

# THE RISE OF GENERATIVE AI

TECH SCALEUP SILICON VALLEY

2023 Report

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## crunchbase



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# 2023: A YEAR OF TRANSITION

## FOR THE VC AND INNOVATION ECONOMY

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2023 has been a year of transition for the venture capital (VC) and innovation economy.

After two years of record-breaking investment, the VC market has cooled in recent months due to a number of factors, including rising interest rates, inflation, and the ongoing war in Ukraine.

Despite the slowdown, there are still many reasons to be optimistic about the VC and innovation economy. The world continues to face a number of complex challenges, and innovation is essential to solving them. VCs are still investing heavily in startups that are developing new technologies to address these challenges.

Here is a brief overview of how 2023 has been so far for the VC and innovation economy:

#### Venture capital investment has slowed.

VC investment in the US fell by 34% in Q2 2023 compared to the same period last year. This is the biggest quarterly decline in VC investment since 2016.

#### Later-stage deals have been hit the hardest.

The decline in VC investment has been most pronounced in later-stage deals. This is because investors are becoming more cautious about investing in companies that are not yet profitable.

#### Valuations are coming down.

The slowdown in VC investment has also led to a decline in valuations for startups. This is good news for investors, but it can be challenging for startups that are raising money in the current environment.

#### IPOs have dried up.

The IPO market has also dried up in recent months. This is making it more difficult for startups to exit and return capital to their investors.

Despite the slowdown, there are still many **bright spots in the VC and innovation economy**. For example, **investment in early-stage startups remains strong**.

This suggests that VCs are still bullish on the **long-term** prospects for innovation.

We are also experiencing a rise of deeptech. Deeptech startups are developing new technologies that are based on cutting-edge scientific discoveries. These startups are attracting significant investment from VCs, as they have the potential to revolutionize entire industries.

Within deeptech, AI startups are front and center. Silicon Valley and San Francisco are (as usual) leading the pack on the innovation movement, with 2,101 AI scaleups that raised \$143.7B in total. Therefore, it does not come as a surprise that Open AI's president Sam Altman has called San Francisco "the best place to start an AI company". A new zone designated "Cerebral Valley" or "HAIyes Valley" (with hacker houses operated out of historic Victorians near Alamo Square) is attracting AI startups from across the country, and expanding AI companies are growing their office footprint in the City.

#### Investments into Al companies have sped up over the past decade.

More than \$300 billion in venture funding was invested in over 16,000 companies in the sector between January 2013 and Q3 2023, according to Crunchbase data.

As of Q3 2023, an estimated 1 in 4 venture dollars in the U.S. this year has gone to a startup that incorporates artificial intelligence in its business, Crunchbase data shows.

"The productivity gains generative AI will enable could be profound," said Gené Teare, Senior Data Editor at Crunchbase News. "Sectors that stand to benefit include health care, product and engineering, cybersecurity, robotics, marketing, design and law and research, among others."

As **Liz Lindqwister** wrote in The San Francisco Standard: "The rise of these hacker homes feels, in many ways, like a **return to tech's Wild West era**, when scrappy startups sought to change the world from the garage of a Palo Alto home—or in this case, an Alamo Square Victorian.

Only time will tell whether this new Wild West will yield a new gold rush."

# A CENTURY OF TECH REVOLUTIONS

**Silicon Valley** unquestionably maintains its reputation as the **global epicenter of innovation**.

Over the past century, this region has spawned some of the most groundbreaking technological advancements ("waves of innovation"), ranging from integrated circuits to personal computers, and from the internet and mobile technologies to social media.

In today's fast-paced tech landscape, **trends evolve rapidly**, with shorter cycles, and disruptive innovations cut across various industries.

In this dynamic environment, Silicon Valley remains at the forefront of global innovation.

It capitalizes on its robust ecosystem of **talent** and **venture capital**, a unique **culture of risk-taking**, dependable **infrastructure**, and an unparalleled **concentration of innovators**.

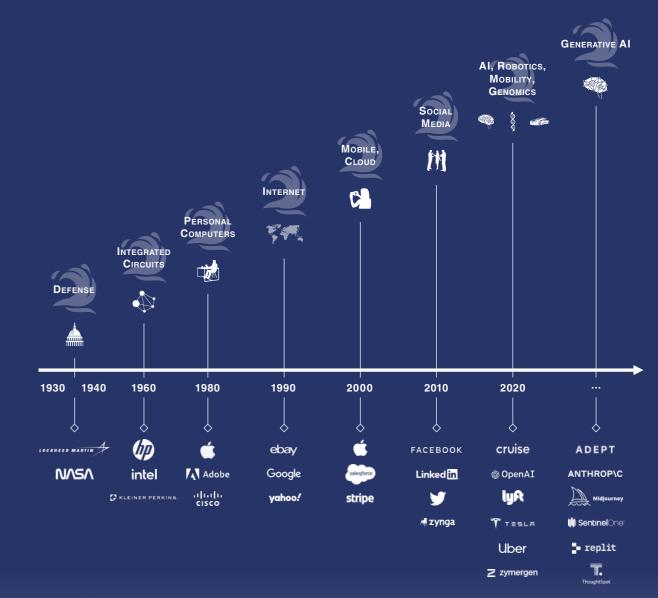
Recent research developments in Artificial Intelligence (AI) and Machine Learning (ML), spearheaded by Silicon Valley giants like Google, OpenAI, and Anthropic, have ushered in a new tech trend known as "Generative AI" (GenAI).

GenAl represents a significant leap in mimicking human intelligence, transcending mere information comprehension and processing to create innovative content. The applications of GenAl models span across diverse fields, including art, healthcare, entertainment, enterprise applications, and more.

The impact of these advancements remains to be seen, as they could either herald a **profoundly transformative new wave of innovation** or potentially lead to an "investment bubble." Nonetheless, it's already evident that innovators such as **OpenAI**, **Adept**, **Anthropic**, **Grammarly**, and **Midjourney** are playing a substantial role in democratizing AI.

This process can be considered nothing short of **revolutionary**.

# FIGURE 1 SILICON VALLEY WAVES OF INNOVATION Source: Mind the Bridge with the support of Crunchbase





# THE RISE OF GENERATIVE AI

Possible concerns regarding the potential decline of Silicon Valley, coupled with reports of a supposed "exodus" of Bay Area residents, now appear to be greatly exaggerated.

Recent strides in AI technology, driven by tech giants and a multitude of thriving scaleups, signal the resurgence of Silicon Valley on the global stage.

In Silicon Valley, the field of Artificial Intelligence (AI) has experienced remarkable growth over the past five years. Open Al's president Sam Altman has called San Francisco "the best place to start an AI company".

A new zone designated "Cerebral Valley" is attracting AI startups from across the US and internationally, and expanding AI companies are growing their office footprint in the city.

But what exactly should be included in the definition of AI? AI refers to the development of computer systems capable of executing tasks that traditionally require human intelligence, including understanding natural language, pattern recognition, and decision-making.

Over the decades, AI research has evolved from rule-based systems to machine learning, culminating in the pursuit of Artificial General Intelligence (AGI) - the aspiration to create machines

with human-like intelligence across a broad spectrum of tasks.

Historically, progress in AGI, particularly in Silicon Valley, has primarily revolved around making sense of existing data. AI models have become proficient in recognizing elements in images and powering search algorithms like Google's.

More recently, **the AI landscape has diversified** into specialized branches, driven by substantial R&D investments from Silicon Valley tech giants such as **Google** and **Meta**. Most importantly, the proliferation of powerful AI-specific chipsets, like those developed by Nvidia, has become integral to training and deploying massive AI models.

These factors have collectively paved the way for the emergence of a specialized AI branch focused on content creation: **Generative AI**.



# **GENERATIVE AI** PAST, PRESENT AND FUTURE

The emergence of Generative AI was spurred by the demand for a technology capable of not just understanding and processing information but also of creating and innovating.

A crucial milestone in this journey was the advent of the Large Language Model (LLM), which played a pivotal role in leading the development of software that can create sophisticated content mimicking human abilities. LLMs were made possible by the "Transformer" architecture - a model made by Google researchers in 2017. Transformer tools enable the fluent parsing and writing skills of current Generative Al models by processing word sequences at once (sentences, paragraphs, or even entire articles) and analyzing all their parts, thus better capturing context and patterns.

In the current state of the art, Generative Al has the capability to produce original content, including essays, fine art, and software code.

Many experts view Generative AI as a technological breakthrough on par with the advent of the internet.

It has the potential to profoundly reshape nearly every facet of society and disrupt entire industries. extending its reach beyond traditionally contentfocused sectors like media and entertainment to fields such as healthcare and law.

While the transformative potential of Generative AI is undeniable, it also raises ethical concerns. These include the creation of deepfakes - synthetic media that are challenging or impossible to distinguish from authentic content -, the propagation of misinformation, the manipulation of public opinion, and the generation of deceptive or inaccurate material. Additionally, the matter of authorship and copyright of Al-generated content remains ambiguous, demanding for careful consideration and potential legal adjustments.

#### FIGURE 2 FROM AI TO GENERATIVE AI Source: Mind the Bridge









ΑI

MACHINE LEARNING DEEP LEARNING

DEEP LEARNING GENERATIVE AI

The history of Generative AI is still unfolding,

as it remains a relatively new and evolving technology. However, the enthusiasm surrounding this technology seems to be more than just hype.

In recent months, Silicon Valley has witnessed a surge in Generative AI meetups and conferences. indicating a strong interest in this field.

Investors are "getting the hots" around Generative Al companies, despite the general decline in VC investments worldwide (the so-called "VC reset"). The Generative AI boom also continues to drive the "cloud-to-edge" shift in computing, spurring the development of specialized Al chipsets tailored for large-scale data processing and analysis.

In the present day, Generative AI has found applications across a wide range of fields, including image and video generation, as well as content creation. Companies are harnessing its capabilities to enhance customer service and user experiences.

**OpenAI**'s GPT-3, for example, is revolutionizing natural language processing, enabling chatbots and virtual assistants to engage in more human-like conversations.

**Anthropic** is pushing the boundaries of AI creativity. Adept is exploring innovative healthcare solutions, and Midjourney is redefining image content generation.

Big tech companies are also racing to dominate the space. Microsoft has backed OpenAl and enhanced its browser with Bing Chat. Among others, Google released its PaLM LLM model, which powers its chatbot Bard, while Meta has launched LLaMA.

Additionally, Generative AI companies are playing a vital role in the process of **AI democratization** thanks to widespread adoption.

For instance, OpenAI's ChatGPT has already amassed over 100 million users, achieving this remarkable growth within a record-breaking three-month period (from April to June 2023).

Looking ahead, the future prospects for Generative Al and its impact are hard to grasp.

Ongoing research and development efforts are constantly improving algorithms and models, propelling Al-generated content to unprecedented levels of sophistication.

Companies are actively harnessing this technology to tackle **complex challenges**, from simulating climate scenarios for climate change mitigation to expediting drug discovery processes.

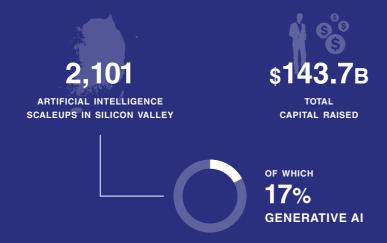
While we cannot definitively predict the exact trajectory of Generative AI's evolution and its impact on our world, one thing is unmistakable:

Silicon Valley is poised to play a central role in this scenario once again.

# THE SILICON VALLEY AI SCALEUP SCENE

## FIGURE 3 FROM AI TO GENERATIVE AI

Source: Mind the Bridge with the support of Crunchbase



Silicon Valley is cultivating one of the most densely populated Al scaleup ecosystems globally, driven in part by the diversification efforts of established companies like Google and Meta.

As of H1 2023, our research has identified a total of **2,101 Al scaleups** in the region (22% of total), with **17% specializing in Generative Al**.

The cumulative capital raised by Al scaleups in Silicon Valley amounts to a substantial \$143.7B (20% of total).

Given these statistics, it's reasonable to estimate the presence of an additional 2,000-2,500 Al early-stage startups (below \$1M in funding) operating in Silicon Valley.

FIGURE 4

GENERATIVE AI UNICORNS - SILICON VALLEY VS. GLOBAL INNOVATION ECOSYSTEMS

Source: Mind the Bridge with the support of Crunchbase. Mind the Bridge elaboration on Bay Area Executive Council Data

	SCALEUP	LOCATION	CAPITAL RAISED	VALUATION
<b>=</b>	<b> ⑤</b> OpenAl	SAN FRANCISCO (CA)	s11.3в	\$29.0в
<b>=</b>	ANTHROP\C	SAN FRANCISCO (CA)	\$2.8B	\$4.4в
<b>=</b>	Inflection	PALO ALTO (CA)	\$1.3в	\$4.0в
•	<b>≈</b> cohere	TORONTO	\$0.4в	\$2.0в
<b>=</b>	Hugging Face	NEW YORK	\$0.4в	\$2.0в
<b>*</b>	$oldsymbol{eta}$ Lightricks	JERUSALEM	\$0.3в	\$1.8в
<b>=</b>	(R runway	NEW YORK	\$0.2в	\$1.5в
<b>=</b>	Jasper	AUSTIN (TX)	\$0.1в	\$1.5в
<b>#</b>	- replit	SAN FRANCISCO (CA)	\$0.2в	\$1.2в
<b>=</b>	ADEPT	SAN FRANCISCO (CA)	\$0.4в	\$1.0в
#	character.ai	MENLO PARK (CA)	\$0.2в	\$1.0в
2 V	stability.ai	LONDON	\$0.1в	\$1.0в
<b>=</b>	glean	PALO ALTO (CA)	\$0.2в	\$1.0в

In terms of the concentration of AI scaleups relative to the total number, Silicon Valley faces one strong contender - South Korea, where one in every four Korean scaleups develops AI technologies.

Nevertheless, in absolute terms, Silicon Valley far outperforms South Korea by approximately 5.5 times. Israel follows closely, with 19% of its scaleups engaged in the development of AI technologies.

The UK and the EU, on the other hand, present relatively less mature AI scaleup ecosystems.

It's worth noting that the EU's figures may be influenced by the ongoing regulatory debate surrounding AI.



## A RADICAL SHIFT IN THE AI INVESTMENT LANDSCAPE

#### FIGURE 5 SILICON VALLEY AI AND GENAI SCALEUP INVESTMENTS PER YEAR

Source: Mind the Bridge with the support of Crunchbase



Over the past few years, the Silicon Valley Al scaleup economy has experienced significant growth.

The turning point occurred in 2018 when the local Al scaleup ecosystem crossed the \$10 billion funding threshold, a milestone that has been consistently maintained until 2022.

Consistently with general investment trends, 2021 was an exceptional year for the Silicon Valley Al landscape, with \$24.8B invested in the local AI innovation scene. However, in 2022, there was a **noticeable decline**, although the total Al financing still remained substantial at \$14.8 billion. Simultaneously, the Generative AI scaleup scene in Silicon Valley gained prominence.

It was virtually non-existent until 2018.

Then, it consistently attracted an average of \$3B per year until 2023, a year that marked a significant shift in the AI technology landscape.

Fueled by the enormous Microsoft-OpenAl deal (\$10B in January 2023)1, Generative AI scaleups raised a total of \$11.9B as of H1 2023, surpassing other AI companies, which secured "only" \$3.2B.

While it remains to be seen if this rapid change in pace will continue or taper off, it's clear that Generative AI is currently the dominant trend in Silicon Valley's Al landscape.

## THE GENERATIVE AI SILICON VALLEY ECOSYSTEM

Generative AI is a relatively novel technology, and consequently, its industrial applications are still in the exploratory phase.

These transformative technologies are progressively transcending industry boundaries, allowing scaleup businesses to apply their business models across various sectors.

It is not uncommon to find scaleups whose products cater to the diverse needs of businesses in areas such as healthcare, law, agrifood, education, and beyond.

In the following sections, we present a visual map of the leading Generative AI scaleups in Silicon Valley, emphasizing their core technologies and industry applications.

According to our methodology, we have identified several **key trends** currently observed in the Silicon Valley Generative AI landscape:

#### **Foundational Model Makers**

Some highly funded scaleups are focused on the development, training, and deployment of the foundational technologies and models that underpin Generative AI.

#### Al Chipset Designers (Enablers)

This category includes AI chipset designers who play a closely related role to the Model Makers. supporting the advancement of Generative AI.

We also reported significant industrial applications in the following domains:

#### **Enterprise Applications**

These encompass a wide range of uses, from enhancing conversational customer management to intelligent automation of various industrial processes.

#### **Industry Applications**

These applications leverage company datasets (Private Data) to improve the quality of generated output and provide tailored solutions.

#### **Security Applications**

Generative AI is making strides in defense and cybersecurity, bolstered by advanced models for threat protection and risk management, supported by substantial computational power.

#### **Legal Sector**

Generative AI is helping manage legal documents at scale, improving efficiency and accuracy.

#### **Content Generation**

The democratization of content generation takes various forms, including text (including code), image and video, voice and speech, and even the ideation of entirely new concepts.

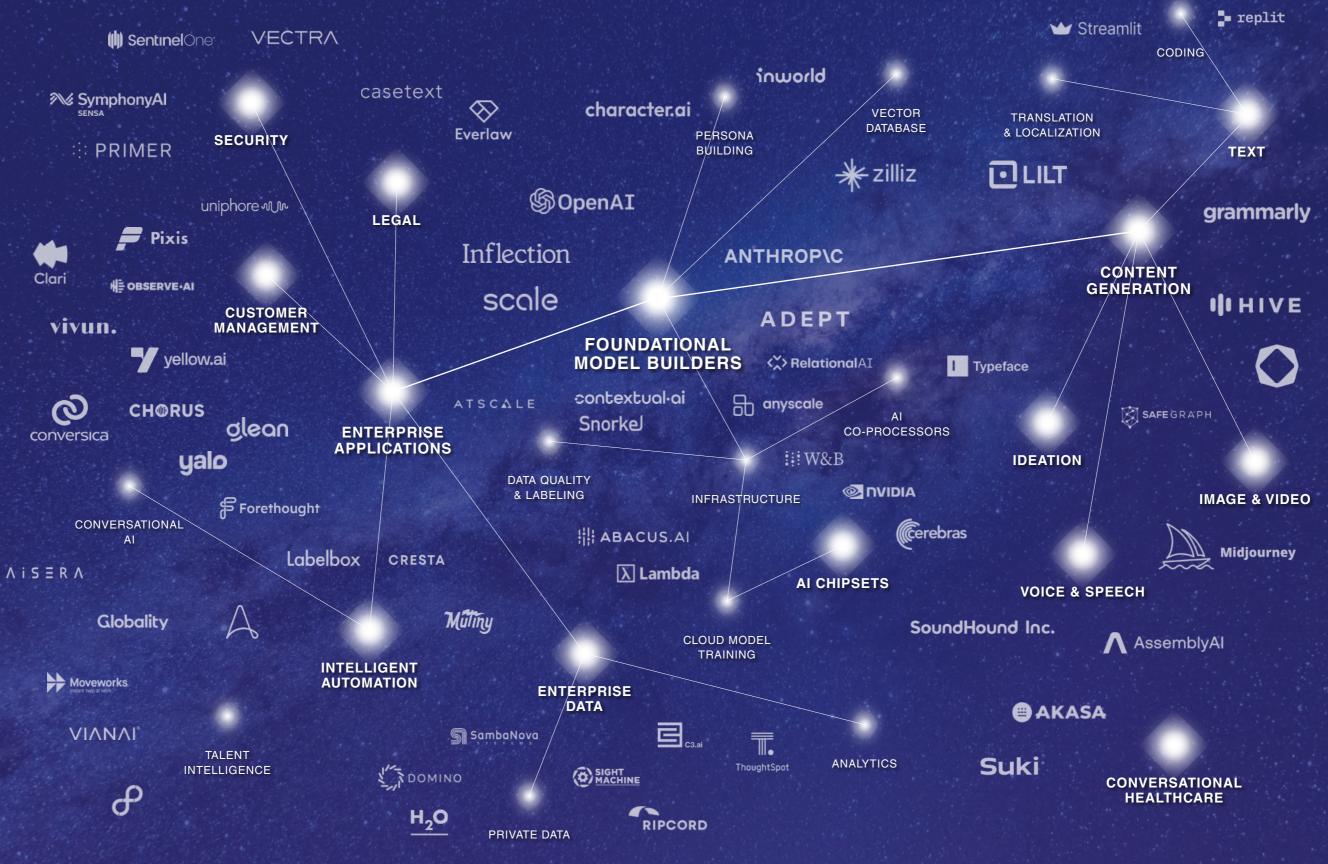
#### Healthcare

Conversational Healthcare represents a significant advancement in telemedicine, improving access to quality healthcare services.

fully disclosed, but Microsoft expects receive three-quarters of OpenAl's profits until it recovers the investment (TechCrunch, 2023)

<sup>1 -</sup> The Microsoft-OpenAI deals has been categorized as a multi-year investment plan under a \$29B valuation. The terms of the deal have not been

### MAP OF THE SILICON VALLEY GENERATIVE AI INNOVATION LANDSCAPE\*



\*The map is intended to provide an overview of some of the most representative and most funded Silicon Valley Generative AI scaleups, according to their main areas of application.

The map also includes some companies that cannot be defined - according to our methodology - as "scaleups", in order to provide a more comprehensive picture of the Silicon Valley Generative AI innovation landscape.

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## SILICON VALLEY GENERATIVE AI SCALEUPS TRENDING INDUSTRY GENERATIVE AI ADOPTIONS

#### **Creative Industries**

Generative AI is being used to generate art, music, and literature. It can create visuals, compose music, and even write articles and stories. It allows creative professionals to streamline their workflows and explore new creative possibilities.





### **Natural Language Processing (NLP)**

Large language models like GPT-3 have revolutionized NLP applications, powering chatbots, virtual assistants, and automated content generation providers, improving customer service, content generation, and information retrieval.

#### Healthcare

In healthcare, Generative AI is applied to tasks such as drug discovery, medical image analysis, and generating synthetic patient data for research.

Generative AI has the potential to accelerate the development of pharmaceuticals and enhance diagnostic accuracy.





#### **Entertainment and Gaming**

Generative AI can be used to create realistic and immersive virtual environments in video games and augmented reality applications. It can also generate dialogues, narratives, and character interactions, enhancing storytelling in games and entertainment content.

#### **Design and Architecture**

Architects and designers can use Generative AI to explore innovative design concepts and generate architectural plans. This technology can optimize building layouts and even propose eco-friendly designs.



### **Marketing and Advertising**

Generative AI can assist in creating personalized marketing campaigns and content.

It may generate product descriptions, advertisements, and social media posts tailored to individual preferences, improving customer engagement.





#### **Finance**

Generative AI can be applied in financial services for tasks like risk assessment, fraud detection, and portfolio optimization. It can generate financial reports and forecasts based on large datasets and market trends.

#### **Robotics**

In robotics, Generative AI can be used for motion planning and control. It may help robots navigate complex environments and make decisions based on sensor data, improving their efficiency and adaptability.





### **Education**

Generative AI can create interactive educational content, adaptive learning materials, and virtual tutors. It may be used to personalize the learning experience, thus potentially significantly boosting educational outcomes.

#### Manufacturing

In manufacturing, Generative AI can provide a strong aid in designing and optimizing products and production processes. It can generate 3D models, CAD designs, and simulations to improve efficiency and reduce costs.



# THE WORLD EPICENTER **OF INNOVATION**

Silicon Valley firmly solidifies its status as the "world epicenter of innovation," boasting the densest innovation ecosystem on a global scale.

As of 2023, Silicon Valley is home to an impressive 9,642 scaleups that have collectively secured over \$735B in capital since their inception.

With nearly 200 scaleups per 100,000 inhabitants and more than three-quarters of the region's GDP invested in the local scaleup economy, Silicon Valley significantly outpaces all other innovation ecosystems worldwide.

This includes prominent tech city hubs like New York, London, Paris, Seoul, Dubai, and even Israel, often referred to as the "Startup Nation."

The enduring appeal of Silicon Valley as the premier destination for global corporate innovation presence

According to our latest study<sup>2</sup>, a total of **331 global** Forbes 2000/Fortune 500 companies have established a stable innovation presence in Silicon Valley, with some maintaining multiple dedicated outposts. This trend is showing continuous acceleration.

and regional startup ecosystems from approximately 40 countries across the globe have established a presence in the Bay Area. This includes supranational entities such as the European Union<sup>3</sup>.

comes as no surprise.

Furthermore, 81 institutions representing national

#### FIGURE 6 TECH SCALEUP SILICON VALLEY

Source: Mind the Bridge with the support of Crunchbase





\$735.3B CAPITAL RAISED



196.8 SCALEUP DENSITY RATIO



**POPULATION** 

77.5% SCALEUP INVESTING RATIO

**GDP** 

The VC reset has left its mark on scaleup ecosystems worldwide, albeit with varying levels of resilience.

Still, there is no other Silicon Valley in sight.

Silicon Valley maintains its position as the undisputed global epicenter of innovation.

It takes the entire European continent to compete in terms of number of scaleups (11,206 vs 9,642). Notably, Israel - the "Startup Nation" - still accounts for less than a third of Silicon Valley's scaleups (2,921).

The closest challengers to Silicon Valley, the main US East Coast hubs (New York, Boston, and Cambridge), and the UK collectively host approximately 30% and 50% fewer scaleups, respectively. Emerging ecosystems like South Korea and Australia boast 7-8 times fewer scaleups.

Silicon Valley remains an unmatched powerhouse when it comes to generating tech giants. For the first time, the number of "scalers" (scaleups that have raised more than \$100M since inception) has crossed the 1,000 mark,

reaching an impressive 1,036.

To put this in perspective, the entire US East Coast accommodates 732 scalers, while the entire European continent hosts less than half that number.

Additionally, Silicon Valley is home to 86 "super scalers" (scaleups that have raised more than \$1B in total). This accounts for approximately one-third of the entire United States.

In terms of funding, Silicon Valley is definitely unrivaled. Local scaleups have amassed a staggering \$735.3B in total funding, surpassing their East Coast and European counterparts by approximately three times, the UK by five times, and Israel by seven times.

FIGURE 7 COMPARING GLOBAL TECH SCALEUP ECOSYSTEMS Source: Mind the Bridge with the support of Crunchbase

	41	•			24 p.	0		•	<b>(•)</b>	4	
	Silicon Valley	us	East Coast NY - Boston - Cambridge	Europe	UK	France	Germany	Israel	South Korea	a Australia	China
*	9,642	37,973	6,871	11,208	4,575	2,463	1,732	2,921	1,506	1,299	11,117
A.	1,036	3,422	732	505	225	109	113	242	66	46	869
	86	236	22	26	17	2	10	8	8	0	114
18	\$735.3B	\$1,971.5B	\$283.6B	\$286.76B	\$135.3B	\$53.5B	\$66.2B	\$107.9B	\$55.8B	\$28.5B	\$658.1B
的教育	196.8	11.3	73.9	3.81	6.77	3.44	2.08	32.5	2.9	5.0	0.8
if.	77.50%	7.36%	12.08%	1.28%	3.58%	1.45%	1.24%	25.81%	2.01%	1.75%	1.99%
	*	Number of Scaleups	Number of Scalers		Number of Super Scalers		fotal Capital Raised	Scaleup Densit	y if	Scaleup Investing	

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<sup>2 -</sup> Mind the Bridge, Corporate Innovation Outposts in Silicon Valley - 2023 Report, San Francisco, October 2023.

<sup>3 -</sup> Mind the Bridge, European Innovation Economy in Silicon Valley - 2023 Report, San Francisco (CA), March 2023.

# CORPORATE INNOVATION OUTPOSTS

## **IN SILICON VALLEY**

#### CORPORATE INNOVATION OUTPOSTS IN SILICON VALLEY

Source: Mind the Bridge



414

CORPORATE
INNOVATION OUTPOSTS
IN SILICON VALLEY



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CORPORATES WITH AN INNOVATION PRESENCE IN SILICON VALLEY

Silicon Valley remains the premier destination for corporates aiming to stay at the cutting edge of innovation.

As of October 2022, our data reveals the presence of 414 active Open Innovation Outposts.

These outposts are operated by 331 prominent global corporates.

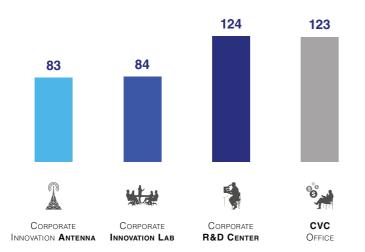
Notably, we have identified 61 companies that maintain a presence with multiple facilities.

Since 2016 Silicon Valley has witnessed the exponential growth of specialized lean corporate presence, serving either tech scouting and trendspotting purposes (Antennas) or facilitating investment opportunities (CVC Offices).

We have recorded the establishment of **67 new Antennas** and **72 new CVC Offices** in Silicon Valley during this period.

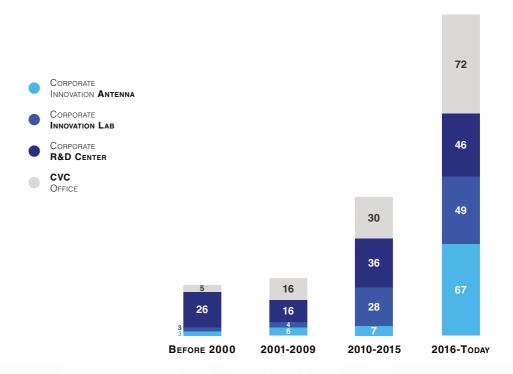
#### CORPORATE INNOVATION OUTPOSTS IN SILICON VALLEY BY TYPE

Source: Mind the Bridge



#### CORPORATE INNOVATION OUTPOSTS IN SILICON VALLEY IN TIME

Source: Mind the Bridge





## **METHODOLOGY**

#### **DEFINITIONS**

#### "Tech Companies"

Mind the Bridge categorizes "Tech Companies" as follows:

- "Startup" <\$1M funding raised
- "Scaleup" >\$1M funding raised
- "Scaler" >\$100M funding raised
- "Super Scaler" >\$1B funding raised

Mind the Bridge defines "Tech Companies" as companies:

- operating in Tech & Digital industries,
- founded in the New Millennium.
- with at least one funding event since 2010.

Companies operating in the Biotech, Life Sciences and Pharma, Semiconductors industry verticals are currently not included.

Mind the Bridge also includes in the analysis so-called "Dual Companies",

 Startups founded in one country that relocated their headquarters – and with that part of their value chain – abroad, while maintaining a strong operational presence in their

We consider "closed" all scaleups that shut down and do not continue to operate anymore. Reasons for closure include (but are not limited to) non-voluntary closure - e.g. bankruptcy GEOGRAPHIES - and voluntary closure

#### "GDP (Gross Domestic Product)"

Data from IMF (PPP, most recent data and/or projections).

#### "Population"

Data from World Bank, United Nations, Local government and other reliable sources (2018, or most recent census data).

#### **FUNDING**

Mind the Bridge categorizes funding as follows:

#### "Equity Funding"

- · All private equity funding rounds (including angel investments, seed capital, series A, B, C, etc...), either coming from VCs and CVCs; funding raised on equity crowdfunding platforms; convertible notes and other equity-based financial instruments.
- Public funding provided in exchange for equity (e.g. specific investments vehicles from
- IPO proceeds, at closing price, including over-subscribed shares.
- Capital raised through ICO (exchange rate of cryptos at the day of ICO).
- Operations with no new cash entering company's balance sheet as a number of existing shareholders sell all or a portion of their holding are not considered. This includes e.g. secondary funding rounds, buyouts and buy-ins.

#### "Non-Equity Funding"

Includes (but not limited to): public grants, debt financing, product crowdfunding.

#### "IPO (Initial Public Offering)"

For companies that went public, the exit valuation is that on the day of the IPO.

#### "ICO (Initial Coin Offering)"

A means of raising capital using cryptocurrencies issued by the company ("tokens") in exchange for legal tender or other cryptocurrencies such as Bitcoin or Ethereum. Price data converted in US\$ at day of sale.

#### **INDICATORS**

Mind the Bridge produces and monitors the following indicators

#### "Scaleup Density Ratio"

Number of scaleups per 100K inhabitants. A measure of density of scaleups in a given

#### "Scaleup Investing Ratio"

Capital raised by Scaleups as a percentage of GDP. A measure meant to measure the capital invested in scaleups in a given ecosystem, compared to the size of the overall economy of that country.

Country ranking built upon Scaleup Density Ratio and Scaleup Investing Ratio. A measure of the overall innovation commitment of a given ecosystem and its ability to produce significant tech players.

The matrix visually compares ecosystems by factoring the Scaleup Density Ratio and Scaleup Investing Ratios.

We analyze scaleups headquartered in 45 Continental European states as listed below.

We categorize European sub-regions as follows: British Isles: United Kingdom (including Gibraltar, Guernsey and Jersey), Ireland

Nordics: Denmark, Iceland, Finland, Sweden, Norway. Southern Europe: Spain, Italy, Portugal, Greece, Malta, Cyprus, Andorra, San Marino,

Benelux: The Netherlands, Belgium, Luxembourg.
Eastern Europe: Poland, Czech Republic, Slovakia, Slovenia, Croatia, Serbia, Bosnia and Herzegovina, Montenegro, Macedonia, Kosovo, Albania, Romania, Bulgaria, Hungary, Moldova, Ukraine, Belarus.

Baltics: Estonia, Lithuania, Latvia.

Scaleups headquartered in 19 countries identified based on World Bank definition, excluding Malta (included in Continental Europe due to its participation in the Eurozone) Israel, and Turkey (analyzed separately for international comparability purposes).

Middle-East: United Arab Emirates, Kingdom of Saudi Arabia (KSA), Kuwait, Qatar, Bahrain, Sultanate of Oman, Yemen, Kingdom of Jordan, Iraq, Islamic Republic of Iran, Syria, Lebanon, West Bank and Gaza, Djibouti.

#### "Unites States of America"

Scaleups headquartered in all 50 US states (Overseas territories (e.g. Guam) are not included). Data collected with the support of Crunchbase and analyzed and reclassified

Scaleups headquartered in Israel. Data collected with the support of Crunchbase and StartupNation and reclassified by Mind the Bridge.

#### "South Korea"

TheVC.kr, Startup Alliance Korea and reclassified by Mind the Bridge.

become associated with "Silicon Valley", although some are technically outside of Silicon Valley: Alameda, Albany, Atherton, Belmont, Berkeley, Brisbane, Burlingame, Campbell, Castro Valley, Cupertino, Daly City, Dublin, East Palo Alto, Emeryville, Foster City, Fremont, Hayward, Los Altos, Los Altos Hills, Los Gatos, Menlo Park, Millbrae, Milpitas, Monte Sereno, Morgan Hill, Mountain View, Newark, Oakland, Palo Alto, Pleasanton, Portola Valley, Redwood City, Redwood Shores, San Bruno, San Carlos, San Francisco, San Jose, San Leandro, San Mateo, San Ramon, Santa Clara, Saratoga, South San

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#### **ABOUT MIND THE BRIDGE**

Mind the Bridge is a global open innovation platform, providing services and products to corporates and local startup ecosystems. Headquartered in Silicon Valley with offices in Barcelona, Seoul and Tel Aviv, and a presence in Los Angeles, New York and Milan, Mind the Bridge has been working as an international bridge at the intersection between startups and corporates since 2007.

Mind the Bridge scouts, filters, and works with 10,000+ startups a year supporting global corporations with open innovation initiatives that translate into curated deals with startups (POCs. procurement, investments, and/or acquisitions). It also provides corporates with advisory services and benchmarking on innovation strategies and structures.

Mind the Bridge developed MTB Ecosystem, a Al-powered open innovation matching platform.

Mind the Bridge regularly produces research reports with the goal of sharing insights and data about startup ecosystems, open innovation, and corporate presence in global innovation hubs. Mind the Bridge reports have been featured on the Financial Times, USA Today, El Pais, Techcrunch, and more.

Mind the Bridge, in collaboration with the International Chamber of Commerce, the 100 y.o. institution representing more than 45M businesses worldwide, annually runs the "Corporate Startup Stars" awards, which rates and awards the most startup-friendly global corporates.

For more info:

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## crunchbase

Crunchbase is an Al-powered platform that helps over 75 million dealmakers discover and prioritize the right opportunities using best-in-class company data.

To learn more, visit about.crunchbase.com and follow Crunchbase on Twitter @crunchbase.