

Communication Design for New Type of Showroom Dedicated to Value Co-creation

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Abstract. For enterprises today, in order to create new business, it is becoming more important to understand customers' business context, their potential problems, and their challenges rather than thinking of ideas to solve widely known problems. In these cases, many companies will provide a special type of facility similar to a showroom which we call a "Co-creation Showroom" in order to understand customers' business context and challenges.

This work analyzes the communication process of the "Co-creation Showroom" and identifies several key factors for successful dialogue between facilitators and customers. This work also introduces a new communication process using new communication tools as well as evaluations of this process.

Keywords: Design method · Co-creation · Critical design · Human centered design · Showroom · User evaluation · Communication tool

1 Introduction

Nowadays, a new type of showroom is becoming popular among enterprises aiming to develop innovative business based on the understanding of customers' business problems and challenges. The "Customer Technical Center (CTC)" of 3 M is one of the most historical examples of this type of showroom. The company has more than 40 CTCs worldwide [1]. In Japan in particular, they established a CTC in 1997. They define the mission of the CTC as "Creating value through collaborative dialogues with customers." Their special communication scheme is introduced as follows: "Engineers work in collaboration with our customers to develop ideas which address their technological problems," and "Customers can meet with engineers face-to-face to discuss problems and solutions and explore possible courses of action" [2].

Recently, similar types of co-creation showrooms are being established by other companies, for example as the "Customer Co-creation Lab" by Fuji Xerox Co., Ltd. in 2010 [3], the "Open Innovation Hub" by FUJIFILM Holdings Corporation in 2014 [4], the "IHI Innovation Centre" by IHI Corporation in 2014 [5] and the "Global Center for Social Innovation (CSI)" by Hitachi, Ltd. in 2015 [6].

These "Co-creation Showrooms" are characterized as follows by comparing them with conventional showrooms (Table 1).

However, an analytical view of the business process and communication taking place in a "Co-creation Showroom" is never clearly stated but rather seeps into and is held by the individual facilitators. Therefore, it is hard to improve performance and

Table 1. Comparison between conventional showroom and co-creation showroom

| | Conventional showroom | Co-creation showroom |
|-------|------------------------------|-------------------------------------|
| Why | Sales promotion | Business development |
| What | Products | Technologies and prototypes |
| Who | Sales representatives | Engineers and planners |
| Whom | End users | Invited managers of a business unit |
| How | Explain and answer questions | Explain and ask questions, dialogue |
| Where | Sales rep sites | R & D sites or headquarters |

quality of communications in the showroom as an organization. This work analyzes the communication processes of the “Co-creation Showroom” and extracts several key factors for successful dialogue between facilitators and customers. This work also introduces a new communication process using a new tool as well as evaluations of this process.

2 Background

Nowadays, it is becoming more important for many enterprises to create new values for customers. Furthermore, the focus of the market is drastically shifting from one that is “goods-centered” to one that is “service-centered” [7]. As the focus of the market shifts from “goods” to “service”, the customer becomes a coproducer of service and an active participant in relational exchanges and coproduction. And “Value is perceived by the consumer on the basis of “value in use.”

Koskinen identified three types of format for design, named “Lab,” “Field” and “Gallery/Showroom,” and defined the characteristics of each of them as follows: [8, 9]

- Lab: Studies are conducted in laboratory-like conditions by introducing explanatory variables.
- Field: Instead of bringing the context into a design experiment, it places design into a naturalistic setting.
- Gallery/Showroom: The exhibition presents concepts and design objects as well as ideas and visions by giving people the opportunity for first-hand experience.

A “Gallery” pushes knowledge to new domains by way of critical discourse through practices borrowed from the art world [8]. On the other hand, the space in which the artifacts are shown becomes a ‘showroom’ rather than a gallery, encouraging a form of conceptual consumerism via critical ‘advertisements’ and ‘products’ [10].

As for “Co-creation Showrooms” for enterprises, we observe that the format is very similar to the conventional showroom so the facilitators tend to behave like sales representatives and fail to extract customers’ business context and problems to develop new businesses. The facilitation of communication in co-creation showrooms requires a wide range of knowledge regarding semi-structured interviews, experience design, business models and organization design as well as business communication manners. However, little attention has been paid to the communication design of the showrooms

in which enterprise customers are invited to create value through collaborative dialogues [1, 10].

This work analyzes the communication process of these new types of Showrooms which we call “Co-creation Showrooms” and identifies several key factors for successful dialogue between facilitators and customers. This work also introduces a new communication process using new communication tools as well as evaluations of this process (Table 2).

Table 2. Key Goal Indicators of the co-creation showroom

| ID | Key Goal Indicators |
|-----|---|
| 1-1 | To create business through co-creation with customers |
| 1-2 | To increase the number of non-disclosure agreements with customers |
| 1-3 | To increase the number of sample evaluation requests from customers |

3 Method

This section describes our steps of communication design, namely user study, identification of user requirements, prototype and evaluation in the field.

3.1 Understanding the Context of the Showroom Activities

To understand the context of the showroom activities, we started a project of an action research with a business partner who has communication process issues of their co-creation showroom. We observed to understand realistic context by participating as “customers” and interviewed two managers of the showroom to understand hidden context such as outputs and goals of the showroom activities and their reporting line. As a result, the activities are roughly categorized into three phases; pre-activities, customer visit and post-activities.

Pre-activities: showroom managers have a meeting with their sales representatives to understand customer’s background of the visit.

Customer visit: it takes about 120 min and consists of mainly 4 parts, “Greetings (10 min),” “Introduction of the company history (20 min),” “Introduction of cutting-edge technologies and prototypes (60 min),” and “Discussion (30 min).”

Post-activities: notes of dialogues are gathered from facilitators, and a summary of the notes are distributed to customers and relevant divisions.

3.2 Hierarchical Goals of the Co-creation Showroom

We design a semi-structured interview based on the key activities extracted from the observation of the co-creation showroom. We take a 150-min semi-structured interview individually with each of two managers of the showroom to understand their activities and goals. Applying GTA [11], we segmented the output of each interview and merged it into 19 goals/sub-goals. Then we categorize these goals into three hierarchical layers

Table 3. Key Success Factors of the co-creation showroom

| ID | Key Success Factors |
|-----|--|
| – | To improve the quality and efficiency of face-to-face communication |
| 2-1 | To extract potential and promising customer problems |
| – | To get an opportunity for new business |
| 2-2 | To identify problems and their business context |
| – | To capture customers’ needs at high quality level |
| 2-3 | To get all customers involved |
| 2-4 | To improve the quality and speed of action derived from the dialogue |

based on their dependency, namely “Key Goal Indicators (KGIs)”, “Key Success Factors (KSFs)” and “Key Performance Indicators (KPIs)”. KSFs are intended to be sub-goals of KGIs, and KPIs are intended to be sub-goals of KSFs (Table 3).

Numbered KGIs, KSFs and KPIs are indicators/factors that are highly prioritized by the managers of the showroom.

3.3 Prototype

Using highly prioritized factors and indicators, we extract a typical current scenario of a showroom focusing on customer problems, as shown in Fig. 1.

| | | | |
|--|---|---|---|
| 1) Facilitation by the Customer Situation Dialogues are mostly facilitated by the top manager of the customer. Problem: Facilitators cannot select the topics. Subordinates of the top manager cannot participate while their boss talking. | 2) Non-visualized dialogue Situation Topics are rarely visualized and barely stay in the personal notes. Problem: It is hard to understand the structure of dialogues and to share insights. | 3) Contact by unreliable relay Situation Identifying of each comment is difficult. Problem: The facilitator has to make contact via a representative. It is time consuming and unreliable. | 4) Feedback to R&D division Situation Facilitators have to summarize key messages by collecting their notes. Problem: Takes time and lacks accuracy to inform key feedbacks to R&D division. |
|--|---|---|---|

Fig. 1. A typical current scenario of the co-creation showroom

To solve problems in a typical current scenario, we have introduced a new communication scenario and communication tools with shared dual 80-in. digital boards as well as a tablet terminal for each customer, as shown in Figs. 2 and 3.

| | | | |
|---|--|--|--|
| 1) Concurrent Externalization of Topics Solution: Each customer sends comments to shared digital board concurrently via tablet terminal. Results: Other customers can send comments while their boss is talking. | 2) Visualize and select topics Solution: Facilitator picks up promising topics from shared digital board and starts dialogue with the right person. Results: Extract potential and promising customer's problems. | 3) Contact right person directly Situation: Visualize and share all comments with author name. The facilitator can identify the right person for the topic. Results: The facilitator makes quick contacts with the right person directly. | 4) Feedback to R&D divisions Solution: Using already shared information, facilitators extract key messages. Results: The facilitator sends information co-structured with customers very quickly to R&D division. |
|---|--|--|--|

Fig. 2. Prototype of a typical future scenario of the co-creation showroom



Fig. 3. Facilitating dialogues using shared digital boards and tablet terminals

Using the new communication process and tools, customers and facilitators can communicate concurrently and visually via digital boards and tablet terminals handling digital sticky-notes (Table 4).

Table 4. Key Performance Indicators of communication in the co-creation showroom

| ID | Key Performance Indicators of Communication |
|-----|---|
| – | To promote dialogue though visualization |
| – | To improve the quality and efficiency of structuring of topics during dialogue |
| 3-1 | To increase the number of visitors who discuss their business challenges |
| 3-2 | To narrow down topics during facilitation |
| 3-3 | To find out customers’ hidden issues |
| 3-4 | To discuss topics in depth |
| – | To facilitate to extract the background and reason of the requirement |
| 3-5 | To improve the speed of feedback to relevant divisions |
| 3-6 | To improve the quality and efficiency of structuring of topics after discussion |

3.4 Evaluation

In order to evaluate the performance improvement of the co-creation showroom from the perspective of KGIs, we trace the total number of (1-2) NDAs entered into and (1-3) sample requests over the course of 6 months. The average occurrence more than tripled, from 1.7 to 5.5 per month (Table 5).

For the perspective of KSFs and KPIs, we design a questionnaire for quantitative and qualitative evaluations. We use a 5-point scale in order to indicate the degree of improvement compared with the baseline, namely level 1: “much worsened”, level 3: “same as before” and level 5: “much improved”. We use a free description format for the qualitative evaluation. We pick up all the facilitators of the co-creation showroom including two managers and five assistant facilitators. Summary of the evaluation is as follows:

Table 5. Quantitative and qualitative evaluation of the new communication process

| ID | KSF/KPI | Quantitative evaluation | Qualitative evaluation |
|-----|--|--------------------------|---|
| 2-1 | To extract potential and promising customer problems | 3.8 | Numbers of comments can indicate the priority of problems. |
| 2-2 | To identify problems and their business context | 4.0 | Visualization of topics makes facilitation easy. |
| 2-3 | To get all customers involved | 4.2 | Topics are selected based on their contents rather than the job titles. |
| 2-4 | To improve quality and speed of action derived from dialogue | quality:4.2 speed:4.0 | It is possible to make direct contact with the author of comments. Sharing digital board images as minutes leads to a quick response from the customer. |
| 3-1 | To increase number of visitors who discuss their business challenges with us | 4.5 | Many comments can be gathered concurrently, especially in a big group discussion. |
| 3-2 | To narrow down topics during facilitation | 4.3 | Facilitators can start dialogues on the topic of their own interests. |
| 3-3 | To find out customers' hidden issues | 3.7 | Customers' writings makes their opinions clear. |
| 3-4 | To discuss topics in depth | 4.3 | Understanding customers' interests and navigating related topics can lead the discussion in depth. |
| 3-5 | To improve speed of feedback to relevant divisions | quality:4.0 speed:4.2 | Since the summary can be shared with attendees on-site, the efficiency is improves. |
| 3-6 | To improve quality and efficiency of structuring of topics after dialogue | quality:4.3 speed:4.7 | Since the structuring process is shared among attendees, the outcome is convincible. |

4 Discussion

We extracted three KGIs, four highly prioritized KSFs, and six KPIs of Communications for the co-creation showroom from the interviews. These KGIs/KSFs and KSFs/KPIs were identified to have cause-and-effect relations by the facilitators.

As we investigate the KSFs and KPIs carefully, strongly dependent factors/indicators are identified, such as (2-1) “extract potential and promising customer’s problem” and (2-2) “find out problems and their business context.” Factor (2-2) is a necessary condition of factor (2-1).

In order to make the relations between factors/indicators clear, we conducted an additional interview and derived a directed acyclic graph (DAG) of the relations, as shown in Fig. 4. Arrows indicate the dependencies; a left-to-right arrow denotes that the left item is dependent on the right.

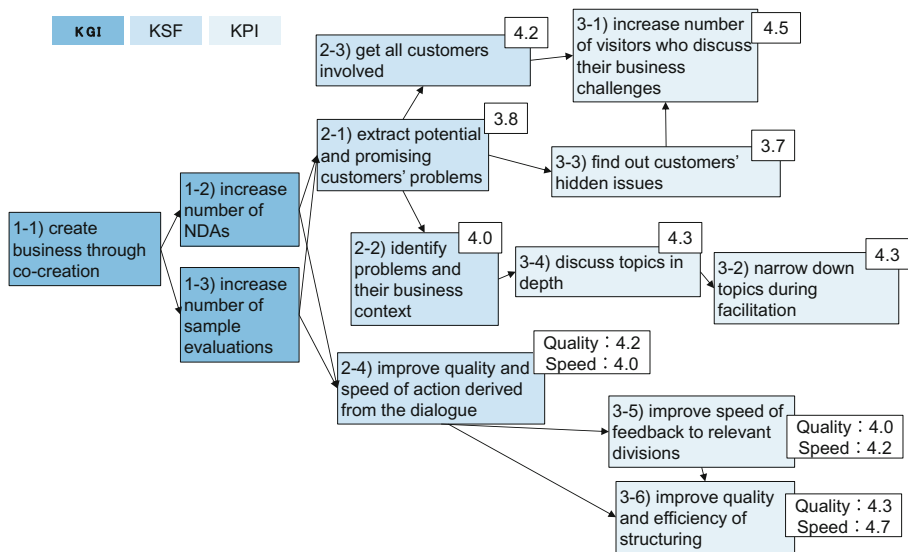


Fig. 4. DAG denoting dependencies of KGIs, KSFs and KPIs from user study

The DAG of the dependencies of indicators/factors tells that:

- Two main KSFs for the showroom are identified, namely, “(2-1) extract potential and promising customer’s problems” and “(2-4) improve quality and speed of action derived from the dialogue”
- The subgraph starting from the node (2-1) is larger than the subgraph starting from the node (2-4). This implies that achieving condition (2-1) is more difficult than achieving (2-4). For example, condition (2-2) is to “identify problems and their business context” requiring discussion in depth (4-3). On the other hand, condition (2-3) requires “To get all customers involved” in widely. Therefore, satisfying both conditions (2-2) and (2-3) requires a special facilitation technique to avoid a contradiction.
- The performance gap between (3-1) “To increase number of visitors who discuss their business challenges” and (3-3) “To find out customers’ hidden issues” is relatively big. This implies that the possibility of missing important KPIs related to the condition (3-3). The full set of KPIs involves the condition of “To facilitate to extract the background and reason of the requirement.” This can be a good candidate to start further discussion.

5 Conclusion

This work analyzes the communication process of the co-creation showroom as an action research and extracts 19 key indicators/factors for successful dialogue between facilitators and customers. We introduce priorities and dependency relations into these indicators/factors to extract a typical current scenario of the co-creation showroom.

To solve problems in a typical current scenario, we introduce a new communication scenario between facilitators and customers using shared digital boards and tablet terminals. As a result, the average KGIs more than tripled from 1.7 to 5.5 per month and all the KSFs/KPIs are improved, whose average is greater than 4 in a 5-point scale.

For the future work, we are planning to;

- apply a statistical analysis to clarify the dependency of KGIs/KSFs/KPIs using evaluation data for each session with customers, and
- introduce other communication processes and mechanisms to support high level facilitation especially for achieving wide involvement of customers to seek topics and deep discussions on the selected topics.

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