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# About evaluation in service design: As it is and how it could evolve

*Francesca Foglieni, Beatrice Villari*

[francesca.foglieni@polimi.it](mailto:francesca.foglieni@polimi.it); [beatrice.villari@polimi.it](mailto:beatrice.villari@polimi.it)

*Department of Design, Politecnico di Milano, Via Durando 38a, 20158 Milan, Italy*

*Froukje Sleswijk Visser*

[f.sleswijkvisser@tudelft.nl](mailto:f.sleswijkvisser@tudelft.nl)

*TU Delft University, Netherlands*

## Abstract

This paper reports on the role of evaluation in the service design field, reflecting in particular on contributions presented at the ServDes Conference 2018 in Milan, where the topic is explicitly introduced for the first time as a promising research and practical argument, to push the boundaries of the discipline and reinforce its legitimacy as a driver of innovation. It starts with a brief overview of literature on the topic, which highlights an increasing attention on measuring the value of service design and its impact on organizations, and goes on to examine some preliminary contributions on the evaluation of services as service design outcomes. After this, some reflections are made on how the papers admitted to the conference currently address these issues. Although we are still not fully aware of the evaluation potential and a shared vision still needs to be built, some trends on how the topic is approached by scholars can already be detected, and future challenges are envisioned for bringing the discussion to the next level.

**KEYWORDS:** service design evaluation, service evaluation, design value, service value, service design impact

## 1. The role of evaluation in service design

Although service design is a maturing field both in theory and practice, evidence that proves its beneficial impact can seldom be retrieved. Theoretical frameworks for service evaluation are scarce and mainly refer to other disciplinary fields (service quality measurement, program evaluation, social impact assessment, etc.), while service design practices rarely include any element of assessment.

Contributions on the role of evaluation in service design practice and on how to determine the value of service design are still rare and fragmented. Nonetheless, some service design scholars and practitioners (see e.g. Blomkvist, 2011; Foglieni and Villari, 2015; Løvlie et al., 2008; Manschot and Sleswijk Visser, 2011; Polaine et al., 2013) have contributed to the

disciplinary debate on the topic. The discussion highlights two main areas of reflection: on the one hand, contributions reflect on the value of service design in the innovation process; on the other hand, discussions are about measuring the service value itself. These two levels often overlap and do not help really help us distinguish between service design evaluation and service evaluation (Foglieni et al., 2018).

Private and public organizations are becoming more and more interested in service design to reinforce their brands, improve customer satisfaction, accelerate new ideas, and/or create new markets. This entails both a growing demand for service design competencies and the necessity to reshape professional practice, and explore new disciplinary territories on the (McNabola et al., 2013).

In this evolving situation, new challenges related to contemporary societal transformations and economic changes appear for service design. Service design needs to better monitor the use of resources, and rethink the role of users and providers in the service processes and in efficient innovation processes. How to evaluate a consistent contribution of service design in a service success or how to measure the multifaceted contribution of service design in service innovation are prominent questions.

In this line, it is suggested that service design can broaden its perspective forward to an evidence-based approach (Carr et al., 2011) that includes a comprehensive measurement of the value of services consistently with the current socio-economic context. This means considering the evaluation of service as a strategic lever to increase the value of service design, also through design interventions that are based on solid, shared and shareable knowledge (Foglieni et al., 2018). In this context, measuring the value of service design and its impact on organizations, as well as evaluating services, becomes a crucial issue to push the boundaries of the discipline and reinforce its legitimacy as a driver of innovation.

The next sections describe the state of the art of evaluating the impact of (service) design on organisations (1.1) and the state of the art on evaluating services (1.2).

## 1.1 The value of design: a brief overview

Value can be assessed in many different ways, and opinions on what exactly is to be measured can vary widely among stakeholders. Manschot and Sleeswijk Visser (2011) argue that experience value (for people who use services) should be combined more with performance value (for organisations) in order to assess value of service innovation.

In design and design management literature there are some studies about the measurement of design value. Although it is a more mature topic in the broader design field, in service design this is still not well developed. The value of design is described through different levels of contributions. For example, design is considered as an economic lever, a strategic asset, a functional aspect, and a way for sense-making for technologies, products, and services.

The European Commission (2013), as well as Moultrie and Livesey (2009), consider the value of design in terms of its contribution to the firms' innovation. The most widely adopted model to measure design value is the 'Design Ladder' (Ramlau and Melander, 2004), which describes four different steps (no design, design as styling, design as a process, and design as a strategy) to measure design maturity in firms. Following this model, enterprises can jump from a level in which design has no importance to the highest stage in which design is fully embedded into company processes and strategies. Another model proposed by the Design Management Institute (DMI) analyses design value in relation to investment and design adoption maturity. DMI's 'Design-Centric Index' (Westcott et al., 2013) is focused on design investments and maps the best metrics for measuring and managing them in companies. Also in this case, design is considered in its aesthetic and functional dimensions or as a strategic resource and competence. Recently, design value in firms has been analysed through the design capability concept (Mortati et al., 2014; Mortati and Villari, 2016), which describes the impact of design in terms of three design capabilities: design leadership, design management, and design execution, which describe how design resources can be managed within organizations.

The model that explicitly mentions service design is the 'Public Sector Design Ladder', which describes three levels (design for discrete problems, design as capability, design for policy)

used by public organisations and decision makers to promote innovation. It outlines how service design processes and tools are adopted by the public sector in order to foster innovation.

Although these models are now widely discussed in the disciplinary debate (including the papers submitted for this track), a dedicated reflection on the measurement of the specific value of service design in innovation processes seems to be lacking. Is it possible to measure the impact of service design in this context? And on which variables, skills, processes or activities can its impact be measured in terms of the value created? What are the specific tools? What are the metrics? Do we need new competencies?

In our opinion, opening a debate on service evaluation and starting to operate it pragmatically, could contribute to making the specific contribution of service design to innovation processes clearer, more visible, and more measurable. Our vision is that in a few years it will be possible to talk about impacts on people and organizations at an economic and social level, both at micro and macro scale, as is already happening for the broader design discipline.

## 1.2 Measuring services

The previous section elaborated on evaluation of the impact of service design on organisations and innovation processes. This section describes developments in measuring the outcomes of service design processes.

Defining service success factors has developed in many different disciplines. In the private and public sectors, more attention is paid to quantifying results or making human experiences more tangible as success factors in services. Service design is gradually moving towards a service evaluation culture and quantifying its outcomes is something that is starting to be addressed in literature and practice.

Service evaluation finds its origins in other disciplines such as service marketing and management, and it is mainly connected to the measurement of service quality and customer satisfaction in relation to organizational performances. Metrics such as customer satisfaction, customer retention, net promoter score, conversion/retention rates, etc. are increasingly applied to evaluate services. Grimes (2017, p. 62) mentions in his article, “Six hacks for service designers working in agile settings” that “...more and more service designers are naming their data scientist and analytics team members as their BFF’s because creatively crunching numbers can reveal relevant data about service experiences”.

Nevertheless, it is still difficult to measure how service design can assess service value or how the existing measures can be applied to the service design field.

Referring to the service design field, Manschot and Sleeswijk Visser (2011) proposed a framework for the assessment of service design based on people's perceptions while using a service. They described two types of value assessment for service design processes: the value of system performance (attributed to the organization) measured through performance indicators, and the value of personal experiences (of service users). Combining success factors from a customer and a provider perspective has the advantage of greater understanding shared by business people and designers, enabling them to make informed innovation decisions from multiple perspectives.

There are, however, two challenges to measuring service success. The first is that measurements obtained through customer data, such as customer satisfaction (the most frequently used) mainly focus on the ‘what’ (i.e. how many people promote the service), and fail to include the ‘why’ (i.e. what do the qualitative and quantitative data mean?). This suggests that more effort must be made to integrate qualitative data into the dashboard of quantitative customer data sources. The second challenge is that many of these measurements evaluate parts of the service, i.e. focusing on one particular service touchpoint. Whereas the service experience evolves over longer time spans and includes an entire sequence of touchpoints, possibly involving other important factors in the overall customer experience, which may not be explicitly described from a business perspective. Løvlie et al. (2008) reflected upon how the value of service design practices could be measured, asking users how much they liked the designed services by using traditional service quality and satisfaction measurements. They realized that data on customer

satisfaction provided insights into acceptance of the service, but did not provide evidence on what works or does not work at organizational level. They thus suggested calculating the ROI of their design initiatives by: (i) small service prototyping activities with users; (ii) the use of a Triple Bottom Line to measure the organizational success; (iii) the use of a Service Usability Index to measure the quality of a service experience through four parameters, namely proposition, experience, usability, and accessibility. Similarly, Lievesley and Yee (2012) considered embedding the Social Return On Investment (SROI) evaluation process in the service design projects, adapting existing service design tools. Other literature refers to service ideas evaluation. This mainly discusses the prototyping activities done during the different stages of the service design process. Prototypes in service design are used to explore, evaluate, or communicate service solutions to various stakeholders (Blomkvist, 2014; Holmlid and Evenson, 2008; Wetter-Edman, 2011). In service design, it is a big challenge to frame clearly what aspect of a service design concept needs to be evaluated, since a service concept involves many different elements (objects, touchpoints, interactions, etc.) that are interconnected and influence each other. It is simply not possible to prototype an entire product-service system in use (Sleeswijk Visser, 2014).

*Services are complex, comprised of multiple interactions with multiple touchpoints, over widely varying time spans. While the re-design of a touchpoint can deliver concrete numbers indicating success, things get much more complex at a service level, when multiple touchpoints come into play. (Grimes, 2017, p3).*

Prototyping activities can be conducted within design teams or through collaborative sessions involving users, providers, and different actors of the service ecosystem. Evaluation is useful for guiding the early stages of the process, such as the research phase, and to define criteria by which to prioritize ideas, identifying those more coherent to the brand in the design and in the development phases (Foglieni et al., 2018). Foglieni, Villari, and Maffei (2018) propose an evaluation framework for re-designing services that embeds a service evaluation strategy into the service design process. The framework is based on the idea of reinforcing, or enabling, a critical process of learning and change for organizations that deliver services, and for the people who use them, focusing on service value. In particular, the authors propose a service design process that integrates four evaluation stages: evaluating the existing service, evaluating and developing concepts, evaluating prototypes resulting from this development, and evaluating the new or renewed service (see Fig.1). The authors then define service evaluation as “...an activity aimed at determining the value of a service before and/or after the service design intervention, as well as the value of concepts and prototypes defined and developed during the service design process” (Foglieni et al., 2018, p. 82).

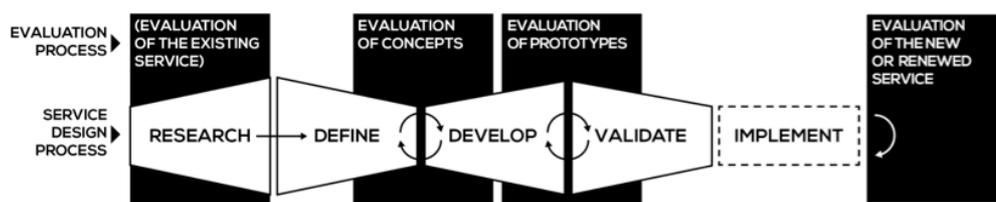


Fig. 1 - The integrated process of service design and evaluation (source: Foglieni et al., 2018, p. 82)

This represents the first attempt to contribute to the international debate by proposing a practical approach, which however still requires testing and further exploration. To conclude, a multidisciplinary perspective on service design and service design evaluation still seems to be missing. Related disciplines (e.g. social design, transformative learning, organizational change, policy making, societal implementation) could bring in more evaluation techniques to make the changes tangible and include them as an integral part of the process. A long-term effect cannot be made immediately tangible and is certainly not quantifiable in immediate success factors. However, is that not precisely what many service design projects

are about? Besides better services, does service delivery not require constant improvement in order to meet user needs whenever possible? Service design ranges from incremental improvements to touchpoints and service experience journeys, to radical innovations when new possibilities appear on the horizons in near or even distant futures.

## 2. Approaching evaluation from multiple perspectives: a fragmented discussion

It is rather notable that while academics and practitioners strongly address the need to develop more ways of measuring and evaluating service design strategies, the number of contributions submitted to this track was rather low. We expected more input on new models to evaluate service design as a process, and more knowledge on how to evaluate services by combining insights on system performance and customer experiences. Moreover, some of the submitted contributions did not fit the track topic, namely 'Measuring and Evaluating service innovation and service design', but discussed, for example, user involvement processes for feedback on service ideas, or focused on other aspects of design process reflections, thus failing to focus particularly on evaluating service design and its outcomes.

The four accepted papers mainly introduce academic perspectives on the evaluation of service design practices. Only one paper addresses service evaluation in particular, by adding Net Promoter Score (NPS) data in journeys as input for designers.

This paper by Følstad and Kvale (2018) shows a method of evaluating touchpoints with feedback from customer reports and NPS. Using data sources such as NPS is quite common in the Customer Experience field and now service designers are increasingly adopting it. The paper describes a case study in which transactional NPS data is used to measure the value of a service from the customers' point of view, and how this data can be informative for service designers. The results indicate that the transactional NPS provides information on customer experience at single touchpoints, but further information can be extracted for their experience of the entire journey experience, i.e. everything that customers consider important to their experience related to the service. Since qualitative feedbacks from customers often not only address a particular touchpoint (e.g. last customer service contact) but also *spillover* data (other aspects of the service provider and its offerings), this type of data might be relevant for use by service designers to identify opportunities for service improvements. Another finding from this study shows that low scores from customers are particularly interesting because they reveal real customer pain points. In addition, middle scores are also valued as interesting data for service designers in this particular case, whereas, in brand NPS, middle scores are usually ignored in data analysis. The middle score reviews in this study provided more nuances (both positive and negative) than the high or low score reviews. This could be of interest for designers because it puts more focus on the overall customer experience.

The three other papers discuss various approaches to evaluating design practices. They cover design capability in organisations and all describe attempts to evaluate using criteria that are meaningful in such processes.

The paper by Björklund et al. (2018) describes how to measure the impact of design and design thinking in organizations at different maturity levels by using the Danish Design Ladder. The author created a table where various currently available metrics are plotted on the levels of the Design Ladder, dividing external and internal metrics. This table provides an interesting overview to evaluate design processes, including a variety of metrics and keeping a clear perspective on the various levels of design (financial performance, customer related metrics, number of design projects and of those dedicated to design budgets, ROI's, team effectiveness and collaboration, employee satisfaction and engagement, etc.).

The paper by Yeo and Lee (2018) discusses the intangible process of transforming public organizations into organizations with design thinking at the core of their innovation processes.

They present a Design Capability Mapping tool (both in digital and physical form) to allow employees in a public organization to evaluate the way design is currently used at different stages of project development, and articulating a vision for how it should be used. The tool is exemplified in one case study based in Singapore. The case highlights how the tool was received and used as a conversation piece to reach a shared understanding of current and desired use of design among the participants. In particular, the collaborative aspect, i.e. discussing individual evaluations in teams, clearly demonstrated how people differ in their understanding of the implications of applying design thinking. In addition, the following issues were identified: conflict between the wish to innovate and resistance to change; the risk of adversity to using the tool on the part of senior management, or their influence on design processes

Furthermore, the paper addresses the importance of shared vocabulary, especially regarding the limited number of facilitation tools available for creating a common language about what design is and how it should be used in (public sector) organizations.

The last paper from Kusano et al. (2018) describes a case study about the effectiveness of the workshop for service creation by non-designers (developers and researchers in ICT). The workshop aims to fuse multiple viewpoints, such as human-centred, technological and business viewpoints, and to synthesize diverse opinions with various stakeholders. They propose a set of questions to evaluate the workshop itself in terms of the knowledge gained by 'non-designers'. The goal of the workshop was to understand and to utilize the diversity of participants for service creation. The other objective was to understand the concept of multiple viewpoints in service creation. The authors describe a detailed programme of a two-day workshop that has three features:

- Selecting a target user from workshop participants and closely considering the target user;
- Dividing work time of individual and group activities to make the most of the diverse opinions of participants;
- Taking the human-centred, technological and business viewpoints in isolation and then synthesizing a multi-viewpoint understanding.

### 3. Reflections on experiments of evaluation in service design

Looking at contributions currently available on the topic, with particular reference to those discussed in the previous section, we can reflect on how evaluation is treated in the field of service design and to what extent it is perceived as important and useful in both the measurement of outcomes and related success factors, and in benefits at organizational and business level.

While the measurement of design value has received some attention in the last decade, leading to the definition of scales and metrics for determining the degree of maturity of organizations in the adoption of this kind of approach and competence (as well as how they relate to innovation), so far efforts to transfer this knowledge to the specific case of service design has not produced structured and acknowledged results.

The service design community has just started to tackle this need to provide evidence of the value of service design in different contexts and organizations. Nonetheless, though we are still in a speculative and explorative phase, based on experiments and situated reflections that can seldom be replicated (and thus being far away from supporting the discipline's proof of concept), some trends on how the topic is approached by scholars can already be detected. They are described as follows.

### 1. *Working for legitimization*

When it comes to introducing evaluation into service design, in most cases, the purpose is to open up the way or reinforce its legitimization as a strategic approach for success and innovation. This is also true of contributions in this track. In fact, all the papers report on reflections and experiences aimed at demonstrating and confirming the validity of the approach and tools, on the one hand, and the maturity level of organizations in adopting service design, on the other. Their purpose is to justify investments and demonstrate the role claimed for service design as a driver of innovation. Kusano et al. (2018) reflect on the validity of a workshop format as a tool for design with ICT specialists, which triggers further reflections on the importance of measuring the appropriateness and relevance of common service design tools, given their increasing adoption in non-design fields by non-designers. Følstad and Kvale (2018) propose to broaden the use of NPS to pre- and post-versions of a service, as an indicator of the value of service design projects and to quantify the validity of the intervention.

In terms of maturity measurement, Björklund et al. (2018) attempt to transform the Design Ladder (Ramlau and Melander, 2004) into an operational tool for measuring the impact of (service) design on organizations through the identification of metrics typically adopted at each maturity level. Similarly, Yeo and Lee (2018) propose a tool to be used by public service organizations to capture their propensity and aptitude to embed design at various organizational levels: individual, teams, and systems.

### 2. *Clarifying the focus of evaluation*

Although a shared vision on what to evaluate in order to prove the legitimacy of service design is still lacking in these and previous contributions, some recurrent evaluation focuses can be identified. In this sense, a distinction needs to be made between cases in which evaluation addresses services as service design inputs or outputs, and cases in which it addresses the impact of service design adoption on organizations. When evaluation addresses existing services that need to be redesigned, or solutions emerging from service design projects and interventions, the focus is mainly on customer experience and financial performances (see e.g. Grimes, 2017; Løvlie et al., 2008; Manschot and Sleeswijk Visser, 2011). Accordingly, referring to contributions discussed in this track, Følstad and Kvale (2018) suggest focusing on the likelihood of a service being recommended, as a measurable source of user insights in support of service designers. While Björklund et al. (2018) assert that sales, revenues, ROI, customer satisfaction and feedbacks are the easiest available metrics for assessing the difference between services developed with and without a design approach. They also remark on a shift from the use of financial metrics to more qualitative and customer-centred ones as companies mature toward design approaches.

On the other hand, when the purpose of evaluation is to assess the impact of service design on the organization, measurements seem to concentrate on the level of learning acquired and changes implemented, beyond, of course, the willingness and tendency to invest in this kind of competence and activity (see e.g. Moultrie and Livesey, 2009; Ramlau and Melander, 2004; Westcott et al., 2013). This is in line with the work of Yeo and Lee (2018), who propose to map design capabilities in organizations by means of a questionnaire. They investigate the understanding of design, work practices and current organisational dynamics of officials in public organizations, in order to build awareness and identify gaps. Yet again, Björklund et al. (2018) report that when design is fully embedded into organizations, its impact on the working culture is measured through employee motivation, engagement, team collaboration, and effectiveness.

### 3. *Embedding extra-disciplinary knowledge*

Lastly, looking at existing measurements for evaluation in service design, a weak awareness of the need to rely on extra-disciplinary knowledge on the topic seems to emerge, especially when it comes to quantitative measures. In fact, these often require specific, technical skills (Bailey, 2010; UNEG, 2016) that do not usually belong to service designers (nor are they taught them). Thus, acquiring evaluation models and theories from related disciplines seems to be the way to tackle this need, with the possibility of developing variations that can better serve the design field. Not by chance, metrics identified by Yeo and Lee (2018) clearly

belong to related service design disciplines, namely (service) marketing and management evaluation culture. This applies in particular to the evaluation of existing services and newly-designed service solutions, and it is linked to an awareness, starting to be expressed by some in the field, that we need to start systematically evaluating before and after service design interventions. Doing so would enable, on the one hand, reliable shared standards to be developed for service success and, on the other hand, the impact of service design to be assessed through the resulting measurable differential (Drew, 2017).

Følstad and Kvale (2018) suggest using the NPS to achieve this purpose since, despite not belonging to the design culture it is easy to understand, operate and analyze. Moreover, it looks particularly suitable for matching quantitative measures and qualitative insights, which are daily bread for service designers. The same tool is also proposed by Kusano et al. (2018), who applied it to their evaluation of the workshop format, proving its versatility to different purposes.

To sum up, in relation to evaluation as a support practice for service design, we can affirm that the community still seems more oriented toward its use for legitimization purposes, especially in relation to measuring its impacts on organizations. However, awareness is also starting to grow with respect to further applications that are more focused on the evaluation of service design outcomes rather than its approach, process, and tools. This makes us wonder what will come next, and express some considerations about future challenges that service design may have to overcome, in order to evolve and acquire more importance in the field.

#### 4. Final considerations and future challenges

Given the short overview on the state of the art of evaluation practice in service design provided in the first part of this contribution, and with reference to papers submitted and accepted by reviewers for this track, we must admit that work still needs to be done to formulate a common vision of what evaluating service and/or service design means. The role of evaluation in service design theory and practice remains underexplored, while measuring the effects and impact of service design outcomes continues to grow in importance, but as a rather fragmented activity. So far, for the majority of people, it is a way of legitimizing the use of service design itself. For others, it means adopting particular tools or metrics to validate certain results or measuring consistency between hypotheses and results. For others again, it is starting to become a useful guide for running an effective design process and assessing its outcome for various audiences.

With particular reference to contents discussed in this track, as mentioned above, we are undeniably dealing with practical experiments in evaluation. What seems to be missing however is a more structured and, why not, theoretical reflection on possible frameworks that could address and expand the discussion on how and why to measure the value of services and service design in companies and organizations.

After all, we must also admit that this fragmented and undefined nature implies a huge opportunity for both scholars and practitioners to further explore the topic, and to build and reinforce an evaluation culture in the service design community.

From our perspective, this is a promising area for both service design research and practice. As researchers, we need to further reflect and investigate on these issues in order to establish a common knowledge framework on which to base our experiments. As practitioners, we need to build and/or reframe tools and approaches to be able to evaluate our work and give it the solidity required for service design practice to be better framed and further acknowledged.

The first challenge is for sure to understand what the difficulties are in approaching the topic and start developing a clear and shared vision: what do practitioners expect from evaluation? What is their current knowledge and understanding? Are they aware of the need for such activity to be embedded into their daily practices? And of the value of making it so?

Secondly, we need to understand how to relate to extra-disciplinary knowledge and competence to fill the gap currently occurring between the peripheral role of evaluation in service design, and the potential it could achieve in supporting the design of better services and establishing a continuous process of innovation.

Finally, we need to provide proof of service design legitimacy. Questions to be answered in this case are: what kind of extra-disciplinary knowledge should we address? And what in this knowledge are we effectively able to handle? What skills do we lack to properly face this challenge?

We hope the track and the emerging reflections can contribute to stimulate further research and professional projects that reinforce and enlarge the current debate on evaluation in the service design field.

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