Improving Internal Communication Management in SMEs: Two Case Studies in Service Design

Tuomo Eskelinen, Mervi Rajahonka, Kaija Villman, and Ulla Santti

In most people's vocabularies, design means veneer. It's interior decorating. It's the fabric of the curtains and the sofa. But to me, nothing could be further from the meaning of design.

Steve Jobs (1955–2011) Co-founder of Apple and Pixar

Effective information management is a success factor for business growth, but small and medium-sized enterprises (SMEs) face challenges in transferring knowledge and information from one organizational unit to another. In this study of two case companies, participative business model development processes were designed to identify challenges and solutions in internal communication management. A service design approach based on CIMO logic (context, intervention, mechanism, and output) showed that the participative business model technique and process can identify problems and challenges in internal communication management, as well as in the prioritization of actions. The process is a creative service design process including both divergent and convergent phases. The process increased motivation among personnel to find solutions, encouraged communication, and created joint understanding on how to solve problems. The technique helped to bring tacit information into use.

Introduction

Service and product innovation is a knowledge-intensive process (e.g., Balasubramanian & Tiwana, 1999). It can be described as an information-transformation process where information is gathered, processed, and transferred in a creative way. Obviously, communication is a vital and basic need, but it is also an opportunity for service and product innovation. This latter aspect is particularly important when team members are separated by geographical distances or when they work in shifts. External communication is also important for successful product innovation (e.g., Mendelson & Pillai, 1999). Communication and collaboration are therefore identified as critical factors for successful product and service innovation management.

A crucial innovation management problem in a small and medium-sized enterprise (SME) is communication inside the company, between its departments (Katcher, 2017; Zeithaml, 1988). For example, poor communication management between sales or marketing and pro-

duction departments causes delays in the delivery of products or services, or quality problems connected to the production process or the product or service itself. Likewise, process communication is important, whether it is external (e.g., communicating with a client) or internal (e.g., communicating within a service-providing organization) (Moritz, 2005).

Many technological solutions have been developed for improving communication management, including collaborative platforms and social media applications. Also, employees use instant messaging as an additional means reaching others in real time, although it has an interruptive nature so management should pay attention to the quality and content of employees instant messaging (Cameron & Webster, 2005). However, there are still very few practical examples of how these technologies have been successfully implemented in SMEs, and many employees recognize that they should be getting more value from these tools. The main purpose of information management technologies should be to help workers do their work. They should also support

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teamwork and increase innovation and productivity. In addition, management needs information to support their staff, to increase effectiveness, and perform their own job better (Hamilton et al., 2016; Heckscher & Adler, 2007). Effective internal communication is crucial for successful organizations because it helps strategic managers to engage employees and achieve objectives (Welch & Jackson, 2007).

Pervaiz (1998) stated that the most innovative companies are those that manage to create appropriate cultures and climate that nurture innovation and creativity. Moreover, innovativeness with open organizational culture and market orientation has positive effects on organizational performance (Deshpandé & Farley, 2004; Deshpandé et al., 2000). Effective internal communication may increase the synergy effect with employees as ambassadors and improve company's marketing and public relations functions (Nielsen & Thomsen, 2009). Varey (1995) noticed that internal marketing may considerably increase competitive effectiveness by continuous improvement and culture change processes and also wondered what tactics and mechanisms may be used to translate information.

In this article, we describe our study of the challenges and solutions in internal communication management in two case companies. After developing the companies' communication processes, we inspected the effects on the company's organizational culture caused by the issued changes. We used service design and business model development approaches, and we tested how these approaches can be used in the context of internal communication challenges. We claim that business model tools can be used in a service design process. There are certain advantages in using service design and business model approaches instead of, for example, the business process management approach, which emphasizes improving performance by optimizing a company's business processes. Both service design and business model approaches are more multidimensional: they include customer and user perspectives in addition to the company's views. Furthermore, they include elements of conceptualization/social construction (through idea generation and selection), development or design (including design of better internal processes), and implementation of changes (Morelli, 2002; Nisula, 2012; Osterwalder & Pigneur, 2010). In other words, they both contain divergent and convergent phases, as typical in service design (e.g., Moritz, 2005).

Business model tools may help industrial companies to better utilize the insights of their own business processes and internal communication - and those of their business customers - and to design integrated solutions that correspond with their customers' needs (Ojasalo, 2017). The business model canvas by Osterwalder and Pigneur (2010) can be applied to cover both the industrial company's viewpoint (value capture) and its customers' viewpoint (value creation) (Ojasalo & Ojasalo, 2015). Interaction and co-production are essential elements of the service logic business model canvas, introduced by Ojasalo and Ojasalo (2015). According to Ojasalo (2017), the key questions relate to how to facilitate the interaction between the company and its customers, what the customer's mental models of interacting with the company are, and how the company can support the customer co-production and the interaction between the company and the customer. The service logic business model canvas includes a specific block on interaction and co-production, which is connected to internal communication. However, internal communication in this context has not been the focus of other studies, which appears to present an obvious gap of knowledge.

Design thinking in our study means that problems and opportunities are framed from a human-centred perspective, trying to engage potential users and stakeholders, and we use visual methods to explore and generate ideas (e.g., Brown, 2008, as cited by Kimbell, 2011). Our research questions are:

- 1. How can SMEs overcome the challenges of internal information management by involving all the stakeholders necessary for a successful service design process?
- 2. How can service design tools and processes, such as participative business model techniques, be used in the identification of communication management problems and solutions inside SMEs?

Our approach to answering these questions and the resulting findings are described below. First, we introduce the project from which the two cases were drawn and the service design tools and methods that were applied to each case company. We also describe our analytical approach, which used CIMO logic (context, intervention, mechanism, and output). Next, we present and discuss our findings. Finally, we offer conclusions, with a particular emphasis on their implications for SMEs.

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Methods

This research is based on two case studies where participative business model techniques were used as part of an innovation process to identify internal communication challenges and solutions. The participative process and tools used include interviews, discussions, and brainstorming. We believe that these methods can be used to uncover explicit user information and reveal tacit knowledge from the employees (Sanders & Dandavate, 1999).

The case companies in this research were participants in the Pake Savo project (Eskelinen et al., 2017), which is a joint project of Finnish universities: the South-Eastern Finland University of Applied Sciences XAMK and the Savonia University of Applied Sciences. The case companies were selected from about 20 SMEs who participated in the Pake Savo project. The selection criteria were a need to develop internal communication and willingness to design a participative development process. The two-year project began in 2015 and was financed by the European Social Fund. The purpose of the project was to help SMEs located in the Northern Savo (Eastern Finland) to start or develop their service business. In today's rapidly changing business environment, SMEs need to develop new innovative service concepts. Therefore, Pake Savo project aimed to advance new business creation and productivity in the participating SMEs, which were from the service and manufacturing industries. The Pake Savo project arranged two training packages on service design for the SMEs. The training was developed and delivered by the two participating universities of applied sciences. Selected external experts also delivered training modules. Related to the training sessions, each company carried out a development project associated with each company's service business. In these development projects, the participants learned, for example, how to apply the training on service design methods and the business model approach to their companies.

Several of the companies used the InTo business model analysis tool (into.savonia.fi), which was developed in Savonia (see Kajanus et al. 2014), to select the development project or to prioritize key development targets. The Into analysis enables personnel to be involved in and committed to the process from the beginning. The selected themes of the development tasks included the development of new service concepts or service products, better customer service or internal processes, and more fluent information flows. The development projects showed that, in a customer-oriented company,

effective internal communication is essential. In other words, only if internal communication processes work well, can a truly customer-oriented service approach become a reality. The shift from a product-oriented company to a customer-oriented company cannot succeed without a major change in the organization's culture. As a part of the training (i.e., the Training Programme on Service Design, Pake Savo, 2015-2017), the SMEs applied a service design approach in their company to develop their businesses, especially to develop new innovative products and services. Typical development topics for service design are process development and development of offerings, and development of marketing, sales, organization, or business strategy (Koivisto, 2014; Miettinen & Koivisto, 2009). Development of new offerings means that they differ from the previous ones, for example, from the point of view of the operating model, customer value, revenue logic, target group, or user experience.

In the two case SMEs, internal communication management was identified as a key problem. Participative business model techniques were used in the identification of communication management problems. Business model techniques can be used in a business design process of an SME aiming to create strategies, reasoning, insights, and improvements in communication. Kajanus and colleagues (2014) have presented a process for business model creation by using multiple-criteria decision support techniques and portfolio analysis. These techniques were now applied to facilitate the communication development process. The researchers designed and realized separate innovation processes in the two case companies together with the management teams and a development group consisting of employees.

Company A produces high-quality furniture and components for different purposes, such as ergonomic furniture constructed hygienic Corian material. Before the training started, the researchers asked the company to fill in a questionnaire, which contained questions on development needs. Development needs and challenges were also identified and discussed during a site visit. Based on the results, internal communication between production, marketing, and delivery of products was identified as a key challenge. A business model development process was designed and performed during 2015. The process contained five steps: i) context design, ii) idea generation, based on interviews of the CEO and application of the web-based Savonia InTo innovation tool (into.savonia.fi), iii) evaluation of ideas against two criteria: improvement of internal communication and management of customer relationships, iv) core index

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analysis, according to Kajanus and colleagues (2014), and v) discussions with personnel on the results and actions (Figure 1). The general theme was defined as developing internal communication and customer relationships management as part of the company's business model. The ideas could be connected to customer needs, to the value produced for the customer, sales channels, development and maintenance of customer relationships, key resources, key activities, or key partners. Company A's goal is to find the ideas and actions that will enable them to deliver products to the customer in an efficient and timely manner. The process produced 28 ideas and 23 comments on those ideas. All company personnel participated in the generation of the ideas and the evaluation and discussion of the best ideas. The best ideas were selected with the help of the core index method and discussions. The goal was to bring the best ideas into practice.

Company B also participated in the Training Programme on Service Design (Pake Savo 2015–2017), filled in the questionnaire on development challenges and needs, and hosted a visit by researchers. Visits were undertaken by service design and business development researchers from the participating universities.

The company is highly innovative, as indicated by its 100 patents. It designs, manufactures, and markets repair equipment and measuring systems for collisiondamaged vehicles. Based on the results of the analysis, internal communication between production, marketing, and sales departments was identified as a major challenge in developing the company's business model. Communication errors have led to many problems, such as delays in the information chain from client to production. When clients need architectural or other changes, for example a change of equipment, information needs to reach all people in the production chain very quickly. The internal communication development process was designed and implemented in 2016. It contained context and participant definition, idea generation with six questions on internal communication challenges, idea evaluation against selected criteria, core index analysis of results according to Kajanus and colleagues (2014), and a workshop to discuss the results and decide actions. There were four evaluation criteria for ideas in the evaluation phase: i) improvement of internal communication, ii) feasibility, iii) increase in productivity and turnover, and iv) cost-benefit value. The process created 32 new ideas and four complete evaluations against the evaluation

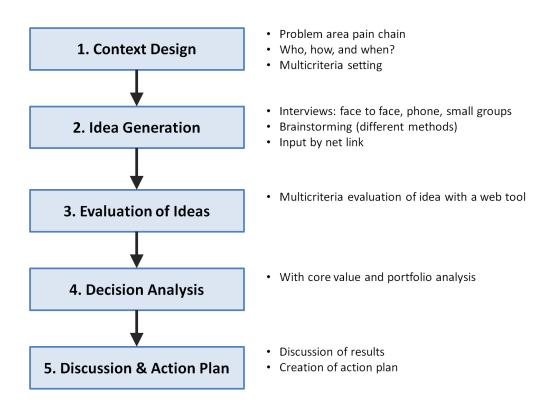


Figure 1. Participative development process for business model techniques (adapted from Kajanus et al., 2014)

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criteria, all of which were analyzed with core index analysis. The ideas were prioritized according to their core index.

Next, CIMO logic (context, intervention, mechanism, and output) was used to describe and analyze the two case studies (Denyer et al., 2008). The purpose of working with CIMO logic is to produce design propositions for enabling understanding and insights of the explored phenomena. A proposition with CIMO logic is formed as follows: for a problematic *context*, use some specific intervention that will invoke some generative mechanisms that in turn will deliver the desired outcome. The propositions thus not only inform what should be done in a specific situation in order to create a specific effect, but more importantly, they offer insight on why it happens (Denyer et al., 2008; Proper et al., 2010). CIMO logic has been used, for example, to analyze public health sector innovations (Batterham et al., 2014; Proper et al., 2010) and to establish a set of design principles to foster the development of teacher communities in secondary education (Brouer et al., 2012).

Findings

The main results of the study are novel methods and innovative tools to identify information management problems, and testing of these tools with solutions piloted in practice in SMEs. The solutions brought about improvements in information management in the case companies. In addition, changes and developments in the communication management and organizational culture are observed and discussed. The main results of the analysis based on CIMO logic (context, intervention, mechanism, and output) are presented in Table 1.

The results were obtained, in the case of Company A, one year after the development process had been finished, and, in case of Company B, only one month after. For this reason, the responses from Company B are interpreted as "goals" in comparison to Company A, whose answers are interpreted as "actualized" items. Company A established a computer-based solution that aims to facilitate more effective communication between the departments, and the solution has been tested and piloted with some clients.

Table 1. Results of CIMO logic analysis (Denyer et al., 2008) of the participative business model techniques for development processes in Companies A and B

CIMO	Company A	Company B
Context	A Finnish company offering tailored wood and composite based products, such as acoustical elements for loudspeakers.	A Finnish company that designs, manufactures, and markets repair equipment and measuring systems for repairing collision-damaged vehicles.
	Challenges lie in developing internal communication between production, marketing, and delivery of products	Challenges lie in internal communication between production, marketing, and sales departments.
Intervention	Business model development process to find new ideas and solutions.	Development process to find ideas and solutions to develop internal communication.
Mechanism	A business model development process: context definition, idea creation with interviews and web link, multi-criteria idea evaluation with a web based tool, portfolio analysis of results and workshop	A development process with six questions on challenges in internal communication, idea creation in a workshop, external expert visit to accelerate creation of new ideas, idea evaluation with a web tool, multi-criteria evaluation of ideas, portfolio analysis of results, and a workshop
Output	Two solutions were identified and put into practice. A WhatsApp application was tested and found useful.	Prioritized list of actions. A decision was made to improve, test, and pilot an internal communication system.

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For example, if the marketing department discovers changes in the customer needs, they communicate directly with the production team, and the development and management departments. Or, if the production team discovers that they need more material, they communicate with the planning department. Company A reports that they have already achieved higher efficiency with one larger client. Previously, a project delivery with a client was delayed due to many changes in customer specifications. In this case, when the client needed different colours, and at the same time, the project developer could not keep the original schedule, dealing with these changes caused a cost of €20,000. Moreover, because of improvements in the internal communication process, clients receive their invoices more quickly and efficiently. Furthermore, the new communication system has proved to be efficient in several other situations. Previously, the information chain was not functioning well, but now, because of the new information system, the information reaches the right recipients in an intelligent way. For example, after the information comes from the client, it is delivered directly to the machining department unit where the changes to the product are done. Another example is when the marketing department recognizes a need to change or improve a product, they negotiate with the client and inform the production department. All information is delivered with a centralized system using email, WhatsApp (www.whatsapp.com), and an implementation system developed by the company. The process applies lean information management to eliminate wasting of time and to increase speed (George, 2002).

The management of Company A claims that the "most important ideas may rise from the most silent worker". The development process was useful because tacit information was made available and the silent workers' ideas were recognized and heard. The management group encourages new ideas to improve internal communication. On the other hand, there has been some resistance against changes. Moreover, not all workers have had the same communication tools, which have delayed the improvement process in internal communication. In the future, Company A will look for new training activities that target further time and production efficiency as well as improving efficiency in internal communication management.

In Company B, internal communication was chosen as the development topic because many challenges had been faced. Information did not reach the right people at the right time. As a very important development question, Company B's goal was that the managers and

bosses should know at all times what is happening in the field and are aware of any reclamations. The company estimated that a substantial improvement was gained as a result of the development process. As another result, an internal communication system was identified as a solution and it now has been piloted with users. Since only a short time has passed after the development process was finished, not all the decisions to improve internal communication have been put into action. Company B's experience of the development process has been that it committed and inspired employees and made the problems clearer and more understandable to all. The next step would be putting the solutions into practice. Also, the personnel's motivation has increased, and it seems that all are doing their best to improve internal communication. There is more discussion and awareness of the challenges. Overall, the development process helped to gain a joint insight on what the problems, challenges, and solutions are in internal communication management. Moreover, it was important to find tacit ideas from the silent workers. As the next step, development needs were identified in order to design and put into practice a digital information management system. For this purpose, Company B and Company A also shared knowledge on solutions as part of the Training Programme. Company B also has decided to develop their meeting routines.

Conclusion

Service design was in the focus of the training programme in which both Companies A and B participated. As feedback, the companies stated that service design methods offer many new possibilities and the training programme increased their knowledge on service design methods as well as collaboration. Of particular importance was the identification of customer needs with service design tools and methods. In addition, tacit information from the employees was brought into practical ideas and solutions with the InTo tool based on a business model approach.

This research presents a systematic business model process, which is efficient in the identification of communication management problems and challenges. Second, it presents the application of the process into two practical cases that illustrate how improvements of internal communication management challenges can be realized in practice. This systematic process and the practical cases create effectiveness and enhance new innovations in the ways how internal communication is managed in SMEs. However, in particular, applying participative business model techniques in the context of

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service design has proven to be a very successful approach. Consequently, the process becomes more multidimensional, customer-oriented, and includes both divergent and convergent phases, and creativity, as typical to service design (e.g., Moritz, 2005). For example, Company B's new product innovation has started from customer needs, namely the need garages have for a productive and fluent service chain when they offer services to their clients who bring cars to the garage for repairs. For garages, the need is to "get the job done easily". The customer feedback on the new product has been very good. Company B actively thinks about customer needs and even the "needs of the customers of their customer".

The service design training programme was linked to real business needs and resulted in measurable improvements in internal communication in the participating SMEs without forgetting the customer perspective. The process including participative business model techniques increases interaction inside the company; interaction is needed when creating more user-oriented services (Miettinen & Koivisto, 2009). The process also increased motivation of the personnel to solve both internal problems and customers' problems.

All SMEs could potentially benefit from the findings of this research. Problems in internal communication management cause many difficulties, which even affect the final customer and end-user satisfaction. Practical case examples also demonstrate that cost-effective solutions are available to improve internal communication management. Better communication management helps workers and executives perform their work better and faster, solve problems more quickly, as well as deliver more value for their customers.

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