Communication Design Playing a Role in Social Innovation

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Abstract Design for social innovation aims at solving community problems by recombining available resources, creating new social relationships, and strengthening stakeholder networks. Social innovation presents itself as one of the most promising proposals for responding to systemic problems that manifest themselves both at a global and local level, and the use of design methodologies, tools, and skills enables social innovation to become more resilient and sustainable. Communication design is a particularly relevant area in this context, as it meets the needs for visibility, visual materialization, creation of future scenarios, dissemination, and replication. Through an in-depth case study of three social innovation initiatives, we collected evidence regarding different roles that design is called upon, although they are not exclusive to communication design. Some of the main roles relate to triggering the initiatives themselves as well as the social debate that sustains them, facilitating processes of ideation and co-creation, mediating actors and prototyping products, services or events.

Keywords Communication design · Design for social innovation · Case study · Social innovation

1 Introduction

This article presents preliminary results of a multiple case study carried out on three social innovation initiatives, with the central objective of observing and describing communication design role throughout the process as well as the opportunities to

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217

expand its performance. This case study is part of an ongoing doctoral research about design for social innovation and the role communication design plays in this context. The doctoral research intends to address several aspects of how communication design takes part in social innovation projects. Namely to characterize what this intervention is, how it proceeds (project methodology, methods, resources, tools, dynamics established with other disciplines and intervening actors, as well as with other design areas), when it occurs (at what stages of the social innovation processes) and why (the relevance of communication design in social innovation initiatives and what characterizes its specific intervention in comparison to other areas).

Design for social innovation (Thackara 2005; Manzini 2015; Amatullo et al. 2016) appears in the contemporary context as a practice-based design response and as a research field interested in addressing open, dynamic, interconnected, and complex problems (Murray et al. 2010; Ceschin 2014; Nicholls et al. 2015) that confront social, economic and natural systems. In face of profound disruptions at multiple levels that jeopardize planet's sustainability, social cohesion, and democracy resilience, there is a demand for new ways of action that take on an ecosystem approach (Scharmer and Kaufer 2013). On the other hand, the transformative capability of engaged citizens and communities, to form coalitions between personal, public, and private domains has never been higher (Manzini 2019). Constant connectivity, as provided by information and communication technologies that configure the fourth industrial revolution (Schwab 2015), is one of the main factors that enable new networks of interest and action (Manzini 2019) both at global and local levels.

It is in this context that design expands its more traditional intervention (Sanders and Stappers 2008), shifting from producing physical artifacts to more immaterial outcomes such as interaction, services, experiences, or systems (Davis 2008; Grefé 2011; Norman 2018). Design for social innovation thus relates to emerging areas that have as their main objective "design for" a purpose (Sanders and Stappers 2008; Manzini 2011; Meroni and Sangiorgi 2011), moving away from material, controlled, and finished products that characterized most of design activity in the twentieth century (Buchanan 2001). Design skills, tools, and methods are applied to social innovation processes (Mulgan 2014) and placed at the service of projects initiated by citizens and communities to facilitate, mediate, co-design, and enhance initiatives. These may be rooted in a specific time and space but can be disseminated and replicated in other situations, giving rise to possibilities of systemic transformation (Manzini 2015).

Communication design is an area capable of adding value to social innovation processes due to its specific contributions (Melo and Neves 2020), in close collaboration with interaction design, strategic design, system design, or service design. By reframing issues or problems (Dorst 2012), circulating new meanings and new narratives of the future (Ehn et al. 2014; Manzini 2015; Emilson 2015), establishing an infrastructure (Hillgren et al. 2011), and design coalitions (Jégou and Manzini 2008), communication design can expand social innovation possibilities and actions.

2 A Multiple Case Study Method

We considered a multiple case study method to be the most appropriate since our main goal was to attain a deep understanding of how communication designers took part in three social innovation initiatives. We combined the methodological steps described by Yin (2018) with the Social Innovation Biographies (SIBs) methodology (Kleverbeck and Terstriep 2017) bearing in mind that the study would focus on social innovation initiatives.

A case study method is particularly suitable when the object of study is contemporary (as opposed to historical) and when there is no control by the researcher over behavioral events (Yin 2018). It allows direct contact with the phenomenon and its context, allowing to describe, understand, and explain it in detail (Tellis 1997). Regarding the situated, contextual (Dorst 2010), and unrepeatable nature of a design process, the case study method becomes even more relevant.

We used multiple sources of information, allowing in-depth data collection and analysis. Through a descriptive approach, we correlated observed phenomena with constructs collected during the literature review.

SIBs intend to address flaws in social innovation case studies that mainly focus on describing implementation and dissemination. This methodology ensures the collection of information and analysis regarding three different levels: individual, structural, and conceptual. The goal is to capture data from "development paths, knowledge trajectories and stakeholder interactions at the micro-level" (Kleverbeck and Terstriep 2017, p. 3). It combines evidence from interviews with key stakeholders and other actors with an analysis of the network woven by the initiative.

Our multiple case study was developed in three phases. In the first phase, we carried out the planning and definition of the case study protocol and selected the cases. In the second phase, we guaranteed triangulation (Yin 2018) by collecting evidence from multiple sources such as semi-structured interviews, structured online questionnaires, desk research, and documentation analysis. In the third phase, we coded collected data in tables and diagrams, allowing for the systematization of information and for analyzing each particular case.

2.1 First Phase—Planning the Action

In the planning phase, we developed a protocol for a multiple case study, pointed out as essential by Yin (2018). This document contains the study's objectives, research questions and propositions, criteria for selecting cases, and procedures regarding evidence collection. The protocol serves as a guide for data collection and analysis, ensuring a consistent and standardized line of action (Yin 2018) in multiple cases, and thus contributing to obtain comparable data between them. It also served as a sort of road map, allowing to clarify and facilitate the research process.

The objectives of the study were to describe three processes of social innovation, mapping stages and milestones, interventions of communication design and resulting tasks and outputs, main actors in the process (individuals, institutions, communities), and network of relationships between them. Parallel to mapping the initiatives, it was also an objective of the study to describe the presence of categories and concepts present in the literature about design for social innovation.

Regarding the selection of cases, one of the main criteria was that each initiative had to fit in a certain description of social innovation, one that combines existing resources (social, economical, productive, i.e.) to solve a community problem, to achieve shareable and sustainable benefits, and to create, recreate or strengthen social relations in the process (Murray et al. 2010; Manzini 2015). Another selection criterion was the existence of communication designers' intervention in the initiatives.

Due to the need to elaborate an in-depth study that allows comparative analysis of results, another criterion was the possibility of collecting data in adequate quantity and depth (Yin 2018) and access key actors in the process (Kleverbeck and Terstriep 2017). The selected initiatives must also be related in some way to problems of human desertification of inland territories or have place-making (Manzini 2015) purposes.

The three selected initiatives were: Loulé Design Lab (LDL), Laboratório Cívico Santiago (Santiago Civic Laboratory/LCS), and Loulé Sou Eu! (I am Loulé/LSE).

2.2 Second Phase—Data Collection Proceedings

Data collection derived from multiple sources of evidence that could provide rich, detailed, and in-depth information. We applied the principle of triangulation so that the findings converged from two or more sources of evidence, thus contributing to construct validity (Yin 2018).

Preliminary desk research was carried out for each case, analyzing official communication material such as websites, social networks, and press clippings.

Afterward, we conducted semi-structured interviews with a key stakeholder (Kleverbeck and Terstriep 2017) to obtain detailed information from someone deeply involved in the initiative. Interviews focused on initiative objectives, structure, activities, the role played by the interviewee, and on the contributions of design and communication design to the process.

Later we sent a structured questionnaire via e-mail and Google Forms to interviewees. It aimed at delving into some specific themes related to the role of design, which required some reflection on the part of respondents. We also analyzed documents provided by interviewees about the initiatives and a field diary was used to collect the researcher's observations and reflections throughout the research process.

In the Loulé Design Lab case, we also had the opportunity to visit the facilities and to undertake direct observation of the project's ecosystem: co-working space for resident designers, workshops, store, and coordination team offices.

2.3 Third Phase—Coding and Analysis

To systematize collected qualitative data, as well as to establish the connection between the occurrence of certain phenomena and their description in the literature, we developed some tools to facilitate comparative analysis of the information: tables and diagrams.

Tables function to code data in a way that makes it easier to detect relevant patterns, serving as a basis for the analysis. The analysis process in the case studies should also, as far as possible, be anticipated and, in some way, planned when elaborating the study protocol (Yin 2018). In this regard, the use of word tables was productive since it ensured all relevant information was being collected, in addition to clarifying which data to collect.

Diagrams allow, clearly and immediately, to obtain a visualization of the operating structure of the initiative and the various phases of the process. They are especially useful in fulfilling functions of recording, understanding, and communicating information (Bertin 1983), generating a systemic view, and leading to the generation of knowledge and insights (Roxburgh 2014; Frascara 2015; Figueiras 2016).

We developed a table of concepts that characterize or are associated with design processes for social innovation (Hillgren et al. 2011; Meroni et al. 2013; Manzini 2014, 2015; Amatullo et al. 2016), recording which of them are identifiable in each case through the collected evidence (Table 1). We also developed an ID table of the initiatives, with relevant data to characterize each one (Kleverbeck and Terstriep 2017); diagrams of the network of stakeholders identified in data collection; diagrams representing the various stages of the process with the recording of moments of communication design intervention and a table of visual artifacts produced by communication design.

We used all these tools for analysis, that unfolded through a cyclical strategy described by Yin (2018): consider evidence collected, draw preliminary conclusions, and re-examine data, to ensure the findings are supported by evidence and observing the principle of linking evidence.

2.4 Study Limitations

Main limitations are related to time constraints for collecting information, as well as the availability of interviewees to allow for an extended interview time, which sometimes needed continuation to deepen some of the topics.

Another limitation stems from the difficulty of obtaining explicit information about the designers' work process, which is sometimes in the domain of tacit knowledge (Schön 1983). Also, when non-designer participants were implementing design strategies, they may not have the vocabulary to explicit their activity in terms of design processes, methods, or tools.

Table 1 Observable DSI concepts in the three cases

Design for social innovation/concepts	LDL	LCS	LSE
Participant interaction			
Design network	✓	✓	✓
Expert design	✓	✓	✓
Diffuse design (non-experts)	✓	✓	✓
Strategies for building consensus/common goals	✓	✓	✓
Creation of new social relations	✓	✓	✓
Design intervention			
Purpose (problem-solving/sensemaking)	Both	Both	Both
Placemaking strategies	✓	✓	✓
Tooling up	✓	✓	–
Framework project (strategy)	✓	✓	✓
Design initiatives	✓	✓	✓
Infrastructuring	✓	✓	✓
Defining an exit strategy	–	–	✓
Results			
Dissemination	✓	✓	✓
Replication	–	–	✓

The existence of two cases from the city of Loulé in the multiple case study is due to the unexpected opportunity to have access to in-depth information about LSE when we were conducting semi-structured interviews in LDL. It was an unforeseen opportunity, but the initiative proved to fit all the selection criteria explained above.

2.5 Case 1—Loulé Design Lab

Loulé Design Lab is an initiative integrated with Loulé Criativo, a project promoted by the Municipality of Loulé, in Algarve, a region in the south of Portugal that has tourism as its main economic activity. Loulé is a small town of about 25,000 inhabitants located a few kilometers from the seashore but still affected by the problems resulting from the concentration of critical thinking (namely in the creative field) in Lisbon and Porto areas, the largest cities in the country.

LDL was created in 2017 to function as an incubator for design projects that incorporate endogenous resources of the region, preserving and expanding the municipality's cultural identity. These resources include a large body of ancient artisanal knowledge that still exists in the community but is increasingly at risk of being lost, due to the aging of the population and by a scarcity of younger people interested in continuing traditional crafts. The synergy model between promoters and the local community bases itself on facilitating opportunities for co-creation

Fig. 1 LDL—visual identity, workshops, and exhibitions. Published with permission from LDL

between resident designers and local artisans. LDL works through a dynamic of long-term residences and the support of a dedicated logistics and human resources structure, with an industrial designer as coordinator and curator and a communication designer in the core team (Fig. 1).

2.6 Case II—Laboratório Cívico de Santiago

Laboratório Cívico de Santiago took place in Aveiro, a city in Portugal's central coast, to implement a civic laboratory methodology (Freire 2017; García 2018) in the Santiago neighborhood, an area with a past of social and economic problems. LCS was promoted by a group of researchers and people connected to the University of Aveiro, some of whom were designers.

The idea was to launch this project as an experience to revitalize social relations in the community, facilitating citizens' initiatives that could contribute to this goal. The public process began with a public call for ideas to improve the neighborhood. Afterward, the promoting team selected ten proposals and organized groups of volunteers from the community for project implementation. A set of prototyping sessions followed with the participation of the involved community and promoting team, which ensured mediation. As a result, there was a photojournalism exhibition, recipe sharing sessions from African cuisine, and painting of public spaces with children from local schools, among others. Projects were developed within a limited timeframe and shared with the Aveiro community in general through a final event (Fig. 2).

Fig. 2 LCS—call for ideas, co-creation workshops, website, and final event. Published with permission from LCS

2.7 Case III—Loulé Sou Eu!

Loulé Sou Eu! was generated in the context of a master's final project by a communication designer at the University of Algarve in Faro. The project reactivated a traditional shopping street in downtown Loulé, in decline due to the increasingly widespread shopping centers. Traditional stores, owned by small local merchants, showed difficulties with the increasing absence of passers-by and consequent lack of customers. Main downtown street, Rua de Portugal, was selected to implement this project.

The promoting designer created a communication plan to showcase each store, involving shopkeepers in an initial action of community creation and engagement with the project. As a follow-up, the promotor and the community of shopkeepers created an event to attract visitors, including street entertainment, decoration of shops and public space, and various other sharing activities between merchants and visitors. The event had great public acceptance and was replicated various times over the course of several months. This project originated an invitation by the Municipality of Loulé for the promoter designer to join a team from this public body to revitalize the downtown area and traditional commerce (Fig. 3).

3 Preliminary Results

Preliminary results of the multiple case study refer to three aspects: presence of concepts or structuring themes relating to communication design intervention in social innovation projects; the roles communication design plays, closely related to the needs of initiatives; lastly, the milestones of communication design intervention regarding one model describing the DSI process (Meroni et al. 2013).

Fig. 3 LSE—event, posters, visual identity, and postcards. Published with permission from LSE

3.1 Concepts

Table 1 lists main concepts that come into play in design for social innovation activities collected from the literature review, describing which were observable in each case.

Social innovation initiatives allow reframing problematic situations to generate new meanings (Dorst 2012; Zurlo and Cautela 2014; Emilson 2015; Manzini 2015). In doing so, they are capable of circulating new narratives socially and thus facilitate deeper change processes. Sense-making ability was observed in the three cases and equated in terms of importance to problem-solving by the various interviewees. This kind of action was carried out by the participating designers, but also by other team members.

All the cases showed the existence and importance of a place-making strategy (Pierce et al. 2011; Manzini 2015), i.e. the production of new meanings that transform a specific space or geographic location into a place. This process of creation implies various communities that relate to it and intentionally produce it. We collected compelling evidence in the three cases of the promoters' intervention as mediators and enablers of establishing and strengthening active communities linked by a shared sense of place.

In the three cases, we were also able to verify the existence of a strategic plan for the development of the initiative. That is, the elaboration of a design program, or framework project (Manzini 2014, 2015), which defines a strategic orientation that can frame and guide the remaining steps. All initiatives, through their promoters but not always through designers, previously defined a macro and medium or long term vision that brought together, coordinated and directed the meaning of a series of specific design initiatives.

The concept of infrastructure (Hillgren et al. 2011) fits in with the need for social innovation initiatives to establish a support system that helps them to be more resilient and flexible. This allows them to sustain themselves over time and support

the nature of temporary and sometimes superficial involvement of some participants (Manzini 2019). Design can play a crucial role in creating, managing, and maintaining a network of relationships between actors and in enhancing synergies between them (Hillgren et al. 2011). These are key steps for the creation of infrastructure, which can also be composed of physical spaces, digital platforms, communication, and design services, or logistical services (Manzini 2015). It became clear in the three cases under analysis that various actions were taken to build elements that work as infrastructure. LDL is the most expressive of the three, with physical structures, institutional partnerships, and a permanent support team.

3.2   Roles

In the LDL and LSE cases, designers took part from the beginning of initiatives, acting as promoters, facilitators, mediators, and triggers of social conversations. They also fostered synergies among stakeholders that gave rise to new social relationships as well as the circulation of resources and knowledge in the network of each initiative. In the LCS case, these roles were performed mostly by specialists from other areas.

However, despite these roles do not need to be performed exclusively by designers, they exhibit the use of design strategies (Lawson 1997; Swann 2002; Dubberly 2005; Almendra 2010). These design strategies include mapping and systematizing information about available resources; strategic planning; project management; use of prototyping tools and materialization of ideas; tooling up, that is providing ways for community members to equip themselves to move forward with projects autonomously; story listening and storytelling as a way of attending the motivations, needs and wants of the community and the participants; co-creation.

It is noteworthy that in the three initiatives, these roles were never done in a closed, pre-determined, specific, or isolated manner. On the contrary, this type of activity can be characterized as flexible, open, fluid, and always evolving (in the sense that needs and formats of action are frequently updated and adjusted). Also, these interventions take place in a community context and imply sharing knowledge, solutions, and insights between participants, experts, and non-experts.

Mediation is very present in the three cases since it is necessary to establish bridges of dialogue between stakeholders, trying to determine a common language among participants with different backgrounds, managing consensus, resolving conflicts, and actively contributing to creating new social relationships.

At LDL it is essential to mediate the relationship between designers and artisans. It is evident the extreme care on part of promoters to foster an egalitarian relationship between the two, concerning authorship and protagonism, and based on proximity and partnership. The need for translation between a more technical language, specific to designers, and the artisan's more traditional approach is also a point worth noting.

At LCS the process was executed through workshops with groups of volunteer citizens who co-designed solutions for the neighborhood. So, it was essential for promoters to make sure that projects pushed through beyond some critical moments, resolving deadlocks and fostering synergies between teams.

In the case of LSE, mediation was crucial at the start of the initiative. There was a previous communication campaign addressed to shopkeepers of Rua de Portugal, generating awareness, goodwill, and gathering efforts around the project's objectives. Furthermore, the project was implemented through teamwork between shop owners to carry out shop decoration and street animation.

The facilitation role is also highlighted in the LDL and LCS cases since in both there were participants who proposed to develop specific projects: ideas for the Santiago neighborhood in the LCS case and products or services that build upon the local resources of Loulé in the LDL case. A constant effort by the promoting team was necessary for providing technical and logistical support, highlighting and encouraging possible partnerships with other community members, and maintaining a constant, motivating, and productive work rhythm.

In all cases, communication design participated as creative producer of design devices (Manzini 2015), developing a visual identity, communication of initiatives, digital communication, and promoting of events. These are tasks that require more specialized skills in communication design since they presuppose the use of specific techniques, tools, methods, as well as graphic and image editing software.

3.3 Process

All the initiatives observed were of medium to long duration, with LCS being active for four months (but with many more months of prior preparation of the promoter team), LSE with a length of more than one year, and LDL with more than three years of existence. Data collected on all three processes show the need for involvement of promoting teams in a deep and committed way, as well as the existence of infrastructure that allows initiatives to sustain throughout its duration. It is also clear that there is a substantial difference in these processes when compared to more traditional modes of design, characterized by occasional interventions responding to a specific briefing and limited to a defined timeframe.

To conclude how the design process for social innovation unfolds we developed a diagram based on the model by Meroni, Fassi, and Simeone (2013) in which we mapped the evidence collected in all three cases (Fig. 4).
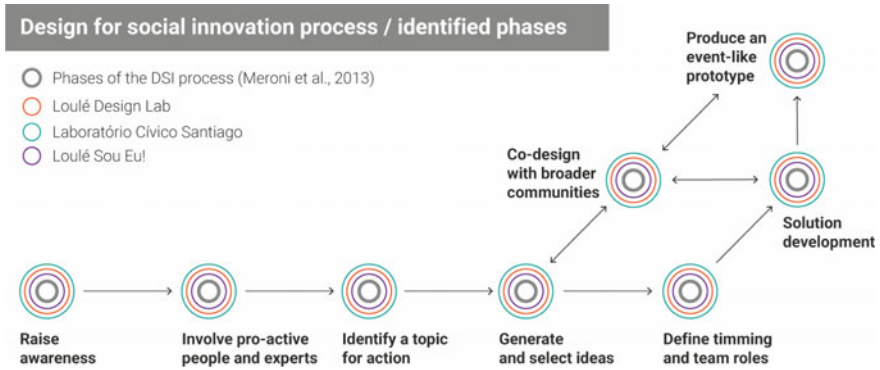
Fig. 4 DSI process adapted from Meroni et al. (2013), with identified phases in each case

4 Discussion

Table 2 shows the study's propositions, based on our literature review, with an indication of their verification in each of the three cases.

4.1 Recommendations for Further Research

Concerning the multiple case study, it will be necessary to do a complete comparative analysis, as well as to produce final conclusions and the case study report. Another recommended step will be to share the report with interviewees for review, as a validation procedure (Yin 2018).

Table 2 Confirmation of study propositions on each case

Multiple case study propositions	LDL	LCS	LSE
Design process methodology, characterized by cycles of goal setting, creation of possible solutions, and implementation tests (Lawson 1997; Design Council 2005; Brown 2009; Almendra 2010) is used in social innovation processes, even when stakeholders who implement it are not design experts	✓	✓	✓
Various tools of the design process (Laurel 2003; Stickdorn et al. 2018) are used, contributing to initiatives to reach their goals	✓	✓	✓
Communication design acts in multiple phases, moments, and tasks of a design for social innovation process	✓	✓	✓
Communication design generates specific outputs and results that are relevant for social innovation initiatives to achieve their goals	✓	✓	✓
Social innovation processes benefit from multiple areas of design, like strategic design, design for services, interaction design, or project management	✓	✓	✓

To broaden the research about the role of communication design in social innovation processes, it is recommended that more cases can be studied. Also, the use of design ethnography and design probes could prove beneficial since the application of these methods will allow the in-depth and context-specific collection of data, from differentiated nature of those already collected. Keeping up with initiatives as they unfold, thus originating specific moments of immersion (Martin and Hanington 2012) from the beginning to the end of the process, would bring benefits in terms of knowledge about effective participation of designers and other stakeholders in less explicit tasks, such as strategic development or others where outcomes are immaterial.

Participant observation aims to obtain information and generate interpretations about behaviors, activities, cultural and social meanings (Atkinson and Hammersley 1994). Applied through design ethnography, it will be especially useful to collect data on the context of design interventions, the dynamics between stakeholders, and to make explicit tacit knowledge in a real work context. It allows questioning people while observing them and ask for explanations about their actions and motivations at specific moments of social innovation initiatives.

Probes, called cultural probes (Gaver et al. 1999) or design probes (Mattelmäki 2006), are physical or digital tools used to collect evidence in a way very close to the research phenomenon. These instruments allow an intentionally informal, flexible, and open collection of inputs, trying to instigate user participation and provoke the sharing of information about aspects of their inner life such as reflections, emotions, or motivations (Martin and Hanington 2012). Another advantage of the method is to reduce the incidence of bias due to the absence of the researcher at the time of data collection, which facilitates the authentic expression of opinions and reflections by the subject (Stickdorn et al. 2018). Deployment of probes can thus allow the collection of information of subjective nature, difficult to obtain by other methods, and possibly generate valuable insights about the role of designers in the DSI process.

5   Conclusions

Although it is necessary to deepen research through comparative analysis of the cases that make up the study, it is possible to observe that design processes for social innovation present challenges that extrapolate the more common model of design intervention. These difficulties are related to working in direct collaboration with communities, co-designing with non-experts, and sharing the conducting of the design process with specialists from other areas. The need for medium and long-term involvement in projects is also problematic, since initiatives may be driven by voluntary personal involvement, making it hard for designers to manage other professional activities.

Our multiple case study allowed us to identify the need to produce communication artifacts to communicate internally, trigger community contributions, attract

participants, create a visual identity, generate documentation, and allow presentation of results. These are situations in which communication design contribution becomes more material, depending on expert capability to generate communication artifacts and systems.

But social innovation initiatives require other roles from designers, like fostering close personal relationships and trust, managing conflicts and consensus, and establishing a design network that helps sustain the initiative over time. Although some of the identified roles are not exclusive to design and can be played by other participants, they make use of methods, tools, and skills that are specific to design. When deployed by designers that are trained and experienced in using these tools, their results can be amplified.

In this sense, regarding communication design, results point to some specific skills like enabling communities of interest and action, tooling up, facilitation, and mediation that must be present to add more value to the processes of social innovation.

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