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TOOLS FOR STAKEHOLDER INVOLVEMENT IN FACILITY MANAGEMENT SERVICE DESIGN

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ABSTRACT

Purpose: The purpose of this paper is to provide an overview of the tools that Facility Management (FM) companies use to involve different stakeholders, and more precisely the ones on the demand side, in the FM service design process. Stakeholder involvement may contribute to FM service innovations that are more in line with the stakeholder needs and expectations, and may thus result in increased customer satisfaction, better services and, at the very end, an increased competitive advantage for the organization.

Background: The background of this study lies in user involvement in service design in combination with empirical evidence and research from the FM field. The differentiation between clients, customers and end-users (Coenen et al. 2013) is taken as the ground to explore the peculiarities of stakeholder management within FM service design, and deepen the discussion on user involvement, which can be found in service design literature.

Methodology: To address the purpose of the study, this article uses a qualitative research design and combines an extensive literature review with semi-structured interviews and archival data from both primary and secondary sources.

Results: This study provides an overview of the specific tools that are used to involve different stakeholders on the demand side in FM service design and innovation process. These tools have been categorized as: (1) direct methods that allow stakeholders (clients, customers and end-users) to actively participate in the FM service design and innovation; and (2) indirect methods that enable to passively involve stakeholders through ethnographic methods.

Practical implications: Practitioners could use the results of this study in the FM service design process to (1) identify which demand stakeholders they want to involve, i.e. client, customer, or end-user; (2) identify which type of involvement, i.e. as co-creator, resource or user, is called for in the specific design process; and (3) choose the design tools to support the FM service design process in each specific instance.

Originality/value: By taking the starting point in the literature on service design, user roles in service design and tools for service design, this paper contributes to FM literature by (1) first identifying the tools used by FM managers to involve users in FM service design processes and (2) by categorizing such tools in relation to the role that FM users have in the design process as well as FM service provision processes.

Research limitations: The major limitation of the study consists of the relatively small amount of interviews conducted, which is the basis for finding the tools in FM service design processes.

Keywords: Services, Facility Management, Design, User involvement, User roles

1 INTRODUCTION

Service design is increasingly becoming a popular subject both in academia and in the business world, especially among consulting companies. Recent literature on new service development and service design has found that organizations, which are most successful in providing new services, engage in a strategic and planned approach to service design. As Bitner, Ostrom and Morgan (2008) state, in fact, successful service designers "prepare and move systematically (and often iteratively) through a set of planned stages, from the establishment of clear objectives, to idea generation, concept development, service design, prototyping, service launch, and customer feedback" (Bitner et al. 2008: 4). Existing literature outlines a number of tools for service design, which draw on different fields such as service design (e.g. Morelli 2006), innovation theory and new service development (e.g. Scupola & Nicolajsen 2013) but also marketing and management disciplines (Shostack 1982; Shostack 1984). Furthermore, recent literature has stressed the importance of involving users and customers in the service innovation process and design (e.g. Alam & Perry 2002; Morelli 2009).

Among other service contexts, research on facility management (FM) service design is increasingly developing. For example, Felten, Coenen and Pfenninger (2012) show how FM service blueprinting can add value in the FM service design process, while Lee (2011) employs a service design approach to healthcare servicescapes and suggests a conceptual framework to help designers interested in patient-centred healthcare facilities.

Given this background, the purpose of this article is to present and discuss some of the tools that FM organizations are using to design and develop FM services that are stakeholder centric or that, at least, explicitly take into considerations the different stakeholder needs. To do so, this paper draws on the concepts of user involvement in new service development as conceptualized by Alam and Perry (2002) and literature on design tools (Bitner et al. 2008; Magnusson et al. 2003; Morelli 2006; Morelli 2009; Scupola & Nicolajsen 2013; Shostack 1987). Involving users in FM service design and development is important since it may lead to FM service innovations, which are more in line with user needs and expectations and which may therefore result in increased customer satisfaction, services with lower failure rates and, at the very end, increased competitive advantage of the company.

The article is structured as follows. The introduction presents the background and the purpose of the paper. The second section presents the theoretical background. The third section discusses the research method, while the fourth section presents an overview of the tools used in FM services design. Finally, the last section presents some concluding remarks.

2. STATE OF THE ART

2.1 Understanding FM services

According to Bitner et al. (2008) one of the most distinctive characteristics of services is their process nature. Unlike physical goods, services are dynamic and unfolding over a period of

time through a sequence or constellation of events and steps. In addition, the service process can be viewed as a chain or constellation of activities that allow the service to function effectively (Shostack 1982; Shostack 1984). Existing literature argues that the best way to understand services is to understand the service process, which applies also for FM services. Felten et al. (2012: 238), for instance, state that, according to the European Standard on FM processes, process activities in FM services (1) are actions taken by specific persons in a planned order to reach a target outcome; (2) have to take place in a logical sequence; (3) are carried out with identified responsibilities; and (4) have to be planned before the process is to be carried out. The planning of the execution, which is intended as preparation before the implementation, is considered to be the first and most important activity. In addition, a mixture of providers, which include internal FM units and external parties to whom services are outsourced, is responsible for the provision of such process activities in FM services.

Therefore, involving customers in FM service process design is complicated not only by the combination of internal and external providers, but also, and especially, by the multidimensionality of customers themselves. The European Standard on FM Terms and definitions, in fact, differentiates between (1) "client", which is defined as the organization that specifies FM needs, and procures FM services by means of a FM agreement; (2) "customer", which is defined as an organizational unit that specifies and orders the facility services within the conditions of the FM agreement; (3) "end users", which are defined as the individuals who receive FM services in a permanent or temporary way (Coenen et al. 2013; Felten et al. 2012). In this paper we refer to stakeholders – and not to users – in the attempt to stress the complexity of the FM value chain. Nevertheless we acknowledge the importance of approaching FM with a demand driven, service-oriented and user focused perspective (Coenen et al. 2013), which is why our study emphasises the involvement of the stakeholders on the demand side, i.e. client, customers and end-users.

2.2 Service Design and User Involvement

Much of today's design science and design thinking is inspired by Herbert Simon's (1965) phases of intelligence, design and choice. Morelli (2009) argues that most authors in the service design literature refer to three phases, which are very similar to those outlined by Simon (1965): (1) a first phase of analysis and investigation, (2) a second phase of concept development and (3) a third phase of choice/selection, where specific solutions are identified. Since one main characteristic of services is that the customer is essential in the service provision process, the user/customer should be included in the service design process. Indeed, FM service design should involve the FM service providers as well as the customers/users. However, even though a significant portion of the literature has addressed customer involvement in the final act of service providing, by focusing, for example, on the moment of truth, customer experience, or service co-creation, user involvement in service design has only been limitedly addressed (Magnusson et al. 2003), especially in the FM context.

To illustrate the tools that can be used in FM service design, this paper draws on the differentiation among client, customer, and end user in FM services described above. In addition, this study draws on the three roles that customers can have in new product development as described by Nambisan (2002) and lately applied in the context of new service development by, for example, Scupola and Nicolajsen (2010). These roles are: "customer as a resource", "customer as co-creator" and "customer as user".

According to Nambisan (2002), the contribution of customers as a *resource* varies with the maturity of the technology and the alignment of the product line with the customer base. In the case of continuous innovations, customers are generally passive and firms have to find out about the customers opinion through market surveys or focus groups. Previous literature (e.g. Matthing, Sandén, & Edvardsson 2004; von Hippel 1986) also argue that there are a number of challenges related to using customers as a resource in idea generation, which include selection of customers, creation of incentives to foster customer participation and capturing of customer knowledge. As *co-creators*, customers can participate in a number of activities varying from design activities to development activities. Potential incentives that motivate customers to involve themselves as co-creators or co-producers include enhanced self-esteem, greater opportunities to make choices and greater customization. According to Nambisan (2002) customer-firms interactions tend to be much more intense and frequent during co-creation, and mechanisms to support such interactions are costly and technology intensive. Finally, in their role as *users*, customers can provide value in two ways during the service process: (1) service testing and (2) support. For example, the involvement of users in product testing can be used to identify problems early on in the development phase, thus minimizing the costs of redesign and re-development.

2.3 Tools for service design

Previous literature has identified a number of tools used by designers in the different phases of the service design process and in different contexts. For example, engineering designers have traditionally used marketing tools, e.g. questionnaires, interviews and focus groups, in the earliest phases of the design processes (Morelli 2006). However, tools and methods deriving from the social science and anthropology are becoming more and more popular among service design scholars (Morelli 2009). These tools include (1) mapping and profiling tools to map the actors of the service system or their profiles; (2) ethnographic methods, e.g. use and interpretation of videos to document reality, and cultural probes, as a way of encouraging users to record relevant information in photographs, personal diaries and other forms of inspirations (postcards, questions and pictures); and (3) service blueprinting, a process analysis methodology. The latter was proposed by Shostack (1982) with the aim of codifying knowledge, skills and particular events that happen in a service provision and consumption, to generate a support for its reproducibility. Morelli (2009) highlights how service blueprinting assumes customers to play a rather passive role, which can be turned into active participation through design orienting scenarios, which are focused visions of the future that can orient the action of a small group of stakeholders, local actors and possible customers. The scenarios are usually developed through a series of brainstorming sessions with all the actors and should take into account the complex interaction between different factors (Morelli 2009). To describe the most critical instances and occurrences in a scenario, service design scholars have used use case methodology (Morelli 2002; Morelli 2006). According to Morelli (2009: 580) “scenarios and use cases are good methods to involve different actors in the design process. Actors (final users and local service providers) can participate to their development by using plain language explanations or requirements”.

For the purposes of this paper, the tools that can be used to involve the customer/user in the FM service design process are distinguished into two main categories: face-to-face and virtual (Information and Communication Technology (ICT)-based) tools (e.g. Prandelli et al. 2008; Scupola & Nicolajsen 2013). An example where ICT-based tools were used to directly involve customers in the design process is the use of e-forums by Lego, where customers have been recruited to engage in software code development for LEGO mind storm. In addi-

tion, the distinction is made here between tools that require direct and pro-active involvement from the participants, such as workshops; and tools where the participants have just a passive role, as in most ethnographic methods. A taxonomy of service design tools is illustrated in Table 1 below.

Table 1: A taxonomy of service design tools (Adapted from Scupola and Nicolajsen, 2013)

Categories of Service Design Methods	Face-to-Face Methods	ICT-based Methods
Examples of "direct methods"	Workshops (e.g. future workshops) Interviews Focus groups Ethnographic methods (cultural probes) Qualitative service blueprinting (design orienting scenarios and use case methodology)	Idea competitions Blogs Facebook e-forums
Examples of "indirect methods"	Mapping and profiling tools Ethnographic methods (documentation of reality) Paper based surveys Complaint box	Online discussion groups Virtual communities Online surveys

3 APPROACH

To find the tools used in FM service design, a qualitative research method has been chosen because qualitative data "are the source of well-grounded, rich description and explanations of processes […] and help researchers go beyond initial pre-conceptions and frameworks" (Miles & Huberman 1984: 15). By following Miles and Huberman (1984)'s guidelines for conducting qualitative research, this research started with a literature review of studies investigating service design and service design tools and was followed by an empirical investigation in the FM field.

Data for the study were gathered from archival sources, interviews with companies as well as attendance in practitioner conferences and workshops on the topic of FM service design and innovation. In all, 19 explorative, semi-structured interviews among FM service practitioners, i.e. facility managers working in internal FM units and outsourced FM providers, were carried out in 15 Danish companies. The interviews aimed at colleting data on FM service development with focus on user involvement in FM service design, and the face-to-face and ICT-based tools used to support such design process.

The interviewees were selected with a combination of convenience (at the beginning) and snowball (later on) sampling criteria (Eisenhardt 1989). All interviews were tape-recorded and transcribed, and notes were taken both during and after the interviews. To increase reliability, an interview protocol was used and a database was developed (Yin 2009). The respondents, all senior managers or directors, were somehow involved with FM design and innovation processes within their organizations.

To complement the interview data and ensure triangulation (Eisenhardt 1989; Yin 2009), archival data, i.e. reports, power point presentations, emails, newsletters, corporate brochures,

were collected both from the interviewees and from secondary sources, such as corporate websites and conferences, and were analysed along with the interview data through subsequent steps of open and axial coding with the support of the qualitative data analysis software Atlas.ti,. The data were analysed from the perspective of the outsourced provider and the internal FM unit, which, within the FM context, is not only the customer but also the internal provider of the client organization. When investigating user involvement in FM service innovation processes, it is interesting to look at how the internal FM unit (a) is involved as customer in relation to the outsourced FM provider; (b) involves top management and employees when developing new services together with the outsourced provider. The setting in which we investigate user involvement is thus a complex setting constituted by the relationship between the client organization and the outsourced FM service provider.

4 RESULTS

4.1 FM service design and user involvement

In FM services, top management, internal FM managers and end-users, as diverse users, may play different roles when involved in FM service design processes (Coenen et al. 2013; Felten et al. 2012). The empirical evidence collected here indicates that in FM service design processes, not only the involvement of users is variable depending on the offered services (Alam & Perry 2002), but also on the specific role that FM users play with regards to the service being designed.

FM strategic decisions, for instance, cannot be made solely by the outsourced FM providers, but require the involvement of the FM client to ensure the proper matching between the FM strategy of the client organization and the actual development and implementation of the new FM service. The FM client is usually involved indirectly with the outsourced FM providers through the internal FM unit, which acts as an intermediary to ensure the proper matching between the client and the external provider. The internal FM unit is in charge of integrating all strategic consideration in the FM design process that is undertaken by the outsourced FM provider.

When the FM development process under consideration does not strategically and/or financially concern the client organization as a whole, e.g. in the case of single FM service innovations, the main actor becomes the internal FM unit, which either influences the suppliers indirectly by setting the guidelines (involvement as resource) or works on the strategic planning and on its implementation together with the outsourced providers (involvement as co-creator).

The outsourced FM service providers usually manage the FM service design process together with the internal FM unit, and are usually held responsible for operational decision-making, especially when the service in question does not directly affect the strategic level of the client organization. In a logistic service provider, for instance, the head of Global Facility Management stated that suppliers should be in charge of the operational tasks of the innovation process, especially the idea generation, while the internal FM unit would rather be involved in the idea selection to make sure that all needs and expectations of internal stakeholders were taken into consideration:

"*We write in your Site Service Agreements that we want to see improvement suggestions one, two or three times per quarter, per month, whatever it is, for these regular meetings. And*

then it's of course up to me to say "no, I don't want this", but I want to have the choice to say no." (Head of Global FM, Logistic Service Provider)

FM end-users often seem to be indirectly involved in various phases of NSD processes through the intermediate action of the internal FM unit. FM end-users, in fact, tend to not be called to participate actively in strategic decisions, as their heterogeneous needs are believed to not correspond to those of the organization as a whole, and to be too operational. Their involvement would be too complex and resource consuming. On the other hand, both the internal FM unit and the outsourced providers support the involvement of end-users in operational activities through surveys and seasonal collection of feedback, as it allows a better understanding of end-users' needs and expectations.

4.2 Tools for user involvement in the FM service innovation process

Among the support tools for FM service design, our study shows that workshops are the preferred tool in most FM user roles. This study shows that traditional marketing tools such as questionnaires, focus groups and interviews are used mostly for involving FM end-users as users in the initial phases of the service development process, while workshops support a more direct and active involvement of clients in the first phase of analysis and investigation of the FM design process (Simon 1965). The respondents have depicted workshops as useful support tools in heterogeneous FM service design situations, as they can be adapted in the structure and functioning to specific FM design contexts and needs. For example, workshops with the participation of outsourced providers and internal FM units are used to involve the latter as users (e.g. for testing marketing approaches), as co-creator (e.g. for personnel training), and as resource (e.g. for selecting the best ideas for implementation).

The study shows that top management, however, needs to be involved through less "demanding" types of design tools such as regularly organized and ad hoc meetings, facilitated for example by scenario analysis and transparency models (Morelli 2009). This is due to the need to demonstrate the professionalism and value of FM services for the client organization, along with the non-strategic importance that top management of the client organization tends to attribute to FM services.

ICT-based tools are mostly used to support information management and sharing. In some cases as for example in scenario analysis and transparency matrices, ICT-based tools are used to facilitate communication between different users as for example between internal FM unit and top management of the FM client organization. On the other hand, the importance of partnership-like relationships between the FM client and the FM outsourced providers, based on trust, increases the relevance of face-to-face meetings, especially to support involvement as co-creators of, not only the internal FM unit, but also of top management and end-users.

End-user involvement appears to be supported mainly through ICT-based user-surveys and interviews, which allow collection of end-user perspectives without direct involvement (requiring more intermediating effort by the internal FM unit). Nonetheless, end-users are sometimes involved as co-creators through idea competitions and workshops, which not only support the new FM service development, but also increase awareness of FM services within the organization. The aim of such initiatives combines (a) collecting feedback on existing FM services to better match needs and expectations in the ones to be (re)designed; (b) asking for potential ideas for improvements and design of new FM services; (c) build or increase awareness on the activities of the FM unit.

In addition, ideas and feedback are continuously collected per email and/or Customer Relationship Management (CRM) tools. End-users have the possibility to submit their feedback and proactive ideas to the internal FM unit, which operates as filter, and pre-selects the ideas to submit to the FM outsourced provider for screening and, potentially, development. For instance, while designing and developing a new, integrated set of services for a specific FM client, one of the FM providers interviewed the end-users to delineate their needs and expectations and used that input to generate new ideas:

"*The investigation was about having workshops with the client's and our employees to understand and we actually said: we are on your side, what gets in your way? How is it to come to the parking lot? How is the reception? What do you spend time on? What doesn't work? What's the hassle?*" (Commercial Director and CFO, FM Service Provider).

Tools such as shared training and team-building activities are also used as ethnographic methods to indirectly and directly involve end-users as resource and co-creators. In fact, by creating cross-functional teams and organising team building exercises with employees from both the FM client and FM provider organization, FM service designers have the opportunity to get closer to the actual needs and expectations of both end-users and customers. The study shows that, besides allowing for mapping and profiling of end-users and customers (involvement as resource), participation in such activities encourages end-users and customers either to share knowledge for and/or actively participate in the FM service design and development (involvement as co-creator). For instance, the FM team of a financial service provider was invited to a cooking class together with the FM service provider team with the aim of increasing socialization among the two teams and elicit knowledge sharing both to support the development of new FM services and the improvement of the existing ones:

"…*They actually came with a very famous chef in Sweden and we cooked with him at night. So we were five teams and we were split up so we were one or two from the provider and one or two from us and we had to make a main course, and a starter, and whatever. Just trying to break down these barriers, so people start to share knowledge...*" (Head of Contract Management and IFM development, Financial Service Provider)

A summary of the support tools that this study found to be used to facilitate user involvement in FM service design is provided in Table 2. These tools are classified in relation to the roles of the stakeholders and their involvement in FM service design processes. Furthermore, Table 2 distinguishes between direct and indirect methods, as depicted in Table 2, whereas the tools supported by ICT are denoted with asterisks (*).

5 PRACTICAL IMPLICATIONS

This study is of practical importance to FM service firms interested in developing their FM services. In fact, Table 2 could be used as an inspiration for FM service designers and developers concerning which kind of methods to use to involve different stakeholders in the FM service design process. The results of this study show the importance of planning for stakeholder involvement in the FM service development and design process as well as the importance of choosing the right support tools for the type of stakeholder involved in the specific design phase and process.

Table 2: A summary of tools for stakeholder involvement in FM service design

		Co-creator	Resource	User
Client/organisation	Direct methods	Regular and ad hoc meetings Workshops	Workshops Qualitative service blueprinting (design orienting scenarios and use case methodology)*	Ad-hoc meetings
	Indirect methods	N.A.	N.A.	N.A.
Customer/internal FM unit	Direct methods	Face-to-face meetings Workshops Ethnographic methods (Team-building activities) Qualitative service blueprinting (design orienting scenarios)*	Workshops Ethnographic methods (Shared training; Team-building activities)	Workshops
	Indirect methods	Mapping and profiling tools*	Mapping and profiling tools*	N.A.
End-user/employees	Direct methods	Ethnographic methods (User workgroups)	Face-to-face interviews Workshops Ethnographic methods (Idea competitions*; Team building activities; Shared training)	Workshops Ethnographic methods (User workgroups)
	Indirect methods	N.A.	User surveys* Mapping and profiling tools*	User surveys*

More specifically, practitioners could use the results in Table 2 in FM design processes to first identify which stakeholder they want to involve, i.e. client, customer, or end-user. Secondly, Table 2 can be used to identify which type of involvement, i.e. as co-creator, resource or user, the stakeholders should take in the specific design process. Finally, practitioners can get an idea of the design tools used in FM service design processes and eventually choose among the design tools described in Table 2 to support the process in each specific FM service design instance.

For example, a new FM service development project that requires significant investment and commitment from the client as in the case of shifting from open offices with assigned seats to activity-based office spaces, could, first of all, involve top management as “resource” in order

to make the decision of whether to implement the idea or not. In addition, FM providers could support the involvement of the client by organising workshops to discuss the new idea of the office space and/or by presenting scenario analyses and transparency matrices to facilitate involvement in the decision-making. Once the decision is made, it might be necessary to involve end-users as co-creators in the design of the activity-based offices, to ensure that all activities that need to be carried out by the employees, have a dedicated space and are serviced appropriately (with cleaning, technical maintenance and so on). In this case, user workgroups could be created to develop a series of proposals, which could then be assessed by the FM providers and integrated, when possible, in the new office space design.

6 CONCLUSION

The aim of this paper was to present and discuss some of the tools that FM organisations use to design and develop new and improved FM services with the involvement of clients, customers, and end-users. The results of the analysis indicate that the involvement of the different users – here called stakeholders – is variable depending not only on the offered FM services (Alam & Perry 2002), but also on the specific role that users may play with regards to the FM service to be (re)designed and developed. Such heterogeneity of roles across the service design and development process implies that different tools are required to ensure the success of stakeholder involvement. The major contribution of the study is providing an overview of the specific tools that are used to involve stakeholders in FM service design and development processes. These tools have been categorized as follows: (1) direct methods, which allow stakeholders to actively participate in FM service design (regular and *ad* hoc meetings; workshops; interviews; cultural probes; quality service blueprinting; idea competitions; user workgroups; shared training and team building activities); and (2) indirect methods, which enable to passively involve stakeholders through observation (mapping and profiling tools; user surveys).

The results of this study are important to FM scholars and practitioners alike. First of all, this is the first study to the best of our knowledge, which investigates the tools for user involvement in the context of FM service design. This can be of interest to service design and innovation scholars in general, and FM scholars in particular. This study is also relevant to FM practitioners, because they can get inspiration about the support tools that can be used by FM managers for stimulating active participation and managing passive contribution of stakeholders in FM service design processes.

Finally, this study is not free of limitations. Firstly, the results are based on a relatively small number of interviews, which probably makes the list of tools not exhaustive. Secondly, the analysis has been based on theoretical models developed in business-to-consumer contexts, which were applied in a complex business-to-business FM context, even though it may be argued that our analysis was conducted at individual level of involvement. To overcome these limitations and increase the generalizability of the results, similar studies could be conducted within FM services as well as other support services to further investigate methods and tools to support the successful involvement of stakeholders in service design.

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