A community centred approach
for neighbourhood-based services.
Connecting design education and research practices for social innovation

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Abstract: The purpose of this paper is to describe a design educational process about service design for social innovation at the neighbourhood scale. The paper presents the results of a Master studio class in Product Service System Design at Politecnico di Milano based on a collaborative approach among students, local actors and practitioners. Seven service ideas emerged from the relationship among designers, local actors, experts in social cohesion and public administrators. Educators collaborated with the local organizations to connect design solutions to the existing networks and activities. Students contributed to propose innovation at local level, being actively involved in a collaborative design process. The connection between research and didactic (especially on field) offered different points of discussion regarding the design capacity to be a driver for social innovation, on the same time, adopting a reflexive attitude to educating and researching improved the design capacity to involving communities and collaborating with different stakeholders (community-centred approach). From a wider perspective, the possibilities to share different knowledge and to involve people with different background add values to both the educational and research processes.

Key words: service design, social innovation, community-centred approaches, collaborative approach

1. Introduction

In recent years design is considered a multi-faced activity able to face with different issues at different scales: from products, to services, to strategic issues and from manufacturing issues to territorial changes [1]. Nearby the capacity to be a key element in business strategies, design acquires an important role in non-technological innovation process and in social innovation issues [2, 3, 4]. This entails a wider range of activities, tools and contexts where designers can have an active role in promoting and foster innovation. This paper describes – through the description of an educational project held in Politecnico di Milano in the Master of Science Course in Product Service System of the Design School – how design can contribute in social innovation processes at a neighbourhood scale. Moreover, the connections between the educational project and the *ColtivAzioni Sociali* research are explained in order to define the background of the experience and the joint actions between teaching staff, students, and local actors. *ColtivAzioni Sociali* is a three-year research programme aimed at reinforcing the social cohesion in Dergano neighbourhood in Milan and defining new neighbourhood-based services involving communities and institutions. The final result consists in seven service ideas structured according to the specific needs of the Dergano neighbourhood (Milan).

The paper is focused on social innovation as the arena to experiment participative and collaborative processes between designers, practitioners, local communities and institutions. In the first part of this paper, a background on social innovation and territorial change is discussed to evidence the links between social and territorial innovation issues. The second part explains the educational process and action-research as a methodological approach to transformation. The paper concludes with a reflection on the significance of a *community-centred approach* when design operates within social innovation processes for territorial transformation.

2. Background: Social innovation and territorial development

The term innovation, when referring to the territorial contexts, describes a broad concept of transformation and change that considers economical, sociological, political and market aspects. The possibility of changing territories is affected by different factors: the decision-making and planning processes, the regional policies, the individual strategies of local agenda, the capacity of actively involving people in the process and connecting policy makers, entrepreneurs, academics and third-sector workers from different contexts. To better understand the implication of introducing innovations at local level a brief introduction on the idea of territorial growth is provided.

Moulaert and Sekia [5] analyse the concept of territorial development in its different paths, studying the connections among different theoretical approaches related to local development and territorial innovation. In particular, the authors consider five models of development: local production systems, innovative milieu, learning region, regional innovation, new industrial spaces, territorial clusters as different approaches focused on understanding the path and the mechanisms that connote the development process. Starting form the analysis of the different models, the authors propose a community-based perspective of territorial innovation, described as a process aimed at enabling local economies by strengthening the public sector, the social economy, the cultural activities, the small productions, as well as the well-being of the local communities, the social dynamics, the non-economic aspects of society, and also the natural environments. The local growth – connecting social, economical and environmental issues – is one of the significances of the European Community, and the territorial innovation topic is at the heart of European policy planning. From the Lisbon Agenda 2000 to the current strategy Europe 2020, the EU encourages the territorial innovation, the dissemination of knowledge and the strengthening of territorial networks, that means investing in human capital, business improvements, and the diffusion of new technologies. In this context, collaborative and bottom-up approaches of innovation – such as the social innovation paradigm – are gaining momentum. Social innovation is considered as a way to strengthening social empowerment in the processes of development, giving to the individuals and the civil society the opportunity to play an active role as agents of change.

The concept of social innovation is not new, but its widespread use is connected to the new technologies and the communication systems. In relation with the worldwide crisis of recent years, the concept is mainly related to the possibility of start-up new business by the civil society. The EU defines social innovation as a mechanism to promote social enterprise, on macro and micro levels, acting on wider contexts or local areas to improve the functioning of organizations in order to achieve social aims and strengthen the mechanisms of participation in local governance [6].

The issues related to the social innovation are different and include activities – based on neighbourhoods or small scales - having an impact also on a large area, as the urban contexts [7].

The social innovation is also connected with the collaborative consumption models [8] and with the open-source, peer-to-peer, distributed production processes emerged in recent years, moreover it is a path-dependent contextual process [7], therefore the results are susceptible to different interpretations, and are difficult to measure both on a small scale and on the territorial dimension. Social innovations are new ideas (products, services and models) that synergistically respond to the social needs by creating new forms of relationship and collaboration. In other words, changes are related to the goods and the services produced by a company, but also they are processes that allow citizens to acquire the capacity to act autonomously [6].

Social innovation for territorial changes regards the collaborative practices and participatory models that support wellbeing and prosperity for people and places, in a sustainable perspective. This means that people and communities are at the centre of the innovation process that is based on strengthening relationships, collaborative and cooperative practices. The issues are various and related for example to the social demand not satisfied in the current market, the connection between social and economical activities, the creation of new social organization based on participatory practices and, on a wider scale, the ability to improve the efficacy of local and national policies.

The collective learning and the ability of individuals to be *harbingers* of innovation are key elements. Therefore organizations, individuals or groups able to fertilize different contexts play a key role to foster changes in that situation where bureaucracy, lack of resources, and complex organisation processes can obstruct the innovation process. Fertilization happens when small and large institutions and businesses exchange their knowledge through people and organization able to activate and spread innovations that have a strong link with the territories [9]. When a specific challenge of a place is defined as a response from the local operators trough a participatory process, we can describe it as *territorial innovation* [10], namely the creation of new processes, new approaches, new organization models, news services, new enterprises that create value for the local resources (material and immaterial). In this scenario, participation and collaboration are crucial features in order to trigger, develop and diffuse social innovation at local level.

In the following part, the collaborative approach used to connect research and education activities is described through an action-research approach applied to designing new services in a neighbourhood.

3. Framework: action research at neighbourhood scale

Designing at local level entails the participation in a multidisciplinary process to face design problems that are not always replicable in other contexts. In this case, the design solutions are often the results of an iterative process that connect reflection and practice to be contextualized in a specific place. Moreover, the design activities involve different communities: designers, practitioners, public and private actors, and citizens. One of the research approaches based on collaboration and participatory activities that merges theory and practice is action-research. The interesting features of action-research are related to its experimental nature, and the attention to the knowledge sharing process and learning. In addition, different authors [11, 12, 13] consider the actors involved in the research process in terms of *communities of inquiry* and *communities of practice*, strengthening the role of the 'communities', considered at the centre of the design/research process. The scholars describe the action-research

process predominantly as a cyclical and iterative process consisting in a succession of hypotheses, experimentation and verification [14]. Observation, interpretation, and action (Stringer, 1999) are reiterated over time to build a knowledge structure incrementally.

This means that the theoretical reflections are put into practice in real contexts and, once completed the tasks, they are evaluated in terms of advantages for the context and for the communities involved in the process. The testing activities reinforce the theoretical hypothesis in a circular dimension that characterizes the action research. This is comparable to the designer attitude described by Schön [15] in term of reflective practice. The project cycle that characterizes the design intervention at local scale is based on the acquiring knowledge about the specific context, the capacity to detect and describe its characteristic resources to promote an idea of change that is coherent with the available *territorial capital* [16]. The action research approach allows managing the different aspects concerning relationships, strategic and organizational issues and practice [17]. From a design perspective, this means adopting an action-reflection model that imply the review of the process, the tools used, the skills acquired and the knowledge produced. Form a local community perspective, this means to acquire the competencies useful to enable the territories and people to self-promote innovation.
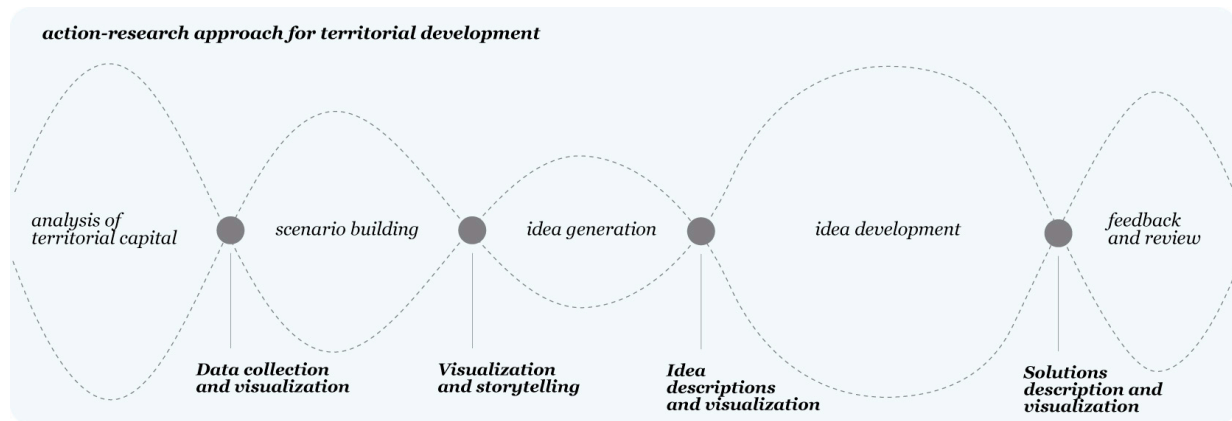

Figure 1 Action-research phases: design for enhancing places and support social innovation.

3.1 The ColtivAzioni sociali project and Dergano neighbourhood in Milan (Italy)

ColtivAzioni Sociali [18] is a three-year research project aimed at reinforcing the local cohesion in the Dergano neighbourhood in Milan (Italy) and improving social innovation involving local communities, local actors, citizens and institutions. The project – co-funded by Fondazione Cariplo, a foundation based in Lombardy that support innovation in different fields – involve five local associations working in the field of social issues, education, creativity and it is coordinated by ICEI (ONG focused on social cohesion) in collaboration with the Department of Design of Politecnico di Milano. The main aims of the project are fostering social innovation and reinforcing social cohesion through participatory mechanisms, educational processes, and by proposing new neighbourhood-based services. *ColtivAzioni Sociali* aims at enabling a collective learning process through an action-research that involves research staff (designers, researchers, and practitioners) and local communities in order to share objectives, practices, and knowledge about Dergano neighbourhood. This process is based on face-to-face activities and online tools in order to reinforce the existing local networks and enable new connections to promote and support a collaborative approach to design and promote new actions. The overall aim is to define

new services based in Dergano that will involve different stakeholders able to support and sustain the ideas in a long-term view. During the first year of the project, one of the activities promoted has been the collaboration between *ColtivAzioni Sociali* and the Master of Science Course in Product Service System Design held in the Design School of Politecnico di Milano. The collaboration has been based on the knowledge exchange between local communities and stakeholders, professors and students. The idea was to connect the design community of Politecnico di Milano to the local communities based in Dergano in order to promote a design vision and create a shared framework able to image new service ideas at a neighbourhood scale. The collaboration has been developed through different activities: research, idea generation, service development, communication and feedback. The detailed process and results are described in the following paragraphs.

3.2 Service design for local innovation: design education on the field

This section describes the Master of Science Studio Class process and its results connected with the Dergano neighbourhood and *ColtivAzioni Sociali* project. The MoS Course is one of the Final Studios in Product Service System of the Design School of Politecnico di Milano. The teaching staff was composed by designers, architects and design managers. The students come from all over the word with different background in design fields. The Final Design Studio focused on service design for cities, and the main aim was to identify new design solutions to enhance Dergano activities considering different topics (social issues, creativity, local craft and productions, entrepreneurship). The course has been structured in five macro-activities – following an action-research cycle – concerning field research, scenario building, service idea generation, service idea development and service prototype. The process has been designed to merge abstraction and concreteness, learning and practice using a collaborative design approach. The research phase was aimed at understanding the resources of the neighbourhood through desk and field analysis supported by local associations and citizens. The research results supported the scenario phase aimed at individuating promising area of design intervention and interesting theme for the projects development. Related to the scenarios, the service ideas were generated responding to the local needs. The ideas were presented to the local actors to have feedback and verify the coherence with the neighbourhood expectation. The link between research and action is signed by the idea development characterising the generative phase of the process. The service ideas were developed describing the service organization, the offering, the user experience, the business idea and the business model and the link with the local context.

The field research involved all the students in analysing the local context using a set of tools (context interviews, photo-reportage, and visual diaries) and collaborating with local associations. The *ColtivAzioni Sociali* staff supported the students in understanding the strength points and the weak points of Dergano facilitating the dialogue between students and local actors. The filed research has been structured in order to better understand and report the characteristics of the *territorial capital* connected with the *brief* defined. The field research analysis outputs were useful to structure and define the design scenarios.

Figure 2 Example of field research cards used.

Starting from the analysis, seven scenarios have been proposed focused on the main elements that the students observed in the previous phase. The scenarios – visualized trough short videos – are storytelling about interesting design areas where possible service solutions could be placed. Through a 'what if' approach, students described some hypothesis to support the next step of the process, namely the service idea generation phase. The service scenarios described some design issues: the relation between families and neighbourhood activities, enhancing the safety perception, create new job opportunities for small shops and artisan already working there, supporting the multi-cultural communities in their integration with people and activities done in Dergano. Based on the design scenarios, seven service ideas were proposed, regarding (i) new food experiences based on multicultural knowledge, (ii) new services based on transportation of people and goods reinforcing the local networks, (iii) new ways to involve immigrants and unemployed people in structured job-networks, (iv) services to enhance local small business improving their offering, and (v) promoting new ways to experience the local craft connecting users and artisans in a 'design-on-demand' process, (vi) new ways to support families in taking care of their children during the whole day, (vii) and new way to experience the public spaces and the neighbourhood resources involving communities in sports and gaming. All the service ideas have been structured and defined in all their components (organizations, processes, actors maps, interactions, touchpoints and business model) considering the specific context and the different stakeholders to be involved in the whole service process.
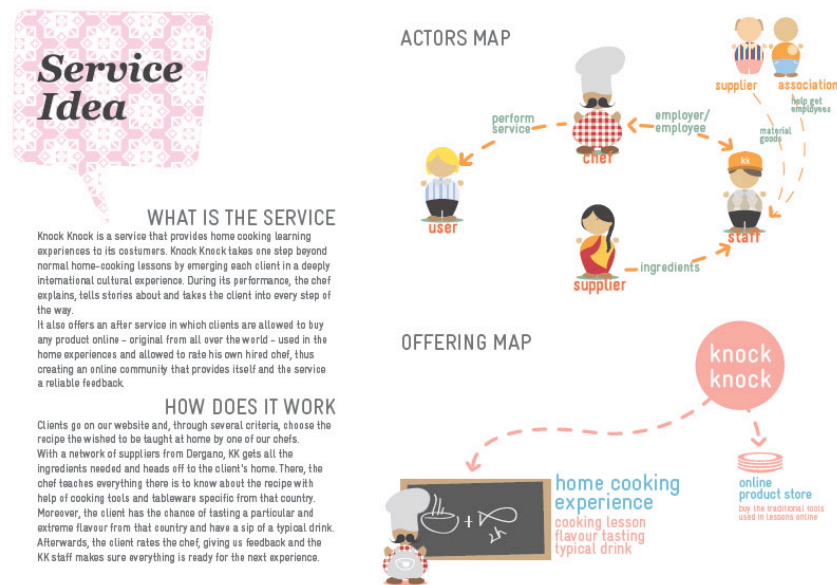
Figure 3 Example of service idea visualization.

In every phase of the design process, professors and students were connected with the local stakeholders that gave feedback on the service ideas and information about other stakeholders to be involved.

The action-and-reflection process was supported from one side by the teaching staff that directed the students in proposing coherent and context-based service solutions, from the other side the design process was supported by local communities that gave their 'internal' point of view about Dergano and its challenges, collaborating with students in order to create a strong link between university community and citizens.

The process ended with a public exhibition of the projects held in Dergano and organized in collaboration with the local institutions, in the headquarters of a local association. The exhibition represented an important situation where the service design approach and the service ideas were shared with all the people involved, but also with other citizens and associations that participated at the event. All the institutions and the local actors involved actively participated in supporting al the activities, since the starting phase to the final communication (a national press has been involved to report the process and the results).

The collaboration between the Politecnico di Milano and the local associations and institutions reinforced the links between the neighbourhood and the university and also produced a fruitful framework to promote the service design at local level and support local communities in developing the ideas in the future. Moreover, at neighbourhood scale, the action-research helped to reinforce some existing local networks to work together on a specific topic, facilitating a new dialogue between different stakeholders based on the possibility to crate joint activities in the future. The results can be measured from different points of view: from a design perspective, the action-research process supported the introduction of design tools and approach in an external context, facilitating the dialogue between different stakeholders and competencies. Moreover, it was a very fruitful experience to give the opportunities to the students to collaborate with a well-defined stakeholder. The students acquired form one side the capacity to face with complex systems – such as services developed for local areas – and on the other side they understand that the experience were going beyond an educational process. At neighbourhood scale, the results can be measured in the capacity of the citizens and local institution in understanding how service design

can really contribute in developing new opportunities for the area and the increasing of self-perception in term of having an acting role in promoting social innovation. From a wider perspective, a strong result was the common understanding of the social innovation issues and challenges and the role of service design as a specific tool to support transformation [19].

4. Final remarks: the importance of a community-centred approach

Service design applied at local level need to involve different roles and competencies in order to support the social innovation process that affects different levels: from policies to small activities. These processes do not depend only on economic factors, but they are *embedded* in the local milieu and are connected to the capacity of individuals of introducing, supporting and spreading innovation at local level. The experience presented supports a reflection about the design process, the design focus and the subjects involved. In particular, the reflections examine: *what* we design, *who* designs, *how* we design.

Designing services for local areas entails the analysis and the knowledge acquisition about the territorial context and its resources, defined as *territorial capital.* This means that the design focus regards a wider range of activities performed at different scales. The *territorial capital* became the focus of the design activities, and the design outputs are a system of products and services aimed at enhancing the local resources and the wellbeing of local communities. Communities are at the centre of the design process and, at the same time, designers are part of a wider community focused on the project (in this case professors, students, local actors, citizens). All the process can be described as a *community-centred approach* based on the idea of participation in a wider *design community* [16, 20, 21] that means to be part of a learning process concerning practices, roles, identities, and tools used. This idea reinforce the concept of *people centred design* described in the recent European report *Design for Growth and Prosperity* [22] describing some recommendations to enhance the role of the design in innovation processes. *People centred design* is defined as a process that enable consumers and citizens to play an increasingly active role since the early stage of development of a product, service or process, including the ability to provide feedback on aspects of production, performance and quality. The *community-centred approach* characterizes the design activities connected with places. The experience described in this paper can be visualized as in Figure 2, connecting the design process to the tools used and the identification of the different actors of the *design community.* This collective subject is formed by different actors supporting the whole design process. Citizens, institutions, local enterprise and associations, stakeholders, design and practitioners worked together in order to promote social innovation at local levels.

action-research approach for territorial development

analysis of territorial capital	scenario building	idea generation	idea development	feedback and review
Data collection and visualization	**Visualization and storytelling**	**Idea descriptions and visualization**		**Solutions description and visualization**

tools used

interviews questionnaires photo-diaries photo cards	brainstorming video scanarios	brainstorming idea visualization techniques	idea visualization techniques maps videos business tools	local exhibitions

design community

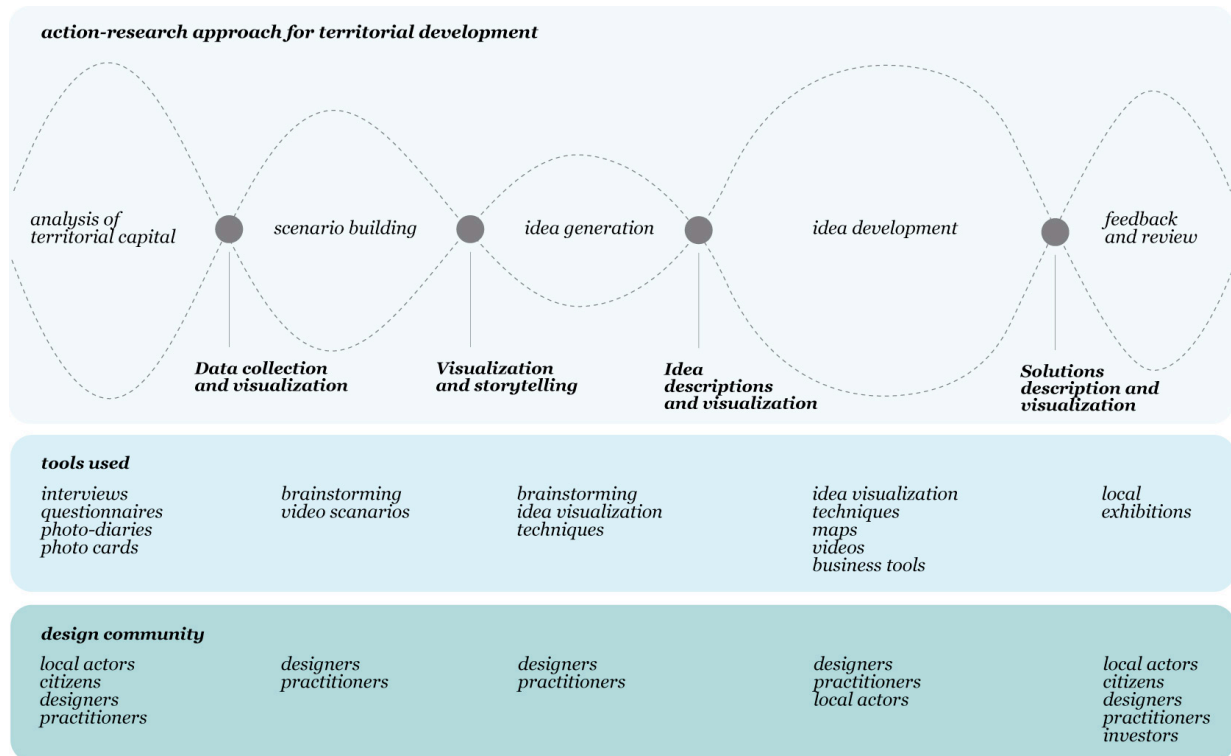|				
local actors citizens designers practitioners	designers practitioners	designers practitioners	designers practitioners local actors	local actors citizens designers practitioners investors

Figure 4 Design process, tools used and development of the design community

Focusing on a neighbourhood or a city, the designer has to face with tangible and intangible aspects: relationships, knowledge, awareness, confidence, and culture just to name a few. Enhancing the territorial capital – through a design perspective - means to act not only on the physical dimension of things, but also refers to design, transform, produce and distribute knowledge. Designers need to be connected with the local knowledge to understand how communities act and learn. This is a collaborative process, where designers, practitioners, citizens, local actors are involved sharing their specific skills and competencies. The collaboration between citizens, businesses and institutions leads to building those connections between communities, citizens and local actors able to trigger social innovation at local level [23].

At local scale, the output of the design process can be the relationship between people, places, enterprises and institutions, the definition of design strategies and scenarios locally, design and develop product-services that create value for a place and its inhabitants, considering the specificity of the local resources. In this context, the service design solutions - as opposed to mass production - are not always reproducible on a large scale and are not always relevant for different places without distinction.

In conclusion, a further task for the designer acting on social and local issues is to promote creative paths and design solutions aimed at enhancing the quality of the experience, the quality of relationships, the quality of the environments, the services and the products, involving local communities in order to share, promote and practice a design process that goes beyond giving shapes of something.

4. Conclusions

In this paper a reflection on how design can contribute in social innovations has been presented describing and experience of design education *on the field.* The educational process has been strictly related to an *action-research*

process that involved academic actors and external competencies that had a role of *interface* between professors and students and local communities. The main results is the description of a dedicated approaches called *community-centred approach* that defined (i) a focus of the design activity identified as *territorial capital*, (ii) the description of an action-research process structured in research activities on the field, scenario building, service idea generation, service development and feedback, (iii) the definition of a collective subject called *design community* that play an active role in promoting, supporting and spreading social innovations. The discussion developed supports new educational and research areas to be investigated in further activities: form the students perspective the learning process has been more complex – due to the big challenge to experiment their selves as active players – to define services and their business perspective in a real context; from the local administrations and communities the collaboration with the designer has been a process to reflect on new way to promote changes at local scale and create new dialogue between institutions and citizens. The collaboration between university and local actors has been useful to improve and better define the design tools needed to activate the dialogue, the storytelling of the ideas and the research process, sharing the design visions related to the social innovation issues. From an educational perspective the outcomes have been mainly related to the relationships aspects. It was really important to define, since the beginning of the process, the roles and the different contributions needed. The educational process developed on two levels: related to the students' learning process and to the one regarding the members of the *design community*. In this context students also learned how to think in term of entrepreneurship. The opportunity to connect their ideas to a real context improved their capacity to manage such complexity and become aware of the whole action-research process and its results related not only to the final solutions. Finally, the educational activities reinforced the hypothesis of the research, and through the research the educational outputs were more grounded and strictly related to the neighbourhood resources.

The future outcomes expected are to reinforce the understanding of the action-research framework and the specific activities and tools that the *design community* can experiment on the field, also through new way of relationship between its members.

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