

### **Innovation Platform**

The Future of Global Technology and Innovation Collaboration in the San Francisco/Silicon Valley Bay Area

#### Introduction

A key hallmark of the San Francisco/Silicon Valley economy is the large array of globally headquartered companies that locate R&D facilities, accelerator programs, venture funds, science offices, or innovation outposts in the region. The scale and diversity of that presence reflects and supports the Bay Area's role as the world's leading platform for technology, innovation, and entrepreneurial activity, particularly in digital fields. Added to the historic flow of human capital from overseas and the region's diplomatic community (the largest in the United States after Washington, DC, and New York), these entities are an important part of the region's economic DNA, providing talent and global connections that magnify its capacity for innovation.

This footprint takes several forms:

- Diplomatic (through consulates)
- Government trade and investment organizations (often co-located with consulates)
- Government and university science organizations (engaging industry and universities)
- Corporate R&D centers (conducting technology research)
- Corporate innovation offices (which pilot technology and innovation strategies)
- Sovereign capital and corporate venture capital funds (that bring investment capital),
- Accelerators (that connect startups coming to the region with local resources and partners)

The global diplomatic presence in the Bay Area is distinctive due to its focus on technology. While consulates elsewhere in the United States traditionally focus on support for nationals, issuing visas and on economic reporting, in the Bay Area technology holds center stage. Connecting their economies and companies to the Bay Area's innovation economy is a central role.

Corporate innovation offices also play a distinct role

as listening posts for their companies on technology and innovation trends and practices. Key roles include developing local partnerships and finding startups to invest in or acquire, which can enhance capabilities, generate revenue, or support innovation at home. Senior executives from headquarters visit frequently. Often these corporate innovation centers combine a range of functions including R&D, customer collaboration, and corporate venture. Whatever their configuration, they function as two-way bridges, supporting collaborative research, entrepreneurship, and product and service innovation that deepens capacity and markets on both sides.

This presence broadly mirrors the distribution of technology and innovation assets globally, with representation by nations, regions, cities, universities, and private companies that account for a preponderant share of global technological capacity. Most government-supported entities have a national focus (such as the Korean Innovation Center), while others are regionally oriented (such as EIT Digital and Mind the Bridge with their European focus, or Nordic House, which represents Iceland, Norway, Sweden, Denmark and Finland). Their size can vary considerably, from one-person teams in the case of Emiglia Romana (Italy) and Czechlnvest, to as many as 50 for Innovation Center Denmark.

Mind the Bridge reports that of 77 government innovation offices in California 80% are headquartered in Silicon Valley (with 69% in San Francisco) while 20% are based in Los Angeles. Most Los Angeles-based government offices also have a location in Silicon Valley. Many government and private innovation centers (two out of three in the case of Europe) have additional offices in other U.S. cities, most often in New York. European economies are strongly represented, as are major economies in Asia such as Japan, and economies with strong technology sectors such as Canada, Taiwan, Singapore, and Israel.

Japan's presence is noteworthy both for its scale and focus. More than eighty Japanese corporate innovation offices operate in the region.<sup>3</sup> According to a survey conducted by JETRO (the Japan External Trade Organization) in May 2021, their activity is focused on varying combinations of information

gathering, developing business partnerships, and investment. Close to 90% are looking to strengthen their products or technologies and apply them to new areas. Taken one year into the pandemic, the survey also found that none of the responding companies had left the U.S.: approximately 4% (two) had moved to a new location and 96% (44) had sustained their operations in the region. Of the two relocations, one was to another site in the Bay Area and one to an undisclosed location. Approximately half of companies operating in the region had reduced their headcount and half had seen no change. Fourteen percent of companies had reduced their partnerships with other companies while 22% had increased them, and for 64% there was no change. A majority were planning to expand their partnerships with Bay Area VCs, accelerators and other partners.4

### What has Changed?

When the covid pandemic struck the Bay Area and the world in March 2020 many global offices physically closed and limited their operations. With global travel severely restricted, corporate executives and research scientists were no longer able to visit and startups were unable to travel for training in residence. As that occurred the region's once-robust networking opportunities were curtailed. The question for the Bay Area now is: as the region emerges from covid in 2022, will this global presence remain robust or will it shrink, and how if at all will its business models change.

To address it the Bay Area Council Economic Institute, in partnership with EIT Digital, Schoolab, and Emilia Romagna in Silicon Valley conducted a review of these offices to determine which were open, which had closed, which had shrunk, which had grown, and how they saw their future in the region. With some exceptions, the review did not include companies or organizations that are locally based, and focused instead on companies and organizations that are headquartered overseas. To determine the impacts of the pandemic it also focused only on companies and organizations with a presence in the region in March 2022. The evidence from this review indicates that the

global technology and innovation presence in the Bay Area remains robust, with some organizations closing but others entering, and the great majority committed to a sustained or expanded San Francisco/Silicon Valley presence.

#### A Sustained Global Presence

As an overview, in December 2021 and January 2022 the Economic Institute conducted an online review of 189 international technology, investment, innovation and R&D offices, and accelerators in the region to initially determine which had closed and which were open. While not comprehensive, the review's coverage was broadly representative of the distribution of these organizations within the region by industry and nationality.

#### It found that:

- Of locally based incubators and accelerators supporting international startups surveyed, 100% (9) are open.
- Of European-sponsored incubators, accelerators, and government innovation offices surveyed, 96% (36) are open and 4% (2) have closed.
- Of European corporate innovation offices surveyed, 73% (46) are open and 27% (17) have closed.
- Of European corporate venture funds surveyed, 94%
   (17) are open and 1 has closed.
- Of Chinese corporate and government accelerators and innovation offices surveyed, 86% (12) are open and 2 (14%) have closed.
- Of Chinese venture funds surveyed, 83% (10) are open and 2 (17%) have closed.
- Of Japanese corporate research and innovation offices surveyed, 100% (80) are open.
- Of Japanese and Japan-related corporate venture firms surveyed, 100% (16) are open.
- Of Korean accelerators and corporate research offices surveyed, 100% (5) are open.

- Of Indian corporate innovation, research, and venture offices surveyed 100% (6) are open.
- Of other international incubators, accelerators and corporate innovation offices (Australian Canadian, Philippine, Singaporean) surveyed, 100% (9) are open.
- Of sovereign wealth funds surveyed, 100% (5) are open.

### **Digging Deeper**

From this high-level review, it appears that despite some attrition in corporate innovation offices the global innovation presence remains strong. The reduction in corporate offices is perhaps not surprising, as most don't operate as profit centers. If not supporting research labs they have historically proven more vulnerable than other organizations to changing conditions or corporate priorities. With the pandemic sharply reducing opportunities for executive visits and local networking, many of these operations have been challenged. The greatest attrition has been in European corporate offices, while there has been no noticeable change in Asian or other offices. The drop in Chinese offices is primarily attributable to the changing environment of US-China relations, which has negatively impacted prospects for Chinese technology collaboration and investment in the U.S.

To probe in greater detail how the operations of global technology innovation offices and accelerators had been impacted by the pandemic and their future plans, the Institute conducted an online survey and follow-on interviews with selected organizations, posing several questions:

### How have your operations been affected by the pandemic:

- Did your physical office close?
- Did activity move online?
- Did executives continue to visit?
- Did this change in 2021?

- Assuming that the pandemic and its effects recede in 2022, what are your plans for the future:
- Has the experience of the pandemic impacted your mission, and if so how?
- Do you expect your staffing and funding to increase, decrease, or remain the same?
- In the coming year will the focus of your activity here change or remain the same?
- Do you believe it is important to have a presence in the Bay Area?

#### The answers revealed consistent patterns:

1. Nearly all global offices closed their physical offices in 2020, with a number partially reopening in the fall and winter of 2021.

"We adapted to the pandemic situation and went through cycles of full closures, partial closures, and being fully opened."

2. Nearly all global offices moved their activity online. In-person programming is resuming, often with a hybrid format.

"Most of the activities moved online, as most researchers, engineers, salespeople, and others could simply work from home. Since we are an international corporation, Skype or Teams were part of the culture even before covid. A few people went back to the office – mainly to operate lab facilities – as soon as regulations allowed."

"We moved all operations virtually including EXPO Days, mentorship sessions and deal flows."

"We pivoted by providing 3-week virtual bootcamps covering U.S. export acceleration, U.S. sales and marketing, and U.S. fundraising. We continued one-on-one business mentoring and other business development activities virtually. In the coming year we will follow a hybrid model of virtual and in-person

services so we can continue to support both founders located at home and those who choose to come to market. We expect demand for our services to increase."

"Most of our corporate innovation bootcamps and mentorship programs have been moved to online streaming. We are hoping to predominantly go back to live programming once conditions allow for it, but we did see benefits (mostly the ability to scale and broaden reach) in online programming, so are considering offering hybrid programs."

"The switch to virtual operations allowed us to expand our virtual footprint to incorporate and welcome an even larger pool of relevant stakeholders to drive innovation even further. A transition to hybrid formats is likely in 2022, and staffing is expected to increase to support those operations."

"As our accelerator programs often span multiple cities in the U.S. (and sometimes globally), the virtual format and availability of purpose-built digital platforms simplified logistics for participants, with little or no loss in quality in program elements involving content delivery. However, we plan to revert to in-person programming for certain elements, such as meetings with U.S. investors and buyers, pitch sessions, etc."

"When the pandemic started we totally moved our business to the virtual world. Meetings and delegations are now happening online. However, the people and companies started to return after the travel ban was lifted on November 8, 2021, and the rate is picking up."

3. With international travel suspended, senior corporate executives suspended travel to their Bay Area offices in 2020. Some travel resumed, however, in the fall and winter of 2021. Visits to accelerators by startup cohorts also were suspended in 2020 and for most of 2021. While some future activity

will remain digital, most accelerators plan to resume in-person visits by startups in 2022.

"We had a number of executive visits, but the number significantly decreased relative to prepandemic levels."

"Some companies have delayed their expat rotation schedule, but most proceeded as usual."

"Large companies didn't pull back and for the most part stayed operational. Medium and smaller companies mostly pulled back - they kept their offices but brought their people home or had them work remotely."

"Historically startups have come to the Bay Area for small networking events of 10-30 people that make this place incredible. It will take some time for that to come back."

"Our accelerator programs continue to run. In the fall of 2021, we brought several (virtual) cohorts for programs in climate tech, agriculture tech, health and digital health, retail tech, and digital. We're currently delivering a women founders-focused accelerator program (aptly named Women in Tech) and have ambitious plans for the coming year."

"In 2021, executives and government delegations continued to visit HQ in Sunnyvale on an ad hoc basis. Moving into 2022, startup cohorts will be able to visit HQ later in the year."

"Our co-working space was empty, nobody was coming to the U.S., and all of our programs went online. A few events happened late last year. When travel restrictions loosened people were immediately willing to come back – enthusiastically. There's no doubt that many will be coming - people can't wait to get back to restart what was paused."

"More corporate VCs are setting up shop."

"We will continue to host startup cohorts but it will be part of something broader. There will also be more digital preparation before they come here physically."

"Some activity will be digitized but people are still going to come"

"Our students interning with tech startups were all pulled back home in March of 2020. Many continued to work remotely. Half of the students enrolled in the program are now back in the Bay Area and all will return in 2022."

"Online accelerator programs aren't that effective. They really need to be in person. The companies we work with are asking "when can we visit?" They're focused on innovation and looking for the next leap."

"Q4 2021 saw the first individual visitors. In Q1 2022 we supported the first larger delegations (60 persons)."

"Our accelerator just signed a lease for a larger office, commencing February 1, 2022."

4. For the vast majority of global offices in the Bay Area the core mission remains unchanged. While some have reduced their headcount, for most offices staffing and budgets remain unchanged from pre-pandemic levels. A significant number of organizations plan to increase their budgets and their headcounts.

"Our budget and staff were downsized during the pandemic but we made the adjustment."

"Our mission remains the same, but we had to get creative regarding how we execute it."

"We do not expect any staffing or funding changes beyond those that are a normal part of organizational growth."

"Our staffing budget will follow the past trend of slow but continuous growth."

"More startups are forming and more venture capital is available. While we are remote-first, we plan to create a new permanent space in the Bay Area. Staffing will increase."

"We will see more good opportunities to invest and work with startups outside the tech hubs but are excited to welcome them to the Bay Area."

"We already had plans to increase our headcount pre-corona, and executed on that during corona. Part of the expansion of the team was because we added more focus on climate technology."

"Our strategic position in Sunnyvale embodies the spirit of Silicon Valley. Our focus will stay similar, with plans to expand our impact around the world."

5. Some organizations have used the hiatus of activity created by the pandemic to reorient their internal strategies.

"We are refocusing on how to provide value in an innovation project context more than inn real estate or network and ecosystem building."

"The last 18 months have focused us on our impact. We are moving away from a residential model that houses people. We also plan to be less involved in technology tourism or in organizing events and focus more on how to use our facilities to co-create value with partners. We see people looking for a community they can work from or with, and will adapt our space to enable that."

6. The great majority of international innovation organizations and companies remain firmly committed to the region. The lack of opportunity for in-person networking, important to the strategy of many innovation offices, has been a challenge. There is general optimism, however, that live networking opportunities will return. While business models may shift and some activity will be distributed more broadly across the U.S., their missions remain unchanged and they believe the Bay Area will remain the leading global center for technology, innovation, and entrepreneurial activity. With that understanding, they plan to maintain or in many cases deepen their presence in the region.

"We believe it is important for our clients to commit to the U.S. market by maintaining a physical presence here. That does not mean they need to be in the Bay Area/Silicon Valley. Although our base is in San Francisco, we support our clients wherever they wish to land in North America. We continue to see growing interest in places like Denver but believe San Francisco and the Bay Area are still an important ecosystem for our clients. So we will maintain an active presence here for now. It is still very quiet downtown and the lack of tech-related events happening in and around the city is something our clients will miss. We have recently seen more founders locating their operations elsewhere and opting to fly into the Bay Area rather than basing themselves here permanently during the early stages of their U.S. market entry and establishment. Whether or not San Francisco and the Bay Area will remain an attractive option for them will depend on how quickly the city can bounce back to pre-pandemic levels."

"The mission has not changed. We plan to maintain an active presence in the Bay Area"

"Our mission remains the same. Our staffing will increase compared to pre-pandemic levels".

"We are growing in Silicon Valley."

"It feels like the morning before the doors open on Black Friday. There's huge pent-up demand from people wanting to come to the Bay Area."

"If you look at the amount of venture capital and other resources that are available here there's no comparison with Austin or other places. They're in different galaxies."

"Our mission to launch great German startups into the U.S. is strong. Silicon Valley is particularly special for us as it is the startup capital of the world."

"We expect the staffing for our office to increase. We will continue to deepen long-term programs with strong research and innovation clusters in Sweden. We are also starting a new program jointly with Business Sweden, the Swedish Energy Agency and the Embassy on the green transition. A group of four people will be hired to run the collaborations."

"The Sunnyvale office is only a small one for the company but an important one, so the organization will maintain the office as an important innovation and customer hub."

"Based on its research, technology, and innovation the Bay Area will grow in importance for us. We expect our relationship with Silicon Valley to deepen."

"The focus of our activities, such as supporting startups through our public-private partnership with Dynamico, will remain the same in the sense that the Consulate, the Trade Office and Dynamico will continue to support our startups and strengthen linkages between them and the startup ecosystem in Silicon Valley. We believe that our current public-private partnership setup that fosters the growth and development of Philippine startups should maintain an active presence in the Bay Area, which remains the

center of innovation and entrepreneurship in the U.S. if not the world."

"It is definitely important to have an active presence here. The Bay Area is the right place to be concerning digital innovation."

"Korean VCs are setting up shop here, and the Korea Innovation Center is also upping its game. Startups that first had success in Japan and Southeast Asia are starting to look at Europe, South America, and North America. The U.S. market is the most competitive but also the most lucrative."

"We see no letup in companies opening here. The pace of Irish companies opening in the Bay Area was sustained throughout the pandemic and is continuing. It's a major vote of confidence in the Bay Area. There's a bit of a correction underway but I'm very bullish. Three ministers are coming in the next three months."

"The pandemic has further accelerated our mission of helping our customers on their digital journeys. We have seen several years-worth of digital transformation happening in a matter of months. The Bay Area is one of the most important hubs for the company – for technology alliances, innovation, and ecosystem development."

"The value of the region isn't its geographical location. It's the power of the vision, the networks, the culture, and the mindset. All of that is undiminished. It's essential to be here."

"I see the focus on Silicon Valley increasing, not decreasing."

"Silicon Valley is not dead at all."

## New Corporate Innovation Centers

Even as some companies exited during the pandemic, more have come. One of the latest corporate innovation centers to open in the region is Brembo, an Italian producer of brake systems that established its first U.S. center of excellence in Silicon Valley in 2021. The Brembo Inspiration Lab aims to strengthen the company's expertise in software development, data science, and AI, and build relationships with commercial customers in Silicon Valley. Announcing the opening, CEO Daniele Schillaci said "We are entering and investing in this world-renowned location for high technology and innovation with the clear and ambitious goal of addressing unprecedented challenges impacting the automotive sector. We are in an era of data science and the application of artificial intelligence. With the Brembo Inspiration Lab, we accept the challenge to increase the company's digital culture."

Another new entrant is Altada Technology Solutions, an Irish provider of data and AI solutions for the financial services, travel security and healthcare markets, which opened an office in San Francisco in February 2022, adding to facilities in Cork, Dublin, Malta, London and New York. The company's AI engine leverages Optical Character Recognition (OCR) and Natural Language Processing (NLP) to analyze large volumes of data, addressing challenges in areas such as asset management, contract intelligence, M&A due diligence, and travel safety. CEO Allan Beechinor described the decision to locate in the Bay Area: "We're a family-owned Irish company that is exporting our talents to the Bay Area because it is where the action is when it comes to Al." Reflecting the Bay Area's deep talent pool, Altada plans to base 15% of its global workforce in the region.

From Germany, pharmaceutical and life science company Merck opened an expanded Silicon Valley Innovation Hub in San Jose 2021. The 150,000 square foot facility offers space for collaboration in life science, healthcare, and electronic

materials, including fully equipped clean rooms and laboratories, and hosts representatives of the company's Business Technology, Strategy and Transformation, and Innovation teams. From Japan, Shimizu Bank opened its Bay Area office in September 2021. Autonomous driving is a key focus, as the bank serves major companies in the automotive sector. Fintech and blockchain are also focal points. Also in September 2021 Japan's leading telecom company NTT opened its One Vision center in Sunnyvale, as the company's West Coast hub for business, innovation and R&D. The new building showcases NTT innovations in ICT, smart building and smart cities technology and serves as home to NTT's global R&D. Hosting many of the company's top researchers, areas of focus include IoT, quantum computing, lithography and digital twinning. NTT CEO Kazuhiro Gomi describes the Center as key to the company's goal to become a significant global ICT player: "Being part of Silicon Valley is a 'must have' for what we want to accomplish."

### National Presence and Tech Diplomacy

The global innovation presence in the Bay Area is also growing at the governmental level, through what is being termed "tech diplomacy". As one European leader describes it "governments are looking to engage with the Bay Area because its technology companies now have the power of governments". This also reflects the fact that the digitalization of the global economy is being led from the Bay Area, with consequences for governments and for businesses in a widening range of sectors. As economic competitiveness will depend on the capacity of businesses to accelerate their digital processes, engagement with the Bay Area is seen as necessary to understanding where that innovation may lead. This growing diplomatic focus also reflects the adoption of national digital strategies in many countries.

With that, governments are increasingly focusing their technology diplomacy on the Bay Area, often with an expanded presence.

■ **Denmark:** Denmark was the first nation – now a

- growing trend to base its global "technology ambassadors" in the region.
- United Kingdom: The United Kingdom's Consul General in San Francisco is also designated as Her Majesty's Tech Envoy to the United States.
- **Switzerland:** Switzerland's foreign ministry, which has a technology ambassador at its headquarters in Bern, has assigned the technology portfolio in the U.S. to its Consul General in San Francisco.
- Estonia: Estonia established a Consulate General in San Francisco in 2019, building on Enterprise Estonia's presence in the region since 2007.
- **Sweden:** Sweden will open a full Consulate General in San Francisco in the fall of 2022, upgrading what had been an honorary consulate, to deepen its concentration on tech.
- **Germany:** In 2021, after considering a number of U.S. options, the German government chose to concentrate its U.S. assets devoted to technology and innovation in San Francisco. A new office of the German Innovation and Science Center (DWIH), opening in 2022, will connect to the German Research Association (for basic research) and to three ministries (Economic Affairs and Climate Change, Research and Science, and Work and Social Affairs), with personnel assigned to San Francisco on a rotating basis. Five other DWIH offices operate in Tokyo, New Delhi, Moscow, Sao Paulo, and New York. DWIH partners include the American Friends of the Alexander von Humboldt Foundation, Campus OWL Germany, German American Chamber of Commerce West, the Hasso Plattner Institute, Heidelberg University Association, Technical University of Munich, the German Universities of Applied Science, UA Ruhr, and the University of Cologne. DIWH will be based at the German Hub, which currently houses the German American Chamber of Commerce – West, Germany Trade and Invest, Invest in Bavaria, Technical University Munich (TUM), the German Academic Exchange Service, KIT-Link (Karlsruhe Institute of Technology), the State of Baden Wurttemberg, and the Northern Germany Innovation Office.
- Italy: In 2021 Italy strengthened its presence in the

region with the opening of its first National Centre for Innovation and Culture in the United States as an experimental model that can one day be replicated in other countries. The Innovation and Culture Hub (ICH) occupies two floors and 12,000 square feet of space in San Francisco housing two government agencies, the Italian Cultural Institute and the Italian Trade and Investment Agency (ITA). Accelerator space will host Italian startups and offices are available for Italian corporations for use as a base for building ties in the region. The Centre will also support engagement by Italian universities and programs and exhibitions with a cultural or technology focus.

- Ireland: In the Spring of 2022 Ireland opened a flagship "Ireland House" in San Francisco, integrating its diplomatic, trade, and tourism promotion functions in a single state-of-the-art facility. That includes dedicated space for early-stage Irish companies supported by Enterprise Ireland. Ireland has doubled its diplomatic presence in California since 2019 to enable a stronger focus on technology and technology policy.
- European Union: Until now the European Union has been represented on a rotating basis by the Consuls General of European nations already represented in the region. In the Fall of 2022 the European Union will open a full time, professionally-staffed office in San Francisco.
- Korea: Korea is expanding its presence. The accelerator Korea Innovation Center (KIC@SV) plans to increase its activity in support of Korean and Korean-American startups and new technology companies launching in the U.S. market, and deepen its network of ties with Silicon Valley investors and technology companies. The Korea Venture Investment Corporation (KVIC), a sovereign fund of funds that invests in startups and has operated in the region for several years, also plans to raise the level of its activity. The Korea Development Bank (KDD) and the Korea Investment Corporation (KIC), another sovereign fund, both opened offices in the Bay Area in 2021.
- **Abu Dhabi:** Adding to its portfolio of global offices in

- Beijing, London, Paris, Seoul, Tel Aviv, Frankfurt, and New York, the Abu Dhabi Investment Office (ADIO), the investment arm of Abu Dhabi's government, opened an office in San Francisco in January 2022.
- **Mexico:** The State of Baja California opened an innovation office, PROBAJA, at the accelerator Plug and Play in March 2022.
- Collaborative Initiatives: Two tech diplomacy initiatives have recently been launched by Open Austria. Playground operates as an informal group that meets once a month to share practices around tech diplomacy. Its fourteen participants include Austria, Canada, Denmark, Finland, Germany, Ireland, Norway, Switzerland, the United Kingdom, Netherlands, Estonia, Australia, Sweden and Brazil. The Freedom Online Coalition Silicon Valley Working Group – composed of Open Austria, the Consulates General of the United Kingdom, Canada, Estonia, Finland (Los Angeles), Mexico, Norway, New Zealand (LA), the Office of the Tech Ambassador of Denmark, as well as Microsoft, the Global Network Initiative, and Stanford's Global Digital Policy Incubator works to build cooperation between Silicon Valley and the Freedom Online Coalition, an initiative of 34 countries that addresses freedom of expression, access to the internet, and the values of democracy online.

#### Conclusion

The suspension of international travel and of in-person networking during the pandemic heavily impacted the operations of globally headquartered technology and innovation offices in the San Francisco/Silicon Valley Bay Area. Most organizations shifted their activity to digital platforms, a format that will continue even as live events resume. While there has been some attrition among corporate innovation offices, particularly those from Europe, and uncertainty continues as to when live programming will return at scale, the global technology and innovation presence in the region remains robust and is growing. To some degree corporate, startup and venture activity will be more widely distributed across the U.S., but the centrality of the Bay Area to

technology development and the innovation process continues and is unlikely to change soon. This reflects the Bay Area's continued concentration of innovation assets (universities, companies, and venture capital), the density of its networks, and the pivotal role it continues to play as governments and businesses around the world increasingly embrace digital technologies.



"The region around San Francisco is one of the most dynamic innovation centers globally. Research and entrepreneurship are closely linked here. The innovation culture in the Bay Area has a strong entrepreneurial spirit and reaches far into the scientific and university landscape. The innovation-promoting infrastructure built on campus is a leading model for universities worldwide. The founding of spin-offs and start-ups is promoted here, as is the development of technologies until they are ready for market. Students and graduates are specifically trained to become entrepreneurs. The Bay Area is not only known for its distinctive start-up culture but also for the successful transfer of knowledge between science, business and society. As a location for a German center for research and innovation, San Francisco offers the necessary density of science and innovation stakeholders and local and international discussion partners."

Dr. Joybrato Mukerjee, President, German Academic Exchange Service, at the opening of the German Center for Research and Innovation in San Francisco, April 2022

# Appendix: Global Technology and Innovation Offices in the Bay Area 2022

#### Bay Area Incubators and Accelerators Supporting International Startups

500 Startups

Founders Space

HAX

IndieBio

One Valley (Formerly GSVlabs)

Plug and Play

Runway

**US Market Access Center** 

Y Combinator

### European Incubators, Accelerators and Government Innovation Offices

ABC Accelerator Silicon Valley (Slovenia)

AICEP (Portugal)

Altada (Ireland)

ART-ER, Emilia-Romagna in Silicon Valley (Italy)

AWEX (Belgium)

Business Sweden

Bulgarian Innovation Hub (Bulgaria)

Catalonia Exponential (Spain

Czechlnvest (Czech Republic)

Desafia San Francisco (Spain)

DWIH - German Center for Research and Innovation

EIT Digital/EIT Hub Silicon Valley (EU)

Enterprise Ireland (Ireland)

Estonian Investment Agency (Estonia)

Flanders Investment and Trade (Belgium)

French Tech Hub (France)

German Accelerator (Germany)

Innovation Centre Denmark (Denmark)

Innovation Norway (Norway)

Invest in Bavaria (Germany)

Invest Northern Ireland

Investment & Development Agency of Latvia (Latvia)

Italian Center for Innovation and Culture

London & Partners

Mind the Bridge (Italy)

Netherlands in the US (Netherlands)

Nordic Innovation House (Nordic Region)

Northern Germany Innovation Office (Germany)

Open Austria (Austria)

Schoolab (France)

Science Foundation Ireland

Silicon Valley Italian Hub (Italy)

Spain Tech Center (Spain)

Startup Basecamp

Swissnex in San Francisco (Switzerland)

The Refiners (France)

Vinnova (Sweden)

### **European Corporate Innovation and Research Offices**

A3 by Airbus (France)

ABB Silicon Valley Campus (Sweden)

Alliance Innovation Lab Silicon Valley - Renault/Nissan/ Mitsubishi

Altada (Ireland)

Audi Innovation Research San Francisco (Germany)

Aviva InsurTech (UK)

AXA Lab, Silicon Valley (France)

BMW Technology Office (Germany)

Bosch Research & Technology Center North America (Germany)

Bouygues Group Winnovation (France)

Brembo Innovation Lab (Italy)

Capgemeni Applied Innovation Exchange (France)

Daimler Business Innovation/Lab1886

Dassault Systems US West Coast headquarters (France)

DB Schenker Human and Machines (Germany)

Deutsche Bank Labs Silicon Valley (Germany)

E.ON Innovation (Germany)

EDF Innovation Lab (France)

Enel Innovation Hub (Italy)

Free Electrons (Global)

GlaxoSmithKlein (UK)

IMEC (Belgium)

Infineon Innovation Center (Germany)

Kaercher (Germany)

Luxotica (Italy)

Mercedes-Benz Research & Development North America (Germany)

Merck Silicon Valley Innovation Hub (Germany)

Munich Re Silicon Valley Outpost (Germany)

Nestle Silicon Valley Innovation Outpost (Switzerland)

Novartis (Switzerland)

Novo Nordisk (Denmark)

Orange Silicon Valley (France)

Porsche Digital (Germany)

PWC Center for Technology & Innovation (UK)

Roche Molecular Solutions (Switzerland)

Royal Bank of Scotland Silicon Valley Solutions (UK)

SAP Innovation Center Silicon Valley (Germany)

Schneider Silicon Valley Innovation Center (France)

Sennheiser Silicon Valley Technology & Innovation Center (Germany)

Siemens, next47 Catalyst (Germany)

Swisscom Silicon Valley Outpost (Switzerland)

Valeo, Silicon Valley Office (France)

Volkswagen Automotive Innovation (Germany)

Volvo Cars R&D Silicon Valley Technology Center (Sweden)

Zeiss Innovation Center (Germany)

Roche Molecular Solutions (Switzerland)

Royal Bank of Scotland Silicon Valley Solutions (UK)

SAP Innovation Center Silicon Valley (Germany)

Schneider Silicon Valley Innovation Center (France)

Sennheiser Silicon Valley Technology & Innovation Center (Germany)

Siemens, next47 Catalyst (Germany)

Swisscom Silicon Valley Outpost (Switzerland)

Valeo, Silicon Valley Office (France)

Volkswagen Automotive Innovation (Germany)

Volvo Cars R&D Silicon Valley Technology Center (Sweden)

Zeiss Innovation Center (Germany)

#### **European Corporate Venture Funds**

ABB Technology Ventures (Sweden)

Airbus Ventures (Europe)

AXA Strategic Ventures (France)

BASF Venture Capital (Germany)

BBVA Propel Venture Partners (Spain)

BMW i Ventures (Germany)

Deutsche Telekom Capital Partners (Germany)

**HELLA Ventures (Germany)** 

Nokia Growth Partners (Finland)

Robert Bosch Venture Capital (Germany)

Sapphire Ventures (Germany)

Shell Ventures (Netherlands)

Sky Startup Investments & Partnerships (UK)

Telefonica Digital (Spain)

Total Energy Ventures (France)

Vodafone Ventures (UK)

Volvo Group Venture Capital (Sweden)

### Chinese Corporate and Government Innovation Centers

Alibaba Group

Baidu

Dragon Group International

Hanhai Silicon Valley Innovation Center

Mindray

New Silicon Valley Offshore Center

New Silicon Valley Offshore Incubator (China)

NIO (US Headquarters)

Tencent

Xuzhou Silicon Valley Science & Technology Exchange Center

ZGC Innovation Center @ Silicon Valley

Zhejiang Innovation Center

#### Chinese and China-Related Venture Funds

Amino Capital

Baidu Ventures-Comet Labs Partnership

Hone Capital

New Horizon Capital

Pivotal bioVenture Partners

Shenzhen Capital Group

Shenzen Valley Ventures

Tsing Capital SAIC Capital

WestSummit Capital

ZhenFund

### Japanese Corporate Innovation and Research Offices

Acario Innovation (Tokyo Gas)

AGC Business Development Americas

AISIN AW Technical Center USA

All Nippon Airways Innovation Strategy Team

Canon Innovation Center
Dai Nippon Printing America
Dai-Ichi Life Innovation Lab

Daikin Open Innovation Lab Silicon Valley

Daiwas Securities Group Daiwa Capital Markets

Denso Silicon Valley Innovation Center

East Japan Railway Company

Fast Retailing Digital Innovation Center

Fuji Xerox Palo Alto Laboratory Fuji Film Open Innovation Lab Fujitsu Laboratories of America Hakuhodo DY Media Partners

Hitachi America Hitachi Vantara Hitachi Solutions Honda Innovations IHI Americas

Innovation Core SEI (Sumitomo Electric)

Itochu International

Japan Airlines (JAL) Innovation Division

Japan Post

JSR JTB

Kajima Corporation Open Innovation and Transformation

Team

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Kawasaki Heavy Industries Innovation Department

KDDI Mugen Labo

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Lab

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Kose Kubota

Marubeni America Silicon Valley Marubeni Information Systems USA

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Mitsubishi Corporation (Americas) Silicon Valley

Mitsubishi UFJ Financial Group Global Innovation Team

Mizuho Digital Innovation

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Rakuten Institute of Technology

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Shimizu Silicon Valley Innovation Center

Sojitz Corporation of America

Sompo Digital Lab

Sony R&D Center US San Jose Laboratory

Sumitomo Corporation Americas

Sumitomo Life Insurance Digital Innovation Lab

Sumitomo Life Insurance

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TDK InvenSense

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Toyota Boshoku America Silicon Valley Office

Toyota Research Institute

Yamaha Motor Ventures and Laboratory Silicon Valley

Zenrin

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Acario Ventures (Tokyo Gas)

Asahi Kasei Ventures

Astellas Venture Management

Conductive Ventures (Panasonic)

**DNX Ventures** 

Digital Garage

Geodesic Capital

Itochu Technology Ventures

**KDDI Ventures** 

Marubeni Ventures

Mitsubishi Chemical Holdings

Mitsui & Co Global Investment

MS&AD Ventures

NTT DOCOMO Ventures

Pegasus Tech Ventures

Presidio Ventures (Sumitomo)

Rakuten Capital

Recruit Strategic Partners

Sony Innovation Fund

Scrum Ventures

Softbank Investment Advisers (Vision Fund)

**SPARX** 

Takeda Ventures

TEL Venture Capital (Tokyo Electron)

Toyota Al Ventures

World Innovation Lab

Yamaha Motor Ventures and Laboratory Silicon Valley

### Korean Accelerators, Corporate Innovation, Venture and Research Offices

Coupang

Hanwha

Hyundai CRADLE

Samsung

Korea Innovation Center

### Indian Corporate Innovation, Venture, and Research Offices

Cognizant Technology Solutions

Tech Mahindra

WiPro Ventures

WiPro Innovation Center

Infosys Center for Emerging Technology Solutions

TCS Customer Collaboration Center

### Other International Incubators, Accelerators, Technology and Corporate Innovation Offices

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Block 71 (Singapore)

Canada House Sponsored by C100

Canada Technology Accelerator

Dynamico (Philippines)

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Schoolab is a global innovation studio headquartered in France, with a presence in San Francisco.

### **Endnotes**

- 1. Mind the Bridge, Government Innovation Outposts in California, September 2021.
- Emilia Romagna in Silicon Valley, European Innovation Hubs in Silicon Valley, 2021.
- 3. Mind the Bridge and JETRO, Japanese Corporate Innovation in Silicon Valley, 2020.
- 4. JETRO San Francisco, Survey on Changes in Open Innovation Activities, May 24, 2021.

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