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**USER INVOLVEMENT IN SERVICE  
DEVELOPMENT AND INNOVATION  
PROJECTS**

**How does the healthcare sector involve its users in  
service development and innovation projects?**

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## **PREFACE**

This thesis is the final part of our Master of Science in Business Administration, majoring in Strategy, Organisation and Leadership at Oslo Business School, Oslo Metropolitan University.

Our motivation to write about user involvement is rooted in our interest in innovation and service development. These are phenomenon that we experience in our daily lives, that have been emphasized throughout our education as a foundation for organisational survival, and that we will encounter in the course of our future careers. As user involvement ensures the quality of service development and innovation projects, we wanted to examine the concept in greater detail to gain a better understanding of how it should be practiced and managed to achieve its full potential. It is our belief that involving users is a necessity both to the users and the public healthcare providers, as it on the one hand ensures improved services for the users, and on the other enables the healthcare providers to increase their capacity and provide better services with the same scarce resources.

Writing this thesis has been as time-consuming and challenging, as it has been educational and rewarding. We are very grateful to our supervisor, professor Line Christoffersen at Oslo Metropolitan University, for all the valuable guidance, feedback and encouragement she has provided us with throughout the process. We would also like to thank our informants for the time they have spent participating in the study and sharing their experiences and knowledge about user involvement. Finally, we would like to acknowledge our friends, families, and significant others for their support during a time when much of our attention and efforts have been focused on this study.

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## ABSTRACT

**Background** – While the healthcare sector has recently increased its focus on involving users in service development and innovation projects, there is a lack of knowledge on how to do so, as previous research is insufficient.

**Objective** – The purpose of the study is to examine how the healthcare sector involves its users in service development and innovation projects. The aim is to improve the knowledge regarding user involvement by proposing a reporting framework. By improving the quality of the evidence on user involvement through efficient reporting, a consensus regarding best practice can be reached.

**Methods** – The study examines user involvement with an inductive approach through ten in-depth interviews of project workers with experience from service development and innovation projects in the healthcare sector.

**Results** – The findings show a lack of consensus regarding whom, when, and how to involve users given project factors such as aim, size, and target users. The knowledge gap regarding the management of user involvement is reflected in the identified difference between how user involvement is intended and how it is practiced.

**Conclusion** – The study suggests that a framework for reporting on user involvement may improve the knowledge on the topic, and hence bridge the difference between intended and practiced user involvement. By reporting on the project factors, who, when, and how users were involved (Table 3), projects can be compared in order to identify a best practice regarding user involvement in service development and innovation projects in the healthcare sector.

## 1. INTRODUCTION

The healthcare sector has recently experienced an increased focus on user involvement in service development and innovation projects, with a strong emphasis on benefits for both users and organisations (Engström & Elg, 2015). User involvement is now considered to be the user's right, as well as a practical approach for organisations to increase their capacity and improve their services. Though previous research has found significant beneficial aspects in involving users in terms of superior services, more creative ideas, and improved performance (Alam, 2002; Kristensson, Magnusson & Matthing, 2002), few studies have been specifically aimed at service development and innovation projects in the healthcare sector. Moreover,

even in the private sector, inconsistencies are found in the results and recommendations of previous studies, as discrepancies are evident regarding what is practiced and what is preached (Matthing, Sandén & Edvardsson, 2004, p. 487), and a best practice is yet to be defined regarding how user involvement should be managed. Given the lack of recent theory on user involvement, and that previous research exhibits inconsistencies and mainly examines the private sector, further research is needed to understand how user involvement should be managed in service development and innovation projects in the healthcare sector.

The present study aims to gain an understanding of how user involvement is practiced in the healthcare sector, with the purpose of finding a potential best practice and filling eventual knowledge gaps on the subject. In the field of research in the healthcare sector, a reporting checklist has been developed to improve reporting on how users are involved in the different studies (Staniszewska et al., 2017). Based on this framework and existing theories on user involvement, the present study uses an inductive theory building method to develop a reporting framework as a tool to compare the management of user involvement in service development and innovation projects in the healthcare sector. Such a reporting framework could facilitate the building of a solid evidence base, the emergence of new theory, and the identification of a best practice regarding how users should be involved.

## **2. THEORETICAL BACKGROUND**

### **2.1 Market orientation & co-creation**

Prahalad and Ramaswamy (2004) describe an emerging trend of market orientation that is in contrast to a more traditional firm-centric approach to value creation. Whereas firms traditionally have considered customers as end consumers with little influence over new product and service development, they now engage in high quality interactions with customers to co-create valuable products and services. The term co-creation emerged as a form of collaboration with customers with the aim of innovation (Lusch, Vargo & O'Brien, 2007; O'Hern & Rindfleisch, 2010). These different collaborative practices imply that customers are actively involved as collaboration partners during the entire innovation process (Kristensson, Matthing & Johansson, 2008). The philosophy of market orientation thus supports the importance of the customers' role as a fundamental principle of user involvement in service development (Kohli & Jowarski, 1990). Indeed, Kristensson et al. (2008) define user involvement as a practice by which co-creation takes place through the generation of

knowledge of the customers' latent needs. These latent needs can only be discovered through the use of a proactive market orientation (Narver, Slater & MacLachlan, 2004), which involves customers joining the company as collaboration partners in the co-creation of value.

By empowering customers to take an active part in product and service development, firms are now viewing customers as co-producers, idea generators, and resource integrators (Prahalad & Ramaswamy, 2000; Vargo & Lusch, 2008). Several studies have uncovered significant benefits derived from involving users, such as enhanced end-value of new products or services (Kristensson et al., 2008), improved levels of creativity (Wikström, 1995), as well as increased user benefits (Magnusson, 2009). These benefits relate to the firms' need to determine and understand customer preferences in order to create products and services that meet the customers' demands. As Gruner and Homburg (2000) argue, customer needs are dynamic rather than static, and may vary greatly through the innovation process. Gaining a deep understanding of customer needs thus requires frequent and in-depth interaction with the customers (Rothwell et al., 1974; Maidique & Zirger, 1985; Parkinson, 1982). The degree of interaction between the firm and its customers may fluctuate, and Alam (2002) identifies different types of co-creation, varying from passively acquiring information to actively involving customers through customer representation during the entire development process. The customer can therefore either be passively involved or have an active role as a contributor (Badcott, 2005).

The term co-creation has emerged at a time where innovation has become crucial to satisfy customers' needs in order to respond to dynamic markets with rapidly changing environments and customer demands (Zhang & Chen, 2008). From the perspective of resource dependency theory, information on customer needs is a key resource to the successful development of new products and services. This valuable information is only available to companies through interaction and cooperation with the customers themselves, and the activities companies engage in to extract this knowledge is considered a bridging strategy through which the company secures critical resources (Scott, 1992). From the perspective of relationship marketing, communication is considered to be the "glue" that enables firms to connect with all parts of their distribution channels (Mohr & Nevin, 1990, p. 36). Supporting the idea that customer interaction is beneficial to innovation, Gruner and Homburg (2000) find that information exchange and collaboration promote successful product and service development.

## 2.2 Why users should be involved

### 2.2.1 Findings from healthcare sector

Badcott (2005) finds that the healthcare sector increasingly emphasizes patient co-creation, shifting from patients having a passive role to being active contributors to the design of the products and services they depend on. This reflects the shift towards market orientation where co-creation is central to the innovation process, as healthcare providers involve patients as creators and resource integrators rather than having a producer-centric outlook on innovation (Engström & Elg, 2015). According to Bate and Robert (2006), the aim of user involvement in co-designing services is to gain a deep understanding of the patients' experiences to achieve new services that are more suited to them:

The nature of the challenge in these initiatives is to understand the experience of care at a deep level, always bearing in mind that it includes all aspects of subjectively experiencing a product or service ... and to use this understanding to design a healthcare experience that will be more successful and fulfilling than it has been before. (Bate & Robert, 2006, p. 308)

Studies have associated several benefits to a patient-centric service development approach that emphasizes user involvement. Indeed, user involvement is found to ensure an emotional connection between service providers and patients (Elg, Engström, Witell & Poksinska, 2012), and increase patients' adherence to treatment (Martin, Williams, Haskard & DiMatteo, 2005), as well as patient well being (Engström & Elg, 2015). From the patients' perspective, being involved in the service development is found to be beneficial through an improved sense of relatedness. This is achieved through the satisfaction of basic psychological needs known from the self-determination theory: participating in service development gives patients a sense of accomplishment and competence, as well as a sense of perceived support by being listened to and interacting with care providers and other patients (Engström & Elg, 2015).

Some evidence, however, indicate that challenges and potential pitfalls might arise when involving patients in service development. Indeed, Engström and Elg (2015) find that if patients feel they must decline to participate due to poor physical health, this may decrease their well-being through a reduced sense of competence. Moreover, when the individuals used to represent the patients' perspectives are representatives of a user organisation, Eriksson (2018) finds that the interaction between the user representatives and the healthcare provider

can be harmful to the user organisation through co-optation. Eriksson (2018) uses co-optation theory to define the power balance between the user organisation and the healthcare provider, and argues that the larger healthcare organisation exercises influential power over the smaller user organisation, which therefore is forced to moderate its critique and fold to the bigger organisation's demands and expectations. Possible harmful effects are hence that the interaction might affect the user organisation's attention, its political voice as a counterweight to the bigger organisation, and its capability to mobilise, as user representatives spend time collaborating with the bigger organisation rather than focusing on their own agenda. Indeed, the collaboration often is affected by the bigger organisation's premises and the smaller user organisation is forced to comply with the political agenda and a consensus-based way of interacting (Eriksson, 2018). Another potentially detrimental aspect of user involvement through user representatives is the fact that the user representatives might be used to voice their own personal experiences, rather than to represent the entire user organisation through a collective voice. In line with the author's way of thinking, a user representative from for example a COPD association being involved in a development project might be asked personal questions about their specific experience regarding their diagnosis, rather than being asked to elaborate on what is important to most COPD patients.

### **2.2.2 Findings from other fields of research**

From other fields of study, several benefits have been associated to user involvement. Alam (2002) finds six objectives of user involvement in the private service sector: "superior and differentiated service", "reduced cycle time", "user education", "rapid diffusion", "improved public relations", and "long-term relationships" (Alam, 2002, p. 254). Others find that users' ideas are more original (Kristensson et al., 2002) and have greater user value (Magnusson, Matthing & Kristensson, 2003) than those generated by professional service developers. Magnusson et al. (2003) also conclude that user involvement facilitates a mutual learning process and creates positive relationships between the users and organisations. From the users' perspective, being involved in service development processes may generate positive emotions such as experienced closeness to the organisation (Sjödín & Kristensson, 2012). In the field of research, patient engagement is found to facilitate dissemination and hence future implementation, as the research findings are more meaningful and understandable to the target users (Shippee et al., 2013; Domecq et al., 2014). In addition, Edwards, Wyatt, Logan & Britten (2011) find that patient engagement in research improves patient enrollment and retention rate. In line with these authors' way of thinking, it is more attractive for patients to



enrol in studies and experiments in which professional researchers have involved and cooperated with patients as contributors.

In contrast to these findings, several studies find potential pitfalls related to user involvement, and that involving users in some cases can be damaging to the organisation. Bennett and Cooper (1981) find that user involvement can lead to less innovative ideas because consumers focus on what they currently can relate to, they have a poor ability to express their needs due to limited technological knowledge, and they focus on immediate needs rather than foreseeing future ones. Similarly, Brockhoff (2003) argues that user involvement leads to less radical innovation, as users are more attentive towards everyday problems and needs. Paying too much attention to customers may therefore lead to organisations failing to innovate radically and explore new opportunities (Christensen & Bower, 1996), as they might be “widely unimaginative” (Martin & Faircloth, 1995, p. 122, in Magnusson et al., 2003). From the users’ perspective, being involved in service development processes may generate negative feelings related to a sense of intrusion (Sjödin & Kristensson, 2012). In the field of research, user involvement has also been associated to patient frustration, tokenism, and scope creep (Domecq et al., 2014). Tokenistic patient engagement is defined as including patients on false pretences, resulting in their perspectives not being truly accounted for. Scope creep, on the other hand, is a potential negative effect derived from user involvement, where a significant amount of irrelevant community concerns renders the scope unmanageable.

### **2.3 Which users should be involved**

In the field of research, Domecq et al. (2014) establish that earlier findings are inconclusive regarding a particular method of selection and recruitment of patients for user involvement. Some studies identified patients through convenience sampling, while others utilised volunteers. Whereas using volunteers might make recruitment easier, a potential downfall may be a lack of representativeness. Indeed, volunteers may be highly motivated and educated about specific issues, but may also have individualistic and subjective concerns related to their personal situation, rather than reflecting the general target patient community. Though there yet is no consensus on a particular method of recruitment and selection criteria, several studies have examined which user characteristics are relevant for successful user involvement in product and service development.

### **2.3.1 Apparent benefit**

Kristensson et al. (2008) identify apparent benefit as a key strategy for user involvement, as it is a user criterion that promotes successful service development processes. Users with an apparent benefit are personally motivated by an expectation of personal benefit derived from the outcomes of the service innovation. Such users are defined as lead users that “face needs that will be general in a market place - but face them months or years before the bulk of that market place encounters them” and “are positioned to benefit significantly by obtaining a solution to those needs” (von Hippel, 1998, p. 107). Gruner and Homburg (2000) and Brockhoff (2003) emphasize user characteristics’ impact on success and the importance of selecting users carefully, and found that lead users have a positive effect on performance outcomes. Finally, Franke, von Hippel and Schreier (2006) argue that lead users are crucial in co-creation due to their essential and advanced understanding of both present and future market demand.

Trischler, Pervan and Scott (2017) examine how team composition affects participation style, which in turn may influence team identity and cohesiveness, intra-team collaboration, and team outcomes. They find that users with high expectations of innovation-related benefits have a more dominant style of collaboration in development teams, and may therefore have a detrimental impact on team performance (Trischler et al., 2017, p. 267). Their form of participation may increase the intra-team level of conflicts, which negatively affects team identity and cohesiveness, ultimately harming team outcomes. There is a parallel between high expectations of innovation-related benefits and the fundamental characteristics of lead users, and the findings hence show a potential pitfall of relying too heavily on lead users for service development. Lead users, which are characterised by specific and personal needs, may thus hamper the co-creation process. The increased level of conflict generated by different motivational drivers may however be moderated by in-house professionals adapting to the team dynamics and the members’ form of participation (Trischler et al., 2017).

### **2.3.2 Users’ expertise**

Matthing, Kristensson, Gustafsson and Parasuraman (2006) find that users exhibiting high degrees of technology readiness are particularly well suited to involve in service development processes, as they have the ability to suggest technologically advanced and innovative solutions to complex problems. However, several studies show that users’ technical expertise might be disadvantageous. Indeed, Kristensson et al. (2008) identify limited expertise as an

important user criteria for user involvement, as in-depth technological knowledge may create rigidities in problem solving activities. Kristensson et al. (2002) also find support for the rigidities created by knowledge, as they argue that an advantage users have over professional developers is their cognitive style of problem solving. Users with limited expertise have cognitive styles that allow for divergent thinking rather than convergent, and users are thus able to solve problems independently from current capabilities and established principles. Finally, Gruner and Homburg (2000) argue that users' technical attractiveness may affect the development team's performance negatively, as their needs may diverge significantly from those of the general market. As is the case when users have specific motivational drivers, users with technological expertise may not be representative of the targeted user community.

### **2.3.3 Heterogeneity**

While some findings indicate that heterogeneity ensures a diversity of new product and service ideas, others argue that it can potentially be harmful to the co-creation and collaboration process. On the one hand, Kristensson et al. (2008) find ensuring heterogeneity to be a key strategy for involving users, as a broader part of the target user community can be represented when involving users with different backgrounds and perspectives. Indeed, this may lead to more original and diverse problem solving resulting in an efficient development process with creative outcomes. On the other hand, Trischler et al. (2017) argue that diversity may lead to complexity rooted in interpersonal incompatibilities, which may enhance the intra-team level of conflict resulting in poor team identity and cohesiveness. Especially, diversity in user characteristics such as age and cultural background, have the potential to cause an unfertile collaboration environment resulting in unfortunate team outcomes. However, as is the case with levels of conflicts generated by different motivational drivers, conflicts generated by heterogeneity may also be moderated by in-house professionals adapting to the team dynamics and the members' form of participation (Trischler et al., 2017).

### **2.4 How users should be involved**

In the field of research, Domecq et al. (2014) establish that earlier findings, as is the case with methods of selection and recruitment of patients for user involvement, are inconclusive regarding a particular method of engagement. This may be a contributing factor to Matthing et al.'s (2004, p. 487) argument that user involvement in service development is "preached but not practiced". A lack of knowledge about how users should be involved may harm co-creation processes as the management of user involvement affects its outcomes significantly (Magnusson et al., 2003). Studying methods of involvement implies examining at which

stages and with which intensity users are involved in the development process. Shippee et al. (2013) argue that patient and service user engagement in the field of research can be managed at three different stages: the preparatory phase (users may be involved in setting the agenda for the research), the execution phase (users may be involved in designing, recruiting, and collecting data in the study), and the translational phase (users may be involved in dissemination, implementation, and evaluation).

#### **2.4.1 Stages and intensity of user involvement**

Alam (2002, p. 253) identifies ten stages in which customers can be involved in service and product development: “strategic planning”, “idea generation”, “idea screening”, “business analysis”, “formation of cross functional teams”, “service and process design”, “personnel training”, “service testing and pilot run”, “test marketing”, and “commercialisation”. User involvement in the stages of idea generation, service and process design, and service testing and pilot run, are found to be especially fruitful for the development outcomes. By involving users in idea generation, managers find that they gain a better understanding of the users’ specific needs. When involving users in service and process design, managers find that they have the opportunity to better assess the users’ wishes. Finally, involving users at the stage of service testing and pilot run enables the managers to observe and get feedback when the users interact with the actual prototype. Alam (2002) finds that the intensity of user involvement varies across different stages of the process, with the most intense involvement being in the early idea generation and screening stages, as well as the later stages of test marketing and commercialisation. Managers seem to value user input less in the middle stages of development, while rather focusing on the early stages of the process.

Gruner and Homburg (2000, p. 6) investigate the performance impact of the user involvement’s intensity at different stages, and come to similar conclusions based on the examination of Myers and Marquis’ (1969) and Crawford’s (1994) six stages of development: “idea generation”, “product concept development”, “product definition”, “engineering”, “prototype testing”, and “market launch”. Indeed, out of the six stages of user involvement, the earlier and later stages are the most crucial for new development success. They find that user involvement at the stage of product concept development yields the strongest positive effect on outcomes, as the information users provide at this concrete stage is found more valuable than at the more general idea generation stage. They also find prototype testing to have a more significant performance impact than market launch, as the information users

provide at this stage is more detailed and can still be taken into account to adapt the final service or product to this information.

#### **2.4.2 Methods/modes of user involvement**

According to Magnusson et al. (2003), the way customer involvement is managed is a deciding factor for its success. While Kristensson et al. (2002) find that users produce more original ideas than professional service developers, their results are based on an experiment where users did not interact with professionals. Based on these findings, Magnusson et al. (2003) examine how an interaction between users and professionals can affect the outcomes of customer involvement. They find that while interacting with professionals does not affect the user value, users consulting with professionals generate less original ideas than users that do not. Indeed, the effect of consulting with professionals is found to make users “expert copycats” as they embrace the professionals’ more rigid ways of thinking (Magnusson et al., 2003, p 119). However, the ideas’ feasibility is increased by consulting with professional service developers. These findings show that the way users are involved in service development through co-creation has an impact on the outcomes of the innovation process.

In the field of healthcare, several ways of involving patients to develop innovative services have been identified. Elg et al. (2012) examine the use of diaries as a method of involving patients to gain a deeper understanding of their experience of the service. They describe this method as a practical way of learning from patient experiences by gaining a deep and emotional understanding of their needs. This can be related to an experience based design emphasizing the design of experiences rather than services, based on the understanding of how users experience the service they are provided (Bate & Robert, 2006). Indeed, Elg et al. (2012) find that using diaries results in patient stories that can be used as narratives for learning purposes in the healthcare institution, as well as the identification of critical events from the patients’ perspective that had the potential to be improved by the healthcare provider. Several dimensions, such as the medium for writing and the level of encouragement provided to participating patients, need to be considered in order for this method of involvement to be fruitful. Elg et al. (2012) find that writing on paper or computers affects the number of words the patients write, and if they are contacted by phone and reminded to keep writing this also increases the number of words written. Similarly, Engström and Elg (2015) examine the use of patient diaries in service development and find that the length of the study can affect both the patients and the outcomes. Indeed, in longer studies patients are involved

over more extensive periods of time, and are therefore given the opportunity to report on their experiences in different states of mind.

Other common methods of involving patients include focus groups, brainstorming, interviews, surveys, as well as serving on a study board and attending regular meetings with researchers (Domecq et al., 2014; Alam, 2002). These different modes of involvement can be used at different stages, either separately or in combination. As Domecq et al. (2014) find in the field of research, patient involvement is recommended, but the comparison of different studies with different methods of involvement provides no supporting evidence of a particularly preferred method.

## **2.5 Reporting on user involvement**

In line with the findings of Matthing et al. (2004, p. 487), who state that “customer involvement especially devoted to service research is preached but not practiced”, Bate and Robert (2006) find that users in the healthcare sector are less involved as co-designers of services than in other sectors. Crawford et al. (2002) also find that patients are more commonly used to provide information during the development of services, rather than being actively involved through the entire service development process. Authors such as Kristensson et al. (2008) identify a paradox within the field of user involvement and co-creation, as the concept on the one hand is widely recommended, while it on the other hand neither is thoroughly grounded nor defined in theory.

In the field of research, the lack of theoretical grounding regarding user involvement and how it is best conducted has been problematized by both Shippee et al. (2013) and Domecq et al. (2014). Indeed, a strong evidence base is needed to compare methods of involvement and to determine a best practice, so as to avoid using poor user involvement methods. Staniszewska et al. (2017) developed a framework to report on user involvement so as to remedy the fragmented nature of the existing evidence on the topic, hence increasing our understanding of user involvement as a concept and practice. Their framework, the Guidance for Reporting Involvement of Patients and the Public (GRIPP), enables findings from different studies to be compared and encompasses reporting on dimensions such as the aim of the patient and public involvement (PPI), the methods used for PPI, the results of PPI, a discussion on the influence of PPI in the study, as well as a reflection on what went well or not (Staniszewska et al., 2017, p. 3).

Table 1: Summary of the main findings from previous research.

Why?	Who?	When?	How?
<p><u>Aim:</u> Gaining a deep understanding of the users' experiences to achieve new services that are more suited to them (Bate &amp; Robert, 2006).</p> <p><i>Within healthcare:</i></p> <p><u>Benefits:</u></p> <ul style="list-style-type: none"> <li>- Emotional connection between the service provider and the patient (Elg et al., 2012).</li> <li>- Patient well being through self-determination theory (Engström &amp; Elg, 2015).</li> </ul> <p><u>Challenges:</u></p> <ul style="list-style-type: none"> <li>- Reduced sense of competence (Engström &amp; Elg, 2015).</li> <li>- User representatives used to voice their own personal experiences (Eriksson, 2018).</li> </ul> <p><i>Within other fields:</i></p> <p><u>Benefits:</u></p> <ul style="list-style-type: none"> <li>- Superior services developed in collaboration with users (Alam, 2002).</li> <li>- The ideas generated are more original and with greater user value (Kristensson et al., 2002; Magnusson et al., 2003).</li> </ul> <p><u>Challenges:</u></p> <ul style="list-style-type: none"> <li>- Less innovative ideas because users focus on what they currently can relate to and may have a poor ability to express their needs (Bennett &amp; Cooper, 1981).</li> <li>- User involvement has been associated with tokenism and scope creep (Domecq et al., 2014).</li> </ul>	<p><u>Aim:</u> Finding the right users to involve in the co-creation process.</p> <p><i>Selection &amp; recruitment</i> (Domecq et al., 2014):</p> <ul style="list-style-type: none"> <li>- Convenience sampling</li> <li>- Volunteers <ul style="list-style-type: none"> <li>• Benefits: Make recruitment easier, are highly motivated and qualified.</li> <li>• Challenges: Lack of representativeness because of individualistic and subjective concerns.</li> </ul> </li> </ul> <p><i>User characteristics:</i></p> <p><u>Apparent benefit:</u> Users that are motivated by the expectation of personal benefit.</p> <ul style="list-style-type: none"> <li>- Positive performance outcomes: An understanding of both the present and future market demand (Kristensson et al., 2008; Franke et al., 2006).</li> <li>- Negative performance outcomes: A dominant style of collaboration, and specific needs that may not be representative for the general market (Trischler et al., 2017).</li> </ul> <p><u>User's expertise:</u></p> <ul style="list-style-type: none"> <li>- Positive performance outcomes: Ability to suggest advanced innovative solutions to complex problems.</li> <li>- Negative performance outcomes: In-depth knowledge may create rigidities in problem solving activities (Kristensson et al., 2008).</li> </ul>	<p><u>Aim:</u> Finding the right ways to manage user involvement in the co-creation process.</p> <p><u>Stages:</u> The most fruitful stages to involve users for the development outcomes are (Alam, 2002):</p> <ul style="list-style-type: none"> <li>- Idea generation: Gain understanding of users' needs.</li> <li>- Service &amp; process design: Assess users' wishes.</li> <li>- Service testing &amp; pilot run: Feedback on prototype when the users interact with the product or service.</li> </ul> <p><u>Intensity:</u> The stages with the most intense user involvement reflect the stages where user involvement yields the strongest positive performance outcomes (Alam, 2002):</p> <ul style="list-style-type: none"> <li>- Early stages: Idea generation and screening.</li> <li>- Later stages: Test marketing and commercialisation.</li> </ul>	<p><u>Aim:</u> Finding the right methods to involve users in the co-creation process.</p> <p><u>Methods of involvement:</u></p> <ul style="list-style-type: none"> <li>- Focus groups</li> <li>- Interviews</li> <li>- Surveys</li> <li>- Brainstorming</li> <li>- Attending regular meetings with researches</li> <li>- Patient diaries</li> </ul> <p>Each of these common methods aims at gaining a better understand of the users' experiences and needs. They can be used at different stages, either separately or in combination.</p> <p><u>Challenge:</u> While increasing the proposed ideas' feasibility, the interaction between users and professionals may cause users to act as "expert copycats" embracing more rigid ways of thinking (Magnusson et al., 2003).</p>
<p><u>Conclusion:</u> While there are several benefits to user involvement, there are also several pitfalls and challenges that can harm both the process and the users.</p>	<p><u>Conclusion:</u> Findings are inconclusive regarding a particular method of selection and recruitment being superior to another (Domecq et al., 2014). All fields examined lack a consensus about best practice.</p>	<p><u>Conclusion:</u> Though the intensity of user involvement varies across different stages of the project, there are clear indications of which phases user involvement yields the strongest positive effect on service development outcomes. In the healthcare sector, patients are more commonly used to provide information, rather than being involved throughout the entire development process (Crawford et al., 2002).</p>	<p><u>Conclusion:</u> There is no supporting evidence of a particular method of involvement being more beneficial than another within healthcare research (Domecq et al., 2014). There is a general lack of consensus about best practice in all fields examined.</p>



### **3. METHOD**

Through gaining insights into project workers' attitudes towards, and practices of user involvement, the purpose of the present study is to answer the following research question: "How does the healthcare sector involve its users in service development and innovation projects?" Based on the findings, the aim is to build a framework for reporting on user involvement to broaden the understanding on the topic and propose a possible best practice. Given that previous research has failed to reach a consensus on user involvement in the healthcare sector, we used a qualitative method for inductive theory building from a multiple case design. In line with the principles of inductive methods, our methodological approach is based on pre-existing notions derived from previous research, as we started by defining a research focus and identifying a priori constructs to be analysed in light of more recent practices in the healthcare sector specifically. We strived to keep both focus and constructs tentative during the process, and allowed them to shift in accordance with the findings to limit the occurrence of bias in the study (Eisenhardt, 1989). Using a multiple case study design enabled us to benefit from a replication logic, whereby each case was used to confirm or disconfirm our emerging theories and interpretations derived from the previous ones (Yin, 1984).

#### **3.1 Informants**

We selected informants using theoretical sampling, as the intention of the study is to generalise analytically rather than statistically, and random selection thus would be disadvantageous. With a limited number of informants, we aimed at maximising the variation across the different individuals and specifically targeted those that were the most influential and knowledgeable about involving users in service development and innovation projects in the healthcare sector. The informants were selected with the intention of obtaining access to the most relevant information about the examined topic, and to gain a clear understanding of the different individuals' personal experiences with user involvement (Jacobsen, 2005). In accordance with our aim of theoretical sampling, we utilized snowball sampling to select the most relevant individuals to interview. Indeed, we first identified known project leaders in the healthcare sector, and let those individuals identify the next informants they thought would be beneficial to interview on the basis of their in-depth understanding and experience with involving users. This method of sampling gave us ten informants that were each considered to be separate cases, as they all had been involved in different service development and



innovation projects in the healthcare sector. Our final sample of informants consisted of nine women and one man with experiences varying from being involved in a few projects to having been involved in or lead dozens of projects. Most had a long career within healthcare organisations and extensive knowledge derived from personal experience with service development and innovation projects. We stopped adding informants when examining new cases ceased to broaden our understanding of the topic, and the new information they provided resembled insights obtained from the previous informants (Glaser & Strauss, 1967).

### **3.2 Data collection**

We adopted an inductive approach, whereby we strived to gain an in-depth understanding of the informants' opinions and attitudes through one-on-one interviews. Our aim was to identify what is true from the informant's subjective perspective, rather than what is objectively true for the general population. Qualitative data derived from interviews is qualified as rich and descriptive, which enabled us to understand underlying phenomenon that quantitative approaches may not be able to uncover (Eisenhardt, 1989). We conducted ten in-depth interviews, which is considered to be the least manipulative way of interacting with informants, as it ensures a great degree of openness (Jacobsen, 2005). Though this form of interview guarantees openness, the results will still be influenced by the interview context and the interviewers' preconceived assumptions. As we will describe in greater detail in chapter 3.5, several precautions were taken in order to critically reflect on the validity and reliability of our findings, in order to overcome such challenges and access the informants' truth.

Jacobsen (2005, p. 127) defines the interview's openness as a variable that varies with the degree of structuring, and emphasizes that in-depth interviews with minimal structure increase the openness. In order to maximize the openness while still being able to compare the findings from different interviews (Ringdal, 2016), we opted for a semi-structured interview guide to ensure that the informants could speak freely and independently bring up important aspects of user involvement with minimal influence from the interviewers. Making use of Eisenhardt's (1989) principles of inductive theory building, we retained flexibility in the interview guide and took advantage of the opportunities that presented themselves during the study through adapting the interview questions in line with findings from the previous interviews. This flexibility made possible by overlapping processes of data collection and analysis enabled us to gain both insight into each individual informant and a broad understanding of the

constructs emerging from the different cases. To ensure that we could later compare the different cases, we build the interview guide and conducted each interview around the pre-existing and emerging constructs, asking questions regarding why, who, when and how users are involved. The interview guide was funnel-shaped, as the interview started with general and open-ended questions, before we gradually narrowed the questions' focus towards more specific topics. We started by asking the informants to describe user involvement as a concept and the benefits associated with involving users. We then asked the informants more narrow questions about their specific and personal experiences with involving users. Finally, we asked them about the existing methods for reporting on user involvement, and how they believed they could be improved to increase knowledge on the topic. This method of interviewing leads to higher accuracy and less interview bias, as the informants are allowed to speak freely with minimal impact from the interviewers' preconceived ideas and opinions. The findings hence reflect the informants' point of view, and not the interviewers', as we adapted each interview to be idiosyncratic to the informant's knowledge on the subject.

We started the interview by ensuring the informants of the full confidentiality and anonymity of their participation. The aim was to guarantee the reliability of our findings through facilitating the informants' openness and motivation to answer truthfully. During the interviews, the informants shared personal experiences and disclosed unpopular opinions and practices, such as questioning whether users should be involved at all, and admitting to purposefully not involving users throughout the entire service development and innovation process. The fact that the informants were willing to share such sensitive information strengthens our belief that our findings are reliable and depict the actual practices in the healthcare sector. The interviews were conducted by two interviewers; one asking the questions and interacting personally with the informant, the other taking notes during the conversation and keeping a more distant relationship to the informant. Our aim with this multiple investigator approach was to minimize the interviewer bias and increase the confidence in the findings through two main advantages (Eisenhardt, 1989, p. 538). First, being two researchers with different relationships to the informants gave us different perspectives and broader insights into each informant. Second, as two investigators with distinctive roles, the convergence of our interpretations strengthens the confidence in the study's results, while our conflicting interpretations prevented us from reaching premature and faulty conclusions. Efforts were also made after the interviews to strengthen the findings' reliability and validity. Indeed, we followed a 24-hour rule to ensure that our notes on each

informant were completed by both investigators within a day. We took great care that each observation and impression was interpreted in the same way by both investigators, and written down regardless of its probable future importance for the study. Finally, we sent our interview notes to the informants and asked them to correct us if we had misunderstood or misinterpreted what they had said and meant.

### **3.3 Data analysis**

Using Eisenhardt's (1989) recommendations for building theories inductively, we analysed our data with both within-case and cross-case examinations. Indeed, we first analysed each case as individual and separate entities, which allowed us to familiarise ourselves with the specific patterns and constructs emerging from each of them. These constructs emerged early during the data collection phase, and we were careful both not to let our preconceived notions influence our interpretation of the constructs, and to retain flexibility around their definition until all interviews were completed. Analyzing each case separately, we found inconsistencies regarding what the informants described as the intended practice of user involvement and the actual practice. We found the study's constructs in the areas of inconsistencies, as these indicated a lack of knowledge around topics such as whom to involve, when, and how.

Having completed our within-case analysis and identified general constructs to examine, we then proceeded with a cross-case methodology to compare cases and sharpen our constructs. We utilized two approaches to compare our cases to find cross-case similarities and differences, as we compared all cases in regards to the different constructs before we selected pairs of cases to examine with the aim of finding parallels and divergences between them. As the goal of cross-case analysis is to achieve accurate and reliable theories that depict the actual data rather than the investigators prejudices, using these techniques enabled us to analyse all data using different lenses to confront our preconceived ideas and constructs. We found both similarities and inconsistencies between the different cases. All cases had in common that there were inconsistencies between how user involvement was intended and how it was actually practiced, and a lack of knowledge regarding how to involve users to achieve the intended goals. These patterns around the constructs of whom to involve, when, and how, were inferred strong evidence, as they were mentioned by most of the informants. Several differences were also found across cases, as there was great variation among the informants regarding what methods of involving users they considered to be the most beneficial. Our findings centred on the study's constructs are summarized in Table 2. Both the

similarities and differences across the cases are the foundation of our interpretations and hypothesis that more knowledge about the different constructs is needed, and that a reporting system centred on these constructs could be a valuable tool to decrease the uncertainties regarding how to manage user involvement. Before we started shaping these hypotheses, we refined the constructs of the study and ensured throughout the within- and cross-case processes that the constructs were in line with the data. Being two investigators also increased the validity of the constructs as these were discussed until agreement, and no premature conclusions were made.

Table 2: Summary of the study’s findings centred on the different constructs

	Findings	Contradictions	
Why?	Importance	”User involvement is important on an ethical and moral level, to make sure that users that depend on services feel taken care of, and included as a part of society”	”Some argue that it is the users’ right to be involved in service development, but I think that it should be up to each individual project leader if and how they wish to involve users”
	Benefits and challenges	”By contributing with insights from their own personal experiences with the services, users enrich all service development projects”	”I feel that in many cases, users should not be involved, as quantitative data is preferable because these represent a larger group of users, rather than the interests of a few individuals”
		”We make the best decisions when users and user representatives are involved”	”As the future is an abstract situation that is difficult for users to relate to, it is challenging to gain an understanding of future needs based on current experiences”
	Drivers and barriers	”I think user representatives should get paid to work on projects, as it is both fair on the users and easier for us to find the right people to involve”	”We often pay our user representatives, and we need to reflect on how this affects their motivation to participate and the quality of their contributions to the projects”
		”National grants increase the focus on user involvement, as it increases the attention towards user involvement”	”The national fundings we get to involve users depend on the results we manage to achieve, and this is problematic as most of the outcomes of our projects are difficult to measure and clearly define”
		”National guidelines make user involvement a requirement for all projects”	”I often experience that users are involved just for the sake of meeting the requirement - to ”tick a box” - and this is a problematic waste of resource because these users are not actually heard”
Who?	Actual users	”I personally feel that we get better contributions from involving actual users, and that these are more beneficial than user representatives from user organisations”	”A challenge with involving actual users is that we have to be more careful as some are experiencing a difficult situation that we don’t want to make worse”
	User representatives from user organisations	”User representatives from user organisations contribute efficiently as they represent the needs of the majority, rather than their own personal experiences”	”We can not expect user representatives from user organisations to be professionals, as they still are people with subjective experiences and opinions that make it difficult for them to represent a larger group of individuals”
		”Some user organisations are better than other at finding the right candidates to represent the needs of the organisation as a whole”	”User organisations may chose user representatives that are too well educated and academic, and they may hence not represent the entire user population”
	Resource group	”Because the information from individual user representatives can be subjective, I prefer using users in a resource group to make clear what is relevant to most rather than what is relevant to the individual”	”Resource groups are used to secure the perspectives of the users’ as a whole, but this is not real user involvement as they are an external group that are not part of the project team and hence do not have any real influence on the project’s focus”
	Staff	”Experienced staff often have good ideas on how to solve service users problems, especially when the project is about redesigning the service. This is because users do not have the knowledge needed to know how staff routines should be changed”	”Patients often think of alternative ways of doing things because they experience the service first hand, while the staff is ”locked” in routines and traditional ways of thinking”
	Characteristics	”It is important to include users as ”non-experts” to correct us experts, as they have actual user experience that can tell us what users need”	”It can be difficult to involve users in project teams, as they are not experts and lack the theoretical knowledge the other team members have”
		”User representatives with strong negative personal experiences with a service tend to harm the project, as they draw a picture that the majority of users might not identify with”	”Negative experiences can often be used to solve important problems, especially if user representatives are contributing constructively”
	Recruitment	”We select the user representatives that we think can give us the most relevant information”	”It is hard to foresee how useful the user representative will be before the team collaboration starts”

<b>When?</b>	Agenda setting	“I think users are included too late in the process, and that they also should take part of the problem definition and agenda setting of the project”	“I never involve users in the early phases of the process because it gets messy. I rather wait until the problem definition has been specified”
	Information gathering	“If users are not involved in the entire process to develop their services, I think it is political nonsense to call it user involvement. They should be involved in all stages of the process”	“The most common way to involve user representatives is to consult them as advisors at the beginning of the project to gather information about how they experience the service”
	Development	“In a project aiming at improving dialysis treatment, a patient came up with the idea of changing the routines and was involved in developing the solution”	“The users are mainly involved at the early stages to give direction to the project, before the solution is developed internally without them. They are then asked after implementation if they are satisfied with the solution”
	Testing	“In my experience, the input from the user representatives is most valuable during the testing phase”	“If users are only involved in the middle stages of the project, such as testing, they have missed the critical early stages of the process”
	All stages	“How and when users are involved varies across projects, but we always have the intention to involve the users throughout the process”	“I have never experienced involving user representatives throughout the entire project, instead we have used an external resource group to gather information and ask questions when we need it”
<b>How?</b>	Quantitative data	“Quantitative data give a better overall picture and represents the majority of the users, rather than subjective and individual opinions”	“It is always beneficial to involve users, as quantitative data from surveys only give the big picture whereas qualitative data is needed to find the users’ underlying needs and experiences”
	Qualitative data	“By interviewing users and asking them about their experiences and needs, we gain a broader understanding and are able to improve the services and find solutions that are relevant to them”	“In-depth interview as a method is more appropriate for some user groups than others. People with disabilities have a tendency to tell the interviewers what they think they want to hear, and it might therefore be more appropriate to use an observational method”
		“I think it is better to use group interviews rather than individual in-depth interviews, as this provides insights into what is important to the whole group rather than individual perspectives”	“User representatives often have several wishes to improve the service, and there is extra work in sorting out what should be focused on if several users are involved”
		“We invited several users to a dialogue café to brainstorm and come up with different ideas of improvement”	“Giving users specific challenges or problems to solve, rather than an aimless brainstorming activity improves the quality of their feedback and solutions”
	“It is fundamentally wrong if users only are asked what they think before the process, and staff then takes over to solve the problem and implement the solutions without consulting with the users”	“I prefer using a professional advisory board to gather information when we need it, rather than involving user representatives throughout the process as a part of the project team”	

### **3.4 Shaping hypotheses**

After analysing the data, we followed Eisenhardt's (1989) recommendations for shaping the hypotheses of our emergent theory and framework. During this process, we iteratively compared our data, the emergent theory, and the extant theory. When we generated our hypotheses about a common lack of knowledge around crucial constructs of user involvement, we went back and forth between our data and the emerging theory to ensure that it reflected the actual findings. Our findings indicated a lack of knowledge around the constructs of whom to involve, when, and how, as well as project factors such as aim, size, and target users. Based on these hypotheses, we proposed a reporting framework aimed at building on previous research findings and broaden the theoretical understanding of user involvement in the healthcare sector. Our emerging theory and framework is therefore the result of constantly going back and forth between our emerging theory and the existing theory. Comparing our results with earlier findings, we identified the constructs regarding whom to involve, when and how, which were similar to those of the existing theory. New constructs that had not previously been identified also emerged from our analysis, such as the project factors: aim, size and, target users. These are interesting findings, as new constructs seems to be eligible to include in extant theory to build theories that better match the healthcare sector.

Guided by Glaser and Strauss' (1967) principles of theoretical saturation, we stopped iterating between theory and data when our hypotheses and theory matched the data, and further comparisons only gave minimal incremental improvement to our study. Overall, the data analysis and the process of shaping hypotheses resulted in a reporting framework built on the emerging constructs, and aimed at reducing the knowledge gaps regarding the management of user involvement in the healthcare sector. In this way, our study provides a new tool to gather evidence about user involvement, so as to compare how users are involved in different projects in order to extend the existing theory on the topic.

### **3.5 Reliability and validity**

Though qualitative data by nature is more subjective than quantitative data, several precautions can still be taken to enhance the findings' reliability and validity. We used Miles and Huberman's (1994) five criteria of quality in qualitative research to assess our findings' reliability and validity. First, we reflected critically around our influence on the informants' responses, as well as how the context of the interview affected their contributions. Indeed, we

guaranteed anonymity and confidentiality, asked open-ended questions, and conducted the interviews in the place and time that was most convenient to the informants. As we also approached the informants with an open mind-set and both investigators participated during all interviews, we consider our findings to reflect the informants' perspectives rather than being coloured by our own. Second, though the aim is not statistical generalisation, we consider our findings to be theoretically generalizable to service development and innovation projects in the healthcare sector. The method of snowball sampling enabled us to find relevant informants who are representative of this particular population and have in-depth knowledge on the topic. The fact that most of our informants are women reflects the overall gender distribution of project workers in the healthcare sector, and the informants are hence typical of the examined population. Third, though Miles and Huberman (1994) recommend triangulation in order to increase the study's validity, we used Hammersley and Atkinson's (1987, p. 35) principle of reflexivity, as the study's extent was limited because of its scarce resources. In line with their theory, we reflected around the social context and our potential influence as possible sources of bias. Finally, the last two criteria were used to increase the findings' reliability and validity, as all findings, both deviant and unexpected, were included and analysed with potential interpretations being considered in the discussion.

## 4. DISCUSSION

### 4.1 Why users should be involved

#### 4.1.1 Aim

The findings show a consensus among all informants that the aim of user involvement is to achieve better services through an understanding of the users' experiences and needs. The informants emphasize a major shift within healthcare regarding user participation and user involvement in recent years. Whereas the previous focus was on user *participation*, defined as users being able to have a say on what they want, the present emphasis is on user *involvement* defined as users actively contributing and being involved consistently in all stages of the service development process as co-creators. There is thus a shift from low involvement towards high involvement as users now are included on the same premises as other team members in service development processes. However, the findings show a gap regarding the informants' felt importance of user involvement, as some define involving users as an ethical and moral obligation towards the users of a service, while others believe it is up to each



individual project leader to decide how and whether users should be involved at all. Indeed, some informants argue that some user groups should not be involved in the service development process, either because they are unable to contribute sufficiently or because there is a lack of knowledge regarding the management of their involvement. Inconsistencies are thus found throughout the study, between the normative definition of what user involvement is and how it should be practiced, and the actual opinions and methods of practice in the field.

The difficulties and differences of opinions regarding user involvement seemingly relate to the fact that it is a concept that takes place at different levels. On the one hand, user involvement at its purest form occurs at an individual level with every user having the right to influence their specific services and life situation. On the other hand, user involvement can also occur at a collective level, as services often are targeted at a larger user population and their development hence has to take into account the needs of several stakeholders. User involvement thus concerns both the specific individuals' rights, as well as the user group as a collective entity including several different individuals.

#### **4.1.2 Benefits and challenges**

The findings show multiple benefits as well as challenges associated with user involvement, as the insights on users' personal experiences both can enrich and harm the service development and innovation process. On the one hand, informants experience that taking into account the users' perspective in the process generates superior ideas and services, as the users give directions to the experts who often have misguided preconceived notions of what is important to them. Informants also find that users often have alternative ways of thinking that help experts think outside the box and produce better solutions to the users' needs. One informant illustrated this with the example of a dialysis patient having the idea to change the nurses' routines in order to let patients take a more active role in their treatment. The hospital staff was too set in their routines to come up with such an innovative idea that ended up being beneficial both to the patients, who spent less time in the hospital, and to the nurses, who then had more time to perform other activities. In addition to getting services that are more suited to them, users benefit from being involved in the development of their services through the involvement itself, as it validates them as individuals to be given the opportunity to influence important aspects of their lives. These findings seem to corroborate previous research on the potential benefits of user involvement, such as superior ideas, greater user value, users

overcoming the rigidities of the experts' routines, as well as increasing the users' well-being through a sense of competence (Engström & Elg, 2015; Kristensson et al., 2002; Magnusson et al., 2003). On the other hand, informants associate several challenges with involving users and relying on their subjective and personal experiences. A main concern is the lack of representativeness, as each user has their own individual and subjective experiences that they focus on. The informants express a difficulty in discerning what is relevant to the user as an individual, and what is relevant to the majority of the target user group. Some therefore think that quantitative data on users' needs are a better form of user involvement because this improves the representativeness, as a larger part of the user population is represented. User involvement can be challenging for the users involved if their expectations are not met and if they have to drop out of the project because they become too ill to participate further. Involving users may also be challenging to the service development process, as personal stories of hardships may be difficult for the rest of the project members to cope with. Furthermore, users have difficulties envisioning future needs, as they relate with greater ease to their current life situation and needs. Finally, taking on the users' perspectives may lead to several wishes being brought up to a project team with the possibility to address only a few, resulting in a challenging and time consuming process of sorting out which wishes and ideas to continue working with in the project. These findings regarding scope creep, users' ability to relate to the future, and the potential detrimental effect of user involvement on users' well-being are in line with some of the previous theories on the subject (Bennett & Cooper, 1981; Domecq et al., 2014; Engström & Elg, 2015).

#### **4.1.3 Drivers and barriers**

The informants identify several drivers that promote involving users that may also potentially be barriers because of their consequences on the projects. First, paying the users involved in service development projects can be beneficial, as it makes it easier to recruit the relevant users. Many users have hectic schedules and find it difficult to take time of work to participate in development projects. This may result in a decrease of representativeness, as retirees or volunteers that may not be representative to the target population then are more readily available than individuals that may be more representative to the entire target population. However, informants express concerns about paying users, as this may influence their motivation to participate and the quality of their contributions. Second, national grants are a mean to increase the attention towards user involvement and to motivate project leaders to involve users. However, these grants implicate that the project outcomes need to be

measured, which is challenging as some projects aim to improve measures such as quality of life that are difficult to isolate and quantify. Finally, national guidelines increase user involvement by making it a requirement for several projects. However, such requirements increase the probability of tokenism, as project leaders might be tempted to involve users simply to meet the requirements without necessarily involving the users actively and taking their contributions into account. Moreover, national guidelines may have a narrow scope that reduces the project's opportunity to adapt to users' actual needs, and may hence prohibit the project from going in another direction or changing its main focus. Compared to previous research on user involvement, it seems that projects in the public healthcare sector are subject to greater amounts of regulations than projects in private organisations that involve users for their own gain. Indeed, whereas the aim of user involvement in the private sector is the organisation's gains, the healthcare sector practices user involvement both because they consider it to be their users' fundamental right and because of official governmental guidelines.

## 4.2 Which users should be involved

### 4.2.1 Whom to involve?

In accordance with the fact that user involvement can be defined at both the individual and collective level, the informants suggest a difference between involving *actual users* to get their personal experiences, and involving *user representatives* to represent the experiences and needs of a broader user population. Whereas actual users act independently and represent themselves exclusively, user representatives are users that are chosen by an organisation to represent the needs of its members. Using actual users to represent themselves and influence the services to match their needs can be both beneficial and challenging. When actual users are involved, the contributions to the development project are rooted in their personal experiences and can hence increase the quality of the services. However, these experiences are individual and subjective, and may therefore not be relevant if the aim is to improve services targeted at a broader population of users. Moreover, the informants express a concern regarding the users' well being, as some users may be in a difficult life situation and the service development process may therefore be an additional burden. This may also encumber the project team members, as they have to be careful when involving users with a difficult diagnosis or life situation.

The aim of involving user representatives is to avoid some of the pitfalls and challenges associated with involving actual users. Indeed, user representatives' contributions give a broader perspective, as they speak for the needs of a larger user population rather than their own. Their contributions are therefore thought by some informants to be less subjective and specific to their personal situation, making the needs they express relevant to the majority rather than to the individual. However, some informants argue that user representatives still remain individuals with their own issues and agendas that make it difficult for them to represent a group rather than themselves. Some informants therefore feel that involving user representatives is less beneficial than involving actual users, as the lack of representativeness and the problem of subjectivity cannot easily be avoided by involving user representatives. Additionally, some informants express a concern towards the user representatives' motivation to be chosen and feel that they often have personal interests as a main motivator. Overall, most informants feel that the quality of user representatives has improved recently, as user organisations have become more aware of how they choose members to represent them. User organisations now emphasize selecting individuals that can represent the entire group rather than those who talk the most, and follow principles of re-election to ensure that the most qualified individuals are representing them at all times. While some informants are satisfied with user organisations now selecting user representative that are educated and qualified, others feel that it is a potential downfall that user representatives may be overqualified and too resourceful. Such user representatives may not be representative for the entire user population, and may hence harm the process. Whereas previous theory has emphasized that the collaboration between healthcare providers and smaller user organisations can be harmful for the user organisation (Eriksson, 2018), the present findings show that the informants are more concerned about the harmful effects on the healthcare provider. Overall, it also seems that the personal interests users have in being involved in processes within the healthcare sector may be greater than those of customers involved in commercial service development by private organisations. Indeed, the users' personal interest regarding healthcare services is related to critical factors such as their quality of life, which arguably might be more significant than the customers' personal benefits that are related to commercial service and product offerings.

As both actual users and user representatives can express opinions and needs that are subjective to them as individuals, some informants prefer gathering users as a group rather than selecting a single user to involve. Such groups are called resource groups and include

either actual users or user representatives, or both. Some informants argue that this is an efficient method that enables the project team members to discern the needs that are specific to a particular individual from the needs that are relevant to the majority. Others, however, feel strongly that the use of resource groups cannot be considered to be actual user involvement, as these groups are external to the project team and are only consulted when the latter desires it. The resource groups are often given a consulting role rather than being actively involved throughout the service development process, and hence have no real influence on the project outcomes.

Because of the challenges associated with involving users in service development projects, some informants consider involving staff rather than users as more appropriate for the development process. Indeed, they feel that users often are too subjective and lack the expertise to solve complex problems to satisfy their needs and improve their services. The staff is mentioned as a valuable source of information as they are close to the users as a group, understand the majority's needs, and are in the position to find solutions as they are the ones providing the services. Whereas some informants feel that the staff can solve problems in innovative ways to improve their routines, others argue that they both have a tendency to be locked in their routines and are unable to represent the users. In the same way using resource groups is not regarded as real user involvement, involving staff instead of users to solve the users' problems is also considered inadequate.

#### **4.2.2 Characteristics of the users involved**

The value of the users' contributions is contingent on their in-depth understanding of the service through their personal experiences. Most informants therefore claim that the longer the users have utilized the service, the greater the understanding of the improvement needs and hence the better the contributions. The users also have to be comfortable speaking their minds and challenging the experts, despite the uneven knowledge and power distribution. Several informants express the importance of the tension between positive and negative experiences, and users being subjective or objective. On the one hand, if users have negative experiences, they may harm the project outcomes by being difficult to collaborate with, as they are more focused on blaming the healthcare provider than solving problems constructively. Moreover, if the users are too focused on their own subjective and individual experiences, they may harm the process by focusing on their specific needs that may not reflect the majority's. On the other hand, users with negative experiences can add great value

to the project by truly challenging the project team and pulling the project in the right direction. In some instances, projects also rely heavily on specific and subjective experiences to gain a deeper understanding of the users' needs. Some informants therefore feel that project leaders should be careful in choosing users that make collaboration too comfortable. There thus seems to be a trade-off and a balance between having users that the project team members are comfortable collaborating with, and involving more challenging users which may also enhance the project outcomes. In line with previous research (Kristensson et al., 2008; Trischler et al., 2017), there seems to be both benefits and challenges associated with users' characteristics such as expertise, experience, and users having a personal interest in influencing the development process.

#### **4.2.3 Recruitment methods**

The findings show a lack of consensus and consistency regarding which users and users' characteristics are beneficial, which makes recruitment challenging, as no specific selection criteria are agreed upon. While some informants recruit users through user organisations or organisations that gather users to ensure their recovery, others benefit from utilising their personal networks and connections to find appropriate candidates. In accordance with the recent emphasis on asking users what is important to them, a popular recruitment strategy involves selecting users in the location they are receiving their services. One informant illustrated this with a recent project aimed at improving nursing homes where the last ten residents to move in were selected to be interviewed. This strategy ensures that the users involved have relevant experiences and contributions. Some informants say the different recruitment strategies lead to a somewhat random sample of the user population, but believe this to be consistent with the aim of user involvement, as it ensures different perspectives and diversity. An important concern is the difficulties associated with not being able to foresee how beneficial users that are selected to take part in a project will be to the process and outcomes before the collaboration starts. One informant therefore prefers gathering several potential candidates in an initial meeting to observe which will be appropriate to involve. To shield them from being rejected and disappointed that they will not be able to contribute and influence the process further, the user candidates are not told that the meeting is part of a recruitment strategy.

The findings indicate a tension between using single individuals in user involvement to gain a deep understanding of their needs, and using quantitative methods to ensure a broader

understanding of needs that is representative to a larger target group. Due to the challenges associated with recruiting users for qualitative purposes, some informants believe it is best to use quantitative data, as larger user surveys are thought to increase representativeness through the randomized selection of a larger population. Others however, argue against randomized selection as some user groups such as individuals with disabilities are heterogeneous, and general quantitative findings about the majority may not reflect the opinions and needs of the specific users as individuals. The findings are in line with previous theory (Domecq et al., 2014), as they show a variety of methods and criteria of recruitment that have both benefits and challenges, and indicate that there is no sound argument to prefer a particular method to another. However, our findings suggest that the public healthcare sector has to take into consideration a greater amount of factors, as they involve vulnerable users that might not have been the target group of most private and commercial development projects.

#### **4.3 When users should be involved**

The findings indicate a great variation across projects regarding when users are involved and at which intensity, and that no particular method of involvement is preferred. The informants point to several factors to explain the variation, such as the nature and aim of the project, which users are involved, the characteristics of the target users, as well as the project leaders' attitudes toward user involvement. Users are most commonly involved in the stage of information gathering and are often later treated as advisors rather than being involved in all stages throughout the entire development process. Though the information gathering phase is described by many as the most crucial one, as users then are given an opportunity to provide information about their experiences and needs, many informants argue that involving users at this stage exclusively is problematic. Indeed, they all define user involvement as giving users the opportunity to influence the entire development of their services, and emphasize that it always is the intention to involve users at all stages. While some argue that specific user groups are inappropriate to involve throughout the process, such as users with severe disabilities, others say that the users' contributions throughout the stages may in some cases be detrimental to the project outcomes.

Involving users at the stage of information gathering, while neglecting other stages, is associated with several potential downfalls. First, some informants claim that when user involvement begins at the information gathering stage, crucial user contributions at the stage of agenda setting have been missed. This can harm the project, as users have not been given

the opportunity to influence the focus of the project. The project might then aim at solving the wrong problems and improving the service in areas that users consider irrelevant compared to more problematic and critical areas. Others, however, claim that involving users at such an early stage may result in unnecessary complexity in finding a project focus and problem definition. Second, informants argue that the involvement of users at the stage of development can be critical to the project outcomes, as they have innovative ways of thinking that may lead to superior solutions to their problems. Unlike staff that often is locked in daily routines and rigid patterns of thinking, users with personal experiences rather than professional expertise may identify and solve problems in more creative ways. However, most informants argue that the staff is more inclined to solve users' problems than the users themselves, as they are the ones that through their professional expertise are able to see how routines and treatments should be changed. Finally, informants define users' contributions as most crucial during the testing phase. Indeed, when presented with a specific product or service to test, users are able to give specific and valuable feedback in order for the developments' end results to be adapted to their actual needs. Testing also is considered as a method to readjust the product or service that may have been developed on the wrong premises, as users often have difficulties envisioning and expressing their future needs. However, the findings show that this crucial testing phase is the most challenging one, as many users involved withdraw during this stage. The informants who express concerns about this are unsure whether this is caused by the testing being too straining on the users, or if the users' abandonment of the project could be avoided through a better management of this stage.

One informant revealed having never experienced involving users throughout an entire project, which reflects the overall descriptions given by the other informants. There is thus an inconsistency between what is intended and what actually is achieved, corroborating previous findings about user involvement in the healthcare sector. The present findings show that there is no particular method regarding when and at which intensity users should be involved during the service development and innovation process.

#### **4.4 How users should be involved**

Most informants explain that the way users should be involved in a project depends on several project factors such as aim, size, and who the target group is. Whereas quantitative surveys are preferred for comprehensive projects, small projects enable users' experiences to be revealed through qualitative methods, as they allow the same users to be involved over time.



Regarding the project's aim, if the project is to improve a service, one-on-one interviews are preferred to gain a deeper understanding of the users' needs. If the project's aim is to improve a product, the users should be actively involved in testing the product to give specific feedback. If the project, however, aims at solving users' needs through reorganising routines and the way a service is offered, project leaders prefer involving staff rather than users. Finally, the way users are involved depends on the user group itself, and whether they are able to communicate, participate, and solve problems efficiently. Indeed, some informants argue that some user groups are too challenging and burdening to the development process, and should hence be kept out of the process all together.

Some informants describe quantitative data as a beneficial way of gaining insights into a larger group of users, as surveys give a better overall picture of the majority rather than subjective and individual perspectives. While some exclusively use this method of involvement, as they believe it to give a better understanding of the users, others use a combination of quantitative and qualitative data, as the qualitative methods provide a deeper understanding of the broader quantitative findings. Several challenges are associated with using quantitative methods, as most informants describe it not to be actual user involvement, and consider it to be inappropriate when measuring the effects of a development project. Indeed, quantitative surveys represent a random selection of users and provide a picture of how users feel at the current moment rather than depicting a development over time.

Regarding the use of qualitative data, several methods of information gathering are described. First, the most common method of involving users is through one-on-one in-depth interviews that give the interviewer insight into the users' experiences and needs. However, some informants argue that this method is less appropriate when dealing with specific groups of users. For example, users with cognitive disabilities often answer in the way they think the interviewer wants them to, and other methods such as observation may therefore be more suitable to understand their actual needs and opinions. Second, interviewing users in groups is preferred by some informants, as this method gives insight into what is important to the majority rather than individual and subjective opinions that are specific to a particular user. A potential downfall of involving several users in group interviews is that it may be time consuming for the project members to deal with a larger amount of wishes and ideas for improvement. Third, while some informants have positive experiences involving users in brainstorming sessions, others believe that presenting users with a specific challenge

improves the quality of their contributions. Indeed, they prefer specific problem solving to aimless brainstorming activities. Finally, while some define user involvement as a fundamental user right that needs to be integrated throughout the entire development process, most prefer only involving users at the early stages of the process while keeping them out of the project team during the actual service development phases. Users are then consulted when needed, rather than being given a real opportunity to influence the entire process on the same premises as the other project team members. These results show that there is a lack of consensus regarding preferred methods of user involvement, as all informants argue that the choice of method depends on the nature of the project. The present findings also corroborate previous research, as users in healthcare projects seem to mainly be involved in information gathering stages, rather than being actively involved as service co-creators throughout the process.

#### **4.5 Reporting**

When asked directly whether a reporting system would be useful to the informants, the majority answer that such a reporting system could help them gain a better understanding of how to manage user involvement in their projects. The aim of such a tool is to learn from other projects' mistakes, and adopt methods that have been proven to be successful, as well as making information readily available across the nation and independently from the people who worked on the project. The current reporting on user involvement is described as insufficient, as the way user involvement is reported on varies across projects, making the reports inconsequential and unsuited for further learning about user involvement. No repository is available to all project workers where user involvement is reported on in a consistent way that enables comparisons across project factors and outcomes. By improving reporting, the informants predict that the knowledge about user involvement can be improved, and that a best practice regarding methods of involvement can be identified. Some informants argue that reporting on user involvement should neither be mandatory nor too comprehensive, as this could be a barrier for motivated individuals in the healthcare sector to start a service development project. Indeed, they claim that making reporting a requirement would complicate an already complex process further.

Overall, the findings show that all informants agree upon the aim of user involvement, and know that the intention is to involve users actively and consistently throughout the entire service development and innovation process. However, it is also revealed that most

informants believe that the methods of involving users regarding whom to involve, when, and how depend on several factors such as the project's aim, size, and target user group. There seems though to be a lack of knowledge regarding which methods are the most appropriate given the different project factors. When the most appropriate methods of involving users in a specific project seems unclear, many informants resolve to methods such as using resource groups or staff rather than users, using quantitative data rather than actually involving users in the process, or even choosing not to involve users at all. Regarding the project's aim, several informants believe that when the purpose is to solve users' problems through reorganising the routines and ways services are offered, involving staff is more appropriate than involving users. Regarding the project's size, several informants believe that the larger the project, the more appropriate quantitative data is compared to qualitative involvement. Lastly, regarding the project's target user group, several informants believe that some user groups are less suited to involve in the service development process, and therefore prefer to either involve professional user representatives or resource groups, or not involving them at all.

The results thus indicate that several answers need to be found to increase the knowledge on user involvement in healthcare projects, and to know the difference between challenges that are resolvable and projects where user involvement in fact may be detrimental or even impossible. Indeed, more knowledge is needed to understand which methods and solutions can be recommended depending on the different project factors. On the one hand, it may well be that some project factors determine which methods are most appropriate or if user involvement even is possible, but more knowledge is needed to support those assumptions and their consequences on user involvement. On the other hand, it is possible that the challenges some project factors generate can be avoided or resolved through better knowledge on the management of user involvement in those specific projects. Reducing the knowledge deficiency regarding the methods of involving users may thus facilitate a transition from low user involvement to high user involvement, by enabling the involvement of users throughout the process rather than mainly at the stage of information gathering.

Based on our interpretation of the findings and their implications, we conclude that developing a framework for reporting on user involvement is essential in three ways. First, it could serve as a tool to increase the knowledge on the topic of user involvement. Second, it could help to identify a best practice regarding which users should be involved and how. Third, a reporting framework could help decrease the discrepancy between how user

involvement in the healthcare sector is intended and how it is practiced. Indeed, when used consistently across different projects, a reporting framework could enable the building of a strong evidence base, and the comparison of different projects may help identify preferred approaches to the management of user involvement. Overall, the present study's main finding is that questions about whom to involve, how to recruit users, and how to manage the involvement yield uncertainties and inconsistencies. The evidence base derived from a reporting framework, and its emerging conclusions about user involvement may contribute in answering these questions and decreasing the inconsistencies. In order to increase our understanding of user involvement in the healthcare sector, we hence propose a reporting framework centred on the unanswered questions. Reports on user involvement should thus describe the project factors, who was involved, how they were selected, and how their involvement was managed. The findings show that a reporting framework should encompass both the users' and the project team members' perspectives on user involvement. The project leaders should describe the project's aim and size, report on who was involved, how they were recruited, the methods of involvement used, how the involvement was managed, and the consequences of the involvement on the project. It would also be advantageous that users report on their experiences of participating in the service development process, and whether they felt they were given a true opportunity to influence the project outcomes. The essence of the report should revolve around how user involvement was managed and facilitated, as well as what was considered to be the crucial success or failure factors. Such a reporting system could be a tool to fill the knowledge gap by enabling projects to be compared, and hence facilitate involving users throughout the entire service development process by revealing a potential best practice.

Table 3: Framework for reporting on user involvement in service development and innovation projects in the healthcare sector.

<b>Topic</b>	<b>Description</b>
<i>Aim</i>	Report on both the aim of the project and the purpose of the user involvement.
<i>Size</i>	Report on both the number of target users that the project is aimed at and the number of members involved in the project team.
<i>Who?</i>	Report on both the project's target user group and the users involved in the project.
<i>Recruitment method</i>	Report on the recruitment method of the project.
<i>When?</i>	Report on both the stages and intensity at which users were involved throughout the project.
<i>How?</i>	Report on which methods were used to manage user involvement during the project.
<i>Project results</i>	Report on both whether the project aim and the purpose of user involvement were achieved. Identify factors that determined the project's success or failure.
<i>Users' evaluation</i>	Users' report on their experiences of being involved in the project and whether their contributions were taken into account.

## 5. CONCLUSION AND IMPLICATIONS

The purpose of the study was to gain insight into how the healthcare sector involves its users in service development and innovation projects. As we concluded in the analysis of existing theory, while a great body of research has studied the effects of user involvement and how it should be managed, deficiencies can be identified in previous literature. Indeed, inconsistencies in the findings complicate the identification of a best practice and the development of a consensus regarding how to involve users in service development and innovation projects in the healthcare sector. Our findings indicate that the way user involvement is practiced varies greatly across projects, and there is hence a difference between how the healthcare sector intends to involve its users and how it actually involves them. Moreover, there seems to be a lack of knowledge regarding whom to involve, when, and how in a way that enables the services to be developed in line with the healthcare sector's goals for user involvement. This knowledge gap seems to be exacerbated by the insufficiency of present reporting methods, as reports currently are inconsequential and unsuited for comparisons across projects.

The aim of our study was to build a framework for reporting on user involvement in service development and innovation projects in the healthcare sector. As our discussion shows, our findings indicate that improving the reporting on user involvement may increase the knowledge on the topic, and hence facilitate the identification of a best practice. Whereas some of our findings are in line with previous research, others yield novel insights that have not yet been examined. Indeed, the constructs of whom to involve, when, and how from previous literature also emerged in the present study. However, new constructs emerged regarding the different project factors such as aim, size, and target users. By reporting on constructs representing areas of uncertainties, the gap between intended and practiced user involvement can be bridged. The resulting evidence base could help answer the questions regarding the management of user involvement; whom to involve, when and how, given the different project factors. We hence propose the reporting framework presented in Table 3 as a tool to increase the knowledge on user involvement and its management in service development and innovation projects in the healthcare sector.

## 6. FUTURE RESEARCH

On the one hand, we consider our findings to be both valid and reliable, as several precautions were taken to ensure the trustworthiness of the results. By guaranteeing the informants' anonymity and being open about the study's purpose, the frankness and openness of the informants were ensured in a study process that was idiosyncratic to their knowledge and experience. Moreover, multiple investigators limited the interview effect and the interviewers' bias, resulting in an increased robustness of the findings and confidence in our interpretations. On the other hand, limitations to our findings can be identified, which could be mitigated by further research. More extensive studies might strengthen our emergent theory's grounding in evidence by using triangulation and quantitative methods, as well as multiple informants for each case. This would corroborate the findings by using different sources of data, and hence limiting informant bias. It would also be beneficial that other studies attempt to replicate our findings, as such a replication could further corroborate and strengthen our findings in two ways. First, other researchers examining the topic and concluding in the same ways when faced with similar observations could limit the weakness in our findings that lies within the subjective nature of our initial interpretations. Second, by replicating the study across different contexts and sectors, we would know more about the generalizability of our findings and emerging theory. As the object of this study was the Norwegian healthcare sector, more research is needed to know whether the insights generated are context dependent, or if they are relevant across different sectors and nations. Moreover, the suggested framework needs to be further validated using methods for developing reporting guidelines such as the EQUATOR method with multiple Delphi surveys. Using such an approach would enable future research to validate the constructs found in the present study by reaching expert consensus, which would facilitate the further development of the proposed reporting framework (Brett et al., 2017). The insights from the present study are thus the mere beginning of the development of an empirically grounded theory and reporting framework. Indeed, our findings need to be replicated and corroborated by further research examining the topic more extensively.

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