



Kansai Startup Mashups

Kyoto-Osaka-Kobe Startup Ecosystem

Rev.1.1

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Uniqueness of the three cities coming together in cutting edge technology

A startup ecosystem for growing companies from the Kansai region aiming for the global market



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A new ecosystem for Kansai startups aiming to the global market.
Mashups of Kyoto, Osaka, Kobe three cities cutting-edge technology and originality.

Kansai Startup Mashups

Kyoto-Osaka-Kobe Startup Ecosystem

The three cities Kyoto, Osaka, Kobe (*1) are working together to create a new ecosystem for Kansai (*2) startups aiming to the global market by doing mashup each cutting-edge technology and originality based on a long history.

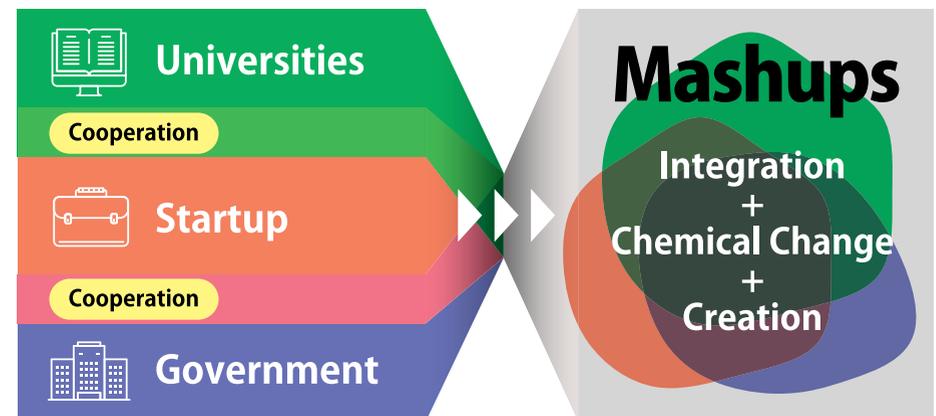
"Kansai Startup Mashups" is the brand message (tagline) that communicates this initiative to the world.

- Osaka:
A gathering of companies in a wide range of fields including deep tech..
- Kyoto:
A city of startups backed by universities and research institutes.
- Kobe:
Focus on the life science area and easy to engage in social experiments.

*1: The region centered on these three cities is called Keihanshin, and it is the main region of Kansai.
Also, Keihanshin is one of the Empowerment Program for 8 Startup Ecosystem Cities designated by the Cabinet Office.
*2: Kansai is a name that refers to the western part of Japan, as opposed to Kanto, which is centered on Tokyo.
Usually refers to six prefectures : Osaka, Kyoto, Hyogo, Shiga, Nara, and Wakayama.
But it can also refer to seven prefectures including Mie, or the entire western Japan area.

The three cities coming together will allow the circle of collaboration and support that universities, companies, and government are engaged in. We aim to promote the presence of Kansai startups to domestic and international investors and create new synergy in startups through the exchange of cutting-edge technology and global wisdom in Kansai, a region rich in long-lived companies.

Make Kansai a place of connection for the hard-working entrepreneurs, aspiring entrepreneurs, and all the people who want to support the process.



R&D-oriented Startups Attracting Attention in the Startup Market

Kansai Market and Potential

In the recent startup market, companies with large financing scale from their early stages, such as R&D (Research and Development) spenders, have attracted attention. Kansai has a fertile ground to support development of this field through the support by its ecosystem.

R&D-oriented Startups Attracting Attention

Up to now, the startup market has been driven by the IT/software sector (keywords: AI, SaaS, FinTech). While the financing market for such companies is still booming, investment in startups that conduct business requiring R&D, corporate alliances, and expertise (e.g., intellectual property management), such as deep tech, pharmaceutical/drug discovery, MaaS, and space ventures has been more active around 2020.

Top 10 Sectors by Funding

2019		2020	
Sector Name	Financing Amount (100 million yen)	Sector Name	Financing Amount (100 million yen)
Artificial Intelligence	1,012	Artificial Intelligence	660
SaaS	798	SaaS	556
IoT	563	FinTech	526
FinTech	511	CleanTech	292
AdTech	443	Sharing Economy	290
Digital Health	417	Commerce	274
Robot	393	Content/ Copyright Business	271
Content/ Copyright Business	343	Pharmaceutical/ Drug Discovery	239
Commerce	292	HRTech	234
HRTech	288	IoT	228

Note 1) The figures including those in the past fluctuate as the survey progress due to the nature of the data. The impact of survey progress tends to be variable by the more recent and the smaller the value of the project.

Note 2) Since multiple sectors are assigned to each company, the total sector value does not equal the total financing amount due to the duplicate recording of rounds between sectors.

Source) INITIAL (as of January 25, 2021)

Source: [Free latest version] All about "Startup Financing Trends" in 2020/NewsPicks/2021-1.29
<https://newspicks.com/news/5562829/body/>

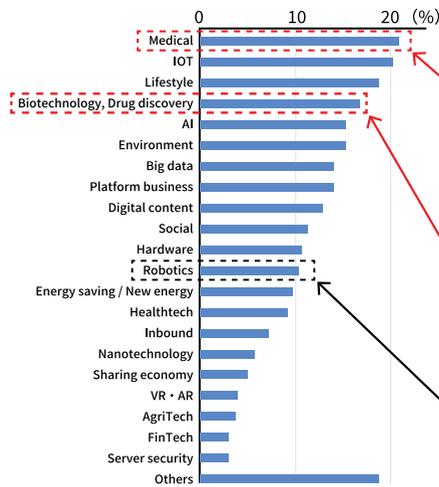
Kansai's Potentiality for the Birth of Unicorn Companies

Kansai Market and Potential

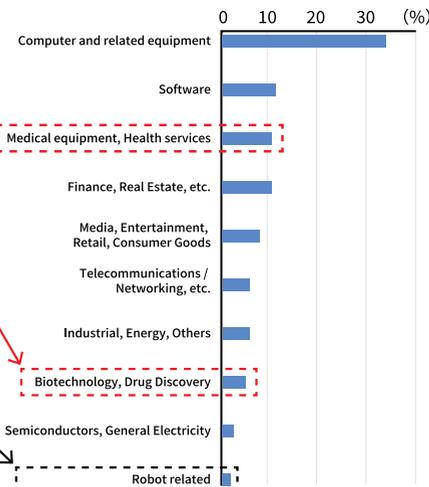
Kansai has a ground to produce university-launched startups easier through collaboration among industry, government, and academia.

1 Distribution of startup activities in Kansai

Fields of activities of Kansai startups
(multiple responses, 406 companies)



Industry distribution of nationwide startups
(single response, 153 companies)



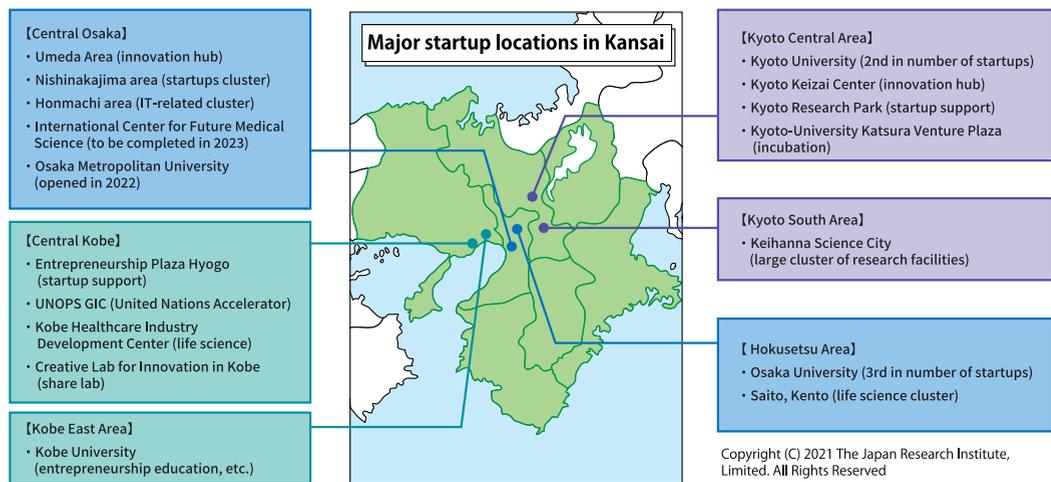
(Source) METI Kinki

(Source) Venture Enterprise Center

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We believe that an ecosystem is essential to promote R&D-oriented businesses, which encourages startups through collaboration among industry, government, and academia. Kansai has strengths in cross-gene collaborations, taking advantage of its regional characteristic that values human connections. In addition, Kansai startups tend to have a high percentage of foundations in the fields of medicine and biotech drug discovery.

2 Kansai's ecosystem that produces university-launched startups



The startup ecosystem is actively formed by industry, government, and academia. The system consists of a centralized support function and startups located in the surrounding area.

※ For Kyoto University (2nd. in the number of startups) and Osaka University (3rd. in the number of startups) in the above chart, the figures refer to the number of startups created in Japan.

Source) Both from "The Current State of Kansai Startups and the Formation of the Ecosystem" by Japan Research Institute, Limited.

Kansai's Strengths Supporting the Ecosystem -Corporate Collaboration

Kansai Market and Potential

— Kansai has strengths in corporate collaboration, university-launched startups, and social demonstrations that support the ecosystem. —



Kansai is one of Japan's leading economic regions with a highly concentrated area of large companies in western Japan. It has also a fertile ground for startups and alliances.

Keihanshin area (Kyoto, Osaka, and Kobe), the largest economic area in western Japan



GDP : 74.1 trillion yen
(about 12.8% in Japan) ※ 1



Population : 16.75 million
(about 13.4% in Japan) ※ 2



Number of companies : 500,000
(about 13.8% in Japan) ※ 3



Number of large companies : 1,559
(about 14.0% in Japan) ※ 3

※ 1 Cabinet Office_Statistics Table Prefectural Accounts (FY2019)

※ 2 Statistics Bureau, the Ministry of Internal Affairs and Communications_Population Estimates (September 2022 Report)

※ 3 Small and Medium Enterprise Agency_Number of Small and Medium Enterprises by Municipality (November 2018)

Startup x Large Company

—

Collaboration Case



Hutzper x Softbank

Provides solutions for the manufacturing industry to improve productivity by combining edge computing and deep learning. Through matching via the Osaka Business Development Agency, four companies, including Softbank, a major Japanese telecommunications company, jointly conducted the "Functional Verification of an Automatic Transport Robot Equipped with an Advertisement Distribution Function Using 5G" at a commercial complex in Osaka City.



SEQSENSE x Kawasaki Heavy Industries

SEQSENSE provides solutions for next-generation facility management that integrate security robots with high autonomous mobility and cloud technology, and cooperate with Kawasaki Heavy industries which has high hardware technology jointly conducted a demonstration experiment to automate delivery operations using autonomous robots in a hospital. Helps to solve the labor shortage and to reduce the burden on medical workers.



Datagrid x Keihan Holdings

Joint developed solutions utilizing Synthetic AI and provides AI products.



Launched a demonstration experiment in collaboration with Keihan HD to explore the potential for PR utilization.

Released Kyoto sightseeing guide videos featuring digital humans generated by Synthetic AI on the Keihan Group's official account.

Kansai's Strengths Supporting the Ecosystem -University-launched Startups

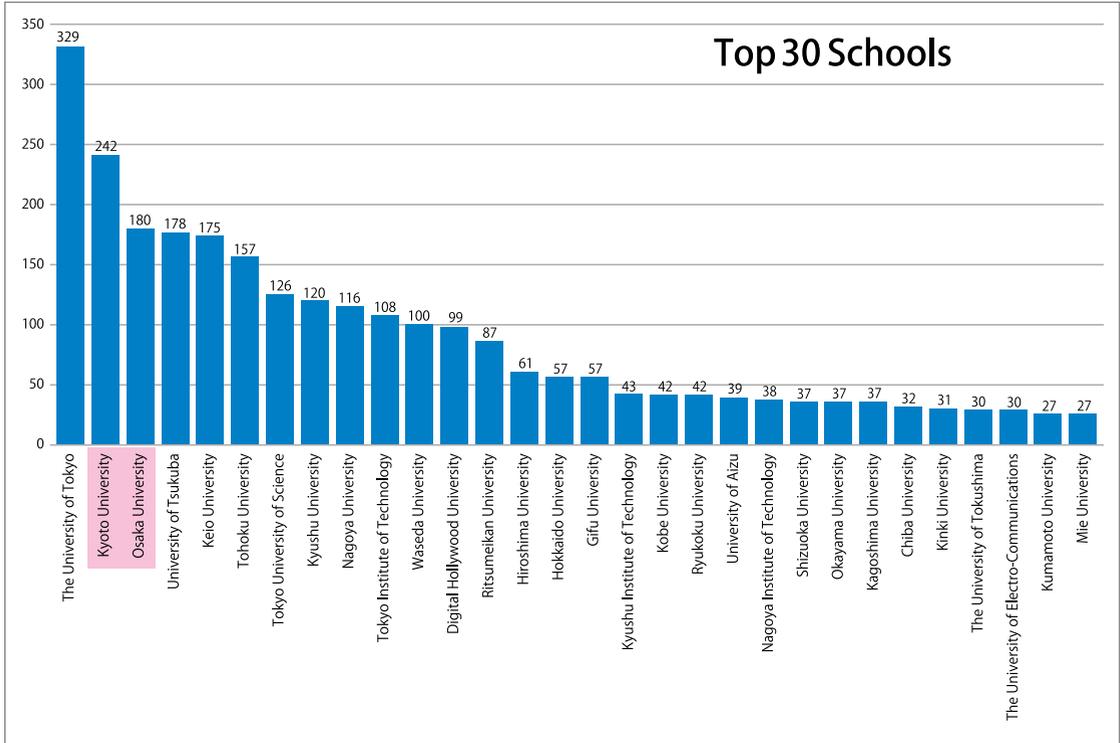
Kansai Market and Potential



There exist several universities with high potential.

In particular, Kyoto University and Osaka University have produced a large number of university-launched startups and achieved high financing.

1 Number of university-launched ventures per university identified in FY2021

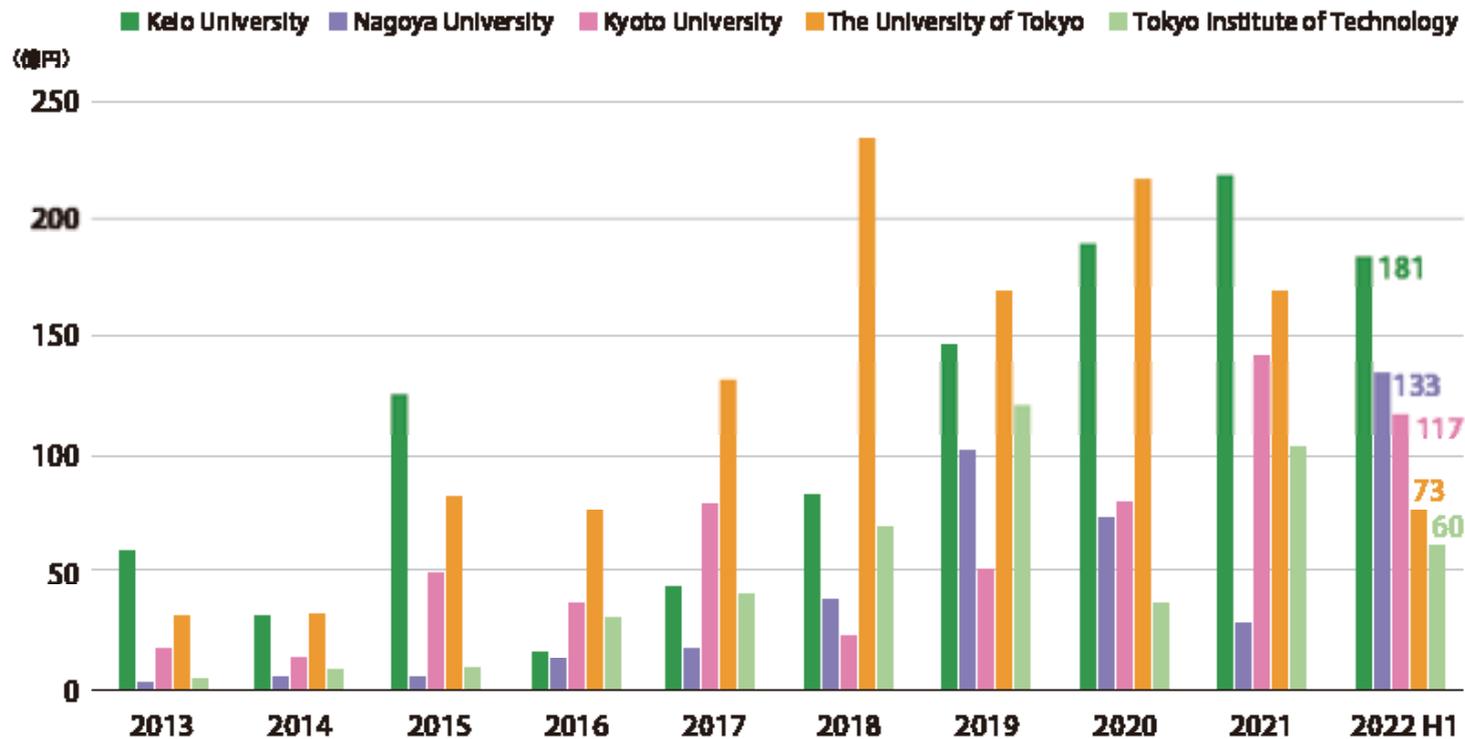


Source) "Survey Results on the Actual Situations of University-Launched Ventures Compiled" by Ministry of Economy, Trade and Industry (May 17, 2021)
https://www.meti.go.jp/policy/innovation_corp/univ-startupsdb.html

- Kyoto University in the 2nd place and Osaka University in the 3rd place in number of university-launched SUs per university.
- Kyoto University financed 11.7 billion yen in 2022, the 3rd largest financing amount in Japan.

2

Trends in Major University-launched Startup Financing



Figures for 2022 are semi-annual values.

Due to the nature of the data, the figures, including those in the past, fluctuate depending on the progress of the survey. The smaller the amount, the more likely to be affected by the progress of the survey.

Values for each year are those observed up to the base date.

See the Definition at the beginning of this report for the definition of "university-launched".

The total number of university-launched projects does not equal the all university-launched projects as the projects by multiple universities are counted separately.

Others are those other than the percentage of top 5 universities of financing amount in the first half of 2022.

Source) INITAL (as of July 20, 2022)

Source : INITAL, Japan Startup Finance 2022 First Half - Startup Funding Trends in Japan

<https://assets.ctfassets.net/bdepgd648nl9/7d5s4b62PwDqNtH4XiPLK/732fb5da232ff67a0ef153310c8c90e2/japan-startup-finance-2022h1.pdf>

Kansai's Strengths Supporting the Ecosystem -Social Demonstrations

Kansai Market and Potential



Many active movements are seen such as Urban Innovation KOBE(UIK) in Kobe City, which aim to improve citizen services by using the power of startups.

What is UIK in Kobe City?

Startups with flexible ideas and superior technological capabilities and city officials with detailed knowledge of social and administrative issues collaborate to find optimal solutions and aim to build and demonstrate services.



Cases of Social Demonstrations at UIK



[Launch of a demonstration experiment to improve the physical strength of children in Kobe city]

Pestalozzi Technology Inc. provided "ALPHA" with an "exercise diary" function to children in Kobe City to record the results of digital physical fitness tests and the content of their daily exercise.

By introducing a system that enables each student to use a personal computer for learning to input, store, and check the content of their daily exercises (visualization of exercise) improve further the children's motivation to exercise and help them make exercise a habit.

[Launch of a demonstration experiment to eliminate wildlife damage]

Introduced speakers on a trial basis, which emit ultrasonic waves that wild deer dislike in areas plagued by deer droppings. Considers expanding the project to other regions as well based on the results of the demonstration.



Ecosystem Structure for Lasting Support

Kansai Market and Potential

Kyoto, Osaka, and Kobe Universities, companies, and government

A support structure that integrates their respective aspirations and ensures startups to grow.

Overview of Startup Support that the Kansai Ecosystem Aims to

Collaboration Support Taking Advantage of the "Connection-oriented" Regional Characteristic

Makes opportunities to produce ventures that utilize the resources of universities, companies, and government.

Examples of support that creates connections



Holding pitch events



Providing community space



Providing community with Angel Fund



The Kansai Ecosystem has strengths in creating contact points of startups with universities, companies, and governments and building a support system by taking advantage of its "connection-oriented" regional characteristic



The Keihanshin Consortium that takes advantage of the "connection-oriented" regional characteristic

Potential Administrative Support

Overview of Startup Support that the Kansai Ecosystem Aims to

Holistic Support System

Has a system that supports holistically the startups' growth, including collaboration with universities/companies, support for community-wide social demonstrations, and support for overseas collaboration.

* Specific support achievements are listed on the next page.

Future Support Service Focus Areas

Actively provides support for areas with particular growth potential based on the past achievements and experiences.

Representative startups in the Kansai region

- University Collaboration
- Corporate Collaboration
- Social Demonstration
- Overseas Collaboration Support

Support Service Focus Areas

- Life Science
- Deep Tech
- Carbon Neutral

Visible Active Startups in Kansai



Many startups from the Kansai region have grown continuously by utilizing the support menu of the ecosystem.

Support for Corporate Collaboration

Support Menu

Examples of the support of Startups Introduced in this Magazine

Osaka

- Morning Meetup

A program to make a pitch to large companies, venture capitalists, and the media. Aims to create business alliances between startups and large companies and open innovation in large companies.

- Osaka Agri-Innovation Grand Prix

A contest that aims to achieve new business models for corporations and individuals engaged in agriculture-related businesses. The sponsors provide funds and technologies to the winners to help them implement business plans that contribute to innovation in Osaka's agriculture.

- Rehabilitation3.0

Made a pitch on the 'CareTech Special' of this event, leading to an opportunity to improve its business.

- Sagri

With the Grand Prix of the contest as a start, received the funds and technology from sponsors to promote the transformation of agriculture into a growth industry and the development of sustainable farm management.

Kyoto

- Kyoto City Startup Support Fund

A fund to support startups run by the "Kyoto City Startup Support Investment Limited Liability Partnership," consisting of local financial institutions. Helps regional revitalization through active development and support of local companies.

- Kyoto Startup X

Organized by Kyoto Startup Ecosystem Promotion Council. An event where startups from Kyoto meet together.

- Space Power Technologies

Selected as a portfolio company of this fund and acquired an investment .

- Space Power Technologies

Made a pitch on the 3rd "Green Innovation Edition" of this event, leading to business tie-ups with large companies.

Support for Corporate Collaboration

Support Menu

Examples of the support of Startups Introduced in this Magazine

Kyoto

- Exchange Meeting of Kyoto Startup Support Angel Community
Startups presents their business plans to executives and angel investors to deepen exchanges.

- Metro Weather
Received mentorship from PwC Kyoto Audit Corporation, which matched at the exchange meeting, to improve its business. Leads to financing for prototype development, cooperating in demonstration experiments, searching for business collaborators, and recruiting resources.

- Kyoto City Venture Business Connoisseur Committee
Discovers and develops ventures that will lead the Kyoto's economy. Evaluates the qualities, technologies, and ideas of entrepreneurs to provide comprehensive support to certified companies.

- Space Power Technologies
Certified its business plan as rank A of this program, received a rent subsidy for moving into the "Kyoto-University Katsura Venture Plaza," a subsidy for fostering Kyoto-style global niche and top companies, and a financing program for policy support.

Hyogo

- Hyogo Kobe Startup Fund
An investment fund jointly established in collaboration with Kobe City and private companies. Invests in startups that are expected to achieve dramatic growth to revitalize the local economy and improve the industrial competitiveness.

- Sagri
Selected as the first recipient of this fund and received investment.

Support for Governmental Collaboration	
Support Menu	Examples of the support of Startups Introduced in this Magazine
Osaka	
<p>- OIH Startup Acceleration Program(OSAP) Aims to accelerate startup business growth. Provides accompanied support to focus on issues that need to be strengthened or improved, and to contribute to the next round or business alliances.</p>	<p>- Rehabilitation3.0 Selected as a support company for this program. Adopted several subsidy programs after repeated discussions with the mentor about growth strategies. Conducted mentorship with a large companies four times, resulting in business partnerships with several companies.</p>
<p>- Trial Round Table Startup demonstration promotion project in Sakai City, Osaka Prefecture. Provides demonstration fields such as public facilities in the city and facilities owned by partner companies, as well as subsidies and PR support for demonstration projects.</p>	<p>- Rehabilitation3.0 Conducted a demonstration experiment to estimate physical and cognitive capabilities from sleep for the citizens in Sakai City. Verifies the needs and effects, leading to improve its business plan.</p>
Kyoto	
<p>- Provision of incubation facilities for startups. Supplements management resources lacking in startups in their early stages of establishment to support business expansion and success.</p>	<p>- Metro Weather Achieves business growth with the help of the "Advanced Chemical Technology Center in Kyoto (ACT Kyoto)," the "Uji Venture Business Development Factory," and the "Keihanna Venture Center."</p>
Hyogo	
<p>- SDGs CHALLENGE Co-creation program in collaboration with UNOPS, a UN agency aiming to solve global SDG issues. Provides business development support for accelerators, as well as financial support for demonstration and research projects in overseas expansion.</p>	<p>- Sagri Selected by this program and conducted a demonstration experiment in India with a view to developing a new decarbonized business in agriculture. Leads to the development of overseas business.</p>
<p>- Urban Innovation Kobe A project to solve issues in collaboration with startups. This is a demonstration project that matches startups with various local issues and collaborates to solve them.</p>	<p>- Sagri Selected by this project and conducted demonstration experiment on the use of "ACTABA," an application for monitoring the farmland status in the city's farmland. The Kobe City Board of Agriculture decided to introduce the application for the first time in the Kansai region.</p>

Support for University Collaboration

Support Menu

Examples of the support of Startups Introduced in this Magazine

Osaka

- Osaka City University Healthcare Startups

A program in collaboration with Osaka City University (currently Osaka Metropolitan University) aiming to create new technology-based businesses in the healthcare field. Practically learns how to build a business to achieve commercialization through mentorship from various experts in the healthcare field.

- Rehabilitation3.0

Participated in this program and presented its business plans at the "Demo Day" held at the end of the program. Leads to searching for collaborative partners and financing.

Kyoto

- "Forest of Enterprise, Forest of Industry-Academia"

Promotion Project

Aims to create new growth industries through industry-academia-government collaboration. Provides comprehensive support for efforts to create products and services and to develop sales activities through collaboration among players such as universities and research institutions.

- Metro Weather

Adopted by the "Commercialization Promotion Course" of this program and received business support for full-scale market research and sales channel development by developing prototypes and services and conducting test sales.

- Space Power Technologies

Adopted by the "Full-Scale Business Development Course" of this program and received business support for applied research and development of production technologies, and investment in mass production facilities for practical use, along with the related development of sales channels, leading to accelerated business growth.



Minoru Furukawa
CEO, Space Power Technologies Inc.

Master of Science in Computer Science and Systems Engineering, Kobe University and currently PhD candidate at Saitama University. First-Class Technical Radio Operator for On-The-Ground Services. Engaged in developing microwave antennas and filters for communication and broadcasting in the Electronic Circuit Department, Antenna Division of NIHON DENGYO KOSAKU CO.,LTD.. Started with his own independent research and development of rectenna for microwave and optical Wireless Power Transfer, and developed rectifying antennas using high-efficiency power diodes and wireless power transmission systems in the New Business Development Department. Participated in drafting the Standard for Surface Electromagnetic Coupling Wireless Power Transmission System for mobile devices.

■ Business Introduction

Development and manufacture of wireless power transmission systems for Truly Wireless IoT.

Please tell us about your company.

We, Space Power Technologies Inc., are a startup founded in Kyoto in 2019 on the mission "to make IoT available whenever and wherever you need" and with the vision "to make power 'layout-free' ."

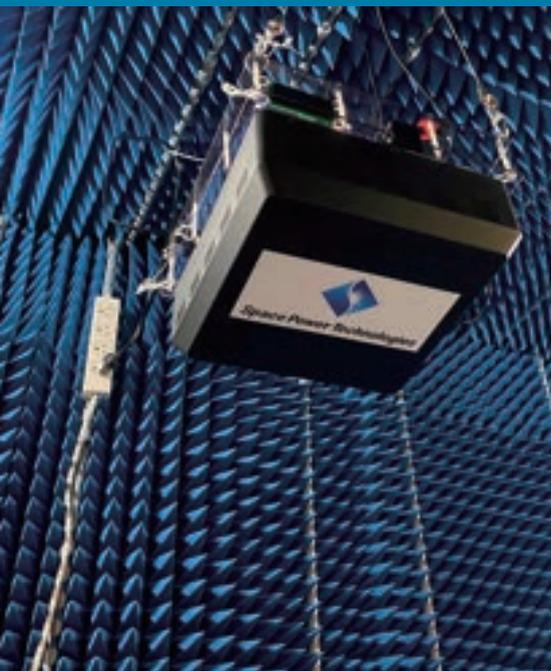
Since around 2010, mobile devices and edge devices have diversified, and they has increased exponentially in number. These devices require a continuous power supply, while they have very limited means of power supply sources,and thus still require wires or charging cables. Without knowing, the limited access to power restricts our economic activities in an IT society.

We will free people from such inconveniences and achieve a truly wireless world. We will make innovation with microwave wireless power transmission that can be used anywhere.

How and why did you start a business?

At my previous job, I was engaged in product development of wireless power transmission systems, which achieved the highest level of efficiency and attracted a lot of attention. However, the regulation at that time allowed only very small power transmission like handheld terminals for electronic tags. It was not sufficient to meet market needs, so the company ended up with discontinuing its development. So, I decided to leave the company to start my own business, and returned to school to resume my PhD research on optical wireless power transmission, aiming to establish the technology.

Then, around 2016, several industry associations have actively requested the government to develop regulations for wireless



power transmission, and we see hope for institutionalization of wireless power transmission.

Therefore, I asked Dr. Naoki Shinohara, Professor at the Research Institute for Sustainable Humanosphere, Kyoto University, to become our Science Advisor and he accepted it, because I collaborated with him in my previous job. I started my business with hands-on investment from Kyoto University Innovation Capital Co., Ltd..

Please tell us about your business.

We are developing wireless power transmission systems by way of microwave. We make available wireless power transmission at a few meter distance and then contribute to improvement of productivity and quality at manufacturing and logistics sites without the hassle of wiring and battery replacement.

What is the social situation surrounding your company and the value you can provide in that situation?

Nowadays, IoT is spreading into various areas such as factories, logistic sites, offices, and homes. While communication is becoming wireless, the power sources of IoT are mainly batteries or wires, and what is worse, large power usages require frequent battery replacement or wiring.

So, we can supply power by utilizing our technology without any hassle. Our technology can deliver about 1W power wirelessly up to several meters away. We have developed various applications such as wireless power supply to sensors near the blades of machine tools and to actuators moving fast.

In Japan, the regulations for microwave wireless power transmission came into effect in May 2022, but their use is limited to only unmanned indoor environments. As the next step institutionalization discussion until 2025, we are cooperating with industry stakeholders to expand its use cases to smart terminals and to infrastructure monitoring sensor systems both in manned indoor and outdoor environments.

The global market for wireless power transfer is estimated to be 742 billion yen in 2025. We aim to grow our sales to 3 billion yen in 2026 and to go public.

Why did you start a business in the Keihanshin area?

Our business is based on the technology which Dr. Shinohara, Professor of Kyoto University, has been studying for many years as a part of Space Power Solar Satellite project. We need to get support from and collaborate with Kyoto University and that's why we set up our company here in Kyoto (Keihansin area).

Please tell us about the past collaborations with other companies, governments, and universities.

We did joint study projects with Kyoto University. We have also collaborated with other universities and research institutes in development of advanced devices.

Please give your expectations and messages
to the banks in Keihanshin area.

We appreciate their various support including introduction of potential partners and customers. We would like them to introduce companies which hold excellent technologies or those who can support us in order to exhibit our products to 2025 Osaka Expo. .

Please give your expectations and messages to venture
capitals and companies that are positive about investing
in startups.

We plan to raise a large amount of capital in the second half of 2023. We would welcome investment by venture capitals that can support us in terms of business development (marketing, overseas, human resources, and IPO) as well as equity finance.

What challenges and issues do you face in financing in the
Keihanshin area?

I see there are still very few investors actively providing finance to the early-to-middle stage startups whereas there are quite a few financial institution-affiliated venture capitals. However,

I think startups in Keihanshin area would become much more active if more and more venture capitals specializing in hard-tech enter into business here in Keihanshin, resulting in increased fund providers in number.

Please tell us about the companies you are targeting.

Apple Inc..

Who is the business leader you respect?

Mr. Takuya Irisawa, President of Ecomott Inc..

Who is the business leader as your mentor from Keihanshin
area?

Mr. Ryosuke Gonotsubo, COO/CFO, Thyas Co. Ltd..

Mr. Gonotsubo, who used to be a capitalist of Kyoto University INNOVATION CAPITAL Co.,Ltd., is a former outside director of our company. He helped me a lot when I started our company and has continuously advised us since then.



Hirokazu Masuda
Representative Director,
Rehabilitation3.0 Co., Ltd.



Graduated from Kansai Medical Technology College (currently Kansai University of Welfare Science). Worked in hospitals for 8 years as a licensed occupational therapist. Established Rehabili PLUS Co., Ltd. in 2012, and Rehabilitation3.0 Co., Ltd. in 2019. Conducts research and development of preventive medical systems using rehabilitation skill and technology. Contributed an article "ICT Deployment for Visiting Nursing" to the journal 'Visiting Rehabilitation.' Presented a joint paper "Estimating Patient Independence with Sleep Sensors" at "UbiComp," the most difficult international conference in the field of AI and Ubiquitous Computing. Won a prize in the "AI Business Creation Idea Contest 2021" and was granted a patent (Patent Application No. 2020-024812).

■ Business Introduction

Development of "SAA System" to estimate capability of physical activities from sleep.

Please tell us about your company.

We, Rehabilitation3.0 are a startup founded in Osaka in November 2019 under the philosophy of "Rehabilitation x Technology for a healthy future for all."

"Preventive medicine" is needed in today's declining birthrate and aging population. It has three key components: early recovery, early detection, and performance improvement, but the social security system guarantees only "early recovery" from illness and injury. What is the most important is, however, "early detection" of health changes and "performance improvement" to prevent illness and injury.

We have developed and provided the "Sleep Activity Assessment (SAA) system," which ensures quantitative and easy assessment of health conditions, enabling early detection and performance improvement.

How and why did you start a business?

Around 2014, after about 10 years of experience as an occupational therapist, I have been able to tell whether a patient could walk just by watching his or her rolling over movements. This is not a supernatural power, but something an experienced occupational therapist can do. I have started to believe there is a correlation between the capability of physical activities during sleep and the capability of exercise and cognition during the day.

If this hypothesis is correct, I could spread my techniques to the entire world by using AI and ICT. I have become motivated to research and develop "Rehabilitation x AI."

In 2018, at a medical device exhibition, I found a sleep sensor that could measure respiration, body temperature, blood pressure, and pulse, which led me to the concept of the "SAA System," using AI to estimate physical and cognitive capabilities from heart rate, respiration rate, and body movement during sleep.

Later, I had an opportunity to speak directly with an executive officer of NTT DOCOMO, INC., who was intrigued by my idea. Thereafter, I spun off the R&D department of Rehabili PLUS and established Rehabilitation3.0. We signed a contract for a PoC (Proof of Concept) experiment with NTT DOCOMO, which have been successful up to now.

Please tell us about your business.

We develop and provide the "SAA System," an application that uses AI analysis of information during sleep to estimate physical and cognitive capabilities and suggest remedial measures such as exercise, stretching, and precautions. We were the first in the world to develop this technology and granted a Japanese patent.

It is a versatile technology, capable of AI estimation by acquiring information from all vital sensors, including those worn on bedding and wearable devices. In addition, we have uniquely developed 1.2 million different health improvement programs, which can make the best proposals according to the physical characteristics and health conditions of the day.

What is the social situation surrounding your company and the value you can provide in that situation?

Japan is a developed country with super-aging population. There are currently said to be seven countries with super-aging population in the world, and be 34 in eight years. Japan is ranked at the top of super-aging population, whose countermeasures attract attention from around the world.

Our strength lies in combining the knowledge, skills, and clinical experience of Rehabilitation Medicine with the technology. The AI technology we have developed enables all people to know their individual health conditions easily and inexpensively anywhere and anytime, and to have a healthy future.

The healthtech market is expected to exceed 300 billion yen in 2022, increasing rapidly by 50% over 2017. Our goal is to launch the "SAA System" in Japan in late 2023 and globally in 2024. We aim for sales of 2 billion yen in Japan and 100 billion yen globally, and an IPO in 2030.

Why did you start a business in the Keihanshin area?

Because I was born and raised in the area and am familiar with it.

In addition, meeting entrepreneurs and engineers at the Osaka Innovation Hub has been a big benefit for the company's growth. Starting a business is like making a path in the dark, which often makes us feel scared and weak in the knees. I have been encouraged many times by supportive people in such cases.

Please tell us about the past collaborations
with other companies,
governments, and universities?

We have jointly conducted PoC experiments with NTT DOCOMO, starting with a joint development agreement for the "SAA system" in 2020.

Please give your expectations and messages
to the banks in Keihanshin area.

We find the subsidies very attractive and hope to utilize it more and more in future. We would also like them to introduce companies that are willing to collaborate with us on data collection from children to adults, existing services x SAA, and PoC experiments.

Please give your expectations and messages
to venture capitalists.

We plan to raise our first round of funding in spring and summer of 2023. We would like to discuss the issues in order to ask them to invest us.

Please give your expectations and messages to companies
that are positive about investing in ventures.

We are looking for companies that are willing to collaborate with us on data collection from children to adults, existing services x SAA, and PoC experiments.

Who is the business leader you respect?

Mr. Ryuhei Sadoshima, Representative Director & CEO, Safie Inc..

Who is the business leader as
your mentor from Keihanshin area?

Mr. Kazuhiko Ito, President & Representative Director, BCC Co., Ltd..



Shunsuke Tsuboi
Representative Director & CEO
Sagri Co., Ltd.



Graduated from Department of Mechanical Engineering and Materials Science, College of Engineering Science, Yokohama National University. Established Uchu co.,Ltd., the first private space education venture in his third year of university, Sagri Co., Ltd. in 2018. Selected as one of the MIT Technology Review's "Innovators Under 35 Japan." Member of the "Study Group on Management of Farmland Information Using 'Digital Maps,'" Ministry of Agriculture, Forestry and Fisheries. Visiting Professor, Professional University of Information and Management for Innovation. 1st batch of student at DMM Academy. 13th batch of student at Softbank Academia. Selected as one of the Forbes JAPAN's "Forbes JAPAN 30 UNDER 30 2022," in the Social Impact Category.

■ Business Introduction

Provision of applications using satellite data and AI

- 1_ "Actaba," for monitoring the farmland status: Visualization of abandoned farmland
- 2_ "Detaba," for improving the efficiency of crop surveys: Visualization of cropping brands
- 3_ "Sagri," for farm management: Visualization of fields conditions.

Please tell us about your company.

We, Sagri Co., Ltd., are a startup founded in Hyogo Prefecture in 2018 with the vision "to achieve coexistence of humankind and the Earth."

Humankind now faces a global food crisis and suffers from climate change. We aim to create the best environment and mechanism for humans and the Earth to coexist by "satellite data x AI" to achieve a society where humans can live on the Earth for granted in future generations.

Why did you start a business?

It was that I saw the environment with my own eyes in which local children had to work on a farm without going to school when visited Rwanda.

I had conducted a workshop on space for children as part of the educational activities of Uchu co.,Ltd. in my third year of university. The children participated in the workshop with sparkling eyes, while they had to labor in the fields after returning home. They had to give up their dreams and take over the farm instead.

I wanted to help children with potential to achieve their dreams. I have become motivated to support farmers in developing countries.

Please tell us about your business.

We provide three applications using satellite data and AI.

The first application, "Actaba," for monitoring the farmland status, visualizes abandoned farmland. It is used by Agricultural Committee Secretariat and Chamber of Agriculture in each municipality. The second application, "Detaba," for improving the efficiency of crop surveys, visualizes cropping brands. It is used by Regional Agricultural Revitalization Councils in each municipality. The third application, "Sagri," for farm management, visualizes growth of fields and the conditions of the soil. We have developed this application with a view to be used by farmers who grow grains including paddy rice and wheat and outdoor grown vegetables, as well as by the JA in each prefecture.

What is the social situation surrounding your company and the value you can provide in that situation?

Japan's agricultural issues include a decline in food self-sufficiency and a decrease in the number of farmers. The dispersed farmland makes farming inefficient and increases farmers' turnover, and the abandoned farmland is said to be as large as Shiga Prefecture. The Agricultural Committee in each municipality needs to visit every dispersed farmland to visually check its status, followed by the preparation of survey reports, which is a very labor-intensive task. Our

"Actaba" and "Databa" can streamline farmland patrol surveys. These applications have been introduced in about 70 municipalities.

Another major issue these days is the escalating price of fertilizers. "Sagri" can contribute to determine the appropriate amount of fertilizer for each farmland, leading to the reduction of dinitrogen monoxide, one of the greenhouse gases, which can also contribute to the prevention of global warming.

Every farmer is our target, which makes up one-third of the world's population. We have already expanded our business into Thailand and Indonesia. The global agricultural DX market is worth 150 billion yen, and the agricultural monitoring market is worth 2.1 trillion yen, which is a growth market with a CAGR of about 8%.

Furthermore, our technology attracts attention for its ability to achieve decarbonization. Of the 50 trillion yen global carbon credit market, the agricultural carbon credit market is worth 6 trillion yen, in which we can target 900 billion yen.

We support farmers in the entire world as well as in Japan. We also want to achieve a decarbonized society and leave the earth unchanged for future generations. Our goal is to provide farm management information to 100 million farmers by 2030.

Why did you start a business in the Keihanshin area?

The trigger was an adoption of the business of Uchu co.,Ltd as a city promotion project in Tamba City, Hyogo Prefecture in 2017, with the theme of regional revitalization in the education field by utilizing the model rockets and drones.

Based in Tamba City, we have heard many concerns about agriculture from local residents. We started the development and commercialization of the product while learning about agriculture from scratch.

Please tell us about the past collaborations with other companies, governments, and universities.

We have conducted demonstration experiments with several municipalities including Hyogo Prefecture and Tamba City. The Kobe City Board of Agriculture decided to introduce Actaba for the first time in the Keihanshin area.

Please give your expectations and messages to banks in the Keihanshin area.

We promote collaborations with the government and research and development of decarbonization technologies. I would like to see if companies are willing to purchase voluntary carbon credits, which are still not familiar in Japan.

Please give your expectations and messages to venture capitalists.

I see there are few investors in the area of globalization and decarbonization technologies, which we are focused on in our business. I would like them to make investment decisions such as impact investments actively.

Please give your expectations and messages to companies that are positive about investing in ventures.

I expect business tie-ups with them not only just investment in business synergies.

What challenges and issues do you face in financing in the Keihanshin area?

As financing is also available online, I see no problem for companies to raise funds in the Keihanshin area if we actively communicate.

Who is the business leader you respect?

Mr. Masayoshi Son, Representative Director, Corporate Officer, Chairman & CEO, SoftBank Group Corp.

Mr. Taejun Shin, Representative Director, Gojo & Company, Inc.

Mr. Elon Musk, CEO, SpaceX / Tesla Motors

Mr. Mitsuru Izumo, President, Euglena Co., Ltd.

Mr. Yukihiro Maru, Group CEO, Leave a Nest Co., Ltd.



Junichi Furumoto
CEO, Metro Weather Co., Ltd.

Established Metro Weather Co., Ltd. in 2015 while conducting research and educational activities as an assistant professor of the Research Institute for Sustainable Humanosphere, Kyoto University until 2019. In addition to using his knowledge of measurement, control, and communications to develop new radar observation technology, involved in research directly connected to solving social issues, and developed a high-performance coherent Doppler Lidar which fully exploits developments in state-of-the-art measurements technologies and devices. Also conducts many initiatives to bring about social application of the results of research in order to contribute to society. A doctor (informatics) and engineer at Kyoto University.

■ Business Introduction

- * Development, manufacture and sales of atmospheric observation devices using remote sensing technology.
- * Marketing and the provision of solutions combining meteorological information and IoT.
- * Provision of meteorological observation and prediction data, and information supporting disaster-prevention operations.

Please tell us about your company.

We, Metro Weather Co., Ltd. are a startup founded in Kyoto in May 2015 with the vision "to be the world's No. 1 wind infrastructure by observing and analyzing wind anywhere under any conditions, and by continuously providing the best solutions." We aim to discover innovations and create new industries in the field of atmospheric science.

We boldly challenge to develop advanced technologies bringing about discontinuous technological innovation, with the following three goals: to discover potential needs to develop new markets; to create new value by discovering and removing true pains to be always close to customers; and to solve energy problems to contribute to global society.

How and why did you start a business?

It was when I conducted research on grated winds in the Kosei area of Shiga Prefecture at university. When I tried to measure the wind over Lake Biwa using a Doppler Lidar to measure the wind direction and velocity distribution in the atmosphere, I was not able to measure it at all.

A new Doppler Lidar was quite expensive in the 2010s, about 300 to 500 million yen per unit. I decided to start a business to produce my own device, with the aim to bring about social application of the results of research, because I had knowledge of developing new radar observation technologies that utilize knowledge of measurement, control, and communications.

The image shows the Metro Weather logo and slogan. The logo consists of the words "METRO WEATHER" in a bold, white, sans-serif font, with "METRO" and "WEATHER" stacked. Below the logo is the Japanese slogan "風を制し、空の安全を守る。" (Control the wind, protect the safety of the sky.) in a smaller white font. The background is a dark, abstract image with blue and white patterns, possibly representing wind or data visualization.

METRO WEATHER

風を制し、空の安全を守る。

I believe that a new industry will be created in future if we could provide a Doppler Lidar at a reasonable price to make it easier to be used in society.

Please tell us about your business.

Our compact Doppler Lidar "Wind Guardian" and our high-resolution wind forecasting system "Wind Foresight" enable us to visualize wind conditions in cities, which are the infrastructure of the skies, in real time. We support the safety of drones and aircraft by measuring and predicting wind conditions, and contribute to the environmental energy field including the wind power generation market, as well as to the disaster prevention field by predicting torrential rains and gusty winds.

What is the social situation surrounding your company and the value you can provide in that situation?

Recently, the Civil Aeronautics Law has been revised in Japan, and the drone business is expected to expand. The infrastructure of the skies is essential for drones to fly over the skies, and the wind observation has also expanded its demand. Furthermore, we expect the combination of our unique weather forecasting simulations with them will contribute in a wide range of fields, including urban disaster prevention, wind power generation, and aviation, marine and rail areas.

Our unique technology makes our Doppler Lidar compact and lightweight, whose price is one-tenth of the conventional ones yet whose measurable distance is twice competitors' ones, even in poor weather conditions making competitors' ones unmeasurable. We work on further miniaturization and development of a mobile-mounted Lidar (mounted on vehicles, aircraft, helicopters, and drones) to meet the society needs. If introduced at regional airports that currently do not adopt due to budgetary difficulties, it is expected to expand the market more than 30 times its current size. We aim to enter it into the U.S. market in future, which has more than 10,000 regional airports.

In addition, as the measurement and management of wind conditions resembles infrastructure businesses, I see our business goes well together with mobile phone industry, in which companies manage multiple base stations in various locations. If we collaborate with mobile phone companies to mount devices on towers and pylons at base stations, we will be able to efficiently collect data over a wide area. Building a relationship with the government, we also plan to use the accumulated wind condition data for urban disaster prevention in future.

We aim for an IPO in Japan in 2026, followed by a listing on the NASDAQ market in the U.S..

Why did you start a business in the Keihanshin area?

Because our business uses technology that has been researched and developed at Kyoto University for about 30 years.

I found geographic disparities when I first started my business since many venture capitalists and potential customers are located in Tokyo, but in recent years, I see geographic disparities are decreasing along with the popularization of online meetings in society.

Please tell us about the past collaborations with other companies, governments, and universities.

In November 2020, we collaborated with NTT Communications Corporation to build a real-time wind condition information system and conducted a demonstration experiment for the stable operation of drones. As for government relations, we have collaborated with Kyoto Prefecture, Osaka Prefecture and Osaka City, and for universities with Kyoto University, to develop new Doppler Lidar and create new businesses.

Please give your expectations and messages to the banks in Keihanshin area.

We are still a small startup, so would appreciate their accompanied support.

Please give your expectations and messages to venture capitalists.

Expanding our business to the U.S., we aim to be listed on the U.S. market. We would appreciate very much their investment in our company.

Please give your expectations and messages to companies that are positive about investing in ventures.

We would like to work together and build a win-win relationship with each industrial company.

What challenges and issues do you face in financing in the Keihanshin area?

We necessarily tend to search first in the Tokyo area because more venture capitalists are located in Kanto area.

Which company do you respect?

Tesla.



Phillip Vincent, Managing Partner, East Asia /
CEO of Plug and Play Japan

Phillip is the Managing Partner of Plug and Play East Asia and CEO of Plug and Play Japan, a subsidiary of Plug and Play Tech Center located in Silicon Valley. He is also a board member of Plug and Play Asia region, focused on East Asia. In 2014, he started working at Plug and Play in Silicon Valley, headed both the IoT and Mobility verticals before moving to Tokyo to launch Plug and Play Japan in 2017. Plug and Play Japan is focused on creating the largest innovation platform in Japan, connecting startups and corporations worldwide with offices in Tokyo, Kyoto and Osaka.

Prior to working for Plug and Play, Phillip worked for Uniglobe Kisco, the U.S. subsidiary of KISCO, a large Japanese trading company. Phillip was an Account Executive in charge of business development between Japan and the U.S. He graduated from San Diego State University.

Foreign Investors' High Expectations for the Japanese Startup Market

Please tell us about the potential of and expectations for the startup market in Japan.

Compared to 2017, when our Plug and Play Japan office was established, I feel that it has developed significantly. Tokyo, the capital of Japan, is ranked high in the Global Startup Ecosystem Ranking published by Startup Genome, a US-based innovation research firm.

Why are foreign investors so interested in your business?

I believe there are four main reasons. First, major companies actively collaborate with startups. We support open innovation at major companies, and have partnerships with

more than 50 companies in Japan and nearly 70 Japanese companies in Silicon Valley. Secondly, local governments and private organizations as well as the government have made a concerted effort to support startups. Thirdly, the government has provided generous support for startups to expand overseas. Finally, universities actively invest in and grow entrepreneurs. I see such a growing momentum as mentioned above in the domestic startup market.

Ease of Collaboration Unique to Keihanshin area (Kyoto, Osaka, and Kobe)

Now I would like to ask you about Keihanshin area. Plug and Play Japan has established an office in Kyoto next to in Tokyo. Please tell us why.

When we were considering the location of our second office, I have seen a growing momentum in the local government support for startups. The government of Kyoto City, in particular, enthusiastically talked to us about the formation of an ecosystem community. I also found a sense of unity throughout the region as a characteristic of Kyoto, rather than a scattering of small communities.

Please tell us about some cases of collaboration in Kyoto

We run a global incubation program in collaboration with Kyoto Prefecture. The program intends that MBA students and graduate students in Japan and abroad can produce Kyoto-based startups by connecting students who are motivated to run a business with them. We have continued similar projects for several years.

What characteristics do you feel are unique to Keihanshin area?

Everyone has strong feelings for their hometown. Proceeding a project to support a startup, I find that the managers and investors show great interests in the project if they are from the same university as the representative of the startup. We are an innovation platform, offering a system that attracts many companies to facilitates innovation. In that sense, I find it easy to proceed with various projects in Keihanshin area.

Forming an Ecosystem in Keihanshin Area to Produce Unicorn Companies

What do you think is necessary to produce more unicorn companies in future?

I think we need three stages to support startups: to increase, to grow, and to scale up. The first stage, "to increase," is to educate people to become entrepreneurs. We tend to think of becoming an entrepreneur as difficult, so we need to lower the bar. The second stage, "to grow," is to support the startups from the early stages of their business. We need to increase the number of angel investors, accelerators, incubators, and other startup support organizations like us. And the final stage, "to scale up" support is also important. In Japan, listing on Mothers is one way of exit, however, it can be a bottleneck so that few entrepreneurs aspire to expand their businesses overseas or grow beyond that. That is why it is necessary to create an environment in Japan that allows companies to get Series C and D financing.

Then, what do you think need to produce startups that will become unicorn companies in Keihanshin area?

We need a system and community that attracts major companies and startups. I think it will be easy for major companies to collaborate with startups to create innovation by using the 2025 Osaka-Kansai Expo as a milestone. It would be nice to have an ecosystem where startups in Keihanshin area can meet advisors and mentors and can collaborate with and be invested in by major companies without going to Tokyo. We would like to cooperate to form a community.



Keisuke Miyoshi, President & CEO and Partner of JAFCO Group Co., Ltd.

Mr. Miyoshi has nearly 30 years of experience in startup investment and growth support. His recent major investments include LayerX, Timee, and Zeals. Since 2013, he has been overseeing the overall VC investments as director in charge of the domestic VC division, including university-launched ventures such as Riverfield and Synplogen. He has been in the current position since April 1, 2022.



Mizuki Takahara, General Manager of the West Japan Branch and Partner of JAFCO Group Co., Ltd.

Mr. Takahara has been in charge of startup investment and growth support outside of Tokyo. He was appointed the General Manager of the West Japan Branch (current position) in September 2021 and Partner in June 2022. His major investments include WonderPlanet, Microwave Chemical, and Next Innovation. In addition to his track record of IPO and M&A exits, he also has fundraising experience. He is engaged in a wide range of activities to support entrepreneurs in various regions, including the Japan Startup Support Association and the Startup Acceleration Program in Osaka.

Wave of Change in the Japanese Startup Market Caused by Changing Values

Mr. Miyoshi, you have been an active venture capitalist for many years. Please tell us about the potential of and expectations for the startup market in Japan.

Miyoshi : I have seen a very big change in the last 5 to 10 years. The most significant factor is the changing values of the Japanese people. Our traditional success model as a country has been to grow talented people throughout society, who join good companies and work there for a long time to grow

the organization, and eventually grow the country. This value is changing in response to the wave of globalization. Each and every one of us has come to review our own ways of life. For example, an increasing number of people appear to choose how they work based on what they truly want to accomplish, such as joining a startup to take on a challenge. The growth speed of startups is accelerating, which at the same time solidifies the foundation for globalization in Japan.

Keihanshin area (Kyoto, Osaka, and Kobe) thrives as geographic disparities decrease

It seems necessary to tell the world about the changes in the Japanese market. Now, please tell us about the potential of and expectations for the startup market in the Keihanshin area.

Takahara : I think the area has great potential. More than 100 fundraising activities take place each year, which is on a steadily upward trend and has still room for growth.

As remote work has taken root due to the COVID-19 pandemic, even if your business is based in the Keihanshin area, the geographic disparities in business and employment opportunities have decreased. I believe that the area will further demonstrate its potential.

While disparities between Tokyo and the Keihanshin area have eased, what characteristics do you feel are unique to the Keihanshin area?

Takahara : I think one of the characteristics is a large number of university-launched startups. Our investments include Kyoto Fusioneering from Kyoto University, conducting R&D of advanced technologies to realize nuclear fusion reactors, Microwave Chemical from Osaka University, conducting R&D of microwave chemical processes, and Synplogen from Kobe University, conducting R&D of DNA synthesis technology. Each university has its own unique characteristics and enhanced support systems, resulting in the birth of unique university-launched startups in recent years.

Miyoshi : Each area of Keihanshin has its own unique culture. As the three areas are not far apart, their respective cultures and people interact with each other, forming new values. I believe that this leads to the creation of something that never existed before.

Activating the Ecosystem to Produce Unicorn Companies

What do you think is necessary to activate the Keihanshin area further, which is characterized by many university-launched startups?

Miyoshi : I think we need collaboration of the government and local communities in addition to support from universities. For example, the Port Island in Kobe has many research institutes as well as universities, which attract people from various industries. I think the resultant concentration of start-ups in this area invigorates interaction and eventually form an industrial cluster, which attracts venture capital funds.

Takahara : I think it all comes down to building a framework for disseminating research at each university. As we are seeing a number of university-affiliated venture capital funds and industry-academia collaborations, I have high expectations for the situation to improve.

I think the story behind the founding of Kyoto Fusioneering, a Kyoto University-launched startup, gives us a hint. Originally, research on nuclear fusion technology had been ongoing for many years in the university. The professor, who was motivated to start his own business, met his co-founder at a matching event between researchers and businesspersons. I think the success rate of university-launched startups and the number of researchers starting up a business would increase if we integrate databases of researchers and university alumni professionals. I hope to see a number of startups expanding overseas from the Keihanshin area.

Future Prospects

Support Phase to Help the Birth of Unicorn Companies

Accelerate the birth and growth of globally active startups.

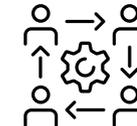
Support the birth and growth of startups taking advantage of the Expo and continuously work toward the future through collaboration with Osaka, Kyoto and Hyogo-Kobe under Kansai Startup Mashups.



Commercialization of University
Research Seeds



Cultivation of Globally Active
Entrepreneurs



Matching with Chief x Officer
Human Resource Candidates



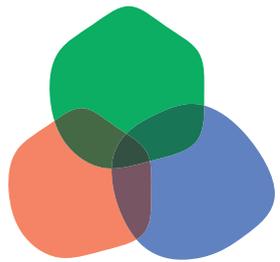
Matching with VC and CVC



Regional Collaboration to
Support Startups



Networking with Overseas
Investors and Supporters



**Kansai Startup
Mashups**

& you

Kyoto-Osaka-Kobe Startup Ecosystem

