

POLITECNICO DI MILANO

Master of Science in Management Engineering



Design for Social Innovation in Colombia

How design tools and methods can improve social
innovation ecosystem

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ABSTRACT

Social innovation has started to make a place within the current discussions about innovation as a possible new paradigm and as a way to create social impact in societies. For this reason, the objective of this work is to present an overview of the current state of this field, first in the world and then in the specific case of Colombia, in order to make an analysis of the social innovation ecosystem in this country and some possible ways in which it can be improved and enhanced.

Furthermore, the developments and ideas coming from the design field about generating social impact are presented, due to their relevancy when dealing with creative ways of tackling problems. In specific, the improvements proposed come from what is called Design for Social Development, term created by Ezio Manzini.

After the literature review, the state of the social innovation field in the Colombian context was analyzed, finding some strengths and weaknesses, as well as some points that could be improved in order to keep fostering this field in the country. The most important pitfalls found are the knowledge and information transfer, the visibility of initiatives and the fragmentation of the actors, who sometimes find it difficult to connect between each other.

As possible solutions to implement, some design methods were proposed regarding the creation and support of infrastructuring and connecting spaces to tackle the fragmentation, and also some tools that may serve as a way of increasing the visibility. This aimed at providing a new insight coming from a field that can have a high impact to improve the performance, by providing better ways to connect and to collaborate between actors and sectors within social innovation.

Keywords: Social innovation, design, social impact, social innovation ecosystem, design for social development.

La innovazione sociale ha cominciato ad avere un posto nelle discussioni sulla innovazione come un possibile nuovo paradigma e come una maniera di creare impatto social nella società. Per questa ragione, l'obiettivo di questo lavoro è presentare una panoramica del attuale stato di questo campo, prima nel mondo e poi nel caso specifico di Colombia, in modo da fare un'analisi sul ecosistema della innovazione sociale in questo paese e alcune possibili maniere in cui si può migliorare e potenziare.

Inoltre, si presentano gli sviluppi e idee provenienti dal campo del disegno su come generare impatto sociale, a causa di la sua pertinenza per trovare modi creativi di affrontare i problemi. In specifico, i miglioramenti proposti vengono dal Disegno per lo Sviluppo Sociale, termine creato per Ezio Manzini.

Dopo la rivista de letteratura, lo stato della innovazione sociale nel contesto colombiano è stato analizzato, trovando alcune punti di forza e di debolezza, oltre a alcuni punti che si possono migliorare per promuovere e favorire questo campo nel paese. Le insidie più importante trovate sono il trasferimento della conoscenza e la informazione, la visibilità delle iniziative e la frammentazione degli attori, i cui a volte trovano difficile collegarsi con altri attori.

Come possibile soluzione per implementare, alcuni metodi di disegno sono stati proposti sulla creazione e supporto della infrastruttura e spazi di connessione to affrontare la frammentazione, ed anche alcuni strumenti che possono servire come modo di aumentare la visibilità. Questo è mirato a provvedere una nuova idea e visione proveniente da un campo che può avere un alto impatto per migliorare la performance fornendo maniere di collegarsi e collaborare fra attori e settori della innovazione sociale.

Parole chiave: Innovazione sociale, disegno, impatto sociale, ecosistema di innovazione sociale, disegno per lo sviluppo sociale.

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1 INTRODUCTION

1.1 PROBLEM SETTING

The core idea of social innovation has accompanied the humanity since its beginning. Individuals and communities have always tried to solve their needs by adapting to changes but these solutions usually stayed within their own contexts. Today, technology offers a wide range of opportunities not just to overcome diverse type of problems and solving needs, but also the possibility to connect, to exchange information and ideas, and to share and replicate the solutions.

Social innovation aims at providing a framework or structured process for facing these challenges, nevertheless, due to its broad nature, a standardized process or a step by step framework is a difficult goal to achieve, not everyone has the same needs or the same resources, being these material or intellectual.

In the last decade there have been an active discussion in this field, several initiatives have been carried out in the world with successful results, and the governments are beginning to see social innovation as a useful resource for poverty reduction. Nevertheless, due to the lack of a single framework to work on, each actor make its own interpretation of the concepts and processes, generating a positive impact, but rendering more difficult to connect and collaborate with other actors. Furthermore, the scarce visibility of some programs and initiatives sometimes makes it difficult to find partners that provide support in terms of funding or knowledge.

These issues expose the need of encouraging the creation of social innovation ecosystems, which can feed the collaboration, exchange and sharing of information and ideas in order to improve the visibility and find the support needed to carry out the projects. For this, design can provide solutions by means of methods and insights that allow actors to begin with the creation of environments that foster social innovation, and to better engage within new or already existing ecosystems.

1.2 RESEARCH METHODOLOGY

1.2.1 Objectives

The main purpose of this research is to make an analysis of the current state of social innovation in the world and in Colombia, through the lens of some of the most known social innovation theories from

different fields. In specific, the research is focused on how some of the design tools and methods could make a big contribution to the improvement and the development of the social innovation ecosystem in the Colombian context.

1.2.2 Outline of the study

The process shown in Figure 1.1 shows the path followed in order to achieve the objectives set. Each step in the process will be further explained in the following sections.

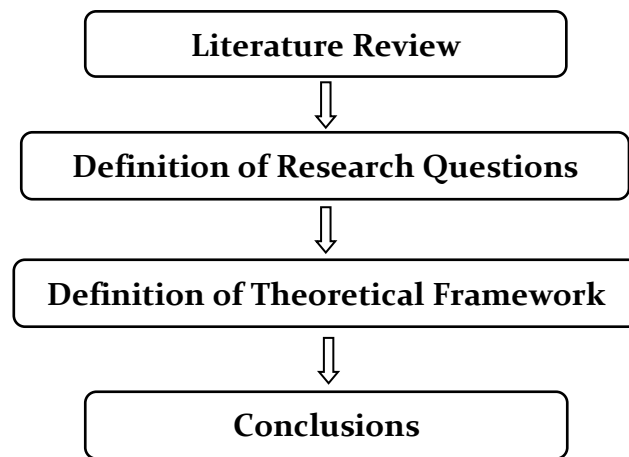


Figure 1.1. Research process.

Literature review

First, a in depth analysis of the literature review was carried out in order to familiarize and gain knowledge about the basic concepts and the state of the art of social innovation and design focused on social development.

Regarding social innovation, it was found that there is not a formal theory that explains each aspect in this field. This means that the definitions and processes vary in each sector, making their own interpretations from their perspectives, focusing on what they better work on or what they better know.

This lack of convergence in definitions and processes does not mean that the actors are against each other. On the contrary, it shows the commitment that they have with the field showing all kind of ideas and points of view, having as a final objective reaching a consensus on a theory that makes easier to begin to apply and replicate projects and initiatives.

In Colombia, it is seen a commitment of the national government to make use of social innovation as a way of overcoming extreme poverty, starting with the transformation of Medellín in the beginning of the century and following with the adoption of social innovation in the National Development Plan.

The field of design has also shown interest in social innovation as can be seen with the active involvement of some organizations and design schools to this process. The literature review of design carried out in this research is based on the book “Design when everybody design” by Ezio Manzini, but taking into account other developments such as those of Tim Brown in IDEO, or Ehn and Hillgren in Malmö University.

The most known approach used in design thinking, focused more on creating impact through initiatives. Nonetheless, other ideas and developments can be found in the field, such as DESIS Lab Networks, the application of new concepts that go beyond co-design and small initiatives, to a systemic change coming from the creation of ecosystems and infrastructures, that allow not just conducting initiatives but also the generation of collaborative networks.

Although the objective of this research is not to propose a new theory of social innovation, it can contribute as a way of gathering the current theories in one place. This in order to make easier to have an overview, which could be further used for new proposals in the field, in terms of theoretical aspects, as well as in initiatives and projects that make use of design.

Definition of the research questions

The literature review showed that in Colombia most of the social innovation initiatives come from the government, who used mostly the approach proposed by Mulgan and colleagues (2007). Although some of the design tools are already being used, there are few organizations using them, thus, if carried out properly it is possible that design can have a higher impact and contribution in social innovation in the Colombian context.

The questions that this research wants to answer are:

- *What is the current state of social innovation field in Colombia?*
- *Which tools or methods of design can be applied in order to better tackle the issue of ecosystem creation within the Colombian context?*

Definition of the theoretical framework

As a first step, the social innovation section in the literature review aimed at giving an overview of the definitions and processes in which initiatives, theories and projects can be developed. For the analysis it was decided to explore the role of design in social innovation, using as framework the ideas and concepts explained by Ezio Mazini about the role of the design expert within social innovation.

The main objective is to analyze how some of the tools and methods that this author explains are being already used in the creation of a social innovation ecosystem, and how a design expert can improve them. Or, on the other hand, if these tools and methods are not yet implemented, how they can contribute to the development of the ecosystem in order to better carry out the initiatives and programs in social innovation.

Conclusion

This section aims at gathering and analyzing the information obtained in the case studies analysis and answering the research questions. It will be shown the present state of the social innovation ecosystem in Colombia and the actors involved, which tools and methods they can rely on to improve the connection with other actors and how this might be the first step for improving their performance while collaborating in the growth of the field.

2 LITERATURE REVIEW

2.1 SOCIAL INNOVATION

2.1.1 Towards social innovation

The first person who tried to explain the term innovation and gave it a place within the economic theory was Joseph Schumpeter (1912) in the beginning of the twentieth century. From this first perspective, and from the evolution that the term had during the last century, it is evident that innovation has been, since the beginning, related to economic growth of firms and markets, and the creation of breakthroughs in technology or industrial processes. This can be seen also in the definitions given by diverse organizations or authors, such as the Oslo Manual (OECD; European Communities, 2011, p. 46).

It is possible to notice here that the first definitions do not consider the social aspects of innovation. About this, the Oslo Manual clarifies that they are focused only on the business sector and, as there is still few knowledge about innovation in public sectors or non-market-oriented sectors, a proper set of guidelines for this type of innovation requires further work. Although they do not take into account social aspects in the Manual, they see the potential that it may have.

Echeverría (2008) makes a call to broaden this narrow definition of innovation by creating a shift in the dominant paradigm of innovation from the market-oriented definition, to one that includes new aspects that have been forgotten, but that can contribute to the discussion and improvement of the concept and the societies by enriching them in artistic, cultural and educational ways. Here money is not the proper tool to measure the success of an initiative, it is necessary to find new ways for the impact measurement, which provide tools of analysis and visualization of the improvement of welfare and quality of life of social groups involved.

Gurrutxaga (2009) specifies three different ways of understanding the concept of Innovation. The first states that innovation is a lineal process that goes from basic research to technological development. The second one takes as basis the first definition but tries to link it with economical, productive and industrial processes, creating networks and relationships that foster innovation. The third conception sees innovation beyond the economic aspects, as a process of constant change in the knowledge or in the actions taken about social, political, cultural or economical dimensions of life.

For Innerarity (2009, p. 30) innovation is social on itself, thus the term “Social Innovation” is redundant. He affirms that there is not innovation without society, because all innovations are given within a social context.

These three authors, as well as, Harayama and Nitta (2011), and Howaldt and Schwarz (2010) called for a change in perspective in innovation due to the way in which technological and economical approach to innovation overlooked the social issues within it. They claim that innovation should not be just about profit maximization and the growth of firms, because its main purpose is not social-driven, although it might have a collateral impact in society.

Continuing with the discussion, the OECD Forum on Social Innovation (2011) acted as an integrator of ideas and took as basis the works of some authors pointing out this issue, allowing a bigger visibility, with the objective of finding an agreement. The Forum states that Social Innovation differs from business innovation because the first is focused on meeting needs not satisfied yet by the market and providing people with an active role in production processes (Young Foundation, 2012, p. 21).

One of the latest insights about this topic is given in the project “Social Innovation: Driving Force of Social Change” (SI-DRIVE) (Howaldt, Butzin, Domanski, & Kaletka, 2014), not just asking for a paradigm shift but also providing some ideas and propositions that can help to address this challenge. They claim that this paradigm shift is a cause of how society is changing from based on the industry to one based on services (Howaldt, Butzin, Domanski, & Kaletka, 2014, p. 157), where social innovation can be considered an independent field differentiated from the current innovation concept, going beyond economic growth (Howaldt, Butzin, Domanski, & Kaletka, 2014, p. 115).

From what is stated above, it is clear to notice that a decade ago there was still not a common ground to aboard a discussion on the social aspects of innovation, nonetheless the contribution of different authors, organizations, universities and institutions has brought a convergence on the idea of the creation of a new paradigm of innovation, encouraging actors to continue with the development of the field, both in practice and in theory, having as a final objective the development of a social innovation theory.

2.1.2 Why is social innovation important: trends and emergence

The beginning of this century brought with it a rapid progression of the technology, as well as complex economic and social challenges that have created trends that are shaping the upcoming future (OECD, 2016). These trends have a strong influence in diverse fields, which makes necessary to answer: which are the social challenges to face and how humankind will deal with them to adapt to the changes or to reduce negative impact? Trends such as the reduction of the welfare state and the evolution of Corporate Social

Responsibility initiatives have shown a new panorama in which Social Innovation has the potential to thrive (Department of National Planning; Department of Science, Technology and Innovation; National Agency for Overcoming Extreme Poverty, 2013, p. 2).

A common denominator among the drivers and trends that encouraged and boosted the development of social innovation is the fact that the market and the government have failed at meeting some of the most pressing needs in this century, as explained by TEPSIE (2012) and Rodriguez and Alvarado (2008). The government due to the lack of tools and the market due to the lack of incentives (Murray, Caulier-Grice, & Mulgan, 2010, p. 3). These needs differ depending on the region, for instance, in Europe they have been discussed by Simon and colleagues (TEPSIE, 2014) and Boelman, Kwan, Lauritzen, Millard and Schon (2014). In the Latin American case, there is still a long road to go through, because wide groups of population still lack of basic services or the provision of these services is given in poor condition (Bernal, 2016, p. 97).

Another important trend is the emerging social economy in which the boundaries of production and consumption are blurred, more importance is given to collaboration and sharing of resources, and the new era of information allows the creation of networks to support it. This leaves behind the centralized structures in which users are simply passive consumers, changing them for distributed networks in which users play an active role (Murray, Caulier-Grice, & Mulgan, 2010).

The last decade brought, along with the wide use of social innovation, some trends that have changed the way to tackle certain problems. The line to define whether the trends influenced social innovation or the other way around is very thin and unclear, because both benefit from each other. A report disclosed by The Young Foundation and Social Innovation Exchange (Pulford, Hackett, & Daste, 2014), proposed six trends which have been born or grown due to and with the spreading of Social Innovation, these are:

- New ways to get new ideas;
- Increased support infrastructure for start-ups;
- Innovative finance tools to support Social Innovations;
- A move towards sharing, which allows citizens to share resources and knowledge more effectively;
- Frameworks for scaling, aimed at reaching more people and spread the impact;
- Systemic innovation, which aims at creating ecosystems of Social Innovation, which allow sustainability of initiatives.

Howaldt and colleagues (2016), mapped and analyzed more than 1000 cases of Social Innovation initiatives all over the world in order to obtain insights that provide guidance on Social Innovation processes. Here

it can be observed the boost that Social Innovation has had in the new century, in which 72% of the initiatives analyzed were created in the last decade. In the specific case of Latin America, the number of Social Innovation projects increased by 37% in the last five years (Howaldt, Schröder, Kaletka, Rehfeld, & Terstriep, 2016, p. 18).

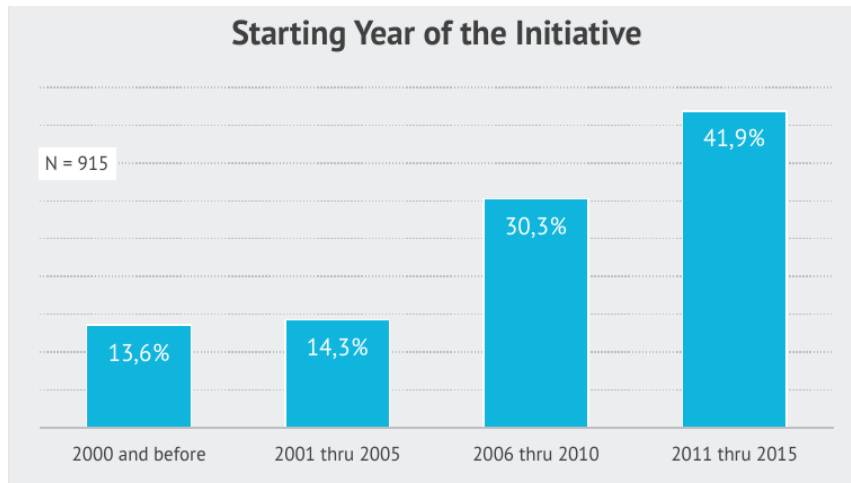


Figure 2.1. Starting year of the initiative (2000 - 2015). (Howaldt, Schröder, Kaletka, Rehfeld, & Terstriep, 2016, p. 19).

The growing importance of Social Innovation is seen also in the adoption as public policies by some governments, such as UK, Germany, Italy, Sweden, Colombia and USA, which, although is yet a small number of countries, it serves as a guide and example for other countries to follow and develop their own initiatives.

2.1.3 Definitions

At this point, after explaining the basic concepts of innovation and its evolution, some definitions of Social Innovation are exposed to show not just the meaning of the concept, but also the broad spectrum of interpretations that exists, which, although they have a common purpose, they also differ in the means or points of view. Although there is not yet an agreement for a unique explanation of the term, this does not mean that there are conflicts between the actors involved in the field. Each definition given is an insight on the ways of working of each actor, and more importantly, each one from its own perspective, which on the contrary, shows the commitment of all of them to contribute to the improvement of the field and the development of a social innovation theory.

Organizations such as Social Innovation Exchange or the Center for Social Innovation in Toronto, take a focus more related to the practical and empirical aspects of Social Innovation. In the Latin-American case,

The Inter-American Development Bank created the Innovation Lab with a similar approach (Guaipatin & Schwartz, 2016). In the book “Social Innovation: What it is, why it matters and how it can be accelerated” (Mulgan, Tucker, Ali, & Sanders, 2007), say explicitly that Social Innovation differs from business innovation, although in some cases they can join together to provide solutions. According to them, some of the existing interpretations overlook the main driver of these initiatives, the purpose, reason why they provide a definition centered on the replicability of models and programs, defining it as: “*Innovative activities and services that are motivated by the goal of meeting a social need and that are predominantly developed and diffused through organizations whose primary purposes are social*” (Mulgan, Tucker, Ali, & Sanders, 2007, p. 8).

The preceding is a definition focused on an empirical approach to Social Innovation, on the other hand, the OECD LEED Forum on Social Innovations (Harayama & Nitta, 2011, p. 20-21) says that social innovation objectives and characteristics are:

- Identifying and delivering new services that improve the quality of life of individuals and communities;
- identifying and implementing new labor market integration processes, new competencies, new jobs, and new forms of participation, as diverse elements that each contribute to improving the position of individuals in the workforce
- the utilization of co-creation processes, seeing the communities not just as consumers but also as producers.

It can be seen that these two denotations differentiate themselves with the market-oriented approaches, not by demeriting them but by changing the objectives and purposes to the society. Nonetheless, sometimes, as the cases of social enterprises or corporate social responsibility, economic aspect is broadened to also have a positive impact on society or the environment.

In the specific case of Colombia, the interpretations are closely linked to one another (Department of National Planning; Department of Science, Technology and Innovation; National Agency for Overcoming Extreme Poverty, 2013, p. 11); (The Scientific Park of Social Innovation, 2017); (Agreement 0035, 2014, p. 33). The objectives are to solve social problems or satisfy unmet needs making emphasis in the effectiveness and efficiency. The interest is not just in short-term, but also in the long-term aiming at finding solutions that are replicable, scalable and sustainable, through the use of a product, service or method novel in the country or in the communities.

Nevertheless, there is a pitfall in the definitions of social innovation mentioned earlier, they focus only on the outcome or the final result, and not in the process. This means that it is possible that an initiative fails in achieving its objective, nonetheless the process may have led to the appropriation of a co-creation process within the community which in the long-term is more meaningful and creates stronger impact if well used; or to the creation of public policies that will spread the use of the initiatives. About this Hernandez and Sánchez argue that “*social innovations can be understood from an evolutionary perspective and not as a finish point exclusively*” (2014, p. 58). As Rodriguez and Alvarado argue:

“The success or failure of every innovation goes beyond its immediate benefits, it is seen in the creative process that adapts the innovation in a new context. Even from failed innovations something can be learned... because any practical application possesses the potential of new knowledge. The problem is that sometimes the potential of learning that lays in the error is overlooked” (2008, p. 35).

“The Theoretical, Empirical and Policy Foundations for Building Social Innovation in Europe (TEPSIE)” (Young Foundation, 2012) noticed this after an extensive research activity, in which some of the most known characterizations of the concept until 2012 were gathered taking them as basis to create a definition to contribute to the discussion. For them, the objective was to integrate the practical and research approaches. According to TEPSIE, social innovation:

“Are new solutions (products, services, models, markets, processes etc.) that simultaneously meet a social need (more effectively than existing solutions) and lead to new or improved capabilities and relationships and better use of assets and resources. In other words, social innovations are both good for society and enhance society’s capacity to act” (Young Foundation, 2012, p. 18).

After the finalization of the TEPSIE project, SI-DRIVE took the wheel on this topic in Europe and provided one of the latest definitions and perhaps one of the most complete, which takes into account all the work that has been done in the last decade, both empirical and theoretical. This project defines social innovation as:

“A new combination or figuration of practices in areas of social action, prompted by certain actors... with the goal of better coping with needs and problems than is possible by use of existing practices. An innovation is therefore social to the extent that it varies social action, and is socially accepted and diffused in society... Depending on circumstances of social change, interests, policies and power, social ideas as well as successfully implemented social innovations may be transformed and ultimately institutionalized as regular social practices or made routine. Following the end of such a

life cycle, when the innovation becomes standard, new demands for change may occur and possibly call for further social innovations” (Howaldt, Butzin, Domanski, & Kaletka, 2014, p. 122).

These two definitions integrate the basic aspect of meeting of social needs and the development of the initiatives, focusing not just in the final outcome but also in the process, as well as in the empowerment of the actors involved, being the sentence “enhance society’s capacity to act” a very clear and powerful way to express not just the meaning of social innovation, but also its mindset.

2.1.4 Approaches

As observed and pointed out in the definitions section, there are diverse approaches on Social Innovation depending on the actor or sector in which they are carried out. This approaches were gathered and explained by the report called “Political Foundations of Social Innovation in Colombia” (Department of National Planning; Department of Science, Technology and Innovation; National Agency for Overcoming Extreme Poverty, 2013) developed by Colombian government, and also by (Martínez Moreno, 2011, p. 10).

This author proposes four approaches analyzed from the work and perspectives of different authors, which are the economic (Mulgan, Tucker, Ali, & Sanders, 2007), the managerial (Phills, Deiglmeier, & Miller, 2008), the socio-ecological (Westley & Antadze, 2010) and the political sciences (Moulaert, 2005). On top of this, the Colombian government report adds a new one called the participative approach (Tancredi & Rey, 2010). These are explained in Table 2.1.

	Economic	Managerial	Systemic	Participative	Political Science
Definition	New ideas (products, services and models) that satisfy social need (with more effectiveness than alternatives) and that, at the same time, create new social relationships and collaborations.	A new solution to a social problem is more effective, efficient, sustainable or fare than existing solutions and whose created value accumulates mainly in the society as a whole instead of particular individuals.	Complex process where social, economic and cultural factors interact, changing deeply basic routines, resources and authority flows, or the beliefs of the social system in which they are produced.	New managerial forms with respect to the state of the art, that allow better results than traditional models, and that promote and strengthen the participation of the beneficiaries, transforming them into actors of their own development and therefore strengthening citizen awareness and the democracy of the region	Changes in programs, agencies and institutions that lead to a better inclusion of excluded groups in diverse spheres of society. Changes in the dynamics of social relationship, including power relationships.
Social Innovation Manager	Social entrepreneur	Social entrepreneur and social enterprise	Community and institutional entrepreneur	Not defined	Civil society, social and cultural collectives

Main Objective	To satisfy a social need through a service carried out by the entrepreneur or the social enterprise	Creation of social value	Profound and disruptive changes in the social system	To improve the results of traditional models and to increase the levels of citizenship involvement and democracy	Social inclusion and promotion of the local development. Enhance socio-political capacities and the access to the necessary resources to satisfy fundamental needs
Key Concepts	Entrepreneur, social economy, efficiency	Corporate social responsibility, third sector, social value	Resilience, complexity, community, disruptive change	Development, community, democracy, beneficiaries	Governance, civil society, local territory, social inclusion
Capacity of Institutional Change	Relative. Dealing with social demands with the intention of affecting the political agenda. Incremental approach	Relative. Solving social problems aiming at affecting the political agenda	High. The SI is developed insofar as there are changes in the institutional and social system, contributing to social resilience	Relative. The main goal is to improve social results aiming at having impact in public policies and to empower the communities	Ambivalent process. The SI can shape an institutional change giving space to a new paradigm in the relationships of power
Process Cycle	Lineal	Lineal	Non lineal	Lineal	Non lineal
Fostering Organizations	NESTA	The Stanford Center for Social Innovation	Social Innovation Generation (SIG)	ECLAC	SINGOCOM
Authors	Geoff Mulgan, Charles Leadbeater	Kriss Driegfmeier, Dale T. Miller	Frances Westley, Nino Antadze	Nohra Rey de Marulanda, Francisco Tancredi	Frank Moulaert, Erik Swyngedouw

Table 2.1. *Approaches of Social Innovation. (Department of National Planning; Department of Science, Technology and Innovation; National Agency for Overcoming Extreme Poverty, 2013, p. 8).*

SI-DRIVE project set a framework to encourage further research, rather than one for developing single projects. This is not just a set of stages to follow or bear in mind while innovating with social purposes, instead it sees innovation from a broader perspective. It is aimed at creating insights, research questions and hypotheses that help with the understanding and the study of Social Innovation, as well as filling in the gaps of the existing methodologies and sector related approaches (Howaldt, Butzin, Domanski, & Kaletka, 2014, p. 159). The five-key dimension are transversal during all the analysis that will be carried out during the whole SI-DRIVE project, affecting the impact, scope and the potential of Social Innovations. The report shows an in depth analysis of the relation of these dimensions with some fields that can contribute to the development of a Social Innovation theory. Furthermore, to carry out a detailed mapping of the field, it is necessary to observe carefully the diversity and the relationships of the actors, the governance models, the concepts, and the capabilities and resources, with the final goal of obtaining a comprehensive analysis (Howaldt, Schröder, Kaletka, Rehfeld, & Terstriep, 2016, p. 5).

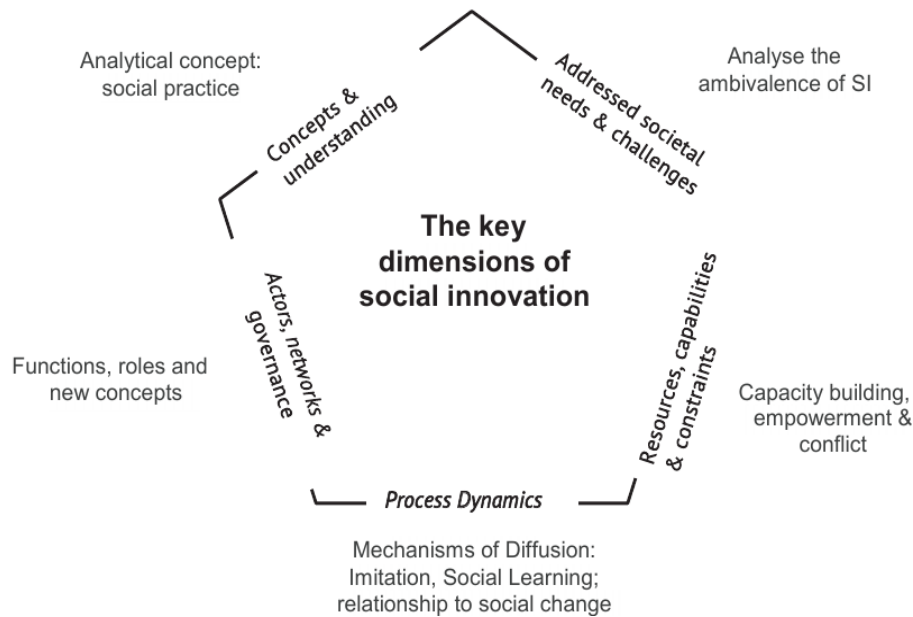


Figure 2.2. Key dimensions of Social Innovation. (Howaldt, Butzin, Domanski, & Kaletka, 2014, p. 159).

2.1.5 Core elements and features

Due to the different type of interpretations of Social Innovation from each sector or organization, not just about how to define it, but also about the approaches, it has been important to establish a set of key aspects involved or the requisites to be considered a Social Innovation. Although the elements or requisites for a Social Innovation vary depending on the sector, some common aspects can be found. Mulgan and some collaborators (2007) were some of the first to face this issue, they identified three aspects that highlight the role of the connectors in an innovative process. In the first aspects, they stresses the importance of the combination of existing elements. The second relates to the convergence of different disciplines, organizations and sectors and the third to the creation of relationships between the actors.

TEPSIE Project provides what they consider to be the key aspects of a Social Innovation, proposing a set of core elements and common features that determine if an initiative is innovative in social aspects or not, the core elements are (Young Foundation, 2012, p. 18):

- **Novelty:** originality or uniqueness of the initiative. The main point is the newness in a field, sector, region, market or by utilizing already existing tools in a new way.
- **From ideas to implementation:** distinction between ideation, invention, innovation and diffusion, that comes from the market-oriented approaches. All these distinctions are involved in the Social Innovation processes, stressing the difference between a novel and promising idea and an established Social Innovation.
- **Effectiveness:** finding ways of capturing the impact and obtaining outcomes that can be measured.

- Meets social need: the needs based approach is used because the commonly used words, such as, problems, poverty or inequality do not provide a proper manner to observe and understand communities.
- Enhances society’s capacity to act: the creation of new forms of relationships between the actors, aimed at increasing the participation of vulnerable or under-represented groups, leading to a better use of resources and skills, empowering them to meet their own needs.

The common features of a Social Innovation mentioned are:

Core Features	Description
Cross-sectoral	Occur at the interfaces between sectors and involve actors from across sectors
New social relationships and capabilities	Social innovations are developed ‘with’ and ‘by’ users and not delivered ‘to’ and ‘for’ them. They can be identified by the type of relationships they create with and between their beneficiaries
Open, collaborative and experimental	Production by the masses – large numbers of people working independently on collective projects without normal market structures and mechanisms
Pro-sumption and Co-production	Blurred boundary between producers and consumers
Grass-roots, bottom-up	Distributed systems where innovation and initiative are dispersed to the periphery and connected by networks
Mutualism	Notion that individual and collective well-being is obtainable only by mutual dependence
Better use of assets and resources	Recognition, exploitation and coordination of latent social assets
Development of capabilities and assets	Participatory approach enabling beneficiaries to meet needs over the longer term

Table 2.2. Common features of Social Innovation. (Young Foundation, 2012, p. 23).

The approach used by the Colombian government takes a different approach more focused on the impact, results and scalability. It divides these elements between needed features and desirable features. Among the first can be found (Department of National Planning; Department of Science, Technology and Innovation; National Agency for Overcoming Extreme Poverty, 2013, p. 13):

- Novelty: It is a useful source of change that provide new alternatives and new ways of doing aiming at creating impact in the population.
- Potential of success: Likelihood of an initiative to be successful and scalable and replicable, probing more efficient ways of solving problems.

- Sustainability: Set of processes and tools that allow long-term economic, social and cultural sustainability.
- Active participation of the community and/or beneficiary population: The communities must be involved during the process; it may be from the problem definition or during a more advance stage.

The desirable features are (Department of National Planning; Department of Science, Technology and Innovation; National Agency for Overcoming Extreme Poverty, 2013, p. 14):

- Potential for public policies;
- Contextualized exchange and transfer of knowledge and experiences;
- Economically favorable;
- Public scrutiny of the quality of life components.

Another perspective is the one given by ECLAC (Tancredi & Rey, 2010, p. 9), which determined eight criteria to identify and analyze Social Innovation initiatives with the objective of make them known to a larger population, showing their capacity to improve lives and their potential to become public policies.

The eight criteria are:

- Innovation;
- Relationship between costs and results;
- Potential of replicability;
- Potential of becoming a public policy;
- Effects over poverty;
- Potential to decrease discrimination and exclusion;
- Social responsibility development;
- Potential of sustainability: a project must meet four conditions to have the potential of sustainability and expansion:
 - conduct the experimentation phase and overcome first stages of execution;
 - bringing together the community;
 - funding for a long-term period or models of auto-sustainability;
 - articulation within the different levels of civil society and the community.

A common feature of the three approaches aforementioned is the importance of achieving certain results, ECLAC and the Colombian Government express this through the economic aspect, the relationship between costs and results, while TEPSIE goes beyond and includes this economic aspect within the possible outcomes that may result from a Social Innovation initiative.

Innovation is also a common feature of these approaches, taking into account that novelty can be considered as an element within innovation. Here the novelty of an idea is the first step, either it is new at a local, national or international level, which will further need to be taken to implementation. SI-DRIVE project mapping on Social Innovation initiatives (Howaldt, Schröder, Kaletka, Rehfeld, & Terstriep, 2016) shows that 45% of the projects provide a completely new solution, while half of them adopt already tested solutions.

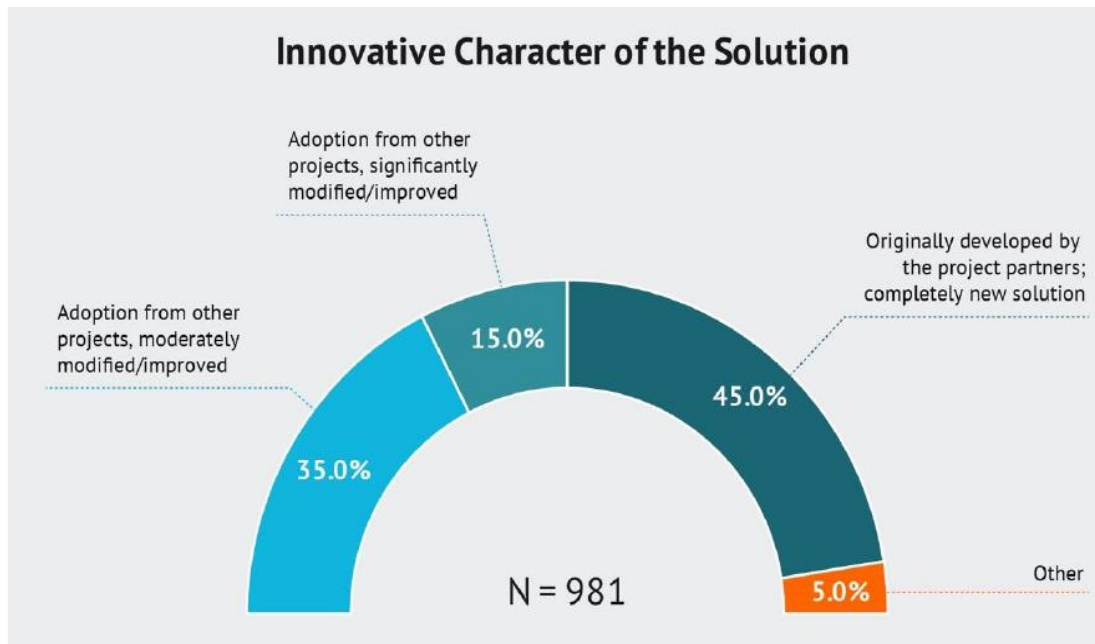


Figure 2.3. Innovative character of the solution. (Howaldt, Schröder, Kaletka, Rehfeld, & Terstriep, 2016, p. 25).

Another aspect shared by the three approaches is related to the involvement of the beneficiary community, from the problem setting, going through the co-creation, co-production and the measuring process, to a final appropriation that enhances the users’ capacities and assets by the integration and collaborations with different actors.

From Colombian Government and ECLAC perspectives, it can be seen the fundamental role given to public policy creation from a Social Innovation given in Latin America, as well as the sustainability aspect. The first, growing from bottom-up aims at taking already tested Social Innovation initiatives to a higher scale by integrating them in the local or State policies in order to reach a broader population in need. The second stresses the importance of sustaining the impact in the long-term, no just creating palliative measures in the short-term.

2.1.6 Stages, process and methodologies

Some authors have proposed a set of stages or life-cycles of Social Innovation to provide a tool for all the sectors that help them better see the wide picture and understand each other's perspectives.

The Innovation Lab of the Inter-American Development Bank developed a methodology composed by six stages in order to promote Social Innovations. The focus is related to finding solution to social problems in excluded communities, through the inclusion of the beneficiaries, the collaboration and coordination with different actors and the use of new technologies to democratize the innovation process. The six stages are:

- Problem identification: Through a “problem contest” in which the communities exposed their problems.
- Building bridges: An open call for people and entities aimed at connecting people with diverse types of knowledge, from different disciplines and countries that proposes solutions to the problem chosen.
- Selection of innovations: The proposals are classified and validated by the communities and finally chosen to be supported by the I-Lab.
- Development of the Social Innovation: Communication, collaboration and testing of prototypes with the beneficiaries.
- Social Innovation implementation: Launch of the solution in the communities.
- Social Innovation scaling: Aimed at having a positive impact to a higher quantity of people by creating alliances with the private and public sector (Guaipatin & Schwartz, 2016, p. 116)

Geoff Mulgan and other authors (2007) proposed what was one of the first ways to approach a Social Innovation process, consisting of four sections. The first the generation of ideas by understanding needs and the identification of potential solutions; the second is developing, prototyping and piloting ideas; the third related to scaling up and the diffusion of the best ideas; and the fourth is learning and evolving. In *The Open Book of Social Innovation*, (Murray, Caulier-Grice, & Mulgan, 2010) further developed this approach by proposing six stages for the Social Innovation, aimed at setting a first approximation of the processes carried out in the field after analyzing several Social Innovation cases. As can be seen in the Figure 2.4, the spiral shape means that Social Innovation is not a linear process.

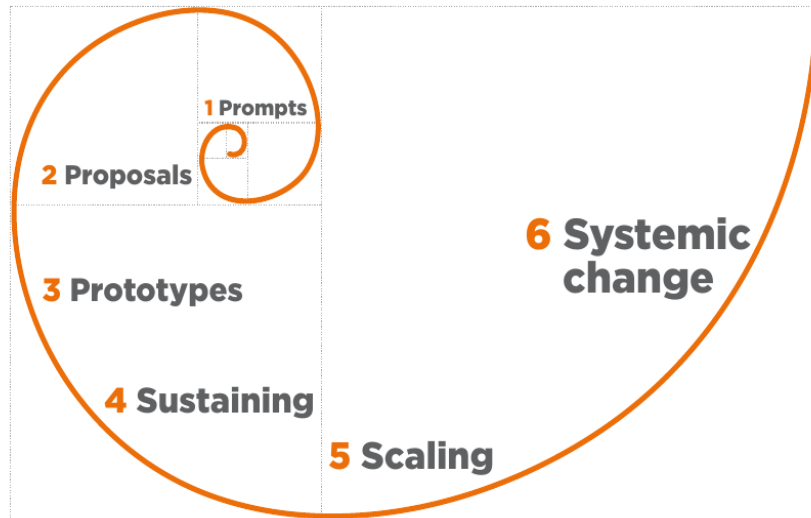


Figure 2.4. *The Social Innovation Process.* (Murray, Caulier-Grice, & Mulgan, 2010, p. 11).

- Prompts, inspirations and diagnoses: the objectives are identifying the problem in a clear manner in order to frame a good question, create new perspectives and ways to see things, and tackle the causes of the problems and not just the symptoms.
- Proposals and ideas: Once having the question it is necessary to find the right answer by generating ideas coming from different actors and sectors, showing diverse insights and bringing together their experiences to broaden the perspectives
- Prototyping and pilots: test of the ideas by creating prototypes and pilots. In addition, the actors get more involved with each, and also, some financial tools for early phases are shown.
- Sustaining: launching of the product or service aiming at reaching financial sustainability. It is necessary to identify budgets and resources, the type of financing, the business strategy, the organizational form and the governance, and to find an equilibrium between the social and financial purposes.
- Scaling and diffusion: social innovation initiatives focus on the rapid diffusion of the innovation, aiming at having a bigger impact using generative diffusion, which is a way of spreading through different ways of replication. Nevertheless, it is necessary to evaluate an innovation in order to decide if the scaling process should be carried out, by using of metrics and data to assess its performance and impact (Murray, Caulier-Grice, & Mulgan, 2010, p. 102).
- Systemic change: due to the complexity, there is not a clear path to follow in order to create them, but they shared some common elements among which can be found the creation of coalitions or

actors, the training of these actors by experts, the implementation of a social structure that allows and encourages changes and new visions (Murray, Caulier-Grice, & Mulgan, 2010, p. 108).

TEPSIE project also presents this process in the report called “Defining Social Innovation” in which they stress the non-linearity of this approach and point out the existence of feedback loops between every stage. Additionally, they state also that some of the stages may overlap or can be done in a different order. Finally, they claim that this process has provided a very useful framework that serves as a base for further developments, although some stages may not be necessary in certain cases (Young Foundation, 2012, p. 34).

The SI-DRIVE project points out some critics and limitations to this process about the iterative nature of the second and third stages, which may continue creating new ideas after the sustainability and escalation of the initiative. In addition, they question the inclusion of the scaling phase by asking if “*it is still an innovation regardless of whether it becomes widespread or remains localized*” (Howaldt, Butzin, Domanski, & Kaletka, 2014, p. 61-62).

Another important point they question is the phase of systemic change as a final stage of the process. The authors argue that, from the explanation given in the process, it can be understood that a systemic change can be reached by scaling any one innovation. Nevertheless, both reports clarify that a systemic change requires the participation of diverse kinds of actors, institutions, norms and practices along with multiple types of innovations (Howaldt, Butzin, Domanski, & Kaletka, 2014, p. 62).

Frances Westley introduced the model called the “adaptive cycle” to “*represent the evolution of a single innovation, from idea to maturity, or the organization that designs and delivers that innovation*” (Westley, 2008, p. 3). She introduces the relationship between the concept of resilience and the Social Innovation, which is critical in the last phase of the process.

The process that she introduces is an infinity loop, representing the non-linearity of Social Innovation and it is formed by four phases. About the process, she states that:

“Once an idea or organization reaches the maturity (conservation) stage it needs to release resources for novelty or change and reengage in exploration in order to retain its resilience. The release and reorganization phase is often termed the “back loop” where non-routine change is introduced. The exploitation and conservation phases are often termed the “front loop” where change is slow, incremental and more deliberate” (Westley, 2008, p. 3).

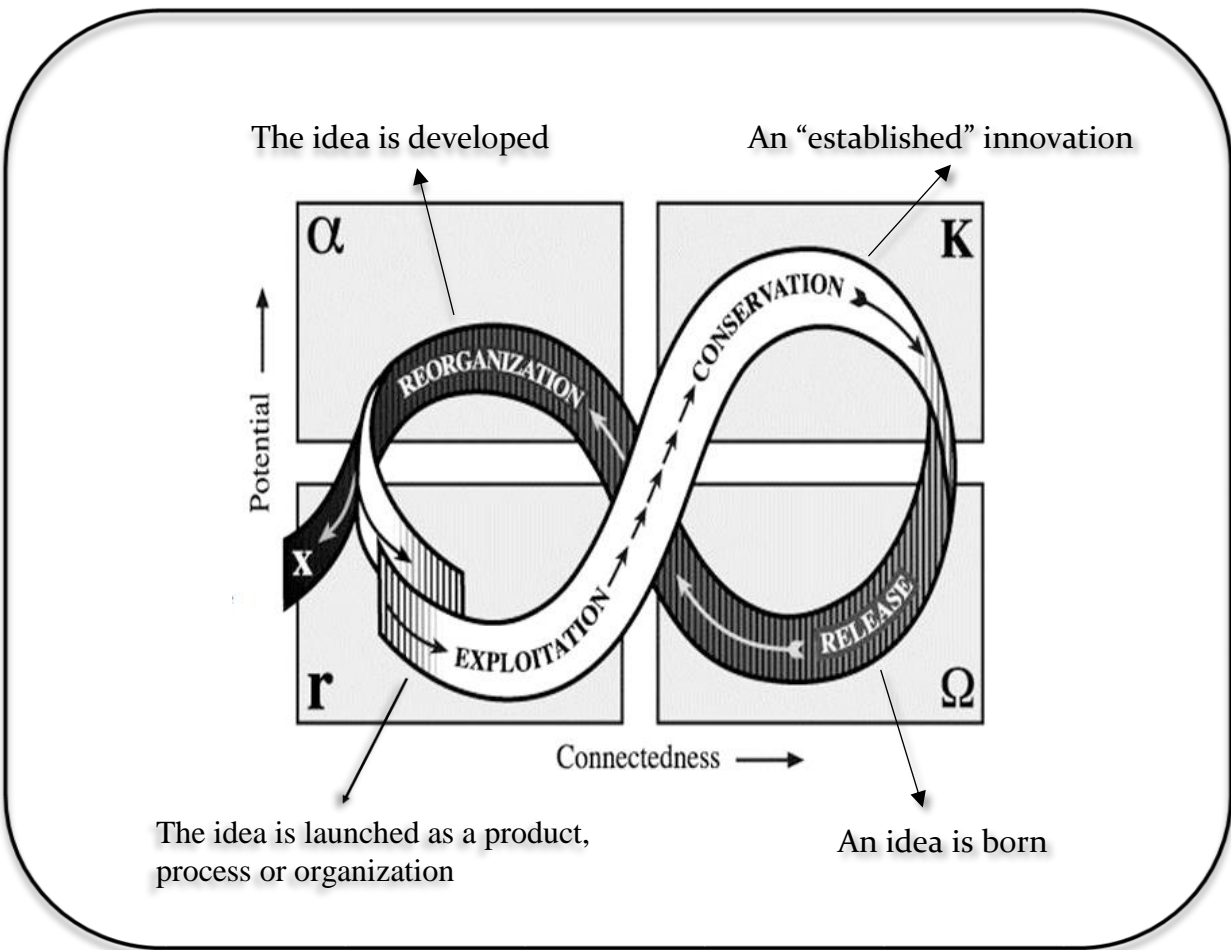


Figure 2.5. The adaptive cycle. Adapted from (Westley, 2008) and (Fath, Dean, & Katzmaier, 2015).

2.1.7 Measurement of social impact

The measurement of social impact is one of the more relevant debates in the field, because there is not a straightforward way of measure. The success of a social innovation process should be measured according to the acceptance of the initiatives, in terms of time of use, utilization and appropriation, although some of them can also create businesses and can have effect in markets, case in which economic indicators can be applied for the impact measurement.

The Open Book of Social Innovation, gathered some of the most used metrics in the field applied during different stages of Social Innovation and used by diverse actors with diverse purposes (Murray, Caulier-Grice, & Mulgan, 2010, p. 101). Echeverría (2008, p. 613) proposes some alternatives to measure the impact through indicators focused on the acceptance of the innovations:

- Using surveys of perception, attitudes and assessment;
- Through the use of social appropriation of the innovations, measuring the effectiveness of the integration in the everyday life of people by observing the time of usage;
- Using qualitative methods such as questionnaires or interviews addressed to relevant users;
- Through the usage of comparative studies of the appropriation of these initiatives along the time.

Identifying and analyzing the good practices in Social Innovation is the main objective of these types of measurement, being the social appropriation the more significant at the moment of evaluation of success or failure, without leaving aside the studies on perception, attitudes and assessment. Nevertheless, due to the diversity of the Social Innovation initiatives, the way of measuring the impact should be carried out in diverse manners depending on the contexts, social groups or individuals involved and the type of innovation.

TEPSIE divides the measuring process in three levels. First, the extent to which single interventions and entrepreneurial activities take place, used to understand how a Social Innovation come into existence and how it is carried out within the communities. Second, the potential of communities to be innovative and the framework conditions that foster Social Innovation ecosystems. Finally, what is the social impact of the initiatives, measuring the organizational outputs and societal outcomes (Howaldt, Butzin, Domanski, & Kaletka, 2014, p. 16).

SIMPACT project argues that technological and business related innovation metrics have flaws when applied to Social Innovation, also making a call for the creation of new approaches of measuring. It sees the need of having proper metrics to be applied to cross-sectoral nature of Social Innovation and the dynamics between the actors. Additionally, the authors claim that financial indicators are not enough, indicators for intangible and subjective information should be created. Finally, indicators from stakeholders and for stakeholders are needed to capture the potential resources, capabilities and networks of the different agents, in order to integrate and combine the inputs from those agents to create value for society (Alijani, et al., 2016, p. 97).

2.1.8 Sectors and actors involved

Several authors, (Bernaola, 2016), (TEPSIE, 2014) (Boelman, Kwan, Keller Lauritzen, Millard, & Schon, 2014) and (Howaldt, Butzin, Domanski, & Kaletka, 2014), stress the relevance of the multidimensionality of Social Innovation. The different perspectives that come from communities, government, private or public sectors. About this (Bernaola, 2016, p. 24) mentions that no actor has an advantage or disadvantage over the others because the concept of “social” includes them all. This can be seen in the analysis carried out

by SI-DRIVE project (Howaldt, Schröder, Kaletka, Rehfeld, & Terstriep, 2016), which reflects the high involvement of each sector in the creation of Social Innovation projects, ranging from 69% to 75%.

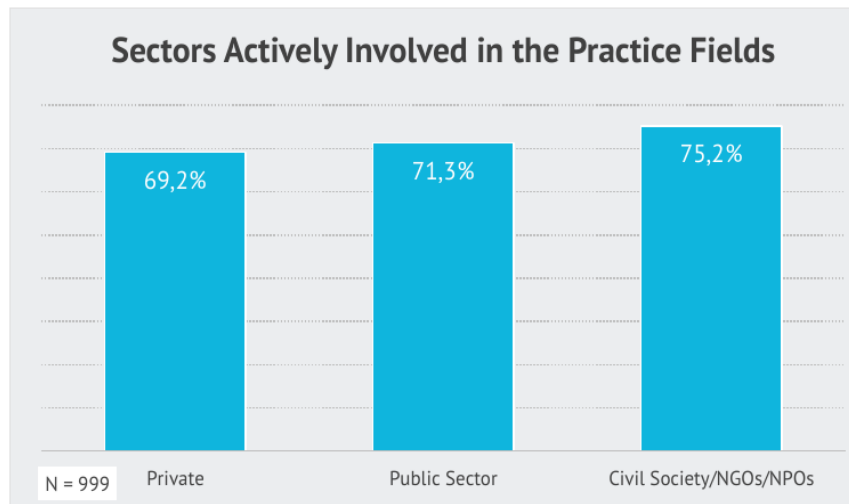


Figure 2.6. Sectors actively involved in the practice field (multiple response). (Howaldt, Schröder, Kaletka, Rehfeld, & Terstriep, 2016, p. 29).

On top of the involvement, it is crucial to point out the cross-sectoral collaborations, in which only 23% of the projects analyzed were developed in only one sector. This rises to 32% with the combinations of two of the three, and finally gets to 45% when three of the sectors were involved (Howaldt, Schröder, Kaletka, Rehfeld, & Terstriep, 2016, p. 29). Going deeper in the sectors analysis the report presents the types of actors that contribute to generate Social Innovations.

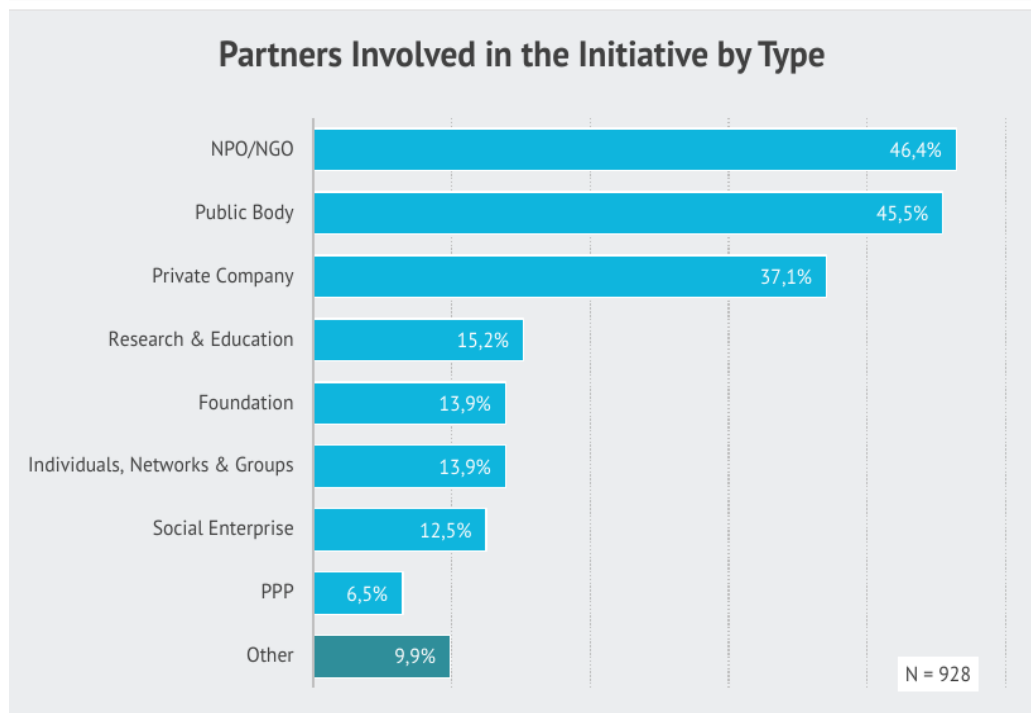


Figure 2.7. Type of partner engaged in Social Innovation initiatives (Multiple responses). (Howaldt, Schröder, Kaletka, Rehfeld, & Terstriep, 2016, p. 29).

Contrary to what has been thought, universities and research institutions engagement is not as high as expected (15.2%). From what the table shows, it is the weaker of the four streams of the Quadruple Helix innovative systems, which might be due to the nature of Social Innovations, in which, the knowledge provision is not carried out by the universities, but by the users and beneficiaries, bringing to consideration the future role of this actors in the Social Innovation (Howaldt, Schröder, Kaletka, Rehfeld, & Terstriep, 2016, p. 94).

Social enterprises, which were once seen as the key actor in Social Innovation (Mulgan, Tucker, Ali, & Sanders, 2007), appear with 12.5%, showing that the innovator role is spread through all the actors. Individuals, networks and groups (13.9%) is seen always as a relevant actor, nonetheless, from the table it cannot be determined the roles that this actor plays, for instance, whether it is central as an innovator or a collaborator for others to innovate (Howaldt, Schröder, Kaletka, Rehfeld, & Terstriep, 2016, p. 95).

Innovation does not come only from big firms or research centers, it can be conceived also by institutions, social groups or even by individuals. In the case in which a micro-systems accept a Social Innovation initiative, its dimension, no matter how small it could be, is still an innovation that improves well-being and quality of life of people.

Following this line of thought, it will be important to categorize among small, medium and big innovations depending on their social reach, and without taking into account where they originated. The crucial point here consists in the contribution that each one can have to generate an innovation culture. Rodriguez and Alvarado (2008, p. 32) expose the importance of creating alliances and networks among the actors for sharing resources and knowledge. Some of the social innovations may have a reflection in the markets, which, with a good set of indicators, could be the first step to detect possible innovations.

Mulgan and colleagues (2007, p. 27) talk about the different drivers or pitfalls that each sector has, stressing also the importance of identifying them to overcome them. The sectors are not mutually exclusive or contained in one another, they are like parallel streams going towards the same goal. This model can be better understood with the work began by Etzkowitz and Leydesdorff (2000, p. 109) in which they introduced the “Triple Helix of university-industry-government relations” and further developed by Carayannis and Campbell (2012), improved with the addition of a fourth helix denominated “media-based and culture-based public, and civil society”. They introduced the so called “Quadruple Helix of Innovation Systems”, which is a way to foster innovation in a:

“Multilateral, multimodal, multinodal, and multilayered manner involving thus entities from government, academia, industry, and civil society as well as driving co-opetition, co-specialization,

and co-evolution resource generation, allocation, and appropriation processes that result in the formation of modalities such as innovation networks and knowledge clusters” (Carayannis & Campbell, 2012, p. 4).

The authors give a definition to the fourth helix that goes beyond the boundaries of what has been studied about public society and community involvement in Social Innovation, mainly because the model was created with a general innovation focus, not centered in only one type of innovation. Both agree in the fundamental role of the integration of society in the innovation process, nonetheless, the approach taken by this model expands the vision of these social aspects including elements such as culture, values and lifestyles, multiculturalism, media and arts (Carayannis & Campbell, 2012, p. 13).

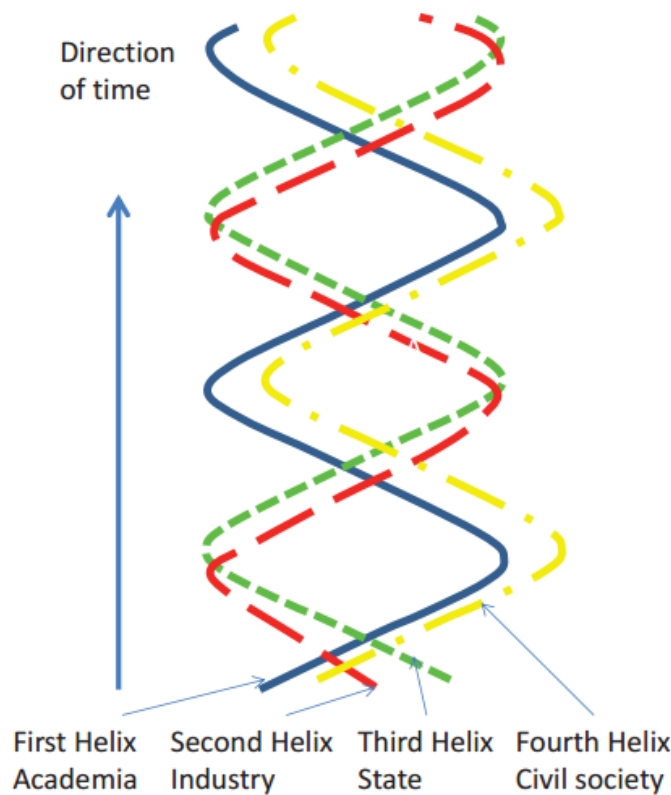


Figure 2.8. Conceptualization of the Quadruple Helix innovation system. Source (Howaldt, Schröder, Kaletka, Rehfeld, & Terstriep, 2016) based on (Carayannis & Campbell, 2012).

Another approach is the one used by TEPSIE project (Young Foundation, 2012), which divides the sectors in four part (shown in Figure 2.9). Besides, defining each of the sectors, it also explains the links between them and how they interact with each other creating different types of collaborations in terms of financial, organizational and creation aspects.

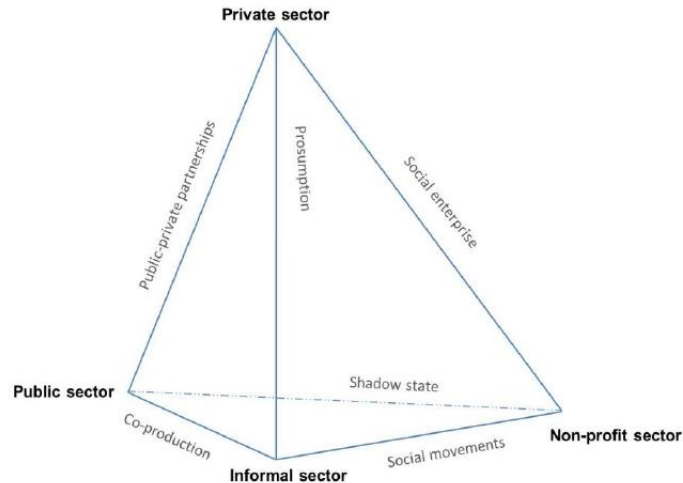


Figure 2.9. *Blurring boundaries between sectors.* (Young Foundation, 2012, p. 32).

The TEPSIE approach, although very explanatory in terms of financial flows and types of collaborations among the four sectors proposed, does not take into account an agent whose importance has been growing in the last years, academia. The participation of universities brought new insights and has created a first basis of what a Social Innovation theory might be. The work carried out by TEPSIE, SI-DRIVE or SIMPACT have facilitated the analysis and understanding of what Social Innovation is and what are its processes thanks to the collaborations of several universities. From a different perspective, Stanford Social Innovation Review shows an approach leaning more to business and social enterprises.

In the Academia is where new models are developed, analyzed and evaluated with scientific rigor, nevertheless, academia on its own cannot transfer and spread these models, reason why it needs the collaboration of other actors (Mulgan, Tucker, Ali, & Sanders, 2007, p. 31). Universities are fundamental in the creation and diffusion of knowledge through the processing and application of information, as well as in the training and education of human resources that will apply that knowledge in the field (Gurrutxaga, 2009, p. 66).

Howaldt & Schwarz (2010) expose some of the research topics related to Social Innovation in the last decade. These include the relation of Social Innovation with other sectors, the economic aspects of Social Innovation, the creation of frameworks that facilitate the adoption and use of Social Innovation, the role of Social Innovation in the environment and the sustainable development, the relationship between Social Innovation and social change.

Social Innovation research is not just limited to business schools, it has expanded its boundaries to reach other fields, such as sociology or design. The first providing tools for understanding the role of the communities, how the innovations are apprehended and appropriated and the impact of the initiatives (Howaldt, Butzin, Domanski, & Kaletka, 2014). The latter noticed that it could contribute to Social

Innovation by providing its tools and methods that may bring different perspectives to tackle problems as stated by Brown (2010), Brown and Wyatt (2010), Heller (2011) or Manzini (2015).

Mulgan and his collaborators (2007, p. 28) argue that politicians and political activists promote ideas for change aiming at creating impact and also gaining political muscle which may help them to win or retain power, idea shared by (Manzini, 2015, p. 60) when he talks about the role of design experts in activism.

Innerarity claims that the government “*has to adapt to the accelerated development of science and technology in order to integrate their innovations in the social system*” (Innerarity, 2009, p. 29). Nevertheless, the government on its own does not possess the tools and knowledge to innovate; it need the collaboration of other actors that bring their knowledge and expertise.

On the other hand, Boelman and colleagues (2014, p. 8-10) claim that the government has the capacity and the potential to innovate by themselves, because it is one of the cornerstone of the Quadruple Helix innovative systems. This, according to the authors, is one of the two roles of government; the second role is the promotion and support of Social Innovations by creating an ecosystem able to connect actors, through the financial and law-making powers.

Mulgan and colleagues (2007, p. 31) exposed two of the ways in which the private sector can contribute to Social Innovations initiatives: philanthropy and markets. The first due to the easy access to money and networks that allow them to support social initiatives. The second because markets can be a useful and effective tool to promote ideas from the margins to the mainstream, with the help of investors and the support of the consumers. Social challenges can also be approached by Corporate Social Responsibility, which contributes to social development of beneficiaries, but creates economic or organizational barriers for replication.

These difficulties for replicability in Corporate Social Responsibility are mentioned also by TEPSIE (Young Foundation, 2012, p. 29), adding also the unsustainable character of initiatives in the long-term due to possible changes in management within the companies. This report shows also the spreading of business whose purpose is to develop low costs solutions to social challenges by means of social enterprises or social businesses, focusing on both social goals and profit making, in which profits are partially or fully reinvested into the company.

Following what is exposed in Figure 2.10, beneficiaries are involved in a 46% of the solutions mapped, dividing the analysis among different roles that users can take.

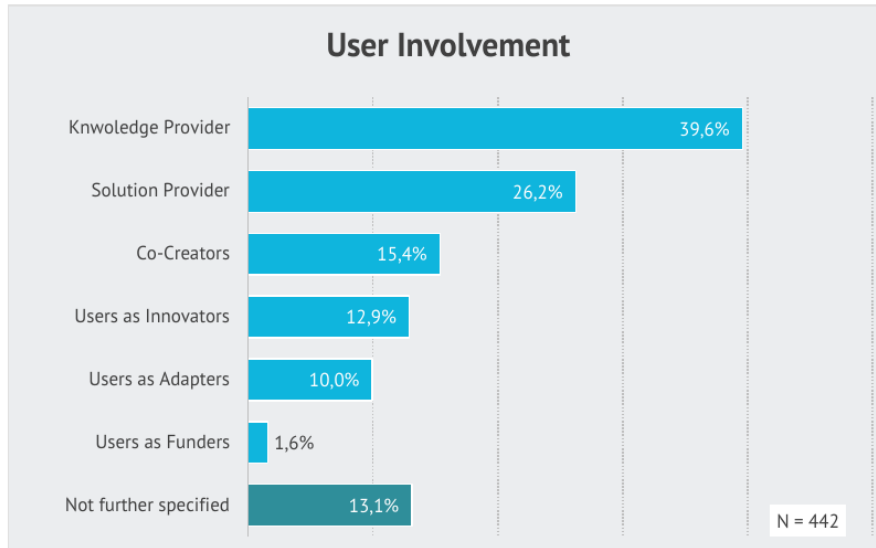


Figure 2.10. Form of user involvement in Social Innovation (multiple response). (Howaldt, Schröder, Kaletka, Rehfeld, & Terstriep, 2016, p. 98)

The systemic approach to Social Innovation proposed by Westley and Antadze (2010), and SI-DRIVE (Howaldt, Butzin, Domanski, & Kaletka, 2014) finds an echo in the further expansion of the Quadruple Helix, with the inclusion of a fifth helix that represents the environment and ecosystem of innovation. Carayannis and Campbell state that “with the transdisciplinary application of interdisciplinary knowledge the Quintuple Helix wants to create and support a mid-term and long-term sustainable development of society, the economy, and democracy that is sensitive for social ecology” (Carayannis & Campbell, 2012, p. 18). The Triple Helix, which focuses on industry-government-academy interaction, is contextualized by the introduction of the public and civil features of the fourth helix; the Fourth Helix Model in turn is contextualized by the introduction of the nature and environmental features of a fifth helix.

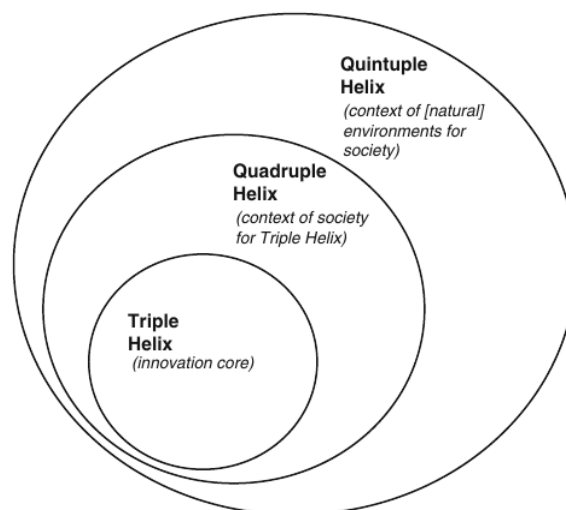


Figure 2.11. Society as context for Triple Helix innovation systems; natural environments as context for Quadruple Helix innovation systems. Source (Carayannis & Campbell, 2012) base on (Etzkowitz & Leydesdorff, 2000).

2.1.9 Social innovation in Colombia

Public sector

Contrary to what might be thought, Bogotá as the biggest city of Colombia, and the city where the national power is located, does not come first as the most innovative city of the country, this place belongs to Medellín. This city experienced a transcendental transformation, from a city that suffered the struggles of narcotraffic in the decades of 1980 and 1990, to being chosen as the most innovative city in 2013 (Camargo, 2013). This was achieved through the application of plans and programs aimed at solving the social issues in the city, strongly focused on overcoming the bad image that the city had by improving people's well-being.

The innovative mindset that Medellín have had, has been extended to the complete region where it is placed, Antioquia, when the local government of the city, move to the departmental government, expanding their ideas to 125 towns. Nonetheless, the perspectives are different, due to the necessity to bear new challenges and carry out initiatives in a much broader geographical region.

Medellín also served as inspiration in a national level. Social Innovation was for the first time included in a National Development Plan (NDP) in 2010, only as a tool that could be used to support economic development. In 2014, with the new NDP, Social Innovation's importance grew and move from the borders, to the center, as a way of fostering social development and overcoming poverty, integrating with ICT and as a coordinator of the diverse institutions that could assist and support this objective (Villa & Melo, 2015, p. 6).

To better tackle social problems and to develop a robust framework for Social Innovation policy, first it was necessary to set the basis which will serve as the cornerstones for this field in the country. In 2011 the Centre for Social Innovation (CIS) was created, followed by the creation of the National Agency for Overcoming Extreme Poverty (ANSPE) in 2012. The CIS is aimed at promoting social innovation in diverse sectors by making it more visible and known (Pulford, Hackett, & Daste, 2014, p. 15). This organization works in two areas: project coordination and knowledge management. They use two different approaches for this, Open Social Innovation and Participative Social Innovation (Villa & Melo, 2015, p. 10).

The public policy formulation was carried out by DNP, Colciencias and ANSPE during 2012 and published in a report called "Basis for a Social Innovation Policy" (2013), which exposes the objectives of Social Innovation policy in Colombia, which are:

- eliminating barriers;

- creating incentives;
- integrating Social Innovation as a tool for public management;
- supporting the spread of impact of successful Social Innovations.

Furthermore, the Social Innovation Policy established some additional elements such as the promotion of collective intelligence among actors, developing favorable territorial environments, developing public and private support services and fostering knowledge management.

Despite the good intentions and the ideas of the government, the Social Innovation processes are not equally developed throughout the whole territory of the country. To solve this issue, the government is planning to foster Social Innovation processes as a fundamental feature of public governance, by allowing the State to better address public needs; by strengthening democracy giving the chance to the communities to be more participative and improving the communication with the government (Ramírez, 2011).

With these guidelines, the National Node of Social Innovation was created in order to serve as connector and integrator for the diverse actors involved in the field, as well as to support in the formulation of policies thanks to the community involvement through web platforms and regional workshops (Ramírez, 2011, p. 199-201).

To further develop the Social Innovation policies, this organization carried out workshops as spaces of participation for diverse organizations. In these workshops five Thematic Nodes of Social Innovation were created, which are:

- Topic Node of Social Innovation for overcoming poverty
- Topic Node of Social Innovation for Good Governance
- Topic Node of Social Innovation for knowledge management
- Topic Node of Social Innovation for entrepreneurship
- Topic Node of Social Innovation environment sustainability

Notwithstanding the importance of this type of initiatives, the thematic nodes failed in the consolidation in the spaces they worked, due to problems in sustainability and assignation of resources. If a new initiative to follow this line of work is generated, these challenges must be faced to create the environments for collaboration and articulation of actors, resources, skills and knowledge.

To avoid the centralization around Bogotá, it is crucial to expand to different regions to better understand what the diverse communities may need. To tackle this, six Regional Nodes of Social Innovation were created to involve the regions in the formulation of policies and to generate favorable environments for

Social Innovation, integrating actors such as universities, entrepreneurs, local governments and social organizations.

The regional nodes are not yet a relevant regional agent; the challenge they face is related to articulating with other actors in order to generate work programs, not just inside but also outside the region. The topic nodes, which have reach certain consolidation, have to bear with information asymmetry among the agents in order to create the ecosystems of innovation about their specific topics (Ramírez, 2011, p. 204).

The commitment of ANSPE to foster Social Innovation processes in Colombia was demonstrated also when they invited The Young Foundation and Social Innovation Exchange to share experiences and to collaborate in developing and growing Social Innovation Capacity in Colombia. Workshops, meetings and interviews were conducted with diverse actors, to raise the visibility of this field and to obtain insights that led to recommendations to improve its practice. After this experience, a report called “A Reflection on Social Innovation in Colombia” was published (Pulford, Hackett, & Daste, 2014).

An interview to the coordinators of DNP, Colciencias and CIS at ANSPE, exposes the existing challenges and barriers, which include knowledge management, financial and non-financial support, the complexity of tackling poverty eradication and reduction of inequality, the shift from market-based innovation to Social Innovation, among others. In addition, they express the importance of the different perspective of each organization but converging to the same objective (Pulford, Hackett, & Daste, 2014).

The workshops and conferences, and the analysis of the current status of the field in the country showed that the government participation in Social Innovation is increasing but it still needs to be developed. Additionally, it shows that building networks is key to the development of the field and a crucial step to generate a systemic change (Pulford, Hackett, & Daste, 2014).

Colciencias has tried to tackle the poor knowledge appropriation with a strategy called “Social Appropriation of Science, Technology and Innovation”, which is aimed at allowing an easier and wider spreading through all sectors of the knowledge gathered and created by science and technology, while offering the opportunity to communities of getting involved in the developing of the initiatives and the formulation of policies (Villa & Melo, 2015, p. 25).

Academic sector

In the academic sector there are already some established initiatives, such as DESIS Lab in Universidad del Norte or the Social Innovation Park in Universidad Minuto de Dios. The CIS through an alliance with different universities and organizations, created a collaborative scheme for design students aimed at applying design methods and tools to deliver a product, service or methodology to solve a specific need.

The final goal is to generate a toolbox for Social Innovation that ANSPE can offer to organization or people interested in the field.

Jorge Tadeo Lozano University has proposed the inclusion of Social Innovation and social development topics within its Design programs, not just to teach the students about this field, but also as a platform for the creation of networks of Social Innovation allowing the convergence of actors and the exchange and sharing of knowledge (Zárate, España, & Ballesteros, 2014, p. 11).

In another research carried out in the National University of Colombia, (Hernández & Sánchez, 2014) exposed an analysis of how Social Innovation is related to collaborative government as a way to demonstrate that it is necessary to carry out structural transformations to achieve the government objectives of economic growth and improvement of the quality of life of the citizens. To explain this, they show an analogy, in which Social Innovation is represented as a tree and the fruits are the final outcome of each different initiative, therefore *“if the tree does not bear fruits yet, it does not mean that the tree does not exist, it means that it has not yet arrived to the point of its evolution in which it will be capable of doing it”* (Hernández & Sánchez, 2014, p. 58).

The authors conclude that a barrier to achieve a proper development of Social Innovation in Colombia is the lack of comprehension of this evolutionary approach, because organizations set high goals that are difficult to accomplish without the use of cross-sectoral networks, this means, organizations want to have fruits with a not yet fully developed tree. To counteract this, authors call for the association of sectors in order to build a solid network, capable of bearing the fruits, as well as, to articulate a new system capable of providing support for new initiatives (Hernández & Sánchez, 2014, p. 59).

Private sector

The public and academic sectors are the ones more involved in policy making and the theoretical aspects of Social Innovation, nevertheless there are other actors from private sector or cross-sectoral that have a strong incidence in the development of Social Innovation. These organizations might not be related only to Social Innovation, but they provide support in diverse manners in the development of initiatives.

Within the national initiatives can be found the Pioneers of Social Innovation, which is a public-private alliance than began in 2011 aimed at dynamizing the Social Innovation environment by providing solutions to poor communities (Villa & Melo, 2015, p. 27). They have assisted CIS in the implementation of their Open Social Innovation approach. Another non-profit organization named Corporation for Participative and Sustainable Development of Small Rural Producers (PBA Corporation), has been promoting social

and participative innovation processes since 2001 within small farmers with the objective of improving their production and their quality of life.

Some international actors have taken their organization and initiatives to Colombia in order to support the development of the field. Some of these are: Instiglio, which is a firm that provides social impact bonds to support social initiatives; Acumen Fund and Fondo Inversor; Impact Hub Bogotá, which can grow to be a crucial actor by articulating initiatives and partners to promote Social Innovation; Corporación Somos Más, which develops processes of participation, articulation and dynamization of actors and communities; and Minka-dev, an online platform whose purpose is to attract sustainable, inclusive and innovative businesses with high impact on poverty reduction and environmental care (Villa & Melo, 2015).

Barriers and incentives

An analysis of the barriers and incentives for the development of Social Innovation in Colombia was carried out to better understand the dynamics of Social Innovation processes in order to create public policies better suited to what the country needs. The analysis was structured in micro, meso and macro level. The micro level relates to internal processes and characteristics of Social Innovation; the meso level corresponds to functions that contribute to have a medium reach while linking with the micro level; the macro level involves national institutional frameworks, public policies and culture. In addition, the Social Innovation process of The Open Book of Social Innovation was used as a support for the study (Frias, Lozano, & Aparicio, 2016).

The macro level shows flaws in the creation of environments that foster Social Innovation due to missing elements in the institutional frameworks and the existing public policies. In addition, there is a weak process systematization and management of knowledge, which complicates the sharing of experiences and scaling and replication of initiatives. Finally, deficiencies in the financial and technical support services and low levels of community participation and appropriation were seen (Frias, Lozano, & Aparicio, 2016, p. 131).

Regarding the Social Innovation lifecycle, in the first phases, the barriers are the lack of financing for pilots and prototypes and the limited articulation of actors. The sustaining stage faces the lack of strong business models, low capacity of innovation management due to weak organizational structures, leading to a stalling in the innovation process. The weak process systematization and management on knowledge have negative influence in the scaling an replication phase, producing scarcity of information about the processes and results, difficulting decision making within the initiatives and support from public institutions. Finally, in the systemic change phase, the barriers are seen in meso and macro level; the

initiatives should aim at changing the power structures within themselves as well as in the environment in order to generate social transformations (Frias, Lozano, & Aparicio, 2016, p. 132).

On the other hand, the analysis found six types of incentives in the development of Social Innovation in Colombia that are relevant in each phase of the Social Innovation lifecycle (Frias, Lozano, & Aparicio, 2016, p. 133):

1. Encouraging network constitution aimed at fostering collaboration and cooperation among actors;
2. Financial drivers for the different stages of Social Innovation that provide support in the consolidation of initiatives;
3. Fostering community participation and empowerment;
4. Supporting the management of knowledge and the development of systematization processes, evaluation and measurement;
5. Diffusion and visibility of initiatives and their impact through publications or awards as a way to facilitate the scaling and the promotion of a Social Innovation culture;
6. Technical consulting services oriented to improve the capacities of social innovators, to configure business models and to optimize organizational structures the initiatives.

Some recommendations are given divided in four different dimensions:

1. Institutional frameworks:
 - Implementing progressive institutional agreements that facilitate the integration of science and technology with social policies for better coordination and decision-making.
 - Encouraging the adoption of Open Innovation as a tool of synergy between sectors.
 - Fostering the generation of alliances among actors as drivers to develop Social Innovation in its different stages.
 - Creating a cross-sectoral institution within the national government promoting tools and methodologies to implement and evaluate Social Innovation policies.
2. Social capital and cultural dynamics:
 - Integrating Social Innovation within entrepreneurship and innovation culture in the society, the organizations and the people.
 - Expanding the reach of voluntary and community service to include Social Innovation initiatives.
 - Inclusion of communities and citizens in the formulation, implementation and evaluation of public policies.

- Creation and visibility of articulating entities to assist and support the relationships between social innovators and financial or consulting agencies.
 - Promoting alliances between the government and the academy to develop Social Innovation capacities and skills through formal education programs or internships in social firms.
3. Knowledge management:
- Implement evaluation and measurement of the impact of initiatives by integrating Social Innovation indicators in the formulation of public policies.
 - Generate communication channels that allow the spreading of the results and the community needs, making them visible to other sectors.
 - Develop technology transfer processes from universities to the third sector and the communities aiming at enhancing the capacities of social problem solving.
4. Supporting services:
- Fostering the use of philanthropy and Corporate Social Responsibility to support the early stages of Social Innovation.
 - Supporting investment funds for Social Innovation initiatives facilitating the scaling and the spreading of the impact.
 - Implementation of public-private platforms for scaling.

The report “OECD Reviews of Innovation Policy in Colombia” (OECD, 2014), although mainly focused on competitiveness and innovation within firms, also touches some fundamental points about Social Innovation. It shows that the lack of clear frameworks in this field causes a dependence on learning from policy experimentation, which brings difficulties due to the fuzzy or unclear boundaries of the field, which renders difficult the determination of the scopes of policies. In addition, it is presented also the concern for the low level of systematization of cases and results, this limited guidance from previous experiences complicates the selection of initiatives that could be applied in other contexts.

Recommendations

As recommendations, the report states that, due to the weak information flow and systematization, the analytical policy development should work in parallel with policy practice, combining the elements from each perspective to develop feedback, monitoring and experiential design. These elements might include project funding and support, backing the participation and empowerment of beneficiaries, on-going monitoring to correct inadequacies and irregularities and periodic policy re-development to learn and evolve from experimentation. About the components the authors state that “*such activities must be seen*

as important programme elements, not just as perfunctory add-ons to meet bureaucratic requirements for terminating projects” (OECD, 2014, p. 227).

Although systemic change is the final goal of Social Innovation, it is crucial to clearly define the policies needed to accomplish this goal, this means understanding the different points of view and paces of each sector (OECD, 2014, p. 227).

Furthermore, recommendations about the integration of analytical and practical policy development are given, regarding the creation of consistent strategies and the accumulation of learning, as well as the support and sustaining of the collaborations among organization and local or national government.

To finish the report, the authors expose some recommendations to strengthen Social Innovation in the country and to increase its impact:

It is necessary to find channels to spread the tools and knowledge created and used by the different actors in each stage of the lifecycle in order to increase the capacities and skills.

Implement rapid learning and spreading of knowledge to all levels of Social Innovation, which leads to conceive a common vision and narrative to better deploy the resources of each actor.

Establishing networks beyond borders to improve the learning processes, the authors make emphasis on how meaningful and significant for Colombia it is to support and to be part of a global Social Innovation network. In addition, they stress the strong relevance of regional networks to effectively share information within a geographical region to better apply the tools, techniques and knowledge coming from the global network (Pulford, Hackett, & Daste, 2014).

2.2 DESIGN FOR SOCIAL INNOVATION

2.2.1 Evolution toward design for social development

Although design as a profession is divided in diverse disciplines, ranging from the widely known such as industrial design, graphic design or textile design, to some that are usually less known such as interaction design or strategic design, a crucial clarification should be held, design is not just a profession or a field, it is a way of working, a mindset that permeates other disciplines including engineering, architecture or computer science.

Albeit each possesses a different focus and methods, they all share some common characteristics and challenges, such as:

- a direct impact on the physical world;
- addressing human needs;
- generating environments;
- complexity in terms of requirements and needs;

From these challenges, new frameworks and theories should emerge in order to shift from the view of the sole designer solving problems to a transdisciplinary focus in which different disciplines share their perspectives and skills to achieve the same or improved results than sole designers (Manzini, 2015, p. 7).

Buchanan (1992) explored four areas in which Design has a relevance in society, these are: design of symbolic and visual communications, which is about visual design and how to communicate information, ideas and arguments. The second is design of material objects, which is related to the visual appearance of the objects, as well as its physical, psychological, social, and cultural relationships of these objects with the human being. The third is design of activities and organized services, related to decision making and strategic planning. And finally, design of complex systems or environments for living, working, playing and learning, which has to do with how human beings integrate with their environment, from an ecological and cultural perspectives.

From a different perspective, Kimbell (2012) analyzed how Design Thinking has been adopted within different fields and contexts and how it is related with the diversity of stakeholders on those fields. She found three strands: Design Thinking as a cognitive style, Design Thinking as a general theory of Design and Design Thinking as a resource for organizations.

The evolution of Design has reached a point in which it is seen as a core element of diverse type of processes, leaving behind the narrow view given to it about being just a complementary aspect of product development, as exposed by Heller (2011, p. 2) when she claimed that design has been a “nice to have” input used after the development of the technology and the strategy

Bjögvinsson, Ehn & Hillgren (2012, p. 110) see design as more than the creation of functional products. Instead, they see it as a way of generating radical and sustainable changes in lifestyles and consumption habits through the development of services and environments. This evolution brought an interest in broadening the scope of the field, bringing different interpretations and definitions.

Following this line of thought, Donald Norman coincides with the view of Heller and Bjögvinsson, but focusing on the pitfalls that designers have when using and applying knowledge from other disciplines,

which may cause misinterpretations. He blames design schools for this issue and makes a call for improving the training and knowledge in technology, behavioral sciences or business, that allow designers to better understand the problems they are trying to solve (Norman, 2010).

To avoid the conundrum aforementioned, Manzini proposes a redesigning of designers themselves and of their ways of operating, taking design out of its field. He considers that design is a capacity that all humans have, although not everyone applies it (Manzini, 2015, p. 11). Nonetheless, without the proper guidance the design initiatives might not achieve their full potential for which Manzini exposes the importance of expert designers as key players to support design processes.

Another perspective is the one introduced by Verganti (2009) explaining his view on the three stages of the evolution of Design: Design as form, Design as product development and innovation at large, and Design as meaning. The latter comes from the definition given by Herbert Simon for whom design “*is concerned with how things ought to be-how they ought to be in order to attain goals and to function*” (Manzini, 2015, p. 45). Manzini and Verganti interprets this definition as “design as making sense of things”, this means that design can be a source of creative solutions for problems of different magnitudes or fields, it is actively involved in the creation of meaning, from a basic product, to a wide social structure (Manzini, 2015).

Some authors noticed the skewed focus of Design towards luxury products and how to increase the prices by improving the aesthetics or the function. They asked themselves if the same methods and tools could be applied to the public (Mulgan, 2014, p. 3), making a transition to wicked problems or Design for improving social development, clarifying that social development does not mean that it focuses only on the base of the pyramid or the poor, but to all social spheres, from the poor to the rich, from markets to the environment.

This goes in the same line of thought of (Manzini, 2015, p. 81) , who explains the differences between design for social development and social design. In the first, the term social is referred to society in its broad sense, as well as to the interactions of social actors, including low, middle and upper classes. It is focused on solving problems adapted to the current social forms and economic models, and not just to the base of the pyramid or the excluded by the markets or the state, which is the case of social design.

To analyze this Meles and de Vere (2011) authors introduced a list of criteria to evaluate if an initiative goes beyond the Triple Bottom Line and how it is related to the design of sustainable products and services that provide solutions to social needs. These are: need, suitability, relative affordability, advancement, local control, usability and empowerment.

2.2.2 Design for Social Innovation: Definition and main characteristics

Social innovations arise from the recombination of existing resources, skills and assets aiming at creating new functions and new meanings to achieve social objectives in a different manner, thus creating local discontinuities, this means breaking the routines and generating breakthroughs in the ways of thinking and behaving of individuals and societies. According to Manzini, this way of seeing Social Innovation is similar to that used in the beginning of industrial design, which was born as a way to improve everyday life by mingling technological innovation and the rising industrial development of the time. Nonetheless, several authors argue that Social Innovation is still a developing field and needs a boost to achieve all its potential, for which some authors think design can be the source of this of this change.

In order to better understand the convergence of Design and Social Innovation and how the first can improve the second, it is necessary to see how Social Innovation has affected and affects Design. Manzini (2015, p. 69) thinks that Social Innovation will stimulate design in the same way that technical innovation did it in the last century, creating what he calls design for social innovation, taking into account that although the term Social Innovation has obtained fame in the last couple of decades, its core concept and way of dealing with diverse problems has always being a tool used by societies, in this case design for Social Innovation is a way in which design is being reshaped.

From what was explained in the last section, design is now going beyond its first boundaries, exploring new design processes and permeating diverse fields, generating a convergence aimed at enhancing the capacity of each actor involved. This new design is based on co-design processes led by design experts, whose purpose is to trigger and to support design initiatives with the objective of creating a shift towards a networked and sustainable society, empowering individuals and organizations by challenging the establishment and the traditional ways of thinking and doing, through the experimentation on the society. In specific he talks about design for sustainable development, also described as Design for Social Innovation (Manzini, 2015, p. 66).

Nevertheless, it is crucial to clarify that Design for Social Innovation uses social change as the main driver (Manzini, 2015, p. 76), this means that its main objective is to create social impact, which differs from a possible social improvement done indirectly by the introduction of a new technology or process, whose main driver is technological, not social. Here is important to bring back the difference between design for Social Innovation and social design mentioned earlier. Nevertheless, these are not poles which do not have contact with each other, they tend to overlap and work in parallel.

Manzini goes beyond the most known definitions of Social Innovation, such as the ones given by Mulgan (Mulgan, Tucker, Ali, & Sanders, 2007), The OECD Forum on Social Innovation (OECD; European Communities, 2011), or SI-DRIVE (Howaldt, Butzin, Domanski, & Kaletka, 2014), including on it a focus on sustainability and the possibility of creating an ecosystem of relationships between people and their environment (Manzini, 2015, p. 15).

Furthermore, Meroni, Fassi & Simeone (2013) expose another approach called Social Innovation Journey, which is a similar approach to the stages of the Social Innovation process proposed by The Open Book of Social Innovation, in this case seeing it from a design perspective in which the design expert must clearly plan every step of the process regarding his work and the work of other actors (Manzini, 2015, p. 208).

2.2.3 Design expert role and objective

Some authors such as Heller (2011), state that Design can make a big contribution to Social Innovation by immersing into the social contexts and by applying the creativity, skills and methods for the generation of conversations, products, business models, technology platforms, among others, that can support innovative processes for social development.

From a different perspective, Tim Brown has explored the relation that Design Thinking has with Social Innovation and how the first can improve the second by using its tools and methods. In an article published with Jocelyn Wyatt (2010), they express the importance of the insights that professional designers can provide to Social Innovation initiatives, mentioning also how giving the final users the possibility to be part of the innovation process can empower them and to generate a bigger impact.

In line with these thoughts, Manzini brings to light the figure of the design expert, who act like the motor that make things happen. Their main objective is to create new design knowledge taking as a base the content, which are the tools used to support design processes, and the culture, which is how to challenge the state of things and how to propose new visions. To achieve this, it is necessary, according to Manzini, to carry out design research in order to produce new knowledge that is explicit, discussable, transferable and accumulable, all this by working on a “day by day” basis, focusing on the small, and also working as a “cultural operator” by sharing visions, stories and images of new and possible forms of well-being (Manzini, 2015, p. 214).

The characteristics of this type of designers are (Manzini, 2015, p. 63, 80):

- being critical, creative and dialogic;
- feeding the conversation with insights, visions and proposals;

- gathering feedback from the participants, as well as giving them feedback;
- enhance and promote design initiatives into the networks;
- promote and provide training in diffuse design;
- triggering, supporting and encouraging co-design processes.

Furthermore, design experts are in the capacity of conducting both design process and design initiatives. The first being a whole and complex project with the interaction of several actors, and the second is an intervention carried out by design experts or specific entities by means of clearly defined projects.

2.2.4 Collaboration and networks

Distributed systems

Distributed systems act as a cradle for new relationships between small and large scale and between the local and the global, acting separately but linked by networks. These systems, although strongly influenced by new technologies, cannot be developed without taking into account the social aspects, often neglected by centralized approaches, thus creating opportunities for Social Innovation initiatives.

Manzini mentions some trends in distributed systems that have appeared in the last decades in which Social Innovation can contribute to make them grow, also affecting positively the production processes, job creation in communities, addressing more specifically their needs. These are:

- distributed intelligence thanks to information systems;
- distributed infrastructure changing energy and water supplies;
- distributed food networks and agriculture;
- distributed fabrication through the networked microfactories, do-it-yourself or small-scale experimentation.

On top of these trends there is a wider one that goes beyond technology, which is distributed economy, a sustainable and resilient economy in which the complexity is de-centralized and it is distributed to the margins, exploding the potential of customer's knowledge on their own situations, being this trend, notwithstanding, still far from making the desired impact (Manzini, 2015, p. 28-35).

Collaborative organizations

The development of Social Innovation is closely linked to the actors involved in the process, and how they are able to collaborate in order to create value, despite the diverse purposes or points of view, these are known as collaborative organizations (Manzini, 2015, p. 96). The main characteristics of these are:

- they occur in environments that are highly connected;
- they aim at creating social, economic and environmental impact;
- the members have freedom of choice about the time of the involvement;
- they allow openness toward other people, organizations and ideas.

Two types can be found: grassroots organizations and social networks, being both heavily supported by people enthusiasm and initiatives. The first related to the initiatives orchestrated by the communities in a bottom-up perspective in which they try to solve their local problems. The latter related to the notion that have arose in the last two decades of social media networks. These two types of collaborative organizations have started to permeate each other and to converge, thus improving the effectiveness, replicability and visualization of grass-roots organizations, and giving a new meaning and a more in depth perspective of reality in the case of social networks (Manzini, 2015, p. 94).

Collaborative organizations are not restrained to bottom-up initiatives, they include interactions in horizontal and vertical levels, such as, peer-to-peer and top-down approaches, which also play a role in generating successful initiatives. A division of diverse type of these organizations can be done:

- collaborative associations, regarding groups of people within communities acting as co-producers aiming at solving problems;
- collaborative services, which are a service where the users become also co-designers and co-producers;
- collaborative production enterprises, which take as basis the new models of production and distribution.

Places and ecosystem creation

It is necessary to create the proper environment in order to foster the development of collaborative organizations, from the start, passing through maturity, to the replication. For this, an ecosystem of cultural, social and technological structures must be constructed, adding elements of different levels and scales and moving in different directions, generating diverse solutions.

The creation of a Social Innovation initiatives able to generate systemic changes requires, not only the need of solving social problems, but also a proper environment able to provide the right tools and spaces to foster communities and organizations to get involved and work. For this, Design for Social Innovation contributes also in designing and building places, defined as “*a space endowed with sense*” (Manzini, 2015, p. 197), in which a group of people meet to converse and act, thus giving a meaning to this space.

Usually these places start from a group of people sharing everyday life problems or living close, sometimes also making use of technologic tools for communicating in long distance. When the people gather, decide to work together and collaborate, sharing opinion and ideas about the problems, they begin with the creation of the meaning necessary for place making. When the problems are solved it is important to learn from the process and keep making use of the place, which, along with other places may be a first step for a resilient system. Expanding this term and applying it in a broader context, it is possible to arrive to a resilient society, in which a society is in capacity of overcoming problems and learning from them, which is different than sustainable society, because this one includes the cultural aspects and characteristics.

Following this line of thought, it can be understood that when a certain number of places get involved together and combine, a new and more complex sociotechnical ecosystem is created, named territory, defined as the convergence and conjunction of historical evolutionary processes transformed through cycles, in terms of nature and culture (Manzini, 2015, p. 202).

As each place possesses its own meaning, the combination of these creates a specific identity, which, along with the history, constitute the core characteristics of the territories. The inclusion of these diverse characteristics is fundamental for creating a varied ecosystem, which is basic for a resilient society, the more variety of entities, the more resilient the system is, being this the first step for a sustainable development.

Infrastructuring

The ecosystems of Social Innovation are crucial in order to foster, support and develop successful initiatives, as well as to create the networks that allow actors to get involved and share ideas and information. The design of these ecosystems is a task suited to design experts, which is called “infrastructure”, which means, creating a platform well-structured to support and connect different initiatives (Manzini, 2015, p. 159).

Infrastructure comes from the work and ideas of Ehn and colleagues (Ehn, Björgvinsson, & Hillgren, 2010), it means an alignment between contexts moving from viewing things as discrete objects to view design and technology as a network of working relationships. To achieve this, the authors introduce the concept of “agonistic spaces” in which the participants expose their opinion and concerns, allowing constructive controversies, respectful and tolerant disputes in which each view is seen as legitimate. Furthermore, they also support and encourage the development of the “infrastructuring” concept, moving from a project-based approach to a more systematic and long-term development of initiatives.

Infrastructuring is a continuous process in which actors create relationships by sharing their time and resources (Hillgren, Seravalli, & Emilson, 2011, p. 179), thus generating long-term processes and relationships among stakeholders and providing an open-ended structure that fosters the appearance of new design possibilities and opportunities that can evolve within the ecosystem. To achieve this, there should be a synergy between the open-ended nature of design processes and the design initiatives that constitute the elements that act as pillars for this process, such as, selecting a meeting place, creating a prototype, the exploration of digital platforms. These are known as infrastructuring elements, which are:

- Digital platforms: to connect people and to make self-organization easier and more effective;
- Physical spaces: to give participants the chance to meet and/or work together;
- Logistic services: to support organizational needs in terms of mobility for people and things;
- Information services: to provide advice on what to do and how, and to create experience repositories;
- Assessment services: to monitor activities and results;
- Communication services: to clarify and divulge the motivations behind collaborative organizations, their reference scenarios, and the outcomes they aspire to or have already achieved;
- Design expert services: to conceive, develop, and systemize all the previous indicated artifacts, in a collaborative way (Manzini, 2015, p. 163).

Design networks and Design coalitions

When it comes to the collaboration between different actors and initiatives, two types can be found, designing networks and designing coalitions. The first are networks more loosely attached, in which the interaction is not always direct and it does not possess a structured process of collaboration. The latter does possess this collaborative structure with a shared vision of what to do, in which different actors coordinate, coming from diverse fields and diverse levels. It is pertinent to mention that these coalitions are the result of a strategic design process, where the actors best fitted to the project are chosen, which leads to the creation of a set of shared values and interests that help them focus around a certain vision or program.

Furthermore, within this process, the stages and steps to follow, and the way of doing it is generated, what is called the design program. Here design experts are crucial to generate the ecosystems of social, economic and technological aspects that support and enhance the design capabilities, thus facilitating the development of design processes.

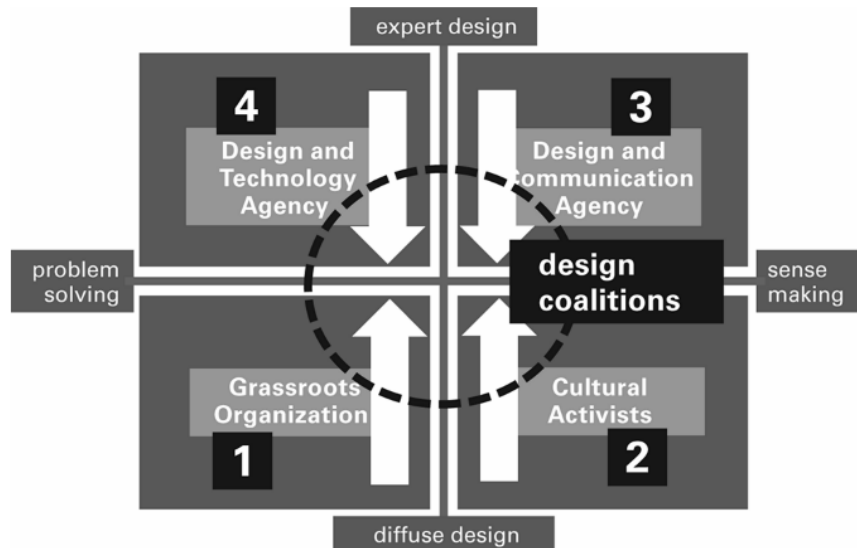


Figure 2.12. Design coalitions. (Manzini, 2015, p. 62)

To work and fully develop a coalition it is necessary to:

- Play the role of trigger by introducing ideas and visions to feed and orient the conversation within the coalition
- Act as a facilitator by helping the other participants in the coalition to make best use of their design skills, and augment them
- Collaborate with other experts and appointed bodies in making the whole environment more favorable in terms of policies, technological infrastructure, public and semipublic spaces. (Manzini, 2015, p. 64).

Design for Social Innovation and Governance

Taking as basis the bottom-up and peer-to-peer interactions broadly used in Social Innovation initiatives, it is important not to leave aside the top-down approach when it comes to governing issues. Governance is carried out by the latter, nonetheless it is arising a new type which is called the networked governance. Here individuals take a more active and collaborative role in decision making, going from vertical to horizontal approach integrating knowledge exchange and communication, thus creating a new paradigm in the relationship between citizens, who will be more involved, and the state, who becomes a partner state.

Within this, design experts can have different task to carry out, ranging from generating new public spaces for knowledge and idea exchange, to the creation of the ecosystem that will include and foster this type of governance, as well as the configuration and development of frameworks that allow the coordination

and replication of initiatives. All this constituting a design process of high complexity, aimed at modernizing the public sector through diverse paths, actors and interactions.

Enabling these ecosystems and creating a favorable environment might require to see society as a social laboratory where experiments on sustainability and social changes can be conducted, taking into account that first it is crucial to create the proper infrastructuring and mindset for actors. For this three key elements must be taken into account:

- tolerance, needed at the moment of sharing ideas and opinions, and when visualizing new possibilities going against the mainstream;
- openness, which means giving freedom to ideas to circulate beyond the limits of prior rigid interactions and disciplinary boundaries;
- learning capacity allows the experiences to be taken into account, despite being negative or positive, they can add something to the discussion, by providing the proper conditions that allow people to make mistakes, as well as freely sharing their ideas and try new approaches.

2.2.5 Mapping of actors and initiatives

In the report published by the students of the MFA in Design for Social Innovation called “Fundamentals of Design for Social Innovation” (Rettig & du Pleiss, 2013), the students gathered the main Design tools and methods that can be applied in the Social Innovation Processes. In addition, the report shows a proposal of the landscape of Design for Social Innovation, in which the y-axis is the “social scale” and the x-axis is the “depth of the process and outcome”. Here the different possibilities of impact and involvement are shown.

THE SCOPE OF OUR INQUIRY

LEVEL 3 SYSTEMS MADE OF SMALLER SYSTEMS	solutions come from experts and are designed for social systems made of smaller social systems	health and wellness for society is built into systems with social systems made of smaller social systems	systems emerge in society due to the inherent abilities of social systems made of smaller social systems
LEVEL 2 SYSTEMS MADE OF INDIVIDUALS	solutions come from experts and are designed for social systems made of individuals	health and wellness for society is built into systems with social systems made of individuals	systems emerge in society due to the inherent abilities of social systems made of individuals
LEVEL 1 INDIVIDUALS	solutions come from experts and are designed for individuals	health and wellness for society is built into systems with individuals	systems emerge in society due to the inherent abilities of the individuals
	FIX PROBLEMS: Design for...	SYSTEMIC WELLNESS: Design with...	SYSTEMATIC SELF-HEALING / RESILIENCE: Nurture the conditions for life...

Figure 2.13. Landscape of Design for Social Innovation. (Rettig & du Pleiss, 2013).

Design modes map

Design offers a spectrum of possibilities when it comes to problem solving, showing two poles, diffuse design and expert design. The first is related to people without formation in design that use their knowledge and skills to solve problems. The second regards people whose profession is design, who through their studies and experiences have acquired conceptual and operational tools used to support design processes.

Taking the poles diffuse and expert design as an axis named 'actors and competences', and problem solving and sense making as a second axis called 'motivations and expectations', it is created the design modes map, which shows the capacities of people or organizations to design, and the extend in which they are capable of doing it.

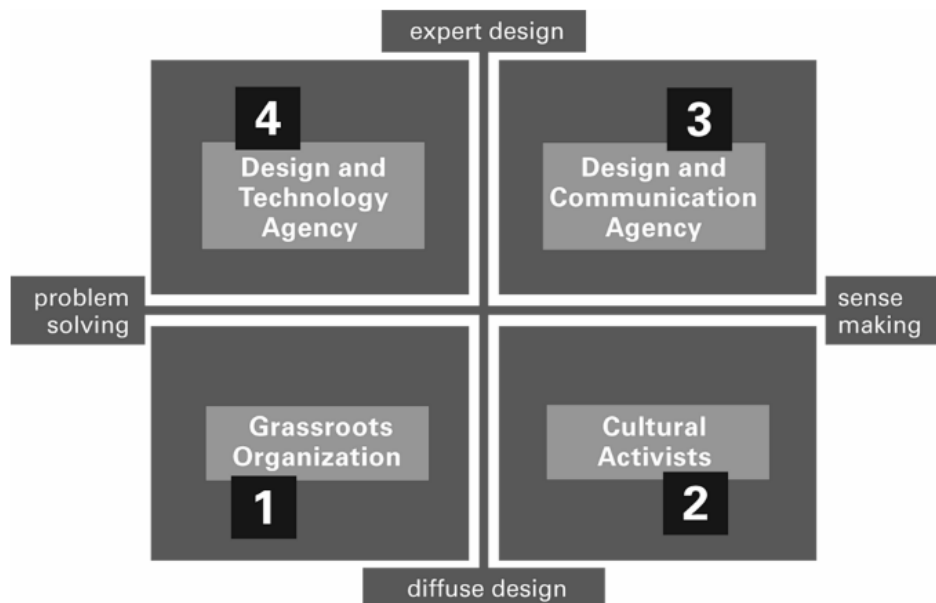


Figure 2.14. Design modes map. (Manzini, 2015, p. 51)

1. Grassroots organizations: the design process used by groups of people with the objective of tackling their social problems. This can be defined as diffuse and competent design.
2. Cultural activists: people interested in cultural activities can be found here aiming at promoting, exhibiting, and debating their ideas and experiences by using their design capacity, playing a key role in the cultural development of societies.
3. Design and communication agency: expert designers create innovative products, services and artifacts that communicate with the user. Nonetheless, the focus on quality and price often overlooks the sustainability aspects.

4. Design and technology agency: this design mode merges design with technical and social issues, carried out mostly by interdisciplinary teams with a design expert as the head. The objective is to serve as support for large design processes, enabling participation, creating coalitions and wisely using the resources (Manzini, 2015, p. 54).

From these four basic modes, some trends have emerged with innovative design cultures in which the polarities tend to find a common ground to work, thus giving the opportunity of generating radical innovations or new meanings.

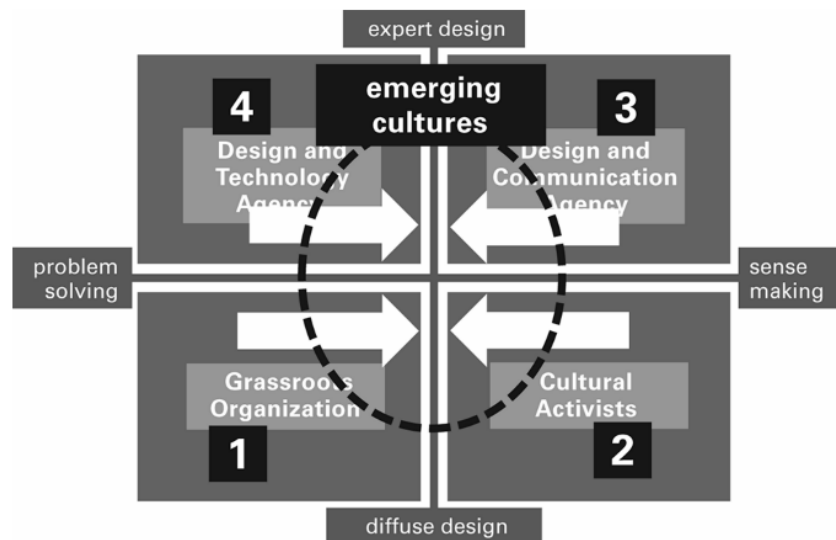


Figure 2.15. Emerging cultures of design. (Manzini, 2015, p. 55).

Manzini identifies four trends:

- Design and sense making: design is not only responsible of the technical and physical aspects of the solutions, but also is must take into account the possible meanings and the social aspects.
- Design as place making: here problem solving and sense making converge. Design experts may assists in the creation of an ecosystem which balances the local and the global (Manzini, 2015, p. 56).
- Design as activism: the main the characteristic in this trend is the influence of social groups in raising awareness and making noticeable certain problems, instead of the direct problem solving. The creation of teams and the design of the diffusion strategies is crucial, mingling the work of volunteers and expert designers.
- Design as making: a questioning about the traditional product design is made, coming from the expert designers working on the convergence of microenterprises and Social Innovation through the use of distributed systems and open design. In this case, design experts become designers, makers and entrepreneur at the same time, reinterpreting the current production systems.

The people and organizations placed in the diffuse and competent design mode are approaching more and more the expert design pole through the interaction with expert designers which generates a new kind of co-design different than the one already formalized, about sharing and discussion of visions and strategies (Manzini, 2015, p. 60).

Participant involvement map

The participant involvement map shows the ways in which users are involved when trying to reach a goal. It uses as axes the degree of active involvement and the degree of collaborative involvement. The first ranges from passive to active engagement, the former regarding users that are service receivers and the latter to users that are co-producers of value. The second axis goes from zero collaboration to intense collaboration, the first related to participants working everything on their own, to working closely with other actors, horizontally, with other peers, or vertically, with businesses, experts or institutions.

In active involvement, to reach a bigger impact it is not only necessary to solve the problems, but also to provide the people with the tools, knowledge and support that allow them to play an active role in their own problem solving. It is fundamental to distance people from the idea of being “people with problems”, in which they are passive individuals or communities waiting for the government or some external actor to provide the solutions they require, to be perceived and act as “people with capabilities”, who are able to contribute with knowledge, energy and skills (Manzini, 2015, p. 114).

Collaborative involvement is seeing from the trend toward individualization that appeared in the last fifty years has decrease and make difficult to carry out collaborating processes, what is called de-skilling in cooperation. Nevertheless, the arrival of Social Innovation and networking thanks to the Internet have brought back into vision the importance of collaborating, which can be seen as re-skilling in cooperation, providing the opportunity of learning how to share experiences and ideas and to agree, despite the differences.

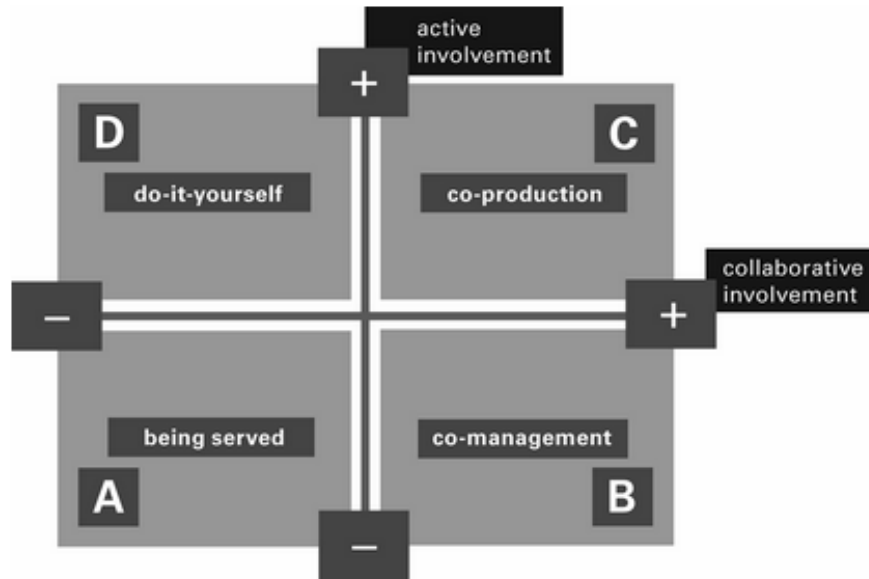


Figure 2.16. Participant involvement map. (Manzini, 2015, p. 121).

- Quadrant A: traditional service mode with low participation in the activities and the collaboration. For instance, the patients in a care service.
- Quadrant B: passive involvement in activities with collaboration in the design and management of the organization. For example, the encounters of residents in a co-housing unit.
- Quadrant C: active participation in the activities in intense collaboration with other actors, as can be found in a community garden.
- Quadrant D: active involvement in activities conducted by an individual without collaboration, being this the model used by the do-it-yourself approach. For instance, encounters of users of a car-sharing organization.

Interaction quality map

The interaction quality map sees collaborative encounters from the nature and the quality of the interactions carried out. It has as axes the social tie strength, which is the level of rigidity, closure and duration; and relational intensity, regarding how deep an interaction is.

The social tie strength establishes how strong a relationship between actors can be in terms of time, intensity and intimacy of the interaction. Weak ties are more loose and flexible, and tend to be created more rapidly. Strong ties require more time to be developed, but provide a closer interaction.

Despite of what might be thought, weak ties do not mean a negative interaction, they are necessary in order to have an open communication, and exchange of ideas and experiences, characteristics that strong

ties lack due to their rigidity and the requirement of long-term commitments. It is fundamental to cultivate both ties, and to determine the type of interaction with each actor involved, for this design experts come into play to find the right balance and mix of ties.

The level of engagement and empathy of a collaborative encounter is known as relational intensity, which consists in establishing deep, intimate and trustful relationships, including also the difficult process of managing these relationships. On the other hand, there is the experiential encounter in which a service is delivered in the encounter, including the common interactions of a service provision, which considers also the facility of management of the interactions. The whole range of possible interactions offer diverse alternatives that can be used depending of the objectives of the initiative to conduct and the other actor in the relationship (Burber, 1996, p. 62).

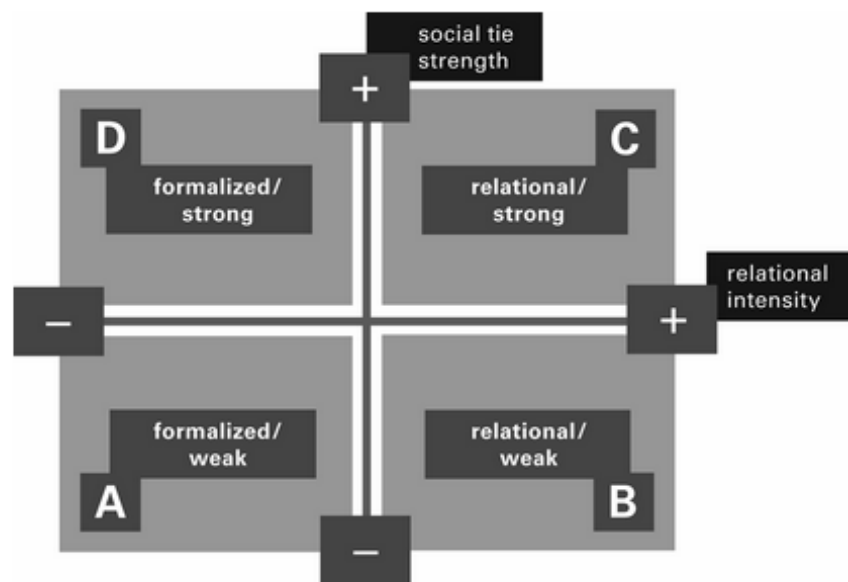


Figure 2.17. Interaction quality map. (Manzini, 2015, p. 123).

- Quadrant A: characterized by weak ties and low intensity in the relationships, being the mode of formalized service encounters. For instance, the interaction between a client and an employee in a fast food restaurant.
- Quadrant B: weak ties with high relational intensity, require low commitment in time and energy but availability to interact in a friendly way. For example, a meeting of the residents of a collaborative condominium.
- Quadrant C: with strong ties and high relational intensity, in this quadrant can be found grassroots organizations, such as meetings of residents of a co-housing unit.
- Quadrant D: strong ties and low intensity of relationships characterized this quadrant, in which organizations with high formality can be found.

2.2.6 Tools and methods

Some of the tools explained in the book written by Manzini are being already used or have been used for decades in diverse sectors, usually they are known with different names but their objective is the same, support and foster social innovation processes. The important detail here is that, although these tools are used, usually there is not someone who can take the best from them, feeding them with insight and ideas.

For instance, Tim Brown (2010) stresses the key role that empathy has, allowing to better understand the end users and their needs by showing some of the tools used in Design Thinking that can be applied to Social Innovation and by providing a set of steps for creating successful initiatives, which are:

- ask a good question;
- get close to the lives of those you are trying to serve;
- build to think and launch to learn;
- see the entire business as a design opportunity;
- teach a person to fish.

Kirk, Hickel and Brewer (2015), support the first point given by Brown arguing that for successfully solving a problem it is necessary to choose the right question to answer, being this a key aspect for tackling the problem of poverty reduction, which is usually focused on treating the symptoms instead of finding and tackling the root causes.

Further analysis on some tools was carried out by Hillgren, Seravalli and Emilson (2011) on how prototyping is can contribute to Social Innovation. Taking as basis the opinions and suggestions given by Geoff Mulgan about the need of closer collaboration between Design and other disciplines working in Social Innovation, and the ideas exposed by Murray and other authors (2010), and Brown and Wyatt (2010) about the iterative processes of refining and testing ideas, and the need to go beyond rapid prototyping. The authors see prototyping not just as a way of testing potential solutions but also as “agonistic spaces” where the actors can exchange ideas and disagree making notice these issues, which helps at the moment of decision making (Hillgren, Seravalli, & Emilson, 2011, p. 178).

Scenario creation

Gathering and generating the spaces of meeting for actors are not enough to obtain the best results possible, it is necessary to create scenarios in which actors can find a shared vision to work on, by debating ideas and opinions that hopefully allow them to find a common path, thus supporting closely co-design processes. A scenario is used to support and to make more favorable the social conversations and the co-

design processes, providing a common ground to work on and to make better decisions and find multiple solutions. The objective is to try to reach a desirable vision of what the world could be like, as well as the meaning of the scenario and finally, establishing the strategy and the ways in which the desire outcome may be reached (Manzini, 2015, p. 141-143).

The creation of these scenarios may be an intricate process depending on the quantity of actors involved and the complexity of the environment in which it will be used, due to the quantity of different perspectives and elements to take into account.

Design expert interventions to enhance people's capabilities

Design experts must not only apply their knowledge and capabilities on the initiatives, but also they must teach and train in diffuse design the people involved in the process, aiming at improving the knowledge and tools that the communities are able to work with, giving them a certain level autonomy (Manzini, 2015, p. 163).

As mentioned before by Brown (2010), it is important that designers engage with the communities to support the appropriation and apprehension of processes, this means that at the end of the project the beneficiaries should be capable or continue with the development of the initiatives, reaching a point in which the actors are autonomous entities capable of carrying out co-design and co-production processes for further developments (Manzini, 2015, p. 82).

One of the tools used to achieve this is by using toolkits within the communities, but this will be further explained in the following section. Besides the toolkits, additional interventions may be used aimed at filling this gap generating a diffuse design culture within these communities, through the use of design initiatives, thus enhancing the process. These can be:

- Tooling up: creating and spreading tools and methods to facilitate co-design processes; teaching non-experts how to make best use of these tools and methods;
- Triggering: feeding social conversation with ideas, visions and provocative actions;
- Investigating: mapping local resources and social innovation;
- Informing: giving promising cases more visibility; clarifying the quality of their results and the related values;
- Visioning: proposing narratives on best practices and on emerging ideas; building scenarios at different scales, from specific local problems to broad visions of possible futures;
- Enhancing: increasing diffuse design culture by feeding social discussion with in-depth criticism and reflections on socio-political as well as aesthetic and ethical values (Manzini, 2015, p. 166).

Community-oriented toolkits and social franchising

Continuing with the idea of empowering communities in order to take over the responsibility of conducting their own projects, some organizations have published, freely accessible toolkits aimed at supporting Social Innovation initiatives by using design tools, which people without prior knowledge can take advantage of, learning and applying what they need in order to bring their ideas to fruition. Among these toolkits can be found: *Development, Impact, and You (DIY)* by NESTA; *The Human-Centered Design Toolkit* by IDEO; or *The Bootcamp Bootleg* by Stanford's D.School. These provide a general approach that can be applied to any sector or by any actor, and it may help in the first steps of the process, giving also the possibility of going more in depth if necessary.

Another approach that expert design might take is the design of community-oriented toolkits with specific purposes, aimed at facilitating the replication process by diverse groups of people in their contexts. These toolkits can be designed to address specific issues, offering the possibility of using them independently and without further assistance (Manzini, 2015, p. 200).

Notwithstanding the great contribution that these toolkits have brought to the communities and the Social Innovation enthusiasts, they also have some pitfalls due to their nature. A first pitfall is the need of having a leading figure that act as a guide and who can be able to provide support to better take full advantage of the toolkits, avoiding misinterpretations, or dealing with problems not faced before without the proper knowledge to overcome them. Another limit is related to how people find motivation to start working, the tools are in the toolkits, but the ideas and motivations must come from the communities (Manzini, 2015, p. 172-174).

Going beyond toolkit creation and use, and bringing it together with other strategies that can help solve the toolkits' pitfalls, it possible to arrive to social franchising, which uses the same principle of franchising of the market economy.

There may be light franchising, in which the central organization provides the tools but allows a certain level of freedom to the franchisees, used when there are few risks to bear with. On the other hand, there are the organizations that require a high level of integration, which might include a toolkit and/or the collaboration with external actors that improve the quality of the final outcome, approach used when the problems are more complex and delicate (Manzini, 2015, p. 203).

Visibility of initiatives

The visibility and spreading of initiative results is fundamental to foster and inspire new Social Innovation projects, or to replicate the already existing. For this it is necessary to map these initiatives in which is

called design for visibility, being this a complex task to conduct, but a task with a high retribution. These maps are portraits of the communities and their interactions with other actors, supporting and nurturing sustainability networks from the local to the global, and how these two environments interact with each other.

Once detected and chosen the initiatives, it is carried out a process of weak signal amplification, in which small or not known cases are spread in order to share their values and results. This is also a design intervention, which any person or organization with initiative is capable of doing it. After the detection, design experts are in the capacity of choosing more suited ways of spreading in order to amplify them. The design aspects of this process include the creation of the communication channels, as well as the decision of the cases that will be highlighted based on specific criteria that also must be decided (Manzini, 2015, p. 141-143).

Enabling solutions for collaborative organizations

Collaborative organizations, just after their creation, have to find tools and artifacts that they can apply on their work, this sometimes means taking them from other fields and adapting them on that specific context. As these tools and artifacts have been generated with specific purposes in their fields, the adaptation brings inefficiencies in the organizations, which must be tackle by improving the commitment and motivation, aiming at achieving an accessible, effective and replicable solution.

In order to overcome this issue, collaborative organizations can make use of enabling solutions, which are products and service systems designed for their specific needs, aimed at enhancing people's capacity, thus facilitating the process to achieve an accessible and effective result. This is done by determining the demands of a collaborative organization and breaking them into basic elements and then finding solutions to each of those elements, which are called solutions components, being the most used and spread:

- Digital platforms: to connect people and to make it easier for collaborative organizations to function smoothly, being these crucial to facilitate activities such as organizing meeting or carrying out long-distance conversations, as well as to open new horizons that previously were almost impossible to observe;
- Flexible spaces: used by communities for mixed public-private functions and incubators for the start-up phase;
- Logistical services: to support the new producer-consumer networks;
- Citizen's agency: catalysts for new grassroots initiatives, but also as facilitators to help existing ones grow, multiply and flourish;

- Information services: to deliver specific advice when new procedures and/or technologies have to be integrated;
- Co-design tools and methodologies: to conceive and develop the above-mentioned artifacts in a collaborative way (Manzini, 2015, p. 177).

SLOC Scenario

From the convergence of distributed systems and Social Innovation comes what Manzini calls the SLOC scenario, which means Small, Local, Open and Connected. These four elements are self-explanatory on their own, nevertheless when merged they become a vision cradle for new, sustainable and networked society. For applying this approach it is necessary to answer two main questions: How can the impact of small initiatives can be increased? How can they grow without losing the collaborative nature? From the possible answers to these questions two strategies arise, replicating and connecting, that allow to create shared visions and frameworks.

The first, as explained in the Social Innovation section, divided in scaling out and scaling up, deals with how to detect successful initiatives and apply them in new contexts, thus spreading geographically and expanding the impact.

When it comes to scaling out an initiative, two effects or ideas help in the process. The first is related to how the transmission of the ideas increases the quantity of expert users able to recognize them and apply them in their own contexts. The second is called the network effect, which consists in how the increase of number of participants in a certain activity is proportional to the value of the activity, thus increasing the benefits for all the users. Applying this concept to Social Innovation, it may be possible to create a cultural network effect, in which each new initiative that is included in the network can bring new insights to add to the shared visions.

Connecting regards not only with the direct connection between initiatives, but also with how they connect, which, if done properly may create a multiplying effect. To achieve this there are two possible ways. The first by providing a favorable environment and infrastructure for the emergence and connection of initiatives. The second by generating framework projects designed in specific for stimulating and facilitating collaboration within local projects (Manzini, 2015, p. 187).

Cosmopolitan localism

Local, as one of the cornerstone of the SLOC scenario is fundamental for the correct development of social innovation. In the current connected world, the concept of local has evolve, coming from a point of view

of isolation and differences to one of diverse perspectives that are shared and that can contribute to improve lives or cultural knowledge mutually in different parts of the world. As Manzini mentions “*the local is or interface with the whole world. It is a point of view (the world as we see it from where we are) and a point of action (the action on the world that we are able to perform from where we are)*” (Manzini, 2015, p. 14).

The term cosmopolitan localism was introduced in order to better explain how local initiatives feed from the global, but also how the first may impact the latter, thus creating the variety needed for a resilient ecosystem.

But, on the other hand, going global may bring some changes and difficulties that is necessary to face. When an initiative successfully creates a systemic change and spreads geographically, reaching a certain level or matureness, the relationships of the actors begin to shift from formal, due to the closeness of the local, to informal, due to the long-distance of the global. Here it is crucial to maintain as much as possible the informality, which means to maintain the human contact while growing and generating more impact.

3 CONCLUSIONS

Innovation in the last century was a term related to changes, to improvement of technologies and processes, to gaining competitive advantage by creating business models capable of disrupting the markets. Despite its type, incremental or radical, it was mostly driven by companies and it was always thought as a game changer in markets, as a way of having better technologies or processes among firms or countries. It is clear to see how innovation has shaped the world in which we live. Innovation has been understood as a source of competitive advantage driven by science and technology research and, in most cases, not taking into account the social repercussions it brings, whether these are good or bad.

Nonetheless, this century brought with it a new and broader perspective of the term, which is setting the basis for a shift to a new innovation paradigm, focused more on societal issues but leveraging on already existing and new technologies, as well as in the markets.

Although social innovation is usually seen in a narrow perspective related to help poor people or people in need, the term possesses a wider reach, which includes every aspect related to the societies, from the poor to the rich, from the local to the global. It uses the knowledge and tools of diverse fields, such as economics, technology, social sciences or design, in order to create a positive impact that benefits the communities, improving not only their well-being but also their capacities to deal with their own problems and find solutions to them. Social innovation is not against technology-driven innovation, on the contrary, they go side by side and “reinforce each other”, as stated by Manzini (2015, p. 186) or by SI-DRIVE (Howaldt, Schröder, Kaletka, Rehfeld, & Terstriep, 2016, p. 115), who see the two types of innovation as intrinsically connected. Social Innovation is seen as an answer to the dichotomy between social welfare and economic growth, offering a path to reunite them.

In terms of the state of social innovation field in the world some remarks can be made, starting from the search for a unique definition and a detailed process that make easier to understand the main concepts and the steps to follow to develop initiatives or projects. It was found that since the beginning of the field, the organizations took the definition and/or approach that better fitted their interests and sector, this means, organizations focused on practical approaches were more centered on creating impact, while public organizations or the academy were focused on policy creation or improving concepts.

In the beginning this created a small divergence of concepts which was tackled by projects such as TEPSIE or SI-DRIVE, which took an inclusive approach taking into account the different definitions coming from the diverse fields and organizations and mingling them in order to obtain a thorough definition.

Furthermore, it was seen that most of the organizations focused their definitions on the impact rather than in novelty or newness of an innovation, although it is also mentioned. From this, it can be implied that the fact that an innovation is new, whether it is completely new or new in the community or sector, does not mean that it will be successful. The level newness of an innovation does not determine the impact that it will have.

In the definitions and the objectives of the organizations analyzed, the empowerment of communities is not mentioned by most of them, only SI-DRIVE project and Colombian DNP include it explicitly, being this a key aspect in the social innovation processes. Social innovation is not just about solving people needs, but also teaching them how they can do it. It is crucial to make more efforts in this direction, which may lead to communities able to tackle their own problems leaving behind the assistive approach usually used.

From another perspective, meeting social needs may be considered as the core element of a Social Innovation project. Although it is not explicitly mentioned in the Colombian and Latin American cases, the objectives provided by them revolve around this idea. Nonetheless, there are several cases in which a Social Innovation is carried out in a community where depending on the point of view, the goal of meeting social needs will be accomplished or not; for the creating organization the project may be a success but for the community or some external actor, the need, although met, does not improve the quality of life because it is not appropriated.

Appropriation is another issue that needs to be tackled. It shows the lack of commitment of some organizations in including the beneficiaries and the communities in the development process of the social innovation initiative. If the inclusion of the communities is non-existing or very low, it is highly probable that the solution will not be appropriated and that after some time it will be ignored. As seen in the literature review, most of the authors and organizations working on this field stress the importance of conducting co-design and co-production, thus making easier the appropriation and also encouraging the beneficiaries to continue with the social innovation process.

Continuing with the analysis, going in specific to the Colombian context, the research questions are answered.

- *What is the current state of social innovation field in Colombia?*

In Colombia the most known case in the innovation field is dated around 2004 in the city of Medellin, which experienced a transcendental transformation, from a city that suffered the struggles of narcotraffic in the decades of 1980 and 1990, to being chosen as the most innovative city in 2013 (Camargo, 2013), all this conducted through the application of plans and programs aimed at solving the social issues in the city, strongly focused on overcoming the bad image that the city had by improving people's well-being.

The success and good results of this approach were the basis for the Colombian government to propose programs and policies of Social Innovation in the National Development Plan of 2010 and 2014, encouraging organizations or different sectors and communities to engage in social innovation processes, which have led the country to be one of the leaders in this field in Latin-America.

As seen in the report by SI-DRIVE (Howaldt, Schröder, Kaletka, Rehfeld, & Terstriep, 2016) and ECLAC (Rodríguez & Alvarado, 2008), Colombia is one of the leading countries in Latin-America in social innovation, and one of the first countries in the world to include social innovation as a national public policy, along with countries such as Germany, Denmark or Canada. Although the field is still in its first steps, some good results have already been shown in terms of initiatives by the government, public and private organizations, or with the incursion of universities trying to bring a different perspective from the academy, mostly from design and social sciences schools.

Starting from the commitment shown by the government, several initiatives have taken place and actors from diverse sectors have gotten involved to support with ideas and knowledge, to fund initiatives or to carry out the projects. These collaborations brought successful results such as Hilando, conducted from 2012 to 2015, or the encounter of SIX and the Young Foundation carried out in 2016, which served as an example for other interested parties of the possible outcomes that can be achieve, thus increasing the quantity of communities and organizations working on the field.

Nevertheless, the field shows a fragmentation of initiatives in which diverse actors tackle different problems, but they do it mostly in a disconnected way, making more difficult the replication or escalation of those initiatives, which bring to light the need of creating better structured collaboration networks that can allow an active ecosystem for sharing and exchanging ideas and initiatives.

Despite the active involvement of actors, the number of successful initiatives and the governmental support, social innovation in Colombia still is in its first phase, therefore, there are challenges to face, things to improve and a long path ahead, which may lead to a journey not taken before.

- *Which tools or methods of design can be applied in order to better tackle the issue of ecosystem creation within the Colombian context?*

In the last decades, design have spread through diverse fields and created different paths to follow in its practice. One of these is design focused on improving the welfare of individuals and society. About this several authors have given their opinions and ideas, such as Buchanan (1992), Kimbell (2012) or Brown (2010), taking about how design can contribute in different aspects of society.

The evolutions on this path has shown successful results when applying design tools to solve society problems, being co-design the one mostly used nowadays. Nonetheless, further developments on the field have brought new insights such as resilience or infrastructuring.

In Colombia co-design and co-production are seen as two pillars for a successful social innovation initiatives. Most of organizations within their definitions and objectives, see the communities as fundamental players able of providing insights and ideas closer to the real needs they have. Although this approach has brought good results, it can be improved by working with design experts able to better interpret the needs, skills and ideas of the actors and apply them to find a more suited solution for the beneficiaries.

Another pitfall found is related to the fragmentation of the field, which may be a consequence of the rather recent creation of it. The government has shown its commitment to foster social innovation as a key driver for overcoming poverty, encouraging diverse actors to participate, which can be seen with the Regional and the Thematic Social Innovation Nodes. These nodes, which can be seen as agonistic spaces, show what could be seen as a first approach of infrastructuring, trying to provide the actors with the knowledge and the resources to improve their capacities. Although this idea is remarkable and has given good results, its implementation has not been what it was expected and there are still several issues to improve.

Going in detail with the infrastructuring ideas and analyzing the elements proposed for this type of activities, it was found that this initiative applied some of them, which are: digital platforms, physical spaces and information services. Nonetheless, the missing elements show why the nodes did not have the impact expected. In logistic services, it was seen that there was not a proper organization of the meetings because they were usually carried out in a specific town, centralizing the works on this one and sometimes leaving aside the needs of the rest of the region. The assessment service and the communication services were not conducted properly, leading to a poor monitoring and sharing of knowledge and ideas among the nodes and from these initiatives to external actors in the field. Finally, there was not a design expert

service, which may be crucial in a second initiative to overcome these issues and to achieve the objectives desired.

Connecting with the aforementioned ideas, resilience, as introduced by Westley (2008), is a term that can be applied in this context in order to learn from the mistakes and to propose better ideas and projects. If the government appropriates this concept and begins to use it, it would send a strong message to the organizations in the field to make use of it, which may set the basis for the creation of an ecosystem of social innovation.

A tool that may give a boost and help the actors to converge into a single point is the scenario creation, which may be carried out by the government. The idea of using social innovation as a way of overcoming poverty, as explained in the literature review, might be seen as a first approach in this direction, being this a vision of what wants to be achieved, nonetheless a proper strategy was not developed leaving each actor with some liberties in terms of the tools and approaches to use in their initiatives. For a scenario creation both the vision and the strategy are fundamental.

The mapping of actors and initiatives can contribute to the systematization, providing a clear and graphical way of seeing the state of the elements and the ways in which they work. For instance, the use of the participant involvement and the interaction quality map may give a clear idea about the type of collaborations and the way to manage them in order to better take advantage of the skills and knowledge of the actors leading to a strong cohesion within the initiatives and in the field in general.

Organizations such as The Scientific Park of Social Innovation in Universidad Minuto de Dios or the initiatives of Colciencias are currently working on the gathering of knowledge and its transfer as a way of having in one place the information that may support or help the replication processes. These type of activities are crucial in social innovation to share the results of the projects in order to understand the processes and try to apply them. Nevertheless, these two initiatives have not been enough due to the high quantity of social innovation projects that are being conducted, which shows the need of having more organizations working in this activity or the need of finding new ways of knowledge transfer and visibility.

It is possible to see that social innovation field is very active in Colombia, including actors coming from diverse sector, creating an ecosystem full of different perspectives and ideas, being this diversity a key point of resilient systems. Despite its recent adoption, social innovation has shown its potential to change the way of tackling the problems faced in the country, the initiatives developed so far has shown very good results and should be taken as an example for upcoming developments.

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