PROTOTYPING SOCIAL PRACTICES IN THE MARTESANA DISTRICT: RESEARCH AND TEACHING EXPERIENCE THAT INVOLVE LOCAL COMMUNITIES

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Abstract

This paper describes “Reinventing Martesana District,” a research and teaching project that involves different actors: Polimi Desis Lab, a furniture company Cargo, the students of the School of Design at Politecnico di Milano and six local communities of the Martesana neighbourhood.

Polimi Desis Lab is a research team of the Department of Design at Politecnico di Milano, part of the International Network of Design for Social Innovation and Sustainability that adopts a strategic and systemic approach to design, with a focus on space and service design, in specific contexts, also involving local communities.

Cargo, a famous furniture store located in the north-east of Milan, focused on the concept of tradition, innovation, and creativity, asked help to the Polimi Desis Lab to increase their relations with the neighbourhood offering the residents a new space of aggregation, community, and sharing.

A group of forty international students of Temporary Urban Solutions (TUS), an elective course of the Master Degree at the School of Design at Politecnico di Milano, was involved in this research and teaching project. In particular, they were asked to work on the Martesana area, a territory characterized by a cultural fabric socially fragmented.

The studio is composed by a heterogeneous group of students coming from different nationalities and with several backgrounds in terms of design: interior, product, communication, fashion design and PSSD (Product Service System Design). To open a dialogue with the Martesana urban fabric identity six local communities have been involved: small non-profit associations, which deal with contemporary art, culture, pedagogy, social experimentation, music and performing arts, a G.A.S. - Solidarity Purchase Group - that applies principles of equity and sustainability to food and consumer products, and a Fab Lab.

The students from the course developed a series of projects, with the purpose to enhance the involvement of the Cargo company in the neighbourhood, that culminate with a final prototype event where the local community could test and try through a series of prototypes.

Keywords: Social practices, Design education, Research in design, Community Centred Design, Co-design.

1 INTRODUCTION

Design has changed from a more craft-oriented discipline into a multidisciplinary one, connected with social environments, products, services, systems and brands. [1] [2]

Therefore, the use of service and spatial design practices in social innovation means putting into practice a holistic, co-creative, and human-centred approach, understanding and involving users’ behaviour (local population, students and Cargo company in this case) to create and to refine new emergent typologies. [3]

In this essay, is highlighted the critical challenge about the collaboration between researchers, students as designers, and the local community, mostly understanding how to involve this last one in the co-creation of new best solutions. Researchers and designers need to be confronted with two main challenges: one is whom to engage and how to open the process for those who are affected, such us local communities and associations related to the neighbourhood. Secondly, how to ensure the setting for fostering the collective creativity, also dealing with contingencies that can emerge at any points of the process. [4]
Referring to innovative, social and service activities means relating to social innovation. The goal of the process here presented, is to meet social needs, predominantly diffuse through associations with a sense of community purpose. [5]

Design discipline has the role, in a context such as peripheral and semi-peripheral neighbourhood, often proactive, proposing specific research methodologies and interventions strategies in close relation with the resident population, building also new skills, creating original synergies, functions, spaces and generally process of inclusion and social innovation. [6] Design, therefore, can be recognized as a powerful innovation driver, also where its methods and tools have been applied in new fields. One of them, as already mentioned, is the application in design for social innovation, aimed at developing new ideas and solutions as a response to social needs. [7]

Co-creation is the strategy that guides the different parties together - Cargo company, designers and students - to jointly produce a mutually valued outcome. [8] Co-created value arises in the form of personalized, unique experiences for the customer (value-in-use) and ongoing revenue. Is also extremely important, during the co-creation process, to settle interactions research tools like stakeholder maps or customer journeys commonly adopted in co-creation workshops. For space and service professionals and researchers, these methodologies provide productive co-creation instruments for making use of users' and other stakeholders' creativity, collecting tangible artefacts built by them and by exploiting their engagement as full participants to the design of services. [4]

1.1 The specific case of Martesana District. A research and teaching project involving different actors.

The active players in this didactical research are forty students, from an international class of the Master degree of School of Design of the Politecnico di Milano, taking part of an elective course called Temporary Urban Solutions. The forty students were divided into six different working groups. The methodology used during the process of this collaborative course is related to community-centred design also using co-design sessions connecting spatial and service design activities, fostering relationships between the students, the associations related to Martesana area and the Polimi Desis Lab.

The context of the studio of Temporary Urban Solution and of the research related to it is about a particular area of Milan, called Martesana district. This is an area placed at North side of Milan, between Viale Monza, Via Padova between Rovereto and Gorla metro stations.

Today the Martesana district, which includes the areas of Crescenzago and Adriano, is considered shortcoming by everyone interested in the dynamics of the city, to be saved even before it is finished. The first part of the district, overlooking the canal, is ancient and is part of the old Crescenzago, even visually. Going ahead, the street widens and opens up the whole new area, the Adriano district is divided into two parts: to the right of Via Adriano, the buildings were built in the nineties, to the left date back to the early 2000s, and is where the greatest urban disasters have been concentrated in the last decade.

The area of Martesana (which its name is coming from the homonymous canal of the Naviglio Martesana) is a territory characterized by a cultural fragile fabric context, also fragmented socially, economically and culturally. Therefore, this district is still trying to find his own identity, an unprecedented territory that cuts across different areas of dialogue.

Crescenzago is located on the sides of the Martesana canal, which runs from the Adda to the centre of Milan: coming from the north-east, Crescenzago is the first district encountered by the canal. The historical part of Crescenzago is a coastal village, with houses and farmhouses that show memories of the old rural vocation of the area. In the first half of the twentieth century, however, the area was destined for other purposes and put at the service of an urban expansion, in fact, uncontrolled. The result is that during the years of the building boom, starting in the mid 50s but even before [10], close to historic buildings have arisen concrete cubes destined for a working class that began to see a minimum of well-being and no longer found space around the ring road.

In this area there are the main libraries of the municipal district which are among the most interesting places of public aggregation in the district, but it is called to manage a huge population basin. The libraries are also frequented by people from the rest of the city or the surrounding areas due to its proximity to the metro station. The subway is the main means of communication of the whole area with the rest of the city, but it is also an authentic wall between Crescenzago and the neighbourhood that
extends beyond the railway line, which here runs on the surface. This great communication route is also an administrative separation: a division that does not make much sense and aggravates even more the impression of isolation of this part of the neighbourhood. Crescenzago is a multifaceted, varied and complex district. The people who live there often run into communication difficulties: cultural differences, instead of becoming a factor of wealth, risk making relations between people of different origins more difficult.

Nevertheless nowadays, the multicultural aspect of this area is attracting young people, students and creatives, whose have found fertile territory to open art galleries, professional studios and craft shops, also thanks to the influence of one of the most active areas, socially and artistically in the Milan, NoLo, North of Loreto, it also characterized by several commercial activities and different cultural traces.

The Adriano district, it’s a piece of fragile city, inhabited by young families in search of a still missing neighbourhood vitality. As regards children and the aged, especially on the right side of Via Adriano, it is a well-equipped neighbourhood: there are already many nursery schools, both public and private, playgrounds and recreational activities organized by the parish and associations in the area, are lacking instead opportunities and places of socializing for teenagers.

The neighbourhood started out well with primary urbanisation works, but in 2009 the construction sites of the other buildings not yet started were definitively blocked. In the neighbourhood there are still well-constructed areas and completely abandoned areas. At the same time, also through calls for tenders and tenders launched by the municipality has always sought a turning point, a way to regenerate the situation especially in terms of urban planning, services and social. It has been decided to revitalize the district with infrastructures and services that will improve the quality of life of citizens, making it deeply connected with the surrounding area: the construction of a large park and a primary and secondary school, the extension of the tramway 7 for a fundamental link for the viability of the area, and finally the regeneration of urban spaces for the creation of new places of aggregation and community life. The real redevelopment of the Adriano district passes through the business centre of the multinational technology company Siemens [11]: the new building covers an area of over 15,000 square metres and is inspired by the principles of smart working with large open spaces without allocation of space and small separate meeting rooms. This is accompanied by a new philosophy that brings people into the office also to socialize, adding to the professional level the informal one.

Sustainable mobility is encouraged by the possibility of using bicycles or electric cars; internally there are also wellness courses, wi-fi stations for working outdoors and relaxation areas as well as sharing, such as the gardens to encourage the work of employees. The new project as a symbol of innovation and sustainability for a small neighbourhood that connects entirely to a metropolis like Milan, but it is only a small piece before completing a real urban development.

The main challenge of this didactical experience, between research and education, is to answer to a specific request by a local reality like Cargo. The aim is to find possible temporary urban solutions, with the possibility to become as well permanent in the future, for those who live in this neighbourhood, encouraging social and cultural relations, interpersonal and living the common spaces at most, through new active initiatives.

This research and education methodology proposes to turn students as activators of improvement of the neighbourhood, using their designing ideas, also co-designed with different local realities.

2 METHODOLOGY

Figure 1. Timeline and processes of T.U.S. – Temporary Urban Solutions course.

Human-Centred design methodology is used, a creative approach to problem-solving builds a deep empathy with the people you are designing for. As IDEO states, “It’s a process that starts with the
people you’re designing for and ends with new solutions that are tailor made to suit their needs” [9].

It’s therefore about generating ideas and building prototypes, sharing what have been done with the people you’re designing for and putting also innovative new solution into the world. HC design mainly consists of three phases: *Inspiration Phase* where is possible to learn directly from the people you are designing for and deeply understand their needs; The second is the *Ideation Phase* where is possible to identify opportunities for design, and prototype possible solutions; lastly the *Implementation Phase* where is possible to bring solution into life [9].

Keeping the same people, you are designing solutions with, as central core of the process, means to build, with more probability, a success.

Students, therefore, were called to involve the local communities into the process, not only once, but during different stages of the process. The phases of the process, also described in the timeline diagram above, established by the course are: the Analysis and Research phase including a desk research and a field research about the associations and about the context, also using tools like interviews and photos reportage; the second phase is about Concept Generation that provide a co-design session extended to the neighbourhood; as third phase, we have Project Development, as the ideation phase, which culminates in a prototyping event aim at testing the designed activities, services, communication, spaces with the community.

*Action Research* has been used, in this experience, as a technique designed to encourage reflective and collective problem formulation and problem solving. Is important, though, to replace the usual relationship between researcher and researched with a more collaborative, iterative relationship where the emphasis is on research “with as” opposed to “on people” [15].

Through the study of local actions initiated by communities, it’s possible to promote the development of an urban public space, relying on sustainability, conviviality, and solidarity, new ways of involving residents and users in the conception phases of a transformation project. That’s why the projects and results from the studio have been co-designed with real local realities of the Martesana. To each of the six working groups has been assigned an association: the first one is G.A.S (Ethical purchasing group) of Crescenzago, a local community of people sharing the common philosophy where at the base is the rejection of consumerism lifestyle, care about natural products and reasonable prices; The second local identity is Assab One, a no profit organization that produces and promotes exhibitions, events and art projects focusing on initiatives that integrate different languages capable of reaching beyond the art world; *WeMake Fablab*, a firm that operates in the digital manufacture industry, also providing access to fablab technologies, which also holds up workshops and co-design sessions for stimulating and growing the creative community network by involving local and global groups; *Sonorusica* association, is another local reality, connected with music, aims at providing music concerts and various musical events more in general, around the neighbourhood including concerts in community areas; *Arti Girovaghe*, promotes the dissemination of cultural and educational research, promoting also social experiments, especially in creative development and free expression, to create socialization processes for a newly connected community. Lastly, *City Art*, a no-profit cultural association which represents a multi-purpose place for reflection and meetings on public and social art with local events, shared with the inhabitants of the neighbourhoods and the schools. It also hosts exhibitions and events where artists investigate their habitat, creating works and projects to reactivate contact between people and the environment in which they live.

2.1 The prototyping session: Martesana Fest event

Public spaces are becoming places of social innovation, offering a context where creative communities act [14] to bring original solutions to everyday problems that the current economic system is no longer able to provide. The bottom-up actions of these active groups of associations, students and Cargo, create opportunities for social transformation and sustainable growth that modifying the existing pattern, replacing the old individualistic values with a new sense of community, sharing exchange of knowledge and information, with mutual support. All the activities and prototyped projects were carried out aimed at building long term relationships with stakeholders of the local community to create networks from which design opportunities can emerge.

The output of the Temporary Urban Solutions course is a final prototyping event organized with Cargo in its spaces, with an ensemble of the "mise en scene" of possible future scenarios for the neighbourhood, where the local community has been invited to collaborate and test the designed by students’ solutions.
“Prototyping to test is the iterative generation of low-resolution artefacts that probe different aspects of your design solution or design space. The fundamental way to test prototypes is by letting users experience them and react to them. In creating prototypes to test with users you have the opportunity to examine your solution decisions as well as test your perception of your users and their needs” [12].

This testing session helped to explore opportunities and to understand possible future scenarios of the designed spaces and services. The creation of visualization techniques is one of the prototyping strengths to support the involvement of diverse stakeholders in the process. Indeed, Virtual Reality models of spaces were provided too, enabling people to interact and to envision the future through them.

3 RESULTS

The students have ventured into designing new possible temporary urban solutions for the Martesana district, to connect local realities, those who frequent the Cargo spaces, those who live in the neighbourhood and every single place that makes it up.

The project, which follows a phase of analysis and research, a phase of co-design and concept generation, anticipates what will then be the last phase of the studio: a triple prototyping goal:

- designers are invited to think in terms of a spatial 1:1 full-scale prototyping of the project conceived or at least of one detailed part of the project;
- a prototyped service of an activity or a tool able to connect the project with the various actors living in Martesana neighbourhood;
- a VR (Virtual Reality) prototyping that stages, through the use and support of this technology, a future scenario in Cargo’s developing spaces.

These student’s prototypes were presented during the Martesana Fest, a final event where every single group gave their solution, also telling the story behind the experience and explaining how the local reality support was useful for designing such prototypes. Six projects, six activities to involve the inhabitants and six future scenarios to stimulate the vision to the futures’ Cargo spaces, through their prototypes. In the following chapters of this paper, the projects of the students, as outputs of the research, are told and explained through their most important characteristics.

- The first project, RE-MIX aims at priorities the human factor re-establishes a better connection between people, resulting in a bigger and stronger community. By using the philosophy of G.A.S., combined with the active participation of the locals and the physical/spatial help of Cargo, a co-design system based on trust, hope, inclusion, competence, and sustainability has been created. To build a social, efficient and pleasant activity, and at the same time, take care of the environment, was designed a strategy for reusability of waste materials, and their transformation into pieces of furniture or other useful objects. To ease this process and make it accessible a movable shed has been designed, consisting of the needed tools for building the pieces. The outcome is the creation of a new community, that cares for smarter consumption and upcycling of goods for better environmental awareness. RE-MIX’s idea is based on the three main activities, namely Reuse, Upcycle and Connect people. Those activities are done by the help of the philosophy of G.A.S, the tools, space, and knowledge provided by Cargo and its craftsman and by the inclusion of the active local community. One possible future scenario of the project is to organize a bimonthly event, by G.A.S members and locals, where during those events all the mentioned participants come together, and they are asked to bring their plastic waste materials, such as plastic bottles. On this event, Cargo’s craftsmen could teach people how they can build their shared public furniture together in an entertaining.

- The second project is DYNAMIC ART in collaboration with the association of Assab One, aims at creating artwork through different body movements. The desired goal is to modify the appearance of the neighbourhood by engaging people in interactive activities. The guidance and suggestions from the Assab One community helped in turning the vision into reality. People are asked to open their senses of creativity and imaginations. Firstly, is possible to look through boards which are cut in shapes of different body positions and are placed in front of an existing mural to change their artistic perspectives. Then, it is possible to enjoy the changing colors on the floor of the bridge that connects the Martesana canal with Cargo High tech. The usage of thermochromic paint that changes color with body movements, body heat, and sunlight make it an exciting and playful experience. Lastly, the highlight of the art journey is a game event that
focuses on decorating the walls of the surrounding by innovative painting techniques. All these artistic scenarios will result in a collective co-created decorative wall piece placed into the neighbourhood.

- iCreate is a project started from and for Martesana District with the collaboration of We Make Fablab. The project consists in an urban garden which holds up a series of workshops about how to grow and harvest fruits and vegetables involving the use of technology, as well as how to process the harvest for consumption (raw food). The workshops are mainly aimed at children and adolescents, also with their parents, however, any member of the community can participate in the project, which has as a final goal to foster more innovative and sustainable social activities for urban activation and revival of community in this particular MiniMakers district. Fablabs can promote the idea of prototyping and producing effectively and efficiently efforts for a more sustainable and healthier lifestyle by creating a suitable habitat for people who are inhabiting modern structures and communities. Create, through current low-cost technologies, a common ground for a mini-maker society which will increase the sense of community by defining identity in the Martesana District. Likewise, the children and adolescents of this community will be part of a collective project which increments their sense of responsibility and belonging as well as stimulating creativity and learning with the help of new technologies.

*Figure 2. From left: RE-MIX (by Katia Al Chosman or Al Hussban, Siyka Georgieva, Kristina Mickute, Giuliana Racco, Vanja Rakic, MengTing Xu), DYNAMIC ART (by Aradhana Das, Alessandra Fazio, Hongmiao Liang, Simona Sanfilippo, Yuke Yan), iCreate (by Yasemin Albayrak, Tan Yawen, Fernanda Paniagua, Wey Yanyan, Zhao Jiaton, Victor Poirier Coutansais).*

- The project, ECHO aims to revive the neighbourhood by creating a space dedicated to music events that interest young people and adults in the Martesana district and beyond: it is about a stage that will rise in front of the Cargo store to host musical events (day and night). Its purpose is to gather people coming from the area along the canal, creating a stronger identity for the neighbourhood. The project came to life through a collaboration with the local people and the Sonomusica association via interviews, surveys, and co-design activities. They contributed to highlighting needs and preferences to create a shared social space with the intent of bringing back the idea of community through the passion of music. Furthermore, this space focuses on the concept of an “open stage” that allows buskers – of the area and beyond - to perform legally and also be known by the general public. The project, therefore, consists of a product-service system with a tailored stage for musical events and a customized mobile app.

- SEEDS OF POETRY, in partnership with Arti Girovaghe, is a project that proposes an activity in which people are free to participate and express themselves. The idea is to create small vertical green areas in the Martesana district, enhancing the concept of the project #riempiamoviapadovadipoesia powered by Arti Girovaghe association, aims to spread poetry in the streets. People can plant seeds, write their poetry, and place it wherever they like in the streets of the neighborhood. The purpose is to spread poetry throughout the neighborhood, aiming to create new communities and integration among the inhabitants of the neighborhood. The vision of Arti Girovaghe “Free arts for free thoughts”, embodies the meaning of this project: the free expression of oneself through art generates not only beauty but also awareness and new forms of sociality.

- As in a texture every single filament increases the structural strength of the final whole, in the project TRAMA, born in association with City Art, the potential of a community can be
expressed through the healthy collaboration between its inhabitants. It is a temporary project aimed at enhancing the Martesana territory through the cooperation of its citizens with the aim of bringing out the potential of intercultural exchange understood as personal, generational and ethnic. The bridge created by the people who collaborate in the project will subsequently materialize in the embellishment and care of the bridges along the Martesana canal to find, even visually, its own meaning. TRAMA has been designed for the Martesana area concentrating the main focus in the Cargo parking area and articulating on the bridges crossing the canal to the City Art headquarters. The bridge, not surprisingly, represents an element of design inspiration and a metaphorical figure to represent the union of different elements to open, concretely and mentally, new viability ways. Another main pivot of the project lies in the active collaboration and interaction among the inhabitants of the territory with the aim of producing rope nests by using knots, thought as junction between both things and people. The output, a result of the collaborative workshop, finds its place within the Martesana landscape thanks to some carefully designed installations for increasing the visual pleasure, the attention towards territory and the sense of belonging to it.

Figure 3. From left: ECHO (by Li Xiaoqian, Peggy Liu, Alice Lonardi, Hao Lyu, Margaux Padрутт, Daniele Trappetti), SEEDS OF POETRY (by Amélie Anger, Beatrice Rinne, Joddy Patrianagara, Niv Gelb, Raphaëlle Lhuillier, Rotem Azar), TRAMA (by Alessandro Benedetti, Caterina Castiglioni, Truc Nguyen, Roberto Oprandi, Greta Vergani).

4 CONCLUSIONS

New design solutions could come from many sources, sometimes also adopting an idea from one field to another or connecting diverse elements creatively. It’s very rare for an idea to arrive alone. More often, ideas grow out of other ones, or out of creative reflection on experience. They are often prompted by thinking about things in new or different ways. [10]

These last Temporary Urban Solutions scenarios and workshops show us how positive the relationship could be between the schools, researcher and students consider as designers, and how power dynamics can be established with the surrounding neighbourhood and the more general urban fabric.

The positive synergies between a heterogeneous population can help to change peripheral areas by avoiding gentrification and ensuring a collaborative bottom-up process using co-design and co-creation methods to develop an improved environment. Co-designing the space-service allows close collaboration between all the stakeholders involved in the design process and a variety of professionals who have hybrid research and design skills.

In the future, we can imagine an evolution of the tools and methods, allowing co-design as a universal language. Indeed, the roles in the design process are changing facing with user-centred design approaches, and with the usage of co-design methods, having an impact on the roles of the players in the design process. The functions of final users - the local community – and researchers and designers are changed, from a more traditional passive object of study, the user figure now can be seen as “expert of his/her experience,” playing a significant role in knowledge development, idea generation and concept development. [13]

The next steps of the research project conducted between the Polimi Desis Lab and Cargo will continue to put in practice the continuation of various voices within the community continuing to develop the present designed scenario. Finally, the results of the achievements will be monitored; and we anticipate evolution of the tools that will promote an integrated design between spatial design and design for services.
REFERENCES


