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Infrastructuring the foundations for a service-dominant orientation

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Abstract: Design has been identified as a transformational approach to help organisations build capabilities to become customer-centred and adopt a Service-Dominant Orientation. However, there's a need to study how to develop the enabling structures that support and sustain these capabilities in time and at scale. This study explores how transformational work done at a large international retailer helped develop the enabling structures that support these organisational level capabilities. The concept "infrastructuring" is proposed as a valid construct to analyse the ongoing strategic design work done to support the adoption of new practices and tools that will shape a new organisational logic and set the conditions for the introduction of service design. This work suggests designers should refocus their attention beyond methods and tools, acknowledging the hidden infrastructures inhibiting transformation within organisations.

Keywords: strategic design; infrastructuring; service-dominant orientation

1. Introduction

Traditional retail is undergoing many challenges, which were accentuated by the 2020 global pandemic. In recent years, the emergence of e-commerce affected fashion retail giants by reducing footfall and sales (The Economist, 2017). While e-commerce kept on growing and affecting physical retailers (Peterson, 2018), the 2020 lockdown dramatically accelerated this trend, at a moment where physical retail spaces were forced to remain closed. Former giants filed for bankruptcy in the US and Europe, affected by lockdowns (Cain & Stone, 2020), many alleging, among other motives, competition from online *pure-players* (online-only); many other players were similarly affected. (The Fashion Law, 2020)

While demand is expected to remain diminished compared to pre-pandemic levels, customers are acquiring new habits and becoming more aware of the industry's footprint on the world, social and environmentally. Previously reluctant consumers adopted online shopping, while questioning their consuming habits, and favouring environmentally and

socially responsible brands whose actions are aligned with its communicated values. (Bianchi et al., 2020)

Fashion retailers can benefit from understanding and reacting to this renewed consumer behaviour, as well as enhancing their shopping experience, both online and in stores (Business of Fashion and McKinsey & Company's, 2020), reconsidering their relationship with partners and rethinking their organisations' structure and capabilities (Bianchi et al., 2020). Tackling these issues means organisations need to undertake ambitious transformation processes.

This necessity to innovate calls for companies to shift their focus from the production outputs, units of output (i.e., products) to the *operant resources*, such as competences, skills, knowledge, technology, or processes (Vargo & Lusch, 2016), which can act upon or modify other resources; in other words, to adopt a Service-Dominant Logic (SDL) (Lusch et al., 2007), enacted in a Service-Dominant Orientation (SD-Orientation). (Karpen et al., 2012)

This call for a strategic shift in business mindset into becoming more service-oriented has attracted the attention of the design field. On one hand, strategic design has been considered as a way to think beyond traditional tactic design projects, by approaching systemic change that shapes and evolves organisations (Meroni, 2008; Windahl et al., 2020). On another hand, transformation design has been described as an approach to create fundamental change and build capabilities in a collaborative manner. (Burns et al., 2006; Sangiorgi, 2011)

Grounded on existing studies on how design is affecting organisational transformation (Aricò, 2018; Kurtmollaiev et al., 2018), particularly within product-oriented organisations (Sangiorgi, 2013), this article will explore the development of organisation-level capabilities through strategic design activities that shape organisational transformations. Furthermore, it will propose the concept of Infrastructuring to describe the institutional work done towards transformation from a Goods-Dominant Logic (GDL) into an SDL.

1.1 Design as an approach for Service-Dominant Orientation

Manufacturing companies need to go through a major shift from thinking about goods as the fundamental economic exchange, a perspective known as a Goods-Dominant Logic (Vargo & Lusch, 2004), into a mindset focused on service as a way to approach business and innovation (Grönroos & Helle, 2010) that places value as driven by the beneficiary (Grönroos & Gummerus, 2014) instead of inherent to the company's offerings. In SDL, organisations are value facilitators, proposing potential value to customers or users, as well as directly interacting with them to influence the value co-creation process; the adoption of this perspective brings broad organisational challenges, such as the necessity of understanding customer's needs and practices, as well as redefining the company-customer relationship (Grönroos & Gummerus, 2014). Moreover, other capabilities have been proposed: a new set of organisational strategic capabilities that support and enact an SDL mindset has been defined by Karpen et al. (2012) as a SD-Orientation. These capabilities are the following: "(a)

understanding individual customers' resource integration processes, contexts, and desires [individuated interaction capability]; (b) communicating with and relating to customers through social interaction processes [relational interaction capability]; (c) engaging with customers in fair and nonopportunistic interactions [ethical interaction capability]; (d) empowering customers to influence the service processes and/or outcomes [empowered interaction capability]; (e) helping customers develop their own operant resources [developmental interaction capability]; and (f) coordinating and integrating service flows toward customers [concerted interaction capability]". (p. 32, brackets added)

Besides building these new organisation-level capabilities to enact an SDL, the relevance for retail companies of focusing and improving their customers' experiences places service design (SD) as central discipline to develop (Karpen et al., 2017), for its association with the development of product-service systems (PSS) — "a marketable set of products and services capable of jointly fulfilling a user's need" (Goedkoop et al., 1999) — that can reframe manufacturing organisations' offerings and business models (Bharma et al., 2017). Besides, SD has been proposed as a transformational approach to challenge the way organisations think and approach innovation, even if selling products, by providing tools to understand "users, their activities, interactions, and experiences in context". (Wetter-Edman et al., 2014, p. 118)

Aligned with these considerations, Holmlid et al. (2017) argue that design should be seen as an activity of reconfiguration processes, which include "developing new technology support, reorganization, changing physical structures, creating new agreements with other organizations, changing how customers participate in the service, making information material, setting up training programmes" (p. 99). In this perspective, the designer's work is to set up the conditions that enable service to become, that allow for communities and organisations to keep on enacting these reconfiguration processes that are necessary for (new) services to unfold. (Ehn, 2008; Kimbell & Blomberg, 2017)

Furthermore, Josina Vink (2019) proposes social structures as the design materials of service ecosystem design, pulling the attention away from a prescriptive role of the designer and focusing on its role as a changemaker within an organisation. Designers are helping shape institutions by doing "institutional work", questioning existing organisational logics, and proposing new ones (Kurtmollaiev et al., 2018). The link between design and institutional logics has also been made by Windahl et al. (2020) by referring to strategic design as intentionally challenging and shaping the meaning of the value-creating systems. Anna Meroni (2008) also refers to strategic design as a key approach to create "a system of rules, beliefs, values and tools to deal with the external environment, thus being able to evolve (and so to survive successfully), as well as maintaining and developing one's own identity" (p. 32), reinforcing the idea of these social structures as material of the design work.

It becomes clear that the designer is far from being only a creator, acquiring a more strategic and transformative role, acting as an enabler, or facilitator of transformative practices, working both on the social and material aspects of organisations. However, research on *how*

to create the conditions to sustainably build these capabilities and enable this reconfiguration process through design at scale has not been studied, particularly in the context of goods-focused companies. As advanced by Malmberg (2017), it is important to identify *how to develop and sustain the enabling structures that support these new organisational capabilities* that allow organisations to better interact with their customers to co-design mutually beneficial resource integration processes.

To develop these organisation-level capabilities, it is not enough to be aware of design's relevance and hire designers to direct their talent into the development of new solutions (Malmberg, 2017; Sangiorgi et al., 2019). Professionals face organisational scenarios with design legacies to be acknowledged and faced (Junginger, 2015). Accordingly, the approach of knowledge transfer to build capabilities in non-professional designers (or designers from various other fields) is also not enough. There must be a double effort, from both organisations and designers, to build real organisation-level capabilities; organisations must give space for cultural change to happen within its structure so that design practices can become integrated in the organisation's existing practices, which Malmberg (2017) refers to as "enabling structures": the conditions for the design knowledge to be sustained and applied. This work around capabilities and their enabling structures on an organisational level means that design work is dealing with transformative processes to implement human-centred practices driving cross-organisational and multidisciplinary value co-creation (Sangiorgi et al., 2019), intentionally working on an institutional level, questioning existing organisational logics to introduce news ones. (Aricò, 2018; Kurtmollaiev et al., 2018; Windahl et al., 2020)

Research has been done about the necessary capabilities required for enacting an SDL, as well as those supporting the introduction of SD within an organisation. Research has also been performed on the elements of design capabilities, as well as how organisation actors contribute to its development. However, it's still important to understand how to create the conditions for SD to be considered, how to develop an SD-Orientation, prior to (or in parallel to) introducing SD and SD capabilities, in coordination with other exiting design capabilities of an organisation.

The author uses the case of Mango to reflect on how to develop these enabling structures. This paper will describe the transformational work developed at Mango aimed at creating the "enabling structures" that support new organisational S-D Oriented capabilities. The author will then suggest the concept of infrastructuring as a valuable theoretical construct to help make sense and analyse the Mango case.

2. Introducing and scaling up a new logic at Mango

2.1 Company overview
Mango is an international fashion retailer based in Barcelona, founded in 1984 with over 2.000 shops in 115 countries. The brand has three main product divisions: Woman, Man,

and Kids. It has over 15.000 employees worldwide, from whom around 2.000 work in the head office.

Within the context of the retail crisis, Mango reported financial losses in 2016 for the first time since its foundation (el País, 2017). To tackle the many challenges originated by this crisis, the company's leadership has suffered changes, beginning with the appointment of a new CEO, Toni Ruiz (Mango, 2018). Among this restructuring, a new position was created with the appointment of Diego Sebastian as Innovation and Customer Experience (CX) Director (Gestal, 2019). In 2021, the CX team was integrated in the same department as the Communications team, acquiring a higher position within the organisation's hierarchy.

2.2 The CX team's work focus

Aligned with concerns on innovating and addressing customer needs, the CX team assumed the leadership of an initiative called "Customer Centric", as well as other projects aimed at introducing a customer perspective at Mango. The author of this paper is part of this CX team, as "Head of Research".

This section describes the first two steps of the Customer Centric initiative, to then account for the subsequent activities developed by the team, to finally provide a reflection on its implications within the organisation, based on conversations maintained with the Research Team and the department director mentioned earlier.

The CX team's director refers to "customer-centricity" as a way to prepare the organisation for further challenges. He refers to the work done by the team as *creating the foundations for an aligned brand that serves customers' needs*. While currently the CX team promotes projects that question the status quo and propose new business models and new ways of relating to customers, according to this director, real change will happen when business units promote this kind of transformation themselves. The team is creating the foundations for a new mindset that will allow the organisation to tackle challenges all the industry must eventually face.

These transformative efforts face strong barriers, grounded in an "opportunistic, short-term mindset" embedded in the organisation's fundamental assumptions, that place short-term sales as central for the company's priorities. The CX team proposes a new mindset focused on consumer needs, a perspective that should eventually lead the organisation to create more fit, aligned, and coherent value propositions.

2.2 The Customer Centric initiative

The goal of the Customer Centric initiative is officially to help transform Mango into a customer-centred organisation, according to its sponsors. The CEO asked the CX team to develop a plan to support this objective.

The team's approach included developing organisational capabilities directed at leveraging customer knowledge as a criterion for decision-making. This was done by developing

customer understanding and interaction, as well as consciously focusing on cross-departmental collaboration to direct new holistic efforts towards customer needs. The collaborative work done with the teams aimed at producing change was based on a framework with three steps: 1) Team & Customer understanding; 2) Customer interaction; 3) Knowledge application (see table 1).

Table 1. Framework for the collaborative work done with teams

Step	1. Team & Customer understanding	2. Customer interaction	3. Knowledge application
Step description	Assessment of the team's existing customer touch points and their work process. Definition of a customer journey based on existing information.	Training on how to perform research with customers. Observation of existing user research activities. Research sessions with customers.	Analysis of the gathered information. Definition of actions to be taken. Definition of indicators to evaluate impact.

The CX team members work as facilitators of the process, guiding colleagues through the research processes, and helping them analysing and applying the acquired knowledge.

The selected team for the first Customer Centric pilot experiment was the denim team, which designs and buys women's denim items. The project began in July 2019.

Step 1: Team & Customer understanding

During the initial stages, denim team's work process was assessed, to identify what kind of information was used to feed their design and buying decisions. A visual workflow allowed the team to identify the steps of the team's process as well as the key moments when customer feedback could be incorporated into their decision-making process (see Figure 1).
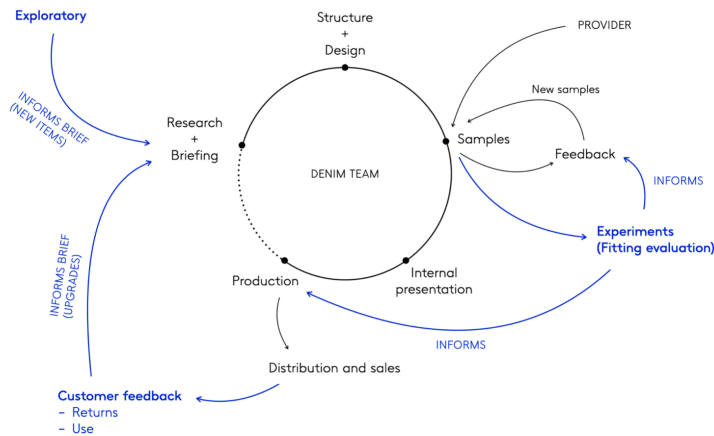
Figure 1. Framework for research with the denim team; this figure highlights how the new practices, in blue, are new layers added to the existing practices, in black, as way to avoid disruption and "build on the existing base".

Step 2: Customer interaction

The research activities developed with the denim team include exploratory ethnographic studies to understand how consumers relate to this product category, diary studies to gather usage feedback, fitting sessions to understand how specific models fit in different body types, among others.

The role of the CX team was multiple. First, to plan the activities and assure the conditions for them to take place, from an operational point of view (e.g., recruiting participants, setting up the space, gathering the necessary artefacts). On another hand, to provide the expertise on the research activities being undertaken, by jointly defining research goals, guides, and analysis frameworks; this collaborative approach assured the denim team learned by doing, acquiring customer knowledge and understanding how to obtain knowledge themselves. Most importantly, to constantly accompany the team in their journey to introduce new practices, by maintaining regular work sessions and conversations to jointly evaluate and decide on what works and what value can be achieved from each approach.

A reflection made with the denim team was very insightful to prioritise research activities. Fitting sessions were referred to as the favourite activity, particularly because they provided feedback "very quickly" (see figure 2). It was also perceived as more actionable (providing specific feedback), whereas more exploratory studies seemed to shed more ambiguous conclusions that appeared to exceed the team's scope.
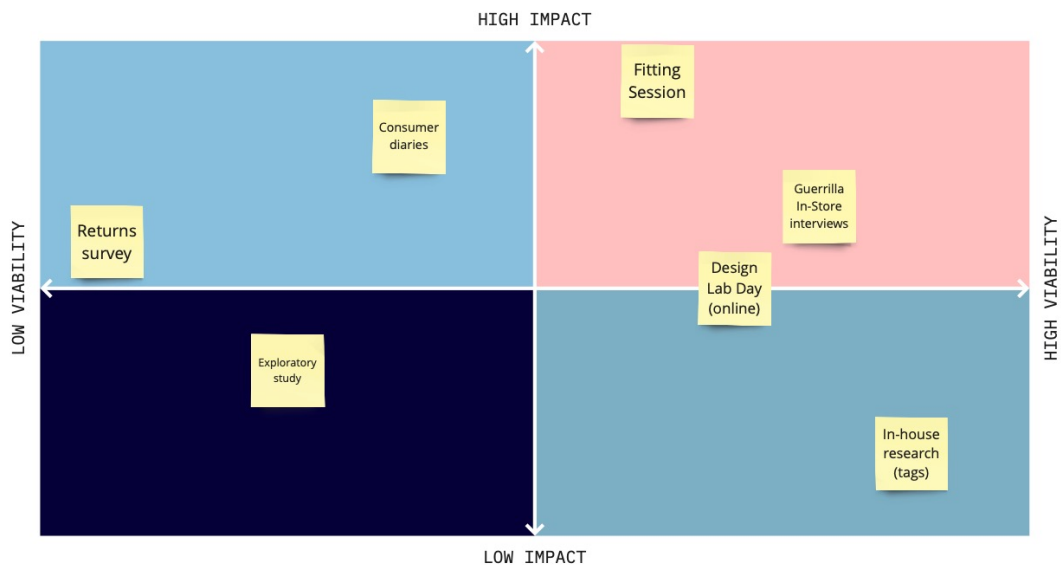
Figure 2. Diagram of the prioritised research activities performed by the denim team.

2.3 Scaling up

While developing the Customer Centric initiative, the CX team developed many other activities, answering requests from other departments or proposing new projects. By the end of 2019, an important project was developed, together with the Womenswear management team and main executives from the Communications and Branding department. The project called "Womenswear Positioning" aimed at setting the brand's position in the market, particularly by defining its target. Grounded on consumer studies, all team members collaboratively built four women archetypes to guide both product development and communication efforts from then on. It was considered a successful initiative, given all teams adopted the archetypes' vocabulary ever since.

Later, still during the initial chaos derived by the pandemic, the CX team focused on creating the means to keep in touch with customers. The budget limitations prompted the development an "innovation community", an internal consumer panel which became vital to get direct access to customers, making it easier, faster, and cheaper to gather feedback.

Besides the most strategic project of Womenswear Positioning, other initiatives were developed with the Womenswear department. A summary of the work being developed can be found on figure 3, which portrays a pyramid reflecting both the tactic work done from the base, as well as the strategic activities that affect the whole department. Besides working on gathering consumer feedback on existing products, the CX team is also providing support on developing the collection, by gathering insights on consumer behaviour and needs that may affect the collection's structure.
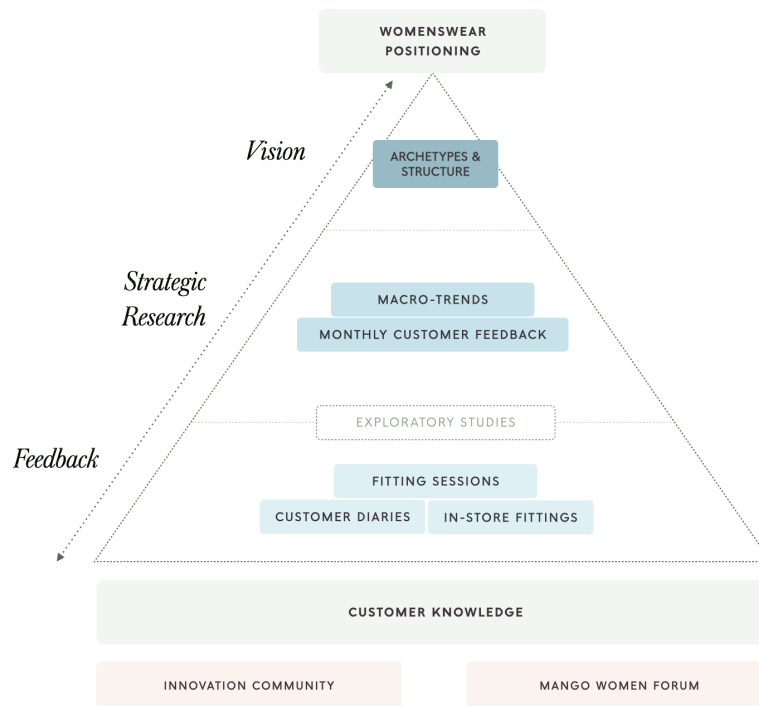
Figure 3. Scope of the collaboration between the innovation team and the Womenswear division at Mango

The initial success of the Womenswear collaboration led the Menswear area to request a similar scope of activities. Some other teams also collaborate very closely with the CX department, such as the CSR team, the Online department, and the Communications department. These teams are starting to consider consumer knowledge as a relevant foundation for decision-making. The CX teams works as a knowledge provider, as well as a companion for its actionability. One of the main goals is to create aligned processes and decisions across siloed departments using customer knowledge as leverage, overcoming the role as "information provider".

2.4 Barriers and ongoing activities

In addition to the mentioned tasks, the CX team regularly informs stakeholders on the evolution of the initiatives. It is important to highlight the outcomes and impact of the research to prove value and assure continuity. Research work competes with the regular activities performed by the teams, directed at increasing sales and profit. These regular activities work as the main barrier for the introduction of the new practices, by competing in time with the research activities.

Another regular activity includes gathering feedback from teams and helping them understand the value of the acquired knowledge. A common concern expressed by the teams is the need to develop initiatives that have direct impact on sales. Anything that doesn't seem to come up with an increase in sales or a direct business improvement tends

to be ditched as useless or time-wasting. Thus, an important part of the work is to adapt the methodologies, evaluating the involved stakeholders, and redefining outputs to assure impact is achieved and relevance maintained. This is done by reflecting on the performed activities, observing stakeholders' reactions, as well as gathering feedback in both formal meetings and informal meetups or gatherings.

Besides working vertically with specific teams, another important task is to foster relationships between divisions across Mango to make sure the insights gathered during research can be put into action in an effective and aligned manner.

2.5 Preliminary considerations

An initial analysis of the work done with the Womenswear division and other teams brings about some reflections on how to work towards the goal of acquiring a customer perspective. First, three main activities can be summarised: 1) Inform: provide knowledge about the customer; 2) Connect: foster relationships to ensure aligned actionability; 3) Experience: develop capabilities and autonomy to action knowledge. However, experience showed these activities were not enough to ensure the adoption of the new practices.

Since the beginning of the project, and in most of the other initiatives, the idea was to go beyond "informing", which is why direct customer interaction was promoted (for which training and assistance was provided). Besides, to prove value, a focus on quicker methods that would generate a quick impact was prioritised, adding up a layer to existing practices, consciously avoiding disruption. Reality showed that most of the work done went beyond the main predicted tasks of each initiative. It is essential to constantly reassure the team of the value of the activities to guarantee the continuity of the projects, as well as to listen to the team's feedback on the ongoing exercises, whether in feedback sessions or informal meetups; sometimes, it is also necessary to appeal to the authority of a director to reinstate the teams' dedication.

In addition, the need to foster cross-department relationships to turn insights into action also became evident. This was also achieved through influence, inviting members from other teams to research activities. This also resulted in a way to scale up awareness.

Reflections on factors that facilitate work with other teams were made with the department director and the research team. These reflections point to key CX team characteristics: adaptability, accessibility, and resoluteness; and some other factors related to other teams or the projects themselves: time-related concerns (project duration and urgency), internal social or political issues (ability and resources for action, top management buy-in, "believer" or "blocker" profiles), and material issues (spaces or tools to facilitate work). These socio-material factors allowed the team to gain credibility and trust to grow its scope of action, but demand an ongoing work in order to make sure these new practices eventually become integrated in the daily tasks of the affected teams, which hasn't occurred yet.

A quick reflection on these preliminary considerations illustrated how the CX team efforts go far beyond informing, connecting, and building capabilities. A considerable amount of background work is essential to make sure the teams perform the agreed research tasks, and to ensure the survival of the initiatives. Without constant adaptation of methods, the informal conversations, the reassuring of the initiatives' value, and the behind-the-scenes operative work, it would have been impossible for the teams to engage in research tasks at all or turn them into action and observe impact, let alone adopt them as part of their basic work process.

All these considerations can be related the call for establishing an "enabling structure" to sustain and scale up the introduction of the new practices that support the resource reconfigurations at Mango.

In particular, the CX team effort has been spent on a continuous work of setting up and maintaining the conditions for this ongoing research and design work, mirroring the idea of "design in use", constantly reflecting on the work done, to then adapt and iterate.

This intentional transformational work can be understood as a strategic design effort to evolve the organisation (Meroni, 2008), by performing institutional work: deal with existing organisational institutions on political, technical, and cultural levels. (Kurtmollaiev et al., 2018)

This ongoing work can also be related to the concept of infrastructuring as used in participatory design, intended as "the integration of new tools and technologies with existing people, materials and tools" (Karasti & Syrjänen, 2004). In this project, "infrastructuring" is understood as the long-term, ongoing activities that support the integration and sustainability of new work practices and tools into the existing installed base.

The following section will therefore introduce the concepts of infrastructure and infrastructuring, reflecting on how these constructs help to better understand the ongoing activities performed at Mango to acquire an SD-Orientation.

3. Infrastructuring

Star and Ruhleder (1996) introduced the concept of information infrastructure as a relationship between human processes and the technologies that enable them, a kind of platform that supports certain activities. They define infrastructure as a relational concept, implying its emergent character: "It becomes infrastructure in relation to organised practices. Within a given cultural context, the cook considers the water system a piece of working infrastructure integral to making dinner; for the city planner, it becomes a variable in a complex equation". (p. 113). The infrastructure emerges when larger-scale technology and tools support the local practices of heterogeneous groups to then become again invisible. Also, closely related to the relational dimension is the one of connectedness, meaning the ability of infrastructures to scale up, and reach a wider scope in time and space.

Star and Ruhleder (Ibid.) don't talk about *what* infrastructures are, but rather *when* they are, suggesting their emergent quality, as they can't be assembled simultaneously through planning and design, but they *accrete* "on already-existing social-material contexts in which they are embedded". (Anand, 2015)

Star and Ruhleder (1996) talk about an installed base, as this "already existing world", and inertias, that with their strengths and limitations, represent constrains for the development of a new infrastructure.

Because of these qualities, studies in Design have introduced the term infrastructuring, acknowledging the situated, long-term, and ongoing design work done in the development of infrastructures (Karasti, 2014; Karasti et al., 2010; Karasti & Baker, 2004; Karasti & Syrjänen, 2004). Roles of designers have been associated with making the installed base visible (Neumann & Star, 1996) to successfully develop new infrastructures (Karasti et al., 2010). Current infrastructures can be consciously made visible by a process called "infrastructural inversion", whether by identifying breakdowns, by partnering with members of the organisation who work with the infrastructure, or by gathering material evidence of the infrastructure. (Karasti & Blomberg, 2018)

Infrastructuring often deals with the development and adoption of new information technology, tools used to help users achieve goals within a community or organisation. From a participatory design perspective, infrastructuring is "the integration of new tools and technologies with existing people, materials and tools" (Karasti & Syrjänen, 2004), which includes not only the development and delivery of the tools, but also the support of the integration of those tools in the daily tasks and practices — the social infrastructure —of users, by engaging them in the process (Pipek & Wulf, 2009) and by creating meaningful encounters that allow for new practices to emerge. (Björgvinsson et al., 2010)

Finally, infrastructuring involves activities that go beyond the traditional participatory activities of the "front-stage" — such as workshops and design games —, and include informal undertakings defined as knotworks (Bødker et al., 2017). Knotworks are temporary and unstable and symbiotic relationships established among stakeholders that support local and personal interests regarding an initiative. The idea of knotworks in infrastructuring is interesting because it makes part of the infrastructure visible, including relationships that are established beyond the horizontal work done within traditional design activities: meetings, phone calls, and other activities that disseminate knowledge at various levels (both horizontally and vertically within an organisation). These relationships are essential to assure that design results are activated on a broader scale and a longer timescale. Addressing knotworks brings a new dimension to the infrastructuring work, by overcoming the horizontal scope of the design work and adding layers of vertical reach that designers should consider.

4. Discussion

The work being done by the CX team at Mango has been described as a strategic intent to introduce new practices, by continuously setting up and maintaining the conditions for the their adoption. This long-term and ongoing design work can be referred to as infrastructuring. By engaging the various teams in the process, new capabilities are being built, and new practices and tools being adopted. The hidden infrastructures are acknowledged, by means of the initial assessment (and then on an ongoing manner through feedback and reflection), before integrating new practices and tools. The CX team soon identified various barriers, meaning the existing infrastructure prevented teams from acquiring the new desired practices and tools. To correct that situation, continuous multilevel background work is performed to build a new infrastructure. On another hand, meaningful encounters are created among different teams, with the objective of aligning perspectives and promoting a more efficient application of customer knowledge, establishing relationships between stakeholders, and organising activities that allowed for new practices to emerge. At the same time, these connections worked as a means for scaling up the initiative, since the value of customer interaction was proven on a broader basis. Much of this work was done in an informal manner, by creating knotworks, bringing people together by sharing common and temporary goals.

The following considerations can be made:

- The CX team performs a conscious transformation effort intended at creating the foundations for the adoption of a new logic within the organisation. This is approached by working with the existing social structures in a collaborative, reflective, and iterative manner.
- Working around existing practices uncovered resistances and breakdowns, which rendered the hidden infrastructure visible, the dominant organisational logic: the fundamental values, beliefs, and conventions of a big traditional organisation, where people from different teams don't collaborate and have competing goals, paired with the pressure to achieve quick results, prevents the teams from collaborating and "wasting time" gathering customer feedback. This led the CX team to constantly listen and adapt their methodology to focus on quick actions to prove quick results, building on the existing infrastructure without fully disrupting it. This proved to be an enabler for scaling-up the customer perspective and generate further interest in reasearch.
- The need to keep the transformation alive led the CX team to move beyond singular design events (e.g., workshops or research sessions), adopting an infrastructuring approach, aiming at creating and maintaining the conditions for practices and tools to be adopted, in an ongoing, reflective, and adaptive manner.

- The sustainability of the project also depended on the constant work of developing knotworks, informal and temporary relationships among stakeholders from various hierarchic levels of the organisation.
- The issue of scaling was approached by reinforcing the connectedness of the new emerging infrastructure, by creating links across units and practices, aligning stakeholders from different departments through meaningful encounters, reviewing the protocols of initiatives and fostering frequent and recurrent collaboration.

5. Conclusions

In this article, the author has analysed the transformational process happening in a big goods-focused commercial organisation, aimed at the adoption of an SD Orientation. This strategic design work was analysed through the lens of infrastructuring, considering ways to develop the enabling structures for scaling up the necessary design capabilities in the organisation.

This exploratory paper contributes to Design:

- By proposing the adoption of the infrastructuring concept as a valid theoretical construct to start articulating what the "enabling structures" that sustain capability building at scale;
- By stressing the need for designers, in particular professionals working within complex organisations, to place their focus beyond methods and tools, considering the hidden infrastructures and the way the new ones "accrete" on existing socio-technical systems and require constant maintenance (building from the existing legacies, instead of fighting them);
- By highlighting that within very fast-paced and results-focused organisations, it is essential to prove impact while building new infrastructures, often achieved by starting with small non-disruptive efforts that may then bring about bigger undertakings;
- By suggesting that these enabling structures work as a new emerging organisational logic with the ability to create institutional change, preparing the organisation for the adoption of an SD Orientation and SD.

Since this is a preliminary and ongoing study, more research needs to be done to better define the categories and qualities of design work oriented toward the creation, maintenance, and adaptation work to sustain these enabling structures and support SD Orientation in large goods focused organisations, as well as better exploring the relationship between infrastructuring and institutional logics.

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