

Designing Services –Overview of Basic Methods

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Abstract: In most national economies nowadays a sharp increase of the service sector role can be observed. The manufacturers are also required to supply services as an addition to material products, thus every business is, at least partly, service business. As well as material products, services should be designed, tested and verified before launching onto the market. Service design is a young field of research in academia and simultaneously developing professional practice in the market place. As a discipline it is not yet clearly define, however it is connected usually with service management and marketing, and also service science. The aim of this article is to present few methods of designinig used for services. The overview is based both on academic researchers publications and practitioners' work.

Keywords: service design, service sector, design methods, service science

1. Introduction

Aknowledge revolution that took place in XX century along with the information technology development transformed the profile of global economy from industrial-oriented into service-oriented. The fact of the shift has reflected in growing share of the service sector in world GDP (around two-thirds of GDPs in most national economies – Fig.1) (Soubotina, 2004). The manufacturers are also required to supply services as an addition to material products, thus every business is, at least partly, service business. Changes in economy drew the attention of researchers and professionals and resulted in developing new approaches, methods and tools applicable for service sector. It seems to be recognizable by intuition whether we face a service or a product, though the difference is not as obvious because the modern material products are combined with services. In literature and in practice there are many definitions of service, e.g. (Tomiyaama, 2001; Rudd, 2007), and despite the differences, all definitions point out main features of services, namely: intangibility,

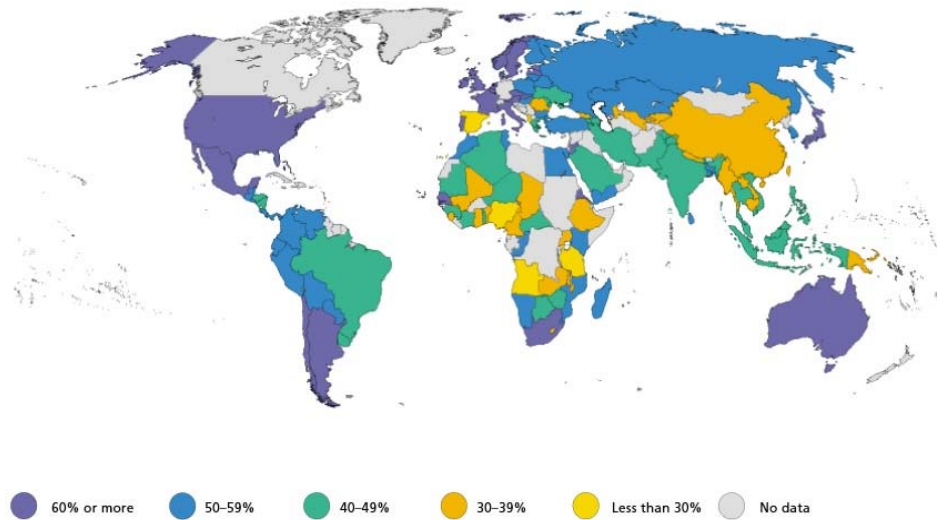


Fig. 1. The share of services in national GDPs in 1999 (Soubotina, 2004).

heterogeneity, perishability and simultaneity (the production and consumption are joint and inseparable). Services cannot be stored or owned and beyond them there is a system of many influential factors, thus services should not be treated as a stand-alone product (Maglio et al, 2006). Along with the blooming growth of the service sector importance, the Service Science term was born as an answer for the changing market demands. The term “Service Science” is a shortcut from Service Science Management and Engineering (SSME), which was introduced by IBM in 2004 (Helfley, 2008), and soon gained the attention and interest of other sectors’ specialist and theorist. Academia realized that the shift in economy needs to be reflected in theory and research. Since then many publications have appeared on the subject of new field emergence, terminology and methodology related with Service Science (Spohrer, 2008; Maglio et al , 2010; Kim, 2009). In general, Service Science aims at innovating services and service systems with scientific methodology (Kim, 2009). The U.S National Innovation Investment Act clarifies the definition of the new discipline as: “curricula, training, and research programs that are designed to teach individuals to apply scientific, engineering, and management disciplines that integrate elements of computer science, operations research, industrial engineering, business strategy, management sciences, and social and legal sciences, in order to encourage innovation in how organizations create value for customers and shareholders that could not be achieved through such disciplines working in isolation” [ibid, p.3].

2. What is Service Design?

We are surrounded by various services every day. In spite of popularity of its existence in present-day world and fierce competitiveness on the market, we – as

clients – encounter unpleasant experiences with the received services permanently. The report of British consulting firm Brain & Company, published in 2005, stated that 80% of the entrepreneurs operating in service sector are satisfied with the way they deliver their service. However, only 8% of their customers agree on this matter (Allen). The research was conducted among 367 companies and their clients and its' results confirm many previous research on the subject. Furthermore, the service is still a product, so to ensure the successful launching onto the market, it should be designed, tested and verified before. It is not an accident or a luck that determines the great success of service (Maglio, 2010).

Service Design discipline is relatively young and has not been defined clearly yet. Richard Buchanan (PhD, a professor of design, management, and information systems) stated, that it should be perceived rather as a strength than a weakness and it is only a confirmation of the fact that Service Design is an evolving discipline (Stickdorn, 2010). In all publications that service design theme is explored, the interdisciplinary or multi-disciplinary approach is mentioned as the main characteristic of the realm. Stickdorn ((Stickdorn, 2010) considers service design approaches in two sets: the first one gathers the academic definitions and descriptions of the new field and the second one represents the practitioners' (mainly marketing agencies) point of view on this matter. According to academic line Service Design is a holistic, multidisciplinary field that aims in creating new or innovating/improving existing services to make them more useful, usable, desirable for clients and effective from supplier's point of view (Moritz, 2005; Mager 2008). The practitioners' definitions in general are similar, though they stress explicitly the critical role of people ("user experience" term is commonly used), skills, interactions and co-creation value in the process of designing for services. As a research field it is rooted basically in design discipline (it grew in design centers and schools - in UK, Nordic countries, USA), but also the field of marketing and management had a great impact on its' evolvement. Recently it has been increasingly associated with Service Science (Holmlid & Evenson, 2008).

Nisula (2012) conducted the search in literature to find out different definitions of Service Design, as there is a temporary flux of definitions, approaches and languages. While some definitions are vast and all-encompassing, i.e. mention many aspects of the whole service production, others are compact and focused on user experience. The study brought her to conclusion that there is an urgent need for comprehensible and commonly accepted approach to the field, which could set the basis for service design research, because existing definitions have as many similarities as differences .

Madana Partnership report "Scoping study on Service Design", that was prepared in 2012 for the UK Design Council, ArtS & Humanities Research Council along with Economic and Social Research Council, indicates that both terms - "service" and

“design” are problematical in their meaning and coverage, in economic and academic aspect. Therefore the fusion of the words are the subject of the debate among the commentators in academia and professional practice. The report outlines the novelty of the field and the necessity of academics and practitioners cooperation in further research on Service Design related themes to integrate the efforts, enlarge the scale of study and thereby develop coherent basics of discipline theory and practice (Madana, 2012).

While the profits generated by well-designed service are rather obvious from the customer point of view, organization may have considerable doubts if they should invest in designing of their services. Moritz lists the positive changes and benefits that accrue for the organization, which are: true understanding of market needs, higher value with the resources available, higher effectiveness and efficiency, positive changes in organization culture, new perspective on future development, higher quality service experience as a basis of success, brand affinity, establishing connects between organization and clients and differentiations against competitors (Moritz, 2005). Designing services is a straightforward approach to innovate them. Undoubtedly, an innovation is a main determinant of the organization competitiveness in the market place, thus it seems unreasonable to not undertake it into consideration while either operating in the service sector or researching on the sector.

3. Design methods and tools used for services

The following chapter is based partly on the research into practitioners experience in designing services, as the literature review seemed to be insufficient. From the variety of methods and tools the author chose a few, which represent the different aspects of designing activities involved in the process. Not only does a project on developing a service engage different level employees from inside the organization (managers, accountants, IT specialist, technicians, etc.) and from outside (designers, scientists and even costumers), but also is costly and time-consuming activity. Though, it is worth noting, that seems impossible to overprize the benefits deriving from planned in details and carefully designed service, as the first experience that clients gain from the provided service determines their choices in the future. All methods described in the chapter are applicable either to introduce or to develop and innovate existing services. In practice designers combine many methods and tools to take into consideration more aspects of service experience. And they have in mind both, a costumer’s and provider’s point of view.

A. Costumer/User Journey Map

In order to understand the experience that customer gets while being provided a service, it is critical to “walk in the costumer’s shoes” (Holmlid, 2008). Customer

Journey Mapping is a visualization of the path that customer takes to access the service. It aims to describe the process of experiencing service through different touch points (the points of direct contact with provider’s employees) from the customer’s point of view (Kankainen, 2012), namely all points from initial contact (e.g. an advertisement), through purchasing and afterwards contacts (e.g. sales support or repurchase), with the special attention to the channels through which it happens (face-to face, online, phone, post etc.). If the map is done for a new service, it may require an introduction of sample service users (The Marshal Office of Silesia Region, 2013). The tool can be joined with other methods, such as personas or narrative methods, like storytelling. In contrary to methods that focus on the individual details in each phase (as described below blueprints), it enables to create an overall picture of the service experience including emotional, material and procedural components (Mager, 2008). The method reveals “the moments of truth” – which are gaps between clients expectations and the experience they actually received. Exemplary map of service (CJM) is presented at Fig. 2.

Fig. 2. Costumer Journey Map - Possible Scheme (Source: (CJM))
Generic Customer Journey Mapping



B. Personas

Persona is a description of an individual that represents the group of user with similar expectations, features, behaviour and demands. It should cover a variety of information such as: (fictional) name, occupation, hobbies, social status, interests, likes and dislikes, other important information (e.g. how did they find out about the service, how they access the service etc.) and most of all needs.

The designers build the set of different types of personas using visual aids such as text and images (The Technology Strategy Board brochure, 2011). Following figure

presents the persona templates (on the left: used in the project of The Marshal Office of Silesia Region (The Marshal Office of Silesia Region, 2013), on the right: suggested by the practitioners of designing field (Shostack, 1982).

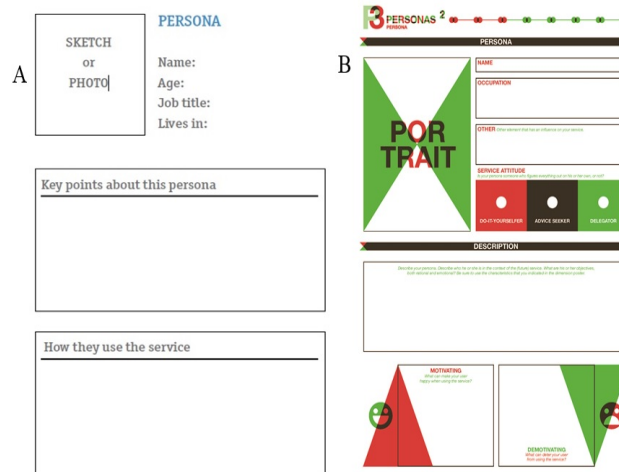


Fig. 3. Template of persona form (Source: The Marshal Office of Silesia Region)

The method allows to define target clients' group in details, and therefore a service can be planned more precisely and accurately for a specific customer group or groups.

C. Service Blueprints

Blueprinting services, proposed by Shostack (1982) as a new approach in marketing of services which supports the management of services innovation and development, evolved and now is one of the basic method for designing a service. Service blueprint's first task is to identify service elements (time, logical sequences of the action and processes) and interactions that constitute the service. Once the first step is done, the designer creates a profile of the service (on a flow diagram). The visualization aim is to separate interactions with the customer in the front stage from those that happens in the back stage of service production. While the diagram is done, the points of service failure can be detected and the fail-save processes should be designed. The identification of potential problems in advance enhances the quality of the service delivery. The next issue that designer should consider are: time frames for a standard service execution and deviations from this standard, and also the profitability analysis. Fig. 4 shows an example of the blueprint formulated for a shoeshine parlor - a very simple case to picture the main idea of the method (1984).

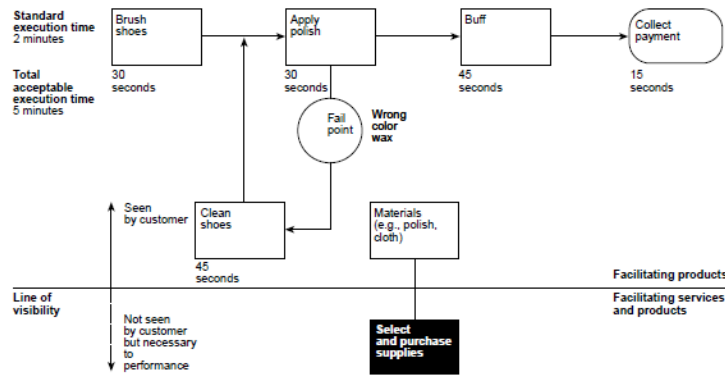


Fig. 4. Blueprint of a shoeshine service (Source: Shostack, 1984)

Bitner extended the typical service blueprint to five components, namely: customer actions, onstage/visible contact employee actions, backstage/invisible contact employee actions, support processes and physical evidence (2008). Fig. 5 represents the diagram proposed by Bitner.

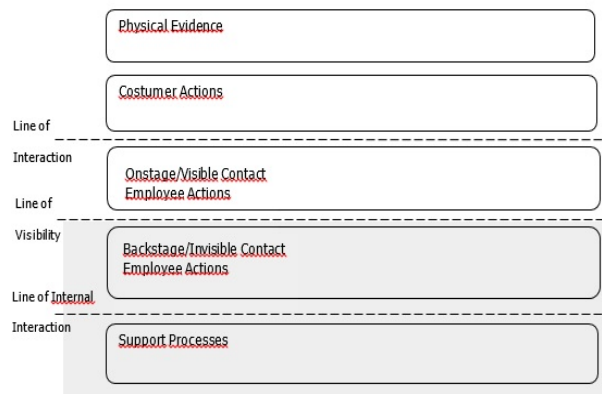


Fig. 5. Blueprint Components (Source: based on: Bitner et al, 2008)

The main drawback of the method, pointed out by practitioners, is that blueprint is only a visualization and gives partial information on how service works, because neither an emotional side nor motivations of clients and suppliers are analyzed. The blueprint shows the construction of the service, enables to track the path of the customer across the time and touch point and reveals where the value is created. It became a basic tool for designing services, mentioned in many publications, widely used in practice, though little research has been done on the blueprints in general (Wreiner et al 2009).

D. Prototyping

Prototyping is a tool used for testing new services in order to verify the ideas and gather feedbacks. Prototypes in services have to encompass the experience as well as the touch points. They can focus on one touch point or service moment or they can test various moments' interactions. The range of prototypes is very wide, from rough sketches to full scale brick and mortar facilities. To pick up more "moments of truth", generating cultural probes may be also worthwhile (Holmlid, 2008;Arvola, 2012). Services can be also prototyped through scenario-building and role-playing (Miettinen, 2009).

Prototyping services is considered by designers as a crucial tool of a great utility in the process of designing and introducing services. Academic literature mentions it as an area that needs more research (Blomkvist, 2010). Although there are definitions of prototyping services (e.g. online repository for Service design tools says: "[service prototyping is a tool] for testing the service by observing the interaction of the user with a prototype of the service put in the place, situation and condition where the service will actually exist"), and the tool is used in practice by designers, the general concept and practical guidelines are very difficult to find in literature. Given the heterogeneity of services, it is problematic to indicate an overall scheme or description for service prototyping. Much more can be retrieved from practitioners' work and case studies. Nevertheless, Blomkvist and Holmlid (2010) stated in their research that even among designers "service prototyping cannot be said to be one thing but rather a variety of approaches and activities ". Therefore it remains an area for further development.

E. ServiceExplorer

Service Explorer (SE) is a concept method of computer-aided design system for services, which was developed by Hara, Arai and Shimomura in 2004. It is based on following definition of service: "an activity between a service provider and service receiver to change the states of the receiver" and the service model as a connected graph between all service participants (namely provider, receiver and intermediate agents) (Hara et al, 2006). With these assumptions authors defined three sub-models of the service: flow model, view model and scope model (Fig. 6), which show the service system (i.e. a service and all that is beyond it) from the simplest one to the most complex.

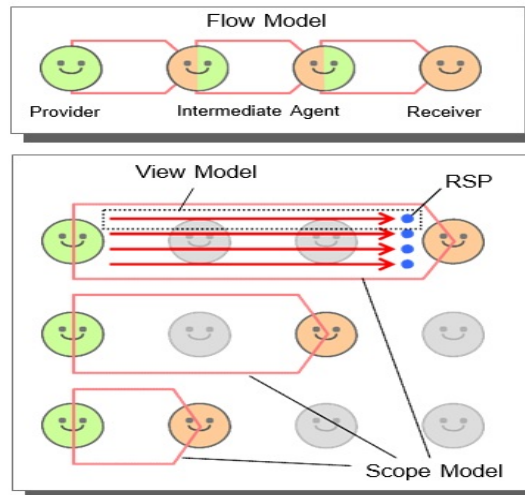


Fig. 6. The relation among three sub models: flow model, scope model, and view model (Source: Hara et al 2006)

To design service model in Service Explorer, the following parameters needs to be defined: Receiver State Parameters (RSPs), Content Parameters (CoPs – describing the states of service content), Channel Parameters (ChPs – which contain information relating to service channels). To specify the Receiver State Parameters, a scenario is introduced with the use of “Personas” concept. A system architecture of Service Explorer is presented at Fig. 7.

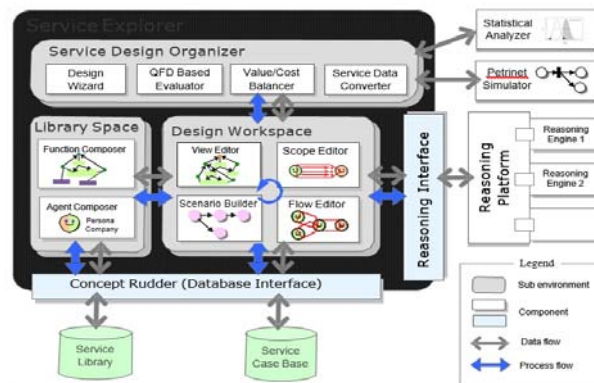


Fig. 7. System architecture of Service Explorer (Hara, 2006)

The application was created using programming in Java and Eclipse Platform. “Design workspace” – provides functions for model building. The data of a service model in “design workspace” is stored in “service case base.” “Service design organizer” controls and supports design activities: to guide design process, to

evaluate services, and to simulate a behavior of service. “Reasoning platform” helps the designer to create a new service by means of reasoning based on analogy. RSPs are means to evaluate customers’ satisfactions. Products and services in the SE are modelled according to their functions and attributes. Designing service with the use of SE enables to review existing or create new project and makes the services visible. It also includes various tools for the design of service and provides a good design environment. The authors of the method point out, however, that analytical approach may lead to a loss of the service totality and a design phase of synthesis (including a construction of the service delivery process and designing interactions between the receiver and the provider) can be required.

4. Conclusions

In most national economies nowadays a sharp increase of the service sector role can be observed. The manufacturers are also required to supply services as an addition to material products, thus every business is, at least partly, service business. Along with the growing importance and popularity of services themselves, the research in the field and theoretical aspects of services as a science discipline has been increasingly brought up in academic publications. Service Science aims at innovating services and service systems with scientific methodology. Service Design is a new multi-disciplinary approach, which is not clearly define as a scientific discipline yet, but its origin lies both in the field of marketing and management of services, and in the design realm. Its aim is to create new or innovate/improve existing services to make them more useful, usable, desirable for clients and effective from supplier’s point of view. Many reports and publications point out the necessity of further development of this research area. In the paper few designing methods used for services were presented, namely: Service Blueprint, Customer Journey Map, Personas, Prototyping Services and Service Explorer as a computer-aided method. Practitioners usually combine more than one means in order to get an entire picture of a service from a user’s and provider’s point of view. The overview of design methods used for services, which was conducted both on academic researchers’ publications and practitioners’ work, and the literature review on the Service Design field revealed that both areas are still prospective for further studies, especially in terms of coherent basics of discipline theory and guidelines for practice. The scope of publications on methodology for designing service in academic literature is rather limited.

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