

# Chapter 2

## An Approach to Service Design



**Abstract** The approach to services has changed in the last decades: it has developed from viewing services in relation to their intrinsic differences in products to viewing services as processes of value co-creation. This chapter therefore introduces the evolution of this concept based on the early studies that introduced the idea that services could be designed to the latest approaches that frame services. It also includes a discussion of design action in relation to these at three logical levels.

### 2.1 Some Brief Historical Notes on the Idea of Service Design

Before defining our approach to service design, it is important to chart the evolution of this discipline from its origin to the approach we are proposing.

Services have existed since the earliest social aggregations of human beings, and they have always been *designed*—at least, in some way, in the form of organised labour (Blomberg and Darrah 2014; Kim 2018). The term *service design* emerged when the relevance of services in economic activities became evident and the need to properly organise the activities in a service emerged. The origin of the term hails from marketing literature. Shostack (1982), for instance, highlights the presence of service and product components in almost all market entities and the need to appropriately design all the components of a service. For this reason, she proposed the term *blueprinting* to describe the activity of designing and codifying the sequence of actions that are included in a service performance.

In the years that followed, service design was analysed from different disciplinary perspectives, unveiling specific relevant research areas in the field (Nisula 2012). Hollins and Hollins (1993), for instance, analyses services starting from an approach that focuses on the organisation of business operations and describes them as processes. In contrast, Mager (2008) focuses on the client perspective and on the interface between clients and service providers on the basis of which service solutions are to be visualised, formulated or orchestrated. Clatworthy (2010) proposes a similar perspective, which focuses on services as experiences that happen over time and that need to be organised through a sequence of interactions between service providers

and customers. In marketing studies, a similar perspective is centred around the *service encounter* (Czepiel et al. 1985), which is based on the interaction between customers and the service’s tangible evidences (humans or artefacts) (Bitner et al. 1990). Service design has also been defined in relation to the coordination of the back stage of services, in other words, to the design of facilities, servers, equipment and other resources needed to produce services (Ghosh et al. 2004).

In those definitions of service design, two main directions emerge (Morelli 2009): whereas the first direction derives from the tradition of product and interaction design, which focuses on the front stage, on user experience and on the interface between service providers and customers, the second direction derives from management and marketing studies, where it focuses on services as processes and analyses the organisational aspects in the back stage.

To summarise the different contributions to the definition of service design, Kimbell (2011) highlights two main tensions: the first tension concerns understanding design either as a defined problem-solving activity or as an enquiry, which means an exploration of an open problem space involving different actors, including users. The second tension concerns understanding services on the basis of how they differ from products or as an activity of value creation.

The definitions derived from such tensions define design, either from an engineering perspective—keeping the distinction between products and services, and interpreting design as a problem-solving activity—or from a design-for-services perspective, which looks at services as a value creation activity in an open-ended problem exploration involving different actors (Fig. 2.1).

The two perspectives open different professional and disciplinary spaces: the former links service design to the tradition of engineering studies, in which design capabilities are derived by a broader definition of engineering capabilities, whereas

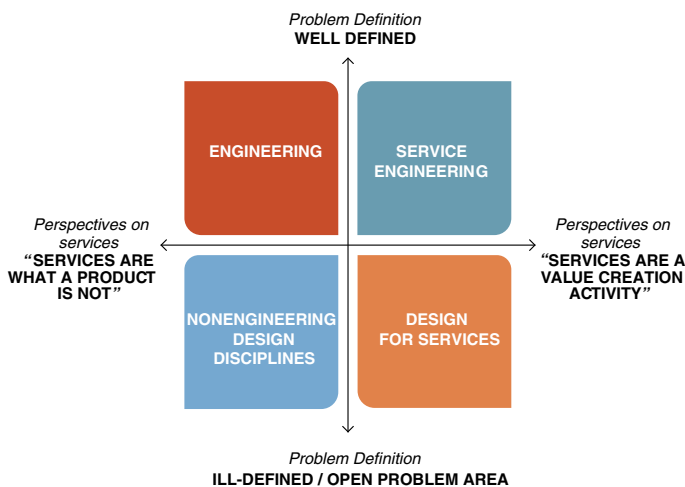


Fig. 2.1 Approaches to conceptualising service design. Adapted from Kimbell (2011)

the latter assembles knowledge domains that derive from different disciplines ranging from economic studies that focus on value creation to design studies that analyse the interaction among actors in a service system and all the way up to studies in the socio-cultural areas, which define the roles, knowledge and cultures that contribute to the shaping of services as a value creation process.

This book will mainly refer to the second perspective—focusing on value creation in an open-ended context—not only because of its proximity to design studies but also because the disciplinary convergence it implies requires the definition of the specific service design capabilities to be more articulated and tailored to each design action.

## 2.2 The Nature of Services in Relation to Value Creation

Common to the definitions analysed in the previous section is that they all start from the shared definition of a service as a fundamental activity in an economic exchange. In doing so, they take the etymological nature of the definition for granted. This book instead proposes to rediscover the original meaning of the term ‘service’, taking into account that this term can have different interpretations, and each interpretation can lead to different working areas for service design.

A simple search of the term ‘service’ in the most common dictionaries provides different possible interpretations of the term.

The first definition is provided by the *Oxford English Dictionary*: ‘A service is the action of helping or doing work for someone.’ The *Merriam-Webster Dictionary* defines ‘service’ as ‘the occupation or function of serving’, thus associating it with the activity of a servant. *Collins Dictionary*’s first definition of ‘service’ is ‘Something that the public needs, such as transport, communications facilities, hospitals, or energy supplies, which is provided in a planned and organized way by the government or an official body.’ And our final definition from the most common dictionaries is given by the *Cambridge Dictionary*, where it instead defines a service as ‘A government system or private organization that is responsible for a particular type of activity, or for providing a particular thing that people need.’

The etymological root of the word is the Latin term, *servus*, which means ‘slave’. Therefore, a service is the work of a slave or a servant that offers their work for the benefit of another person (a master, a lord) with or without a monetary reward (Kim 2018). The various definitions given above refer to different interpretations of the term ‘service’:

1. Service as *interaction* between two or more people, characterised by unbalanced roles between *server(s)* and *served* (e.g. a nurse and a patient).
2. Service as an *infrastructure* that supports a certain kind of (service) activities (e.g. the hospital in which the interaction happens and its related organisation).
3. Service as a *systemic institution* (e.g. the institutional system of healthcare laws, the organisation of the healthcare system and the related scientific, technical and organisational knowledge) that organises the activities and processes.

The three concepts are equally important for the discipline of service design, as they represent three different working areas in which service designers operate. The development of capabilities for service designers must take into account these three areas.

It is worth noting that the common trait of the three interpretations is that all are centred around the process of creating value. The first definition observes the value creation process at the level of the interaction among the subjects that create value, the second at the level of the physical, functional or organisational infrastructure that makes the interaction possible, and the third definition focuses on the institutional level that represents the social, technical and regulatory context for the process of value creation. These three levels define different possible contexts for design. Taken together, these three points of observation define an ecosystem related to the production of value.

When I have a health problem, I may be able to solve it with my own knowledge (what I know about a headache or muscle pain) or my social knowledge (I can ask my trustworthy friends), or I can ask for help from a healthcare service (a doctor or a hospital). The process of value creation (healing my body) is therefore not necessarily using services. Whether I solve the problem myself or through a service, my action is framed by the institutional system of rules (there are drugs I cannot use, I may need to behave in a certain way to prevent infection, I must abide by general ethical principles), scientific knowledge (the scientific approach to the problem) and infrastructure (the way I can access healthcare services).

The interpretations therefore suggest that designing services means working on three logical levels, each of them requiring different capabilities (Fig. 2.2).

Before looking at such capabilities, it is worth focusing a bit longer on the definition of value creation and on the progressive evolution of the basic concept of value creation in the last few years.

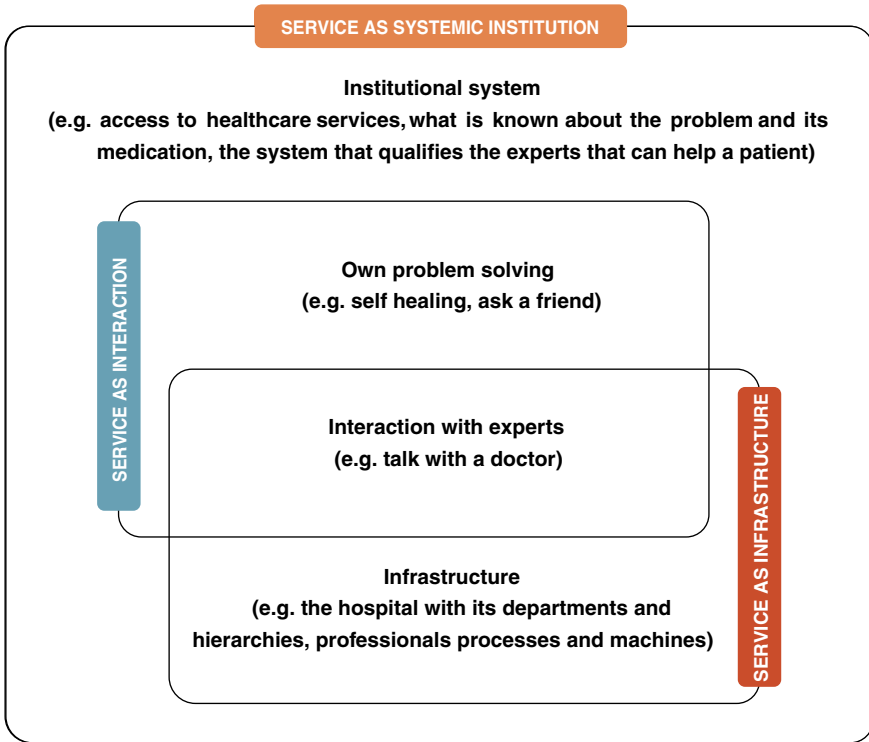


Fig. 2.2 The value creation ecosystem, from self-healing to healthcare institutions

### 2.3 Value Creation: The Evolution of a Concept

The concept of value and value creation has been debated since Aristotle (in Johnson 1939), but in the last few centuries, the theme of value creation has come to the fore and became the focus of much literature in economic studies. More recently, the significance of the value creation concept on the design discipline has been considered and its link between design and economics has been analysed.<sup>1</sup>

The traditional thinking about the process of the creation of value is based on a model in which a number of actors are aligned in a chain, which starts from upstream suppliers and continues by following additions down to the final customer (Johnson et al. 2017). Each actor in this chain provides input for the value creation of the actors downstream (Porter 1985; Normann and Ramirez 1993). In this perspective, the value creation process stops at the stage of the interaction with the final user. The image of the chain provides a simplified model of a system of value production. This model works well to represent some production processes, especially those

<sup>1</sup>Heskett et al. (2017) propose a comprehensive review of different economic theories and the role of design in creating value.

related to products but is less adequate for explaining more complex value production processes. The complexity of such processes cannot be interpreted through simple input–output or server–served mechanisms.

Normann and Ramirez (1994) propose a different picture to represent the process of value creation. They argue that ‘the key to creating value is to coproduce offerings that mobilize customers’ (p. 69). From this consideration, they outline a scenario in which the creation of value is the outcome of the interaction of a constellation of actors rather than a linear production chain. In this perspective, the role of the customer also changes from being a passive receiver of value in the chain model to becoming an active co-producer of value that interacts with other actors and also produces and aggregates resources (products, services, and infrastructures). This perspective is in line with what other authors have suggested. *Value creation* refers to the activity of creating something worthwhile, something we attribute importance to, or something deemed useful. Therefore, value is often measured in economics as utility. It is not an attribute of goods or services but rather linked to the subjective judgement of users (Heskett et al. 2017). Although the concept of value has often referred to qualitative criteria, such as pleasure and satisfaction, the need to deal with value in economics leads to the definition of value as something measurable and therefore related to an economic exchange. Furthermore, the concept of value has often been associated with the process of producing such value and embedding it into something that can be materially exchanged.

Value for customers is created throughout the relationship by the customer, partly in interactions between the customer and the supplier or service provider. (...) The focus is not on products, but on the customers’ value-creating processes where value emerges for customers and is perceived by them. (Grönroos 2007, p. 27)

The customer becomes primarily an operand resource (co-producer) rather than an operand resource (target) and can be involved in the entire value and service chain. (Vargo and Lusch 2004, p. 11)

The value creation process, therefore, implies negotiation among different actors and may require facilitation in the form of interaction mechanisms. The context for this interaction is shaped by the infrastructure conditions (physical, functional or organisational) and the institutional conditions (cultural, political, social and economic frames) which facilitate, support or organise the value creation process.

A supermarket customer creates value by choosing the products needed to make meals (using their knowledge about the recipe). The infrastructure that facilitates this process (the supermarket) includes, for instance, the shelves, which organise and exhibit products, or even a combination of products that can be bought (e.g. using recipes) and the shopping cart. The institutional conditions refer to the implicit rules that customers should follow in the supermarket, in the payment arrangements (e.g. credit card system) and in the market rules that impose the price of the goods the customer intends to buy.

This perspective on the value creation process is changing the way in which services should be observed, and this book explores it as a new view of the service system. The exploration we propose stems from the interpretations of the dictionary definitions presented in the previous section and from the service design literature that looks at services as complex, nonlinear value creation processes. These interpretations help navigate different points of view on the value creation process, starting from the actual value creation moment and zooming out to see the bigger picture regarding the material and immaterial components of the whole service ecosystem.

Therefore, this book refers to these definitions in three different sections:

1. Service as interaction: facilitating the service beneficiaries in the time and context in which they interact with other actors and infrastructures to co-create value.
2. Service as infrastructure: designing the process and the place (the infrastructure) for value creation.
3. Service as a systemic institution: creating elements of changes (e.g. policies, scaled-up services) in the institutional system or aligning services to the institutional context, which includes the culture, social conditions, political frames and innovation attitude of a society.

The book contains subsections that briefly summarise the characteristics of these levels, while Chaps. 4, 5 and 6 give a more in-depth analysis of the levels in relation to the capabilities required for designers to operate at each level.

## 2.4 Service as Interaction: The Time and Context of Value Creation

The perspective at this level is based on an observation point that is very close in time and space to the interaction between two actors. As explained in Sect. 2.1, the etymology of the term ‘service’ and the definition provided by the *Oxford Dictionary* explicitly refer to an asymmetric interaction between two actors (or actor categories)—a *server* and a *served* actor. The definition assumes that there is an active actor who generates value and another actor who (more or less) passively benefits from such value. Early studies focused on services and service design (Shostack 1982, 1984) found that this assumption was highly efficient in describing a service, and in fact, many of the services that have existed since the beginning of our civilisation can be explained with this definition—from thermal baths in ancient civilisations to table service in a restaurant today.

This definition assumes that the value is entirely created by the *server*. The ‘production process’ of a service is therefore concluded in the time and place of the interaction between the server and the customer that takes benefit from the service (in this book, we indicate ‘the customer’ as the *beneficiary* of the service). In this sense, a service is not very different from a good, with the same asymmetric interaction mentioned earlier. As for products, the value creation process can also be considered as concluded at the point of sale when the good is handed over to the customer. In

this moment there is a clear distinction between a *producer* and a *consumer*, and therefore, a clear distinction of their role: the producer is the actor (or the chain of actors) that has *stored* value in the product, whereas the consumer is the actor that *consumes* the value (the verb *consuming* derives from Latin, *consumare*, which means to finish, to conclude, but later also meant *to destroy*). According to this perspective the customer is not passive in the value creation process, but rather they are in fact *destroying* the value created by the product/service provider (Ramirez 1999).

A car or a piece of furniture is the output of a long chain of production processes—from the extraction of raw material, the production of components and the assembly, to the logistic processes that make them available at the selling point. But according to the value chain logic, right after these products are purchased and start to be consumed, their value is already substantially lower than the purchase price.

The analogy between services and products helped the early studies on services to qualify services as an economic activity: like products, services are produced by someone—they are part of an economic exchange between a producer and a consumer. They create value and are based on the work of someone for someone else. But the analogy was also used to define some basic differences between services and products that explain the main characteristics of services. Services were initially defined as ‘that which is not a product’, and therefore described as *immaterial*, *heterogeneous*, *inseparable* and *perishable* (Zeithaml et al. 1985)—from which, the acronym IHIP derives.

### 2.4.1 The IHIP Paradigm

For many years, the most common way to define the characteristics of services was based on the difference between products and services. The first difference between product and services is in the *immateriality* of a service. Products have a material consistency, whereas services are considered immaterial. An effective definition of services by the English magazine *The Economist* is that a ‘*service is everything that can’t fall on your feet*’ (Moritz 2009). In fact, this difference, which is very effective in describing one of the most evident characteristics of products, their material nature, no longer works when analysing the nature of services.<sup>2</sup> Services are the result of the combination of a number of factors, including humans, their knowledge, and the way humans experience services, but services also depend on material components, such as objects, technologies, and physical locations. Therefore, services do have a material component as well, but the emphasis on their immaterial values helps

<sup>2</sup>Today, the definition of products is becoming ambiguous, as IT experts would call a *product* a ‘digital interface’ and a bank clerk would use the same term to define a financial package.



to focus on aspects such as time, experience, and knowledge contribution from the various stakeholders, which are crucial for the process of value co-creation.

The core value provided by a school is immaterial: knowledge and the social experience of its students. Nevertheless, the school is usually a material place, with rooms, tables, chairs, teaching material and other material components, including the people that participate in this knowledge production process.

A second critical characteristic of services is *heterogeneity*. Heterogeneity describes the variability of services, both on the side of service providers and on the side of the customers: service change according to the input the customer puts in the service. As shown in the example below, the interaction between service providers and customers cannot be fully controlled by any of the actors because many factors emerge that depend on interpersonal relations between the service personnel and the customers.

A shoe store does not provide the same result to all its customers. The variability depends, among other factors, on the personal conditions of the shop attendant (how busy they are, how competent they are, how happy they are to do that job, or even how happy their life is in that moment) and on the characteristics of the customer (if they are looking for something special, if they have a precise idea of what to search for, how they pay, if they know the implicit rules of the shop, like waiting their turn or not touching the shoes on the shelves, or their personal characteristics, like their view on impulsive shopping).

Services' *inseparability* refers to how the production and consumption of services happen at the same time. While goods are first produced, then sold and consumed, services require the customer to be present in the very moment of value creation. This characteristic also refers to other issues concerning services, including the strong and intimate relationship the service provider and customer may have regarding the services.

While food preparation is an important function in a restaurant, the real value of the restaurant is created when the food is consumed (i.e. when the customer is in the restaurant). The experience a customer has in a restaurant highly depends on certain factors. These include the customer's emotional state and their dependence on other actors, for example, a waiter's capability to empathise and the possibility to engage in the restaurant experience by being informed about the ingredients or the preparation process of the food.

Finally, *perishability* refers to the fact that services cannot be stored or purchased (what is paid for is access to the service). This has implications on the synchronization of supply and demand. Services have to be available whenever the customer needs them and be able to adapt to the variation of the demand.

A gourmet restaurant cannot produce and store fully prepared meals in the precise moment customers arrive. The meals provided by the restaurant during peak hours have to be produced the very moment in which the customers visit the restaurant. This may create problems of limited capacity in high season.

#### 2.4.2 *The Limits of the IHIP Paradigm and Service Dominant Logic*

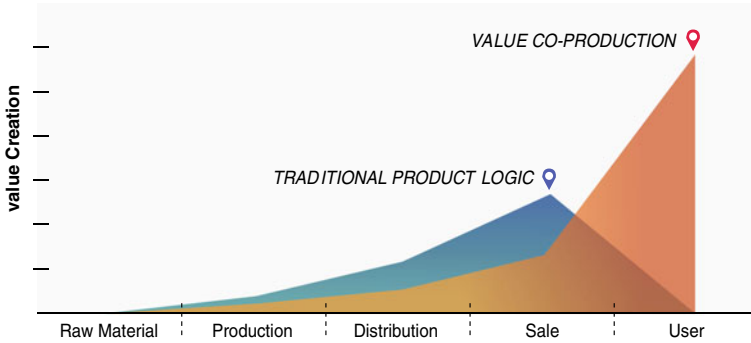
The implication of the characteristics the IHIP paradigm refers to are synthesised by Zeithaml et al. (1985). Although the IHIP paradigm is very useful to describe some characteristics of services, it does not place enough emphasis on the nature of services as interactions between different actors. The exploration of such characteristics gives the opportunity to study services from a different perspective (Pacenti 1998).

*Interaction aspects* are not completely neglected in the IHIP paradigm, but they are not central. Their relevance also relates to the *time dimension*, which qualifies services as processes rather than products. Another consequence of this perspective is that the *value is co-created* in this interaction, instead of just being *passed* from a producer to a consumer. Services are an activity of value creation that continues (and sometimes becomes more intense) after the point of sale, for example, after the moment in which a contract for the service is signed or after the material resources to produce value are transferred from the service provider to the customer. The point of sale is the beginning of a co-creation process based on a collaboration between customers and other actors (including the service provider) (Fig. 2.3).

Normann and Ramirez (1993) emphasise how companies like IKEA have based their success on a concept of value co-creation that includes the customer as a main actor. The new business model proposed by the Swedish company was based on a new division of labour in which the customers implicitly agree to take over part of the tasks that traditional furniture companies cover. To do this, the company produced a number of *facilitation tools*, including (1) the catalogue, which is not just a collection of pictures of the furniture, but rather a *design manual* that suggests possible combinations of furniture to non-designer customers, of which, many would otherwise not be able to figure out all the possible solutions<sup>3</sup>; (2) the exhibition space—a 3D representation of possible configurations of the IKEA furniture; and

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<sup>3</sup>The function of the catalogue in the IKEA strategy is further explained in Sect. 4.4.1.



**Fig. 2.3** Goods versus service value co-production. Inspired by Normann and Ramirez (1993)

(3) a number of facilities and infrastructures, from large parking areas to automobile roof racks to hire for transporting the furniture (Normann and Ramirez 1993).

Each product or service in the IKEA system is the result of a complicated set of activities. In fact, as Normann and Ramirez note, ‘What we usually think of as products or services are really frozen activities, concrete manifestations of the relationship among actors in a value-creating system’ (1993, p. 68). The actual production of value happens when the customer aggregates a number of resources (e.g. not only the IKEA furniture but also their own car to transport the items, their friends to help them in the transport, the mounting instructions) according to their own taste, knowledge, culture and personal capabilities. The value is in fact produced by a continuous interaction between the customer and a number of other actors, products and technologies. Normann and Ramirez observe that this happens not only with certain services but even when we use an ordinary product (Normann and Ramirez 1994).

A car is just a support for transportation—the real value is not in the car but on the constellation of products and services (e.g. roads, petrol stations, transport facilities) and in the knowledge (e.g. the driver knowledge about where to go and how to use a car) which aggregates the elements of such a constellation.

Seen in this perspective, the very moment of value production is in the interaction between the users/customers and the offering (products or services) that someone has sold or proposed to them. This perspective does not change whether we focus on a product (e.g. a car) or a service (e.g. IKEA) (Vargo and Lusch 2004, 2008). In both cases:

- Value is only produced when the customer comes into play. It is uniquely produced by the customer, when they aggregate a number of resources, which could be material (products) or immaterial (knowledge, concrete help provided by other people).

- Products are just tools for value creation, in which other people have frozen their knowledge or other activities. Such knowledge, or the activities stored in products, represents a potential power that is unleashed by the user when using products. Therefore, goods are only distribution mechanisms that support service provision.
- Producers or service providers cannot deliver value but rather offer only a value proposition to be aggregated by the beneficiary in the moment and place of value creation.

This vision focusing on service as a value production process does not only apply to contemporary services (e.g. service platforms) but also could be a way to read and analyse any kind of service and also any kind of product with the same logic. This is why Vargo and Lusch (2004, 2008) define services (*the application of specialised skills and knowledge*) as the fundamental unit of economic exchange.

The observation of services from a close perspective that focuses on interaction therefore makes it possible to define services according to a new logic—a *service dominant logic*. The definition of this logic as *service dominant* is in contrast with a *goods dominant* logic, in which (1) the purpose of economic activities is to make and distribute things (goods) that can be sold; therefore, goods (instead of services) are the main unit of economic exchange, (2) value is only produced and embedded in goods, and (3) users are *passive* in the process of value creation because they only use or consume the value embedded in a product or service (Table 2.1).

**Table 2.1** Goods dominant logic versus service dominant logic

	Goods dominant logic	Service dominant logic
Primary unit of exchange	Goods	Services
Role of goods	Goods are end-products	Goods transmit embedded knowledge into the process of value creation
Role of customers	The customer is the recipient of goods	The customer is a co-producer of value
Value producer	Value is determined by the producer and embedded in goods	Value is perceived and determined by the customer
Firm/customer relation	Customers are passive	Customer is active, firms can only make a <i>value proposition</i> (through products/services)

Adapted from Vargo and Lusch (2004)

## 2.5 Service as Infrastructure: Designing the Process and Place for Value Creation

The perspective of this book is based on the assumption that design actions do not solely consist of complete beginning-to-end projects with a specified time span, and above all, with a specific outcome (value creation). If we assume that the aforementioned process of value creation depends on the presence and action of customers,<sup>4</sup> then all the actions *before* that moment—the work of service providers, the technical development of products and services, and the related design action—have to be considered as *propositions* rather than complete and stand-alone value-creation processes. In particular, the action of a designer has to be seen as an open-ended support to value creation. This perspective is in opposition to the view that sees the action of a service provider or a designer as a stand-alone project with a clearly defined outcome.

To mark the conceptual difference between a project-based approach and this open-ended approach, some authors (Björgvinsson et al. 2010; Hillgren et al. 2011; Karasti 2014) describe the design action as *infrastructuring*.

In a project-based perspective, designers create products or services and consider them as complete and stand-alone instances of value creation; therefore, their process has a precise end and is concluded when the product (e.g. a piece of furniture) leaves the manufacturer or when the service interaction with the customer is complete (with the final invoice). The result of such a process can be easily described by designers (e.g. through a blueprint),<sup>5</sup> who, together with service providers have full control over the possible configurations of the results of the process.

In the infrastructuring perspective, instead, the process of value creation starts during or after the intervention of a designer, and more specifically,

- through direct interaction between designers and customers in workshops and social innovation processes, or
- through material or immaterial service components that trigger customers' interaction with a service, such as service interfaces, prototypes, cards, or visualisations of the service offering.

In this perspective, the result of the process is open and cannot be completely described by designers (blueprints only describe possible use scenarios), and neither the designer nor the service provider have full control over the value produced.

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<sup>4</sup>In this case, we are still referring to customers as the early literature on services does, but in fact, the actor playing this role in value creation has been defined as the *beneficiary* in the literature on the Service Dominant Logic. The literature on social innovation or on public services often refers to 'citizens' to indicate the same role.

<sup>5</sup>A blueprint is a technical drawing that specifies a design plan. In service design, the term is used to represent the sequence of actions in a service interaction, with a (more or less) detailed description of timings, actions, material evidence and actors involved in the interaction. Since the early contribution of Shostack (1982), who first introduced the idea that services should be designed, blueprinting has represented a key activity in service design.

**Table 2.2** Project-based versus design-for-infrastructure approaches

	Project-based approach	Infrastructuring approach
Process duration	Closed: the process has a beginning and an end	Open: the duration of the process depends on how the customer aggregates the resources at their disposal
Value created	Embedded in a product or service	Defined by the customer
Control over results	Designer/manufacturer/service provider controls the result	The customer controls the results
Description of the result (products)	Technical drawings/rendering/products	Scenarios of use catalogues/use proposition
Description of the result (service)	Blueprint	Scenarios of interaction/experience prototypes

The final value co-produced by the customer of a furniture shop is not in the furniture—which may convey a set of cultural or aesthetic values that will become part of the value co-creation process—but rather in the intimate relation the customer will establish with the space they can create through that furniture. This means that neither the designer nor the shop (the service provider) have full control of the value created with their support; they are just creating the infrastructure for the value creation process. Of course, designers and service providers control the production, distribution and sale of the furniture, but this does not fully encompass the value created (Table 2.2).

It is worth noting that the two approaches describe two different ways of looking at services. The choice or the preference for one or the other approach may depend on the business conditions or the nature of the service, but to a certain extent, any service can be observed from both perspectives; the choice of one or the other point of view will possibly highlight different aspects of the design action.

When designing services for a hospital, for instance, a project-based approach could be useful to design the platform that the patients will use to book an appointment, while an infrastructuring approach could be useful to design the whole healing process, in which the patient will interact with technologies, hospital procedures, and nurses or doctors.

## 2.6 Services as Systemic Institution: Introducing Elements of Change in the Institutional Context

So far we have analysed the activity of value co-creation and the role of designers in infrastructuring value co-creation, which means suggesting tools for activating customers' own cognitive and creative resources, together with proposing a context, a place, and a time sequence for value creation. Those activities, however, do not happen in a vacuum. They refer to the background context of laws, cultures, technical or social knowledge, regulations, physical and technical constraints. In other words, this background consists of the systemic institutions that shape our society. Such context links every design action to other actions that are being performed somewhere else, that have been performed before, or even that will be performed in the foreseeable future. This context is like a landscape—the scene on which human action is framed. It represents an exogenous environment beyond the direct influence of customers or firms.

This landscape also shapes innovation and changes at all logical levels, from individual choices to the design of complex service platforms or public institutions (Geels and Schot 2007). This context is relatively stable: changes in this landscape are usually slow and evolutionary, which means that any innovation is not the direct result of specific actions but rather the consequence of continuous negotiations among values, institutions and actors.

For this reason, talking about design in this context seems to make little sense. Design, seen as a purposeful action to change a present situation into a preferred one, has no chance to generate large systemic change. Yet, in the last decades, the emergence of large-scale problems and the acknowledgement of designers' responsibilities as part of those problems focused the attention of how design can have a role in systemic change. Bason (2014) argues that design is not traditionally associated with public policies, and asks, 'Can designers come to terms with the sheer scale, interdependence and complexity of public problems?' (p. 6). This is associated with the question of the extent to which design action can contribute to large-scale transitions. The question may become even more relevant with the recent emergence of the *mission-oriented innovation* approach (Mazzucato 2017), which sets broad and ambitious missions as a target for long-term policies and requires a large and collective design effort.

In this context, design can play a role in generating elements of change that have the potential to trigger larger systemic changes, for instance, by scaling-up local initiatives, thus working from a lower scale—a community or a small institution—to larger contexts, such as a city administration or national policies.

But a design approach can also be useful to align broad institutional changes to innovation in infrastructure and in smaller contexts, thus translating the potential of large policies into real changes in value creation processes.

In many countries, the welfare state that had been conceived and developed in the post-war period is experiencing a big crisis due to broad societal changes (Esping-Andersen 1996, 2002; Vandenbroucke 2003; Leadbeater and Cottam 2009). Several cases have been proposed for design interventions to create small local changes that could translate the need for a new welfare state into concrete cases by inspiring citizens to be activists or supporting their interaction with services and experts (Cottam and Leadbeater 2004; Manzini and Staszowski 2013). The challenge, however, remains with the issue of how such small change can, in turn, be scaled-up to re-create a big picture of the new welfare state that would mean translating those small and local innovations in terms that can trigger a new institutional system (Morelli 2015; Manzini and Rizzo 2011).

## 2.7 Summing Up: Working on Services on Three Logical Levels

This chapter introduced a logical framework for value creation that will be analysed in greater depth throughout the rest of the book. The framework is based on three logical levels:

- *Service as interaction*: At this level, value is co-created by service beneficiaries (customers) and other actors interacting with them.
- *Service as infrastructure*: At this level, services are organised as an open-ended support for the value co-creation process.
- *Service as a systemic institution*: This is the level in which broad cultural and social changes happen, and these frame the value co-creation processes and their related support infrastructure.

From the perspective of a designer, each of the logical levels listed in this chapter requires specific professional design capabilities for specific tasks. The chapters that follow will explore the way designers need to use their capabilities at each logical level. Such exploration is also meant to be a *navigation* tool that links service design tools (currently available in several publications) with the logical landscape in which service design will be used.



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