FUJITSU Knowledge Integration Base PLY: Co-creation Platform for New UX

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As we approach the digital business era, initiatives to utilize digital technologies to create new value have begun. These initiatives involve not only so-called waterfall development based on existing processes, but also collaborative efforts with customers through the user experience (UX), which can only be gained from the people who use products and services. To provide a venue for such co-creation, we launched in May 2016 FUJITSU Knowledge Integration Base PLY (hereafter, PLY) at Fujitsu Solution Square in Ota City, Tokyo. The concept behind PLY is to provide a space where system engineers with experience in co-creation engage with customers to develop new value based on the environment and concepts supported by these engineers. This paper describes how we created the PLY environment and moved forward with co-creation initiatives.

1. Introduction

As customer markets become saturated and digital technologies keep on advancing, increasing expectations are being placed on the creation of new value through the use of ICT. Unlike the domain of systems of record (SoR), which involves the construction of conventional business systems, the domain of systems of engagement (SoE) is still largely unknown to most customers, who therefore struggle to articulate their needs and requirements. For this reason, system engineers (SEs) themselves must become partners who help customers create new businesses and services, and thus new value.

Meanwhile, ICT such as mobile and social media has dramatically evolved for end users, not a few of whom have achieved a level of ICT literacy unthinkable just a few years ago. Consequently, the creation of new value no longer can be driven solely from the perspective of engineers, which needs to be complemented by the experience of consumers and site users, or what is called the user experience (UX).

Against this backdrop, it was necessary to have a place to practice co-creation, a place for so-called open innovation that would allow engineers to interact with all kinds of people including consumers and field departments.

The authors defined the aims of the co-creation spaces as follows:
- To provide opportunities for diverse members such as people from local companies and local residents to interact with engineers with various backgrounds,
- To provide extraordinary spaces in which participants can try new things, and
- To provide spaces where SEs themselves practicing co-creation feel emotional attachment.

Based on the above, we decided to build a place to practice co-creation, FUJITSU Knowledge Integration Base PLY (hereafter, PLY), at Fujitsu Solution Square (Ota City, Tokyo), Fujitsu's largest SE base.

This paper describes the construction of PLY to accelerate new value creation.

2. Service system for co-creation and value creation process

Fujitsu has created a system of programs and services for the creation of new value with customers based on our accumulated co-creation know-how (**Figure 1**). As the processes for creating new value, three phases have been defined: "Information collection and issue identification," "Idea creation," and "Service implementation." Rapid and repeated cycling
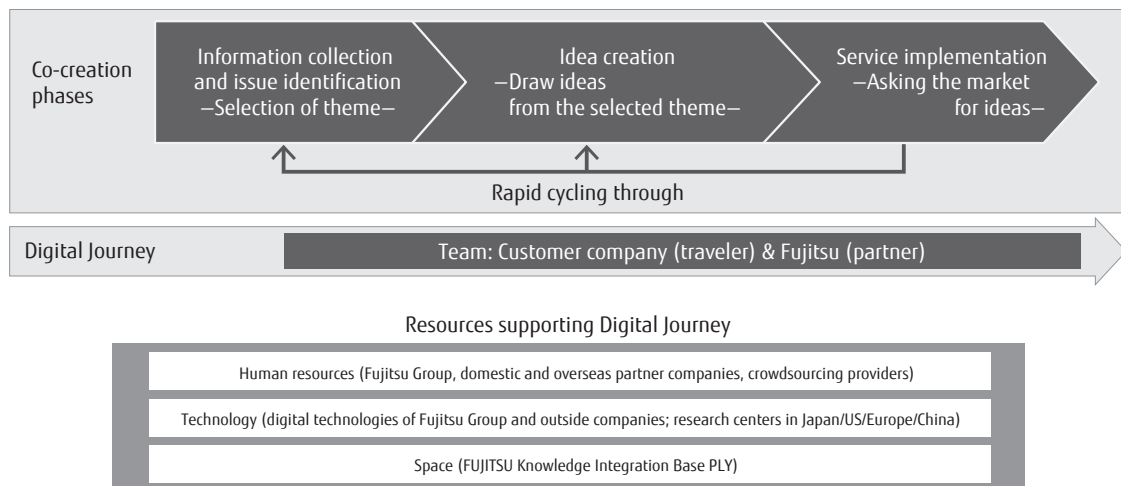
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Figure 1
Service system for co-creation.

through these phases by the customer and Fujitsu SEs enables the creation of new value in a timely manner. PLY is positioned as the place for putting this service system into actual practice. Each of the phases of this system is introduced below.

1) Information collection and issue identification

In the digital business domain, the diversification of market needs and the evolution of technologies make consumer and user requirements unclear, and actual requirements can be difficult to specify. For this reason, in this service system, the first phase is to collect information through on-site observation. This includes uncovering potential needs and analyzing technological and market trends, and identifying things commonly perceived by people as requiring a solution.

2) Idea creation

In this phase, ideas (solutions) are created from the collected information and identified issues. The aim is to come up with as many ideas as possible and to verify them. Design thinking workshops and hack-athons are among the resources that can be used to this end. Verification is carried out by taking into consideration the various stakeholders and many different kinds of knowledge in relation to the direction aimed for.[1] Further, emphasis is placed on the views of consumers and users to rapidly verify whether the products and services to be offered are truly worthy value propositions.

3) Service implementation

Once ideas have been narrowed down to a certain extent, verifiable prototypes that closely approximate actual services and products are created. These prototypes are used to verify usefulness and business value by cycling through the build-measure-learn feedback loop. In the service implementation phase, a product with minimal functions, called the minimum viable product (MVP), is defined. Then, limited-scope implementations referred to as "small starts" are executed to weed out uncertainties, allowing rapid verification through a lean approach.

Along with the progress of digital technologies such as sensors and mobile, not only systems but also simple hardware may need to be developed and verified. Recently, Fujitsu set up an environment equipped with 3D printers and other tools allowing mock-ups to be easily created and verified. With these resources, engineers can readily mock up services and products and verify their actual usefulness and appropriateness for business. The products and services are then robustly tested for their value and utility to customers, following which their marketability and potential for ongoing enhancement are verified.

3. The PLY concept and space design

The PLY concept is "a place for practicing co-creation by blending knowledge with knowledge to weave the future." PLY means "blending thoughts," "making

dots into lines, lines into shapes, and building shapes on shapes." The sound of the word PLY also brings to mind PLAY, which befits a place for the practice of co-creation. Through conceptualization (by holding concept making workshops), building (through concept selection, holding usage scenario study workshops, and space design), PLY leads to operation (activities) (**Figure 2**).

Concept making workshops are held for Fujitsu's SEs as well as those of partner companies to promote user attachment. Furthermore, workshops to examine specific PLY usage scenarios are held, and the ideas developed there are translated into functions required for design. PLY was designed based on the premise of supporting the activities of the service system processes for co-creation introduced in the previous section ("Information collection and issue identification," "Idea creation," and "Service implementation").

The layout was also determined in line with the above processes (**Figure 3**). First, near the entrance, the space on the theme of information collection and issue identification, the WAITING EXHIBITION Space, is where one engages with actual issues, technologies, and ideas from various fields. There, prototypes born from hackathons, and idea cards (tools that allow ideas in various fields to be summarized using only short titles and illustrations and provide a large number and wide range of inputs in a short time) are displayed.

Next, the space on the theme of idea creation, the WORKSHOP COWORKING Space, was built for the purpose of holding meetings, seminars, hackathons, and workshops. Users can use this space by freely arranging desks, chairs, and the like as desired according to the nature and scale of their activities.

Furthermore, the space on the theme of service implementation, the FAB Space, is where one can freely engage in prototyping using the laser cutters, 3D printers, and other equipment provided there. There is also a LEAN Studio where agile development specialists can quickly put ideas into practice. Using these spaces to practice the above three processes rapidly and continuously is the distinguishing feature of the PLY configuration.

With regard to the rich UX offered by PLY, the authors built PLY as a space consistently designed around an awareness of UX, with a view to offering creative hands-on experience of weaving the future in collaboration with other users possessing heterogeneous knowledge, instead of SEs consorting solely with other SEs.

4. Activities to promote the use of PLY

In the first six months after the opening of PLY in July 2016, PLY received more than 14,000 visits from Fujitsu and elsewhere, and more than 100 workshops were held there (as of February 2017). Events and activities for both those in and outside the Fujitsu Group are being held at PLY with great frequency. The following introduces some of them.

1) IDEA WORKSHOP

We periodically hold events aimed at collaboration among companies that wish to make new things and among people who aim to develop new businesses.

One such event in August 2016, named "Redefining the Camera," invited the participation of those in charge of new business development at
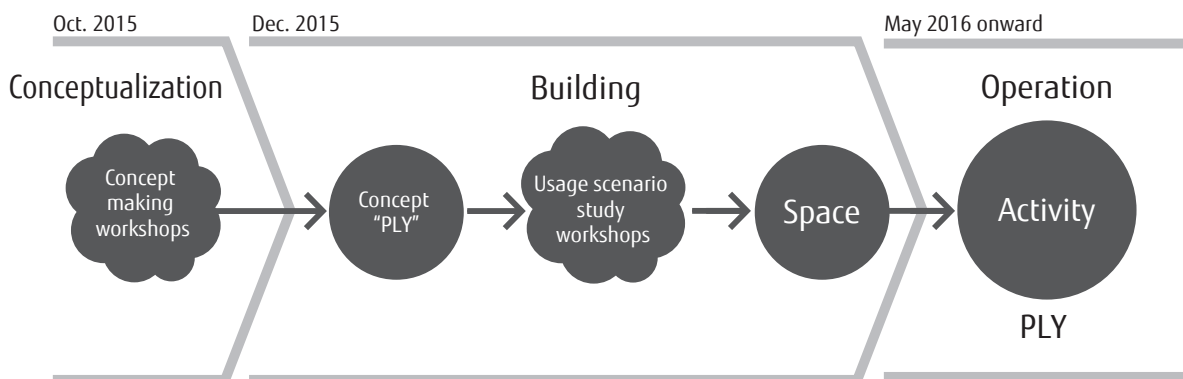

Figure 2
Processes until operation start.

FAB Space
A space for prototyping with 3D printers, laser cutters, etc.

WORKSHOP COWORKING Space
A flexible space for meetings, seminars, hackathons, small workshops, etc.

WAITING EXHIBITION Space
A space for discovering demo apps and prototypes created here while waiting for someone.

LEAN Studio
A showcase space for practicing agile style creation. Many skilled professionals can be found here.
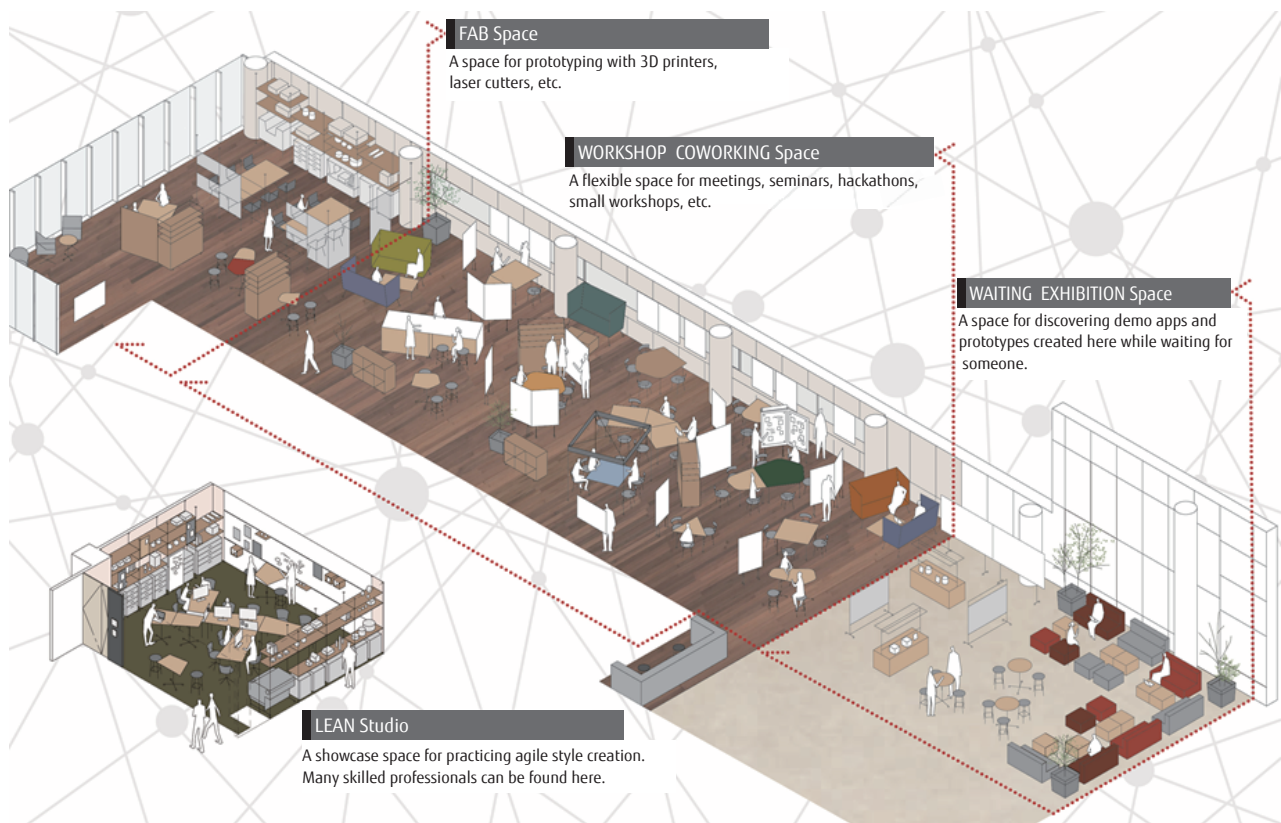
Figure 3
PLY space and utilization example.

camera manufacturers. There, for the purpose of re-considering why people use cameras in the first place, a workshop bringing together manufacturers, service providers, and users to think about new camera values was held. Sixteen people from the Fujitsu Group and 17 from outside were recruited to participate in this workshop through social media, for a total of 33 people. The workshop earned a high rating of 68.8% as its Net Promoter Score (NPS), which is an index that measures customer loyalty. Many of the participants indicated that they felt the benefits of PLY, leaving comments such as "I gained new awareness" and "I made new contacts." Such activities, promoted through the major social media, develop further participation from people both from and outside the Fujitsu Group.

2) Cross-Division Working Group

Lack of coordination between divisions still persists at many large companies. In order to promote activities across these divisions, Fujitsu selected promoters in each division and set up a Cross-Division Working Group (WG). This WG has the following two

aims. The first is the propagation of PLY activities to internal divisions through the promoters. The second is the promotion of a shared awareness of issues among divisions and collaboration across different types of business.

The creation of this WG has resulted in more divisions taking the initiative to engage in co-creation activities with others. Furthermore, little by little, these activities are leading to the emergence of cross-business activities.

3) The Ashita-no-Community Lab and Digital Innovation Lab

We launched a website to build relationships with key persons outside the Fujitsu Group, brainstorm problem-solving ideas, and consider their feasibility.[2] The Ashita-no-Community Lab ("Ashita-no" means "tomorrow") is a medium launched in 2012 for the purpose of identifying future businesses and ideas for living from changes in society. The Digital Innovation Lab is a platform established in 2015 to disseminate ICT utilization tips.

Through these virtual media, PLY brings together the knowledge of the Fujitsu Group with that of external innovators with whom we have built relationships, in a bid to create new businesses.

5. Initiatives for revitalization

Until now, this paper has given an overview of PLY and various initiatives to promote its use and encourage autonomous activities among users. Fujitsu is also developing new programs and services to accelerate the formation of human resources capable of co-creation and business development, for the continuous creation of new value through the use of PLY. Some of these programs and services are introduced below.

1) FUJI HACK 2016

Since 2014, the Fujitsu Group has been holding a hackathon called FUJI HACK to develop personnel capable of practicing co-creation. In 2016, we declared the week of August 29 to September 2 as Hackathon Challenge Week, and thus far hackathons have been held at PLY a total of four times (**Figure 4**). FUJI HACK 2016 was distinguished by the fact that anyone who visited PLY while it is held could feel the "breath of innovation" there. The 88 participants included 10 people from outside the company. The event received media coverage from television stations and newspaper companies, and this was an opportunity to let the outside world learn about Fujitsu's co-creation activities.

2) PLY Challenge

In recent years, due to changes in business and systems, business verification from idea creation to implementation of services has been taking an increasingly long time. To solve this problem, we are working on the development of a program that will allow implementation from idea creation to hypothesis verification using prototypes in just 2 weeks (actual activity duration: 2.5 days). Trials are underway, using a cross functional team that includes consultants, designers, and engineers.

3) Activity support tools

Although many ideas are waiting to be realized, expert knowledge and various skills are often needed, and in many cases the existing members cannot find solutions just on their own. To remedy this, we provide support tools for online recruiting of experts from within the Fujitsu Group who are willing to lend a hand. In this way, we aim to expand collaborations across organizational boundaries.

6. Conclusion

This paper introduced the background for the creation of co-creation spaces, the thoughts that went into this endeavor, and activities to promote and stimulate their use. The PLY project presented in this paper received a Good Design Award in 2016 in recognition of Fujitsu's initiative in creating its own space for accelerating the practice of co-creation.[3]

PLY has already been used by many SEs as a place for practicing co-creation. Our circle of partners who appreciate this activity and join us in creating new value is also expanding. We aim to make PLY a space where anyone dropping by will be able to make new encounters and achieve new insights. In order to involve and integrate more people across organization units and companies, we believe that it is necessary to resolutely carry out dissemination by engaging with the local community and spreading the word via the various media to promote interest and understanding. In addition to the co-creation space described in this paper, various other such places have been growing both inside the Fujitsu Group and outside. We intend to collaborate with such places to promote understanding among as many people as possible, and to create a large market.

Finally, what the authors aim for involves changing many established ways, which will not necessarily be readily accepted by all. In this respect, our elected approach of getting everybody involved in helping create the space by inviting all stakeholders and

Figure 4
FUJI HACK at PLY.

incorporating the views of users to generate wide acceptance, has proved to be effective. In creating such spaces, an open approach in all aspects, from planning to operation, is best. We believe that co-creation involves also making changes in ourselves, engaging numerous stakeholders both within and outside the Fujitsu Group, and always aiming to take on bigger challenges. To that end, a process that can create continuous connections through real and virtual places with a more open mind is important. We believe that no company can continue to exist without such a process.

By all means, please come on over to PLY and join us in creating new value as co-creation partners.

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