached 27% of the August 2021 number, while the Series B+ deal count reached 36%. Silicon Valley's deal amount contracted by 75% for Series A and 73% for Series B+ in the same period, more than the global (excluding Silicon Valley) average decline of 69% for Series A and 72% for Series B+.

In mid-2023, Silicon Valley is undergoing a rebirth moment with signs of renewal including **Atomic Semi** bringing semiconductors back to the ecosystem and the constellation of AI startups emerging from the region, in part driven by **OpenAI's** recent success. However, Silicon Valley as the cutting-edge frontier has dissipated and diffused across the U.S. and the world, thanks in part to the very success of the technologies that came out of its previous cycle allowing remote work, outsourcing, and automation.

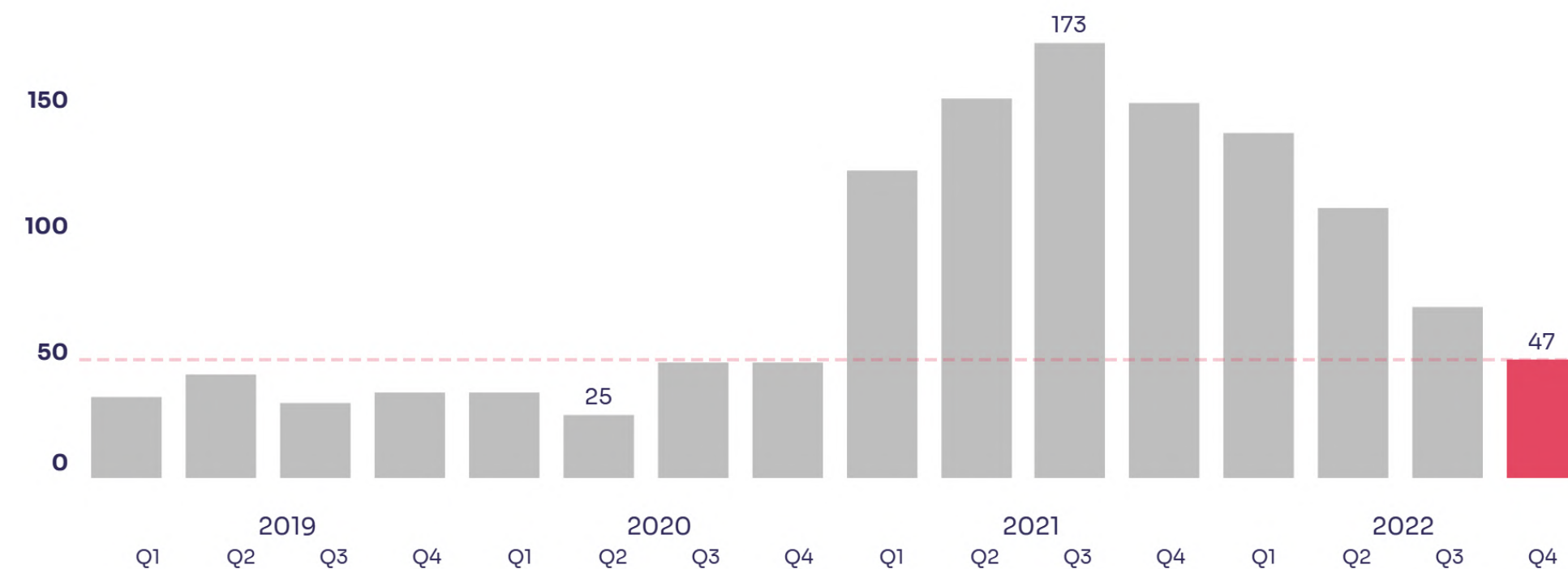
A dramatic decrease in the count of exits over \$50 million and their overall amount began in Q4 2021 and continued into the following year to the extent that the figure for Q4 2022 was below pre-COVID levels.



## 2022's Downturn Was Also Evidenced by the Declining Number of New Unicorns

Global Number of Unicorns Based on Join Date by Quarter

Source: Startup Genome, 2023



**Find the right supportive ecosystem or mentorships. Community support is incredibly important. Going at it alone is really, really challenging and having a sounding board and community support is a must”**

**Andrea Johnston**, Assistant Deputy Minister, Innovation Canada, ISED

### Fewer Unicorns Are Being Produced

2022's downturn was also evidenced by the dwindling number of unicorns, a global decline of 40% from 2021's 595 to 359. The largest declines were in Asia and North America (-46% and -45%, respectively). North America's share of unicorns declined from 58% to 52%, while Europe took up the slack, increasing its share from 14%

to 20%. **Beijing** struggled in 2022. Each year from 2015–2020 it produced 10 or more unicorns; that number shot up to 19 in 2021, but likely due to COVID lockdowns, fell to three in 2022.

A number of ecosystems defied the downward trend, producing more unicorns in 2022 than in the previous year. Included in this group were: **Shenzhen** +1 (from 6 to 7) and **Montreal** +1 (from 3 to 4). **Zurich** and **Milan** both produced zero unicorns in 2021 but three each in 2022.

What's more, seven ecosystems produced their first tech unicorn in 2022: three in Europe (**Payhawk** from Sofia, **Rimac** from Zagreb, and **Rohlik Group** from Prague), one in North America (**EnergyX** from San Juan, Puerto Rico), one in Asia (**Open** from Kerala), one in MENA (**Yassir** from Algiers), and one in sub-Saharan Africa (**Sun King** from **Nairobi**).

The usual players of Silicon Valley, New York, Beijing, and Shanghai may remain at the top of the rankings,

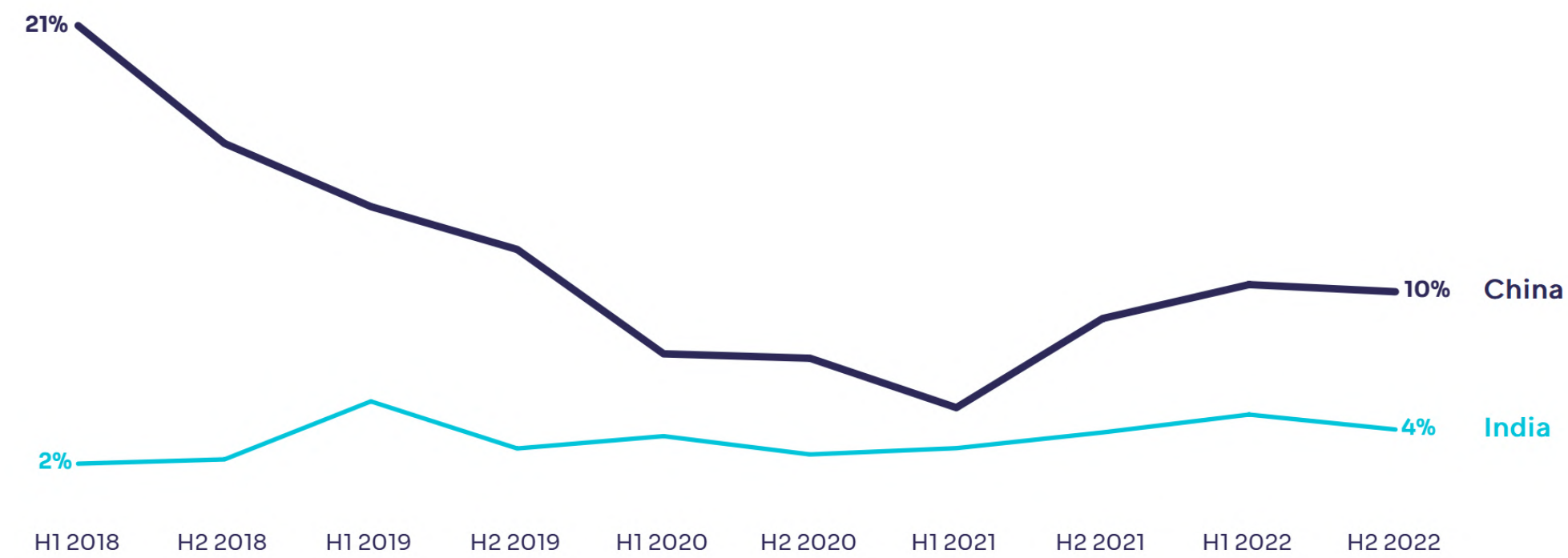
but many smaller ecosystems are making headway. Previously reliant on connections to bigger ecosystems, these smaller players are increasingly becoming globally connected to each other, able to form their own nodes without the connection to the massive hubs.



## Over Five Years, China's Share of Series A Deals Has Halved, While India's Has Doubled

Series A Deal Count Global Market Share of China and India

Source: Startup Genome, 2023



### China Slowing, India Gaining Ground

The **GSER 2022** focused on the decline of China's dominance and unbridled growth of India. This trend broadly continues: Eight Chinese ecosystems have fallen in the rankings from last year, including the leading hubs of Beijing, Shanghai, and Shenzhen, while seven Indian ecosystems moved up, including Delhi and Bengaluru-Karnataka in the top 30 and Mumbai tied at #31.

India recently surpassed China as the world's most populous country. That fact, coupled with its high

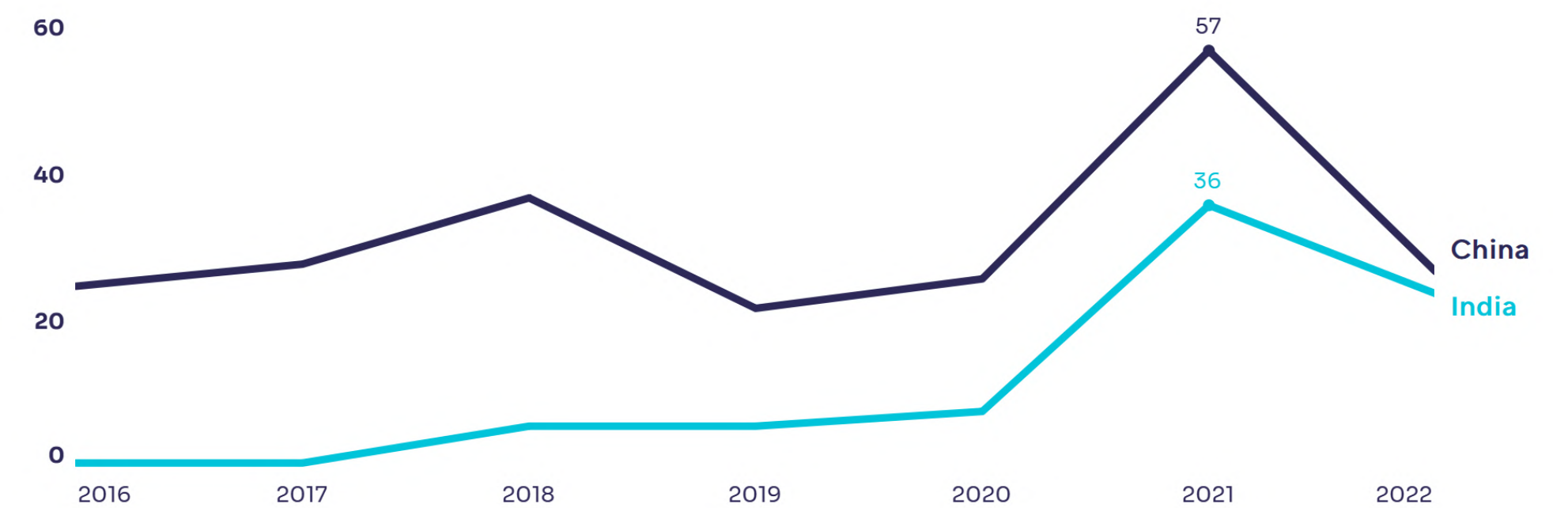
percentage of working-age population — currently over 1.4 billion and growing — has created the world's largest talent pool.

Additionally, the Indian government has massively invested in infrastructure and expedited growth and investment-oriented policies and reforms. This has transformed the nation into a major manufacturing and technology hub. The 2023 national budget only seeks to build on this growth, with several inclusions intended to boost entrepreneurial success, such as efforts to improve the ease of doing business through the simplification of the KYC process and the introduction of a unified filing

## In 2022, the Gap in India and China's Unicorn Production Narrowed to Just Three

Number of Unicorns Created by Year

Source: Startup Genome, 2023



process. The budget also includes tax benefits for eligible startups and plans to set up 30 Skill India International Centres across the nation.

Yet, despite the overall positive story, even India is experiencing a slowdown. In 2021, India minted a record 36 unicorns while raising a total of \$72 billion in exits. In 2022, the number of unicorns was down 33% to 24, and exits declined to \$5.5 billion.

China has suffered through restrictive policies for extended periods, and its growth is slower than it was prior to the pandemic. In the period 2018–2020, China produced an average of 28 unicorns per year,

dwarfing India's yearly average of seven. In 2021, that gap decreased, though China still produced 21 more unicorns (57) than India (36). In 2022, the combination of China slowing and India's growth saw the nations close their previously wide gap in unicorn production to just three (27 vs 24).



# Ecosystem Lifecycle Analysis

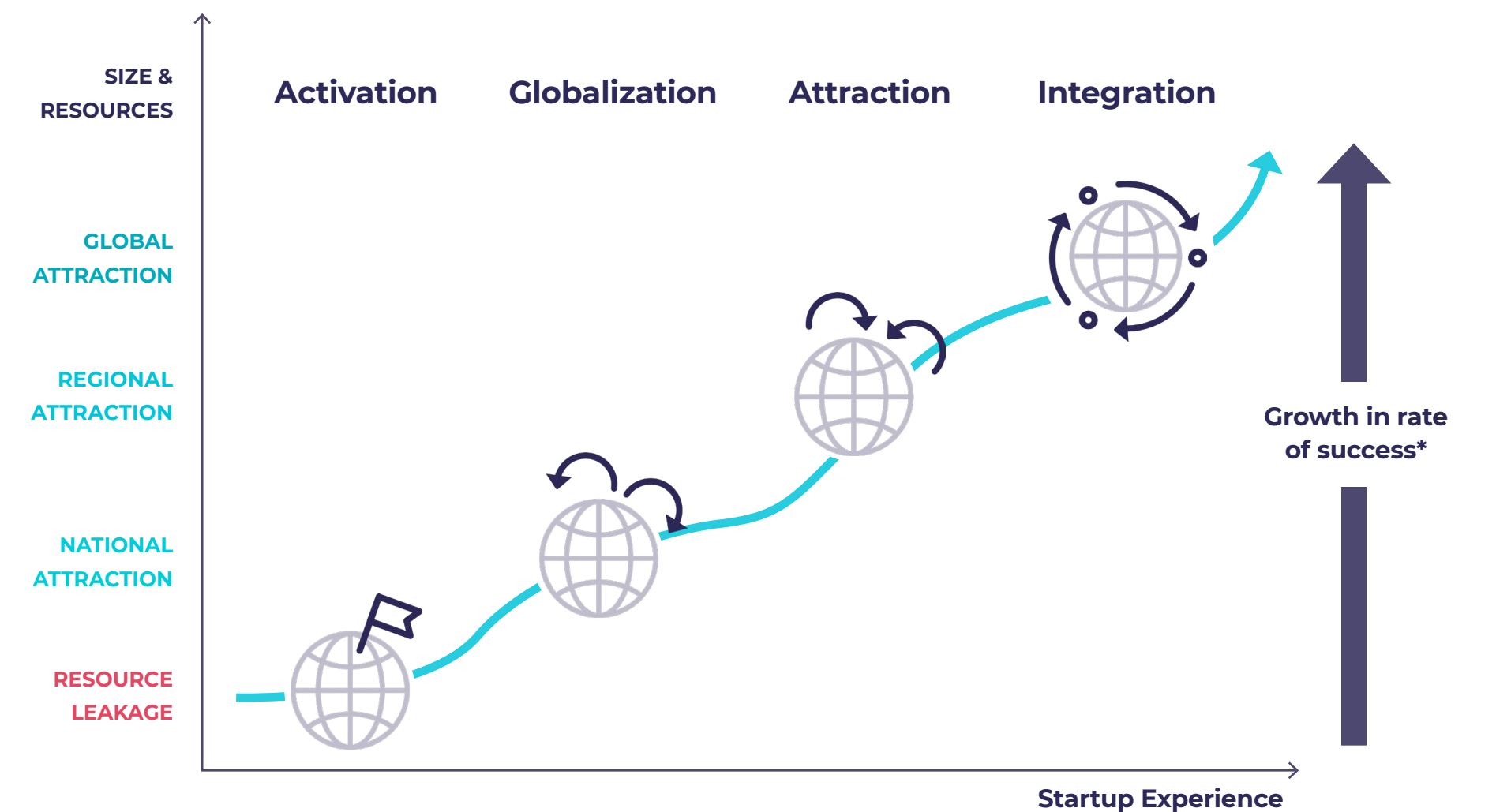
The evolution of startup ecosystems is a complex and multifaceted process. Like their ecological analogs, they evolve through different phases. Each phase has different features, resource characteristics, and needs. In Startup Genome's taxonomy, startup ecosystems go through four phases of development: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

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

**Ecosystems that don't sync their initiatives with their lifecycle phase may be doing the right thing but at the wrong time, inadvertently wasting time and money for no improvement in the startup ecosystem.**

## Ecosystem Lifecycle Model

Source: Startup Genome, 2023



\*As ecosystems advance across the lifecycle, they have higher rates of success, i.e. a higher proportion of the ecosystem receives funding, becomes scaleups, and has successful exits.



## Activation

An Activation-phase ecosystem is characterized by limited startup experience and low startup output (<1,000 startups), where the main focus is to grow startup output (or the number of startups locally), early-stage funding (Seed and Series A rounds) and a more connected local community. It is the leading ecosystem in the nation and sometimes, in the region. Examples include **Manila**, **Calgary**, and **Bahrain**.

The main challenge of Activation-phase ecosystems is that they experience resource leakages (startups, talent, capital) to later-phase ecosystems nationally and globally. This makes it very challenging to grow the ecosystem to the Globalization phase without important investments by local governments and community leaders.

Startups in ecosystems that are different from or geographically distant to innovation markets (i.e. those in the U.S., Western Europe, and parts of Southeast Asia) often experience accelerated growth by solving local problems and adapting global innovations to the local reality. **Kuala Lumpur**-founded **Grab** is a great example, having built on Uber's model but solved local payment issues that made it very difficult for Uber to enter the Malaysian market, with Grab later becoming a payment leader across Southeast Asia and setting up headquarters in Singapore.

### CHARACTERISTICS

### OBJECTIVE

#### Ecosystem Leadership

Extremely important but challenged by accelerating ecosystem growth.

To activate entrepreneurially minded people and grow a more connected local community that helps each other.

#### Community

The local system is the main focus at the early Activation phase. Quality of community is measured by startup experience and Local Connectedness, while performance is captured by startup output and output growth index.

Focus on growing and building a large and more connected community by activating local entrepreneurs, talent, and investors.

#### Local Size

<1,000 startups  
Usually fast-growing

Build on local economic strengths and develop focused programs to accelerate ecosystem growth and develop pockets of success that lead to sizable exits.

#### Global Relationship

The global system slowly becomes increasingly important in the late Activation phase. To thrive at this point, the community needs to increasingly connect with and learn from the global startup community, measured by Startup Genome as Global Connectedness.

Empower the community to tap into global sources of knowledge to better develop leading business models, achieve global market reach, and accelerate to exits. Exits help recycle resources in the ecosystem, furthering its growth.

#### Funding

Most and especially the best startups raise funding outside the ecosystem, or receive amounts that are too small to build success. The investor community is relatively inexperienced and often lacks well-structured angel groups and highly funded VC firms.

Support the formation and operations of angel groups to increase deal flow and expertise, and inject capital in a way that de-risks the asset class. Inject capital in VC firms to support the development of expertise and returns. Develop one or two dominant startup sub-sectors in the ecosystem, using them to emerge as a regional leader in a targeted area and lead to ecosystem growth.

#### Startup Support

Limited startup experience (experienced investors, advisors, mentors, and community behaviors that support startup success).

Continue to support founders so they know how to become investment ready.



## Globalization

A Globalization-phase ecosystem is characterized by an output of more than 1,000 startups, increased startup experience in the ecosystem, and a series of exits that trigger national resource attraction. These ecosystems are national leaders, or sometimes regional leaders. Examples include Melbourne, Miami, and Helsinki.

Triggers to this phase include increased Startup Experience (the accumulation of knowledge and resources), leading to the production of a series of regionally impressive exits, usually greater than \$100 million.

### CHARACTERISTICS

### OBJECTIVE

#### Ecosystem Leadership

Extremely important but under stress by accelerating growth and successful innovation centers.

To achieve a series of exits that could potentially lead to national resource attraction and to urgently address remaining success-factor gaps.

#### Community

Has exits over \$100 million, which attracts resources. More focus on accumulating global knowledge.

Inject global know-how technologies in the ecosystem and accelerate big exits.

#### Local Size

1,000 to 3,000 startups

Exits over \$100 million that attract resources, and reduce resource leakage to other leading ecosystems

#### Global Relationship

The community can tap into global sources of knowledge to develop better leading business models, achieve global market reach, and accelerate the path to exits.

Focus on increasing Global Connectedness with founders from the top ecosystems, and thus attracting resources (entrepreneurs, talent, investors) from earlier-phase ecosystems.

#### Funding

Lack of formalized and successful angel groups and experienced VC investor community. Deep seed and VC funding gaps that require startups to seek funding elsewhere, especially large sums.

Continue to de-risk asset classes and to form and strengthen angel groups to ensure there are more than one strong one. Inject capital in VC firms and support the development of expertise and returns, including through the development of relationships with VCs in top ecosystems.

#### Startup Support

Needed resources are available, but the ecosystem still leaks resources to top ecosystems.

Support startups to increase their global market reach. By focusing on global factors such as Global Connectedness, an ecosystem can more quickly realize its scaleup potential.



## Attraction

An Attraction-phase ecosystem is characterized by usually more than 3,000 startups, where the main objective is to drive global resource attraction to significantly expand the size of the ecosystem and address resource gaps. Ecosystems in this phase are usually regional leaders (or nationally leading if they're in the United States). Examples include Singapore, Amsterdam, Berlin, and Chicago.

Triggers to this phase include a series of globally impressive events such as the creation of unicorns and \$1 billion+ exits.

	CHARACTERISTICS	OBJECTIVE
<b>Ecosystem Leadership</b>	Efforts leading to \$1 billion+ exits and unicorns have helped to elevate the ecosystem to the global stage and made the world its pool of resources.	Expand, fill in resource gaps, and increase Global Connectedness by enabling and taking advantage of global resource attraction.
<b>Community</b>	The ecosystem has a highly supportive local community that fuels growth and innovation.	Filling in the gaps with more abundant resources and a higher level of global connectedness.
<b>Local Size</b>	> 3,000 startups	Using global resource attraction to significantly expand the size of the ecosystem.
<b>Global Relationship</b>	The ecosystem attracts resources from top startup ecosystems allowing itself to stand apart on the global stage.	Removing barriers to immigration and directing attraction through well designed policy programs.
<b>Funding</b>	Strong availability of venture capital and highly experienced investors.	Using the presence of available resources to fill the gaps in funding and produce a rhythm of \$1 billion+ startups
<b>Startup Support</b>	Presence of a startup-nurturing, support-enabled environment that fosters the growth and scaling of startups.	Boosting talent attraction from top global ecosystems and ensuring the presence of efficient policies to ensure startup support and ecosystem growth.



## Integration

An Integration-phase ecosystem is characterized by more than 5,000 startups, with the ecosystem integrating into the global fabric of knowledge, producing global business models, and achieving higher global market reach. Ecosystems in this phase are globally leading and are considered one of the leading sectors of value creation for the local economy. Examples include Silicon Valley, New York City, and London.

Integration Phase ecosystems should prioritize deeper alignment with the economic, social, and regulatory fabric of the economy to support large-scale innovation and equitable outcomes.

Triggers to this ecosystem phase include self-sustainable Global Connectedness levels and extremely high global resource attraction.

### CHARACTERISTICS

### OBJECTIVE

**Ecosystem Leadership**

Production of a high and self sustainable degree of global connectedness, able to produce globally leading business models.

Integrating the ecosystem within the global, national, and local flows of resources and knowledge inside and outside of the startup ecosystem.

**Community**

Presence of a community that keeps its startups integrated in the global fabric of knowledge.

Spreading the benefits (e.g. culture, capital innovation, source of competitiveness) to other sectors of the economy and parts of the nation.

**Local Size**

> 5,000

Using global resource attraction to significantly expand the size of the ecosystem.

**Global Relationship**

Global resource attraction, producing a high degree of Global Connectedness and flow of knowledge.

Integrate the ecosystem within global, national, and local flows of resources and knowledge, both inside and outside of the tech sector.

**Funding**

Local investors have the expertise and capital to fund startups better than they are elsewhere, and investors and startups come from other ecosystems to participate

Fuel growth and fill gaps by amplifying late-stage funding in the ecosystem.

**Startup Support**

Support including mentorship, networking, and funding is prevalent in the ecosystem.

Ensure corporate involvement and scaleup programs for existing startups.





**Stephan Keuster**

Head of Ecosystem Strategy, Startup Genome

## Ecosystem Support Organizations Portfolio Management: Are We Prepared for the Future?

Tech ecosystems have shown sustained growth at a speed exponentially faster than in any traditional industry sector. With tech ecosystems maturing all over the globe and with many more cities and regions having highly functional tech entrepreneur communities,

support requirements are changing at pace. It is imperative for ecosystem leaders and policymakers to adapt their development strategies and the support mechanisms that they make available to budding entrepreneurs accordingly. Ecosystem Support Organizations (ESOs) have made great contributions to ecosystem development; however, considering the pace of change it is critical to ask whether an existing ESO portfolio reflects entrepreneurs' support needs.

### Largely Focused on Early-Stage Support

Research that we conducted in 2022 showed that current ESO programs are focused primarily on early-stage ecosystems — a staggering 95% of all spending is directed here — and the needs of entrepreneurs starting their businesses. However, with many ecosystems showing significant growth, it is essential to understand development trajectory and the respective implications for founder support needs. Only very few ecosystems globally provide the support needed for entrepreneurs to navigate the critical growth and global expansion phases. Scenario-modeling can help to understand ecosystem growth and the changing composition of the startup community and its evolving support requirements.

It is essential to identify key resource and success factor gaps in order to address them. Ecosystem leaders

need to clearly understand what support systems exist and what specific resource gaps remain, be they in funding, access to talent, or a lack of collaboration and Local Connectedness. The ESO portfolio needs to address these gaps, and planning needs to be informed by a deep, data-driven assessment of the existing entrepreneurial ecosystem.

### Adapting to the Needs of Deep Tech

Deep Tech has become the major driver of ecosystem growth, and founders working in this area have significantly different requirements from previous generations. Support programs in these new sectors require higher levels of technical depth and expertise, and development and investment cycles tend to be significantly longer. It is crucial that leaders appreciate the opportunities in Deep Tech and adjust support programs accordingly, in terms of both programmatic design as well as recognition of longer-term funding requirements.

With the rise of Deep Tech, we also see specialist ESO programs demonstrating higher participant attraction, satisfaction, and outcomes, e.g., with specialist programs aimed at individual sectors such as Agriculture or Bioscience helping to build bridges and effective collaboration between university researchers and a dynamic entrepreneurship community. Startup

community leaders need to provide specializations from incubation to later-stage scaling to more effectively support the complex technical, regulatory, and business model-related requirements of these new ventures.

### Creating New ESO Funding Models

In today's economic climate, financial sustainability is critical for ESO programs and the overall program portfolio. Slower economies and reduced tax revenues put pressure on public funding. Furthermore, political leadership and budgets are subject to periodic change, resulting in disruption to ESO funding and performance. Traditional sources of program income, particularly those related to traditional real estate models, have become less attractive since the pandemic. ESOs need to be prepared to pivot accordingly and to develop different and more diversified income streams.

In our opinion, it is a critical task for ecosystem leaders and policymakers involved in ecosystem development to review and to develop ESO portfolios regularly, to track individual program performance, and to drive ESO strategy and change management. Doing so will ensure that we are prepared for the future and can continue to support the ecosystem and our entrepreneurs as they continue to grow and to evolve.



# Global Startup Ecosystem Ranking 2023

## (Top 30 + Runners-Up)

**This ranking identifies the top 30 global ecosystems and 10 runners-up. These ecosystems are more mature than other ecosystems globally, featuring a higher number of exits over \$50 million and more funding activity.**

In previous years, the runners-up have been grouped as tied #31 and tied #36. For 2023 and future reports, we are showing the specific ranking of the runners-up for improved transparency and to allow easier future benchmarking. For more information about how this ranking is created, please see the [Methodology](#) section.

### → Key Findings

- The top three ecosystems have maintained their positions from 2020, with Silicon Valley remaining at the top, followed by New York City and London tied at #2.
- Boston and Beijing have both slipped out of the top five to #6 and #7 respectively, losing two positions each. This has paved the way for Los Angeles to rise to #4 and Tel Aviv to #5, both gaining two spots.
- Singapore has entered the top 10 for the first time, moving up an impressive 10 places to #8 from #18 in the GSER 2022, the biggest improvement in the rankings.
- Miami has also made impressive progress, making it into the top 30 ecosystems at #23, an improvement of 10 positions from last year.
- All major Chinese ecosystems dropped in the overall rankings: Shenzhen moved down 12 places, Beijing two, and Shanghai one, now standing at #35, #7, and #9 respectively.
- Indian ecosystems continue to rise, with Mumbai leading the way by moving up five places to tied #31. Bengaluru-Karnataka and Delhi both moved up two places, to #20 and #24 respectively.
- Melbourne has moved up an impressive six places from last year, to reach #33.
- Zurich has made remarkable progress and risen 10 places from last year, entering the top 30 + runners-up at #36, and making the biggest year-on-year improvement in Europe.

**Singapore has entered the top 10 for the first time, moving up an impressive 10 places to #8 from #18, the biggest improvement in the rankings.**



# Global Startup Ecosystem Ranking 2023

(Top 30 + Runners-Up)

ECOSYSTEMS	OVERALL RANKING	PERFORMANCE	FUNDING	CONNECTEDNESS	MARKET REACH	KNOWLEDGE	TALENT + EXPERIENCE
SILICON VALLEY	1	10	10	10	10	9	10
NEW YORK CITY	2 (tied)	10	10	10	10	6	10
LONDON	2 (tied)	9	10	10	10	6	10
LOS ANGELES	4	10	10	8	9	6	9
TEL AVIV	5	9	9	9	10	5	8
BOSTON	6	9	9	8	9	6	10
BEIJING	7	10	4	3	8	10	10
SINGAPORE	8	7	9	9	9	1	7
SHANGHAI	9	9	3	1	6	10	9
SEATTLE	10	8	6	4	8	7	8
WASHINGTON, D.C.	11	8	5	2	9	3	8
SEOUL	12	7	8	7	1	8	7
BERLIN	13	6	8	9	5	1	6
AMSTERDAM-DELTA	14	6	7	10	6	1	6
TOKYO	15	4	7	7	1	8	9
SAN DIEGO	16	8	2	1	8	7	7
TORONTO-WATERLOO	17	5	8	8	5	2	6
PARIS	18	1	9	9	7	1	8
CHICAGO	19	7	5	6	6	1	7
SYDNEY	20 (tied)	5	7	7	5	1	5

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

**IMPROVEMENT FROM GSER 2022**

- +2
- +2
- +10
- +3

CONTD.





ECOSYSTEMS	OVERALL RANKING	PERFORMANCE	FUNDING	CONNECTEDNESS	MARKET REACH	KNOWLEDGE	TALENT + EXPERIENCE
BENGALURU-KARNATAKA	20 (tied)	4	8	8	1	7	3
STOCKHOLM	22	5	5	1	7	2	5
MIAMI	23	7	6	1	7	1	3
DELHI	24	8	7	2	1	1	3
AUSTIN	25	2	6	5	3	5	4
SÃO PAULO	26	6	6	3	1	1	2
PHILADELPHIA	27	4	4	1	7	1	4
DENVER-BOULDER	28	3	4	1	2	4	4
ATLANTA	29	1	4	2	5	1	5
VANCOUVER	30	3	3	3	1	1	2
MUMBAI	31 (tied)	6	3	1	1	1	1
SALT LAKE-PROVO	31 (tied)	5	1	1	8	1	3
MELBOURNE	33	1	1	5	1	1	4
DALLAS	34	2	1	1	6	3	2
SHENZHEN	35	1	1	1	1	10	7
ZURICH	36	1	5	6	1	2	1
MUNICH	37	1	2	7	1	5	2
HANGZHOU	38	4	1	1	1	10	5
GREATER HELSINKI	39	3	1	1	1	1	1
MONTREAL	40	1	1	1	1	1	1

RUNNERS-UP

IMPROVEMENT FROM GSER 2022

- +2
- +10
- +2
- +2
- +2
- +5
- +6
- +10



## Global Leaders

North America remains the globally leading region in terms of the number of tech startup ecosystems in the ranking (16 of the top 30 with three additional entries in the 10 runners-up). The top three global ecosystems remain the same from 2020, with Silicon Valley at #1, followed by New York City and London tied at #2. However, Boston and Beijing have dropped out of the top five, losing two positions each, and are replaced by Los Angeles at #4 and Tel Aviv at #5. These top five account for a collective \$4 trillion in Ecosystem Value, 53% of the accumulated total of the top 30 ecosystems, while the remaining 25 are collectively worth \$3.6 trillion.

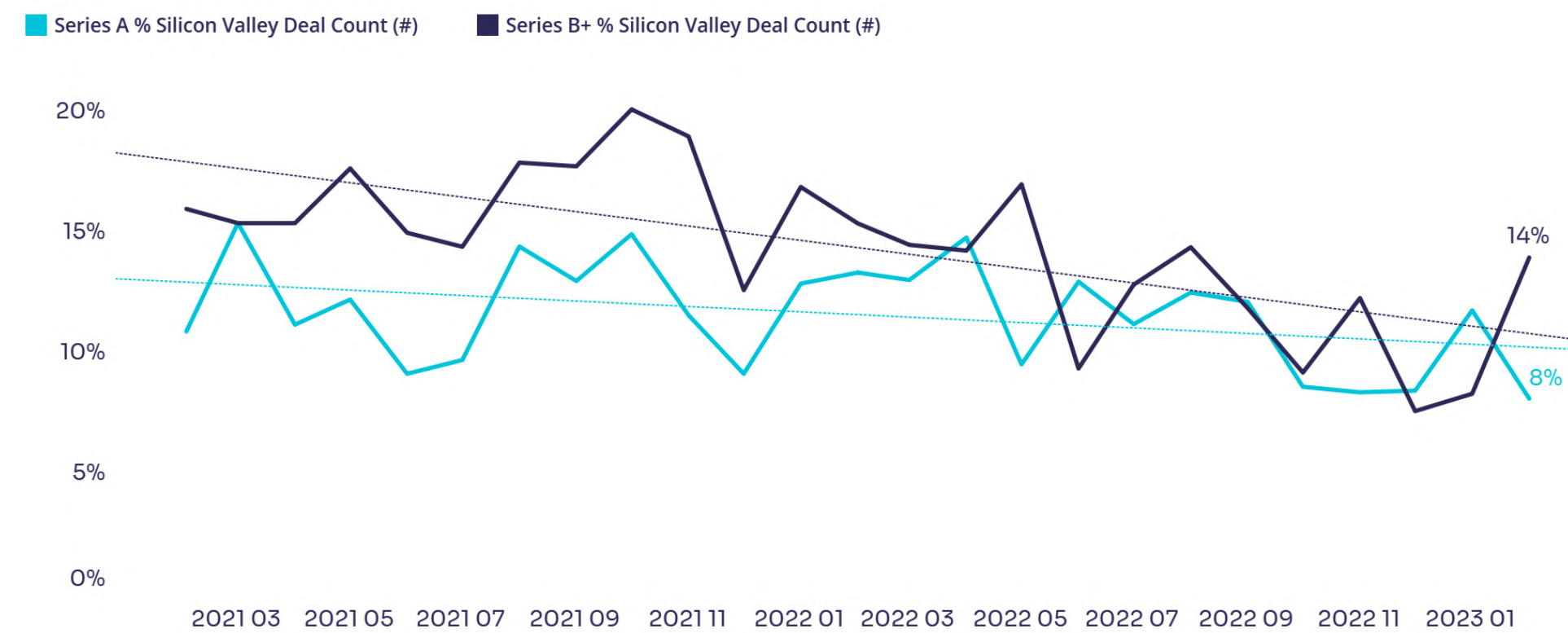
Silicon Valley accounts for 31% of the total value within the top 30 ecosystems. But even the established global leader has taken a hit in recent months. Since Q3 2021, the count of Series A deals has continuously dwindled each month, down to just 27% of what it was in August 2021 by February 2023. The Series B+ deal count hit a low in December 2022, at just 25% of the number in August 2021, but has since made some recovery.

London remains Europe's leading tech startup ecosystem. The region has seen an upswing in exits over \$50 million, with several high-value exits over \$1 billion, including Fintech **Wise** (\$12.2 billion), **Deliveroo** (\$10.5 billion), and **Oxford Nanopore Technologies** (\$4.6 billion). In addition, Europe's largest Fintech unicorn, **Revolut**, is based in London, boasting a valuation of \$33 billion, while **SumUp** and **Rapyd** are valued at \$9 billion and \$8.7 billion respectively.

## Silicon Valley's Share of Both Series A and Series B+ Deal Count Has Declined

Silicon Valley Share of Series A and Series B+ Deal Count (#)

Source: Startup Genome, 2023



New York City has witnessed a 42% increase in exits above \$1 billion since the GSER 2022, including Healthtech **Roivant's** Q2 2021 \$7.3 billion exit, and now boasts 126 unicorns, with 37 added in 2022. Digital asset exchange **Gemini** is the Big Apple's highest-valued tech unicorn at \$7.1 billion, contributing significantly to the 71% increase in Ecosystem Value from July 1, 2019–December 31, 2021 to July 1, 2020–December 31, 2022.

Los Angeles moved up two positions to make it into the top five, at #4. It saw a 29% increase in exits over \$50 million and an impressive 110% increase in exits over \$1 billion, **GoodRx's** \$12.7 billion valued IPO being the top

exit. The number of LA unicorns has increased by 21, to 44. **SpaceX** is the top-valued unicorn at \$100 billion, contributing to a 40% increase in Ecosystem Value.

**Tel Aviv** has also moved up two positions, making it a top five global ecosystems at #5. It saw a sharp increase in exits over \$1 billion, with Fintech **Pagaya** having the highest exit in an IPO valued at \$8.5 billion. Tel Aviv also saw a 33-unicorn surge, increasing the total to 57, with Blockchain company **Fireblocks** as the highest-valued unicorn at \$8.5 billion. The overall Ecosystem Value grew to \$235 billion — up 100% from July 1, 2019–December 31, 2021 to July 1, 2020–December 31, 2022.

## Hot Spots & Rising Ecosystems

**Singapore** has entered the top 10 ecosystems for the first time, moving up an impressive 10 places from #18 last year. The ecosystem increased 100% in the count of exits over \$1 billion to a total of four. **Grab** was the highest valued exit at \$40 billion. The number of unicorns increased from 11 to 18, including **Coda Payments**, which raised a \$690 million Series C round in April 2022. The ecosystem also experienced a 33% increase in the count of early-stage deals.

**Melbourne** has also seen notable progress, climbing six places from the GSER 2022 to #33. A 43% increase in Ecosystem Value comes thanks in part to increased exits over \$50 million and above \$1 billion. The unicorn count increased by one to three total, with Fintech company **Airwallex** the highest valued at \$5.5 billion.

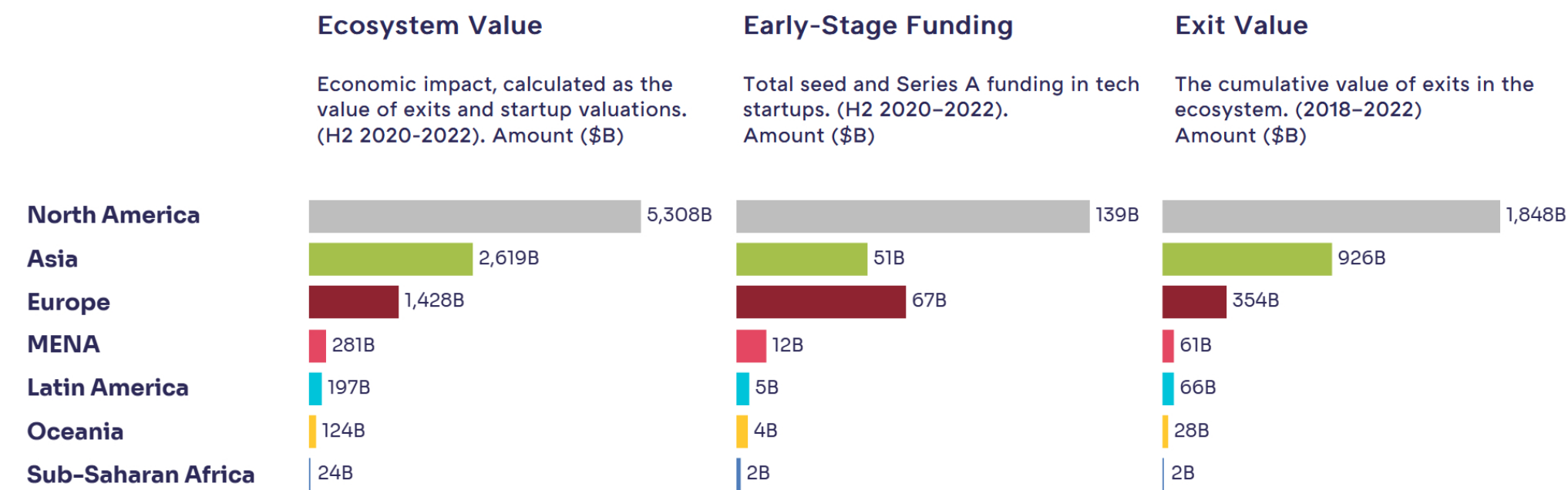
In **Miami**, the number of \$1 billion+ exits increased from two to five from the GSER 2022, and the number of \$50 million+ exits from 11 to 19. In large part due to **MSP Recovery's** \$32 billion IPO/reverse merger, Ecosystem Value increased by 160%. The count of early-stage deals also increased by 64.3% and the number of unicorns from five to seven, all helping take Miami up an impressive 10 places from the GSER 2022, to #23.

Helping to demonstrate India's increasing strength as a tech startup nation, **Mumbai** has risen five places to #31 since last year (tied with Salt Lake-Provo). Its number of exits over \$50 million increased by 60%, with the highest valued online marketplace **Nykaa's**



## North America and Asia Are Leading in Ecosystem Value and Exit Value, but Europe Ranks Second in Early-Stage Funding

Source: Startup Genome, 2023



2021 IPO at \$7 billion. The number of unicorns has increased from six to 15, contributing to a 57% boost in Ecosystem Value.

**Zurich**'s recent performance has also been impressive, rising a remarkable 10 places from last year and making it to the runners-up, at #36. Exits over \$50 million have grown a massive 300%, with Healthtech **Pharvaris** exiting at a valuation of \$636 million. The unicorn count has increased from two to six, including Blockchain company **Dfinity**, which is valued at \$9.5 billion, all contributing to a nearly 60% increase in Ecosystem Value from July 1, 2019–December 31, 2021 to July 1, 2020–December 31, 2022.

### Cooling Ecosystems

Although still globally leading ecosystems, both **Boston** and **Beijing** have lost their footing at the top of the rankings, each moving down two spots from the GSER 2022. However, it's not all bad news. Boston recorded a 55% increase in exits over \$1 billion and increased its number of unicorns by an impressive 29 since last year's ranking.

Meanwhile, Beijing experienced a decrease in exits both over \$50 million and over \$1 billion, as well as a drop in the number of unicorns from 45 to 36. It continues a trend of Chinese ecosystems slowing discussed in the

**GSER 2022.** In fact, all major Chinese ecosystems have experienced drops in the global ranking, with **Shanghai** moving down one place to #9 and Shenzhen dropping 12 places to #35. However, Shenzhen still boasts 13 unicorns, more than doubling last year's six. Shenzhen's highest-valued unicorn, **UBTECH Robotics**, saw its value increase to \$4.5 billion, contributing to a 52% boost in Ecosystem Value.

In the GSER 2022, **Helsinki** made a huge leap from #59 to #31, but this year has moved down four places to #35. The Finnish ecosystem experienced a 24% increase in early-stage funding deals since the GSER 2022. However, Series A rounds over the last decade have decreased by 24%, which indicates fewer experienced entrepreneurs in the ecosystem and thus impacts the Talent & Experience score.

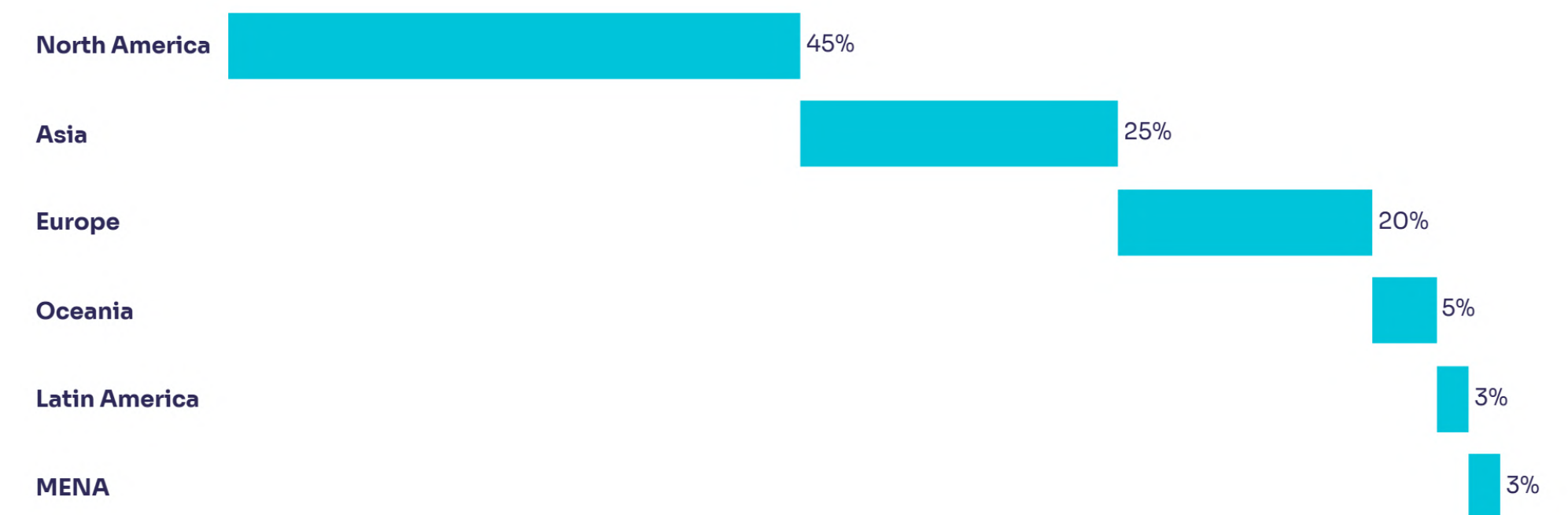
**Tokyo** and **Paris** have each moved down three places in the ranking, landing at #15 and #18 respectively. While Tokyo's exits over \$50 million and count of early-stage funding decreased, affecting overall growth, its Ecosystem Value increased by 6%. The Japanese capital is also now home to six unicorns, with 2022 seeing currency digitization platform **GVE Ltd.** and robotics company **RT Corporation** join the \$1 million+ club. RT Corporation is the highest valued unicorn at \$3.5 billion. Fintech **Paidy** was the biggest exit from Tokyo, at \$2.7 billion.

Paris saw an increase in exits over \$50 million but recorded no exits above \$1 billion. However, the number of unicorns in the French capital increased by 16 to 30, contributing to an increase in Ecosystem Value of 62% and including online marketplace **Back Market**, which is valued at \$5.7 billion.

## North America Is Home to 45% Of the World's Top Ecosystems

Share of the Global Startup Ecosystem Ranking 2023 (Top 30 + Runners-up)

Source: Startup Genome, 2023





# Success Factor Highlights

→ To create the 2023 rankings, we measured six Success Factors in each ecosystem:

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

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

ECOSYSTEM	OVERALL RANK	EXIT	ECOSYSTEM VALUE	STARTUP SUCCESS
SILICON VALLEY	1	10	10	7
NEW YORK CITY	2 (tied)	10	10	5
LONDON	2 (tied)	10	9	9
LOS ANGELES	4	10	10	4
TEL AVIV	5	10	9	8
BOSTON	6	9	9	9
BEIJING	7	9	10	10
SINGAPORE	8	7	7	1
SHANGHAI	9	8	9	10
SEATTLE	10	8	8	5
WASHINGTON, D.C.	11	8	5	6
SEOUL	12	5	8	5
BERLIN	13	6	6	2
AMSTERDAM-DELTA	14	6	5	7
TOKYO	15	4	3	10
SAN DIEGO	16	9	6	8
TORONTO-WATERLOO	17	6	4	3
PARIS	18	1	8	7
CHICAGO	19	7	4	9
SYDNEY	20 (tied)	6	5	5
BENGALURU-KARNATAKA	20 (tied)	4	8	6
STOCKHOLM	22	6	6	5
MIAMI	23	8	6	2
DELHI	24	7	7	6
AUSTIN	25	2	4	3
SÃO PAULO	26	6	7	2
PHILADELPHIA	27	3	4	9
DENVER-BOULDER	28	2	4	5
ATLANTA	29	3	3	1
VANCOUVER	30	4	2	1
MUMBAI	31 (tied)	5	4	9
SALT LAKE-PROVO	31 (tied)	7	3	1
MELBOURNE	33	3	1	7
DALLAS	34	3	2	3
SHENZHEN	35	1	8	9
ZURICH	36	1	1	2
MUNICH	37	1	2	3
HANGZHOU	38	2	6	10
GREATER HELSINKI	39	4	1	6
MONTREAL	40	2	1	9

## Performance

The Performance Success Factor assesses:

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



# Funding

## The Funding Success Factor assesses:

**Access:** A function of early-stage funding volume and growth.

**Quality & Activity:** The number of local investors; those investors' experience (average years investing and exit ratio); and their level of activity (percentage of investors active in 2022 and the number of new investors).

ECOSYSTEM	OVERALL RANK	ACCESS	QUALITY & ACTIVITY
SILICON VALLEY	1	10	10
NEW YORK CITY	2 (tied)	10	10
LONDON	2 (tied)	10	10
LOS ANGELES	4	10	9
TEL AVIV	5	9	8
BOSTON	6	9	9
BEIJING	7	3	10
SINGAPORE	8	9	8
SHANGHAI	9	2	9
SEATTLE	10	7	5
WASHINGTON, D.C.	11	5	5
SEOUL	12	7	8
BERLIN	13	8	7
AMSTERDAM-DELTA	14	7	7
TOKYO	15	6	8
SAN DIEGO	16	3	1
TORONTO-WATERLOO	17	8	7
PARIS	18	9	8
CHICAGO	19	5	7
SYDNEY	20 (tied)	7	6
BENGALURU-KARNATAKA	20 (tied)	8	4
STOCKHOLM	22	5	4
MIAMI	23	7	5
DELHI	24	8	3
AUSTIN	25	6	8
SÃO PAULO	26	7	5
PHILADELPHIA	27	4	2
DENVER-BOULDER	28	5	4
ATLANTA	29	4	2
VANCOUVER	30	4	1
MUMBAI	31 (tied)	3	6
SALT LAKE-PROVO	31 (tied)	1	3
MELBOURNE	33	2	1
DALLAS	34	2	1
SHENZHEN	35	1	6
ZURICH	36	5	5
MUNICH	37	3	4
HANGZHOU	38	1	2
GREATER HELSINKI	39	2	2
MONTREAL	40	1	2



# Market Reach

## The Market Reach Success Factor assesses:

**Local Market Reach:** The size of local markets, proxied as a function of country GDP.

**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).

**Quality:** An indicator of how much policy encourages the commercialization of tangible IP, measured at the country level.

ECOSYSTEM	OVERALL RANK	LOCAL MARKET REACH	GLOBALLY LEADING COMPANIES	QUALITY
SILICON VALLEY	1	10	10	10
NEW YORK CITY	2 (tied)	10	9	10
LONDON	2 (tied)	5	10	10
LOS ANGELES	4	10	9	10
TEL AVIV	5	1	10	10
BOSTON	6	10	9	10
BEIJING	7	7	8	2
SINGAPORE	8	1	10	10
SHANGHAI	9	7	6	2
SEATTLE	10	10	4	10
WASHINGTON, D.C.	11	10	7	10
SEOUL	12	3	7	3
BERLIN	13	5	5	5
AMSTERDAM-DELTA	14	2	8	5
TOKYO	15	6	3	4
SAN DIEGO	16	10	6	10
TORONTO-WATERLOO	17	4	7	4
PARIS	18	4	7	5
CHICAGO	19	10	2	10
SYDNEY	20 (tied)	2	6	10
BENGALURU-KARNATAKA	20 (tied)	5	6	2
STOCKHOLM	22	1	9	3
MIAMI	23	10	3	10
DELHI	24	5	5	2
AUSTIN	25	10	1	10
SÃO PAULO	26	3	8	2
PHILADELPHIA	27	10	3	10
DENVER-BOULDER	28	10	1	10
ATLANTA	29	10	2	10
VANCOUVER	30	4	6	4
MUMBAI	31 (tied)	5	5	2
SALT LAKE-PROVO	31 (tied)	10	3	10
MELBOURNE	33	2	4	10
DALLAS	34	10	2	10
SHENZHEN	35	7	1	2
ZURICH	36	2	4	10
MUNICH	37	5	2	5
HANGZHOU	38	7	2	2
GREATER HELSINKI	39	1	8	3
MONTREAL	40	4	4	4



# Talent & Experience

The Talent & Experience Success Factor assesses:

## Tech Talent

**Quality & Access:** 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:** Cost efficiency average of software engineer salaries. (Higher salaries lead to lower scores.)

## Life Sciences Talent

**STEM Access:** Number of STEM students and graduates.

**LS Access:** Number of Life Sciences-focused universities and degree programs.

**LS 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.

ECOSYSTEM	OVERALL RANK	QUALITY & ACCESS	COST	STEM ACCESS	LS ACCESS	LS QUALITY	SCALING EXPERIENCE	STARTUP EXPERIENCE
SILICON VALLEY	1	10	2	10	5	10	10	10
NEW YORK CITY	2 (tied)	9	2	10	10	6	10	10
LONDON	2 (tied)	10	7	10	10	9	9	10
LOS ANGELES	4	10	3	10	7	9	9	10
TEL AVIV	5	6	1	10	7	3	9	8
BOSTON	6	10	4	10	10	9	10	9
BEIJING	7	8	9	10	10	4	10	10
SINGAPORE	8	5	8	10	5	10	7	7
SHANGHAI	9	8	9	10	9	3	9	10
SEATTLE	10	9	1	10	1	10	8	7
WASHINGTON, D.C.	11	9	3	10	8	4	8	6
SEOUL	12	5	6	10	9	2	6	8
BERLIN	13	4	8	10	6	6	6	7
AMSTERDAM-DELTA	14	7	1	10	9	9	6	5
TOKYO	15	7	3	10	6	1	8	9
SAN DIEGO	16	9	3	10	2	7	7	5
TORONTO-WATERLOO	17	6	6	10	9	5	3	6
PARIS	18	8	8	10	8	7	1	9
CHICAGO	19	8	4	10	7	8	7	6
SYDNEY	20 (tied)	7	5	10	8	8	5	4
BENGALURU-KARNATAKA	20 (tied)	2	10	1	1	1	2	6
STOCKHOLM	22	4	7	10	6	8	6	4
MIAMI	23	3	6	10	3	2	5	3
DELHI	24	1	10	10	2	1	5	5
AUSTIN	25	5	4	10	1	8	1	6
SÃO PAULO	26	1	10	10	4	2	4	3
PHILADELPHIA	27	5	3	10	7	8	5	3
DENVER-BOULDER	28	4	2	10	3	5	3	5
ATLANTA	29	7	5	10	5	5	5	3
VANCOUVER	30	3	6	10	4	6	2	2
MUMBAI	31 (tied)	2	10	1	1	1	2	2
SALT LAKE-PROVO	31 (tied)	4	6	10	2	2	8	1
MELBOURNE	33	6	6	10	8	5	3	1
DALLAS	34	4	4	1	3	3	4	1
SHENZHEN	35	6	9	10	4	5	4	8
ZURICH	36	1	1	10	3	10	1	4
MUNICH	37	2	8	10	4	7	2	3
HANGZHOU	38	2	9	10	5	3	7	7
GREATER HELSINKI	39	1	7	10	2	6	1	2
MONTREAL	40	3	7	10	6	4	3	1

# Connectedness

The Connectedness Success Factor assesses:

**Local Connectedness:** A function of the number of tech meetups in the ecosystem.

**Global Connectedness:** A calculation of international connectedness based on the ratio of international startups with secondary offices and international investors with investment in an ecosystem.

ECOSYSTEM	OVERALL RANK	LOCAL CONNECTEDNESS	GLOBAL CONNECTEDNESS
SILICON VALLEY	1	10	9
NEW YORK CITY	2 (tied)	10	9
LONDON	2 (tied)	10	10
LOS ANGELES	4	9	7
TEL AVIV	5	8	10
BOSTON	6	9	7
BEIJING	7	5	4
SINGAPORE	8	7	10
SHANGHAI	9	1	5
SEATTLE	10	7	1
WASHINGTON, D.C.	11	6	2
SEOUL	12	8	6
BERLIN	13	9	9
AMSTERDAM-DELTA	14	10	10
TOKYO	15	7	7
SAN DIEGO	16	3	1
TORONTO-WATERLOO	17	8	9
PARIS	18	9	8
CHICAGO	19	8	4
SYDNEY	20 (tied)	6	8
BENGALURU-KARNATAKA	20 (tied)	7	8
STOCKHOLM	22	3	4
MIAMI	23	2	3
DELHI	24	4	4
AUSTIN	25	5	5
SÃO PAULO	26	3	6
PHILADELPHIA	27	4	2
DENVER-BOULDER	28	5	2
ATLANTA	29	5	3
VANCOUVER	30	4	5
MUMBAI	31 (tied)	1	5
SALT LAKE-PROVO	31 (tied)	2	1
MELBOURNE	33	5	7
DALLAS	34	3	2
SHENZHEN	35	2	3
ZURICH	36	6	6
MUNICH	37	6	8
HANGZHOU	38	1	1
GREATER HELSINKI	39	2	6
MONTREAL	40	2	3

# Knowledge

The Knowledge Success Factor assesses:

**Patents:** The volume, complexity, and potential patents generated in the ecosystem.

**Research:** Based on the H-Index, a measure of publication impact, this metric looks at the production of research at the country level.

ECOSYSTEM	OVERALL RANK	PATENTS	RESEARCH
SILICON VALLEY	1	9	10
NEW YORK CITY	2 (tied)	5	10
LONDON	2 (tied)	8	7
LOS ANGELES	4	6	10
TEL AVIV	5	8	2
BOSTON	6	6	10
BEIJING	7	10	4
SINGAPORE	8	6	1
SHANGHAI	9	10	4
SEATTLE	10	7	10
WASHINGTON, D.C.	11	3	10
SEOUL	12	9	2
BERLIN	13	5	6
AMSTERDAM-DELTA	14	3	5
TOKYO	15	9	4
SAN DIEGO	16	7	10
TORONTO-WATERLOO	17	7	6
PARIS	18	3	5
CHICAGO	19	2	10
SYDNEY	20 (tied)	2	5
BENGALURU-KARNATAKA	20 (tied)	9	2
STOCKHOLM	22	8	3
MIAMI	23	1	10
DELHI	24	6	2
AUSTIN	25	5	10
SÃO PAULO	26	1	1
PHILADELPHIA	27	2	10
DENVER-BOULDER	28	4	10
ATLANTA	29	1	10
VANCOUVER	30	4	6
MUMBAI	31 (tied)	5	2
SALT LAKE-PROVO	31 (tied)	1	10
MELBOURNE	33	2	5
DALLAS	34	4	10
SHENZHEN	35	10	4
ZURICH	36	7	4
MUNICH	37	8	6
HANGZHOU	38	10	4
GREATER HELSINKI	39	3	2
MONTREAL		5	6



# Emerging Ecosystems Ranking

Emerging ecosystems are startup communities at earlier stages of growth. The methodology for this ranking is intended to reflect this, showcasing the ecosystems displaying high potential to be top global performers in the coming years.

The factor weights used to rank these ecosystems are slightly different from those used with the top ecosystems to reflect their emerging status and emphasize the factors that have more influence in ecosystems that are just beginning to grow. Less weight is given to the number of exits over \$50 million and startup activity is more focused on early-stage funding than in the top 40 ecosystems. For more information, please see the [Methodology](#) section.

ECOSYSTEM	RANK	PERFORMANCE	FUNDING	CONNECTEDNESS	MARKET REACH	KNOWLEDGE	TALENT & EXPERIENCE
COPENHAGEN	1	10	10	9	10	4	10
HONG KONG	2	9	9	9	10	1	10
DETROIT	3	10	9	7	8	6	9
BARCELONA	4	9	10	10	6	3	10
DUBLIN, MI	5	9	8	10	9	7	10
MANCHESTER-LIVERPOOL	6	10	8	9	4	6	10
BRUSSELS	7	9	9	10	9	7	8
RESEARCH TRIANGLE, NC	8	9	8	9	9	9	9
MINNEAPOLIS, MN	9	10	9	8	6	6	9
ESTONIA	10	7	10	1	10	1	5
HOUSTON, TX	11	10	10	7	3	4	9
DUBAI	12	8	10	10	10	1	6
MADRID	13	7	10	10	4	4	10
GUANGZHOU	14	10	3	1	8	10	10
JAKARTA	15	10	10	8	1	1	7
ISTANBUL	16	7	10	6	3	1	9
OSLO	17	8	9	9	10	1	6
WUXI	18	9	7	1	5	10	10
PHOENIX, AZ	19	9	8	7	5	9	7
NEW ZEALAND	20	8	7	6	8	1	9
NANJING	21-30	10	3	1	2	10	10
METRO RHEIN-RUHR	21-30	7	8	10	6	9	7
BRISTOL	21-30	7	9	8	1	9	8
KUALA LUMPUR	21-30	8	9	3	1	1	8
CHENNAI	21-30	10	3	7	3	6	8
TAIPEI CITY	21-30	8	6	3	1	9	8
GENEVA	21-30	7	8	9	7	8	5
MILAN	21-30	5	10	8	1	6	6
TAMPA BAY, FL	21-30	8	6	9	7	6	8
FRANKFURT	21-30	8	6	10	1	8	9

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

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## → Key Findings

- The top 100 Emerging Ecosystems are collectively worth over \$1.5 trillion in Ecosystem Value, a 50% increase from July 1, 2019–December 31, 2021 to July 1, 2020–December 31, 2022.
- Europe is the most represented region in the Emerging Ecosystems ranking and has expanded its share from 37% to 41% since the GSER 2022.
- Copenhagen is at #1, moving from the runners-up in the main ranking due to being outperformed by other regions such as Zurich. However, its Ecosystem Value increased by 29% and it saw growth in early-stage funding amount and in the number of exits over \$50 million, with review platform **Trustpilot** the top exit in an IPO valued at \$1.5 billion.
- Barcelona has moved up five positions since last year, reaching #4. Its highest-valued unicorn, tech-enabled delivery platform **Paack**, was valued at \$1.6 billion, helping to take the Ecosystem Value to \$21 billion, a 91% increase from 2022.

ECOSYSTEM	RANK	PERFORMANCE	FUNDING	CONNECTEDNESS	MARKET REACH	KNOWLEDGE	TALENT & EXPERIENCE
MOSCOW	31-40	7	6	3	1	10	10
EDINBURGH-GLASGOW	31-40	5	8	8	1	7	9
BIRMINGHAM	31-40	6	7	7	1	6	9
ORLANDO	31-40	8	4	7	6	1	8
PITTSBURGH, PA	31-40	6	8	4	3	5	6
PUNE	31-40	8	5	9	3	9	6
PRAGUE	31-40	6	8	8	9	1	3
PORTLAND, OR	31-40	9	2	1	9	10	4
HARTFORD, CT	31-40	10	1	1	7	7	7
LISBON	31-40	6	6	9	8	5	3
MEXICO CITY	41-50	4	9	9	1	1	4
HAMBURG	41-50	2	8	10	1	7	8
LITHUANIA	41-50	1	6	1	10	1	3
NASHVILLE, TN	41-50	5	6	3	2	2	7
ST. LOUIS, MO	41-50	6	5	5	3	3	7
KANSAS CITY, MO	41-50	6	5	3	6	1	5
BRISBANE	41-50	5	6	7	1	1	7
INDIANAPOLIS, IN	41-50	4	7	1	3	1	6
SANTA BARBARA, CA	41-50	9	1	1	8	8	6
STUTTGART	41-50	6	4	8	1	9	6
VIENNA	51-60	2	7	10	5	3	4
CAIRO	51-60	3	9	1	1	1	8
NICOSIA	51-60	3	3	1	10	1	1
TELANGANA	51-60	4	5	8	1	7	7
WARSAW	51-60	1	7	10	1	1	6
NAIROBI	51-60	4	7	5	6	1	2
CALGARY	51-60	4	7	6	1	1	5
BUENOS AIRES	51-60	5	5	7	5	1	4
LAGOS	51-60	2	10	3	1	1	4
CHARLOTTE, NC	51-60	5	3	7	4	5	5

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- Estonia has moved up an impressive 28 positions since the GSER 2022, reaching #10. Its rise is thanks to an increase in early-stage funding rounds, a 100% increase in exits over \$50 million, and the new inclusion of CRM and intelligence platform **Pipedrive's** 2020 \$1.5 billion buyout.
- New Zealand has moved up 14 positions, reaching #20 in the Emerging Ecosystems ranking thanks in part to an increase in exits of over \$50 million and a new unicorn, **Lodestone Energy**, valued at \$1.3 billion.
- Further supporting the pattern of India growing and China declining, Pune has moved into the 31–40 range from 51–60 in 2022, experiencing both an increase in exits over \$50 million and in the number of unicorns, while Guangzhou dropped seven positions from last year, to #14.
- Riga has entered the Emerging Ecosystem ranking for the first time, in the 91–100 range, thanks in part to print-on-demand service **Printful** achieving unicorn status by raising \$130 million in 2021.

ECOSYSTEM	RANK	PERFORMANCE	FUNDING	CONNECTEDNESS	MARKET REACH	KNOWLEDGE	TALENT & EXPERIENCE
WILMINGTON, NC	61-70	1	9	1	8	1	1
SACRAMENTO, CA	61-70	5	3	1	4	9	4
WUHAN	61-70	9	1	1	6	10	7
RIYADH	61-70	4	7	1	4	1	2
CHENGDU	61-70	7	1	1	2	10	9
COLUMBUS, OH	61-70	7	2	4	3	4	3
BUCHAREST	61-70	5	4	6	7	1	2
SAN BERNARDINO, CA	61-70	7	1	1	9	8	2
LAS VEGAS, NV	61-70	1	5	5	2	1	5
BOGOTA	61-70	3	6	6	5	1	1
LYON	71-80	2	4	7	1	7	8
CLEVELAND, OH	71-80	4	2	3	2	2	4
CINCINNATI, OH	71-80	5	1	4	3	4	5
DURHAM	71-80	1	4	6	4	2	5
LILLE	71-80	6	1	1	1	1	4
VALENCIA	71-80	1	5	4	1	1	3
RENO, NV	71-80	6	1	1	9	1	1
KIEV	71-80	3	3	3	8	1	1
ROME	71-80	2	3	2	1	5	3
OTTAWA	71-80	1	1	6	1	8	6
SANTIAGO	81-90	1	7	5	1	1	2
ABU DHABI	81-90	2	6	1	1	1	1
HO CHI MINH CITY	81-90	1	5	1	1	1	7
BURLINGTON, VT	81-90	4	1	1	9	6	2
REYKJAVIK	81-90	2	1	1	10	1	1
WESTERN DENMARK	81-90	2	1	2	2	3	3
BUFFALO, NY	81-90	6	1	1	7	1	2
BANGKOK	81-90	3	1	3	1	3	2
BELFAST	81-90	4	1	2	1	1	4
RIO DE JANEIRO	81-90	2	2	2	1	2	2

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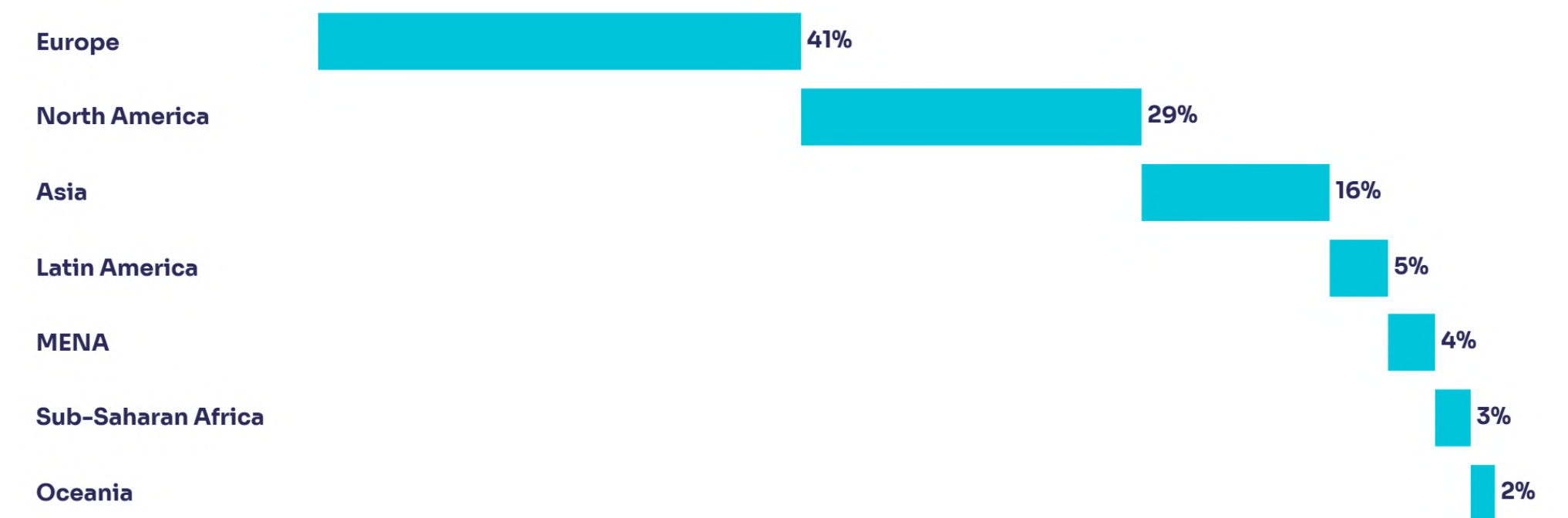
ECOSYSTEM	RANK	PERFORMANCE	FUNDING	CONNECTEDNESS	MARKET REACH	KNOWLEDGE	TALENT & EXPERIENCE
ZAGREB	91-100	1	2	6	10	1	1
JACKSONVILLE, FL	91-100	3	1	1	5	1	3
LUXEMBOURG	91-100	1	4	4	1	1	3
MANILA	91-100	1	5	4	1	1	5
RIGA	91-100	1	1	1	10	1	1
LEIPZIG	91-100	1	1	5	4	5	3
MARSEILLE	91-100	2	1	1	1	1	5
GOTHENBURG	91-100	1	5	3	1	3	4
KANSAI REGION	91-100	3	1	1	1	10	1
CAPE TOWN	91-100	1	4	5	1	1	2

**Europe is the most represented region in the Emerging Ecosystems ranking and has expanded its share from 37% to 41% since the GSER 2022.**

### Europe Is Home to 41% Of the Top 100 Emerging Ecosystems

Share of Emerging Ecosystems by Region

Source: Startup Genome, 2023





### TOP 10 EMERGING ECOSYSTEMS BY ECOSYSTEM VALUE

ECOSYSTEM	ECOSYSTEM VALUE (\$B)
Nanjing	\$127
Detroit	\$103
Jakarta	\$71
Hong Kong	\$54
Kuala Lumpur	\$46
Copenhagen	\$45
Guangzhou	\$43
Minneapolis	\$39
Bucharest	\$37
Mexico City	\$30

### EMERGING ECOSYSTEMS WITH FOUR OR MORE UNICORNS IN THE LAST 10 YEARS

ECOSYSTEM	NUMBER OF UNICORNS
Hong Kong	11
Guangzhou	10
Pune	7
Jakarta	7
Chengdu	7
Nanjing	7
Mexico City	6
Dublin	6
Phoenix	6
Wuhan	6
Wuxi	6
Oslo	5
Dubai	5
Santa Barbara	5
Taipei City	5
Chennai	4
Ho Chi Minh City	4
Copenhagen	4
Manchester-Liverpool	4

### TOP 10 EMERGING ECOSYSTEMS BY TOTAL EARLY-STAGE FUNDING VALUE

ECOSYSTEM	EARLY-STAGE FUNDING (\$M)
Guangzhou	\$1,560
Jakarta	\$1,523
Hong Kong	\$1,451
Copenhagen	\$1,349
Barcelona	\$1,233
Wuxi	\$1,131
Dubai	\$1,098
Milan	\$1,092
Wuhan	\$1,090
Mexico City	\$1,074

# Strong Starters Ranking

**The Strong Starters ranking identifies the top 25 ecosystems from the Emerging Ecosystems ranking where early-stage funding activity is most robust.**

For more information on how this is calculated, please see the [Methodology](#) section.

Early-stage funding includes seed and Series A deals. Seed funding is the first VC round of funding that a startup raises and is typically used to validate the business model, build the product, and grow the team. Series A is an important step in the life of a startup as Series A rounds are typically much bigger than seed rounds and provide startups with runway to develop products, hire more employees, and develop and launch a market strategy.

Early-stage funding is an important indicator of potential success as most startups that receive Series A rounds have demonstrated their potential by the creation of a minimal viable product, by generating revenue, or by showing they are close to launching a product. Hence, both the count and amount of early-stage rounds in an ecosystem are an indicator of its success and growth.

- |      |                |      |                       |
|------|----------------|------|-----------------------|
| 1 →  | Istanbul       | 14 → | Bristol               |
| 2 →  | Barcelona      | 15 → | Detroit, MI           |
| 3 →  | Estonia        | 16 → | Oslo                  |
| 4 →  | Madrid         | 17 → | Mexico City           |
| 5 →  | Dubai          | 18 → | Minneapolis, MI       |
| 6 →  | Copenhagen     | 19 → | Hong Kong             |
| 7 →  | Milan          | 20 → | Kuala Lumpur          |
| 8 →  | Jakarta        | 21 → | Manchester-Liverpool  |
| 9 →  | Houston, TX    | 22 → | Dublin                |
| 10 → | Lagos          | 23 → | Research Triangle, NC |
| 11 → | Wilmington, NC | 24 → | Hamburg               |
| 12 → | Brussels       | 25 → | Metro Rhein-Ruhr      |
| 13 → | Cairo          |      |                       |



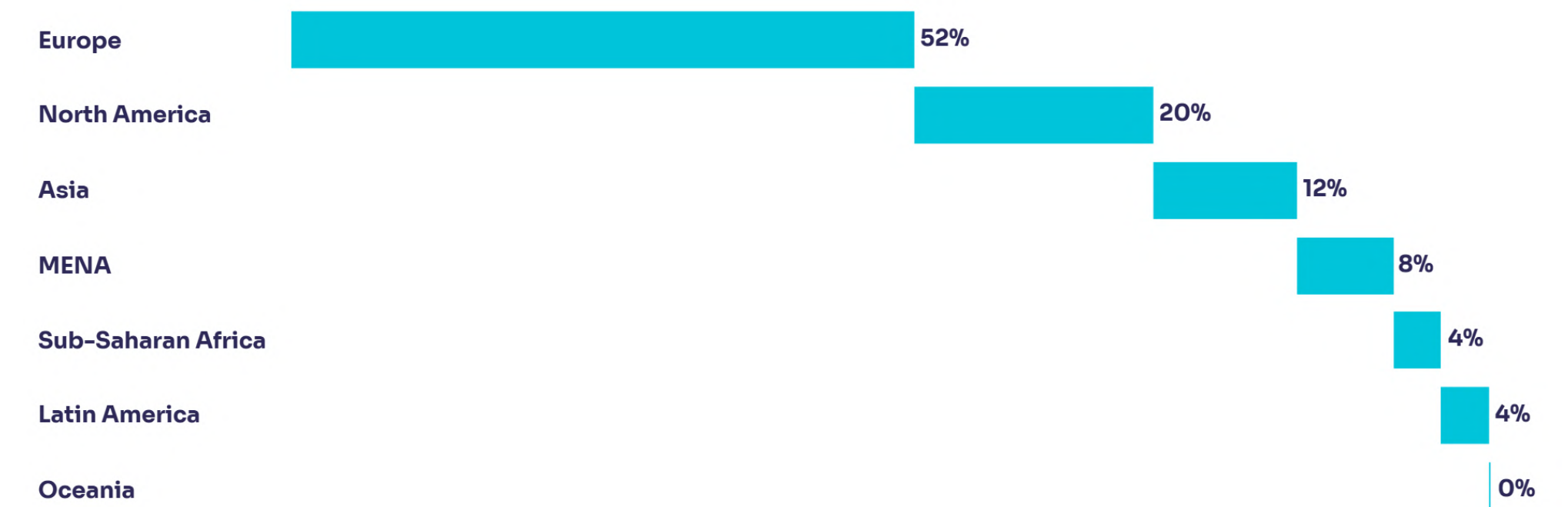
## → Key Findings

- The collective Ecosystem Value of the Strong Starters exceeds \$700 billion, with **Detroit** alone contributing \$103 billion, the highest individual Ecosystem Value in the ranking.
- **Istanbul** takes the #1 spot in the Strong Starters ranking thanks to a 60% increase in early-stage deal count and 35% increase in early-stage deal amount from the GSER 2022. The Turkish city has raised close to 600 early-stage rounds in the GSER 2023 timeframe. Gaming accounts for a large part of the success, with **Dream Games** raising a \$50 million Series A round in 2021 and **Ace Games** raising \$33 million in early-stage funding in 2022.
- Over half of the ecosystems in the ranking (13) are European, including the top four. Spain has two entries in the top five: Barcelona at #2 and **Madrid** at #4.
- Barcelona experienced an increase of 24% in early-stage funding deal count and 12% in early-stage deal amount from the GSER 2022. **Yaba** raised \$85 million in Series A rounds in 2022 and **Splice Bio** raised a \$56 million Series A the same year.
- Madrid saw an increase of 24% in early-stage funding deal count and 12% increase in deal amount from the GSER 2022, raising \$760 million in early-stage funding deals in the GSER 2023 timeframe. The biggest deals include digital entertainment platform **Carousel Group**, which raised \$50 million in a 2021 Series A round, and data platform **Tinybird** with a \$37 million Series A in 2022.
- Estonia takes #3 in the Strong Starters ranking, further cementing its status as a fast-growing tech hub. Estonia experienced an increase of 46% in early-stage funding amount from 2021 to 2022, but a 10% decrease in early-stage deal count. The biggest rounds include **Eurora** raising \$40 million in a 2022 Series A, and NFT developer platform **NTPort** raising \$26 million at Series A in 2022.
- **Dubai** comes in at #5, with a 45% increase in early-stage funding count, and 114% in deal amount since the GSER 2022. Two of the biggest rounds were digital banking platform **YAP**'s \$41 million Series A round in 2022, and Buy Now, Pay Later platform **Cashew**'s \$40 million Series A round in 2021.

## Europe Is Home to More Than Half of the Strong Starters Ranking

Share of Strong Starters Ecosystems by Region

Source: Startup Genome, 2023





# Global Startup Sub-Sector Analysis

## → Key Findings

- Despite the overall economic downturn, three sub-sectors increased in the overall number of VC deals from 2021 to 2022: Gaming (+13%), Blockchain (+8%), and Fintech (+4%).
- Reflecting AI's increasing use and intersection with other sub-sectors, AI & Big Data is the sub-sector with the highest count of total VC deals, making up 28% of the global share in 2022. It also has the highest growth in number of exits, at 74%, from 2017–2018 to 2021–2022, and experienced a 34% increase in Series A count for the same period.
- As Deep Tech innovations become more integrated into the startup world, Deep Tech's exit amount has grown faster than non-Deep Tech technologies from 2017–2018 to 2021–2022, at 326% vs. 225%.
- Advanced Manufacturing & Robotics is the fastest-growing sub-sector in terms of Series A amount, up 168% from 2017–2018 to 2021–2022.
- Fintech has grown significantly in sub-Saharan Africa and Latin America, making up 41% and 37% of global Series A deal count respectively from 2017–2018 to 2021–2022.
- Although Edtech was widely expected to thrive during and post-pandemic, its Series A funding amount decreased 44% from 2017–2018 to 2021–2022.

**The bubble in 2021 and subsequent global downturn from H2 2022 have affected all sectors — obfuscating individual trends and investor opportunities. As such, the short-term decline in funding amounts, valuations, and exits that we are now seeing is not particularly related to individual sub-sectors but largely driven by overall investor sentiment and scarcity of capital.**





**Understand the existing policy and regulatory context of the sector, industry, and value chain your business operates in. Founders operating within the Edtech, Fintech, Agtech, Climatetech, or other tech sectors need to have an appreciable knowledge of existing and proposed Acts, policies, and regulatory bodies at the national and subnational levels that can (in)directly or indirectly impact their business models. With technology changing faster than regulators can sometimes keep up with, there are increasing risks and opportunities for startups, which do not want to be caught on the wrong side of the regulatory environment.”**

**Adenike Adeyemi**, Executive Director, FATE Foundation

## Global Sub-Sector Lifecycle

The rise and fall of technology sub-sectors can be classified into three phases: Growth, Mature, and Decline. Classification is based on an analysis of deal count and amount of Series A investments and exits from 2017–2018 to 2021–2022. An increase in Series A activity shows the dynamics of the sub-sector at the early stage, indicating new businesses being formed and funded, while an increase in exits indicates the value realized to founders and investors. The sub-sectors with the highest increase are included in the Growth phase. The sub-sectors in the Mature phase display a lower

rate of growth, though it is still very strong compared to many non-tech, non-VC sectors. Sub-sectors showing negative values in either Series A or exits, or both, are in the Decline phase.

The following lifecycle charts combine changes in Series A count and amount and in exit count and amount to provide a long-term view of sub-sector health. The further right and higher in the chart a sub-sector is shown, the higher the rise in exit and Series A activity, positioning the sub-sector in the Growth phase. Mature

phase sub-sectors are in the middle of the chart, as they continue to grow but at a slower rate as they become larger. For example, Fintech had twice the Series A rounds in 2021 (627) than it had in 2016 (303), so when it grew to 723 in 2022, the percentage increment wasn't as impressive as what the sectors in the Growth phase were experiencing. Sub-sectors in the bottom left of the charts are in the Decline phase. For example, Adtech is here because it had a lower count of Series A deals and exits in the period 2021–2022 compared to 2017–2018.

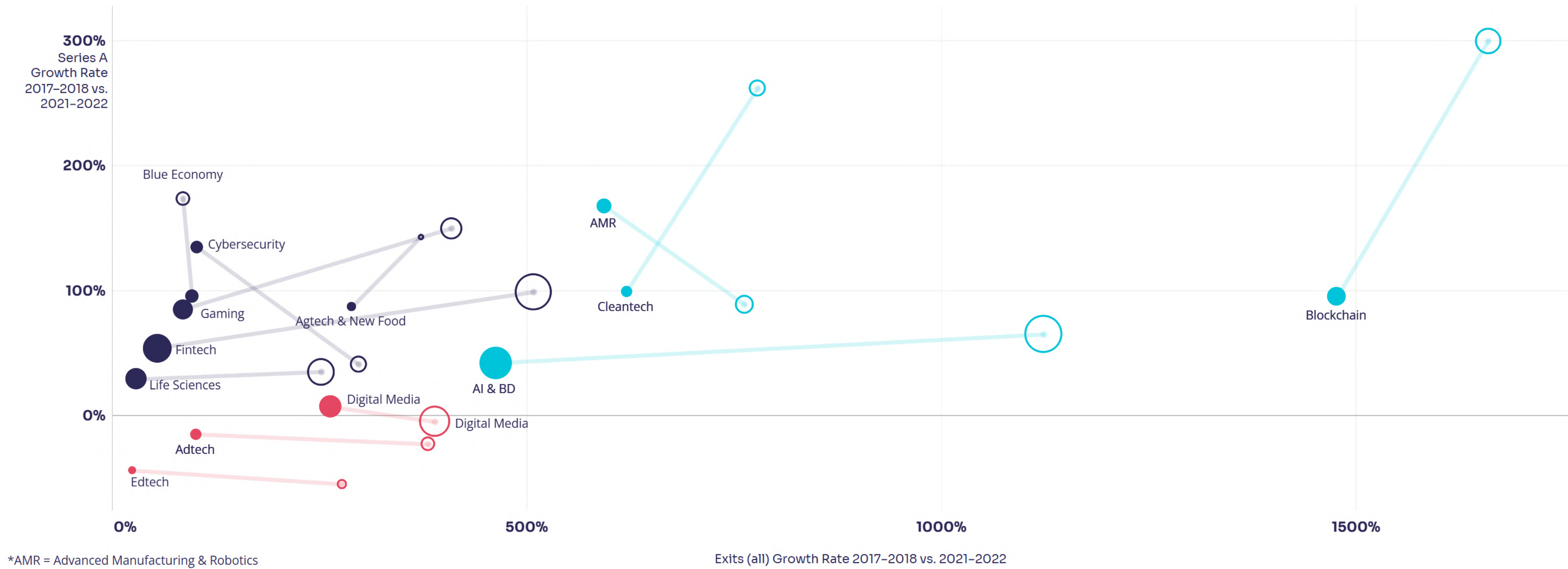
# Global Sub-Sector Lifecycle In \$ Terms by Total Series A Funding and Exit Value

GSER 2022 (2016–2017 vs. 2020–2021) and GSER 2023 (2017–2018 vs. 2021–2022)

Source: Startup Genome, 2023

○ GSER 2022 ● GSER 2023 Phase: ■ Growth ■ Mature ■ Decline

Bubble Size Refers to Ecosystem Value





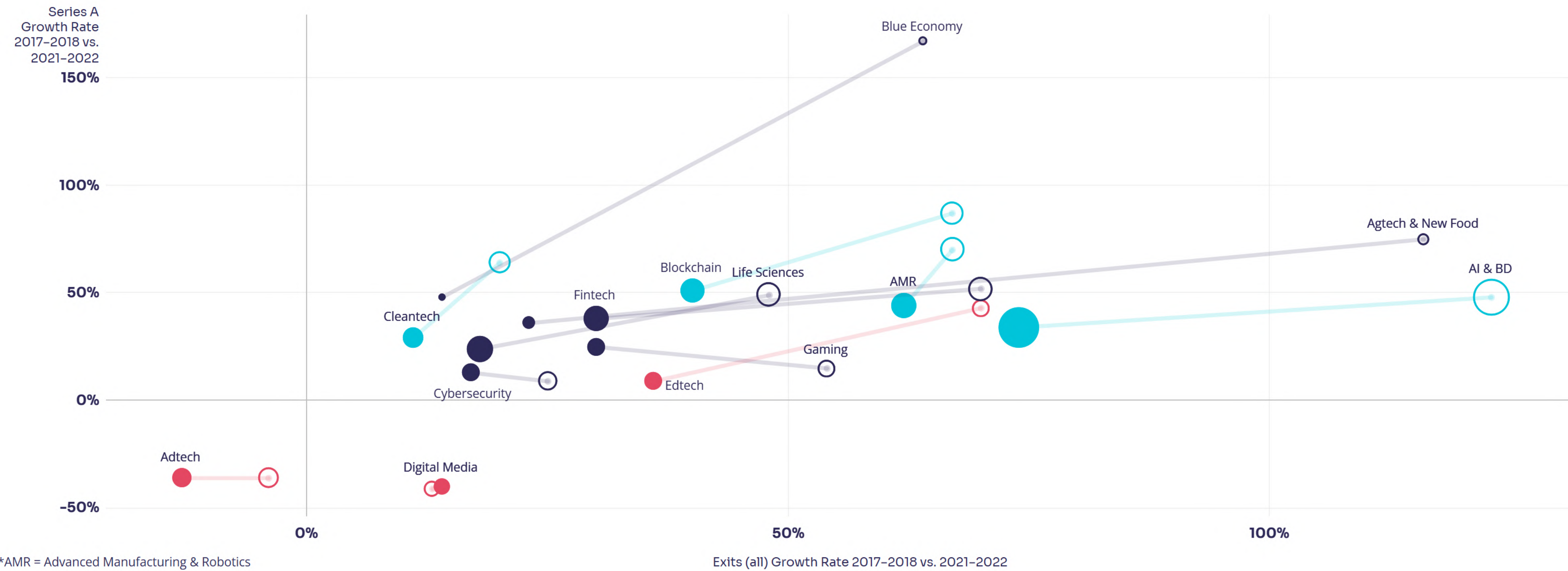
# Global Sub-Sector Lifecycle by Series A Deals and Exit Count

GSER 2022 (2016–2017 vs. 2020–2021) and GSER 2023 (2017–2018 vs. 2021–2022)

Source: Startup Genome, 2023

○ GSER 2022 ● GSER 2023 Phase: ■ Growth ■ Mature ■ Decline

Bubble Size Refers to Startup Output



The four sub-sectors in the Growth phase (Advanced Manufacturing & Robotics, AI & Big Data, Cleantech, and Blockchain) show an average increase of 101% in Series A deal amount from 2017–2018 to 2021–2022 and an average 788% rise in exit value for the same period.

The six sub-sectors in the Mature phase (Agtech & New Food, Cybersecurity, Fintech, Gaming, Life Sciences, and the Blue Economy) show an average 81% increase in Series A deal amount from 2017–2018 to 2021–2022 and an average 196% rise in exit value for the same period.

The three sub-sectors in the Decline phase (Digital Media, Edtech, and Adtech) experienced an average 18% decrease in Series A deal amount from 2017–2018 to 2021–2022 and an average 129% rise in exit value for the same period.

For reference, the Global Startup Ecosystem Report 2022 (GSER 2022) showed a number of sub-sectors reaching up to a 100% increase from the previous report’s timeframe in both Series A count and exit count [GSER 2021 (2015–2016 vs. 2019–2020) and GSER 2022 (2016–2017 vs. 2020–2021)]. However, we are now seeing lower growth rates in reflection of the general economic downturn.

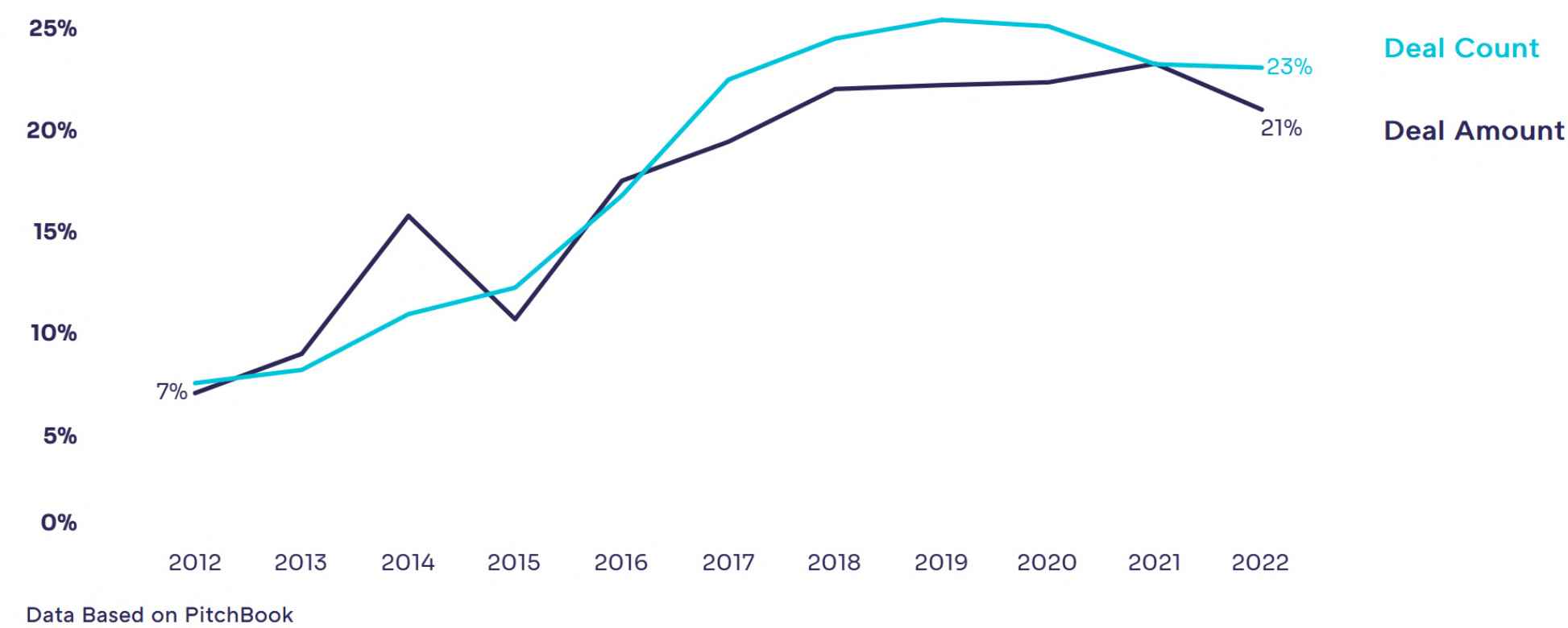
This year’s notable movements include Blockchain boasting the highest growth rate in Series A count, increasing 51% from 2017–2018 to 2021–2022. The exit of Coinbase at \$85.8 billion contributed to a massive 1,477% increase in exit value from 2017–2018 to 2021–2022. Excluding it, the sub-sector’s exit value growth rate

PHASE	GROWTH	MATURE	DECLINE
SUB-SECTORS	Advanced Manufacturing & Robotics, AI & Big Data, Cleantech, and Blockchain	Agtech & New Food, Cybersecurity, Fintech, Gaming, Life Sciences, and the Blue Economy	Digital Media, Edtech, and Adtech
SERIES A DEAL AMOUNT GROWTH RATE	101%	81%	-18%
EXIT VALUE GROWTH RATE	788%	196%	129%

### AI Intersects Over 20% With Other Tech Sectors

AI Intersects With Other Tech Sectors Among All Venture Deals by Deal Year, 2012–2022

Source: Startup Genome, 2023



would be similar to that of AI & Big Data at 400%, which would still mean it was one of the sub-sectors with the highest exit value growth rate.

After record highs in 2021, AI & Big Data has seen a significant correction in 2022 with a 84% decrease in exit amount and 24% decline in Series A deal amount. However, the recent attention around generative AI is likely to bring new energy to this sub-sector. AI is now firmly embedded in the tech stack of many startups — AI alone shows an intersection with other tech sectors above 20% — and it continues to attract investor attention and funding. AI & BD shows substantial growth when taking a longer view: the sub-sector increased 462% in exit value from 2017–2018 to 2021–2022.



**Forrest Wright**

Research Assessment Lead, Startup Genome

## How AI Has Changed The Startup Landscape, And How Policymakers Can Help

In the span of just a couple years, AI startups have driven revolutionary changes across multiple industries. For example, in healthcare, startups such as Babylon Health and Path AI are using AI to detect diseases and improve patient care. While in finance, AI-enabled financial planning platforms such as Trim or N26 are scaling consumer financial solutions at levels never thought possible. In transportation, startups such as ArgoAI and Waymo are leveraging AI for autonomous

vehicle deployment, with significant financial backing from large corporations.

Other startups have taken a more cross-sector approach, providing services that leverage AI technology across multiple industries. The most prominent example so far is ChatGPT, the AI-enabled chatbot platform developed by Open AI launched at the end of 2022. Within just a few months, the natural-language-processing model has been used by millions, an unprecedented scaleup in the history of startups.

### The State of AI Legislation

The speed and impact of AI adoption has led to urgent consideration of AI-related legislation. At the G7 summit in May 2023, leaders called for the development and adoption of technical standards to keep AI “trustworthy,” saying that governance has not kept pace with growth of the technology.

The E.U. is leading the charge in drafting regulatory framework with its AI Act, which is making its way through the European Parliament. The Act sets out a number of requirements for AI developers, such as providing users with clear information about how their algorithms work and explanations of how decisions are reached. This has raised concern from European startups that the regulations might make them less competitive. A December 2022 survey of 113 E.U.-

based AI startups found that 50% of those surveyed thought the AI Act would slow down innovation in Europe, while 16% were considering stopping operations or moving outside the E.U.

In the U.S. there is currently no federal law governing the use of AI, although voluntary guidance for federal agencies was issued in the Blueprint for an AI Bill of Rights. Several states have begun taking their own steps. In 2022, New York passed the AI Bias Law, which prohibits employers from using AI tools to screen potential candidates unless they can demonstrate they are not using biasing factors in their model. California is considering a bill that requires companies to disclose to individuals how their AI algorithms arrived at “consequential decisions.” It is noteworthy that the E.U.’s approach to regulating AI is as a horizontal technology while the U.S. appears to be moving toward a more sub-sector-specific approach.

China has enacted several regulatory regimes around AI, starting in 2017 with its New Generation AI Development Plan, which laid out the government’s broad priorities for AI development by 2030. In 2022, it banned AI-generated media that does not contain watermarks, and more recently banned ChatGPT and any proxy servers hosting its services. The Cyberspace Administration of China (CAC) has also proposed more sweeping legislation, with key provisions ensuring that generative AI adheres to China’s social morality.

### Towards a Better AI Policy Framework

Collectively, these attempts at AI regulation demonstrate a warranted concern over the technology’s real potential for swift, and perhaps socially disruptive capabilities. Approaches vary, but one common theme emerges: transparency. In their rush to develop cutting-edge AI technology in a hyper-competitive sector, many startups have seemingly avoided this critical component of public trust. This is unfortunate, as the speed and potential material consequence of AI technologies make transparency that much more essential.

The goal of policymakers should be to strike a balance between the need for transparency while maintaining a competitive and fair AI startup ecosystem. A difficult task, but one that could be achieved if governments a) incorporate a diverse set of AI startup founders in the process, and b) strive for clarity and simplicity in their legislation.

Making compliance too cumbersome will extinguish the hopes of many innovative startups, as well as benefit larger firms with the resources to comply. It will be difficult to get this right, but the societies that do so have much to gain. Startups that emerge from jurisdictions with clear transparency guidelines will have stronger levels of trust when scaling their operations to new countries. Customers will also feel more confident in their products and services, expanding the potential market.



## Global Trends in Startup Sub-Sectors

The bubble in 2021 and subsequent global downturn from H2 2022 have affected all sectors — obfuscating individual trends and investor opportunities. As such, the short-term decline in funding amounts, valuations, and exits that we are now seeing is not particularly related to individual sub-sectors but largely driven by overall investor sentiment and scarcity of capital. Some expected “darlings” of the pandemic such as Edtech are losing momentum, while others, including Life Sciences, are seeing extended growth. In particular, sectors related to Deep Tech are increasingly becoming a major part of the startup economy and showing signs of maturation.

Deep Tech involves the use of advanced technologies to attempt to solve critical, large-scale problems. It includes sub-sectors that are based in complex combinations of hardware and software, including Advanced Manufacturing & Robotics, Agtech & New Food, AI & Big Data, Blockchain, and Life Sciences. While affected by the market correction, Deep Tech continues to be the main driver of ecosystem growth the world over. In fact, Deep Tech will likely persist as a major economic engine with implications for ecosystem developers and policymakers at the intersection of academia and community.

Both Deep Tech sub-sectors and non-Deep Tech sub-sectors have experienced growth in exit amount but Deep Tech sub-sectors grew 326% whereas non-Deep



**Major transitions in healthcare, energy, food and agriculture, high-tech industries, and manufacturing are driving underlying mid- to long-term trends that will trigger more startup activity. Deep Tech companies that anticipate these trends and provide real value-added solutions are likely to continue to attract serious capital.”**

Constantijn van Oranje, Special Envoy, Techleap.nl

Tech sub-sectors grew 225% from 2017–2018 to 2021–2022. Deep Tech sub-sectors also achieved more Series A deals (35% increase for Deep Tech vs. 21% for non-Deep Tech), and a higher exit count (46% growth for Deep Tech vs. 19% for non-Deep Tech).

Gaming, Fintech, and Blockchain are the only three sub-sectors with a higher count of VC funding deals in 2022 than in 2021, at 13%, 4%, and 8% respectively.

Fintech and Gaming registered record numbers of VC funding deals in 2022 (above any other year since 2015). Blockchain startups experienced near-record levels of deal activity in 2022, second only to activity observed in 2018. The Gaming industry is benefitting from advancements in graphics, processing power, and network capabilities that all enable more immersive and engaging experiences. Additionally, increased access to

high-speed internet and broader mobile penetration have expanded the global Gaming market.

Blockchain deal count grew 57% from 2017–2022, 31% from 2020–2021, and 8% from 2021–2022. Cryptocurrency had a challenging year in 2022, but Blockchain is being adopted in many other industries, such as banking, government, agriculture, and healthcare. This broader use is helping the sub-sector to hold its own.



## Cleantech is likely to see more investment despite the current economic downturn.

Fintech continues to grow overall, and was the second best performing sub-sector in terms of both overall deal amount and count in 2022. Fintech startups in sub-Saharan Africa and Latin America continue to thrive as payment solutions are still growing to support the trend toward Ecommerce and digital payments. In mature markets we see different dynamics, with Fintech solutions growing in the B2B environment and increasingly addressing historically underserved markets such as SME lending, pensions, and back-office applications.

Industry 4.0 and Advanced Manufacturing continue to be relevant as automation and production efficiency are key to addressing rising costs and increasing workforce shortages. A reduction in the use of intermediaries in

global supply chains also creates additional demand for hyper-efficient local production and supply-chain solutions.

In the context of climate change, Cleantech is likely to see more investment despite the current economic downturn. Subsidies and easing of regulation have helped energize the sector, particularly in Europe and the U.S., but also in China. Europe and the U.S. have both introduced policies to encourage the development of technologies that address the climate crisis, including elements of the U.S. Inflation Reduction Act and the E.U.'s proposed Net Zero Industry Act. Agtech & New Food is following a similar path. The sub-sector is still small, but it is gaining in relevance as the world grows increasingly aware of the need to ensure sustainable food supply chains. As such, we will likely see more investor activity in Agtech & New Food in coming years.

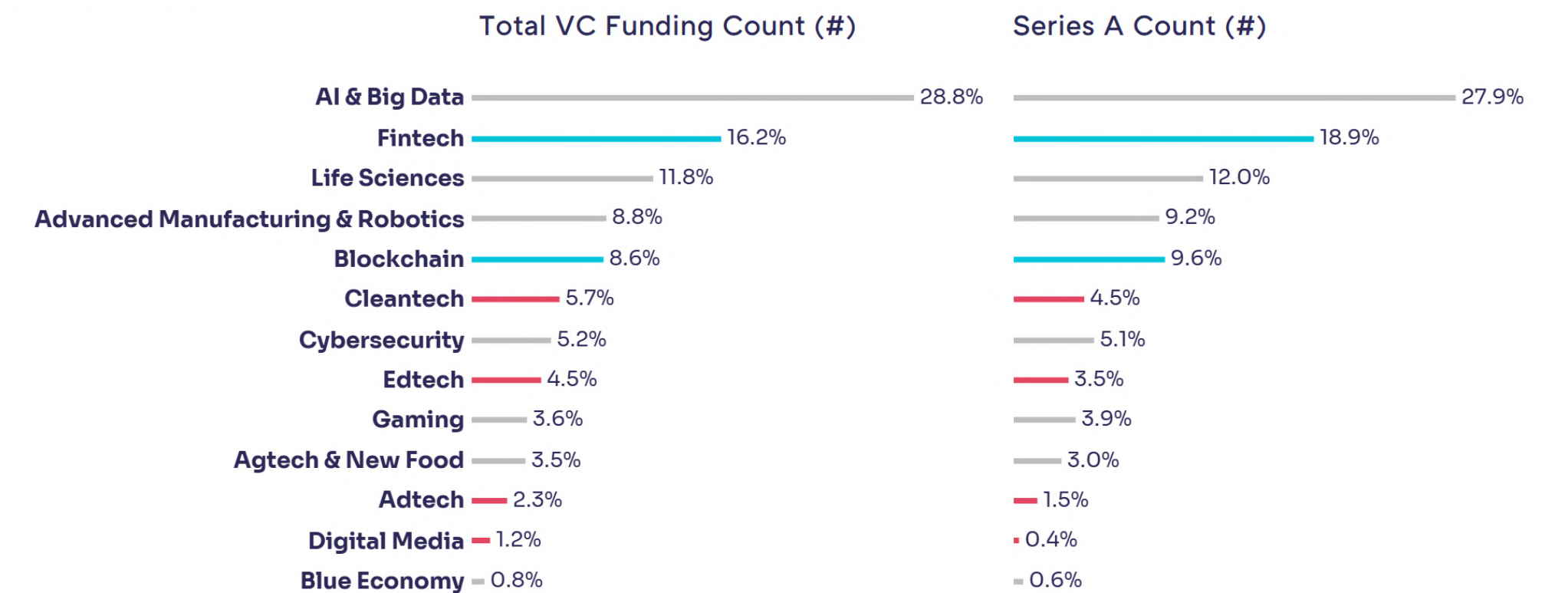
Finally, although Edtech was widely expected to thrive during and post-pandemic, enthusiasm seems to have waned. Factors affecting Edtech startups include privacy concerns, regulation such as China's 2021 ban on companies that teach school curricula from making profits, raising capital, or going public, and an ideological gap between the academic and startup worlds. On the whole, educational systems remain slow-moving and have yet to fully embrace technology.

The bar chart compares total VC deals from the period 2018–2022 (sub-sector share of total count of deals for the period) to Series A share in 2022 (sub-sector share of new startups securing funding in 2022). This allows

## Fintech and Blockchain Have a Higher Share of Series A in 2022 Than Their Total Funding Share in the Long Term

Share of Total VC Deal Count (2018–2022) and Series A Deal Count (2022) by Sub-Sector

Source: Startup Genome, 2023



us to see which sub-sectors are changing in early-stage activity relative to the longer-term trend.

Fintech and Blockchain have a higher share of Series A deals in 2022 than share of total deals from 2018–2022, implying growth. Cleantech, Edtech, Adtech, and Digital Media show a smaller proportion of new startups securing funding in 2022.

## Fintech accounted for 41% of Series A deals in sub-Saharan Africa in 2018–2022

### Regional Share of Sub-Sectors

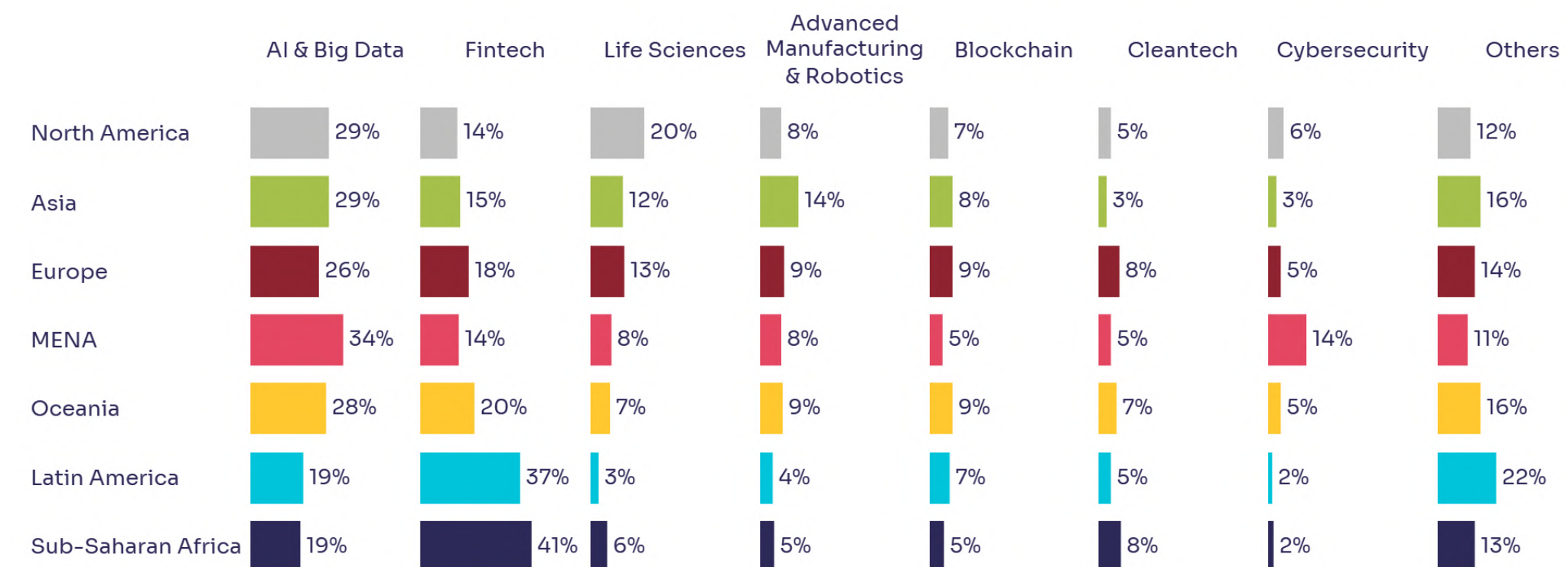
Fintech has experienced a significant surge in sub-Saharan Africa, where it accounted for 41% of Series A deals in 2018–2022, and Latin America, where it made up 37% of Series A deal count in the same period. The COVID-19 pandemic and associated lockdowns accelerated growth in online business in these regions. This is also a sign of increased technology deployment, somewhat following patterns seen in more developed markets in that individuals start to engage with technology and first-time real transactions in payments and Ecommerce.

North America leads in the regional share of Life Sciences startups, at 20%. Advanced Manufacturing & Robotics made up 14% of Asia’s Series A deals. Cybersecurity made up 14% of MENA’s, while in other regions it didn’t surpass 5% of the total share of startups.

### Sub-Saharan Africa and Latin America Have the Largest Shares of Fintech Series A Deals

Share of Series A Deal Count (#) by Sub-Sector by Region (2018–2022)

Source: Startup Genome, 2023





# Sub-Sectors by Phase

## Sub-Sectors in Growth Phase

### Advanced Manufacturing & Robotics, AI & Big Data, Blockchain, Cleantech

The Growth phase includes sub-sectors with the highest growth rate from 2017–2018 to 2021–2022 in both Series A and exit deal count and amount.

The four sub-sectors in the Growth phase (Advanced Manufacturing & Robotics, AI & Big Data, Blockchain, and Cleantech) show an average 101% rise in Series A deal amount from 2017–2018 to 2021–2022 and an average 788% growth in exit value. Together, the four Growth phase sub-sectors make up 62% share of the reported total startup creation over the period 2013–2022.

Blockchain is the only sub-sector showing an increase in the overall number of VC deals — it grew 57% from 2017 to 2022, and was up 8% from 2021 to 2022. Blockchain also experienced the highest growth rate in Series A deal count in the period 2018–2022, at 51%. Blockchain holds the highest growth in exit value in the period 2018–2022, at 1,477%. This is much higher than the exit value rate of Advanced Manufacturing & Robotics (593%) and AI & Big Data (462%) over the same period.

AI & Big Data decreased by 25% in overall VC deal count from 2018 to 2022, but continued to be the sub-

sector with the highest overall share of VC deals, at 28%. Additionally, AI & Big Data experienced the highest growth in exit count (74%) in the period 2018–2022.

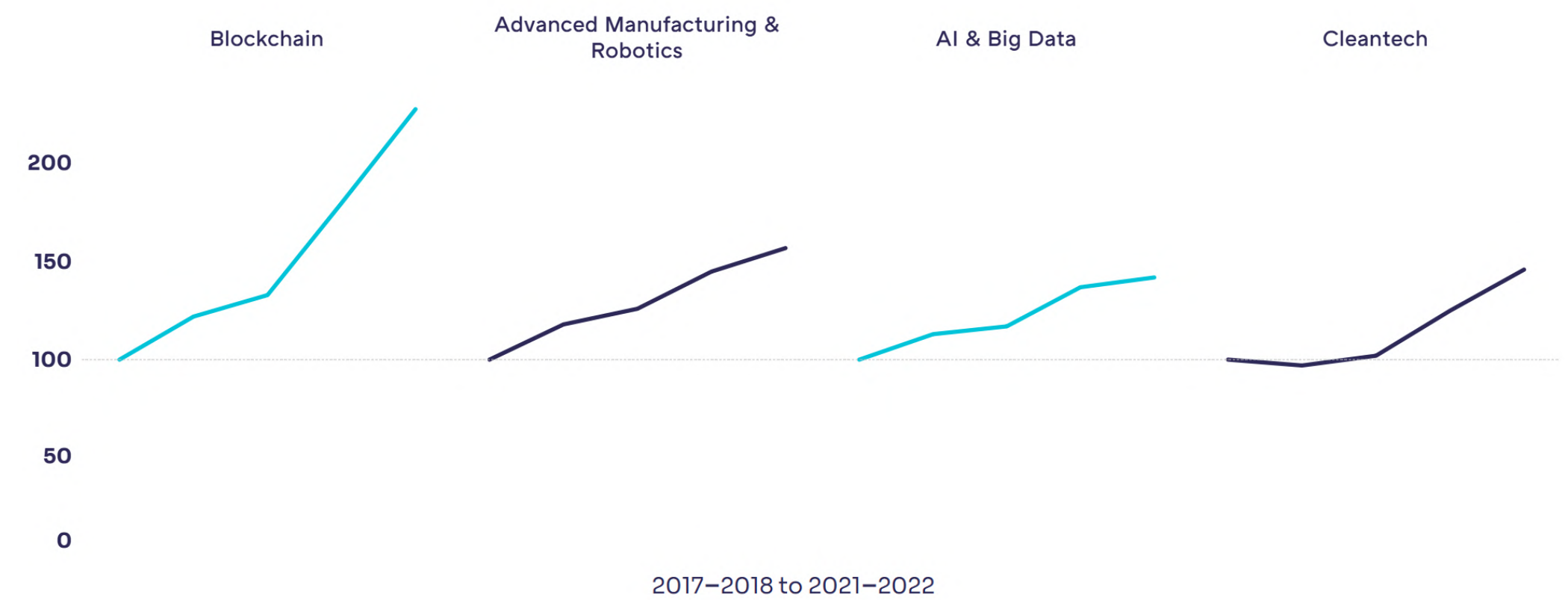
Cleantech grew 620% in exit value and 99% in Series A amount from 2017–2018 to 2021–2022. Cleantech is performing more modestly in Series A deal count — increasing 29% from 2017–2018 to 2021–2022 — and in the number of exits, which are up 11% in the same period.

**Blockchain grew 1,477% in exit value over 2018–2022.**

## Startup Sub-Sectors in Growth Phase

Total Two-Year Moving Average of Series B+ Funding Deal Count (#) Indexed by 100 From 2017–2018

Source: Startup Genome, 2023



SUB-SECTOR	SERIES A FUNDING FIVE-YEAR GROWTH*	EXIT VALUE FIVE-YEAR GROWTH*	SERIES A DEAL COUNT FIVE-YEAR GROWTH*	EXIT DEAL COUNT FIVE-YEAR GROWTH*
Advanced Manufacturing & Robotics	168%	593%	44%	62%
AI & Big Data	42%	462%	34%	74%
Blockchain	95%	1477%	51%	40%
Cleantech	99%	620%	29%	11%

\*2017–2018 vs. 2021–2022

## Sub-Sectors in Mature Phase

### Agtech & New Food, Cybersecurity, Fintech, Gaming, Life Sciences, and the Blue Economy

The Mature phase includes sub-sectors that have grown in both Series A and exit deal count and amount from 2017–2018 to 2021–2022, but not as vigorously as the ones in the Growth phase.

The six sub-sectors in the Mature phase (Agtech & New Food, Cybersecurity, Fintech, Gaming, Life Sciences, and the Blue Economy) show noteworthy growth, with an average 81% rise in Series A amount from 2017–2018 to 2021–2022 and an average 196% growth in exit value. Together, the six Mature phase sub-sectors represent 41% of reported tech startups funded over the period 2013–2022.

Although total deal count in Cybersecurity has decreased from 2018 to 2022, it is the fastest growing Mature sub-sector in Series A deal amount, growing 135% from 2017–2018 to 2021–2022.

Gaming, Agtech & New Food, and Fintech all show exit value growth reaching almost 300% from 2017–2018 to 2021–2022, above the Mature phase average of 196%. Life Sciences is close to the 31% phase average growth in Series A count at 24% and the 22% phase average exit count at 18%, but is behind in Series A deal amount at only 29% (the average is 81%), and in exit value at 116% (the average is 196%).

Fintech attracted 2,677 VC deals in 2022, more than any other sub-sector in the Mature phase. Fintech grew 76% in total VC funding deal count over the 2015–2022 period, 23% from 2020 to 2021, and 3.7% from 2021 to 2022.

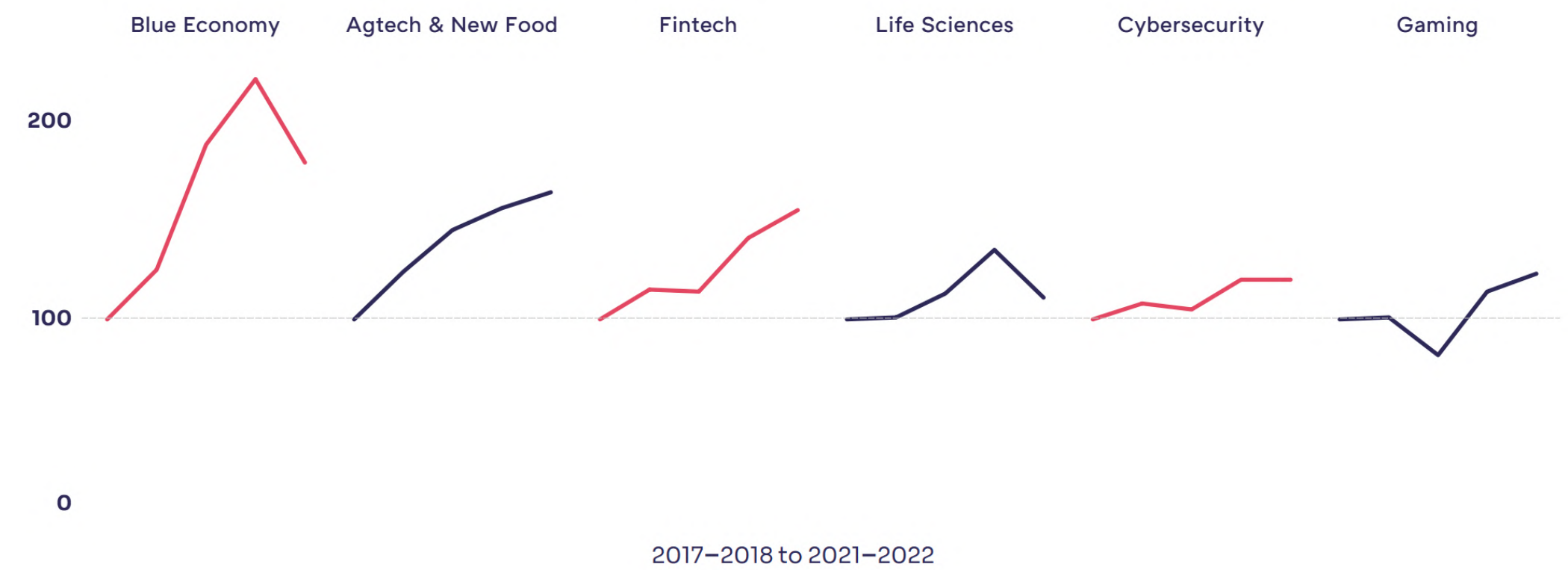
After years of stagnation, the Gaming sector is showing new signs of life, increasing its exit count by 16% and exit amount by 134% from 2020 to 2021. The sub-sector’s Series A deal amount almost tripled from 2020 to 2021, and Series A deal count grew 19%. Gaming experienced the highest growth rate in total VC deal count from 2021 to 2022, at 13.4%. For context, Life Sciences saw a decline of 42% over the same period.

The Blue Economy, Agtech & New Food, and Cybersecurity have all experienced a decrease in total VC funding deal count since 2021. The Blue Economy is the smallest sub-sector in terms of deal count, so small increments in absolute numbers show as bigger movements proportionally. The Blue Economy attracted 72 deals in 2022, less than 3% of Fintech, but from 2017–2018 to 2021–2022 the Blue Economy has grown 48% in Series A deal count, more than any other sector in the Mature phase. For context, Fintech grew 38% in the same period.

## Startup Sub-Sectors in Mature Phase

Total Two-Year Moving Average of Series B+ Funding Deal Count (#) Indexed by 100 From 2017–2018

Source: Startup Genome, 2023



SUB-SECTOR	SERIES A FUNDING FIVE-YEAR GROWTH*	EXIT VALUE FIVE-YEAR GROWTH*	SERIES A DEAL COUNT FIVE-YEAR GROWTH*	EXIT DEAL COUNT FIVE-YEAR GROWTH*
Agtech & New Food	87%	289%	36%	23%
Blue Economy	96%	111%	48%	14%
Cybersecurity	135%	102%	13%	17%
Fintech	54%	258%	38%	30%
Gaming	85%	298%	25%	30%
Life Sciences	29%	116%	24%	18%

\*2017–2018 vs. 2021–2022



## Sub-Sectors in Decline Phase

### Digital Media, Edtech, and Adtech

The sub-sectors with a negative growth rate from 2017–2018 to 2021–2022 in either or both Series A and exit count and amount, are considered to be in the Decline phase.

The three sub-sectors in the Decline Phase (Digital Media, Edtech, and Adtech) show an average 18% decrease in Series A amount from 2017–2018 to 2021–2022 and an average 129% growth in exit value. The three sectors combined represent 18% of reported tech startups funded over the period 2013–2022.

Digital Media saw negative growth in Series A count (-40%) from 2017–2018 to 2021–2022. It also experienced a 53% drop in VC deal count from 2021 to 2022.

When it comes to total deal count, Edtech has experienced a slight yet continued decline since 2018 despite the short-lived pandemic-related buzz around online learning platforms. Edtech declined 44% in Series A amount but exit value grew 24% from 2017–2018 to 2021–2022.

Adtech also experienced a 54% decline in total VC deal count from 2018 to 2022 and a 23% drop in total deal count from 2021 to 2022. Adtech also experienced the strongest decline of any sub-sector in Series A count

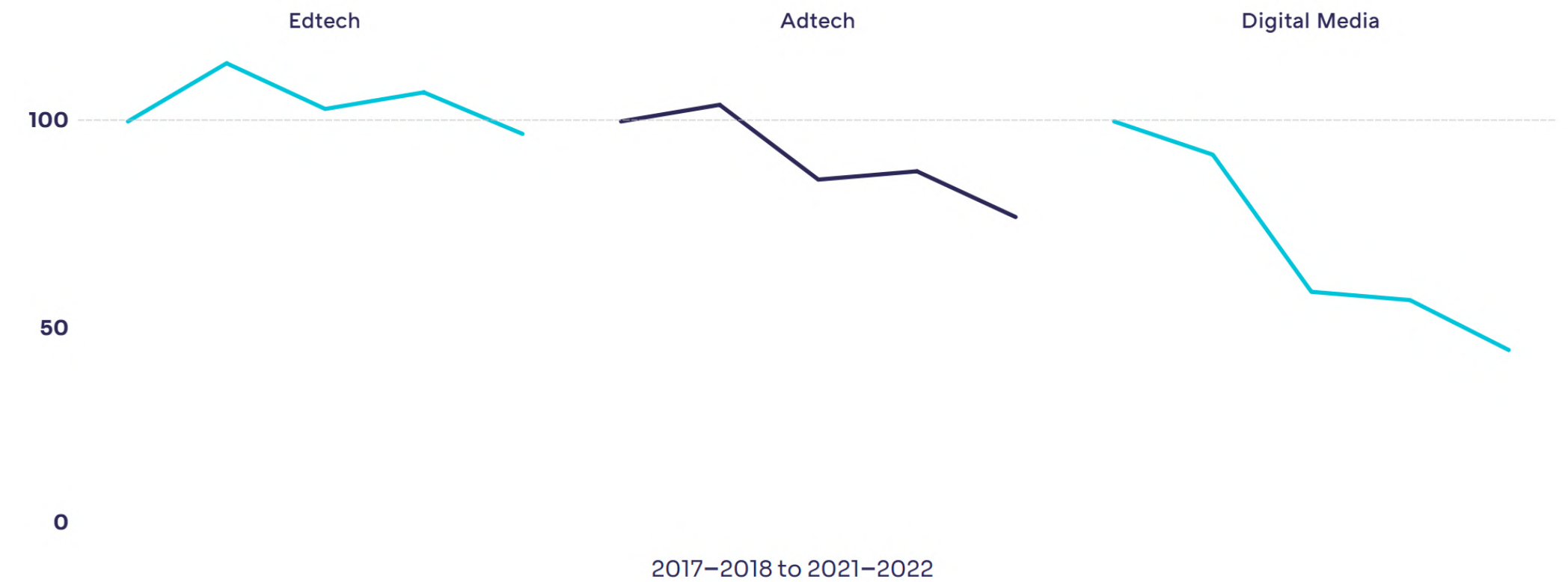
(-36%), Series A amount (-15%), and exit count (-13%) from 2017–2018 to 2021–2022, but saw an increase of 101% in exit value in the same period.

**Edtech has experienced a continued decline since 2018 despite the pandemic-related buzz around online learning.**

## Startup Sub-Sectors in Decline Phase

Total Two-Year Moving Average of Series B+ Funding Deal Count (#) Indexed by 100 From 2017–2018

Source: Startup Genome, 2023



SUB-SECTOR	SERIES A FUNDING FIVE-YEAR GROWTH*	EXIT VALUE FIVE-YEAR GROWTH*	SERIES A DEAL COUNT FIVE-YEAR GROWTH*	EXIT DEAL COUNT FIVE-YEAR GROWTH*
Adtech	-15%	101%	-36%	-13%
Digital Media	7%	263%	-40%	14%
Edtech	-44%	24%	6%	33%

\*2017–2018 vs. 2021–2022



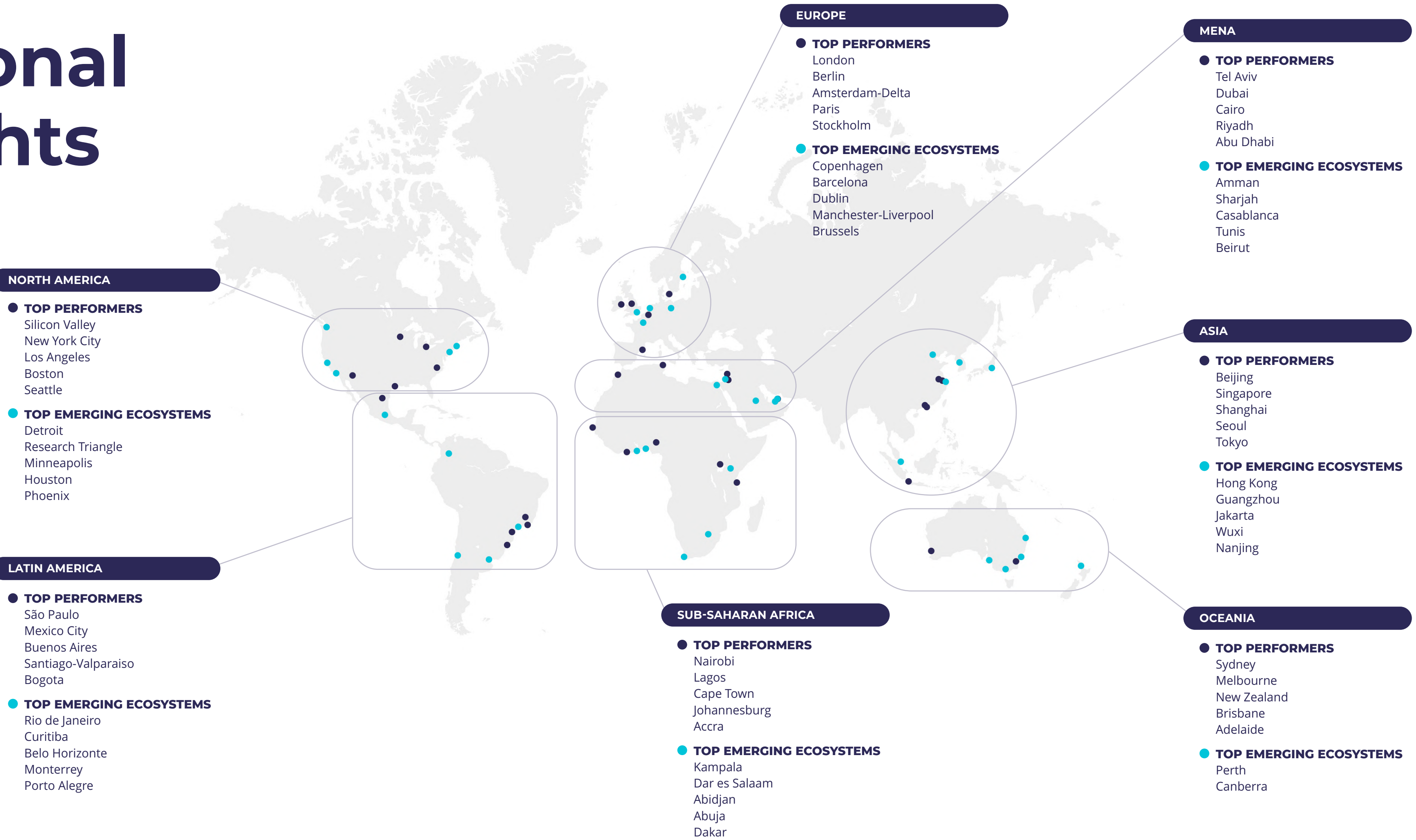
# 03 Regional Insights

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# Regional Insights





# ASIA

65 ——— Key Findings

66 ——— Ecosystem Pages





# Regional Insights ASIA

**Venture capital funding in Asia dropped by 31% compared to the record-setting numbers of 2021, from \$102 billion to \$70 billion. As elsewhere, global events have taken their toll on the economy, but in parts of Asia, rigid COVID-19 restrictions, climate change, and aging populations are further exacerbating economic challenges. That said, Asia was the least impacted global region in terms of early-stage funding amount, dropping just a single percentage point from 2021 to 2022.**

Asia's early-stage funding deal count was also largely stable, showing just a 4.9% decrease in the same period. Later-stage funding was more impacted, with the region's Series B+ amount decreasing 39% from 2021 to 2022, and Series B+ deal count 13%.

The GSER 2022 outlined the decline of China's dominance and the growth of India. This trend continues, with

Beijing and Shanghai both declining in the rankings (down two places and one respectively) and Bengaluru-Karnataka, Delhi, and Mumbai each improving in ranking (up two places, two places, and five respectively). In 2021, China introduced firm regulations including restrictions on Edtech, antitrust rules, and data protection, impacting the tech sector in a nation still under strict COVID-19 policies. However, more recently, the government has both slowed down its regulation of technology and eased its COVID-19 restrictions. In late 2022, it committed to promote further stability and improvement of the economy.

India had relatively relaxed COVID-19 policies, which helped the nation continue its rapid growth. Policies including the Startup India initiative further catalyze the startup scene. However, even India is experiencing a slowdown. In 2022, it produced 24 new unicorns, a 33% decline from 2021's 26. The Series B+ deal count dropped by 17% from 2021 to 2022, and Series B+ amount declined 46% for the same period. Although the amount of early-stage funding increased 19% from 2021 to 2022, the count of early-stage deals dropped by 6%.

### TOP FIVE ECOSYSTEMS

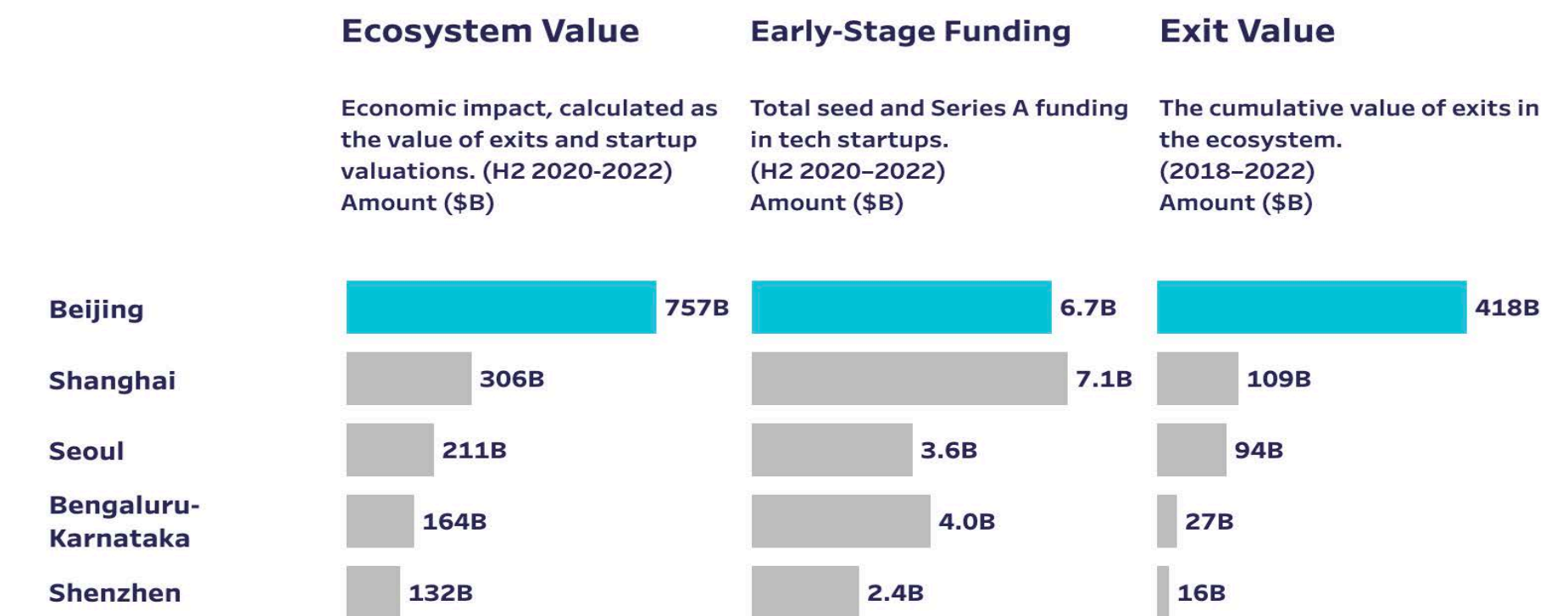
- 1 → Beijing
- 2 → Singapore
- 3 → Shanghai
- 4 → Seoul
- 5 → Tokyo

### TOP FIVE EMERGING ECOSYSTEMS

- 1 → Hong Kong
- 2 → Guangzhou
- 3 → Jakarta
- 4 → Wuxi
- 5 → Nanjing

## Beijing Is the Regional Leader in Ecosystem Value and Exit Value

Source: Startup Genome, 2023



## → Key Findings

- Seven Asian ecosystems are in the top 30 ranking, with a further three in the runners-up.
- Singapore has jumped 10 places in the ranking to #8, the second-highest ranked Asian ecosystem after Beijing. A 100% increase in exits over \$50 million since the GSER 2022 helped boost its placement, four of which were over \$1 billion. Delivery app **Grab** is the highest valued at \$40 billion. Singapore now boasts 18 unicorns, including **Coda Payments**, which raised a \$690 million Series C round in April 2022.
- Two Chinese cities feature in the top 30 — Beijing and Shanghai at #7 and #9 — and two in the runners-up — Shenzhen and Hangzhou at #35 and #38. However, three of these four declined from last year’s rankings, including leading Asian ecosystem Beijing, which dropped two places, and tech hub Shenzhen, which fell 12 places.
- India has two cities in the top 30 and one in the runners-up, all moving up at least two places. Bengaluru-Karnataka, the highest-ranked ecosystem at #20, rose two places and shares its position with Sydney. This success is largely due to a 57% increase in exits over \$50 million and a significant growth in unicorns, from 21 to 36. Delhi rose two places to #24, while Mumbai climbed five places to tie with Salt Lake-Provo at #31.
- Despite Seoul’s slight drop of two places from last year, it still ranks high at #12 and experienced a significant increase in unicorns, from 9 to 17.
- Tokyo, the only Japanese ecosystem in the top 30 and runners-up, sits at #15, down from last year’s #12 mainly due to the quicker growth of other ecosystems.

**Asia was the least impacted region in terms of early-stage funding amount, dropping just 1% from 2021 to 2022.**

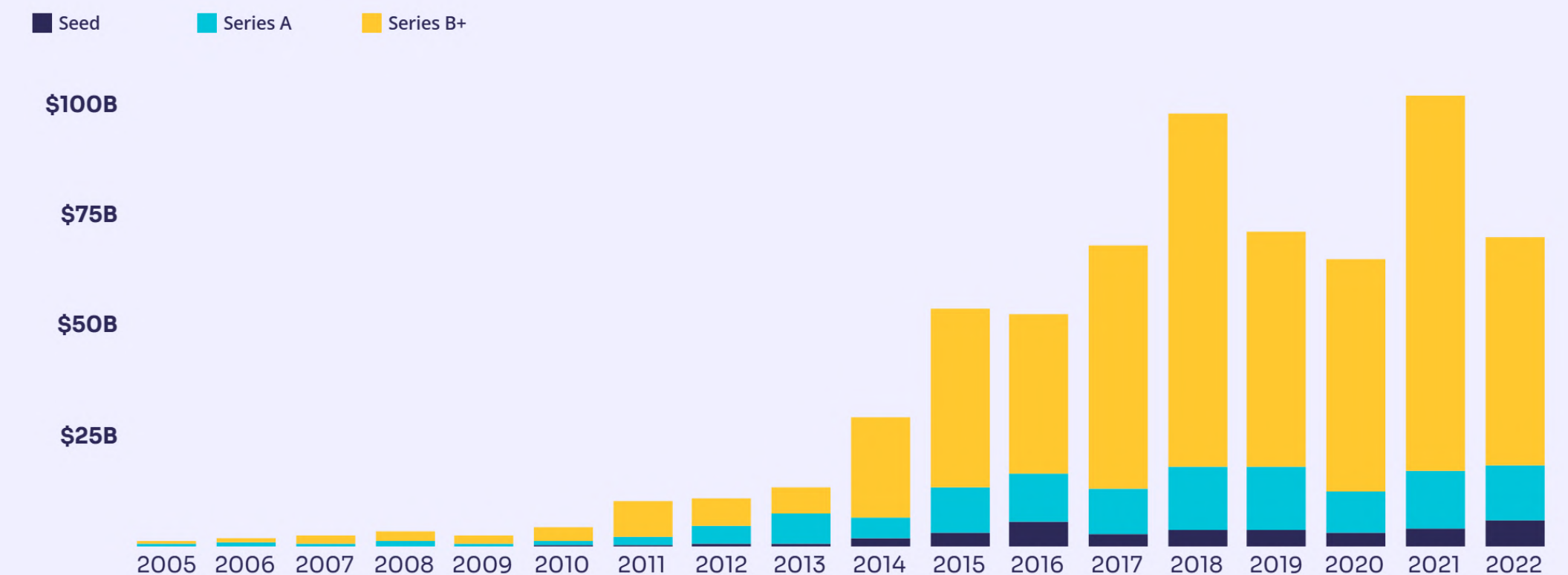
### TOP FIVE ECOSYSTEMS BY VC FUNDING PER CAPITA

- 1 → Beijing
- 2 → Singapore
- 3 → Seoul
- 4 → Hangzhou
- 5 → Bengaluru-Karnataka

### VC Investment in Asia Decreased 31% Overall From 2021 to 2022

Asian VC Funding Amount (\$B) by Stage

Source: Startup Genome, 2023





China  
**Beijing**

**#7** Global Ranking **#8** Agtech Ranking **#6** Fintech Ranking

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

**Heng Teck Yong**

Partner, Pegasus Capital



**Highlights**

Heavily impacted by COVID-19 restrictions, economists estimate China’s economy grew by just 3% in 2022. With the country open for business again, Beijing’s vibrant technology and startup ecosystem is rebounding from the slump. China-focused venture capitalists have near-record levels of capital on hand — an estimated \$105 billion as of March 2022 — and deals continue to take place.

Beijing’s strong support for SMEs was a recurring theme in the government’s 14th Five Year Plan (2021-2025). Plans include increased investment in technology innovation, development of local talent, attracting foreign experts, and enhancing intellectual property protection laws. China is building Huairou Science City in the northeastern suburbs of Beijing to provide laboratories and infrastructure for advanced research. In March 2022, five experimental stations opened to users. More than 50 applications have been received from domestic and foreign teams, according to the Huairou Park of the Institute of Physics, Chinese Academy of Sciences.

In October 2022 the 15th China Smart City Conference took place. Venture Capital Summit 2023 will be held in October 2023. The International Conference on Information Network and Computer Communications is set for the same month. In April 2022, digital interactive content development platform Cocos Technology closed a \$50 million Series B. In June 2022, Robotics company MegaRobo Technologies closed a \$300 million Series C.

## Ecosystem by the Numbers

**ECOSYSTEM VALUE**  
(H2 2020 - 2022)

**\$757 bn**



GLOBAL AVG. \$34.6 bn

**NUMBER OF UNICORNS**  
(H2 2020 - 2022)

**36**



GLOBAL AVG. 4

**SOFT. ENGINEER SALARY**  
(2022)

**\$46 k**



GLOBAL AVG. \$46 k

**TIME TO EXIT**  
(2018 - 2022)

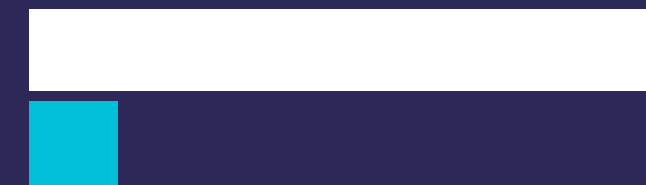
**8.3 years**



GLOBAL AVG. 9 years

**TOTAL EARLY-STAGE FUNDING**  
(H2 2020 - 2022)

**\$6.7 bn**



GLOBAL AVG. \$970 m

**MEDIAN SEED ROUND**  
(H2 2020 - 2022)

**\$3.1 m**



GLOBAL AVG. \$821 k

**EARLY-STAGE FUNDING GROWTH**  
(2019 - 20 VS. 2021 - 22)



Scale of 1 (lowest) to 10 (highest)

**EXIT AMOUNT**  
(2018 - 2022)

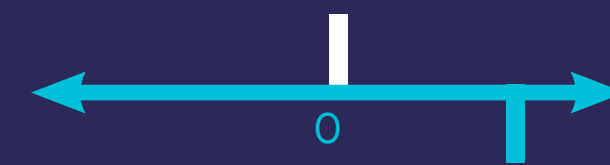
**\$418 bn**



GLOBAL AVG. \$11.3 bn

**ECOSYSTEM VALUE GROWTH**  
(H2 2020 - H2 2022 VS H2 2018 - H2 2020)

**3%**



GLOBAL AVG. 4.7%

**MEDIAN SERIES A ROUND**  
(H2 2020 - 2022)

**\$15 m**



GLOBAL AVG. \$6 m

**TOTAL VC FUNDING**  
(2018 - 2022)

**\$110 bn**

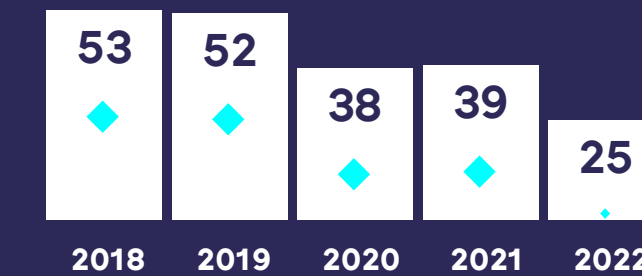


GLOBAL AVG. \$6.6 bn

**EXIT COUNT (#)**  
(2018 - 2022)

**207**

GLOBAL AVG. 91





## Sub-Sector Strengths

### AI, Big Data & Analytics

Beijing had an estimated 1,048 major AI companies as of October 2022, approximately 29% of the national total. The city has more than 40,000 professionals in core AI technologies. In October AI startup Bishi Technology raised a \$27.7 million Series C.

### Fintech

Beijing topped the ranking of 50 cities around the globe for the fourth time in the Global Fintech Hub Report 2022. Tsinghua University PBC School of Finance and Tsinghua University National Institute of Financial Research co-organize the annual China Financial Research Conference with the ultimate goal of encouraging financial innovation in China. The FinTech World Forum took place here in May 2023. In February, corporate spend provider Fenbeitong raised a \$140 million Series C+ round, reaching unicorn status.

### Life Sciences

Beijing has three Life Sciences clusters: Zhongguancun Life Sciences Park, China Bio-medicine Park, and Beijing Economic-Technological Development Area. Sinovac Biotech, a biopharmaceutical product provider, began construction of a new vaccine quality research center here in 2022, and a new biomedical imaging facility was unveiled in Huairou Science City in the same year. In January 2022 synthetic biology firm Bluepha raised a \$235 million Series B. In July 2022, Helixon raised a \$75 million Series A round for its AI drug-development platform. In August 2022, biotech Sironax closed a \$200 million Series B.

## Reasons to Move Your Startup to Beijing

### Tech Talent

In 2022 China aimed to enroll at least 1.4 million students in technical colleges, according to the Ministry of Human Resources and Social Security. Officials in Beijing expect the number of university graduates to reach approximately 12 million in 2023.

### Access to Funding

The Research Fund for International Scientists (RFIS) supports international scientists with foreign citizenship who conduct basic research in China. The program also aims to encourage collaboration and exchange between Chinese and international scientists.

### Infrastructure for Advanced Research

The Beijing International Data Exchange platform incorporates 333 data-trading entities controlling 773 million transactions. The Beijing High-level Autonomous Driving Demonstration Zone is being expanded to cover 500 square kilometers (193 square miles). A pilot computing and design system is managing a million square meters (10.76 million square feet) in the Haidian District. Other projects, including digital community governance models, industry-research integrated Blockchain systems, and a metaverse experience center, are under development.

India

# Bengaluru-Karnataka

**#20** Global Ranking **#13** Agtech Ranking **#21** Fintech Ranking

**MEMBERS:**

Karnataka Innovation & Technology Society (KITS) / Karnataka Digital Economy Mission (KDEM)

*“Karnataka has a vision to be a leading global destination for startups and cutting-edge technology solutions. The government is committed to further strengthening the incubation and acceleration infrastructure across the state to support the development of innovative solutions.”*



**Dr. E.V. Ramana Reddy**

IAS, Additional Chief Secretary, Dept. of Electronics, IT, BT and S&T, Govt. of Karnataka



## Highlights

Bengaluru, Karnataka’s capital, is a magnet for entrepreneurs, investors, and innovators. The city has been described as the world’s fastest-growing tech hub and is home to the R&D centers of some of the world’s most famous tech companies, including Amazon, Microsoft, Facebook, and Google. Unicorns born in Karnataka include Byju’s, Zerodha, Cred, PhonePe, Flipkart and Big Basket. The state government has ambitious plans to double the number of startups through various initiatives. Bengaluru’s population is expected to grow by more than 6% in 2023, projected to be the fastest growing city in the Asia-Pacific region.

Data from Inc42 shows Bengaluru-based startups raised \$11 billion in 2022. Research from Dealroom showed that Bengaluru was the leading Asian city and fifth ranked hub in the world for tech VC investment in 2022. In 2022, Karnataka attracted \$21.5 billion in foreign direct investment, more than half of the total amount for the entire country.

In November 2022, Google signed a MoU with the Karnataka government to provide training and mentorship programs to startups, job seekers, and children. It will work with Karnataka Innovation and Technology Society (KITS) to train women-led startups. Google will also provide scholarships for its Career Certification program. In February 2023, tech company Aptiv announced the opening of a new \$14 million technical center in Bengaluru. Also in February, manufacturing firm Ducab Group set up an office here. Logiy Spaces has partnered with AA Holdings to develop a 1 million square foot industrial and logistics park in Karnataka. Samsung R&D Institute Bengaluru and Samsung R&D Institute Noida launched a startup incubation program in February 2023.



# Ecosystem by the Numbers

**ECOSYSTEM VALUE**  
(H2 2020 - 2022)

**\$164 bn**



GLOBAL AVG. \$34.6 bn

**NUMBER OF UNICORNS**  
(H2 2020 - 2022)

**34**



GLOBAL AVG. 4

**SOFT. ENGINEER SALARY**  
(2022)

**\$12 k**



GLOBAL AVG. \$46 k

**TIME TO EXIT**  
(2018 - 2022)

**6.8 years**



GLOBAL AVG. 9 years

**TOTAL EARLY-STAGE FUNDING**  
(H2 2020 - 2022)

**\$4 bn**



GLOBAL AVG. \$970 m

**MEDIAN SEED ROUND**  
(H2 2020 - 2022)

**\$750 k**



GLOBAL AVG. \$821 k

**EARLY-STAGE FUNDING GROWTH**  
(2019 - 20 VS. 2021 - 22)



Scale of 1 (lowest) to 10 (highest)

**EXIT AMOUNT**  
(2018 - 2022)

**\$27 bn**



GLOBAL AVG. 11.3 bn

**ECOSYSTEM VALUE GROWTH**  
(H2 2020 - H2 2022 VS. H2 2018 - H2 2020)

**59%**



GLOBAL AVG. 4.7%

**MEDIAN SERIES A ROUND**  
(H2 2020 - 2022)

**\$6.9 m**



GLOBAL AVG. \$6 m

**TOTAL VC FUNDING**  
(2018 - 2022)

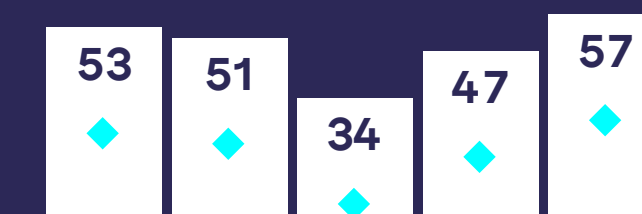
**\$35 bn**



GLOBAL AVG. \$6.6 bn

**EXIT COUNT (#)**  
(2018 - 2022)

**242**



GLOBAL AVG. 91

## Sub-Sector Strengths

### Fintech

The state is on track to produce 50 Fintech unicorns by 2030, according to the KDEM's FinTech Task Force. KDEM is advocating for the creation of a dedicated Fintech policy for the state, as well as supporting the creation of the Karnataka Centre of FinTech Excellence and the Karnataka FinTech StartUp Innovation Corpus. Razorpay acquired offline POS company Ezetap for \$200 million in August 2022. Personal-loan platform KreditBee raised a \$120 million Series D in January 2023.

### Life Sciences

Karnataka is home to approximately 60% of India's Biotech companies, employing about 54% of the country's biotech workforce. The Centre for Cellular and Molecular Platforms (C-CAMP) has supported more than 350 startups, many in Life Sciences. Bangalore Bioinnovation Centre further supports the ecosystem and academia. Digital healthcare platform Mfine was acquired by LifeCell International for \$80 million in July 2022. Diagnostics service Orange Health Labs raised a \$23.3 million Series B in June 2022.

### Cleantech

Electric vehicle (EV) startups in India raised \$1.7 billion in 2022, a jump of 117% from 2021. In June 2022, the Karnataka government launched EV-awareness portal EV Jagruthi. BorgWarner opened a technical center in December 2022 and set up the India Electric Propulsion Engineering Centre in January 2023 to develop EV-specific products. EV-focused Fintech startup Turno raised a \$18.8 million Series A in February 2023. Electric scooter company Ather Energy raised a \$49 million Series E in October 2022.

## Reasons to Move Your Startup to Bengaluru-Karnataka

### Established Tech Scene

Bengaluru-Karnataka is home to a vast number of IT companies, tech talent, and startup support initiatives.. Karnataka hosts 44% of India's R&D centers, including Google's first AI-focused center and Intel's largest 5G technology design center. In February 2023, the Karnataka government announced plans for a new startup park near Bengaluru.

### Skilled Talent

As of February 2022, Bengaluru was home to 1.5 million workers — a quarter of India's digital talent and far more than any other Indian city. Bengaluru is also home to a number of internationally recognised higher education and research institutes, including the Indian Institute of Science and the Indian Institute of Management Bengaluru.

### Government Support

The Karnataka Startup Policy 2022–27 supports funding for startups, gives special emphasis to women-led startups and envisions establishing 50 innovation centers, technology business incubators, a Centre of Excellence for Rural Innovation and Assistive Technology, and a Resource Centre for Circular Economy startups. The Idea2PoC Grant-In-Aid Scheme offers seed funding to early-stage startups and has already supported 721+ startups so far.



## Selected Startup Organizations

STARTUP GENOME MEMBERS

MEMBER

### Karnataka Innovation & Technology Society (KITS)

KITS is the Government of Karnataka's Nodal Agency to promote the state's startup ecosystem and is responsible for facilitating implementation of various schemes, programs, interventions of the policy and any new initiatives required for the growth of the startup ecosystem in the State. KITS is working closely with academia, Karnataka Digital Economy Mission (KDEM), and industry to accelerate growth and investments in the field of electronics, IT, BT, and S&T sectors in Karnataka.

MEMBER

### Karnataka Digital Economy Mission (KDEM)

KDEM is the implementing agency responsible for carrying out the Government of Karnataka's initiatives.

Japan  
**Fukuoka**

**MEMBERS:**  
Fukuoka City / JETRO, Fukuoka

*“We provide robust support for startups, and has been designated as a Special Zone for Global Startups and Job Creation by the government in recognition of its efforts. We are bringing new vitality to Fukuoka as a place with excellent prospects for those looking to launch businesses here.”*



**Soichiro Takashima**  
Mayor of Fukuoka City



## Highlights

Fukuoka, Kyushu’s largest city with 1.5 million residents, is working to become the Silicon Valley of Japan. Long heralded as the “gateway to Asia,” Fukuoka is centrally located between Tokyo, Osaka, and Kobe to the east and Taipei, Shanghai, and Seoul to the west. It has a manufacturing history related to traditional crafts such as textiles stretching back to the 1600s. Today, Fukuoka City is home to 23 globally ranked universities, several R&D centers, and 135 international firms.

In 2014, Fukuoka City was designated a National Strategic Special Zone, easing regulations and making it easier for startups to get established in the city. In addition, Startup Cafe was established as a one-stop support center for startups, assisting at various phases from incorporation to hiring new talent, and providing a hub for members of the ecosystem to come together. In 2017, Fukuoka City established Fukuoka Growth Next (FGN), a public-private incubation facility. As well as providing workspace, FGN offers an incubation program. Cambridge Innovation Center (CIC) is collaborating with Nishitetsu Group/Nishinippon Railroad, to establish startup-support facility Innovation Campus in 2025.

Fukuoka City was selected to be a member of the Japanese government’s International Financial City Initiative, which aims to create leading hubs for foreign financial institutions. Team Fukuoka, a public-private consortium working to transform Fukuoka into an international finance hub was formed in 2020, and has attracted 14 companies so far. In 2022, Singapore Fintech M-DAQ and Taiwan’s E.Sun Commercial Bank announced that they will open offices in Fukuoka.



# Ecosystem by the Numbers

**ECOSYSTEM VALUE**  
(H2 2020 - 2022)

**\$649 m**



GLOBAL AVG. \$34.6 bn

**NUMBER OF UNICORNS**  
(H2 2020 - 2022)

**0**



GLOBAL AVG. 4

**SOFT. ENGINEER SALARY**  
(2022)

**\$40 k**



GLOBAL AVG. \$46 k

**TIME TO EXIT**  
(2018 - 2022)

**5.7 years**



GLOBAL AVG. 9 years

**TOTAL EARLY-STAGE FUNDING**  
(H2 2020 - 2022)

**\$113 m**



GLOBAL AVG. \$970 m

**MEDIAN SEED ROUND**  
(H2 2020 - 2022)

**\$847 k**



GLOBAL AVG. \$821 k

**EARLY-STAGE FUNDING GROWTH**  
(2019 - 20 VS. 2021 - 22)



Scale of 1 (lowest) to 10 (highest)

**EXIT AMOUNT**  
(2018 - 2022)

**\$274 m**



GLOBAL AVG. \$11.3 bn

**ECOSYSTEM VALUE GROWTH**  
(H2 2020 - H2 2022 VS. H2 2018 - H2 2020)

**34%**



GLOBAL AVG. 4.7%

**MEDIAN SERIES A ROUND**  
(H2 2020 - 2022)

**\$2.1 m**



GLOBAL AVG. \$6 m

**TOTAL VC FUNDING**  
(2018 - 2022)

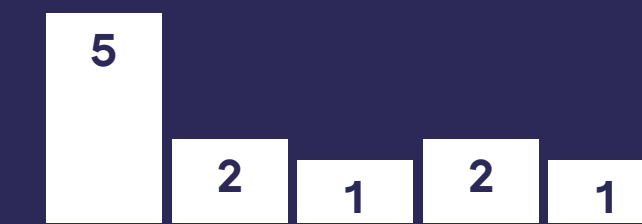
**\$437 m**



GLOBAL AVG. \$6.6 bn

**EXIT COUNT (#)**  
(2018 - 2022)

**11**



GLOBAL AVG. 91

## Sub-Sector Strengths

### Digital Media

Fukuoka City is working to promote both digital and analogue creative industries including Gaming, music, design, videography, and fashion to realize its vision of becoming Creative Entertainment City Fukuoka. The city is home to Japan's leading Gaming companies, including Level-5 and CyberConnect2. Every fall, Fukuoka City hosts The Creators, an event where visitors can experience various forms of entertainment. In 2022, approximately 70,000 people enjoyed the event.

### Life Sciences

Fukuoka is actively building a cluster of Life Sciences startups, related companies, and research institutions. In particular, Kyushu University is focused on supporting startups originating from the university, and there are already more than 10 unlisted companies with an enterprise value of over ¥1 billion (\$7.5 million). In May 2023, the ITO Lab Plus complex was built next to the campus, providing not only laboratories and offices but also restaurants and housing. The Open Innovation Platform, the university's industry-academia interface, moved into this complex.

### Fintech

In 2020, Team Fukuoka, a regionwide partnership among industry, academia, and government, was established to promote the entry of foreign financial institutions, Fintech companies, and talent. Global Finance Center provides a one-stop support agency for those institutions. Through these efforts, 14 financial companies from Singapore, Taiwan, Hong Kong, and other countries have successfully established their business bases in Fukuoka City in just two years, and other efforts are underway to make Fukuoka an international financial city that continuously creates innovation.

## Reasons to Move Your Startup to Fukuoka

### Location

Fukuoka is conveniently situated in the center of East Asia. Hubs including Shanghai, Hong Kong, Seoul, Beijing, and Taiwan are a short, direct flight away. Trains to Tokyo depart up 27 times a day and take less than five hours. The train to Kyoto takes less than three hours and also has frequent departures.

### Government Support

Fukuoka City has been approved to implement the Startup Visa (Entrepreneurial Incentives for Foreigners) to incentivize foreigners to be entrepreneurs in Fukuoka. As a National Strategic Special Zone, prerequisites for the Business Manager visa, which is required for foreigners intending to start a business in Japan, are eased for foreigners who wish to found their business in Fukuoka. With this visa, entrepreneurs are able to stay and work in Japan for up to one year.

### Financial Assistance

Fukuoka City provides loans for entrepreneurs who have established a business in the city during the previous two years. The maximum awarded is ¥35 million (\$253,000), with a 1.3% interest rate. Fukuoka City also holds a yearly business plan contest with a maximum prize of ¥1 million (\$7.5 million). Startups founded within the last five years may be eligible to receive subsidies depending on their number of employees and rental costs.



## Selected Startup Organizations

STARTUP GENOME MEMBERS

MEMBER

### Fukuoka City

Fukuoka City is the fastest growing city in Japan. Its economy is booming, and this trend promises to continue. People are flocking here, and Fukuoka has the highest population growth rate in Japan. In fact, Fukuoka ranks #1 in terms of the growth rate of foreign residents among all the ordinance-designated cities. While the population grows, the prices in the city are still some of the most reasonable in Japan. This economy coupled with the startup incentives that the city provides make it an ideal place to found a new company.

KEY ECOSYSTEM PLAYERS

### Fukuoka Growth Next (FGN)

FGN is the public-private collaborative start-up support facility. It supports growth of startups through acceleration programs and mentoring from venture capitalists. It also provides startups meet-up opportunities with many companies and supporters.

### Fukuoka Directive Council (FDC)

FDC is the industry-academia-government-citizens joint Think & Do tank. It shapes the new future of Fukuoka and strengthens its international competitiveness through strategic planning and implementations for growth.

### Startup GoGo

StartupGoGo is an accelerator based in Fukuoka City. In addition to hosting the pitch event StartupGo!Go!, it runs the acceleration program UPDRAFT. It also established GxPartners to invest into startups.

MEMBER

### JETRO, Fukuoka

JETRO, or the Japan External Trade Organization, is a government-related organization that works to promote mutual trade and investment between Japan and the rest of the world. By utilizing its network of more than 70 overseas offices and 50 domestic offices, JETRO supports 700+ Japanese startups per year through 15 different acceleration programs, and 3,000+ through mentoring, partnering with world-renowned accelerators. JETRO Fukuoka was established in 1952 as the first local office, and has been serving to vitalize the regional economy.

### Global Startup Center (GSC)

GSC provides comprehensive support and helps you make the connections you need to establish your business via visa support, help with incorporation, marketing, fundraising, and business matching.

### Kyushu University

Founded in 1911, Kyushu University is a leading research-oriented institution of higher education located in Fukuoka. Nearly 20,000 students are enrolled, and more than 2,300 international students represent 102 countries.

### ASCENSION

Fukuoka City hosts ASCENSION, an event to promote Fukuoka as a startup city both in Japan and abroad through discussions between Fukuoka City Mayor Soichiro Takashima and entrepreneurs who are active on the global stage.

## India Kerala

**MEMBERS:**  
Kerala Startup Mission

*“Kerala’s dynamic startup ecosystem and highly skilled talent pool have positioned the state as a hub of innovation and entrepreneurship. As we continue to foster a supportive environment for startups, we are confident that Kerala will emerge as a leading destination for future technologies, game-changing ideas, and transformative solutions.”*



**Pinarayi Vijayan**  
Honourable Chief Minister of Kerala



## Highlights

In 2022, the Kerala government announced plans to create 15,000 tech startups in the next five years, and also approved an INR 2.5 billion (\$30.4 million) VC fund. The state has also partnered with five VC funds as limited partners and made INR 9 billion (\$110 million) available for startups. The Build it Big project by Kerala Startup Mission (KSUM) invites professionals to build products that can compete with world-class existing products. INR 10 million (\$122,000) is earmarked for each product.

KSUM has announced the launch of four Startup Infinity spaces, launchpads for startups to scale globally, in the UAE, U.S., Australia, and Germany and plans to scale to other parts of the world. Startups from across the world can come to Kerala and explore the Indian market with three months of free space provided. The Kerala Government created India’s first facility for attracting Spacetech startups and the development of a manufacturing hub for space technology and R&D. The Research Innovation Network Kerala promotes technology commercialization.

KSUM provided INR 50 million (\$609,300) in grants for startups in 2022 and offers a Soft Loan Scheme under which local startups with female leadership can access seed funding of up to Rs 1.5 million (\$18,300). The scheme also provides technology commercialization support up to Rs 3 million (\$36,600) for approved startups. In November 2022, the government approved plans to set up a new digital science park.



# Ecosystem by the Numbers

**ECOSYSTEM VALUE**  
(H2 2020 - 2022)

**\$1.2 bn**



GLOBAL AVG. \$34.6 bn

**NUMBER OF UNICORNS**  
(H2 2020 - 2022)

**1**



GLOBAL AVG. 4

**SOFT. ENGINEER SALARY**  
(2022)

**\$5 k**



GLOBAL AVG. \$46 k

**TIME TO EXIT**  
(2018 - 2022)

**5.5 years**



GLOBAL AVG. 9 years

**TOTAL EARLY-STAGE FUNDING**  
(H2 2020 - 2022)

**\$64 m**



GLOBAL AVG. \$970 m

**MEDIAN SEED ROUND**  
(H2 2020 - 2022)

**\$340 k**



GLOBAL AVG. \$821 k

**EARLY-STAGE FUNDING GROWTH**  
(2019 - 20 VS. 2021 - 22)



Scale of 1 (lowest) to 10 (highest)

**EXIT AMOUNT**  
(2018 - 2022)

**\$76 m**



GLOBAL AVG. \$11.3 bn

**ECOSYSTEM VALUE GROWTH**  
(H2 2020 - H2 2022 VS H2 2018 - H2 2020)

**243%**



GLOBAL AVG. 47%

**MEDIAN SERIES A ROUND**  
(H2 2020 - 2022)

**\$4.5 m**



GLOBAL AVG. \$6 m

**TOTAL VC FUNDING**  
(2018 - 2022)

**\$331 m**



GLOBAL AVG. \$6.6 bn

**EXIT COUNT (#)**  
(2018 - 2022)

**8**



GLOBAL AVG. 91

## Sub-Sector Strengths



### Advanced Manufacturing & Robotics

The Kerala Infrastructure and Technology for Education plans to establish 9,000 Robotics labs in high schools across the state. In February 2022, the Kerala government announced the country's first Graphene Innovation Centre, a joint venture of Digital University of Kerala, Centre for Materials for Electronics Technology, and Tata Steel. In 2023, Kerala unveiled a draft industrial policy that emphasizes upgrading skills in Kerala's young people. The Super Fab Lab and 22 mini fab labs provide digital fabrication experience to youth in the state.



### AI, Big Data & Analytics

Initiatives including Future Technologies Lab, Digital Hub, Design Incubator, and Digital University are bringing new talent into AI, Big Data & Analytics. Digital University Kerala launched training program Capacity Building in Responsible AI and Data Analytics for the Police Department in 2022. AI and machine learning applications company DCUBE Ai signed an MoU with Australian Spaceteck startups SABRN and AltData. The companies will partner with Adelaide University to provide health services to astronauts.



### Life Sciences

Kerala launched the Genome Data Centre, a high-capacity data center and data hub for researchers, healthcare professionals, and public health officials to access and share genomic data in March 2023. A new Life Sciences Park is planned in Thiruvananthapuram. A Kerala State Industrial Development Corporation initiative, it will bring together research institutions, academia, and companies working in Biotechnology, Nanotechnology and Life Sciences.

## Reasons to Move Your Startup to Kerala

### Government Support

The Kerala Startup Mission (KSUM) is the central agency of the state government for entrepreneurship development. It has registered 4,000+ startups, dispersed Rs 50 million (\$609,300) in grants, and administered a Rs 10 billion (\$121.9 million) fund of funds. KSUM has established a network of 425 innovation and entrepreneurship development centers in universities and colleges.

### Tech Talent

With a literacy rate of 92.2%, Kerala is one of India's most highly skilled states, and the cities of Kochi and Thiruvananthapuram are hubs for international IT companies. Kerala has focused on upskilling through initiatives including Digital University, ASAP, Mu Learn, and Kerala Blockchain Academy. It ranked #3 among Indian states for its employable talent in the India Skills Report 2022.

### Digital Adoption

Kerala is the first state in India to go fully digital in its banking services and also the first to declare access to the internet "a basic human right." Launched in 2022, the Kerala Fibre Optic Network adds 17,155 km to the network. Kerala allows digital signatures on various official documents.



# Selected Startup Organizations

STARTUP GENOME MEMBERS

MEMBER

## Kerala Startup Mission

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

Malaysia

# Kuala Lumpur

# (21-30) Emerging Ranking #20 Strong Starters Ranking

MEMBERS:

Cradle

*“The Malaysian Government is committed to building a vibrant startup ecosystem. That commitment is evident through the allocation of up to \$900 million to grow the local startup ecosystem. MOSTI will drive this initiative through the Malaysia Startup Ecosystem Roadmap 2021–2030 and will strive to ensure mutual benefit for all stakeholders.”*



**Chang Lih Kang**

Minister of Science, Technology and Innovation (MOSTI)



## Highlights

Kuala Lumpur is home to over 8 million people and a growing number of tech startups. Cradle, a federal agency with a mandate to support startups from seed stage to beyond the nation’s borders, is at the heart of the startup ecosystem. The Ministry of Science, Technology and Innovation (MOSTI) launched the Malaysia Startup Ecosystem Roadmap (SUPER) 2021–2030 along with a capacity-building initiative called MYStartup to further elevate Malaysia’s startup scene. Since its establishment, the initiative has supported over 5,000 founders through various programs, investments, and acquisitions.

Success stories include local startup Luwjistik being acquired by Shippit, an Australian logistics company, for \$11.3 million in Q4 2022, and BetterPlace, an India-based SaaS and workforce management platform acquiring Malaysia-based recruitment firm Troopers in Q2 2023. Also in 2023, Fintech SoftSpace raised \$31.5 million in a Series B funding round, making it the largest Series B raised by a Malaysian startup.

Collaboration and public-private partnerships are key factors in the ecosystem’s success. Khazanah Nasional Sdn Bhd announced a \$1.3 billion commitment to support the ecosystem over five years through its Dana Impak mandate. Malaysia Venture Capital Management Bhd (MAVCAP), Cradle, and Penjana Kapital provide grants and investment. Corporate players also support both seed-stage and rising stars. Petronas created its FutureTech program and telecom giant Maxis includes venture building as part of its overall strategy to invest in and grow tech-driven startups and companies. Funding and mentorship also comes from VCs and accelerators including ScaleUp Malaysia, Sunway iLabs, and 25 Startups, which work alongside international organizations such as Indelible Ventures, Gobi Partners, Endeavor, and 500 Global.



# Ecosystem by the Numbers

**ECOSYSTEM VALUE**  
(H2 2020 - 2022)

**\$46 bn**



GLOBAL AVG. \$34.6 bn

**NUMBER OF UNICORNS**  
(H2 2020 - 2022)

**1**



GLOBAL AVG. 4

**SOFT. ENGINEER SALARY**  
(2022)

**\$16 k**



GLOBAL AVG. \$46 k

**TIME TO EXIT**  
(2018 - 2022)

**8.1 years**



GLOBAL AVG. 9 years

**TOTAL EARLY-STAGE FUNDING**  
(H2 2020 - 2022)

**\$314 m**



GLOBAL AVG. \$970 m

**MEDIAN SEED ROUND**  
(H2 2020 - 2022)

**\$323 k**



GLOBAL AVG. \$821 k

**EARLY-STAGE FUNDING GROWTH**  
(2019 - 20 VS. 2021 - 22)



Scale of 1 (lowest) to 10 (highest)

**EXIT AMOUNT**  
(2018 - 2022)

**\$41 bn**



GLOBAL AVG. 11.3 bn

**ECOSYSTEM VALUE GROWTH**  
(H2 2020 - H2 2022 VS. H2 2018 - H2 2020)

**61%**



GLOBAL AVG. 4.7%

**MEDIAN SERIES A ROUND**  
(H2 2020 - 2022)

**\$2.4 m**



GLOBAL AVG. \$6 m

**TOTAL VC FUNDING**  
(2018 - 2022)

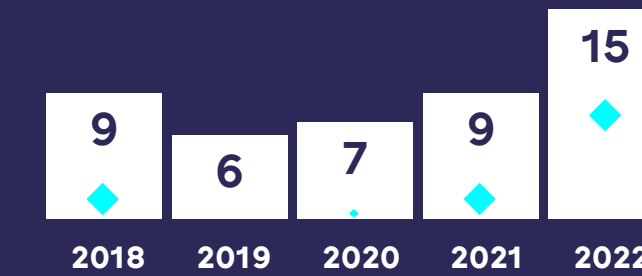
**\$5.4 bn**



GLOBAL AVG. \$6.6 bn

**EXIT COUNT (#)**  
(2018 - 2022)

**46**



GLOBAL AVG. 91

## Sub-Sector Strengths

### Fintech

In 2022, Malaysia's Central Bank announced five successful applicants for the digital bank licenses as approved by the Minister of Finance to further penetrate and develop the unbanked and underserved market. FintechMoneyMatch was one of the five to obtain a license as part of a consortium led by KAF Investment Bank, which also includes Carsome and Fintech startup Jirnexu.

### E-commerce

Malaysia aims to grow the Ecommerce market to \$367.7 billion and boost the number of businesses exporting via Ecommerce to 84,000 by 2025. The average number of online platforms used per person saw a 1.9 times growth from 2021 to 2022. In January 2022, SaaS-enabled marketplace Dropee raised \$7 million in Series A funding led by returning investor Vynn Capital.

### Healthtech

In 2022, digital health provider Naluri raised \$7 million in a pre-Series B funding and is eyeing strategic expansion into Thailand. Local Healthtech startups such as DOC2US, BookDoc, and DoctorOnCall have been recognised by the government and played a crucial role in managing the COVID-19 pandemic in Malaysia. In March 2023, eldercare-focused startup Care Concierge became the first portfolio to be backed by Gobi Partners under the newly established Gobi Dana Impak Ventures Fund.

## Reasons to Move Your Startup to Kuala Lumpur

### Young, Educated Workforce

The median age in Malaysia is 30.3 years old, providing companies in Kuala Lumpur with a strong pipeline of young talent. The EF English Proficiency Index 2022 ranked Malaysia #3 in ASEAN and #24 overall, putting it in the "high proficiency" category. The MyDigitalWorkForce Work In Tech initiative provides incentives for training including providing startups with a contribution towards employees' salaries.

### Ease of Doing Business

Malaysia's government continues to streamline the ease of doing business. The country ranked #42 overall and #8 in the Asia-Pacific region in the Index of Economic Freedom published by the Heritage Foundation, with a score above the world and regional averages. In September 2022, Malaysia launched DE Rantau, a program promoting the country to digital nomads that will provide 2,000 short-term rental accommodations known as Digital Nomad Hubs in 2023.

### Startup Assistance

In the Budget 2023, the Malaysia government allocated RM40 billion (\$9 billion) towards loan facilities and financing guarantees for SMEs. The Central Bank has also committed RM2 billion (\$450 million) in funding for sustainable technology startups and to help SMEs implement low-carbon practices. Bintang Capital, Kejora Capital, 1337 Ventures, Artem Ventures, and Ficus Capital continue to fund and scale new startups every year.



## Selected Startup Organizations

STARTUP GENOME MEMBERS

MEMBER

### Cradle

Having empowered over 1,000 startups throughout the years, Cradle continues to drive the growth of the Malaysian startup ecosystem through various initiatives. In addition to grants and mentorship assistance, public-private partnerships with the likes of Microsoft, Petronas, and Maxis continue to scale startups from Kuala Lumpur and nationwide. MYStartup, an initiative with the Ministry of Science and Technology (MOSTI) has been at the forefront of driving collaboration between industries and corporate partners to further elevate and empower the startup ecosystem.

KEY ECOSYSTEM PLAYERS

### Ahmad Kashfi Alwi (Ash)

Leading the MYStartup platform. The platform is an interactive environment where all startup ecosystem partners can share information, procure services, and stimulate meaningful partnerships.

### Harmender Singh

Leading the Malaysia Startup Ecosystem Roadmap 2021-2030 (SUPER) Project Management Office. SUPER acts as the true north of all other national policies and guidelines on startup.

### Malaysia Digital Economy Corporation (MDEC) Fox Program

The FOX programme is an intervention initiative designed to provide support for 20 selected companies that have shown high-speed growth and the potential to become the next unicorn.

### Khazanah (Future Malaysia via Dana Impak)

The programme is an initiative under its Dana Impak mandate — a RM6 billion (\$1.3 billion) commitment over five years, which aims to support the local start-up ecosystem of entrepreneurs, start-ups, venture capital and corporate venture programmes.

### Penjana Kapital

Stimulating Malaysia's economy by futureproofing businesses through innovation from start-ups, funded by private capital from strategic international and private domestic investors, matched by the government.

### Adlin Yusman

Endeavor is on a mission to build thriving entrepreneurial ecosystems in emerging and underserved markets around the world.

## Philippines Manila

**MEMBERS:**

Department of Trade and Industry

*“We continue to invest and inspire our young Filipino Talent through our Science, Technology, and Innovation Industrialization strategy. We believe that our people are our main competitive advantage in the era of industrial transformation.”*



**Rafaelita M. Aldaba**

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



## Highlights

With its young, tech-savvy, and educated young population, along with government and private support initiatives, the Philippine startup ecosystem is rapidly growing and gaining momentum.

The country ranked #5 in Global Innovation Index 2022 among ASEAN member states and accounted for 3.9% of the total \$15.8 billion in startup equity funding raised in Southeast Asia in 2022. In the same year, the investment landscape expanded to 9% from its 2% record in 2020 despite the overall worldwide investment downturn.

The Philippine government is taking several measures to streamline support services for the startup ecosystem, including developing an eGov app as a single operating system for all government transactions. The platform will act as a one-stop-shop for business permits and strategic investments. Local startups receive support from the Startup Venture Fund, the Grant Fund, and various incubation and acceleration programs from public and private organizations. The Philippine Development Plan for 2023–2028 also seeks to accelerate startup growth through integration into global value chains.

Ranking among the 2022 top startup ecosystems in the Asia Pacific, Manila is the most active startup ecosystem in the Philippines, potentially becoming the leading hub for innovation and entrepreneurship in Southeast Asia. Other highly urbanized cities, including Naga, Iloilo, Cebu, and Davao also show potential as startup destinations, with the expansion of government and private support through Regional Inclusive Innovation Centers. These virtual platforms engage innovation stakeholders from government, industry, and academia to develop and improve startups’ market solutions.



# Ecosystem by the Numbers

**ECOSYSTEM VALUE**  
(H2 2020 - 2022)

**\$3.5 bn**



GLOBAL AVG. \$34.6 bn

**NUMBER OF UNICORNS**  
(H2 2020 - 2022)

**0**



GLOBAL AVG. 4

**SOFT. ENGINEER SALARY**  
(2022)

**\$9 k**



GLOBAL AVG. \$46 k

**TIME TO EXIT**  
(2018 - 2022)

**7.6 years**



GLOBAL AVG. 9 years

**TOTAL EARLY-STAGE FUNDING**  
(H2 2020 - 2022)

**\$338 m**



GLOBAL AVG. \$970 m

**MEDIAN SEED ROUND**  
(H2 2020 - 2022)

**\$265 k**



GLOBAL AVG. \$821 k

**EARLY-STAGE FUNDING GROWTH**  
(2019 - 20 VS. 2021 - 22)



Scale of 1 (lowest) to 10 (highest)

**EXIT AMOUNT**  
(2018 - 2022)

**\$499 m**



GLOBAL AVG. 11.3 bn

**ECOSYSTEM VALUE GROWTH**  
(H2 2020 - H2 2022 VS. H2 2018 - H2 2020)

**85%**



GLOBAL AVG. 4.7%

**MEDIAN SERIES A ROUND**  
(H2 2020 - 2022)

**\$8.4 m**



GLOBAL AVG. \$6 m

**TOTAL VC FUNDING**  
(2018 - 2022)

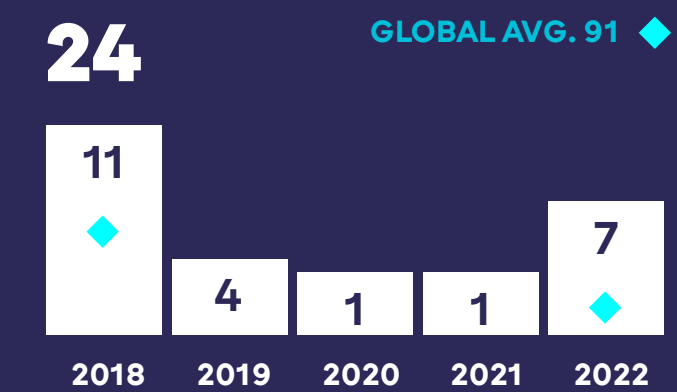
**\$1.3 bn**



GLOBAL AVG. \$6.6 bn

**EXIT COUNT (#)**  
(2018 - 2022)

**24**



GLOBAL AVG. 91

## Sub-Sector Strengths



### Fintech

BSP, the central bank of the Philippines, aims to achieve 50% digital retail transactions and 70% of Filipino adults having bank accounts by 2023. It places Cybersecurity as a top priority in building public trust in digital banking. Tonik, the first independent all-digital bank in the country, was launched in 2021 and has raised \$175 million over five rounds. Buy Now, Pay Later startup BillEase has raised \$51 million over three rounds. PDAX, Lista, and UNO Digital Bank are other notable local Fintech startups.



### E-commerce

The Philippines is among the fastest-growing countries in terms of online retail sales growth, with a young population and high internet penetration contributing to this. The government has supported development through the E-Commerce Act of 2000 (RA 8792), which recognizes electronic documents as legally equivalent to written ones, and the E-Commerce Roadmap 2022, which aims for easy commerce through the MADALI program. Great Deals, Kumu, and GrowSari are three examples of successful local Ecommerce startups.



### Gaming

Esports is growing in popularity in the Philippines because of the increasing availability of smartphones and mobile internet. There are over 45 million active gamers in the country. CasinosEnLigne.com projects mobile games revenue will jump by 13% to \$173 billion in 2023. GosuGamers and Fulcrum Esports signed an agreement to elevate grassroots Gaming and esports in the Philippines. The Bang Bang World Championship (M5) will be held in Manila in December 2023. CONQuest Festival 2023 took place in June.

## Reasons to Move Your Startup to Manila

### Young, Educated Talent

Manila is rich in young and competent tech talent with the potential to discover and develop new solutions in various sectors. The median age in the Philippines is 25.3 years old, and each year 350,000 college graduates join the labor pool. In the 2022 EF English Proficiency Index, the Philippines ranked #2 in Asia and #22 in the world.

### Government Support

The Innovative Startup Act provides programs and incentives for startups and startup enablers, the Philippine Innovation Act facilitates the country's adoption of innovation to drive inclusive development, and the Ease of Doing Business Act speeds up the creation and entry of more businesses in the country. Additionally, the Foreign Investment Act encourages investments to help fuel the overall economy, and the CREATE Law provides tax incentives for digital and innovative businesses.

### Dedicated Startup Support

Funding mechanisms and grants such as Startup and Creatives Venture Fund, Startup Grant Fund, and TECHNiCOM help support the startup ecosystem. An Industry 4.0 Pilot Factory, a Center for AI Research, and the Smart Industry Readiness Index are also driving innovation. Ease of doing business for startups is also being promoted through the SBOSS initiative.



## Selected Startup Organizations

STARTUP GENOME MEMBERS

MEMBER

### Department of Trade and Industry

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

KEY ECOSYSTEM PLAYERS

### Philippine Startup Week

A week-long and large-scale collaborative international conference organized by the DICT, DOST, and DTI showcasing the Philippine startup ecosystem.

### Regional Inclusive Innovation Centers

Solution-driven platforms that aim to meet local and regional industry needs and provide greater access and linkages to innovation opportunities for startups and MSMEs to position their products in the Global Value Chain.

### Technology Business Incubators

Technology Business Incubator promotes innovation and technopreneurship and helps technology-based startup businesses by providing various resources, services, and facilities needed during the development stage.

### Gobi-Core Philippines Fund

A venture capital firm that strategically invests in tech-enabled early-stage startups across the Philippines and has already invested in startups which have now become local household names such as Tier One, kumu and Cloudeats.

### Foxmont Capital Partners

The only independent and most prolific Philippine-focused venture capital fund that invests in early-stage, tech-driven, and scalable startups in rapidly digitizing areas such as e-commerce, fintech, and health tech.

### QBO

A public-private initiative focused on helping startups to succeed, developing the PH startup ecosystem, and forwarding tech and innovation. It has been an active player in the country, fueled by its vision of Filipino startups changing the world.

South Korea

# Seoul

**#12** Global Ranking

**#26** Fintech Ranking

**#11** Blue Economy Ranking

**MEMBERS:**

Seoul Business Agency

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



**Hyun Woo Kim**

CEO, Seoul Business Agency



Global Ecosystem in Funding

**Top 15**



Global Ecosystem in Knowledge

**Top 15**



Global Ecosystem in Talent & Experience

**Top 15**

## Highlights

Known for tech giants like Samsung and LG, South Korea is actively developing its startup ecosystem. Seoul Startup Hub aims to match more than 1,000 startups with larger companies by 2024. South Korea’s Ministry of SMEs and Startups announced a ₩1.35 trillion (\$10.2 billion) budget for 2023. The 2023 Super-gap Startup 1,000+ Project will intensively foster 1,000 startups in specific high-tech sub-sectors.

In 2022, South Korea had 231 active VC firms, up from around 197 the previous year. Social impact VC firm Sopoong closed its \$8 million sixth fund in November and has already invested in 16 startups. South Korea’s Fintech Innovation Fund is set to increase from ₩500 billion (\$379 million) to ₩1 trillion to support Fintechs facing economic headwinds. The Seoul Municipal Government is launching the Vision 2030 Fund to invest ₩5 trillion (\$3.9 billion) in startups over the next four years.

In October 2022, the Seoul Metropolitan Government launched Seoul Startup Hub Bengaluru to provide assistance to Korean startups entering the heart of the Indian market. The hub is part of Seoul’s long-term plan to set up 10 startup support centers around the world by 2026. In February 2022, Seoul established Invest Seoul to attract foreign investment and overseas companies. Seoul ranks 10th place among 130 cities in Global Financial Centres Index (GFCI) which evaluates the financial competitiveness of major cities worldwide.

Startup festival Try Everything 2022 was held in September. At CES 2023, Korean companies received 9 out of 20 Best of Innovation Awards, making South Korea the most awarded country of all. The ninth Annual AVCJ Private Equity & Venture Forum - Korea took place in September 2022.



# Ecosystem by the Numbers

**ECOSYSTEM VALUE**  
(H2 2020 - 2022)

**\$211 bn**



GLOBAL AVG. \$34.6 bn

**NUMBER OF UNICORNS**  
(H2 2020 - 2022)

**17**



GLOBAL AVG. 4

**SOFT. ENGINEER SALARY**  
(2022)

**\$51 k**



GLOBAL AVG. \$46 k

**TIME TO EXIT**  
(2018 - 2022)

**8.5 years**



GLOBAL AVG. 9 years

**TOTAL EARLY-STAGE FUNDING**  
(H2 2020 - 2022)

**\$3.6 bn**



GLOBAL AVG. \$970 m

**MEDIAN SEED ROUND**  
(H2 2020 - 2022)

**\$841 k**



GLOBAL AVG. \$821 k

**EARLY-STAGE FUNDING GROWTH**  
(2019 - 20 VS. 2021 - 22)



Scale of 1 (lowest) to 10 (highest)

**EXIT AMOUNT**  
(2018 - 2022)

**\$94 bn**



GLOBAL AVG. 11.3 bn

**ECOSYSTEM VALUE GROWTH**  
(H2 2020 - H2 2022 VS H2 2018 - H2 2020)

**100%**



GLOBAL AVG. 4.7%

**MEDIAN SERIES A ROUND**  
(H2 2020 - 2022)

**\$3.4 m**



GLOBAL AVG. \$6 m

**TOTAL VC FUNDING**  
(2018 - 2022)

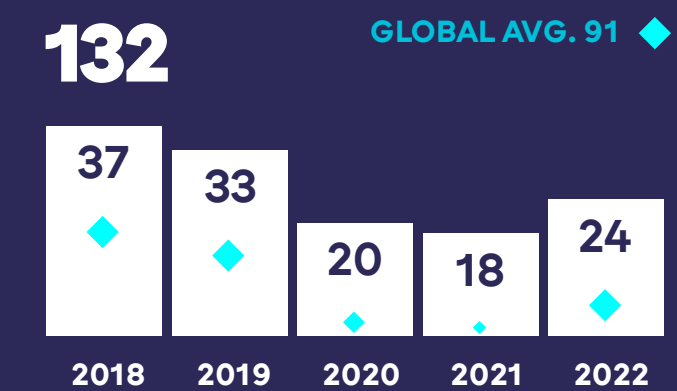
**\$34 bn**



GLOBAL AVG. \$6.6 bn

**EXIT COUNT (#)**  
(2018 - 2022)

**132**



GLOBAL AVG. 91

## Sub-Sector Strengths

### AI, Big Data & Analytics

AI Yangjae Hub is the first AI startup development institution in Korea. In February 2023, Rebellions Inc launched an AI chip to challenge global leader Nvidia Corp in hardware. In March 2022, Alibaba Cloud announced its first data center in Seoul. Singapore's Epyrion DC announced a 40MW green data center in Seoul will launch in 2024. AI Summit Seoul 2023 is scheduled for September. AI Expo Korea 2023 took place in May. StradVision, a maker of software for autonomous driving, raised an \$88 million Series C in August 2022. Industrial AI leader onepredict raised a \$25 million Series C in March 2022.

### Life Sciences

In December 2022, South Korea's four leading biotech firms announced plans to launch an investment fund of up to ₩50 billion (\$37.6 million) to support smaller domestic biotech firms. Vaccine and biotech company SK bioscience plans to establish its headquarters and R&D center in Seoul. BIO KOREA International Convention 2023 is set for May. Drug developer Onconic Therapeutics, raised a \$19.5 million Series B in December 2022. Remote medicine company Doctornow raised a \$33.0 million Series B in June 2022.

### Advanced Manufacturing & Robotics

South Korea has emerged as a leader in the fourth industrial Revolution. The Third Basic Plan on Intelligent Robots of South Korea aims to make Robotics a core industry, and the government has allocated \$172.2 million towards this goal. In February 2023, ASM International announced plans to invest around \$100 million in its manufacturing and innovation center in South Korea. Service robot maker Bear Robotics raised a \$81 million Series B in March 2022. Seoul Robotics has raised a total of \$43.1 million, including a \$25 million Series B in September 2022.

## Reasons to Move Your Startup to Seoul

### Educated Talent

South Korea boasts a highly educated and experienced population. In the latest QS World University Rankings, Seoul National University ranked #29 globally. Other top universities in the country include the Korea Advanced Institute of Science and Technology, Yonsei University, and Korea University.

### Established Innovation Hub

Seoul ranked #4 in the Global Innovation Index 2022's list of the world's 100 science and technology clusters. South Korea was named the sixth most innovative country in the world thanks to its high R&D intensity. The South Korean Ministry of Science and ICT will invest ₩5.24 trillion (\$3.9 billion) in R&D by 2023. Seoul Open Innovation Alliance, hosted by Seoul Business Agency, is a cooperative network for large and mid-sized enterprises, startups, accelerators, investors, and private and public institutions. Seoul is introducing a verification system to discover and attract more high-potential startups.

### Market Access

With its population of nearly 10 million, Seoul is the center of South Korea's economy. The nation has strong cultural and economic ties with China, Japan, Hong Kong, and Taiwan, helping startups access Asian markets. South Korea ranked #16 in the AT Kearney Foreign Direct Investment Confidence Index 2022. The nation plans to extend onshore trading hours for the won in an effort to improve access for foreign investors. Seoul City is forming various consultative bodies to expand cooperation with global companies.



## Selected Startup Organizations

STARTUP GENOME MEMBERS

MEMBER

### Seoul Business Agency

Seoul Business Agency (SBA) is a subsidiary organization of Seoul Metropolitan Government for supporting small and medium-sized enterprises in Seoul. SBA supports SMEs through projects of digital contents, IT, BT, PR & marketing, and exhibitions & conventions, as well as attracting foreign commercial investment.

KEY ECOSYSTEM PLAYERS

### Channel Talk

It is a B2B chatbot service company with an overwhelming market share in the Korean market. It has more than 110,000 customers worldwide and has accumulated more than 33 million USD in investment.

### Fadu

The semiconductor design startup is about to go public and has been recognized as a unicorn in the pre-IPO stage. In six years, the company's valuation has grown 20 times, and it plans to go public in 2023.

### Medit

Dental 3D scanner solution company acquired by Asia's largest private equity firm MBK Partners, Asia's largest private equity firm, for USD 2 billion.

### Rebellions

A company specializing in semiconductor design based on artificial intelligence technology, it has received a cumulative investment of 93 million USD up to Series A and has become a unicorn company.

### Green Labs

Green Labs, which provides one-stop services for all stages of farming, operates Farm Morning, a comprehensive agricultural platform, and Fresh High, an online B2B distribution platform.

### Swit

The cloud-based collaboration tool company was awarded "Startup of the Year" in 2020 by Startup Grind, the world's largest startup community.

China

# Shanghai

**#9** Global Ranking **#16** Agtech Ranking **#11** Fintech Ranking

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



**Daryoush Ziai**  
CEO, Schindler China

<b>Global Ecosystem in Knowledge</b>	<b>Global Ecosystem in Performance</b>	<b>Global Ecosystem in Talent &amp; Experience</b>
<b>#2</b>	<b>Top 10</b>	<b>Top 5</b>

## Highlights

Already one of the world’s top financial and shipping hubs, Shanghai has goals to strengthen its position in technology and innovation. Heavily impacted by COVID-19 restrictions, the city has ambitious plans to recover. In November 2022, Shanghai released a blueprint to develop five "future industries:" health, smart devices, energy, space, and new materials. The goal is for the output value of these industries to reach \$71 billion by 2030. To achieve this target, Shanghai will build a research institute, establish several technology colleges, and develop 15 innovation centers. It also plans to build 70 hydrogen refueling stations and up to five R&D platforms. Several tech zones have already been built, including the Zhangjiang, Lingang, and Zizhu tech zones.

In February 2023 Shanghai revealed plans for the Grand neoBay Sci-Tech Innovation Park, which will house 1,000 high-tech enterprises by 2025. Construction began on the Suzano China Innovability Hub in Zhangjiang Science City in November 2022. More than 80 new high-tech projects were launched in Shanghai’s Pudong New Area in February 2023. Four Fortune 500 companies are launching new high-tech projects in the area. It will also be home to the global headquarters of chip design company SmartSens Technology. Shanghai plans to promote three priority sectors: low-carbon businesses, the metaverse, and smart devices. The city aims to expand the market value of these sectors to more than \$224 billion by 2025.

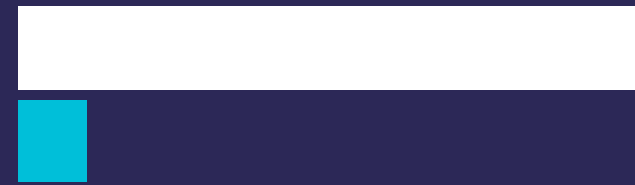
The SIA2023 20th Shanghai Smart Factory Exhibition and Shanghai International Industrial Automation and Robotics Exhibition take place each year. The Asia Cybersecurity Innovation Summit 2023 was held here in January 2023.



## Ecosystem by the Numbers

**ECOSYSTEM VALUE**  
(H2 2020 - 2022)

**\$306 bn**



GLOBAL AVG. \$34.6 bn

**NUMBER OF UNICORNS**  
(H2 2020 - 2022)

**28**



GLOBAL AVG. 4

**SOFT. ENGINEER SALARY**  
(2022)

**\$46 k**



GLOBAL AVG. \$46 k

**TIME TO EXIT**  
(2018 - 2022)

**9.9 years**



GLOBAL AVG. 9 years

**TOTAL EARLY-STAGE FUNDING**  
(H2 2020 - 2022)

**\$7.1 bn**



GLOBAL AVG. \$970 m

**MEDIAN SEED ROUND**  
(H2 2020 - 2022)

**\$3.1 m**



GLOBAL AVG. \$821 k

**EARLY-STAGE FUNDING GROWTH**  
(2019 - 20 VS. 2021 - 22)



Scale of 1 (lowest) to 10 (highest)

**EXIT AMOUNT**  
(2018 - 2022)

**\$109 bn**



GLOBAL AVG. 11.3 bn

**ECOSYSTEM VALUE GROWTH**  
(H2 2020 - H2 2022 VS H2 2018 - H2 2020)

**26%**



GLOBAL AVG. 4.7%

**MEDIAN SERIES A ROUND**  
(H2 2020 - 2022)

**\$15 m**



GLOBAL AVG. \$6 m

**TOTAL VC FUNDING**  
(2018 - 2022)

**\$66 bn**



GLOBAL AVG. \$6.6 bn

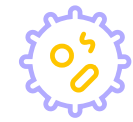
**EXIT COUNT (#)**  
(2018 - 2022)

**152**



GLOBAL AVG. 91

## Sub-Sector Strengths



### Life Sciences

The Zhangjiang National Innovation Demonstration Zone is home to more than 1,400 Life Sciences companies and 330 national R&D institutions. Qingpu is a Life Sciences center with a focus on innovative medicines, clinical nutrition, diagnostics, and medical devices. CBC Healthcare Infrastructure Platform is investing \$137 million to develop eight manufacturing facilities and two R&D facilities in Qingpu. Cell-therapy products company Neukio Biotherapeutics raised a \$50 million Series A-1 funding in September 2022. SGS China bioanalysis center opened in February 2023.



### AI, Big Data & Analytics

Operated by the Shanghai Supercomputer Center and launched in February 2023, the Shanghai Artificial Intelligence Public Computing Service Platform offers companies and organizations cloud-based computing capabilities. The platform is part of Shanghai's plan to establish a global innovation center focused on AI, Life Sciences, and chips. In January 2022 SenseTime opened one of Asia's largest AI data centers in Shanghai's Lin-gang Free Trade Zone.



### Gaming

There are approximately 160 Gaming startups in Shanghai. In February 2023, the government of Jingan district signed a deal with the China Audio-Video and Digital Publishing Association, China's Gaming industry trade body, to establish an esports industry research institute. Edward Gaming plans to construct an esports stadium in Shanghai. With an initial investment of \$720 million, the arena will be one of the largest projects in the global esports industry. In 2022, Riot Games announced the upgrade of its Shanghai R&D Center to focus on developing new mobile games for China.

## Reasons to Move Your Startup to Shanghai

### Access to Funding

Shanghai boasts approximately 5,000 angel investors and associations and 417 VC organizations, including global leaders such as Sequoia Capital, IDG Capital Partners, and GSR Venture. The China Venture Capital Finance Organization helps connect startups with investors. The Shanghai government also supports startups' R&D, including facilitation of cross-border financial services, funding, and help with environmental assessments. With foreign investment hitting a record high of \$24 billion in 2022, the city leads the nation in attracting foreign R&D investment.

### Financial Hub

Shanghai is a leading financial hub with some of the best financial infrastructure in the world. Besides conventional exchanges, the city has set up a cross-border yuan payment system and the Shanghai Clearing House, which supports the stability of financial markets. The city's 2023 economic development goals include the construction of the Pilot Free Trade Zone and further development of the STAR Market on the Shanghai Stock Exchange to support the development of high-tech enterprises.

### Global Connections

Shanghai is the largest distribution center for imported consumer goods in China, with more than 40% of goods now entering the country through Shanghai ports. The city is also the first choice for international brands entering the Chinese market thanks to its huge market consumption capacity. It has boasted the busiest port in the world for 13 consecutive years, with a container throughput exceeding 47.3 million 20-foot equivalent units (TEUs) in 2022.



China  
**Shenzhen**

- #35 Global Ranking
- #28 Cleantech Ranking
- #26 Agtech Ranking

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



**Yuepeng Ma**  
Founder, ValleyGroove Venture Capital

Global Ecosystem in Bang for Buck	Global Ecosystem in Knowledge	Global Ecosystem in Talent & Experience
<b>Top 35</b>	<b>#4</b>	<b>Top 20</b>

## Highlights

Known as China's Silicon Valley, Shenzhen is a global manufacturing hub and the country's fastest-growing city. The Chinese Academy of Social Sciences ranked Shenzhen China's top city for overall economic competitiveness. Shenzhen accounts for 2.7% of the country's GDP, according to the China Silk Road iValley Research Institute. The city is also the location of China's premier Special Economic Zone for foreign investment. Shenzhen's use of foreign capital hit a new high of US\$11 billion in 2022, and the tech industry accounted for a significant fraction of that total. The city has boasted China's greatest entrepreneurship density for eight consecutive years, with one entrepreneur for every five citizens. Long a hotbed for domestic startups, the ecosystem is now working to attract entrepreneurs from outside China as well.

Shenzhen is working to become a global logistics center and has set targets to handle 31 million TEUs of containers at its ports, 45 million passenger trips at its airport, and realize a ¥350 billion (\$51 billion) added value to its logistics industry in 2023. Shenzhen announced 266 construction projects for 2023, including the Yanluo Intelligent Connected Vehicles Industrial Park, Phase I of the Pinghu Intelligent Manufacturing Park, and the Qianhai Shenzhen-Hong Kong Innovation Industrial Park.

The China Hi-Tech Fair took place in November. The 2022 Shenzhen Global Investment Promotion Conference was held in December. The first Venture Capital Day of Shenzhen took place in November with similar events planned monthly going forward.

# Ecosystem by the Numbers

**ECOSYSTEM VALUE**  
(H2 2020 - 2022)

**\$132 bn**



GLOBAL AVG. \$34.6 bn

**NUMBER OF UNICORNS**  
(H2 2020 - 2022)

**13**



GLOBAL AVG. 4

**SOFT. ENGINEER SALARY**  
(2022)

**\$43 k**



GLOBAL AVG. \$46 k

**TIME TO EXIT**  
(2018 - 2022)

**11.5 years**



GLOBAL AVG. 9 years

**TOTAL EARLY-STAGE FUNDING**  
(H2 2020 - 2022)

**\$2.4 bn**



GLOBAL AVG. \$970 m

**MEDIAN SEED ROUND**  
(H2 2020 - 2022)

**\$1.7 m**



GLOBAL AVG. \$821 k

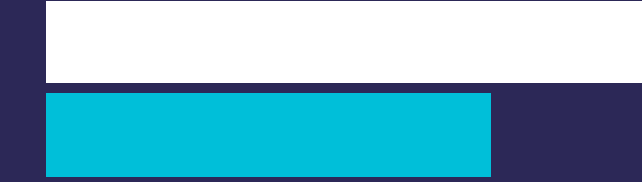
**EARLY-STAGE FUNDING GROWTH**  
(2019-20 VS. 2021-22)



Scale of 1 (lowest) to 10 (highest)

**EXIT AMOUNT**  
(2018 - 2022)

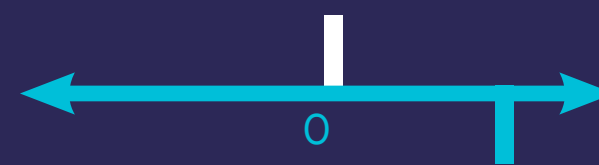
**\$16 bn**



GLOBAL AVG. 11.3 bn

**ECOSYSTEM VALUE GROWTH**  
(H2 2020 - H2 2022 VS H2 2018 - H2 2020)

**4%**



GLOBAL AVG. 4.7%

**MEDIAN SERIES A ROUND**  
(H2 2020 - 2022)

**\$10 m**



GLOBAL AVG. \$6 m

**TOTAL VC FUNDING**  
(2018 - 2022)

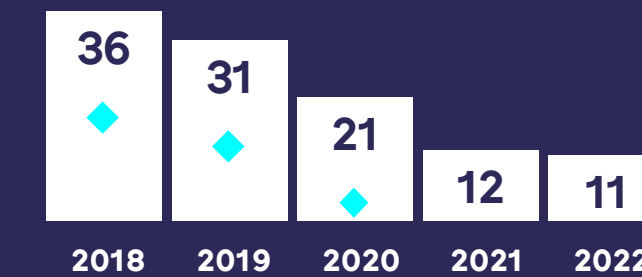
**\$23 bn**



GLOBAL AVG. \$6.6 bn

**EXIT COUNT (#)**  
(2018 - 2022)

**111**



GLOBAL AVG. 91 ◆



## Sub-Sector Strengths

### AI, Big Data & Analytics

Shenzhen is home to more than 1,300 AI-related firms, according to the Shenzhen Artificial Intelligence Industry Association. In August 2022, Shenzhen passed AI regulation, making it the first local government in China to establish targeted policies for the sub-sector. The U.K.-China Workshop: Exchanges and Collaboration on AI for Global Goods was held in March 2023. The Artificial Intelligence Exhibition 2023 was held in May. In January 2022, AI company Parametrix.ai raised a \$100 million Series B that put the company's valuation into unicorn territory.

### Fintech

The municipal financial regulatory authority aims to make Shenzhen an international Fintech center by 2025. The plan calls for Shenzhen to build five industrial parks oriented toward Fintech and to cultivate more than 10 leading Fintech firms. In April 2022, the government of Shenzhen issued policies to support the development of the financial industry. Newly registered financial enterprises will be granted up to ¥50 million (\$7.9 million) as an incentive.

### Advanced Manufacturing & Robotics

Manufacturing is Shenzhen's calling card and the sub-sector is undergoing a rapid upgrade towards high-end, sophisticated processes and products including 5G smartphones, drones, and EVs. Official statistics from the 24th China Hi-Tech Fair showed that there were more than 3,000 Advanced Manufacturing firms in Shenzhen as of October 2022. Shenzhen plans to build 20 additional Advanced Manufacturing parks. In June 2022, warehouse logistics company Hai Robotics raised a \$100+ million Series D. Driverless vehicle company VisionNav Robotics raised a \$80+ million Series C+ round in April 2022.

## Reasons to Move Your Startup to Shenzhen

### Business-Friendly Environment

Shenzhen is one of China's most business-friendly cities and home to more than 4 million business entities. Companies that seek to set up and expand in the area benefit from a range of policies, including reduced tax rates and talent incentives. Foreign talent working in Shenzhen benefit from the individual income tax subsidy policy. Successful applicants receive subsidies equal to the portion of income tax paid in excess of 15% of taxable income for the previous year.

### Openness to Trade

In 2022, Shenzhen streamlined regulations to facilitate cross-border trade. The city's Qualified Domestic Enterprise Investment program now allows both domestic and foreign entities to apply. Its quota was raised from \$5 billion to \$10 billion. An update to the Shenzhen Qualified Foreign Limited Partnership expanded the asset classes allowed in order to attract a broader spectrum of FDI and increase flexibility for investors.

### Educated Talent

In late 2022, the principal of Shenzhen University said he wanted to cultivate "10 outstanding entrepreneurs" on par with Pony Ma Huateng, an alumnus of the university and the founder of Tencent Holdings. At the Shenzhen-Hong Kong (Qianhai) Talent Cooperation Annual Meeting and Shenzhen-Hong Kong joint Talent Attraction event in November 2022, Hong Kong Economic and Trade Office in Guangdong and the Shenzhen Qianhai Authority announced the launch of the 2023 Shenzhen-Hong Kong Joint Talent Attraction Plan.

# Singapore

- #8 Global Ranking
- #4 Fintech Ranking
- #1 Blue Economy Ranking

**MEMBERS:**  
Enterprise Singapore

"With its supportive government, world-class research institutions, and a strong financial market, Singapore has all the ingredients to become a global leader in Deep Tech. It is an ideal hub for founders looking to scale and make a positive impact."



**Louis Christian Murayama**  
Director, Real Tech Fund Singapore

Asian Ecosystem in Funding	Global Ecosystem in Funding	Global Ecosystem in Performance
#1	Top 10	Top 15

## Highlights

With its pro-business environment and booming digital economy, Singapore is an attractive hub for international startups and businesses. Home to around 4,000 tech startups and more than 220 incubators and accelerators, the ecosystem also has over 400 venture capital managers and an estimated 700 family offices. Singapore was ranked #7 in the Global Innovation Index 2022. An Asia-Pacific financial hub, Singapore is a hot bed of Fintech innovation. In April 2022, Coda Payments, an independent platform for digital content monetization, raised \$690 million in funding. In December 2022, crypto trading firm Amber Group closed a \$300 million Series C.

The Singapore government has been deepening its National AI strategy since 2019 and is leveraging AI to transform services. Deep Tech received more than \$1 billion of investment in 2022 and VC firm iGlobe Partners is raising a \$200 million fund to back Deep Tech startups. EFS-Green enables access to green financing for enterprises, and the France-Singapore Digital and Green Partnership (DGP) is part of Singapore's larger strategy to build a network of international partnerships in the fast-growing digital and green economies.

In June 2022, Meta announced the Meta Immersive Learning Academy. AWS and IMDA launched a Joint Innovation Centre in Southeast Asia at IMDA's PIXEL Innovation Hub. At the Singapore Week of Technology and Innovation conference in October 2022, Enterprise Singapore and Stellar Lifestyle launched a joint-funding partnership as a testbed for innovative solutions that could be deployed across the country's mass transit network.



# Ecosystem by the Numbers

**ECOSYSTEM VALUE**  
(H2 2020 - 2022)

**\$128 bn**



GLOBAL AVG. \$34.6 bn

**NUMBER OF UNICORNS**  
(H2 2020 - 2022)

**18**



GLOBAL AVG. 4

**SOFT. ENGINEER SALARY**  
(2022)

**\$47 k**



GLOBAL AVG. \$46 k

**TIME TO EXIT**  
(2018 - 2022)

**7.1 years**



GLOBAL AVG. 9 years

**TOTAL EARLY-STAGE FUNDING**  
(H2 2020 - 2022)

**\$5.7 bn**



GLOBAL AVG. \$970 m

**MEDIAN SEED ROUND**  
(H2 2020 - 2022)

**\$1 m**



GLOBAL AVG. \$821 k

**EARLY-STAGE FUNDING GROWTH**  
(2019 - 20 VS. 2021 - 22)



Scale of 1 (lowest) to 10 (highest)

**EXIT AMOUNT**  
(2018 - 2022)

**\$11 bn**



GLOBAL AVG. 11.3 bn

**ECOSYSTEM VALUE GROWTH**  
(H2 2020 - H2 2022 VS. H2 2018 - H2 2020)

**61%**



GLOBAL AVG. 4.7%

**MEDIAN SERIES A ROUND**  
(H2 2020 - 2022)

**\$6.3 m**



GLOBAL AVG. \$6 m

**TOTAL VC FUNDING**  
(2018 - 2022)

**\$26 bn**



GLOBAL AVG. \$6.6 bn

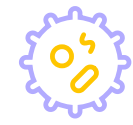
**EXIT COUNT (#)**  
(2018 - 2022)

**252**

GLOBAL AVG. 91



## Sub-Sector Strengths



### Life Sciences

Singapore is a hub for manufacturing advanced medical technologies. BioNTech acquired a mRNA facility here in November 2022. SGInnovate, an ecosystem builder and investor backed by the Singapore government, launched the Helix Immersion Programme to offer Life Science researchers on-the-job training. mRNA company RVAC Medicine has raised \$140 million. In June 2022, Tessa Therapeutics, a clinical-stage cell therapy company, closed a \$126 million Series A. In November TauRx Pharmaceuticals, a global leader in research in Alzheimer's, raised \$119 million.



### AI, Big Data & Analytics

Singapore will invest \$50 million to attract and develop AI talent and open three new centers of innovation. 100 Experiments is AI Singapore's flagship program to solve industries' AI problems and help them build their AI teams. AI Singapore provides co-funding to organizations working on an AI-focused innovation. ATxAI took place here in June 2023 and Big Data & AI World will return in October.



### Agtech & New Food

Republic Polytechnic launched the first cloud-based Agtech laboratory in an institute of higher learning in Singapore. The facility will support Singapore's 30 by 30 initiative, which aims to provide 30% of the country's nutritional needs by 2030. The government has committed \$300 million to innovation in future foods, sustainable urban food production, and food safety under the Singapore Food Story R&D Programme. In September 2022, insect-protein producer Nutrition Technologies closed a \$20 million equity round.

## Reasons to Move Your Startup to Singapore

### Tax Incentives

The Enterprise Innovation Scheme provides tax deductions to help companies innovate and improve their business processes, including for R&D expenses, the cost of acquiring and licensing IP, the cost of registering IP rights, and more. Singapore does not impose capital gains tax and offers multi-year tax holidays to startups in preferred sectors. A personal income tax rate of 22% is a draw for foreign talent.

### Ease of Doing Business

Entrepreneurs in Singapore can set up businesses in any sector, trade is not limited, and the currency is stable.## Multiple ministries and R&D funding bodies support research and innovation. Singapore also has various entry options for tech talent and entrepreneurs, such as Tech@SG and EntrePass, a work visa for serial entrepreneurs, highly skilled talent, and experienced investors.

### Talent

The Overseas Networks & Expertise Pass allows top talent across all sectors to start, operate, and work for multiple companies in Singapore at one time. Local players like SGInnovate also have various schemes that help connect Deep Tech startups with talent.



## Selected Startup Organizations

STARTUP GENOME MEMBERS

MEMBER

### Enterprise Singapore

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

KEY ECOSYSTEM PLAYERS

### 500 Global

500 Global is a multi-stage venture capital firm with \$2.7B in assets under management. It has backed over 2,800 companies operating in 80+ countries, including 50+ companies valued at \$1+ billion.

### NUS Enterprise

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

### SEEDS Capital

The investment arm of Enterprise Singapore that catalyzes private sector investments into Singapore-based, early-stage tech startups in Advanced Manufacturing, Healthcare and Biomedical Sciences, Urban Solutions, AgriFoodTech, and Sustainability.

### Action Community for Entrepreneurship (ACE)

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

### Quest Ventures

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

### SGInnovate

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

# Sri Lanka

**MEMBERS:**

Information and Communication Technology Agency of Sri Lanka

*“Sri Lanka is creating an ecosystem to build products for Govtech, Agtech, and Green Energy with global application. Fueled by world-renowned tech talent and award-winning coworking spaces, incubators, and accelerators, Sri Lanka boasts of a steady growth in ecosystem value targeting US\$1 billion by 2024.”*



**Mahesh Perera**

CEO, ICT Agency of Sri Lanka



## Highlights

The startup ecosystem in Sri Lanka has been growing steadily over the past decade with the island currently home to 748 startups. Startup SL aims to create 1,000 new startups by 2025, and there are numerous initiatives helping make this a reality. Innovate Lanka assists startups with funding and acceleration, and the winner of the Innovate Lanka 2022 competition entered the Global Entrepreneurship Network (GEN)-Global Programme. Microsoft for Startups Founders Hub was launched in October 2022. AccelerateHER, from Hatch and the U.S. Department of State, is Sri Lanka’s first accelerator for female founders. John Keells X is an accelerator and open innovation program that helps startups obtain the funding, training, and connections to scale. In February 2022, work began on the first of five tech parks aiming to attract foreign investment and establish Sri Lanka as an innovation hub. Global Entrepreneurship Week Sri Lanka was hosted by the Information and Communication Technology Agency of Sri Lanka (ICTA) in December 2022.

In April 2023, the President instructed the Ministry of Technology to form an AI task force with an aim of increasing the nation’s AI activity. At DIGIECON 2030, a digital economy 2030 master plan and a regulatory policy framework were developed, aimed at transforming the country into an inclusive digital economy. Colombo- and Jaffna-based Hatch was named the best coworking space in the world at the Global Startup Awards 2021.



# Ecosystem by the Numbers

**ECOSYSTEM VALUE**  
(H2 2020 - 2022)

**\$244 m**



GLOBAL AVG. \$34.6 bn

**NUMBER OF UNICORNS**  
(H2 2020 - 2022)

**0**



GLOBAL AVG. 4

**SOFT. ENGINEER SALARY**  
(2022)

**\$6 k**



GLOBAL AVG. \$46 k

**TIME TO EXIT**  
(2018 - 2022)

**5.8 years**



GLOBAL AVG. 9 years

**TOTAL EARLY-STAGE FUNDING**  
(H2 2020 - 2022)

**\$11 m**



GLOBAL AVG. \$970 m

**MEDIAN SEED ROUND**  
(H2 2020 - 2022)

**\$90 k**



GLOBAL AVG. \$821 k

**EARLY-STAGE FUNDING GROWTH**  
(2019 - 20 VS. 2021 - 22)



Scale of 1 (lowest) to 10 (highest)

**EXIT AMOUNT**  
(2018 - 2022)

**\$75 m**



GLOBAL AVG. \$11.3 bn

**ECOSYSTEM VALUE GROWTH**  
(H2 2020 - H2 2022 VS H2 2018 - H2 2020)

**20%**



GLOBAL AVG. 4.7%

**MEDIAN SERIES A ROUND**  
(H2 2020 - 2022)

**\$545 k**



GLOBAL AVG. \$6 m

**TOTAL VC FUNDING**  
(2018 - 2022)

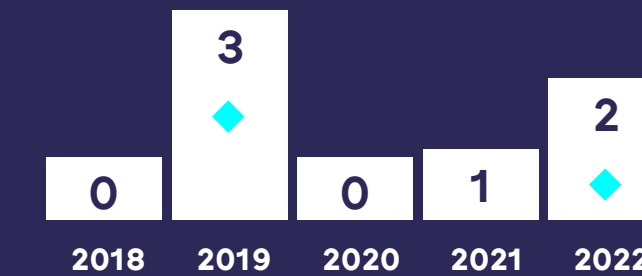
**\$128 m**



GLOBAL AVG. \$6.6 bn

**EXIT COUNT (#)**  
(2018 - 2022)

**6**



GLOBAL AVG. 91

## Sub-Sector Strengths

### Cleantech

The Sri Lankan government aims to generate 70% of the nation's electricity from renewable sources by 2030 and reach net zero by 2050. In 2022, Adani Group was granted approval to develop 500MW of renewable energy projects. The group is expected to invest \$500 million. NTPC Limited and Ceylon Electricity Board, the state-owned electricity company of Sri Lanka, are collaborating to develop a 50MW solar-power plant.

### Govtech

The Lanka Government Network connects over 860 state institutions, and the Lanka Government Cloud provides hosting to 150 government agencies. The National Data and Identity Interoperability Platform bridges government information systems. In 2022, the ICTA launched the Digital Libraries Project to establish 26 model digital libraries and the government announced the biometrics Unique Digital Identity program. The National Fuel Pass is a digital service that keeps track of drivers' fuel quota. The Courts Automation Project aims to improve efficiency by establishing an ICT-based court management system.

### Agtech & New Food

The International Water Management Institute and the Department of Agrarian Development Sri Lanka launched the GeoGoviya monitoring and feedback system to improve coordination and information sharing in the Agriculture sector. In 2022, the Bill and Melinda Gates Foundation offered to assist Sri Lanka in the development of Farmer Data Management Systems and Digital Strategy. In early 2023, the government announced several initiatives to enhance food security, including the National Food Security Act.

## Reasons to Move Your Startup to Sri Lanka

### Access to Talent

Sri Lanka has a sizable talent pool that provides international startups with affordable resources. Initiatives to further strengthen the talent pool include XpressJobs and ICTA's initiative to help startups improve their recruitment. The University of Moratuwa's open learning platform provides free training in full-stack development. The National Future Talent Initiative provides youth with a guided path to pursue careers in IT and business.

### Startup-Friendly Environment

Sri Lanka's proximity to the Indian sub-continent positions it as a gateway to a market of 1.3 billion people, and the nation is an established offshoring location. New economic zones are planned in the country's western and north-western provinces, as well as in Hambantota and Trincomalee districts, to attract foreign investment. Foreign investors maintain 100% ownership of investments.

### Dedicated Support

The Spiration Startup Incubator provides support for early-stage technology entrepreneurs, including seed funding, training, networking, and business promotion opportunities locally and internationally. ICTA's 10,000 Ideas Startup Challenge is an innovation program to empower the next generation of tech entrepreneurs, and ICTA's partnership with Brandix Apparel will fund 10 selected startups. SPARX Lab nurtures early-stage startups with guidance, mentoring, and networking opportunities.



## Selected Startup Organizations

STARTUP GENOME MEMBERS

MEMBER

### Information and Communication Technology Agency of Sri Lanka

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

KEY ECOSYSTEM PLAYERS

#### BOV Capital

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

#### Hatch Works Pvt Ltd

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

#### John Keells X

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

#### Lankan Angel Network

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

#### Yarl IT Hub

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

# India Telangana

**MEMBERS:**  
T-Hub Foundation

*“As a startup powerhouse, Telangana is poised to shape India’s future. T-Hub supports this vision and connects entrepreneurs, talent, and capital to drive innovation, growth, and transformation for the state and nation.”*



**Mahankali Srinivas Rao**  
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. Mobility tech is a growing area of innovation in Telangana. In February 2023 the government of Telangana launched the Telangana Mobility Valley to accelerate the growth of sustainable mobility in the country. Automotive Test Systems and TUV Rheinland will set up an automotive technology center at TMV. Automotive manufacturer Mahindra plans to open a manufacturing facility in Telangana to make electric vehicles (EVs).

In January 2023, the Telangana government’s startup incubator T-Hub partnered with VC firm Dallas Venture Capital to launch the ₹350 crore (\$42.6 million) DVC India Fund. T-Hub won the sub-category for startup ecosystem enablers at the National Startup Awards 2022. T-Hub’s ‘Global Immersion Program supports Indian startups looking to enter the U.S. market. T-Hub announced a partnership with Suzuki Motor Corporation to provide mentorship to Indian entrepreneurs looking to access Japan’s ecosystem. Launched in July, the Drone-tech Accelerator program is India’s first accelerator program focused on drone technology.

Microsoft will open three 100-MW data centers in Hyderabad, bringing the total number of data centers the company plans to operate in the ecosystem to six. Singapore-based CapitaLand plans to set up a new 36-MW data center in Hyderabad. The Social Entrepreneurship Summit – Impulse 2023 was held in February 2023, as was Hyderabad E-Mobility Week.



# Ecosystem by the Numbers

**ECOSYSTEM VALUE**  
(H2 2020 - 2022)

**\$6.2 bn**



GLOBAL AVG. \$34.6 bn

**NUMBER OF UNICORNS**  
(H2 2020 - 2022)

**2**



GLOBAL AVG. 4

**SOFT. ENGINEER SALARY**  
(2022)

**\$13 k**



GLOBAL AVG. \$46 k

**TIME TO EXIT**  
(2018 - 2022)

**7.2 years**



GLOBAL AVG. 9 years

**TOTAL EARLY-STAGE FUNDING**  
(H2 2020 - 2022)

**\$334 m**



GLOBAL AVG. \$970 m

**MEDIAN SEED ROUND**  
(H2 2020 - 2022)

**\$500 k**



GLOBAL AVG. \$821 k

**EARLY-STAGE FUNDING GROWTH**  
(2019 - 20 VS. 2021 - 22)



Scale of 1 (lowest) to 10 (highest)

**EXIT AMOUNT**  
(2018 - 2022)

**\$728 m**



GLOBAL AVG. 11.3 bn

**ECOSYSTEM VALUE GROWTH**  
(H2 2020 - H2 2022 VS. H2 2018 - H2 2020)

**115%**



GLOBAL AVG. 4.7%

**MEDIAN SERIES A ROUND**  
(H2 2020 - 2022)

**\$4.8 m**



GLOBAL AVG. \$6 m

**TOTAL VC FUNDING**  
(2018 - 2022)

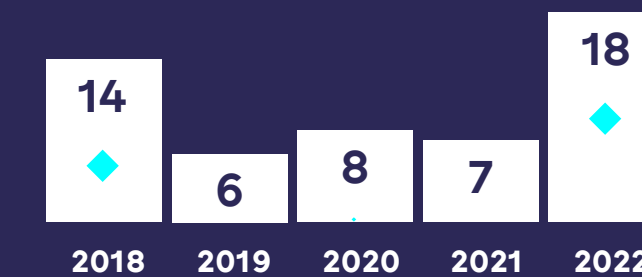
**\$1.6 bn**



GLOBAL AVG. \$6.6 bn

**EXIT COUNT (#)**  
(2018 - 2022)

**53**



GLOBAL AVG. 91

## Sub-Sector Strengths

### Agtech & New Food

Incubator AgHub was launched in 2021 with the aim to nurture an Agtech ecosystem. In June 2022, the Telangana AI Mission announced a partnership with AgHub for capacity building and mentoring. The World Economic Forum's Artificial Intelligence for Agriculture Innovation initiative will promote the use of AI and other technologies in agriculture. More than 7,000 farmers have enrolled in a pilot project in Telangana. Farmer franchising platform Our Food raised a \$6 million growth funding round in January 2022.

### Life Sciences

Telangana accounts for one third of global vaccine output and contributes 35% of India's pharmaceutical production. Genome Valley is India's first organized cluster for Life Sciences R&D and clean manufacturing activities, and is home to numerous international organizations. Sai Life Sciences entered a five-year strategic agreement with Schrödinger to set up research laboratories there and in October 2022, Yapan Bio announced it was opening a new facility in Genome Valley.

### AI, Big Data & Analytics

Industry cloud company Infor opened a new development center in Hitech City, Hyderabad in October 2022. AI startup Kore.ai is expanding its footprint in Hyderabad with a new R&D facility in Hitech City. Launched in November 2022, AI for All is a pilot initiative to train students and teachers in basic AI skills. 25,000 students and 4,500 teachers have already completed the online training.

## Reasons to Move Your Startup to Telangana

### Access to Talent

Since 2020, the government has added thousands of places in new technology courses such as AI, machine learning, Cybersecurity, and Robotics. In January 2023, Mastercard announced the expansion of its Girls4Tech STEM education program in India with the aim of reaching an additional 100,000 female students across the country by 2024, including 14,200 students in Hyderabad. Telangana will soon be home to 26 medical colleges.

### Established Startup Hub

Telangana is home to one of India's fastest-growing startup hubs, Hyderabad, and is the birthplace of SaaS unicorns Darwinbox and Zenoti. The state government launched the second phase of the world's largest innovation campus, T-Hub, in June 2022. It aims to support over 20,000 startups and house companies, investors, researchers, and ecosystem enablers. The campus will also house offices of several governmental and international agencies.

### Dedicated Incentives

Telangana has a self certification-based system for approvals and clearances, meaning relative ease of setting up business. The state government pledges to tailor incentives to match or better incentives offered by any other Indian state. Other incentives include reimbursement of recruitment assistance, a grant of 5% of annual turnover for startups that record a year-on-year growth rate of 15% up to a limit of INR 10 Lakhs (\$12.2K) within three years of incorporation, and reimbursement of expenses incurred for patent registration.





## Selected Startup Organizations

STARTUP GENOME MEMBERS

MEMBER

### T-Hub Foundation

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

Japan  
**Tokyo**

- #15 Global Ranking
- #24 Fintech Ranking
- #12 Blue Economy Ranking

**MEMBERS:**

Tokyo Metropolitan Government / Deloitte Japan

*“Tokyo’s startup ecosystem has been expanding through digitalization in various industries. Tokyo launched the Tokyo Consortium in 2020, and is working as a leading member of a strong community of more than 500 companies, investors, incubators, universities, governments, and more to enter the new era together with startups.”*



**Keiichi Yoshimura**

Director General, Office for Startup and Global Financial City Strategy, Tokyo Metropolitan Government



## Highlights

Tokyo aims to become “the most startup-friendly” city in the world with a goal of growing the number of unicorns and new business launches in the capital 10X over five years. The plan calls for the number of startups to increase from about 10,000 to 100,000, with 100 of these being unicorns. The Japanese government is dedicating ¥10 trillion (\$72.4 billion) to meet this ambitious target. It has earmarked ¥100 billion (\$734 million) to support Deep Tech-related startups and ¥300 billion (\$2.2 billion) to support drug discovery-related startups.

The Tokyo government plans to support high-growth companies by establishing a major hub for startups, universities, VCs, and support organizations, as well as by making it easier for startups to participate in public procurement. The hub, which will be able to house approximately 1,000 institutions, is set to open in 2024. In July 2022, global sensing technology company i-PRO announced that it is opening a global headquarters in Tokyo. Launched in February 2023, the Fujitsu Web3 Acceleration Platform offers a developmental environment as well as various service APIs for startups, partner companies, and universities building Web3 applications and services.

Tokyo Bay eSG, “the world’s first ESG city,” will be completed by 2050 and aims to attract ESG-focused VCs and startups from around the world. All of the city’s energy needs will be met by renewable energy, while buildings and transport systems will produce zero emissions. City-Tech.Tokyo, an event promoting Tokyo’s new startup strategy, took place in February 2023.



# Ecosystem by the Numbers

**ECOSYSTEM VALUE**  
(H2 2020 - 2022)

**\$67 bn**



GLOBAL AVG. \$34.6 bn

**NUMBER OF UNICORNS**  
(H2 2020 - 2022)

**6**



GLOBAL AVG. 4

**SOFT. ENGINEER SALARY**  
(2022)

**\$62 k**



GLOBAL AVG. \$46 k

**TIME TO EXIT**  
(2018 - 2022)

**8.1 years**



GLOBAL AVG. 9 years

**TOTAL EARLY-STAGE FUNDING**  
(H2 2020 - 2022)

**\$2.9 bn**



GLOBAL AVG. \$970 m

**MEDIAN SEED ROUND**  
(H2 2020 - 2022)

**\$748 k**



GLOBAL AVG. \$821 k

**EARLY-STAGE FUNDING GROWTH**  
(2019 - 20 VS. 2021 - 22)



Scale of 1 (lowest) to 10 (highest)

**EXIT AMOUNT**  
(2018 - 2022)

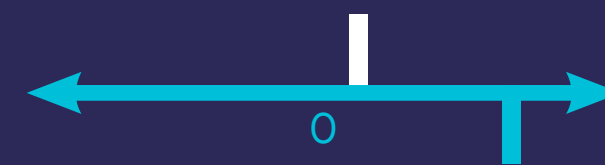
**\$28 bn**



GLOBAL AVG. 11.3 bn

**ECOSYSTEM VALUE GROWTH**  
(H2 2020 - H2 2022 VS H2 2018 - H2 2020)

**9%**



GLOBAL AVG. 4.7%

**MEDIAN SERIES A ROUND**  
(H2 2020 - 2022)

**\$2.9 m**



GLOBAL AVG. \$6 m

**TOTAL VC FUNDING**  
(2018 - 2022)

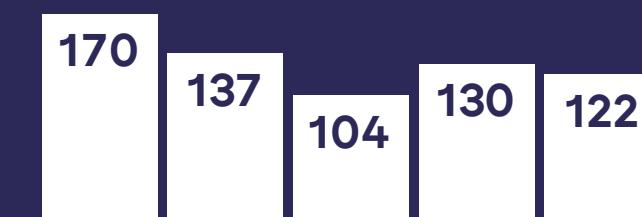
**\$27 bn**



GLOBAL AVG. \$6.6 bn

**EXIT COUNT (#)**  
(2018 - 2022)

**663**



GLOBAL AVG. 91

2018 2019 2020 2021 2022

## Sub-Sector Strengths



### Advanced Manufacturing & Robotics

The International Robot Exhibition, one of the largest robot exhibitions in the world, is scheduled for November 2023. In 2022, the event was attended by more than 62,000 visitors. Ascent Robotics raised a ¥1 billion (\$7.2 million) Series B in January 2022. AI manufacturing company Adacotech raised a ¥1.1 billion (\$8 million) Series B in April 2022. ROMS, a maker of automated retail and supply chain solutions, raised ¥1.2 billion (\$8.6 million) in venture funding in September 2022.



### Fintech

Tokyo was ranked #7 in CEOWORLD's list of the world's leading international financial centers. The Fintech Association of Japan has partnered with Fintech Australia, Asosiasi Fintech Syariah Indonesia, and Fintech Saudi to make the Japanese Fintech ecosystem more globally connected. The Bank of Japan launched a pilot "digital yen" in April 2023. Under the Tokyo Market Entry scheme, Fintech companies focused on sustainability are eligible for subsidies in Tokyo. Digital asset trading platform BITPoint Japan was acquired by SBI Holdings for \$99 million in May 2022.



### Life Sciences

Greater Tokyo Biocommunity (GTB) is composed of 45 organizations, including local governments, universities, research institutes, and investors. Japan Life Science Week 2023 took place in Tokyo in April. In February 2022, Belgian VC firm Newton Biocapital launched a €150 million fund to harness synergies between European and Japanese Life Sciences startups. Cyfuse Biomedical raised ¥2.85 billion (\$20.8 million) in a December 2022 IPO. Biotechnology company LUCA Science raised a ¥3.9 billion (\$30.3 million) Series B in June 2022.

## Reasons to Move Your Startup to Tokyo

### Market Access

Japan is the third largest economy in the world, and much of this activity is concentrated in Tokyo. Tokyo's stock market boasts high-quality liquidity: there are 3,700 listed companies (second in the world); the total market value is ¥600 trillion (\$4.4 trillion and third in the world); and stock trading value per day is ¥3 trillion (\$22.3 million and first in Asia).

### Technical Infrastructure

Cloud technology and 5G have been widely adopted in Japan. The government has set a target of 95% 5G coverage across the country by 2024. Alibaba Cloud, Tencent Holdings, Equinix, and Google all have plans to open new data centers in Japan. The Equinix project, set to open in 2024, will be its 15th international business exchange data center in Tokyo.

### Dedicated Support

The e-Business Concierge chatbot provides English information 24 hours a day, 365 days a year. Business Development Center TOKYO offers support to foreign companies considering expansion in Tokyo. The Fundraising Support for Foreign Entrepreneurs Project provides financial support to foreign entrepreneurs. The Tokyo Metropolitan Government's Special Zone system makes it easier for foreigners to start a business here.



## Selected Startup Organizations

### STARTUP GENOME MEMBERS

MEMBER

### Tokyo Metropolitan Government

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

### KEY ECOSYSTEM PLAYERS

### CIC Japan G.K.

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

### Plug and Play Japan

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

### The University of Tokyo Edge Capital Partners

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

MEMBER

### Deloitte Japan

Deloitte Tohmatsu Group (Deloitte Japan) provides audit and assurance, risk advisory, consulting, financial advisory, tax, legal and related services in accordance with applicable laws and regulations. With approximately 17,000 people in about 30 cities throughout Japan, its clients include multinational enterprises and major Japanese businesses. Deloitte Japan has supported 3,000 startups in Japan and champions the Tokyo ecosystem through Morning Pitch and open-innovation support for large companies. Deloitte Japan was entrusted with the Tokyo Innovation Ecosystem Formation Promotion Support Initiative for FY 2022.

### Keio Innovation Initiative, Inc.

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

### The University of Tokyo

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

### City-Tech.Tokyo

The first international startup event led by the Tokyo Metropolitan Government. Around 26,000 people from 293 cities in 67 countries attended the event.



# EUROPE

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# Regional Insights EUROPE

**Despite macroeconomic woes and geopolitical tensions, 2022 was the second-biggest year overall for European VC activity after 2021, with deal count and amount surpassing pre-2021 numbers. In 2022, the amount of early-stage funding in Europe was down 15% from the year before, but the average early-stage deal amount was up by 7% due to a significant reduction in the number of deals, just 75% of 2021's number.**

For the same period, the number of Series B+ deals fell by 11% and the Series B+ funding amount by 29%, from \$67 million in 2021 to \$48 million in 2022. However, in the period 2018–2022, Europe experienced an 18% increase in Series B+ deal count and 160% in Series B+ amount. It also experienced a 56% increase in early-stage deal amount over the same period, all highlighting the long-term growth in startup investment in the region.

Fintech has become a major European sub-sector as digital adoption after the financial crisis disrupted the finance services industry. London's Checkout.com and Revolut are two of the most valuable VC-backed companies in Europe. However, in 2022 the sub-sector trended downward, likely influenced by the prospect of regulations to be imposed over data, security, and the financial services industry in combination with the general downturn.

Several European nations implemented policies aimed at attracting and supporting startups in 2022, with both Spain and Portugal passing "startup laws." Brussels pushed through two major bills that increased regulation for high-tech companies. One of these, the Digital Services Act (DSA), is particularly relevant to startups, as it emphasizes transparency and moderation. Additionally, all European startups utilizing AI will be affected by planned legislation that aims to tighten regulations to ensure safer and more trustworthy AI products.

### TOP FIVE ECOSYSTEMS

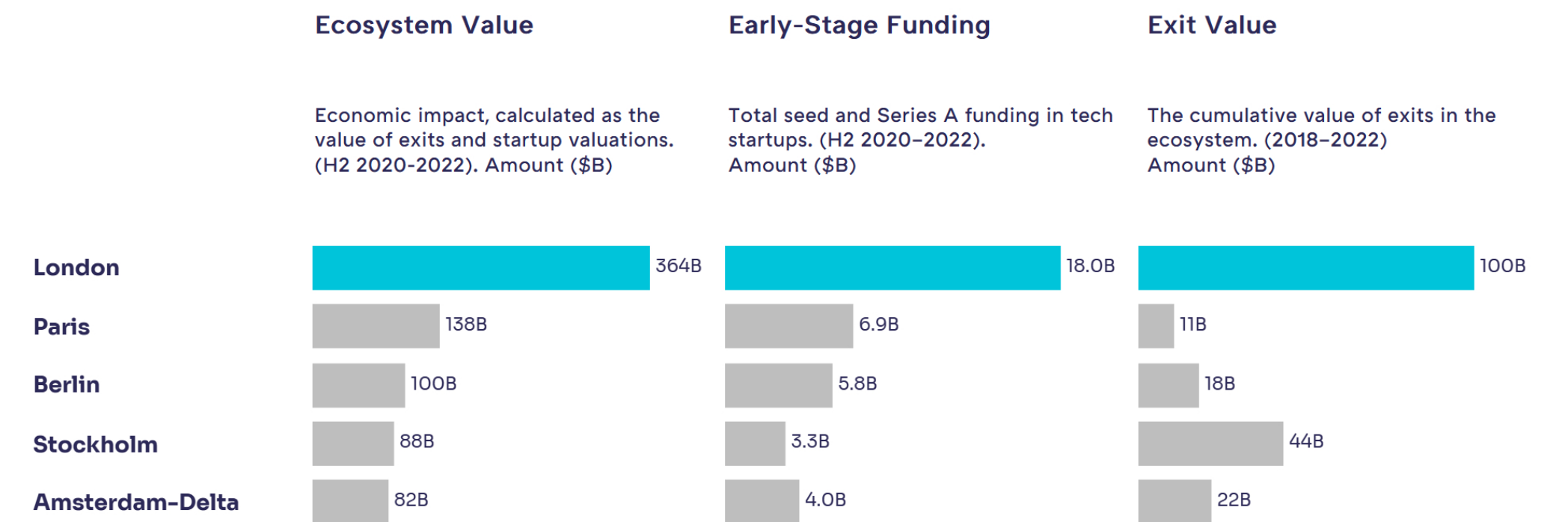
- 1 → London
- 2 → Berlin
- 3 → Amsterdam-Delta
- 4 → Paris
- 5 → Stockholm

### TOP FIVE EMERGING ECOSYSTEMS

- 1 → Copenhagen
- 2 → Barcelona
- 3 → Dublin
- 4 → Manchester-Liverpool
- 5 → Brussels

## London Is Europe's Top Performing Ecosystem

Source: Startup Genome, 2023



## → Key Findings

- London remains #1 in Europe and has the most companies valued over \$1 billion in the region. The ecosystem's 83 exits over \$50 million include **Wise**, at a valuation of \$12.2 billion, and **Deliveroo** at \$10.5 billion. **Revolut**, one of Europe's largest Fintech unicorns, is valued at \$33 billion.
- Berlin moved up to #13 overall and #2 in Europe. The German capital minted five new unicorns in 2022, increasing the total count from 14 to 19. **CoachHub** was the highest valued at \$1.5 billion. Exits over \$50 million have increased by 40% from the GSER 2022 timeframe, with **AUTO1-Group** being the highest valued in a \$9.2 billion IPO.
- Amsterdam holds steady at #14 overall and #3 in Europe, thanks to an increase in exit count over \$50 million, in early-stage deal count, and in the number of unicorns. Banking platform **Backbase** is the most recent addition, valued at 2.7 billion.
- Paris has dropped three places to #18, yet remains a leading European ecosystem at #4 in the region. The French capital increased its number of unicorns from 14 to 30, with **Back Market** the highest valued at \$5.7 billion.
- Zurich shot up 10 places to #36, making it to the top 30 + runners-up for the first time. The growth was spurred by the number of exits over \$50 million

increasing by 300% from the GSER 2022. The top-valued exit in the ecosystem was **Sportradar's** 2021 \$8 billion IPO.

- Estonia has moved up 28 positions since the GSER 2022, reaching #10 in the Emerging Ecosystems ranking. It experienced an increase in early-stage funding rounds, and a 100% increase in exits over \$50 million. Looking at the longer term, Estonia has experienced a massive 439% increase in early-stage deal amount from 2018 to 2022 and 50% increase in early-stage deal count in the same period.

**Europe experienced an 18% increase in Series B+ deal count and 160% rise in Series B+ amount in 2018–2022.**

### TOP FIVE ECOSYSTEMS BY VC FUNDING PER CAPITA

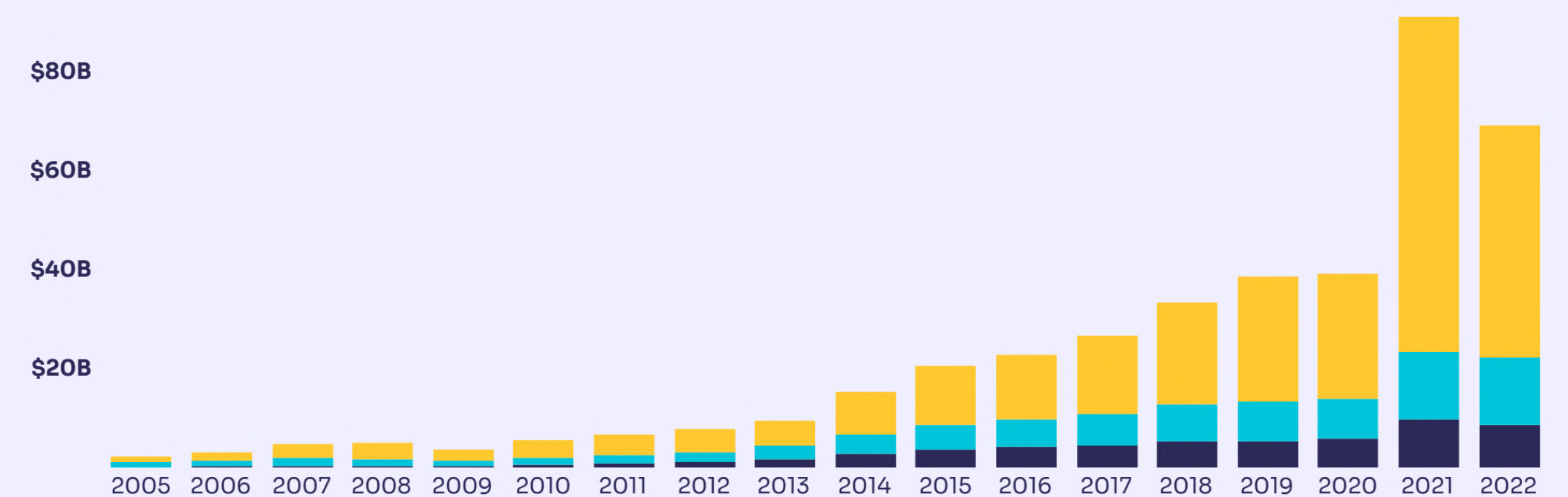
- London
- Stockholm
- Zurich
- Munich
- Dublin

### VC Investment in Europe Decreased 24% Overall From 2021 to 2022

European VC Funding Amount (\$B) by Stage

Source: Startup Genome, 2023

■ Seed ■ Series A ■ Series B+





# The Historical Spirit of Amsterdam Lives on in Its Thriving Startup Scene

**Amsterdam has always marched to the sound of its own drum. For hundreds of years, this historical trading city has been both a hub for business leaders and a refuge for those who see things a little differently. The city's startup scene has embraced this duality, combining both entrepreneurial drive and a freewheeling spirit.**

The Amsterdam region is home to approximately 4,000 startups that employ 196,000 people, and the last few years have seen a deluge of funding pouring into the ecosystem. For example, H1 2022 saw VCs invest €2.8 billion into startups based in the city. This sky-high figure came back down to earth in H2 2022, but with €698 million invested, H1 2022 was still the second highest amount of funding the region has ever received in a half-year period. In short, Amsterdam-based startups are a magnet for VC funding.

## Amsterdam's Changing Startup Landscape

Over the past several years, Fintech has been the driving force behind the Dutch capital's startup ecosystem, but things are changing. While the sector is still the top dog, attracting €189 million in funding from January to June 2022, other industries are catching up.

During the same period, startups in the health sector raised €161 million, transportation €129 million, and education €28 million. Other industries are also showing strong growth, with security and food being thriving areas of research, innovation, and investment.

Amsterdam also punches far above its weight on the international scene. Despite a population of around one million people, Amsterdam startups were worth €227 billion in June 2022. That placed the region second only to London in Europe at the time, more valuable than the startups based in Paris or Berlin, and therefore the E.U. leader in terms of startup value.



**Amsterdam was a natural fit for us to base our headquarters. With a thriving tech scene, there is a large amount of high quality talent living here.”**

**Maxim Romain**, co-founder and COO, Dott

## What Makes Amsterdam a Leading Startup Ecosystem?

There are several reasons why Amsterdam has been so successful in creating a startup scene. First and foremost is its access to incredible talent and, perhaps more vitally, it has the tools to nurture it. The Dutch are known for being multilingual, with around 94% of the populace speaking a second language. This makes the Netherlands incredibly welcoming to individuals from around the world looking to work, which in turn increases the available talent pool.

In addition, there are seven universities in Amsterdam, which collectively produce a wide range of talent. The University of Amsterdam is a world-renowned institution that is regularly ranked in the top 50 in the world. The Dutch capital is also a short journey away from several other top-class universities throughout the Netherlands, meaning students from Leiden, Utrecht, Rotterdam, and beyond are often drawn to Amsterdam's thriving scene or choose to bring their talents here after graduation. With many of the country's cities less than an hour from Amsterdam, the nation's compact size is a huge advantage for creating a thriving startup scene.

## Dedicated Startup Support

Amsterdam's network of coding, data science, and entrepreneur academies — including **Code Institute**, **The Analytics Academy**, and Young Capital — is a top-class feeder for startups. These programs help turn skilled but inexperienced students into polished entrepreneurs and experts.

Startup accelerators also abound in Amsterdam, with the VC-accelerator **Rockstart** and **Startupbootcamp** just two examples of agencies offering various programs throughout the year. No matter what industry a startup is operating in, there are plenty of options for support.

There is also a gamut of startup-focused work spaces that serve as hubs, with **TNW Spaces** leading the way with its two locations, in the city center and Amsterdam-West. The small size of the city and well-established cycling culture makes travelling between spaces a breeze, allowing individuals to integrate themselves across the scene as a whole, rather than being siloed to a specific area, which can happen in larger cities.

Then, there are the events. **TNW Conference** is one of Europe's leading tech gatherings. At this annual Amsterdam event, attendees can attend workshops, keynotes, and panel sessions, as well as connect with international tech experts, VCs, and other major players from the local ecosystem and further afield.

## Fintech Has Been the Driving Force Behind the Dutch Capital's Startup Ecosystem

Funding by Sector From January to June 2022

Source: Startup Genome, 2023



## Amsterdam Is Above the European Average of Active Unicorns by Ecosystem

Source: Startup Genome, 2023

Number of Active Unicorns (H2 2020–2022)





## A Supportive Community

An established startup scene in a compact city means that newcomers and fledgling entrepreneurs have access to an experienced network of professionals with talent and connections to share. Amsterdam is home to a tight-knit startup ecosystem in which founders and professionals are in close proximity to coworking spaces, incubators, and events throughout the Dutch capital, making an ideal breeding ground for knowledge transfer and networking.

Dott is just one of Amsterdam’s many success stories. The micromobility startup currently operates 40,000 e-scooters and 10,000 e-bikes in cities in eight countries. It raised over €140 million in Series B funding alone and saw the number of riders grow by 94% in 2022 compared to the year before.

“Amsterdam was a natural fit for us to base our headquarters,” shares Maxim Romain, co-founder and COO. “With a thriving tech scene, there is a large amount of high quality talent living here.”

Other Amsterdam-founded success stories include MessageBird, a cloud communication platform that has raised over €1 billion, and SignRequest, a digital-signature company that was acquired by Box for €51.32 million. VanMoof, Mollie, Crisp, and many other players are also making a name here.

## Amsterdam as a Gateway to The World

Historically, Amsterdam was a center for trade, but it was also the birthplace of modern business — this former fishing village grew to become one of the largest ports in Europe, and was the birthplace of the modern stock market. Alongside this, the city spearheaded cultural revolutions, creating a relaxed, tolerant, and creative society. These elements continue today in a

region that combines the best of both a major city and a closely connected small town.

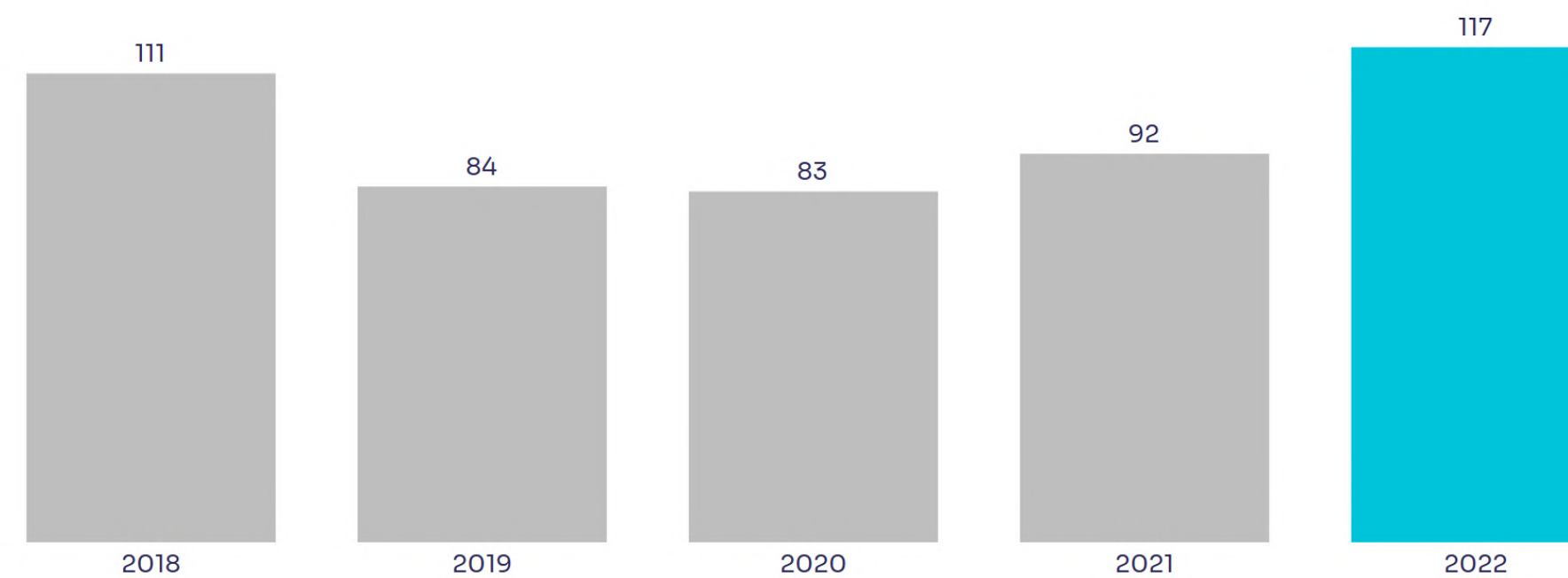
Amsterdam startups have the benefit of these dualities, many combining both creativity and business nous. They have access to impressive levels of investment, high-quality programs, and a talent pool filled with inventive and skilled workers. With true innovation flourishing and a supportive community to accelerate ideas, the Dutch capital is a startup ecosystem that truly feels like one.

**With many of the country’s cities less than an hour from Amsterdam, the nation’s compact size is a huge advantage for creating a thriving startup scene.**

## 2022 Was a Record Year in Exits for Amsterdam

Source: Startup Genome, 2023

Exit Count (#) By Year (2018 - 2022)





# Bold, Curious, and Unafraid: Estonia Is Where Startups Get Started

If you think of Europe as a continent of traditional, established countries, think again. There is one small nation that is unafraid to do things differently, leading the way in creating startups and investment per capita: Discover Estonia, the quickly developing agile and digitalized startup launchpad.

Don't be fooled by Estonia's relatively small size and population of 1.3 million people. The cat-like character of the Estonian people (more on that later) has fostered the creation of one of the world's most ambitious startup ecosystems. In just three decades, Estonia has transformed itself into an international digital dynamo, with prominent institutions such as NATO relying on Estonian entrepreneurial know-how. "We're a European powerhouse, punching above our weight when it comes to unicorns and investment per capita," says Vaido Mikheim, Deep Tech Project Lead for **Startup Estonia**, a government initiative aimed at creating more startup success stories in Estonia by



developing three building blocks: availability of human resources and capital, open and connected community and services, and transparent and straightforward regulative infrastructure. "But more importantly we are adventurous, always looking to have an impact, with a bit of fun along the way," he adds.

**We're a European powerhouse, punching above our weight when it comes to unicorns and investment per capita, but more importantly we are adventurous, always looking to have an impact, with a bit of fun along the way."**

Vaido Mikheim, Deep Tech Project Lead, Startup Estonia

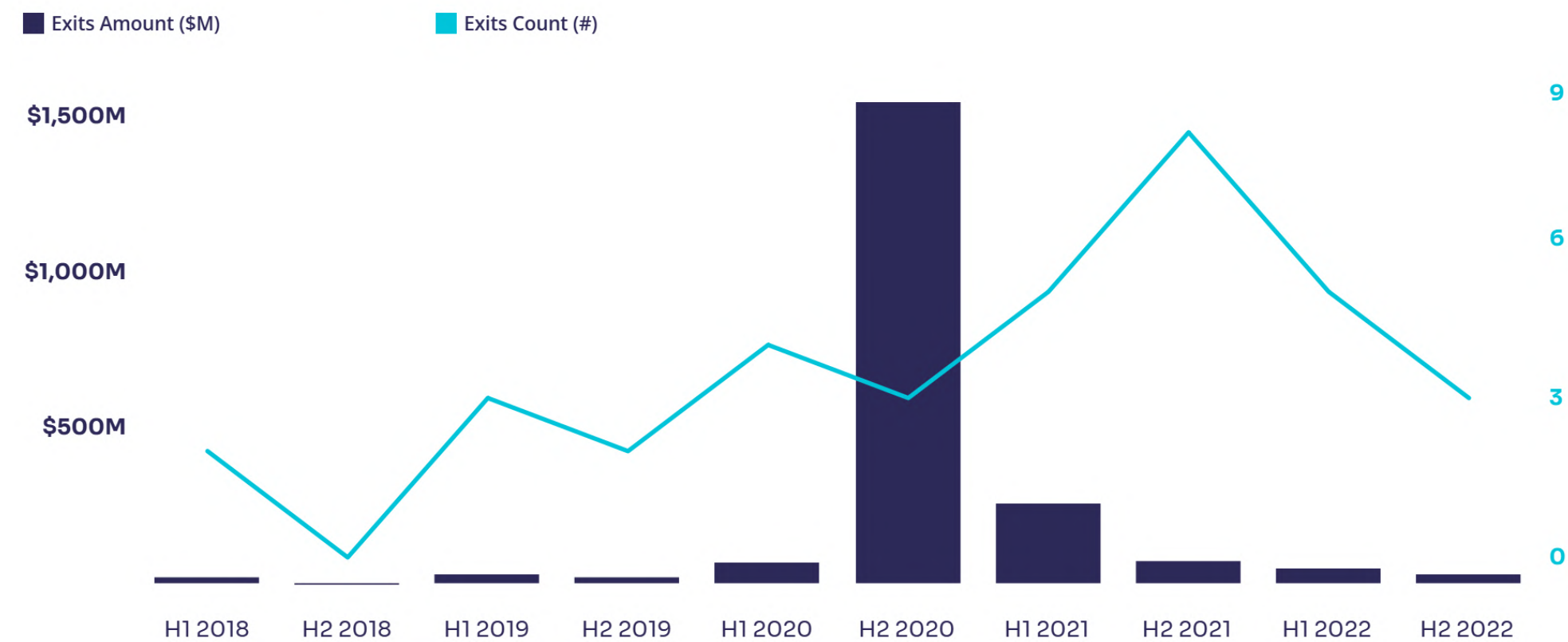
It's no coincidence that Estonia is the birthplace of some of the world's most innovative brands, including **Skype**, **Wise**, and **Pipedrive**. If you're looking for the perfect test bed for your next world-changing idea, look no further than Estonia.



## Pipedrive Contributed to Estonia's H2 2020 Peak in Exit Value

Exits Deal Count and Amount (\$M)

Source: Startup Genome, 2023



## Starting Up in a Matter of Minutes

If there's one word that captures the essence of Estonia's startup ecosystem, it would be "speed." With a culture steeped in curiosity and efficiency, Estonia offers a friction-free path to launching a startup primed to tackle the world's greatest, most complex problems.

"Estonians are like cats. We tend to be curious — unafraid to take risks and experiment with new ideas," says Ettie Mikita, Marketing and Communications Lead for Startup Estonia. "We're also pragmatic and hard-working. We

value honesty and transparency, and expect the same from others."

She continues, "We eliminate the daily drag, red tape, and anything that stands in the way of realizing your biggest dreams. As a small nation with grand ambitions, we always try hard to discover shortcuts by leveraging science and smart applications."

When a culture known for speed and efficiency merges with a digital-first government, amazing things happen. With digital signatures and paperless communication the norm, in Estonia 99% of government services are available from the comfort of your home (perfect for

staying warm and cozy during the nation's beautiful yet admittedly long winters).

With Estonia's groundbreaking, 100,000-member-strong **e-Residency** system, all it takes is an internet connection and a few minutes to securely launch, grow, and run an E.U. startup from anywhere in the world. In fact, in testament to Estonia's digital infrastructure, Austrian entrepreneur Dominik Panosch started a business from scratch in a world-record-breaking 15 minutes, 33 seconds. (It should come as no surprise that the previous record of 18 minutes, 3 seconds was also established in Estonia.)

## A Sandbox for Solving Global Problems

With over 120 startup support organizations, including science parks, accelerators, incubators, coworking hubs, and startup event organizers, Estonia delivers what Vaido calls "startup-ecosystem hygiene requirements" in spades. However, going far beyond these essential expectations is what makes the country a place where startups turn global challenges into new market opportunities.

Estonian unicorns such as **Veriff**, an AI-powered identity verification startup, lead a solid list of businesses that have disrupted the status quo while creating historic, positive social change in communication, commerce, food security, and more. Car-sharing, scooter network, and delivery platform **Bolt** raised a €628 million Series F in January 2022, taking it to a €7.4 billion valuation.

With a culture steeped in curiosity and efficiency, Estonia offers a friction-free path to launching a startup primed to tackle the world's greatest, most complex problems.



The Estonian Biobank houses genetic data for more than 200,000 individuals (about 20% of Estonia’s adult population), creating a world-class research opportunity. Berkeley-based startup **BioAge Labs** relies on the Estonian Biobank in its pursuit to predict mortality: a bold attempt to solve humanity’s quintessential existential crisis.

**Accelerate Estonia**, a governmental innovation lab, ensures that Estonian startups remain on the fast track to success. Regardless of how attractive, well connected, and accommodating a startup ecosystem is, innovation is impossible without a proactive government. Through public-private partnerships, Accelerate Estonia helps entrepreneurs cut through bureaucracy and red tape faster than you can say “unicorn” (well, not really *that* fast, but you get the idea). Known for solving “wicked problems,” Accelerate Estonia is a launchpad for moonshot ideas, helping founders break down seemingly overwhelming challenges into smaller, bite-sized chunks.

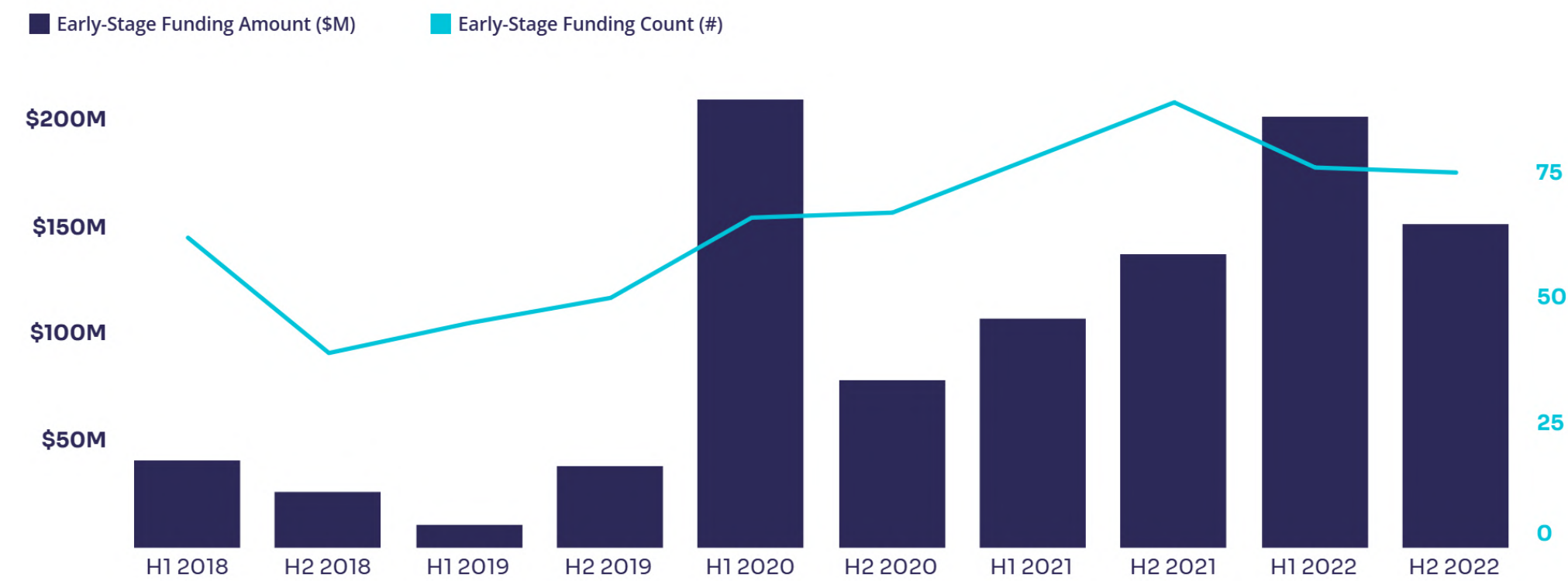
## Deep Tech Darlings

Referred to as the “New Nordic Silicon Valley,” Estonia is home to an array of cutting-edge companies. One prime example is **Starship Technologies**, which specializes in autonomous delivery robots. These adorable six-wheeled vehicles adorned with signature red flags make food and package deliveries more efficient, convenient, and sustainable. In concert with the growth of Starship Industries and other Deep Tech developments, the Estonian government has been moving toward what

## Estonia’s Early-Stage Funding Remained Strong in 2022 Despite a Global Downturn

Early-Stage Funding Deal Count and Amount (\$M)

Source: Startup Genome, 2023



many legal professionals believe to be inevitable: granting robots status as legal entities.

Although Deep Tech is a bit of a buzzword these days, Estonians are determined to prove that the hype is real — the nation recently launched a national Deep Tech startup ecosystem development action plan. Additionally, the Ministry of Economic Affairs is working on a tax exemption scheme for R&D employees and a national Research Transfer Organization similar to Finland’s VTT or Sweden’s RISE is about to go live.

## An International & Welcoming Ecosystem

Solving the problems of a diverse world requires an equally diverse startup ecosystem, where anyone from anywhere can thrive. Thirty-two percent of Estonian startup founders hail from other countries. Additionally, Estonia boasts a higher proportion of female startup founders (17%) than the rest of Europe (15%), and the number of women-led Estonian startups has been steadily increasing since 2020.

And as fun as learning the exclusive Estonian language may be, doing so isn’t necessary to thrive here. Not only are all digital services provided in English, but you’ll soon discover that, from bus drivers to village shopkeepers, a high level of English is common throughout the population.

Launching and growing a successful startup is a monumental challenge. That’s why, as a founder, it’s critical to establish your business in a place where the deck is stacked in your favor. Estonia, a nation known for its ingenuity, can boost your fledgling startup and make your unicorn-level idea a reality. Everyone involved in the Estonian startup ecosystem recognizes the challenges that founders face. Together, they have created a community that continually works to minimize friction and clear a path for success. (Vaido encourages everyone to look up #EstonianMafia.) Build your business in Estonia, the small European country that makes big dreams a reality.



Startup Estonia is covering the cost of publishing this article from the European Regional Development Fund (project number EU50651).



# Adaptation & Resilience: First-Hand Insights Into the Ukrainian Startup Ecosystem

Pavlo Kartashov, CEO, Ukrainian Startup Fund (Innovation Development Fund), Ihor Markevych, Head of Strategy and Development, Ukrainian Startup Fund (Innovation Development Fund), and Nataly Veremeeva, Director, TechUkraine share their thoughts on the current state of the Ukrainian startup ecosystem.

## The Impact of War & Current State of the Ecosystem

**Pavlov and Ihor:** The war has changed the Ukrainian startup ecosystem permanently. It will never be the same as before the full-scale war. But still, a surprising number of startups have survived months of Russian attacks and even found ways to grow. Only 12% of all startups fully stopped their activity. 43% of startups expect growth in 2023 based on the results of 2022. In general, we can identify the following key features of the Ukrainian startup ecosystem in times of war:

**1. Basic needs are a priority.** The war in Ukraine is still ongoing. The largest-scale hostilities are taking place in the east of the country at a considerable distance from Kyiv and Lviv, but there are still risks of missile attacks, mobilization, and other consequences of war.

That is why startups are prioritizing solutions for basic challenges irrelevant to most others worldwide, such as security, access to the internet, and electricity.

**2. Attracting investment has become even more difficult.** Even before 2022, most investors did not consider Ukraine a priority jurisdiction for investment, but now it has become even worse. Investing in Ukrainian startups has become more risky. If a startup has no sales outside of Ukraine and its core team is in Ukraine, it is almost impossible to raise funding. But more mature startups with proven traction are securing funding. Examples include **airSlate**, which secured \$51.5 million and is now valued at over \$1.25 billion, and **Preply** with \$50 million raised in an Series C round C. **Finmap** and **FuelFinance** have secured \$1 million each.

**3. Relocation of startups.** More than 30% of startups have relocated to different countries worldwide. They

start to form different communities and build bridges between the ecosystems of Ukraine and the country of temporary residence. The Ukrainian startup ecosystem has become global.

**4. Great resilience and bravery.** Despite the war, Ukrainian startups are supporting the army while continuing to operate their businesses, implement projects, pay taxes, acquire new customers, and expand globally.

**5. Top-level publicity.** Media attention is focused on the Ukrainian tech ecosystem and startups. All the Ukrainian booths at the major tech events are overcrowded. Ukrainian startups get their chance to talk to the media, present and showcase their projects, and promote the ecosystem.



**The Ukrainian startup ecosystem has become global.”**

**Pavlo Kartashov**, CEO, Ukrainian Startup Fund (Innovation Development Fund)



**Nataly:** The war was a shock for the whole Ukrainian nation and the country's economy. However, the tech sector was among the few that showed impressive resilience. It showed growth of exports of IT services of more than 5% despite all the challenges the sector has faced, raising up to \$7.4 billion. The size of investments in Ukrainian startups in 2022 was also considerable. There were dedicated funds and special programs launched by various programs from agencies including USAID, GIZ, Google for startups and others. A lot of work has been done to improve the investment climate in Ukraine and prepare frameworks for post-war recovery. This said, startups are still struggling to attract investment and for the startup ecosystem to show its real strength we need more capital in the country.

## Changing Focus

**N:** There was an important shift in terms of the problems that startups are solving. There is more focus on resolving the country's immediate needs in military technology, logistics, and communication. A big amount of focus from the tech sector is going towards helping Ukraine, both in terms of financing, technology, and educated tech professionals. Over 300,000 people are working in IT and internet armies, that is, working in the area of Cybersecurity and on other tasks.

Our Ministry of Digital Transformation has published a list of verticals that are currently a priority. A really important segment for now is Militarytech, and we have seen a lot of new solutions in this area: drones, navigation



**The war was a shock for the whole Ukrainian nation and the country's economy. However, the tech sector was among the few that showed impressive resilience."**

**Nataly Veremeeva**, Director, TechUkraine

systems, autonomous vehicles. These projects were undertaken by established companies, startups, and higher educational institutions. Cybersecurity is another area where there is a high level of activity.

**P&I:** Defensetech as an industry has become very popular and crucial for Ukraine. There are more than 300 Defensetech startups, the majority of which were founded in 2022–2023. A lot of existing startups have also started to develop products relevant to the war effort, such as demining products, energy saver technologies, and military drones.

At Ukrainian Startup Fund we prioritize the support of startups in five key war- and post-war recovery-related industries: Defensetech, Cybertech, Edtech, Healthtech, and infrastructure. In 2022 we received more than 200 applications and supported almost 30 startups in these

industries, starting with demining drones and finishing with VR educational platforms for soldiers.

The Deep Tech industry is also developing because of access to E.U. funding and supporting programs. A lot of European institutions are cooperating with Ukrainian ones (EIT, EIC, COST, and others) and integrating them into the E.U. tech ecosystem. There was a specific EIC call for €20 million to support Ukrainian startups, which has boosted the creation and formalization of Deep Tech startups, as well as respective supportive organizations. In May 2023, the EIC announced a pan-European network that will implement a €20 million action supporting Ukraine's innovation community called Seeds of Bravery. We are grateful for these new partnerships because our startups have a lot to offer the world.

## Brain Drain & Talent Retention

**P&I:** Digital technology has allowed founders to continue operations. COVID prepared startups to work remotely and the skills gained during quarantine restrictions significantly help startups to survive during the war. Nevertheless, Ukraine has a critical brain-drain problem. With every month of the war, more and more talent leaves the country. However, many founders remain in Ukraine for patriotic reasons, continuing to develop their products and work for victory. We continue to work with all Ukrainian founders regardless of their temporary location. We continue to provide grants and other types of support to Ukrainian startups, and are also actively developing international partnerships, creating joint programs specifically for Ukrainian entrepreneurs.



Of course, we will do everything to bring as many Ukrainians home as possible. To do this, we need to create the most convenient and comfortable startup environment in Ukraine. We already have one of the best tax regimes for tech companies in Diiacity — a legal and tax regime that creates favorable conditions for the development of IT business as well as introduces a set of incentives for Ukraine to become a high-tech digital state. We are working to improve legislation to unlock investment mechanisms and working closely with startups and other stakeholders to define their needs and verify approaches.

**N:** Women are currently our ambassadors, including in tech. They have ties in the country, husbands, partners, parents, and others still here. A lot of them are waiting for the war to finish and also travel back and forth to visit their family members, so the connections are maintained naturally.

Ukraine also still offers very good conditions for doing business: it is comparatively inexpensive and has a very qualified workforce, so even if founders and some parts of the team moved abroad, people are still interested in growing a team in Ukraine because of the quality and pricing of human capital, apart from the emotional part.

## Maintaining a Strong Ukrainian Startup Community

**N:** Communities have a common goal of staying connected. We all want our country to win in this war and

even if a person's location has changed, their heart and thoughts are still in the country. There is a big difference between emigration out of choice and changing location because of the war. With technology, it is comparatively easy to stay in touch. COVID taught us to work remotely on a regular basis. With the beginning of the war we just went on doing it, using digital tools and habits that were already in place.

Apart from that, a large amount of Ukrainian public services had already moved online, so it is also easy to interact with the state, even from a distant location. Another aspect is the Diiia app, which offers a wide variety of public services and additional options, like questionnaires from the state to know public opinion and even military-focused services, like sharing the enemy location or for people notify that they have just seen a rocket fly over, thus helping our air-defense systems locate and extinguish the attack.

**P&I:** It is important that cooperation is coordinated by a number of institutionally strong organizations. On the part of the state these are the Ministry of Digital Transformation of Ukraine and the Ukrainian Startup Fund, and on the part of business, these are IT clusters, IT associations, etc. Moreover, the Ukrainian startup ecosystem is naturally connected with the key goal to gain victory in this war. A lot of founders and team members are involved in the IT army initiative, PR army, Army of Drones, and other defense initiatives.

Startups continue to thrive even in these difficult circumstances. **Zeely** recently made it to the Forbes



## Startups continue to thrive even in these difficult circumstances.”

**Ihor Markevych**, Head of Strategy and Development, Ukrainian Startup Fund (Innovation Development Fund)

30 under 30 Europe list in the Media and Marketing category, and last year it was among the top three finalists among 1,200 competitors at the Slush tech conference in Finland. It also secured \$1 million in April 2023. Fintech startup **Finmap** raised a €1 million round in February, with one of its founders defending Ukraine in the Armed Forces. Cleantech startup **Releaf Paper** has developed a unique technology for producing paper from fallen leaves and won the EIC Accelerator 2022 program from the European Commission. The team has entered the French market and intends to build its own factory worth €3.5 million, of which €2.5 million will be funded by a grant from the European Commission.

The Ukrainian Startup Fund runs several regular ecosystem community initiatives including Ecosystem Meetup (monthly offline meetups to align the activities of key stakeholders), an online communication platform, and a lot of different events. Ukrainian Startup Fund has become an entry and connection point for the Ukrainian ecosystem, where you can find almost everything you

need, or at least information about everything you need. We are planning to launch Tech Rammstein — a communication platform to unite global startup agencies and investors with the key goal to help Ukrainian startups.

It is important for us to create as many opportunities for Ukrainian startups as possible, but not to turn these opportunities into brain-drain tools. We are incredibly interested in cooperation, not just relocation. We are open to any joint projects that will create additional opportunities for Ukrainian startups, from finance to knowledge. We are not asking just for donations — we have a lot to offer.

Ukraine's startup ecosystem is going through the most difficult times in its history, but it is still growing. We will be grateful for any help, but most importantly, we urge you to accept Ukrainian startups as equals and provide them with equal access to opportunities. You should not refuse to invest, nor buy just because the startup is a Ukrainian one. Use Ukrainian products because they are not only high quality, but also brave.

Netherlands

# Amsterdam-Delta

- \$14** Global Ranking
- #7** Cleantech Ranking
- #4** Blue Economy Ranking

*The Amsterdam ecosystem is thriving and has created an environment for talent and entrepreneurs to excel. I can see a new powerful growth spurt ahead if we continue to work together, connecting all ecosystem players in the city and across the Netherlands.*



**Myrthe van der Erve**  
CEO, The Next Web

Global Ecosystem in Funding	Global Ecosystem in Performance	Global Ecosystem in Talent & Experience
<b>Top 15</b>	<b>Top 20</b>	<b>Top 20</b>

## Highlights

Amsterdam is the most popular location for VC-backed startups in the Netherlands, with 45% of all Dutch funded ventures having their HQ in the city. Amsterdam’s homegrown startups employed 49,000 people in 2022, a 6% increase year-on-year, and more than 260 foreign startups employed another 23,500 people. Many international tech giants, including Tesla, Meta, IBM, and Google, have offices in Amsterdam, and the city’s ecosystem was valued the highest in the E.U. in H1 2022. Around 90% of VC funding flowing into Amsterdam comes from foreign investors.

The Dutch capital is also the home to The Next Web, which not only hosts the annual TNW Conference, but provides coworking space and programs to further boost the Amsterdam tech startup scene. Overall, Amsterdam is an international but closely connected ecosystem with a rich supply of support agencies and talent to drive innovation.

A new Demonstrator Lab at Science Park in Amsterdam opened in March 2022 with the goal of fostering an entrepreneurial culture in Amsterdam’s higher education ecosystem. The lab offers guidance and equipment to students and staff members of local universities looking to turn a research-based idea into a product or service. Blockchain Expo will be held in September 2023, and Aquatech Amsterdam 2023, a water trade show for process, drinking, and wastewater, will take place in November. AI-powered indoor farm startup Source.ag raised \$10 million in a March 2022 seed round. Creative Fabrica has raised \$68.5 million over five rounds, including a \$61 million January 2023 Series B.



# Ecosystem by the Numbers

**ECOSYSTEM VALUE**  
(H2 2020 - 2022)

**\$82 bn**



GLOBAL AVG. \$34.6 bn

**NUMBER OF UNICORNS**  
(H2 2020 - 2022)

**5**



GLOBAL AVG. 4

**SOFT. ENGINEER SALARY**  
(2022)

**\$64 k**



GLOBAL AVG. \$46 k

**TIME TO EXIT**  
(2018 - 2022)

**10.7 years**



GLOBAL AVG. 9 years

**TOTAL EARLY-STAGE FUNDING**  
(H2 2020 - 2022)

**\$3.9 bn**



GLOBAL AVG. \$970 m

**MEDIAN SEED ROUND**  
(H2 2020 - 2022)

**\$765 k**



GLOBAL AVG. \$821 k

**EARLY-STAGE FUNDING GROWTH**  
(2019 - 20 VS. 2021 - 22)



Scale of 1 (lowest) to 10 (highest)

**EXIT AMOUNT**  
(2018 - 2022)

**\$22 bn**



GLOBAL AVG. \$11.3 bn

**ECOSYSTEM VALUE GROWTH**  
(H2 2020 - H2 2022 VS H2 2018 - H2 2020)

**37%**



GLOBAL AVG. 4.7%

**MEDIAN SERIES A ROUND**  
(H2 2020 - 2022)

**\$6.1 m**



GLOBAL AVG. \$6 m

**TOTAL VC FUNDING**  
(2018 - 2022)

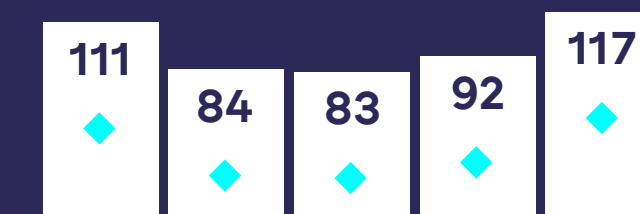
**\$17 bn**



GLOBAL AVG. \$6.6 bn

**EXIT COUNT (#)**  
(2018 - 2022)

**487**



GLOBAL AVG. 91

## Sub-Sector Strengths

### Fintech

More than 20% of startup jobs in the Amsterdam ecosystem are in Fintech, with 1,200 added in 2022. Canadian cross-border payments network Buckzy and U.S. banking startup Trovata are set to open offices in the area. Amsterdam placed #2 in the 10th Global Green Finance Index. The city also took second place in the 2022–23 fDi Intelligence Global Cities of the Future rankings. Fintech event Money 20/20 EUrope 2023 took place in June. Amsterdam FinTech Week (XFW) is set for September.

### Life Sciences

The Netherlands is the top European importer and exporter of medical devices. The city has access to 95% of Europe's biggest consumer markets, with the Schiphol Airport housing a specialized pharma zone and the Port of Amsterdam biomass transshipment facilities. In 2022, Life Science Partners announced it had raised over €1 billion for its flagship fund, the largest Life Sciences VC fund raised in Europe to date. Cancer immunotherapies startup CimCure raised a €5 million seed round in June 2022. Lapsi Health raised a \$3.7 million seed round in January 2023.

### AI, Big Data & Analytics

The Global Observatory for Urban AI places Amsterdam among the world leaders in developing ethical AI solutions, listing 17 initiatives based here, and two of the city's universities offer programs in AI. In January 2023, the Netherlands Organization for Scientific Research announced an additional €25 million in funding towards opening 17 new AI labs and supporting students in the field. The AI & Big Data Expo Europe 2023 is set for Amsterdam in September, and the World AI Summit 2023 will take place in October. Business intelligence and analytics firm Pyramid Analytics raised \$120 million in May 2022.

## Reasons to Move Your Startup to Amsterdam-Delta

### International Talent

Amsterdam's modern, educated, multilingual workforce is a magnet for international companies. It ranked first in the EF Global English Proficiency Index 2022, indicating the highest level of non-native English speakers worldwide. Almost half of the city's residents hold a degree. The Global Talent Competitiveness Index 2022 ranked Amsterdam #11 for talent competitiveness.

### Established Business Community

Amsterdam's long history as an international business center means an outward-looking attitude is deeply ingrained in Dutch culture. The Dutch capital is welcoming to expats and foreign businesses. Amsterdam boasts excellent transport links, with Schiphol Airport Europe's third busiest by passenger numbers. fDi Intelligence's European Cities and Regions of the Future 2022/23 ranked Amsterdam #4 in business friendliness and #2 in connectivity.

### Science & Tech Hub

The growing number of tech startups and established STEM companies means there is a strong community of scientific and tech professionals in the city. Research facilities including Lab42 in Amsterdam Science Park help connect young talent to industry experts. City government and academic institutions are investing in building new innovation hubs aimed at cultivating science-led entrepreneurship.



Serbia

# Belgrade and Novi Sad

**MEMBERS:**

The Ministry of Science, Technological Development and Innovation of the Republic of Serbia / Digital Serbia Initiative

*Through targeted investments, strategic partnerships, and policies that promote innovation and entrepreneurship, we are working to create an environment where Serbian startups can thrive. With our focus on fostering the blockchain ecosystem, AI and other emerging technologies, we are confident that Serbia will become a driving force in the global innovation landscape.*



**Jelena Begović**

PhD, Minister of Science, Technological Development and Innovation



European Ecosystem in Affordable Talent



## Highlights

Serbia is known for its engineering talent, but the startup ecosystem in Belgrade and Novi Sad also benefits from an innovation-focused approach of government, industry, academia and other stakeholders in the digital ecosystem. Its strategy includes the introduction of entrepreneurship education at all levels and the improvement of infrastructure and support programs, with a goal of creating up to 1,200 active startups that attract worldwide investors. In 2022, Serbia saw a record year with inflows of foreign direct investments of approximately €4.4 billion, according to the National Bank of Serbia.

In June 2022, the EU and the World Bank jointly pledged €84.5 million to finance Serbian research and startups. The Serbia Ventures program, an initiative of the Serbian Innovation Fund, aims to encourage private investors and institutions to finance startups and establish VC funds in Serbia. It will invest up to €5 million in newly established VC funds. Omorika Ventures and The Fifth Quarter are two new funds that will start operations in 2023.

3Lateral and Epic Games continue the planning and construction of a future campus in Novi Sad as a support to education and educational infrastructure. Microsoft signed an agreement with acceleration program Katapult that gives affiliated startups access to Microsoft services, and Katapult welcomed its first cohort of 18 startups in Serbia in 2022. The NINJA Accelerator Program happened as a joint initiative of Digital Serbia and the Japan International Cooperation Agency that aims to connect the Serbian and Asian markets.

# Ecosystem by the Numbers

**ECOSYSTEM VALUE**  
(H2 2020 - 2022)

**\$1.1 bn**



GLOBAL AVG. \$34.6 bn

**NUMBER OF UNICORNS**  
(H2 2020 - 2022)

**0**



GLOBAL AVG. 4

**SOFT. ENGINEER SALARY**  
(2022)

**\$24 k**



GLOBAL AVG. \$46 k

**TIME TO EXIT**  
(2018 - 2022)

**10.9 years**



GLOBAL AVG. 9 years

**TOTAL EARLY-STAGE FUNDING**  
(H2 2020 - 2022)

**\$67 m**



GLOBAL AVG. \$970 m

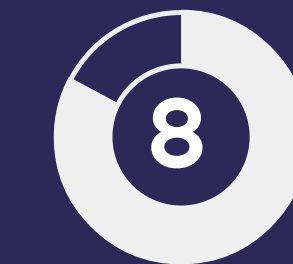
**MEDIAN SEED ROUND**  
(H2 2020 - 2022)

**\$356 k**



GLOBAL AVG. \$821 k

**EARLY-STAGE FUNDING GROWTH**  
(2019 - 20 VS. 2021 - 22)



Scale of 1 (lowest) to 10 (highest)

**EXIT AMOUNT**  
(2018 - 2022)

**\$647 m**



GLOBAL AVG. \$11.3 bn

**ECOSYSTEM VALUE GROWTH**  
(H2 2020 - H2 2022 VS H2 2018 - H2 2020)

**75%**



GLOBAL AVG. 4.7%

**MEDIAN SERIES A ROUND**  
(H2 2020 - 2022)

**\$9.4 m**



GLOBAL AVG. \$6 m

**TOTAL VC FUNDING**  
(2018 - 2022)

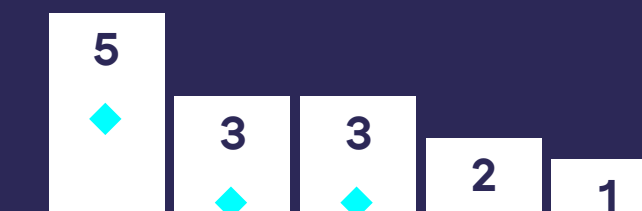
**\$159 m**



GLOBAL AVG. \$6.6 bn

**EXIT COUNT (#)**  
(2018 - 2022)

**14**



GLOBAL AVG. 91

2018 2019 2020 2021 2022



## Sub-Sector Strengths

### Gaming

There are 140 Gaming studios in Serbia as of April 2023, and the 15 most successful companies collectively generated €150 million in 2022. Serbia is home to Nordeus, which became part of the U.S. company Take-Two Interactive in 2021, in one of the largest ever Gaming deals in Serbia. In 2022, the Nordeus Foundation introduced the free Gaming learning platform Gamelab, and Wargaming announced that it will open a studio in Belgrade. The Serbian Games Association continues its support via programs for its 120 members.

### Blockchain

Serbia is a global leader for Blockchain and home to many related startups. The Serbian Blockchain Initiative is an organization dedicated to promoting Blockchain adoption. The Law on Digital Assets regulates virtual currencies and digital tokens. Two licenses for the provision of digital assets services have been issued to date. Tenderly, which aims to make it easier for Web3 developers to build Blockchain products, raised a \$40 million Series B in March 2022. Web3 venture-builder Attic42 opened in April 2023.

### Life Sciences

The construction of BIO4 Campus, the first Life Sciences campus in the region, will begin in Belgrade in 2023. Covering 110,000 square meters, it will house six faculties and nine science institutes. The Serbian Government, partnering with the World Economic Forum and the United Nations Development Programme, hosted the inaugural Biotech Future Forum in October 2022. The Centre for the Fourth Industrial Revolution in Serbia is a platform promoting public-private partnerships in Life Sciences. The Serbia Innovates program includes the Laboratory of Health Technologies supercluster.

## Reasons to Move Your Startup to Belgrade and Novi Sad

### Tech Talent

Serbia's tech industry accounts for at least 6% of the nation's GDP and is growing rapidly. There are over 45,000 highly-skilled tech professionals in Serbia, which is known globally for its world-class engineers. Computer programming is compulsory for all students over the age of 11, who study Scratch, Python, Pygame, and Jupyter. There are 44 specialized IT courses taken by 800 pupils annually in high schools. 3,300 software engineers graduate from 26 faculties every year.

### Tax Incentives

The Personal Income Tax Law provides tax exemptions for employees who are directly engaged in R&D. Combined with the IP Box regime and Double R&D deduction, these incentives provide solid ground for startups in R&D phase. The Personal Income Tax Law and the Law on Mandatory Social Security Insurance provides exemptions to startups that perform innovative activities. Serbia provides subsidies for startups, and benefits for investing in newly established companies.

### International Connections

Serbia is the largest and most prosperous economy in the Western Balkans, serving as a regional hub and springboard for companies to access the region. It is also in the gradual process of accession to the EU, which would potentially expand its market reach further. The NINJA Global Project is building international connections to Belgrade and Novi Sad and opening Serbia to Asian markets. Western Balkan Startup Alliance is a collaborative initiative of startup support organizations from the Western Balkan region with a mission to strengthen the startup ecosystem in the region.

## Selected Startup Organizations

STARTUP GENOME MEMBERS

MEMBER

### The Ministry of Science, Technological Development and Innovation of the Republic of Serbia

Led by Minister Jelena Begović, PhD., the Ministry will launch numerous projects, and propose measures and activities in the field of science, innovation and technological development. Reform processes that contribute to the development of society have already begun in the areas of the Ministry. The work of the Ministry includes all activities in the development and application of scientific knowledge, the promotion of innovations, technological development and the provision of larger investments, as well as the creation of a favorable system for the development and promotion of innovations, so that Serbia continues to keep pace with world practice and achievements. This Ministry, together with other participants in the innovation ecosystem, will build the reputation of Serbia as a society and economy based on knowledge and innovation.

KEY ECOSYSTEM PLAYERS

### Katapult

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

### TS Ventures Fund

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

### Venture an Idea

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

MEMBER

### Digital Serbia Initiative

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

### Serbia Innovates

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

### Tenderly Garaža

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

### DSI Business Angel Group

The main mission of DSI Business Angel Group is to support new entrepreneurs and accelerate the development of the Serbian startup ecosystem, while bringing the opportunity to investors to contribute to ecosystem development.



## Germany Berlin

- #13 Global Ranking
- #11 Cleantech Ranking
- #38 Blue Economy Ranking

*Berlin is a living contradiction. It is a city of history, art, and techno. Yet it creates world-class tech startups, attracts leading venture capital, and maintains an industry mix that is unparalleled. Everything is possible in Berlin.*



**Darius Moeini**  
Founder & CEO, BIA Berlin Innovation Agency

Global Ecosystem in Funding	Global Ecosystem in Performance	Global Ecosystem in Talent & Experience
<b>Top 10</b>	<b>Top 20</b>	<b>Top 20</b>

## Highlights

Berlin is Germany’s startup capital, with twice as many startups being founded in the ecosystem in 2022 than in any other city in the country. That year, the city’s startups raised 390 financing rounds, 39% of all rounds in the country. Nevertheless, Germany was not untouched by the general economic downturn and ongoing global events — the number of startups founded in Germany dropped 18% compared to 2021, according to a report by the German Startups Association and Startup Detector.

Initiatives to strengthen the nation’s position include the German government’s new startup strategy, which was released in July 2022 and features 10 points to strengthen the country’s position as a startup hub. Goals include improving the availability of venture capital, tackling a shortage of skilled workers, and removing bureaucratic hurdles. The policy roadmap will unlock €30 billion in funding by 2030. German Chancellor Olaf Scholz inaugurated Learning Factory Industry 4.0 at ABB in Berlin in September 2022. The new apprenticeship program aims to transform training opportunities for technology companies. 205 trainees are set to begin the program in Berlin in the 2023/2024 academic year.

BlueYard Capital raised its third fund, totalling \$185 million (€172 million), in June 2022 to invest in seed-stage companies. Digital logistics and freight-forwarding company Forto raised a \$250 million Series D in March 2022. The company has raised \$593.4 million over six rounds. Annual tech conference hub.berlin brings together local and international innovators each summer.

# Ecosystem by the Numbers

**ECOSYSTEM VALUE**  
(H2 2020 - 2022)

**\$100 bn**



GLOBAL AVG. \$34.6 bn

**NUMBER OF UNICORNS**  
(H2 2020 - 2022)

**17**



GLOBAL AVG. 4

**SOFT. ENGINEER SALARY**  
(2022)

**\$56 k**



GLOBAL AVG. \$46 k

**TIME TO EXIT**  
(2018 - 2022)

**7.3 years**



GLOBAL AVG. 9 years

**TOTAL EARLY-STAGE FUNDING**  
(H2 2020 - 2022)

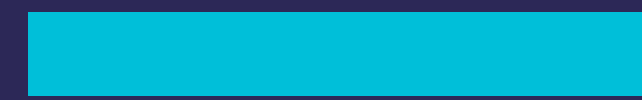
**\$5.8 bn**



GLOBAL AVG. \$970 m

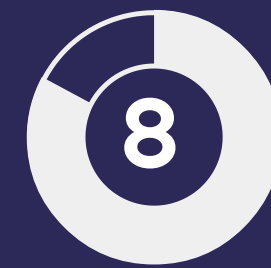
**MEDIAN SEED ROUND**  
(H2 2020 - 2022)

**\$1.5 m**



GLOBAL AVG. \$821 k

**EARLY-STAGE FUNDING GROWTH**  
(2019 - 20 VS. 2021 - 22)



Scale of 1 (lowest) to 10 (highest)

**EXIT AMOUNT**  
(2018 - 2022)

**\$18 bn**



GLOBAL AVG. \$11.3 bn

**ECOSYSTEM VALUE GROWTH**  
(H2 2020 - H2 2022 VS. H2 2018 - H2 2020)

**47%**



GLOBAL AVG. 47%

**MEDIAN SERIES A ROUND**  
(H2 2020 - 2022)

**\$11 m**



GLOBAL AVG. \$6 m

**TOTAL VC FUNDING**  
(2018 - 2022)

**\$31 bn**

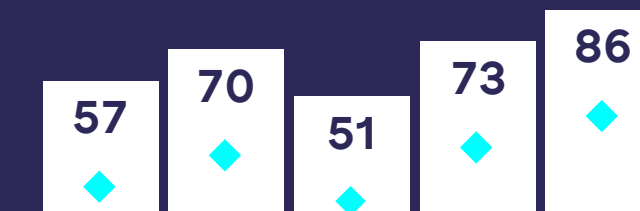


GLOBAL AVG. \$6.6 bn

**EXIT COUNT (#)**  
(2018 - 2022)

**337**

GLOBAL AVG. 91



2018 2019 2020 2021 2022



## Sub-Sector Strengths

### Fintech

Berlin's Fintech scene attracts top international talent thanks to its high level of English language adoption and startup-friendly laws. Berlin startups received 94% of total funding invested in the Fintech/Insurtech sub-sector in Germany in 2022, a total of €1.3 billion. The sub-sector is Germany's biggest recipient of VC funding. InsurTech platform Wefox raised a \$400 million Series D in July 2022, putting the company's pre-money valuation at \$4.1 billion.

### AI, Big Data & Analytics

In July 2022, it was announced that the Berlin AI Competence Centre BIFOLD will receive €22 million annually from the federal government and the State of Berlin to establish itself as one of five National AI Competence Centers. The funding is also intended to further boost Brain City Berlin. In January 2023, the E.U. project TEF-Health committed €60 million to test and validate innovative AI and robotics solutions for the healthcare sector and accelerate paths to market.

### Cleantech

In June 2022, Green Generation Fund announced it had raised €100 million to fuel Cleantech innovation. The next month, VC AENU (ex-Pirate Impact) announced the first close of its €100 million evergreen fund for Climatetech and impact startups. Berlin is home to the GreenTech Festival, which has been running since 2020. Photovoltaics leasing firm Enpal has raised €1.7 billion over 13 rounds, including a €215 million Series D in January 2023.

## Reasons to Move Your Startup to Berlin

### International Talent

Diversity, a high quality of life, and a creative atmosphere attract highly trained, multilingual talent to Berlin from all over the world. About 46,000 foreign students matriculated from the ecosystem's universities in 2021/22. Together they accounted for 23% of all students in Berlin. 28% of employees at Berlin's startups are international.

### Market Access

Located in the center of Europe and with a dense transport network, Berlin is connected to much of the continent. Germany ranked among the countries with the highest purchasing power in Europe in 2022. Hundreds of thousands of businesses in Germany, including many world market leaders in their fields, serve as potential partners and customers for the country's startups.

### Ease of Relocation

Berlin makes it simple for overseas talent to relocate to the city, with both Berlin Investment Bank and Berlin Partners offering funding and guidance to startups. Municipal services for registering a business and other processes are available in English. An international talent pool makes it easy for companies to find experts in all kinds of fields.

Spain  
**Biscay Startup Bay**

**MEMBERS:**  
Diputación Foral de Bizkaia

*“Biscay Bay’s B Accelerator Tower (BAT) is an open innovation and entrepreneurship center that acts as a lighthouse of the ecosystem and connects the ecosystem to the main innovation and entrepreneurship hubs in the world.”*



**Eriz Sainz Gurtubay**  
Director, BAT



European Ecosystem in Affordable Talent



**Highlights**

Biscay Bay’s transformation from a former industrial and shipbuilding powerhouse to a modern, innovative startup hub continues. 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.

Biscay pursues entrepreneurship and innovation as the mainstays of economic and social change through the Biscay Startup Bay strategy, with its B Accelerator Tower (BAT) as the guiding light of an entrepreneurship and innovation ecosystem that has become an international benchmark. BAT opened in September 2022 with the aim of welcoming a community of startups, investors, and training and support organizations. More than an entrepreneurship center, the BAT community is connected to more than 140 international hubs, allowing global leaders to interact to create solutions that will allow them to grow and lead new challenges.

The ecosystem has close ties with entrepreneurial hubs including Austin, Tel Aviv, Helsinki, Berlin and Fukuoka, global leaders in innovation and concentration of startups. It is also connected to Latin America via a partnership with the South Summit and with local players in Chile, Mexico, Colombia, and Brazil. This collaboration connects leading corporations and innovation systems and startups, thus helping to further innovation. Such connections provide access to ground-breaking technologies and talent, and enhance the reputation and brand positioning of all parties, among other values.



# Ecosystem by the Numbers

**ECOSYSTEM VALUE**  
(H2 2020 - 2022)

**\$720 m**



GLOBAL AVG. \$34.6 bn

**NUMBER OF UNICORNS**  
(H2 2020 - 2022)

**0**



GLOBAL AVG. 4

**SOFT. ENGINEER SALARY**  
(2022)

**\$33 k**



GLOBAL AVG. \$46 k

**TIME TO EXIT**  
(2018 - 2022)

**10.7 years**



GLOBAL AVG. 9 years

**TOTAL EARLY-STAGE FUNDING**  
(H2 2020 - 2022)

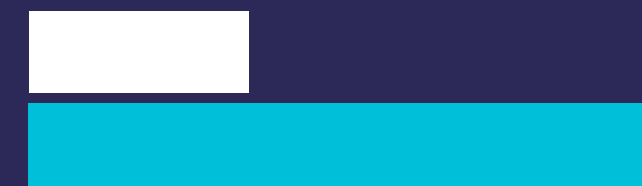
**\$856 m**



GLOBAL AVG. \$970 m

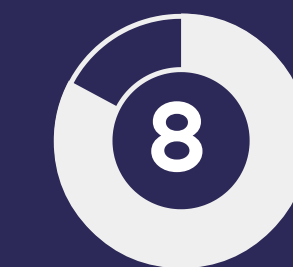
**MEDIAN SEED ROUND**  
(H2 2020 - 2022)

**\$287 k**



GLOBAL AVG. \$821 k

**EARLY-STAGE FUNDING GROWTH**  
(2019 - 20 VS. 2021 - 22)



Scale of 1 (lowest) to 10 (highest)

**EXIT AMOUNT**  
(2018 - 2022)

**\$254 m**



GLOBAL AVG. 11.3 bn

**ECOSYSTEM VALUE GROWTH**  
(H2 2020 - H2 2022 VS. H2 2018 - H2 2020)

**45%**



GLOBAL AVG. 4.7%

**MEDIAN SERIES A ROUND**  
(H2 2020 - 2022)

**\$3.2 m**



GLOBAL AVG. \$6 m

**TOTAL VC FUNDING**  
(2018 - 2022)

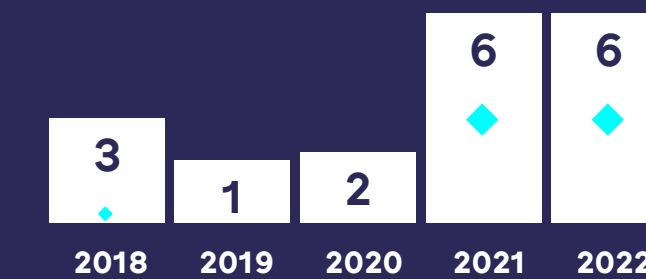
**\$1.1 bn**



GLOBAL AVG. \$6.6 bn

**EXIT COUNT (#)**  
(2018 - 2022)

**18**



GLOBAL AVG. 91

## Sub-Sector Strengths

### Cleantech

Biscay has earned a reputation as a knowledge hub and an industrial reference center in the field of energy. The ecosystem is committed to reinforcing its referential position and leadership in the energy transition, the diversification of energy sources, the promotion of renewable energy, Smart Grids, and the development of the Basque Hydrogen Corridor. The Energy Intelligence Center was designed to position Biscay as an international benchmark in the field of energy and energy transition.

### Industry 4.0 and Future Technologies

The first edition of South Summit's Ecosystem Builders event, intended to connect key players in the energy transition, Industry 4.0, and mobility sectors, took place in Bilbao in November 2022. Biscay is committed to incorporating innovative technologies to address challenges and to transform the sector. An open innovation platform and startup acceleration program, BIND 4.0 is part of the Invest in Basque Country initiative, promoting, attracting, and investing in innovation and emerging technologies to enhance the entrepreneurial ecosystem and strengthen the digital transformation of industry.

### Mobility

In terms of volume, Biscay is one of the leading producers of mobility in the E.U., 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. The sector comprises 300 firms that collectively raise over €18 billion and provide over 40,000 jobs in Biscay. The new AIC-Automotive Intelligence Centre is adding value by 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

### Dedicated Support

Beaz provides several support initiatives: the i creation program, which supports the development and definition of new companies or new business units in existing companies; 2i, which support innovation projects, both technological and non-technological, and makes advanced investments; and 3i, which offers support for comprehensive innovation, investment and internationalization projects to improve the competitiveness of companies.

### Tax Benefits

Thanks to its independent regulatory powers, Biscay has a number of tax measures designed to strengthen its economic ecosystem and channel it towards support for innovation, entrepreneurship, and alternative financing.

### Talent Attraction

Biscay is committed to receiving professionals and digital nomads who wish to establish themselves in the region, and offers the conditions necessary to attract, establish ties with, and retain highly qualified people.





## Selected Startup Organizations

STARTUP GENOME MEMBERS

MEMBER

### Diputación Foral de Bizkaia

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

## Hungary Budapest

**MEMBERS:**

Express Innovation Agency / HUNBAN / NRDIO

*“Hungary is well known for its tech talent and deep tech expertise, and as it gets paired with sales and marketing talent from the West, we get a powerful combination. As an undervalued ecosystem, there’s room for growth, which also means opportunities for startups, investors, and ecosystem players alike.”*



**Peter Balogh**  
Tech Angel and Entrepreneur



## Highlights

Hungary’s lively capital boasts a long history of cutting-edge research and scientific progress, a deep pool of innovative talent, and excellent connections to European markets. Hungary is home to around 2,900 startups that together employ more than 10,000 people. Collectively, these startups have raised over €1.4 billion in funding. Besides Budapest, Debrecen, Győr, Pécs, and Szeged are also growing startup launchpads. Success stories from Hungary include online fraud prevention SEON, GoTo (which was acquired by LastPass), and mobile DevOps platform Bitrise.

Foreign investors brought €6.5 billion to the country in 2022, an all-time record. In total, 92 large foreign direct investment deals were closed. The battery industry is a particular hotspot for investment, with 38 projects from South Korean, Japanese, Chinese, and American companies.

Hiventures, from the Hungarian Development Bank, is one of the largest government-backed VC funds in Europe, managing over \$220 million. It invested HUF 24 billion (\$67.7 million) in domestic companies in 2022. Express Innovation Agency supports the innovation ecosystem from youth education to accessing international markets. Hungary ranked #21 in innovation in the European Commission’s European Innovation Scoreboard 2022, the best result among emerging innovators in the E.U.

Startup Hungary is an entrepreneur-led organization that supports the startup community and high-growth potential tech companies. Incubator Design Terminal helps innovative Hungarian startups enter the international market, and CEU iLab’s incubator provides founders with mentorship and funding opportunities. In 2022, more than 4,000 students enrolled in Express Innovation Agency’s Hungarian Startup University Program.



# Ecosystem by the Numbers

**ECOSYSTEM VALUE**  
(H2 2020 - 2022)

**\$1.8 bn**



GLOBAL AVG. \$34.6 bn

**NUMBER OF UNICORNS**  
(H2 2020 - 2022)

**0**



GLOBAL AVG. 4

**SOFT. ENGINEER SALARY**  
(2022)

**\$27 k**



GLOBAL AVG. \$46 k

**TIME TO EXIT**  
(2018 - 2022)

**10.3 years**



GLOBAL AVG. 9 years

**TOTAL EARLY-STAGE FUNDING**  
(H2 2020 - 2022)

**\$148 m**



GLOBAL AVG. \$970 m

**MEDIAN SEED ROUND**  
(H2 2020 - 2022)

**\$250 k**



GLOBAL AVG. \$821 k

**EARLY-STAGE FUNDING GROWTH**  
(2019 - 20 VS. 2021 - 22)



Scale of 1 (lowest) to 10 (highest)

**EXIT AMOUNT**  
(2018 - 2022)

**\$287 m**



GLOBAL AVG. \$11.3 bn

**ECOSYSTEM VALUE GROWTH**  
(H2 2020 - H2 2022 VS H2 2018 - H2 2020)

**-1%**



GLOBAL AVG. 4.7%

**MEDIAN SERIES A ROUND**  
(H2 2020 - 2022)

**\$2 m**



GLOBAL AVG. \$6 m

**TOTAL VC FUNDING**  
(2018 - 2022)

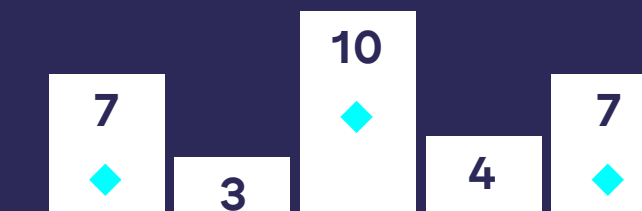
**\$846 m**



GLOBAL AVG. \$6.6 bn

**EXIT COUNT (#)**  
(2018 - 2022)

**31**



GLOBAL AVG. 91

2018: 7, 2019: 3, 2020: 10, 2021: 4, 2022: 7

## Sub-Sector Strengths

### AI, Big Data & Analytics

Bosch is building a new 3,500 square meter R&D complex near ZalaZone, Hungary's proving ground for cutting-edge mobility solutions. The complex will be home to 200 engineers working on autonomous driving, e-mobility, and AI. The first module of an AI supercomputer, built in partnership between the Ministry of Innovation and Technology and OTP Bank, was inaugurated in January 2022.

### Fintech

As of January 2023, there were 106 Fintech startups in Budapest. Approximately 26% of Hungarian Fintech companies work in financial software development and system integration, 19% in payment services, and 17% in data analysis and business intelligence services.

### Life Sciences

Hungary is well known for its Life Science sector. Home to approximately 300 Life Sciences startups, 80,000 people work in the sub-sector. Eight of the top 10 global drug and biotech companies have manufacturing facilities in Hungary. Fourteen Hungarian universities graduate more than 5,000 students in Life Sciences-related fields per year. Cell-behavior simulation platform Turbine raised a €20 million Series A in November 2022.

## Reasons to Move Your Startup to Budapest

### Skilled, Affordable Workforce

The education system in Hungary produces high-quality, workforce-ready graduates. 90% of students speak English and two-thirds of the startup workforce are STEM graduates. This has led many companies in sectors including pharmaceuticals, engineering, R&D, and IT to look to Budapest when searching for talent. In 2022, labor costs were among the lowest in the E.U.

### Tax Incentives

Hungary has the lowest corporate income tax level in the EU at 9%. Dividends paid to owners both within Hungary and abroad are not taxed. Local business tax is levied on the gross profit of the company up to 2%, depending on the municipality. There are special taxation schemes for small companies that meet specific criteria.

### Strategic Location

On the national scale, Budapest benefits from a unique centralized infrastructure providing exceptional opportunities for those who would like to operate in the country. Moreover, thanks to its geographical location, Hungary and its capital serves as the perfect place to reach out to CEE and Western European countries.



## Selected Startup Organizations

STARTUP GENOME MEMBERS

MEMBER

### Express Innovation Agency

The Express Innovation Agency (Xi Agency) is the innovation agency of the National Research, Development, and Innovation Office. Its mission is to support the innovation ecosystem actively, from youth education to the gateway to international markets. It reaches out to the youngest through new talent programs, innovation promotion, training, and mentoring. The Xi Agency promotes growth through valorization, incubation support, and encourages reaching the next level of innovation via international contacts and offers preparation for accessing European funding. The Agency aims to help the whole ecosystem by creating a supportive environment that, regardless of discipline, serves as an information and support hub, from planting the seeds of innovation to successful market entry. The Agency also operates the Hungarian Startup University Program (HSUP) which is Hungary's first tertiary education level startup program.

MEMBER

### HUNBAN

Hungarian Business Angel Network (HUNBAN) is the official angel investor association of Hungary. Incorporated in April 2017, its aim is to welcome and unite all business angels who are interested in investment opportunities not only on a local, but a regional level as well. The network's mission is to integrate Hungary into the international circulation of business angels and truly represent both the companies and the investors' interests. The purpose of the association is to increase the efficiency of the Hungarian business angel market, the quantitative and qualitative development of startup investments, and the development of the startup ecosystem in the region.

MEMBER

### NRDIO

The National Research, Development, and Innovation Office (NRDIO) is a central budgetary body operating as a central office under the direction of the Minister responsible for the coordination of science policy. The NRDIO participates in the preparation of the government's decision on its research, development, and innovation strategy and contributes to its implementation; prepares the decision of the Minister responsible for the coordination of science policy; performs the technical tasks of international and European integration-driven cooperation in the field of research, development, and innovation; contributes to the utilization and coordination of foreign research, development, and innovation support provided to Hungary and monitors and controls funded projects.

Germany

# Frankfurt

# (21-30) Global Ranking #30 Fintech Ranking

**MEMBERS:**

TechQuartier / StartHub Hessen / FrankfurtRheinMain GmbH / Frankfurt Economic Development GmbH

*The innovative and technology-driven performers in the region of Frankfurt contribute greatly to the growth opportunities of Hessen as a business location. This environment favors the development of creative, promising ideas and startups.*



**Tarek Al-Wazir**

Minister of Economic Affairs, Energy, Transport and Housing and Vice Minister-President, State of Hessen



## Highlights

Frankfurt is the economic and geographical center of the FrankfurtRhineMain region and one of the most important data-traffic hubs in the world. Cosmopolitan and fast-growing, it's an ideal home for innovative startups looking for talent and industry partners. The epicenter of finance in Europe, Frankfurt is home to about 280 banks, as well as 7,900 financial services companies, investment funds, consulting agencies, law firms, and auditing companies. The financial ecosystem employs over 155,000 people, attracting talent from around the world.

Entrepreneurs in Frankfurt are supported by a range of government, private sector, and university programs. StartHub Hessen and TechQuartier connect founders, investors, mentors, talent, and corporate innovators. TechQuartier partners with international and European companies including Microsoft, VISA, PwC, and the Deutsche Bundesbank to support founders, including more than 600 startups in the TechQuartier community and the FrankfurtRhineMain region. hessian.AI – The Hessian Center for Artificial Intelligence brings together 13 universities to drive research, education, and leadership in AI. Frankfurt School of Finance & Management opened an Entrepreneurship Centre in May 2022 and has since incubated more than 40 startups.

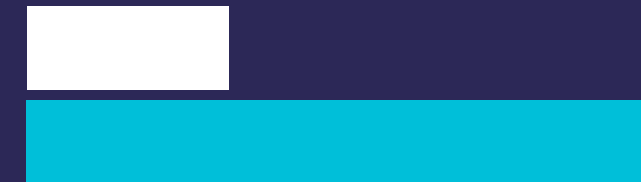
Some of Frankfurt's startup success stories include drone manufacturer Wingcopter and cloud foundation platform meshcloud. Mattress retailer Emma is among the fastest growing companies in Europe, and BioNTech SE – which along with Pfizer developed one of the first vaccines against COVID-19 – is based in the nearby city of Mainz. Gunzilla Games raised \$46 million in venture funding in August 2022.



# Ecosystem by the Numbers

**ECOSYSTEM VALUE**  
(H2 2020 - 2022)

**\$11 bn**



GLOBAL AVG. \$34.6 bn

**NUMBER OF UNICORNS**  
(H2 2020 - 2022)

**0**



GLOBAL AVG. 4

**SOFT. ENGINEER SALARY**  
(2022)

**\$56 k**



GLOBAL AVG. \$46 k

**TIME TO EXIT**  
(2018 - 2022)

**11.1 years**



GLOBAL AVG. 9 years

**TOTAL EARLY-STAGE FUNDING**  
(H2 2020 - 2022)

**\$476 m**



GLOBAL AVG. \$970 m

**MEDIAN SEED ROUND**  
(H2 2020 - 2022)

**\$603 k**



GLOBAL AVG. \$821 k

**EARLY-STAGE FUNDING GROWTH**  
(2019 - 20 VS. 2021 - 22)



Scale of 1 (lowest) to 10 (highest)

**EXIT AMOUNT**  
(2018 - 2022)

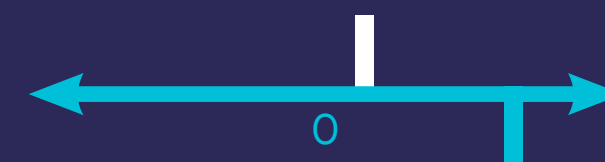
**\$7.2 bn**



GLOBAL AVG. 11.3 bn

**ECOSYSTEM VALUE GROWTH**  
(H2 2020 - H2 2022 VS H2 2018 - H2 2020)

**10%**



GLOBAL AVG. 4.7%

**MEDIAN SERIES A ROUND**  
(H2 2020 - 2022)

**\$6.8 m**



GLOBAL AVG. \$6 m

**TOTAL VC FUNDING**  
(2018 - 2022)

**\$2.2 bn**



GLOBAL AVG. \$6.6 bn

**EXIT COUNT (#)**  
(2018 - 2022)

**95**



GLOBAL AVG. 91

2018 2019 2020 2021 2022

## Sub-Sector Strengths

### Fintech

Approximately 33% of Frankfurt's startups are focused on Fintech and related areas. CommerzVentures closed its third fund at €300 million in 2022, which will be used to invest in companies in Fintech and Insurtech. In February 2023, Frankfurt Digital Finance gathered key participants in the European digital finance ecosystem. The International Sustainability Standards Board is based in Frankfurt and is driving the city's development into a green finance capital. Finanzguru raised €13 million in April 2023, led by investors including PayPal Ventures.

### Cybersecurity

Together, Digital Hub Cybersecurity, the Fraunhofer SIT, and Germany's National Center for Applied Research ATHENE constitute in nearby located Darmstadt Europe's largest cluster for applied Cybersecurity. Goethe University Frankfurt joined ATHENE in May 2022. Incubation and funding programs including StartUpSecure|ATHENE have contributed to the growth of the sub-sector. PwC Germany opened a Cyber Security Experience Center in Frankfurt in April 2022. The Cloud & Cyber Security Expo took place in Frankfurt in May 2023.

### Cleantech

Frankfurt was among the first German cities to adopt a plan to achieve 100% renewable energy supply by 2050, and is a prominent Cleantech hub. The Green and Sustainable Finance Cluster Germany brings together key players. Impact Festival is the flagship event for B2B sustainability startups in the region. Hy2gen AG completed a €200 million round in February 2022, and energy-as-a-service startup ENVIRIA raised €22.5 million in June 2022.

## Reasons to Move Your Startup to Frankfurt

### Access to Talent

FrankfurtRhineMain is home to more than 43 universities and 280,000 students, including 90,000 STEM and 40,000 economics/business students. The ecosystem's schools and universities graduate 15,000 STEM graduates each year. Numerous research institutions, including the world-renowned Fraunhofer, Leibnitz & Max Planck institutes, and the Paul Ehrlich Institute are also based here.

### Access to Major Players

A major European financial center, Frankfurt is home to the European Central Bank, EIOPA, Deutsche Bundesbank, Frankfurt Stock Exchange, BaFin, Deutsche Bank, DZ Bank, WIBank, BMH, KfW, and Commerzbank, as well as major players in other industries. 162 international banks as well as national and European institutions and supervisory agencies have HQs in Frankfurt.

### Strategic Connections

Frankfurt is a logistics hub, with data, people, and goods streaming through the city. It boasts one of Europe's leading passenger and cargo airports, and outstanding road and rail connections. Amsterdam, Berlin, Paris, and Zurich are all within four hours by high-speed train. Frankfurt's internet hub DE-CIX is the largest data-exchange point in the world, managing peak traffic of over 12 TB/s.



## Selected Startup Organizations

### STARTUP GENOME MEMBERS

MEMBER

#### TechQuartier

TechQuartier builds startup ecosystems. With a powerful community of more than 600 members and curated startup programs, it builds corporate-startup relationships. As a digital innovation hub, it accelerates entrepreneurship within the region, Germany, and internationally.

MEMBER

#### StartHub Hessen

StartHub Hessen is the central platform for startups and the Hessen startup ecosystem. It helps startups and other players with networking and visibility, and provides an overview of funding options.

MEMBER

#### FrankfurtRheinMain GmbH

The official investment promotion and business development agency for the Greater Frankfurt region. Most services are free of charge, and its goal is your success. FrankfurtRheinMain GmbH will tailor its support to your specific requirements and individual business case.

MEMBER

#### Frankfurt Economic Development GmbH

Frankfurt Economic Development is the first point of contact for Frankfurt's businesses, founders and companies planning to set up in the city. It is an independent guide and provides customized information on Frankfurt's economic structure and key industries. Through industry get-togethers and networks, it can put you in touch with other companies, as well as associations, communities, and consultants.

### KEY ECOSYSTEM PLAYERS

#### IMPACT FESTIVAL

The IMPACT FESTIVAL is Europe's largest B2B event and platform for sustainable innovation, bringing together European GreenTech startups and scaleups and key stakeholders to accelerate sustainable transformation.

#### Frankfurt Forward

A project of the Frankfurt Economic Development Agency, Frankfurt Forward is the independent matchmaker and innovation driver for the FrankfurtRhineMain startup ecosystem.

#### FLUXUM Gernsheim

On 26 hectares of buildable industrial area, companies are offered the opportunity to produce innovative products and services in the field of "environmental technologies." The GreenTech Accelerator ryon supports startups by the development of new sustainable solutions in various areas.

#### The House of Logistics and Mobility (HOLM) GmbH

The independent development and networking platform for the future of the logistics and mobility industry. Companies, startups, universities, research, and political institutions come together at HOLM.

Finland

# Helsinki Metropolitan Area

**#39** Global Ranking **#30** Blue Economy Ranking

**MEMBERS:**

City of Helsinki / City of Espoo / City of Vantaa

*“Our community offers a wide range of top ranking scientific, creative, and commercial capabilities, with a strong focus on spearheading Deep Tech development. The greater Otaniemi area in Espoo is the world’s leading epicenter of systemic cross-disciplinary innovation. We believe in accelerating a new breed of innovation to tackle the most significant challenges of our times: the climate crisis, nature loss, and inequality.”*



**Harri Paananen**

Director of Economic Development, City of Espoo

<b>Global Ecosystem in Funding</b>	<b>European Ecosystem in Performance</b>	<b>European Ecosystem in Talent &amp; Experience</b>
<b>Top 40</b>	<b>Top 5</b>	<b>Top 10</b>

## Highlights

Ranked the happiest country in the world for six years running, Finland — and the Helsinki area in particular — is a great place to live and to build a startup. With a population of just one million, Helsinki is home to an estimated 2,226 startups and scaleups and 155 venture capitalists. Four of the seven Finnish unicorns are headquartered in the capital. Together these companies are worth €24.4 billion. There are ample funding opportunities too. FOV Ventures invests in the metaverse, Butterfly Ventures invests in Deep Tech and hardware startups, and government startup grants offer new entrepreneurs around €740 per month for a year to get their business off the ground. The 2023 Index of Economic Freedom ranked Finland the 11th freest economy in the world.

VTT Technical Research Centre of Finland, the City of Espoo, Aalto University, and members of the semiconductor industry plan to collaborate on an RDI hub for microelectronics and quantum technology. The center will expand Espoo’s already world-class research infrastructure. The Aalto Startup Center is one of the world’s top university business accelerators. Urban Tech Helsinki supports companies solving the challenges of modern cities. Business Finland launched two programs in 2023: 6G Bridge and Decarbonized Cities. Maria 01 is one of Europe’s top startup campuses, and its member companies raised a record €219 million in 2022. Construction of a new Maria 01 campus is set to begin in 2024. Student-run leading tech conference Slush takes place every November.



## Ecosystem by the Numbers

**ECOSYSTEM VALUE**  
(H2 2020 - 2022)

**\$35 bn**



GLOBAL AVG. \$34.6 bn

**NUMBER OF UNICORNS**  
(H2 2020 - 2022)

**2**



GLOBAL AVG. 4

**SOFT. ENGINEER SALARY**  
(2022)

**\$49 k**



GLOBAL AVG. \$46 k

**TIME TO EXIT**  
(2018 - 2022)

**10.4 years**



GLOBAL AVG. 9 years

**TOTAL EARLY-STAGE FUNDING**  
(H2 2020 - 2022)

**\$971 m**



GLOBAL AVG. \$970 m

**MEDIAN SEED ROUND**  
(H2 2020 - 2022)

**\$703 k**



GLOBAL AVG. \$821 k

**EARLY-STAGE FUNDING GROWTH**  
(2019 - 20 VS. 2021 - 22)



Scale of 1 (lowest) to 10 (highest)

**EXIT AMOUNT**  
(2018 - 2022)

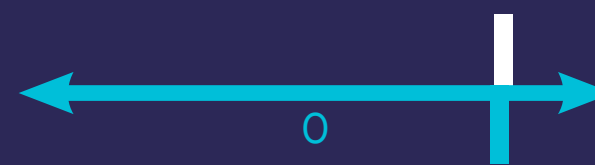
**\$5.4 bn**



GLOBAL AVG. 11.3 bn

**ECOSYSTEM VALUE GROWTH**  
(H2 2020 - H2 2022 VS H2 2018 - H2 2020)

**48%**



GLOBAL AVG. 4.7%

**MEDIAN SERIES A ROUND**  
(H2 2020 - 2022)

**\$4.9 m**



GLOBAL AVG. \$6 m

**TOTAL VC FUNDING**  
(2018 - 2022)

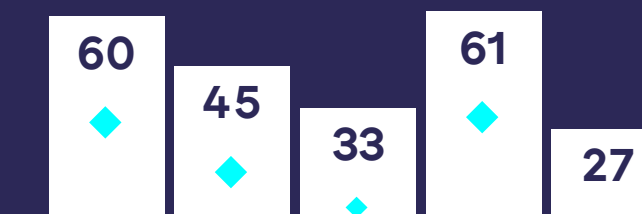
**\$6.5 bn**



GLOBAL AVG. \$6.6 bn

**EXIT COUNT (#)**  
(2018 - 2022)

**226**



GLOBAL AVG. 91

## Sub-Sector Strengths



### Life Sciences

Helsinki hosts 750 Life Sciences companies, two world-class universities, and a huge pool of relevant talent. It is also a hotspot for clinical testing. Meilahti campus works closely with the University of Helsinki's Faculty of Medicine, the Helsinki Institute of Life Science, and the Hospital District of Helsinki and Uusimaa. Healthtech startup Veri raised a €7.5 million Series A in June 2022. Clinical-stage biotech company TILT Biotherapeutics raised €22 million in February 2023.



### AI, Big Data & Analytics

The Finnish Center for Artificial Intelligence was founded by Aalto University, University of Helsinki, and VTT Technical Research Centre of Finland. Launched in April 2022, the Kumpula-based pre-incubator for Deep Tech, AI, and Sustainability focuses on data science, AI, and atmospheric sciences. Participants have the option to continue with the Helsinki Incubator Programme's Deep Tech, AI, and Sustainability Incubator at the end of the program. Database-as-a-service platform Aiven raised \$210 million in May 2022, putting the company's pre-money valuation at \$3.04 billion.



### Gaming

Helsinki is at the heart of the Finnish Gaming industry. The ecosystem hosts more than 50 Gaming companies and a rich pool of talent, capital, and infrastructure for development. Clash of Clans maker Supercell and developer Rovio both call Helsinki home. Games studios based in the Helsinki metropolitan area made £2.8 billion in 2022, and in September that year, Netflix announced it is creating an internal game development studio in the Finnish capital. The company also acquired mobile games developer Next Games.

## Reasons to Move Your Startup to Helsinki Metropolitan Area

### Quality of Life

Nature, sustainability, and excellent quality of life are key draws for Finland. Helsinki aims to reach carbon neutrality by 2030, and in 2023 Finland was named the happiest country in the world for the sixth year in a row in 2023. Finland was also ranked as the second least corrupt country in the world by Transparency International.

### Access to Talent

The Global City Talent Competitiveness Index 2022 ranked Helsinki #8 among 175 cities, citing the workforce's strong technical skills. Finland is known for its world-class educational system. In Espoo, over half of adult residents have a university degree. The city also has the largest innovation community in the Nordics. Helsinki's 90 Day Finn Programme offers global professionals the chance to experience life in the country for 90 days.

### Ease of Doing Business

Finland's corporate tax rate of 20% is among the lowest in the E.U. and the lowest in the Nordics. Businesses conducting R&D receive a permanent basic tax deduction related to existing R&D costs. This is an additional benefit to the existing 150% tax deduction for R&D subcontracting. The government's resolution on entrepreneurship aims to make the country more entrepreneur friendly and is in effect 2022-2027.



## Selected Startup Organizations

### STARTUP GENOME MEMBERS

MEMBER

#### City of Helsinki

Helsinki is a city for all, a place for good life. It is a smart, safe, and compact city that is known for its combination of urban culture and nature. Helsinki cherishes its open, participatory culture that is a source for its innovative and creative atmosphere. A hotbed for innovation, and an ideal testing ground for bold new ideas, it is the perfect size for startups to test the waters and obtain first references. Helsinki provides a stable and well-functioning business environment that nurtures startups to success and is a modern and attractive location for entrepreneurs.

### KEY ECOSYSTEM PLAYERS

#### A Grid

Startup hub A Grid is one of the largest concentrations of startups in Northern Europe, and is part of the Aalto University ecosystem, along with Design Factory and Startup Sauna, among others.

#### Slush

Slush is a not-for-profit for startups, bringing together advanced matchmaking, hyper-relevant speakers, and the largest gathering of VC on the planet.

#### Aalto University

Supports new ideas, research, work, and leadership development towards a stronger Finland.

MEMBER

#### City of Espoo

Espoo-based startups electrified the creation of a new Finnish innovation culture at the end of the 2000s, when Nokia hit hard times. Today, many of Finland's most promising Deep Tech startups come from Espoo, and most of Finland's unicorns were born here. Finland's key sustainable innovation players and most valuable companies are located in Espoo. Big players like Nokia, Kone, and VTT make Espoo #6 among European cities that applied for most patents in 2020, and Espoo is #8 in Europe in capital invested (2020). The city has repeatedly been recognized by the European Commission for using innovation to improve the lives of citizens.

#### VTT

A visionary research, development, and innovation partner that drives sustainable growth and tackles the biggest global challenges of our time, turning them into opportunities for business growth.

#### Enter Espoo

Enter Espoo helps companies, investors, visitors, and travel professionals access business opportunities and exciting adventures in Espoo's innovation and travel ecosystems.

#### Kiuas

Kiuas is the leading startup accelerator and co-founder matchmaker in Finland.

MEMBER

#### City of Vantaa

Vantaa is an innovative city of sustainable growth and was elected as the rising innovative city in Europe in 2021. Aviapolis is also a logistics hub and an innovative future airport city, combining residential area, business opportunities, and the airport. To enhance the dialogue between the city, businesses and higher education institutions, Vantaa operates within business ecosystems. The purpose of these Key Business Clusters is to create connections between companies of all sizes, from startups to industry leaders. The aim is to create new business opportunities by sharing knowledge, new ideas, and innovations.

# Turkey Istanbul

**#16** Emerging Ranking **#1** Strong Starters Ranking

**MEMBERS:**

Istanbul Development Agency

*“Istanbul’s entrepreneurship ecosystem is thriving with a dynamic community of innovative startups, experienced mentors, and investors. The city’s strategic location at the crossroads of Europe and Asia, combined with its young and tech-savvy population, makes it an ideal hub for startups looking to grow and go global.”*



**Ismail Erkam Tuzgen**  
Secretary-General of Istanbul Development Agency



## Highlights

With its young, tech-savvy population and strategic location, Istanbul is fertile ground to grow a thriving startup ecosystem. Leveraging these advantages, the nation has set a target of having up to 100,000 tech startups and 100 unicorns (“Turcorns”) by 2030.

There were 75 VC funds in Istanbul as of January 2023. Forty funds raised a collective \$358 million in 2022, bringing the total amount raised in five years to then to \$1.4 billion. In 2022, foreign investors participated in approximately one out of every five deals. Accel, Balderton Capital, Ceecat Capital, EBRD, Hummingbird, Felix Capital, Goodwater Capital, Goldman Sachs, Index Ventures, Qatar Investment Authority, Sequoia Capital, Startup Wise Guys, Tiger Global, and Wamda Capital all invested in Turkish startups in 2022. The European Bank for Reconstruction and Development made an equity investment of up to €5 million in 500 Startups Istanbul Fund II, which targets early-stage technology-driven companies in Türkiye and in central and eastern Europe.

Istanbul Development Agency (ISTKA) runs an Entrepreneurship Result Oriented Program (2021-2023) with 24 components. In addition to regular project grants for ecosystem actors, ISTKA invests in VC funds with its \$30 million fund-of-funds and helps Turkish startups grow globally by taking them to international events. ISTKA established the first Istanbul Pavilion at CES 2022, accommodating 28 Turkish startups. CES 2023’s Istanbul Pavilion hosted more than 50 startups and several ecosystem actors.

In December 2022, Istanbul-founded grocery-delivery startup Getir acquired German rival Gorillas, making Getir the biggest grocery delivery company in Europe and taking its valuation to \$8.8 billion.



# Ecosystem by the Numbers

**ECOSYSTEM VALUE**  
(H2 2020 - 2022)

**\$22 bn**



GLOBAL AVG. \$34.6 bn

**NUMBER OF UNICORNS**  
(H2 2020 - 2022)

**3**



GLOBAL AVG. 4

**SOFT. ENGINEER SALARY**  
(2022)

**\$16 k**



GLOBAL AVG. \$46 k

**TIME TO EXIT**  
(2018 - 2022)

**7.8 years**



GLOBAL AVG. 9 years

**TOTAL EARLY-STAGE FUNDING**  
(H2 2020 - 2022)

**\$702 m**



GLOBAL AVG. \$970 m

**MEDIAN SEED ROUND**  
(H2 2020 - 2022)

**\$238 k**



GLOBAL AVG. \$821 k

**EARLY-STAGE FUNDING GROWTH**  
(2019 - 20 VS. 2021 - 22)



Scale of 1 (lowest) to 10 (highest)

**EXIT AMOUNT**  
(2018 - 2022)

**\$3.8 bn**



GLOBAL AVG. 11.3 bn

**ECOSYSTEM VALUE GROWTH**  
(H2 2020 - H2 2022 VS. H2 2018 - H2 2020)

**104%**



GLOBAL AVG. 47%

**MEDIAN SERIES A ROUND**  
(H2 2020 - 2022)

**\$2.4 m**



GLOBAL AVG. \$6 m

**TOTAL VC FUNDING**  
(2018 - 2022)

**\$3.6 bn**



GLOBAL AVG. \$6.6 bn

**EXIT COUNT (#)**  
(2018 - 2022)

**66**



GLOBAL AVG. 91

## Sub-Sector Strengths

### Gaming

There are over 200 Gaming startups and multiple Gaming-focused incubators and accelerators in Istanbul. 2022 broke the record for the amount invested in the sector in Türkiye, with 30 Gaming startups receiving a total of \$437 million. Türkiye attracted the fourth highest number of Gaming deals of any country in 2022, and excluding the Getir deal, 54% of the nation's investments were in Gaming or Fintech. Dream Games raised a \$225 million Series C in January 2022, becoming Türkiye's second Gaming unicorn.

### AI, Big Data & Analytics

The National Artificial Intelligence Strategy for 2021–2025 aims to solidify Türkiye's position in AI, including boosting employment in the sector to 50,000 people. The number of AI graduates will be increased by 10,000 within five years and AI applications developed in the ecosystem will be prioritized in public-sector procurement. No-code AI platform Cameralyze raised a \$3 million seed round in February 2022. Free coding school 42 Istanbul aims to boost the ecosystem's international competitiveness with thousands of new developers.

### Fintech

Türkiye has the most vibrant Fintech ecosystem in the region, with more than 600 active Fintechs, thanks to innovation-friendly regulations. In June 2022, the Turkish Parliament introduced a draft law to establish the Istanbul Finance Center, which aims to promote Istanbul as an international finance hub, develop high value-added financial products and services, and strengthen integration with international markets. Param obtained the first electronic money license in Türkiye and implemented the first Buy Now, Pay Later model in the country.

## Reasons to Move Your Startup to Istanbul

### Global Connections

Located at the nexus of Europe, Asia, and Africa, Istanbul is an ideal launch pad for global markets. Startup Istanbul supports international startups succeed in the city, and Istanbul Technical University's ITU SEED and Innogate Acceleration Programs assist local startups looking to go global. Take Off, held in Istanbul, has grown into a leading entrepreneurship summit in the region.

### Young, Tech-Savvy Talent

Türkiye's rapidly growing population of 85 million has a median age of 33.5 years and is digitally savvy. The nation is the seventh largest market for mobile apps, based on the total number of downloads, making it an ideal testing ground for developers. Türkiye also turns out more than a million university graduates each year, including over 80,000 in engineering and related fields.

### Dedicated Support

Government agencies including TUBITAK and KOSGEB, and development agencies provide extensive grants to startups. National grant program TUBITAK BIGG (Individual Young Entrepreneurship) Program supports entrepreneurs from the idea stage to market. Istanbul is home to one of Türkiye's 18 Free Trade Zones, where companies are exempt from VAT, customs duty, and more. It is also home to 13 technoparks, and the Technology Focused Industrial Movement Program provides further support.



## Selected Startup Organizations

### STARTUP GENOME MEMBERS

**MEMBER**

### Istanbul Development Agency

Istanbul Development Agency is a government agency with a view to expediting regional development, providing sustainability, and closing interregional and intraregional gaps by improving collaboration among public sector and private industry and non-governmental organizations, fostering opportune and efficient use of resources and galvanizing the local potential. It is a key ecosystem builder, implementing programs and supporting projects and activities for the development and strengthening of Istanbul's startup ecosystem to make it a prominent international entrepreneurship hub.

### KEY ECOSYSTEM PLAYERS

#### BTM

A social structure that offers all kinds of support on entrepreneurship and innovation in the processes of commercialization of new business ideas and their growth after commercialization.

#### Endeavor Turkiye

Endeavor Turkiye aims to create a multiplier effect by inspiring high-growth entrepreneurs to dream bigger, supporting and investing in them to scale faster, and providing a platform to pay it forward.

#### Cube Incubation

Cube Incubation, the incubation center of Teknopark Istanbul, hosts an ecosystem where deep-tech entrepreneurs, investors and other stakeholders meet in common goals with Türkiye's first and only deep tech-oriented incubation center structure.

#### ITU SEED

ITU SEED offers all the support an entrepreneur needs on their journey, such as training, consultancy, mentoring, networking, corporate business partners, press and PR support, and investment.

#### TEKNOFEST

TEKNOFEST, initiated as an aerospace and technology festival, has grown into being the biggest tech event in Türkiye to inspire the children and young. It hosts 40 technology competitions in 99 different categories.

#### YTU Startup House

As one of the biggest incubation centers in Türkiye, YTU Startup House offers training, mentorship, office, prototyping, and investment facilities. YTU Startup runs acceleration programs in gaming, fintech, health, and insurance.

United Kingdom  
**London**

**#2** Global Ranking **#3** Agtech Ranking **#3** Fintech Ranking

"London is more than just a city ecosystem — it's a world-leading tech investment hub that flies the flag for the whole of U.K. tech. Although other U.K. cities are charting their own courses to ecosystem maturity, London will always be an important center of excellence."



**Elizabeth Scott**  
former Client Engagement Director, Tech Nation



**Highlights**

Despite the ongoing impact of Brexit, the repercussions of the war in Ukraine, and a difficult economic climate, London remains Europe's leading tech ecosystem hub. The value of U.K. tech companies reached over \$1 trillion in 2022. The U.S. and China are the only other countries to reach this milestone. London tech firms attracted \$19.8 billion in VC funding in 2022. This is double the amount of investment raised in any other European city and the fourth largest amount of any city worldwide. According to the Startups 100 Index, London startups receive an average of £15 million in early-stage investment, around eight times the U.K. average.

London is home to nearly 70% of the U.K.'s private equity and VC investors. Recently launched London-based funds include a \$1 billion fund from Northzone, a \$650 million fund from Atomico, and a \$500 million fund from Phoenix Court. Sequoia Capital, Lightspeed Ventures, and General Catalyst all recently expanded their presence in London. The Dell Technologies Women Entrepreneur Cities Index 2023 declared London the best city in the world for female entrepreneurs.

In May 2022, social enterprise builder Zinc announced the first close of its £33 million fund to support diverse entrepreneurs. Launched in January 2023, 100x Impact Accelerator nurtures high-potential social enterprises. The UK-India Startup Launchpad fosters deeper collaboration between the two nations' startup scenes. A Smarter London Together is an ongoing roadmap from the Mayor of London to make the capital the smartest city in the world. London Tech Week is a must-attend annual event on the global tech calendar.



# Ecosystem by the Numbers

**ECOSYSTEM VALUE**  
(H2 2020 - 2022)

**\$364 bn**



GLOBAL AVG. \$34.6 bn

**NUMBER OF UNICORNS**  
(H2 2020 - 2022)

**42**



GLOBAL AVG. 4

**SOFT. ENGINEER SALARY**  
(2022)

**\$65 k**



GLOBAL AVG. \$46 k

**TIME TO EXIT**  
(2018 - 2022)

**10 years**



GLOBAL AVG. 9 years

**TOTAL EARLY-STAGE FUNDING**  
(H2 2020 - 2022)

**\$18 bn**



GLOBAL AVG. \$970 m

**MEDIAN SEED ROUND**  
(H2 2020 - 2022)

**\$889 k**



GLOBAL AVG. \$821 k

**EARLY-STAGE FUNDING GROWTH**  
(2019 - 20 VS. 2021 - 22)



Scale of 1 (lowest) to 10 (highest)

**EXIT AMOUNT**  
(2018 - 2022)

**\$100 bn**



GLOBAL AVG. 11.3 bn

**ECOSYSTEM VALUE GROWTH**  
(H2 2020 - H2 2022 VS H2 2018 - H2 2020)

**47%**



GLOBAL AVG. 4.7%

**MEDIAN SERIES A ROUND**  
(H2 2020 - 2022)

**\$8.5 m**



GLOBAL AVG. \$6 m

**TOTAL VC FUNDING**  
(2018 - 2022)

**\$102 bn**

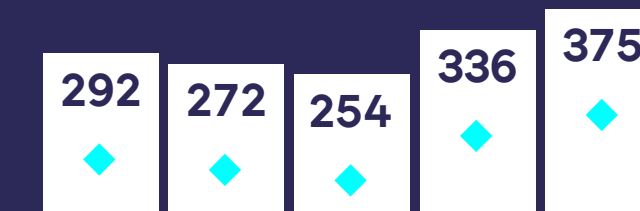


GLOBAL AVG. \$6.6 bn

**EXIT COUNT (#)**  
(2018 - 2022)

**1529**

GLOBAL AVG. 91



2018 2019 2020 2021 2022

## Sub-Sector Strengths

### Cleantech

London has Europe's highest concentration of Cleantech startups, with 353 calling the capital home. In January 2022, London set a goal to become a zero-carbon city by 2030 and a zero-waste city by 2050. Cleantech London links companies with investors. Launched in June 2022, Kiko Ventures is a \$450 million platform to invest in the next generation of Cleantech innovators. Announced in February 2023, Cleantech for the UK is a collaboration of Cleantech investors and entrepreneurs supported by Bill Gates' Breakthrough Energy.

### Fintech

London's Fintech firms raised a total of \$9.7 billion in 2022, more than any other city globally. In December 2022 EY announced the launch of its first Fintech lab in London. EY is also launching a Fintech growth program aimed at early-stage and growing businesses. Fintech Week London 2023 took place in June. Digital payment services provider Checkout.com raised a \$1 billion Series D in January 2022, more than doubling its valuation to ~\$40 billion. In June 2022 card reader company SumUp raised €590 million. In March 2023, consumer loans startup Abound raised over £500 million.

### AI, Big Data & Analytics

As of 2022, London is home to 1,300 AI companies. The sub-sector has grown on average 48% year-on-year since 2016. UK GDP will be up to 10.3% higher in 2030 than 2022 as a result of AI, according to estimates by London & Partners. The UK's Spring Budget 2023 allocated £900 million for the establishment of an AI Research Resource and the creation of an "exascale" supercomputer. The budget also calls for a new AI sandbox.

## Reasons to Move Your Startup to London

### Leading Tech Talent

Over 58% of the workforce is educated to at least degree level. London is home to three universities in the global top 40: Imperial College, the London School of Economics and Political Science, and King's College. LSE was named Outstanding Entrepreneurial University at the Times Higher Education Awards. The UK government offers a scaleup visa for businesses to sponsor highly skilled tech workers for two years.

### Business-Friendly Environment

London has a lively funding scene with startups here raising £26 billion in VC funding between 2010 to 2022. A Designated Enterprise Zone, the availability of startup-related assistance and tax incentives make London particularly friendly for tech startups. The Royal Docks Enterprise Zone offers benefits including tax relief for companies investing in manufacturing plants and machinery. The Startup Loans Program offers personal loans of up to £25,000 and free mentoring to those that have a viable business idea but no access to finance.

### Dedicated Support

London & Partners provides free advice on starting a business in London, including support for scaleups. Its Business Growth Program is open to SMEs with a turnover of less than £40 million. London Business Hub runs a range of programs to support local businesses. LSE Generate supports students and alumni, and provides mentoring for secondary school pupils. Generate also runs GAO, an accelerator for startups founded by staff members, students, or alumni.



## Ireland

# Mid-East Region

**MEMBERS:**

Meath Enterprise

*The Mideast region is fast becoming a hotbed of entrepreneurial activity as exciting new projects such as the Boyne Valley Food Innovation District, the Merits Innovation Thinkspace, the Clermont Enterprise Hub, and the AgTechUCD Innovation Centre promote and support global ambition across this thriving ecosystem.*

**Gary O'Meara**

CEO of Meath Enterprise and Chair of CEAI – Ireland's Enterprise Hub Network

## Highlights

The counties encircling Dublin continue to build their reputation as a thriving startup ecosystem. The Mid-East Regional Enterprise Plan to 2024 was launched in March 2022 with €180 million in funding to implement innovative ecosystem development projects. The Kildare 2025 Economic Development strategy includes the provision of high-speed broadband and remote working hubs, creation of a startup-friendly environment, and investment in green economy initiatives. The Agile Innovation Fund allows companies to access up to 50% of the cost of innovation projects up to a total cost of €300,000 with fast-track approval. Grants covering up to 25% of project costs are available. Funded by Google and announced in December 2022, the Changing Ireland Accelerator Programme supports underserved social entrepreneurs. According to the Irish Venture Capital Association VenturePulse survey, VC investment in Irish tech firms totaled €1.33 billion in 2022.

There are currently 14 purpose-built entrepreneurial hubs across the Mid-East Region, with another 5 due to open in 2023. The Kells Tech Hub is an enterprise development, training, and coworking facility that seeks to support startups to go global. Science and technology park Kildare Innovation Campus, near Maynooth University, seeks to become a leading innovation campus in Europe. In January 2022, Echelon Data Centres announced the construction of two data centers in County Wicklow. Leixlip-based Binarii Labs, a developer of SaaS solutions that de-risk and protect enterprises, raised \$1.64 million in seed funding in March 2022, putting the company's pre-money valuation at \$6.5 million.

# Ecosystem by the Numbers

**ECOSYSTEM VALUE**  
(H2 2020 - 2022)

**\$354 m**



GLOBAL AVG. \$34.6 bn

**NUMBER OF UNICORNS**  
(H2 2020 - 2022)



GLOBAL AVG. 4

**SOFT. ENGINEER SALARY**  
(2022)

**\$52 k**



GLOBAL AVG. \$46 k

**TIME TO EXIT**  
(2018 - 2022)

**12.8 years**



GLOBAL AVG. 9 years

**TOTAL EARLY-STAGE FUNDING**  
(H2 2020 - 2022)

**\$22 m**



GLOBAL AVG. \$970 m

**MEDIAN SEED ROUND**  
(H2 2020 - 2022)

**\$152 k**



GLOBAL AVG. \$821 k

**EARLY-STAGE FUNDING GROWTH**  
(2019 - 20 VS. 2021 - 22)



Scale of 1 (lowest) to 10 (highest)

**EXIT AMOUNT**  
(2018 - 2022)

**\$173 m**



GLOBAL AVG. \$11.3 bn

**ECOSYSTEM VALUE GROWTH**  
(H2 2020 - H2 2022 VS. H2 2018 - H2 2020)

**347%**



GLOBAL AVG. 47%

**MEDIAN SERIES A ROUND**  
(H2 2020 - 2022)

**\$9.5 m**



GLOBAL AVG. \$6 m

**TOTAL VC FUNDING**  
(2018 - 2022)

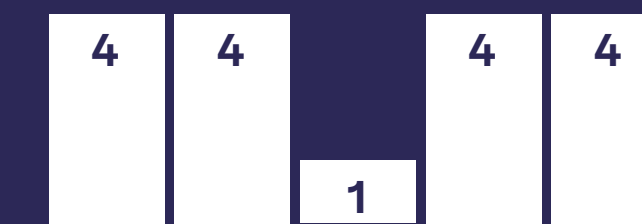
**\$104 m**



GLOBAL AVG. \$6.6 bn

**EXIT COUNT (#)**  
(2018 - 2022)

**17**



GLOBAL AVG. 91

2018 2019 2020 2021 2022



## Sub-Sector Strengths

### Agtech & New Food

Employment in climate, sustainability, and Agtech grew 13% in Ireland in 2022. Boyne Valley Food Hub, a project of Boyne Valley Food Innovation District, aims to accelerate growth in food businesses across the Mideast and Northeast regions through collaboration, innovation, and clustering. The project will create an innovative food hub with nine food-grade units, a timeshare development kitchen and food R&D lab, sensory testing facilities, a food-specific coworking hub, and a knowledge lab.

### Cleantech

In January 2023, the Department of Transport announced plans to increase the number of public rapid electric vehicle charging points from around 1,700 to over 4,500 within three years. Cushaling Wind Farm is expected to be operational in late 2024. The first large-scale ground-mounted solar farm to supply electricity to the Irish grid opened in County Wicklow in 2022. INFORMBIO is a project to develop a low-carbon roadmap for Ireland's bioeconomy. The Climate Innovation Fund 2022 aims to foster innovative climate solutions in Kildare.

### Life Sciences

Launched in October 2022, Sandbox is a collaborative project from Meath Enterprise, the Boyne Valley Food Innovation District, and Maynooth University to deliver education in Life Sciences. TU Dublin's Graduate Business School, in partnership with the School of Chemical Pharmaceutical Sciences, offers Ireland's first Executive MBA in Life Sciences Leadership. A Life Sciences incubation and acceleration facility opened at The Campus, Cherrywood in South Dublin in December 2022. The center provides lab, office, and collaboration space for over 100 Life Science professionals, entrepreneurs, and researchers.

## Reasons to Move Your Startup to Mid-East Region

### Highly Educated Talent

Maynooth University is Ireland's fastest growing university, with over 11,000 students from more than 90 countries. A national skills platform launched in February 2023 to help close Ireland's digital skills gap. The project is being driven by Learnovate, Ireland's future of work and learning research hub at Trinity College Dublin, along with Cisco and the national workforce development agency, Skillnet Ireland.

### Research & Development

Maynooth University houses seven cutting-edge research institutes and boasts one of the best records for commercializing research of any Irish university. In March 2023, two new programs were launched by the Irish Government to support innovators and researchers with more than €63 million in funding. Siemens Healthineers launched a Centre of Excellence for Immunoassay Instrument R&D in the Mid-East Region.

### Government Support

Ireland offers startups and SMEs a range of grants, loans, tax breaks, and other funding. The Short-Term Enterprise Allowance supports unemployed individuals who plan to start a business. The Start-up Refunds for Entrepreneurs scheme allows entrepreneurs to claim back income tax when starting a business. New businesses are eligible for corporate tax exemption for their first three years. Microfinance Ireland provides loans for commercially viable products, and the Digital Transition Fund supports businesses at all stages and in all sectors.

## Selected Startup Organizations

### STARTUP GENOME MEMBERS

MEMBER

### Meath Enterprise

Meath Enterprise is a commercially focused local government (not-for-profit) enterprise-development company with a remit/mission to drive local, regional, and national innovation and enterprise development through the provision of business incubation and support services, collaboration, clustering, and creative thinking. We work with partners across all sectors from Government, Education, Corporate, SME and Social Enterprise to deliver step-change ecosystem development projects such as the Boyne Valley Food Innovation District, the new Digital Innovation and Smart Agri Hub and many other world class startup incubation and coworking projects, services, and facilities.

### KEY ECOSYSTEM PLAYERS

#### Gary O'Meara

Gary has a clear vision for what the Mid-East Region and Ireland can realize in terms of social and economic value, and has a keen insight to know how to get there.

#### Owen Brennan

Executive Chairman of Devenish Nutrition, a leading global agri technology company, and current Chair of the Irish governments Regional Enterprise Strategic Plan for the Mid East Region in Ireland.

#### Michael Brougham

Manager of the Mid East Regional Skills Forum, a government initiative that works with and supports all ecosystem stakeholders to identify and implement proactive responses to address current and future skills needs.

#### John Cunningham

Co-founder and Managing Director of Complex Nutrition, John drives the strategic development of the company. He is also the Business Champion for Meath on the government's regional enterprise plan committee.

#### Allan Shine

Chief Executive of Kildare Chamber of Commerce, the largest business organization in the Mid-East Region of Ireland, representing an employer base of 400 businesses and over 38,000 employees.

#### Siobhan Keogh

Regional Director at Enterprise Ireland for the Mid-East Region of Ireland and member of the government's Regional Enterprise Strategic Plan committee for the Mid-East Region.



France  
**Paris**

- #18** Global Ranking
- #15** Cleantech Ranking
- #10** Fintech Ranking

Paris is an epicenter of innovation, attracting individuals and startups eager to tackle complex challenges and shape a better future. In this vibrant ecosystem, startups can leverage an unparalleled combination of market opportunities, funding, infrastructure, and top talent to test and accelerate their ideas. This makes Paris ideal for those looking to make a positive impact and drive meaningful change at the intersection of societal, environmental, economic, and digital transformation.



**Francesco Travagli**  
Head of Tech & Industries, Choose Paris Region

European Ecosystem in Bang for Buck	Global Ecosystem in Funding	Global Ecosystem in Talent & Experience
<b>#4</b>	<b>Top 10</b>	<b>Top 10</b>

## Highlights

Paris dominates the French startup scene and is a consistent European leader. The capital city is home to more than 8,000 startups, as well as the world’s largest startup campus, Station F. The Paris-Saclay campus, a leading R&D hub, hosts the continent’s largest concentration of researchers. Launched in 2019, the French Tech Next40/120 program aims to support French startups in becoming world-class technology leaders and act as a laboratory for innovation policies.

French startups raised €11.9 billion in 2022, with a total of 358 startups raising a round at an average of €33 million each. In January 2022, the nation reached French President Emmanuel Macron’s target of 25 unicorns by 2025 three years ahead of schedule. In 2020–2022, France had a 2.2x net inflow of founder and leadership talent.

Resonance, a €150 million VC fund was launched in 2022. IRIS Capital reached a €110 million first close for its new €150 million fund. In 2022, Sista, which campaigns for more funds for female founders, announced its first close of €30 million — with a final target of €100 million. Paris-based VC firm Quantonation is the first dedicated quantum fund in Europe. The Paris 2023 Q1 Venture Capital World Summit gathered a global community of investors and investees in February 2023. The Venture Capital Forum was held in Paris in October 2022. VivaTech is held in Paris each year, attracting innovators and tech leaders from around the world. The Women in Tech Global Summit was held in May 2023.

# Ecosystem by the Numbers

**ECOSYSTEM VALUE**  
(H2 2020 - 2022)

**\$138 bn**



GLOBAL AVG. \$34.6 bn

**NUMBER OF UNICORNS**  
(H2 2020 - 2022)

**28**



GLOBAL AVG. 4

**SOFT. ENGINEER SALARY**  
(2022)

**\$48 k**



GLOBAL AVG. \$46 k

**TIME TO EXIT**  
(2018 - 2022)

**9.5 years**



GLOBAL AVG. 9 years

**TOTAL EARLY-STAGE FUNDING**  
(H2 2020 - 2022)

**\$6.9 bn**



GLOBAL AVG. \$970 m

**MEDIAN SEED ROUND**  
(H2 2020 - 2022)

**\$1.6 m**



GLOBAL AVG. \$821 k

**EARLY-STAGE FUNDING GROWTH**  
(2019 - 20 VS. 2021 - 22)



Scale of 1 (lowest) to 10 (highest)

**EXIT AMOUNT**  
(2018 - 2022)

**\$11 bn**



GLOBAL AVG. 11.3 bn

**ECOSYSTEM VALUE GROWTH**  
(H2 2020 - H2 2022 VS. H2 2018 - H2 2020)

**65%**



GLOBAL AVG. 4.7%

**MEDIAN SERIES A ROUND**  
(H2 2020 - 2022)

**\$9.1 m**



GLOBAL AVG. \$6 m

**TOTAL VC FUNDING**  
(2018 - 2022)

**\$37 bn**



GLOBAL AVG. \$6.6 bn

**EXIT COUNT (#)**  
(2018 - 2022)

**586**

GLOBAL AVG. 91





## Sub-Sector Strengths

### Fintech

Paris is France's leading Fintech ecosystem. At Paris Climate Finance Day in October 2022, the creation of the Institute for Sustainable Finance was announced. Digital native credit provider Younited has raised a total of €483.8 million over 11 rounds. Descartes Underwriting has raised \$140.8 million over four rounds. Qonto, a provider of financial tools for SMEs, raised a €486 million Series D in January 2022, one of the largest rounds in French history. Spend management software company Spendesk has raised \$311.8 million over seven rounds.

### Cleantech

With more than 1,800 startups, the French Cleantech ecosystem is one of the largest in Europe. In June 2022, President Macron announced France's ambition to have 25 green unicorns by 2030. €54 billion of the France 2030 budget targets Cleantech industries. Techstars Sustainability Paris was launched in 2022, and VC firm Satgana closed a target €30 million fund to back Cleantech startups. A \$500 million funding round in June 2022 made sustainability data firm EcoVadis the first ever sustainability data unicorn.

### AI, Big Data & Analytics

Paris AI Week showcases the French AI ecosystem. Big Data & AI Paris 2022 attracted 15,000 participants in September 2022. Digital experience analytics company Contentsquare closed a \$600 million growth investment round in July 2022, bringing its total funding to \$1.4 billion.

## Reasons to Move Your Startup to Paris

### Market Access

Companies that expand into France can take advantage of the country's population of 67.3 million domestic consumers as well as easy access to the wider European Union market. The French economy is the third largest in Europe, and the unemployment rate remains consistently low.

### Transportation Links

Paris' Charles de Gaulle Airport is the second busiest airport in Europe, and France also has one of the most developed railway systems in the world. With its six train stations, Paris is well connected to much of Europe by rail. The Eurostar takes travelers from Paris to London in just 2 hours, 15 minutes. Plans to connect Paris and Madrid with a high-speed train line by the end of 2024 were announced in 2022.

### Excellent Educational Institutions

Paris is home to 21 top-tier business schools and a top engineering university. Insead ranked #2 overall in the 2023 Financial Times Global MBA ranking. HEC Paris is among the top 10 universities in Europe for producing graduates that go on to produce unicorn startups. More than 10,000 students University of Paris Saclay are involved in entrepreneurial development programs.

Sweden

# Stockholm

**#22** Global Ranking

**#3** Cleantech Ranking

**#15** Agtech Ranking

*The entrepreneurial excellence of Stockholm and Sweden comes from a long history of successful businesses based on Deep Tech innovation. This has shaped a culture of confident individuals willing to take risks in which startups work closely with both universities and capital – a recipe for creating successful unicorns.*



**Thomas Öström**  
Cleantech Entrepreneur

Global Ecosystem in Knowledge	Global Ecosystem in Funding	Global Ecosystem in Talent & Experience
<b>Top 35</b>	<b>Top 25</b>	<b>Top 25</b>

## Highlights

Despite having just 10 million inhabitants, Sweden is a hotbed for tech innovation. Recent reports from the European Commission and World Intellectual Property Organisation ranked Sweden the most innovative country in the E.U., and third in the world. Sweden also came in third in the IMD World Digital Competitiveness Ranking 2022 thanks in part to its high number of startups.

Stockholm is the heart of Sweden’s innovation economy, attracting more than 50% of the country’s total foreign direct investment. The ecosystem has a strong focus on social good. Stockholm is home to more than 240 impact startups and in 2021, 57% of the \$3.6 billion raised by the ecosystem’s startups went to impact startups. The Norrskan Foundation created the Impact100 annual list of the world’s most promising impact startups, and has been referred to as the Nobel Prize for Impact.

Private equity and venture firm EQT closed a €2.2 billion fund in September 2022. Stockholm School of Economics’ startup incubator SSE Business Lab raised 40 million SEK (\$3.6 million) for its new evergreen fund, SSE Ventures, the same month. Female founded VC firm BackingMinds closed a €50 million fund in November 2022.

The 2022 Global Impact Summit, Stockholm took place in November. The annual Stockholm Impact Week brings together startups, talent, investors, business leaders, and policymakers. Women In Tech Sweden aims to inspire and support women in tech.



## Ecosystem by the Numbers

**ECOSYSTEM VALUE**  
(H2 2020 - 2022)

**\$88 bn**



GLOBAL AVG. \$34.6 bn

**NUMBER OF UNICORNS**  
(H2 2020 - 2022)

**9**



GLOBAL AVG. 4

**SOFT. ENGINEER SALARY**  
(2022)

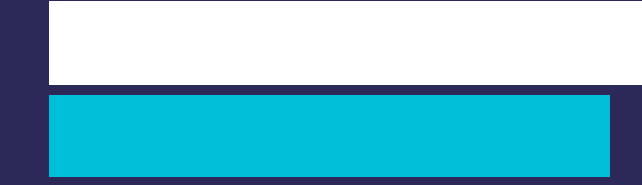
**\$56 k**



GLOBAL AVG. \$46 k

**TIME TO EXIT**  
(2018 - 2022)

**10.1 years**



GLOBAL AVG. 9 years

**TOTAL EARLY-STAGE FUNDING**  
(H2 2020 - 2022)

**\$3.3 bn**



GLOBAL AVG. \$970 m

**MEDIAN SEED ROUND**  
(H2 2020 - 2022)

**\$997 k**



GLOBAL AVG. \$821 k

**EARLY-STAGE FUNDING GROWTH**  
(2019 - 20 VS. 2021 - 22)



Scale of 1 (lowest) to 10 (highest)

**EXIT AMOUNT**  
(2018 - 2022)

**\$44 bn**



GLOBAL AVG. \$11.3 bn

**ECOSYSTEM VALUE GROWTH**  
(H2 2020 - H2 2022 VS H2 2018 - H2 2020)

**114%**



GLOBAL AVG. 4.7%

**MEDIAN SERIES A ROUND**  
(H2 2020 - 2022)

**\$5.8 m**



GLOBAL AVG. \$6 m

**TOTAL VC FUNDING**  
(2018 - 2022)

**\$17 bn**



GLOBAL AVG. \$6.6 bn

**EXIT COUNT (#)**  
(2018 - 2022)

**307**



GLOBAL AVG. 91

## Sub-Sector Strengths

### Cleantech

Stockholm aims to be fossil free and climate positive by 2040. Sweden was ranked #5 in the Climate Change Performance Index 2023 and #5 in the Environmental Performance Index 2022. In September 2022, Hexagon announced a new venture capital arm of its sustainable-innovation investment subsidiary. H2 Green Steel joined seven European Cleantech companies to form a Cleantech scaleup coalition. Carbon-accounting engine Normative.io has raised \$45.3 million over four rounds and Volta Trucks has raised \$391 million over five rounds.

### Fintech

Sweden is leading the way towards a cashless society with an increasing number of Swedes using smartphones for payments. More than 4,000 Swedes have had a microchip implanted in their arm to make payments instead of carrying bank cards. Sthlm Fintech Week, held in February 2023, brought together attendees from 21 countries. Smart economy app Anyfin raised a €30 million Series C in January 2023. Fintech giant Klarna has raised a total of \$4.5 billion over 30 rounds.

### Life Sciences

More than 50% of Sweden's Life Science industry is located in Stockholm. The International Vaccine Institute opened its European office here in 2022, and science city Hagastaden is one of Stockholm's largest development projects. Tenants include AstraZeneca, 10X Genomics, Immedica Pharma, GHP, Sirona and Polarium. Pfizer relocated its headquarters to Hagstaden in February 2023. Stockholm Life Tech is a project to develop research and innovation infrastructure in the region.

## Reasons to Move Your Startup to Stockholm

### Established Startup Community

The birthplace of Skype, Klarna, and Spotify, Stockholm has produced more unicorns per capita than any other European city. The ecosystem has a reputation for strong collaboration, as well as a keen focus on sustainability and mission. Stockholm offers a high survival rate for startups, a high density of angel investors and VCs, and support from state-run agencies.

### Opportunities for International Talent

The Swedish government offers visa sponsorship jobs that allow international workers to relocate to the nation. Most jobs in the scheme are in IT, engineering, healthcare, and other skilled industries. The 2022 IMD World Talent Ranking ranked Sweden #2 among 63 economies in attracting and retaining talent. English is the office language at many Swedish tech companies.

### Quality of Life

Several rankings rate Sweden highly for its quality of life, citing the country's level of freedom, environmental performance, happiness levels, and its welcoming attitude towards migrants. The nation is home to excellent universities, and tuition is subsidized for students from Sweden, the EU/EEA area, and Switzerland. There are scholarship programs that cover tuition and living costs for highly qualified students from developing nations.



Italy  
**Turin**

**MEMBERS:**

Intesa Sanpaolo Innovation Center / Fondazione Compagnia di San Paolo

*“We are moving fast to place Torino on the global map of innovation ecosystems. A number of tangible results prove that today we are one step closer to that goal.”*



**Francesco Profumo**

Chairman, Fondazione Compagnia di San Paolo



European Ecosystem  
in Affordable Talent



## Highlights

Turin may be best known as an automotive center, but local stakeholders are on a mission to transform the northern Italian city into an international hub for innovators, particularly in the field of Smart Cities and space technology. Such a transition is epitomized by the evolution of ToTeM – Torino Tech Map, a web directory of startups, investors, and enablers. In 2022, ToTeM launched a new series of monthly in-person events to gather the local startup community and thus boost local connectedness.

Qualified investors play a pivotal role in Turin’s thriving ecosystem. In 2022, Neva SGR closed its first flagship fund of €250 million to back European and global startups. To date, Neva SGR has invested €150 million in 26 companies, with a third of its investments allocated to Italian startups. Additionally, Neva SGR announced its plans to raise a second, larger fund, expected to conclude in 2024. In 2022 Neva SGR also launched Fondo SEI (Sviluppo Ecosistemi di Innovazione) for supporting the innovation ecosystem with primary focus on implementation of startup research, selection, acceleration, and professionalization programs in Italy.

The tech investment boutique LIFTT has an investment target of €90 million over the next five years and has already completed 36 investments. The gem in its portfolio is Newcleo, a disruptor in next-generation nuclear reactors that unveiled a major investment plan of €3 billion in France by 2030. In June 2022, Google Cloud announced expansion in partnership with TIM and Intesa Sanpaolo into Italy in Milan, with another location to come in Turin.

# Ecosystem by the Numbers

**ECOSYSTEM VALUE**  
(H2 2020 - 2022)

**\$2.1 bn**



GLOBAL AVG. \$34.6 bn

**NUMBER OF UNICORNS**  
(H2 2020 - 2022)

**0**



GLOBAL AVG. 4

**SOFT. ENGINEER SALARY**  
(2022)

**\$31 k**



GLOBAL AVG. \$46 k

**TIME TO EXIT**  
(2018 - 2022)

**12 years**



GLOBAL AVG. 9 years

**TOTAL EARLY-STAGE FUNDING**  
(H2 2020 - 2022)

**\$105 m**



GLOBAL AVG. \$970 m

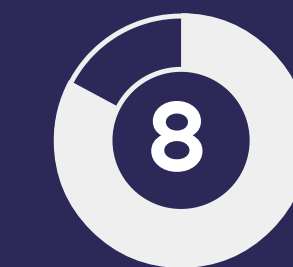
**MEDIAN SEED ROUND**  
(H2 2020 - 2022)

**\$227 k**



GLOBAL AVG. \$821 k

**EARLY-STAGE FUNDING GROWTH**  
(2019 - 20 VS. 2021 - 22)



Scale of 1 (lowest) to 10 (highest)

**EXIT AMOUNT**  
(2018 - 2022)

**\$804 m**



GLOBAL AVG. \$11.3 bn

**ECOSYSTEM VALUE GROWTH**  
(H2 2020 - H2 2022 VS. H2 2018 - H2 2020)

**52%**



GLOBAL AVG. 4.7%

**MEDIAN SERIES A ROUND**  
(H2 2020 - 2022)

**\$1.6 m**



GLOBAL AVG. \$6 m

**TOTAL VC FUNDING**  
(2018 - 2022)

**\$654 m**



GLOBAL AVG. \$6.6 bn

**EXIT COUNT (#)**  
(2018 - 2022)

**28**



GLOBAL AVG. 91



## Sub-Sector Strengths



### Smart Cities

Turin is one of the 100 cities selected by the European Commission to take part in the EU mission for climate-neutral and Smart Cities. Turin's commitment to tap into tech innovation to achieve climate neutrality by 2030 relies on a number of flagship initiatives. These include Torino Cities of the Future Techstars Accelerator, the first program run by Techstars in Italy, and Torino City Lab, a platform for testing next-generation urban innovations related to green and digital transitions.



### AI, Big Data & Analytics

In March 2022, Intesa Sanpaolo announced the establishment of CENTAI, an advanced AI research center, and in June 2022 the incorporation of the Anti Financial Crime Digital Hub, a consortium fighting digital financial crime through the use of AI whose founding members include Intesa Sanpaolo, Intesa Sanpaolo Innovation Center and CENTAI. Artificial Intelligence, Humans, and Society is an initiative from Fondazione Compagnia di San Paolo that explores frontier AI applications to unleash transformative impact on industry and society.

## Reasons to Move Your Startup to Turin

### Access to Talent

Turin is home to 110K+ students, many of them international, and several prestigious universities. Università degli Studi di Torino has a 600-year history and offers 159 degree programs. Politecnico di Torino is one of the best engineering universities in Europe, and its startup incubator, I3P, was named the best public incubator worldwide by UBI Global. The planned Italy Digital Nomad Visa will make it easier for international talent to relocate here.

### International Startup Programs

Turin is widely recognized as a premier destination for world-class acceleration, incubation, and venture-building initiatives. More than 10 international programs take place in Turin each year. Among the new entries that commenced operations in 2023 are Magic Mind (the first AI program launched in Italy) and Personae (a one-of-a-kind program on welfare tech).

### Testing Infrastructure

Through collaboration among ecosystem facilitators — including Intesa Sanpaolo Innovation Center and Fondazione Compagnia di San Paolo, the municipality, corporations, and high-tech SMEs and startups — Turin has become an open-air laboratory where autonomous vehicles and drones are safely deployed under 5G coverage within specially designated areas.

## Selected Startup Organizations

STARTUP GENOME MEMBERS

MEMBER

### Intesa Sanpaolo Innovation Center

Intesa Sanpaolo Innovation Center is a subsidiary of Intesa Sanpaolo Banking Group dedicated to innovation. It invests in applied research projects and, through the management company Neva SGR, in high-potential startups. Intesa Sanpaolo Innovation Center supports startups' growth in domestic and international markets through acceleration programs and networking. In addition, it accelerates the implementation of the circular economy plan, to make Intesa Sanpaolo the driving force behind a new socially and environmentally aware economy.

KEY ECOSYSTEM PLAYERS

### Torino Cities of the Future Techstars Accelerator

Torino Cities of the Future Techstars Accelerator is the first program launched by Techstars in Italy. It aims to attract international startups to connect them with the fast-evolving local ecosystem.

### CTE NEXT

A technology transfer center that provides spaces, technology assets, and highly skilled partners to support the testing of innovative solutions in strategic sectors for Turin using 5G and AI, IoT, and Blockchain.

### LIFTT

A not-only-profit operating VC founded by Fondazione Compagnia di San Paolo and Politecnico di Torino. LIFTT specializes in technology transfer from university to industry.

MEMBER

### Fondazione Compagnia di San Paolo

Established in Turin in 1563, Fondazione Compagnia di San Paolo is a banking foundation acting as the major shareholder of Intesa Sanpaolo. It is one of the largest private foundations in Europe, as evidenced by its €1.5 billion of philanthropic grants in the last decade. As part of its mission to promote cultural, civic, and economic development, the foundation is today one of the leading ecosystem developers in the Italian landscape.

### Torino City Lab

An initiative promoted by the City of Turin aimed at creating more accessible conditions for companies and other interested parties to respond to specific open challenges in response to concrete needs of the territory, the public administration, and citizens.

### Neva SGR

Neva aims to be the Italian market maker of the VC investments to boost the tech economy. The First fund, launched in 2020, raised €250 million from 130 subscribers and invested in 20 startups for €80 million. In 2022, Neva launched Fondo SEI with an initial €15 million capital to support innovation ecosystems.

### I3P

The incubator of Politecnico di Torino, I3P supports high-tech startups founded by university researchers and external entrepreneurs, providing strategic consulting, mentoring, and fundraising support.



# LATIN AMERICA

176 ——— Key Findings

177 ——— Ecosystem Pages





# Regional Insights LATIN AMERICA

In 2022, venture capital funding cooled in Latin America after a year of tremendous growth in 2021. The region experienced a 5% decline in early-stage funding amount and a 72% decline in Series B+ funding amount. The Series B deal count was down 54%. However, total funding for 2022 still exceeded that for all the tracked years prior to 2021, indicating that the region is faring well over the longer term.

Latin America's share of early-stage funding amount increased 49%, from 1.7% in 2018 to 2.5% in 2022. It also experienced a 65% increase in Series B+ deal count and a 143% increase in Series B+ amount in the period 2018–2022. Fintech is particularly successful in this region, making up on average 37% of Series A deal counts over the same period.

**São Paulo**, a major tech startup hub and also Brazil's largest city, climbed two positions in the rankings and now finds itself at #26, earning the distinction of being the top-ranked ecosystem in the region and the only one featured among the top 30 + runners-up. It has seen impressive funding activity, including Fintech **Nubank's** \$41.5 billion IPO in 2021, consumer lending startup **Creditas's** \$310 million Series F round in January 2022, and digital bank **Neon's** \$300 million Series D round in February 2022.

Other Brazilian cities, such as Rio de Janeiro and Florianópolis, are also rapidly developing their own tech startup communities, benefitting from the government's Legal Framework for Startups, introduced in June 2021, which encourages companies to experiment with innovative technologies and business models.

### TOP FIVE ECOSYSTEMS

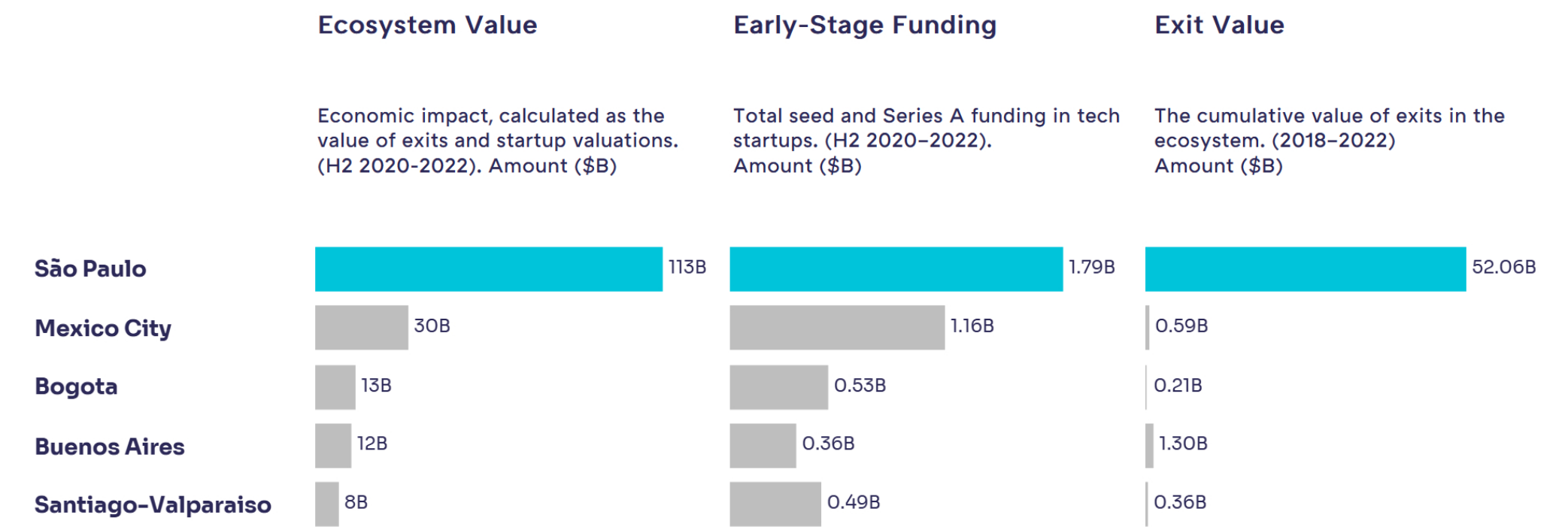
- 1 → São Paulo
- 2 → Mexico City
- 3 → Buenos Aires
- 4 → Santiago-Valparaiso
- 5 → Bogota

### TOP FIVE EMERGING ECOSYSTEMS

- 1 → Rio de Janeiro
- 2 → Curitiba
- 3 → Belo Horizonte
- 4 → Monterrey
- 5 → Porto Alegre

## São Paulo Is Latin America's Top Performing Ecosystem

Source: Startup Genome, 2023





## → Key Findings

- At #26, São Paulo is Latin America’s only ecosystem in the top 30. It is home to the region’s highest-valued Fintech, **Nubank**, which exited in a 2021 \$41.5 billion IPO. From 2020–2023, the ecosystem has risen four places, from #30 to #26.
- **Mexico City** has held steady in the 41–50 range in the Emerging Ecosystem ranking, of which it is the highest-ranked ecosystem in the region. Car-trading platform **Kavak** produced Latin America’s biggest deal in the GSER 2023 timeframe, a September 2021 \$700 million Series E round.
- **Buenos Aires** moved up to the 51–60 range in the Emerging Ecosystem ranking, buoyed by a 70% increase in Ecosystem Value and a 100% increase in the number of exits over \$50 million, with highest-valued unicorn **Nuvemshop** valued at \$3.1 billion.
- **Bogotá** has moved up to the 61–70 range in the Emerging Ecosystem ranking, partially due to a 37% increase in Ecosystem Value fueled by the consumer tech company **Rappi**, which is valued at \$5.25 billion, as well as Proptech platform **Habi**, which became a unicorn in 2022.

**Latin America experienced a 143% increase in Series B+ amount in the period 2018–2022.**

### TOP FIVE ECOSYSTEMS BY VC FUNDING PER CAPITA

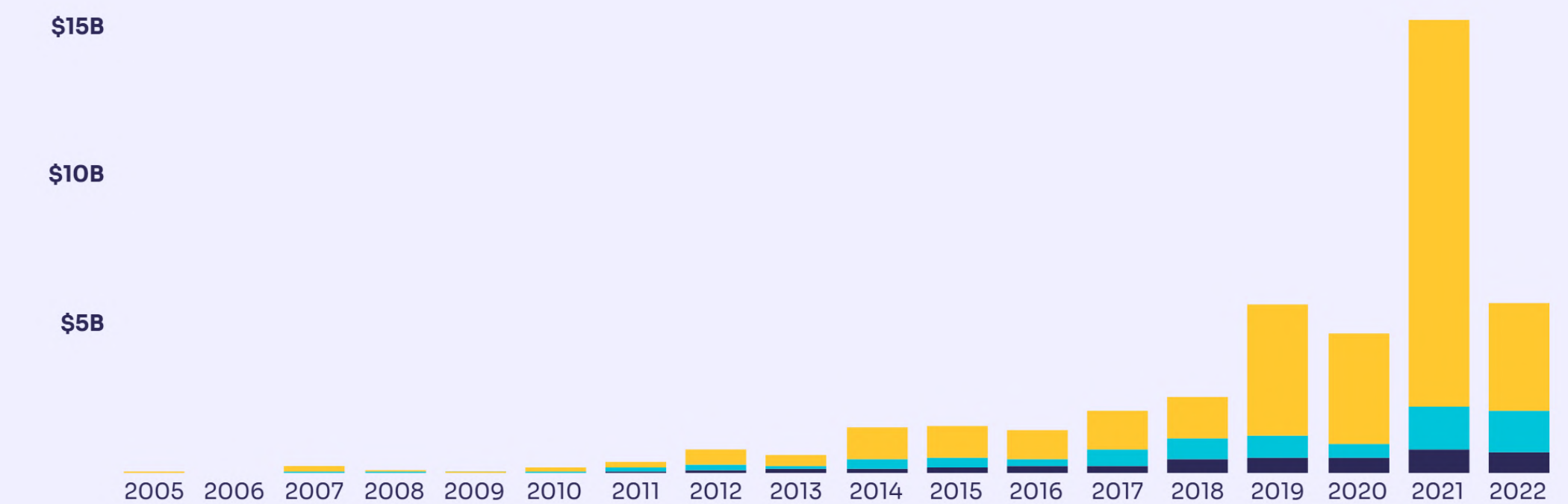
- 1 → São Paulo
- 2 → Bogotá
- 3 → Mexico City
- 4 → Santiago
- 5 → Curitiba

### VC Investment in Latin America Decreased 62% Overall From 2021 to 2022

Latin American VC Funding Amount (\$B) by Stage

Source: Startup Genome, 2023

■ Seed ■ Series A ■ Series B+



## Colombia Bogotá

*In Colombia we work to articulate the entrepreneurial and innovative ecosystem, to democratize it and generate economic and productive development through the alliance of the state, community, business, and academia.*



**Hernan Guillermo Ceballos Gacharná**  
Manager of iNNpulsa Colombia



## Highlights

Bogotá continues to consolidate its position as one of Latin America’s top startup hubs. Colombia’s capital is home to at least 800 venture-funded startups, and 74% of Colombian startups that have raised capital are located in the ecosystem.

ICC and Bogotá Chamber launched the Centre of Entrepreneurship in February 2022 to support, connect, and mobilize the next generation of entrepreneurs. Made in Bogotá Market is an initiative of the Ministry of Economic Development to raise the visibility of the ecosystem’s entrepreneurs. SENA and SheWorks! launched the Land of Unicorns initiative to strengthen high-growth ventures led by women. Launched in November 2022, the platform Hecho en Bogotá Market enables businesses to showcase their products to users worldwide.

In 2022 the Bogotá Chamber of Commerce, Corferias, and the District Department of Economic Development announced the creation of a Bogotá Science, Technology and Innovation District in order to position Bogotá as an international hub of innovation. An investment of \$300 million is planned. A Center of Excellence and Simulation in Cybersecurity, developed by the National Learning Service and Mnemo was launched in July 2022.

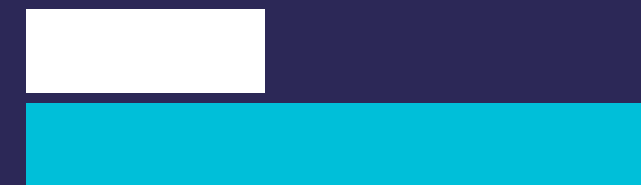
Bogotá-based VC fund Marathon Ventures closed its first \$26 million fund in February 2022. The fund is used to invest in B2B platforms in Fintech, SaaS, and marketplaces. The 2023 World Business Forum Bogota will take place in November 2023.



# Ecosystem by the Numbers

**ECOSYSTEM VALUE**  
(H2 2020 - 2022)

**\$13 bn**



GLOBAL AVG. \$34.6 bn

**NUMBER OF UNICORNS**  
H2 2020 - 2022

**2**



GLOBAL AVG. 4

**SOFT. ENGINEER SALARY**  
(2022)

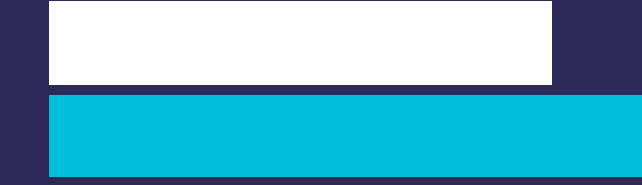
**\$24 k**



GLOBAL AVG. \$46 k

**TIME TO EXIT**  
(2018 - 2022)

**7.2 years**



GLOBAL AVG. 9 years

**TOTAL EARLY-STAGE FUNDING**  
(H2 2020 - 2022)

**\$527 m**



GLOBAL AVG. \$970 m

**MEDIAN SEED ROUND**  
(H2 2020 - 2022)

**\$500 k**



GLOBAL AVG. \$821 k

**EARLY-STAGE FUNDING GROWTH**  
(2019 - 20 VS. 2021 - 22)



Scale of 1 (lowest) to 10 (highest)

**EXIT AMOUNT**  
(2018 - 2022)

**\$207 m**



GLOBAL AVG. 11.3 bn

**ECOSYSTEM VALUE GROWTH**  
(H2 2020 - H2 2022 VS H2 2018 - H2 2020)

**52%**



GLOBAL AVG. 4.7%

**MEDIAN SERIES A ROUND**  
(H2 2020 - 2022)

**\$12 m**



GLOBAL AVG. \$6 m

**TOTAL VC FUNDING**  
(2018 - 2022)

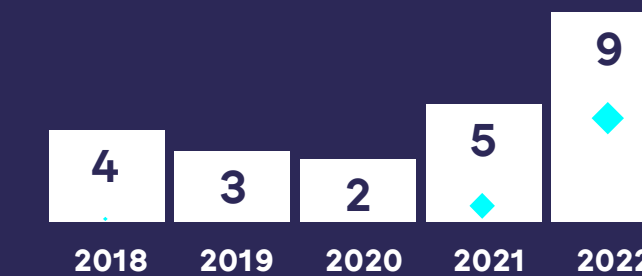
**\$4.5 bn**



GLOBAL AVG. \$6.6 bn

**EXIT COUNT (#)**  
(2018 - 2022)

**23**



GLOBAL AVG. 91

## Sub-Sector Strengths

### Fintech

Bogotá is one of Latin America's leading Fintech hubs, supported by the Colombian Fintech Regulatory Sandbox, which allows the live testing of innovative products and services in a controlled environment. Import finance platform Finkargo has raised \$82.5 million over two rounds. Digital ledger Treinta has raised a total of \$60.8 million over three rounds. KLYM has raised \$228.7 million over five rounds, including a \$27 million January 2023 Series A.

### E-commerce

At the sixth edition of eSummit, in November 2022, an alliance between Google and the Colombian Chamber of Electronic Commerce announced the platform eXporta.online, a space for Colombian SMEs to sell online. Ecommerce startup Tul has raised \$212.8 million over nine rounds. Online delivery company Rappi has raised \$2.3 billion over 14 rounds. Frubana, a B2B marketplace for restaurants, has raised \$277.1 million over six rounds, including a \$75 million Series C in June 2022.

### Proptech

The first edition of the Colombia Proptech Forum was held in Bogotá in October 2022. The 39th International Symposium on Automation and Robotics in Construction was held here in July 2022. Proptech company Habi has raised a total of \$390.5 million over five rounds. Property financing startup Castia has raised a total of \$38.8 million over three rounds.

## Reasons to Move Your Startup to Bogotá

### Strategic Location

Bogotá, Colombia's biggest startup hub, is only five hours from the U.S., making it a convenient base for cross-border trade. El Dorado airport in Bogotá ranks among the best in Latin America. Colombia also boasts ports serving both the Atlantic and Pacific, providing access to markets in North America, Europe, and Asia-Pacific. Colombia's stable economy makes the country desirable for U.S. businesses looking to outsource nearshore.

### Skilled Talent

Bogotá is home to 25% of Colombia's labor force, and more than 70% of the country's population is bilingual. Bogotá's Universidad de Los Andes and the Universidad Nacional de Colombia are among the 10 best universities in Latin America. Approximately 40% of Forbes' list of entrepreneurs in Colombia are Andes grads, while a report from KPMG found 60% of tech companies in Colombia are led by alumni from the university.

### Dedicated Incentives

Invest in Bogota actively promotes the city to companies looking to expand in Latin America for operations in English and Spanish. The Inter-American Development Bank (IDB) covers the costs of companies moving operations from Asia to Latin America. In 2021, the Social Investment Law established programs to increase employment through government incentives to employers.



Argentina

# Buenos Aires

*"In Argentina, tech is one of the fastest-growing sectors. Providing young women with the tools to develop in this field presents a significant opportunity to enhance their potential for success, and the Buenos Aires ecosystem is increasingly supportive of this."*



**Paula Coto**  
Executive Director, Chicas en Tecnología



## Highlights

Argentina’s cosmopolitan capital city, Buenos Aires is a lively and innovative tech hub. Unicorns to grow out of the ecosystem include Aleph, Bitfarms, Mural, Tiendanube, Ualá, and Vercel. This is also the birthplace of MercadoLibre, now the biggest Ecommerce platform in Latin America, which IPOd in 2007 and set the stage for a new generation of Ecommerce startups. Nuclea, a B2B digital platform for construction, raised a \$3.9 million seed round in October 2021, and Ecommerce startup Elevva raised a \$30 million seed round in May 2022.

In July 2022, the World Bank Board approved a \$200 million loan to promote sustainable growth in Argentina with a focus on the creation of technology-based companies, support for entrepreneurs, and access to private capital. This Smart Growth Innovation Program will have special emphasis on promoting low-carbon technologies, circular economy initiatives, and climate-smart developments. It will prioritize initiatives led by women.

Startup Argentina promotes entrepreneurship and innovation in the technology sector by providing resources including mentorship, networking, and funding. The program runs several accelerator programs and connects startups with investors and partners. It also offers an internationalization program to help startups expand globally. Buenos Aires Innovation Park is a 12+ hectare campus intended to bring together public and private institutions dedicated to innovation, higher education, and applied scientific research.

The La Plata Free Trade Zone, which includes a port and logistics hub, allows companies operating within the zone to enjoy benefits including no customs duties and no value-added tax on imported goods.

# Ecosystem by the Numbers

**ECOSYSTEM VALUE**  
(H2 2020 - 2022)

**\$12 bn**



GLOBAL AVG. \$34.6 bn

**NUMBER OF UNICORNS**  
(H2 2020 - 2022)

**3**



GLOBAL AVG. 4

**SOFT. ENGINEER SALARY**  
(2022)

**\$13 k**



GLOBAL AVG. \$46 k

**TIME TO EXIT**  
(2018 - 2022)

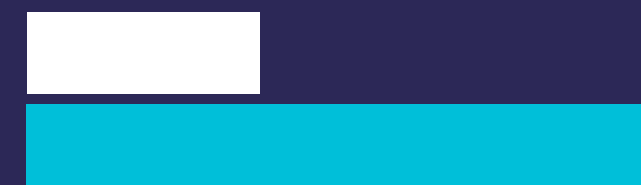
**9.8 years**



GLOBAL AVG. 9 years

**TOTAL EARLY-STAGE FUNDING**  
(H2 2020 - 2022)

**\$360 m**



GLOBAL AVG. \$970 m

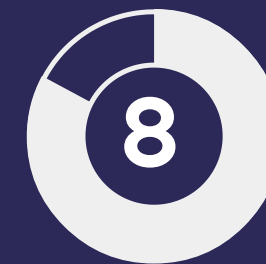
**MEDIAN SEED ROUND**  
(H2 2020 - 2022)

**\$500 k**



GLOBAL AVG. \$821 k

**EARLY-STAGE FUNDING GROWTH**  
(2019 - 20 VS. 2021 - 22)



Scale of 1 (lowest) to 10 (highest)

**EXIT AMOUNT**  
(2018 - 2022)

**\$1.3 bn**



GLOBAL AVG. 11.3 bn

**ECOSYSTEM VALUE GROWTH**  
(H2 2020 - H2 2022 VS. H2 2018 - H2 2020)

**164%**



GLOBAL AVG. 4.7%

**MEDIAN SERIES A ROUND**  
(H2 2020 - 2022)

**\$7 m**



GLOBAL AVG. \$6 m

**TOTAL VC FUNDING**  
(2018 - 2022)

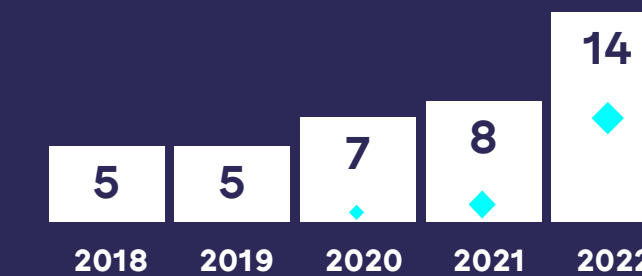
**\$1.9 bn**



GLOBAL AVG. \$6.6 bn

**EXIT COUNT (#)**  
(2018 - 2022)

**39**



GLOBAL AVG. 91



## Sub-Sector Strengths

### Fintech

In August 2022, Binance and Mastercard launched a prepaid Bitcoin Rewards Card to normalize the use of cryptocurrency in a country with high levels of inflation. November 2022 was a busy month for the Fintech scene, with the Argentina Fintech Forum 2022 taking place, infrastructure startup Pomelo raising a \$15 million Series A, neobank Ping raising a \$15 million seed round, and crypto exchange Lemon Cash raising a \$27.8 million Series A.

### Blockchain

The City Government of Buenos Aires announced TangoID, a Blockchain-based ID system, at the ETH Latam conference in August 2022, as well as plans to host Ethereum nodes as part of its digitization push in 2023. In early 2023, the city also announced it would allow residents to pay taxes with cryptocurrency. Blockchain payments platform Koibanx raised a \$22 million Series A round in August 2022.

### Agtech & New Food

Brazilian agritech association ConectarAGRO looks to identify potential digital transformation solutions in the agricultural sector, and has outlined plans to establish a sister organization in Argentina. AgTech.AR, a virtual space for Argentinian Agtech solutions, was launched at Expoagro 2022. Tomorrow Foods develops plant-based ingredients and has raised 6.4 million over three rounds to date.

## Reasons to Move Your Startup to Buenos Aires

### Tech Talent

Argentina has a long history of providing tuition-free access to local schools and universities, generating a strong pipeline of talent. Ten universities in Buenos Aires appeared in the QS World University Rankings 2023. The Universidad de Buenos Aires ranked #1 in Argentina for Computer Science education. Combined with a high level of English fluency, the city is quickly becoming a hub for outsourcing tech teams.

### International Community

A cosmopolitan cultural hub with highly ranked universities, Buenos Aires is a magnet for international students. It is the regional headquarters of over 30 global companies and hosts one of the largest entrepreneurial ecosystems in the region. In 2022, Argentina introduced a digital nomad visa, which allows remote workers to stay in the country for six months and is renewable for six more.

### Convenient Location

Buenos Aires is just one hour ahead of New York, four hours behind London, and four hours ahead of Silicon Valley, making it a strategic location for teams working remotely or serving a variety of international clients.

## Argentina Córdoba

**MEMBERS:**

Agencia Córdoba Innovar y Emprender

*"The entrepreneurial ecosystem in Córdoba has demonstrated remarkable growth. The region boasts a diverse range of actors that are highly interconnected and work collaboratively, including business incubators, accelerators, investors, institutions that support entrepreneurs, and public sector organizations that are highly interconnected and work collaboratively."*



**Diego Casali**

President, Córdoba Innovation and Entrepreneurship Agency



## Highlights

Considered Argentina’s second startup region after Buenos Aires, Córdoba is home to 368 startups, and 36 of them raised venture capital in 2022. Private sector financing increased almost five times compared to 2021, reaching \$41.3 million. 60% of the ventures that raised capital were in one of four sub-sectors: Agtech, Biotech, Ecommerce, or Fintech. Until 2019, the percentage of companies that raised funding that had a female founder was 15%. Since then, this has increased to an average of 32%. The Córdoba Innovation and Entrepreneurship Agency is the leading institution for the development of startups in the region. It runs a comprehensive platform sharing data about the ecosystem’s entrepreneurial actors.

There are 22 business incubators in the province, eight institutions that provide venture capital to startups, two angel investment clubs with almost 70 investors, and more than 20 entrepreneurial support institutions. There is a significant concentration of actors in the capital city, with 80% of the startups and 70% of the institutions being located in this area.<sup>2</sup> In September 2022, the Córdoba Innovation and Entrepreneurship Agency launched a new voucher program in collaboration with UVITEC, a technology transfer unit aimed at promoting open innovation in companies and enhancing their competitiveness.<sup>25</sup> Eligible companies can receive funding of up to \$56,400 per project, covering up to 50% of their total costs. In August 2022, the third edition of the Argentine Entrepreneurship Capital Forum was held in Córdoba, with over 180 participants.



# Ecosystem by the Numbers

**ECOSYSTEM VALUE**  
(H2 2020 - 2022)

**\$319 m**



GLOBAL AVG. \$34.6 bn

**NUMBER OF UNICORNS**  
(H2 2020 - 2022)

**0**



GLOBAL AVG. 4

**SOFT. ENGINEER SALARY**  
(2022)

**\$21 k**



GLOBAL AVG. \$46 k

**TIME TO EXIT**  
(2018 - 2022)

**8.2 years**



GLOBAL AVG. 9 years

**TOTAL EARLY-STAGE FUNDING**  
(H2 2020 - 2022)

**\$60 m**



GLOBAL AVG. \$970 m

**MEDIAN SEED ROUND**  
(H2 2020 - 2022)

**\$100 k**



GLOBAL AVG. \$821 k

**EARLY-STAGE FUNDING GROWTH**  
(2019 - 20 VS. 2021 - 22)



Scale of 1 (lowest) to 10 (highest)

**EXIT AMOUNT**  
(2018 - 2022)

**\$47 m**



GLOBAL AVG. 11.3 bn

**ECOSYSTEM VALUE GROWTH**  
(H2 2020 - H2 2022 VS. H2 2018 - H2 2020)

**165%**



GLOBAL AVG. 4.7%

**MEDIAN SERIES A ROUND**  
(H2 2020 - 2022)

**\$1.5 m**



GLOBAL AVG. \$6 m

**TOTAL VC FUNDING**  
(2018 - 2022)

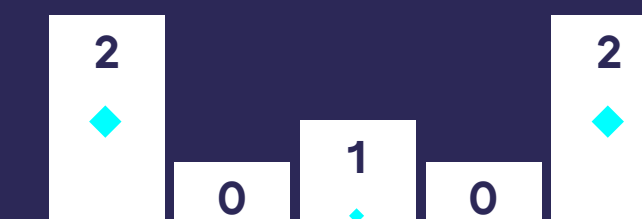
**\$77 m**



GLOBAL AVG. \$6.6 bn

**EXIT COUNT (#)**  
(2018 - 2022)

**5**



GLOBAL AVG. 91

2018 2019 2020 2021 2022

## Sub-Sector Strengths

### Agtech & New Food

As of December 2022, the Province of Córdoba was home to 69 Agtech startups, and seven raised capital funding in that year. Kilimo, an irrigation-management platform, raised a \$2 million Series A round. Innovation Agtech-Hub is a cutting-edge initiative that facilitates collaboration between large companies, startups, producers, investors, and other key stakeholders in the agricultural ecosystem. It offers a range of programs and initiatives, including the Provincial Good Agricultural Practices Program, which aims to support producers and raise the visibility of Agtech businesses.

### Life Sciences

There are around 14 Biotech startups in Córdoba and local universities offer 10 graduate and undergraduate courses in related fields.<sup>16</sup> The province of Córdoba has the second-highest number of researchers and research projects in the country. The first biotechnological cluster in Córdoba was formed in March 2022. Home to more than 150 researchers and technicians, CEPROCOR is a scientific-technological center dedicated to commercializing innovation.

### E-commerce

As of December 2022, there were 41 Ecommerce startups in Córdoba. This includes Comparaencasa, a digital insurance broker with a mission to democratize insurance in emerging markets, ClickOh, a YC-startup that built the largest logistics network in Latin America to store, pack, and ship for Ecommerce companies in Latin America, and Rapiboy, a restaurant delivery platform.

## Reasons to Move Your Startup to Córdoba

### Business-Friendly Environment

The province of Córdoba offers a streamlined process for the creation of companies that can be completed in just one day through a digital platform. A federal promotion regime effective by law since 2019 aims to turn Argentina into a hub for technological development and innovation. This law benefits companies in knowledge economy sectors, such as software development, Biotechnology, AI, and Robotics. Benefits available include an income tax rate reduction and tax credits for hiring employees from under-represented communities.

### Educated Talent

There are 12 universities in Córdoba, which attract students from all over Argentina and South America. The National University of Córdoba is ranked #35 in Latin America. It hosts 300 study abroad students through a variety of programs, the majority of which are from Western Europe and Asia.

### Dedicated Support

The Córdoba Innovation and Entrepreneurship Agency has representatives from the province, the private sector, and local businesses, as well as the academic sector and the entrepreneurial ecosystem. It offers a wide range of co-investment programs to stimulate entrepreneurship, encourage innovation, and facilitate the participation of accelerators, angel investors, and sponsor companies.



## Selected Startup Organizations

STARTUP GENOME MEMBERS

MEMBER

### Agencia Córdoba Innovar y Emprender

The Córdoba Innovation and Entrepreneurship Agency is a leading public-private actor established in 2016 to help improve the performance of Córdoba's entrepreneurial ecosystem. It is in charge of promoting the establishment of innovative ventures, developing territorial strategies for local economic development and executing plans, projects, and innovation programs. It has co-invested in more than 70 startups with angel investors and VC funds since 2017, contributing \$2.3 million to entrepreneurs. More than 15 business incubators have been supported by the Agency through financial assistance, training, and performance measurement mechanisms. Currently, eight accelerators are being financially supported through a program, within which they select over 50 startups to accelerate. In addition, the Agency contributes to the professionalization of angel investors through a support program for angel investment clubs in the province.

KEY ECOSYSTEM PLAYERS

### Argentine Entrepreneurship Capital Forum

It is a conference that connects influential leaders from the entrepreneurial ecosystem through panels, interviews, and talks to spark meaningful conversations and shape the future of entrepreneurship.

### Alaya Capital

Alaya is a Venture Capital fund that invests in the next generation of Latin American digital entrepreneurs that will have an impact in the world.

### Founder Institute

The Founder Institute is a network where ideas turn into fundable startups, and startups into global businesses. To date, FI has helped launch over 6,800 companies across 200+ cities and six continents.

### Endeavor Córdoba Experience

The Endeavor Córdoba Experience is an annual event of over 5 thousand people who share a passion for entrepreneurship, innovation, and knowledge, providing an opportunity to learn, inspire, and network with like-minded individuals.

### Kalei Ventures

Kalei is a Venture Capital fund that seeks to help the best latin american early stage entrepreneurs successfully address big opportunities by providing capital and strategic value.

### Junior Achievement

It promotes the entrepreneurial spirit among young people through the delivery of educational programs, which approach entrepreneurship as an attitude that challenges them to achieve their goals and become leaders.

Mexico

# Mexico City

**#17** Strong Starters Ranking **#37** Fintech Ranking

*“This highly concentrated market is becoming home to a new wave of entrepreneurs looking for opportunities outside the costly, competitive confines of Silicon Valley.”*

Insights by Stanford Business



## Highlights

Mexico City is the political, cultural and economic heart of Mexico, as well as the heart of the country’s startup scene. Mexico City was the place of birth of the first Mexican unicorn, Kavak, which is now the second most valuable company in Latin America, worth \$8.7 billion.

Many international and local investment firms have their headquarters in Mexico City, increasing the availability of capital. VC firms based in the city include Avalancha Ventures, Wollef, and Investo. Several other institutions based in Mexico City also fund tech innovation, including INADEM (The National Institute of the Entrepreneur) and NAFIN, one of Mexico’s leading development banks.

The largest entrepreneurship organizations in Mexico, including 500 Startups Latam and Startup Weekend Mexico, have offices in the city. In 2022, global tech company Sryas announced the opening of a new delivery center here, and in March 2023, security company Genetec announced the opening of an experience center that will be its hub for Latin America and the Caribbean.

With its pool of young, educated talent, the city is experiencing a nearshoring boom of U.S. and Canadian companies looking to hire in the Mexican capital. Mexico City is also a hub for digital nomads, offering fast wifi, plenty of coworking spaces, and a large community of remote workers. Prices are significantly lower than any U.S. city, according to 2022 data from Numbeo. According to the UN Department of Economic and Social Affairs, Mexico is the #1 destination for American expats.



# Ecosystem by the Numbers

**ECOSYSTEM VALUE**  
(H2 2020 - 2022)

**\$30 bn**



GLOBAL AVG. \$34.6 bn

**NUMBER OF UNICORNS**  
(H2 2020 - 2022)

**8**



GLOBAL AVG. 4

**SOFT. ENGINEER SALARY**  
(2022)

**\$20 k**



GLOBAL AVG. \$46 k

**TIME TO EXIT**  
(2018 - 2022)

**7.8 years**



GLOBAL AVG. 9 years

**TOTAL EARLY-STAGE FUNDING**  
(H2 2020 - 2022)

**\$1.2 bn**



GLOBAL AVG. \$970 m

**MEDIAN SEED ROUND**  
(H2 2020 - 2022)

**\$875 k**



GLOBAL AVG. \$821 k

**EARLY-STAGE FUNDING GROWTH**  
(2019 - 20 VS. 2021 - 22)



Scale of 1 (lowest) to 10 (highest)

**EXIT AMOUNT**  
(2018 - 2022)

**\$594 m**



GLOBAL AVG. 11.3 bn

**ECOSYSTEM VALUE GROWTH**  
(H2 2020 - H2 2022 VS. H2 2018 - H2 2020)

**107%**



GLOBAL AVG. 4.7%

**MEDIAN SERIES A ROUND**  
(H2 2020 - 2022)

**\$15 m**



GLOBAL AVG. \$6 m

**TOTAL VC FUNDING**  
(2018 - 2022)

**\$6.4 bn**



GLOBAL AVG. \$6.6 bn

**EXIT COUNT (#)**  
(2018 - 2022)

**40**



GLOBAL AVG. 91

## Sub-Sector Strengths

### Fintech

There are approximately 300 Fintech startups in Mexico City, and the Bank of Mexico has plans to introduce a national digital currency. Finnovista helps corporations develop innovation programs that include the Fintech ecosystem and hosts the annual FINNOSUMMIT event. Mobile-first credit card company Stori became Mexico's second unicorn after a \$150 million Series C in July 2022. Digital financial services platform Klar raised a \$90 million Series C in June 2022.

### Logistics & Transportation

As of February 2023 there were 68 Supply Chain and Logistics startups in Mexico City. The Logistics World Expo & Summit took place in April and Manufacturing Supply Chain Expo 2023 in June. On-demand delivery service 99minutes.com raised an \$82 million Series C in March 2022. In April 2022, online grocer Jüsto raised a \$152 million Series B.

### Agtech & New Food

Mexico's agriculture sector is large, diversified, and heavily integrated with the U.S., providing ample opportunity for innovation. The Mexico Agtech Canadian Technology Accelerator provides knowledge and connections to help companies enter the Mexican agriculture industry. Food Technology Summit & Expo 2023 is scheduled for September. GreenTech Americas 2023 was held in March.

## Reasons to Move Your Startup to Mexico City

### Strategic Location

Mexico City's location makes it an ideal hub for companies expanding in the Americas. It offers businesses proximity to important ports and highways, a well-developed transportation infrastructure, and easy access to key American cities including Miami, Houston, Dallas, and Chicago. Mexico's time zones align with the U.S., facilitating real-time collaboration.

### Advantageous Trade Deals

Mexico has 13 Free Trade Agreements with 50 countries, including with the EU, Japan, Israel, 10 countries in Latin America, and the 11-country Comprehensive and Progressive Agreement for Trans-Pacific Partnership. It is also a member of the Pacific Alliance. The UK-Mexico Trade Continuity Agreement supports streamlined trade between Mexico and the UK. The U.S.-Mexico-Canada Agreement grants U.S. and Canadian investors favor when setting up operations or acquiring companies in Mexico.

### Tech Talent

Mexico City is one of the biggest cities in the world, with a young and growing population of approximately 22 million. Over 350 outsourcing companies operate in Mexico, many in the capital city. Mexico was ranked #58 among the Top Digital Nations worldwide in the Global Innovation Index 2022.



**Brazil**  
**Rio de Janeiro**

"Brazil has an open and diversified economy and is the most active startup ecosystem in Latin America. As a result, it continues to produce startup success stories and unicorns. Rio de Janeiro is one of the nation's most dynamic cities, and is an exciting prospect for angel investors and entrepreneurs."



**Maria Rita Spina Bueno**  
Board Member, Anjos do Brasil



**Highlights**

Internationally known for its beautiful beaches and thriving cultural scene, Rio de Janeiro is also an important business hub and the home of a rapidly growing startup scene. Rio de Janeiro boasts a highly diversified economy and many national and international companies, including Petrobrás and the National Economic and Social Development Bank, have their headquarters in the city. Owing to its port, many of Brazil's export-import companies are also headquartered here. While Rio de Janeiro's startup ecosystem may still be smaller than the scene in buzzing São Paulo, local authorities have made huge efforts to make the city attractive to young, tech-savvy talent and improved both security and infrastructure in recent years.

The first edition of Web Summit Rio took place in May 2023, indicating the ecosystem's growing reputation as a startup hub. A European tech calendar event each year, Web Summit is now also the largest tech event in Brazil. Rio Innovation Week also takes place in October, and Rio2C 2023 gathered creative industry professionals in April. The Global Sustainable Technology and Innovation Conference is another Rio de Janeiro annual event.

Universidade Federal do Rio de Janeiro ranked #8 in the QS Latin America University Rankings 2023, providing a stream of educated talent to the ecosystem. The Federal University of Rio de Janeiro is the largest federal university in Brazil and is also well regarded for its teaching and research. Notable funding news includes healthcare platform Conexa Saude's \$40 million Series C in June 2022, and digital bank NG.CASH's \$10 million August 2022 seed round.

# Ecosystem by the Numbers

**ECOSYSTEM VALUE**  
(H2 2020 - 2022)

**\$2.4 bn**



GLOBAL AVG. \$34.6 bn

**NUMBER OF UNICORNS**  
(H2 2020 - 2022)

**0**



GLOBAL AVG. 4

**SOFT. ENGINEER SALARY**  
(2022)

**\$35 k**



GLOBAL AVG. \$46 k

**TIME TO EXIT**  
(2018 - 2022)

**9.7 years**



GLOBAL AVG. 9 years

**TOTAL EARLY-STAGE FUNDING**  
(H2 2020 - 2022)

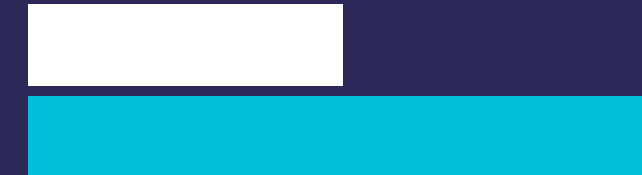
**\$93 m**



GLOBAL AVG. \$970 m

**MEDIAN SEED ROUND**  
(H2 2020 - 2022)

**\$410 k**



GLOBAL AVG. \$821 k

**EARLY-STAGE FUNDING GROWTH**  
(2019 - 20 VS. 2021 - 22)



Scale of 1 (lowest) to 10 (highest)

**EXIT AMOUNT**  
(2018 - 2022)

**\$9.2 bn**



GLOBAL AVG. 11.3 bn

**ECOSYSTEM VALUE GROWTH**  
(H2 2020 - H2 2022 VS H2 2018 - H2 2020)

**-52%**



GLOBAL AVG. 4.7%

**MEDIAN SERIES A ROUND**  
(H2 2020 - 2022)

**\$4.2 m**



GLOBAL AVG. \$6 m

**TOTAL VC FUNDING**  
(2018 - 2022)

**\$605 m**



GLOBAL AVG. \$6.6 bn

**EXIT COUNT (#)**  
(2018 - 2022)

**31**



GLOBAL AVG. 91

2018 2019 2020 2021 2022



## Sub-Sector Strengths

### Blockchain

In December 2022, Brazil passed a crypto-regulation bill that includes creating a virtual service provider license for digital asset companies, including exchanges. Shortly after, Crypto.com became the first crypto exchange to receive approval for its EMI license in Brazil. Hashtown in Rio houses companies and investors from the international crypto community, including Valor Capital, NFT company W3block, and Blockchain infrastructure firm Parfin. In 2023, Rio de Janeiro became the first Brazilian city to accept crypto payments for property taxes.

### AI, Big Data & Analytics

In February 2023, researchers from the Centre for Data and Knowledge Integration for Health and the Federal University of Rio de Janeiro unveiled an AI-powered early warning system for new disease outbreaks. Big Data analytics SaaS platform Cortex raised a \$50 million Series C in September 2022.

### Cleantech

Rio de Janeiro's 50-year Neutral Carbon Rio Strategy sets a goal for the city to achieve carbon neutrality by 2065. In January 2023, regional entrepreneurship acceleration Program MIT Reap held a workshop in Rio de Janeiro with the aim of transforming the city into a "Silicon Valley for sustainability." MIT Reap Rio will invest \$60 million in training, acceleration, and other support measures for Cleantech startups.

## Reasons to Move Your Startup to Rio de Janeiro

### Government Support

In 2021, the Brazilian government passed Bill 146/2019, broadly known as Legal Framework for Start-ups, to encourage investment in startups and improve the business environment in the country. The law enables regulatory bodies to grant special authorization to startups to test new technologies and business models for a fixed period of time and with a restricted number of consumers.

### International-Friendly Environment

In 2022, Brazil established a digital nomad visa that allows foreign remote workers and self-employed individuals to live in the country for one year with the possibility of extension. Brazil boasts one of the world's most diverse cultures due to a history of various waves of colonization and immigration and Rio de Janeiro is the nation's cultural center, known for its lively festivals.

### Wide Range of Industries

Rio de Janeiro is home to a well-established and highly diversified economy, providing large-scale employment in both heavy and light industry, manufacturing, commerce, finance, trade, and other service sectors. Combined with the strong import and export opportunities provided by the port, there is much opportunity for startups to collaborate with existing companies and to spot opportunities for innovation in established industries.

**Brazil**  
**São Paulo**

**#26** Global Ranking **#18** Agtech Ranking **#16** Fintech Ranking

*"São Paulo is a thriving tech ecosystem, and on a constant path of improvement. More than unicorns, it is the result of solid commitment and the consistent work of people who really want to make a difference. Brilliant talents are here, including founders, researchers, investors, and community. It is a strong anchor to all the other amazing things happening all over Brazil."*



**Luciana Brasil Marques**  
International Business Development & Innovation Lead,  
Sebrae for Startups



**Highlights**

Home to more than 24 million people, São Paulo is the largest economic and industrial center in the southern hemisphere and a vibrant startup hub. Its size and density offer founders a large market and ample opportunity for networking. São Paulo is home to 2,770 startups, the highest number by far in Brazil, including 11 valued at \$1 billion or more. Success stories include Fintech Nubank which exited in a 2021 \$41 billion IPO, and insurtech Justos, which raised both a \$2.8 million seed round and a \$35.8 million Series A the same year.

Brazil contributes more than 50% of data center investments in Latin America, and is home to the innovation and data centers of global titans such as Microsoft and Google. It is also the home to the regional headquarters of Airbnb, Netflix, and Amazon. According to Arizton, the Brazilian data center market is expected to grow at a CAGR of 8.26% from 2022–2028. There are 51 existing and 22 planned data center facilities in the country, with São Paulo being the nation’s primary data center hub.

The University of São Paulo was ranked the best university in Latin America in 2023 by the Times Higher Education. With some of the best academic programs in STEM fields, the city’s businesses benefit from this talent pipeline. ACE Startups carried out more than 100 acceleration programs and was chosen three times as the best accelerator in Latin America. It is now seeking to invest in early-stage startups.



# Ecosystem by the Numbers

**ECOSYSTEM VALUE**  
(H2 2020 - 2022)

**\$113 bn**



GLOBAL AVG. \$34.6 bn

**NUMBER OF UNICORNS**  
(H2 2020 - 2022)

**15**



GLOBAL AVG. 4

**SOFT. ENGINEER SALARY**  
(2022)

**\$29 k**



GLOBAL AVG. \$46 k

**TIME TO EXIT**  
(2018 - 2022)

**8.2 years**



GLOBAL AVG. 9 years

**TOTAL EARLY-STAGE FUNDING**  
(H2 2020 - 2022)

**\$1.8 bn**



GLOBAL AVG. \$970 m

**MEDIAN SEED ROUND**  
(H2 2020 - 2022)

**\$450 k**



GLOBAL AVG. \$821 k

**EARLY-STAGE FUNDING GROWTH**  
(2019 - 20 VS. 2021 - 22)



Scale of 1 (lowest) to 10 (highest)

**EXIT AMOUNT**  
(2018 - 2022)

**\$52 bn**



GLOBAL AVG. 11.3 bn

**ECOSYSTEM VALUE GROWTH**  
(H2 2020 - H2 2022 VS. H2 2018 - H2 2020)

**47%**



GLOBAL AVG. 4.7%

**MEDIAN SERIES A ROUND**  
(H2 2020 - 2022)

**\$7.8 m**



GLOBAL AVG. \$6 m

**TOTAL VC FUNDING**  
(2018 - 2022)

**\$17 bn**



GLOBAL AVG. \$6.6 bn

**EXIT COUNT (#)**  
(2018 - 2022)

**214**

GLOBAL AVG. 91



## Sub-Sector Strengths

### Fintech

In November 2022, Swedish company Zimpler announced plans to establish its regional headquarters here in order to introduce its payments solution to Brazil. A collaboration between Bank of Brazil and crypto firm Bifty allows citizens to pay their taxes using cryptocurrencies. The Central Bank of Brazil plans to introduce a Brazilian central bank digital currency by 2024. Digital bank Neon raised a \$300 million Series D in February 2022, putting the company's pre-money valuation at \$700 million.

### Edtech

São Paulo has emerged as a hub for Edtech companies in Brazil. Of the nation's approximately 560 Edtech startups, São Paulo accounts for 38%. The German-Brazilian EdTech Hackathon is an annual event where experts from Brazil and Germany collaborate to create innovative solutions to digital education challenges. The second edition was held in São Paulo in May 2023.

### Agtech & New Food

Brazil is home to around 1,700 Agtech startups, and the state of São Paulo is home to approximately 47% of them. AgTech Garage is one of the most important Agtech innovation hubs in Brazil, with a mission to increase the sustainability and competitiveness of Brazilian agribusiness. It has a network of more than 80 corporate partners and 1,000 startups. It launched its first FoodTech Innovation Circuit in June 2022 before being acquired by PwC in November. Agtech TerraMagna raised a \$40 million Series A in January 2022.

## Reasons to Move Your Startup to São Paulo

### Large Market

São Paulo is the most populous city in South America with a population of more than 24 million people. Brazil has the largest consumer market and GDP in South America, and a large portion of its population and economic activity is concentrated in the states of São Paulo and nearby Rio de Janeiro and Minas Gerais, providing a huge market for São Paulo-based startups.

### Strategic Location

Only an hour from the coast and the Port of Santos, Brazil's biggest and most important port and the busiest container port in Latin America, startups in São Paulo have good access to international logistics links. Additionally, the city is home to four airports, one of which is the busiest international airport in Brazil.

### Educated Talent

The University of São Paulo, Brazil was the top ranked university in Latin America in the 2023 Times Higher Education's list of the world's best universities, producing a steady stream of quality talent. In joint second place, the University of Campinas, São Paulo is an established medical and scientific research center. It is also among the 100 most sustainable universities in the world, according to the UI GreenMetric World University Ranking.



# MENA

198 ——— Key Findings

199 ——— Ecosystem Pages





# Regional Insights MENA

**MENA largely held steady from 2021 to 2022, with only a very slight decrease in the amount of early-stage funding (-5%), a decline of 19% in Series B+ deal amount, and 14% decline in total VC funding. Even with this downturn, the region remained above 2020 funding amounts.**

In the period 2018–2022, MENA saw a 96% rise in early-stage funding amount, a 28% growth in Series B+ deal count, and an impressive 113% increase in Series B+ deal amount. AI & Big Data accounted for 34% of Series A deals in the same period. Cybersecurity accounts for 15% share of Series A deals, significantly above all other regions, where it makes up 6% or less.

The United Arab Emirates has made significant strides in diversifying its market from oil and gas, establishing itself as an innovation hub and hot spot for entrepreneurs. The nation prides itself on having a strong talent pool, ample funding opportunities,

and both legislation and infrastructure that nurtures the growth and success of startups. Abu Dhabi and Dubai are both global hubs for entrepreneurship, with Dubai’s Global Unicorn Center serving as a vital startup incubator and a critical component of the government’s plan to foster the growth of 30 unicorns within 10 years.

Oman is also actively building an innovation community as it sets out a vision towards a more diverse, knowledge-based economy, as outlined in the Oman 2040 initiative. To aid economic recovery from the COVID-19 pandemic, the nation initiated a three-year program aimed at fostering and developing the financial sector. The city of Muscat was the Arab Digital Capital in 2022, cementing its status as a hub for digital innovation and enterprise.

## TOP FIVE ECOSYSTEMS

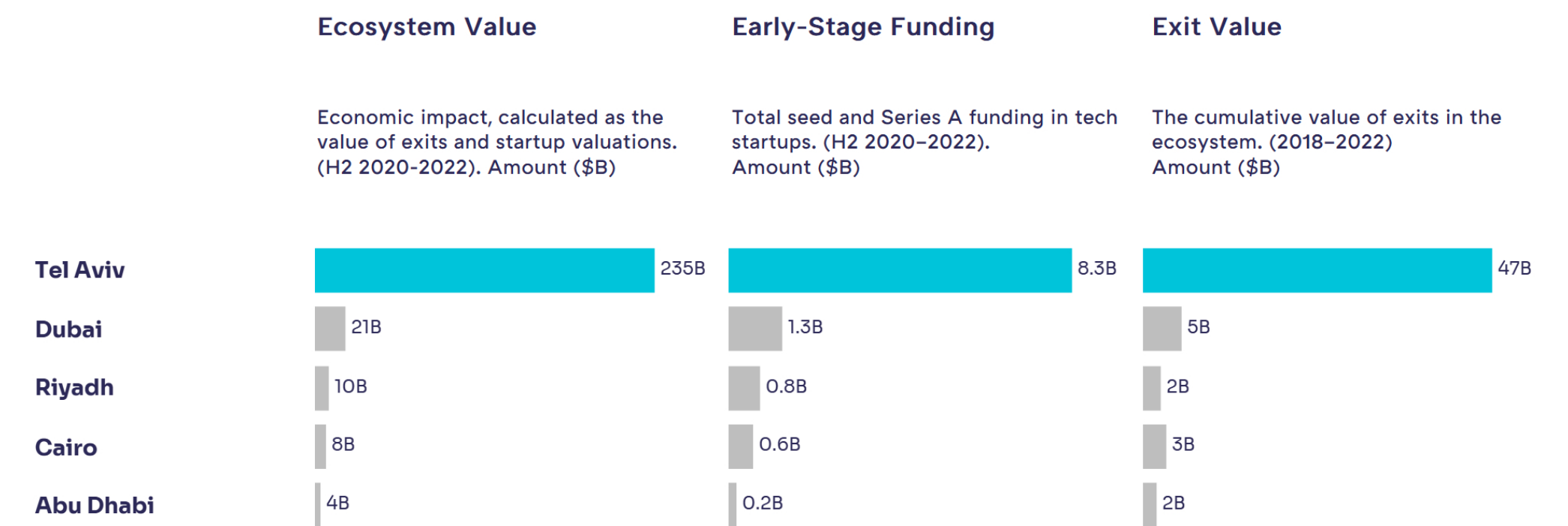
- 1 → Tel Aviv
- 2 → Dubai
- 3 → Cairo
- 4 → Riyadh
- 5 → Abu Dhabi

## TOP FIVE EMERGING ECOSYSTEMS

- 1 → Amman
- 2 → Sharjah
- 3 → Casablanca
- 4 → Tunis
- 5 → Beirut

## Tel Aviv Is MENA’s Top Performing Ecosystem

Source: Startup Genome, 2023





## → Key Findings

- Tel Aviv remains the region's leading ecosystem and is thriving. It moved from #7 in the rankings, where it had sat since 2020, to #5. Its Ecosystem Value grew by 100% (\$235 billion) from July 1, 2019–December 31, 2021 to July 1, 2020–December 31, 2022, buoyed by several exits over \$1 billion. Fintech **Pagaya** reported the highest exit at \$8.5 billion. The number of unicorns has also risen considerably, with a massive 33 new entrants bringing the total to 57, including Blockchain company **Fireblocks**, valued at \$8 billion.
- Dubai moved up three places and is the highest ranked MENA entry in the Emerging Ecosystems ranking at #12. The number of exits over \$50 million has grown by 50% while the number of exits over \$1 billion doubled, with **Swvl** at \$1.5 billion. The number of unicorns increased by from two to four with **Astra Tech** and **Fenix Games** joining the club in 2022, contributing to an 81% increase in Ecosystem Value. The number of early-stage funding deals also increased, by 45%.
- Cairo shot up from 71-80 to the 51–60 range in the Emerging Ecosystems ranking, fueled in part by a \$1.5 billion exit from **Swvl**. The Ecosystem Value grew 97%, to \$8 billion.
- Riyadh also shot up 91-100 to the 61 - 70 range in the emerging ecosystems. Food delivery platform **Jahez** is valued at \$2.4 billion, while the number of unicorns

doubled to two, with highest-valued unicorn **Foodics** valued at \$1.2 billion, increasing the Ecosystem Value by over 100%.

- Abu Dhabi entered the Emerging Ecosystems ranking, in the 81–90 range. It has experienced a 134% increase in Ecosystem Value to \$3.9 billion, partly attributed to the growing number of exits over \$50 million, with Agtech **Pure Harvest Smart Farms** valued at \$1.3 billion.

**From 2018 to 2022, MENA saw a 96% rise in early-stage funding amount, a 28% growth in Series B+ deal count, and a 113% increase in Series B+ deal amount.**

### TOP FIVE ECOSYSTEMS BY VC FUNDING PER CAPITA

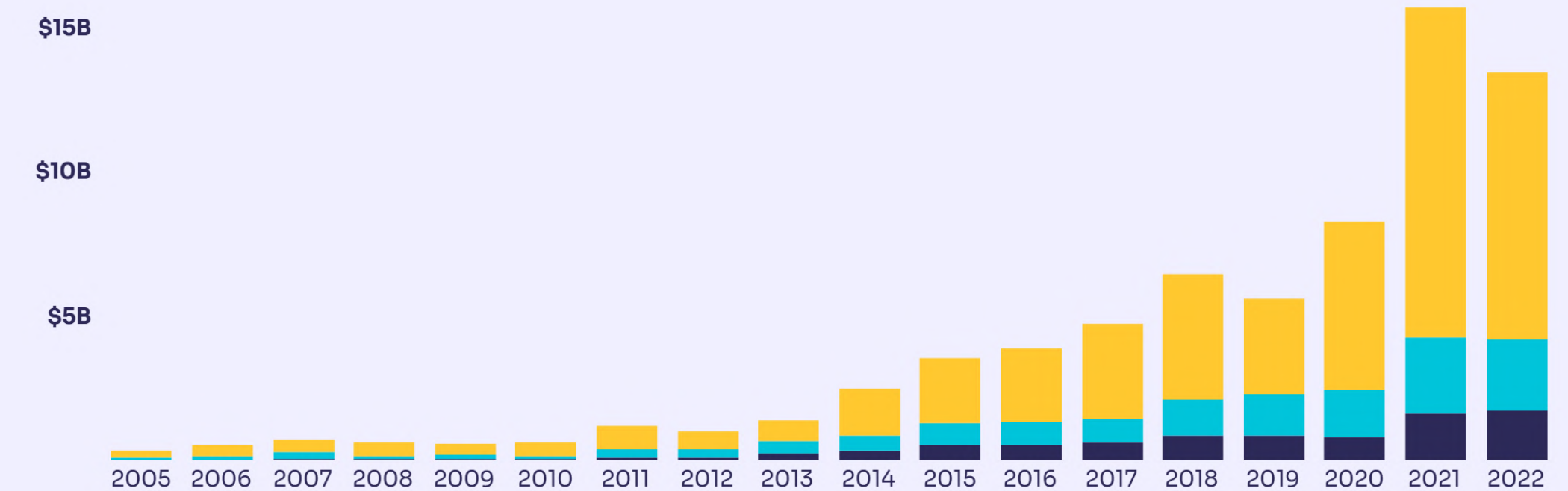
- 1 → Tel Aviv
- 2 → Dubai
- 3 → Abu Dhabi
- 4 → Riyadh
- 5 → Amman

### VC Investment in MENA Decreased 14% Overall From 2021 to 2022

MENA VC Funding Amount (\$B) by Stage

Source: Startup Genome, 2023

■ Seed ■ Series A ■ Series B+



United Arab Emirates

# Abu Dhabi

**MEMBERS:**

Hub71

*“Abu Dhabi’s thriving falcon economy is testament to the leadership’s unwavering commitment to enhance a growing, prosperous, and diversified economy, anchored by technological innovations.”*



**H.E. Ahmed Jasim Al Zaabi**

Chairman of the Abu Dhabi Department of Economic Development (ADDED)



## Highlights

Abu Dhabi is shifting gears from an oil and gas powerhouse to become a world-leading technology and innovation hub. The Abu Dhabi government is investing AED 10 billion (\$2.7 billion) to increase non-oil exports by 143% by 2031. The UAE Government aims to develop more than 8,000 SMEs and startups by 2030 with the goal of creating 20 startups valued at more than \$1 billion by 2031 as part of its Entrepreneurial Nation initiative.

Hub71, Abu Dhabi’s global tech ecosystem, has grown its startup community to more than 200 companies that have raised more than \$1 billion collectively. Hub71+ Digital Assets is a Web3-focused ecosystem with partners who have committed \$2 billion of capital globally to fund startups in the Web3 and Blockchain space. In 2022, 51 startups were selected to join Hub71 in Abu Dhabi. To facilitate cross-border growth, Hub71 launched a partnership with GetFundedAfrica, a marketplace that matches startups, investors, corporations, and governments.

In May 2022, the Abu Dhabi Competitiveness Office launched Abu Dhabi Innovates to enhance innovation and boost entrepreneurship. Further Ventures launched a \$200 million fund anchored by ADQ, an Abu Dhabi-based investment and holding company that will focus on digital assets, Fintech, and supply-chain startups. The Abu Dhabi Investment Authority launched ADIA Lab, an innovation center, in December 2022.



# Ecosystem by the Numbers

**ECOSYSTEM VALUE**  
(H2 2020 - 2022)

**\$3.9 bn**



GLOBAL AVG. \$34.6 bn

**NUMBER OF UNICORNS**  
(H2 2020 - 2022)

**1**



GLOBAL AVG. 4

**SOFT. ENGINEER SALARY**  
(2022)

**\$33 k**



GLOBAL AVG. \$46 k

**TIME TO EXIT**  
(2018 - 2022)

**8.5 years**



GLOBAL AVG. 9 years

**TOTAL EARLY-STAGE FUNDING**  
(H2 2020 - 2022)

**\$199 m**



GLOBAL AVG. \$970 m

**MEDIAN SEED ROUND**  
(H2 2020 - 2022)

**\$670 k**



GLOBAL AVG. \$821 k

**EARLY-STAGE FUNDING GROWTH**  
(2019 - 20 VS. 2021 - 22)



Scale of 1 (lowest) to 10 (highest)

**EXIT AMOUNT**  
(2018 - 2022)

**\$1.9 bn**



GLOBAL AVG. 11.3 bn

**ECOSYSTEM VALUE GROWTH**  
(H2 2020 - H2 2022 VS. H2 2018 - H2 2020)

**134%**



GLOBAL AVG. 4.7%

**MEDIAN SERIES A ROUND**  
(H2 2020 - 2022)

**\$5 m**



GLOBAL AVG. \$6 m

**TOTAL VC FUNDING**  
(2018 - 2022)

**\$735 m**



GLOBAL AVG. \$6.6 bn

**EXIT COUNT (#)**  
(2018 - 2022)

**13**



GLOBAL AVG. 91

## Sub-Sector Strengths

### Fintech

As of February 2023, there were 79 Fintech startups in Abu Dhabi. The same month, Emirates Islamic launched a global Fintech accelerator in collaboration with Plug and Play Abu Dhabi. In 2022 Abu Dhabi Islamic Bank launched its first API developer portal and First Israeli joined with ADIO's Innovation Programme to establish a Fintech R&D center in Abu Dhabi. In February 2023, NymCard and Fintech Payment Solutions announced a partnership to bring end-to-end payment solutions in the region.

### Agtech & New Food

In February 2023, AeroFarms AgX opened the world's largest R&D indoor vertical farm. The company also signed an agreement with Agtech investor Silal to focus on R&D to commercialize new crops. Accelerator Dana Global promotes female-led Agtech startups tackling food insecurity in the UAE and MENA. In December 2022, it announced a partnership with Silal to attract Agtech innovation to Abu Dhabi's ecosystem. Masdar City and Dana are also building a beta site for relevant pre-seed and Series A startups.

### Cleantech

Masdar City is a special economic zone with a focus on Cleantech and renewable energy. Abu Dhabi's fastest growing free zone, it provides easy registration and licensing, 100% foreign ownership, full repatriation of capital and profits, and exemption from taxes. Hub71 partnered with AIQ, the Abu Dhabi National Oil Company's AI joint venture with Group 42, to explore AI solutions to support a sustainable energy future. Hub71 also signed a partnership with Siemens Energy to support Cleantech startups.

## Reasons to Move Your Startup to Abu Dhabi

### Golden Visa

The UAE Golden Visa is a long-term residency visa that enables foreign nationals to live, work, and study in Abu Dhabi without the need of a national sponsor and with 100% ownership of their business. Each Golden Visa is valid for a renewable period of five or 10 years, depending on the visa category.

### Government Support

Abu Dhabi has flexible health insurance for foreign entrepreneurs and investors who work in the private sector and their families, provided that their monthly income exceeds AED 5,000 (\$1,400). Hub71 provides 100% subsidized incentives for seed-stage startups that have raised between \$100,000 and \$500,000 and 50% subsidized for startups that have raised \$500,000 or more.

### Strategic Location

Abu Dhabi has transformed from a desert oasis into a global business hub. Today, the UAE's capital is a gateway to markets across the Middle East, Africa, and South Asia with world-class infrastructure and connectivity. A third of the world is just a four-hour flight away and 80% of the world can be reached by an eight-hour flight.



## Selected Startup Organizations

### STARTUP GENOME MEMBERS

MEMBER

### Hub71

Hub71 is Abu Dhabi's global tech ecosystem that enables founders to build globally enduring homegrown tech companies in any sector by providing access to global markets, a capital ecosystem, a global network of partners, and a vibrant community filled with highly skilled talent, governed by forward-thinking regulation.

### KEY ECOSYSTEM PLAYERS

#### Abu Dhabi Global Market (ADGM)

Abu Dhabi Global Market is an award-winning international financial centre strategically located in the capital city of the United Arab Emirates.

#### The Abu Dhabi Investment Office (ADIO)

The government entity responsible for attracting and facilitating investment in the Emirate of Abu Dhabi.

#### Mubadala Investment Company

A sovereign investor managing a global portfolio, aimed at generating sustainable financial returns for the Government of Abu Dhabi.

#### startAD

startAD is an Abu Dhabi-based accelerator, steering local and global startups to scale in the UAE and beyond.

#### Anghami

A leading music streaming technology platform in the Middle East and North Africa, Anghami is the go-to destination for Arabic and international music, podcasts, and entertainment.

#### ADQ

Established in 2018, ADQ is an Abu Dhabi-based investment and holding company with a broad portfolio of major enterprises.

# Bahrain

**MEMBERS:**  
Tamkeen

*“Startups have the ability to mobilize economies by providing employment opportunities, driving innovation, and advancing technology, and Bahrain is well positioned to foster a thriving ecosystem, facilitating their growth.”*



**Maha Mofeez**  
Chief Executive, Tamkeen

<b>MENA Ecosystem in Affordable Talent</b>	<b>MENA Ecosystem in Performance</b>	<b>MENA Ecosystem in Talent &amp; Experience</b>
<b>Top 15</b>	<b>Top 10</b>	<b>Top 15</b>

## Highlights

Companies based in Bahrain benefit from a liberal business climate, zero corporate taxes, and a welcoming culture. Bahrain ranks #14 in the world's most competitive emerging markets and #6 in business fundamentals, according to the 2022 Agility Emerging Markets Logistics Index. It also ranked #1 in MENA for financial, investment, and trade freedom in the 2022 Heritage Foundation index. Forty-four Bahraini startups raised \$136 million in 2022, and the Kingdom attracted over \$1.1 billion in direct investments.

Bahrain is prioritizing efforts to train and upskill its citizens in ICT, recognizing the critical role of digital literacy in the country's economic growth and development. Building on Bahrain's tradition as a regional financial hub, Fintech is a key focus area. In 2022, the Central Bank of Bahrain successfully completed a test run using the JPM Coin and now permits established banks to work with crypto exchanges.

Hope Ventures has launched a series of initiatives designed to support high-growth businesses led by local entrepreneurs. It also created Beban, a reality TV show in which entrepreneurs pitch to investors. In January 2023, equity crowdfunding platform Beban Crowdfunding was launched. Multiple tech training programs to reskill and upskill locals were also launched in 2022, including Reboot Coding Institute and Citi Global Tech Hub. Tamkeen also announced an updated version of its Young Entrepreneur program. Tamkeen has stepped up its efforts to support Bahraini women, providing financial assistance to start, grow, and expand their businesses through its Riyadat Scheme. Tenmou, Bahrain's first business angels company, launched the Investors' Awareness Programme in June 2022.



# Ecosystem by the Numbers

**ECOSYSTEM VALUE**  
(H2 2020 - 2022)

**\$928 m**



GLOBAL AVG. \$34.6 bn

**NUMBER OF UNICORNS**  
(H2 2020 - 2022)

**0**



GLOBAL AVG. 4

**SOFT. ENGINEER SALARY**  
(2022)

**\$37 k**



GLOBAL AVG. \$46 k

**TIME TO EXIT**  
(2018 - 2022)

**4.5 years**



GLOBAL AVG. 9 years

**TOTAL EARLY-STAGE FUNDING**  
(H2 2020 - 2022)

**\$90 m**



GLOBAL AVG. \$970 m

**MEDIAN SEED ROUND**  
(H2 2020 - 2022)

**\$150 k**



GLOBAL AVG. \$821 k

**EARLY-STAGE FUNDING GROWTH**  
(2019 - 20 VS. 2021 - 22)



Scale of 1 (lowest) to 10 (highest)

**EXIT AMOUNT**

**\$19 m**



GLOBAL AVG. 11.3 bn

**ECOSYSTEM VALUE GROWTH**  
(H2 2020 - H2 2022 VS H2 2018 - H2 2020)

**54%**



GLOBAL AVG. 4.7%

**MEDIAN SERIES A ROUND**  
(H2 2020 - 2022)

**\$13 m**



GLOBAL AVG. \$6 m

**TOTAL VC FUNDING**  
(2018 - 2022)

**\$367 m**



GLOBAL AVG. \$6.6 bn

**EXIT COUNT (#)**  
(2018 - 2022)

**2**



GLOBAL AVG. 91

2018 2019 2020 2021 2022

## Sub-Sector Strengths

### Fintech

Bahrain's financial sector contributes around 17% of its GDP, and Bahrain FinTech Bay is the leading Fintech hub in MENA. The Central Bank of Bahrain (CBB) launched an Open Banking Framework to facilitate a more seamless implementation of services for both banks and third-party providers. BEYON Money provides open banking, connecting all the banks across the Kingdom in one app. In 2022, Mastercard partnered with Payment International Enterprise to launch FLOOSS, a digital-first program providing microfinancing services. In October 2022, Binance launched binance.bh.

### Cybersecurity

A national training initiative for Bahrainis in Cybersecurity and advanced IT was launched in December 2022. The program aims to train Bahraini university graduates and job seekers. In January 2023, Cybersecurity training provider SANS Institute and Tamkeen launched the second phase of the Cyber Reskilling Programme. Two programs will allow 60 students to gain GIAC Security Essentials (GSEC) and GIAC Certified Incident Handler (GCIH) certifications. The Arab International Cybersecurity Exhibition and Conference was held here in December 2022.

### Govtech

Bahrain's Economic Vision 2030 speaks of the ambition of an efficient, enabling public sector. A cloud-first policy encourages the use of advanced technologies to provide efficient government services. The Kingdom launched a four-year telecommunications, ICT, and digital economy sector strategy in 2022. It includes developing telecommunications infrastructure, supporting the digital economy, and enhancing e-governance. The BeAware Bahrain app is a digital wallet that stores digital versions of important government documents and allows users to access e-services such as health appointments.

## Reasons to Move Your Startup to Bahrain

### Business-Friendly Environment

Bahrain allows 100% foreign ownership for nearly all business activities. It is a member of the GCC single market and the Pan-Arab Free Trade Areas, and has signed free-trade agreements with countries including the U.S., Singapore, and Norway. Operating costs in Bahrain are 12% lower than the regional average. A Golden Residency Visa is available to investors, entrepreneurs, and highly talented individuals.

### Skilled Talent

Bahrain ranked #35 in the World Talent Ranking from the International Institute for Management Development World Competitiveness Centre. Tamkeen offers entrepreneurship training programs, as well as training in the manufacturing sector. It also plans to train 1,200 individuals in coding and other emerging technology skills in collaboration with the General Assembly and the Bahrain Institute of Banking & Finance.

### Low Taxes

Bahrain imposes no personal or corporate income tax (except for oil companies), no capital gains tax, and no variable stamp taxes. Bahrain's value added tax regime, with a rate of 10%, offers VAT rates substantially lower than elsewhere in the region and in most of Western countries.



## Selected Startup Organizations

### STARTUP GENOME MEMBERS

MEMBER

### Tamkeen

Tamkeen empowers Bahrainis to become employees of choice and enables the private sector to become the key engine of economic growth. It works with enterprises to innovate, grow, transform, digitalize, and internationalize. It also supports Bahraini talents with their training needs, ensuring their competitiveness both locally and internationally.

### KEY ECOSYSTEM PLAYERS

#### Tamkeen

Empowers Bahrainis to be the employees of choice and enables the private sector to become the key engine of economic growth through supporting enterprises to innovate, grow, transform, digitize, internationalize and Bahrainis with their training needs.

#### Tenmou

Bahrain's first Business Angels Company, committed to providing mentorship and capital to high potential, innovative Bahrain based entrepreneurs in the different sectors, who have reached the stage of viability in their business journey.

#### StartUp Bahrain

StartUp Bahrain is Bahrain's national ecosystem for innovative scalable startups. It's made up of startups, corporates, investors, accelerators, incubators, educational institutions, the Bahrain government and you.

#### Bahrain Fintech Bay

Leading FinTech hub in the MENA region. It offers incubation, acceleration, activities, and educational opportunities and works with the government, financial institutions, corporates, investors, and startups to further develop the FinTech ecosystem.

#### Hope Fund

Two companies fall under the Fund's umbrella, Hope Ventures, is the investment arm, and The 1%, is its talent arm. Hope Ventures co-invests in high-potential, scalable, Bahraini-founded businesses, and strategically accelerate their business growth.

## Egypt Cairo

**#13** Strong Starters Ranking

**MEMBERS:**

Information Technology Industry Development Agency (ITIDA)

*“Proud of our local-yet global entrepreneurial ecosystem that is sustaining growth year after year; serving not only the local market but successfully present in African and Middle Eastern markets as well.”*



**H.E. Dr. Amr Talaat**

Minister of Communications and Information Technology, Egypt



## Highlights

Cairo’s ecosystem continues to grow despite global challenges. Investors poured \$517 million into the country in 2022, up 3% from 2021. Additionally, 160 deals were closed — more than in any other country in the MENA region, according to Magnitt’s 2022 Egypt Venture Capital Report. With 93.6% of Egypt’s startups based in Cairo most of this activity was focused on the city. Cairo jumped from the 71-80 range to the 51-60 range in the Emerging Ecosystems ranking 2022, a reflection of its growing importance.

In November 2022 American VC fund 500 Global signed an agreement to open an office in Cairo, its first in Africa, and to launch several programs to support Egyptian startups. UNDP has plans to launch a \$1 billion startup financing facility for Africa and establish eight hubs across the continent in 2023, including one in Cairo. In December 2022, Indian multinational Tech Mahindra signed an agreement with Egypt’s Information Technology Industry Development Agency to establish a global delivery center in Cairo that will hire more than 1,000 employees.

The Smart Cities cohort of Plug and Play Egypt welcomed its first 25 startups in 2022, and VC firm Algebra Ventures finalized the first close of its second \$100 million Egypt-dedicated fund in Q4 2022. COP27 was hosted in Egypt in 2022. TNW hosted Hangout with VCs in Cairo in May 2022. Cairo ICT was held in November 2022, and the fourth edition of the Startups Without Borders in February 2023. Innovation Summit and Techne Summit 2023 took place in March 2023, with the latter gathering 30,000 attendees.



# Ecosystem by the Numbers

**ECOSYSTEM VALUE**  
(H2 2020 - 2022)

**\$8.3 bn**



GLOBAL AVG. \$34.6 bn

**NUMBER OF UNICORNS**  
(H2 2020 - 2022)

**0**



GLOBAL AVG. 4

**SOFT. ENGINEER SALARY**  
(2022)

**\$7.6 k**



GLOBAL AVG. \$46 k

**TIME TO EXIT**  
(2018 - 2022)

**5.5 years**



GLOBAL AVG. 9 years

**TOTAL EARLY-STAGE FUNDING**  
(H2 2020 - 2022)

**\$666 m**



GLOBAL AVG. \$970 m

**MEDIAN SEED ROUND**  
(H2 2020 - 2022)

**\$200 k**



GLOBAL AVG. \$821 k

**EARLY-STAGE FUNDING GROWTH**  
(2019 - 20 VS. 2021 - 22)



Scale of 1 (lowest) to 10 (highest)

**EXIT AMOUNT**  
(2018 - 2022)

**\$3.1 bn**



GLOBAL AVG. 11.3 bn

**ECOSYSTEM VALUE GROWTH**  
(H2 2020 - H2 2022 VS. H2 2018 - H2 2020)

**102%**



GLOBAL AVG. 4.7%

**MEDIAN SERIES A ROUND**  
(H2 2020 - 2022)

**\$7 m**



GLOBAL AVG. \$6 m

**TOTAL VC FUNDING**  
(2018 - 2022)

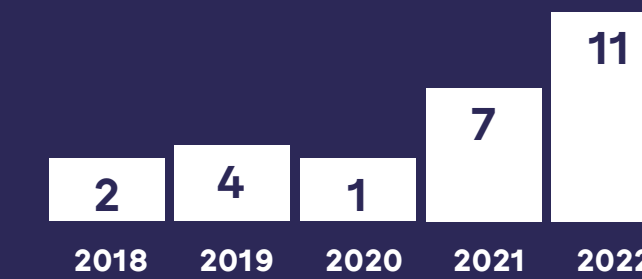
**\$1.7 bn**



GLOBAL AVG. \$6.6 bn

**EXIT COUNT (#)**  
(2018 - 2022)

**25**



GLOBAL AVG. 91

## Sub-Sector Strengths

### Fintech

Egypt's Fintechs raised \$217 million in 2022, an 18% increase on 2021. Bank penetration grew 131% from 2016 to 2022, and the Financial Inclusion Strategy 2022–2025 aims to further expand access. In January 2023, the FinTech Egypt initiative launched the country's first digital training academy. In partnership with Global Ventures and Mastercard, three major Egyptian banks have launched an \$85 million fund to invest in Fintechs in MENA. MoneyFellows raised a \$31 million Series B in October 2022. In February 2023, MNT-Halan raised \$200 million, making it Egypt's first unicorn.

### E-commerce

Egypt's young population and rising internet and mobile penetration rates are driving the expansion of Ecommerce. In 2022, consumers purchased 3.4% of their goods online, with this figure expected to grow to 4.5% by 2025. According to In Disrupt Africa's African Tech Startups Funding Report, 17.6% of Egypt's funded startups are in Ecommerce. Home furnishings marketplace Homzmart raised a \$23 million venture round in August 2022. Digital pharmacy platform Grinta raised an \$8 million seed round in November 2022.

### Logistics & Transportation

Nearly 80 transportation projects are in development in Egypt, including port development, marine passenger terminals, and multimodal transport. Together, these projects will cost an estimated \$6.6 billion. The World Bank has approved a \$400 million agreement to enhance Egypt's logistics and transportation sector and support a shift towards low-carbon transportation. Parcel delivery company Mylerz raised a \$9.6 million seed round in May 2022. Digital freight marketplace Naqla raised a \$10.5 million pre-Series A the same month.

## Reasons to Move Your Startup to Cairo

### Strategic Location

Egypt is located at the crossroads of three continents and sits close to major strategic routes such as the Suez Canal. The country is easily reached via 27 international airports, with major European cities just a few hours away. Egypt's population is growing by about 2 million people a year, and the country boasts the third largest economy in the region. Egypt is an ideal bridge for trade between Europe and MENA.

### Young, Skilled Talent

The median age in Egypt is 24.7, and Cairo is home to several high-quality universities, including the American University in Cairo, British University in Egypt, and Cairo University. Each year, over 600,000 graduates join the workforce, and 80% of the working population speaks English or other European languages. In late 2022, ITIDA made 29 new agreements with technology multinational companies, setting the path for 34,000 new jobs to be created within three years.

### Established Support

The IT Industry Development Agency is a one-stop shop for foreign IT and business services companies looking to invest in the country. Its Knowledge City Innovation Center provides startups with three years of exemption from rent and utilities and free incubation, among other incentives. The Technology Innovation and Entrepreneurship Center (TIEC) further supports entrepreneurs. AUC Venture Lab, Egypt's first university-based accelerator, operates in Cairo.



## Selected Startup Organizations

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 and Information Technology. Established in 2004, ITIDA's core mission is to spearhead the development of Egypt's IT industry to increase its global competitiveness and make it a key contributor to the country's economic growth.

KEY ECOSYSTEM PLAYERS

### Algebra Ventures

Egypt's leading tech VC firm. Algebra Ventures partners with founders to build transformative companies, and supports them by providing multi-stage capital, assisting with strategy and operations, and helping to build star teams.

### Cairo Angels

Egypt's first formal angel investment network. Formed in 2012, it invests in and supports early-stage startups in Egypt and across MENA. Cairo Angels facilitates due diligence, negotiates terms, and finalizes deal closing.

### Technology Innovation and Entrepreneurship Center (TIEC)

TIEC drives economic growth by providing knowledge and financial support to entrepreneurs and startups. Since 2010, it has sought to unleash creative solutions and innovative ideas that make impact in Egypt.

### American University in Cairo - Venture Labs

Egypt's first university-based startup accelerator program and leading accelerator in Africa and Middle East.

### Cubit Ventures

An early-stage venture fund backing tech startups driving digital transformation in Egypt. Cubit Ventures is capitalizing on Egypt's imminent economic ascent coupled with an accelerated digital adoption across all sectors.

**Qatar**  
**Doha**

**MEMBERS:**

Qatar Development Bank

*"Qatar has rapidly established itself as an accessible, stable, and innovative investment destination, a reputation earned through investment in the incubation and acceleration of local and international startups, strategic programming and mentorship, and international partnerships. Qatar Development Bank is focused on supporting this growth."*



**Abdulrahman Hesham Al Sowaidi**  
Acting CEO, Qatar Development Bank



**Highlights**

The success of the FIFA World Cup 2022 hosted by Qatar spotlighted the country's commitment to innovation and economic development. Qatar is one of the wealthiest countries in the world with the highest per capita in the MENA region. It ranks #1 in the world for foreign direct investment growth, according to the FDI Standouts Watchlist 2023 by fDi Intelligence. Qatar achieved a 70% annual growth in FDI projects between 2019 and 2022.

In May 2022, the Ministry of Commerce and Industry collaborated with Qatar Development Bank (QDB) and the World Economic Forum to launch Qatar's Advanced Manufacturing Hub (AMHUB). The following month, the India-Qatar Startup Bridge initiative was launched to connect the startup ecosystems of both countries. Qatar has also established various programs to support innovation and entrepreneurship, such as the TASMU Accelerator, XLR8, and the Lean Acceleration Program from Qatar Business Incubation Center (QBIC), which has a specific program to assist startups in manufacturing products in Qatar. Additionally, Microsoft launched a cloud data center region in Qatar in August 2022.

In November 2022, QDB organized the Qatar Entrepreneurship Conference (ROWAD) as part of the Global Entrepreneurship Week. The Digital Transformation Summit took place in March 2023 in Doha. At-Home-Doc, a telehealth startup, has raised \$6.3 million over four rounds, with the latest being a seed round of \$1.9 million in January 2023.



# Ecosystem by the Numbers

**ECOSYSTEM VALUE**  
(H2 2020 - 2022)

**\$685 m**



GLOBAL AVG. \$34.6 bn

**NUMBER OF UNICORNS**  
(H2 2020 - 2022)

**0**



GLOBAL AVG. 4

**SOFT. ENGINEER SALARY**  
(2022)

**\$37 k**



GLOBAL AVG. \$46 k

**TIME TO EXIT**  
(2018 - 2022)

**N/A**



GLOBAL AVG. 9 years

**TOTAL EARLY-STAGE FUNDING**  
(H2 2020 - 2022)

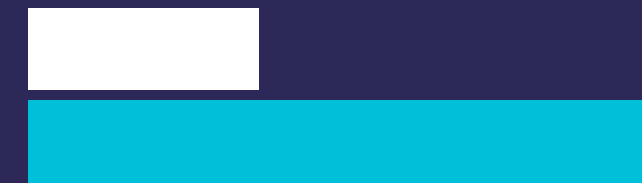
**\$94 m**



GLOBAL AVG. \$970 m

**MEDIAN SEED ROUND**  
(H2 2020 - 2022)

**\$301 k**



GLOBAL AVG. \$821 k

**EARLY-STAGE FUNDING GROWTH**  
(2019 - 20 VS. 2021 - 22)



Scale of 1 (lowest) to 10 (highest)

**EXIT AMOUNT**  
(2018 - 2022)

**\$9 m**



GLOBAL AVG. 11.3 bn

**ECOSYSTEM VALUE GROWTH**  
(H2 2020 - H2 2022 VS H2 2018 - H2 2020)

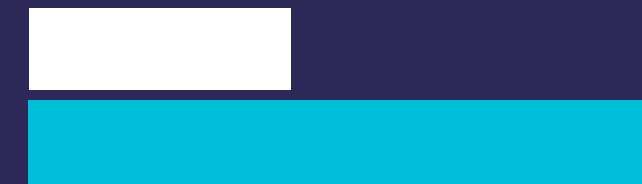
**133%**



GLOBAL AVG. 4.7%

**MEDIAN SERIES A ROUND**  
(H2 2020 - 2022)

**\$2.5 m**



GLOBAL AVG. \$6 m

**TOTAL VC FUNDING**  
(2018 - 2022)

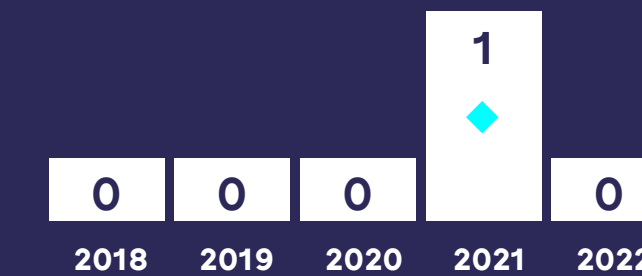
**\$205 m**



GLOBAL AVG. \$6.6 bn

**EXIT COUNT (#)**  
(2018 - 2022)

**1**



GLOBAL AVG. 91

## Sub-Sector Strengths

### Fintech

In August 2022, Qatar Central Bank (QCB) announced the launch of Google Pay in the country. QCB also issued licenses for Ooredoo Money and iPay by Vodafone Qatar, and all global digital wallet services are now accepted. Qatar FinTech Hub, developed by QDB to support the growth of Fintechs, offers startup support programs, and the Qatar Financial Centre's 2023–30 expansion strategy includes plans to introduce new financial products. Spendwisor, a mobile payment app, has raised an \$85 million till date with the latest seed round in January 2022.

### Logistics & Transportation

The FIFA World Cup Qatar 2022 significantly boosted the development of logistics and transportation. According to the Agility Emerging Markets Logistics Index 2022, Qatar topped all GCC countries in the domestic logistics segment and is the seventh most competitive of the world's leading emerging markets because of its digital readiness and favorable business conditions. In February 2022, the Investment Promotion Agency Qatar and FLYR Labs announced a partnership to advance the transportation sector through AI and digital solutions. In early 2022, GWC opened a logistics park catering specifically for MSMEs.

### Edtech

The Qatar Foundation WISE Edtech Accelerator Program supports Edtech innovation and community. In 2022, Edtech giant Byju's entered into an agreement with QIA, the sovereign wealth fund of the State of Qatar, to set up a subsidiary in Doha and build a R&D hub for Arabic content and products. The Doha Learning Days festival aims to take learning outside of formal educational settings, offering workshops and activities. The 2023 theme is Youth Empowerment, with a focus on empowering young people through skills-based workshops.

## Reasons to Move Your Startup to Doha

### Access to Capital

Qatar Development Bank's Ithmar scheme is an equity funding initiative that seeks to develop a new generation of Qatari entrepreneurs and companies. Al-Dhameen is a QDB program that encourages banks to offer financing to startups by issuing a letter of guarantee for up to 100% of the allocated funds up to 15 million QAR (\$4.1 million). In 2021, QDB partnered with Plug and Play to launch the ELV8 program, which offers tech startups in Qatar access to intensive mentoring and funding opportunities.

### Foreign Direct Investment

Qatar ranks #1 among 50 of the world's top destinations for foreign direct investment, according to the FDI Standouts Watchlist 2023 by fDi Intelligence. Qatar achieved 70% annual growth in FDI projects between 2019 and 2022. Its economy is expected to grow by 2.4% in 2023, while inflation is expected not to exceed 3.3%. In 2022, most of the FDI projects Qatar attracted came from companies in business and financial services and ICT. The U.S. is the leading source market for FDI into Qatar, accounting for a quarter of all projects.

### Qatar Free Zones Authority

Qatar Free Zones Authority has established free trade zones Umm Alhould and Ras Boufantas to attract foreign investment and international entrepreneurs. They offer a wide range of benefits, including 100% ownership in companies established in Qatar, no corporate tax or customs duty, and no personal income taxes. The zones are home to the Google Cloud's Center of Excellence in Qatar Free Zones, which offers training in cloud computing skills. Cybersecurity leader Thales opened a new headquarters and Digital Competence Centre in Qatar Free Zones in September 2022.



## Selected Startup Organizations

STARTUP GENOME MEMBERS

MEMBER

### Qatar Development Bank

Qatar Development Bank was established in 1997 under the name Qatar Industrial Development Bank, and it is a development entity 100% owned by the government. It was established to support investment in and develop local industries, and to drive economic development and diversification in the State of Qatar with a focus on the private sector. Its mission is to advance Qatar's economic development cycle by providing entrepreneurs and SMEs with a comprehensive suite of financial and advisory services and products, while supporting Qatar's economic and innovation agenda.

KEY ECOSYSTEM PLAYERS

### Qatar Business Incubation Center (QBIC)

QBIC is a unique mixed-use business incubation center providing support services to help entrepreneurs and companies who either have an idea to start a business or want to grow an existing business.

### Qatar Fintech Hub

QFTH brings together talented entrepreneurs, investors and enablers to develop disruptive technologies so that great visions become reality. It launches incubation and acceleration programs for Fintech startups.

### Qatar Science & Technology Park

QSTP provides a free zone and technology park that hosts leading global tech companies, mentor and support a network of startups and rising tech ventures, and have a value chain of acceleration, incubation, and funding programs.

### Digital Incubation Center

DIC was created to boost ICT innovation in Qatar, particularly among young people at the critical early stages of starting or growing a technology-related business.

### Doha TechAngels

DTA is Qatar's first private angel fund and is registered with Qatar Financial Center (QFC). It's focused on providing funding from seed to Series A rounds for early stage technology startups in Qatar, the Middle East, and beyond.

Oman  
**Muscat**

**MEMBERS:**

The Rising Omani Startups Programme

*“We are aware of the importance of the small and medium enterprises sector and the entrepreneurship sector, especially startups that are based on innovation, artificial intelligence, and advanced technologies. We are training young people and enabling them to take advantage of the opportunities offered by this vital sector to be a basic building block in the national economy.”*



**His Majesty Sultan Haitham Bin Tarik Al Said**  
Sultan of Oman



**Highlights**

Oman’s capital, Muscat, is making huge strides to establish itself as a hub for tech entrepreneurs. Oman 2040 sets out a vision for the transition from an oil-and-gas-based economy towards a more diverse, knowledge-based one. Oman Future Fund, \$5.2 billion available for investment across sectors of economic diversification, and \$26 billion National Initiative AI were launched in early 2023. Muscat was chosen as the Arab Digital Capital 2022.

The Rising Omani Startups Programme has a goal of enabling innovation, supporting the establishment of startups, linking founders with business opportunities, and identifying investment opportunities for expansion outside Oman. The Omani Start-ups Program provides support for entrepreneurs at all stages. Omantel Labs works in partnership with the Central Bank of Oman (CBO) to host a growing Fintech sandbox and provide a six-month accelerator for startups working on solutions within 5G, IoT, Cybersecurity, customer experience, and Big Data. ITHCA Group is an investment arm of the government focused on building Oman’s IT infrastructure and digital capabilities. Oman Technology Fund offers OTF Techween, a pre-seed fund program that provides funding, coworking space, and mentoring.

Local startups include payments platform Thawani Technologies, IT consultancy Rihal, IoT-enabled logistics company Emushrif, and transportation app Otaxi. Crowdfunding platform Beehive connects investors with startups, and Ethisx is an investment platform focused on impact-driven crowd-investments and financing. In 2022, Qatar’s Snoonu acquired Omani food-delivery platform Akeed and Mexican car-buying platform Kavak bought Muscat’s Carzaty for an undisclosed sum. Saudi Healthtech labayh acquired OTF-funded Nafas in March 2023.



# Ecosystem by the Numbers

**ECOSYSTEM VALUE**  
(H2 2020 - 2022)

**\$301 m**



GLOBAL AVG. \$34.6 bn

**NUMBER OF UNICORNS**  
(H2 2020 - 2022)

**0**



GLOBAL AVG. 4

**SOFT. ENGINEER SALARY**  
(2022)

**\$23 k**



GLOBAL AVG. \$46 k

**TIME TO EXIT**  
(2018 - 2022)

**4 years**



GLOBAL AVG. 9 years

**TOTAL EARLY-STAGE FUNDING**  
(H2 2020 - 2022)

**\$20 m**



GLOBAL AVG. \$970 m

**MEDIAN SEED ROUND**  
(H2 2020 - 2022)

**\$200 k**



GLOBAL AVG. \$821 k

**EARLY-STAGE FUNDING GROWTH**  
(2019 - 20 VS. 2021 - 22)



Scale of 1 (lowest) to 10 (highest)

**EXIT AMOUNT**  
(2018 - 2022)

**\$19 m**



GLOBAL AVG. \$11.3 bn

**ECOSYSTEM VALUE GROWTH**  
(H2 2020 - H2 2022 VS. H2 2018 - H2 2020)

**70%**



GLOBAL AVG. 4.7%

**MEDIAN SERIES A ROUND**  
(H2 2020 - 2022)

**\$1.3 m**



GLOBAL AVG. \$6 m

**TOTAL VC FUNDING**  
(2018 - 2022)

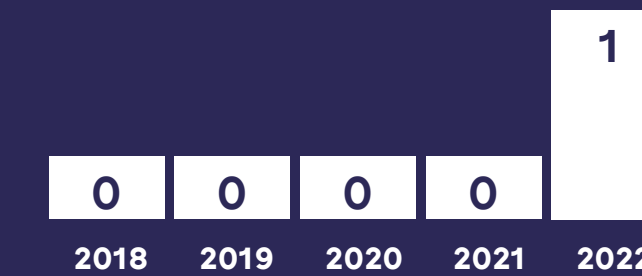
**\$28 m**



GLOBAL AVG. \$6.6 bn

**EXIT COUNT (#)**  
(2018 - 2022)

**1**



GLOBAL AVG. 91

## Sub-Sector Strengths



### Ecommerce

By 2025, the value of Oman's Ecommerce market is predicted to reach \$868 million. The sultanate has an estimated internet penetration rate of over 95.2%, and has high mobile broadband penetration and a robust 4G network. Tanweel, Bon, and X Garage are some notable Ecommerce startups from Oman. Delivery Hero's regional startup Talabat has operated successfully in the country since 2018. Floward is an ecommerce platform for flowers and gifts.



### Cleantech

Oman is rapidly building out its Cleantech infrastructure, targeting \$140 billion investments to develop the green hydrogen sector alone by 2050. The Ministry of Transport, Communications and Information Technology has a goal of all new vehicles being electric or hydrogen-fueled by 2050. At Oman Sustainability Week 2022, Oman Shell and Oman Airports Management Company announced Shell's Green Hydrogen for Mobility project, Oman's first hybrid hydrogen station. Carbon mineralization startup 44.01 was the winner of the 2022 Earthshot Prize.



### Fintech

The Central Bank of Oman (CBO) is working on Open Banking and digital currency initiatives. The country's roadmap envisions several accelerators, a regulatory sandbox, a cloud-computing framework, and an e-KYC initiative. CBO and Omantel have partnered on a Fintech accelerator for high-potential startups. Participating companies receive space at Omantel Innovation Labs and gain access to a network of over 100,000 investors, corporates, and mentors. Muscat Fintech startups include Bima, Thawani, and Wadiaa.

## Reasons to Move Your Startup to Muscat

### Strategic Location

Muscat is at a key position on maritime routes linking Asia with Africa and Europe, providing trade connections and ample opportunity for advanced technologies in port operations, logistics, supply-chain management, and supply-chain finance. The nation's free-trade zones include Duqm Free Zone, Sohar Free Zone, Salalah Free Zone, Maziona Free Zone, Innovation Park Muscat, and Knowledge Oasis Muscat.

### Business-Friendly Environment

Companies registered in Oman only have to pay a 15% corporate tax. No personal income tax applies, and goods move free of customs duties in the GCC. Invest Oman offers free investment advisory services. Oman scores high in the IPRI ranking for IP rights, at #4 in MENA and #32 in the world. The nation has many trade agreements, including the U.S.-Oman Free Trade Agreement, which allows U.S. investors the same rights as Omani investors.

### Dedicated Support

The Rising Omani Startups Programme provides programs, funding, and networking opportunities. The Oman Talent Hub offers work experience in advisory and technology fields. Invest Oman promotes Oman as a base for businesses and provides soft-landing support. The Ministry of Higher Education Research and Innovation (MOHERI) provides comprehensive higher education, leading to a knowledge society.



## Selected Startup Organizations

STARTUP GENOME MEMBERS

MEMBER

### The Rising Omani Startups Programme

The Rising Omani Startups Program is a three-year national program aimed at stimulating the ecosystem of emerging startups based on advanced technology and innovation in the Sultanate of Oman, contributing to spreading the culture of startups in educational institutions, enhancing community awareness of their importance, and escalating the Omani startups to the regional and global markets. The programme has three main pillars: capacity building, financing and investing, and a supportive regulatory framework.

KEY ECOSYSTEM PLAYERS

#### Authority for SME Development

The Authority for SMEs Development has registered over 100,000 SMEs and startups. It offers six incubation programs to empower innovation and technology based startups, and supports youth orientation toward entrepreneurship to achieve sustainable growth of the national economy. The authority provides funding to guarantee the continuity of SMEs managed by Omanis. It has loaned OMR 100 million to SMEs and startups. The 190,000 SMEs in Oman contribute 26% of Oman's GDP.

#### Omantel Innovation Lab

Omantel Innovation Labs engages a community of startups, corporate partners, academia, investors, and government entities to create a holistic ecosystem. It offers a six-month accelerator program that provides specialized technology and entrepreneurial support to technology startups working within 5G, IoT, Cyber Security, customer experience, and Big Data.

#### The Ministry of Higher Education Research and Innovation (MOHERI)

MOHERI has a vision of a comprehensive higher education, sustainable learning, and scientific research leading to a knowledge society and competitive national capabilities. It offers opportunities in entrepreneurship education, including workshops and dedicated university programs.

#### The Ministry of Transport, Communications and Information Technology

The Ministry strives to make transport and logistics the second source of national income and within the top 10 in logistics performance at the international level by 2040. It is also responsible for formulating and implementing digital strategies and programs, including the National Digital Transformational Program, the National Space Program, the National Digital Economy Program 2021-2025, and Sas Accelerator Program.

#### ITHCA Group

ITHCA Group (Oman ICT Group) was established to focus investments on the technologies of the fourth industrial revolution, as well as investing in the necessary infrastructure. Its core functionalities are to actively work on building Oman's IT infrastructures, its networks, and enhance Oman's digital capabilities. OMR 52 million is allocated for the fourth industrial revolution, with 29% for VC investments. OTE, part of ITHCA Group, has invested in 163 startups in three different stages. Ninety-two are Omani startups.

#### Oman Investment Authority

Oman Investment Authority is the Sultanate of Oman's investment arm that has been mandated to manage and invest the state's funds and assets to advance targeted economic sectors. It has spent 187 million OMR on SMEs and startups in 2022 whereby more than 8,000 SMEs and startups were supported. It invests in more than 40 countries worldwide in both public and private markets.

## Palestine

# Palestine

*“We are seeing a whole new wave of Palestinian entrepreneurs who understand the regional and international markets and what it takes to penetrate them, despite how young the Palestinian ecosystem is and the many challenges the entrepreneurs face.”*



**Khaled Abu Alkheir**

Early-Stage Financing Program Manager, IPSD

## Highlights

Despite a challenging regional and global context, Palestine continues to nurture its nascent startup ecosystem. In January 2023, regional business leaders committed to support Palestinian economic resilience as an important building block to open new pathways to a two-state solution.

VC firm Ibtikar announced the close of a \$15 million fund in January 2022 and has already invested \$1.4 million in three startups founded by Palestinians. In December 2022, Intersect Innovation Hub and SPARK launched a new program to support Palestinian entrepreneurs. Gaza Sky Geeks is a tech hub housing tech upskilling, coworking spaces, and a startup accelerator. The Gaza Code Academy is a joint project of Gaza Sky Geeks and Founders & Coders. The GSG Freelance Academy is a training program in online freelancing, social media, and professional English. The Startup Program focuses on digitizing services and business models across Palestine.

In March 2022, Startups Without Borders together with Meta launched Boost Without Borders, a program aimed at supporting 500 entrepreneurs, building the capacity of support organizations, and providing \$100,000 in grants for startups. The Palestinian Mentorship Program matches Palestinian entrepreneurs with global experts to build bridges between Palestine’s ecosystem and markets abroad. The Factory 4.0 Accelerator provides matchmaking with corporate partners, mentoring, a state-of-the-art fabrication lab, and seed money. Founder Institute Palestine 2023 will kick off in August. The Palestine CleanTech Innovation Competition concluded in January 2022. The winners will participate in the Global Cleantech Innovation Program in Silicon Valley. The IGNITE Investment Readiness Program prepares ambitious Palestinian startups to raise equity investment.

# Ecosystem by the Numbers

**ECOSYSTEM VALUE**  
(H2 2020 - 2022)

**\$69 m**



GLOBAL AVG. \$34.6 bn

**NUMBER OF UNICORNS**  
(H2 2020 - 2022)

**0**



GLOBAL AVG. 4

**SOFT. ENGINEER SALARY**  
(2022)

**0**



GLOBAL AVG. \$46 k

**TIME TO EXIT**  
(2018 - 2022)

**N/A**



GLOBAL AVG. 9 years

**TOTAL EARLY-STAGE FUNDING**  
(H2 2020 - 2022)

**\$4.3 m**



GLOBAL AVG. \$970 m

**MEDIAN SEED ROUND**  
(H2 2020 - 2022)

**\$250 k**



GLOBAL AVG. \$821 k

**EARLY-STAGE FUNDING GROWTH**  
(2019 - 20 VS. 2021 - 22)



Scale of 1 (lowest) to 10 (highest)

**EXIT AMOUNT**  
(2018 - 2022)

**0**



GLOBAL AVG. 11.3 bn

**ECOSYSTEM VALUE GROWTH**  
(H2 2020 - H2 2022 VS. H2 2018 - H2 2020)

**2%**



GLOBAL AVG. 4.7%

**MEDIAN SERIES A ROUND**  
(H2 2020 - 2022)

**0**



GLOBAL AVG. \$6 m

**TOTAL VC FUNDING**  
(2018 - 2022)

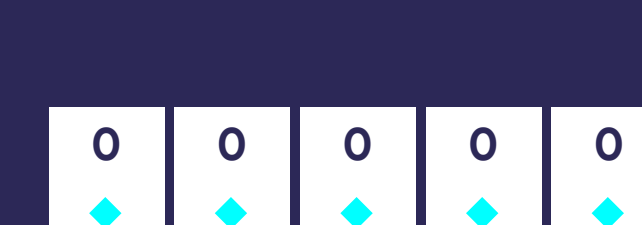
**\$12 m**



GLOBAL AVG. \$6.6 bn

**EXIT COUNT (#)**  
(2018 - 2022)

**0**



GLOBAL AVG. 91

2018 2019 2020 2021 2022



## Sub-Sector Strengths

### Fintech

The Palestine Monetary Authority introduced its Fintech Regulatory Sandbox in March 2022. GIZ and SANAD TAF launched a Fintech for a Future accelerator program targeting the cross-border Fintech ecosystem between Palestine and Jordan. In October 2022, the Palestine Capital Market Authority (PCMA) launched the Insurtech Wizard Challenge. PCMA also partnered with open innovation firm Fintech Galaxy to create the Insurtech Wizard Hackathon. Both initiatives are aimed at advancing financial inclusion in Palestine.

### Edtech

Palestine's numerous Edtech startups include Jeel Code, which teaches kids to code in Arabic; coaching platform Coachwhizz; and Hessa, which connects students and tutors. EdTech Hub provides workshops and programs. In March 2022, the World Bank approved an eight-year program to address key education challenges in Palestine. With \$20 million in funding already approved, the program aims to improve education outcomes and increase pathways leading to tertiary education.

### Life Sciences

Palestine's Life Sciences startups include telemedicine companies Tebfact and Tanaffas, appointment-booking system Doctor On Time, and startups focused on the prevention of chronic diseases like Wikaya and Dawsat. Jerusalem-based SynergyMed is developing non-surgical cancer treatments. In September, healthtech startup AIRazi won the Startups Without Borders pitch competition, held in partnership with Meta.

## Reasons to Move Your Startup to Palestine

### Local Connectedness

The Palestinian ecosystem benefits from a strong sense of community, both locally and internationally and particularly in MENA and the U.S. The Palestinian government created the Ministry of Entrepreneurship and Empowerment (MoEE) to help catalyze the growth of the ecosystem, and its Palestinian Entrepreneurship Cluster brings together Palestine's support organizations. The NEXUS program supports Palestinian firms that are ready to expand into new markets.

### Skilled Talent

Palestinians are highly literate, well-educated, and many have a high level of English. Universities in Palestine produce more than 4,000 STEM graduates annually, about 1,000 of whom go on to work for outsourced international companies. In February 2022, Google announced a \$10 million Arabic-language training program in mobile and cloud/AI app development. Google and its partners will provide mentorship, organize job fairs, and provide grants for access to incubators, among other benefits.

### Dedicated Support

Adopted in March 2022, the Companies Law modernizes and simplifies the business-registration process. The draft Start-up Act is intended to provide a simplified business-registration process for startups. Flow Accelerator Map and Polaris, from Intersect Accelerator and the Bank of Palestine, provide data on digital businesses in Palestine. SPARK and its partners deliver skills training for youth to access remote and digital job opportunities in Palestine and globally.

UAE  
**Sharjah**

**MEMBERS:**

Sharjah Entrepreneurship Center

*“Sharjah continues to be the leading destination for entrepreneurs creating positive impact, driving innovative solutions and contributing to the nation’s socio-economic growth. Sheraa is proud to be the catalyst behind these relentless changemakers.”*



**Najla Al Midfa**

CEO, Sharjah Entrepreneurship Center (Sheraa)



**MENA Ecosystem in Affordable Talent**

**Top 10**



**MENA Ecosystem in Bang for Buck**

**Top 5**



**MENA Ecosystem in Performance**

**Top 15**

## Highlights

When it comes to innovation, the UAE is aiming high, and Sharjah is playing a key role in reaching these ambitious goals. The National Agenda for Entrepreneurship includes 29 initiatives and incentive packages aimed at having one million startups and 10 locally incubated unicorns. In October 2022, the UAE Ministry of Economy launched the Entrepreneurial Nation 2.0 program, which seeks to develop more than 8,000 SMEs and startups by 2030.

The Sharjah Entrepreneurship Centre (Sheraa) has supported more than 150 startups since its inception in 2016 through a soft-landing scheme and accelerator and incubation programs that provide access to mentorship, customers, and capital. Sharjah Startup Studio (s3) is a six-month equity-free accelerator program that is personalized to serve participating startups’ needs. It uses a collaborative model to help founders develop an MVP and launch, including access to seed funding, dedicated experts, product development capabilities, and business framework creation and setup. Sheraa has a focus on Edtech, Cleantech, and creative industries in 2023, with the goal of producing more local impact-driven startups. The organization has the goal of developing future-ready talent and has upskilled more than 6,000 youth in entrepreneurship and skills of the future. Other local startup support programs include the Badiri Entrepreneurship Programme, which has graduated more than 1,000 female founders.

The Sharjah Investment Forum took place in February 2023, providing valuable networking opportunities and investment connections and featuring a pitch competition and hackathon. Sharjah and Hong Kong signed a strategic investment partnership at the event.

## Ecosystem by the Numbers

**ECOSYSTEM VALUE**  
(H2 2020 - 2022)

**\$349 m**



GLOBAL AVG. \$34.6 bn

**NUMBER OF UNICORNS**  
(H2 2020 - 2022)

**0**



GLOBAL AVG. 4

**SOFT. ENGINEER SALARY**  
(2022)

**\$31 k**



GLOBAL AVG. \$46 k

**TIME TO EXIT**  
(2018 - 2022)

**6 years**



GLOBAL AVG. 9 years

**TOTAL EARLY-STAGE FUNDING**  
(H2 2020 - 2022)

**\$46 m**



GLOBAL AVG. \$970 m

**MEDIAN SEED ROUND**  
(H2 2020 - 2022)

**\$550 k**



GLOBAL AVG. \$821 k

**EARLY-STAGE FUNDING GROWTH**  
(2019 - 20 VS. 2021 - 22)



Scale of 1 (lowest) to 10 (highest)

**EXIT AMOUNT**  
(2018 - 2022)

**\$9.5 m**



GLOBAL AVG. \$11.3 bn

**ECOSYSTEM VALUE GROWTH**  
(H2 2020 - H2 2022 VS. H2 2018 - H2 2020)

**50%**



GLOBAL AVG. 4.7%

**MEDIAN SERIES A ROUND**  
(H2 2020 - 2022)

**\$3 m**



GLOBAL AVG. \$6 m

**TOTAL VC FUNDING**  
(2018 - 2022)

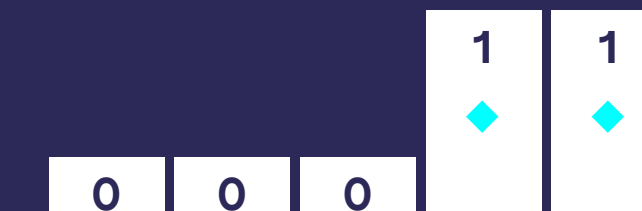
**\$204 m**



GLOBAL AVG. \$6.6 bn

**EXIT COUNT (#)**  
(2018 - 2022)

**2**



GLOBAL AVG. 91



## Sub-Sector Strengths

### Cleantech

In February 2023, the Sharjah Entrepreneurship Center launched the Access Sharjah Challenge 2023, calling for global startups to implement solutions with corporate partners worth AED 250,000 (\$70,000) in commercial value. Sharjah Waste to Energy plant aims to make Sharjah the Middle East's first zero-waste city. Sharjah Sustainable City is a planned community designed to improve quality of life for residents without compromising future generations. It includes smart-home automation, water-saving appliances, and other Cleantech innovations.

### Digital & Creative Industries

Sharjah Media City (Shams) is a free zone dedicated to creative startups. Created in collaboration with UAE-based venture building studio Grow Valley, Shams Valley aims to shape the future of media in the region. Through a partnership with venture debt platform Funding Souq, Shams also provides financing for startups and SMEs. Sheraa provides strategic connections and introductions to both public and private sector partners, which provide creative startups with a competitive advantage and allows them to kick-start their impact.

### Edtech

The pandemic accelerated the adoption of digital technology education in the Gulf, and with the support of the University City in Sharjah, the sub-sector is poised to grow further. Sheraa-incubated Oktopi acquired the U.K. Edtech startup Tutor House in October 2022. Online learning platform Almentor partnered with HBMSU to launch an entrepreneurship initiative for Arab youth. Almentor has raised \$24.5 million over six rounds, with the most recent a March 2023 \$10 million Series C round.

## Reasons to Move Your Startup to Sharjah

### Skilled Talent

The University City of Sharjah is home to more than 20 educational institutions. Sheraa has hubs at both the American University of Sharjah and University of Sharjah, providing youth incubation and upskilling programs as well as the Startup Career Fair, which provides startups with the opportunity to connect with exceptional talent from both of the universities.

### Growing Economy

In 2021, Sharjah's GDP was \$35.5 billion. The UAE boasted GDP growth of 7.6% in 2022 and has projected growth of 4.2% in 2023. The country offers a business-friendly environment, including modern legislation, future-ready infrastructure, a talented workforce, and an ecosystem of more than 60,000 SMEs and startups, and Sharjah is a major part of this growing economy.

### Dedicated Support

The Sharjah Entrepreneurship Center (Sheraa) is a government-supported entity with a mandate to build the entrepreneurial ecosystem and support entrepreneurs. Invest in Sharjah is a strategic partner for global investors looking to grow their business in the emirate. It provides expert market knowledge, access to investment opportunities across a range of sectors and industries, and step-by-step guidance.

## Selected Startup Organizations

### STARTUP GENOME MEMBERS

[MEMBER](#)

### Sharjah Entrepreneurship Center

The Sharjah Entrepreneurship Center (Sheraa) is a government-supported entity launched in 2016 with a mandate to build the entrepreneurial ecosystem in Sharjah and support entrepreneurs as they build and grow innovative startups that will contribute positively to the region's economy. Sheraa works with entrepreneurs to build, launch, and scale startups that go on to make a significant impact in their communities. The organization also has a strong focus on empowering the next generation of changemakers, through hackathons and capacity building programs at university hubs. Sheraa also hosts the annual Sharjah Entrepreneurship Festival, which has attracted over 18,000 attendees over six years. Its offerings support the full spectrum of entrepreneurship, from motivating youth to scaling startups, driving Sharjah's vision of being a world-class entrepreneurship hub.

### KEY ECOSYSTEM PLAYERS

### Invest in Sharjah

Sharjah's investment promotion agency and a strategic partner for global investors looking to grow their business in the emirate of Sharjah.

### Sharjah Research Technology & Innovation Park (SRTIP)

SRTI Park aims to develop and manage an innovation ecosystem within a free zone that promotes Research and Development and supports enterprise activities.

# Israel Tel Aviv

- #5 Global Ranking
- #2 Cleantech Ranking
- #4 Fintech Ranking

**MEMBERS:**  
Tel Aviv Global

*“We launched our global innovation hub in Tel Aviv in 2018 to collaborate with the best startups in the world. Since then, the quality, creativity, and community have not ceased to amaze us.”*



**Hemdat Sagi**  
Chief of Strategy & Business Development, Konnect – Volkswagen Group Innovation Hub TLV



## Highlights

Tel Aviv climbed two positions, to #5, in Startup Genome’s Global Startup Ecosystem Ranking 2023, despite a challenging year for the tech industry worldwide. Although investment volume fell by almost half compared to 2021’s record year for fundraising (to \$15.5 billion), 2022 surpassed 2020 and previous years, continuing the ecosystem’s growth trajectory toward maturity. Similarly, the value of acquisitions and IPOs was down 80% from \$82.5 billion in 2021 to \$16.9 billion, while still surpassing 2020’s exit total by 10%.

Beyond resilience, Tel Aviv also experienced direct year-on-year growth across key categories in 2022. Seed investments grew by 10% compared to 2021. The ecosystem saw two \$1 billion+ exits in 2022, including AI-based Fintech Pagaya’s \$8.5 billion IPO, and the number of unicorns grew from 33 to 57. AI-powered optimization software company Granulate was acquired by Intel for \$650 million in May 2022 and Sling Insuretech’s \$665 million venture round in April 2022 put the company’s pre-money valuation at \$2.9 billion.

Additionally, a national plan for developing human capital in high-tech was approved in September 2022. A pilot project is underway and will expand in 2023, prioritizing under-represented populations. The government also has a goal of adding 4,500 personnel from the Arab sector, 2,500 from the ultra-orthodox sector, and for 45% of trainees to be women. In June 2022, the government announced an \$870 million plan to boost Cleantech innovation. The Back to Tech Incentive program aims to attract Israeli technology professionals living abroad.



## Ecosystem by the Numbers

**ECOSYSTEM VALUE**  
(H2 2020 - 2022)

**\$235 bn**



GLOBAL AVG. \$34.6 bn

**NUMBER OF UNICORNS**  
(H2 2020 - 2022)

**57**



GLOBAL AVG. 4

**SOFT. ENGINEER SALARY**  
(2022)

**\$77 k**



GLOBAL AVG. \$46 k

**TIME TO EXIT**  
(2018 - 2022)

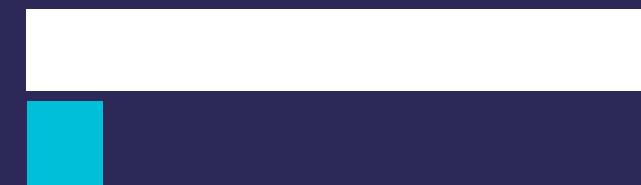
**7.4 years**



GLOBAL AVG. 9 years

**TOTAL EARLY-STAGE FUNDING**  
(H2 2020 - 2022)

**\$8.3 bn**



GLOBAL AVG. \$970 m

**MEDIAN SEED ROUND**  
(H2 2020 - 2022)

**\$2.8 m**



GLOBAL AVG. \$821 k

**EARLY-STAGE FUNDING GROWTH**  
(2019 - 20 VS. 2021 - 22)



Scale of 1 (lowest) to 10 (highest)

**EXIT AMOUNT**  
(2018 - 2022)

**\$47 bn**



GLOBAL AVG. 11.3 bn

**ECOSYSTEM VALUE GROWTH**  
(H2 2020 - H2 2022 VS. H2 2018 - H2 2020)

**58%**



GLOBAL AVG. 4.7%

**MEDIAN SERIES A ROUND**  
(H2 2020 - 2022)

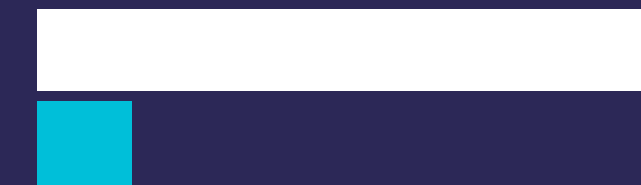
**\$10 m**



GLOBAL AVG. \$6 m

**TOTAL VC FUNDING**  
(2018 - 2022)

**\$45 bn**



GLOBAL AVG. \$6.6 bn

**EXIT COUNT (#)**  
(2018 - 2022)

**439**



GLOBAL AVG. 91

## Sub-Sector Strengths

### AI, Big Data & Analytics

Founded in 2017, the annual Future of AI event brings together leading startups and big tech companies in AI. Data observability platform Databand was acquired by IBM for \$150 million in June 2022. Streaming analytics company Coralogix, which was founded in Tel Aviv, raised a \$142 million Series D in June 2022.

### Cybersecurity

YL Ventures, a VC firm focused on Israel-based Cybersecurity companies, raised a \$400 million fifth fund in May 2022, the largest seed-stage Cybersecurity fund ever raised by a VC firm. Go-to-market security company CHEQ raised a \$150 million Series C in February 2022, putting the company's pre-money valuation at \$850 million. Cloud security firm Wiz closed a \$300 million Series D in February 2023 at a \$10 billion valuation.

### Life Sciences

In May 2022, Israel launched a five-year plan that includes investing \$127 million in advancing bio-convergence. The same month, Israel Biotech Fund (IBF) and Lonza, a global development and manufacturing partner, announced an agreement in which Lonza will offer pre-investment due diligence and support to IBF's portfolio companies. CytoReason signed a \$110 million, five-year extension of its AI-powered drug development deal with Pfizer in September 2022. AI-powered healthtech Aidoc raised \$110 million in June 2022, putting its pre-money valuation at \$586 million.

## Reasons to Move Your Startup to Tel Aviv

### Established Startup Scene

Israel has the most startups per capita of any country. More than 2,000 startups were founded in the past decade, as well as another 3,000 SMEs and high-tech companies, 30 growth companies, 50 large technology companies, and 300 R&D centers. Tel Aviv University is ranked #8 globally for the number of VC-backed entrepreneurs among alumni.

### Tax Incentives

The Investment Law allows foreign companies to benefit from a reduced company tax rate and investment grants. Another government incentive program provides employment grants for R&D centers and large enterprises. The four-year grant scheme covers 25% of the employer's cost of salaries for each new employee on average.

### Dedicated Support

The Israel Innovation Authority (IIA) provides several support programs, including grants to cover partial R&D costs. The Global Enterprise R&D Collaboration Framework aims to encourage partnerships between multinational corporations and Israeli startups. The City of Tel Aviv Tech is an entity of the City of Tel Aviv that fast tracks municipal services, opportunities for collaboration and promotion, workforce training, and research.

## Selected Startup Organizations

### STARTUP GENOME MEMBERS

MEMBER

#### Tel Aviv Global

Tel Aviv Tech is a strategic initiative of the City of Tel Aviv operated by Tel Aviv Global and focused on strengthening connections between the tech industry and the municipality and its residents. Tel Aviv Global initiates collaboration between public entities and local tech companies, fast tracks municipal services, facilitates professional training for residents, welcomes delegations and prospective companies, and advances the Startup City brand globally.

### KEY ECOSYSTEM PLAYERS

#### Tel Aviv University

Located in the heart of Israel's high-tech, business and culture center, Tel Aviv University (TAU) represents the country at its best – dynamic, innovative, cosmopolitan, and forward-looking.

#### HealthIL

An NGO fostering technological transformation in healthcare systems in Israel and abroad via a network of over 100 healthcare innovation managers, 1,100+ startups, 1,200+ pilots, and 160+ implementation projects.

#### Startup Nation Central

Leading NGO facilitating the business development of Israel's innovation ecosystem through global partnerships, innovation diplomacy, and ecosystem policy, reporting, and research tools.

#### Shani Zanescu

All things Climatetech. Shani Zanescu is an early-stage investor and co-founder of PLANETech, Israel's leading NGO to advance the field.

#### Guy Tytunovich

A serial entrepreneur, co-founder and CEO of CHEQ, a unicorn go-to-market security company, and frequent speaker and contributor.

#### CityZone

A living lab for entrepreneurs advancing solutions to urban challenges in partnership with the Tel Aviv Municipality, Tel Aviv University, and the Atidim Corporate Park.



Tunisia  
**Tunisia**

**MEMBERS:**

Smart Capital / Caisse des Dépôts et Consignations (CDC)

*"Tunisia is in the top 10 emerging ecosystems in terms of available funding for startups and innovative SMEs. It is ranked first in the MENA region in terms of accessible talent."*



**Ms. Nejia Gharbi**  
CEO, CDC Tunisia

<b>Global Ecosystem in Affordable Talent</b>	<b>MENA Ecosystem in Funding</b>	<b>MENA Ecosystem in Knowledge</b>
<b>Top 15</b>	<b>Top 10</b>	<b>Top 10</b>

## Highlights

In 2018, Tunisia was the first African country to sign a startup bill into law. Since then, Tunisia has officially recognized more than 650 startups, launched a €100 million fund of funds, and started the Flywheel program to support the ecosystem. Startup Tunisia offers grants of up to TND 200,000 (\$63,000) to support the launch of new startup support programs. Air2 offers up to TND 200,000 (\$63,000) to seed-stage startups to support them as they raise larger amounts.<sup>2</sup>

In 2022, KfW Development Bank subscribed €20 million to the ANAVA fund, which reached €60 million. ANAVA invested in two prominent VC funds in 2022: 216 Capital Fund I, a seed-stage fund that backs Tunisian tech-startups managed by 216 Capital Venture, and Badia Impact Squared, a late-stage fund investing in startups across MENA and managed by Silicon Badia. Badia Impact Squared led a \$20 million round for Expensya, a Tunisian B2B Expense Management Platform, in 2021.

The Tunisia Support Project for Innovative Startups and SMEs received a \$75 million loan from the ANAVA fund of funds, including \$17 million to the \$43 million INNOVATECH Fund, which launched in February 2022. The government's 2023–2025 Development Plan includes green projects worth €2.1 billion, including a green hydrogen project, and a national roadmap on green hydrogen was launched in March 2023. Notable deals in the ecosystem include grocery delivery company Appetito's acquisition of last-mile delivery startup Lamma for \$12.5 million in June 2022 and Edtech GOMYCODE's \$8 million Series A the same month.

## Ecosystem by the Numbers

**ECOSYSTEM VALUE**  
(H2 2020 - 2022)

**\$120 m**



GLOBAL AVG. \$34.6 bn

**NUMBER OF UNICORNS**  
(H2 2020 - 2022)

**0**



GLOBAL AVG. 4

**SOFT. ENGINEER SALARY**  
(2022)

**\$7 k**



GLOBAL AVG. \$46 k

**TIME TO EXIT**  
(2018 - 2022)

**11 years**



GLOBAL AVG. 9 years

**TOTAL EARLY-STAGE FUNDING**  
(H2 2020 - 2022)

**\$22 m**



GLOBAL AVG. \$970 m

**MEDIAN SEED ROUND**  
(H2 2020 - 2022)

**\$100 k**



GLOBAL AVG. \$821 k

**EARLY-STAGE FUNDING GROWTH**  
(2019 - 20 VS. 2021 - 22)



Scale of 1 (lowest) to 10 (highest)

**EXIT AMOUNT**  
(2018 - 2022)

**\$28 m**



GLOBAL AVG. 11.3 bn

**ECOSYSTEM VALUE GROWTH**  
(H2 2020 - H2 2022 VS H2 2018 - H2 2020)

**17%**



GLOBAL AVG. 4.7%

**MEDIAN SERIES A ROUND**  
(H2 2020 - 2022)

**\$4.7 m**



GLOBAL AVG. \$6 m

**TOTAL VC FUNDING**  
(2018 - 2022)

**\$81 m**



GLOBAL AVG. \$6.6 bn

**EXIT COUNT (#)**  
(2018 - 2022)

**3**



GLOBAL AVG. 91

2018 2019 2020 2021 2022

## Sub-Sector Strengths

### AI, Big Data & Analytics

The Tunisian national roadmap 2020–2023 includes investments in AI R&D, policy reforms to enable development in the area, and a focus on international cooperation. AI Hack Tunisia 2022, which took place in August, included a Machine Learning Challenge. German biotech company BioNTech acquired Tunisian AI startup InstaDeep for £562 million (\$680 million) in January 2023.

### Life Sciences

Connect'Innov supports and promotes Life Sciences innovation, particularly in telehealth and biotech. The Tunisian Association for Health Promotion, in partnership with the World Health Organisation, hosted the Africa and Middle East Digital Health Conference and Exhibition in Tunisia in September 2022.

### Blue Economy

The UN SwitchMed Blue Economy initiative includes a project to make Tunisia's aquaculture value chain more efficient and sustainable. SwitchMed II uses technology to improve fish farm economics and reduce environmental impact. The government has established two research institutes related to the ocean. In 2022, Tunisia released a report on the Blue Economy that includes initial guidelines for a national strategy. The World Bank is advising on institutional policies and in November 2022 announced a \$13.5 million Blue Economy program to catalyze financing on the African coast.

## Reasons to Move Your Startup to Tunisia

### Strategic Location

Positioned at the northern tip of Africa, Tunisia is at the heart of the Euro-Mediterranean and Middle East logistics chain and is an ideal export platform to several global growth markets. Tunisia is in the same time zone as many European countries, making it an ideal base for remote workers serving the continent.

### Entrepreneurship Education

All of Tunisia's universities now offer courses in entrepreneurship. Student enterprise clubs, business-plan contests, and ideas competitions are driving interest in entrepreneurship among young people. The Tunisia Support Project for Innovative Startups and SMEs aims to build entrepreneurial skills, and there are more than 50 startup support organizations in the ecosystem.

### Dedicated Support

The Startup Act makes startups exempt from corporate tax and allows them to apply for a label that provides the right to open accounts in foreign currency, enabling them to invest freely and without authorizations. It also allows startups to create subsidiaries abroad and take shareholdings in companies abroad. Tunisia has 15 cyberparks covering various specialties that work as incubators for ICT businesses.



## Selected Startup Organizations

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's three components: Startup Act, the law and its incentives; Startup Invest, which oversees funding; and Startup Ecosystem, which backs supporting structures such as incubators, accelerators, and startup studios. Smart Capital operates under the authority of both the Ministry of Communication Technologies and Digital Transition and the Ministry of Economy, Finance and Support for Investment.

KEY ECOSYSTEM PLAYERS

### Open Startup Tunisia

Open startup is a Tunisian organization aspiring to bridge the gap between the educational system and the entrepreneurial ecosystem in Tunisia, MOROCCO, SENEGAL and Jordan.

### Beta Cube

Betacube is a Tech Venture builder that invests, builds, and grows B2B-based startups in Fintech and Mobility.

### Novation City

Novation City runs a full program from ideation to prototyping for AI Startups and Industry 4.0 solutions.

MEMBER

### Caisse des Dépôts et Consignations (CDC)

Caisse des Dépôts et Consignations (CDC) is a public institution created in 2011. As the Private Equity arm of the government, it supports state policies in sustainable development goals and projects. The CDC distinguishes itself by its unique economic model, and is characterized by its mode of governance, its investment doctrine, and its risk management. It is a key player in the long-term economic and social development of Tunisia.

### Africinvest

Africinvest is an investment and financial services company. The company has dedicated investment teams focused on North Africa and Sub-Saharan Africa.

### Connect'innov

Connect'innov Lab is the first accelerator 100% dedicated to startups in the HealthTech vertical. It provides technical support and access to global markets.

### 216 Capital

216 Capital is a venture capital firm focusing on early-stage technology companies.



# NORTH AMERICA

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# Regional Insights NORTH AMERICA

Following the general trend of 2022, North America experienced a decline in overall deal activity from 2021. Most notably, Series B+ deal amounts dropped 41% (from \$203 billion to \$120 billion) and Series B+ deal count 24% (from 2,647 deals to 2,006). Early-stage funding dropped 26% and Series A deal count 25%. Regardless, North America is still the world's leading startup nation, making up 50% of the top 30 plus runners-up ranking.

Taking a longer view, in the period 2018–2022, North America experienced only a 4% increase in Series B deal count, but a 56% growth in Series B+ deal amount. The number of early-stage funding deals have been decreasing since 2018, and in 2022 were 28% below that year's count, while the early-stage funding amount has increased 26% from 2018 to 2022, highlighting the general trend of inflated values in this period.

The region's largest exit was Silicon Valley cryptocurrency exchange Coinbase, which was valued at \$85.8 billion in April 2021. Miami-based medtech MSP Recovery was second highest, valued at \$32.6 billion when it IPOd in May 2022. Canada produced 18 unicorns in 2021 and 15 in 2022, largely from the rapidly growing hubs of Toronto-Waterloo, Vancouver, and Montreal, which all maintained their ranking places from last year.

Both the U.S. and Canada have recently introduced dedicated measures to encourage tech innovation. In August 2022, the U.S. signed into law the Inflation Reduction Act, an initiative aimed at promoting domestic manufacturing and accelerating the development of clean technologies. In May 2023, the Regional Technology and Innovation Hubs (Tech Hubs) competition was launched as part of the Investing in America agenda, seeking to develop regional centers of innovation and job creation. Meanwhile, Canada has supported the growth of startups at the national level by investing \$90 million in intellectual property programs through the ElevateIP program.

## TOP FIVE ECOSYSTEMS

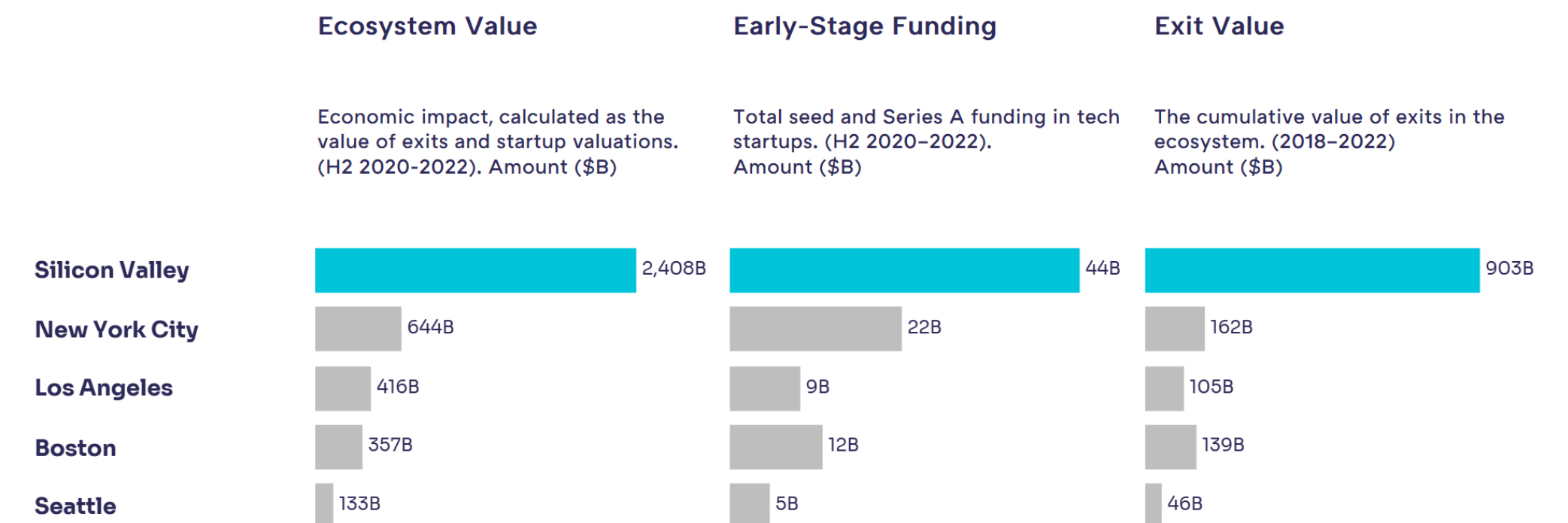
- 1 → Silicon Valley
- 2 → New York City
- 3 → Los Angeles
- 4 → Boston
- 5 → Seattle

## TOP FIVE EMERGING ECOSYSTEMS

- 1 → Detroit
- 2 → Research Triangle
- 3 → Minneapolis
- 4 → Houston
- 5 → Phoenix

## Silicon Valley Is North America's Top Performing Ecosystem

Source: Startup Genome, 2023





## → Key Findings

- Fifteen of the top 30 global ecosystems are based in North America, with two in Canada and the remainder in the U.S. A further three are in the runners-up: Salt Lake-Provo, Dallas, and Montreal.
- Silicon Valley continues to dominate the rankings, despite having a reduced market share compared to previous years as more startup ecosystems are sprouting worldwide and North America's are diversifying.
- Los Angeles moved into the top five for the first time, up two places to #4 thanks in part to an increase in exits over \$50 million and over \$1 billion. **GoodRx** was the ecosystem's highest exit, in an IPO at a valuation of \$12.7 billion. The number of unicorns increased to 44, up 21 from last year. **SpaceX** was the top-valued unicorn at \$100 billion.
- Miami moved up an impressive 10 places to #23. It experienced 160% growth in Ecosystem Value from last year, a 64.3% increase in early-stage funding, and an increase in large exits including Medtech **MSP Recovery's** \$32.6 billion IPO.
- Toronto remains Canada's leading ecosystem, holding its place at #17. It saw a 54% growth in exits over \$50

million, with video-management system **Rumble** exiting in a \$3.85 billion IPO. The number of unicorns increased to 14, with **PointClickCare** the top valued at \$4 billion, contributing to a 65% increase in Ecosystem Value.

- Vancouver and Montreal also remained steady from the GSER 2022, at #30 and #40 respectively, making them Canada's second and third highest ranked ecosystems.

**North America is still the world's leading startup nation, making up 50% of the top 30 plus runners-up ranking.**

### TOP FIVE ECOSYSTEMS BY VC FUNDING PER CAPITA

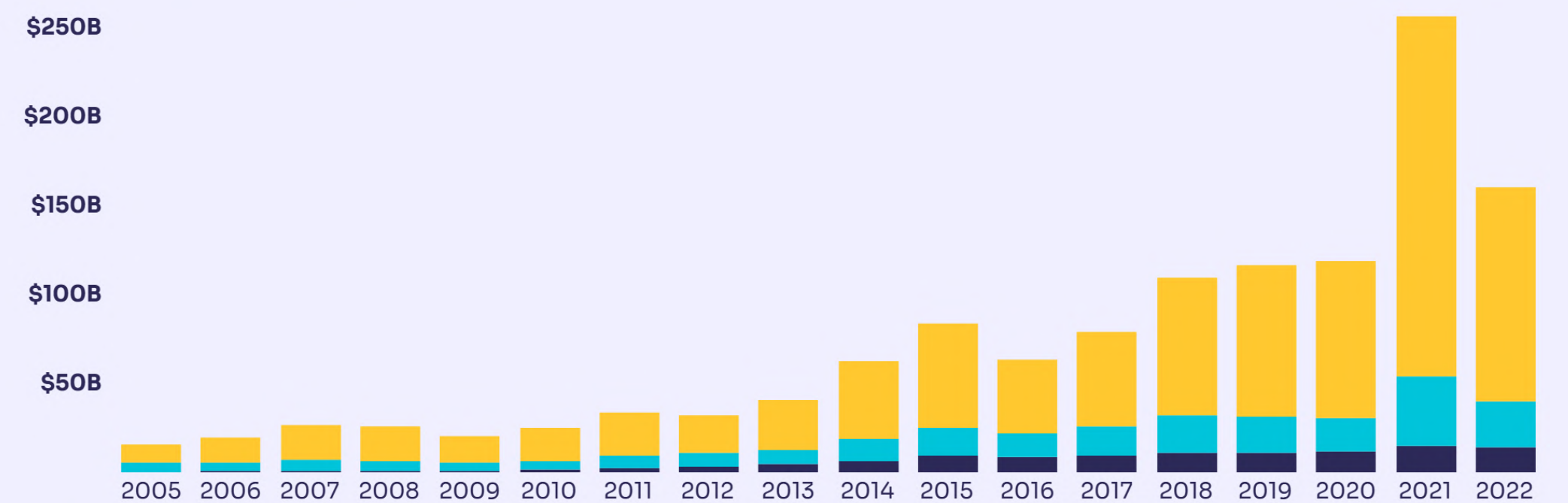
- Silicon Valley
- Boston
- Austin
- Seattle
- New York City

### VC Investment in North America Decreased 37% From 2021 to 2022

North American VC Funding Amount (\$B) by Stage

Source: Startup Genome, 2023

■ Seed ■ Series A ■ Series B+



# A Data-Driven Review of Detroit's Startup Ecosystem

From a legacy of automobile manufacturing and motown, the Motor City is emerging as a thriving startup ecosystem. With 1,500 active startups across the region, Detroit's local economy is no longer dominated by large legacy corporations. And investors are taking note.

The size of Detroit's startup exits has increased significantly in recent years, with seven \$100 million+ exits occurring since 2018, including two \$1 billion+ exits in Cybersecurity platform **Duo Security** and electric vehicle company **Rivian**. And in 2019, the city welcomed a new unicorn in **StockX**, an online reseller platform.

A range of factors have contributed to Detroit's transformation from a manufacturing center to one of America's most promising tech hubs. Foremost is the city's unique mix of talent sources, flowing from nearby universities as well as large corporations. Next is the range of sub-sectors that Detroit's startups



**We believe Detroit has the potential to become one of the world's premier locations for high-growth entrepreneurship. This study offers actionable insights to help us get there."**

**Diana Callaghan**, Managing Director of Endeavor

participate in, with particular strength in Cybersecurity and Industry 4.0.

In 2022, with support from the William Davidson Foundation, Startup Genome and Endeavor collaborated to assess the entrepreneurial climate for growth and tech-oriented startups in the Detroit region. Using a

combination of proprietary methodologies, including 50 founder surveys, the in-depth analysis defined priority recommendations. We worked in close coordination with key community partners with the goal of identifying key gaps and opportunities to actively support founders.



## Detroit's Strong Talent Pool

Detroit is uniquely situated as a city with access to strong talent pools while continuing to offer a lower cost of living compared to other major U.S. cities. Wayne State and Detroit Mercy universities, in addition to nearby Michigan State University, provide a steady source of educated talent. So does the city's hulking corporate sector, anchored by some of the world's largest auto companies (Ford, Stellantis, General Motors), as well as Rocket Companies, America's largest mortgage lender.

The result is an educated and experienced community of startup founders. Startup Genome's 2022 survey of 50 Detroit founders confirms this. The survey found that 88% of Detroit's founders had a business degree — higher than most U.S. peer ecosystems — and nearly half (46%) had previously founded a startup. As we enter an era when investors increasingly scrutinize the financial viability of startups, founders with strong business acumen and previous experience should fare better.

Detroit has also invested in initiatives that cultivate local talent beyond the local universities and corporations. The Detroit at Work Academy, formed in 2017 by the city government, offers two-week, cohort-based entrepreneurial training. ProsperoUs Detroit, an economic development organization serving lower-income, immigrant, and minority individuals, offers mentor-based training programs for working adults. Additionally, TechTown Detroit offers a "retail boot camp," which reflects a practical local entrepreneurial need for advanced retail

skills. Since launching in 2013, the program has helped over 40 local entrepreneurs to open brick-and-mortar stores and over 80 Ecommerce operations.

## A Variety of Sub-Sector Strengths

Detroit's 1,500+ active startups represent a range of sub-sectors. A sample of the city's recent successful companies run the gamut, including Airspace Link (air mobility), Autobooks (Fintech), Bloomscape (Ecommerce), The Lip Bar (consumer cosmetics), Our Next Energy (Cleantech), and Workit Health (Medtech). Such range of focus indicates a healthy ecosystem in which founders with varied backgrounds can find their footing and, critically, raise large capital amounts at levels belying the city's reputation as a smaller ecosystem.

However, specialization is also required for emerging ecosystems to grow local champions into international players. Based on Startup Genome's evaluation of Detroit's startup clustering, funding, and innovation strengths, a few promising trends emerge. Industry 4.0 — an area of advanced manufacturing that introduces sensors and software to optimize manufacturing processes — and Cybersecurity both perform above U.S. peers when it comes to funding and exit activity. Two of Detroit's largest exits, Rivian and Duo, come from these two sub-sectors. These large exits will help prove critical funding and knowledge sources for future Detroit startups as founders and execs return to invest locally.

Detroit also shows strengths in AI and Big Data (AI&BD). In addition to a large number of funding deals (100+) for Detroit AI & BD startups since 2017, the sub-sector also has strong support from local universities and research organizations, which generate patents. Based on Startup Genome's scoring of Detroit's university strengths as well as patent development by sub-sector, AI & BD shows strong potential compared to peer ecosystems. This is a promising development as AI & BD can integrate into almost any business, enabling Detroit to build on its existing strengths such as Industry 4.0 and Cybersecurity.

## Detroit's Founders Have More Connections With Other Founders, Investors, and Experts

Relationship Index Score

Source: Startup Genome, 2023





## Future Plans for Detroit's Startup Ecosystem

While Detroit's emergence as a dynamic startup ecosystem since 2008 should be celebrated, several challenges remain. More support for founders, particularly at the early stage, would certainly help. Compared to peers, Detroit has a relatively low success rate of startups securing seed funding and an even rate of Series A funding. Additionally, startups that do secure Series A rounds show smaller valuations on average than those in peer cities. A lack of early-stage funding can diminish an ecosystem's potential by causing promising startups to lower their valuations, which caps their long-term scalability, or to leave the ecosystem entirely.

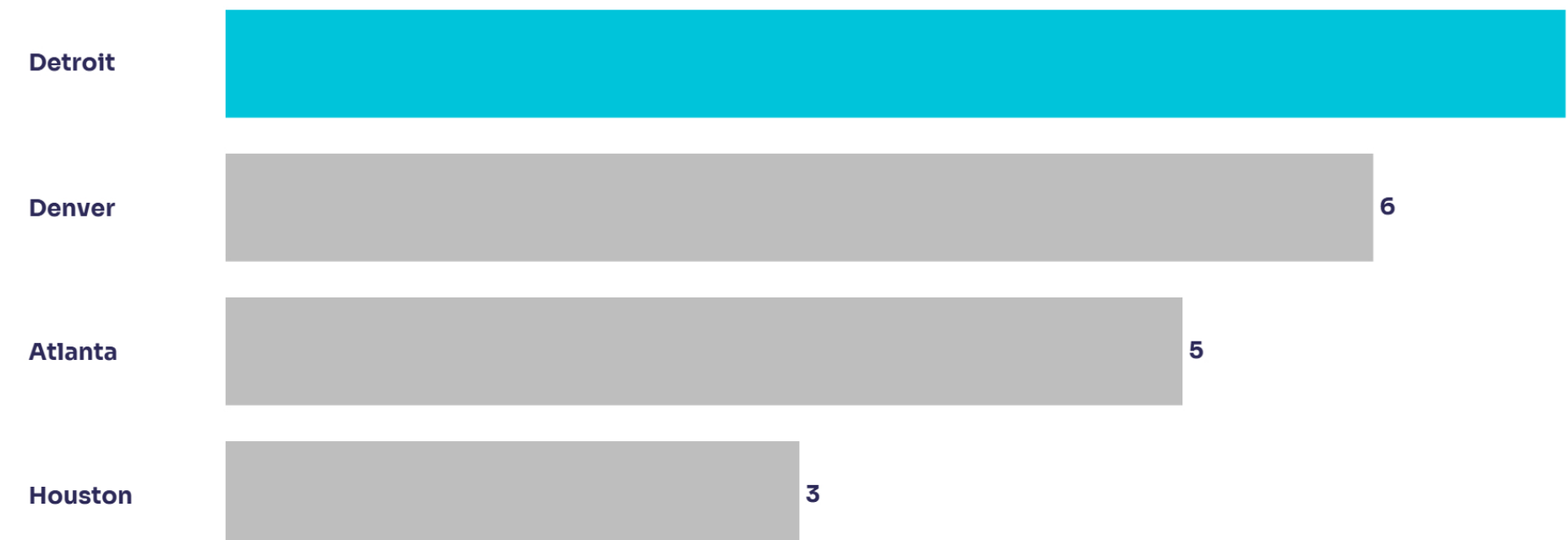
Based on results from Startup Genome's assessment of Detroit, Endeavor has outlined several focus efforts to better support local entrepreneurs. These actions include convening and aligning the region's efforts around a more unified strategy, promoting more feedback and insight directly from founders, and advancing policy and advocacy efforts to drive more federal, state, and local funding into early-stage investment. There is also planning for more targeted support for high-performing entrepreneurial support organizations (ESOs) and providing more transparency for founders around accelerators, incubators, and ESOs' performance. Cumulatively, these efforts will help founders focus their strategy, from picking the right accelerator to obtaining the best funding package, so they can quickly scale in Detroit and beyond.

Given Endeavor's commitment to these efforts, Detroit's best days are ahead. Diana Callaghan, Managing Director of Endeavor, says, "We believe Detroit has the potential to become one of the world's premier locations for high-growth entrepreneurship. This study offers actionable insights to help us get there."

### Detroit Has Produced More \$100M+ Exits Than Peer Ecosystems

Number of Exits Over \$100M (2019-H1 2022)

Source: Startup Genome, 2023



**Seven \$100 million+ exits have occurred in Detroit since 2018, including two \$1 billion+ exits.**



United States

# Austin

**#25** Global Ranking

**#27** Fintech Ranking

**#33** Blue Economy Ranking

While Austin continues to grow in the amount of investment and diversity of startups, what's impressive is that this booming innovation hub hasn't lost its small-town sensibilities. The community is invested in companies succeeding and prioritizes collaboration. Entrepreneurs have access to an exceptional amount of resources, and that support has a direct impact on the long-term viability of ventures and the sustainability of the ecosystem.



**Alicia Dean**

Founder, ATX+ Entrepreneurship Program, City of Austin



Global Ecosystem in Funding

**Top 20**



Global Ecosystem in Knowledge

**Top 25**



Global Ecosystem in Talent & Experience

**Top 30**

## Highlights

The Austin area tech industry currently employs more than 270,000 people. Like many ecosystems around the world, it saw a record fundraising year in 2021, raising \$4.9 billion, and then a decline in 2022 — to a still-impressive \$3.9 billion. VC firm Next Coast Ventures raised \$310 million in March 2022. The same month, S3 Ventures raised \$250 million to target Texas-based startups and new players Tacora announced the first close — of \$250 million — of its debut fund, which is targeting \$300 million to provide asset-based lending to venture-backed companies.

For the third consecutive year, Austin topped the CompTIA Tech Town Index in large part due to its comparative affordability. The 2022 Best Cities and States for Startups report from Crowdfund Capital Advisors also ranked Austin as the best U.S. city for startups. In 2022, at least eight tech companies opened new offices in Austin and another 13 tech companies moved their headquarters there. Supporting the ecosystem, the Austin Chamber of Commerce launched a web-based tool to provide data and resources.

SXSW is the ecosystem's globally recognized annual flagship event, bringing together internationally known artists, musicians, and technology in a collaborative multi-disciplinary festival. Austin Startup Week takes place each November, and Venture Capital Summit held an Austin event in June 2023. Local funding news includes ecommerce platform developer Cart.com raising \$240 million in equity and debt funding in March 2022. Jasper AI's \$15 million Series A in November 2022 put the company's valuation at \$1.5 billion.

# Ecosystem by the Numbers

**ECOSYSTEM VALUE**  
(H2 2020 - 2022)

**\$70 bn**



GLOBAL AVG. \$34.6 bn

**NUMBER OF UNICORNS**  
(H2 2020 - 2022)

**12**



GLOBAL AVG. 4

**SOFT. ENGINEER SALARY**  
(2022)

**\$87 k**



GLOBAL AVG. \$46 k

**TIME TO EXIT**  
(2018 - 2022)

**8.9 years**



GLOBAL AVG. 9 years

**TOTAL EARLY-STAGE FUNDING**  
(H2 2020 - 2022)

**\$2.9 bn**



GLOBAL AVG. \$970 m

**MEDIAN SEED ROUND**  
(H2 2020 - 2022)

**\$1.1 m**



GLOBAL AVG. \$821 k

**EARLY-STAGE FUNDING GROWTH**  
(2019 - 20 VS. 2021 - 22)



Scale of 1 (lowest) to 10 (highest)

**EXIT AMOUNT**  
(2018 - 2022)

**\$5.9 bn**



GLOBAL AVG. \$11.3 bn

**ECOSYSTEM VALUE GROWTH**  
(H2 2020 - H2 2022 VS H2 2018 - H2 2020)

**34%**



GLOBAL AVG. 4.7%

**MEDIAN SERIES A ROUND**  
(H2 2020 - 2022)

**\$8.9 m**



GLOBAL AVG. \$6 m

**TOTAL VC FUNDING**  
(2018 - 2022)

**\$17 bn**

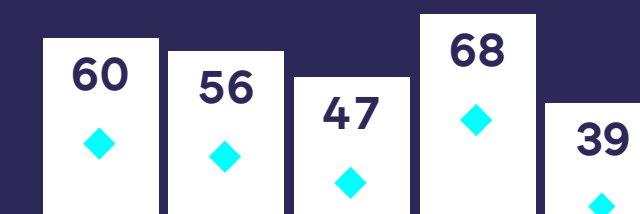


GLOBAL AVG. \$6.6 bn

**EXIT COUNT (#)**  
(2018 - 2022)

**270**

GLOBAL AVG. 91



2018 2019 2020 2021 2022



## Sub-Sector Strengths

### Cleantech

The Electric Reliability Council of Texas is headquartered in Austin, offering Cleantech companies access to one of the largest independent electric grids in the U.S. The CleanTech Fellowship offers Texas MBA students the opportunity to deepen their knowledge. The annual UT Energy Week showcases the University of Texas at Austin's energy research, and RE+ Texas gathers solar-energy professionals. Clean-energy tech startup Energy X secured \$450 million in development capital in October 2022 and a further \$15 million in December.

### Fintech

There are approximately 250 Fintech companies in the greater Austin area. Financing platform Founderpath secured \$145 million in August 2022. Online real estate investing platform CrowdStreet raised \$43 million in October, and Billd, a provider of financial solutions for commercial subcontractors, closed a \$100 million debt facility in November. StellarFi, which helps underserved communities improve their credit score, raised a \$15.5 million Series A round in March 2023.

### Life Sciences

Employment in Life Sciences in the Austin area has grown by nearly 74% over the past five years and is expected to continue to rise at a rate of 6.5% per year through 2025, according to Newmark. Life Sciences made up 12% of Series B+ investment and 9.8% of all VC funding for the period 2018–2022. Triumvira Immunologics, a developer of immunotherapy-based drugs, raised a \$100 million Series A in March 2022. Alleviant Medical raised a \$75 million Series A in January 2023.

## Reasons to Move Your Startup to Austin

### Financial Incentives

Texas has no income taxes, and local government and economic development organizations create incentive packages to attract qualified companies. Organizations that move to Austin and create 75+ jobs paying a living wage are eligible for relocation incentives including a reimbursement of up to 3% of wages and a property tax reimbursement of up to 50%. Companies opening or expanding in Texas may be eligible for performance-based grants.

### Access to Capital

With more than 100 VC firms based in Austin, the city offers founders a robust fundraising environment. The Opportunity Austin initiative is dedicated to attracting investors to the ecosystem and connecting them with local business owners who are looking to expand.

### Educated Talent

The University of Texas at Austin is one of the 50 best universities in the world as ranked by Times Higher Education. Half of Austin area residents have at least a bachelor's degree, compared to a national average of 35%. Community and state technical colleges in Texas have received \$15 million for the creation and expansion of vocational programs from the Texas Higher Education Coordinating Board.

United States

# Boston

**#6** Global Ranking **#7** Agtech Ranking

"Boston's ecosystem is a force to be reckoned with. Fueled by top-tier universities, experienced entrepreneurs, and a supportive community, it's no surprise it continues to produce innovative startups and attract significant funding."



**Harry Glorikian**

General Partner, Scientia Ventures



## Highlights

With its incredible strength in Life Sciences and Robotics and world-leading universities, Boston is a startup powerhouse. Boston's government has a reputation for being startup- and innovation-friendly, and there is a range of incubators and accelerators in the city. The ecosystem is consistently among the global leaders in the GSER rankings, a result of its strong talent, funding, and experience, among other factors.

Although the tech sector as a whole saw a decline in venture capital investment in 2022, several Boston startups pulled in hundreds of millions of dollars, including renewable energy company Longroad Energy's \$500 million raise, battery company Form Energy's \$450 million Series E, and crypto company Circle's \$400 million in funding. Volition Capital closed its \$675 million Volition Capital Fund V in January 2023.

The Boston ecosystem is notable for its friendliness to diverse founders. In January 2023, female and Latinx-founded VC firm Mendoza Ventures secured the first close on its third fund at \$100 million to invest in early growth-stage startups with diverse teams. VC firm Visible Hands, which is focused on otherwise often overlooked founders, kicked off its first fund with \$10.5 million. In January 2023, MassChallenge, in partnership with MITRE, announced a new cohort of under-represented founders participating in the MITRE Social Innovation Mentorship Program.

The 2022 MIT Startup Ecosystem Conference was held in May, and Startup Boston Week happened in September 2022. RESOLVE: The MassChallenge 2023 Awards took place in February 2023, and Women in Tech Boston is scheduled for October.

# Ecosystem by the Numbers

**ECOSYSTEM VALUE**  
(H2 2020 - 2022)

**\$357 bn**



GLOBAL AVG. \$34.6 bn

**NUMBER OF UNICORNS**  
(H2 2020 - 2022)

**26**



GLOBAL AVG. 4

**SOFT. ENGINEER SALARY**  
(2022)

**\$100 k**



GLOBAL AVG. \$46 k

**TIME TO EXIT**  
(2018 - 2022)

**9.6 years**



GLOBAL AVG. 9 years

**TOTAL EARLY-STAGE FUNDING**  
(H2 2020 - 2022)

**\$12 bn**



GLOBAL AVG. \$970 m

**MEDIAN SEED ROUND**  
(H2 2020 - 2022)

**\$1.5 m**



GLOBAL AVG. \$821 k

**EARLY-STAGE FUNDING GROWTH**  
(2019 - 20 VS. 2021 - 22)



Scale of 1 (lowest) to 10 (highest)

**EXIT AMOUNT**  
(2018 - 2022)

**\$139 bn**



GLOBAL AVG. 11.3 bn

**ECOSYSTEM VALUE GROWTH**  
(H2 2020 - H2 2022 VS H2 2018 - H2 2020)

**28%**



GLOBAL AVG. 4.7%

**MEDIAN SERIES A ROUND**  
(H2 2020 - 2022)

**\$13 m**



GLOBAL AVG. \$6 m

**TOTAL VC FUNDING**  
(2018 - 2022)

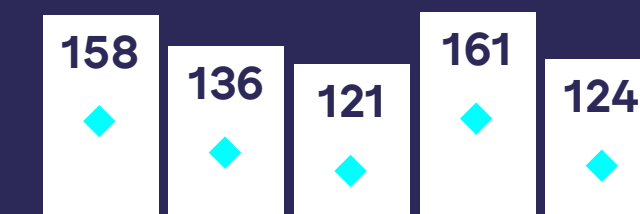
**\$75 bn**



GLOBAL AVG. \$6.6 bn

**EXIT COUNT (#)**  
(2018 - 2022)

**700**

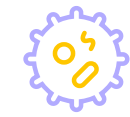


GLOBAL AVG. 91

2018 2019 2020 2021 2022



## Sub-Sector Strengths



### Life Sciences

Despite a general slowdown in VC funding, the 2022 Massachusetts-based biopharma companies had their second best fundraising year ever, raising a total of \$8.72 billion. A Massachusetts Life Sciences tax program provides tax incentives for expansion and job creation. CARB-X, a not-for-profit investment firm led by Boston University, supports companies through the early stages of product development. Biotech company Biofourmis raised a \$320 million Series D in July 2022. In January 2023, genomic medicines company Ensoma raised \$85 million.



### AI, Big Data & Analytics

Hyundai Motor Group and Boston Dynamics are investing \$424 million to establish an AI research center, the Boston Dynamics AI Institute, in Cambridge. AI-powered contract management platform LinkSquares was named to Forbes' Next Billion-Dollar Startups list for 2022. It also won Best Natural Language Generation Platform in the AI Breakthrough Awards in 2022. In June 2022 AI-powered discovery experience platform Zoovu raised a \$169 million Series C.



### Fintech

Home to many financial institutions, hedge funds, and private equity firms, Boston has both a robust financial industry and lively Fintech ecosystem. In March 2022, the Mass Fintech Hub established an advisory board of leaders from across the state and also announced a new Fintech Forum, career fair, and Fintech Bootcamp. In April 2022, Circle Internet Financial, raised \$400 million in funding.

## Reasons to Move Your Startup to Boston

### Educated Talent

Home to some of the best universities in the world, Boston offers companies a rich pool of educated talent. There are over 100 colleges and universities in the area, including MIT, Tufts, Northeastern, Boston College, and Harvard. Massachusetts has the highest concentration of individuals with bachelor's and master's degrees of any U.S. state. Boston ranked #7 in CBRE's 2022 Scoring Tech Talent report.

### Support & Mentorship

With its large, established ecosystem, Boston offers founders a vibrant community and a host of startup-focused events. SCORE Boston provides free business workshops and business mentoring from experienced advisors. Startup Boston events are a platform through which innovators can learn from one another, build partnerships, and strengthen ties.

### Convenient Location

One of Boston's greatest strengths is its accessibility. Travelers can get to major business hubs New York and London with ease, making the city an ideal base for entrepreneurs managing multiple teams and time zones.

Canada  
**Calgary**

**MEMBERS:**

Platform Calgary / Calgary Innovation Coalition / Calgary Economic Development

*With access to a community passionate about the environment and incredible resource extraction talent, starting and growing Summit Nanotech in Calgary was an obvious choice. We're proud to be part of an ecosystem leading in clean technology.*



**Amanda Hall**  
CEO and Founder, Summit Nanotech



## Highlights

2022 was another strong year for Calgary’s innovation ecosystem. The city ranked fourth in investment attraction across Canada with 64 deals totalling \$647 million, according to the Canadian Venture Capital & Private Equity Association, and increased its total VC investment 13% from 2021 to 2022. Several Calgary-based tech companies have achieved unicorn status, including Neo Financial, Benevity, and Shareworks by MorganStanley, and the CBRE’s Scoring Tech Talent Report found 40,600 people were employed in tech in Calgary in 2021. Calgary is also home to the highest number of corporate head offices per capita compared to other major cities in Canada.

The Platform Innovation Centre opened in June 2022, the first purpose-built hub for tech and innovation in the province. The new center brings together more than 100 partners offering startup support services and event space. In 2022, the Opportunity Calgary Investment Fund (OCIF), a \$100 million fund to catalyze investment and drive innovation and transformative economic development, supported key ecosystem players including Combine Venture Builders, Avatar Innovations, Thin Air Labs, The51, and anchor companies IBM and Mphasis.

The creation of Quantum City, a quantum science technology hub at the University of Calgary, was announced in June 2022. Mphasis opened its Canadian headquarters the same month, and Infosys opened its Digital Centre in September. Sidetrade and Appexus Technologies have also announced they will establish regional headquarters. IBM Canada announced it will open the IBM Client Innovation Centre for Western Canada with a focus on sustainability, and KPMG opened KPMG Ignition Calgary at the Platform Innovation Centre.

# Ecosystem by the Numbers

**ECOSYSTEM VALUE**  
(H2 2020 - 2022)

**\$5.2 bn**



GLOBAL AVG. \$34.6 bn

**NUMBER OF UNICORNS**  
(H2 2020 - 2022)

**0**



GLOBAL AVG. 4

**SOFT. ENGINEER SALARY**  
(2022)

**\$66 k**



GLOBAL AVG. \$46 k

**TIME TO EXIT**  
(2018 - 2022)

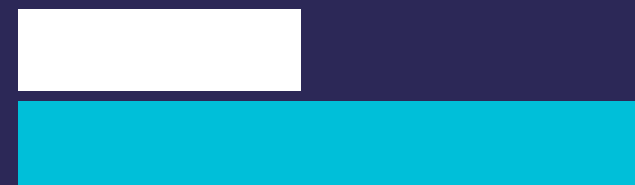
**11.1 years**



GLOBAL AVG. 9 years

**TOTAL EARLY-STAGE FUNDING**  
(H2 2020 - 2022)

**\$436 m**



GLOBAL AVG. \$970 m

**MEDIAN SEED ROUND**  
(H2 2020 - 2022)

**\$500 k**



GLOBAL AVG. \$821 k

**EARLY-STAGE FUNDING GROWTH**  
(2019 - 20 VS. 2021 - 22)



Scale of 1 (lowest) to 10 (highest)

**EXIT AMOUNT**  
(2018 - 2022)

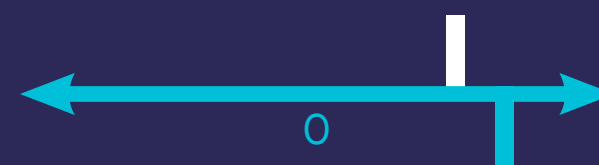
**\$1.1 bn**



GLOBAL AVG. 11.3 bn

**ECOSYSTEM VALUE GROWTH**  
(H2 2020 - H2 2022 VS H2 2018 - H2 2020)

**35%**



GLOBAL AVG. 4.7%

**MEDIAN SERIES A ROUND**  
(H2 2020 - 2022)

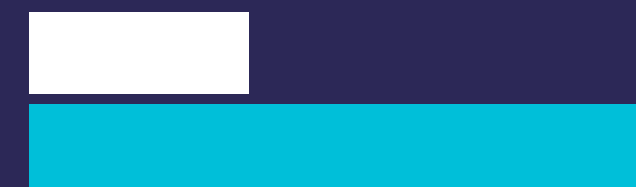
**\$6.8 m**



GLOBAL AVG. \$6 m

**TOTAL VC FUNDING**  
(2018 - 2022)

**\$2.3 bn**

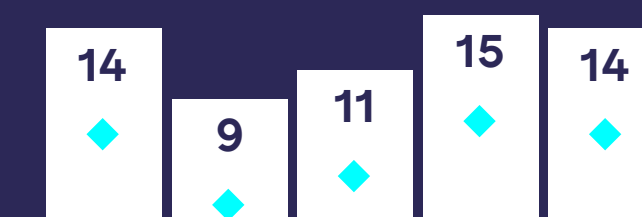


GLOBAL AVG. \$6.6 bn

**EXIT COUNT (#)**  
(2018 - 2022)

**63**

GLOBAL AVG. 91



2018 2019 2020 2021 2022



## Sub-Sector Strengths

### Cleantech

The Government of Alberta has committed CA\$58 million (\$42.2 million) in 10 Alberta-based companies to reduce greenhouse gas emissions by 4 million tons by 2050. Two Calgary-based Cleantech companies made the 2023 Global Cleantech 100 list — Carbon Upcycling Technologies and Eavor — and 15 local companies made the Foresight 50, a list of Canada's most investable Cleantech companies. The Energy Transition Centre opened in November 2022, to support the development and commercialization of new energy technologies.

### Fintech

Neo Financial broke the Canadian record for time to unicorn status after raising a \$14.5 million Series C in May 2022, and was the top Canadian Startup on LinkedIn's List of Top Canadian Startups 2022. EY announced Calgary as the location of its Finance Centre of Excellence. Symend has raised \$151 million over 10 rounds, and alongside Helcim is cementing Calgary's place as one of Canada's hottest Fintech ecosystems. Digital Bank Calgary launched the Calgary Fintech awards in 2022 and continues to offer opportunities for Fintech startups.

### Agtech & New Food

In 2022, Agriplay set up a showcase urban farm in downtown Calgary, and SVG Ventures THRIVE and Platform Calgary created the THRIVE Agrifood Innovation Digital Hub for Canada. The THRIVE Academy has also launched an Agtech pre-accelerator program. The51 created the \$50 million women-led Food and Agtech Fund. Olds College is home to the Olds College Smart Farm, the Smart Ag Innovation Centre, and the Werklund Agriculture and Technology Centre. In April 2022, Verge Ag raised a \$7.5 million Series A.

## Reasons to Move Your Startup to Calgary

### Low Cost of Doing Business

Albertans pay no provincial sales tax, no payroll tax or health premium, and have the lowest provincial corporate income tax rate in Canada. Calgary is the second most affordable major city in Canada, with incredibly affordable real estate compared to Vancouver and Toronto. In 2022, the Government of Alberta streamlined processes and reduced unnecessary duplication. The City of Calgary also has a department mandated to support local business.

### Global Talent

Calgary has the fastest tech workforce growth in North America, according to 2022 LinkedIn Talent Insights. It ranked #28 in the Top 50 North American markets for the second consecutive year in CBRE's 2022 Scoring Tech Talent report. Calgary is the second youngest and third most diverse city in Canada, with 41% of Calgarians identifying as a visible minority. The Alberta Advantage Immigration Program provides an entry pathway for immigrants.

### Quality of Life

Calgary is a welcoming, inclusive, and vibrant city less than an hour from the Canadian Rocky Mountains. The Economist Intelligence Unit ranked it the third most livable city in the world, and #1 in North America in 2022. No doubt this has something to do with its access to large urban parks and the most extensive outdoor pathway and bikeway network in North America.



## Selected Startup Organizations

### STARTUP GENOME MEMBERS

**MEMBER**

### Platform Calgary

Platform Calgary is an impact organization whose members are tech companies, large and small, united in a vision of inclusive, innovation-driven prosperity for Calgary. Platform Calgary connects entrepreneurs to a network of 110+ partners focused on helping startups launch and grow at every step of their journey, from ideation through to scale. The Platform Innovation Centre is the front door to this community – a single point of access for people as they navigate Calgary’s innovation ecosystem.

**MEMBER**

### Calgary Innovation Coalition

The Calgary Innovation Coalition (CIC) is a group of organizations in the Calgary region that support innovation-driven entrepreneurs, startups, and enterprises. Our collective presents a single vision and voice regarding the priorities of Calgary’s innovation community, a unique model for collaboration in Alberta’s innovation ecosystem.

**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.

### KEY ECOSYSTEM PLAYERS

### Creative Destruction Lab (CDL)-Rockies

CDL brings together many of the region’s most experienced entrepreneurs, investors, and scientists from diverse fields with a mission to accelerate the commercialization of science for the betterment of humankind.

### Thrive

The THRIVE Canada Accelerator supports early-stage agrifood tech startups from across the value chain whose technologies drive our ecosystem towards a more efficient, sustainable, and secure agriculture future.

### Startup TNT

Startup TNT actively works with local startups, angel groups, seed funds, and early-stage VC funds to stimulate angel investment across Western Canada!

### Foresight Alberta

Foresight is supporting efforts to position Alberta as a world leader in cleantech by providing expertise to navigate the cleantech sector and by strengthening the ecosystem.

### Plug and Play

A global accelerator offering three streams: sustainability, health, and a sector agnostic stream with a global learning component. Plug and Play connects the world’s best startups with international corporations to bring technology to market faster.

### Global 500

Alberta Accelerator by 500 is designed for startups with the shared vision of strengthening Alberta as a global hub for tech innovation.

United States

# Chicago

**#19** Global Ranking **#17** Agtech Ranking **#14** Fintech Ranking

*“Chicago’s major strength is its demonstrated ability to catalyze change. The Chicago Women’s Leadership Accelerator is just one example of the various DEI initiatives focused on increasing opportunities for historically excluded Chicagoans.”*



**Cindu Thomas-George**

Founder and Principal Trainer, Shakti Diversity and Equity Training



## Highlights

Chicago has deep roots as an industrial hub and is home to the headquarters of 12 Fortune 500 companies. Reflecting a general slowdown in investment, Chicago startups raised nearly 34% less capital from VCs in 2022 than they did in 2021, but the Midwestern city remains a solid tech startup hub. Founders can access a strong network of 70 startup accelerators and incubators, including 1871 — one of the largest incubators in the country — Techstars Chicago, and the Chicago Innovation Exchange.

One of the driving forces behind Chicago’s startup growth is its abundance of top-tier universities and research institutions. The University of Chicago, Northwestern University, and the Illinois Institute of Technology are just a few of the institutions that foster an environment of collaboration and innovation. At City Colleges, students can enroll in the Digital Scholars summer pipeline program, which connects students to startups.

The city is also looking to lure foreign workers laid off by technology giants to the city to fill thousands of open roles. More than 35 local firms looking to hire workers on H-1B visas have teamed up with the City and non-profit P33 to create a job-listing website. HR startup Atlas raised a \$200 million Series B in September 2022; and Puttshack, which offers tech-infused mini golf experiences, raised \$150 million the next month. Also in October, direct-to-consumer home insurance company Kin closed a \$145 million credit facility.



# Ecosystem by the Numbers

**ECOSYSTEM VALUE**  
(H2 2020 - 2022)

**\$75 bn**



GLOBAL AVG. \$34.6 bn

**NUMBER OF UNICORNS**  
(H2 2020 - 2022)

**14**



GLOBAL AVG. 4

**SOFT. ENGINEER SALARY**  
(2022)

**\$86 k**



GLOBAL AVG. \$46 k

**TIME TO EXIT**  
(2018 - 2022)

**11 years**



GLOBAL AVG. 9 years

**TOTAL EARLY-STAGE FUNDING**  
(H2 2020 - 2022)

**\$2.3 bn**



GLOBAL AVG. \$970 m

**MEDIAN SEED ROUND**  
(H2 2020 - 2022)

**\$1 m**



GLOBAL AVG. \$821 k

**EARLY-STAGE FUNDING GROWTH**  
(2019 - 20 VS. 2021 - 22)



Scale of 1 (lowest) to 10 (highest)

**EXIT AMOUNT**  
(2018 - 2022)

**\$20 bn**



GLOBAL AVG. \$11.3 bn

**ECOSYSTEM VALUE GROWTH**  
(H2 2020 - H2 2022 VS H2 2018 - H2 2020)

**44%**



GLOBAL AVG. 4.7%

**MEDIAN SERIES A ROUND**  
(H2 2020 - 2022)

**\$8.5 m**



GLOBAL AVG. \$6 m

**TOTAL VC FUNDING**  
(2018 - 2022)

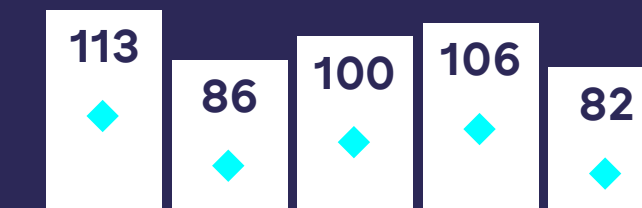
**\$21 bn**



GLOBAL AVG. \$6.6 bn

**EXIT COUNT (#)**  
(2018 - 2022)

**487**



GLOBAL AVG. 91

2018 2019 2020 2021 2022

## Sub-Sector Strengths

### Fintech

Fintech investment in Chicago was up by 44% in 2022 versus 2021 to reach \$2 billion. In March 2022, World Business Chicago announced Fintech as a priority industry of focus. In May 2022, Amount, which creates software for financial institutions, raised a \$99 million Series D at a valuation of just over \$1 billion.

### AI, Big Data & Analytics

In January 2023 the University of Chicago's Polsky Center for Entrepreneurship and Innovation and Data Science Institute launched Transform, an accelerator for startups focused on data science and AI. The Big Data and Analytics Roundtable helps members of the Chicago Booth community better understand big data and analytics. In October 2022, AI-enabled precision medicine company Tempus raised approximately \$275 million in equity and debt financing. It has raised over \$1.3 billion in total.

### Life Sciences

The Chicago area is home to 185 Life Sciences companies and related businesses and seven medical schools. Research parks including Chicago Technology Park, University Technology Park at IIT, and Illinois Science + Technology Park bring together research and industry. A stream of Life Sciences startups are emerging from the University of Chicago and Northwestern University. In November 2022, Emalex Biosciences closed a \$250 million Series D round.

## Reasons to Move Your Startup to Chicago

### Large, Diverse Workforce

Chicago boasts the third largest labor pool in the United States, as well as an extremely diverse workforce. Approximately 30% of Chicago-based startups have either a woman or person of color as a founder or CEO. Chicago also has a very balanced economy, with no single industry employing more than 14% of the workforce.

### Dedicated Support

Chicago offers several programs for entrepreneurs, including Neighborhood Business Development Centers, SCORE Chicago, and Illinois Small Business Development Center. The city has passed reforms to reduce red tape and has also eliminated the employee head tax. The ecosystem is home to numerous incubators and accelerators, including mHUB, Kiwi Tech, Evergreen Climate Innovations, and Higher Ground Labs.

### Logistics Infrastructure

Chicago's central location makes it an attractive option for startups looking to expand throughout the U.S. With its easy access to two world-class airports and 10 interstate highways, startups can set up shop in Chicago and easily reach customers and partners across the country. There are approximately 16,000 transportation, distribution, and logistics companies in the Chicago area, and the city leads the U.S. in freight handling.

United States

# Detroit

**#3** Emerging Ranking **#15** Strong Starters ranking

"Detroit entrepreneurs are resourceful, tenacious, and have shown it can be done—high growth, strong investment, big exits. As a high-caliber support ecosystem forms around our future founders, we're going to see high-growth companies lead Michigan's economy."



**Justin Mast**  
Founder, Bloomscape



## Highlights

Detroit's tech ecosystem includes major players like Google, Microsoft, Apple, Amazon, IBM, and Rocket Mortgage, along with regional offices for LinkedIn, Twitter, and Cisco. The Detroit region is home to headquarters of 18 Fortune 1,000 companies, attracting multinational businesses. But with 1,500 active startups in a wide range of sectors, the Detroit region's local economy is no longer dominated by large legacy corporations. The size of Detroit's startup exits has increased significantly in recent years, with seven \$100 million+ exits occurring since 2018, including two \$1 billion+ exits in Cybersecurity platform Duo Security and electric vehicle company Rivian. In 2019, online sneaker reselling platform StockX joined the unicorn club.

The Michigan Emerging Technologies Fund is designed to expand funding opportunities for technology-based companies, and the Michigan Business Development Program provides economic assistance to businesses for highly competitive projects that create jobs or provide a net-positive return to Michigan. The Techstars Detroit Powered by JP Morgan program is a virtual/hybrid accelerator that aims to provide equitable access, funding, and support to entrepreneurs from traditionally underrepresented backgrounds, offering opportunities across all industries.

The region boasts 98,000 workers in the financial industry and Fintech, and is home to the headquarters of two of the nation's biggest mortgage lenders. The Big Four accounting firms also all have operations in the region. Autobooks, a successful Fintech startup, has raised a total of \$97.8 million in VC funding over six rounds, with its latest round of \$50 million in June 2022.



# Ecosystem by the Numbers

**ECOSYSTEM VALUE**  
(H2 2020 - 2022)

**\$103 bn**



GLOBAL AVG. \$34.6 bn

**NUMBER OF UNICORNS**  
(H2 2020 - 2022)

**1**



GLOBAL AVG. 4

**SOFT. ENGINEER SALARY**  
(2022)

**\$92 k**



GLOBAL AVG. \$46 k

**TIME TO EXIT**  
(2018 - 2022)

**11.1 years**



GLOBAL AVG. 9 years

**TOTAL EARLY-STAGE FUNDING**  
(H2 2020 - 2022)

**\$797 m**



GLOBAL AVG. \$970 m

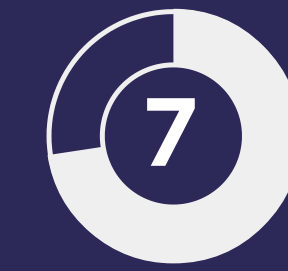
**MEDIAN SEED ROUND**  
(H2 2020 - 2022)

**\$750 k**



GLOBAL AVG. \$821 k

**EARLY-STAGE FUNDING GROWTH**  
(2019 - 20 VS. 2021 - 22)



Scale of 1 (lowest) to 10 (highest)

**EXIT AMOUNT**  
(2018 - 2022)

**\$77 bn**



GLOBAL AVG. \$11.3 bn

**ECOSYSTEM VALUE GROWTH**  
(H2 2020 - H2 2022 VS H2 2018 - H2 2020)

**43%**



GLOBAL AVG. 4.7%

**MEDIAN SERIES A ROUND**  
(H2 2020 - 2022)

**\$5.5 m**



GLOBAL AVG. \$6 m

**TOTAL VC FUNDING**  
(2018 - 2022)

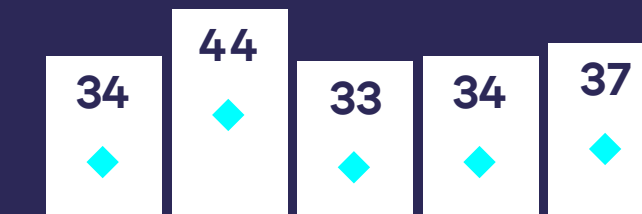
**\$13 bn**



GLOBAL AVG. \$6.6 bn

**EXIT COUNT (#)**  
(2018 - 2022)

**182**



GLOBAL AVG. 91

2018 2019 2020 2021 2022

## Sub-Sector Strengths



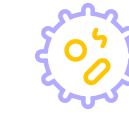
### Cybersecurity

Detroit's strength in Cybersecurity is bolstered by its automotive industry and the presence of industry-leading companies. Hush, a Cybersecurity startup, was selected for the MissionLink 2023 Accelerator Program. Michigan has also dedicated resources to Cybersecurity, with the governor hosting the annual Michigan Cyber Summit to address industry needs. Michigan's Cyber Partners is a collaborative effort involving various divisions at the State of Michigan, including Michigan Cybersecurity and the Michigan State Police, to enhance Cybersecurity resources and best practices across the state.



### Industry 4.0 and Future Technologies

Michigan's Industry 4.0 initiative, launched in late 2020, has reached over 2,120 small manufacturers in the state, providing them with programming, events, training, and technology assessments. Additionally, 24 small manufacturers in Michigan have received a total of \$559,005 through the Industry 4.0 Technology Implementation Grant program to support the adoption of Industry 4.0 technologies.



### Life Sciences

Nearby Ann Arbor's thriving Life Sciences community is fueling Detroit's Life Sciences sub-sector growth, as are the renowned research institutes at the University of Michigan. The region's biotechnology sector, encompassing medical device manufacturing, pharmaceutical development, and service providers, is expanding, attracting investments, and generating employment opportunities. Collaborative initiatives between the University's Medical Innovation Center, Eastern Michigan University's Coatings Research Institute, and industry players are fostering innovation and driving the overall progress of the region.

## Reasons to Move Your Startup to Detroit

### Investment in Talent

Wayne State University, Detroit Mercy, and nearby Michigan State University provide Detroit with a steady source of educated talent. The city also invests in initiatives to nurture talent, including the Detroit at Work Academy and ProsperoUs Detroit, which offer entrepreneurial training programs. TechTown Detroit's retail boot camp has helped 40 local entrepreneurs open brick-and-mortar stores and over 80 Ecommerce operations since 2013.

### Tax Incentives

The Michigan Business Development Program provides tax credits, property tax abatement, and employer withholding tax capture for startups relocating to or expanding in Michigan. The Strategic Outreach and Attraction Reserve fund provides tax incentives to state businesses operating in critical sectors, including startups. Local tax abatements are available to qualifying businesses, including startups, that operate within certain zones of Detroit in an effort to spur the city's economic growth.

### Strategic Location

The Detroit Region's strategic location and extensive transportation infrastructure provide unrivaled connectivity. Situated on the U.S.-Canadian border, it boasts the busiest North American crossing and plans to enhance cross-border trade with the Gordie Howe International Bridge. With seven interstates, four railroads, seven ports, and 15 airports, including the prominent Detroit Metropolitan Airport, offering global flight connections, the region ensures seamless access.

Canada

# Edmonton

**MEMBERS:**

Edmonton Unlimited

*“Edmonton is an inclusive city of innovators tackling global challenges such as the climate emergency, public health, and food security. Our entrepreneurs are creating local solutions that also meet international demand and are attractive to enlightened investment the world over.”*



**Catherine Warren**

CEO, Edmonton Unlimited



## Highlights

Despite global slowdowns, Edmonton technology and innovation companies continue to attract the interest of investors. Venture capital investment pulled in \$76.3 million across 23 deals in 2022, and Edmonton continues to grow its reputation as a low-cost, high quality-of-life destination for startups looking to access young, educated talent.

Edmonton’s ecosystem is anchored by Edmonton Unlimited, the City-funded innovation agency responsible for ecosystem-building, and approximately 20 other support organizations, including Startup TNT, Amii and Health Cities. The city is also home to seven post-secondary institutions, including the University of Alberta, which is known for excellence in AI, machine learning, Life Sciences, and Cleantech.

In May 2022, the Edmonton ecosystem received an injection of CA\$4.9 million (\$3.6 million) from Alberta Innovates through the Edmonton Regional Innovation Network (ERIN) to Edmonton Unlimited. The funding is earmarked to deliver programming and support to build startups and solutions for global demands.

Edmonton Unlimited also received approximately CA\$780,000 (\$570,000) from PrairiesCan and CA\$1.8 million (\$1.3 million) from the Government of Alberta for Capital City Pilots, a novel collaboration with the City of Edmonton to develop, promote and market a novel procurement experiment where startups can test their innovative intellectual property while improving municipal property. A prominent funding deal in Edmonton includes scheduling software startup Jobber’s \$100 million in growth capital. This all-equity deal more than doubles Jobber’s last valuation of \$300-\$400 million when it raised \$60 million in early 2021. It’s the first nine-figure financing of 2023 for a Canadian tech company and Edmonton’s single largest venture deal of all time.



# Ecosystem by the Numbers

**ECOSYSTEM VALUE**  
(H2 2020 - 2022)

**\$1.3 bn**



GLOBAL AVG. \$34.6 bn

**NUMBER OF UNICORNS**  
(H2 2020 - 2022)

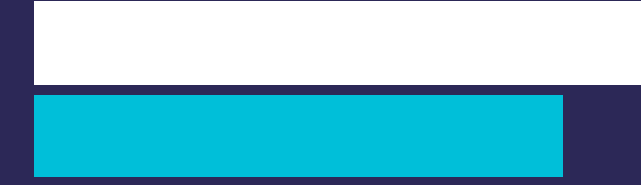
**0**



GLOBAL AVG. 4

**SOFT. ENGINEER SALARY**  
(2022)

**\$55 k**



GLOBAL AVG. \$46 k

**TIME TO EXIT**  
(2018 - 2022)

**8.3 years**



GLOBAL AVG. 9 years

**TOTAL EARLY-STAGE FUNDING**  
(H2 2020 - 2022)

**\$106 m**



GLOBAL AVG. \$970 m

**MEDIAN SEED ROUND**  
(H2 2020 - 2022)

**\$280 k**



GLOBAL AVG. \$821 k

**EARLY-STAGE FUNDING GROWTH**  
(2019 - 20 VS. 2021 - 22)



Scale of 1 (lowest) to 10 (highest)

**EXIT AMOUNT**  
(2018 - 2022)

**\$317 m**



GLOBAL AVG. \$11.3 bn

**ECOSYSTEM VALUE GROWTH**  
(H2 2020 - H2 2022 VS. H2 2018 - H2 2020)

**54%**



GLOBAL AVG. 4.7%

**MEDIAN SERIES A ROUND**  
(H2 2020 - 2022)

**\$4.9 m**



GLOBAL AVG. \$6 m

**TOTAL VC FUNDING**  
(2018 - 2022)

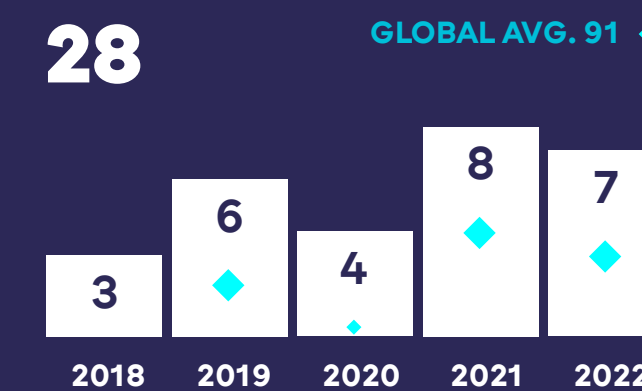
**\$819 m**



GLOBAL AVG. \$6.6 bn

**EXIT COUNT (#)**  
(2018 - 2022)

**28**



GLOBAL AVG. 91

## Sub-Sector Strengths

### AI, Big Data & Analytics

The Alberta Machine Intelligence Institute (Amii) is a world leader in research and part of the Pan-Canadian AI Strategy, the world's first national AI strategy, as well as home to the Amii AI Career Accelerator. In early 2023, Amii announced that the Canadian Institute for Advanced Research had committed CA\$30 million (\$22 million) over five years to expand Amii's research program, including hiring 20 new AI faculty members at the University of Alberta.

### Life Sciences

Around 60% of Alberta's Life Science companies are based in the Edmonton area. Support organizations include Applied Pharmaceutical Innovation, which provides support to researchers and startups in drug development, and the University of Alberta's Health Innovation Hub. Health Cities creates pathways for health technology companies to test and validate their solutions in clinical settings, accelerating them to market. Edmonton-based biotech startup Future Fields raised CA\$15.1 million CAD (\$11.2 million) in a seed extension funding round in Feb 2023.

### Cleantech

The Edmonton Region Hydrogen HUB has a goal to develop the low-carbon hydrogen economy. The Commercial Vehicle Demonstrations Project provides commercial carriers with opportunities to use hydrogen-fueled trucks and analyzes the performance of hydrogen-fueled vehicles. Edmonton Global's 5,000 Vehicle Challenge has a goal of 5,000 hydrogen- or dual-fuel hydrogen vehicles in Western Canada in five years. Air Products is building a hydrogen plant expected to come on-stream in 2024, and Aurora Hydrogena, a startup developing hydrogen-production technology, raised \$10 million in a Series A fund in 2022.

## Reasons to Move Your Startup to Edmonton

### Skilled Talent

Edmonton was named Canada's First UNESCO City of Learners, an educationally rich urban center offering lifelong learning pathways. Over 144,000 people in the Edmonton ecosystem are enrolled in post-secondary education and 62% of the labor force has post-secondary training. The University of Alberta is a global leader in high-tech research and is home to one of the world's largest nanotechnology research centers.

### Dedicated Support

The Experiential Learning in Innovation, Technology, and Entrepreneurship (ELITE) program, supports young Black founders, and the ANZA Black Entrepreneur Ecosystem also helps Black youth generate and develop business ideas. Alberta Women Entrepreneurs' Bold Leadership Program supports female entrepreneurs who want to implement technology to improve their business. Edmonton Unlimited's new downtown location is an inclusive space for networking and collaboration.

### Affordability

The cost of living in Edmonton is significantly less than other major Canadian cities, such as Vancouver and Toronto. The combined federal/provincial corporate income tax rate is 23% for general businesses and 11% for small businesses with revenues below \$500,000. This is the lowest tax rate in Canada and among the lowest corporate tax rates in North America.



## Selected Startup Organizations

STARTUP GENOME MEMBERS

MEMBER

### Edmonton Unlimited

As the City of Edmonton’s innovation agency, Edmonton Unlimited positions Edmonton as an inclusive global innovation capital, supporting innovators as they create companies and solutions to solve the planet’s toughest challenges, including the climate emergency, public health, food security, digital inclusion, and Reconciliation. By providing local innovators with the right assistance at the right time, it helps Edmonton’s entrepreneurs translate their ideas into tangible, growing companies. These made-in-Edmonton solutions are uniquely designed to meet international market demands, attract enlightened investment, and bolster the city’s reputation as a destination-of-choice for entrepreneurs, accelerators, and bold multinationals. Edmonton Unlimited contributes to the city’s enduring economic vitality, resiliency, and identity, while also fueling jobs, economic opportunities, and civic pride for all Edmontonians.



United States  
**Indiana**

**MEMBERS:**

Indiana Economic Development Corporation

*“Entrepreneurship is one of the most important investments we can make in Indiana’s future.”*



**Brad Chambers**  
Indiana Secretary of Commerce



## Highlights

2022 was another record-breaking year for the welcoming, tightly connected Indiana ecosystem. Named Best State to Start a Business by Forbes thanks to its low taxes, reasonable cost of living and talented workforce, Indiana welcomed 218 companies that located or expanded here, investing more than \$22.2 billion and creating 24,059 new jobs. According to the Indiana Economic Development Corp. (IEDC), 38 startups have participated in its accelerators to date, raising a record \$65 million in funding. The IEDC also provided \$18.5 million in tax credits through its Venture Capital Investment tax credit program. In 2022, state-supported VC firm Elevate Ventures made 128 investments totaling nearly \$23 million, a new record. Indiana is set to receive \$99.1 million in federal funding through the State Small Business Credit Initiative to increase capital for Indiana entrepreneurs. Approximately \$70 million will be directed to accelerating Indiana’s startup ecosystem.

Cleantech companies are an increasing part of Indiana’s business community. Stellantis and Samsung SDI launched a joint venture to build a new EV battery manufacturing facility in May 2022. In September 2022, General Motors announced plans to invest \$491 million to support the company’s EV production. Soulbrain MI is investing \$75 million to increase production of high purity electrolyte for lithium-ion batteries, and Doral Renewables is building a 13,000-acre solar farm project in Indiana.

Recent significant funding news includes environmental software company Encamp’s \$30 million Series C in June 2022 and IT infrastructure company Scale Computing’s \$55 million venture round a month later.

# Ecosystem by the Numbers

**ECOSYSTEM VALUE**  
(H2 2020 - 2022)

**\$5.3 bn**



GLOBAL AVG. \$34.6 bn

**NUMBER OF UNICORNS**  
(H2 2020 - 2022)

**0**



GLOBAL AVG. 4

**SOFT. ENGINEER SALARY**  
(2022)

**\$75 k**



GLOBAL AVG. \$46 k

**TIME TO EXIT**  
(2018 - 2022)

**10.8 years**



GLOBAL AVG. 9 years

**TOTAL EARLY-STAGE FUNDING**  
(H2 2020 - 2022)

**\$489 m**



GLOBAL AVG. \$970 m

**MEDIAN SEED ROUND**  
(H2 2020 - 2022)

**\$870 k**



GLOBAL AVG. \$821 k

**EARLY-STAGE FUNDING GROWTH**  
(2019 - 20 VS. 2021 - 22)



Scale of 1 (lowest) to 10 (highest)

**EXIT AMOUNT**  
(2018 - 2022)

**\$1.1 bn**



GLOBAL AVG. \$11.3 bn

**ECOSYSTEM VALUE GROWTH**  
(H2 2020 - H2 2022 VS. H2 2018 - H2 2020)

**35%**



GLOBAL AVG. 4.7%

**MEDIAN SERIES A ROUND**  
(H2 2020 - 2022)

**\$4.5 m**



GLOBAL AVG. \$6 m

**TOTAL VC FUNDING**  
(2018 - 2022)

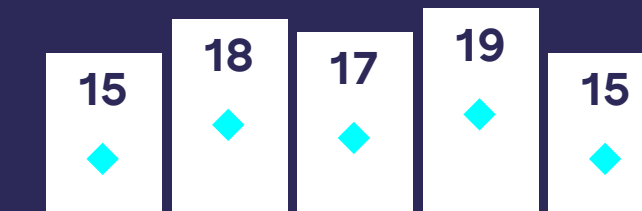
**\$2.8 bn**



GLOBAL AVG. \$6.6 bn

**EXIT COUNT (#)**  
(2018 - 2022)

**84**



GLOBAL AVG. 91

2018 2019 2020 2021 2022

## Sub-Sector Strengths



### Industry 4.0 and Future Technologies

IEDC, in partnership with Conexus Indiana, awarded 186 Manufacturing Readiness Grants totaling \$22.7 million in 2022, supporting \$352.7 million in capital investment. A 2022 study by Conexus Indiana and Indiana University Kelley School of Business Center for Excellence in Manufacturing showed that the percentage of manufacturers planning to adopt cobots (collaborative robots) and Cybersecurity in the next five years has doubled from 2020 to 2022. Those planning to adopt sensor technology rose 25%, while those planning to adopt IoT went up 68%.



### Life Sciences

Indiana's Life Sciences sector attracted a record \$620 million in venture funding in 2022. An Indiana University Kelley School of Business center that prepares students for careers in Life Sciences received a \$1 million gift, and Eli Lilly is investing \$2.1 billion in Indiana to build two new manufacturing sites in Indiana's LEAP Lebanon Innovation and Research District. Clinical stage biopharmaceutical company MBX Biosciences raised a \$115 million Series B in November 2022, bringing the company's total raised to \$174.9 million.



### Agtech & New Food

More than 10,000 Indiana agribusiness companies export \$4.6 billion in products annually. Purdue, Notre Dame, and Indiana University are recognized globally for their agricultural research, with Purdue's Agriculture & Biological Engineering Program ranked #2 nationally in 2022 by U.S. News & World Report. Precision fermentation manufacturer Liberation Labs plans to invest \$115 million to develop its first commercial-scale biomanufacturing facility in Indiana. In September 2022, AI-powered crop-analytics platform Taranis raised a \$40 million Series D.

## Reasons to Move Your Startup to Indiana

### Local Connectedness

Dedicated initiatives foster connections, allowing entrepreneurs to quickly connect to resources, information, experts, and talent in Indiana. A 2021-2022 Startup Genome assessment observed that the ecosystem had higher Local Connectedness than the global average. This is a key success factor for startups, with research demonstrating that startups with high Local Connectedness see 2.1x faster revenue growth versus those with low Local Connectedness.

### Dedicated Support

Tax credits in Indiana include the Headquarters Relocation Tax Credit for businesses that relocate to the state and the Economic Development for a Growing Economy Tax Credit for businesses that create new jobs that improve the standard of living for Indiana residents. The Skills Enhancement Incentive provides financial support for training employees, and Next Level Jobs helps cover training costs. Several public-private partnerships are focused on specific sectors, including Central Indiana Corporate Partnership, AgriNovus Indiana, Ascend Indiana, BioCrossroads, Conexus Indiana, Energy Systems Network, and TechPoint.

### Affordability

Indiana is the 10th most affordable U.S. state to live in, according to Forbes, with a cost of living 15% lower than the national average. The average single-family home in the state costs \$185,805. Housing costs are 21.7% below the national average. Indiana has one of the lowest unemployment rates in the country at 2.2% and offers businesses a low flat tax rate of 3.23%.



## Selected Startup Organizations

STARTUP GENOME MEMBERS

MEMBER

### Indiana Economic Development Corporation

The Indiana Economic Development Corporation (IEDC) is charged with growing the state economy, driving economic development, and helping businesses launch, grow, and locate in the state. Led by Secretary of Commerce Brad Chambers and governed by a 15-member board chaired by Governor Eric J. Holcomb, the IEDC manages initiatives including performance-based tax credits, workforce training grants, innovation and entrepreneurship resources, public infrastructure assistance, and talent attraction and retention efforts.

KEY ECOSYSTEM PLAYERS

#### Agrinovus

Agrinovus is a non-profit, fueling growth in the agbioscience economy by challenging tech pioneers to improve access to food, improving net-farm income through the Producer-led Innovation Challenge, and connecting the next generation of talent to careers in the agbioscience industry.

#### Gener8tor

gener8tor is a nationally-ranked venture capital firm and accelerator that brings together founders, investors, students, and artists. Through gBETA, gener8tor has been inspiring connectedness and giving Hoosier founders the tools they need to be successful.

#### Biocrossroads

Biocrossroads blazes the trail to ignite Indiana's robust life sciences industry through initiatives that help entrepreneurs get connected to their desired sector of the industry, tracking key data, and by providing funding opportunities for emerging life science founders.

#### Elevate

Elevate Ventures is building a sustainable entrepreneurship culture in Indiana through its Venture Capital investment in high-potential, high-growth Hoosier startups, inspiring record investment in our state's entrepreneurs.

#### Next Level Fund

The Next Level Fund makes targeted investments into Indiana businesses and Venture Capital funds to generate a competitive investment environment, establishing a more supportive environment for Hoosier entrepreneurs.

#### CICP

Central Indiana Corporate Partnership brings together industry leaders, higher education institutions and philanthropists to build a sustainable business environment, ensuring that Central Indiana's businesses are working together towards economic growth.

United States

# Los Angeles

**#4** Global Ranking **#6** Agtech Ranking

*“Startup success stories abound in Los Angeles. The City’s commitment to the innovation economy is unwavering, and our incubators and accelerators are here to help them grow and thrive.”*



**Carolyn Hull**  
General Manager, EWDD

<b>Global Ecosystem in Funding</b>	<b>Global Ecosystem in Performance</b>	<b>Global Ecosystem in Talent &amp; Experience</b>
<b>#4</b>	<b>#2</b>	<b>Top 5</b>

## Highlights

Los Angeles is one of the largest startup markets in the U.S., supported by a diverse network of founders, more than 100 VC firms, and a wide range of accelerators, incubators, and coworking spaces. In addition to its world-famous entertainment industry, Los Angeles is home to NASA’s R&D center, the Jet Propulsion Laboratory, Northrup Grumman’s 110-acre campus, and SpaceX headquarters.

The ecosystem is a major player in tech sectors ranging from the metaverse to crypto to gaming. The city also boasts some of the world’s top universities, including UCLA, CalTech, and USC, which provide companies with a steady stream of talent. According to CommercialEdge, LA ranks #2 after only New York in the number of residents who hold at least a bachelor’s degree in science, engineering, or related fields. Nearly 1.5 million residents have such a degree. Additionally, Los Angeles County has the largest foreign-born population of any county in the U.S., at one of every three residents, according to 2021 census estimates.

The annual dot.LA Summit, which brings together founders, investors, and operators is held in October. Venture Capital Summit 2023 took place in April, as did TECHSPO Technology Expo. A month earlier, entrepreneurs, investors, and thought leaders gathered for the Montgomery Summit.

Mobility commerce platform Metropolis raised a \$167 million Series B in June 2022. Clinical biopharma company Acelyrin raised a \$300 million Series C in September 2022. Microscale robot company Bionaut Labs raised a \$43.2 million Series B in November 2022.

# Ecosystem by the Numbers

**ECOSYSTEM VALUE**  
(H2 2020 - 2022)

**\$416 bn**



GLOBAL AVG. \$34.6 bn

**NUMBER OF UNICORNS**  
(H2 2020 - 2022)

**42**



GLOBAL AVG. 4

**SOFT. ENGINEER SALARY**  
(2022)

**\$98 k**



GLOBAL AVG. \$46 k

**TIME TO EXIT**  
(2018 - 2022)

**9.5 years**



GLOBAL AVG. 9 years

**TOTAL EARLY-STAGE FUNDING**  
(H2 2020 - 2022)

**\$8.9 bn**



GLOBAL AVG. \$970 m

**MEDIAN SEED ROUND**  
(H2 2020 - 2022)

**\$1.1 m**



GLOBAL AVG. \$821 k

**EARLY-STAGE FUNDING GROWTH**  
(2019 - 20 VS. 2021 - 22)



Scale of 1 (lowest) to 10 (highest)

**EXIT AMOUNT**  
(2018 - 2022)

**\$105 bn**



GLOBAL AVG. 11.3 bn

**ECOSYSTEM VALUE GROWTH**  
(H2 2020 - H2 2022 VS H2 2018 - H2 2020)

**38%**



GLOBAL AVG. 4.7%

**MEDIAN SERIES A ROUND**  
(H2 2020 - 2022)

**\$10 m**



GLOBAL AVG. \$6 m

**TOTAL VC FUNDING**  
(2018 - 2022)

**\$70 bn**

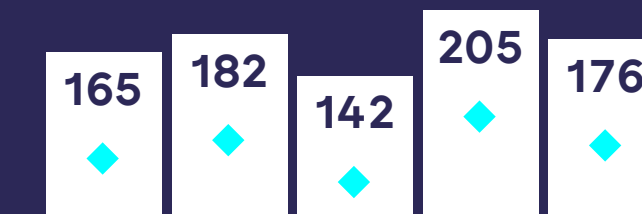


GLOBAL AVG. \$6.6 bn

**EXIT COUNT (#)**  
(2018 - 2022)

**870**

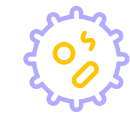
GLOBAL AVG. 91



2018 2019 2020 2021 2022



## Sub-Sector Strengths



### Life Sciences

Built around a globally respected university network that produces thousands of STEM graduates each year, the LA Life Sciences ecosystem is growing fast. The UCLA Innovation Fund facilitates the commercialization of UCLA-owned Life Sciences technologies by providing up to \$150,000 in funding. The LAEDC Bioscience Council is a network of leaders dedicated to cultivating the industry's workforce. The Los Angeles Bioscience Ecosystem Summit showcases innovation each year.



### Gaming

Los Angeles is home to more than 200 Gaming startups. Electronic Entertainment Expo (E3), the largest Gaming trade event, was held in Los Angeles in June 2023. The inaugural Gaming X LA was held in November 2022. GamesBeat Summit 2023 took place in May. Theorycraft Games raised a \$50 million Series B in September 2022.



### Cleantech

The LA100 Study charted pathways for L.A. to reach 100% carbon-free energy by 2035. As of 2022, 62% of the city's energy was carbon-free. The Los Angeles Cleantech Incubator (LACI), established by the City of Los Angeles, supports up to 50 startups each year. LACI's \$6 million Cleantech Debt Fund provides green loans of \$25,000 to \$250,000 to early-stage

## Reasons to Move Your Startup to Los Angeles

### Market Access

Home to nearly 4 million people, LA offers companies a huge potential market. If Los Angeles County were a country, its economy would be the 19th largest on the planet. More than 40% of American imports travel through the Ports of Los Angeles and Long Beach before connecting to a system of railways and interstate highways that distribute them across the country.

### Funding & Incentives

Los Angeles offers a huge array of funding options for businesses from venture capital to small business grants. The Los Angeles County Economic Development Corporation provides support for entrepreneurs, including assistance with tax credits. Its Small Business Loan Guarantee Program boosts access to capital, while its California Capital Access Program encourages lenders to make loans to small businesses..

### Diverse Talent

A remarkably diverse populace and the presence of several top universities help develop the talent necessary to propel LA's innovation ecosystem forward. Los Angeles is much more diverse than Silicon Valley, boasting residents from at least 130 countries who speak over 200 languages. One out of every three residents is foreign born.

Canada

# Montréal

**#40** Global Ranking **#37** Agtech Ranking

**MEMBERS:**

Startup Montréal / Centech / Montréal International / Ville de Montréal / Ministère de l'Économie, de l'Innovation et de l'Énergie

*"The government's massive support for innovation, the brilliance of our researchers and creative minds, our collective ambition for making a positive difference in society — Montreal is a very special place in the world to create, develop, and commercialize out-of-the-ordinary innovation."*



**Luc Sirois**  
Québec's Chief Innovation Officer



## Highlights

Montréal is a vibrant, strategically located hub that offers companies easy access to markets in over 50 countries with almost 1.5 billion consumers. Featuring a strong collaborative culture, Montréal benefits from great public-private partnerships, such as Hypercroissance Québec, a tailored program to support the city's most promising scaleups. In 2022, Québec launched a CA\$7.5 billion (\$5.5 billion) Research and Innovation Investment Strategy, of which CA\$110 million (\$81 million) will directly go to innovative technological entrepreneurship. In its 2022–2023 Budget, the province renewed a tax incentives package for R&D and IP development activities for five more years. In March 2023, CA\$48 million (\$35 million) was secured to create Ax-C, a new international entrepreneurship hub in Montreal. Earlier, the City of Montreal had announced the dedication of CA\$4 million (\$2.9 million) to support startups, including funding for business incubators and accelerators and Startup Montréal. The city is also relaunching the Open Innovation Subsidy Program.

Greater Montreal is a fast-growing Cleantech hub, with sub-sectors of excellence including Agtech, Smart Buildings, and Energy and Smart Transportation. Cycle Capital, Canada's leading private ClimateTech VC investment manages over \$500 million in early and growth stage funds.

Notable local events include Startupfest, Montreal International AI and Neuroscience (MAIN) Event, C2 Montreal, the World AI Summit and the international UN Biodiversity Conference: COP15. Recent large funding rounds include digital mortgage platform Nesto's December 2022 \$80 million Series C. In 2022, Lithion Recycling raised a total of \$125 million in Series A funding.

# Ecosystem by the Numbers

**ECOSYSTEM VALUE**  
(H2 2020 - 2022)

**\$38 bn**



GLOBAL AVG. \$34.6 bn

**NUMBER OF UNICORNS**  
(H2 2020 - 2022)

**7**



GLOBAL AVG. 4

**SOFT. ENGINEER SALARY**  
(2022)

**\$75 k**



GLOBAL AVG. \$46 k

**TIME TO EXIT**  
(2018 - 2022)

**10.6 years**



GLOBAL AVG. 9 years

**TOTAL EARLY-STAGE FUNDING**  
(H2 2020 - 2022)

**\$1 bn**



GLOBAL AVG. \$970 m

**MEDIAN SEED ROUND**  
(H2 2020 - 2022)

**\$1 m**



GLOBAL AVG. \$821 k

**EARLY-STAGE FUNDING GROWTH**  
(2019 - 20 VS. 2021 - 22)



Scale of 1 (lowest) to 10 (highest)

**EXIT AMOUNT**  
(2018 - 2022)

**\$6.9 bn**



GLOBAL AVG. 11.3 bn

**ECOSYSTEM VALUE GROWTH**  
(H2 2020 - H2 2022 VS. H2 2018 - H2 2020)

**54%**



GLOBAL AVG. 4.7%

**MEDIAN SERIES A ROUND**  
(H2 2020 - 2022)

**\$10 m**



GLOBAL AVG. \$6 m

**TOTAL VC FUNDING**  
(2018 - 2022)

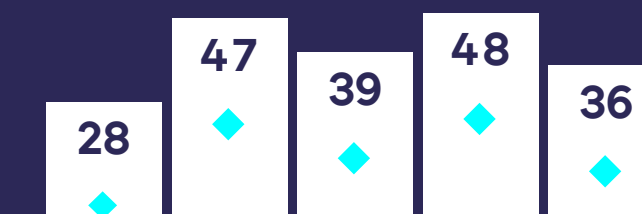
**\$8.1 bn**



GLOBAL AVG. \$6.6 bn

**EXIT COUNT (#)**  
(2018 - 2022)

**198**

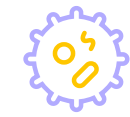


GLOBAL AVG. 91

2018 2019 2020 2021 2022



## Sub-Sector Strengths



### Life Sciences

Montréal's Life Sciences and Healthtech sector broke a record in 2022, with 12 foreign direct investment projects worth \$685 million, a 144% jump from 2021. The 2022–2025 Québec Life Sciences Strategy will provide \$569 million (\$416 million) to support an estimated CA\$2 billion (\$1.46 billion) in direct investment. Québec Consortium of Life Sciences Accelerators and Incubators was created in September 2022. Moderna's first mRNA vaccine-manufacturing facility is planned for Laval's Biotech City. Montréal InVivo is a Life Sciences and Health Technologies cluster of nearly 600 organizations.



### AI, Big Data & Analytics

Montreal is home to 30,000+ professionals with AI skills, as well as research organizations Mila and the Institute for Data Valorisation. Global leaders including Google, Microsoft, and Meta have made Montréal their AI R&D center. In December 2022, Google committed CA\$2.75 million (\$2 million) to support Québec's tech ecosystem. Samsung AI Center Montréal will open a lab to develop wireless and robotics technologies. Concordia University launched a new Applied AI Institute in 2022 and the Quantum Frontiers Lab opened.



### Fintech

Montréal ranked #1 in Canada in sustainable finance in the Global Green Finance Index 10 and is among the top 10 financial centers in North America. In 2022, Hopper secured CA\$130 million (\$96 million) in equity funding with a valuation estimated at over CA\$6.7 billion (\$5 billion). A group of Fintechs formed the Canadian Web3 Council to advance Blockchain-related policies. Station Fintech Montréal Accelerator introduced founders to large corporations, insurance companies, investors, and service providers within the Finance Montréal network.

## Reasons to Move Your Startup to Montréal

### Educated Talent

Montréal is home to 15 universities, 300,000 postsecondary students, and the largest number of university researchers in Canada. McGill University ranked joint #31 in the best universities in the world and #1 in Canada in the 2023 QS Best Student Cities. NPower Canada aims to launch 460 Québec residents into digital careers through its free workforce-development program.

### Quality of Life

This multicultural and multilingual capital is ranked the second best city in the world for remote workers and has the lowest crime index among the 20 largest cities in Canada and the U.S. The Time Out Index 2022 ranked it the ninth best city worldwide. Montréal's cultural attractions include 120 festivals and 70 museums. It is cheaper than almost all other large cities in North America.

### Investment Network

Institutional investors play a significant role in the Montreal startup ecosystem. They provide consistent funding for entrepreneurs regardless of the economic situation, leaving the ecosystem less exposed to economic crises. Montréal is a launchpad for emerging ventures with six of Canada's 10 most active investment funds here. In 2022, VC investments added up to \$2.5 billion across 150+ deals.



## Selected Startup Organizations

STARTUP GENOME MEMBERS

<b>MEMBER</b>		<b>MEMBER</b>		<b>MEMBER</b>		<b>MEMBER</b>	
<p><b>Startup Montréal</b></p> <p>Startup Montréal is a not-for-profit organization born from the merger of Bonjour Startup Montréal with Montréal inc. Through collaborative projects, we extend Montreal’s startup ecosystem outreach and multiply its positive impact.</p>	<p><b>Centech</b></p> <p>Centech, a non-for-profit organization, supports deep tech companies in manufacturing, supply chains, telecom, energy and industrial cleantech, medical devices and digital health. Centech also provides open innovation services to establish corporations. The incubator was recognized as one of the global top 10 best business university incubators by UBI-Global.</p>	<p><b>Montréal International</b></p> <p>For the past 25 years, Montréal International (MI) has contributed to building Greater Montréal’s international reputation and prosperity by acting as a driving force for economic development.</p>	<p><b>Ville de Montréal</b></p> <p>As a higher education town and a cosmopolitan city, Montréal is a breeding-ground for talents and an economic hub of knowledge. It also stands out because of its exceptional cultural vitality and world-renowned creative force.</p>	<p><b>Ministère de l’Économie, de l’Innovation et de l’Énergie</b></p> <p>The Ministry’s mission is to support business growth, entrepreneurship, science, innovation, export trade and investment. The MEIE is coordinating the elaboration and the implementation of the digital strategy.</p>			

KEY ECOSYSTEM PLAYERS

**District 3 Innovation Center**

Based at Concordia University, District 3 is a leading innovation hub in Montreal open to all. We nurture and develop multidisciplinary teams and scientific entrepreneurs that harness emerging technologies to create businesses with global impact.

**Cycle Momentum**

Cycle Momentum is a specialized and personalized accelerator dedicated to Cleantech startups. Cycle Momentum enables entrepreneurs, investors, and companies to find innovative solutions to humanity’s major ecological challenges.

**Zú**

Zú supports and propels entrepreneurs who use technology to revolutionize the creative industries by generating innovative projects and world-class intellectual properties.

**McGill Dobson Centre for Entrepreneurship**

The McGill Dobson Centre for Entrepreneurship is the hub of entrepreneurial activity at McGill University. Its mission is to support McGill entrepreneurs as they seek to build innovative companies with a purpose.

**Startupfest**

A global gathering of the world’s best entrepreneurs, founders, investors and mentors. It features world-class content across three days of keynotes, interactive how-to sessions, thought-provoking predictions, and a healthy dose of irreverence.

**Mila**

Founded by Professor Yoshua Bengio, Mila rallies researchers specializing in the field of deep learning. Recognized globally for its significant contributions to the field of deep learning.

United States

# New York City

**#2** Global Ranking **#2** Agtech Ranking **#2** Fintech Ranking

**MEMBERS:**

New York City Economic Development Corporation / Tech:NYC

*“New York continues to attract startups in many of the fastest-growing segments of the sector — AI, Life Sciences, and Cleantech, to name a few. Thanks to the city’s unmatched talent pool and funding opportunities, New York remains a top destination for startups to thrive.”*



**Julie Samuels**

President and Executive Director, Tech:NYC



## Highlights

The largest city in the U.S. by population, New York City has the nation’s biggest consumer base. The city’s thriving startup ecosystem is valued at around \$14.7 billion, with more than 25,000 tech-enabled startups supported by over 200 coworking spaces and 100 accelerators and incubators. The city also ranks #3 among U.S. states in foreign direct investment jobs.

VC firms continue to flock to NYC. In May 2022, Index Ventures, a European firm with headquarters in San Francisco and London, announced the opening of an office here, and in July 2022, Sequoia Capital announced a New York office, its first U.S. location outside of Silicon Valley. New York State has devoted \$100 million, with an additional \$35 million in Small Business Credit Initiative funding, to a direct investment VC fund. New York Ventures also manages three VC legacy funds that invest in seed- and early-stage companies across the state.

The City’s \$8 million CS4All initiative (Computer Science for All) has trained 100,000 students since 2015, and the CUNY 2X tech program has doubled the number of CUNY graduates with tech-related bachelor’s degrees since 2017. The Founder Fellowship program, which supports entrepreneurs from historically underrepresented backgrounds, expanded to include 100 tech founders in its second cohort. At the end of 2022, the mayor and governor jointly released a set of 40 proposals intended to make NYC the best place to work and serve. As a part of it, Initiative 31 is dedicated to making NYC the global hub for urban innovation.



## Ecosystem by the Numbers

**ECOSYSTEM VALUE**  
(H2 2020 - 2022)

**\$647 bn**



GLOBAL AVG. \$34.6 bn

**NUMBER OF UNICORNS**  
(H2 2020 - 2022)

**98**



GLOBAL AVG. 4

**SOFT. ENGINEER SALARY**  
(2022)

**\$104 k**



GLOBAL AVG. \$46 k

**TIME TO EXIT**  
(2018 - 2022)

**9.1 years**



GLOBAL AVG. 9 years

**TOTAL EARLY-STAGE FUNDING**  
(H2 2020 - 2022)

**\$22 bn**



GLOBAL AVG. \$970 m

**MEDIAN SEED ROUND**  
(H2 2020 - 2022)

**\$1.5 m**



GLOBAL AVG. \$821 k

**EARLY-STAGE FUNDING GROWTH**  
(2019 - 20 VS. 2021 - 22)



Scale of 1 (lowest) to 10 (highest)

**EXIT AMOUNT**  
(2018 - 2022)

**\$162 bn**



GLOBAL AVG. \$11.3 bn

**ECOSYSTEM VALUE GROWTH**  
(H2 2020 - H2 2022 VS. H2 2018 - H2 2020)

**50%**



GLOBAL AVG. 4.7%

**MEDIAN SERIES A ROUND**  
(H2 2020 - 2022)

**\$10 m**



GLOBAL AVG. \$6 m

**TOTAL VC FUNDING**  
(2018 - 2022)

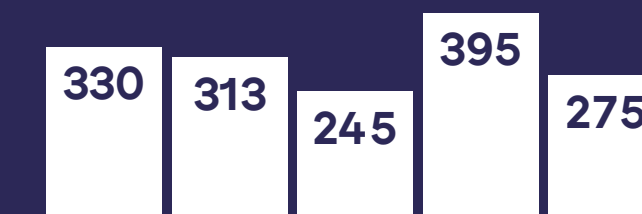
**\$138 bn**



GLOBAL AVG. \$6.6 bn

**EXIT COUNT (#)**  
(2018 - 2022)

**1558**



GLOBAL AVG. 91

2018 2019 2020 2021 2022

## Sub-Sector Strengths

### AI, Big Data & Analytics

In 2022, generative AI companies in New York raised a whopping \$483.6 million over 28 funding rounds. Alphasense, an AI-powered market intelligence search engine, reached unicorn status with \$100 million in additional Series D funding in April 2023. Canoe, makers of an AI-powered solution that captures data from documents for institutional investors, raised a \$25 million Series B in February 2023. Massive Bio, which uses AI to match cancer patients to clinical trials, made the New York City Digital Health 100 for the second consecutive year.

### Life Sciences

New York sits in the middle of a corridor of Life Sciences innovation stretching from Boston to Raleigh-Durham. The metro area is home to nearly 5,100 Life Sciences companies, has received the most National Institute of Health funding in the U.S., and raised \$3.1 billion in VC deals in 2021. New York ranked #2 in the best states for Life Sciences incentive programs in CBRE's 2023 U.S. Life Sciences Outlook. Ten early-stage Life Sciences incubators have been launched across the five boroughs.

### Cleantech

NYC announced two startup programs as part of its sustainability focused PlaNYC agenda: one to help early-stage companies incubate solutions for urban environments and another to attract international companies. Governors Island is being transformed into a \$700 million “living laboratory” for climate solutions, and a \$20 million biotech hub will open for startups using sustainability focused biotechnology. In 2022, Fifth Wall closed a \$500 million commitment for its inaugural climate fund and Union Square Ventures announced a \$200 million fund dedicated to investments in startups mitigating or adapting to climate change.

## Reasons to Move Your Startup to New York City

### High-Quality Talent

New York offers a diverse and skilled talent pool fed by a pipeline of graduates from more than two dozen world-class academic and healthcare institutions. The city ranks #1 in the Northeast in total number of STEM grads and #2 in the nation for the highest number of residents who are scientists and engineers. The number of tech jobs in New York has grown 143% over the last decade.

### Tax Benefits

The START-UP NY program provides tax benefits to businesses that are based in approved locations near colleges and universities. Approved businesses operate tax-free for 10 years and gain access to advanced research laboratories, development resources, and experts in key industries. Employees hired for new jobs in a tax-free area pay no state or local income taxes for the first five years and a reduced rate for a further five years.

### Dedicated Support

The \$75 million NYC Small Business Opportunity Fund is a public-private loan fund for small businesses. The Global NY Fund Grant program is a \$35 million fund for SMEs. Empire State Development, together with the US Small Business Administration, provides grants to help increase exports, along with trade education. NYCEDC supports businesses in expanding or relocating through site selection guidance, workforce development consultation, financial incentive analysis, and more.



## Selected Startup Organizations

STARTUP GENOME MEMBERS

MEMBER

### New York City Economic Development Corporation

New York City Economic Development Corporation is a mission-driven, nonprofit organization that works for a vibrant, inclusive, and globally competitive economy for all New Yorkers. We take a comprehensive approach, through four main strategies: strengthen confidence in NYC as a great place to do business; grow innovative sectors with a focus on equity; build neighborhoods as places to live, learn, work, and play; and deliver sustainable infrastructure for communities and the city's future economy.

MEMBER

### Tech:NYC

Tech:NYC is an engaged network of tech leaders working to foster a dynamic, diverse, and creative New York. We bring together New Yorkers to support a successful technology ecosystem, attract and retain top-tier talent, and celebrate New York and the companies that call it home.



United States

# Philadelphia

- #27 Global Ranking
- #38 Fintech Ranking
- #24 Blue Economy Ranking

**MEMBERS:**

Ben Franklin Technology Partners of Southeastern Pennsylvania / Drexel University / University City Science Center

*“We’re building an innovation ecosystem that will help to propel our region to global leadership in Life Sciences, and we’re laying the path for our researchers, co-op students, graduates and neighbors to participate.”*



**John Fry**  
President, Drexel University

Global Ecosystem in Funding	Global Ecosystem in Performance	Global Ecosystem in Talent & Experience
<b>Top 30</b>	<b>Top 30</b>	<b>Top 30</b>

## Highlights

Philadelphia has built a reputation as an innovation and research hub, particularly in Life Sciences, but it is also gaining ground in Fintech and enterprise tech. The ecosystem’s relatively low cost, friendly attitude to newcomers, convenient location to New York and Washington, D.C., excellent educational institutions, and diverse workforce are attracting startups. The Philadelphia metro area ranked #15 in SmartAsset’s 2022 Best Cities for Women in Tech report.

Outside investment has flooded into the ecosystem in recent years. In 2021, \$3.8 billion came from Bay Area investors and \$4.6 billion from New York. In 2022, the numbers were down but still respectable at \$2.9 billion from Silicon Valley firms and \$3.4 billion from New York ones. Local agencies continue to play their part too. Ben Franklin Technology Partners of Southeastern Pennsylvania (Ben Franklin) invested \$10.3 million into 42 companies in Philadelphia and surrounding areas. Ben Franklin is also aiming to raise at least \$25 million for its new growth-stage fund, which continues the work led by its GO Philly Fund.

With new initiatives including the Capital Readiness Program — designed for startups preparing for a first institutional raise — and a Founders Fellowship for STEM researchers interested in pursuing entrepreneurship, University City Science Center continues to support startups while cultivating a diverse STEM workforce. Capital One is opening its second innovation center in Philadelphia. TD Workshop, a retail innovation lab in the University City district, opened in 2022. The latest edition of Philly Tech Week took place in May 2023.

# Ecosystem by the Numbers

**ECOSYSTEM VALUE**  
(H2 2020 - 2022)

**\$68 bn**



GLOBAL AVG. \$34.6 bn

**NUMBER OF UNICORNS**  
(H2 2020 - 2022)

**8**



GLOBAL AVG. 4

**SOFT. ENGINEER SALARY**  
(2022)

**\$84 k**



GLOBAL AVG. \$46 k

**TIME TO EXIT**  
(2018 - 2022)

**10.5 years**



GLOBAL AVG. 9 years

**TOTAL EARLY-STAGE FUNDING**  
(H2 2020 - 2022)

**\$1.7 bn**



GLOBAL AVG. \$970 m

**MEDIAN SEED ROUND**  
(H2 2020 - 2022)

**\$750 k**



GLOBAL AVG. \$821 k

**EARLY-STAGE FUNDING GROWTH**  
(2019 - 20 VS. 2021 - 22)



Scale of 1 (lowest) to 10 (highest)

**EXIT AMOUNT**  
(2018 - 2022)

**\$15 bn**



GLOBAL AVG. \$11.3 bn

**ECOSYSTEM VALUE GROWTH**  
(H2 2020 - H2 2022 VS. H2 2018 - H2 2020)

**47%**



GLOBAL AVG. 47%

**MEDIAN SERIES A ROUND**  
(H2 2020 - 2022)

**\$6.1 m**



GLOBAL AVG. \$6 m

**TOTAL VC FUNDING**  
(2018 - 2022)

**\$16 bn**

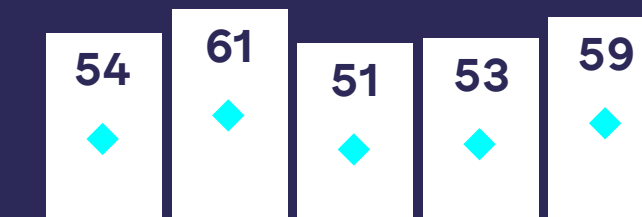


GLOBAL AVG. \$6.6 bn

**EXIT COUNT (#)**  
(2018 - 2022)

**278**

GLOBAL AVG. 91



2018 2019 2020 2021 2022

## Sub-Sector Strengths

### AI, Big Data & Analytics

The Wharton School and Penn Engineering hosted the fourth annual Women in Data Science (WiDS) @ Penn Conference in February 2023. Data analytics startup dbt Labs closed a \$222 million Series D at a \$4.2 billion valuation in February 2022.

### Life Sciences

CBRE's Life Sciences Talent Report ranked Philadelphia as the eighth best market for Life Sciences talent. In February 2023, ground was broken on Philadelphia's largest Life Sciences research laboratory, created by Drexel University and Gattuso Development Partners. The University of Pennsylvania plans to develop a Life Sciences facility inside its innovation incubator, Pennovation Works. Vitara Biomedical raised a \$75 million Series B in July 2022. Gene-editing company iECURE raised a \$65 million Series A1 in November 2022, putting its pre-money valuation at \$90 million.

### Advanced Manufacturing & Robotics

Once known as the Workshop of the World, Philadelphia is an advanced manufacturing hub that is home to 5,600 manufacturers employing 190,000 workers. This includes Boeing, Dow Chemical, DuPont, Lockheed Martin, Merck, and Pfizer. The ecosystem boasts extensive supply-chain networks. Robotics startup FORT raised a \$25 million Series B in July 2022, putting the company's pre-money valuation at \$100 million.

## Reasons to Move Your Startup to Philadelphia

### Diverse & Skilled Talent

CBRE ranked Philadelphia #22 in its 2022 tech talent ranking. The CEO Council is working to attract professionals, as well as retain local graduates and tech workers. The Office of Diversity, Equity and Inclusion works to dismantle barriers holding back many Philadelphia residents. The Black Innovation Alliance (BIA) partnered with Google to give \$50,000 to five Black-owned businesses, including delivery service Black and Mobile.

### Dedicated Support

Home to several leading science institutions and many innovative startups, Philadelphia is a leader in research and innovation. Drexel University offers an Innovation Fund to invest in early-stage Drexel student and postgraduate startups, as well as startups founded to commercialize the results of Drexel scientific research. The fund invests \$150,000 per startup in up to four startups per year.

### Tax Incentives

The Sustainable Jump Start program offers new, sustainable, job-creating businesses a 0% rate on business income and receipts tax for the first three years of operations. A total of \$15 million in tax credits is available through the Keystone Innovation Zone tax credit program every year. Life Sciences and tech businesses in three specific areas of Philadelphia are eligible to apply.



## Selected Startup Organizations

### STARTUP GENOME MEMBERS

MEMBER

### Ben Franklin Technology Partners of Southeastern Pennsylvania

Ranked among the most active seed and early stage investors in the US, Ben Franklin Technology Partners of Southeastern Pennsylvania is a venture development organization that helps high-growth innovative enterprises plant and nurture their roots in the Philadelphia region. The nonprofit has supported more than 2,000 companies to deliver an economic impact of more than \$5 billion and over 32,000 jobs created in the Philadelphia region.

### KEY ECOSYSTEM PLAYERS

#### Philly Startup Leaders

Created by founders for founders, this 501(c)3 supports current and future entrepreneurs by providing them with the education, mentorship, and network needed to scale their businesses.

#### Independence Health Group

This leading health insurance company has built a reputation for seeking innovative partnerships with world-class organizations in Philadelphia and across the country to enable better health for all.

#### 1Philadelphia

1Philadelphia is a coalition of community partners working together to create an equitable tech industry in Philadelphia.

MEMBER

### Drexel University

Drexel is a comprehensive global research university with a unique model of experiential learning that combines academic rigor with one of the nation's premier cooperative education programs. Drexel is classified as "R1: Doctoral Universities" by the Carnegie Classification of Institutions of Higher Education, a designation given to U.S. research institutions with the highest level of research activity.

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 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, the Science Center has supported over 1,000 early-stage companies.

#### Comcast NBCUniversal LIFT Labs Accelerator

Startup accelerator and strategic innovation programs give global founders access to the company's network of mentors and brands to foster rapid breakthroughs in media, entertainment and connectivity.

#### Philadelphia Alliance for Capital and Technologies (PACT)

The go-to resource for fast-growing companies, as well as a driver of entrepreneurship and innovation in the Philadelphia region and a leader in creating access and equity for underrepresented founders.

United States

# Pittsburgh

# (31-40) Emerging Ranking

**MEMBERS:**

Pittsburgh Regional Alliance / InnovatePGH Partnership / Innovation Works

*“Pittsburgh is quite literally leading our nation back to the surface of the Moon, and if Pittsburgh can land on the Moon, Pittsburgh can do anything. We are the next generation of the tech economy, and the opportunities here are limitless.”*



**John Thornton**

CEO, Astrobotic Technology, Inc.



## Highlights

Over 500 startups and scaleups call the Pittsburgh region home, estimated to be worth a combined \$35.6 billion. Pittsburgh’s startups raised more than \$534 million in 2022, an increase from 2021.

The Pittsburgh region was awarded \$62.7 billion in a first-of-its-kind federal funding grant from the EDA to expand Pittsburgh’s world-leading Robotics and autonomy ecosystem. Innovation Works, along with the Pittsburgh Robotics Network and other partners, have launched the Robotics Factory, a set of programs to create, accelerate, and scale Robotics startups in the region. Innovation Works has invested \$120 million in over 730 companies that have brought in an additional \$3.5 billion in outside funding. The Build Back Better grant will fund five regional projects designed to provide long-term opportunities in the Robotics and autonomy industry. The growing sector already includes more than 14,500 workers and over 750 companies, and contributes approximately \$575 million in regional GDP. The Pittsburgh Robotics Network includes 130+ Robotics organizations.

The Keystone Innovation Zone Tax Credit Program, with an annual budget of \$15 million, provides credits to businesses less than eight years old operating within targeted industries. Carnegie Mellon University and the Norman and Ruth Rales Foundation broaden the pipeline of STEM talent by offering tuition-free graduate study for nearly 90 students a year in perpetuity. Kloopify, a sustainable procurement startup, landed its first major investment in a \$1.5 million November 2022 seed round. It was also the first local startup to score a deal from Pittsburgh-based Black Tech Nation Ventures, which led the round.

# Ecosystem by the Numbers

**ECOSYSTEM VALUE**  
(H2 2020 - 2022)

**\$12 bn**



GLOBAL AVG. \$34.6 bn

**NUMBER OF UNICORNS**  
(H2 2020 - 2022)

**0**



GLOBAL AVG. 4

**SOFT. ENGINEER SALARY**  
(2022)

**\$85 k**



GLOBAL AVG. \$46 k

**TIME TO EXIT**  
(2018 - 2022)

**11.6 years**



GLOBAL AVG. 9 years

**TOTAL EARLY-STAGE FUNDING**  
(H2 2020 - 2022)

**\$731 m**



GLOBAL AVG. \$970 m

**MEDIAN SEED ROUND**  
(H2 2020 - 2022)

**\$100 k**



GLOBAL AVG. \$821 k

**EARLY-STAGE FUNDING GROWTH**  
(2019 - 20 VS. 2021 - 22)



Scale of 1 (lowest) to 10 (highest)

**EXIT AMOUNT**  
(2018 - 2022)

**\$9.2 bn**



GLOBAL AVG. 11.3 bn

**ECOSYSTEM VALUE GROWTH**  
(H2 2020 - H2 2022 VS. H2 2018 - H2 2020)

**43%**



GLOBAL AVG. 4.7%

**MEDIAN SERIES A ROUND**  
(H2 2020 - 2022)

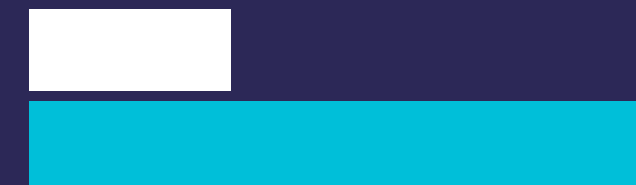
**\$9.1 m**



GLOBAL AVG. \$6 m

**TOTAL VC FUNDING**  
(2018 - 2022)

**\$2.1 bn**

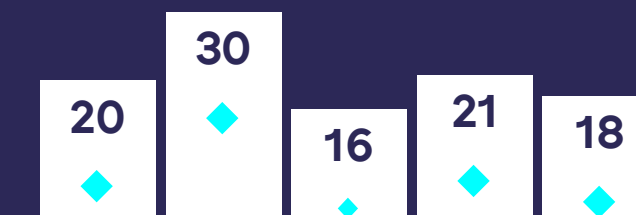


GLOBAL AVG. \$6.6 bn

**EXIT COUNT (#)**  
(2018 - 2022)

**105**

GLOBAL AVG. 91



2018 2019 2020 2021 2022



## Sub-Sector Strengths



### Advanced Manufacturing & Robotics

Pittsburgh is home to some of the world's most respected Robotics companies, including Astrobotic, Aurora, Caterpillar, Seegrid, and Smith+Nephew. A hub for self-driving technology, Aurora, Motional, and Waymo, are based here. Carnegie Mellon University has the #1 ranked Robotics program in the world. Robotics software company Tesseract Solutions announced that its U.S. headquarters will be in Pittsburgh, and Oshkosh Corp. has announced it will also build a space here. Re:Build Manufacturing has announced an \$81 million investment to create a manufacturing center and 300 jobs in New Kensington.



### Life Sciences

Pittsburgh's vibrant Life Sciences ecosystem has received \$714 million in NIH research funding to date. The city is home to 1,000 principal investigators, 56 active venture and angel-funded firms with nearly \$1 billion invested, and a growing portfolio of lab and space concentrated in the Pittsburgh Innovation District. Life Sciences firms employ more than 1,000 people in the region. In May 2023, Krystal Biotech raised \$160 million on the heels of FDA approval for the first-ever redosable gene therapy product.

### SpaceTech

Anchored by Astrobotic, Pittsburgh is quickly becoming a hub for space manufacturing and automation. Organizations including the Keystone Space Collaborative are pulling together the collective manufacturing, logistics, and engineering strengths of the tri-state region to catalyze investment and promote growth in this global emerging sector. In the first trip back to the moon since the Apollo era, Astrobotic will launch the Peregrine Lunar Lander, the first privately built rover to land on the surface of the moon.

## Reasons to Move Your Startup to Pittsburgh

### Affordability

Pittsburgh was named the most affordable city to buy a home in the 2022 Demographia International Housing Affordability study by the Urban Reform Institute and the Frontier Center for Public Policy. CBRE's 2022 Scoring Tech Talent Report ranked Pittsburgh as the twentieth most affordable city of 50 North American markets. The city was ranked #21 in terms of affordable living, with average rent costs taking up 17.3% of the average tech worker's wages.

### Pittsburgh Innovation District

Pittsburgh has emerged as a powerhouse R&D center with a particular focus on the autonomy industry, Life Sciences, and medical technology. Rooted in the world-class research of the University of Pittsburgh, Carnegie Mellon University, and UPMC, the Pittsburgh Innovation District generates \$1.2 billion in annual R&D. The area is home to Facebook, Bosch, Uber, Microsoft, Oracle, SAP, Amazon, Yelp!, ANSYS, Intel, Apple, and others. The University of Pittsburgh is one of the top five in National Institutes of Health funding.

### Tech Talent

Pittsburgh ranks #2 in the U.S. for IT degrees and is in CBRE's top 10 North American Tech Markets for quality of tech talent. More than 10,000 tech companies in the region employ more than 300,000 people, a quarter of the region's workforce. The \$26.5 billion payroll for tech workers is 37% of the region's wages. 30% of Pittsburgh's STEM-focused employment is in jobs that do not require a bachelor's degree, creating as much economic activity as does STEM-focused employment of degree holders.

## Selected Startup Organizations

STARTUP GENOME MEMBERS

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 Pittsburgh region – comprising 10 southwestern Pennsylvania counties – and supports the growth of existing regional businesses.

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

### Innovation Works

Innovation Works (IW) is one of the top U.S. investors in early-stage technology startups and supports the startup and entrepreneurial ecosystem within southwestern Pennsylvania. It provides the investment, programming – including the AlphaLab (software), AlphaLab Gear (hardware), and AlphaLab Health (Life Sciences) accelerators – and critical resources startups need to reach the next stage of growth in Pittsburgh.

Canada

# Québec City

**MEMBERS:**

Québec International / LE CAMP

*“In recent years, the rapid rise in maturity and growth of the entrepreneurial ecosystem in Québec City has positioned it among the most dynamic in Canada.”*



**Bruno Marchand**

Mayor of Québec City



North American Ecosystem  
in Affordable Talent



North American Ecosystem  
in Bang for Buck



## Highlights

The Québec City ecosystem has evolved and matured in recent years. Its startup economy is now considered a best in class ecosystem, with 369 startups per 100,000 people. The CA\$1.3 billion (\$948,000) QuébecResearch and Innovation Strategy initiative aims to boost collaborative research, increase access to research and innovation expertise for businesses, and drive technology innovation via entrepreneurs. Accelerator LE CAMP supported 122 startups in 2022, and won the InBIA technology accelerator of the year award, as well as the Dinah Adkins award 2022. The CAMP accelerator generated an economic impact of \$194.5 million in 2022. The financing obtained by the startups working with LE CAMP amounts to \$109.3 million.<sup>1</sup> The Impulsion PME Program from Investissement Québec helps startups access capital by matching funding up to \$1 million in initial rounds. Many specialized incubators including Quantino, 2 Degrés, and Mycellium offers industry-specific expertise and equipment to accelerate product development.

Québec City benefits from its easily accessible location, with the U.S. border approximately 100 miles away and direct flights to many international destinations. The provincial capital, it has a European flavor with easy access to nature and outdoor activities. Canada’s Start-Up Visa offers permanent residence to qualified immigrant entrepreneurs.

LeddarTech, which creates environmental sensing platforms for autonomous vehicles, raised \$14.7 million in 2022. QScale, a mega data center will invest almost \$1 billion to build one of the world’s most important and innovative computing centers with energy recovery. Omy Laboratoires, an AI-powered personalized skincare product company, raised \$11 million in an April 2023 venture round.



# Ecosystem by the Numbers

**ECOSYSTEM VALUE**  
(H2 2020 - 2022)

**\$2.5 bn**



GLOBAL AVG. \$34.6 bn

**NUMBER OF UNICORNS**  
(H2 2020 - 2022)

**0**



GLOBAL AVG. 4

**SOFT. ENGINEER SALARY**  
(2022)

**\$57 k**



GLOBAL AVG. \$46 k

**TIME TO EXIT**  
(2018 - 2022)

**11.6 years**



GLOBAL AVG. 9 years

**TOTAL EARLY-STAGE FUNDING**  
(H2 2020 - 2022)

**\$91 m**



GLOBAL AVG. \$970 m

**MEDIAN SEED ROUND**  
(H2 2020 - 2022)

**\$1.3 m**



GLOBAL AVG. \$821 k

**EARLY-STAGE FUNDING GROWTH**  
(2019 - 20 VS. 2021 - 22)



Scale of 1 (lowest) to 10 (highest)

**EXIT AMOUNT**  
(2018 - 2022)

**\$243 m**



GLOBAL AVG. \$11.3 bn

**ECOSYSTEM VALUE GROWTH**  
(H2 2020 - H2 2022 VS. H2 2018 - H2 2020)

**64%**



GLOBAL AVG. 4.7%

**MEDIAN SERIES A ROUND**  
(H2 2020 - 2022)

**\$11 m**



GLOBAL AVG. \$6 m

**TOTAL VC FUNDING**  
(2018 - 2022)

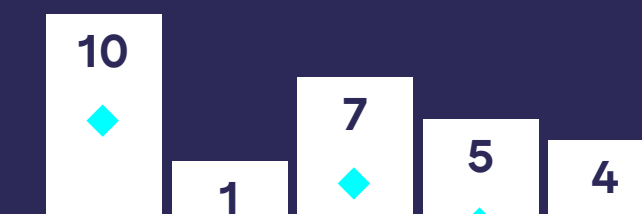
**\$1 bn**



GLOBAL AVG. \$6.6 bn

**EXIT COUNT (#)**  
(2018 - 2022)

**27**



GLOBAL AVG. 91

2018 2019 2020 2021 2022

## Sub-Sector Strengths

### AI, Big Data & Analytics

With over 39,000 IT professionals and leading institutions like Laval University's Institute Intelligence and Data, Québec City is a hub of expertise. QScale's upcoming data center and Vantage Data Centers' investment further solidify the city's position as a tech hotspot. Plus, with a collaborative ecosystem between industrial and academic sectors, responsible AI use, and research expertise in data analysis and processing, Québec City is the optimal size for deploying smart systems.

### Life Sciences

Québec is at the heart of innovation in biopharmaceuticals, medical devices and cosmetics. With the largest infectious disease research center in Canada, CRI, and numerous spin-offs such as Infectio Diagnostic (now Becton Dickinson) and GenePOC (now Meridian Bioscience), the city is a pioneer in health research. Cell culture products company Saguro Technologies closed a \$1.1 million seed round in February 2022. Personalized preventive health startup Biotwin raised a \$3.6 million seed round in May 2022.

### Advanced Manufacturing & Robotics

The Québec City region boasts a powerful concentration of businesses in the optics-photonics and related fields thanks to world-class research centers like INO, the largest center of expertise in optics and photonics in Canada, and Laval University's Centre for Optics, Photonics and Lasers (COPL). Unique incentives foster innovation, giving the region a distinct advantage in these cutting-edge industries.

## Reasons to Move Your Startup to Québec City

### Skilled Talent

More than 500 high-tech companies in Québec City generate nearly \$2 billion in revenue annually. The city is home to more than 35,000 tech employees and the ecosystem has Canada's highest ratio of researchers to population, boasting more than 5,500 researchers and 400 laboratories, research centers, and institutes.

### Tax Credits

Québec businesses can claim up to 30% of eligible expenses related to R&D. The government has set aside up to \$2.7 billion over five years for R&D-related tax credits. The government has also extended the temporary increase to its investment and innovation tax credit through December 2023. Québec's investment and innovation tax credit (C3i) encourages businesses to acquire manufacturing and processing equipment, hardware, and software.

### Cost of Living

The province of Québec is one of the most affordable in Canada, with some of the lowest rents and electricity prices, as well as subsidized child care. The cost of living in Québec City is 19% cheaper than in Montreal, 34% cheaper than in Toronto, and 52% cheaper than in Vancouver. The government is investing CA\$3.8 million (\$2.77 million) by 2026-2027 to offset recent price increases.

## Selected Startup Organizations

### 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.

### KEY ECOSYSTEM PLAYERS

### LE CAMP

Growth accelerator for tech startup, from seed-to-Series A.

### Entrepreneuriat ULaval

Entrepreneuriat ULaval propels entrepreneurs in the university community towards success.

MEMBER

### LE CAMP

A major player in the entrepreneurial technology ecosystem of Québec since 2016, LE CAMP is an accelerator-incubator dedicated to tech businesses, from market validation to international growth. Located in the heart of Québec City, LE CAMP offers high-level support programs and services, regardless of the startup's location. It is also a place of incubation and animation of the technological entrepreneurial ecosystem of the Québec City region.

### Quantino

Quantino is a high-tech incubator specializing in optics, photonics, hardware, and medical and quantum technologies.

### Axelys

Axelys's mission is to contribute to the economic and social prosperity of Québec by accelerating the development and transfer of high-potential innovations stemming from public research.



United States

# San Diego

**#16** Global Ranking

**#20** Agtech Ranking

**#17** Blue Economy Ranking

*"San Diego's strength is its breadth of innovation: Tech, Life Sciences, Defense, and Healthtech are all colliding and collaborating. Nearshoring is easy with Mexico just 20 miles from downtown, and the great weather further contributes to the ecosystem being perfectly positioned for continued growth."*



**Mike Krenn**  
CEO, Connect/SDVG



Global Ecosystem in Knowledge

**Top 15**



Global Ecosystem in Performance

**Top 10**



Global Ecosystem in Talent & Experience

**Top 15**

## Highlights

San Diego's tech startup sector has seen rapid growth in recent years, aided by the availability of tech talent from the area's many excellent universities and military bases. The city's famous sunshine, high quality of life, and business-friendly environment have all helped attract founders and talent. But as in most ecosystems, VC fundraising in San Diego was down in 2022 compared to 2021's heights — by 45% — although 2022 totals still compared favorably to historical figures. Overall VC funding increased by 55% from 2018 to 2022.

More than 220 accelerator programs, incubators, and investors focused on San Diego tech startups have helped the ecosystem grow. San Diego State University and Techstars partnered to create Techstars San Diego Powered by SDSU, and Greater Than Tech seeks to support the next generation of female scientists, engineers and entrepreneurs. Startup San Diego supports startup founders in San Diego and fosters a cohesive, collaborative community.

The city also plays its part, with the San Diego Regional Economic Development Corporation's Inclusive Growth Initiative aiming to create 50,000 new quality jobs in small businesses by 2030. Qualified sites can take advantage of an extension of the U.S. Foreign-Trade Zone program offering international traders, importers, and exporters special customs privileges. San Diego Startup Week is one of the nation's largest startup events, taking place each June.

In September 2022, biotechnology company Capstan Therapeutics raised \$165 million in financing. Security compliance and automation platform Drata raised a \$200 million Series C round in December 2022, taking the company's valuation to \$2 billion.

# Ecosystem by the Numbers

**ECOSYSTEM VALUE**  
(H2 2020 - 2022)

**\$96 bn**



GLOBAL AVG. \$34.6 bn

**NUMBER OF UNICORNS**  
(H2 2020 - 2022)

**14**



GLOBAL AVG. 4

**SOFT. ENGINEER SALARY**  
(2022)

**\$100 k**



GLOBAL AVG. \$46 k

**TIME TO EXIT**  
(2018 - 2022)

**10.7 years**



GLOBAL AVG. 9 years

**TOTAL EARLY-STAGE FUNDING**  
(H2 2020 - 2022)

**\$3.2 bn**



GLOBAL AVG. \$970 m

**MEDIAN SEED ROUND**  
(H2 2020 - 2022)

**\$1.4 m**



GLOBAL AVG. \$821 k

**EARLY-STAGE FUNDING GROWTH**  
(2019 - 20 VS. 2021 - 22)



Scale of 1 (lowest) to 10 (highest)

**EXIT AMOUNT**  
(2018 - 2022)

**\$29 bn**



GLOBAL AVG. 11.3 bn

**ECOSYSTEM VALUE GROWTH**  
(H2 2020 - H2 2022 VS. H2 2018 - H2 2020)

**24%**



GLOBAL AVG. 4.7%

**MEDIAN SERIES A ROUND**  
(H2 2020 - 2022)

**\$12 m**



GLOBAL AVG. \$6 m

**TOTAL VC FUNDING**  
(2018 - 2022)

**\$23 bn**



GLOBAL AVG. \$6.6 bn

**EXIT COUNT (#)**  
(2018 - 2022)

**280**



GLOBAL AVG. 91 ◆

## Sub-Sector Strengths

### Cleantech

San Diego's Cleantech sector has an economic impact of \$8.2 billion. Cleantech San Diego, a supporting organization of the Cleantech Forum North America, connects startups with investors and corporate partners. In July 2022, San Diego Gas & Electric, in collaboration with Cleantech Nuvve, announced the success of a pilot project to use electric school buses. In July 2022, battery materials company Wildcat Discovery Technologies raised a \$90 million Series D.

### Life Sciences

San Diego is ranked the fifth strongest Life Sciences labor market for research talent in the U.S., with the highest density of biochemists, biophysicists, and other biological scientists and the second highest density of chemists. The development of Bioterra, a \$202 million biotech facility, was announced in late 2022. Targeted radiopharmaceutical company RayzeBio raised a \$160 million Series D in September 2022. Clinical-stage company Escient Pharmaceuticals closed a \$120 million Series C in November 2022.

### AI, Big Data & Analytics

In July 2022, a National Science Foundation initiative created the Institute for Emerging CORE Methods in Data Science, a \$10 million institute at the University of California San Diego. The Emerging Topics in Artificial Intelligence 2022 conference was held in August. In April 2023, the Artificial Intelligence for Early Drug Discovery conference gathered experts in the field. In December 2022, defense technology company Shield AI raised an additional \$60 million in Series E financing, closing out the round at \$225 million.

## Reasons to Move Your Startup to San Diego

### Business-Friendly Environment

San Diego has reduced permit processing times and fees and modified codes to provide businesses with regulatory relief. Its Online Business Portal further assists entrepreneurs. The City's Economic Development Department has a proactive Business Expansion, Attraction and Retention Division that works directly with businesses in targeted industries, providing assistance and incentives.

### Quality of Life

Housing is significantly cheaper in San Diego than in other top California hubs, and the overall cost of living is more affordable. Job growth for the next 10 years is estimated to be 34.9%, outpacing the 33.5% forecast for the rest of the country. San Diego's Climate Action Plan sets a goal of net-zero greenhouse gas emissions by 2035. SANDAG's Regional Transportation Plan seeks to reduce local reliance on cars.

### Tax Incentives

City of San Diego tax incentives include the Business Cooperation Program, which can provide tax rebates when a business implements new practices for sales, purchasing, or tax accounting. The Fee Payment Incentive Program allows businesses to recoup certain fees associated with submitting and securing building permit entitlements.



United States

# Seattle

**#10** Global Ranking **#12** Agtech Ranking **#18** Fintech Ranking

"Seattle leads in tech communities, with abundant programmers and investment opportunities. Its success in cloud computing, AI, and Ecommerce sets it apart as a hub for innovation and action."



**John Sechrest**  
Founder, Seattle Angel Conference



## Highlights

Seattle is the birthplace of Microsoft and Amazon as well as many other decacorns, creating a vibrant tech ecosystem that is an ideal breeding ground for future unicorns. Seattle ranked #12 in the 2022 America's Best Cities report, and household income was found to be the sixth highest nationally.

While the end of 2022 and beginning of 2023 have seen large rounds of layoffs at many of the city's tech companies, about 79% of recently laid off workers were landing a new job within three months in the last quarter of 2022, according to a ZipRecruite report. There are an estimated 155,000 information workers in the region, and the Seattle area ranked as the best city for STEM professions, according to a study from WalletHub.

The AWS Impact Accelerator, run by Amazon Web Services, was launched in April 2022 to support early-stage startups led by Black, women, Latinx, and LGBTQIA+ founders. Startups receive up to \$125,000 in cash and \$100,000 in AWS credits. The Buerk Center promotes entrepreneurship across the University of Washington campus.

Seattle's reputation as a tech hub attracts a host of startup-related events each year, including the 2023 Venture Capital World Summit, the biannual Seattle Angel Conference, the GeekWire Summit, and various other meetups. Retail media platform Swiftly has raised a total of \$215.6 million over three rounds. Its was a September 2022 Series C round of \$100 million, helping the company become the latest Seattle-area startup to reach a \$1 billion valuation.

# Ecosystem by the Numbers

**ECOSYSTEM VALUE**  
(H2 2020 - 2022)

**\$133 bn**



GLOBAL AVG. \$34.6 bn

**NUMBER OF UNICORNS**  
(H2 2020 - 2022)

**17**



GLOBAL AVG. 4

**SOFT. ENGINEER SALARY**  
(2022)

**\$115 k**



GLOBAL AVG. \$46 k

**TIME TO EXIT**  
(2018 - 2022)

**8.7 years**



GLOBAL AVG. 9 years

**TOTAL EARLY-STAGE FUNDING**  
(H2 2020 - 2022)

**\$5.2 bn**



GLOBAL AVG. \$970 m

**MEDIAN SEED ROUND**  
(H2 2020 - 2022)

**\$1.5 m**



GLOBAL AVG. \$821 k

**EARLY-STAGE FUNDING GROWTH**  
(2019 - 20 VS. 2021 - 22)



Scale of 1 (lowest) to 10 (highest)

**EXIT AMOUNT**  
(2018 - 2022)

**\$46 bn**



GLOBAL AVG. 11.3 bn

**ECOSYSTEM VALUE GROWTH**  
(H2 2020 - H2 2022 VS H2 2018 - H2 2020)

**46%**



GLOBAL AVG. 4.7%

**MEDIAN SERIES A ROUND**  
(H2 2020 - 2022)

**\$10 m**



GLOBAL AVG. \$6 m

**TOTAL VC FUNDING**  
(2018 - 2022)

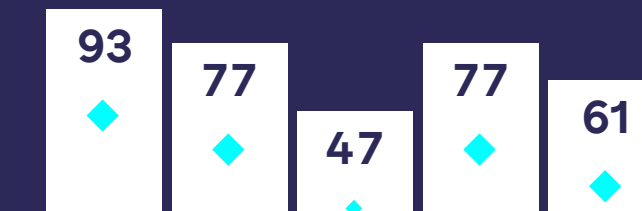
**\$26 bn**



GLOBAL AVG. \$6.6 bn

**EXIT COUNT (#)**  
(2018 - 2022)

**355**



GLOBAL AVG. 91

## Sub-Sector Strengths

### AI, Big Data & Analytics

In January 2023 IonQ, a leader in quantum computing, announced plans to open the first dedicated quantum-computing manufacturing facility in the U.S. in Seattle. The company plans to invest \$1 billion in the Pacific Northwest over the next decade. In March 2022, VC firm Flying Fish announced it had raised \$70 million for its second fund to invest in early-stage machine-learning and AI startups. Serverless data analytics platform MotherDuck has raised \$47.5 million over two rounds, including a \$35 million Series A in November 2022.

### Life Sciences

Seattle is a hub for Life Sciences and research talent. Global biotech company Seagen and Sana Biotechnology are both building facilities in the Seattle area. Google acquired Sound Life Sciences, makers of an app to monitor breathing, in October 2022. Synthetic biology company Arzeda has raised \$51.4 million over 10 rounds. Clinical-stage biotech company Aurion Biotechnologies raised a \$120 million venture round in April 2022. Drug discovery company Cajal Neuroscience raised a \$96 million Series A in November 2022.

### Agtech & New Food

Precision agriculture company IUNU has raised \$45.7 million, including a \$24 million Series C in March 2022. Indoor agriculture startup Koidra will share a \$3.77 million research grant raised in October 2022 with two universities to continue developing data-driven growth of produce. Biosensing platform Strella Biotechnology has raised \$11.8 million over four rounds, including an \$8 million Series A in June 2022. Lithos Carbon, which transforms farmland into carbon capture centers, raised a \$6.3 million seed round in October 2022.

## Reasons to Move Your Startup to Seattle

### Established Tech Scene

Seattle's tech industry is well established and attracts aspiring entrepreneurs and tech workers alike. Over 165,000 Seattle residents work in technology. Nearly half of all knowledge jobs in the city are technology related and the industry occupies 42% of all office space. Tech jobs here are expected to grow 8.7% by 2026.

### Strong Talent Pool

Seattle offers a robust talent pool to draw from thanks to its many universities and reputation as a tech hub. The city leads the U.S. in tech job creation, according to CBRE's 2022 annual Scoring Tech Talent Report, which ranked the city #2 overall. The region is among the 10 most educated metropolitan areas in the country, with 36% of residents holding a bachelor's degree.

### Strategic Location

Located on the west coast and within easy reach of nature and the Canadian border, Seattle offers a high quality of life residents with a strategic location. The Port of Seattle is one of the busiest ports in the world, a leading economic engine for the region, and a key hub for Pacific trade. Two airports connect the city to the world.



United States

# Silicon Valley

**#1** Global Ranking **#1** Agtech Ranking **#1** Fintech Ranking

*"Silicon Valley has been the hub and North Star of tech innovation since the dawn of the semiconductor. This innovation ebbs and flows as platforms shift — from hardware to software to cloud to mobile, and now to generative AI. Now is as bright of a time as ever to be innovating and investing in technology, especially in Silicon Valley."*



**Matt Murphy**  
Managing Director, Menlo Ventures

<b>Global Ecosystem in Funding</b>	<b>Global Ecosystem in Performance</b>	<b>Global Ecosystem in Talent &amp; Experience</b>
<b>#1</b>	<b>#1</b>	<b>#1</b>

## Highlights

Silicon Valley has placed at the top of the global startup ecosystem ranking since it was launched, and the ecosystem emerged from the pandemic with its dominance intact. Despite the 2023 Silicon Valley Index stating that 91,000 people departed from the hub over the past two years (the highest number since the dot.com bust), and that there “is no longer a significant influx of people from other places,” it also notes that Silicon Valley added 88,000 jobs between mid-2021 and mid-2022, and that an estimated 22,000 jobs were added in H2 2022. The landscape may be changing, but Silicon Valley’s established reputation, access to funding, high level of knowledge, and connections all contribute to it maintaining its status as the leading tech startup hub.

Research shows that layoffs are often followed by booms in entrepreneurship and efforts to catalyze this process are already underway in Silicon Valley, with support services stepping in to assist. One example is early-stage VC fund Day One Ventures launching a new initiative to fund startups founded by people laid off from tech jobs.

Ecommerce platform Weee announced a \$425 million Series E in February 2022, bringing its valuation to \$4.1 billion. Tech-enabled homebuilding company Veev announced a \$400 million Series D in March 2022. Cloud security startup Netskope raised \$401 million in January 2023. The Women of Silicon Valley conference took place in May 2022, and Emerging Tech Expo, a two-day summit, took place the same month. TECHSPO Silicon Valley takes place each summer.

# Ecosystem by the Numbers

**ECOSYSTEM VALUE**  
(H2 2020 - 2022)

**\$2400 bn**



GLOBAL AVG. \$34.6 bn

**NUMBER OF UNICORNS**  
(H2 2020 - 2022)

**251**



GLOBAL AVG. 4

**SOFT. ENGINEER SALARY**  
(2022)

**\$125 k**



GLOBAL AVG. \$46 k

**TIME TO EXIT**  
(2018 - 2022)

**7.9 years**



GLOBAL AVG. 9 years

**TOTAL EARLY-STAGE FUNDING**  
(H2 2020 - 2022)

**\$44 bn**



GLOBAL AVG. \$970 m

**MEDIAN SEED ROUND**  
(H2 2020 - 2022)

**\$2.1 m**



GLOBAL AVG. \$821 k

**EARLY-STAGE FUNDING GROWTH**  
(2019 - 20 VS. 2021 - 22)



Scale of 1 (lowest) to 10 (highest)

**EXIT AMOUNT**  
(2018 - 2022)

**\$903 bn**



GLOBAL AVG. 11.3 bn

**ECOSYSTEM VALUE GROWTH**  
(H2 2020 - H2 2022 VS H2 2018 - H2 2020)

**28%**



GLOBAL AVG. 4.7%

**MEDIAN SERIES A ROUND**  
(H2 2020 - 2022)

**\$14 m**



GLOBAL AVG. \$6 m

**TOTAL VC FUNDING**  
(2018 - 2022)

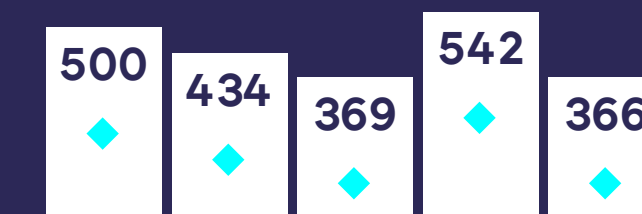
**\$344 bn**



GLOBAL AVG. \$6.6 bn

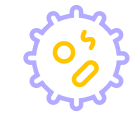
**EXIT COUNT (#)**  
(2018 - 2022)

**2238**



GLOBAL AVG. 91

## Sub-Sector Strengths



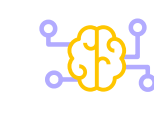
### Life Sciences

Silicon Valley's highly educated workforce and proximity to leading research institutions has made it one of the top Life Sciences clusters in the world. South San Francisco boasts more than 250 biotech companies, accounting for about 30% of the city's jobs. The Precision Medicine World Conference took place in January 2023. BIOMEDevice Silicon Valley is scheduled for November 2023. DNA-sequencing startup Ultima Genomics raised \$600 million in May 2022. Endpoint Health closed \$52 million in equity and debt financing in June 2022.



### Fintech

The birthplace of many world-famous Fintechs, including PayPal, Stripe, and Bill, Silicon Valley is now nurturing another generation of Fintech innovators. Step, a financial platform aimed at teens and young adults, has raised a total of \$500 million. Insurance payments platform Ascend raised a \$30 million Series A in January 2022. Credit card platform Deserve announced a new \$250 million credit facility in May 2022.



### AI, Big Data & Analytics

OpenAI is undoubtedly Silicon Valley's most visible AI success story in recent months. It launched an early demo of ChatGPT in November 2022 and amassed over 1 million users in five days. Since then, Microsoft invested \$10 billion in OpenAI, gaining a 46% stake in the company, and ChatGPT has attracted an estimated 96 million users per month. The world's leading AI and Big Data event, AI & Big Data Expo 2023 took place in Silicon Valley in May.

## Reasons to Move Your Startup to Silicon Valley

### Skilled Talent

Silicon Valley is home to many of the country's best and brightest STEM minds and the greatest concentration of tech companies in the U.S. Stanford University, located in the heart of Silicon Valley, produced the founders of Nike, Google, Hewlett Packard, and Yahoo, as well as 59 Nobel laureates and 17 astronauts.

### Networking Opportunities

Silicon Valley offers a unique culture of innovation, collaboration, and risk-taking. Many of the area's startups are founded by employees and partners of the area's established tech giants. This tight web of relationships makes it easy to find and connect with experienced mentors, access in-depth knowledge of tech and innovation, and be inspired to dream big.

### Legal & Financial Support

As the world's top startup hub, Silicon Valley offers companies efficient laws, policies, and regulations to safeguard business interests and IP. The ecosystem is also the epicenter of startup financing and home to a high concentration of billionaires. Startups benefit from access to a huge range of potential investors with deep understanding of technology and an appetite for risk.



Canada

# Toronto-Waterloo

#17 Global Ranking #11 Agtech Ranking #7 Fintech Ranking

"The Toronto-Waterloo corridor offers incredible diversity in talent, industry representation, and funding opportunities. In today's fast-moving markets, this type of diversity is essential to driving efficient growth for businesses like Vidyard."



**Michael Litt**  
CEO and cofounder, Vidyard



## Highlights

The Toronto-Waterloo Corridor is home to more than 15,000 tech companies, including 5,200 startups, and around 250,000 tech workers. The largest tech hub in Canada and one of the largest in North America, the region is rapidly growing and attracting both tech giants and innovative new startups. Microsoft opened four floors of new office space in a downtown tower in February 2022, while Google has announced plans to build a 400,000 square foot building in Toronto.

Toronto saw CA\$3.7 billion (\$2.7 billion) in investments in 2022, more than double the CA\$1.5 billion (\$1.1 billion) raised in 2019. Waterloo-based companies, meanwhile, raised CA\$856.4 million (\$632.9 million) in 2022, for a combined total of just over CA\$4.5 billion (\$3.3 billion). In April 2023, traffic-tech company Miovision raised CA\$260 million (\$192.2 million) to grow its smart-city technology. PointClickCare Technologies, one of the largest private Canadian software vendors was valued at over \$5 billion in July 2022, making it the ecosystem's highest valued unicorn.

The success of Toronto's tech startup scene is in part a result of Canada's immigration-friendly policies. The Global Skills Strategy expedited the immigration process for highly skilled workers to just two weeks, and today over half of all Toronto residents were born outside of Canada. Leading innovation hubs including MaRS and Communitech have built a strong entrepreneurial community and continue to nurture it with dedicated support, and a steady stream of talent comes out of local post-secondary institutions, which include the University of Waterloo, York University, and the University of Toronto.

# Ecosystem by the Numbers

**ECOSYSTEM VALUE**  
(H2 2020 - 2022)

**\$71 bn**



GLOBAL AVG. \$34.6 bn

**NUMBER OF UNICORNS**  
(H2 2020 - 2022)

**14**



GLOBAL AVG. 4

**SOFT. ENGINEER SALARY**  
(2022)

**\$75 k**



GLOBAL AVG. \$46 k

**TIME TO EXIT**  
(2018 - 2022)

**9.3 years**



GLOBAL AVG. 9 years

**TOTAL EARLY-STAGE FUNDING**  
(H2 2020 - 2022)

**\$3.8 bn**



GLOBAL AVG. \$970 m

**MEDIAN SEED ROUND**  
(H2 2020 - 2022)

**\$900 k**



GLOBAL AVG. \$821 k

**EARLY-STAGE FUNDING GROWTH**  
(2019 - 20 VS. 2021 - 22)



Scale of 1 (lowest) to 10 (highest)

**EXIT AMOUNT**  
(2018 - 2022)

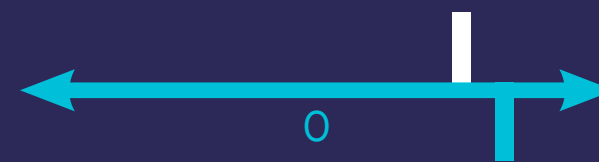
**\$18 bn**



GLOBAL AVG. 11.3 bn

**ECOSYSTEM VALUE GROWTH**  
(H2 2020 - H2 2022 VS. H2 2018 - H2 2020)

**36%**



GLOBAL AVG. 4.7%

**MEDIAN SERIES A ROUND**  
(H2 2020 - 2022)

**\$10 m**



GLOBAL AVG. \$6 m

**TOTAL VC FUNDING**  
(2018 - 2022)

**\$21 bn**



GLOBAL AVG. \$6.6 bn

**EXIT COUNT (#)**  
(2018 - 2022)

**594**

GLOBAL AVG. 91



2018 2019 2020 2021 2022

## Sub-Sector Strengths

### AI, Big Data & Analytics

The University of Waterloo's is a partner in the SCALE.AI Supercluster, an industry-led consortium dedicated to boosting Canada's leadership in applied AI. More than 200 researchers work at the university's AI Institute, and the Toronto-Waterloo Corridor is home to the most AI PhDs in Canada. Notable AI research labs NVIDIA AI Lab, Samsung AI Lab, and the Sanofi AI Centre of Excellence are based in Toronto. Generative AI startup Cohere raised \$250 million in a May 2023 round and is valued at \$2 billion.

### Life Sciences

Toronto's Discovery District is Canada's largest concentration of hospitals, research institutes, business incubators, and venture capital organizations. The Toronto-Golden Horseshoe region represents around a third of Canada's Life Sciences employment. Led by the University of Toronto, the Canadian Hub for Health Intelligence and Innovation in Infectious Diseases (HI3) is a national hub focused on responding quickly and effectively to future pandemics. In April 2023, Waterloo welcomed the Medical Innovation Xchange, Canada's first industry-led hub for Medtech startups.

### Fintech

The Toronto-Waterloo Corridor is home to more than 12,000 Fintech companies and around 360,000 people are employed in the sector. The region attracts more than half of all foreign capital investment in financial services in Canada, and Accenture's 2021 Canadian Fintech Report ranked Toronto as the #8 tech hub in the world, ahead of all other Canadian cities. The Intuit Prosperity Accelerator: Toronto offers a four-month program with an aim to support Fintech startups to refine and scale products.

## Reasons to Move Your Startup to Toronto-Waterloo

### Global Community

Toronto is one of the most diverse cities in the world with more than 230 nationalities represented and around 190 languages spoken. Over 400,000 people became Canadian permanent residents in 2022, and immigrants and permanent residents accounted for 23% of the population. More than half of those admitted to Canada between 2016 and 2021 entered under the economic category.

### Tech Talent

The Toronto-Waterloo Corridor is home to 16 post-secondary institutions, including Canada's largest engineering school, two of Canada's top three computer science programs, and three of the top five business schools in the country. The 2022 PitchBook university rankings place the University of Waterloo at #1 in Canada and reports that the institution has produced 494 founders with undergraduate degrees who have gone on to raise \$19.4 billion.

### Strategic Location

Located almost directly in the middle of America's Eastern Seaboard and Midwest, the Toronto-Waterloo Corridor is easily accessible from other North American tech hubs, including Montreal, New York City, Boston, Chicago, and Detroit. That means entrepreneurs and investors can easily expand and maintain their network to other ecosystems and explore new markets without major investment.



United States

# Washington, D.C.

**#11** Global Ranking **#22** Agtech Ranking

*"Washington, D.C. is rapidly growing as a hub for startups, bolstered by supportive policy measures. D.C.'s innovation scene is uniquely intertwined with the federal government, making it an attractive location for startups seeking regulatory insight."*



**Caleb Watney**

Cofounder, Institute for Progress



## Highlights

Washington, D.C. may be more well known for politics than for entrepreneurship, but the U.S. capital has been gaining a reputation as a startup hub. More than 16,000 tech companies are based in Washington, D.C., making it one of the country's largest tech hubs. The ecosystem benefits from a growing tech talent pool and proximity to relevant federal government departments, including the Federal Communications Commission and the Department of Homeland Security, as well as an abundance of Fortune 1000 companies headquartered in the area.

WalletHub ranked Washington, D.C. the 3rd most educated city in America in 2022. The city is home to several prestigious universities, including Georgetown University, Howard University, and American University and has one of the nation's most educated populations. Techstars Washington, DC Powered by J.P. Morgan was announced in March 2022, with a goal of providing equitable access to funding and support for underrepresented founders. It's first cohort started the following September. In May 2022, the mayor announced that the district would invest \$5 million to develop two innovation districts to leverage existing economies to spur new ideas for growth and development: the Penn West Equity and Innovation District ("Penn West") and the Mobility Innovation District (MID).

The annual DC Blockchain Summit was held in March 2023. Recent large deals include insurtech company Pie Insurance's \$315 million Series D in September 2022 and auto Fintech Caribou's \$115 million Series C in May 2022.

# Ecosystem by the Numbers

**ECOSYSTEM VALUE**  
(H2 2020 - 2022)

**\$81 bn**



GLOBAL AVG. \$34.6 bn

**NUMBER OF UNICORNS**  
(H2 2020 - 2022)

**15**



GLOBAL AVG. 4

**SOFT. ENGINEER SALARY**  
(2022)

**\$93 k**



GLOBAL AVG. \$46 k

**TIME TO EXIT**  
(2018 - 2022)

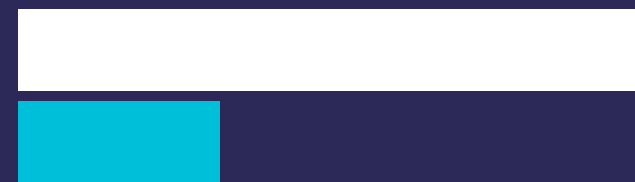
**10.8 years**



GLOBAL AVG. 9 years

**TOTAL EARLY-STAGE FUNDING**  
(H2 2020 - 2022)

**\$3 bn**



GLOBAL AVG. \$970 m

**MEDIAN SEED ROUND**  
(H2 2020 - 2022)

**\$800 k**



GLOBAL AVG. \$821 k

**EARLY-STAGE FUNDING GROWTH**  
(2019 - 20 VS. 2021 - 22)



Scale of 1 (lowest) to 10 (highest)

**EXIT AMOUNT**  
(2018 - 2022)

**\$33 bn**



GLOBAL AVG. 11.3 bn

**ECOSYSTEM VALUE GROWTH**  
(H2 2020 - H2 2022 VS H2 2018 - H2 2020)

**44%**



GLOBAL AVG. 4.7%

**MEDIAN SERIES A ROUND**  
(H2 2020 - 2022)

**\$10 m**



GLOBAL AVG. \$6 m

**TOTAL VC FUNDING**  
(2018 - 2022)

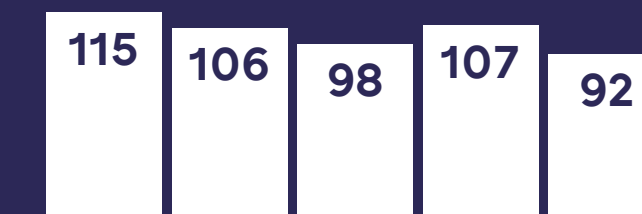
**\$21 bn**



GLOBAL AVG. \$6.6 bn

**EXIT COUNT (#)**  
(2018 - 2022)

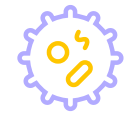
**518**



GLOBAL AVG. 91

2018 2019 2020 2021 2022

## Sub-Sector Strengths



### Life Sciences

The DC/Baltimore region is #2 in the U.S. for Life Sciences research talent, according to CBRE's Life Sciences Research Talent 2022 report. The report cited the area's strong industry presence and top-ranked universities, including George Washington University, Johns Hopkins University, and George Mason University. As of June 2022, Johnson & Johnson JLABS hub was home to more than 25 early-stage Life Sciences companies. Medtech Current Surgical raised a \$3.2 million seed round in February 2023.



### Cybersecurity

The 2022 Cybersecurity conference was held in October, as was the most recent edition of the annual Women in Cybersecurity Reception. The Billington CyberSecurity Summit is scheduled for September 2023. Social engineering prevention and detection platform Picnic raised a \$14 million Series A in February 2022. Cybersecurity startup GreyNoise Intelligence closed a \$15 million Series A in June 2022.



### Cleantech

In July 2022 the D.C. council passed the Climate Commitment Act, pledging to reach carbon neutrality by 2045. The District of Columbia ranked sixth among states on the 2022 State Energy Efficiency Scorecard from the American Council for Energy Efficient Economy. Electric vehicles infrastructure platform Inspiration Mobility raised \$215 million in May 2022. Climate technology company Arcadia raised \$125 million in December 2022 after raising \$200 million in May 2022.

## Reasons to Move Your Startup to Washington, D.C.

### Access to Funding

The Office of the Deputy Mayor for Planning and Economic Development's (DMPED) Vitality Fund assists businesses within targeted sectors to relocate, expand, or remain in D.C. In September 2022, DMPED and 1863 Ventures opened applications for the latest round of the Inclusive Innovation Equity Impact Fund. In September 2022, Comcast's RISE's DC program announced it was awarding an additional \$1 million in small business grants for local founders from marginalized groups.

### Tax Incentives

Qualified high technology companies can claim tax benefits to support their growth, including a reduced capital gains tax rate of 3%, a new hire wage tax credit of up to \$15,000 annually for each qualified disadvantaged employee, a new hire retraining tax credit, and a five-year freeze on real property taxes for office improvements. The Creative and Open Space Modernization Tax Rebate offers qualifying companies a tax rebate of up to \$1 million annually for five years to assist with office improvements.

### Tech Talent

The Scoring Tech Talent 2022 report from CBRE found that the D.C. region is the fourth best market for talent thanks to the size of its talent pool and the large number of tech graduates. The D.C. region also ranks #1 for diversity among major tech hubs, with 31.4% of IT professionals women. D.C. ranks second best for the percentage of women in the tech workforce, according to a SmartAsset analysis.



# OCEANIA

- 304 — Key Findings
- 305 — How a Diverse Range of Tech Startups Is Flourishing in New Zealand
- 307 — Ecosystem Pages





# Regional Insights OCEANIA

**After enjoying significant growth in 2021, Oceania experienced declines on multiple fronts in 2022: 31% year-on-year decline in Series B+ deal amount, 10% decline in the number of Series B+ deals, and 13.6% decline in early-stage funding amount. However, longer-term patterns are much more positive.**

Oceania experienced a 152% increase in Series B+ deal amount, 81% increase in Series B+ deal count, and 60.7% increase in early-stage funding amount over the period 2018–2022, the highest of any global region for this period, indicating significant overall growth in the funding landscape.

Both Australia and New Zealand have established dedicated national policies to support local entrepreneurs and attract international talent to the region. These include the Australian government’s Entrepreneurs’ Program and the Incubator Support Program, which provide funding, mentoring, and networking

opportunities. Additionally, the ESVCLP program offers tax incentives for eligible venture capital funds to invest in early-stage startups. Among New Zealand’s policies are a visa scheme designed for entrepreneurs to develop their businesses in the country, the \$300 million Elevate NZ venture capital fund aimed at increasing the number of tech unicorns, and an initiative to grow economy-wide R&D activity. Local governments and ecosystem support organizations also play a large part, and international collaboration such as the New Zealand – Ireland Agritech Summit brings expertise to the region and facilitates knowledge sharing.

## TOP FIVE ECOSYSTEMS

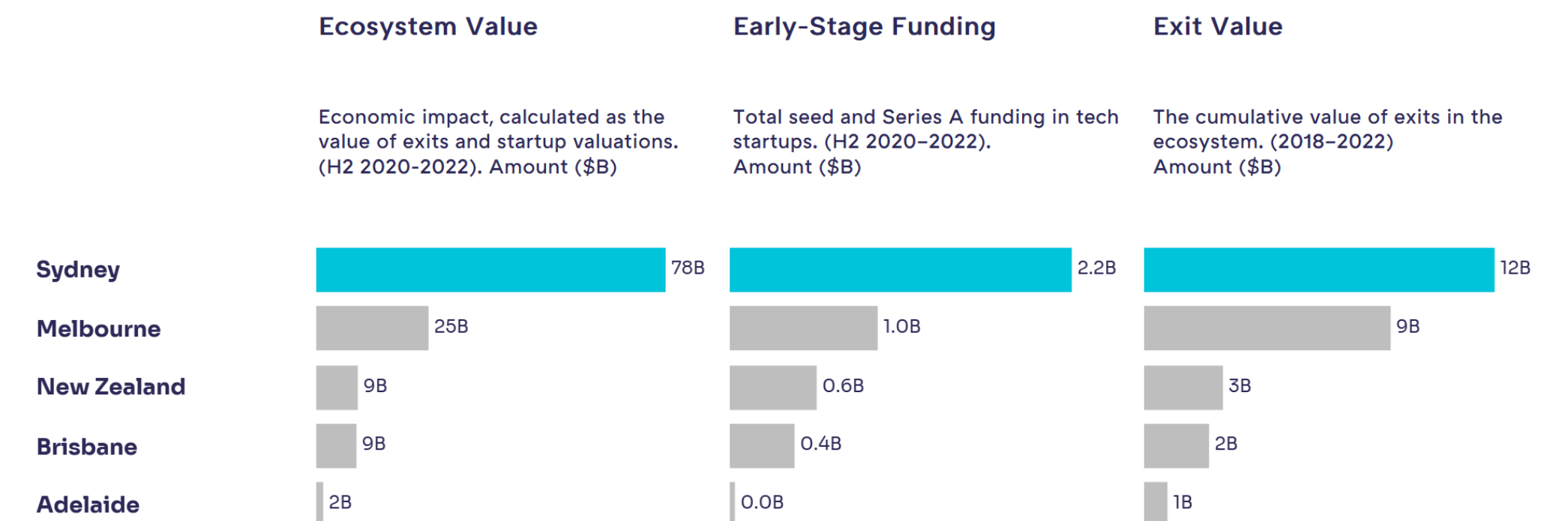
- 1 → Sydney
- 2 → Melbourne
- 3 → New Zealand
- 4 → Brisbane
- 5 → Adelaide

## TOP EMERGING ECOSYSTEMS

- 1 → Perth
- 2 → Canberra

## Sydney Is Oceania’s Top Performing Ecosystem

Source: Startup Genome, 2023



## → Key Findings

- Sydney has maintained its top position as the highest-ranking ecosystem in Oceania, tied at #21 with Bengaluru-Karnataka. Its Ecosystem Value grew 50% from the GSER, with the number of unicorns increasing from three to four with the new addition of Gaming platform **Immutable** in 2022 valued at \$2.5 billion. **Canva** remains the highest valued at \$40 billion. Exits over \$1 billion increased by one: SaaS provider **BigCommerce** had an IPO at a valuation of \$1.6 billion.
- Melbourne, the second largest ecosystem in the region, moved up six places to #33. It saw a sharp 43% increase in Ecosystem Value, to \$25 billion. The number of early-stage deals grew 29%, exits over \$50 million 27%, and exits over \$1 billion 50%, including **Judo Bank's** IPO at a valuation of \$1.7 billion. The highest valued of Melbourne's three unicorns is Fintech **Airwallex**, valued at \$5.5 billion.
- New Zealand moved up from its previous 31–40 range to #20 in the Emerging Ecosystem rankings. It experienced a 29% increase in exits over \$50 million (from seven to nine) and saw the birth of a new unicorn, Cleantech **Lodestone Energy**, which is valued at \$1.3 billion.

- Brisbane also produced one of Oceania's biggest exits: the electric vehicle charger manufacturer **Tritium's** IPOd at a valuation of \$1.3 billion in January 2022. This helped the ecosystem move from the 61–70 to the 41–50 range in the Emerging Ecosystem ranking.

Oceania experienced a 60.7% increase in early-stage funding amount over 2018–2022, the highest of any global region for this period.

### TOP FIVE ECOSYSTEMS BY VC FUNDING PER CAPITA

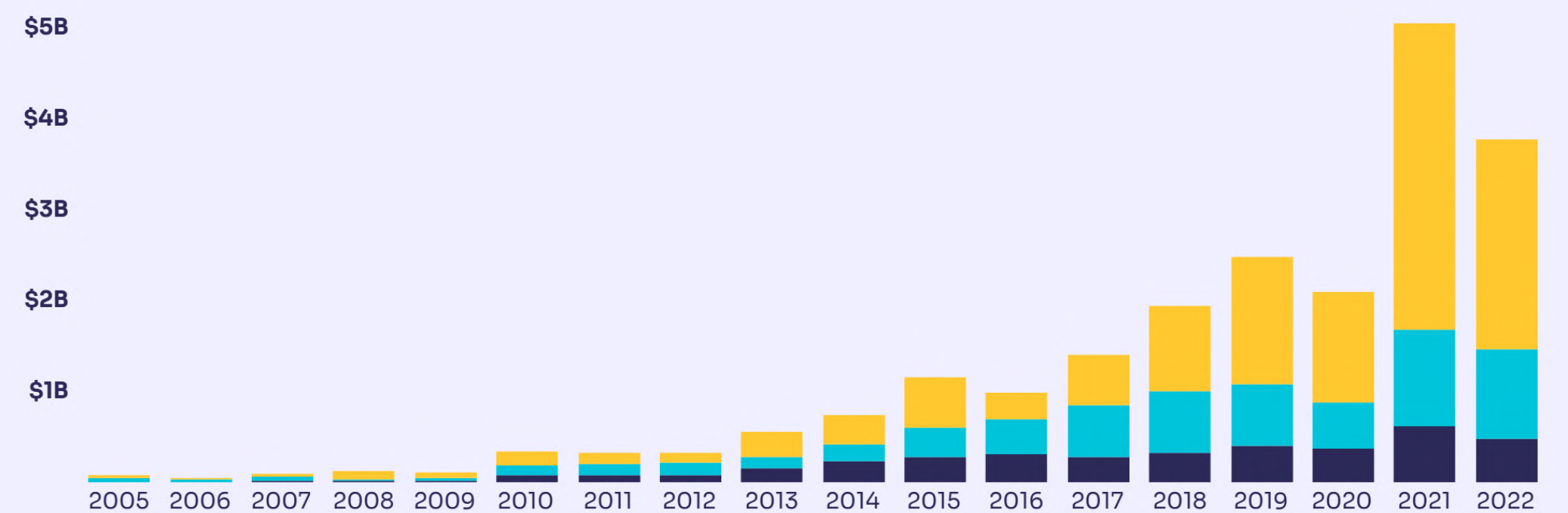
- Sydney
- Melbourne
- Brisbane
- New Zealand
- Adelaide

### VC Investment in Oceania Decreased 25% Overall From 2021 to 2022

Oceania VC Funding Amount (\$B) by Stage

Source: Startup Genome, 2023

■ Seed ■ Series A ■ Series B+





# How a Diverse Range of Tech Startups Is Flourishing in New Zealand

**New Zealand, long known for its idyllic beauty and high living standards, is increasingly becoming known as a hub for high-potential tech startup creation. Founders here are passionate about the startup community's collaborative environment, where fellow entrepreneurs, no matter how far along their journey, are willing to talk and impart wisdom to the next generation. They also praise a culture that emphasizes a holistic approach to success that truly incorporates social and environmental good — reflecting honored Māori principles.**

With a population just over 5 million, New Zealand boasts more than 2,400 startups: a density exceeding many regional peers. While most of these startups are based in Auckland, regional ecosystems also exist elsewhere, including the capital Wellington, as

well as Christchurch, which has mounted an incredible comeback from a devastating 2011 earthquake, typifying the resilient Kiwi attitude. The city now hosts nearly 200 startups, including a sizable aerospace community led by Dawn Aerospace.

In 2022, Startup Genome and the New Zealand Ministry of Business, Innovation, and Employment conducted an in-depth analysis of the country's entrepreneurial climate for early-stage technology startups, using a combination of global datasets and 178 founder surveys. The **assessment** determined the ecosystem's stage of development, created benchmarks against peer and top global ecosystems, and examined both the gaps and strengths to be capitalized on.

## Funding Leads the Way

Startup ecosystems can't succeed without adequate funding. Fortunately, New Zealand has experienced a significant increase in this area in recent years. Between 2020 and H1 2022, the amount of early-stage funding

raised by Kiwi startups almost doubled compared to the previous 36-month period.

Part of this funding increase was led by an infusion of capital from overseas investors looking to get a foothold in this emerging ecosystem. In late 2019, Blackbird, Australia's largest VC firm, introduced an early-stage New Zealand fund which has about \$44 million under management as of year-end 2022. Other VCs took a more targeted approach. Finistere Ventures, a Silicon Valley VC, launched a NZ\$40 million (\$25 million) fund focused on Agtech & New Food startups in partnership with New Zealand Growth Capital Partners (NZGCP).

New Zealand VCs were also able to take advantage of this sudden global investor interest. For example, Icehouse, one of the earliest Kiwi VCs, launched its Sustainable Tech Fund in June 2021 in partnership with SDG Impact Japan.

The New Zealand government also stepped up its commitment to domestic startups. In March 2020, NZGCP launched its Elevate fund-of-funds with NZ\$300

**Kiwi founders are ambitious, not just to build successful companies, but in their striving for a greater purpose.**

million (\$186 million) from the New Zealand government, committing NZ\$196 million (\$121 million) so far into eight Kiwi VCs. Cumulatively, this recent mix of overseas investment and private-public domestic support should help close Series A and B funding gaps that had previously constrained startups.

## A Diverse Range of Startups

New Zealand has produced startups in a variety of sectors, with strengths emerging in AI & BD, Industry 4.0, Cleantech, and Agtech & New Food. The country's commitment to innovative research across several disciplines, led by its Crown Research Institutes and universities, generates exciting Deep Tech possibilities.

Brian Ward, founder and CEO of Aroa Biosurgery, which exited in 2020 with an IPO, praised New Zealand's talented researchers and university graduates as essential in growing his wound-treatment startup. He also expressed enthusiasm for the next generation of Kiwi startups, which have much better access to domestic funding sources compared to when he started in 2008.

This new availability of local funding has enabled companies such as Foundry Lab, a digital metal casting startup, and Alimetry, a gastric disorders monitoring startup, to raise recent rounds from primarily local funders. These examples can only encourage future founders to stay local when growing their business.

Kiwi startups focused on Deep Tech can also take advantage of numerous grant and loan programs, such as Callaghan Innovation Agency's New to R&D Grant, which offers up to NZ\$400,000 (\$250,000) for research opportunities, or through the many incubators and accelerators now available. The Sprout Agritech accelerator, for example, invests NZ\$1 million (\$630,000) in Agtech & New Food startups — a sector where New Zealand is a global leader. Successful recent graduates include Scention Bio, which

makes devices that mimic insect odorant receptors, and MenuAid, an AI-enabled meal-planning startup.

## A Culture of Looking Beyond the Bottom Line

Kiwi founders are ambitious, not just to build successful companies, but in their striving for a greater purpose. Over 90% of those interviewed stated that they wanted to change the world with their startup, a much higher number than the peer average. Part of this comes from the country's natural beauty, which inspires Kiwis to consider environmental stewardship, but it is also a reflection of the commitment to incorporating Māori principles of community betterment.

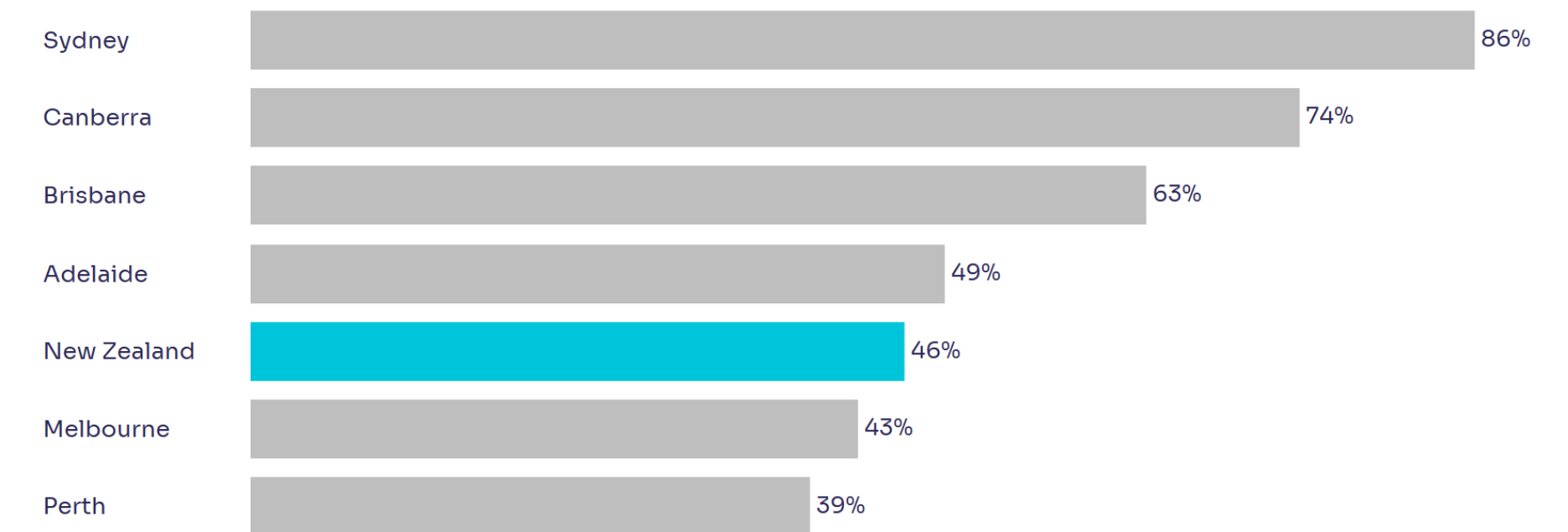
While much work remains to be done to achieve equity, Kiwi startup stakeholders recognize the need to engage the Māori community. At 17% of the New Zealand population, only 5% of Kiwi founders are of Māori heritage. However, several programs have been created with the aim of encouraging Māori entrepreneurship. Kōkiri, an entrepreneurship and startup accelerator exclusively for Maori participants, has held two cohorts and helped launch Barrett Dynamics, a solar energy startup. NGEN Room, a digital media training program, focuses on helping young, primarily-Māori individuals to gain skills for the next generation of digital jobs, or to become entrepreneurs in this space.

Kiwi founders are also becoming increasingly diverse along other lines. The number of New Zealand founders

## The Five-Year Growth Trend of New Zealand Surpasses Melbourne and Perth

Source: Startup Genome, 2023

Ecosystem Value Growth (H2 2020–H2 2022 vs H2 2018–H2 2020)



who immigrated to the nation (28%) is higher than in most ecosystems, and is higher than the country's overall immigrant population (23%). The rate of female founders in New Zealand, at 26%, is one of the higher rates globally, and much higher than the 16% female founder rate the previous time Startup Genome surveyed New Zealand founders, in 2017. Female founders have credited an evolving culture and the emergence of informal meetups with other female founders as factors in this growth. As more startups led by women succeed — such as Thematic, a Y Combinator-backed SaaS company, or Sharsies, an investment platform that has raised more

than \$50 million — female startup participation in New Zealand should continue to rise.

## A Bright Future for Kiwi Startups

Between the recent increase in funding, high quality of life, and supportive founder culture, the New Zealand startup ecosystem is well-positioned to continue its development. This is particularly true as the world seeks innovative solutions to increasingly complex environmental and food sustainability problems. New Zealand's strengths can lead the way.



Australia  
**Adelaide**

**MEMBERS:**

The Department for Industry, Innovation and Science (DIIS) / Lot Fourteen / Adelaide Economic Development Agency (AEDA)

*“Fuelled by a combination of supportive policies, strategic partnerships, and access to top-tier research institutions, Adelaide’s ecosystem draws international attention and investment. Moreover, its support networks make it a fantastic place to be a founder.”*



**Danielle Seymour**

Director and Co-Owner, \_SOUTHSTART



**Highlights**

South Australia’s capital city Adelaide is a tourist drawcard, boasting a vibrant events calendar, food and small bar scene, and proximity to world-class wine regions and beaches. However, it’s increasingly the business community that’s making headlines. Tech giants including Amazon (AWS) and Microsoft Azure have established offices in Adelaide and a growing number of South Australian startups are finding global success. These include SWEAT, a global fitness software company founded in Adelaide, and Life Whisperer, which uses AI to improve IVF outcomes.

Adelaide knows how to play to its strengths, translating findings from world-class research institutes into innovative products and services. Agriculture, health, defense, and Spacetech are all thriving here. The ecosystem is also a global leader in renewable energy, with South Australia having transformed its energy system from 1% to over 70% from renewables since 2006. More broadly, South Australia boasts significant energy, sustainability, and Climatetech activity. Local Climatetech startups include ValAi — a data-driven platform helping customers track, certify, and reduce emissions — and XDI, which allows users to predict and mitigate the impact of climate change on their businesses and infrastructure. Both have showcased their innovations at United Nations Climate Change Conferences in recent years.

A network of innovation districts provides dedicated physical, digital, and social infrastructure to accelerate new ideas into widespread economic outcomes. The South Australian Government’s Department for Industry, Innovation and Science provides advice and support to founders, including administering competitive Seed-Start grants of between AU\$50,000–\$500,000 (\$33,800–\$338,000) to high growth potential businesses.



# Ecosystem by the Numbers

**ECOSYSTEM VALUE**  
(H2 2020 - 2022)

**\$1.6 bn**



GLOBAL AVG. \$34.6 bn

**NUMBER OF UNICORNS**  
(H2 2020 - 2022)

**0**



GLOBAL AVG. 4

**SOFT. ENGINEER SALARY**  
(2022)

**\$69 k**



GLOBAL AVG. \$46 k

**TIME TO EXIT**  
(2018 - 2022)

**8.7 years**



GLOBAL AVG. 9 years

**TOTAL EARLY-STAGE FUNDING**  
(H2 2020 - 2022)

**\$39 m**



GLOBAL AVG. \$970 m

**MEDIAN SEED ROUND**  
(H2 2020 - 2022)

**\$727 k**



GLOBAL AVG. \$821 k

**EARLY-STAGE FUNDING GROWTH**  
(2019 - 20 VS. 2021 - 22)



Scale of 1 (lowest) to 10 (highest)

**EXIT AMOUNT**  
(2018 - 2022)

**\$852 m**



GLOBAL AVG. 11.3 bn

**ECOSYSTEM VALUE GROWTH**  
(H2 2020 - H2 2022 VS H2 2018 - H2 2020)

**49%**



GLOBAL AVG. 4.7%

**MEDIAN SERIES A ROUND**  
(H2 2020 - 2022)

**\$5.7 m**



GLOBAL AVG. \$6 m

**TOTAL VC FUNDING**  
(2018 - 2022)

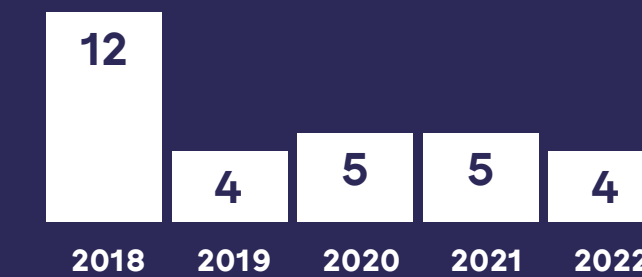
**\$267 m**



GLOBAL AVG. \$6.6 bn

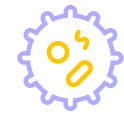
**EXIT COUNT (#)**  
(2018 - 2022)

**30**



GLOBAL AVG. 91

## Sub-Sector Strengths



### Life Sciences

Adelaide is home to several leading medical research institutes, including the SA Health and Medical Research Institute (SAHMRI). A fast-growing ecosystem of startups is translating findings into products. Personify Care, Splose, and Lumary develop software to help medical professionals and customers navigate complex systems. Add-Life Technologies, Tobruk Engineering, and TekCyte design innovative medical and assistive devices. Ferronova, BiomeBank, and Aucentra Therapeutics are working on improved medical treatments for cancers and other debilitating diseases. BiomeBank raised AU\$10.7 million (\$7.2 million) in a December 2022 round.

### SpaceTech

Australia's space capital, Adelaide is home to the Australian Space Agency and the nation's first dedicated space manufacturing hub, Australian Space Park. Fleet Space Technologies is an Australian Space Park industry partner and leader in space technology excellence. The nanosatellite communications company has raised more than \$70 million over five rounds including a May 2023 AU\$50 million (\$33.8 million) Series C round to globalize its critical minerals exploration technology and is now valued at more than \$350 million.



### AI, Big Data & Analytics

The Australian Institute for Machine Learning (AIML), affiliated with the University of Adelaide and based at Lot Fourteen, conducts globally competitive R&D in AI, machine learning, computer vision, and deep learning. This expertise has attracted global tech giants — AWS credits local AI capability as a key reason for establishing an Adelaide office — and has spurred startup activity. Big Data Analytics startup Fivecast closed a AU\$30 million (\$20.3 million) Series A round in April 2023 to fund the expansion of its AI-enabled platform.

## Reasons to Move Your Startup to Adelaide

### Network of Innovation Districts

Adelaide's innovation districts, which include Lot Fourteen, Tonsley Innovation District, and Adelaide BioMed City, are carefully curated to increase productivity and skilled jobs, support the development of new-to-world products and services, solve complex industrial problems, deliver better healthcare, and strive for enhanced environmental outcomes.

### Hyperconnectivity

The advantages of working in a smaller city are evident in Adelaide, where you're never more than one connection away from the right research partner, investor, mentor, or customer. This hyperconnectivity has served local startup founders well, many of whom have used Adelaide as a friendly testbed for their global products and services.

### Quality of Life

A family-friendly city that is consistently ranked among the world's most liveable, Adelaide offers business founders the opportunity to thrive both professionally and personally. Life-work balance is a draw, with Adelaide residents able to spend less time in traffic than in larger cities, and more time enjoying the region's top-tier wineries, restaurants, beaches, and cultural events.

## Selected Startup Organizations

### STARTUP GENOME MEMBERS

MEMBER

#### The Department for Industry, Innovation and Science (DIIS)

DIIS supports sustainable economic growth by assisting South Australian industries and businesses to succeed in a local and global environment.

MEMBER

#### Lot Fourteen

A globally connected innovation district bringing together a curated government, research and industry ecosystem focused on advancing the defense, space, and critical technologies industries.

MEMBER

#### Adelaide Economic Development Agency (AEDA)

AEDA delivers a range of programs designed to stimulate the city's economic growth with a focus on business growth, investment attraction and growing our visitor economy.

### KEY ECOSYSTEM PLAYERS

#### \_SOUTHSTART

Supported by the South Australian Government, \_SOUTHSTART is a national startup and technology conference held in Adelaide. Growing in size and popularity each year, it is an inclusive gathering of future-minded innovators committed to widespread social, economic, and environmental change.

#### Stone and Chalk

The largest innovation community in Australia, Stone and Chalk's Adelaide team manages the Startup Hub at innovation district Lot Fourteen. Almost 60 startups are located here, benefitting from Stone and Chalk's national network, events, and other growth opportunities.

#### Innovation and Collaboration Centre (ICC)

The University of South Australia's startup incubator, supporting early-stage startups through the provision of workspace, mentoring, and funding.

#### Southern Angels

An Adelaide-based angel investment fund investing time, expertise and capital into high-growth companies with the potential to make a global impact.

#### Flinders New Venture Institute (Flinders NVI)

Flinders University's center for innovation and entrepreneurship, providing a range of programs and services to its community of startups and businesses.

#### ThincLab

The University of Adelaide's business incubator, supporting students, alumni, staff members, and startups.



Australia

# Melbourne

**#33** Global Ranking **#33** Agtech Ranking **#35** Fintech Ranking

**MEMBERS:**

LaunchVic

*"It is exciting to see Melbourne's early-stage startup ecosystem grow by 43% in a year. As Victoria's startup agency, LaunchVic has focused on addressing the funding gap for early-stage startups and these latest results reinforce that we are on the right path."*



**Dr. Kate Cornick**  
CEO, LaunchVic



## Highlights

Despite a global slowdown, Melbourne's startup ecosystem is thriving, with startup growth outpacing most leading ecosystems. The State of Victoria's startup agency, LaunchVic, actively supports Victoria's entire startup ecosystem, which now has an enterprise value of AU\$91 billion. LaunchVic's support includes the Alice Anderson Fund, a \$10 million sidecar investment fund to ensure female startup founders have equal access to early-stage funding. It has so far unlocked \$33 million in co-investments from private investors of an expected AU\$40 million (\$26.6 million) for female founders by 2024. Additionally, LaunchVic's 30X30 is an executive education program for scaleups with a goal to accelerate the number of unicorns in Victoria by 2030.

More broadly, the Victorian government's AU\$2 billion (\$1.3 billion) Breakthrough Victoria fund aims to stimulate commercialization activity. In June 2022, Breakthrough Victoria unveiled its AU\$100 million (\$70 million) University Innovation Platform, which will form pre-seed funds with universities. The same month, the University of Melbourne announced the Tin Alley Ventures Fund, an AU\$100 million (\$66.6 million) fund in partnership with Tanarra Capital, to support the commercialization of research. University RMIT was ranked #2 globally for Blockchain by CoinDesk, and its RMIT Blockchain Innovation Hub is the world's first research center dedicated to the social science of Blockchain. In August 2022, UST launched its first Innovation Lab in Australia at Melbourne Connect.

Melbourne will also host the Global Entrepreneurship Congress 2023 in September. Linktree has raised \$165.7 million over three rounds, including a March 2022 Series C round of \$110 million.

# Ecosystem by the Numbers

**ECOSYSTEM VALUE**  
(H2 2020 - 2022)

**\$25 bn**



GLOBAL AVG. \$34.6 bn

**NUMBER OF UNICORNS**  
(H2 2020 - 2022)

**3**



GLOBAL AVG. 4

**SOFT. ENGINEER SALARY**  
(2022)

**\$62 k**



GLOBAL AVG. \$46 k

**TIME TO EXIT**

**10 years**



GLOBAL AVG. 9 years

**TOTAL EARLY-STAGE FUNDING**  
(H2 2020 - 2022)

**\$955 m**



GLOBAL AVG. \$970 m

**MEDIAN SEED ROUND**  
(H2 2020 - 2022)

**\$740 k**



GLOBAL AVG. \$821 k

**EARLY-STAGE FUNDING GROWTH**



Scale of 1 (lowest) to 10 (highest)

**EXIT AMOUNT**  
(2018 - 2022)

**\$8.6 bn**



GLOBAL AVG. \$11.3 bn

**ECOSYSTEM VALUE GROWTH**  
(H2 2020 - H2 2022 VS H2 2018 - H2 2020)

**43%**



GLOBAL AVG. 4.7%

**MEDIAN SERIES A ROUND**  
(H2 2020 - 2022)

**\$5.9 m**



GLOBAL AVG. \$6 m

**TOTAL VC FUNDING**  
(2018 - 2022)

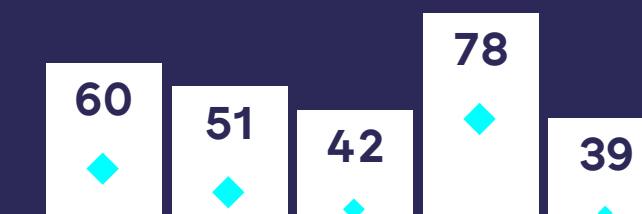
**\$5.4 bn**



GLOBAL AVG. \$6.6 bn

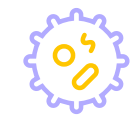
**EXIT COUNT (#)**  
(2018 - 2022)

**270**



GLOBAL AVG. 91

## Sub-Sector Strengths



### Life Sciences

Life Sciences startups have raised the most rounds in Victoria since 2017. The Melbourne Biomedical Precinct (MBP) is among the top 10 medical hubs in the world. Moderna is building Australia's first large-scale mRNA vaccine manufacturing facility in Melbourne, and the state of Victoria and BioNTech are collaborating on potential mRNA-based therapies and an innovation center. Aikenhead Centre for Medical Discovery, Australia's first hospital-based biomedical engineering research center, will be completed by 2024.



### Fintech

Fintech is the top funded sub-sector in Victoria with AU\$3.2 billion (\$2.1 billion) raised since 2017, and Melbourne is home to almost 500 Fintech startups. Payment solutions provider Worldline chose Melbourne for its Australian headquarters. Payments platform Airwallex raised a \$100 million Series E in October 2022 and was named Fintech Organisation of the Year at the 2022 Asia FinTech Awards. Financial services solution Zeller raised an AU\$100 million (\$67.1 million) Series B in March 2022.



### AI, Big Data & Analytics

Melbourne is home to over 20% of Australia's AI startups and scaleups. In January 2023, Deep Tech company Seventh Sense announced it will establish an AI R&D hub in Melbourne. Amazon Web Services announced the AWS Asia Pacific (Melbourne) Region as its second AWS infrastructure region in Australia. Israeli firm Data Science Group is partnering with the Victorian Government to launch its first AI Center of Excellence in Australia.

## Reasons to Move Your Startup to Melbourne

### Quality of Life

Melbourne was named Australia's most liveable city and the tenth most liveable city in the world in the Global Liveability Index 2022. Melbourne scored 100 out of 100 for education. It is projected that Melbourne will overtake Sydney to become Australia's largest city in 2031-32, with a population of just over 6 million people.

### Educated Talent

Victoria is Australia's most highly skilled state, and its universities produce a deep pool of work-ready graduates. The Times Higher Education World University Rankings 2023 placed the University of Melbourne as the highest ranked university in Australia and #34 worldwide. The University of Melbourne, Monash University, and RMIT all ranked in the global Top 100 for employability outcomes.

### Government Support

Through LaunchVic and Breakthrough Victoria, the Victorian Government is heavily investing in the startup ecosystem. In addition, the Victorian Business Growth Fund and the Venture Growth Fund provide support. The Equity Investment Attraction Fund aims to attract innovative companies to the state. The Venture Growth Fund provides financing and the R&D Cash Flow Loans initiative supports SMEs to invest in R&D activity with low-interest loans.



## Selected Startup Organizations

STARTUP GENOME MEMBERS

MEMBER

### LaunchVic

LaunchVic is Victoria's startup agency. Its role is to fuel the growth of Victoria's startup ecosystem by building the confidence and capability of Victorians to create, scale and invest in startups. LaunchVic was established by the Victorian Government in 2016.

KEY ECOSYSTEM PLAYERS

### LaunchVic

LaunchVic is Victoria's startup agency established to fuel the growth of the local startup ecosystem.

### Startmate

The epicenter of startup ambition across Australia and New Zealand.

### Cremorne Digital Hub

The Cremorne Digital Hub brings together industry, universities and investors to enhance collaboration, accelerate research and skills development, build capacity and increase productivity in the precinct.

### Square Peg Capital

Investing in emerging technology companies across the internet economy from our bases in Australia, Singapore and Tel Aviv.

### Breakthrough Victoria

Investing in innovation for impact.

Australia

# Sydney

**#20** Global Ranking **#21** Agtech Ranking **#13** Fintech Ranking

**MEMBERS:**

Investment NSW

"Sydney has the #1 ranked startup ecosystem in Oceania and with anchor tenants like Atlassian and Block, the appeal of Tech Central is genuinely global. Whether you're in London, Tokyo or Mumbai, everyone knows the value of locating near these unicorns."



**Katie Knight**  
CEO, Investment NSW



## Highlights

With the largest economy in Australia, Sydney is also the country's financial center and a fast-growing startup hub. The ecosystem is anchored by tech success stories including Canva and Atlassian. In 2022, Atlassian began construction on a new AU\$1.4 billion (\$948.8M), 39-story headquarters, which will anchor the Tech Central Innovation District.

Sydney is home to the regional headquarters of over 600 multinational companies, including Amazon, Microsoft, and Google, which developed Google maps in the city. In early 2023, one of the world's largest pre-seed investors, Techstars, moved its flagship accelerator program to Sydney's Tech Central district. The Network Readiness Index 2022, a leading index of the impact of ICT in economies, ranked Australia #14 out of 131 economies. Leading VC firms Blackbird Ventures, AirTree Ventures, Square Peg Ventures, and Main Sequence Ventures all have headquarters or offices in Sydney.

Much of Australia's quantum research, industry capability, and investment is concentrated in Sydney, which has the full stack of quantum capabilities and a global hub of quantum expertise including over 160 active quantum PhDs and over 100 quantum university researchers. Quantum startups headquartered here include Quantum Brilliance, Diraq, and Australia's first VC-backed quantum company, Q-CTRL, as well as Silicon Quantum Computing, which received \$83 million in seed funding from shareholders including the Australian and NSW State Governments to build the world's first silicon quantum computer. Quantum Australia Conference and Careers Fair returned to Sydney in 2023. Additionally, CISO Sydney 2023 was held in February and Smart City Expo 2023 in March.

# Ecosystem by the Numbers

**ECOSYSTEM VALUE**  
(H2 2020 - 2022)

**\$78 bn**



GLOBAL AVG. \$34.6 bn

**NUMBER OF UNICORNS**  
(H2 2020 - 2022)

**4**



GLOBAL AVG. 4

**SOFT. ENGINEER SALARY**  
(2022)

**\$78 k**



GLOBAL AVG. \$46 k

**TIME TO EXIT**  
(2018 - 2022)

**9.5 years**



GLOBAL AVG. 9 years

**TOTAL EARLY-STAGE FUNDING**  
(H2 2020 - 2022)

**\$2.2 bn**



GLOBAL AVG. \$970 m

**MEDIAN SEED ROUND**  
(H2 2020 - 2022)

**\$1 m**



GLOBAL AVG. \$821 k

**EARLY-STAGE FUNDING GROWTH**  
(2019 - 20 VS. 2021 - 22)



Scale of 1 (lowest) to 10 (highest)

**EXIT AMOUNT**  
(2018 - 2022)

**\$12 bn**



GLOBAL AVG. 11.3 bn

**ECOSYSTEM VALUE GROWTH**  
(H2 2020 - H2 2022 VS H2 2018 - H2 2020)

**86%**



GLOBAL AVG. 4.7%

**MEDIAN SERIES A ROUND**  
(H2 2020 - 2022)

**\$7.5 m**



GLOBAL AVG. \$6 m

**TOTAL VC FUNDING**  
(2018 - 2022)

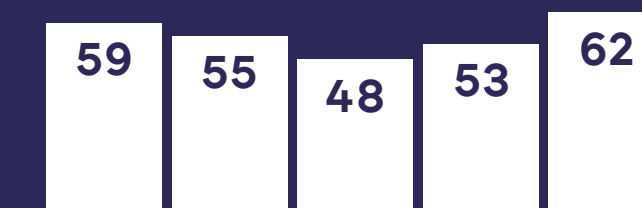
**\$9.1 bn**



GLOBAL AVG. \$6.6 bn

**EXIT COUNT (#)**  
(2018 - 2022)

**277**



GLOBAL AVG. 91

2018 2019 2020 2021 2022



## Sub-Sector Strengths

### Fintech

Home to the headquarters of 60 of Australia's 64 banks, Sydney is also home to 954 Fintech startups. In 2022, Sydney was the most active city in Australia for Fintech funding, with 42 deals announced, accounting for 37% of the sub-sector total. The FinTech Summit 2023 will take place in October. Online brokerage platform Stake has raised a total of \$70.3 million over three rounds. Pocket-money app Spriggy has raised a total of \$62.1 million over six rounds.

### Cleantech

A member of the global Race to Zero initiative, NSW is set to halve emissions by 2030 and has a target to reach net zero by 2050. Sydney is also home to EnergyLab, Australia and New Zealand's largest Climatetech accelerator. In February 2023, EnergyLab announced the Supercharge Australia Innovation Challenge to drive local lithium battery innovation.

### Advanced Manufacturing & Robotics

The NSW manufacturing industry produces almost one third of Australia's total manufacturing output, generating around \$33 billion. \$262 million is being invested in Western Sydney for an Advanced Manufacturing Research Facility (AMRF) with the aim of making the area the national capital of Advanced Manufacturing. Hitachi will establish a collaborative creation center in the AMRF. AI robotics company Advanced Navigation has raised a total of \$85.2 million over five rounds, including a \$68 million Series B in November 2022.

## Reasons to Move Your Startup to Sydney

### Supportive Business Environment

Three startup hubs support businesses from startup to scaleup across Sydney and Western Sydney: The Sydney Startup Hub, Western Sydney Startup Hub, and Tech Central Scaleup Hub.

### Educated Workforce

Australia's scientific institutions rank in the top 1% in the world in 15 fields of research, including space science, computer science, and medicine. Sydney is home to five internationally ranked universities and the city ranked #8 in the QS Best Student Cities 2022 report. More than 50,000 international students come to Sydney each year, contributing to the city's diverse and inclusive culture.

### Quality of Life

Diverse and metropolitan, Sydney is Australia's most populated city. According to a 2023 survey from The Committee for Sydney, 83% of Sydney residents were satisfied with their quality of life, compared to 75% of New Yorkers and 76% of Londoners. Sydney ranked #13 out of 50 cities in the Internations Expat City Ranking 2022. World famous Bondi Beach is just 8 km from the city center.

## Selected Startup Organizations

STARTUP GENOME MEMBERS

MEMBER

### Investment NSW

Investment NSW is the New South Wales (NSW) Government's economic development and attraction agency, with a mandate to reinforce NSW as the most desirable place in the world to visit, study, invest and do business. It helps drive the state's economic growth and transformation by showcasing NSW business, events, tourism and education for new markets and investors in Australia and around the world.

KEY ECOSYSTEM PLAYERS

#### Q-CTRL

Quantum technology promises to transform the economy. Q-CTRL expands the utility of quantum computers and delivers new quantum sensing capabilities, all through software.

#### Cicada Innovations

Cicada Innovations is Australia's leading Deep Tech incubator, with a 20-year track record of developing ventures focused on the world's most pressing problems and promising opportunities.

#### Launch Pad Western Sydney University

Western Sydney University's Launch Pad is a Tech Startup Incubator operating since 2015. Launch Pad was established to enable the growth of a startup community in Western Sydney and drive the development of a sophisticated innovation ecosystem for the region.

#### Stone & Chalk

The largest innovation community in Australia, Stone & Chalk brings together founders, investors, industry stakeholders and mentors into one network to drive growth and commercial success for tech startups and scaleups.

#### Techstars

Techstars is an accelerator committed to supporting and advancing world-class startups focused on emerging technologies across industries including AI, advanced manufacturing, Blockchain, Fintech, cloud computing, Cybersecurity, quantum computing, creative tech, and Climatetech.

#### Startmate

The epicenter for startup ambition across Australia and New Zealand. Startmate accelerates the most ambitious founders, operators and investors through its programs, propelled by a highly-trusted mentor-driven community, and backed by the best angels, venture funds and tech startups in the region.



# SUB-SAHARAN AFRICA

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# Regional Insights SUB-SAHARAN AFRICA

Unprecedented amounts were invested in sub-Saharan tech startups in 2021, and while some other regions struggled to get close to their success of the previous year, funding in sub-Saharan Africa decreased only slightly in 2022. Early-stage funding declined 5.9%, early-stage funding amount by 6.7%, the number of Series B+ deals was equal, and Series B+ amount fell just 3.7%. Overall, sub-Saharan Africa remained significantly above pre-2021 levels.

Looking at the longer term, the region was up 227% in early-stage funding amount and up 43.8% in early-stage deal count from 2018 to 2022, highlighting the rapid development of sub-Saharan Africa's tech startup scene.

Fintech is the highest performing sub-sector in sub-Saharan Africa, comprising 41% of total technology startup deals in the period 2018–2022. Nairobi is a hub of tech innovation and particularly known for Fintech.

The region's biggest exit and second biggest deal in the GSER 2023 timeframe emerged from the ecosystem: Payments startup **DPO** was acquired by Network International in 2021 for \$291 million and **Sun King**, which produces solar home systems, raised \$499 million in total VC funding, including a total of \$330 million in Series D rounds in 2022.

Sub-Saharan Africa's biggest deal came in the form of Lagos-founded Fintech **OPay's** \$400 million August 2021 Series C. Additionally, Lagos-founded Fintech **Flutterwave** raised a \$250 million Series D in February 2022, taking its valuation to over \$3 billion. The Nigeria Startup Act, developed in 2021 and signed into law in October 2022, aims to create clear regulations that will help further boost the nation's tech ecosystem.

## TOP FIVE ECOSYSTEMS

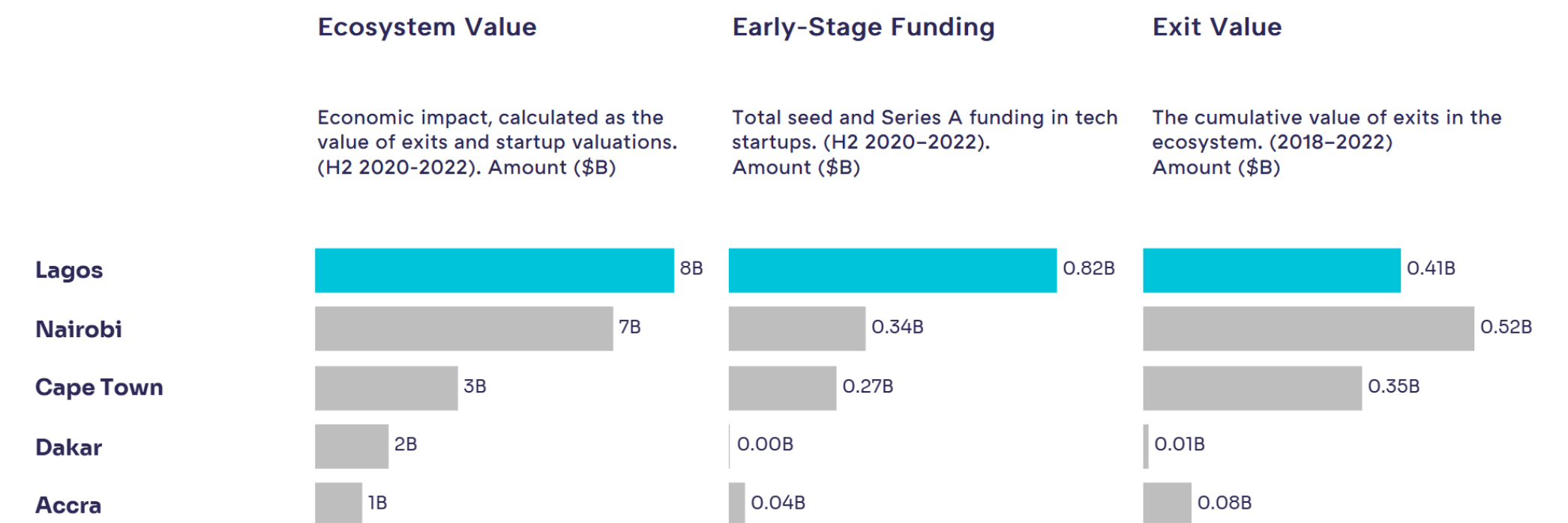
- 1 → Nairobi
- 2 → Lagos
- 3 → Cape Town
- 4 → Johannesburg
- 5 → Accra

## TOP FIVE EMERGING ECOSYSTEMS

- 1 → Kampala
- 2 → Dar es Salaam
- 3 → Abidjan
- 4 → Abuja
- 5 → Dakar

## Lagos Is the Regional Leader in Ecosystem Value and Early-Stage Funding

Source: Startup Genome, 2023



## → Key Findings

- No sub-Saharan ecosystems made it into the top 30 + runners-up ranking, but this doesn't mean the region is without significant activity. Sub-Saharan Africa was up 227% in early-stage funding amount and up 43.8% in early-stage deal count from 2018 to 2022, highlighting the rapid development of the region's tech startup scene.
- Nairobi produced the region's biggest exit and the second biggest deal also emerged from the Kenyan ecosystem: Payments startup DPO was acquired by Network International in 2021 for \$2.9 million and Sun King, which sells, installs, and finances solar home systems, has raised \$577 million over nine rounds, with its latest a April 2022 Series D round of \$330 million. Nairobi's Ecosystem Value is up an impressive 281% from July 1, 2019–December 31, 2021 to July 1, 2020–December 31, 2022.
- Lagos held its place in the 51–60 range of the Emerging Ecosystems ranking. OPay's \$400 million Series C in August 2021 was the region's biggest deal, while Flutterwave's \$250 million Series D in February 2022 saw its valuation increase to over \$3 billion.
- Cape Town has entered the top 100 Emerging Ecosystems for the first time, in the 91–100 category and aided by a 23% increase in Ecosystem Value, a 26% growth in the count of early-stage deals, and 22 new Life Sciences disciplines.

**Sub-Saharan Africa increased 227% in early-stage funding amount and 43.8% in early-stage deal count from 2018 to 2022, highlighting the rapid development of the region's tech startup scene.**

### TOP FIVE ECOSYSTEMS BY VC FUNDING PER CAPITA

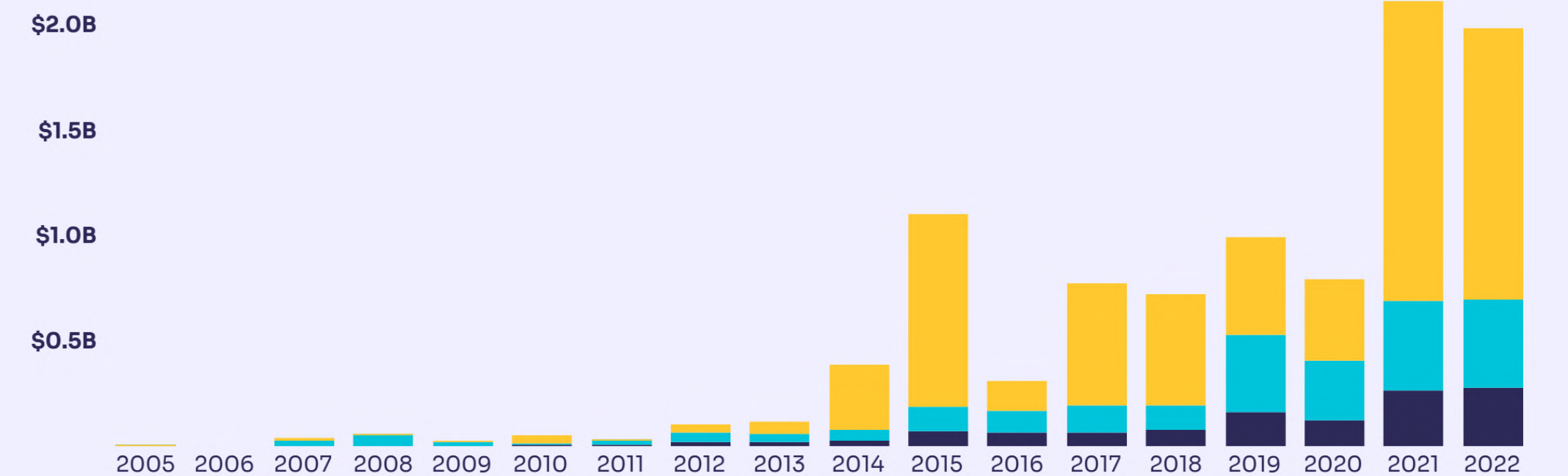
- 1 → Nairobi
- 2 → Cape Town
- 3 → Lagos
- 4 → Dar es Salaam
- 5 → Johannesburg

### VC Investment in Sub-Saharan Africa Decreased by Only 6% Overall From 2021 to 2022

Sub-Saharan Africa VC Funding Amount (\$B) by Stage

Source: Startup Genome, 2023

■ Seed ■ Series A ■ Series B+





# Discover Angola's Emerging Startup Ecosystem: Opportunities and Challenges

**Angola, a country known for its rich oil reserves, is gradually diversifying its economy by developing its startup ecosystem. The local startup scene is still in its early stages but is starting to flourish in various sectors, including e-commerce and Fintech.**

In early 2023, Startup Genome **assessed** the ecosystem to determine its stage of development, benchmark it against comparable global ecosystems, and identify gaps and opportunities. Here are some of the key findings.

## The Emergence of a Community of Innovators and Entrepreneurs

Since 2013, Angola's startup ecosystem has seen significant growth, spurred by the creation of a Facebook group dedicated to tech entrepreneurship. The social innovation hub Mwika Impactista, launched by Lúcia Fernandes Stanislas, has also made a significant impact

on the ecosystem since this time, focusing on promoting social entrepreneurship, diversity, equity, and inclusion in entrepreneurship. The hub provides mentorship, training programs, and opportunities for collaboration with various ecosystem players.

Kianda Hub, a coworking space in Angola's capital city of Luanda established by young entrepreneurs in 2015, has been instrumental in promoting local digital entrepreneurs. Seedstars World, an international startup initiative launched in Angola the same year, further highlights the potential of startups in the country.

The ABC of the Entrepreneur, a web portal created by Emilia Dias and Ronaldo Pitta Grós, has also provided valuable support and guidance to entrepreneurs in better planning and organizing their businesses. Menos Fios is an information service that has been an integral media partner in the promotion of startups since the early days of the technology ecosystem. In 2016, Unitel, the country's largest telecom company, launched its own startup initiative, Unitel Go Challenge



**Entrepreneurs should not fear failure, but rather view it as a part of the journey towards success."**

Haymée Perez Cogle, Ecosystem Builder, Founder Institute Luanda

(previously Unitel Apps), which generated increased public attention for startups.

Startup-support studio Bantu Makers was established in 2017 and gave rise to successful ventures including Deya, the first Angolan crowdfunding platform; Salo, a micro-jobs platform; and Lwei, a microfinance platform. Bantu Makers also engaged large companies including Millennium Atlantico Bank, BAI Bank, Standard Bank, and NCR to support local entrepreneurs. In addition, it

launched a podcast and organized community-building events such as Startup BBQ — a pitch event created in partnership with Jobartis — and Startup Weekend, as well as supported skill-building initiatives such as Coding Dojo Angola.

Acelera Angola played a key role in promoting the first Global Entrepreneurship Week in Luanda. The organization also partnered with Portuguese Beta-i and BNA (Central Bank) to establish LISPA (Laboratório de



Inovação do Sistema de Pagamentos), an initiative that includes various support programs for entrepreneurs. Acelera Angola further collaborated with Mozambican IdeaLab and the United States Embassy on programs such as “Who wants to be an entrepreneur?” to encourage entrepreneurship in Angola.

## The Growth of a Strong Startup Scene

In 2018, Orange Corners Angola, a training and program initiative created in the Netherlands, was launched here, as well as the local chapter of the Founder Institute. As the world’s largest accelerator for pre-seed startups, FI Luanda is playing a prominent role in the local startup scene, supporting early-stage entrepreneurs and positioning itself as the reference acceleration program in technology-based entrepreneurship. It offers founders access to 50 local mentors and a global network spread across 210 cities.

From 2019 to 2022, FI Luanda ran four cohorts with more than 90 enrolled entrepreneurs, of which 37 completed the program. Currently, 36 startups comprise the portfolio, with 16 in the MVP stage, five in the go-to-market stage, and three making regular sales. In total, 34 new jobs have been created to date. To transform startups into bankable businesses, FI Luanda collaborates with the IFC-International Financial Corporation to incubate the most promising startups and prepare them for fundraising.

Although most startup activities in Angola are still based in Luanda, there is increased opportunity for entrepreneurs elsewhere in the nation with the emergence of new programs. The government has started to recognize the importance of startups and is working to create an environment that enables them to thrive. For example, discussions of a new startup bill are underway.

The COVID-19 pandemic accelerated digital transformation efforts in Angola’s public infrastructure, making it possible to start the process of creating a company online for the first time. The National Institute for Small and Medium Businesses (INAPEM) hosted a session dedicated to the startup ecosystem, and entrepreneurship is now a subject in the school curriculum, a move that could help foster an entrepreneurial mindset in future generations throughout the country.

## A Culture of Bootstrapping in Angola’s Tech Startups

While some Angolan startups have secured funding from angel investors and VC firms, most have bootstrapped their way to success. There is no formal structure for funding rounds in Angola. However, support organizations have played a significant role in helping founders generate revenue and expand their businesses.

Successful local startups include Soba-store, Socia, and BayQi, all e-commerce platforms selling traditional handmade items from Angola. Other startups that have

seen growth in recent years include mobility startups Kubinga and T’leva, food delivery platform Tupuca, healthtech platform AppySaúde, and WiConnect, which offers Wi-Fi solutions for marketing and advertising.

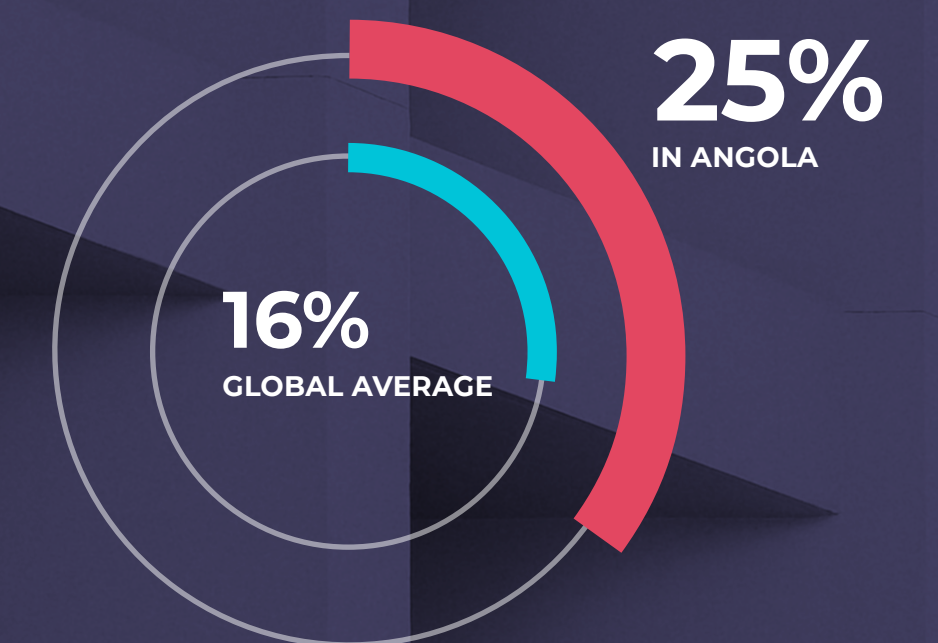
Support organizations have helped startups generate revenue and expand, including Narisrec, a Cleantech platform, FoodCare, which connects local food producers and consumers, and Nawabus, a mobile application for public transport schedules.

Haymée Perez Cogle, an angel investor and ecosystem builder at FI Luanda, explains, “In Angola, we are entrepreneurial by nature, particularly the young women. There is a necessity to be so. We also have a young population, one that is ambitious and wants to be a part of the solution.” This is reflected in the data: The average founder is 34 years old, slightly below the global average of 37, and 25% of startups in Angola are founded by women, compared to a global average of 16%.

Recently, the CMC-Capital Market Commission has approved the first private VC funds to specifically back high-risk startups in Angola. There is also growing interest in impact investing, as well as increased access to capital from national banks. These developments are helping to grow the Angolan startup ecosystem and catalyze innovation.

**The average founder is 34 years old, slightly below the global average of 37, and 25% of startups in Angola are founded by women, compared to a global average of 16%.**

STARTUPS FOUNDED BY WOMEN





## The Importance of Collaboration for Startup Success

Collaboration is a crucial factor in the success of startups, especially in Angola, where cultural challenges still persist despite a growing pool of tech talent.

According to Haymée Perez Cogle, many startups fail to progress due to the fear of sharing ideas, successes, and failures. This lack of transparency and communication prevents founders from sharing equity and collaborating with each other, resulting in missed opportunities for growth. To address this, various support initiatives are working towards boosting the ecosystem of digital innovation, promoting collaboration, communication, and sharing of experiences.

Startup Genome data highlights the importance of **Local Connectedness** in successful startup ecosystems. In Angola, entrepreneurs should view fellow entrepreneurs as part of a community rather than competition, and there is a need for leaders to emphasize the value of collaborators and mentors.

Haymée stresses the need for consistent and transparent support for tech-based entrepreneurship to bring structure to the ecosystem, develop business skills, and build the entrepreneurial culture. The creation of the Angolan Association of Startups and Digital Entrepreneurship (AASED) is a step towards achieving this objective by bringing in investors and promoting collaboration, communication and knowledge exchange.

To succeed, Haymée says that early-stage Angolan startups must embrace the African philosophy of Ubuntu, which emphasizes the importance of togetherness and growth. “Entrepreneurs should not fear failure, but rather view it as a part of the journey towards success. With more data-driven insights, encouragement to share knowledge, and a collaborative mindset, the startup ecosystem in Angola can thrive in the long run,” she says.

## Industries Positioned for Success

Angola has several industries poised for success, offering potential for growth and development. The oil and gas sector is a significant opportunity for investment in exploration, production, refining, and distribution, and the country has also shown a substantial focus on renewable energy. Additionally, the education and health sectors are ripe for innovation and technological advancements.

Investment in the agricultural sector is another promising opportunity, with ample arable land and prospects for increased production and exports. Angola’s tourism sector also offers expansive growth potential with its beautiful landscapes, rich culture, and diverse wildlife. With investment in infrastructure and marketing, the country could attract more tourists, generating job opportunities and economic growth.

Although Angola’s startup ecosystem is still in its early stages, it shows great promise for the future. The ecosystem is gaining momentum, attracting international

**The ecosystem is gaining momentum, attracting international interest, and has the potential to become a significant player in the African tech scene.**

interest, and has the potential to become a significant player in the African tech scene. Collaboration with local stakeholders and support organizations can help entrepreneurs and investors create a vibrant and sustainable ecosystem, benefiting both Angola and the global startup community.

Ghana  
**Accra**

Seated at the coast of the Gulf of Guinea is Accra, the capital of Ghana and Africa’s rising city of startups. It is an emerging entrepreneurship and startup ecosystem blended with unique culture.



**Franklin Owusu-Karikari**  
Director of Business Support & Policy, NEIP



## Highlights

Accra is one of the fastest-growing tech hubs in West Africa, as well as a hotspot for digital nomads. The Government of Ghana will launch its Ghana Digital Acceleration Project in 2023 with support from the World Bank, which has approved \$200 million to increase access to technology and boost digital innovation.

In 2022, UNDP Africa announced an initiative to invest \$1 billion in eight startup hubs across Africa, including Accra. In 2021, Google announced plans to invest \$1 billion over the next five years to support Africa’s digital transformation. In 2022, Google’s Black Founders Fund invested up to \$100,000 in capital and \$200,000 in Google Cloud Credits in three Ghanaian startups: Built, Kudigo, and Zuberi. Africa Data Centres announced it is building a 30MW data center facility in Accra.

Launched in 2022, the One Billion Successful Women Entrepreneurs Worldwide initiative aims to empower female entrepreneurs with advice, grants, and education. The first Women Entrepreneurship & Leadership for Africa educational program kicked off in Accra in April 2023. MEST, a well-established ecosystem hub in Accra, has trained over 800 African entrepreneurs and invested in over 80 startups. Web3 Accra took place in July 2022. The Ghana Startup Summit took place in November, and Ghana Tech Summit 2023 is scheduled for September. E-mobility startup Cargo Bikes Africa signed a \$20 million agreement with Mana Mobility for the production and marketing of electric vehicles in October 2022. Bboxx acquired solar company PEG Africa for \$200 million in April 2022.



# Ecosystem by the Numbers

**ECOSYSTEM VALUE**  
(H2 2020 - 2022)

**\$1.1 bn**



GLOBAL AVG. \$34.6 bn

**NUMBER OF UNICORNS**  
(H2 2020 - 2022)

**0**



GLOBAL AVG. 4

**SOFT. ENGINEER SALARY**  
(2022)

**\$5 k**



GLOBAL AVG. \$46 k

**TIME TO EXIT**  
(2018 - 2022)

**4.5 years**



GLOBAL AVG. 9 years

**TOTAL EARLY-STAGE FUNDING**  
(H2 2020 - 2022)

**\$41 m**



GLOBAL AVG. \$970 m

**MEDIAN SEED ROUND**  
(H2 2020 - 2022)

**\$130 k**



GLOBAL AVG. \$821 k

**EARLY-STAGE FUNDING GROWTH**  
(2019 - 20 VS. 2021 - 22)



Scale of 1 (lowest) to 10 (highest)

**EXIT AMOUNT**  
(2018 - 2022)

**\$76 m**



GLOBAL AVG. \$11.3 bn

**ECOSYSTEM VALUE GROWTH**  
(H2 2020 - H2 2022 VS H2 2018 - H2 2020)

**66%**



GLOBAL AVG. 4.7%

**MEDIAN SERIES A ROUND**  
(H2 2020 - 2022)

**\$6.5 m**



GLOBAL AVG. \$6 m

**TOTAL VC FUNDING**  
(2018 - 2022)

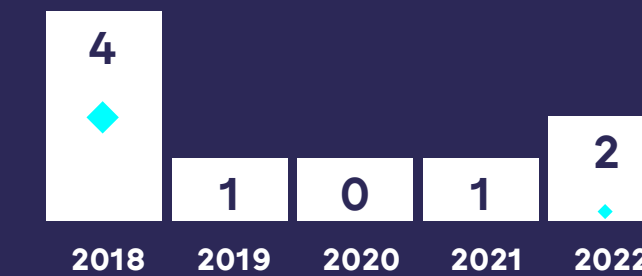
**\$264 m**



GLOBAL AVG. \$6.6 bn

**EXIT COUNT (#)**  
(2018 - 2022)

**8**



GLOBAL AVG. 91

## Sub-Sector Strengths

### Fintech

In 2021, the Bank of Ghana announced the development of a digital currency, known as the e-Cedi, and the bank has since partnered with Fintech EMTECH with the aim of increasing financial inclusion by 75% by the end of 2023. In January 2022, the government of Ghana launched the payment system PAPPS to facilitate cross-border payments. Mobile payment app GhanaPay launched in June 2022. Zeepay raised a \$10 million Series A in August 2022. Fintech DKK Partners opened its African hub in Accra in Q1 2023.

### Agtech & New Food

Accra will host one of eight UNDP Pan-African Innovation Hubs being established across the continent, and the Accra hub will focus on Agtech. In September 2022, the Africa Stakeholders Conference on Climate Smart Agriculture gathered researchers, policymakers, and other stakeholders. Agribusiness marketplace Farmerline raised a \$1.5 million seed round in September 2022, and has partnered with the Commercial Agriculture for Smallholders and Agribusiness Technical Assistance Facility to support agribusinesses that source from smallholder farmers.

### Logistics & Transportation

In the 2022 Agility Emerging Markets Logistics Index from logistics industry analysts Transport Intelligence, Ghana improved its global ranking by eight places from the year before, coming in at #32. Ghana scored highest in digital readiness. CARISCA's latest Logistics Managers Index showed a rise in logistics activities in Ghana. Freight forwarder Worldwide Logistics Group announced the opening of its first African branch in Accra in January 2022. Supply chain platform Jetstream Africa raised a \$13 million seed round in January 2023.

## Reasons to Move Your Startup to Accra

### Strong Business Environment

Thanks to a strong, stable democracy, Ghana is now one of the most attractive destinations in Africa for foreign investors. The Fitch Solutions Operational Risk Index ranked Ghana the most attractive market for trade and investment out of 16 West African countries. Accra is home to many ministries, bank headquarters, and large markets, and is conveniently located near Tema Port, a key cross-country border for international trade.

### Dedicated Support

The Ghana Startup Bill project aims to provide legal backing to startups and promote the use of new technologies. YouStart was introduced in 2022 to create a million jobs by 2025 by providing loans to youth-led enterprises. Africa Street MBA Accelerator has a particular focus on underrepresented entrepreneurs. The Google Ghana Internship Program 2023 offers students the chance to intern as software engineers.

### Young, Tech-savvy Talent

In 2022, Ghana was home to 17 million internet users, and the internet penetration rate stood at 53% of the population. The median age in Ghana is 21.5 years. The country has made strides in expanding training in technical skills, and the 14th African Standby Force Training Implementation Workshop was held in Accra at the end of 2022 to explore options to further expand technical training.

South Africa

# Cape Town

“Cape Town is often referred to as the tech capital of Africa, with a vibrant ecosystem where tech entrepreneurs can thrive and grow sustainable businesses. UVU Africa is driving inclusive growth through business incubation, skills development, and open innovation from Khayelitsha to Kigali.”



**Ian Merrington**  
CEO, UVU Africa Group



## Highlights

Cape Town is South Africa’s technology hub and home to many local and international tech companies. The city is also a hotspot for the green economy. With its natural beauty, high quality of life, and excellent municipal services, Cape Town draws thousands of immigrants from all over the world. Africa Data Centres announced in January 2023 that it is building an additional 20MW data center in Cape Town. The new facility will be operational in 2024. Tech giants including Amazon, Google, Oracle, and Microsoft have set up cloud regions in South Africa.

UNDP Africa is launching eight Timbuktoo hubs across Africa’s leading startup ecosystems, including Cape Town. In September 2022, VC firm Knife Capital’s announced a \$50 million African Series B expansion fund. The SA SME Fund is mandated to invest 50% of its capital into businesses owned and managed by Black Africans. Accelerator Grindstone assists high-growth, innovation-driven startups to become more investable, sustainable, and exit-ready.

AI-as-a-Service startup DataProphet closed a \$10 million Series A round in August 2022. In September 2022, biometric authentication company iiIDENTIFii raised a \$15.2 million Series A. In January 2023, mobile games publisher Carry1st raised a \$27 million pre-Series B round, and in February 2023, streaming data platform Redpanda Data raised \$50 million, bringing its total funding to \$76 million.

Africa’s Green Economy Summit was held in Cape Town in February 2023. TECHSPO Cape Town is set for October. Africa Tech Festival 2023 will take place in November, and SuperReturn Africa will be held in December.



# Ecosystem by the Numbers

**ECOSYSTEM VALUE**  
(H2 2020 - 2022)

**\$3.4 bn**



GLOBAL AVG. \$34.6 bn

**NUMBER OF UNICORNS**  
(H2 2020 - 2022)

**0**



GLOBAL AVG. 4

**SOFT. ENGINEER SALARY**  
(2022)

**\$30 k**



GLOBAL AVG. \$46 k

**TIME TO EXIT**  
(2018 - 2022)

**10.0 years**



GLOBAL AVG. 9 years

**TOTAL EARLY-STAGE FUNDING**  
(H2 2020 - 2022)

**\$272 m**



GLOBAL AVG. \$970 m

**MEDIAN SEED ROUND**  
(H2 2020 - 2022)

**\$1 m**



GLOBAL AVG. \$821 k

**EARLY-STAGE FUNDING GROWTH**  
(2019 - 20 VS. 2021 - 22)



Scale of 1 (lowest) to 10 (highest)

**EXIT AMOUNT**  
(2018 - 2022)

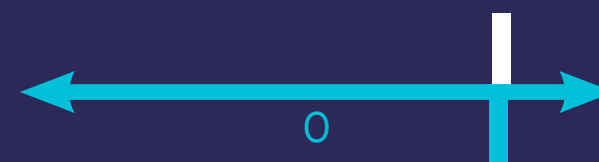
**\$346 m**



GLOBAL AVG. \$11.3 bn

**ECOSYSTEM VALUE GROWTH**  
(H2 2020 - H2 2022 VS. H2 2018 - H2 2020)

**46%**



GLOBAL AVG. 4.7%

**MEDIAN SERIES A ROUND**  
(H2 2020 - 2022)

**\$3.8 m**



GLOBAL AVG. \$6 m

**TOTAL VC FUNDING**  
(2018 - 2022)

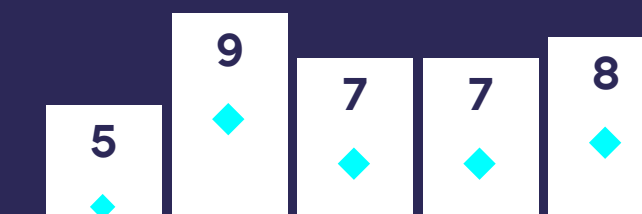
**\$1.5 bn**



GLOBAL AVG. \$6.6 bn

**EXIT COUNT (#)**  
(2018 - 2022)

**36**



GLOBAL AVG. 91

2018 2019 2020 2021 2022

## Sub-Sector Strengths

### Fintech

The Global Financial Centres Index ranked Cape Town #64 out of #119 financial centers around the world, just ahead of Johannesburg. The eighth Africa Fintech Summit was held in November 2022 and was billed as Africa's premier Fintech event. In February 2022, API Fintech startup Stitch raised a \$21 million Series A. In February 2023, online lending company Lulalend raised a \$35 million Series B. In October 2022, secure data collaboration platform Omnisent raised \$3.5 million.

### Edtech

Mindjoy aims to teach a million school children in South Africa and beyond to code. The Injini/Mastercard Foundation EdTech Fellowship Program 2023 is an equity-free, hybrid venture support program that takes a partnership approach to business acceleration. In May 2022, AI robot study buddy FoondaMate secured \$2 million in seed funding. Injini South Africa EdTech Week was held in November 2022.

### AI, Big Data & Analytics

In 2022, an event led by the South African Human Sciences Research Council gathered policymakers to consider key priorities for advancing responsible AI. The Global Forum on Bioethics in Research held a meeting in November 2022 on the theme of Ethics of AI in Global Health Research.” The AI Summit Cape Town was held in November 2022 and the International Joint Conference on Artificial Intelligence is planned for August 2023. In August AI and autonomous manufacturing company DataProphet raised \$4.5 million in Series A funding.

## Reasons to Move Your Startup to Cape Town

### Business-Friendly Environment

Cape Town's Enterprise and Investment Department seeks to attract investment and support commercial activity. Within this department is The Business Hub, a one-stop service to help entrepreneurs access information regarding city processes and connect to specialized business-support agencies. Cape Town's 10-year infrastructure project pipeline aims to create a foundation for economic growth over the next decade.

### Established Startup Scene

From Fintech to Agtech to eCommerce, Cape Town is home to startups in a wide range of sectors. The city is home to 33 incubators and accelerators, as well as a number of coworking spaces. The Innovation Collective accelerator program is part of ecosystem hub Innovation City Cape Town, which hosts over 60 startups, corporates, and investors.

### Special Economic Zone

Cape Town's Atlantis Special Economic Zone (ASEZ) is dedicated to supporting green and circular economy businesses. Companies operating in the zone benefit from a preferential 15% corporate tax rate, employment tax incentives, and customs controlled area tax relief. A second zone supports agricultural activities.

South Africa

# Johannesburg

*“Johannesburg is a major hub for startup growth on the continent. The ecosystem prides itself on providing access to top talent, access to markets, and access to capital for startups, with many large corporations actively seeking partnership with startups aimed at vertical integration into their business.”*



**Kizito Okechukwu**  
Executive Head, 22 On Sloane



## Highlights

Johannesburg, the largest city in South Africa, is home to nearly 5 million people, more than 70% of the nation’s companies, and the largest stock exchange in Africa. Johannesburg has been leveraging its position as the country’s financial capital to build a startup ecosystem to rival South Africa’s better-known scene in Cape Town. The city ranked 176th overall and in the 2022 Statista Global Business Cities Rankings, and was the third top business city in Africa.

The Smart City Innovation Challenge, developed by the City of Johannesburg in partnership with Tshimologong Innovation Precinct, aims to find and develop startups that are responding to challenges faced by the city. In June 2022, Johannesburg announced a new ZAR 30 billion (\$1.65 billion) rejuvenation project aimed at making the city more attractive to foreign investment. Wits University and Anglo American have partnered to fund the refurbishment and expansion of the Johannesburg Planetarium into a new multidisciplinary research, training, and events hub.

The MultiChoice accelerator provides training in entrepreneurship skills and exposure to a network of global investors for startups working in Healthtech, Agtech, Fintech, Edtech, the circular economy, and the creative industries. The Founder Institute, the world’s largest pre-seed startup accelerator, will welcome its fifth cohort in Johannesburg in 2023. Smart Cities Summit takes place each year in June, andTECHSPO Johannesburg is taking place in October.



# Ecosystem by the Numbers

**ECOSYSTEM VALUE**  
(H2 2020 - 2022)

**\$764 m**



GLOBAL AVG. \$34.6 bn

**NUMBER OF UNICORNS**  
(2020H2 - 2022)

**0**



GLOBAL AVG. 4

**SOFT. ENGINEER SALARY**  
(2022)

**\$30 k**



GLOBAL AVG. \$46 k

**TIME TO EXIT**  
(2018 - 2022)

**10.1 years**



GLOBAL AVG. 9 years

**TOTAL EARLY-STAGE FUNDING**  
(H2 2020 - 2022)

**\$128 m**



GLOBAL AVG. \$970 m

**MEDIAN SEED ROUND**  
(H2 2020 - 2022)

**\$300 k**



GLOBAL AVG. \$821 k

**EARLY-STAGE FUNDING GROWTH**  
(2019 - 20 VS. 2021 - 22)



Scale of 1 (lowest) to 10 (highest)

**EXIT AMOUNT**  
(2018 - 2022)

**\$450 m**



GLOBAL AVG. \$11.3 bn

**ECOSYSTEM VALUE GROWTH**  
(H2 2020 - H2 2022 VS H2 2018 - H2 2020)

**10%**



GLOBAL AVG. 4.7%

**MEDIAN SERIES A ROUND**  
(H2 2020 - 2022)

**\$3.4 m**



GLOBAL AVG. \$6 m

**TOTAL VC FUNDING**  
(2018 - 2022)

**\$503 m**



GLOBAL AVG. \$6.6 bn

**EXIT COUNT (#)**  
(2018 - 2022)

**48**



GLOBAL AVG. 91

2018 2019 2020 2021 2022

## Sub-Sector Strengths

### Fintech

Johannesburg is home to many of Africa's leading banks and financial institutions, as well as Africa's largest stock exchange, creating fertile soil for its Fintech ecosystem. Digital Finance Africa 2023 is scheduled for September and the Blockchain Africa Conference 2023 was hosted in Johannesburg in March. Mobile money interoperability hub MFS Africa has raised \$217.2 million over six rounds, including a \$100 million Series C in June 2022. Crypto currency exchange VALR has raised \$54.9 million over three rounds.

### AI, Big Data & Analytics

AI Expo Africa is Africa's largest AI and intelligent automation trade show and conference. This year's event will take place in Johannesburg in November. Data and analytics summit Velocity, took place in March. IPOXCap AI, which uses AI and natural-language processing to automate financial analysis, has raised \$500K over five rounds. VitruvianMD combines biomedical engineering and AI to provide diagnostic tools for medical laboratories, with a particular focus on emerging markets.

### Proptech

The 13th Annual Africa Property Investment Summit took place in Johannesburg in September 2022. The Africa Proptech Forum was also held there the same month. Property marketing platform Flow has raised a total of \$6.1 million over two rounds, including a \$4.3 million seed round in January 2023.

## Reasons to Move Your Startup to Johannesburg

### Educated Talent

In the 2022-23 Best Global Universities Rankings, the University of Johannesburg ranked #7 in Best Global Universities in Africa and #5 in Best Global Universities in South Africa. Three of South Africa's top five business schools are located in Gauteng, the province that is home to Johannesburg.

### Support for Female Founders

WomHub is a pan-African incubator for women in STEM that runs a coworking space and provides training. The Africa Innovation Fellowship is an eight-month leadership and business development opportunity for early-stage startups looking to become investor ready. The Economic Growth Accelerator is a year-long hybrid program offering leadership development and intensive entrepreneurial support, and the Sasol Women in Engineering Incubator Program supports women-owned SMEs in South Africa.

### Investment in Data Centers

In December 2022, Equinix announced a \$160 million data center will open in 2024 in Johannesburg. Global cybersecurity company Acronis announced the opening of a new data center to give local service providers access to cyber protection solutions. Software giant Oracle officially opened its Johannesburg-based data center in 2022. Johannesburg also hosts a Microsoft Azure data center, and Africa Data Center is expanding its Johannesburg facility from 10MW to 40MW of IT load by the end of 2025.

Nigeria  
**Lagos**

**#10** Rising Star Ranking

“Lagos is home to dynamic and resilient startups that, despite a challenging macro environment, continue to lead innovation across many sectors, including financial services, health, climate change, and education. They do so not just within Nigeria but across the continent.”



**Adenike Adeyemi**  
Executive Director, FATE Foundation

Global Ecosystem in Bang for Buck	Global Ecosystem in Affordable Talent	Sub-Saharan African Ecosystem in Funding
<b>Top 25</b>	<b>Top 20</b>	<b>#1</b>

## Highlights

With 24 million residents, Lagos is Africa’s biggest metropolitan area as well as one of its leading commercial hubs. It’s also an established and fast-growing tech hub, home to more than 400 startups, 88% of Nigeria’s total.

The Lagos State Development Plan (LSDP) 2052 aims to maximize the potential of the ecosystem. In 2022, the EU announced an €820 million (\$861.9M) investment in Nigeria’s digital transformation. The Lagos State Government’s Knowledge, Innovation, Technology and Entrepreneurship (KITE) project positions Lagos as Nigeria’s innovation hub.

VC fundraising event EkoVention, launched in June 2022, raises funding for promising pre-seed or seed stage startups. In October 2022, the Lagos state government announced the Lagos State Venture Capital fund. In December 2022, female-founded Aruwa Capital successfully closed its first fund, exceeding its \$20 million target. Honeywell Group has partnered with the Lagos State Government and Lagos Innovates to help young entrepreneurs develop successful startups. Incubation program Lagos Innovates’ Idea Hub supports early-stage tech ventures, and iHatch is a five-month free intensive business incubation program.

Lagos Startup Week is one of Nigeria’s most influential startup events. Art of Technology Lagos is the largest tech conference in Nigeria. Lagos Tech Fest brings together entrepreneurs, investors, and tech enthusiasts. The Nigeria Cybersecurity Summit gathers cybersecurity experts and ethical hackers. Notable funding news includes procurement platform Vendease’s \$40 million Series A in September 2022 and vehicle-financing startup Moove’s \$30 million round in December 2022, bringing its total raised to \$230 million.



## Ecosystem by the Numbers

**ECOSYSTEM VALUE**  
(H2 2020 - 2022)

**\$8.4 bn**



GLOBAL AVG. \$34.6 bn

**NUMBER OF UNICORNS**  
(H2 2020 - 2022)

**0**



GLOBAL AVG. 4

**SOFT. ENGINEER SALARY**  
(2022)

**\$9 k**



GLOBAL AVG. \$46 k

**TIME TO EXIT**  
(2018 - 2022)

**6.1 years**



GLOBAL AVG. 9 years

**TOTAL EARLY-STAGE FUNDING**  
(H2 2020 - 2022)

**\$824 m**



GLOBAL AVG. \$970 m

**MEDIAN SEED ROUND**  
(H2 2020 - 2022)

**\$500 k**



GLOBAL AVG. \$821 k

**EARLY-STAGE FUNDING GROWTH**  
(2019 - 20 VS. 2021 - 22)



Scale of 1 (lowest) to 10 (highest)

**EXIT AMOUNT**  
(2018 - 2022)

**\$408 m**



GLOBAL AVG. \$11.3 bn

**ECOSYSTEM VALUE GROWTH**  
(H2 2020 - H2 2022 VS H2 2018 - H2 2020)

**29%**



GLOBAL AVG. 4.7%

**MEDIAN SERIES A ROUND**  
(H2 2020 - 2022)

**\$15 m**



GLOBAL AVG. \$6 m

**TOTAL VC FUNDING**

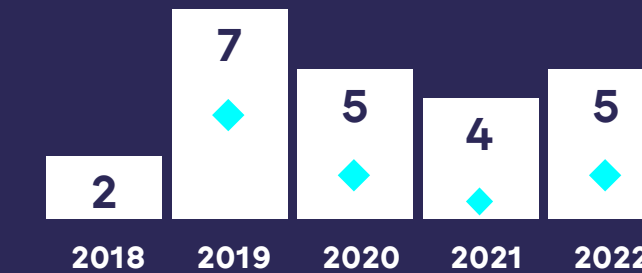
**\$3.3 bn**



GLOBAL AVG. \$6.6 bn

**EXIT COUNT (#)**  
(2018 - 2022)

**23**



GLOBAL AVG. 91

## Sub-Sector Strengths

### Fintech

Nigeria introduced a cashless policy in 2012, and this has only spurred the development of Fintech startups. Over 90% are based in Lagos, with most focused on lending and payments. Fintechs accounted for 49% of investment in 2022. Flutterwave raised a \$250 million Series D in February 2022, tripling its valuation to over \$3 billion. The unicorn gained financial licenses from the National Bank of Rwanda in early 2023 and plans to expand into MENA after receiving Egyptian licenses.

### Proptech

In October 2022, developer LandWey Investment unveiled Future City, a pilot city in Epe, Isimi Lagos. Isimi Lagos will incorporate TechValley (Orbit 1), a campus with tech and innovation laboratories, a research center, and incubation labs. ARM Labs Techstars Accelerator Program invests in early-stage Proptech companies. Proptech startup SmallSmall raised \$3 million in seed funding in October 2022. The same month, rental solution Spleet announced \$2.6 million in seed funding.

### Edtech

Lagos is Nigeria's Edtech hub. Prepclass offers customized learning programs and connects tutors and students through an online platform. Edves provides digital infrastructure for schools across Africa, automating both learning and administration. It raised a total of \$1.2 million over five rounds.

## Reasons to Move Your Startup to Lagos

### Tax Incentives

The Nigeria Startup Act 2022 provides startups with a four-year exemption from income tax, additional tax relief equal to 5% of taxable profits for up to five years for qualifying startups, an investment tax credit equal to 30% of investments made in qualifying startups, a 35% individual income tax exemption for startup employees for two years and more.

### Dedicated Support

The Lagos State Employment Trust Fund (LSETF) fosters entrepreneurship by improving access to finance and markets and formulating policies designed to improve the business environment in Lagos. LSETF also offers programs to support founders and startups. Lagos State Development Plan (LSDP 2052) promotes Lagos as a top investment destination in Africa. Andela co-founder Iyinoluwa Aboyeji is developing Talent City to create an ideal work environment and community for startups.

### Young, Tech-savvy Talent

The median age in Nigeria is 18.1 years and the nation is home to 82% of the continent's telecom subscribers. The Africa Developer Report 2021 from Google and Accenture notes that Nigeria added 5,000 new software developers from 2020 to 2021, for a total of 89,000. Tech talent flocks to Lagos for career opportunities. As a consequence, global firms are increasingly looking to the city to fill their talent gaps.

Kenya  
**Nairobi**

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

**Enpact**



**Highlights**

Nairobi dominates Kenya's startup ecosystem and is one of the leading tech cities in Africa. The capital city is home to 97% of the country's startups, as well as regional offices of many multinational companies. Google, Microsoft, and Visa all opened research and innovation centers in Nairobi in 2022.

In November 2022, IXAfrica Data Centre struck a deal with Helios Investment Partners to invest in the build-out of a campus in Nairobi to deliver 20MW of hyper-scale-ready capacity. Africa Data Centres is expanding its existing data center in Nairobi to 5X current capacity.

In January 2023, VC fund and accelerator Catalyst Fund announced a \$2 million investment into 10 startups working on improving the resilience of climate-vulnerable communities in Africa. The Nairobi County Government will issue a green bond of \$1.2 billion to finance environmental infrastructure and accelerate the green transition. Under the UK-Kenya Strategic Partnership, the UK Government will commit KES 2 billion (\$16.4 million) to lower investment risk and unlock KES 12 billion (\$98.6 million) of climate finance for Kenyan projects. At COP27, UK Prime Minister Rishi Sunak promised to expedite new green investments in Kenya. The flagship project, BasiGo, has raised \$11 million over four rounds. Sun King, which sells, installs, and finances solar home systems, has raised \$577 million over nine rounds, and raised sub-Saharan Africa's biggest round in 2022 in a December \$260 million Series D.

The second annual Kenya Innovation Week was held in Nairobi in December 2022, attracting 1,500 attendees. The next Kauffman Fellows Africa VC Summit will bring more than 300 investors from over 35 countries to Nairobi in September 2023.



# Ecosystem by the Numbers

**ECOSYSTEM VALUE**  
(H2 2020 - 2022)

**\$7 bn**



GLOBAL AVG. \$34.6 bn

**NUMBER OF UNICORNS**  
(H2 2020 - 2022)

**1**



GLOBAL AVG. 4

**SOFT. ENGINEER SALARY**  
(2022)

**\$13 k**



GLOBAL AVG. \$46 k

**TIME TO EXIT**  
(2018 - 2022)

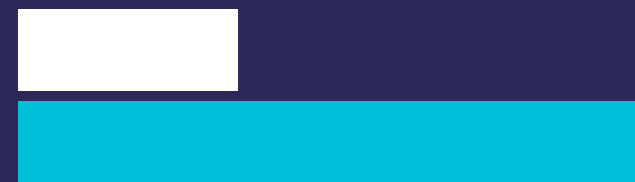
**7.4 years**



GLOBAL AVG. 9 years

**TOTAL EARLY-STAGE FUNDING**  
(H2 2020 - 2022)

**\$344 m**



GLOBAL AVG. \$970 m

**MEDIAN SEED ROUND**  
(H2 2020 - 2022)

**\$520 k**



GLOBAL AVG. \$821 k

**EARLY-STAGE FUNDING GROWTH**  
(2019 - 20 VS. 2021 - 22)



Scale of 1 (lowest) to 10 (highest)

**EXIT AMOUNT**  
(2018 - 2022)

**\$524 m**



GLOBAL AVG. \$11.3 bn

**ECOSYSTEM VALUE GROWTH**  
(H2 2020 - H2 2022 VS H2 2018 - H2 2020)

**81%**



GLOBAL AVG. 4.7%

**MEDIAN SERIES A ROUND**  
(H2 2020 - 2022)

**\$4 m**



GLOBAL AVG. \$6 m

**TOTAL VC FUNDING**  
(2018 - 2022)

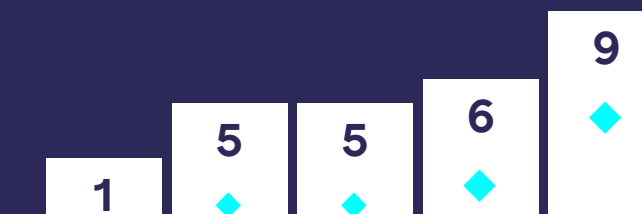
**\$2 bn**



GLOBAL AVG. \$6.6 bn

**EXIT COUNT (#)**  
(2018 - 2022)

**26**



GLOBAL AVG. 91

2018 2019 2020 2021 2022

## Sub-Sector Strengths

### Fintech

Nairobi is Kenya's Fintech hub. In July 2022, President Kenyatta launched the Nairobi International Financial Centre (NIFC), an initiative designed to make it easier and more attractive to invest and innovate in financial services. NIFC aims to raise over \$2 billion by 2030. Connected asset financing platform M-KOPA has raised a total of \$263.6 million over 16 rounds. Advanced lending solution Credrails raised a \$2.5 million seed round in February 2022. Savings app Koa raised \$2.4 million in venture funding in March 2022.

### Agtech & New Food

In Kenya, Agtech ranks second behind only Fintech in job creation and is responsible for creating 18% of startup jobs. In June 2022, Heifer International Kenya launched the AYuTe Africa Challenge Kenya to promote and reward Agtech innovation. The World Bank with Korea World Bank Partnership Facility, the Korean Green Growth Trust Fund, and Plug and Play Tech Center, launched the Africa-Korea Agtech Innovation Challenge to identify disruptive Agtech innovators in Kenya and Uganda. Apollo Agriculture, which helps small-scale farmers maximize profits, raised a \$40 million Series B in March 2022.

### E-commerce

Kenya boasts 29 active e-commerce startups, all of which are based in Nairobi. Consumer-facing, multi-product e-commerce platforms and B2B retail-tech solutions are particularly active sub-categories. Kenya's e-commerce startups collectively secured \$230 million in funding in 2022. Retail tech startup Wasoko has raised a total of \$143.6 million over 11 rounds, including a \$125 million Series B in March 2022.

## Reasons to Move Your Startup to Nairobi

### Market Opportunity

With 4.4 million residents, Nairobi is a vibrant commercial hub that is home to the regional headquarters of many global companies. Kenya's membership in regional economic blocs and its strategic geographic location makes it an ideal gateway to Eastern and Southern Africa. Kenya benefits from several preferential trade arrangements, including the African Growth and Opportunities Act, which allows duty-free access to the U.S. market for over 6,000 items, as well as the Africa Caribbean and Pacific-European Union Economic Partnership Agreement, which provides duty-free access to the EU.

### Growing Tech Community

Kenya's Vision 2030 economic blueprint established the Konza Technopolis City project, aimed at creating a hub of technology innovation in Africa. The initiative has propelled the growth of tech hubs and coworking spaces in Nairobi. Tech giants Microsoft and Visa have set up innovation hubs in Kenya, and Google launched its first product development center in the country. AmazonWeb Services announced AWS local zone cloud infrastructure. Several other global tech companies have announced plans to open offices in Nairobi.

### International Environment

Expats generally feel at home in Nairobi. In the 2022 Expat City Ranking the city placed #6 in the Ease of Settling in Index, with 66% of survey respondents saying making local friends is generally easy and 29% finding it very easy. Nairobi was ranked among the world's top 30 prime cities by real estate giant Knight Frank in its Prime Global Cities Index 2022. Knight Frank deemed Nairobi one of the most attractive cities in Africa for expats and firms looking to invest in the continent.

# 04 Methodology, References & Acknowledgments



# Methodology

**Our quantitative data infrastructure is the world's most comprehensive and quality controlled.**

We study 3.5 million companies across 290+ startup ecosystems, combine data from the three leading venture funding databases and then remove duplicates and clean with an AI engine, machine learning techniques, and a manual review. Additionally, we work with 50+ countries to power and update the data found in our reports and policy consultancy work.

## Key Definitions

**Ecosystem:** We define a startup ecosystem as a shared pool of resources, generally located within a 60-mile (100-kilometer) radius around a center point in a given region, with a few exceptions based on local reality. Resources typically include policymakers, accelerators, incubators, coworking spaces, educational institutions, and funding groups.

**Exit:** An exit, in the context of startups, refers to an event in which the founders, investors, or employees of a startup realize a return on their investment by selling their ownership stake in the company. Exits include IPOs,

M&A, buyouts, and reverse mergers. Starting from this year's ranking, we are including buyouts and reverse mergers as valid exit types. We only include the first exit as relevant.

**H1/H2:** Fiscal periods of half a year, in which January–June is H1 and July–December is H2. Similarly, Q1, Q2, etc. refers to the four fiscal quarters of a year (January–March, April–June, etc.).

**Regions:** We define global regions based on UN and World Bank Definition and divide all countries into seven regions: Asia, Europe, Latin America, MENA, North America, Oceania, sub-Saharan Africa. For a full list of which ecosystems are included in each region, please see here.

**Startup:** We define a startup as an innovative or technology-driven company that was founded within the last 10 years and that has technology and/or scalability at the core of its business model. In addition to software, this includes startups active in Deep Tech, such as Robotics, Life Sciences, and more.

**Unicorn:** A startup that meets our definition and has been valued at more than \$1 billion and has not exited.

## Sub-Sector Definitions

Sub-sectors are not mutually exclusive nor comprehensive — some startups are in sub-sectors that we do not consider. In addition, we are aware of a clear tech convergence. Technologies such as AI software are increasingly interrelated, and we would expect a similar convergence over time for other startup sub-sectors.

**Advertising Tech (Adtech):** Captures different types of analytics and digital tools used in the context of advertising and marketing. Extensive and complex systems are used to direct, convey, or monitor advertising to target audiences of any size and scale.

**Advanced Manufacturing & Robotics:** The use of smart technology to improve traditional manufacturing of products and/or processes, and the science and technology of robots, their design, manufacture, and application.

**Agriculture Tech (Agtech) & New Food:** Agtech captures the use of technology in agriculture, horticulture, and aquaculture with the aim of improving yield, efficiency, and profitability through information monitoring and analysis of weather, pests, and soil and air temperature. New Food includes technologies that can be leveraged to create efficiency and sustainability in designing, producing, choosing, delivering, and consuming food.

**Artificial Intelligence, Big Data & Analytics:** An area of technology devoted to extracting meaning from large sets of raw data, e.g. often including simulations of intelligent behavior in computers.

**Blockchain:** A decentralized data storage method secured by cryptography. Companies building their product/architecture on top of this decentralized and encrypted technology are defined as Blockchain companies. Cryptocurrencies are one of many innovations utilizing Blockchain.

**Cleantech:** Sustainable solutions in the fields of energy, water, transportation, agriculture, and manufacturing that include advanced materials, smart grids, water treatment, efficient energy storage, and distributed energy systems.

**Construction and Property Tech (Proptech):** Technology that can improve construction processes and methods including productivity gains, cost savings, improved safety, shorter lead times, and maximized resources etc. Proptech refers to the technology that helps organizations and individuals research, buy, sell, rent, lease and manage real estate. Methods include searching for property, listing available properties, setting up viewing dates, and finalizing lease agreements and deals.

**Consumer Electronics or Home Electronics (includes Wearables, Smart Devices):** 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:** The body of technologies, processes, and practices designed to protect networks, computers, programs, and data from attack, damage, or unauthorized access.

**Deep Tech:** Deep Tech involves the use of advanced technologies to attempt to solve critical, large-scale problems, and it includes sub-sectors that are based in complex combinations of hardware and software, such as Advanced Manufacturing & Robotics, Agtech & New Food, AI & Big Data, Blockchain, and Life Sciences.

**Edtech:** Technology devoted to the development and application of tools (including software, hardware, and processes) intended to redesign traditional products and services in education.

**Fintech:** Technology that aims to improve existing processes, products, and services in the Financial Services industry (including insurance).

**Gaming:** The development, marketing, and monetization of video games and gambling machines, as well as associated services.

**Life Sciences:** Life Sciences is concerned with diagnosing, treating, and managing diseases and conditions. This includes startups in Biotech, Pharma, and Medtech (also referred to as medical devices).

## Ecosystem Page Metrics

**Ecosystem Value:** A measure of economic impact, calculated as the value of exits and startup valuations from H2 2020–2022. Ecosystem Value growth (CAGR) is calculated based on companies founded in the ecosystem in H2 2018–H2 2020 vs. H2 2020–H2 2022. Ecosystem Value growth is calculated based on companies founded in the ecosystem in H2 2018–H2 2020 vs. H2 2020–H2 2022.

**Total Early-Stage Funding:** The total seed and Series A funding in tech startups in H2 2020–2022.

**Total VC Funding:** The total VC funding (seed, Series A, Series B+) in tech startups in 2018–2022.

**Median Series A:** The median of Series A rounds in tech startups in the ecosystem in H2 2020–2022.

**Median Seed:** The median of seed rounds in tech startups in the ecosystem in H2 2020–2022.

**Software Engineer Salary:** Average software engineer salary informed by data from Glassdoor, Salary.com, and PayScale, as well as local sources when available.

**Time to Exit:** The average age at the time of exit in the ecosystem in 2018–2022.

For additional definitions, please see the [Glossary](#) on our website.

## Primary Data Sources

- Startup Genome proprietary data:
  - Interviews of 100+ experts
  - 2017–2022 Startup Ecosystem Survey with more than 10,000 participants per year.
- Dealroom: global dataset on funding, exits, and locations of startups and investors
- Crunchbase: global dataset on funding, exits, and locations of startups and investors
- PitchBook: private capital market data provider
- Local partners (accelerators, incubators, startup hubs, investors):

- list of startups
- list of local exits and funding events
- Startup Genome LLC (2017-2023). StartupGenome.com database
- Dealroom.co BV. (2017-2023). Dealroom.co database
- Crunchbase (2017-2023). Crunchbase.com database
- CB Insights (2019-2023). Cbinsights.com database
- Orb Intelligence Inc. (2017-2023). orb-intelligence.com database
- PitchBook (2018-2023), 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



- USPTO
- WIPO
- World Bank

## Selected Data Timeframes

- Ecosystem Value: Sum of exits and funding rounds in H2 2020–2022.
- Based on long-term research and analysis, we know that it takes around one year for 50% of seed rounds to appear in the major data sources. As such, we use H2 2020 as the most recent period for seed rounds and earlier-stage metrics that are computed to create reliable benchmarks at the ecosystem level.
- For early-stage funding, we take the count of all seed and Series A investments in H2 2019–2021 for seed rounds and H2 2020–2022 for Series A rounds. It takes four to eight weeks for the majority of Series A rounds to appear in our sources.

## Ranking Methodology

### Global Startup Ecosystem Ranking 2023 (Top 30 + Runners-Up)

This ranking identifies the top 40 ecosystems. These ecosystems are more mature than other ecosystems globally, featuring more exits over \$50 million and more funding activities.

This 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 calculate an ecosystem index value for each factor, based on the sub-factor and metrics detailed below. The ecosystems scores are 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 indices as independent variables with the performance index as a dependent variable. Finally, adding the actual Performance Index to the ranking formula serves to include the influence of unobserved factors on the performance of an ecosystem.

## Ranking Details

### Performance

Captures the actual leading, current, and lagging indicators of ecosystem performance.

- **50% Ecosystem Value**
  - Log of sum of all exits and estimated startups valuations during H2 2020–2022 without double-counting.
- **37.5% Exits**
  - 80% volume of exits (80% log of number of \$50 million+ exits and 20% log of number of \$1 billion+ exits) from H2 2020–2022.
  - 20% exit growth index (scored from 1 to 10) from 2019–2020 vs. 2021–2022.
- **12.5% Startup Success**
  - 60% growth-stage success (100% ratio of Series C-to-A Startups) from H2 2020–2022.
  - 30% speed to exit (50% average company age at exit and 50% average company age at IPO) from H2 2020–2022.
  - 10% early-stage success (ratio of Series B-to-A startups) from H2 2020–2022.

## 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). The time range for seed rounds is July 1, 2019 to December 31, 2021 and for Series A rounds is July 1, 2020 to Dec 31, 2022.
  - 10% log of early-stage funding growth from 2018–2019 vs. 2020–2021.
- **10% Quality and Activity**
  - 70% volume of investors (50% log of total number of VCs and CVCs in 2022 and 50% log of total number of investors with \$100 million+ assets under management in Q1 2022).
  - 10% experience of investors (50% number of investors with above average exit rates and 50% average years of experience of investors).
  - 20% new investors (50% log of total number of new investors, with less than five years of activity) and 50% ratio of active investors.



## Market Reach

Measures early-stage startup access to customers, allowing them to scale and potentially “go-global.”

- **60% Globally Leading Companies**

- 50% ratio of startups with \$1 billion+ valuations to GDP in H2 2020–2022.
- 30% ratio of \$50 million+ exits by Metro population (M) in H2 2020–2022.
- 10% log of ratio of exits over \$50 million in the second half of 2020, 2021, and 2022 to Series A funding in the first half of 2020, 2021, and 2022.
- 10% ratio of tech startups (formed after 2012) with international secondary offices.

- **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) for 2022.

## Connectedness

Measures how connected the ecosystem is to the global fabric of knowledge within the ecosystem (Local Connectedness and Innovation Infrastructure).

- **60% Local Connectedness**

- 55% log of count of Meetup groups on meetup.com.
- 15% log of ratio of number of Meetup groups from meetup.com by population (M).
- 30% log of the number of accelerators and incubators.

- **40% Global Connectedness**

- 90% log of tech companies with secondary offices in the ecosystem.
- 10% log of international investors.

## Talent & Experience

Assesses the talent early-stage startups have access to and the degree of startup experience in an ecosystem.

- **37.5% Talent**

- 80% Tech Talent
  - 90% Quality & Access
    - 70% log of count of \$50 million+ exits in 2013–2022
    - 10% share of top Github coders to total Github coders (based on the data available in January 2023).

- 10% log of count of Github coders on github.com with more than 10 followers (based on the data available in January 2023).

- 10% English Proficiency Score for 2022.

- 10% Cost

- 50% log of software engineer salary — lower is considered better — from Glassdoor, Salary.com, and PayScale for 2022.

- 50% log of funding runway: ratio of median Series A funding rounds for H2 2020–2022 by software engineer salary.

- 20% 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 with Life Sciences-related disciplines.

- 10% 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**

- 80% startup experience in the ecosystem.
  - Log of count of funding of Series A in 2013–2022.
- 20% scaling experience in the 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 \$1 billion+ exits.
  - 40% log of number of \$50 million+exits.

## Knowledge

Measures innovation through research and patent activity.

- **80% patents (the volume, complexity, and potential of all patents created in the ecosystem)**

- 50% log of tier of number of all the patents in the ecosystem in 2012–2021.
- 30% three-year moving average growth of all patents.
- 10% 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) in 2012–2021.
- 10% complexity score of patents, a measure of the capacity of the ecosystem for producing patent in complex technology classes, based on a PageRank algorithm.
- **20% research**
  - H-index, a measure of publication impact, this metric looks at the production of all research at the country level in 1996–2021.

## Emerging Ecosystems Ranking

Emerging ecosystems are those ecosystems following the top 40 global ecosystems in the Performance Success Factor. The factor weights used to rank these ecosystems are slightly different from those used with top ecosystems to reflect their emerging status and emphasize the factors that have more influence in ecosystems that are just beginning to grow. Less weight is given to the number of exits over \$50 million and startup activity is more focused on early-stage funding than in the top 40 ecosystems.

The Emerging ecosystem ranking is a weighted average of the following factor scores:

- **Performance: 40%**
- **Funding: 30%**
- **Market Reach: 12.5%**
- **Talent & Experience: 12.5%**
- **Connectedness: 2.5%**
- **Knowledge: 2.5%**

### 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 H2 2020–2022 without double-counting
- **20% Exits**
  - 80% volume of exits (80% log of number of \$50 million+ exits and 20% log of number of \$1 billion+ exits) in H2 2020–2022.
  - 20% Exit Growth Index (scored from 1 to 10) for 2019–2020 vs. 2021–2022.

### 10% Startup Success

- 80% growth-stage success (50% ratio of Series C-to-A startups and 50% log of unicorns from H2 2020–2022)
- 10% speed to exit (50% average company age at exit and 50% average company age at IPO) from H2 2020–2022.
- 10% early-stage success (ratio of Series B to Series A startups) from H2 2020–2022.

### 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). The time range for seed rounds is July 1, 2019 to December 31, 2021 and for Series A rounds is July 1, 2020 to Dec 31, 2022.
- 10% log of early-stage funding growth in 2019–2020 vs. 2021–2022

## Market Reach

Measures early-stage startup access to customers allowing them to scale and “go-global.”

- **80% Globally Leading Companies**
  - 45% ratio of startups valued at \$1 billion+ to GDP (in billions) from H2 2020–2022.
  - 25% ratio of \$50 million+ exits by Metro population (in millions) from H2 2020–2022.
  - 10% log of ratio of \$50 million+ exits in H2 2020–2022 to Series A funding in H2 2020–2022
  - 20% proportion of tech startups (formed after 2012) with one or more international secondary offices.
- **20% Local Market Reach**
  - Log of country GDP.

## Talent & Experience

Assesses the talent early-stage startups have access to and the degree of startup experience in an ecosystem.

- **50% Talent**
  - 80% Tech Talent
    - 50% Quality & Access

– 70% log of count of \$50 million+ exits from 2013–2022.

– 10% share of top Github coders to total Github coders

– 20% log of count of Github coders with more than 10 followers on github.com.

- 50% Cost

– 50% log of software engineer salary — lower is better — from Glassdoor, Salary.com, and PayScale

– 50% log of funding runway: The ratio of median Series A funding rounds by software engineer salary.

- 20% STEM Students: log of number of STEM students.
- **50% Experience**
  - 80% Startup Experience in Ecosystem
    - Log of count of Series A funding in 2013–2022.
  - 20% Scaling Experience in Ecosystem (the cumulative number of significant \$50 million+ and \$1 billion+ exits over 10 years for startups founded in the ecosystem).
    - 60% log of number of \$1 billion+ exits in 2013–2022.
    - 40% log of number of \$50 million+ exits in 2013–2022.

## Connectedness

Measures how connected the ecosystem is to the global fabric of knowledge within the ecosystem.

- **80% Local Connectedness**
  - 70% log of count of Meetup groups on meetup.com.
  - 20% log of ratio of number of Meetup groups from meetup.com by population (M).
  - 10% log of the number of accelerators and incubators.
- **20% Global Connectedness**
  - 90% log of tech companies with secondary offices in the ecosystem.
  - 10% log of international investors.

## Knowledge

Measures innovation through research and patent activity.

- **80% Patents (the volume, complexity, and potential of all patents created in the ecosystem).**
  - 50% log of tier of number of all the patents in the ecosystem in 2012–2021.

- 30% three-year moving average growth of all patents.
- 10% 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) in 2012–2021.
- 10% complexity score of patents, a measure of the capacity of the ecosystem for producing patents in complex technology classes, based on a PageRank algorithm.
- **20% research (H-index, a measure of publication impact, this metric looks at the production of all research at the country level in 1996–2021).**



## Strong Starters Ranking

The Strong Starters ranking identifies the top 25 ecosystems from the Emerging Ecosystems ranking where early-stage funding activity is most robust.

### Funding

- **90% Early-stage Funding:**
  - 80% log of count of early-stage funding deals. The time range for seed rounds is July 1, 2019 to December 31, 2021 and for Series A rounds is July 1, 2020 to Dec 31, 2022.
  - 20% log of the sum of total early-stage funding deals. The time range for seed rounds is July 1, 2019 to December 31, 2021 and for Series A rounds is July 1, 2020 to December 31, 2022.
- **10% Log of Early-stage Funding Growth from 2019–2020 vs. 2021–2022.**

## Changes in Ecosystem Value

It is our constant endeavor to improve our quality of research and data, in order to help our members and readers gain accurate and current knowledge on global startup ecosystems. With that aim in mind, we have significantly improved our data set since the GSER 2021 — both in terms of exhaustiveness and quality. As we improved the data, one of the key outcomes was an increase in Ecosystem Value. The major factors that influenced this are:

1. **Technology startup classification:** We have made significant improvements in our classification of technology companies by adding more comprehensive classification criteria and tags from multiple sources. We have added CB Insights data and introduced in-depth checks to ensure the tech classification is accurate. This resulted in more companies being tagged as tech and hence more deals added to our dataset. This contributed approximately 8% to Ecosystem Value.
2. **Increasing the age criteria:** We concluded that older startups are more likely to receive higher and late-stage funding rounds. With that in mind, for exits over \$100 million we included companies with formation dates that go back to 1995. For rounds later than Series B, we also include companies with formation dates since 1995 in our dataset.
3. **Increasing unicorns data:** We have made enormous strides in expanding unicorn coverage in our dataset. This includes incorporating CB Insights unicorns and \$1 billion+ exits (after in-depth checks). This contributed to an approximate 36% increase in Ecosystem Value of the top ecosystems.
4. **Fine-combing through big deals:** As a final check, we scrupulously examined the larger deals of each ecosystem to make sure that every deal was valid, reflected the true value, and belonged to that particular ecosystem.
5. **From this year onwards, we are including exits larger than \$500 million that took place after the H2 2019.** These large exits stay in their ecosystem, mostly in the form of dry powder for investors to expand their portfolios.
6. **We have also updated the exit type.** From this year onwards, we are including buyouts and reverse mergers as relevant exit deal types.
7. **In previous years, we have only considered the ecosystem that a startup is founded in.** From this year, we have also added the value of the top five startups and/or unicorns to the ecosystem where the startup is headquartered. The intention is to attribute both where a startup is born and where it creates attraction.

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