

3 Trend in Inward FDI in Japan – Foreign Investment Contributing to the Emergence of Innovation

Changes occurring along with rapid progress of the Fourth Industrial Revolution include: (1) new value emerging thanks to the introduction of innovative business models and services, (2) the spread of open innovation, and (3) increasing focus on the startups as the bearers of innovation.

This chapter will shed light on the forms that foreign-affiliated companies are taking amidst these changes which contribute to the emergence of innovation in Japan. Also, this chapter will introduce some initiatives being undertaken by pioneering local governments that make use of foreign investment for their regional innovations.

1. Foreign investment bringing innovation in the Fourth Industrial Revolution field to Japan and in turn creating new value

(1) “Connecting” with IoT to make normally hidden info “visible”

Connecting up all sorts of things to obtain and analyze data to make hidden trends and situations numerically and graphically “visible”, IoT technology is giving birth to new value in various fields, including manufacturing, medical treatment and daily living.

In 2017, **Siemens** (Germany) started offering the Japanese manufacturing industry an analysis system using an in-house-developed industrial IoT platform to analyze massive swathes of data gathered from sensors installed in equipment and devices such as machine tools. The system makes things like work time and operating information “visible”, which, in turn, connects to productivity improvements and equipment failure predictions at plants. Bringing down the operating cost to make it easier for small and medium-sized enterprises to introduce this IoT technology, the system is also used by a control panel manufacturer in Kanazawa, Ishikawa Prefecture. Thus, it looks likely that small and medium-sized plants will find this system an effective tool to combat labor shortages they suffer from.

HealthTech company **Philips** (Netherlands) offers healthcare solutions which utilize data obtained by connecting up their in-house-developed platform to devices such as medical treatment equipment and household healthcare goods. They have brought these solutions to Japan, starting in September 2017 with an oral care service connected to electric toothbrushes they offer and then in January 2018 a treatment support service connected to a medical treatment device for sleep apnea syndrome. Device usage data are automatically gathered in a cloud, where computers and smartphones can be used by doctors and patients to accurately check the data at any time – in other words, bringing “visibility” to healthcare. Furthermore, the analyzed data connects to more effective medical treatment, better operational efficiency by doctors and remote therapy. Philips will expand these connectable device types and services, to help prevent illness and support healthcare in Japan.

NextDrive (Taiwan), a startup which has developed one of the world’s smallest IoT gateways measuring less than 5 cm in length and width that plugs directly into power outlets, founded a Japanese subsidiary in January 2017. IoT gateways are devices that act as live linkups to send data gathered by devices – such as sensors and cameras – to a cloud via the internet. NextDrive’s gateway supports multiple wireless standards, so it can be connected to various devices, making it a spotlighted product in the realm of smart-house equipment where it can be used to expand the potential of things like home security, home energy management systems (HEMS) and health management. Jointly developed with Japanese companies, Kyoto

University and others, it is even being connected to Wi-SUN (wireless smart utility network). NextDrive provides smart energy management solutions by helping to make household energy usage “visible.” Further expansion is expected amidst the Japanese government working hard to popularize smart houses and introduce HEMS since the 2011 Great East Japan Earthquake.



Cube J Series and its peripherals provided by NextDrive

(2) FinTech bringing change to Japanese financial services

FinTech is one of the cutting-edge technologies in the age of the Fourth Industrial Revolution. Up to now, financial institutes, cored around banks, have been the mainstay of financial services, but, thanks to the spread of smartphones and the development of IT technologies, even enterprises without large-scale systems and an army of experts can provide financial services, opening the way for hi-tech foreign affiliated companies to enter a diverse range of fields, including mobile payments, overseas money transfers, crowdfunding, insurance and asset management, where they are bringing change to Japanese financial services.

One important area where such changes are coming is in the move to become cashless. The Japanese government is touting the next ten years as a period to make the cashless payment rate double. Going cashless reduces costs that come with a cash-based society, such as actual stores and ATMs, as well as improving productivity and payment convenience, while also encouraging consumerism. Mobile payment far-seeing the expansion of inbound tourist consumerism and 2020 Tokyo Olympics and Paralympics sets a precedent for it. To provide services for the overseas tourists who are familiar with cashless payments, the Japanese retail industry, railways, taxi companies and airports, etc., are already pushing ahead with the introduction of QR code payment services, such as AliPay (by **Alibaba Group**) and WeChatPay (by **Tencent** who provides China’s biggest SNS service, WeChat). All users have to do is to register their credit card or bank account details in advance, to enable easy payment by reading store QR codes with their smartphone.

Popularizing cashless payments across all walks of life in Japan will depend on how well the cashless merits are laid out to stores and users, but the fact that the services for inbound tourists have kicked off the trend already could be enough traction to pull Japan fully into the cashless world from here on.

Indeed, Japan is witnessing a push by some companies to offer further evolved cashless payment services using the latest technologies such as AI and biometrics. **Coolpay** (Singapore), a startup which has developed a system where payments can be made by simply holding up a finger to a dedicated scanner that reads (authenticates) the fingerprint, opened a base in Tokyo in October 2017. By linking the user’s fingerprint with credit card details and membership programs, the user can pay for goods and services at any store around the world that has the fingerprint scanner,

without having to do anything with a smartphone. With the latest scanner model, a face authentication function will be built in alongside fingerprint authentication, QR code, and NFC (Near field communication).

Shift Technology (France), a startup which offers a system that effectively detects insurance claims that look fraudulently suspicious by using AI to analyze past insurance payment data, established a Japanese subsidiary in Tokyo in January 2018. A major insurance company already has decided to be the first in Japan to use this system.

Apart from these examples, set against the backdrop of more and more foreigner workers and international students coming to Japan and wanting to make remittances regularly, there are foreign-affiliated companies emerging to provide low-price services for swift and easy overseas money transfers using smartphones. A string of such companies have commenced providing services in Japan, including **TransferWise** (UK), an overseas money transfer app company that has captured attention as a unicorn company (a startup worth more than one billion US dollars), **WorldRemit** (UK), an overseas money transfer service set up to support expatriate/migrant workers and **Flywire** (US), a payment agency service for international students.

(3) Foreign-affiliated companies working with existing companies to produce sharing services unique to Japan

Sharing services are one of the flagship business models in the age of the Fourth Industrial Revolution.

The domestic market size of the sharing economy is expected to expand some 2.5-fold between 2016 and 2022 (Chart 3-1). With consumers changing their thinking from “ownership” to “renting when needed” coupled with government-driven deregulating, it can be said that the business environment for sharing services is up and running. While the increased demand for accommodation and transport that accompanies the boom in foreigners visiting Japan is leading to business chances, a string of foreign companies with proven track records abroad are joining forces with existing industries in order to access Japan.

In 2018, **Airbnb** (US) established for the first time in the world for the company a cross-industry organization, “Airbnb Partners,” partnering with 36 Japanese companies. They aim to create a new ecosystem in the sharing economy to underpin the Japanese tourist industry. Indeed, Airbnb has signed a memorandum on promotion of tourism with the City of Kamaishi in Iwate Prefecture, one of the venues for the 2019 Rugby World Cup. Meanwhile, they also announced a partnership with the Beppu City Ryokan Hotel Association in Oita Prefecture.

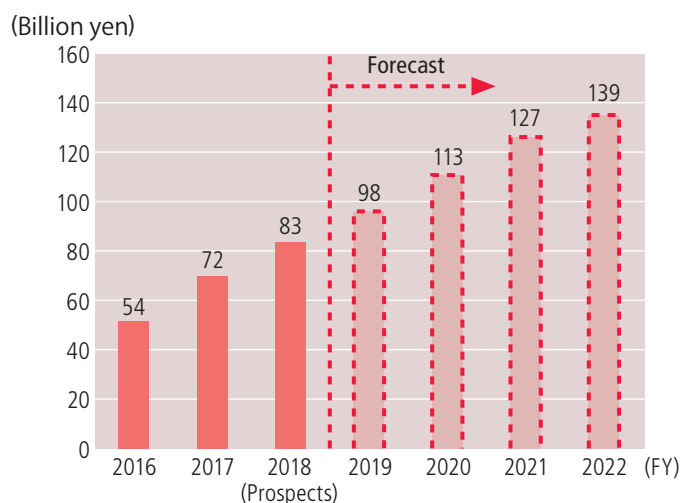
As vacation rental sites, companies like **HomeAway** (US), **Tujia** (China) and **Zizaike** (China) also are entering into the Japanese market, and they are listed as members of the industry association of vacation rental sites that the Japan Tourism Agency played a mediating role in forming. In tandem with this business flow, **Keycafe** (Canada), a company that offers IoT key box terminals enabling remote/unmanned key pickup-and-return services, has entered into a partnership with a major Japanese convenience store chain.

While onerous ride-share services using private vehicles are illegal in Japan, taxi allocating services are starting to enter Japan in specialist guises. The ride-share giant **Uber Technologies** (US) have conducted ride-share proving trials in a limited way in places like Kyotango City in Kyoto Prefecture as well as starting in July 2018 taxi allocating service proving trials in Awaji Island in Hyogo Prefecture jointly with a taxi company and the Awaji Citizens Station of Hyogo Prefecture. They officially commenced a taxi allocating service using a dedicated app in cooperation with a Nagoya taxi company in September 2018. **Didi Chuxing** (China) also have coupled up with Daiichi Koutsu Sangyo to start proving trials on AI-powered taxi allocating in Osaka, Kyoto, Fukuoka, Tokyo and other places. Apart from these examples, the Taiwanese taxi giant **Taiwan Taxi** is working on a partnership with Daiwa Motor Transportation, while ride-share giant **Via** (US) is in partnership with Mori Building and looking to start proving trials for ride sharing in one-box cars (people movers).

As for share bicycles, a Chinese giant, **Mobike** has set up a Japanese subsidiary in 2017 and is commencing proving trials in regional cities. They announced that they are cooperating with LINE. Meanwhile, a share scooter company **Gogoro** (Taiwan) has teamed up with Sumitomo Corporation and have started a service on Ishigaki Island in Okinawa Prefecture. Hence, the prospect is for such services to contribute to regional vitalization, including the improvement in convenience for users and the enticement of tourists in areas where there are not many forms of transport available.

Regarding the introduction into Japan of new businesses that are thought to be destructive, foreign-affiliated companies are cooperating with the existing companies to develop sharing services unique to Japan rather than fighting with them. As the cooperating trend is taking off, it could become the impetus for discussions to further deregulate from here on.

Chart 3-1 Transition and forecast of sharing economy service market size



[Note] In this study on the sharing economy, copyrighted work, such as music and videos, are not handled as shared property. Further, market size is calculated on a sales basis, such as matching charges and sales charges of the enterprise providing the service, monthly costs and earnings from other such services.

[Source] “Study on Sharing Economy Market 2018”, Yano Research Institute (published on September 12, 2018)

(4) Technologies of foreign-affiliated companies adopted by industries predominately developed in Japan

As seen in the above FinTech examples, the big changes taking place globally in the Fourth Industrial Revolution are tending to relativize the walls between industries, such as skilled manufacturing and services by the advance of IT in all industries. Amidst this, a trend is beginning to take shape where industries that have been predominately developed by Japanese companies up to now are beginning to make use of the technologies of foreign-affiliated companies.

For example, it has been announced that Toyota Motor is adopting EtherCAT, the open industrial network protocol developed by **Beckhoff Automation** (Germany), as a standard field network for IoT in Toyota plants. Open protocol of EtherCAT realizes free combination of industrial components which used to be non-compatible. Introducing IoT requires a number of sensors being installed on machines in production lines. EtherCAT also provides wire-saving technology which combines fast data communication and power supply in just one cable, resulting in the advantage of reducing number of cables. In September 2017, Beckhoff Automation(Japan) established their second subsidiary in Nagoya. This will enhance the sales focus on manufacturers in Chubu region and the penetration of Beckhoff components in Japan.

Even the railway field, where the use of foreign technologies and products has been sparse, is beginning to change. The trial introduction of a track diagnostic system from the railroad inspection and signal systems developer **MER MEC** (Italy) was decided for the track of the Sanyo Shinkansen Line of JR West for the first time on a domestic project. Although Japan's high-speed Shinkansen boasts globally preeminent technologies, the tracks are normally inspected by workers visually checking as they walk the line. Whereas, MER MEC's system travels the track at 50km/h (Maximum measuring speed: 125km/h), continuously filming and sensing the track from various angles for onboard processing that enables automatic detection of anomalies. Thus, with the anticipation of improving safety and work efficiency, data collection started from September 2017, with the goal of putting the system to practical use after four or five years. Also, the next scheduled project is to introduce the system to the Hokuriku Shinkansen Line and conventional lines.



MER MEC's Track Machine Vision System

2. Foreign-affiliated companies involved in the emergence of innovation in Japan via open innovation

The trend of foreign-affiliated companies getting involved in open innovation with companies, universities and research institutes in Japan is picking up momentum. The approaches that foreign-affiliated companies take to utilize resources held by Japanese companies and universities are diversifying as follows: (1) commercialization of research seeds, (2) making use of data, (3) partnering startups, and (4) partnerships between small and medium-sized enterprises.

(1) Moves aiming to use and commercialize research seeds and address social issues

Foreign-affiliated companies with universities & research institute

Open innovation initiatives between foreign-affiliated companies and Japanese universities and research institutes in the fields of medical treatment and life science could well accelerate medical-treatment innovation and be the linking bridge to solutions for social issues and improvements in the quality of medical treatment in Japan. Furthermore, if these kinds of partnerships take place in regional areas, the anticipation is for the partnership to become the driving force behind regional innovation, which will contribute to regional revitalization.

Johnson & Johnson Innovation (a division of Johnson & Johnson (China) Investment Ltd. and a group company of the US **Johnson & Johnson** Group) has successively announced partnerships with Japanese universities, in order to speed up the early discovery and nurturing of research seeds as early as possible in the fields of pharmaceuticals and medical instruments. While, on the one hand, there is greater anticipation of breakthroughs in innovative medical systems and medical technologies, the current situation, on the other hand, is one where it is difficult to make practical use of or commercialize research seeds produced by universities because of insufficient research funds and human resources to support commercialization. In September 2017, Johnson & Johnson Innovation signed a strategic partnership agreement on "Strategic Global Partnership & Cross-Innovation Initiative" set up by Osaka University (this was the first such agreement with a foreign-affiliated healthcare company). The aim of the agreement is to develop and commercialize the promising research results of the university, such as regenerative medicine. This was followed by memorandum agreements with the University of Tokyo in February 2018 and Kyoto University in July 2018, with, in both cases, the focus of cooperation on development of pharmaceuticals and medical instruments cored around the sparking of innovations to solve unmet medical needs across the globe.

In July 2018, **Nihon L'Oréal**, the Japanese subsidiary of the giant French cosmetic group **L'Oréal**, opened a joint research base "Material Innovation Center" with the National Institute for Materials Science (NIMS), inside the NIMS facilities in Tsukuba, Ibaraki Prefecture. With Nihon L'Oréal partnering NIMS to develop products that make the most of the frontrunning new materials that NIMS have proudly developed, the hope is that the time required from fundamental research to product development will be greatly shortened.

(2) Moves aiming to use data to address social issues

Foreign-affiliated companies with universities & research institute

There also are moves under way to analyze the massive swathes of data possessed by universities and research institutes using a technical platform, so that the results can be used to address regional depopulation, super-aging and decreasing accessibility to medical care as well as threaded into efforts to reduce medical care costs and enhance the quality of medical treatment.

In June 2018, **Philips Japan** (Netherlands) entered into a comprehensive partnership with Tohoku University to jointly research the healthcare domain, setting up the "Co-creation Satellite" as a base inside the university where the university and companies can develop business together. The satellite acts to prevent illnesses by gathering various data from medical instruments and daily commodities to research daily living and its relationship to diseases. In May 2019, Philips Japan also is scheduled to open the "Co-Creation Center" (an R&D innovation center) in Sendai, Miyagi Prefecture. Teaming up with Miyagi Prefecture, it will generate innovation from the Tohoku area, an area that suffers a comparatively high percentage of social problems, such as population aging and depopulation.

In addition, Philips Japan announced in May 2018 that they will work with the National Cerebral and Cardiovascular Center (NCVC) in Osaka to jointly

develop AI to support medical diagnoses by doctors and prevention of illnesses. This joint work will bring the enormous trove of data in possession of NCVC together with the AI technologies of Philips. Besides these partnerships, in June 2018, Philips Japan entered into a partnership with Nagoya University to develop a medical treatment scheme that makes the most of next-generation IoT innovation in joint research that will put clinical data to good use academically.

Furthermore, it should be noted, that in March 2017, NCVC already has entered into a partnership with **GE Healthcare Japan**, a group company of **GE** (US), to develop leading-edge medical technologies and build up a next-generation hospital system.

(3) Moves to make use of research seeds via the fostering of Japanese startups

Foreign-affiliated companies with Japanese startups

There are moves afoot to incorporate research seeds and technologies of Japanese startups even as foreign-affiliated companies nurture those very same startups.

Bayer Yakuhin, a group company of **Bayer** (Germany) opened an incubation lab in Kobe City, Hyogo Prefecture, in June 2018, with the aim of supporting startups in the bio field and establishing network. It is the first Asian arm of their facilities that are already in San Francisco (US) and Berlin (Germany). By supporting startups, Bayer can expand joint research and take the seeds of Japanese work for use around the world. Spin-off startups from Osaka University and Kyoto University with leading-edge technologies are taking up occupancy in the lab.

Already staging a startup competition program around the world, the US credit card giant **Visa** held its first such program in Japan in 2018. Looking toward the 2020 Tokyo Olympics and Paralympics, they called for proposals that can promote the propagation of innovative digital payment solutions.

Yet again, the big US life insurance company **Metlife**, partnering with LumenLab, the innovation center of Metlife Asia, held the Metlife Collab Japan Accelerator Program. The program takes the theme of “changing life insurance using open innovation” as a way of cooperating with startups to bring to fruition the inventive ideas in the field of health & wellness.

For startups the merit of open innovation with large companies comes from receiving capital and assistance from them.

(4) Moves to fuse together specialty fields on both sides to develop new products

Foreign-affiliated SMEs with Japanese SMEs

Moves among smaller foreign-affiliated companies and Japanese companies reveal efforts to fuse each other’s strengths in technology and specialty fields.

In February 2017, the US bio-pharma **Agilis Biotherapeutics** established a joint venture with a Japanese company and then opened an R&D center in Kawasaki City, Kanagawa Prefecture. The aim is to develop new therapeutics for chronic disease of the central nervous system by combining Agilis’ experience and technologies in gene therapy with the high level of manufacturing technology in the Japanese counterpart, Gene Therapy Research Institution.

The Vietnamese software developer **NTQ Solution** together with a Japanese company has developed a contactless computer security system that automatically logs on and logs off for users. Also, the Chinese robot maker **Suzhou Pangolin Robot Corp** teamed up with the technical licensing organization (TLO) of the University of Electro-Communications and a subsidiary company of Huis Ten Bosch (a theme park in Nagasaki Prefecture) doing business related to robot-utilizing, to form a three-way joint venture, **Pangolin Robot Japan**, in order to jointly develop a next-generation, self-standing, mobile humanoid delivering robots for serving tables.

In a JETRO survey of foreign-affiliated companies, respondents said that existence of excellent partners, companies and universities is one of the most appealing reasons for doing business in Japan. The interest in starting open innovation with Japanese companies is strong among foreign-affiliated companies (see Chapter 4).

3. Foreign-affiliated companies participating in the forming of Japanese startup ecosystem

While, on the one hand, as leaders of innovation, startups have the potential to pull along the next-generation of Japan’s economy, uncertainty about them is incredibly high. For this reason, the necessity for establishing a “startup ecosystem” is growing as a mechanism for developing startups and adding pace to their business efforts.

The ecosystem is populated by an eclectic team of actors, including large companies, universities, support groups, the government and local governments. Notably, the spotlight has been on the following actors in recent years: (1) coworking spaces providing flexible office and networking places, (2) incubators to help in the establishment of companies and structuring of business models to produce inventive ideas, (3) accelerators to speed up startup growth, (4) venture capitals to provide an acceleration program on top of capital, and (5) crowdfunding that collect funds from the public via Internet.

Indeed, the startup growth stages are often divided into four: “seed,” “early,” “expansion” and “later.” Yet, in Japan, up to now, there has been a lack of actors supporting startups mainly in the early stage. However, now foreign-affiliated companies are successively using their strengths – the abundant experience and successes achieved abroad – to make inroads into Japan (See Chart 3-2).

2018 could be called the “first year of share offices” in Japan. Set to a background of expanding work-style change, the number of coworking spaces has leapt, especially in Tokyo. Coworking space not only keeps office-opening costs down it also enables occupants to interact to come up with new ideas as well as providing opportunities for business – powerful reasons for making such spaces popular.

A company that made its way into Japan on the ability to offer that kind of community is **WeWork**, a big US player in the coworking space field. They started the ball rolling February 2018 by opening their first office in Japan in Roppongi, Tokyo, and in half a year they also opened up in Shimbashi, Marunouchi, Ginza, Hibiya and Harajuku, successively extending their presence to six offices. As of June 2018, WeWork has offices in almost 300 locations across the globe and connects more than 260,000 members from venture companies to large enterprises on a global scale, stimulating each other and creating new businesses and innovation. On top of that, each office has community managers who analyze the special features and work-related data of occupants in the coworking space, in order to coordinate the optimum networking spot for them. Like Uber and Airbnb, WeWork is well known as a unicorn company, and they intend to spread to key cities, such as Yokohama, Osaka and Fukuoka.

In October 2018, the big US cloud service **Amazon Web Services (AWS)** opened AWS Loft Tokyo as their first branch (outside of the US) of the facilities in Meguro, Tokyo, to support startups. In the coworking space that can be used free of charge, users also can get technical advice about startups from permanently stationed specialist technicians and attend seminars about the technology behind AWS.

The pace at which foreign-affiliated consulting firms open facilities equipped with coworking spaces and event spaces is picking up – for example, **PwC** Group, **Accenture** and **KPMG Japan** have each newly opened innovation creation facilities in the heart of Tokyo. Meanwhile, major foreign-affiliated rental office companies already well ensconced in Japan, including **Servcorp** (Australia) and **Regus** (UK), have now, one after the other, newly set up coworking spaces, which is widening the trend further.

The existence of various actors that help to nurture and grow startups in a hands-on way is fulfilling an important role in helping startups to overcome the so-called “death-valley curve.”

Venture Café – the sister organization to **Cambridge Innovation Center (CIC)**, an incubator that draws in huge numbers of startups – opened “Venture Café Tokyo” in March 2018. Including its US presence, Venture Café is doing business in six cities around the world in which it offers innovation promotion programs that include events and workshops where innovators, such as entrepreneurs and investors, can interact to expand their contacts and get opportunities to pick up business hints. Taking its first step into Asia via a base in Toranomon, Tokyo, Venture Café has co-staged with the City of Tsukuba (Ibaraki Prefecture) and JETRO the “Tsukuba Global Night” event. Other efforts include activities co-partnered by government bodies and local governments as well as companies and universities – for example, the “J-Startup Hour” in the “Thursday Gathering” program which is held every Thursday offers opportunities for private and public sector players, such as powerful supporters and companies selected in “J-Startup”, a startup support program run under a partnership between the public and private sectors.

Silicon-Valley-based **Plug and Play** (US), one of the world’s biggest technology accelerators and venture capital providers, advanced into Shibuya, Tokyo, in July 2017. They are operating accelerator programs with top companies in Japan, cored around business axis of FinTech, IoT and InsurTech. Their strength is being able to offer the following in a three-month program through their worldwide startup network: (1) provision of various forms of mentoring and business know-hows needed to grow a startup, (2) support for business alliance with large companies in Japan, and (3) support for global expansion. Plug and Play has a proven track record in investing in startups on the world stage from their very inception. Thus, by 2020, in Japan they are looking to invest in 50 startups and get cooperation from 50 large

companies, while also keeping an open mind about setting up in other locales apart from Tokyo.

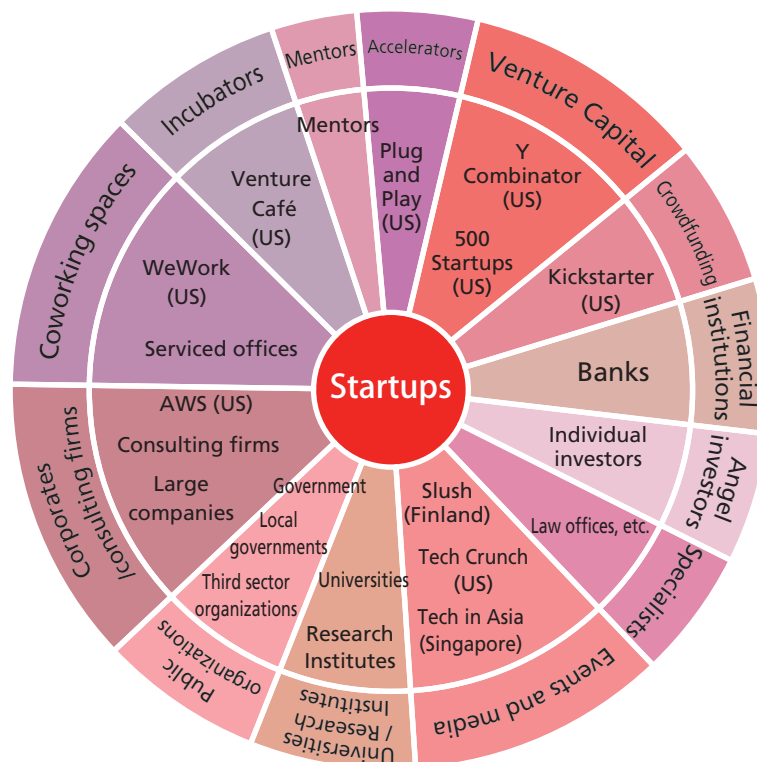
Another Silicon Valley based venture capital company, **500 Startups** (US), has been investing in seed-stage startups ever since it established a Japanese subsidiary in February 2016. Also, from 2016, after entering into a partnership with the City of Kobe, it is annually staging “500 Kobe Accelerator.” Among the entrepreneurs who have participated up to now, there are already some who have received venture capital and entered into partnerships with companies (see p.23).

Y Combinator (US), a company offering programs to nurture entrepreneurs (including the provision of capital) in Silicon Valley, in cooperation with a Japanese startup support body, staged in September 2018 its first official event in Japan, the “Y Combinator MEETUP in Tokyo,” which was held over several days at venues that include the University of Tokyo and Keio University. It should be noted that Y Combinator’s track record is impressive, as it has produced in the past companies like Dropbox and Airbnb through its well-known entrepreneur growth programs held in Silicon Valley, where strictly vetted startups are selected to receive modest funding and three months of intense guidance on business development.

Also, the world’s biggest crowdfunding platform **Kickstarter** (US) started offering a Japanese-language interface from September 2017, to truly begin providing a service for Japan. Now, users around the globe can invest in projects being made public in Japan.

In other moves, a string of info-orientated events is being held in Tokyo, including a matching event and conference staged by **Tech in Asia** (info media from Singapore), Slush Tokyo from the startup event **Slush** (Finland)

Chart 3-2 Startup Ecosystem in Japan (Focused on foreign-affiliated companies)



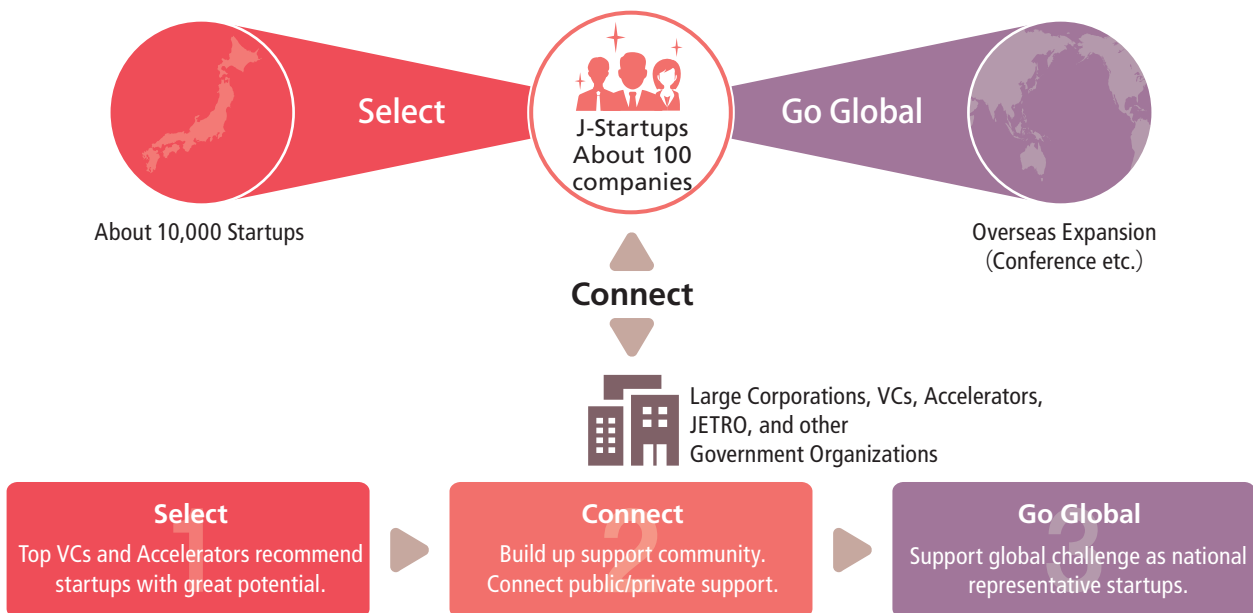
[Note] Classified by JETRO focusing on the representative factors of the foreign-affiliated companies introduced as examples in Chapter 3.

and TechCrunch Tokyo from **TechCrunch** (US), a beacon of startup news. Featuring programs such as talk sessions by famous entrepreneurs and pitch contests, events are reaching the size where thousands attend, providing various opportunities for Japanese startups to link up with supporters.

Likewise, since June 2018, JETRO has been running the “Global Acceleration Hub,” work consistent with “J-Startup” (See Chart 3-3), the program that funnels support to startups via public-private partnerships established under the principle guidance of the Ministry of Economy, Trade and Industry. This work aims to support the growth of Japanese startups. It involves JETRO taking the role of a partnership contact desk to link up worldwide startup ecosystems (from Silicon Valley to Israel) with Japanese companies and skilled professionals. The hub, in partnerships with foreign venture capital companies and accelerators, offers free services, such as on-site briefings and advice on business strategy proposals by mentors, and provision of coworking spaces to Japanese-affiliated startups wanting to expand business. At the same time, the hub also works to find local promising startups interested in deploying in Japan, aiming for two-way support (See Chapter 5).

These various movements are expected to contribute to the improvement of the environment for the emergence of innovation in Japan.

Chart 3-3 Overview of J-Startup



[Source] "J-Startup" (Ministry of Economy, Trade and Industry)

4. Foreign investment for creating innovation in local regions

Japanese local governments are also starting efforts to attract foreign startups and accelerators. This section introduces local governments' pioneering initiatives to embrace vitality of innovation from overseas for their sustainable development and globalization.

(1) Fukuoka City: Aiming to be a "Startup City" through National Strategic Special Zone and partnerships with overseas

Pushing the vision of "Global Startup City – Fukuoka", Fukuoka City, Fukuoka Prefecture is not just putting its backbone into efforts to attract Japanese entrepreneurs but also it is striving to bring overseas startups to the city and help them in their business efforts. Started under the National Strategic Special Zones system in 2015 for the first time in Japan, Startup Visa realized deregulating of conditions on obtaining "Business Manager" residence status, to give foreigners a helping hand in starting businesses in Japan. By the end of September 2018, the number of application to Startup Visa recorded 59, exceeding that to other special zones including Tokyo.

In April 2017, Fukuoka City established "Fukuoka Growth Next," a startup support facility leveraging public-private collaboration, bringing one-step administrative services for support of business. Then, in May of the same year, the city opened the "Fukuoka Global Startup Center" to specialize in supporting local startups in Fukuoka City developing overseas businesses and foreign startups' activities in Fukuoka City. The center provides free-of-charge consultations on business establishment provided by specialists such as lawyers, accountants and consultants, etc. In addition, to help foreign startups with capital procurement in Japan, the center also has beefed itself up in public-private partnerships, including one with a large Japanese crowdfunding company. The center received more than 1,100 consultation requests in FY2017 alone and an average of 180 per month in FY2018, with nearly all of them coming from foreign entrepreneurs and foreign companies.

With these kinds of support, an example of foreign startups entering Fukuoka City includes: **Green Jacket Sports** (Japanese subsidiary's name: **Golface**), a company developing and selling services (applications) for golf courses and golfers. Their smart cart navigation system provides services that include course guides for golfers, while it analyzes big data such as players' location information stored in the system and provides feedback to the golf courses, contributing to more efficient management. Also, the company started to organize golf tours in Japan for Taiwanese golfers in cooperation with the Nishitetsu Group. It is safe to say that this is a good example of how a foreign startup has made inroads into Fukuoka, bringing new services to the local community and boosting activities around inbound tourists.

Partnerships with foreign cities also are underpinning Fukuoka City's startup support measures. Fukuoka City has close ties with 14 locales in 10 countries and regions (as of September 2018) including the US, Taiwan and Estonia, promoting cooperation in enabling startups to mutually make inroads into each other's countries/regions. In 2016, the city launched a training program abroad for entrepreneurs to learn skills and knowledge necessary for business startups with an eye to future development into overseas markets and realization of overseas business. This program has been held annually since 2016, with visits to companies in Silicon Valley and participation in local startup

events giving Fukuoka-based startups a helping hand in making the move to other markets in other countries. Also, in September 2018, at Fukuoka Growth Next, the city staged international business matching events for 100 companies including foreign startups invited from overseas, which shows its overseas network making a big contribution in configuring an ecosystem for the support of startups.



Inside Startup Cafe where Fukuoka Global Startup Center is set up

(2) Osaka City: On the frontline of international-conference-led innovation and solutions for social challenges

With sights set on being an "open innovation city," Osaka City's core base is the "Osaka Innovation Hub" (OIH). In 2013, taking the redevelopment of the Umekita area as a good opportunity, OIH has made its mission to "realize an open innovation ecosystem in Osaka/Kansai area" as "a place for supporting the creation of innovation." OIH has 690 player members (entrepreneurs) and 280 partner members (investors, Japanese and foreign universities, public bodies and the media, etc.) that support the players. OIH stages in excess of 200 events annually, with 70% of those being member-driven carry-in plans. Indeed, pitch events, such as morning meetups, offer domestic and overseas startups opportunities to create new business and scale up.

Osaka City holds once every year the international innovation conference "Hack Osaka" which includes a startup pitch contest, and in the sixth conference Hack Osaka 2018, entrepreneurs competed over their ideas and business models in the fields of "digital health," "travel tech" and "smart city." In addition, Hack Osaka 2018 saw a lot of lively interaction between industry and academia in areas such as speeches by domestic and foreign entrepreneurs, an exhibition of products and services and business talk gatherings of participating startups and a panel discussion by experts involved in supporting entrepreneurs.

Hack Osaka runs in English for the entire program, vigorously inviting foreign startups. At the 2018 pitch contest, eight of the ten participating companies were foreign. The Gold prize-awarded startup, **Dot Incorporation** of South Korea, which was invited by JETRO to the conference, develops, manufactures and sells the world's first braille smartwatch. The startup develops the watch jointly with **Google**, already launching it in the US and China. Stepping up after these countries, Dot Incorporation intends to next launch in Japan and are exploring ways in which the product could be made available to the Tokyo

Olympics and Paralympics. Some of the other startups innovating to solve social challenges included **EyeFree Assisting Communication** (Israel), developing a wearable communication device for amyotrophic lateral sclerosis (ALS) patients, and **Shenzhen Yi-yuan Intelligence Tech** (China), developing software and products incorporating AI and big data technologies that enable users to diagnose their own skin.

Hack Osaka 2019, scheduled on 13th March 2019, has been selected as a project for Regional Business Conference (RBC, see Chapter V), in which foreign companies will be invited by Japanese local governments to participate in investment promotion talks and business matching events with local companies, to convey information on attractive business environments in their regions to the rest of the world. By inviting promising foreign startups and accelerators, the city aims to attract startups to Osaka and establish itself as an innovation hub in Osaka/Kansai area and a gateway abroad.



Pitch contest award ceremony at Hack Osaka 2018 (Courtesy of Osaka City)

Foreign startups also are welcomed to the program. One third of the more than 200 applicants for the 2017 program were from abroad. While only three foreign startups were selected for 2016, that number grew to five in 2017, a quarter of all selected applicants. After participating in the program, a Taiwan e-learning service provider **HOPE English** made its way into Japan. Although Kobe City does not necessarily assume program-completing startups to set up in Kobe City, the city does expect the program to provide impetus for new products and services to emerge from Kobe as well as offer a hand to encourage local startups. Amidst the high concentration of Japanese accelerators and venture capital in Tokyo, it can be said that the Kobe City’s model is an initiative contributing to the proliferation of Japanese startup ecosystems to local regions.

Another initiative involves “Urban Innovation KOBE”, which widely draws applicants from startups working on solutions to regional administrative issues. Given a trial period of four months, selected startups work with the city to solve the issues in question. For the first four-month program in 2018, 60 startups applied, and seven have been selected. **FlyData**, a US startup involved in management support using big data and AI, is experimenting with automated checking of receipts (sent from medical institutes) that the city usually checks manually on a monthly basis, in an effort to bring efficiency to verification of as much as 2.5 million receipts in a year. This kind of pioneering GovTech work where startups make the most of their innovative technologies to improve administrative productivity is being watched with interest.



A scene from 500 Kobe Accelerator (Courtesy of Kobe City)

(3) Kobe City: Teaming up with foreign-affiliates to offer entrepreneurs a platform for success



Kobe City is using the prowess and strengths of foreign-affiliates to shape a regional ecosystem for startups. A face-to-face meeting between a global venture capital/accelerator **500 Startups** and the mayor of Kobe City in 2015 was a turning point that led to a signed partnership agreement, which, in turn, has led to the acceleration program “500 Kobe Accelerator” being staged in Kobe once a year since 2016.

With 500 Kobe Accelerator, global team members of 500 Startups come to Japan and manage a six-week program. The 27 members who ran the program in 2017 exclusively worked with each participating company to advise them on business models and lecture them on how to procure capital and how to present a pitch. Such a program is an invaluable opportunity for participating startups at the seed level to be in Japan but learning about best practices in Silicon Valley from 500 Startups, a company with an investment track record of more than 2,000 recipient companies in 60 countries. In the final week of the program, a demo day is worked in for participants to pitch their business ideas to investors. In the past two years, 22 companies have successfully procured in excess of two billion yen of capital after demo days.