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Towards a Design Observatory: crafting a distributed approach

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Abstract | As Design is gaining traction globally different observation models were developed to map the Design landscape. However, the application of these models in contexts with a slower maturation of Design culture and no institutional Design infrastructure can be difficult. With this challenge in mind, this paper presents a new distributed approach to support Design observation. It applies it to a case within the DesignOBS project - a project aiming to identify, map and interpret the Portuguese design landscape - and develops an online platform with the aim to create more efficient and engaging representations of Design practices and realities/contexts to multiple publics, including policymakers. The approach can benefit countries in a similar situation as Portugal, leveraging the participation of design actor-networks, encourage local initiatives, map the evolving Design landscape in collective manner, and hopefully constitute the supporting, resilient backbone to develop national Design policy.

KEYWORDS | DESIGN OBSERVATION, DESIGN ECOSYSTEM MODEL, REFLECTION-ACTION PROCESS, PARTICIPATORY PROCESSES, DESIGN SCHOOL NETWORKS

1. Introduction

Research studies undertaken by the UK Design Council (2018) as well as the Danish Design Center (2018) – two leading Design Centers in Europe –, demonstrate the potential socio-economic impact of Design, especially within the scope of innovation. Additionally, statistical evidence shows that Design plays a significantly important role in national innovation and productivity than previously recognized (NESTA, 2009). Design policies have been developed and are increasing in numbers worldwide as a result of the efforts undertaken to develop quantitative and qualitative measures for Design impact - ex. Design4Innovation (Whicher et al., 2018); Barcelona Design System (Calvera & Monguet, 2008); Design Scoreboard (Moultrie & Livesey, 2010; Moultrie et al., 2009). However, “we still need to be better at communicating who we are, and what we do” (Melander, 2019). Moreover, comparative analysis of different national Design contexts based on the application of existing ecosystem models may be ineffective since resources and conditions cannot be transferred (Raulik-Murphy, Cawood, Larsen, & Lewis, 2008).

When compared to other leading EU members, Design is rather misunderstood and thus underused in Portugal. According to the most recent Innobarometer results (European Commission, 2016), only 13% of Portuguese enterprises mention to use Design as a strategy in the business, whereas 49% of them mentioned that they do not use Design systematically (i.e. “uses Design as a central element in the company”: Denmark 21%, Germany 18%, UK 17%). The lack of an effective systematic representation of Design impact has resulted in the loss of investment in the discipline within Portuguese society (Quintela, 2019). Moreover, the rapid evolving nature of Design and its diffusion in multiple areas of practice and knowledge, has also added to the confusion of what the discipline is about. With the disappearance of the Portuguese Design Center (CPD) in 2013, there are no National Design Institutions – with the exception of Design schools – that are representative of the myriad of actors within the national Design Ecosystem. As such, a more integrated and resilient observation approach of the discipline is required.

The Design schools scattered around the country seem to currently be the sole institutional infrastructure, with national presence, that still remains active and relatively independent of governmental changes and external funding (ex. European incentives). Considering the current scant resources and the status quo of Design in Portuguese society, the project DesignOBS (Towards a Design observatory in Portugal) is being established by four national institutional entities scattered around the country, to collect, analyze, interpret and represent the Portuguese Design ecosystem. It partially emerged from the results obtained through the first REDE#01 meeting (Acronym for Reunião de Escolas de Design or Design Schools Meeting) with 37 Design schools (Borges et al., 2018). Whereas REDE focuses on Design education and research, DesignOBS emerged to interpret and represent the national Design Ecosystem, including its multiple agents and evolving forms of Design practices and realities.

This study develops a new reflexive and distributed observation approach. First, it analyzes and compares European Design models currently used, and enriches the analysis with in-loco visits to key Design centers and interviews with their leaders. The lessons learned from the research are paramount to develop the reflexive approach for Design observation, enabling more participatory processes. It applies the new approach in a case with design doctorates and refines it according to the feedback from the design community. The distributed approach supports design actors – experts within their own context, namely the teaching/research staff of high education Design Schools around the country – to take initiatives and collectively shape the evolving representation of the Design landscape.

2. Literature review

2.1. Characterization of the Portuguese Design context

National Design institutions such as Design associations, forums and Design centers are either non-existent or lack a more valid representation of the agents involved in the Design ecosystem. The long-standing antecedents of design training started in 1934 with the Decorative School of Arts of António Arroio, teaching Applied Arts (CPD, 2000; Manaças, 2005; Almeida, 2009). The institutionalization of Design Education in the country began after the democratic revolution (post 1974), with the first design courses created in the Schools of Fine Arts of Lisbon and Porto. In 86, ICEP (Institute of Portuguese External Commerce) would launch the "young designer" contest that aimed to improve the relationship between Design education and the reality of industries (Castanheta, 2012). Additionally, in the 80's, the Portuguese Design Center was created and aimed to promote Design and designers at the national level and launched multiple programs such as "Designers for industry", supporting the infusion of young professionals in companies. However, the latest evaluation reports revealed that "there is still a profound ignorance in Portuguese companies regarding the discipline and its advantages" (Curado, 2013). Moreover, the lack of financial autonomy of the institution, several years of accumulated negative results – namely the poor connections established with SMEs – and a climate of austerity, sufficed to close the center (Curado, 2013; Quintela, 2019). In this context, when compared to leading European countries (ex. UK, Denmark), Design culture in Portugal still has room for improvement.

Additionally, there are still important weaknesses in the integration of Design in the Portuguese economy, particularly in the national industrial fabric, and the internal processes of maturing the strategic importance of the discipline are slow. The Innovation Strategy Portugal 2018-2030 proposed by the government emphasizes the infusion of innovation at multiple levels but does not mention "Design" once (Conselho de Ministros, 2018). Another governmental document also mentions the implementation of Design strategies for the "modernization and upgrade of industry, economy and the country" (PNR, 2019). However, no specific policies were developed. In recent interviews with Design practitioners, Quintela

(2019) mentions that “the adoption of public policy for the promotion of Design as an instrument for innovation in industry and exportation of national production, seem to be mainly driven by a set of external political and financial stimuli as opposed to internal processes of maturing the strategic importance of the discipline” (Quintela, 2019; translation from the authors).

2.2. International Design models

Countries worldwide have invested in the promotion of Design with the aim to promote the country internationally, raise awareness among local consumers about the value of Design and quality of products, and increase interests from local industry about the benefits Design can bring to business performance (Raulik-Murphy et al., 2008). These programs have evolved significantly in scope and complexity (ex. Design 2005! Saarela, 2000; Better by Design, New Zealand Design Taskforce, 2003 mentioned in Raulik-Murphy et al., 2008). Meanwhile, Design has entered the European policy agenda (European Commission, 2013) and is already part of national innovation policies across Europe (Whicher, Cawood, & Walters, 2012). This in turn, gave impetus to the creation of several EU projects to accelerate the integration of Design into government and business strategies ex. SEE platform (sharing European experience in Design innovation policy), IDeAll (integrating Design for all in living labs), €Design (measuring Design value), DeEP (Design in European policies), EHDM (European house of Design management) and REDI (regions supporting entrepreneurs and Designers to innovate) (Whicher, 2016); and more recently, initiatives such as Design For Europe (2017), have created principles and guidelines to support countries, cities and regions to take more advantage of design-led innovation.

In this context, a growing interest in the development of Design models and metrics has also emerged to better compare performances between countries, at the international level (ex. Design scoreboard, Moultrie et al, 2008; Moultrie and Livesey, 2009) and map real-world situations, to understand the interactions between the multiple actors involved in the Design system. For example, Calvera and Monguet (Calvera & Monguet, 2006, 2008) developed the Barcelona Design System model, which partially departed from the Milan Design System model (Bertola et al., 1999). Design system can be defined as a theoretical model used to “visualize in only one map the different agents and actors that, within a land well delimited both economically and geographically, act, interact and establish relationships between them related to the professional practice of Design and so, have an economic impact” (Calvera and Monguet, 2008). They outline it according to three main axes, namely (1) offer, (2) demand and (3) culture (Calvera and Monguet, 2006, pp.19). More recently, Whicher has developed the European Design system (Whicher, 2016, 2017; Whicher et al., 2012) complementing previous models that integrated system failure theory (ex. Love, 2007; Raulik-Murphy and Cadwood, 2009 in Whicher et al., 2012). System Failure theory highlights the role of government intervention to stimulate supply and demand via actions, policies or programs, and tackle failures in the way actors of the system interact (Love, 2007). Whicher identifies Design’s role in the context of innovation according to three axes with nine

components: (1) supply (research, education and Designers), (2) demand (users, support, promotion); and a third - different from the Barcelona's model – called (3) "supply-demand" (funding, policy and actors). The two first axes are similar between the models, however the third reveals a fundamental difference: whereas Milan and Barcelona's models emphasize the role of Design community to promote Design culture (i.e. practitioners and people working within Design culture promotion and production); Whicher's model highlights the role of the government, in particular, policymakers, as an overall influencer/corrector of the Design system. As such, we may observe a two-way approach with complementary views. Milan and Barcelona's models seem to adopt a more bottom-up approach to map and regulate Design systems. On the other hand, Whicher has a more top-down and institutional approach, integrating the role of other actors beyond Design systems (i.e. policymakers) to regulate systems demand and supply.

2.3. Research gap

Existing Design observation models are key to better observe and understand the importance of Design within innovation. However, these models present some limitations, especially in contexts characterized by a slower maturation of Design culture, and with no institutional infrastructure to promote the discipline.

Bertola et al. (1999) and Calvera and Monguet (2008) perspectives of Design observation are highly context dependent. They highlight local Design resources as key vectors for the construction of a Design identity and image. This perspective is effective within well delimited Design systems with a rich Design culture but may not work as well within more complex and different contexts. On the other hand, Whicher's Design model has already been applied in multiple European countries to better inform policy and thus provides means for international comparison of Design performance within the context of innovation. However, the application of Whicher's model may not be very successful in countries with limited availability of data for the indicators developed, such as the case of Portugal. Second, by adopting an inherent focus on policy making and policy makers, the indicators developed may not capture the entire spectrum of Design practices and realities, thus resulting in partial views of the Design ecosystem. Finally, the development of policies requires valid/reliable input to guide the creation of actions and programs. The inherent mechanisms to collect robust Design information are a challenge whenever there are no public institutions. This is one of the key tasks of the DesignObs project.

Bringing existing Design ecosystem models to observation practice in challenging contexts may require more embedded, networked "open" systems (Hobday, Boddington, & Grantham, 2012). Hence, we propose a new approach to support the Design observation process, while attempting to align our model with existing ones for the purpose of comparison. We build on the analysis of existing models, interviews with leaders of Design centers, and in-loco visits to international Design observatories to develop a distributed and

reflexive observation approach which could facilitate a richer representation of Design and – ideally – the creation of a more resilient national Design infrastructure.

3. Methodology

Based on the existing Design models and taking into consideration their limitations, the project DesignOBS was created to identify, analyze, characterize and represent the agents involved in the Design ecosystem in Portugal. The project emerged partially from a previous initiative called REDE, organized by 37 national Design schools and their representatives, in 2017 (Borges et al., 2018). During the meeting – mainly focused on Design education and research – numerous topics emerged which lacked important supportive national data about Design. To operationalize the DesignOBS project, an iterative process was put in place while taking into account the Portuguese context, characterized by a scattered and unarticulated Design community, a less mature Design culture and lack of national institutional infrastructures. We followed a three-step Design research process:

1. Development of a preliminary observation process based in particular on (i) the analysis and comparison of Design ecosystem models in use at the European level to better understand their advantages, limitations and complementarities; (ii) the interview and in-loco visits with leaders of key international Design centers i.e. Danish Design Center (DDC), Christina Melander, and Tokyo Design Center - to understand the data collection mechanisms put in place and main challenges faced by existing observatories; and (iii) the concept of reflection-action process proposed by Schön (1983).
2. Application of the approach on a preliminary (and manageable) case about design doctorates to create a “first portrayal” of the status quo of national scholarly Design research. The analysis of results led to the development of guidelines for keywords and calls for action which were presented and discussed within the REDE community (Costa et al., 2020).
3. Refinement of the iterative reflexive and distributed observation approach based on the results obtained in stage 1 and 2. The refinement of the approach reinforces the iterative reflection-action processes with and through the design community, leveraging additional interpretations of design-driven data.

Based on the literature review, we identified two main approaches in current models: whereas Whicher’s ultimate beneficiaries are intended to be policymakers to create actions and programs which could better benefit Design activity; Milan and Barcelona models seems less focused on guiding governmental action, but more on emphasizing Design as part of interweaving actions amongst business and culture, technology and craftsmanship, individual entrepreneurial initiative and teamwork undertaken by actors in (or in relationship with) Design systems (Calvera and Monguet, 2008; Bertola et al., 1999). These

two approaches take place in different levels of complexity and context (i.e. European arena versus a city), thus explaining their fundamental differences in their representation potential. The challenge thus lies in navigating both at the macro and micro levels of representation, while capturing the richness of Design in between those levels.

Additionally, the visits to Design centers (i.e. DDC and Tokyo Design center) and interviews with key leaders reveal important challenges that countries with a more mature Design culture still face. Key takeaways from the interview with Christina Melander included (1) the importance of lobbying about of Design to the government whenever there is no formal institution; (2) being able to capture the best cases of Design intervention within the public and private sectors, (3) a more compelling narrative construction about Design, so that it can reach publics beyond Designers; (4) coupling quantitative information taking into account the new ICT and social media services with those narratives whenever possible; (5) developing a national Design identity. Although quantitative studies about Design already show its inherent impact on the business bottom line (Danish Design Center, 2018; Sheppard, Kouyoumjian, Sarrazin, & Dore, 2018), it seems that “surveys are not very useful to make a connection between Design and economic values” and that “Design(ers) still struggles to articulate how it(they) create value” (Melander, 2019).

Since the initial challenge of the project was to create a national Design ecosystem map, we looked at the multiple components of Whicher’s model (2016) in the preliminary phase. Considering also the familiarity of the team members with Design education, the first topic studied was focused on “Design research”, one of the key vectors of Whicher’s model. To analyze “the number of Design doctorates and type of Design research undertaken in Portugal”, data from three different governmental databases was collected, analyzed both quantitatively and qualitatively. Results showed very important disparities in the number of Design thesis concluded, and dubious quality of information (i.e. some thesis are classified within “Design course” but are not about Design). The lack of curation and reliability of information collected through the sole institutional means available, thus jeopardizes the reliability of a map built through those means. The results of this study – which are explained in detail elsewhere (Costa et al., 2020) - were presented in the second REDE meeting with 55 representatives of 23 design schools in late October 2019. The event was key to develop the first calls for action in the scholar community; build awareness and discuss the flawed mechanisms put in place to collect, interpret and communicate information about Design.

4. Crafting a reflexive and distributed approach for Design observation

Considering Design as a reflexive, embodied and continuous process of discovery and actualization involves some skeptical orientation towards what appears to be an unproblematic “first portrayal” (i.e. example of Design doctorates in Portugal). Schön (1983;

1992) in particular uses the term “reflective practice” to emphasize the relation and interactions between action and reflection: an actor sees, acts and then sees again to understand the consequences of their actions. Design hence, puts emphasis on this iterative actor-driven process of understanding a situation through an attempt to change it, and then changing the situation through an attempt to better understand it. Moreover, it also looks at actors and their role in the design process as key to produce and reflect upon Design materials and forms (i.e. representations). Adopting this view as a lens and looking at the DesignOBS as a material artifact resulting from this iterative reflective practice is key to build a more comprehensive understanding of Portuguese Design.

Based on the previous stages of the research process and Schön reflective-practice theory, we propose a new approach to represent and interpret Portuguese Design ecosystem. Moreover, we also detail how DesignOBS observation model and representation will according to this iterative process.

4.1. Reflection-Action process

We combine two complementary approaches identified in literature (top-down and bottom-up) to build an iterative and continuous process to support reflexivity and action (Schön, 1983) while evolving representations of the discipline at the national level (Figure 1):

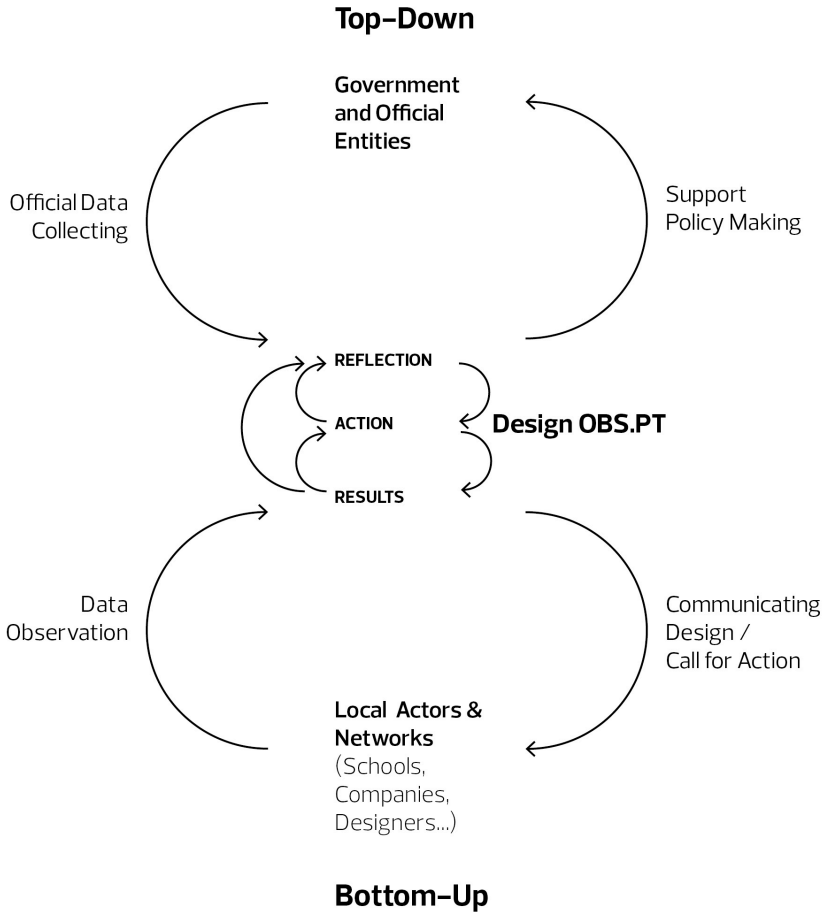


Figure 1. Observation process within DesignOBS, based on Schön (1983)

First, we verified that Design information is scattered, and institutional databases are not very reliable as they do not focus solely on Design; and are missing an important interpretative component. Some inferences (“first portrayal”) can however (i) be built based on available data, (ii) be used to raise awareness inside the community and, in turn, (iii) leverage more coordinated initiatives/actions (Figure 1).

Second, we use distributed mechanisms and school-driven networks to collect information; and an open toolkit to support local observation. The current network of informants i.e. REDE, Design schools - are considered as experts in their own contexts and approaches, with connections with local businesses, organizations, labs amongst other actors in local Design systems. Moreover, they are currently the sole institutional and robust infrastructure at the national level. Identifying local networks is paramount for the project to expand, in a sustainable way, thus adding more intricate and detailed layers of representation. Having Design schools as champions of local Design systems provides traceable material, increases ownership of the data collected, and responsibility of the representation of the region, stimulates grassroots governance and self-organization.

4.2. DesignOBS as an evolving artefact of representation

DesignOBS (www.designobs.pt) can be interpreted as a cumulative, critical and evolving platform which aims to both (1) connect and facilitate dialogue amongst Design stakeholders, giving them visibility within the Design ecosystem; and (2) create more efficient and engaging representations of Design practices and realities/contexts, in three main topics: Design education and research, practice and culture. These topics as well as their content were created based on Whicher's Design ecosystem model. They are used as guidelines to support the research but can evolve according to the feedback of the network and need for further developments.

The DesignOBS platform aims to be the direct visible result of the application of the iterative reflection-action process (Figure 1). Considering the lessons learned from previous observatories, the models used at the European level, and the national context, we propose to collect data via an open toolkit for Design observation distributed amongst an established Design school-network (REDE). The data collected has two main levels of input as shown in Figure 2.

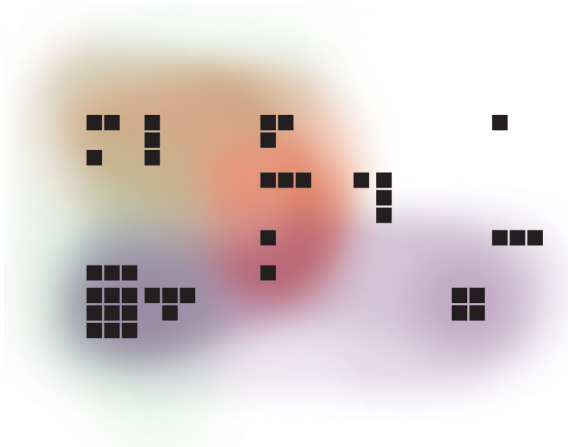


Figure 2. Objective (black) and interpretative (colour) layers of a Design Ecosystem Grid, Observatory's model.

BLACK INFORMATION, THE OBJECTIVE LAYER: The first level focuses on collecting, extracting or producing quantitative and objective information (black dots in Figure 2), which will enable a rapid creation of maps representing the diverse Design realities across the territory. It makes use of more desk research, surveys; closed questionnaires as well as direct and participatory input from the schools, to collect information. For instance, the study about Design doctorates undertaken in Portugal (Costa et al., 2020) fits within this level. First, the aggregation and analysis of results from governmental databases enabled the elaboration of a “first draft”. Verifying disparities, the team searched for additional PhDs within other databases (universities which provide Design doctorate level studies) to complement and build up a more reliable map of Design doctorates. Another approach used was to ask directly to the school-network to “feed” the platform with the information available within their own institutions. Thus, they become active creators of the content on the platform. This process is being used to approach other research topics such as “characterization of Design companies in Portugal”. Databases such as SABI or AMADEUS can provide some information to facilitate the creation of preliminary representations, develop interpretations, calls for actions in the community/network; and advance other topics which require more in-depth, local and interpretative observation (Figure 1). Moreover, the objective data (i.e. archives, databases) is open to the community to build on, and make additional interpretations, producing new Design discourses (colored discourses in Figure 2).

COLOURED INFORMATION, THE INTERPRETATIVE LAYER: The second level of data collection builds on the first layer of information to inspire more interpretative, qualitative, and subjective discourses about Portuguese Design Ecosystem. It is also more complex, context-dependent and prone to emergence as it embraces the inherent characteristics and identity of the regions which constitute the territory. Thus, it makes also a more systematic use of

the school-network and participatory processes to evolve the observational toolkit and collectively shape Design ecosystems. For example, the “characterization of the Portuguese Design companies” can have both a quantitative denotation (ex. how many companies exist; percentage of exports, etc.); qualitative connotation (ex. how do these companies perceive Design and designers) as well as interpretative connotations (ex. design identity of a region). This level thus, is more subjective, embedded and more prone to emergence.

This data collection process and the organization of the different elements to be observed, already constitute a landscape per se (black layer of information), like the periodic table of elements, arranged according to their properties. Instead of metals or non-metals, gases or halogens, we aim to have schools, promoters, designers, museums, companies, government agencies, amongst other elements. This structure is aligned with existing design models for the purpose of comparison, but will evolve through time, and according to the emergence of other themes and topics, adding other emergent discourses about Portuguese Design (colored layer of information).

5. Conclusions and future steps

As Design is gaining traction globally different observation models are being developed to map the Design landscape and better inform policies. However, the application of these models in contexts with a slower maturation of Design culture and no institutional Design infrastructure can be difficult. With this challenge in mind, this paper presents a new distributed approach to support Design observation. It applies it to a case within the DesignOBS project and develops an online platform with the aim to connect Portuguese Design stakeholders and create more efficient and engaging representations of Design practices and realities/contexts to multiple publics, including policymakers. The approach can benefit countries in a similar situation as Portugal, leveraging the participation of actors-networks, encourage local initiatives, map the evolving Design landscape in collective manner, and hopefully constitute the supporting backbone for developing Design policies in Portugal.

This research also presents some limitations which in turn indicate directions for future research. First, the application of the approach is restricted to the case of Design doctorates within the first level of data collection (quantitative analysis). The application thus needs to expand to other levels and topics of research to reach publics beyond Design(ers).

Second, due to space limitations, the development of the observation toolkit mentioned in Figure 1 is a topic that goes beyond this paper. The focus of this study is to define and explain the objective(s) of DesignOBS and develop its observational approach. Future research should, however, make a thorough analysis on the multiple tools and methods to be used to collect the data, while taking into consideration the objectives of the project.

Third, the expansion of the project to other socio-economic and cultural actors and institutions within Design ecosystems is paramount to gain structure and resilience. Given the short time frame and limited funding of DesignOBS project, the involvement of companies and other institutional entities, beyond Design schools is required. Thus, future steps include infrastructuring activities, to build up a network of networks scattered around the territory, enabling further connections amongst actors. Future studies should however, take into account the failures of past initiatives, centers and Design associations.

This study constitutes an important step to advance Portuguese Design observation. It develops a new approach which integrates the top-down and bottom-up perspectives based on previous Design ecosystem models. It also puts forward a more embedded and participatory approach for Design observation and interpretation. Moreover, it may also contribute to Design practice, by proposing new mechanisms of observation for countries with a less mature Design culture and more fragile Design infrastructure.

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