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Designing for servitization:

a designerly approach to foster a cultural transformation within a product-centric company.

PSSD PRODUCT-SERVICE
SYSTEM DESIGN

POLITECNICO
MILANO 1863

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In collaboration with

Claro

Master Thesis

POLITECNICO
MILANO 1863

A.Y. 2020/2021

PSSD PRODUCT-SERVICE SYSTEM DESIGN

School of Design

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Acknowledgments

Throughout the development of this thesis, I have received tremendous support and assistance from many people.

Abstract

(English)

In the last decades, the economy has evolved rapidly towards services boosted by digital technologies. Within this context, markets operate under a new Service-Dominant Logic which has redefined value meaning (from added to co-created) and resource primacy (from physical to skills and knowledge).

In the light of it, traditional product-centered companies started to embrace servitization processes by increasing service-based business models. However, they often assume investments to expand service offerings that improve neither revenues nor customer satisfaction, named 'service paradox'. It is crucial to embrace an organizational transformation in the service culture and mindset that supports new ways of doing business by the company to overcome the service paradox.

The Design for Services approach appears as a suitable response to this challenge. Design literature recently has demonstrated its potential to facilitate culture transformations inside the organization by conducting projects as participatory inquiry and introducing new ways of thinking services in terms of value co-creation and service systems that fit with the current market principles.

An action research project was carried out at Claro, a large Argentinian telecommunication company. The aim was to explore practical implications for service designers performing inquiry processes inside companies undergoing servitization—especially using co-design as an approach to introduce new ways of thinking about services.

A guiding framework for designers within servitization contexts is presented to inform further projects aiming for cultural transformation. It synthesizes the structure, methodology, and roles that designers can apply during a design inquiry.

The designerly approach for cultural transformation can foster the transition progressively from product-centric towards service-centric culture. This transition is possible by principally instilling perspective to think services regarding service systems that co-create value.

Keywords

Design for Services, Servitization, Culture Transformation, Service Dominant-Logic.

Abstract (Italiano)

Negli ultimi decenni, l'economia si è evoluta rapidamente verso i servizi potenziati dalle tecnologie digitali. In questo contesto, i mercati operano secondo una nuova logica di servizio dominante che ha ridefinito il significato del valore (da aggiunto a co-creato) e il primato delle risorse (dal fisico alle abilità e conoscenza).

Alla luce di ciò, le aziende tradizionali incentrate sul prodotto hanno iniziato ad abbracciare i processi di servitizzazione aumentando i modelli di business basati sui servizi. Tuttavia, spesso far fronte agli investimenti non migliora né i ricavi né la soddisfazione del cliente. Per superare questo problema, è fondamentale abbracciare una trasformazione organizzativa nella cultura del servizio e nella mentalità che supportano nuovi modi di fare business da parte dell'azienda.

L'approccio del Design for Services appare come una risposta adeguata a questa sfida. La letteratura sul design ha recentemente dimostrato il suo potenziale per condurre trasformazioni culturali all'interno dell'organizzazione conducendo progetti come sondaggi partecipativi e introducendo nuovi modi di pensare i servizi in termini di co-creazione di valore e sistemi di servizi che si adattano agli attuali principi di mercato.

Un progetto di ricerca-azione è stato condotto presso Claro, una grande azienda di telecomunicazioni argentina, per esplorare le implicazioni pratiche per i progettisti di servizi che svolgono processi di indagini all'interno di aziende in fase di servitizzazione, in particolare utilizzando il co-design come approcio per introdurre nuovi modi di pensare i servizi.

Viene presentato un quadro di riferimento come guida per i designer in contesti di servitizzazione per informare ulteriori progetti che puntano alla trasformazione culturale. Sintetizza la struttura, la metodologia e i ruoli che i progettisti possono applicare durante l'indagine di design.

L'approccio progettuale per la trasformazione culturale può favorire la transizione progressiva dalla cultura incentrata sul prodotto a quella incentrata sul servizio, introducendo principalmente la prospettiva dei sistemi di servizi dove si co-crea valore.

Parole chiave

Design for Services, Servitization, Culture Transformation, Service Dominant-Logic.

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Introduction

The increasing availability of information technologies in the last decades has changed the economy forever. Nowadays, the interconnected world generates fast-changing markets, with new competitors and fluctuating customer needs. Companies, especially in the manufacturing sector, started to see services as a competitive differentiator to face this dynamic environment.

The strategy of growing in service offerings is defined as Servitization (Vandermerwe and Rada, 1988; Baines et al., 2008).However, companies often experience a service paradox (Gebauer et al., 2005), when failing in cost-effectively managing transformation. To overcome this issue a culture transformation from product-centric towards service-centric is fundamental inside organizations to support new ways of doing business (Nuutinen & Lappalainen, 2012; Kindström & Kowalkowski, 2014).

For innovating in services, companies should understand services from a Service-Dominant Logic, as the "application of specialized competencies (knowledge and skills) through deeds, processes, and performances for the benefit of another entity or the entity itself" (Vargo & Lusch, 2004, p.2). Value is not added by companies during the value chain and defined in the exchange; instead, the value is co-created by companies and customers in an interactive process.

The evolution of Design for Service understanding in the last years has highlighted the potential for approaching cultural transformation within organizations and the opportunity to guide them towards current service and value definitions. Designers can trigger transformations around values, beliefs, and behaviors using a participative approach for inquiry inside organizations while designing services (Burns, et al., 2006; Junginger & Sangiorgi, 2009; Meroni & Sangiorgi , 2011). Additionally, designers think services in terms of value co-creation and service systems (Sangiorgi, 2012; Sangiorgi et al., 2013). By applying service design methods, designers can redirect the focus from the output and technical features towards benefits, interactions, and experiences.

Acknowledging the Design for Services approach's potentiality to address transformational processes inside product-centric companies and the relevance of services in the current markets, the research aims to explore its conscious and active application within the servitization context to gain more understanding about practical implications for service designers.To address the aim, an action research was carried out in cooperation with a large telecommunication company in Argentina, Claro, that started in 2018 a digital transformation process for innovating their services by taking advantage of new technologies. This version of transformational processes is what scholars have named digital servitization (Kohtamäki et al., 2020; Tronvoll et al., 2020).

The study was structured in three action research cycles following thse steps for inquiry : exploring, envisioning, and experiencing. Co-design sessions with a steering style guide in combination with training activities were executed with the design team. The aim of these activities was to analyze the current situation and imagine possible futures regarding services innovation while infusing new service and value concepts and service design methodology.

As a general outcome, the study introduces a practical guiding framework for service designers that can be replicated in other initiatives for culture and mindset transformation towards service and value co-creation in product-centric companies.

.02

Theoretical Background

Economy landscape

The economy has followed a steady path from the Industrial Revolution based on transactions of physical products w and economy of scale. Technological breakthroughs were applied to the specialized division of labor in supply chains to achieve a competitive advantage by reducing time and cost per unit and increasing production.

However, in the last few years, the economy has been challenged by information technologies that have boosted a globalized market in constant change. Arthur (2011) has defined it as a 'Second economy' characterized as "*digital, remotely executing and global, concurrent, and self-configuring*" (p.3).

In fact, digitalization has brought two relevant transformations that challenge how the economy was considered. First, technology brings the opportunity for combinations of functions and features in new ways. Indeed, this also makes it more complicated and fuzzy the boundaries with competitors in the fast-changing globalized markets. Second, technologies allow customers to be more connectewd and informed, making them active and constantly modifying their needs. (Prahalad & Ramaswamy, 2003)

In this context of new possibilities, how value is generated has also changed. While the industrial

economy, considered value as embedded in products during the linear supply chain, in the digital economy, instead, *"value creation is defined by the experience of a specific consumer, at a specific point in time and location, in the context of a specific event"* (Prahalad & Ramaswamy, 2003).

As value is redefined, the articulation of value-creating systems became more relevant than innovation driven by technology. It means a strategic focus on generating new combinations of activities, with new definitions, roles, and relationships to generate new forms of value and by new actors (Normann & Ramírez, 1993) in which companies move technology from the place of value-added to an enabler role of this new configuration.

The change of the economy and ways of generating value as was known in the industrial landscape has brought not only new ways of doing business but also the need to modify offerings to remain competitive in the markets. Transforming their service portfolio, companies must cope with many processes and deal with different challenges to succeed, as it will develop in the next section.

2.2

Servitization

The evolution of society and markets boosted by digital technologies in the last decades has brought more complex customer needs and demands, making organizations increase their attention towards services to meet them successfully.

The evolution of the society and markets boosted by digital technologies in the last decades have brought more complex customer needs and demands making organizations increase their attention towards services as a way to meet them sucessfully.

Due to service characteristics, companies have started to invest on them looking to achieve diverse objectives. Services are more difficult to imitate since they are based on intangible assets such as a firm's capabilities and knowledge (Baines et al., 2008; Fang et al., 2008) and do not result in a tangible asset's ownership, a difference with products (Baines et al., 2009), in short, most advanced services supply customers with capabilities instead of tangible assets (Baines & Lightfoot, 2013). Taking advantage of this, companies are increasingly putting at the center of their strategies the provision of advanced services as differentiating factor, seeking to achieve financial (e.g. increase revenue streams), strategic (e.g.competitivity advantage), or marketing

objetives (e.g. maintain customer loyalty) (Baines et al., 2008).

This phenomenon is called in the literature as **'Servitization',** defined primarily by Vandermerwe and Rada (1988) as *"the increased offering of fuller market packages or 'bundles' of customer focussed combinations of goods, services, support, self-service and knowledge in order to add value to core product offerings."* Although this definition gives a sense about the main change in the company offerings, servitization strategy implies modification at many levels of the organization to successfully provision competitive services. Attending the strategy modification's impact, Baines et al. (2008) have defined servitization as *" the innovation of an organisation's capabilities and processes to shift from selling products to selling integrated products and services that deliver value in use"*

The decision to strategically increase the service offering means for companies to experience many transition processes inside the organization to deliver value successfully. How this transition takes place inside the organizations could be analyzed from different perspectives, focusing on offering change (Tukker, 2004) to understanding it as an organizational process (Oliva & Kallenberg 2003). They will be synthesized in the following paragraphs as, beyond the variance, each of them contributes to the servitization understanding.

A. Mathieu, 2001

The author analyses the offering's transformation as an organizational process that varies regarding the type of service as a strategic objective and depth in the organization reached by the practices to accomplish the strategy. This is represented as a model that classifies the diverse 'service maneuver' that companies can utilize to approach the service strategy.

Two axes are proposed in the model to generate the classification:

FIGURE 01

Service Maneuvers Typology

ORGANIZATIONAL INTENSITY

TACIT   STRATEGIC   CULTURAL

CUSTOMER SERVICE

PRODUCT SERVICES

PRODUCT SERVICES

SERVICE SPECIFICITY

Note: Adapted from "Service strategies within the manufacturing sector: Benefits, costs and partnership". Mathieu, V. (2001). *International Journal of Service Industry Management, 12*, p.453. Copyright 2001 by MCB University Press.

Service specificity, the vertical one, refers to the offers's type that service maneuver's is about and it could be three:

1. **Customer service**: that tends to address the quality of interaction between customer and provider.

2. **Product Service**: in which it supports the product after being sold.

3. **Service as a Product:** where the service is provided as independent from a product, client experiences come from the service without consuming goods from the company.

Organizational intensity, the horizontal one, classifies how companies live the service maneuver. It means the strength and scope of the impact inside of the organization. Three levels of intensity are devised:

1. **Cultural:** is the level with a profound impact on the company, since modifying the mission and even the underlying belief system and consequently the shared values, norms, and behavior.

2. **Strategic:** with less impactful modifications, they remain in the addition of some key competencies without altering the company's mission or culture.

3. **Tactical:** the most limited impact, modify the marketing mix.

The application of the different service maneuvers could bring in to a greater or lesser extent advantages as well challenges. The authors highlight three principal benefits (financial, strategic and marketing) that variy according to the level and combination of the different axes position. It is essential to state that as higher service specificity and organizational intensity, the higher benefits are, but also costs of implementation increase.

Summarizing, when a company moves fom services that are based on supporting customers to generate experiences for customers without consuming goods, benefits can be higher. However this movement can mean a deep cultural adaptation that implies some costs for the organization. The dichotomy of what (service specificity) and how (organizational intensity) gives space to interpret different possibilities of balances cost and benefits of moving to services that lately will fullfil the organization objectives.

B. Eighth archetypical of PSS business model Tukker (2004)
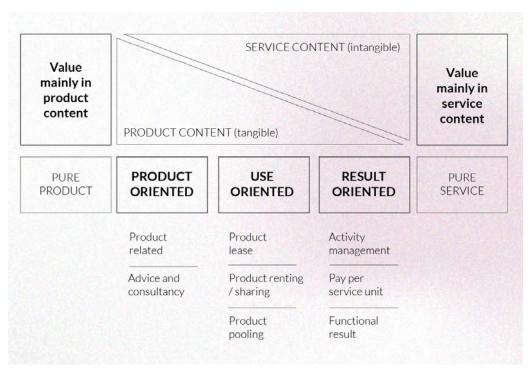
FIGURE 02

PSS categories

Understanding Product-Service Systems as *"tangible products and intangible services designed and combined so that they jointly are capable of fulfilling specific customer needs"* that could bring economic potential, Tukker (2004) presents the model that explains how value varies along with the reliance on products. The author states that as the offer moves from the beginning to the end in the different eight archetypes, the value relies less on products, and the user needs to be covered and become more abstract.

The archetypes are classified into three main categories:

- **Product-oriented services**: the business model is based on the sales of products with some extra services.

- **Use-oriented services**: The product still plays a central role; however, the product is owned by the provider, who made it available in a different form or shared by several users.

- **Result-oriented services**: client and provider agree on a result without a pre-determined product involved.
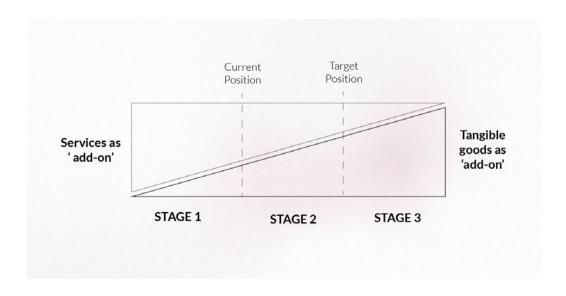
This framework helps to understand that modifying the offering is directly linked to the mechanism modification through value created in line with how value is generated 'by products' in the industrial economy and how it is 'by service' in the digital economy. This also stands out how the different resources are managed and actors' relationships are developed regarding the offering, potentially impacting the organization when bundling products with services.

C. Oliva and Kallenberg (2003)

Authors explain the transition process in an organization along a continuum in which one extreme service is viewed as an "add-on" and in the other extreme the tangible good as an "add-on". Change in the product's role in value creation could be compared with the archetype framework presented by Tukker (2004).

In this analysis, the process is divided into three stages by which service position changes and, as authors highlight, capabilities development required to lead the organization as a service provider.

FIGURE 03

The Product Service Continuum

Note: Adapted from "Managing the transition from products to services" by Oliva, R., & Kallenberg, R. (2003).

International Journal of Service Industry Management, 14, p.162. Copyright 2003 by MCB UP Limited.

First stage: Consolidating the product-related service offering

Companies are already providing product-related services for supporting the product; those are generally dispersed in the organization and do not compose a profitable source. While starting the consolidation, the services are regrouped into a single unit to increase product sales or improve service performance. This phase also includes monitoring systems creation to test the effectiveness and efficiency of services, having indicators of services contribution to the company's operation.

Second stage: Entering the Installed Base service market.

Having identified the potential profit contribution in the previous phase, the company identifies service opportunities and establishes the structures and processes to take advantage of them.

This change of focus requires two significant efforts. First, a cultural change from product-centered to service-oriented in which an organization learns to value the services instead of seeing them as "free of charge." Second, the creation of global service infrastructure to respond locally to the installed base's requirements.

Here, three difficulties must be afforded by the organization: (1) the investment in infrastructure with not short term revenues; (2) Development of the capability to diffuse knowledge within the network and manage the large service personnel; (3) Decide the degree of standardization and customization of the service offer.

Third stage: Expanding the Installed Base service offering

Once the core functionality of the service organization is established, two transitions take place. First, moving the focus in customer interactions from transaction to relationship-based in which the service is priced, this means charge per availability.

Second, the value proposition moves from product-oriented services to end-user's process services.

The authors' continuum can be observed as a synthesis of two previous explanations; it summarizes that a change on what is offered — from product-oriented to user-oriented service is directly related with the simultaneously and internal organizational factors transformation such as infrastructure, capabilities, and culture.

As a synthesis, services represent a competitive option for companies in the current globalized and fast-changing markets that have evolved from an industrial paradigm boosted by information technologies. Services provide capabilities instead of owning tangible assets to customers, allowing companies to create less imitable and customized solutions to meet the changing customer needs. Embarking in a growth strategy towards services requires a whole organizational transformation by the company; this is especially true when providing advanced services as value is generated in a completely different way. In this case, servitization is not only about a mere offering change but also a modification in:

Value meaning: From supporting product performance to generate value in the user processes and experiences.

Capabilities: From monitoring value chain to manage service system for value creation

Structures: From specialized business units to collaborative networks

Interaction with users: From transactional to relationship based

FIGURE 04
Main Shifts
for Servitization

VALUE	FOR PRODUCT PERFORMANCE →	IN USER PROCESSES & EXPERIENCES
CAPABILITIES	MONITORING VALUE CHAIN →	MANAGE SERVICE SYSTEM
STRUCTURES	SPECIALIZED BUSINESS UNITS →	COLLABORATIVE NETWORKS
USER INTERACTION	TRANSACTIONAL →	RELATIONSHIP BASED

Note: Own elaboration based in the Literature Review.
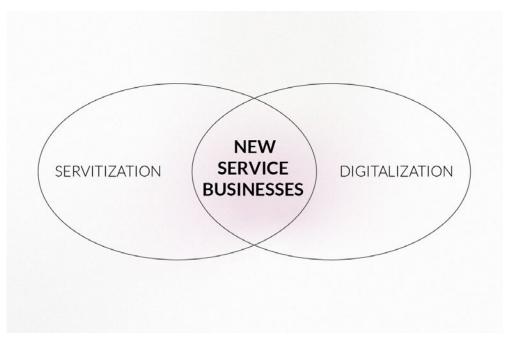
Digital servitization

Whereas the main servitization literature has concentrated on the transformation of manufacturers into service providers, recently, some authors started to analyze the role of technology in this process. Digital technologies has been indicated as a essential driver and enabler of servitization (Vendrell-Herrero et al., 2017; Kohtamäki et al., 2020; Tronvoll et al., 2020) as they bring strategic and operational opportunities for companies by gaining efficiency, enhancing resource management and data transparency, and innovating customer interactions and integration (Tronvoll et al., 2020).

Digital servitization is the term used for this sub-stream in the literature, and can be defined as *"the deployment of digital technologies to support the transformation from a product-centric to a service-centric business model"* (Tronvoll et al., 2020, p.293). Digitalization can be described as the implementation of digital technologies to convert any object in data and the social-technical structures that collect analize and use the data for improve value proposition (Kohtamäki et al., 2020; Tronvoll et al., 2020). Here, servitization is what actually consolidate how the value of digitalization efforts will be translated into new service offerings (Kohtamäki et al., 2020) and support the necessary changes in the organization to meet the service strategy objectives (Tronvoll et al., 2020)

Once data is gathered through technology , the company can harness different ways to improve service provision. Broadly the servitization pathways can be classified on three: industrial servitization, commercial

FIGURE 05
*Servitization and
Digitalization
Interconnection*

Note: Own elaboration based in the Literature Review.

servitization and value servitization (Coreynen et al, 2015). Industrial servitization refers to value-added services as a result of internal process optimization boosted by knowledge gathering. Differently commencial servitization uses technology to align internally with user value creation processes creating new ways of interaction and stroger relationships. Finally, value servitization pursued the creation of totally new value propositions , proposing a different way to relate with customers by new digital products, resources and capabilities.

To sum up, digitalization and servitization processes while interrelated inside organizations can boost one to each other. While digital technologies inclusion provide real-time data of and for the service system, servitization processes take this opportunity to traduce into better offerings by specifying the resources, capabilities and objectives for new service businesses to flourish.

2.2.2   Servitization challenges

A company's servitization process, presupposes a better position in the markets since offering services allows creating significant value for customers and less imitation by competitors. However, organizations can experience a **'service paradox'** (Gebauer et al., 2005), in which besides the increase of service offerings and investment on it, the increasing revenue does not occur.

Succeeding in the service growth strategy does not rely only on introducing new service offerings but also on managing the required organizational transformation in a controllable and cost-effective way. Considering the nature, scale, and scope of services, becoming a service provider for companies who previously were centered on 'goods' strategies are likely to need different organizational principles, structures, and processes (Baines et al., 2008) along with new resources and capabilities for service innovation (Kindström & Kowalkowski, 2014)

Modifying those factors in a pre-established organization might bring many challenges that broadly can be classified in *product-service design, organizational strategy, and organizational transformation* (Baines et al., 2008).

Product-service design

Due to its nature, technology approaches for innovating product development do not generate the same results when redesigning services. Service is very different from products in nature, they "*are fuzzy and difficult to define*" (Slack, 2005, p.328), new service development (NSD) needs to be more flexible and iterative in which the customer is always involved (Kindström & Kowalkowski, 2014). As value is determined by customers when they experience the service, it is critical to have capabilities to identify systematically, and complete customer needs to design successful services (Gebauer et al., 2005)

Organization strategy

Another factor to succeed is a clear definition of the company strategy that determines how to utilize services to achieve an advantage in markets. A clear and appropriate strategy definition comes from understanding customer needs and service markets; without them, new businesses are prone to fail (Gebauer et al., 2005). Determine and use service strategy intentionally and proactively helps companies to make the required changes in organization and resources (Gebauer et al., 2005). The success of the strategy relies on alignment between the environment, strategy, and factors of the organization (Gebauer et al., 2008).

Organizational transformation

Once that new strategy is defined, service as the base of company offerings will not succeed without adaptation of organizational factors, for example, human resource management, organizational structure, measurement and rewards, and corporate culture (Gebauer et al., 2008).

More proactive service roles, in which generating value for users instead for product maintance, require crucial transformations should be approached in parallel (Mathieu, 2001; Oliva & Kallenberg, 2003). The main changes are: (1) Growing differentiation of business units, separating services from products, (2) Behavioural capabilities acquisition, such as listening & communicating skills, (3) Collaboration and knowledge sharing; and (4) Installing a global infrastructure. (Oliva & Kallenberg, 2003; Gebauer, et al., 2005; Gebauer et al., 2008)

2.2.2.1   Culture & Mindset

Any of the previous changes, however, can be achieved without a mindset and cultural transformation simultaneously. As many authors stated, creating a service culture is crucial to support the new strategy (Oliva & Kallenberg, 2003 ;Gebauer et al., 2005 ;Gebauer et al., 2008).

As culture and mindset determine how organizations do business, a mere intent of business change will require a supportive culture. Culture is the intangible system of value and belief rules the structures, management styles, practices, capabilities, attitudes, and even language with which companies treat services (Nuutinen & Lappalainen, 2012). Introducing modifications in visible aspects such as company bussines offering without a clear understanding of the organization members' service value is prone to produce a culture clash and resistance to change (Gebauer et al., 2005).

A real transformation will come from the interaction between employees and managers' new values and behaviors around service (Nuutinen & Lappalainen, 2012).
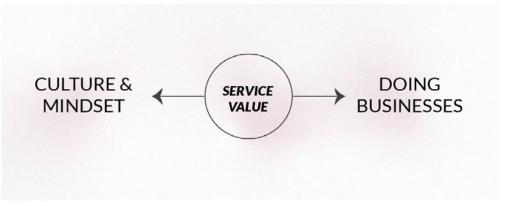
FIGURE 06
Service &
Value Role
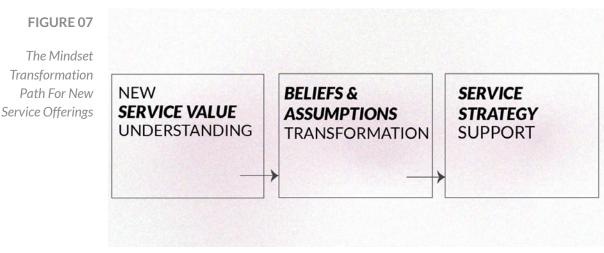
Note: Own elaboration based on " Towards service-oriented organisational culture in manufacturing companies"

by Nuutinen, M., & Lappalainen, I. (2012). *International Journal of Quality and Service Sciences, 4(2)*, 137–155.

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Instilling a new understanding of service value and purpose in the new strategy is essential since it increases awareness of beliefs and assumptions that need to be transformed. Recognition by employees and managers of service as a central for creating value with users instead of supporting products is the principal change for initiating a new service culture that successfully innovates in service markets (Nuutinen & Lappalainen, 2012; Kindström & Kowalkowski, 2014).

This process will lately foster adaptations of development actions worth in time and efforts, the motives and objectives to do it, and how to approach them (Nuutinen & Lappalainen, 2012).

FIGURE 07

The Mindset Transformation Path For New Service Offerings

NEW **SERVICE VALUE** UNDERSTANDING → **BELIEFS & ASSUMPTIONS** TRANSFORMATION → **SERVICE STRATEGY** SUPPORT

Note: Own elaboration based in the Literature Review.

In summary, to benefit from new service business offerings, companies should transit transformational processes in diverse aspects of the organization. A clear strategy redefinition, infrastructural and design approach changes that although important are not enough for achieving the expected results. Culture and mindset are the glue by which organization members will give sense to the required changes and support them. Employees will need to understand what services are, what they mean for the new strategy and how new behaviors are important over others.

The new Dominant Logic

With the evolution towards a digital economy, services had taken relevance, as was presented, especially for their suitability to meet customer needs in a globalized and interconnected market. However, service conception had varied considerably regarding the industrial economy paradigm, in which services were considered contrary to goods and generally supported product performance.

Aiming to explain and clarify the current economy and marketing based on service, Vargo and Lush (2004) have proposed and defined a new dominant logic and principles in the marketing field that converge the different and fragmented marketing thoughts in a single one. Making a general statement that marketing has moved from a good-dominant logic (GDL) to service-dominant logic (SDL), the authors established three central aspects of differentiation between two logics : (1) how value is created in the markets and society (2) the meaning of the value, and (3) resource utilization.

(1)How value is created: *From value chains towards service ecosystems*

In traditional and industrial markets, the way of generating wealth was characterized by the exchange of units of outputs. In consequence, the generation of value happens in only one sense: from companies to customers. In its proactive role, the firm is the firm who innovates, produces, and sells goods with embedded value to users (Lusch & Vargo, 2014).

However, in current markets, more connected and globalized, value creation can be seen as generated in the interaction between actors (actor-to-actor framework) exchanging service-for-service (Lusch & Vargo, 2014). This means, in a broad network, in which actors co-create value through exchange, integration, and use of their resources with other's resources to benefit each other.

Vargo and Lusch (2014) have defined that network as a service ecosystem, a *"relatively self-contained, a self-adjusting system of resource-integrating actors connected by shared institutional arrangements and mutual value creation through service exchange."* Maglio & Spohrer (2008), similarly, named this network as service systems, which are " *value-co-creation configurations of people, technology, value propositions connecting internal and external service systems, and shared information (e.g., language, laws, measures, and methods)."*

(2) Value meaning: *From value in exchange towards value in use and value co-creation*

Acknowledging this new vision of markets, frameworks, and processes, the definition itself of what is value change accordingly. In a traditional view of the market, value is extracted in the exchange transaction between the company and the customer. Alternatively, this new perspective states that marketing occur during social and economic processes in which customer is who define (through his experience) and co create the value with the company.

(3) Resources primacy : *From operand towards operant resources*

Consequently, the utilization of two types of company resources, operand or operant, change when following one or another logic. Operand resources are principally tangible matter characterized to be static and finite (for example, natural resources or manufactured products) to which an operation could be performed to produce a result or effect (Vargo & Lush, 2004). On the other hand, operant resources are recognized for being invisible and intangible, and a difference with operand resources is that they are dynamic and infinite. Operant resources are used to act and produce the effects on operand resources, and they can be knowledge, skills, and competencies such as. (Vargo & Lush, 2004). Authors state that the primacy moves from operand to operant resources as changing the logic.

Understanding the value generation processes, the value meaning, and the predominance of one or another resource determine different logics under which markets and organizations operate. Both Good-Dominant logic and Service-Dominant logic will be described in the next sections.

Table 01

Resources Role Within Logics

	GDL	**SDL**
Primary unit of exchange	People exchange for *operand resources* (goods).	People exchange to acquire the benefits of *operant resources* (knowledge & skills).
Role of goods	Goods are *operand resources* and end products.	Goods are transmitters of *operant resources* (embedded knowledge).
Role of customer	The customer is the recipient of goods.	The customer is a coproducer of service.
Determination and meaning of value	Value is determined by the producer & embedded in the *operand resource*.	Value is perceived and determined by the consumer. Firms can only make value propositions.
Firm–customer interaction	The customer is an *operand resource*.	The customer is primarily an *operant resource*.
Source of economic growth	Wealth is obtained from tangible resources and goods.	Wealth is obtained through the application and exchange of specialized knowledge and skills.

Note: Adapted from "Evolving to a New Dominant Logic for Marketing" by Vargo, S. L., & Lusch, R. F. (2004). *Journal of Marketing, 68*, p.7.

Good-Dominant Logic

This logic, grounded in the industrial economy, is centered on tangible outputs (goods) and selling them through transactions. Therefore, operand resources have a primary role, and it is the proactive actor who innovates on them.

Value is created and determined by the company during the value chain system in their production and distribution processes. Once that selling transaction occurs, value is extracted by the customer from the product. Products have embedded value and are offered by the company to customers, as authors define as 'value-in-exchange.'

Operand resources are the source of economic growth. Companies' efforts concentrate on maximizing the efficiency and standardization of the production process isolated from the market to transform operand resources into outcomes at a low cost. On the other hand, services play a secondary role and act as value-added when including in the product offering.

At this point, customers constitute the demand that the company supplies, and in a passive role, they are something to be acted to be captured through offerings that the company can give. This gives a sense that customers also are treated as operand resources.

2.3.2   Service-Dominant Logic

This new vision proposes a significant change in how and where value is generated, actors' roles, and the source of wealth for companies mainly. A difference of Good-Dominant Logic, operant resources has primacy over operand resources. Thus, intangibility, exchange processes, and relationships become central.

While in the previous logic, output embedded with value was referred to as a unit of exchange, service is exchanged for service. The authors defined service as the "application of specialized competencies (knowledge and skills) through deeds, processes, and performances for the benefit of another entity or the entity itself" (Vargo & Lusch, 2004, p.2). In other words, operant resources are used to benefit the receiver.

A valid clarification is that using intentionally the singular term 'service' instead of 'services', authors propose integrating service and goods under the same logic rather than presenting services as an alternative of goods as was conceived in the other logic. The role of goods (operand resources) is to be the appliances that serve as the vehicle to deliver the service (operant resources).

As actors, organizations apply their core competencies, knowledge, and skills (mental & physical) to transform matter into a state that could be useful for the receiver (customers); they make a value proposition. In exchange, the receiver (customer) gives his resources (money and abilities) and is who defines the utility that can be obtained from the offer (value in use). Considering the process through which value is determined, value is co-created between companies and customers and not defined nor embedded in the output.

Core knowledge and skills that the company possesses could potentially bring benefits to customers. Collaboration and learning from customers and the adaptation of the value propositions are ways

to achieve a competitive advantage. Cultivate relationships — instead of transactions — with customers allow to collect user feedback about their concrete needs and then improve and create compelling value propositions to meet them, than competitors. Customer as co-creator of value moves from an operand resource — to be owned and controlled by the company — towards an operant resource and active participant.

Table 02

Main Logics Differences

Good-Dominant Logic	Service-Dominant Logic
Good	Service(s)
Tangible	Intangible
Operand Resources	Operant Resources
Value added	Value Proposition
Transactional	Relational

Note: Adapted from "The Service-Dominant Mindset" by Lusch, R. F., & Vargo, S. L. (2008). *Service Science, Management & Engineering*, p.90. Copyright 2008 by Springer Science+Business Media,

In general terms, the main differences around value definition, resource importance, actor roles, and mechanisms used to generate competitive advantage between Good- and Service-Dominant Logic had been stated. However, as the new logic presents substantial changes, the authors Vargo and Lush (2004; 2006; 2008) had defined and redefined five axioms and eleven foundational premises, helpful to have a deep understanding of general rules of the new economic and market landscapes. In the next paragraphs, these principles will be explained in order to bring support to further research.

2.3.2.1   Principles and axioms

From the first formal definition in 2004 by Vargo & Lusch, the foundational premises have incorporated clarity on the 'general laws' to understand, research, and do practices in marketing and markets nowadays. The premises had been revisited under the progress of research and suggestions from other scholars in 2008 and 2014. In 2014, four foundational premises achieved a status of axioms, considered by the authors as the essence of Service-Dominant logic, adding a fifth one in 2016. From the five axioms, the rest of the premises could be derived.

FP1

Service is the fundamental basis of exchange.

Authors aim to point out the importance of processes by which people use their own operant resources (physical and mental skills) to benefit others.

FP2

Indirect exchange masks the fundamental basis of exchange

The microspecialization of tasks and roles inside an organization, boosted by the efficiency looked for during the industrial model, place many actors aways from the end customers, making them lose the sense of purpose of their role and tasks. Nowadays, this remains along with the size and complexity increasing of the organization.

Although this is true, actors still have internal customers and other workers that in the full picture contributes to the service provision, and they still exchange service for service.

FP3

Goods are distribution mechanisms for service provision

The common denominator of exchange is the application of operant resources, it means mental skills and knowledge, and physical labor. They could be delivered "1) directly, (2) through education or training, or (3) indirectly by embedding them in objects." (Vargo & Lusch, 2004, p.9). Goods are the appliances through operant resources that are distributed to benefit other actors.

FP4

Operant resources are the fundamental source of strategic benefit.

The differential use and application of knowledge and information during the service chain is the key to making value propositions to customers. Value co creation through the exchange of operant resources desired by other actors is the principal motivator. Competition pursued by one actor benefiting itself, instead, is secondary.

FP5

All economies are service economies.

Instead of considering the difference between services and goods, economic exchange is based on applying mental and physical skills, operant resources, and goods as just service provision mechanisms.

In the industrial economy, knowledge and skill specialization were used in large-scale mass productions and organizational management to result in differential products lately. In services and information economies, that specialization is used in information and unembedded knowledge exchange.

As we can see, although the different mechanisms of provision (embedded in a product or not), knowledge and skills are the basis of economic exchange.

FP6

Value is cocreated by multiple actors, always including the beneficiary.
Axiom state

Value creation happens among many actors, including the actor benefited, by integrating resources provided by many sources (market, private and public actors). Value Is neither created in isolation by a single actor or a dyadic process between customer-company, and it is different for each actor.

FP7

Actors cannot deliver value but can participate in the creation and offering of value propositions.

The service provider can just make a value proposition, once the potential beneficiary determines the value and embrace it, the relational co-creation process takes place to cover specific needs. Service is then provided directly (in person) or impersonally (goods).

FP8

A service-centered view is inherently beneficiary oriented and relational.

A beneficiary of the service is the referent of value cocreation since he/she is who determines the value (by experiencing the benefit). To obtain the benefit (utility), the actors' exchange of skills or services occurs in an interactive and reciprocal process.

FP9

All social and economic actors are resource integrators.
Axiom state

The parties involved in the exchange relationship integrate and transform in some grade the operant resources. Organizations, for example, do it into complex services that are demanded in the marketplace.

FP10

Value is always uniquely and phenomenologically determined by the beneficiary.

Value has an experiential nature inherently when the beneficiary is able to transform the services into a useful state for him.

FP11

Value cocreation is coordinated through actor-generated institutions and institutional arrangements.

The individual "rules" of each actor — *institutions* —, under which he behave and the interrelated sets of institutions — *institutional arrangements* — between the actors in the service ecosystems become the building blocks that give coherence and facilitate the coordination of activities for value cocreation processes.

In conclusion, Service-Dominant logic brings a new lens by which markets and economy can be understood, focusing primarily on the value creation process, value meaning, and resource relevance when it comes to services. The principles (rules) help to understand what service is and to make necessary considerations around how to behave when designing and developing sustainable services over time in current society.

Servitization and Service-Dominant Logic

With servitization strategies growing impulsed by the markets and technological changes, companies will need to cope with the diverse transformations and challenges, especially culture change, to achieve the potential benefits.

To provide advanced services is crucial for transforming the company's production mindset to embrace service business models (Baines et al., 2017).

In this scenario, the Service-Dominant Logic can support this transformation since it can guide and give structure through the eleven premises stated by Vargo and Lusch (2004, 2008, 2014, 2016). In fact, the new logic serves as a complement of servitization (Baines et al., 2017). The theories' complementarity brings new knowledge (Servic-dominant Logic) that gives the foundations to the main changes moving from products and product-centered perspectives towards providing services and a service-centered perspective (servitization). Service-Dominant Logic, then, helps to rethink how they generate value, its meaning, and the relevance of some resources over others crucial for transforming the necessary cultural elements.

.03

Service Design

Introduction to Service Design

As a recently recognized design field, in the last thirty years, Service Design has been the subject of research and different definitions of what is its object and the methodologies and tools that it can apply derived from Design and other fields such as marketing and management (Sangiorgi & Prendiville, 2017).

Due to this evolving process, modifications in the discipline understanding have been common until the current definitions.

Sangiorgi and Prendiville (2017) defined Service Design as a human-centered, creative and iterative approach for innovating in services. Stickdorn et al. (2018), in the same direction, have defined Service Design as human-centered and iterative, but also as collaborative and interdisciplinary, that in the practice adopts research and prototyping activities and visualization tools that support the creation and orchestration of experiences that can better respond to people's needs

Service Design principles

While the definition of Service Design and its object can vary (Meroni & Sangiorgi, 2011; Stickdorn et al., 2018), there are a set of principles that can help to define the discipline at it is. Six principles have been collected and defined by Stickdorn et al. (2018):

1 Human-centered

When designing services, the SD approach focuses on all the people involved in the service system, which means not only direct service users, but also non-users such as internal stakeholders and staff that the service will impact on.

2 Collaborative

Two aspects are important in service. First, value is generated within the service and with the customer participation, hence, necessarily value is co-created . Secondly, people bring different backgrounds into the creative process of designing a service, making it essential for practitioners to understand the cross-disciplinary nature of Service Design. Diverse stakeholders' engagement is critical during the design process.

3 Iterative

As a design-lead approach, Service Design is characterized by an interaction process in which small steps and early attempts are held to experiment and fail at less cost while learning from the failure and adapting until implementation. This process is the opposite of a linear process of 'decide-plan-do'.

4 Sequential

Experience is key in Service Design; it is defined by the interaction and relationship moments or touchpoints. Regarding this principle, SD suggests how *"the service should be visualized and orchestrated as a sequence of interrelated actions"* (p.26)

5 Real
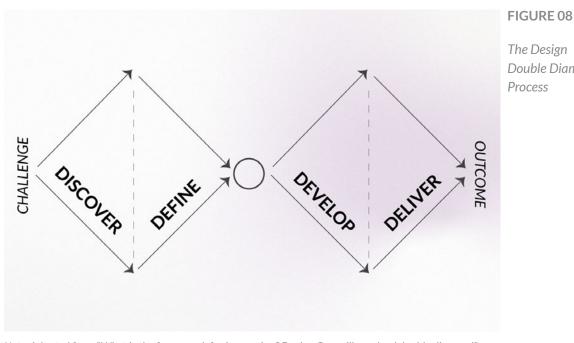
The service offering is composed mainly of intangible parts that generate value for the customers. Service Design evidences the value as a physical or digital reality. Evidencing is possible through a pragmatic and practical approach used for research and prototype ideas in reality.

6 Holistic

The Design of the services considers the entirety of the service system (including backstage processes), the needs of customers as well as the business and organization goals. This is why *"services should sustainably address the needs of all stakeholders through the entire service and across the business"* (p.26)

3.1.2 Service Design tools and methods

Service Design principles are present in the diverse approaches that designers apply during the design process. The design process is generally represented as a "double diamond" model (British Design Council, 2019), which has largely been accepted to represent the designers' work. Consisting of four main phases - discover, define, develop and deliver -, the diagram depicts the divergent and convergent thinking modes that qualify different stages of problem framing and problem solving.

FIGURE 08

The Design Double Diamond Process

Note: Adapted from "What is the framework for innovation? Design Council's evolved double diamond"

Design Council (2019) https://www.designcouncil.org.uk/news-opinion/what-framework-innovation-design-councils-evolved-double-diamond

During the designing process, service designers employ a wide variety of tools and methods regarding the design process stage. Some of the tools will be summarized below, considering which design phase to give a general overview of service designers' practical work (Design Council, 2015; Stickdorn et al., 2018) .

1 Discover

Field Research:

Conducting field research helps designers overcome the gaps in researcher's knowledge or understanding by gathering a new perspective through activities in the user's context (Farrell , 2016).The process consists of collecting data from the context of design problems and synthesizing them to generate new learning and knowledge. There is a wide array of tools and methods for gathering data where designers can directly interact with participants or just observe them. Some of the most typical activities include:

- **Cultural probes**. It consists of asking participants to record feelings, activities and interactions by notes , pictures or artifacts. Researchers give instructions and tools packages to participants that help them to keep a diary for a certain period of time (e.g a week). As a result this method provides unbiased information and insights about culture, emotions and values (Stickdorn et al., 2018; Wilson & Bevan, 2009).

- **Participant observation .** Researcher does a structured observation of a user interacting with a product or service for a determined period of time. The observation can be done in a natural context without intervention or researcher can intervene by creating tasks to be observed or performing the task (Think Desgn, 2020) This activity helps to create insights about how people use the service, their problems and discover things they will not tell (Livework, 2017a).

- **Interviews** in an unstructured, semi-structured, or structured way, interviews aim to gather points of view from different stakeholders. Most common semi-structured interviews allow participants going from a more general picture to more specific topics related to the design problem (Stickdorn et al., 2018).They can be conducted face-to-face or be done within the user context -ethnographic- (The Interaction Design Foundation. (n.d.a). The outcomes are insights about their experiences, emotions,

opinions, problems or even ideas (Livework, 2017b).

Once data is gathered - *video, photos, numbers, text, audio recordings, or artifacts-*, the designer synthesizes it by following an abductive sensemaking process (Kolko, 2010). The large amount of data is converted in manageable to generate insights for the project by prioritizing data regarding design problem and creating a hierarchy structure. Then by *judging*, researchers determine the relevance of some data over others for solving the problem. Finally, a viable narrative about why data elements are related to one another is created by *Forging of connections* (Kolko, 2010). Typical formats for these interrelated elements are key insights, job to be done, or user stories that will inform the subsequent phases (Stickdorn et al., 2018).

Journey mapping (Design Council, 2015; Stickdorn et al., 2018) .

It is a visual representation of the user experience over time with a service. The mapping activity consists of creating a journey from the research data indicating the main steps (actions) that the user takes during the interaction with the service, the touchpoints or channels that participate, while grouping all related steps into key phases. To better analyze the experience, journey maps can be complemented with emotional journeys or dramatic arcs that help discover pain points.

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System maps (Stickdorn et al., 2018) .

These types of maps allow designers to visualize the main components of the service system that enables the service delivery. The 'picture' of the current system helps to understand the relation between elements and visualize possible futures. These maps could be used for representing the stakeholder that intervenes in the service, the value network, or the ecosystem as humans, machines, interfaces, devices, platforms, and interrelations are mapped.

2 Define

Personas (Design Council, 2015; Stickdorn et al., 2018).

A powerful tool that serves to share findings while engaging people inside and outside of the team. In summary, it is an archetype that represents a group of users that share the same needs. Typical elements to build a persona are; a picture, name, demographics, a representative quote, mood pictures, description, and statistics. The combination of them creates an integral representation of the user, her context and interests, needs, motivations, or frustrations, always related to the research question.

Brainstorming (Design Council, 2015) .

Once that current scenario is clearer, this technique is useful for generating quickly alternative ideas or opportunities. This activity is carried out in small group sessions with a facilitator during which everyone can discuss and generate ideas openly on a given topic; what emerges is then captured visually. The aim of a brainstorming session is to break traditional patterns of thinking, so wild ideas are welcome.

3 Develop

Service Blueprinting (Design Council, 2015; Stickdorn et al., 2018) .

A service blueprint is the evolution of journey maps, by adding the front-stage and back-stage employees' actions and support processes. It helps to build a holistic overview of service elements and their relations that influence the customer experience. The organization's actions and processes are divided by a line of visibility that categorizes company steps regarding if customers see them or not. Mapping evidence in each step, such as products, mail messages, or voice responses systems, is a useful indicator of the designed elements.

Prototyping(Design Council, 2015; Stickdorn et al., 2018) .
Services prototypes include rehearsals, walkthroughs, simulations, or pilots that allow the team and stakeholders to experience the service or processes end-to-end or partially. It can be used as an approach for exploring and validating early concepts or to communicate across teams. The prototypes' fidelity depends on the aim of the tool and the moment in the process used. For example, in the early stages, rough prototypes are advised to test, learn, and iterate quickly.

Business model canvas (Design Council, 2015)
This traditional framework can be used to evaluate how different changes in the service elements and their relations affect the business model and, consequently, the customer experience. It can also be used to make some parts visible that have not been considered yet.Finally, once defined, the business model represents a reduced version of the blueprint and can be used as a reference for implementation.

4 Deliver

Design scenarios

In a storytelling format, design scenarios describe how users will interact with the service. The scenario consists in a determined user or group of users (Who), the goals and the needs of them (What and Why) and the context (When and Where) in which service interaction happens (The Interaction Design Foundation. (n.d.b). Visuals and text are used to express the story, describing step by step in the user process. During the delivery phase, communicate to stakeholders the preferred outcomes and help engage them in the service vision. By using straightforward narrative, scenarios help to create a collaborative understanding of future services(Design Council, 2015)

Design for Services

Service Design can be defined regarding its general principles and tools; however, its study and areas of intervention have been modified over the years.

In association with the simultaneous evolution of the understanding of Design and Service and the increasing importance of services in the last century, new intervention areas have appeared for service designers.

Design as a discipline was historically associated with the conceptualization and determination of all the products' properties to be then produced. On the contrary, services represent more complexity since they are made of connections of artifacts and people, and multiple factors cannot be controlled or designed (Manzini, 2011). Acknowledging this difference, Manzini (2011) stated that designers' activity is not anymore the 'design of something' but 'design for something (or to get something to happen)'. In Service Design, **designing for service** means creating the **action platforms** where interactions will occur, instead of designing its outcome, in this case, the interaction between people (ibid).

The understanding that design does not directly control the outcome but the system that generates it, reoriented how design principles and tools can be applied. Kimbell (2011) broadened the definition of Design for Service as an explorative and constructive process. Services are considered *social* (the people, their skills and knowledge)

and *material* (physical and digital touchpoints) configurations. They are also considered both *relational* and *temporal* as users interact with service firms by using artifacts through time and space. During those interactions, value is co-created in practice.Following this approach, designers' activity seeks to inquire inside an organization in the four areas — *social, material, relational and temporal*— by engaging diverse actors through boundary objects. The final purpose is understanding the current configurations and purpose of a new kind of value relation in the socio-material configuration.

This broaden view around service and design, as represented by Design for Services, propose new fields of action for designers in which they can move from interaction and function paradigms towards more strategic levels having significant contribution to the new economy and society (Meroni & Sangiorgi, 2011) Based on the human-centered approach and considering the diverse levels, methods, and aims with which designers can contribute to innovating in services, Meroni and Sangiorgi (2011) categorized them into four main intervention areas:

1. Designing interaction, relation, and experiences

Designing for services in this area means working at the level of interactions, relations, and experiences by focusing on improving experiences through empathic and effective interactions among the people in the service system. Designers' practice here aims to understand people's behaviors, experiences, and practices, to define the conditions for improving service interactions, and then to facilitate co-design processes to engage users and generate new solutions. The pursued result is to improve services by making them more desirable, useful, and usable.

2. Designing interactions to shape systems and organizations

Service interactions, interpreted as interactions between users and staff, staff and the service systems, and service system interactions, open up a path to redesigning service interactions as a vehicle for innovation, organizational change, and business development.

Designers, by working at the interaction level, facilitate the generation of new configurations in the service system with the aim to reduce gaps and generate clearer and more fluent processes and experiences.

Those new service configurations inevitably modify social and service systems; this brings some challenges such as resistance to change and behaviors that cannot be controlled. To support these modifications, designers promote organizational change based on a human-centered service culture.

As a synthesis, the designer works to innovate services by creating improved interaction modes that rely on a more human-centered service culture.

3. Exploring new collaborative service models

In this area Design for Services aims to transform the service delivery models into more 'open source' paradigm as in the case of social networks and collaborative solutions. To achieve this, designers work with multidisciplinary teams to create solutions while exploring social, economic, and technological feasibility.

Exploring new behavioral patterns, interpretation of social demands, and facilitation through participatory methodologies and tools are the activities designers perform in this area.
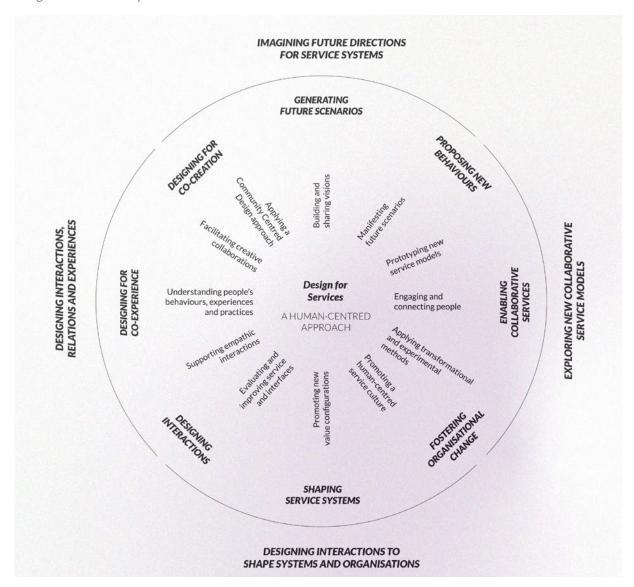
4. Imaging future directions for service systems

Within this area, designers generate new scenarios and visions for the sustainable development of the future of regions, places, and service systems.

The designer works with communities and uses scenario building and storytelling to imagine and create collective conditions for a long-term, transformational process. The focus therefore moves from user to community-centered design.

FIGURE 09

Design For Services Map

The action fields serve as a reference framework to reorient designers' practice regarding the service project aims. Given that this MA thesis is studying the implications of the emergence of the new service economy, the growing servitization, and the necessity of organizational culture transformation, the application field of **'Designing interactions to shape systems and organizations'** has a particular value and potential.

This study adheres to Service Design's interpretation as designing the conditions for potential changes to happen, rather than the design as planning of predefined service interactions. This interpretation is in line with the Design for Services definition.

Service design and Organizational change

As society and economy problems become more complex, new service models able to address them require deep organizational and system changes.

Creating new and successful services implies changes in the institutions and values that rule organizations and their configurations to serve others (Burns et al., 2006; Manzini, 2011). Moreover, when aiming for transformational change, active participation of stakeholders is crucial to give a sense of ownership and aligning thinking around end users, as well as building capacity and leaving tools for continuing the change process in the future (Burns, et al., 2006).

In this scenario, service designers can facilitate organizational change to the extent that designers promote new configurations in the service systems while in parallel fostering a new human-centered service culture (Meroni & Sangiorgi , 2011). This approach can bring important benefits and address the inherent issues of the transformational process (Burns et al., 2006).

The dual process of triggering a cultural change while developing a new service vision requires from designers a series of approaches, methods, and skills to engage the organization during the transformational process. Using design projects as an organisational inquiry, designers can aim to reach deeper levels in the organization culture (Junginger & Sangiorgi, 2009), revealing pre-existent elements of Design Legacies (Junginger, 2015) – by exploring the organizational purposes, the value that drives organization and the design practices perfomed – to inform a possible re-articulation of assumptions, values, belief and behaviors in the company context.

Service Design as inquiry in organization

Acting upon the elements of service systems, designers can reach more or less depth in the organizational culture. While pursuing transformational aims, the designers can use the project as inquiry in the organization, to reveal pre-existent structures, and fundamental assumptions while guiding the process towards what is more relevant for the organization itself and the improvement of services (Junginger & Sangiorgi, 2009).

The impacts and outcomes generated by the organization's project can vary depending on the level it interacts with the service system. Three are the possible levels of depth in organizations that a project as an organisational inquiry can reach (Junginger & Sangiorgi, 2009).

1. **Service interaction design:** similar to the traditional view, design concentrates on service interactions, where impacts on the organizations can be small or large, temporary or lasting. These changes at the interface level generally introduce modifications only in the artifacts and might not address the norms and values behind them. Relating with the concepts of Kimbell (2011), the redesign suggests only a change in the material dimension of the services configurations.

2. **Service design intervention:** Gaining depth and introducing modifications in service interactions require minimum or considerable organizational value and norms changes. The designer's work not only concentrates on the 'material' aspect of service configurations but instead needs to engage the organization ('social' aspect), making visible the value of change, and being able to interpret the organization. As they do not modify the fundamental assumptions, the organizational changes do not represent a radical one.

Organizational transformation: New service concepts question the organization's fundamental assumptions, reaching the core of the organizational culture. Bringing to the surface the fundamental assumptions, designers can meet resistances by organisational members. To approach it, designers should illustrate the current situation and co-create a vision for the future and agenda for change, which will require more commitment and longer time of collaboration.

Transformation design will depend on the ability of the designer to turn the redesign of a service into a vehicle of inquiry, reaching fundamental assumptions levels and discussing them with the organisation. The alignment of thinking towards a human-centered perspective is achieved when the project is able to change fundamental assumptions (unconscious beliefs) held by the people that integrate the organization since they rule the behavioral norms, values, behavior patterns, and artifacts (e.g., service interactions).
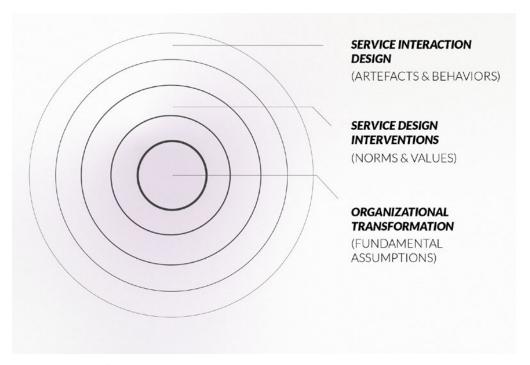
SERVICE INTERACTION DESIGN
(ARTEFACTS & BEHAVIORS)

SERVICE DESIGN INTERVENTIONS
(NORMS & VALUES)

ORGANIZATIONAL TRANSFORMATION
(FUNDAMENTAL ASSUMPTIONS)

FIGURE 10

The Potential Levels of Impact of Service Design Projects

Note: Adapted from " Service design and organisational change. Bridging the gap between rigour and relevance"

S. Junginger, & D. Sangiorgi, 2004*International Association of Societies of Design Research*, p.8

Reaching those transformational levels in an organizatonal culture by Service Design is not direct; some factors influence the organization's level of depth. Junginger and Sangiorgi (2009) identified some practices that contribute to the transformational process. First, building trust relationships can help overcome resistance by the organization; this is possible by approaching the organization collaboratively and flexibly and engaging them by introducing new variables and perspectives. Second, by generating transformative insights around fundamental assumptions, values, norms, and behaviors, designers can engage the organization by increasing interest and trust, co-creating a new vision, and enabling learning.

Service Design Legacies

Junginger (2015) suggests how an organization and design depend on the Design Legacies that have shaped the structures, process, procedures, and services over time and even the way organisations innovate. This perspective contributes to delineate the analysis of an organization's culture from a design angle. Acknowledging an organization as a place full of Design Legacies, gives a structure to designers' inquiry work, defining the elements and the methods to observe and interpret an organization aimed to be transformed.

Design Legacies are the practices that people have taken from previous generations, that in some grade are involved in the core organizational activities of managing, designing, changing, and organizing. To embrace transformation within organizations, designers should be aware of these current Design Legacies and work by disentangling them and reflecting on what should be articulated or modified to reach the desired outcomes.

The elements that define Design Legacies are:

Organizational purpose and vision

Is the reason for why the organization exists and supports some actions and discourages others. This guide what type of services are developed and should be aligned with the organizational design approach. When a transformational project takes place inside the organization a shift, update or broadened vision and purpose might be necessary. Designers can connect design effort while aligning them with the organization's vision and purpose.

Organizational design approaches

Organisational design approaches can be described as the values that drive the organization and the focus by which services are conceived. The author identified four possible approaches that organizations can embrace individually or sometimes combined. First, a human-centered approach in which the focus is to identify and develop services

meaningful for people. Second, a process-oriented design approach where services use the current resources and fit into the established structure and processes of the organziation. Third, the problem-solving approach is characterized for being top-down and linear decision making, when development starts once the problem has been identified. Fourth, a cost-saving approach in which the design of services is guided by cost reducing opportunities. Designers have the opportunity to bring human-centeredness as an integrative design approach that allows them to create solutions that 'fit' in the current systems and at the same introduce new processes, reduce costs and respond to problems in an innovative way.

Organizational design practices

Finally, the previous elements consolidate in the actual design practices that are performed daily by people in the organization. They are the most 'tangible' elements and can help designers to identify what are the existing legacies by taking a look at who gets to design. Three are groups of people that could have a participation in the service development . First group are the internal members, such as managers or administrative staff, who without being aware they perform design activities. Second group, external experts, come to the organization as consultants or academic researchers. Usually, they are more aware about their role as designers since they get a retribution from it or are interested in the outcomes. The last group is the people that are served, 'the customers' that might be or not be engaged in the organizational design practices.

Similar to the fundamental assumption concept, Design Legacies are in their nature intangible and shape the current thinking and doing of organizations, even if the people do not notice them. Junginger (2015) proposes toolkits and methodologies of co-design as methods to inquiry. These methods can bring to the surface the design legacies by visualizing them and by starting a conversation with organizations to create new pathways for innovation by revisiting purpose and vision, design practices and approaches. By following this approach, designers can generate interest and engage people into a collaborative reflection process that might lead to transformational changes in the way of thinking and doing.

3.4

Design for Services and mindset change

Design for Services can activate transformational processes in organizations. Additionally, it can also bring into the process new understandings of service and value, leading to the cultural change towards a service-centric mindset within organizations undergoing a servitization process.

The Design for Services conceptions around service and value are aligned with the new economic paradigm. Design for Services has been related to the Service-Dominant Logic. Both share the meaning of value, actors and system networks, and experience (Wetter Edman, 2009), although their contributions are different. Service-Dominant Logic offers a theoretical and analytical framework by which service can be understood as a service system in which different actors integrate their resources to co-create value. Meanwhile, Design for Service introduces a theoretical and practical approach that enables participatory processes for service systems exploration and envision new configurations of resources, actors, and value co-creation processes (Wetter Edman et al., 2014).
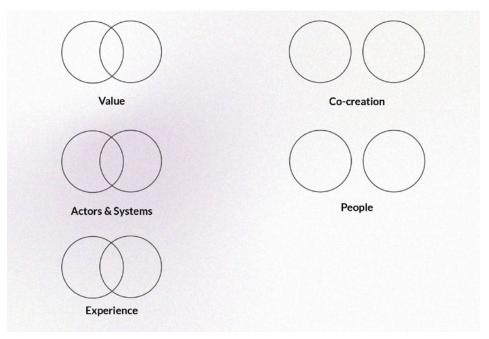
Value

Co-creation

Actors & Systems

People

Experience

Note: Adapted from "Exploring overlaps and differences in service-dominant logic and design thinking" by K. W. Edman, 2009, In *1st Nordic Conference on Service Design and Service Innovation, Oslo, Norway*, p.208 .

During projects, designers not only can apply methods for creating better experiences and customer-centered offerings, but they also can introduce a new perspective for service innovation. Within Design for Services operates a new way of conceiving service defined as Service Thinking (Sangiorgi, 2012). This concept has his root in the new understanding around value as co-created. It represents the way of thinking services as doing something beneficial for others and with some entity during an interactive process and within a value creating system (Sangiorgi et al., 2013).

Designers' stimulation to think services differently can represent a quantum leap for organizations, facilitating the transition from a product-centered mindset towards a service mindset and novel ways of co-create value. Rather than focusing on units of outputs and value added, Service Thinking looks at services in terms of interactions, benefits, and exchanges (Sangiorgi, 2012) and can serve as a framework and strategic tool for innovation (Sangiorgi et al., 2013). Lately, can it trigger transformations by challenging organizations' role perception, offerings, and innovation processes (Sangiorgi, 2012).

It is using Service Design tools and methods that designers transfer this new way of thinking and guide organization in the shift of focus when designing services. The Design for Services practical approach supports and enhances the collaborative exploration around where value is co-created within the current configurations, focusing on the processes and interactions between people, resources, and artifacts that generate benefits for customers. The design approach works at two levels by enabling a broader vision of value co-creation and focuses on the softest aspects of services, such as customer needs and actor interactions that co-create value (Sangiorgi, 2012). It allows organizations to spot innovation opportunities in their offerings around customers' needs and experiences (Sangiorgi, 2012).
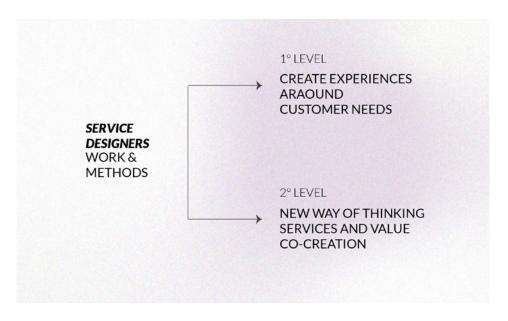
SERVICE DESIGNERS WORK & METHODS

1° LEVEL
CREATE EXPERIENCES ARAOUND CUSTOMER NEEDS

2° LEVEL
NEW WAY OF THINKING SERVICES AND VALUE CO-CREATION

FIGURE 12
Service Designers Levels of Work in a Organization

Note: Own elaboration based on *"Value co-creation in Design for Services"* by D. Sangiorgi, 2012, In Miettinen, S. & Valtonen, A. (Ed.) Service Design with Theory: Discussion on Change, Value and Methods. (pp. 97 -104) Finland: Lapland University Press.

Some practices had been indicated to trigger a transformation in the way of thinking. Workshops, in particular, had been indicated by Sangiorgi et al.(2013) as a suitable and effective method to work inside the 'product-centric' organization. The facilitation approach enables and maintains servitization transition. Here, organizations can experience this new perspective while designers share valuable information or ask triggering questions. Visual and material support also helps to represent intangible aspects of services and share a common understanding. This way of leading Design for Service practices by designers helps create ownership and engagement at the bottom in the organization and support at management levels. (Calabretta et al., 2016)

In conclusion, Design for Services presents a timely theoretical and practical approach for generating the cultural and mindset transformations required in companies with ongoing servitization processes. First, projects can reach deep levels in an organizational culture as they turn into a collaborative inquiry. Second, the inquiry can evidence the way of design by articulanting coversations around the three elements of the Design Legacies to discover misalignments and new possibilities. Finally, applying a Service Thinking, designers are able to instill new service understandings inside organizations that are more aligned with a service mindset and co-creation of value. Collaborative methods, facilitation approach and visual tools had been indicated as suitable approaches to guide a possible transformation.

3.5

Case Studies

A series of practical initiatives were selected to generate knowledge about designerly approaches for organizational transformation.

The selecting criteria were regarding outside-in / inside-out ways to approach the process, the inclusion or not within a design project, and considering their purposes such as instilling a user-centered approach or challenging service and value concepts. The comparison between them gives a sense of how design practices can be associated with different outcomes, opening the spectrum of possibilities [Table 03].

Table 03

Case Study Comparison.

		CASE 1 Flywheel model of change management	CASE 2 Shaping a design mindset	CASE 3 Customer Experience Navigators	CASE 4 Innovation through Improved Service & Design programme	CASE 5 A tool for inquiry
APPROACH	OUTSIDE - IN		●		●	●
	INSIDE - OUT	●		●		
CONTEXT	ORGANIZATION		●			●
	PROJECT - RELATED	●		●	●	
AIMS	INCREASING USER-CENTRICITY		●	●		
	CHALLENGING VALUE & SERVICE UNDERSTADINGS	●			●	●

FIGURE 13

Case study 1 - Table to capture employee feedback

1. Flywheel model of change management

(Block & Bartlett, 2020)

Working with a Fortune 500 client, Bridgable collaborated for three years with a new customer centre of excellence to develop a customer experience strategy and start with the redesign of a single touchpoint.

Note: From *A Flywheel Model of Change Management*, by T. Block , S. Bartlett, 2020 (https://medium.com/touchpoint/a-flywheel-model-of-change-management-876fc535f93e).

Aim

The idea was to generate organizational transformation towards customer-centricity by solving practical service design problems within the business.

How

The plan consisted of a classic service design project approach, with a participatory approach, activities focused on understanding the customer journey and organizational context, cocreate prototype and iterations. Additionally, change management practices were implemented during the process to achieve organizational transformation.

The participatory design process allowed stakeholders to become advocates and champions for change ('group of people who couldn't wait for the change to come'). It created awareness and desire to engage with the practical project and the new customer strategy instead of a traditional change management program.

Service design activities were combined with classical management activities

such as stakeholder analysis, communication plans, and formal training to make change real. The design process served to understand employees' motivations and pains and was captured by templates. Templates worked as 'accelerators' of change management, synthesizing and documenting findings that spark ideas for the smooth adoption of the change. Then communication and change management activities for the adoption of the new systems.

Although the first project was challenging since design practices such as co-design and early validations were not the company's practices, later projects became easier as organizational capabilities were built and a new part of the organization reached.

Outcomes

The way to approach innovation was based on the concept of 'flywheel' as a mechanical device for storing rotational kinetic energy that is difficult initially but becomes more effortless.

Designers were able to lead to a broader organizational transformation by applying design principles in small steps and repetitions with change management tools integration.

Key insights

- A new approach for design projects could be more successful if is considered the management of the change.

- The transformation evolution can be supported with tailored responses to the participant's needs that arise during the process.

- Most importantly, a transformation could be less harmful to the people if they grow progressively from small modifications to iterative change cycles.

FIGURE 14

Case Study 2- Workshops in RBI held by Designit

2.Shaping a design mindset

Designit. (n.d.)

Raiffeisen Bank International (RBI) embraced a digital transformation process to lead the company in a good position in digital markets; however, reaching the same digital maturity level in the organization was demanding.

Note: From *Shaping a design mindset*, by Designit, n.d (https://www.designit.com/work/shaping-a-design-mindset). Copyright 2020 by Designit.

Aim

The project pursued fostering a new design mindset inside the organization from product-driven to user-driven culture that supports the company's digital transformation process.

How

The current product development workflow was revisited to generate the change of mindset and integrate user-centered design principles across silos and domains. Designit performed with the company a series of workshops to unveil the skills needed in each phase of product development. As a result, three internal guides were created: a guideline to embedding user insignia into product development, a toolkit for product teams to plan and assess their product in the different phases and guides for visualize how skills are distributed in development and which skills are needed in different phases.

Outcomes

The use of workshops as an approach to foster a new mindset helped to promote at the same moment a mindset shift and to co-create across silos a road map for transforming delivering solutions in a better, faster, and user-centered way.

Key insights

- Bringing people to participate in transformation can align the level of change inside an organization.

- Creation of material support can guide people in the daily activities for support the culture transformation.

FIGURE 15

Case study 3 - CX Garage in the company

3. Customer Experience Navigators

(Service Design Network, 2020)

Telekom Deutschland GmbH (Deutsche Telekom), a traditional market leader in the telecommunication sector, was pressured to change due to the fast-changing market.

Note: From *Reinventing from Within; Don't talk about cultural change, do it,* by Service Design Network, 2020 (https://issuu.com/touchpoint_journal/docs/touchpoint_vol.8_no.2_preview/s/10619665). Copyright Maik Medzich & Pia Drechsel

Aim

For embracing a more customer-centric DNA, people from within created a bottom-up approach.

How

The initiative comprehended several CX ambassadors in each department that spend 30% of their time on projects outside of their own work area by spreading the voice about the customer-centric approach and being coaches in company projects. As the initial method, they used a Customer Experience Blueprint (CEB) as a combination of Customer Journey Mapping and Service Blueprinting) and later on, they were trained in Design Thinking.

After ten months, the community of CX Navigators grew up and became recognized formally by management. The central role was as Desing Thinking coaches for projects from other business units. People with no customer-centric methodology engaged as CX Navigator and were trained about methodology and facilitating roles to lead workshops within the projects

assigned. This practice also created a learning community with a positive engagement.

Outcomes

This bottom-up approach generated recognition by their pairs and accepted their support as coaches in different projects bringing new perspectives on long-term experiences instead of short-term metrics.

Twenty-five months later, and after several learning cycles, they could structure a framework that supports the corporate culture's transforming approach. The fundamental principle was to start doing, following the process, and making the necessary adjustments to grow and evolve.

Key insights

- Peer-to-peer training can generate more trust for change.

- Training activities about new practices and approaches can give members more confidence to spread knowledge in the organization.

- The integrartion of transformational process in the current routines can support a direct result of the change.

FIGURE 16

Case study 4 - ImaginationLancaster programme workshop

Note: From *Innovation through improved Service & Design*, by ImaginationLancaster, n.d.

4. Innovation through Improved Service & Design programme

(ImaginationLancaster, n.d)

Innovation through Improved Service & Design is a program created by ImaginationLancaster, a research lab at Lancaster University and supported by the Design Council.

Aim

The program aimed to make accessible the Service Thinking and service design approach for driving innovation to SMEs in the engineering, manufacturing, and technology sectors.

How

The process, articulated in three workshops, brings practical tools and methods to be applied straight away and brings novel insights and business opportunities.

The first workshop looks to understand how service thinking can increase competitiveness & improve customer relationships. It was supported by a series of three tools that guide participants to think in function and benefits, experiences and practices, and in terms of value co-creation. One workshop's experience was held in a social research and design consultancy that works in collaborative social change, specifically in a project that tackles young smokers' problems. Exploring the behaviors and factors that influence young people in London boroughs helps create dispersed service embedded in the existing community.

The second workshop aims to learn about service design methods for identifying and defining new or improved service offerings. The workshop works to identify the core user in a three activities structure and create a possible journey. As a case study, Engine Service Desing used this workshop to work with a new Philips service venture that collaboratively discovered the client's type, created suitable service provision and scenarios for services that connected internal production, and tailored to customer's needs.

The third workshop is focused on developing emerged opportunities and ideas into refined concepts and generating implementation plans. Grounded in a participatory approach, the workshop generates ideas in collaborative sessions starting from problems previously identified. Workshop tools presented help define the principle with which services will be designed, synthase ideas to present, and evaluations of those ideas.
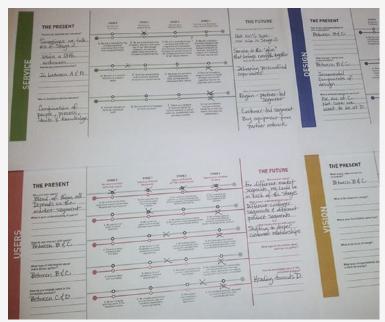
Outcomes

Finally, each workshop allowed companies to get progressively better outcomes: generating new business positions with new services, discovering potential areas, and starting plans for customer-driven innovation, and definition of value propositions and correspondingly action plans.

Key insights

- Useful insights can arise by letting organizations think about the service's characteristics, first in a product-centric perspective, and then translate them into a value co-creation perspective. (eg. from technical features to benefits for users)

- An approach for transforming manufacturing cultures could be by working progressively and collaboratively from sensitizing new ways of thinking towards concrete value proposition design.

FIGURE 17
Case Study 5 - Tool for Inquiry

5. A tool for inquiry

(Sangiorgi et al., 2016)

Sangiorgi et al. (2016) study acknowledged the need for evolution in understanding service, design, and users by manufacturing organizations that intend to include service offerings in the current markets successfully.

Aim

Aim to help manufacturing companies reflect on the current position in the evolution process and create awareness for applying new strategies.

How

To allow this reflection process, a conversational piece was created and structured in a question format around service, design, user and vision topics, and answers related to the evolution from Good-Dominant Logic to Service-Dominant Logic.

By using this tool, employees can reflect on their practices, identity, and future. It is a starting point since it will give a general picture of the organization's current situation and possible misalignment between employees' perceptions. This first data can then serve to do an action plan with them.

As a part of the study, a pilot was run in a large global business organization.

Five interviews of 60-90 minutes were done using the inquiry tool. Three participants were responsible for Customer Product Management and two from Service Product Management.

In general, the tool worked as a reference by which participants could express themselves and make sense of the current situation. However, it was not easy to start without a clear assessment since the company structure was significant and could refer to different areas.

Outcomes

As a result, the tool helped visualize the differences in understanding of service and design and the inclusion of users in the creative process, relevant for embracing a strategy towards service. The variance of understanding between different stakeholders resulted in a lack of clarity about the strategy and ineffective development of solutions since resources or planning can be compromised. The tool helps to inform the company about that and make it tangible, leaving room to take action.

Key insights

- Comparative states in different aspects of the culture can be good approaches for raising the willingness to change and defining starting points and future actions.

- Breaking down the exploration topics into design, value, and users can guide the conversations towards crucial assumptions that are generally unnoticed.

Conclusions

Service Design discipline evolution in the last decades has opened new areas for designer contributions.

The recent redefinition of the design practice as Designing for Services (Meroni & Sangiorgi, 2011) expands the participation in the creation of service, not only by improving the experience at the interaction level but also supporting organizations to rethink their socio-technical configurations that co-create value with users over time.

Designers can reach the organization's deepest levels and work collaboratively to transform culture into a more human-centric and service mindset. They can trigger transformations around values, beliefs, and behaviors using a participative approach for conducting projects as inquiry inside organizations. Moreover, a theoretical and practical approach to think services in terms of value co-creation and service systems can redirect the focus from units of outputs and technical features towards benefits, interactions, and experiences when approaching innovation. The latter can be related to the contemporary principles about service and value in current markets and the economy.

Previous insights demonstrate the potential of Design for Services to approach the challenge of transforming a product mindset into a service mindset for supporting new business models in organizations that undergo servitization processes. This MA thesis aims to explore the practical implications for designers when consciously applying a Design for Services approach for culture and mindset transformation in this context.
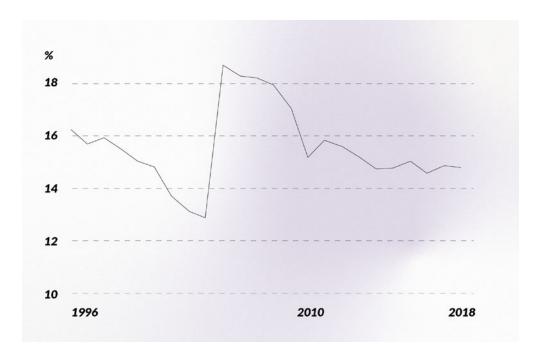
.04

Context of research

General context

Nowadays, services are essential for markets as their participation in the worldwide economy has grown at high speed in the last decades, surpassing products.
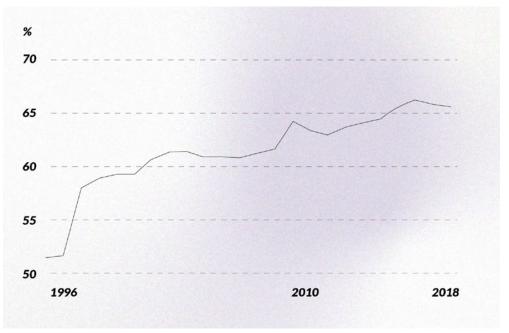
Comparing the contribution to value-added in the worldwide gross domestic product (GDP), services had increased 5.78% by 2018 from 1997. In contrast, Manufacturing contribution has slowed down, falling 2.15% in the same period of time (The World Bank, n.d). The growth of services' role has been due to diverse circumstances, standing out new technologies' availability.

FIGURE 18

Manufacturing, value added (% of GDP)

Note: Adapted from *Manufacturing, value added (% of GDP)*, by The World Bank, n.d (https://data.worldbank.org/

indicator/NV.IND.MANF.ZS?end=2019&start=1960&view=chart). Copyright 2021 by The World Bank Group

FIGURE 19

Services, value added (% of GDP)

Note: Adapted from *Services, value added (% of GDP)*, by The World Bank, n.d (https://data.worldbank.org/

indicator/NV.SRV.TOTL.ZS?end=2019&start=1960&view=chart). Copyright 2021 by The World Bank Group

Information and digital technologies had been an acceleration factor in the incrementation of service offerings. Internet access and mobile connection by people have increased notably in the last ten years (Figure 20 & 21), allowing them to connect with more people and access a significant amount of information (Deloitte, 2014). These shifts have created a more informed and intelligent customer and altering behaviors. Technology shapes customers' expectations based on other customer opinions and demands instantaneous and tailored access to information, products, and services. These changes put pressure on companies to review their strategies to meet customer demands (IBM, 2010; Evans, 2017).
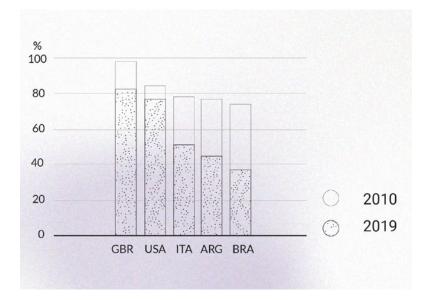
FIGURE 20

Internet users as percentage of 16-74-years olds 2010-2019

Note: Adapted from *A Roadmap toward a common framework for measuring the digital economy: Report for the G20 Digital Economy Task Force*, by OECD, 2020 , p.23(https://www.oecd.org/sti/roadmap-toward-a-common-framework-for-measuring-the-digital-economy.pdf). Copyright 2020 by OECD
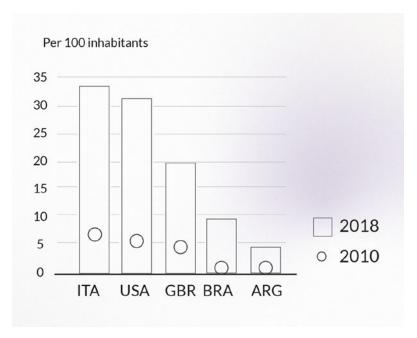

FIGURE 21

M2M SIM card penetration in 2010-2018

Note: Adapted from *Toolkit for measuring the digital economy,* by G20, 2018, p.18 (https://www.oecd.org/g20/summits/buenos-aires/G20-Toolkit-for-measuring-digital-economy.pdf).

New technologies also have become an ally for companies that aim to embrace the servitization process since they allow to provide services digitally, integrate services to products, and personalize offers delivery (Dinges et al., 2015). Thus, companies draw on new technologies to servitizate their business facing this new scenario and experience a digital servitization (Tronvoll et al., 2020).

In addition to a technological advancement phenomenon, the Covid-19 pandemic has accentuated companies' conditions to start and accelerate servitization processes, especially digital ones. Due to the impossibility of social contact, companies have been forced to digitize their incumbent face-to-face-based services (UNCTAD, 2020). Additionally, lockdown measures have modified customer behaviors, such as online purchase facilities, priority spending redistribution, or home-work spaces integration (Consultancy.uk, 2020). Combining those changes traduces in the necessity of companies adjusting their offerings by understanding the different types of customers better and boosting operation transformations while acknowledging and working on their flaws and weaknesses (Buckley, 2021).

The redefinition of markets, new technological possibilities, and constantly changing customers' needs had been putting pressure on companies to start the servitization process. Moreover, Covid-19 has become in the last year a catalyst to take urgent action by organizations to adapt to survive in the market and adapt to the new reality. In combination, these circumstances highlight the timeliness to research new supporting ways for servitization.

Telecommunication operators sector

Technology has been the most influential factor in the telecommunication sector regarding the necessity to grow in service offerings.

In the last decade, telecom operators, significantly, have been affected by the commoditization of the technology and the introduction of new players, as are the over-the-top services.

Telecom operators are found hampered by how they have been taking advantage of technologies. As a general operational model, companies provide their service by their telecom network and are accessed by customers through their devices and supported through communication and technical assistance (Lelah et al., 2015). Considering the structure, the company's investment efforts focused mainly on technologies to maintain and operate the physical infrastructural network; however, barriers to access the same technology by more and new competitors are declining, making the traditional strategy obsolete to differentiate their offerings (Temraz, 2010). Other market players have taken advantage of having access to the same technologies to create new benefits for customers.

The over-the-top (OTT) services have been one of the most influential competitors challenging the traditional telecom strategies as they brought new on-demand and flexible experiences. Examples of OTT services

are Facebook, Amazon, Netflix, and Google, which took advantage of the internet and telecom infrastructure to provide their services. A difference with the less sustainable messaging and voice service revenue models (Patterson et al., 2017), these new competitors have used the information to generate incomes by applying technology for collecting, analyzing, and monetizing the data(Frisiani et al., 2017). Consequently, customers have changed their behaviors and started asking operators for tailored, high-quality, and accessible services with smooth experiences such as those they obtain from direct and indirect competitors (Patterson et al., 2017).

The combination of new competitors and the change in customer needs put under pressure the strategies to stop losing the market, adopting strategies that inhibit economic growth and led telecom to rethink their business model and the relationship with customers. Telecom's first reaction was implementing old strategies like reducing the plan's pricing by reducing operational cost and workforce. However, revenues continue to decrease (Temraz, 2010; Frisiani et al., 2017). Neither good operational performance nor low-cost offerings are no longer the most valued assets by customers in the telecom market; nevetless, there are other areas that operators can exploit to keep growing.

Digital services and personalized experiences appear as ways to improve customer engagement and consequently revenues for telecom companies, but in several parallel transformations should be taken into consideration to success. By 2020 operators were expecting to have 25% of revenue from digital services. The most promising applications are in video and entertaining for final customers (Patterson et al., 2017, p.21).

Additionally, target definition by, for example, analyzing customer data through technology and consequently realignment of operations structures to deliver tailored and self-service outcomes is how telecom operators can achieve the customer engagement desired (Patterson et al., 2017, p.25).

Those new innovating paths will need many adaptations to overcome the current innovation focus on physical assets, such as embracing a cultural change, developing new revenue streams, reskilling of the workforce, and adaptations of silo operational structure (Patterson et al., 2017).

In conclusion, digital technologies have brought new scenarios for telecom operators to rethink their way of doing business. Although the potential for creating new and digital, and personalized services while engaging customers is set, some issues appear. The legacy focused on physical infrastructure is the principal obstacle that should be tackled to open paths for more flexible collaborative ways of working, customer understanding, and innovation in services.

Claro Argentina

Claro is a large telecommunication company born in 1994 under the name CTI (Compañía de Teléfonos del Interior S.A.) in which the initial objective was to bring mobile communication facilities to the interior (north and south) of Argentina (Verizon, 1996).

Growing their coverage, in 1999 started to operate also in Buenos Aires. However, after the deep economic crisis in 2001, the company was acquired in 2003 by America Movil S.A., a multinational telecommunication company with the main headquarter in Mexico. It was re-branded as CTI Movil and as Claro in 2008 to unify the whole Latin America brand identity.

Nowadays, it is a leading telecommunication company, having the first place mobile market share with 38% in the fourth quarter of 2019 (Navarro, 2021). Current offerings comprehend a vast quantity of services. They range from wireless, fixed-line voice, broadband, and Pay T.V. services and products for a final customer (B2C) and wireless, fixed-line voice, broadband, cloud, security, data center IoT services and products for companies (B2B).

FIGURE 22

Claro Customer service center in Córdoba

Note: From Google Maps https://goo.gl/maps/Genh1ciid8Jq7bsW7. Copyright 2020 Claro Argentina

The organization's general structure is based on a telecommunication company's traditional schema, divided by functional units such as marketing, advertising, I.T., billing, customer support, and e-commerce, in which around five thousand employees are distributed.

4.3.1 Digital Transformation

The company acknowledges the markets and user changes occurring and decides to modify their direction while taking advantage of technology mastery. Following the mission of innovating continuously to enhance the connection between people, communities, and businesses to the world, the company's traditional focus was investing heavily in the country network to provide a high quality of services. However, in the last years, the top management of the company realizing the changes in customers' behaviors, such as moving for calls and messaging to increasing navigation and content consumption, decided to redirect the use of technology to create better solutions for users (FiloNews, 2017).
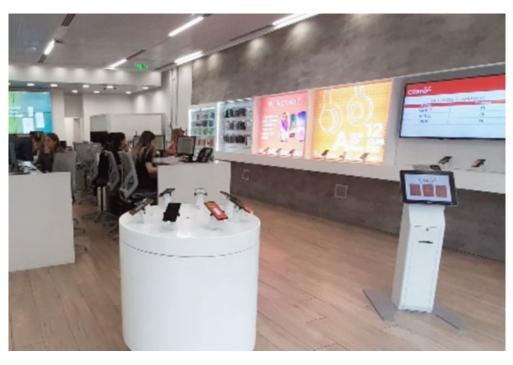
Embarking in a digital transformation, new and diverse frontiers of work open up, giving space for designers' inclusion inside the company. The investment plan is destined to infrastructure, high capacity networks, quality of service, customer service, and new technologies and looks for two principal objectives: Provide a seamless experience to customers while improving the service quality. Consequently, new services such as music and video streaming were created, and especially technology inversions to innovate the backend processes are ongoing (FiloNews, 2017). New units were created regarding the last point, and new profiles hired, such as designers and data analysts, to comprehend better customers and create solutions in response.

4.3.1.1   Billing and digital experience, the new unit.

In 2018, following the digital transformation perspective, a new unit with five members was created in the billing department; the mission: digitize the billing delivery for B2C while enhancing user experience. Against the traditional company approach to look inside the organization for human sources, the hired outsider new talent is hired, especially a UX designer and Data analyst. The first projects' results were promising to increase the number of clients who were able to consult the invoices and new projects digitally from diverse organization areas arrive to be approached by the 'new' team. By the end of 2018, backend processes and services such as selling, installation, or customer support started to be redesigned by the team. The team then started to focus more on digital experience rather than billing, and new and growing collaboration started to take place inside the organization.

FIGURE 23

Claro Customer service center in Buenos Aires

Note: From Google Maps https://goo.gl/maps/jgHmunbCecrjSCjQ6. Copyright 2020 Claro Argentina

Although the projects' first successes, the expected impact from digitalization did not occur, leaving management nowadays looking for new strategies in approaching this type of project. Project results generally were good at 'paperless' initiatives by just digitizing physical touchpoints, but not significant experience improvement was achieved. Even worse, some processes resulted more complex than before and unsuccessful in the employees' rate of use, who prefer to use the old and physical process. Additionally, the Covid-19 pandemic deepened these shortcomings since the company started to operate remotely and is willing to do it in this way for the future. Due to this, the middle management decided to restructure the team creating three different groups regarding the type of business and designating one designer per each, having three experience designers as part of the team.

Managers are convinced about the value that designers bring to this process of growing to services even more digital, and this is why they are increasing the space given to design lead practices and thinking. However, they recognize that daily they deal with an operational approach of using technology that makes the process more efficient.

Considering the potential of Design for Services to drive transformational processes inside organizations and the context of willingness and proactiveness in Claro to transform their services despite the presence of obstacles related to the heritage of past innovation strategy motivates the researcher to approach the research described in the following.

.05

Methodology

Aim

The research explores the Design for Services approach's utilization to supporting culture transformation processes within a product-centric company in the telecommunication sector that embraced a servitization strategy (Claro).

The purpose of the study is to gain more understanding about practical implications for service designers that perform processes of inquiry inside companies undergoing servitization. More specifically, when these processes reach deep into the organization's culture and support its transformation.

The research objectives are:

1. Outline the company's current situation regarding organizational vision and purposes, design approach, and design practices to identify the potential misalignments.

2. Understand the main challenges and barriers that hinder the particular team's expected results when ideating and designing service.

3. Explore design practices to integrate for overcoming the identified challenges and barriers.

4. Evaluate which design activities are suitable to encourage the adoption of Service Thinking (Sangiorgi, 2012)

5. Understand the designer's role during the entire process from guiding the organization until obtaining concrete results.

Methodological approach

The study focused on understanding service design practices' suitability for cultural transformation inside an organization undergoing a servitization process.

The research activities collected qualitative data from primary sources and supported the generation of insights through their analysis. Methods combination contributed to understanding correlations betweenww service designer's practices and mindset transformation in an inquiry process within servitization processes.

The research's structure consisted of one **preliminary interview** to set the company's current situation and an **action research project divided into three cycles** to foster a new service culture.

The interview comprehended semistructured questions for examining the company's purposes, the main obstacles, and the organization's actions to overcome them. The information served as the basis for the action research project to be planned and executed.

With the insights generated from the interview, each action research cycle was planned regarding a specific moment of an inquiry process (Dewey, 1938). The decision to divide the inquiry process into cycles sought to articulate the current product-centered culture with the new service mindset and design practices. It fostered a process from sensing the need for culture change, evaluating new methods and knowledge regarding Service Design, and integrating them into the organizational reality.

The three cycles consisted in:

[Exploring]

Reflecting on the indeterminate situation to acknowledge the problematic situation.

The first cycle consisted of a co-design activity that introduced a new service perspective to trigger a reflection process about the current culture.

Generative tools helped to establish the current scenario and reflect in terms value co-creation, service system thinking, and human-centered design practices. In this way, the process supported the evaluation of beliefs, values, and behaviors that were not leading to the desired outcome.

The action results set the boundaries for working in the subsequent cycles regarding service mindset and practices.
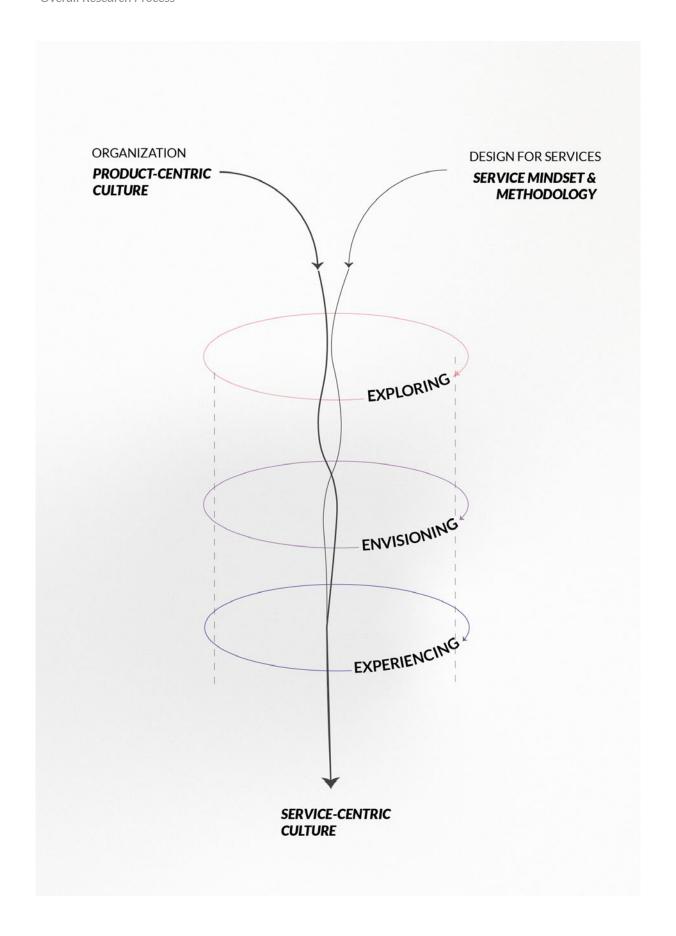
[Envisioning]

Determination of a problem-solution & reasoning

Based on previous cycle insights, the second co-design focused on evaluating which changes around practices and knowledge would lead to better service design outcomes.

In this case, generative tools supported observing and determining the current conditions and limitations and imagining new possible futures in the company context regarding a more service-centric organization for a particular project.

After the activity, participants were asked to answer an online questionnaire to synthesize their individual learnings. At the end of the cycle, the learnings gave clarity about concrete needs and possible answers.

FIGURE 24

Overall Research Process

ORGANIZATION
**PRODUCT-CENTRIC
CULTURE**

DESIGN FOR SERVICES
**SERVICE MINDSET &
METHODOLOGY**

EXPLORING

ENVISIONING

EXPERIENCING

**SERVICE-CENTRIC
CULTURE**

Methodology

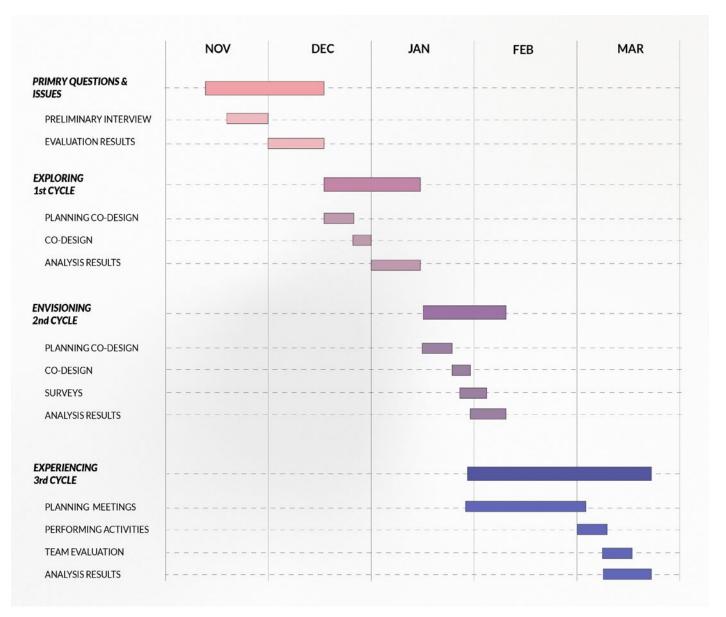# [Experiencing]

Making a possible future operational.

The last cycle was the least planned. It pursued to integrate the new design activities spotted in the previous cycle. However, actions were created regarding the organization's needs.

The actions concentrated on knowledge transfer, such as a sharing session about co-design methodology, building customer journeys maps and blueprinting, and supporting the preparation of co-design activities. Those activities brought to reality new service mindsets and design practices within the selected project. The training process helped the first pilot and gave evidence that supported the innovation of services in terms of experiences and benefits for customers. To conclude the cycle and the inquiry process, an online questionary was compiled again with the main learnings. It was also complemented with a retrospective session to share what worked, what did not work well, and ideas for improvements.

The research was developed in collaboration with the Digital Experience team from Claro company (Argentina). It lasted from November 2020 to March 2021, and it was carried on virtually as the team was operating remotely due to the Covid-19 pandemic. The use of digital collaboration platforms as Miro was essential for the process since it supported the visual tools' sharing and conversation.

In conclusion, combining action research cycles with the steps of the inquiry process allowed the flexibility to follow a progressive and collaborative process. It helped introduce new value understanding and behavior and understand how to engage the organization's members in creating change.

FIGURE 25

Research Project Timeline 2020-2021

5.3

Methodological criteria

The selection of suitable research approaches and methods for a new service mindset infusion was crucial to support knowledge building around applying the Design for Service approach within servitization processes.

The action research was chosen to work collaboratively within an organization for a new reality to emerge while adapting Service Design practices to their context. Furthermore, the co-design methodology, its style guidance, and subject matters were selected as a vehicle for transformation towards service-centric culture. The complementarity between the research approach and methods selection aimed to support the consolidation of learnings through the process.

5.3.1   Action Research approach

The motivation for selecting action research was mainly because of the need to carry out an in-field inquiry and observe and understand the Design for Services methodology application for cultural change.

Action research is a participatory inquiry process of systematic cycles of action and reflection that allows connecting ideas and knowledge with practice and action (Reason & Bradbury, 2008). This approach gives standardization to analyze the correlation between conditions
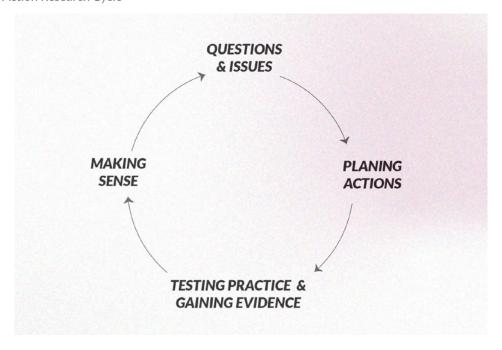
and effects of actions in a determined context (Lewin, 1946).

Considering the particularities of action research, it represented the right approach since it allows to study the implication (effect) of service design practices (action) in the culture transformation by members within an organization (context).

In particular, the inquiring step's distribution in three action cycles enabled breaking down the process into pieces. Doing so, allowed the researcher to analyze the correspondence of design practices and cultural change, considering these correlations are mainly unnoticeable. Additionally, moments of reflection were necessary for reviewing Service Design methods' performance and adapting them to the particular company's reality and needs.

Overall, the research approach selected helped observe the field's transformation. It gave a proper structure for exploring the Service Design approach's conscious application for culture transformation. Finally, the action research project has brought the flexibility to adapt the Service designer's actions concerning organizational reality and needs.
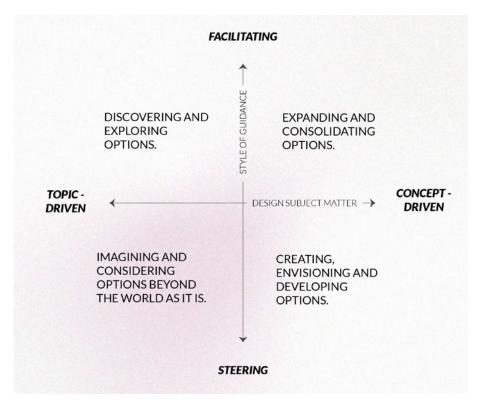
FIGURE 26
Action Research Cycle

Note: Own elaboration From *The SAGE Handbook of Action Research: Participative Inquiry and Practice*, by P. Reason, H. Bradbury, 2008, SAGE Publications. (https://dx.doi.org/10.4135/9781848607934). Copyright 2008 by Sage Publications.

5.3.2 Co-design methodology

Co-design methodology was the activity selected for the two first research cycles to engage organization members in the transformational process, as it's a suitable approach for holding a participatory inquiry while introducing new value and service understanding.

During the first stages of the inquiry process, it was indispensable to reflect on the present and start imagining possible futures in which services co-create value with users. In this sense, Steen (2013) defined co-design as a helpful practice for a joint inquiry to reflect and discuss problems. It helps to achieve positive changes by participating collaboratively and creatively. Hence, co-design sessions represented as a resource to establish participatory conversations around new value and service understandings.

FIGURE 27

The Collaborative Design Framework

Note: Adapted from *Massive Codesign: A Proposal for a Collaborative Design Framework*, by A. Meroni, D. Selloni & M. Rossi, 2018, p.39 (http://library.oapen.org/handle/20.500.12657/29995). Copyright 2018 by FrancoAngeli s.r.l., Milano, Italy.

The use of co-design not only allowed different actors to actively participate for research purposes, but it was selected to bring into conversation new service and value knowledge. Meroni et al. (2018) state that designers can use various co-design guidance styles and combine them with design subject matters to achieve different outcomes in complex problems. The styles are ranging from active listening (facilitator) to thought-provoking (steering). In parallel, subjects can be topic-driven or concept-driven. Acknowledging this, the researcher selected diverse style guidance and subject matter combinations to direct the inquiry into the culture shift and service-centricity.

For the first cycle, a steering style and topic-driven subject were selected for new knowledge introduction about value co-creation, service system thinking, and human-centered design practices and to stimulate the imagination of services and culture out of product-centricity.

For the second cycle instead, the co-design steering style remained but the subject matter was modified to use a concept-driven subject. The selection sought to overcome the current culture by triggering imagination of possible changes around new knowledge likely to be integrated into the organization's culture.

In summary, Co-design methodology selection was due to the suitability for approaching a change with the people affected by it. Steering style selection over other styles allows the introduction of new ways of thinking services. Meanwhile, the transition from topic to concept subject matters steadily integrates new understandings into a discussion for new and different behaviors.

Data analysis methods

Note-taking, video recording, and artifacts represented the raw data from each action hold during the research. Complementary, **online questionaries** after activities in the second and third cycle were sent to grasp additional reflection of participants. The analysis applied qualitative methods in each cycle to answer the research questions and objectives.

Insights generation around patterns and themes served to consolidate learnings in each inquiry step and set the basis for the subsequent actions.

FIGURE 28

Interview analysis
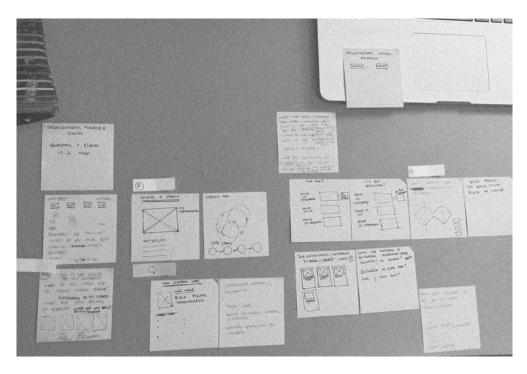
FIGURE 29
1st Co-design analysis

The preliminary interview learnings distributed around triggering questions stated before start the downloading. Pre-establishing the questions helped to create a picture of the company's current state from where it started.

In the action research project, insights generation was used again, but they varied regarding the cycle objectives. For the first cycle, insights reflected the opportunities for change, and the How Might We question was defined for the next steps. The second cycle insights were created around themes by interconnecting evidence. The themes reflected the spaces for change inside the current culture. Finally, in the third cycle, the analysis focused on contrast topic responses and evidence from the training activities with themes defined in the second cycle. It allowed describing the outcomes of the whole process.

.06

Action Research

6.1

Preliminay interview

This first activity consisted of a semi-structured interview, and it aimed to understand the company's current scenario regarding the servitization process.

The inquiry focused on getting a sense of the main goals for innovating in services, obstacles, and the actions to overcome them.

The interview was held with the Leader of the Digital Experience team. She was in charge of most of the projects of services digitalization. Inquiries were structured in three blocks that represented the main topics. The first block explored top management's strategic objectives when deciding to redesign the services. The second block of questions focused on inquiring about the principal modification on processes, people, and infrastructure they experimented with

Table 04

Preliminary interview

ACTION	Preliminary interview
METHOD	Semi-structured interview (Teams platform)
PARTICIPANTS	Team Leader
DATA	18 November 2020
DURATION	1 hour

as a team while pursuing the objectives. This block of questions also covered the challenges and learning associated with the changes. Finally, the third block concentrated on understanding service, users, and design (Sangiorgi et al., 2016) to grasp the servitization's potential stage as the starting point for the following activities.

The interview recording was transcribed and analyzed along with the notes taken during the activity. Relevant information and learnings were clustered around the following triggering questions:

What are they trying to achieve?

What did they do?

What change & why?

What are the main challenges?

The questions served to identify themes to work around, and insights were generated to support the action research planning.

6.1.1   Findings

The Team Leader voice has depicted indications of a product-centric mindset and issues related to service paradox. Top-management strategies focused on use technology to improve service experiences. Despite it, the outcomes generally comprised advanced features without real value for customers.

The company's willingness to innovate its services combine technological improvement objectives such as touchpoints' efficiency. The organization's efforts concentrated on developed minimum but finished solutions. Iterations occurred only once services were implemented.

The development process lacked systemic thinking about the service. Actors' involvement appeared during the design of new solutions. However, stakeholders' participation was limited to 'inform' current situation and 'demand' novel features.

Besides the product-centric mindset scenario, some designers' practices initiatives with users started to be recognized as potential and valuable for improving development solutions. Design practices' input was one strategy for leaders to focus for desired outcomes achievement. Nevertheless, integrating them with the current way of innovation was unuseful.

This first approach to the company context set the basis for starting the inquiry process. The insights described a strategy for creating new and better services and experiences boosted by technology integration. However, culture was not up to support the innovation processes in business models.

#1 The top management aim is to transform into self-service the current presential pre & post sale service however their focus is in efficency & technology.

The CEO of the company is willing to digitize all 'processes' (as they refer to services) boosted now for Covid-19 pandemy. Some of the motivation they remark is the "old technology" with which 'services' were created and the bureaucracy that characterizes them and the main drivers for redesigning them are 'Agility & Efficiency'.

Although the leader recognizes services definition as " the way to help our clients create the best value and this qualifies how we do business and innovate" (Tool of inquiry, Sangiorgi et al , 2016), it represent an objective and the leader contrast that current developments are far from there.

#2 While designing the new service, exploitation activities prevail over exploration ones.

The practice and knowledge applied to re-design the process was focussed at the interaction level, working in isolated touchpoints of the services and stakeholders generally were attached to the current configuration of the service, the Leader highlighted

that 'Thinking out of the box' doesnt occur generally, and results are focused on digitize the existing touchpoints.

#3 Explore current service systems and generate new ideas is an <mark>extensive and frustrating task.</mark>

This challenge showed up many times during the interview. As the services have an important human variable (the front line) and relationships with third parties (providers), grasping the current service system and needs were approached with large committee meetings characterized by lack of clarity and useful inputs for projects.

> **We need a person that knows the full service (Product Owner).**

> **... sometimes we actually do design in the comitee meetings.**

> **Everyone ask for a different feature.**

Team Leader

#4 Design <mark>activities like testing and prototyping</mark> had add valuable insigths during the development process but they <mark>are scarce.</mark>

Thinking based on probes with final users has demostrate the suitableness of some ideas (when the test is perform pre-launch) and new directions for iterations of the ideas and next developments (performed after launch). However, based on an engineering mindset, the efforts concentrate on the creation of a 'MVP' (minimun product viable) try in the context and improve, missing the opportunity to prototype earlier.

Action Research

6.2

Exploring – 1st action research cycle

The strategy transforming services solely was leaving managers at a dead end, without the possibility to implement promising designerly practices.

Based on the interview insights, the characteristics of a product-focused mindset that shape the redesigning of services were noticeable. Although there were efforts to improve the development and innovation processes, the results were not paying off efforts.

Table 05

Activity 1 - Exploring Action Research Cycle

ACTION	Exploring Co-design session
METHOD	Co-design session - Steering guidance (Miro platform)
PARTICIPANTS	Team leader, UX Team Lead, UX analyst
DATA	21 December 2020
DURATION	1:30 hour

The first activity sought to articulate the fragmented part of the situation. A co-design session was planned with a topic-driven and steering intention as a designer (Meroni et al., 2018).

Co-design activities focused on reflecting on how the company thinks and designs when it comes to services. For this purpose, three elements of Design Legacies proposed by Junginger (2015) served as structure. The activities were arranged around why, what, and how the company innovates services. To bring new perspectives, generative tools comprise elements that represent concepts from product-centric toward service-centric possible answers.
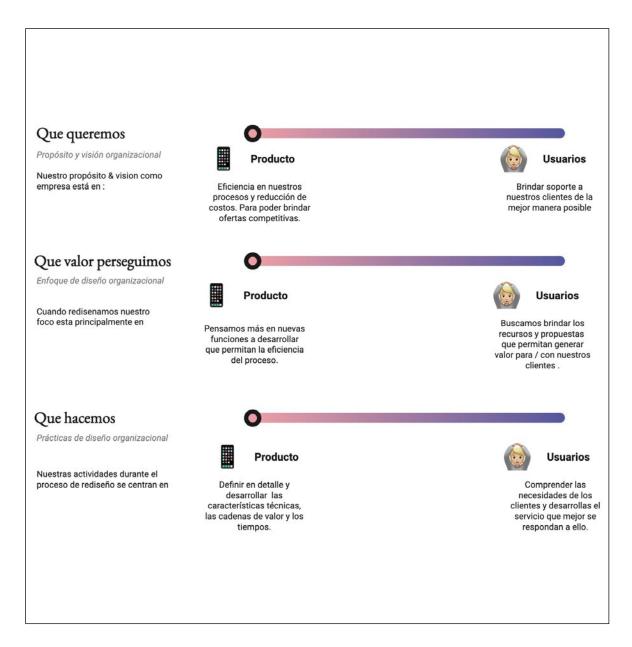
 The co-design was held online through the Miro and Teams platforms, with three team members responsible for the design and project management of new services. It was missing the participation of one project manager since it was in the holiday license. For later analysis purposes, the co-design was video recorded, and active note taking was used.

During the co-design, participants observed the correspondence between purpose, design approach, and design practices. In the end, the insights generated from the co-design artifacts opened up new paths for thinking about services differently.

6.2.1   Co-design in detail

FIGURE 30

Self assessment activity - 1st Co-design.

Que queremos
Propósito y visión organizacional

Nuestro propósito & vision como empresa está en :

Producto
Eficiencia en nuestros procesos y reducción de costos. Para poder brindar ofertas competitivas.

Usuarios
Brindar soporte a nuestros clientes de la mejor manera posible

Que valor perseguimos
Enfoque de diseño organizacional

Cuando redisenamos nuestro foco esta principalmente en

Producto
Pensamos más en nuevas funciones a desarrollar que permitan la eficiencia del proceso.

Usuarios
Buscamos brindar los recursos y propuestas que permitan generar valor para / con nuestros clientes .

Que hacemos
Prácticas de diseño organizacional

Nuestras actividades durante el proceso de rediseño se centran en

Producto
Definir en detalle y desarrollar las características técnicas, las cadenas de valor y los tiempos.

Usuarios
Comprender las necesidades de los clientes y desarrollas el servicio que mejor se respondan a ello.

The first activity focused on defining open and collaboratively how they define the company activity, their services, and the motivations and objectives for redesigning services.

The second activity asked participants to choose the definition of value (value-added, in use, co-created) that better fit the company and their customers.

The third activity in the same stream (from value-added to value co-created) asked to think about a current service and possible new technical features, translate them into new service functionalities, and finally translate it into benefits for customers.

The fourth activity concentrated on mapping the current design process for services and their activities in each phase.

All activity answers were coded with a color, pink for more 'product-centric' and purple for 'service-centric'. The revelation of the code was just before the last activity. This activity asked first to revise all activities and prevailing colors in their answers. Then they did a self-assessment [Figure 29] connecting color answers and positioned themselves about what they want (activity 1), their value pursued (Activity 2 & 3), and design activities (activity 4).

6.2.2   Findings

After downloading the learnings and the notes taken, an analysis was made around the organization's principal issues and, specifically, the team was dealing with them. [see insights]

Misalignments came up between what they pursued and the actions that were taken to accomplish objectives. Those differences could be attributed to value and service understandings, hampered by a product-centric mindset.

First of all, it was insightful for participants to see how much they focused on the technical aspects instead of users' benefits when redesigning services. Contrasting the answers between why and how they innovate, the team was surprised by the discrepancy of principles. The company's purposes pursued service-centered aims; however, value understanding and operational activities were concentrated on product-centric principles.

After that, the team explored the strategies already approached to align objectives and actions. In Particular, they indicated the introduction of new design practices as a typical response. However, they recognized that the strategy's results were not always positive. The team regularly dealt with issues like resistance to change and work against the established rules and routines.

Most importantly, a gap in the team's value understanding appeared as a solid insight to focus on in the subsequent cycles. There was no clear definition of what is valuable from services for a customer, although they considered themselves as co-creator of value. The team did not recognize it as relevant to make their work more coherent with their objectives. Instead, they just focused on creating better service features for user needs without really understanding how service systems are benefiting their customers.

For research purposes, co-design brings insights about how to proceed in terms of new knowledge integration. It became relevant the need to connect new value and service understanding with actions to alignments arise. Finally, For the following action research cycle purposes, a How Might We question was created to adapt the inquiry into the company's context:

How Might We help the team to leverage the service approach and activities in the current NSD while introducing a new perspective in the product-centered organization culture?
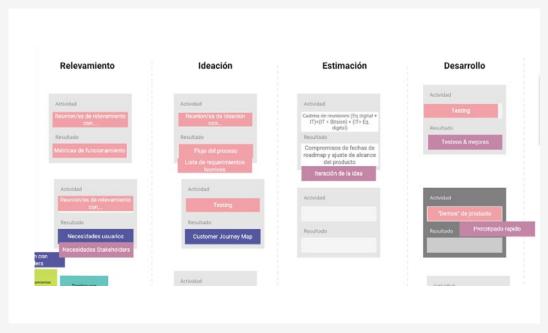
#1 Organization's motivations vs reality

The organization wanted to develop innovative and digital solutions to keep competitive in a changing market & technology. However, the activities performed during the development process focused mainly on improving and modifying exisiting services (technical features).

> **I meant that technology is advancing and if you don't adapt to that, you are becoming obsolete and customers go hand in hand. Companies that focus more on the customer generate 'that' engagment and a certain value for which the customer continues to consume.**
>
> **UX Designer**

FIGURE 31

Activity 4.1 "Current NSD process" - 1st Co-design

Note: While mapping the activities, team chosen mainly product-focused practices.

#2 Team's willingnes vs actual value understanding
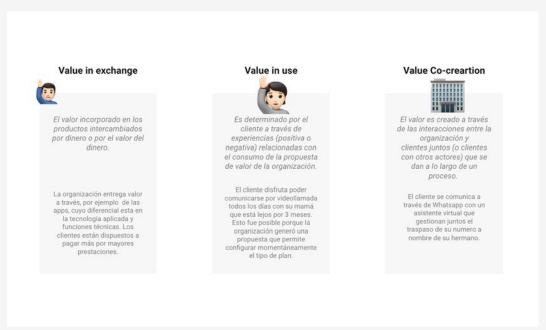
The team sought to co-create value with users to develop innovative and integral solutions but is unknown for them what is valuable or a benefit for users.

" ***The activity about relations between technical function, functionality of the service and benefits it provides, I think it's good, I think it can helps us to think about it***

Team Leader

FIGURE 32

Activity 2 " What is Value?" - 1st Co-design

Value in exchange

El valor incorporado en los productos intercambiados por dinero o por el valor del dinero.

La organización entrega valor a través, por ejemplo de las apps, cuyo diferencial esta en la tecnología aplicada y funciones técnicas. Los clientes están dispuestos a pagar más por mayores prestaciones.

Value in use

Es determinado por el cliente a través de experiencias (positiva o negativa) relacionadas con el consumo de la propuesta de valor de la organización.

El cliente disfruta poder comunicarse por videollamada todos los días con su mamá que está lejos por 3 meses. Esto fue posible porque la organización generó una propuesta que permite configurar momentáneamente el tipo de plan.

Value Co-creartion

El valor es creado a través de las interacciones entre la organización y clientes juntos (o clientes con otros actores) que se dan a lo largo de un proceso.

El cliente se comunica a través de Whatsapp con un asistente virtual que gestionan juntos el traspaso de su numero a nombre de su hermano.

Note: They struggle to define value for their clients and they assumed that were both without clear evidence about it.

Action Research

135
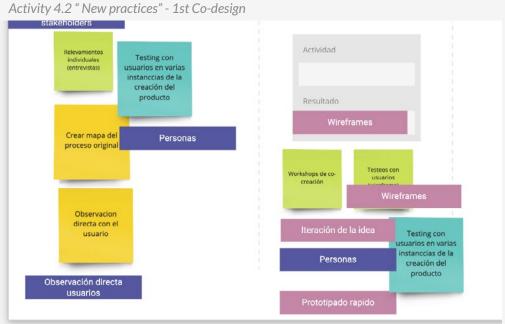
#3 Team aims vs the obstacles

The team would like to use user-centered methodologies during Understanding and Ideation stages . They have realized the value of those activities as they have reduced mistakes and produces better results for users . However, the team found challenging the introduction of new activities in the current NSD (New Service Development) , especially when it requires the involvement of stakeholers.

> *"There is motivation but it would be necessary to find a balance in time, we came with a very agile pace, we should add new tasks to the tasks we already do and that we do not exceed the time"*

UX Team lead, about the obstacles of human-centered practices implementation.

FIGURE 33

Activity 4.2 " New practices" - 1st Co-design

Note: Activity 4.2 Team selected new activities that could improve the performance during the NSD, they were more human-centered.

6.3

Envisioning – 2nd action research cycle

Two main insights guided the second cycle, first the need to integrate new design practices for human-centered design; second, parallel development of knowledge about value co-creation and service systems.

The team was willing to modify how services are redesigned by integrating new activities for a more user-centered design; it was the selected answer to achieving the objective. In parallel, awareness about the current product mindset happened during the first co-design. However, the team recognized no direct connection of this mindset with the issues to change behaviors.

To envision new possibilities, it was necessary to assure the connection of 'ways of designing' with the 'way of thinking'. For this, a co-design session was designed to

Table 06

Activity 2 - Envisioning Action Research Cycle

ACTION	Envisioning Co-design session
METHOD	Co-design session - Steering guidance (Miro platform)
PARTICIPANTS	Team leader, UX Team Lead, UX analyst, Project Manager
DATA	12 January 2021
DURATION	1:30 hour

reflect on possible obstacles to integrating new practices regarding time or resources availability and knowledge or expertise. The activities aimed to enable connections between the current culture with the practices (old and new).

The co-design consisted of four activities with a concept-driven and steering intention as a designer (Meroni et al., 2018). The session consisted of an envisioning process with activities that provoke reflection about concrete (resources) and more abstract conditions (fundamental assumptions, beliefs, and values) for practice evaluation to be integrated as new in the current design process. The reflection process was designed around an ongoing project. It sought to allow the team to be more concrete about thoughts and directly relate to their reality.

Co-design activities focused on selecting the design practices that could positively impact their overall purpose and think about why they will benefit the design process, obstacles expected, and ideas to overcome them. Considering that not all participants shared the same background, essential information about design practices was shared before starting activities to avoid misinterpretations.

ACTION	After Co-design evaluation
METHOD	Online Questionnaire (Google form)
PARTICIPANTS	Team leader, UX Team Lead, UX analyst, Project Manager
DATA	-
DURATION	-

Table 07
*Evaluation 1 -
Envisioning
Action Research Cycle*

The session was online through Miro and Teams platforms with the same members' participation in the previous co-design and project manager. Note-taking and video recording were also used for documentation of the session.

After the session, an online questionarie was shared with the participants. It consisted of open and multiple-choice questions that looked to synthesize the learnings from the first and second cycle. Questions went around what it is, what should be, and why regarding purpose, value, meaning, and actions.

6.3.1 Co-design in detail
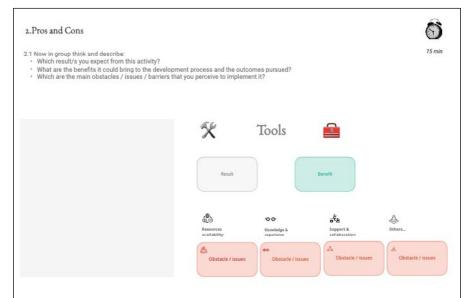
FIGURE 34
Activity 2 "Pro & cons of new practices" - 2nd Co-design

The first activity mapped the current design process activities (based on the first codesign session), and possible design practices were introduced with a synthetic definition and efforts required. After that, participants were asked to choose a project they would like to try with and pick up possible activities to include in the design process's different phases.

The second activity asked participants to choose one activity that would impact most the project selected to trigger an evaluation about pros and cons. After the selection, participants should define the expected results, the benefits it will bring, and obstacles and issues related to the implementation. Three categories were created to guide the exploration of implementation barriers: resource availability, knowledge & expertise, and support & collaboration.

The third activity created a space for brainstorming about possible ways of overcoming those obstacles noticed.
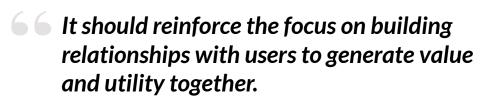
The last activity looked for synthesizing the ideas and creating a definition about the practice and its characteristics to achieve the results expected as a team.

6.3.2   Findings

In general, the activities worked well for the pre-established objectives. First, the connection between the way of designing and thinking started to became real. They started to connect with an actual project and reflected on the necessity of new value understanding, capabilities, and source allocation for new practice integration. Second, further information about design practices supported the decisions and evaluation efforts to implement them.

The co-design helped the team be proactive and get more confidence to try a new way of doing while designing services, generating insights about possible solutions to current problems in practice integration. Complemented from the questionnaire's answers, the team members recognized the lack of user and service system consideration for the whole design process, often having fragmented information.

It became evident the prevalent company mindset focused on single products that did not consider users as an active element for value creation, just the recipient. Participants agreed on integrating users for successful value co-creation, not only by listening requirements but also by creating conversations about how the service is and could be.

> 66 *It should reinforce the focus on building relationships with users to generate value and utility together.*
>
> **Team Leader, questionnarie answer.**

Co-design methodology was selected as the activity to be integrated into the current design process. This new activity sought to replace traditional 'committee meetings' where the team explored new possibilities with stakeholders. However, connected with the company assumption about value, participants were fearful about their capabilities to perform the new activity selected. The fear was due to a lack of knowledge and possible rejection inside the organization.

> 66 *...but as the company is now and the bureaucracy it has, it seems to me that new methods are complex to implement and to see the value.*
>
> **UX Designer, Envisioning Co -design**

Most of the efforts and possibilities to perform the first co-design concentrated inside the team due to recognizing themselves as different from the company mindset. The team did not consider other stakeholders for preparation activities for the next cycle.

Finally, members expressed that collaborative methodology worked well to make concrete points of view of team members, realizing the reasons behind the purpose and the action misalignments. As a result, they felt a strengthened team with more confidence, theoretical and practical knowledge applicable to their reality, and more precise objectives.

#1 New possible way of doing, Co-design.

They were able to discuss positive changes this new activity can bring for the exact moment of the process and past and unresolved issues and potential obstacles. Three were the results expected for applying the new practice: (1) Include different perspectives & Experiences, (2) Accurate data collection from direct users, (3)Enrich the understanding with insights from a first idea.

Action Research

" *Nowadays we need to have the right data, the creative part we have, sometimes we collect information from committee meetings format, and sometimes that info is not well communicated or they are not willing to do it*

UX Team Lead

" *I expect to bring this to the practice, how to take it that we have designed, which steps they would have to do and with which tools."*

Project Manager

#2   The benefits of new capability integration
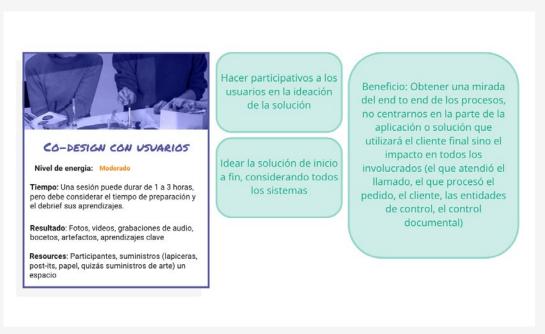
The team hoped to make the user more participative in the solution ideation and have an end-to-end solution, considering all actors and systems involved. Regarding the relationship with stakeholders, they would like to generate engagement, compromise, and motivation to collaborate to support a manageable ideation process, with more flexibility and better coordination internally.

> *"It is more practical to have face to face with super specific people, small groups, I think that in a co-design session it will be much more productive."*
>
> **UX Team Lead**

FIGURE 35

Activity 2 "Benefits of integrate Co-design method" - 2nd Co-design

CO-DESIGN CON USUARIOS

Nivel de energia: Moderado

Tiempo: Una sesión puede durar de 1 a 3 horas, pero debe considerar el tiempo de preparación y el debrief sus aprendizajes.

Resultado: Fotos, videos, grabaciones de audio, bocetos, artefactos, aprendizajes clave

Resources: Participantes, suministros (lapiceras, post-its, papel, quizás suministros de arte) un espacio

Hacer participativos a los usuarios en la ideación de la solución

Idear la solución de inicio a fin, considerando todos los sistemas

Beneficio: Obtener una mirada del end to end de los procesos, no centrarnos en la parte de la aplicación o solución que utilizará el cliente final sino el impacto en todos los involucrados (el que atendió el llamado, el que procesó el pedido, el cliente, las entidades de control, el control documental)

Note: Team expressed which adventages could bring the change of traditional 'commitee meetings' for co-design sessions.
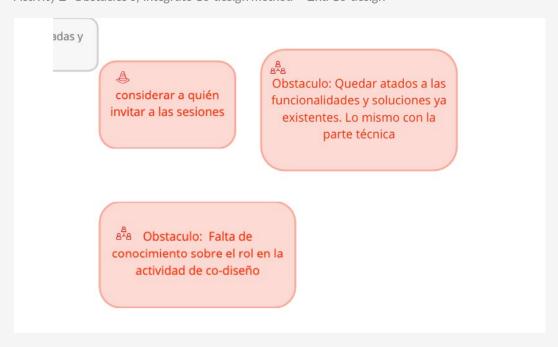
#3 What can hinder the integration

There was a particular concern about three aspects of co-design activity: external reception, team capability to perform it well, and a new way of thinking service integration. Regarding stakeholders, the team was concerned about a lack of understanding of their co-design activity role. As a team, they would like not to perform it as a committee format because of the lack of knowledge. Finally, they wanted to avoid the unsuccessful integration of new ways of thinking, remaining attached to current solutions, functionalities, and technical aspects.

> ❝ *"We should go in depth and understand the method, because I am afraid that there is a fine line to return to what the dynamics of the committees were."*
>
> **Team Leader**

FIGURE 36

Activity 2 "Obstacles of integrate Co-design method" - 2nd Co-design

considerar a quién invitar a las sesiones

Obstaculo: Quedar atados a las funcionalidades y soluciones ya existentes. Lo mismo con la parte técnica

Obstaculo: Falta de conocimiento sobre el rol en la actividad de co-diseño

Note: Team mentioned potetial issues about the lack of knowledge about the method to perform it or to participate.

Action Research

6.4

Experiencing – 3rd action research cycle

The opportunity created in the team brought the focus around increasing the new value co-creation system and practice understanding and connecting this to an actual project.

The team's motivation for change assured the allocation of necessary time and resources to bring new practices into reality. In particular, the team defined itself as responsible for spreading innovative practices and concepts within the organization; thus, preparation activities focused only on the group.

The third cycle activities were distributed in preparing, doing, and reflecting with the team about a co-design pilot inside the company. In this case, researcher work concentrates on supporting the team to perform the pilot of the activity. Those activities' objectives were to transfer knowledge about co-design methodology and think about services as service systems that create benefits for users.

During the preparation phase, the co-design pilot was planned with the UX team lead and two ux designers. The process started from acknowledging the project's current state regarding the design process and working with the team's first customer journey map (CJM).

ACTION	Preparation meetings
METHOD	CJM , Blueprint, Supportive Guide (Miro / Teams platform)
PARTICIPANTS	2 UX designers & UX Team Lead
DATA	January - February 2021
DURATION	3 meetings 1:30 hour

The first part of the planning was made in three meetings to review the CJM. Each meeting lasted 1,5 and took place during the end of January and the beginning of February. The objective was to map as much as possible the current service and determine punctual doubts to be addressed in the co-design session. In between meetings, the team worked internally to complete and review the journey by gathering data from stakeholders. A small guide about steps to iterate the journey map was shared to support this activity.

In the middle of the process, a sharing session about co-design methodology, the beginnings, the purposes, and characteristics was held with the whole team. The session helped to deepen knowledge and complement the ongoing preparation.

ACTION	Sharing session
METHOD	Presentation (Teams platform)
PARTICIPANTS	(5) Team Leader, Projec Manager, 2 UX designers & UX Team Lead
DATA	09 Februrary 2021
DURATION	1 hour

The CJM became a Blueprint that started to map the service's complexity, and it was split into two different channels since two different types of front-line had different journeys. The co-design tools and guide were developed with them in three meetings with 2 hours of duration in total in the last two weeks of February. The roles were distributed to facilitate the session.

ACTION	Actors Co-design session - Frontend screening
METHOD	Co-design session - generative tools (Miro platform)
PARTICIPANTS	(4) 3 front line employees and sales channel leader
DATA	11 March 2021
DURATION	1 hour

Table 10
Activity 5 - Exploring Action Research Cycle

ACTION	Stakeholders Co-design session - Frontend & Backend screening
METHOD	Co-design session - generative tools (Miro platform)
PARTICIPANTS	(3) 2 supervisors and sales channel leader
DATA	12 March 2021
DURATION	2 hours

Table 11
Activity 6 - Exploring Action Research Cycle

After carrying both co-designs, the reflection phase started. An online questionnaire was shared with the team members. It consisted of open questions about the pilot's performance regarding benefits and obstacles identified in the second cycle, significant learnings, and impact in the balance between purpose, value meaning, and actions.

ACTION	Post codesign Questionnaire with the Team
METHOD	Online Questionnaire (typeform platform)
PARTICIPANTS	(4) Team Leader, 2 UX designers & UX Team Lead
DATA	15 March 2021
DURATION	-

Table 12
Evaluation 2 - Exploring Action Research Cycle

ACTION	Retrospective meeting
METHOD	Brainstorming - Voting (Ideaboardz Platform)
PARTICIPANTS	(4) Team Leader, 2 UX designers & UX Team Lead
DATA	18 March 2021
DURATION	1 hour

Table 13
Evaluation 3 - Exploring Action Research Cycle
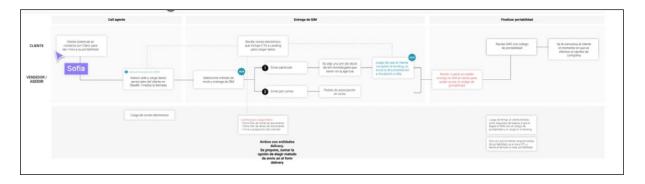
The questions served as a preparation for a retrospective session proposed by a UX designer. During the session, brainstorming was developed around what worked, what could be improved, and ideas for improvements. Later, the ideas were voted for future implementations by the team.

Additionally, with the artifacts created during the co-designs and retrospective session, all meetings were video recorded, and note-taking was also implemented to collect the data.

6.4.1   Findings
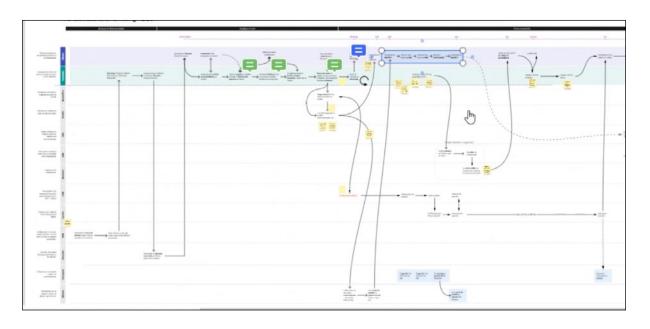
Results of this cycle were highly positives for the cycle itself and the whole inquiry process. Preparation activities had an essential role in consolidating new understanding and definitions around value co-creation. Simultaneously, the co-design sessions experience catalyzed the relatedness between thinking and designing services, opening new spaces for transformation inside the company.

FIGURE 37

First Customer Journey Map of the project.

Note: In the beginning of the process the team had mapped a small CJM of the service.

FIGURE 38

Last Blueprint of the project.

Note: By the end of the process they were able to understand better the service complexity having mapped all elements and their relationships.

After new knowledge acquisition and supporting activities, they mapped the current service in its complexity, acknowledging the service system's elements: actors, technology, information, and relationships. The services' holistic perspective also helped determine precisely the objective and key actors for the co-design session.

A unique role had the sharing session; it was an inflection point in articulating new knowledge. They realized the sense of starting to call 'services' instead of 'processes' when referencing the redesign object. It also clarified the co-design's purpose in the design process, reducing the urgency of having a 'defined idea' to be tested and open up space of generation in line with the team needs.

Nonetheless, stakeholders offered resistance to participate and collaborate since they did not see the activity as valuable. They considered that for the purposes, a regular meeting was enough without compromising time and resources. To overcome the hurdle, informal conversations and explanations regarding the importance of their participation in this activity were necessary. Finally, the stakeholders and actors were invited with a glimpse about the activity aim and procedure and indications for the Miro platform use.

> ❝ *When referring to Services, is what we actually call Processes?*
>
> **Team Leader, sharing session**

The co-design sessions bought gainings for everyone that participated. For the team, the integration of the diverse parts of the service with accurate data, the clarification of user needs, and objectives in the next steps of the design process. Participants were proactive and welcomed the method, particularly the playful and participative approach and the suitability to express the tacit knowledge about service and reflect on that. The stakeholders recognized that co-design was not the idea they had in mind and allowed them to express their thoughts creatively.

Finally, at the end of the inquiry process, members reflected on what had changed, highlighted the awareness gained about the misalignment between purpose and action, and the redefinition of value appeared as a foundation of transformation and continuity. They recognized this as a good starting point and have started to apply it as an approach in other services and share and involve other company areas always supported by the top management.

FIGURE 39

Retrospective Session.

Note: Each participant had the turn to express what worked, what not so well and possible improvements. Then

everyone voted the most relevant to continue working on.

Summary

Each cycle allowed to advance in the inquiry process from general understanding to concrete actions.

The integration of the Design for Services approaches and methodologies in the current organizational culture modified the perspective by which Claro defines its services. By changing the service interpretations, new opportunities for innovation appeared. None of this would have been possible without new design practices incorporation.

To synthesize the process, main relations between aims, cause and effects in action research cycles are illustrated in the Figure 40.

Action Research

FIGURE 40

Action Research Summary.

ORGANIZATION
PRODUCT-CENTRIC CULTURE

DESIGN FOR SERVICES
SERVICE MINDSET & METHODOLOGY

Aims

Actions

Results

Reflecting about the current scenaro in which services are designed.

Co-Design session
Steering & Topic-Driven
EXPLORING

To explore Why, What, and How the company innovates services and comparing answers rapport with product-centric or more service-centric principles.

• Awareness about misalignments between service-centric purposes and product-centric actions.

• Sensing the need to modify design practices.

• A value understanding gap became visible but it was not considered as the cause of misalignments.

Evaluating changes in the design process for specific project that would lead to better service design outcomes.

Co-Design session
Steering & Concept-Driven
ENVISIONING

To imagine new and more service-centric futures, acknowledging current limitations, and proposing further actions.

• Recognition of organizational product-centric culture as main obstacle.

• New practice proposal (co-design) for holistic and user-centered view of services.

• Resource allocation to learn and introduce the new practice.

Integrating new design practices and knowledge in the current culture.
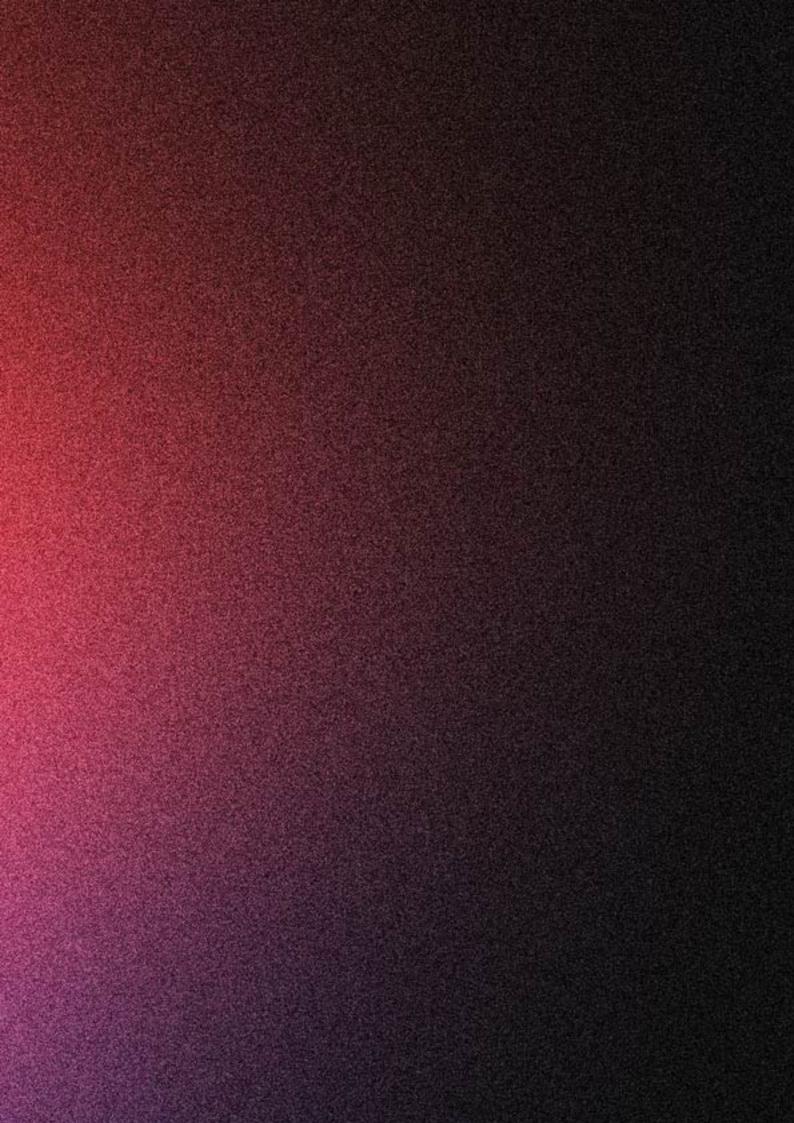
Training & Coaching
EXPERIENCING

Regarding blueprinting and Co-design as methodologies to support knowledge building about value co-creation and service system.

• Service system understanding in its complexity based on accurate data.

• Redefinition of what is valuable for users, bringing opportunities for innovation.

• Motivation to continue the transformation of design practices more aligned with the purposes. Boosted by the new understandings of value and service these practices bring.

SERVICE-CENTRIC CULTURE

Action Research

.07

Discussion

Results discussion

Traditional companies started to embrace servitization strategies by increasing service-based business models. However, they often cope with a service paradox where their investment improves neither revenues nor customer satisfaction. An organizational transformation in service culture and mindset should take place inside companies to overcome the service paradox while supporting new ways of doing business.

The study results show service designers' inquiry process as suitable to give rise to a new service culture inside of a product-centric organization. The distinctive practical approach is represented as a guiding framework for designers in Figure 39.
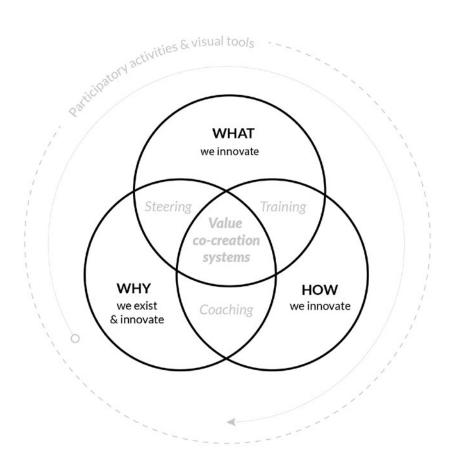
Service designer practices can contribute to the servitization process by carrying out an inquiry process delimited by transformation areas, instilling a new perspective around service as value co-creation systems, generating employees' engagement for change using participatory activities and visual tools and adapting the designer's role. This approach for working can be used in an iterative way to amplify the results inside organizations.

FIGURE 41

Guiding Framework for Designers.

Transformation areas

FIGURE 42

Areas for Design Inquiry.

Keep clear the subjects of exploration strengthen the process of inquiry. It allows the comparison between initial, during, and after states and evaluating the transformation process.
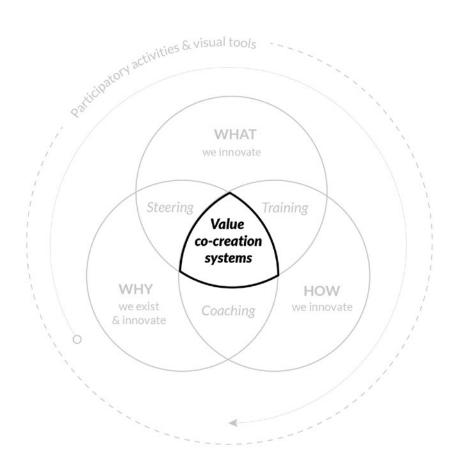
Structuring the inquiry process around the three elements of Design Legacies proposed by Junginger (2015) served as a reference to guide the transformation and help to reduce resistance to change by lack of understanding about the relationship between new behaviors and service and value definition stated by Gebauer et al. (2005).

The recognition of gaps between the three areas was an inflection point for sensing the opportunity of change (1st cycle) and making sense of the organization's reality and possible futures (2nd cycle). Reflecting on Why they exist (Purpose), What is valuable from service (Design approach), and How to design (Design practices) also performed as a self-assessment tool for the end of the inquiry process to evaluate what has changed.

In organizations' undergoing the servitization process, the primary outcomes of the areas are amplified. Additionally to the conversational goals established by Junginger (2015), the areas also opens paths for value redefinition that unlock the Design Legacies elements' alignment.

Instilling a new perspective: Value co-creation systems

FIGURE 43

The central argument of the inquiry process.

New value and service understandings are the axes for culture change. The Service Design methodology opens new paths for innovation by boosting the evaluation of the service in terms of service systems and value co-creation.

If Design Legacies elements delimit the pathway for transformation, Service Thinking (Sangiorgi, 2012) is the motor of change from product-centric to service-centric culture. Thinking about value co-creation systems is the central argument for exploring and transforming the Why, What, and How of innovation in services.

Introducing new variables to explore what generates value in services is the most valuable contribution from service designers to the organization approaching service growth strategies, contributing to the service understanding shift indicated by Nuutinen & Lappalainen (2012) and Kindström & Kowalkowski (2014).
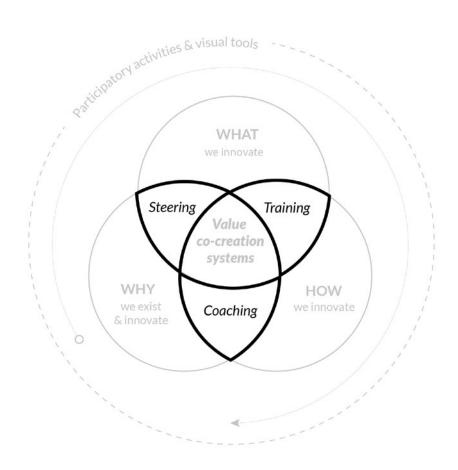
This new way of thinking expands service reasoning from solely interaction between customers and company through touchpoints to the complex system of humans and artifacts interrelated that generates benefits to actors. This result aligns with the service system definition (Maglio & Spohrer, 2008; Vargo and Lusch, 2004) and the Design for Service approach (Manzini, 2011; Kimbell, 2011).

The new perspective embedded in the diverse activities and tools allows spotting new opportunities for innovation and generation of value, as stated by Sangiorgi (2012). The recognition of technical innovation approach and lack of understanding about value for users (1st cycle), the insufficient involvement of stakeholders and users during design processes (2nd cycle), and the increasing service complexity management (3rd cycle) can be mentioned as the results of new perspectives introduced in this case study.

The widened service view also generates the engagement and proactiveness to change the way of doing design (Design practices). In the study, the knowledge gained about their services and opportunities to innovate (2nd and 3rd cycle) gave purpose to the company for resource compromise for new practices. The combination of theory with practical action appears as an indication of Design for Service suitability for bringing to practice the Service-Dominant Logic principles as indicated by Wetter Edman et al. (2014).

Service designer role adaptation

FIGURE 44

Designer's role during the inquiry process.

Fostering a transformation inside an established organizational culture requires not only introducing new concepts or methods. It is also necessary to steer the reflexive process while building new knowledge and capability that supports articulation with organization context.

Leading an inquiry process with transformational aims demands different actions that support articulating a new service mindset inside a product-centric organization. The study contributes to determining the correspondence between the moments in the process and the designer's role.
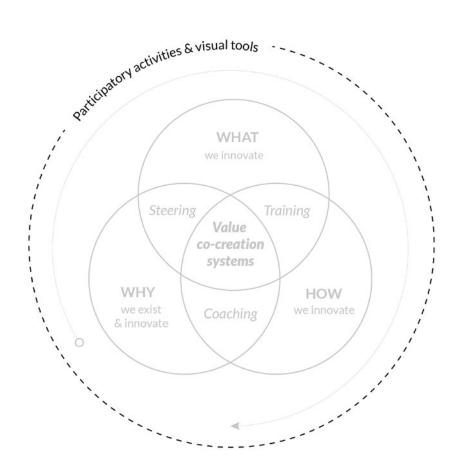
The steering role is appropriate at the beginning of the process, especially to enable awareness of gaps in value understanding that hindered the objectives' fulfillment.

Moving in the inquiry processes, formal training activities stand out as potential new contributions for transformation processes. Application of new value and service understanding through new behaviors required transference of design practices knowledge such as service mapping regarding the different elements and steps of co-design session creation to fill the gaps in blueprint and new ideas generation.

Finally, coaching activities are what crystallize new knowledge and capability into the organizational context. Once an organization's endeavor for change is generated, the designer supports the process by recalling the process's main insights, giving contextual examples and training to help in 'on demand' requirements. As the study shows, preparation meetings and informal conversations were required to blend activities in their reality for new activities implementation.

Visual and Participatory engagement

FIGURE 45

Methodology and tools to performing the inquiry process
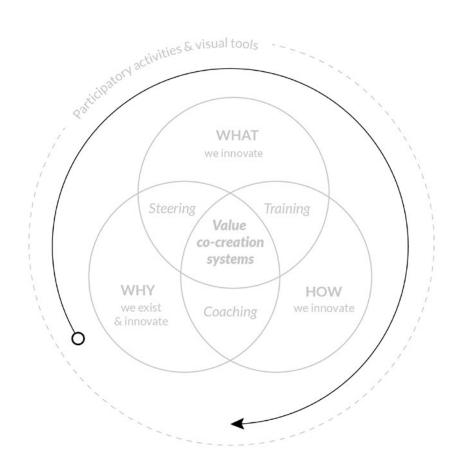
Implementing participatory activities and visual tools to carry out the inquiry process converts abstract elements of culture into parts to be acted on and becomes the communication language for transformation.

The presence of boundary objects that support collaborative conversations enables active participation for organizational change (Burns et al., 2006). Participants become capable of interpreting and making changes in their reality by themselves.

The combination of both into a single technique generates spaces of sharing and construction for new possible futures. During the study, co-design activities supported by visuals prompts were recognized as positive, helpful ways to bring different perspectives, synthesize ideas about the current situation (1st cycle), and clarify what to achieve (2nd cycle).

The results confirm the claims of Sangiorgi et al.(2013), Junginger (2015), and Calabretta et al. (2016) that indicated workshops, co-design, and visual tools as a way to approach transformational projects.

Culture transformation starting point

FIGURE 46

Framework iteration.

The process is iterative. A complete cycle can lead organizations with new learnings and results. Moreover, more questions can arise or new people can get involved. The model can be used as many times is needed to reach a desired balance between culture and business models.

The inquiry process has laid the foundations for scaling transformation to other projects and organization members. Knowledge transference and tool sharing during the inquiry process leaves the participants the capacity to apply in different projects and spread the new mindset to other members by translating into their language and practice infusion, as findings in the last cycle indicated.
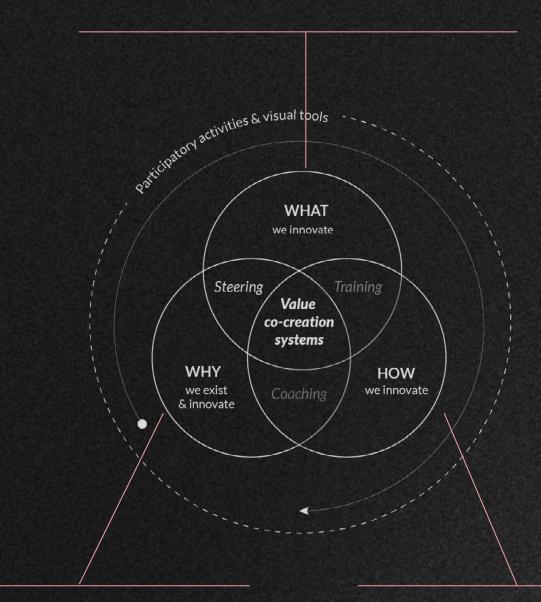
Results can be compared with the Flywheel model and Telekom Deutschland GmbH case study in which the 'snowballing effect' is how cultural changes unfold within an organization. This reinforces Burns et al. (2006) 's claims that transformational projects should leave people with instruments for continuing the transformation.

FIGURE 47
Framework results example - Exploring Phase.

EXPLORING in Claro

UX Designer

" We are focus on technology and functionalities, but there is starting in listenining more the user"

UX Team Lead

" We simplify processes between the client and the front line, we reduce the use of paper"

UX Designer

"The market and technology change and we have to adapt, search for better positioning"

UX Designer
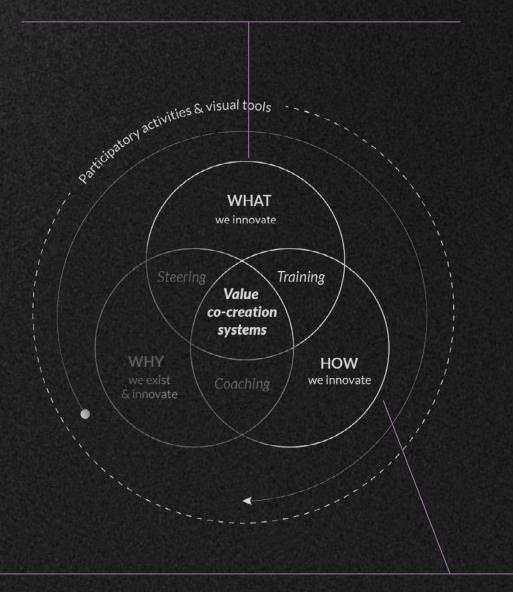
" If we think about our motivation, we want to be more innovative and stand out"

Team Lead

"First stages of design process are essential because when you go too far, you underestimate the process and the problems show up, we have a thousands examples of that"

FIGURE 48
Framework results example - Envisioning Phase.

ENVISIONING in Claro

Team Lead

" We have to broaden our perspective not only look to the part that is resolved in the app, but the entire process"

Project manager

"We can involve and motivate stakeholders, make them want to collaborate, make them want to take ideas to think about"

Team Lead

"I would seek a look at the process level; co-design seems excellent to me when it comes to going with an idea and involving end-users."

FIGURE 49
Framework results example - Experiencing Phase.
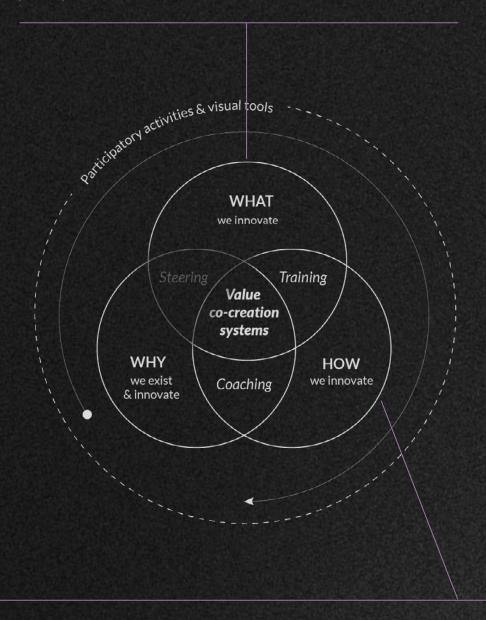
EXPERIENCING in Claro

UX Designer

"We know the current process with the interactions of people, systems and actions they carry out"

UX Designer

"I think the value we are pursuing was modified, more inclined to the user"

Team Leader
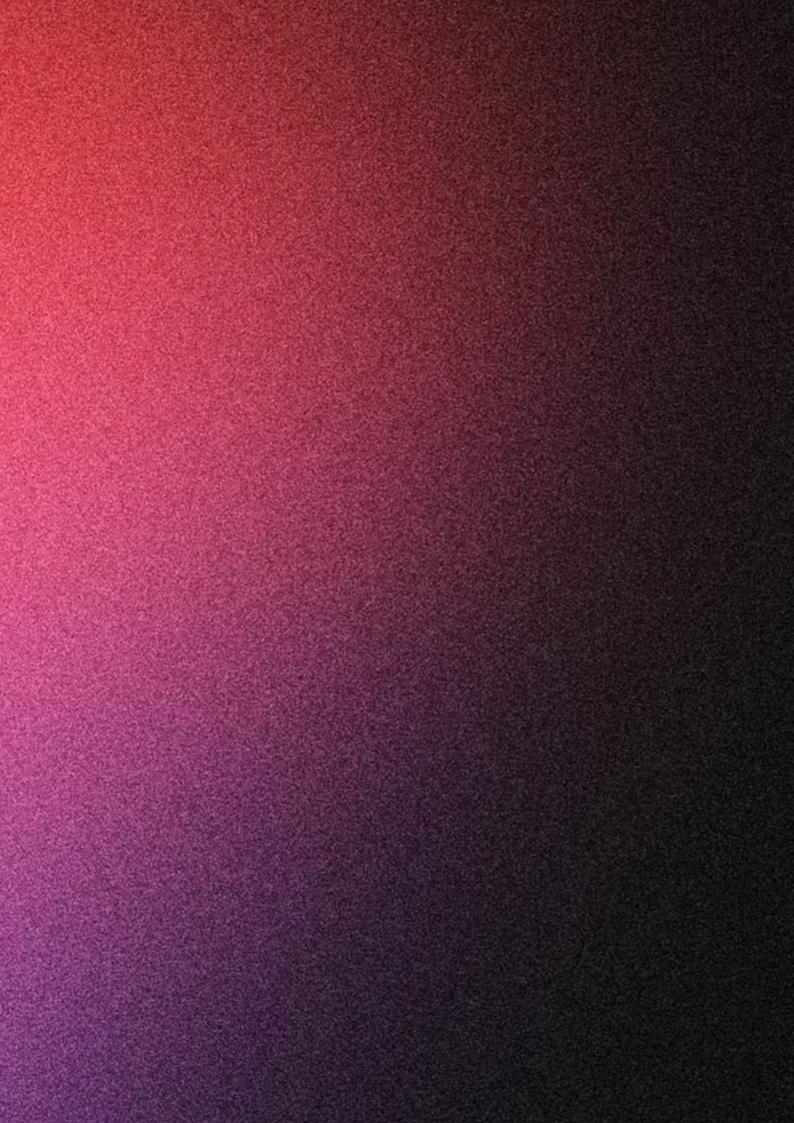
"We are able to integrate all parts of the process, making it visible that we are all connected under the same principle"

Stakeholder, co-design session participant

"We were able to see what is happening to the users. Sometimes we have in mind the process mechanically and in our routines, it's good to detach from that"

7.2 Limitations of the study

The number of participants and type of company limits the generalizability of the results. First, it can not be concluded from the study that cultural change happened in the organization as a whole since the participant sample was five (5) people regarding the company's large size. Second, the study was held in a large telecommunication company in Argentina. For this reason, results were analyzed regarding the context of research and another size, sector, or country economy can modify the designer work's outcomes.

The Design legacies elements preponderance during the study, particularly in the first and second cycle, interfered with the actual context integration. This issue was amended when a real project had equally place in the process as happened during the last research cycle. The omission of real project inclusion in earlier stages of the researcher's inquiry process also resulted in the lack of preliminary determination of stakeholders to adopt new behaviors and value co-creation sensitization. Due to the lack of connection with the whole inquiry process, stakeholders' resistance and setbacks for context integration appeared, although they were partially remedied with informal communications.

.08

Conclusion

The research aimed to explore Design for Service practical implications for supporting cultural transformation in a product-centric organization undergoing a servitization process. The action research consisted of three cycles, each of them focused on one step to the inquiry process.

First, during the cycle called Exploring a Co-design session has a place for picturing the current situation regarding Why, What, and How the company innovates services. A range of elements from product-centric to service-centric was provided to answer the questions. This allowed introducing new perspectives to think services, unveil misalignments between principles that guided the Why, What, and How - ones more inclined to services and other to products-, and start sensing the need for change.

The second cycle, Envisioning, focused on seeing which modifications can lead to better alignment and results. A Co-design activity focused on evaluate the opportunity

for change, breaking it into parts such as benefits, obstacles, and actions to overcome them. As a result, co-design methodology was chosen as an activity to integrate into the design process to obtain a broad and more user-centric view of the service. Resource allocation, practical and theoretical knowledge acquisition were indicated as requirements to change.

In the last cycle, Experiencing, actions were directed to increase understanding about value co-creation, service systems while performing the new practice. Training activities and a co-design pilot traduced to understand better the service complexity, where value is created, and what opportunities for innovation.

This initial work in the organization set the basis to continue the culture change. The study has left new perspectives and tools to support the ongoing initiatives to innovate services and experiences. The team decided to scale these learnings to other projects and business areas. Subsequent actions will replicate blueprinting and co-design sessions in other services to build knowledge about service systems in which value is co-created.

Based on the qualitative analysis done during the study in the company, it can be concluded that service designers can place the seeds for the organization towards service-centric culture and mindset and support managerial initiatives.

By conducting inquiry projects that explore why, what, and how organizations innovate in services while instilling a new value co-creation system knowledge, designers can reach transformational levels. This process allows to raise awareness of organization misalignments that lead to negative results, trigger the need for change and give support for true transformation. Designers count on participatory activities, visual tools, and the role metamorphosis from steering, training to coach, making the transformation possible.

Based on these conclusions, practitioners should consider applying a framework of reference for the inquiry process and have solid expertise in handling value co-creation, service systems, and service thinking knowledge and tools. It could be helpful to include envisioning

tools such as systems maps to enable conversation about the benefit, interaction, and value supported by a concrete example of service systems. Future studies could address the application of this designer work's model in other industry sectors, organizations, or sample sizes to better understand the implications of the results.

To conclude, the existing design literature about Service Design discipline for organizational change and service mindset introduction (Junginger & Sangiorgi, 2009; Sangiorgi, 2012; Meroni & Sangiorgi, 2012; Junginger, 2015), integrated during the study confirms the suitability for supporting organizations to servitize while embracing a Service-Dominant Logic. The results also inform with empirical data a guiding framework that other designers could replicate in different product-centric organizations or projects for successful service innovation.

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