

Initiatives to Create New Businesses in Collaboration With Startups

*Takeshi Namegaya*¹, Noriyuki Yokouchi*², Kouki Sato*³, Takeshi Akutsu*⁴*

1. OUR COLLABORATION WITH THE STARTUPS

For approximately 100 years since Schumpeter¹⁾ defined “Innovation”, various organizations and institutes have been working on the innovation and there are various views including its definitions and problems. The innovation can be expressed as “It is the concept which was created by combining various technologies, products and services in order to satisfy market needs, and which has been accepted by customers economically and socially.”. It is also classified as the sustaining innovation, the breaking-through innovation and the disruptive innovation. Furukawa Electric, as well as many other large enterprises, has been stating its policy to create new businesses as one of the most important policies for managing its business and been strengthening its activities in the promotion of innovation. In general, Japanese enterprises are good at the sustaining innovation. We surmised that it was because Japanese enterprises have shown their accomplishment of a high growth in their businesses under the soaring economic growth for a long period. On the other hand, it is pointed out that their past success may prevent the large enterprises from their further innovation. It has become more difficult than before for them to make a new concept by themselves separately from such a business model, a way of business, and a tradition, as was experienced in their past success and to take actions from the concept to the reformation^{2),3)}.

Now a days, exemplified by GAFA (four major IT enterprises composed of Google, Amazon, Facebook and Apple), many present enterprises are shaken by such disruptive innovations as a fresh firm appears with a new business model at its hand and constructs its platform. A present supply chain is suddenly destroyed, and a new market appears where any current business model is not accepted. The startup is the first on the list of potential

small firms which generate such a disruptive innovation. The startup challenges to create a new market and a new business model from nothing with its original ideas and technologies as its core competence and is growing up at a tremendous speed. It is their common intention for the startups to create a new value with their brand-new innovation to make it useful for the world and the life style of people. Further, the behavior of people and society has been changing along with the highly advanced infrastructure of information such as the reduced cost of computing, and such a disruptive innovation as to respond to the change will possibly appear more than before.

Furukawa Electric has been not only intending to develop the technological innovation by itself but also creating its brand-new businesses in collaboration with either domestic or overseas leading enterprises since its establishment. Furukawa Electric, now celebrating its 135th year since its establishment, has started to challenge the creation of the open innovation together with the startups by joining their community where they are taking a lead in order to innovate itself. We are not only working together with the startups to understand their own conditions and share the vision jointly in order to nurture the seed of a new innovation but also making our best efforts in adopting the way of the startups and acting in an agile manner in order to change our present way of business.

In this paper, we are going to introduce to you partially an example of our activities to aim at creating a brand-new innovation together with the startups.

2. OUR ACTIVITIES IN SILICON VALLEY TO CREATE INNOVATIONS

2.1 Background

Furukawa Electric established Silicon Valley Innovation Laboratories, Furukawa Electric (SVIL, hereinafter) in San Jose, California, USA in August 2018. (Shown in Figure 1 below)

Silicon Valley is a popular name for the south part of the San Francisco Bay Area, California, where giant IT enterprises, from Apple and Google on down, have their sites. And, recently it has become the world most active area to promote the innovation, where the innumerable startups based on their technologies are in fierce compe-

¹ New Business Development Department, Global Marketing Sales Division

² Silicon Valley Innovation Laboratories, Furukawa Electric

³ Planning Department, R&D Division

⁴ Market Relationship Management Department, Marketing Initiatives & Business Development Department, Global Marketing Sales Division



Figure 1 The office building where SVIL is located.

tion with each other with their own technologies and ideas at their hands as their arms aiming to become one of the unicorn enterprises in the next generation, each of which is the privately owned startup valued at over \$1 billion. Especially, talented personnel produced from Stanford University, U.C. Berkeley and others have become a great force to drive the innovation ecosystem in Silicon Valley. And, as many as 913 Japanese enterprises, which was the largest number in the past at the end of 2017 were doing their business based on the Bay Area, according to “On-Site Survey of Japanese Companies in the Bay Area, North California - surveyed in 2018 -” published Japan External Trade Organization (JETRO) San Francisco in August 2018.

SVIL was established aiming at accelerating our open innovation and gaining the most advanced technologies in the broader fields by entering the above-mentioned innovation ecosystem in Silicon Valley.

2.2 Features of Silicon Valley

We would like to state the features of Silicon Valley leading to the creation of innovations, in which we were impressed through our one-year activities at SVIL.

They say that there are several reasons why Silicon Valley has continued to create the innovations. One of them is the diversity. There is a very wide range in the diversity not only in the races and the nationalities but also in each of the way of growth, the environment, the ideology, the way of thinking and the taste, and further, there is such a culture as to accept all of them. As mentioned above, this, quite rare in the world, so wide a diversity is the ground to create the innovations. And recently, we recognize that we ourselves have been incorporated in as a part of the diversity.

Their amazing speed in driving the business and in changing the way has attracted us as well. The gap in the speed between the large enterprise and the startup is well known. And we have been amazed by its agile response when having actual contact with the startup. Further, especially in the field of software technology, the spending time until the social implementation is so short that it

is not a rare case for the startup to launch its official service in half a year from its start of the business. Although we are sure that the number of vanishing technologies may be much larger than that of successful technologies, the function as the site to test the most advanced technologies may also attract the hardware technology when developing it to the launch in a short period.

It is the mind and the energy of each individual entrepreneur, investor, engineer and partner that strengthen the power of driving the innovation ecosystem. The startups are not always necessarily headed by young entrepreneurs. We feel their strong intention that their team should be always positive to realize their own vision and accomplish something, regardless of their age or experience. This kind of mind is affecting people around and we have been already influenced considerably as well.

2.3 Our activity at SVIL

Based on Furukawa Electric Group, Vision 2030⁴⁾ aiming to create solutions for the new generation of global infrastructure combining information, energy and mobility, we think we should make our first step to create new businesses by implementing the digital technology aggressively, which is being produced in Silicon Valley and its surroundings in addition to our core technologies, such as in metals, polymers, photonics and high-frequency.

As a foothold to enter the innovation ecosystem, we came to a partnership agreement in February 2019, with one of the largest-scale accelerators in Silicon Valley. It gives us such an opportunity through various events sponsored by the accelerator to search digital technologies required by us and to bridge contact points with the startups. And we have been aggressively participating in the events related to the startups as well, which were not sponsored by the accelerator under the agreement with us to raise our presence in the community of the startups. In March and November of 2019, we participated in the event sponsored by JETRO Toronto to introduce our activities at SVIL to develop the open innovation to the startups in Canada. Through these activities, we have already started Proof-of-Concept experiments with several of these startups

2.4 Toward Future Activities

We would like to tell you what is required to carry out the open innovation based on our site in Silicon Valley and create new businesses and innovations from now on.

Those who have succeeded at a large enterprise in the co-creation with the startup and those who have been promoting the matching between a large enterprise and the startup at a venture capital or an accelerator declare that the resolve of the executive and the understanding of the middle management are essential to succeed in the open innovation. On the other hand, we hear that there are not few cases where a difference in the consciousness generated between a team located in Silicon Valley and that in Japan makes it difficult to advance their progress. It may be necessary for the executive, the middle management and the young people who will be the pillars

of the next generation to visit Silicon Valley actually and feel its energy as the system to share more of the knowledge learnt and experienced in Silicon Valley. We think that if we behave as mentioned above, the problems which actually we want to solve will become clearer and more concrete instead of those which we can solve. And such a concrete measure is required as to adjust the difference in the sense of speed between a large enterprise and the startup as mentioned above. We cannot accelerate the speed of our way in the present business as fast as to catch up the speed of the startup. After understanding it, can we build such a system as to fit the co-creation with the startup?

One year has passed since we started our activities at SVIL. And we feel that Silicon Valley is asking us whether we are serious in the developing the open innovation. Raising our level of the experience not only as SVIL but also as all Furukawa Electric, we are intending to be a frontrunner to create a new social infrastructure.

3. IMPLEMENTATION OF THE ACCELERATOR PROGRAM

Furukawa Electric, in collaboration with Creww Co., Ltd. carried out the program “Furukawa Electric Accelerator 2018”⁵⁾ for approximately half a year since May 2018, through which we intended to co-create new businesses with the startups.

In this program, we opened our exclusive web site in the home page of Creww and we accepted the proposals for collaboration from the startups which had original ideas and unique know-how on condition that our management resources should be used, and the startups could find out the synergy to create the business model for a collaboration with us in a speedy manner.

We have determined three major initiatives, “Strengthen and transform the businesses”, “Expand sales in the global market” and “Accelerate the creation of new businesses” in our mid-term management plan “Furukawa G Plan 2020, Delivering sustained profitable growth”, therefore we have established “Fun Lab” in Yokohama corresponding to the initiatives. In this program, “Take a Great Leap out of MONOZUKURI (manufacturing) in the 134th Year Since Our Establishment” is our theme. We intend to generate the innovation in the life infrastructure which will support our society in the future with the creation of brand-new businesses together with the startups free from our present infrastructure businesses which have been our main ones. And we are aiming at creating the new value not only to make our local community more prosperous but also to solve the problems of our whole society.

The promoting team consists of members mainly from our Planning Dept. of R&D Div., New Business Development Dept. (at the time) of Strategy Div., and Market Relationship Management Dept. of Global Marketing Sales (GSM) Div. and supporting members will join to the team from our related departments if necessary.

Figure 2 shows an image of the web site opened exclusively for Furukawa Electric Accelerator Program.

As shown in Figure 2, setting two sub-themes as 1) The life base to support the society in the future and 2) The conceptual image of a new vehicle, we have accepted the proposals for collaboration given by the startups. And at that moment, we gave the following six items as the management resources provided by Furukawa Electric, which the startups can make use of.

(1) Open innovation facilities: Fun Lab

We have established “Fun Lab” as a venue for the



Figure 2 Images of the web site exclusive to our Furukawa Electric Accelerator Program. (Japanese web site)

open innovation in our Yokohama Works to further accelerate our technical innovation. Here, we can develop a product from its planning up to making its prototype within our one-stop service and make good use of our technologies cultivated in our long history.

(2) Capacity for technological innovations

We have seven R&D sites in total, four in Japan and three overseas. Provided with the broad technical base including the technologies cultivated at these sites, we can either solve technical problems or develop new businesses.

(3) Broad base with our customers

In twenty-one countries all over the world, from nine sites for our sales and seven sites for our production in Japan on down, we are producing and selling our optical fiber, power cables, automotive products and others. We can make good use of our broad links to the telecommunication carriers, the power companies and the automotive manufactures located all over the world.

(4) Links to local governments

We have links to many domestic and overseas government agencies and local governments as well, because we are producing various products to support the social infrastructure. Furthermore, we have been taking care of the link to the local community through our Corporate Social Responsibility (CSR) activity to make it possible to contribute to the vitalization of local economies.

(5) Global networks

We have a global network system consisting of more than 120 companies all over the world. We can make good use of this network system of Furukawa Electric Group all through the creation of a new business.

(6) Sports & culture

We have been supporting the activity for the events of sports and traditional culture, from “JEF United Ichihara-Chiba” affiliated to Japan Professional Football League on down, to achieve a further prosperous society. We can make good use of such a scene where many people get together such as in a soccer game and in a motor sports event.

We have received proposals for collaboration from forty-five startups in total during two weeks from the application. With them, we have checked their consistency against our themes, interviewed directly with the founder and had internal discussion on the possibility to create a new business.

Finally, at the secondary selection in last August after approximately three months since the start of receiving the proposals, we have selected three firms and determined to carry out our demonstration tests so-called the PoC (Proof of Concept) with them to examine the hypothesis required to assess on our commercialization. (See Figure 3)

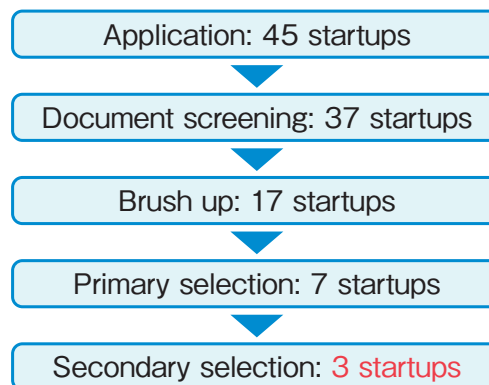


Figure 3 Process of selection.

Now, we have learnt a lot such as the sense of time for their decision-making, their enthusiasm for solution of social problems and the sense of crisis on their business continuity through implementing the accelerator program that lasted for 3 months with the startups. On the other hand, we have some problems left even with our best effort to create a new business such as involving very few of our departments especially our business units related to the new business.

We are going to make full use of what we have learnt in this program to examine the collaboration with the startups at the scene provided by Innovation Leaders Summit (ILS) or WeWork, which we are going to introduce in the following chapters. For example, at the ILS Power Matching Event, General Manager of R&D Div. has been taking the lead in carrying out our activities.

4. ILS POWER MATCHING EVENT

In Chapter 3, we have introduced our collaboration activities with the startups carried out in the way of the accelerator program to accelerate the commercialization of unique ideas of the startups by making good use of the management resource of Furukawa Electric. In this chapter, we are going to introduce our collaboration activities with the startups, which is known as “Matching” in which we made good use of technologies of the startups to cover the so-called “missing piece” of Furukawa Electric.

The 7th Innovation Leaders Summit (ILS) Power Matching⁶⁾ was held for 3 days from October 28 to 30 at Toranomon Hills, which was advertised as one of the largest matching events in Japan with the startups. It was a large-scale matching event with actual participants consisting of 115 large enterprises, 582 startups in total including 177 enterprises from overseas and a total of 10,856 people present. Our joint team of R&D Div. and GMS (Global Marketing Sales Div.) participated in it for the first time for Furukawa Electric. We had meetings with 27 startups including those recommended by the secretariat of ILS in total.

Targeting at achieving of Furukawa Electric Group, Vision 2030⁴⁾, R&D Div. selected such startups that possessed the storage battery technology, the wireless

power transmission technology and the drone technology as mobility and on the other hand, GMS selected such startups that possessed the technologies of MaaS (Mobility As A Service), sensing, healthcare and Artificial Intelligence (AI) which were recognized as necessary in our marketing activities. And we had as short as a 20-minute meeting with each of them to find out the possibility of the collaboration.

A feature of ILS Matching is such as a scheme is adopted as to let a decision-making executive of the large enterprise to participate in the meeting with the startup. This time, General Manager of R&D Div. participated and took the lead in the interview and the discussion with the startups. (See Figure 4)



Figure 4 The Furukawa Electric team participating in ILS Power Matching (at the top) and a view of the interview (at the bottom).

5. THE OPEN INNOVATION ACTIVITY AT WeWork

WeWork has been developing the business to provide the co-working spaces to its members in 111 cities of 29 countries. More than 520,000 people are using the co-working spaces worldwide. In Japan, they operate 26 offices in 5 cities including Tokyo, Osaka and Fukuoka, and more than 15,000 people are using them (as of September 2019). We, Furukawa Electric has started to use their office in Yokohama since May 2019 as one of our open innovation bases. (See Figure 5.)

Since the speed of technological innovation has been drastically accelerated, we believe that it is essential to grasp changes in the market rapidly to explore and develop new businesses. As we are a manufacturing company which is producing mainly material-based products

such as power cables, optical fibers and automotive products, our business is mostly centered on the B-to-B-model. However, it has been getting more important to develop our products and services matching to the market demands by collecting VoC (Voice of Customer) from end-users and B-to-C companies which stay closer to them.

By utilizing the community of WeWork, where many enterprises in various industries are using, we are not only collecting the marketing information essential for developing a new business but also searching partners to collaborate with. Many local governments such as Kanagawa Prefecture, Nagoya City, Kobe City and Shizuoka City are also using WeWork. And we are developing collaboration and cooperation with them, which will contribute to solving social problems in their local communities.



Figure 5 WeWork members of Furukawa Electric.

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