

A PATTERN LANGUAGE OF PROCESS AND ENVIRONMENT TO DESIGN VALUE CO-CREATION WITH CUSTOMERS

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ABSTRACT

This paper introduces the concept of the Customer Co-creation Lab, its process and a new collaboration environment that help us effectively visualize insights obtained from customers to provide solutions for their business challenges.

We have designed the Customer Co-creation Lab as an enterprise platform to co-create customer's value, business models, and resource integration networks based on a human-centered design and a pattern language approach.

INTRODUCTION

In May 2010, Fuji Xerox established the Customer Co-creation Lab in Fuji Xerox R&D Square, aiming to create new value with our customers from their point of view.

The activities of Customer Co-creation Lab are based on the human-centered design process. As we are mainly focused on B-to-B business, we have to be highly involved in our customers' practical business context during value creation activities.

The following are typical value creation activities in our Customer Co-creation Lab:

- Interviews and observations to understand customer's business processes and challenges
- Introduction of our business challenges and approaches in Fuji Xerox
- Proposal of new approaches as prototypes in order to adapt to customer's business context
- Evaluation of prototyped approaches in the customer's business context using qualitative and quantitative methods

The most important points are to provide both design process and environment in order to support these co-creation activities.

GOALS AND STAGES OF CO-CREATION PROJECTS

We set three goals for each project in co-creation lab as follows:

1. Customer value verification: identify customers' business challenges and evaluate how our service changes their business process
2. Business model verification: create sustainable business models for the value-verified services
3. Generalization: verify adaptability and feasibility of the customer value and business model to other customers in the target segment

Our projects report the status of these goals to our executives at each stage and discuss plans and resources for further stages.

DESIGN OF CO-CREATION LAB

In order to design co-creation lab, we have to identify requirements from the following perspectives:

- Design process and method to augment customers' values
- Co-creation environments to support the process and method, including workplaces, IT, and tools

We use a combination of the two approaches to identify these requirements. The first is "pattern language" [Alexander, 1977], which identifies practical knowledge of experts who previously tackled similar problems. The other is "human-centered design", in which we understand users' requirements and prototype solutions for them.

Pattern mining with ubiquitous computing experts

In order to identify practical expert knowledge, we arranged workshops at the International Conference on Ubiquitous Computing [Weiser, 1991] from 2005 to 2008 [Back, 2007] with researchers investigating novel user experiences for smart collaboration. To mine design patterns from the projects creating new user experience, we requested participants to introduce their research activities especially from the viewpoint of design process and co-creation environment to discuss their distinctive approaches.

Through these workshops, we have found that researchers in the field tend to use very similar approaches to design and evaluate new user experiences as follows:

- Design process

- Human-centered design and co-creation
- Agile development
- Pattern mining of practical knowledge
- Workplace
 - Box in the Box
 - Flexible layout of furniture
 - Seamless individual work and collaboration
 - Visualization wall: walls visualizing user context, schedule and project status
 - Separate rooms dedicated to each project
- IT and tools
 - Network separated from corporate intranet to prototype online services with customers
 - Collaboration support tools
 - Concept work support tools

Prototypes

We integrate these patterns into a design process, workplace, IT, and tools for value co-creation. Before setting the prototype in our new office, we apply the prototype to working projects and improve it using feedback from the projects (Fig. 1).

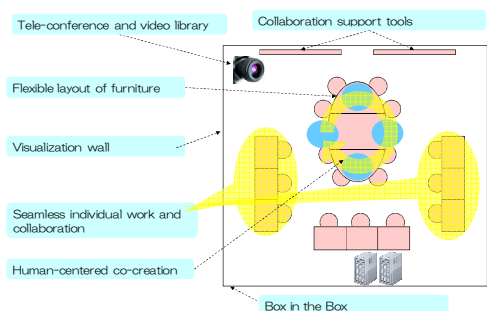


Figure 1: Value co-creation environments using a pattern language.

As shown in Fig. 2, we focus on the human-centered design process for adapting to B-to-B business in the co-creation with customers.

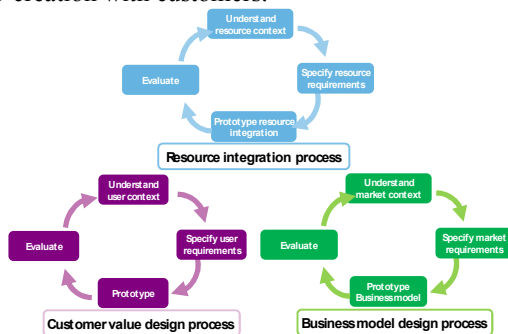


Figure 2: Three main processes based on Human-centered design.

Evaluation

We evaluate both the design process and the co-creation environment from the viewpoint of practical project performance.

In the first case, we provide “Understanding User Context Methods” and “Concept Work Support IT Tools” for a project reporting market research for 4 weeks. It is found that they reduce man-hours by 40 percent to extract structured business challenges from a 400 customer visiting log.

In another case, we provide a “Value Design Process” for selected groups proposing new business plans in a training course. These groups indicate highest score in the final proposal evaluation. Fig. 3 shows the usefulness score of each provided method weighted by trainees.

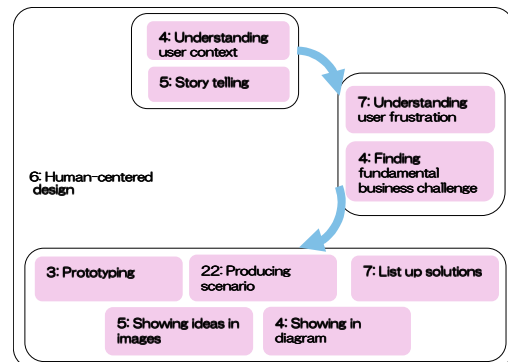


Figure 3: Methods provided for business planning.

ACHIEVEMENT OF CUSTOMER CO-CREATION LAB AND FUTURE WORK

The Customer Co-creation Lab operated between May 2010 to Nov. 2014, undertook 14 projects, and helped 10 services get into business. Our design process and co-creation environment have now been adopted by human resource development courses and sales proposal activities in Fuji Xerox.

Recently, we have found the number of customers interested in the value co-creation framework is increasing drastically. We are currently planning to provide Customer Co-creation Lab concept – design process and co-creation environment to customers.

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