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Involving Stakeholders Towards Service Implementation. Co-designing change of practices using a visual language

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Abstract: Service implementation is complex and multifaceted. In this paper, we focus on change of practices for actors in an organisation as one of these facets. Successful value co-creation requires different service actors to work together. Therefore, successful realisation of change of practices requires these actors to have a shared mental model of (consequences of) such change, both for themselves and for the collaboration with other actors.

We argue that collaborative development and use of a visual language can function as boundary object that can facilitate conversations and development of shared understanding regarding service implementation as change of practices, if connotative meaning of the words in the language is defined by those who use it.

We use data from a workshop in the context of implementing a change of practices to show how this can work and reflect on what role designers can have in the transition towards service implementation.

Keywords: service implementation, change of practices, visual language, boundary object, shared understanding, co-design, value co-creation

1. Introduction

Implementing a new service and subsequently running it are not easy. So far, there has not been much discussion in service design literature regarding the transition from service design to service implementation (the exception being Lin et al., 2011). Recently, this topic is being addressed more in (service) design research (e.g. Yu & Sangjorgi, 2014; Christiansen, 2015; Bækkelie, 2016; Lønvik, Pettersen, & Verhulst, 2016).

There are multiple aspects to service implementation (Overkamp & Holmlid, 2016), but in this paper we focus on change of practices that are implicit if service development is viewed from a service logic perspective (Holmlid, Wetter-Edman, & Edvardsson, 2017) and two challenges related to this. Firstly, successful implementation and operation of services requires more than a single department of an organisation (Polaine, Løvlie, & Reason, 2013). This means that shaping service resources that are...
required for integration in value co-creation processes (see e.g. Vargo & Lusch, 2008; Grönroos & Gummerus, 2014) on a meso-level is a quest for an entire organisation. Secondly, service implementation involves organisational change because it influences roles and responsibilities of actors in an organisation (Lin et al., 2011; Overkamp and Holmlid, 2016). Therefore, it is important for stakeholders to know what the service implementation will mean for their own work and how this relates to the organisation as a whole.

We argue that visual languages that are collaboratively created and used by those involved in the change of practices can help to address these two challenges. Firstly, it supports development of connections between actors and secondly it helps to generate - among these actors - a shared understanding of (the consequences of) the change of practices that is part of service implementation. In this paper, we use a case study to exemplify how design(ers) can help to develop these connections and the shared understanding that are required in order to make change of practices successful. Actively working with these two challenges in a timely manner will save time and increase the odds of successful change, making the change process more effective and efficient.

The rest of the paper is set up as follows. In the background section, we discuss service implementation as change of practices, shared understanding of this change as prerequisite for its successful realisation and how communities of practice influence the development of such shared understanding. In addition, we present how boundary objects and visual languages can be used to develop shared understanding. Then we introduce a case where a visual language was created and used in a workshop around implementation of a change of practices within a municipality in the Netherlands. In the discussion, we reflect on the extent to which the visual language helped the participants to achieve a shared understanding regarding the implementation efforts and the consequences for their own practices. Finally, we discuss how a visual language can be used more generally in the process of implementing service as change of practices and the role of (service) designers in this.

2. Background

Organisations continuously roll out planned and emergent changes in the way they work (Van Aken, 2007). The implementation of new or improved services is an example of this and involves a change in the practices of those involved in value co-creation (Vargo & Lusch, 2004; 2008). The complex nature of services means that different departments of an organisation need to work together for value co-creation to be successful.

Both this dependence of actors upon each other and specialisation of actors increase the need for collaboration (Carlile, 2004) and the need for actors to have a shared understanding of the required change(s) (Noble & Mokwa, 1999, p.58). This shared understanding is also referred to as a shared or team mental model (Klimoski & Mohammed, 1994). A person’s mental models include relations of cause and effect in processes in the world around us (Craik, 1943) and they thus “help people to describe, explain and predict events in their environment” (Mathieu, Heffner, Goodwin, Salas, & Cannon-bowers, 2000 p. 274). If such mental models about tasks, roles, responsibilities as well as knowledge, skills, etc. of each actor are shared among actors who work together, these actors can anticipate each other’s actions and adapt their own behaviour accordingly (Cannon-Bowers, Tannenbaum, Salas, & Volpe, 1995). This limits the time needed to negotiate activities with other

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1 Klimoski and Mohammed (1994) critique the fact that these terms are used interchangeably in literature and that authors do not cite literature that refers to similar concepts under a different name. Akkerman et al. (2007) voice a similar critique.
actors (Mohammed, Ferzandi, & Hamilton, 2010) and helps teams perform well in situations where it is difficult to communicate (Mathieu et al., 2000). In a service context, this means that all actors involved in a new service need to have a shared understanding of how the service system works as a whole and how activities of the different actors in the service system are related to each other. Then, value co-creation can be successful even in unpredictable situations.

Little is known about how to support the development of shared understanding in a deliberate and repeatable way (Bittner & Leimeister, 2014), but some aspects that contribute to it are known. These factors can exist on different levels in an organisation (e.g. Kleinsmann & Valkenburg, 2008) and include communication between members in the organisation (Noble & Mokwa, 1999), which is helped by informal integration between different parts of the organisation (Rapert, Velliquette, & Garretson, 2002). Collaborative (design) work can also support the development of a shared understanding (Arias, et al., 2000).

However, in order for such communication and collaborations to work, actors need to learn to communicate with and learn from others, who might have different perspectives and perhaps a different vocabulary for describing their ideas (Koskinen & Mäkinen, 2009, p.31). A reason for such differences can be that actors belong to different communities of practice (Lave & Wenger, 1991). By working with fellow members of the community you develop your identity as a member of this practice, also called ‘organisational socialisation’ (Van Maanen & Schein, 1979; Hall, 1987). This also involves creating a difference in relation to others, thus excluding people outside the community (Koskinen, 2005). Communities of practice lead to the development of local understandings of the work of the organisation and one’s role in it (Becky, 2003) as well as knowledge boundaries between different parts of an organisation (Rosenkranz, Vranesic, & Holten, 2014). This increases the need for shared understanding. Boundary objects (Star and Griesemer, 1989) can serve as part of a solution to this issue, because they facilitate the development of a shared understanding between people from different parts of an organisation (Koskinen, 2005; Koskinen and Mäkinen, 2009).

Carlile (2002; 2004) has described three types of boundary objects, syntactic, semantic and pragmatic. We focus on semantic boundary objects, which can support knowledge translation between actors who have a different vocabulary, by providing a shared vocabulary (ibid.). In service design, blueprints and journey maps can function as semantic boundary objects to develop a shared understanding of the service and its implementation, for those who use them collaboratively (Bitner, Ostrom, & Morgan, 2008; Calabretta et al., 2016), but since elements of these tools are only partly formalised, there can be ambiguity in elements of the service. The Customer Journey Modelling Language (CJML), on the other hand, has been developed to allow making a detailed specification of the service in a common vocabulary (Halvorsrud, Lee, Haugstveit, & Følstad, 2014). The visual and unambiguous character of this language are a benefit, because they help prevent situations where two actors use the same label, while they (unknowingly) refer to different concepts. A downside with CJML, however, is that much of this unambiguity is predetermined by its developers. This limits the possibility for those who use the language to give connotative meaning (Kostelnick & Roberts, 1998) to the words that fits the specific context of use. Therefore, we are interested in how a visual language, where connotative meaning of the language’s words can be created by those who use it, can function as a semantic boundary object that facilitates conversations and development of shared understanding regarding service implementation as change of practices.
3. Method

The project presented in this paper involves a Dutch municipality that wanted to change their way of working. The leadership of the municipality felt they could not provide the service that they wanted. However, they did not have an idea of what their new way of working should look like. Therefore, they hired JAM visual thinking, a design agency. JAM visual thinking designed a series of workshops – together with the project leader from the municipality – to support the municipality in their search for this new way of working. A central principle of all workshops was that the stakeholders within the municipality had the chance to co-design the content of the new way of working. For all workshops, an imagery set was used as part of the workshop materials. This set consisted of 100 cards (see Figure 1 for examples). 75 of these images were chosen based on images most commonly used in the work of JAM visual thinking over the past 10 years. These 75 images contain metaphors, objects and behaviours. They were ambiguous, so that participants themselves could determine what concept was represented by the image. In addition to the 75 basic images, around 25 project-related images were added, which were developed together with the project leader from the municipality.

![Figure 1. Examples of the cards in the imagery set.](image)

The first workshop in the series was held with the heads of all the departments of the municipality. During this workshop, five themes emerged in relation to the new way of working: ‘heart for the city’, ‘time and space for learning’, ‘building together’, ‘creation of movement’ and ‘making choices’.

In this paper, we focus on the second workshop in the process. In this particular workshop, 38 civil servants from across all the departments of the municipality participated. They were challenged to give meaning to the five themes from the first workshop. The participants were divided into 6 groups, who were seated at separate tables in the room (see Figure 2). The workshop was facilitated by seven designers from JAM visual thinking. They supported the process in the groups and gave visual support where needed (e.g. adding images that were not part of the imagery set but that were requested by a participant).
Assignment 1 – Visualising the individual perspective

The workshop started from an individual perspective. After an introduction of the five themes by one of the heads of the departments who participated in the first workshop, participants were asked to develop their personal vision of what the new, future-oriented practices for the municipality should look like on a general level. For this assignment, each participant was given a template (see Figure 3). Per table there was one set of the 100 image cards available for visualising the individual perspective on the new way of working on a general level. The participants used the imagery set, additional drawings and notes to visualise their perspective on the new way of working. When they had finished, they presented their drawing and ideas to the others at their table. Each group member first presented his/her vision to the person sitting next to them at the table. Then, this neighbour, presented the vision to the rest of the group at the table.

Figure 3. The template that participants used to visualise their individual vision of the future-oriented practices on a general level.
Assignment 2 – Developing a group vision

During the second assignment, the individual perspectives on the new way of working in general were developed into a group vision per table, focusing on one of the themes in particular. Tables one to five were assigned one of the themes that emerged during the first workshop. The theme ‘heart for the city’ was considered an undercurrent for all themes. So, instead, two groups focused on the theme ‘building together’. The assignment was to give meaning to this theme together, in the table group. Table 6 was a wildcard table. They were given the assignment to challenge the four remaining themes and decide if there was something that was not addressed yet in these themes. The participants at each table used a template (Figure 4) to develop the group vision for the theme that was assigned to them. When the groups had finished their vision on the theme, each group visited the other tables, in a presentation carousel format, to hear the other groups’ views on the other themes. One member of each group member stayed with the group’s poster and presented it to those who came by.

Figure 4. The template for developing the group vision for a specific theme, based on the individual visions for a future-oriented practices on a general level, from assignment 1.

Assignment 3 – What will you do as of tomorrow?

After the individual and group assignment, all participants reflected on how they could start the new way of working that they co-created during the workshop as of tomorrow. They wrote this down on a post-it note and read this aloud to all the other participants.

Data collection and analysis

The templates that the participants filled out during assignments 1 and 2 as well as the post-it notes from assignment 3 were collected after the workshop and used for analysis. In the analysis of the templates, we looked per group at what topics regarding future-oriented practices were part of the individual templates from assignment 1 and what topics were part of the group vision for the theme that was assigned to them during assignment 2. During the analysis of the post-it notes, the authors first worked individually and used an open, inductive coding (Bernard, 2006) to identify themes regarding what participants mentioned they would change in their practices. Then, both authors discussed the themes they identified individually and combined them into a small number of themes (Creswell, 2014).
4. Results

Here we present the outcomes of the workshop. First, we show the results of the first and second assignment, taken together per group. Second, we present the topics mentioned in the third assignment.

Assignment 1 and 2

During the first two assignments, the individual templates shown in Figure 3 and 4 were filled out by the participants. Examples of how this was done are shown in Figure 5 and 6.

Figure 5. Example of how the template for the individual vision was used.

Figure 6. Example of how the template for the group vision was used.
Below, we show the individual and group visions, in Figure 7 to Figure 12. Topics taken directly from the individual vision into the group vision are marked with a circle in a solid line. Topics taken from individual vision but slightly reformulated in the group vision are marked with a dotted line.

Figure 7. The individual visions (above) and the group vision (below) for group 1 (theme: building together).
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Figure 8. The individual visions (above) and the group vision (below) for group 2 (theme: creation of movement).
Figure 9. The individual visions (above) and the group vision (below) for group 3 (theme: building together).
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Figure 10. The individual visions (above) and the group vision (below) for group 4 (theme: time and space for learning).
Figure 11. The individual visions (above) and the group vision (below) for group 5 (theme: making choices).
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Figure 12. The individual visions (above) and the group vision (below) for “wildcard” group 6 (theme: pushing boundaries).
Assignment 3

Among the post-it notes we identified four general themes: collaboration with other actors, having an open attitude, being creative and reflection & learning. Below, we present quotes (translated from Dutch) for these themes.

Most of the comments were about aspects of collaboration inside and outside the city hall, such as:

**Participant #1:** Make even more contacts with colleagues, citizens, organisations, companies.

**Participant #3:** Initiate more collaboration between team and department.

**Participant #18:** Even more dialogue outside the city hall.

**Participant #21:** Looking more “outside” to see what happens there and add my talents to that.

**Participant #35:** Through this session I have become even more aware of the fact that there are so many talented, funny and knowledgeable colleagues around. I am definitely going to seek them out and talk and do together.

Notes about an open, supportive attitude were, for instance:

**Participant #4:** Listening, stimulate safety and trust.

**Participant #16:** Support colleagues, reward them and provide more space, to give them more confidence in themselves and the environment.

**Participant #17:** Listening to the opinion of colleagues (...) positive approach.

**Participant #24:** Really listen to others and take time for that. Not ad hoc due to workload.

Examples of statements regarding reflection and learning:

**Participant #13:** As of tomorrow, I will keep having a dialogue and explain why and ask why.

**Participant #16:** More dialogue about what, how and why for more stakeholders.

**Participant #27:** Keep learning (...), asking questions, self-reflection.

Finally, regarding being creative and extending boxes, participants mentioned:

**Participant #6:** I will realise even more that frames may be pushed.

**Participant #10:** Tomorrow, I will confidently take space to try out new ideas.

**Participant #29:** Tomorrow, I will take and give more freedom.

**Participant #37:** Push boundaries by deliberating so that I can build together.

5. Discussion

In the material developed during assignments 1 and 2 we see that the group visions contain topics from all – or almost all – the individual visions, either one-on-one or slightly reformulated. Only for three of the 38 individual visions (in groups 2, 4 and 6) no element has been incorporated in the
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group vision. There was no group in which the individual vision of one of the members was taken as a clear base for the collective vision, with only limited inputs from the other members. The group visions have thus become a shared mental model of the specific themes within the change of practices, that – on top of that – is built up from all the individual visions in the group. The collaborative development of the vision can explain this shared understanding (Arias, et al., 2000).

The overlaps between individual and group vision on the change of practices are clear through the reappearance of imagery from the individual vision in the group vision. That allows individual participants to recognise and point to contributions that they made to the shared vision and makes clear that the content of the change of practices was designed collaboratively. If the conversations and vision formulation would have only been verbal, individual contributions could have been less clear, for instance if these would have been taken together under an umbrella term. Using a visual language has a benefit over a written language here.

The workshop participants came from all the departments of the municipality and each group contained a mixture of members of different departments. Since each department was represented in each group, the visual language is shared among different parts of the organisation. This makes it easier to disseminate and have conversations about the workshop outcomes (between the different departments), after the workshop (Bailey, 2012). Also, the visualisation of the group vision can live on in the organisation and facilitate dissemination, which happened with group 5. The tulip metaphor is used throughout the organisation for all that is related to the theme ‘time and space for learning’.

When it comes to the reflections written on the post-it notes, there is little spread in the topics that are mentioned by the participants. This suggests a shared understanding among the participants of the content of the change of practices. Also, there is a recognition for the need to develop and improve connections within the organisation, which are important for successful realisation of value co-creation (Polaine, Løvlie, & Reason, 2013).

The role of the designers was that they designed the workshop series and material. Thereby, they created a platform for collaborative design of the change of practices. In other words: the designers created the conditions needed for the participants to collaboratively create the new vision themselves (Ruijs, 2016). Service designers already involve stakeholders in various ways in the service design process (Han, 2009), such as through (organising) co-creation workshops where actors co-design service ideas. In the transition towards service implementation, designers could play a similar role, which some already do (Yu, 2015). In that phase, the workshops can have two additional aims. Firstly, to keep connections between actors – developed during the co-creation of service ideas – alive. Secondly, to transfer ownership and responsibility of the change of practice from service designers to service actors. The workshop presented in this paper contains examples of how these two aims can be operationalised in the workshop design.

There are also limits to what these workshops can contribute with. Firstly, some of the responses on the notes from the third assignment were of a more general nature:

Participant #2: Try to apply everything that was said and seen.
Participant #8: Do it!
Participant #20: Speed date. Sweet.
Participant #28: Think, dare, do.
These responses do not show a clear understanding of what is needed on an operational level to support the change of practice. In addition, all statements made by the participants are intentions; we have not followed the municipality to see whether the intentions were translated into actions.

Furthermore, although the outcomes of this workshop are in line with the suggestion by (Noble & Mokwa, 1999) that communication between members in the organisation contributes to the development of shared understanding, organisational structures also influence whether such continuous dialogues can take place (Rapert, Velliquette, & Garretson, 2002; Kleinsmann & Valkenburg, 2008).

Additional research is needed, both in other sectors and with other designers, to learn more about the role of visual languages in facilitating connections in organisations and shared understanding of change of practices.

6. Conclusion

The successful realisation of new services involves a change of practices for actors in the service system(s) where value is co-created. Furthermore, successful resource integration in the (new) service requires connections between service actors and a shared understanding among these actors regarding the change of practices.

In this paper, we argued that visual languages that are collaboratively created and used by those involved in the change of practices can function as a semantic boundary object to address these challenges.

We have used a workshop where a visual language was used to support conversations about (the consequences of) a change of practices in a municipality to show how this can work. Firstly, we showed that each group developed a shared understanding of the change of practices, which contained elements of all individual visions of the members of the group. Secondly, the collaborative creation and use of the visual language created connections between actors across the organisation. Thirdly, the participants formulated concrete actions for themselves to support the change of practices, which focussed on maintaining the collaboration with actors inside and outside the municipality. Such collaborations are needed for successful resource integration in the service.

We have thus shown that co-creation and use of (shared) visual languages is a potentially valuable tool in the transition towards realisation of change of practices related to service implementation. Design(ers) can help to develop the connections and shared understanding required for successful change of practices. Actively and timely working with this will help actors to work in one direction – rather than multiple, different ones – towards successful future value co-creation, making the change process more efficient and effective.

With this paper, we contribute to the discussions regarding successful realisation of service as value co-creation and the role that designers can have in the transition towards service implementation.

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