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**Diversity of regions; is it the key to the global world?
KRP's perception of Kyoto for connecting regional
potentials**

Parallel session

The impact of STPs and AOs

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Hosted by:



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Executive Summary

The global world is getting more flat than ever. In such a flat world, diversity of the regions will be the key for better world.

In this paper, we will introduce what kind of unique features are there in Kyoto and what kind obstacles are there to overcome. Also, the business creation process model at Kyoto will be identified according to the characters and obstacles of Kyoto, which will best describe the Innovation Ecosystem in Kyoto. We will also introduce the activities of Kyoto Research Park to contribute to the Kyoto's Innovation Ecosystem.

We have introduce 3 impact factors of the region; 1) Creating Working population, 2) Creating Business Startups, and 3) Supporting Globalization. We will provide examples of our activities to bring impact. We will also introduce our latest challenge in supporting the globalization and possibilities for mutual collaboration between the STP&AI community.

1. Introduction: need for diversity of regions

1) The global world is getting more flat than ever

Due to the technological evolution by the internet, the global world is getting more flat than ever. People all over the world use Google and equivalent services to search their keywords, and spread their friendship using Facebook. E-mails depart and arrive at your mailbox 24/7, and you can even hold a face-to-face like meetings using Skype although you are thousands of miles away from each other.

In a world like this, information and ideas spread instantly throughout the world. People are looking after those ideas and racing to become the first one to start new business from it.

By connecting the world, many of our basic technologies becomes standardized. Everyone uses iPhone and buy their merchandise from Amazon. Thanks to the new technologies, we are facing convenient society which we have never experienced before.

2) Diversity for better life

But as the world becomes more and more convenient, we start to become conscious to the importance of difference among each other. People now long for different cultures and different lifestyles from themselves. In order to encounter and experience such differences, people start travelling to places where they have never gone to, and start searching for information which they have never heard of. Such new discovery will enrich their lives, and become new hints to innovation. In other words, as the world becomes more flat, people becomes more interested in diversity.

Each region in the world has different back ground from one another. If each region can take advantages of their characteristics, and connect with one another, then we can contribute to realize a more diverse society.

In order to start the action, we will introduce our hometown, Kyoto. We will describe what kind of characteristics Kyoto has. We will also uncover the obstacles which Kyoto faces. Then we will introduce what KRP is working on to solve the obstacles and to connect the regions. We hope for the STP&AI community to join our challenge by Kyoto and KRP to help make a better world.

2. Kyoto: hometown of Kyoto Research Park

1) Introduction of Kyoto

Kyoto is a beautiful and historical city located in the center of Japan. It is located approximately 500km west of Tokyo, the capital and the largest city of Japan. (Fig.2.1.1)



Fig 2.1.1 Location of Kyoto
Source: Craft Map

Kyoto had been capital and the cultural center of Japan for over 1,000 years from 794 to 1869. Now, it is home to approximately 1.5 million citizens and is the 7th largest city in Japan in terms of population. Kyoto, along with Osaka and Kobe, is the center of Kansai region.

The main part of the city is very compact. As the remains of the ancient capital, the city plan of the central district is like a chessboard, with streets running north-south and east-west. The main parts of Kyoto will fit inside a 10km square, and the best transportation method to move around is bicycle. The city is surrounded by mountains on 3 sides, the opening on the south side. You can easily access nature; a half an hour drive will take you in to the midst of the mountains. So you can spend a rich daily life as well as the business life at Kyoto.

2) Industrial features of Kyoto

We will now take a look into the industrial structure of Kyoto. We will first compare the industrial structure of Kyoto and Japan in Fig. 2.2.1. The largest industry in Kyoto is Services (21.1%) followed by Manufacturing (19.8%), Real Estate (16.5%). As compared with Japan, the ratio of the top 3 industries is higher than that of Japan.

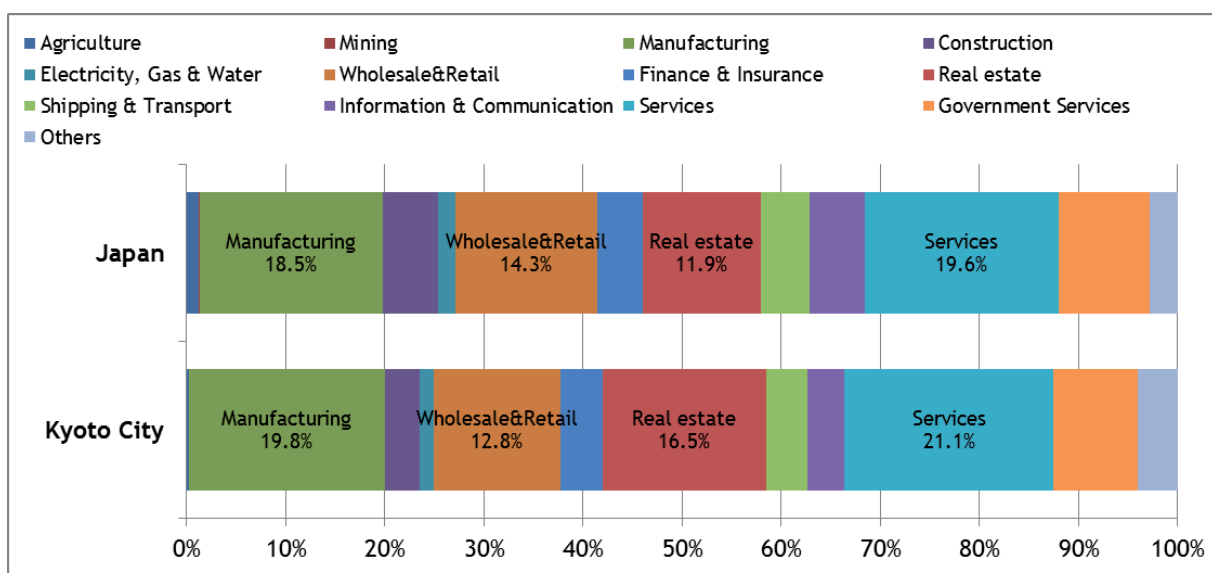


Fig.2.2.1 Gross National (Regional) Product Comparison: Japan & Kyoto City

Source: "Economy of Kyoto City 2015", Kyoto City

Next, we will compare the industry strength of 12 Major Cities in Japan. Fig 2.2.2 shows the employee comparison between industries of the 12 Major Cities. This data compares how much employees the city holds to that of the average. So, if the number is high, then it means that the industry holds more employees than other cities. Taking look at Kyoto, the number is high on Education (1.7), Manufacturing (1.5), Accommodation (1.3), and Medicine & Welfare (1.3). This matches the industrial image of Kyoto, being known as the city of Academia, manufacturing, and tourism. We will take a look at each image later.

Industries	Sapporo	Sendai	Saitama	Tokyo	Yokohama	Kawasaki	Nagoya	Kyoto	Osaka	Kobe	Hiroshima	Fukuoka
Construction	1.3	1.5	1.2	0.9	1.1	1.1	1.1	0.7	1.0	0.7	1.2	1.1
Manufacturing	0.5	0.5	1.0	0.9	1.2	1.8	1.2	1.5	1.2	1.5	1.2	0.5
Information & Communication	0.6	0.6	0.3	1.5	0.6	0.9	0.6	0.3	0.9	0.3	0.5	0.8
Shipping, Transport	1.0	1.1	1.1	1.0	1.1	1.1	0.9	0.8	0.9	1.3	1.2	1.2
Wholesale, Retail	1.0	1.1	1.0	1.0	0.9	0.7	1.0	1.0	1.1	1.0	1.0	1.0
Finance, Insurance	0.8	0.9	1.0	1.3	0.6	0.4	0.8	0.7	1.0	0.6	0.8	1.1
Real estate	1.1	1.0	0.9	1.1	0.9	0.8	0.8	0.9	1.1	0.8	0.9	0.9
Research, Special Services	0.8	0.8	0.7	1.2	1.0	1.3	0.8	0.7	1.0	0.7	0.8	0.8
Accommodation, Food&Beverages	1.0	0.9	1.0	0.9	1.0	1.0	1.1	1.3	1.0	1.2	0.9	1.1
Entertainment	1.2	1.0	0.1	0.9	1.1	1.1	1.1	1.1	0.9	1.1	1.0	1.0
Education	1.0	1.4	1.1	0.9	1.1	1.0	1.1	1.7	0.6	1.1	1.0	1.2
Medicine, Welfare	1.5	1.2	1.2	0.7	1.5	1.2	1.0	1.3	0.9	1.5	1.3	1.2
Other Services	1.1	1.1	1.2	0.1	0.9	0.8	1.0	0.7	1.1	0.8	0.9	1.1

>1.5
>1.3
>1.2

Fig.2.2.2 Employee Comparison of each industries: 12 Major Cities in Japan

Source: “Internationally recognised Kyoto Companies”, Japan External Trade Organization(JETRO), Mar.2015

3) Characteristics of Kyoto: Tourism

Now we will look into the key characteristics of Kyoto. First characteristic is Tourism.

Kyoto is highly recognized in Japan and the world as the tourist city. The major reason for this is the rich history of Kyoto being the capital city.

Since 9th century, Kyoto has been the origin of the Japanese culture, and variety of arts and crafts have been produced. Emperors and Aristocrats have not only been the users but have also been producers and experts of arts, crafts, gastronomy, fashion and other cultures. Many skilled craftsmen were fostered in Kyoto to meet their high demands enabling the hand manufacturing industry to grow. They still retain their fame as the international brands. One example is WASHOKU, the healthy and tasty Japanese traditional gastronomy, which has been registered as the Word Heritage by UNESCO in 2015.

As the resemblances of the former capital, 17 temples and shrines have also been registered as the World Heritage by UNESCO. As mentioned before, the city is surrounded by mountains on 3 sides, from east to north to west, forming a small basin. Therefore, you can enjoy the seasonal landscape of the mountains while spending a daily life in the middle of the city.

These characteristics have attracted more than 50 million tourists per year to this beautiful city and also have attracted the judges to be certified as the “World’s Best City” by TRAVEL+LEISURE magazine for two consecutive years in 2014 and 2015.

4) Characteristics of Kyoto: Academia

Second characteristic of Kyoto is the Academia. Of the 1.47 million citizens of Kyoto City, more than 10% are university and college students. In Kyoto Prefecture, there are 48 Universities, Colleges, and Junior Colleges. The large population of highly educated people is a

distinguishing characteristic of Kyoto.

Of these universities, most well-known is the Kyoto University. As a research university, it has won international acclaim as in the field of Biotechnology, Material, Chemistry, Medicine and others. For example, in the field of Biotechnology, Kyoto University is the world leader in the research of iPS cells. Other universities are also highly regarded as the research universities.

5) Characteristics of Kyoto: Manufacturing

Third characteristic is the Manufacturing. By observing the Industrial structure of manufacturing industry in Fig. 2.5.1, we can see that different industries are well balanced and not dominant. Also, we can observe that fairly light industries industrial/transportation /electric machine & devices, and electronic components are there but no heavy industries such as steel, aviation, and ship cannot be seen. One of the reasons for this is because Kyoto is an inland city. It does not have coastline or large industrial spaces. Therefore, it is difficult to build large factories. So Kyoto had to go to more lightweight manufacturing such as electronic components and other businesses.

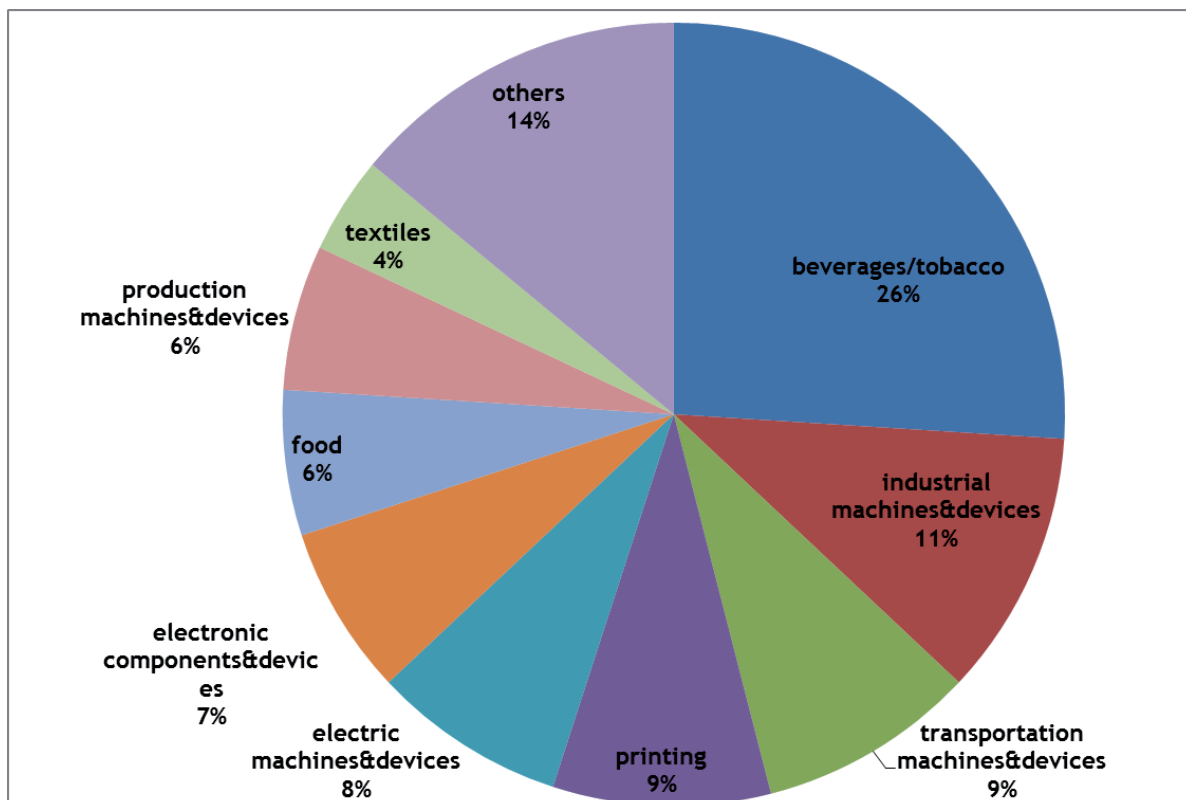


Fig.2.5.1 Industrial structure of manufacturing industries at Kyoto City (product shipment value)
Source: "Internationally recognised Kyoto Companies", Japan External Trade Organization(JETRO), Mar.2015

Also, many Kyoto companies have #1 global share products. For example, Smartphone

components such as ceramic condensers are dominated by MURATA Corporation. Such market dominant companies include, KYOCERA, NIDEC, and ROHM. Also, many other Kyoto companies have strength in evaluation and analytic instruments.

Not only the global companies but also SMEs are very strong in Kyoto as well. Group of SMEs specialized in precision processing technology form a group called “Kyoto SHISAKU Net”, meaning prototyping network. They form a team to tackle clients’ imagination and demands. Through consultation, the team evaluates which technology best fits the demands. They breakdown these technologies into each technological components so that they can decide which members will provide solution to the demanded process. They work together as a team, so that clients need not to make blueprints for each component. The “SHISAKU Net” will provide chances to customers to make their dream come true.

6) Characteristics of Kyoto: Sustainability

The forth character is the Sustainability.

Kyoto Prefecture certifies and commemorates the long lasting companies when they become 100 years old. They have certified more than 1800 companies so far. These companies have survived drastic changes along the way by self-innovation.

Common factors to these long life companies are “philosophy” and “innovation”. Many of these companies are family owned enterprises and have a corporate philosophy which has been descended by the head of family for generations. The corporate leaders are to pass their business to the next generation while maintaining good trust between the customers. They also make continuous effort of self-innovation to meet the changes from time to time. To do so, they identify their core competence, usually the key technology, and pivot their way to seek for new products or customers.

Some of these long life companies have even changed their technology into high-tech business. Some examples of these companies are shown in Table 2.6.1. These long life companies have made new innovations while being sustainable.

Company	Original business	Recent business
SHIMADZU CORPORATION	Buddhist altars manufacturer	Analytical instruments, Medical systems, Aircraft equipment
Murata	Kiyomizu pottery manufacturer	Ceramic condensers and other electronic components
FUKUDA METAL FOIL & POWDER CO., LTD.	Gold leaf/powder trader for temples & shrines	Metallic foil and powder applications for electronic components & devices

Table 2.6.1 Examples of Kyoto companies who have transformed their business

3. Obstacles needed to overcome at Kyoto & Japan

In this chapter, we will identify the obstacles which need to overcome at Kyoto. There are four obstacles; 1) Population Decrease, 2) Entrepreneurship Mindset, 3) Business Exit, 4) Globalization. These obstacles are common to whole of Japan as well.

1) Population Decrease

Japan is rapidly entering into an aged society. Fig.3.1.1 shows the population pyramid of Japan. From the pyramid, we can observe that the population of younger generation is gradually decreasing from age 40 and younger. This means that we will have a decrease in the working population and that the pension costs for the working population will keep on rising.

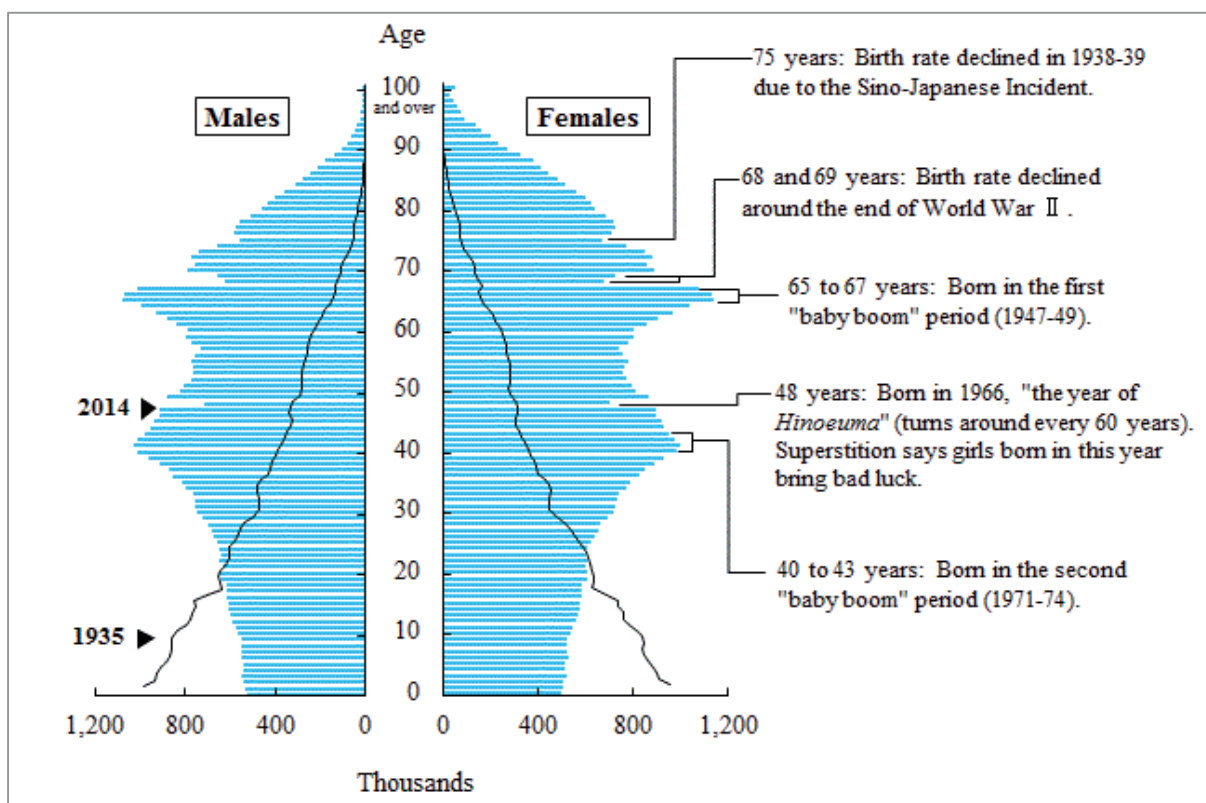


Fig. 3.1.1 Population Pyramid of Japan

Source: "The Statistical Handbook of Japan 2015", Statistics Bureau, Ministry of Internal Affairs and Communications

The main reason for the decreasing population among the young generation is the low birth rate. Why does the birth rate go down? One reason is the decrease in the household income. Ministry of Internal Affairs and Communications have been taking household surveys. By observing the statistics, we can see the changes in the households.

JPY			JPY			JPY			
Year	Income	Expenditures	Expenditures	Consumption expenditures	Non-consumption expenditures	Consumption expenditures	※Daily expenditures	Culture & recreation	Other consumption expenditures
2000	562,754	430,239	430,239	341,896	88,343	341,896	219,430	33,796	88,670
2015	525,669	413,778	413,778	315,379	98,398	315,379	220,686	30,364	64,329
rate 2015/2000	93.4%	96.2%	96.2%	92.2%	111.4%	92.2%	100.6%	89.8%	72.5%

※ Food, Housing, Fuel/light&water, Furniture&households, Clothing, Medical Care, Transportation&Communication, Education

Table. 3.1.2 Household survey of Japan

Source: “Yearly Average of Monthly Receipts and Disbursements per Household - Workers' Households (2000 ~2015)”, Statistics Japan

Table.3.1.2 shows the Incomes and Expenditures of typical household in Japan. From this table, we can observe that household budget has become very tight in the last 15years. The income is going down while the tax goes up. But at the same time, the daily expenditure did not drop with the income. In such a situation, it is difficult to say to the young generation to have children..

Trends in Population (as of October 1)

Year	Population (1,000)		Age composition (%)			Rate of population change (%)	Population density (per km ²)
	Males	Females	0-14 years	15-64	65 and over		
1872 ¹⁾	34,806	17,666	91
1900 ¹⁾	43,847	22,051	33.9	60.7	5.4	0.83	115
1910 ¹⁾	49,184	24,650	36.0	58.8	5.2	1.16	129
1920	55,963	28,044	36.5	58.3	5.3	1.30	147
1930	64,450	32,390	36.6	58.7	4.8	1.42	169
1940	71,933	35,387	36.7	58.5	4.8	1.10	188
1950	84,115	41,241	35.4	59.6	4.9	1.58	226
1955	90,077	44,243	33.4	61.2	5.3	1.38	242
1960	94,302	46,300	30.2	64.1	5.7	0.92	254
1965	99,209	48,692	25.7	68.0	6.3	1.02	267
1970	104,665	51,369	24.0	68.9	7.1	1.08	281
1975	111,940	55,091	24.3	67.7	7.9	1.35	301
1980	117,060	57,594	23.5	67.4	9.1	0.90	314
1985	121,049	59,497	21.5	68.2	10.3	0.67	325
1990	123,611	60,697	18.2	69.7	12.1	0.42	332
1995	125,570	61,574	16.0	69.5	14.6	0.31	337
2000	126,926	62,111	14.6	68.1	17.4	0.21	340
2005	127,768	62,349	13.8	66.1	20.2	0.13	343
2010	128,057	62,328	13.2	63.8	23.0	0.05	343
2011	127,799	62,184	13.1	63.6	23.3	-0.20	343
2012	127,515	62,029	13.0	62.9	24.1	-0.22	342
2013	127,298	61,909	12.9	62.1	25.1	-0.17	341
2014	127,083	61,801	12.8	61.3	26.0	-0.17	341
(Projection, January 2012)							
2020	124,100	60,146	11.7	59.2	29.1	-0.42	333
2030	116,618	56,253	10.3	58.1	31.6	-0.62	313
2040	107,276	51,583	10.0	53.9	36.1	-0.83	288
2050	97,076	46,657	9.7	51.5	38.8	-0.99	260

1) As of January 1.

Source: Statistics Bureau, MIC; Ministry of Health, Labour and Welfare; Ministry of Land, Infrastructure, Transport and Tourism.

Table. 3.1.3 Trends in Population

Source: “The Statistical Handbook of Japan 2015”, Statistics Bureau, Ministry of Internal Affairs and Communications

2) Entrepreneurship mindset

Next, we will look into the entrepreneurial mindset. Japan is not doing so well in this field either. The “2014 White Paper on Small and Medium Enterprises in Japan”, reports about the new business by the Japanese entrepreneurs. From the report, 3 problems arise: lack of young

entrepreneurs, low business entry rate and lack of business skills.

Of the entrepreneurs, number of senior entrepreneur is rising, but the number of younger generations below age 30 is decreasing. The number rise by the senior is that the baby boom generation which were born after the World War II they are reaching retirement age. On the other hand, the younger generation feels more comfortable working for companies rather than starting a business on their own.

One reason for this is the parent's wish. The parents want their children to live a stable life. They want to avoid risks for their children. Second is the mindset of the universities. With the population decline, universities are forced to compete with each other to acquire students. To attract students and their parents, universities must be able to show that they are able to have students find good jobs. So the employment rate of the graduates is now becoming a deciding factor to attract new students. In this situation, it is difficult for universities to encourage their students to become entrepreneurs.

Next is the low business entry rate. Fig. 3.2.1 shows the rate of business entry and exits in Japan, United States, United Kingdom, Germany, and France. The figure shows that the Japan is less than 1/3 in the business entry rate in year 2012. On the other hand, exit rate is also low in Japan. The entry and the exit rates balance each other fairly well with all countries. From this result, we can assume that the more you enter, the more you exit.

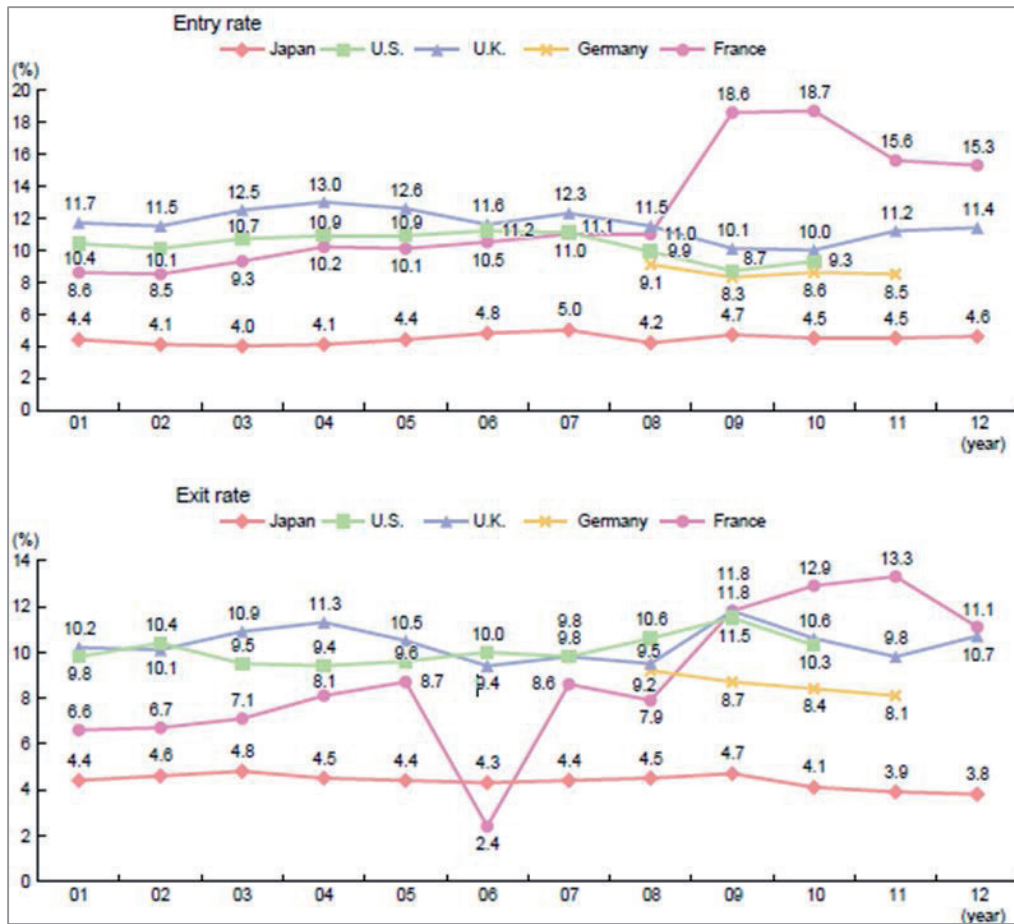


Table 3.2.1 Rate of business entries and exits for Japan and other countries
 Source: “2014 White Paper on Small and Medium Enterprises in Japan”, National Association of Trade Promotion for Small and Medium Enterprises

Now we will look in to the 3rd problem, the lack of management skills. This is in relation to the university’s mindset. The university put more effort in supporting the students to find a job rather than to start their own business. There are courses to teach entrepreneurship but it is not necessary to take the course. Therefore, unless the student is well esteemed, it is difficult to learn about the management skills at universities.

A mixture of the problems mentioned above is the trigger to this obstacle of the entrepreneurship mindset.

3) Business Exit

Once you overcome the entrepreneurship mindset obstacle, you will be facing the next obstacle of finance. In Japan, about 30% of the entrepreneurs must provide personal guarantees for acquiring initial money for starting up. This is due to the small alternatives to choose from. One must rely on bank loans or their families to raise money to start a new business.

The banks will require personal guarantee from entrepreneurs or their families when the credit capability is low. It will lower risk for banks, but raises more risks for the entrepreneurs. Entrepreneurs must fight with the fear of additional payment of personal guarantee even after bankrupt.

One of the reasons to this situation is the lack of initial venture funding in Japan. This is due to the small exit option for the venture funds. When venture funds make an investment, they must know the way to monetize the investment within a certain period of time. Major monetizing options are IPO, M&A, and a share buyback by the shareholders. In Japan, unfortunately, buyback by the shareholder is the biggest option for the funds. The share buyback accounts for the same percentage as to the IPO and M&A options added together. In this sense, venture funds do not feel an incentive to invest in such an early and risky stage.

So the lack of exit options for investor is another obstacle for entrepreneurs.

4) Globalization

The last obstacle is the globalization.

First of all, there is a language problem. Most Japanese are almost frightened to speak English. One reason for this is the grammatical one. School teaches English as an exam subject, meaning that you are not allowed to make grammatical mistakes. For this reason, many Japanese feel that they should not speak if there is a risk of making mistakes. Another reason is that Japanese rely on non-verbal communication more often. They have been raised in a culture where one should feel the atmosphere before speaking out, so they are not used to expressing in verbal form. This may be one of the reasons why Japanese are reluctant to attend international conferences.

Second reason is the domestic market size. Although Japan has been surpassed by China, it is still the world's 3rd largest market. Therefore, if a company can penetrate to get a decent share in the Japanese market, they can make enough money for a small success. Also, Japanese products and services are usually made to meet the special demands by the Japanese customers. The companies are used to this Japanese mentality. So, changing their products and services to meet international standards are often an obstacle for Japanese companies.

4. Kyoto Research Park: the innovation hub of Kyoto

1) Overview of Kyoto Research Park

KRP, opened in 1989, is the first and the only private research park in Japan. The mission of KRP is to vitalize the local economy through innovation support. We do so by becoming the

innovation hub of the region. KRP is located in central Kyoto, and has 380 tenant companies with 4,200 daytime working populations on top of 5.6 hectares of land.

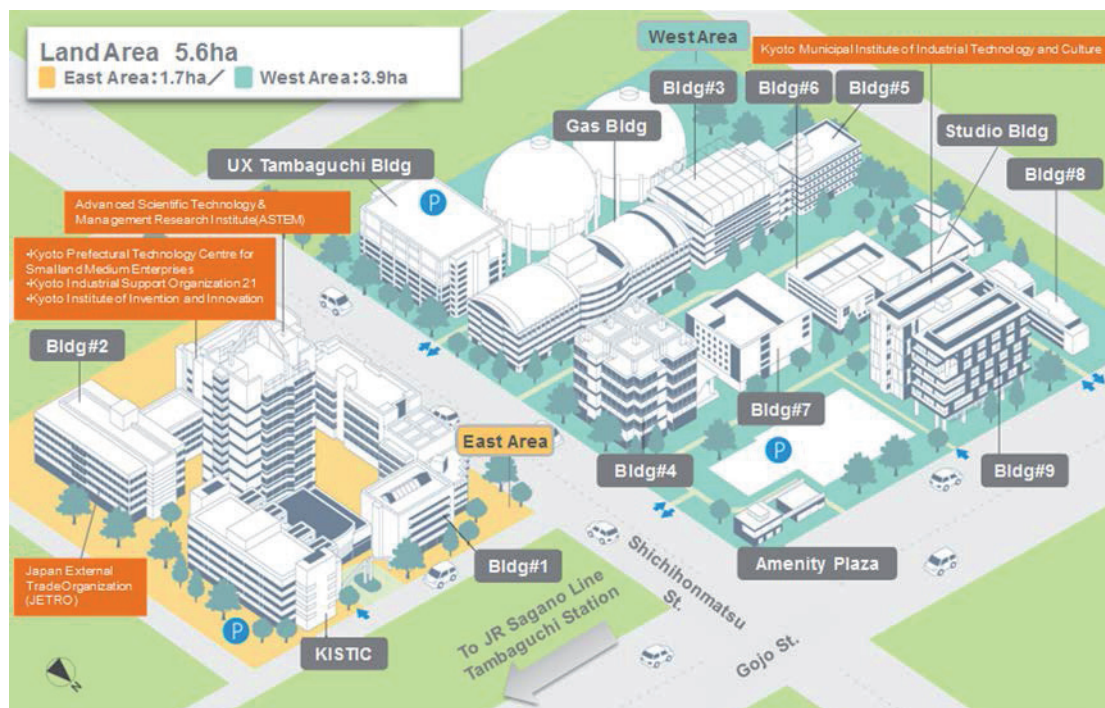


Fig. 4.1.1 Map of Kyoto Research Park

The uniqueness of KRP is that it is owned and operated by private company. By this, we have independence of operation from central/local governments or universities. This independence enables different government supported institutions to co-exist and accumulate in one place. SMEs can enjoy this accumulation, because they can obtain different kinds of support by coming to KRP. The public support institutions residing in KRP are shown in the Table 4.1.2.

Institution	Main Services
Kyoto Prefectural Technology Center for Small and Medium Enterprises	We provide technological support& consultations, testing/analytical instrument rental, and sample analysis to support SME growth in the region
Kyoto Industrial Support Organization 21	We support management renovation, new business challenges by SMEs and entrepreneurs
Kyoto Institute of Invention and Innovation	We provide assistance to obtaining/searching intellectual properties as well as educational support to students about invention and intellectual properties
Kyoto Municipal Institute of Industrial Technology and	We provide research & technology support in the fields of textile-dyeing, fiber/polymer materials, metal, ceramics,

Culture	surface treatment and else to the local SMEs
Advanced Scientific Technology & Management Research Institute (ASTEM)	We provide support joint R&D between industry and academia, as well as venture & SME support in the region
Japan External Trade Organization (JETRO)	We support outbound business challenges by the Kyoto companies as well as inbound investment support for setting Up business in Kyoto

Table 4.1.2 Public supporting institutions residing at KRP

2) Characteristics of KRP

The most distinctive features of KRP are described in Table 4.1.3.

Features	Distinctiveness
Accumulation of public support institutions	Becoming the one-stop service point for local SMEs by offering different support in fields of start-up, management, research, trade, funding, etc.
Accumulation of research institutions	Home to Kyoto University Design School (first graduate faculty of Kyoto University outside of university campus) and other government funded R&D projects
Accumulation of 380 tenants	diversity of different business fields enables tenants to find new partners and collaborate within KRP
Open-lab facilities	Access to state-of-art instrument for very low rental price enables SMEs and researchers to accelerate their research

Table 4.1.3 Distinctive features of Kyoto Research Park

As the operating company of the park, Kyoto Research Park Corp. offers services to realize its corporate motto “Accumulate, Interact, and Create”. Main services provided by operating company are described in Table 4.1.4.

Services	Description
Spatial Services	We offer wide variety of office and research spaces to provide safety & comfort for tenants’ business life. Convention venues are available to host special meetings.
New Business Creation	We aim to fully utilize the existing regional resources and strengths to find new collaboration possibilities leading to new innovation by catalyzing the regional collaboration between local industry, academia, and government. 4 key technology areas: life science, ICT, creative industry, energy & electronics

<p>Business Incubation&Acceleration</p>	<p>We provide support to maximize business growth utilizing our supporting network in Kyoto, Japan and World. As the hub for new business creation, KRP provides: incubation & start-up support, business support, international business support</p>
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Table 4.1.4 Services provided by Kyoto Research Park Corp.

The activities mentioned above are operated under the mission to create new business and new industry from Kyoto. Our aim is to contribute to the Innovation Ecosystem of Kyoto.

3) Kyoto's Innovation Ecosystem

As earlier stated, the key characters in terms of Kyoto industry is manufacturing and sustainability. Especially, sustainable SMEs have built concrete relationship based on trust and quality with the customers. By keeping up to the customer's high expectations, SMEs were able to train and innovate themselves to achieve higher level. The customers will stay loyal to the company, as they are the ones who know the exact needs and through this process, reputation, or brand is formed. Domestically, an admiration to the former capital will put value to the brand, and the reputation by the customers in Kyoto will act as a certification to the outside world promising sustainability and market growth.

This endless training and innovation process by the SMEs over the generation is the key characteristic in Kyoto. Making new innovation from core competence or technology is just like pivoting by the entrepreneurs to make the new product to fit the customer needs. The only difference is the time scale.

The deficit to Kyoto and Japan is the lack of IPO and M&A market. There has been only 1 IPO from Kyoto in the last 7 years. But this does not mean that there are no good companies. Since Kyoto companies put emphasis in sustainability, they simply do not have the need for IPO. Taking this in to account, we have identified the business creation model in Kyoto to be like the model observed in Fig. 4.3.1.

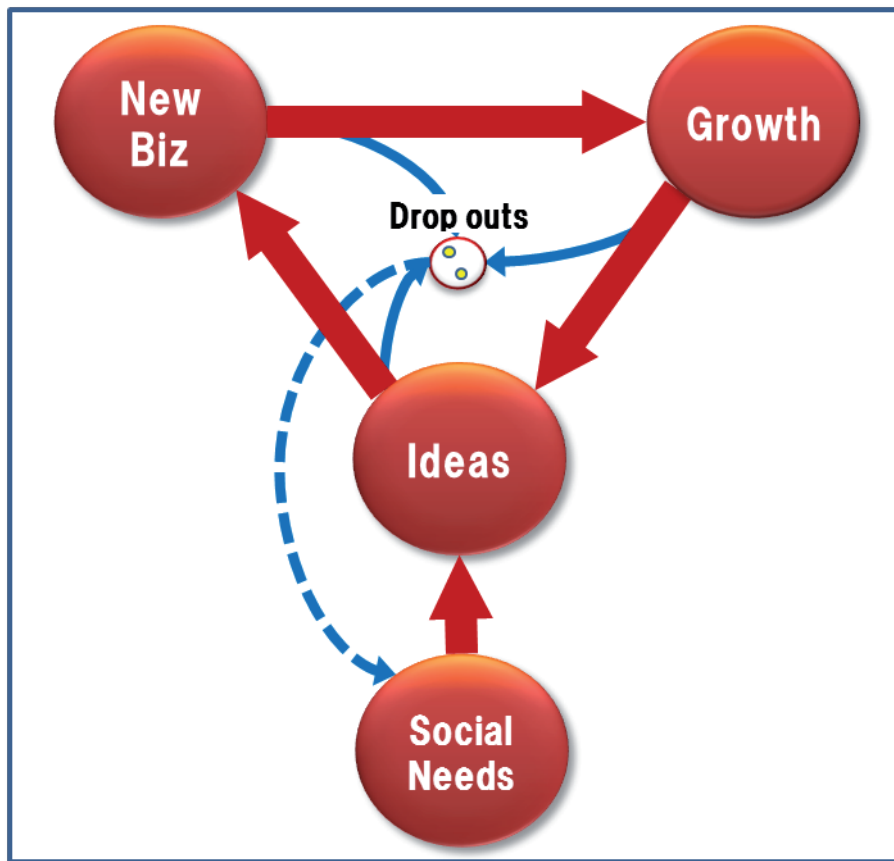


Table 4.3.1 The Business Creation model at Kyoto

Big difference compared to Silicon Valley is that there is no Exit in this model. The grown up company will return to new idea to pivot their way to new innovation. Existing companies are equally important as the entrepreneurs, since the entrepreneur numbers are not enough in Kyoto. The existing sustainable companies are the second source of new innovation. They are the ones who cover the problem of lack of entrepreneurs in the ecosystem by setting the flow from “Growth” to the next “Ideas”. We will call the process the “re-innovation process”

At KRP, New Business Creation activities will support this “re-innovation process”. One example of the activity is the Tissue engineering and regenerative medicine support platform, which we have been described in last year’s paper¹.

We also support the entrepreneurs to proceed through the flow from the “Social Needs” to “Ideas” to “New Business”. Business Incubation & Acceleration activities will support this process. With the Spatial Services acting as the base for both activities, KRP aims to strengthen this model to contribute to the Kyoto’s Innovation Ecosystem.

¹ Makoto Shida, “How can STPs support local manufacturing SMEs to tackle for new innovation in fast growing life science research market? Lessons learned from KRP’s challenge -”, 32nd IASP World Conference

5. Activities by Kyoto Research Park to bring impact to the region and the world

In this chapter, we will describe how we bring impact to the region and the world by focusing to three impact factors of the region; 1) Working population, 2) Business Startups, and 3) Globalization. We will give examples of our activities to each factor

1) Creating working population

First factor is the working population. Working population is closely related with the regional economic activities. As the result of economic activity, companies can hire new employees and their activities will bring more economic activities. Also, new working population will bring more people to the region, and thus help the vitalization of the region.

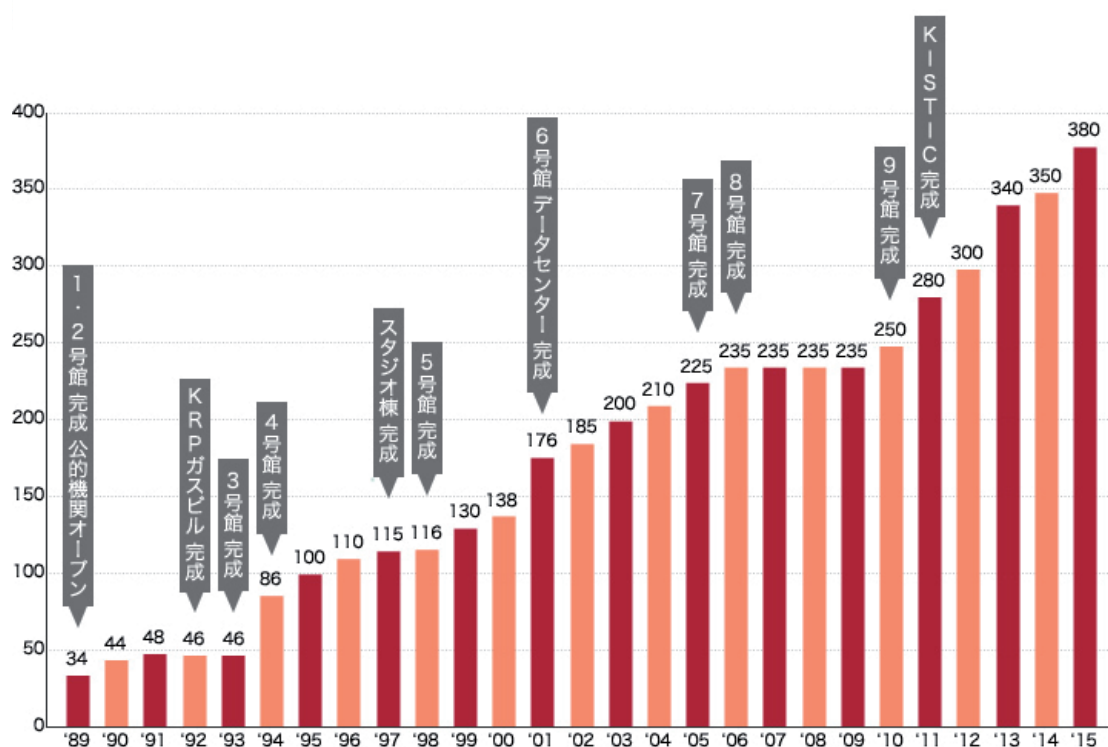


Fig5.1.1 Research Park development and number of tenants at KRP

KRP has taken the step by step approach in the park development since its opening in 1989. The development history can be observed in Fig. 5.1.1. WE can see the tenant numbers increasing as the new building opens. In the last 10years from 2007, the working population has grown from 2,600 to 4,200 in 2016. This is a 1.6 times increase in 10 years.

We have seen recent growth of population in R&D sectors, especially in the biotech and pharmaceutical field. Companies needed facilities which are compatible for R&D activities and at the same time, facilities which are easy to commute by public transportation. With the population on the decrease, it is important to keep high quality employees to stay at their jobs.

KRP has advantages in terms of location, but also has another advantage. Accumulation of Public Institutions provides technological support and open labs to aid company's R&D activities. Companies can save additional investments if the analytical instruments at the public institutions match their needs. These factors, as well as the location sound very intriguing to companies searching for new R&D facilities.

In addition, the accumulation of companies and working population has gained attention of the local government. They are now very collaborative in using KRP as their new industrial accumulation district. The local government is now promoting KRP together with us, which is quite unique taking into account that KRP is a private owned/operated research park. Especially for the promotion of inbound investment to Kyoto of R&D facilities, Kyoto Prefecture and Kyoto City are now working together with KRP being the catalyst which is also quite unique in Japanese local government relationships.

2) Creating Business Startups

Second factor is the business startups. To vitalize regional economic activities, new business creation is essential. New business will bring new employment to the area.

In Japan, this is quite a big obstacle. As described in chapter 3, business entry rate is low and young people are not so entrepreneur minded. At Kyoto, we cover the lack of entrepreneurs by the "Re-innovation process" of existing companies. It is efficient in the sense of keeping the high sustainability of companies in the region. But on the other hand, we need new startups to bring new players to the innovation ecosystem. So it is very important topic for the policy maker in Kyoto.

As stated earlier, initial finance is a very important and difficult theme for entrepreneurs. It would be best if they can self-fund with the savings or prior investments, but this is a very rare case. Entrepreneurs need to find ways to acquire the initial money either from the bank or from the venture funds.

Unfortunately, KRP does not have a financing function. Therefore we need to team up with local banks and venture funds. We have recently set up two schemes to bridge entrepreneurs with financial players. One scheme is an alliance with local banks and the other scheme is an alliance with VCs.

The first scheme is an alliance with the local banks. Banks enlarge transaction opportunities with the companies by becoming their main banks. Existing companies have already chosen their main banks, so it is difficult to cultivate new transactions or become the

new main banks. So they must endeavor to seek for new client candidates. But entrepreneurs have much higher risk of going out of business compared to existing companies. Banks have a dilemma of endeavoring and avoiding risk at the same time. It would be best if they can find good entrepreneurs with a good chance of succeeding their business, but usually, here is heavy competition between the banks. So it is very important to search good entrepreneurs early in a timing early enough to be the first bank encounter for the entrepreneurs.

To support to the needs of the banks, KRP has formed an alliance with the 3 local banks to provide business startup supporting seminars to entrepreneurs. In this seminar, KRP provides individual support to build and brush up the business plans of the applicants. The local banks will have the chance to join this process of brushing up on a voluntary basis. Through this process, banks can obtain abundant information to evaluate the risks and chances of the business as well as the financing demands to start the business. They can use their experience and customer networks to support entrepreneurs to avoid making mistakes in the planning, and provide possible client candidate from the network database which they possess. Entrepreneurs can obtain good advice from the financial professional to brush up their plans and to choose which bank is most suitable as the his or her main bank.

But we still need to take care of the personal guarantee. We have called the credit guarantee association of Kyoto to join the alliance. The association will be the guarantor of the loan once the business goes wrong. The association can join the brush up process to make their own evaluation for guaranteeing the loan or not.

This activity was started in 2015 and 33 applicants have participated so far. 9 have successfully launched their business. Now, Kyoto Prefecture and Kyoto City is giving certifications to enable application to additional startup support such as tax deduction, setting up supporting programs to support the applicants who have completed the seminar.

The second scheme is the alliance with Venture capital. The Japanese government has set up a program to support technology oriented venture companies. In this program, NEDO, a government agency certifies several VCs as Technology Commercialization Program certified Venture Capitals (TCP VCs). When these certified TCP VCs make investments to technology oriented venture companies, NEDO can grant R&D money to the invested companies. The ratio of investment and grant is 15:85 maximum. Therefore, entrepreneurs can obtain extra R&D money along with the investment by the VCs, and VC can lower their risk by reducing their investment amount.

KRP has recently formed an alliance with SARR/Tech RANCH, a certified TCP RP in Kyoto. We have set up an accelerator called "Technology Startup Accelerator (TSA)" in which SARR/Tech

RANNCH is one of the alliance partner. SARR/Tech RANCH is a joint VC between SARR, located in Kyoto, and Tech RANCH, an accelerator in Austin Texas. They can provide mentoring support as well as bridge to American market. Other Venture capitals and supporting institutions are joining the alliance to provide more efficient support to the entrepreneurs.

3) Supporting Globalization

Third factor is the globalization support. As described previously, many Japanese SMEs were reluctant to endeavor the global market due to language barriers and domestic market size. But as the revitalization of the Japanese economy being gradual and the fast spread of the globalization coming rapidly around the corner, companies are now seeking possibilities in the global market. And foreign companies are now coming into Japanese market to endeavor for new innovation and business. These foreign companies not only become potential partners for the regional companies, they can stimulate new ideas for new businesses to the region. It is now a big interest for the regional policy makers to enhance both outbound and inbound business activities in the region.

KRP has been supporting the international activities. We have three different activities; 1) activities utilizing the STP/AI community, 2) activities in tie with regional institutions, 3) original challenge to support soft business landing.

First activity is the support utilizing the network of STP/AI community. KRP has been the only Japanese STP to be actively involved with the IASP's STP/AI community. Through the IASP network, we were able to build relationships with individual STPs as well. As a result, KRP has signed a first MOU of collaboration with Hsinchu Science Park (HSP) in Taiwan. We are now exchanging information and sharing practices between each other.

In 2015, KRP has extended the relationship to hold support business matching between each region. We brought company from Kyoto to HSP and held a face to face business matching with HSP tenant companies. We also had similar face to face matching with tenants at HoaLac High Tech Park (HHTP) and Saigon High Tech Park (SHTP) located in Vietnam. This time it was the Japanese companies seeking for new business in each areas but the route can be directed both ways.

Second activity is utilizing the accumulation of public supporting institutions at KRP. JETRO, a central government agency to support outbound and inbound trade, has set up their first office in Kyoto at KRP in 2015. JETRO has offices throughout the world and they provide information and business support at each region. JETRO has been recently putting emphasis in inbound business support to foreign companies. They provide consultation and legal support upon setting up business in Japan.

In Kyoto, there is also an committee to support foreign investment to Kyoto. KRP, along with JETRO, Kyoto Prefecture and Kyoto City is a member of the committee. This committee along with the JETRO office can support foreign companies to start business in Japan.

Third is our newest challenge, “KRP BIZ NEXT” shown in Fig.5.3.1. It is a service office where furnished office, luxurious lounge and concierge service is available from the day you sign the contract to use. Unlike the normal offices and labs at KRP, “KRP BIZ NEXT” can be used on monthly basis. This contract style will be more suitable for foreign companies who wish to set up a preparatory office to explore business feasibility in Japan. You can also register at this office so you can change it from reparatory office to permanent office as the business possibilities expands.

Also, Lounge space is available for quick work as well as coffee breaks and meeting with clients. You can also become lounge only members as well. Lounge memberships are suitable for companies having a frequent or long business trip to Kyoto. For these clients, workspace and guest meetings were problem. They might have had to ask hotels for permission to use the front lobby or use café in the business district. But those spaces may not be suitable to meet your guests. This lounge provides the comfort of a hotel lounge and yet is designated for business use.



Fig 5.3.1 KRP BIZ NEXT, the new service office provided by KRP

The “KRP BIZ NEXT” will open in Mid-May, so it is still in a trial stage. But by combining JETRO, and other supporting facilities like open labs, KRP may become an ideal startup point for tenants in your region. We aim to have this space to be used as the soft landing space for their

business exploration in Japan.

6. Conclusion

In this paper, we have raised a topic as to how regional diversities will become important in the global world which is getting more flat than ever.

As to start the topic, we have described the characteristics and obstacles of Kyoto in chapters 2&3. Four characteristics as shown in Table 6.1.1 describes the basic characteristics of Kyoto and four obstacles as shown in Table 6.1.2 best describes the obstacles which we face at Kyoto.

Characteristics	Description
Tourism	<ul style="list-style-type: none"> - Over 1000 years history as Japan's capital, being the center of arts, culture, fashion, etc. - More than 50 million tourists per year
Academia	<ul style="list-style-type: none"> - Over 10% of population of Kyoto are students - World class research in fields of natural science
Manufacturing	<ul style="list-style-type: none"> - High global share manufacturers in electronic parts, analytical instruments - Network of SMEs specialized in Prototyping
Sustainability	<ul style="list-style-type: none"> - Over 1800 certified companies older than 100 years old - Philosophy & innovation is the key for sustainability over generations

Table6.1.1 Four characteristics of Kyoto

Obstacles	Description
Population decrease	<ul style="list-style-type: none"> - Low birth rate and steady growth ageing population - Decreasing income but increasing basic expenditure for households
Entrepreneurship mindset	<ul style="list-style-type: none"> - Young people's tendency for stable jobs - Low business entry/exit rate compared to other countries
Business exit	<ul style="list-style-type: none"> - Main financial source to start business being bank loans requiring personal guarantees - Lack of exit options due to small IPO/M&A market
Globalization	<ul style="list-style-type: none"> - Big psychological hurdle towards English and verbal communication - Large enough domestic market

Table6.1.2 Four obstacles facing Kyoto

In chapter 4, we have introduced the business creation process model at Kyoto according to the characters and obstacles identified in chapters 2&3. This model best describes the Innovation Ecosystem in Kyoto. Unique feature to Kyoto's Ecosystem is the continuative "innovation process" by the sustainable companies to overcome the lack of entrepreneurs due to the low business entry rates in Japan & Kyoto. KRP operates its activities to enhance this ecosystem in Kyoto.

In chapter 5, we have introduced 3 impacts factors which KRP brings impact to the region. We have described examples of KRP's activities to provide regional impact for the factors as summarized in Table 6.1.3.

Table6.1.3 3 regional impact factors to which KRP brings impact to

Impact factor	KRP's activity to bring impact to region
Working population	<ul style="list-style-type: none"> - Step by step development for over 25 years, where working population grew 1.6 times between 2007 to 2016 (2,600 -> 4,200) - Population growth especially in R&D fields - KRP district becoming adhesion for cooperation between prefectural & municipal government in terms of enterprise attraction
Business Startups	<ul style="list-style-type: none"> - Activities to support entrepreneurs in obtaining initial finance - Partnering with local banks to provide business planning/preparation support for entrepreneurs - Partnering with government certified VC to provide R&D financing
Globalization	<ul style="list-style-type: none"> - Utilizing STP community to enhance business collaboration between regions - Utilizing accumulation of public support institutions at KRP to provide outbound/inbound business expansions - New challenge by KRP to support soft business landing to Kyoto by foreign companies

As to finish this paper, we would like to recall to our latest challenge to support regional globalization, "KRP BIZ NEXT". It is a service office to support foreign companies which are want to endeavor their business possibilities in Japanese market which can be used as the soft landing platform for the region. We would like to propose to share and utilize this soft landing platform with the STP & AI community, so that we can bring more impact to the support globalization in each region. If you have similar spaces, why not consider becoming strategic partners to utilize the space for mutual benefit?

Let us assume that your STP and KRP have become partners to utilize this platform. Let's imagine how it looks like.

One of your tenant companies comes up to you to say that they are seeking business possibilities in Japan. For you, "KRP BIZ NEXT" becomes your virtual Japan Business Branch. You will book a reservation for them to use the space before they leave.

When they arrive in Kyoto, and come to the front desk of “KRP BIZ NEXT”, the space is ready for them to use. They can start using the lounge and the office as soon as they are finished with their check-in. They don't have to use their time asking hotels to open a room for them to meet their important clients to have business discussions. And the payment will be made at site upon check out like the hotel. You won't be bothered by calling them up to collect money for the charges when they return home.

Wouldn't it be great if you can have similar platform not only in Japan, but throughout the world in our STP&AI communities? Wouldn't it give a big impact to you and your region?

We believe that by making use of this platform, the STP&AI communities can contribute more to the region and to the world by making use of the regional diversities. We hope that you can join our platform challenge!