Designing a Community Garden

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ABSTRACT

Politecnico di Milano Coltivando *is a convivial garden where people meet, experiment, cultivate crops and share their skills and ideas. Coltivando uses innovative service and spatial design knowledge and community consultation processes. Coltivando is a design research project that is documented throughout its entire process. It is also a social as well as an educational experiment. People from the same neighbourhood yet strangers to one another and design students from the different disciplines of service and spatial design are brought together. This paper is a project review that analyses and explains the context, the main outputs and innovation, the process, the obstacles, the impact, the users' needs, the transferability of the solution and its dissemination.*

THE IDEA

Coltivando is a public space where people cultivate vegetables in an urban environment within a university campus. At *Coltivando* it is possible to spend time there and meet people from the neighbourhood and others working in the university. With community gardens, 'opportunities exist for creative cooperation between planning and design professionals and those who focus on urban agriculture and food systems to reconcile constraints that range from zoning restriction to construction codes'[1] As a community garden, *Coltivando* was initiated as an opportunity to play a vital role in bringing individuals and communities together, especially in our rapidly changing world and urban environments.[2] It can be seen as a place for a diverse array of people to meet, share experiences, organise events and grow vegetables. Like a 'Neighbourhood Lab',[3] a place that hosts activities to boost socialisation and communication among the people living in the surrounding area to enhance the relationship between people and spaces; we believed that a community garden could also be such a lab. Therefore *Coltivando*, besides being a garden, is a place of belonging for the surrounding neighbourhood of Bovisa.

MAIN INNOVATIONS

Coltivando is a design experiment conceived within the framework of two research programs run by POLIMI-DESIS Lab, a member of the DESIS Network, at the Politecnico di Milano Design Department. The first program – 'Human Cities, reclaiming public spaces' (2010-2012) – worked on the regeneration of public spaces for urban communities. The second – 'Feeding Milan, energies for change' (2010-2013) – aims to shorten the food chain in the Milanese region.[4] *Coltivando* as a project brings together the concerns of both of these programs: it is situated in the public university space of the Politecnico di Milano's Bovisa campus, allowing the local community to discover a hidden public place; and helps people of the community to grow up their own food. It adds to the social and environmental value of the campus and the local community.

Within this framework, the research focus was oriented to make two different design areas – service design and spatial design – work together on the same project. It was a didactic and research experiment to combine competences to understand how they can enhance, as well as constrain, each other both in terms of the designers' competences and design results. *Coltivando* includes design elements that are both 'hard' (spaces, infrastructures, garden beds, etc.), and 'soft' (service, participants, duties, timeframes, etc.). *Coltivando* had been a design experiment and an exercise to demonstrate how two different disciplinary approaches can help each other to get the best result at the end: using the specific tools of spatial design and service design such as master planning, space layout, system maps, personas, storytelling and prototypes, designers worked side by side to make up a system made of place and people feeding each other. Involving potential users, from the early stage of the process, in designing and setting up both the space/hardware and the service/software, led to an integrated result where the place grows and improves itself as well as the community who take care of it. As an educational exercise, the junior designers were pushed to talk to each other to develop a coherent system under the supervision of two senior designers and professors.

Because of the infrastructures, buildings, boundaries and gates, the campus appears to be a difficult place to enter and enjoy for the people of the neighbourhood. Public space is often not obvious. When borders between private and public are blurred, new kinds of space are born which, although available to everyone, are not recognised as public. These can be described as 'hidden public spaces',[5] since residents, tourists or regular passers-by are unlikely to visit them unless deliberately directed there. In Milan, such places may even be like 'a city within a city' and despite their location on main routes, remain unknown. Others are actually not visible because they are located in a kind of urban backstage. Public university campuses are included in the latter category. Even though they are used by a specific kind of user (people who study or work there) they are perceived by other people as private areas (belonging to the university) even though the university is a public institution and therefore the campus spaces are also public. This is the case for the Politecnico di Milano campus in the Bovisa district, a former industrial area where *Coltivando* is situated.

Coltivando is a *convivial* project. Conviviality conveys a sense of sociality and sharing knowledge. Such a concept is extended to the overall project through the multi-disciplinary approach where designers from different backgrounds work together to build a coherent system. In this project, conviviality is also encountered in the participatory approach of the co-design sessions that invited

the community to share their ideas about the up-coming garden; in the location of the garden that blurs the borders of the campus and opens its gates to the neighbourhood, welcoming people from outside the university; in the system, that hosts shared plots where every member of the community can take care; in the community, that always welcomes new members without any specific enrolment procedure; in the layout of the space, where the absence of any fencing invites people to enjoy and respect the place.

As a collaborative service, *Coltivando* is designed to be a garden where the plots, as well as all the spaces, are shared within the community.[6] Every member has his/her own duty to take care of everything with some members chosen among the others to co-ordinate specific tasks, such as seed planting, watering plants, care of garden tools, when and how to harvest, and communication. Problems, decisions and tasks are shared with the whole of the community.

The funding scheme of *Coltivando* is unique for many reasons: the garden is set up inside the Politecnico di Milano area as a public space and the university has provided a budget for all the logistics, the paperwork, and the hardware such as soil, steel for the boxes, hoses for watering, to set up the place. Further to this, other costs for the project and the personnel were covered by POLIMI-DESIS Lab as part of their research programs 'Human Cities' and 'Feeding Milan'. Currently, *Coltivando* is working on a volunteer base composed of community members and some guests who occasionally help in the garden. While contingent extra costs for hardware to improve the place continue to be covered by Politecnico di Milano, participants are also covering small frequent costs such as seeds, new tools and so on.

BACKGROUND AND CONTEXT

In the second half of the twentieth century the Bovisa district was subjected to great change due to the closure of almost all the industries located there. The Bovisa Durando campus of the Politecnico, which houses the School of Design, was built at the end of the 90s on the site of Ceretti & Tanfani, a historical company that produced cable railways, and whose presence resulted in the development of Bovisa as a working class district. This continues to form part of the historical memory of the community residents. The new life of the neighbourhood, however, brought an improvement to public transportation and the building of new residential areas. Today it is a green space with places to sit and a café. In spring and summer many students sit outside, enjoy the sun and take part in outdoor activities. The campus remains an island for students and most of the people who knew the place as an industrial site do not see how it has been transformed. The university community and the local residents have very few contact points in common. The potential for improvement of the neighbourhood that the building of the campus could have offered was huge, but unfortunately was not fulfilled. *Coltivando* is attempting to change this by trying to reconnect to the agricultural tradition this area had before the Second World War, which has totally disappeared. The concept of the community garden is not new in Milan where there has

been a strong tradition of community gardens run by working class families since the post-war period. They took advantage of empty spaces in the city and around the factories to grow their own food and to supplement their income. Traditionally, the Milanese urban garden was a small parcel of land situated on the fringes of the industrial sites with factory owners allowing them to be managed by local communities. More recently, the closure of factories and the unrestrained increase in the value of urban land has resulted in the urban garden almost disappearing, even though some those were of social, urban and historical value.

MAIN OUTPUT

Coltivando has four main goals and output aims: social, spatial, productive and educational.

Social: The goal here is to enable two kinds of community (university and neighbourhood) to make contact so as to give added value not only to the campus but also to the district. On one hand the university community will not only inhabit its work space as commuters, during working hours, but as part of a larger group interacting with local residents. On the other hand, people living in the Bovisa area will get to know the university life, people and places better, and be involved in activities that could improve their quality of life.

Spatial: Dedicating some of the green areas on the Bovisa campus to a gardening activity gives a new function to a place and involves the design of spatial solutions by students in the disciplines taught in the Politecnico di Milano (design, architecture and engineering). The result is a plot of 900 square metres facing onto one of the main neighbourhood streets that includes:

– boxes for gardening (garden beds made of steel) to be self-constructed with an instruction video and handbook.
– rest areas that are multifunctional and in future could be used for kitchen areas, educational activities, etc.
– shelters for gardening tools.
– compost areas.

As a result of the onsite co-design activities, the functional distribution reflects people's wishes concerning where to place things and the spatial dimension of specific areas. 'Regarding function and shape, the boxes are set in a grid that excludes physical boundaries but allows easy entry into the area, reminiscent of the Roman 'cardo' and 'decumanus'; perpendicular paths that generate a sequential space. Being located in front of the main street it is very visible to people, who often stop to have a look at the vegetables and flowers.

Above
Figure 1: Coltivando – the convivial garden, Milan, 2012. Community members gathering and working in the garden on an ordinary Saturday morning. Photograph: Alessandro Sachero.

Productive: The goal here with gardening was to produce food – more than fifty kinds of vegetables are being organically cultivated – and to enable the community of twenty-five people who take care of Coltivando to be self-sufficient in vegetables and fruit.

Educational: The *Coltivando* project was one of the first attempts in the Politecnico di Milano School of Design to compel the two different design perspectives of spatial and service design to work together on the same topic. Such an approach gave the students and teachers involved a rare opportunity to develop a more holistic solution.

According to Gustavo Primavera (a graduate student who developed the service project): 'The multidisciplinary group warranted the definition of the "design problem" outside normal boundaries, reaching an enabling solution based on a new understanding of the complexity… *Coltivando* developed as a whole natural system and not as a collection of different parts relating to different disciplines.'

In addition, the student educational side was enriched by the cross-fertilisation of some design tools traditionally adopted by one or the other perspective. Graduate students who developed the spatial project, Alessandro Sachero and Sonia Zanzi, observed that 'working side by side with service design and developing part of the communication while designing the spaces, helped us to design a coherent and complete solution. The constraints that emerged working with other disciplines were a stimulus to go beyond our single perspective and figure out a real and reliable solution…We had the unprecedented chance to meet another design field, with its methods and tools.'

The students also had the opportunity to engage with a real project from concept to implementation phase. With *Coltivando*, they were forced to talk to real stakeholders, to network with local gardeners and local authorities, to ask about providers and their costs – thus building the first community of members – and, in some cases, were required to stop and rethink the solution according to its feasibility. This was a starting point for subsequent interdisciplinary collaboration with communication design students too, who later worked with transmedial and communication strategy output.

RESOURCES AND PROJECT DEVELOPMENT PROCESS

Initially the main design team comprised two senior designers – ourselves [Davide Fassi (researcher and professor in Interior and Spatial Design), and Giulia Simeone (researcher and professor in Service Design)]. We were assisted by three graduate students in Interior Design and two graduate students in Product Service System Design: from the start, Alessandro Sachero – co-author of this paper – and Sonia Zanzi; then joined by Paola Fino (Interior Design), and Gustavo Primavera and Paola Russo (Product Service System Design). As well as the main team, a pool of satellite-assistants provided their own contributions according to the expertise required.

Following is the history of the project that outlines the main areas of competence involved throughout the process:

Coltivando took over twelve months to develop. The first indications of interest for a community project focused on a vegetable garden began in the autumn of 2011 when five students out of sixty created a test garden for the community interaction. This demonstration experiment came out of a week-long workshop called 'Temporary Urban Solutions'.[7] Following this, a design research team was established. According to Sanders and Stappers,[8] 'co-creation practised at the early front end of the design development process can have an impact with positive, long-range consequences.' We organised three co-design sessions between May and June 2012. The first was an academic workshop involving people studying and working in the university, the others were community consultations open to local stakeholders and people from the Bovisa neighbourhood. The community-centred design approach[9] was used to engage various stakeholders in the university community as well as in the community of Bovisa, and several tools were developed to enable many people to design their own garden.

In each workshop, designers proposed an in-progress concept of the convivial garden, according to the results of the previous session, and asked for feedback about the possible spatial layout and the rules to manage the future community. We developed tools to collect data and information from the people including questionnaires, space mock-ups and games to help the people to create their garden both in terms of space use and service rules. We split the people into groups of experts and beginners, to better understand the needs and the motivations of both the categories. They were asked to design in response to issues such as where to place the fruit trees, herb and vegetable lots, to create special lots for growing experiments, areas to relax and a playground for children; to define the roles of members to run the service and ten basic rules to become a member. These issues became more and more defined and refined after each co-design session. At the end of the three co-design workshops, we used feedback from about a hundred people (experts and beginners, academics and residents) to inspire, and adjust to what was possible, the very first design proposal for the space and for the service model of the garden. The design challenge at the end of this process was to match people's desires with what was feasible amid the constraints and the available budget. From this experience, we learnt that this phase of concept creation is very sensitive: the more the concept responds to the brief (from the university) and the earlier the local community is involved in the design process, the better is the result from the working project definition. Such an approach avoids the creation of unrealistically high expectations in the local community about the final result. People are also kept up to date with the progress of the project and feel that it is their creation. They remain aware of what is possible to achieve and what it is not.

One of the main outputs from the co-design sessions was not directly associated with design practice, but resulted in strong community-building. Through meeting at the workshop, people

started to get to know each other, to understand each other's competencies and to develop respect for each other – and this resulted in the development of a strong community base to run the service and care for the garden. As a consequence, strict rules were not required to make the garden run. This was another important outcome we learnt about designing a collaborative service. Throughout the service design phase, we stressed very much the issue of the rules to be a member of the community, such as defining work shifts, roles, timing and communication processes to keep community cohesion. At the end of this phase, moving on with the prototype of *Coltivando*, we found that soft rules and auto-regulation happen spontaneously and create a strong community that is able to trigger a democratic process to allocate the roles and determine the best way to run the garden.

After the co-design sessions, we presented the final working project and the final budget for the project start-up, to obtain funds from the university administration. In order to keep the attention and enthusiasm of the neighbourhood alive after the co-design sessions, during the summer the design team installed a 'Box Zero' prototype in the space. This was a demonstration box with basil and tomatoes that aimed to test the effectiveness of the box project, as well as to test the level of interest of the local people who had volunteered to take care of the box in the summertime.

In October 2012, in the second session of the 'Temporary Urban Solution' workshop, *Coltivando* was opened with a launch event that brought together all the stakeholders and resources involved so far to work together to build the first garden beds. Since then, *Coltivando* has been adjusted and modified by the community itself thanks to a continuous co-design approach that permeated other sessions during the life of the garden. Such sessions were set up by design students in order to co-design special features of the garden with the community and to provide them with tools for self-sufficient gardening. Late 2012, *Coltivando* went online and on major social networks, gaining significant success and reaching a wider community of 'friends'. The project has also been presented at major international design conferences.

In mid-2013 links with local associations, schools and the wider neighbourhood were strengthened through the organising of a series of public and free events on site. By the end of the year, *Coltivando* was included in several transmedial productions, made by the communication design studio that had developed pilots of web-series broadcast on *Plug*, a neighbourhood social TV channel also produced by the studio. Many of the community members that had been involved in the creation process of *Coltivando* participated as actors in these docu-fictions.

MAIN DIFFICULTIES AND OBSTACLES

Opening a vegetable garden in a university that does not provide any teaching in disciplines related to the cultivation and production of food has generated some concerns in the world of community gardens in Milan. The tradition in which these spaces are the result of bottom-up initiatives suggesting new features and uses for abandoned spaces has here found a new interpretation through the design of the spaces and services. Having made available the Politecnico's design skills and having involved local residents in the spatial re-definition of the 'hidden public spaces' allowed the initial mistrust to be overcome and affection for the project to be created. Furthermore, the resistance of expert gardeners to the approach and method of spaces and materials to be used has lessened over time due to field-testing of certain formal, technological, material and distribution choices (i.e. the sheet-metal boxes, the grid distribution).

The enthusiasm demonstrated at the initial launch has been maintained by organising weekly meetings to build together both the soft part (community) of *Coltivando* and the hardware (garden beds, irrigation system, compost area, etc.).

An 'exit strategy' for us as the designers of the process and design activators has been created by increasing the responsibility of community members for the various functions to be carried out in the garden. This is allowing *Coltivando* to be a self-governing project, belonging to a 'system made by micro-structures of service and relationships'[10] that defines the identity of place.

ENVIRONMENTAL IMPACT

The environmental impact of *Coltivando* is measurable in terms of introduced biodiversity, environmental sustainability of the hardware component of the project, the adoption of best practices in the use of natural resources, food self-sufficiency and activated social sustainability. The cultivation of more than fifty different types of vegetables and fruits in the first season (spring-summer 2013) generated a biodiversity in the existing ecosystem that is visible through the activity of several species of insects, the arrival of bees and earthworms in the soil. The system of garden beds (made from only one material – galvanised sheet metal) as well as the compost area and the irrigation system were co-designed following the principle of total disassembly and subsequent recycling or storage of the components. Since the municipality has not yet activated the collection of organic waste in the district, we set up a compost bin through a co-design activity that in the first ten months of the project produced compost to be used in fertilising the garden. The production of food has ensured self-sufficiency in vegetables for a group of twenty people and has spawned a generational mix of participants as an outcome of the social cohesion produced.

MAIN USERS AND NEEDS

Starting from the idea of conviviality, the main focus in the creation of the community of *Coltivando* was to initiate a process of reunification between two groups of users in the Bovisa district that for years had not had any kind of interaction; the inhabitants of the district on one side and the students, staff and faculty of the Politecnico di Milano on the other. Now, the university community not only inhabits its workspace as commuters, during working hours, but also has become part of a larger group through interacting with local residents. On the other hand, people living in the Bovisa area have an insight into university life, its people and places, and are involved in activities that could improve their quality of life.

The use of a convivial garden as a tool for reunification has great potential in the formation of a community: the act of building

and then sowing, cultivating and taking care of the plants, as well as harvesting the food produced, all collectively contribute to strengthening ties within the community that is being created, while at the same time, the opportunity for individuals to become self-sufficient in the production of fruit and vegetables is created. One year after the opening, the community of *Coltivando* totals twenty-five to thirty permanent members with an ever-increasing number of visitors who occasionally participate in maintenance activities and take advantage of the opportunity to spend some time in, and enjoy, a public green area.

The organisation of the community of *Coltivando* has been one of the main focuses of the design research project: to set up an independent group where members are able to self-regulate and manage critical issues that arise. As mentioned, a strategy was employed to designate co-ordinators for different activities such as the collection of the seeds, compost and irrigation as well as the management of communication. These co-ordinators became the reference points for other members for technical and practical support. This was important, as the group of people who attend the garden is very heterogeneous in terms of social and professional backgrounds as well as personal experience. The approach has created a dynamic organism capable of creating new incentives and an intense exchange of knowledge.

Some stories include:
– Rossella, who is a fifty-three-year-old psychologist working in corporate training, was one of the first to be part of *Coltivando*. Even before the opening she took part in the testing phase, taking care of the first garden bed. Amazed by the potential of the *Coltivando* community, she was able to involve other members in activities related to her work, such as writing a joint article with a partner or looking for collaboration in a new project that required different skills.
– Tommaso, who is a twenty-eight-year-old computer engineer and is passionate about and active in issues of environmental sustainability and self-sufficiency in food and farming. In *Coltivando* he found the place to put his ideas into practice. Although he doesn't live in the Bovisa district and he is not part of Politecnico di Milano, every Saturday he crosses the city to spend time in the

garden, cultivating and sharing in the knowledge and experiences of other people.

– Agostina, who is a forty-five-year-old agronomist; she took part in all the co-design workshops despite being nervous at the idea of being enclosed in a university classroom, as she has always preferred to be outside and doing physical work. After a year's participation in the activities of the group, she has become a point of reference for all the members – the 'expert' of the group. If there were any doubts about how to sow, or how to treat a sick plant or whether the compost is too wet, Agostina always has the answer (and if she hasn't, she will go home and consult her text books).

TRANSFERABILITY AND DUPLICABILITY

In the course of its first year of life, *Coltivando* generated a widespread interest, from public and private organisations, in creating activities in the space at different levels and with different forms of interaction. *Coltivando* has become both a hospitable place and an experience to be shared.

From March to July 2013 a group of students and faculty of the Politecnico di Milano together with associations and members of *Coltivando* conceived 'Il Sabato della Bovisa – Saturday in Bovisa', a platform for actions, services, prototyping space and performances hosted at the campus and close to the vegetable garden, to reinforce the goal of bringing the district and the university together. More than two hundred and fifty primary school children in the neighbourhood came to visit Coltivando during April to observe the growing of vegetables, explore the area and assess the possibility of replicating the project in their spaces. Since December 2012 *Coltivando* has participated in activities of promotion and interaction organised by ZAC a farmers' market that includes both organic farms and local associations. Then, based on the experience of *Coltivando*, in January 2014 the first results of *In un giardino – In a garden* were presented to the district. *In un giardino* was a set of co-design activities in eight urban green spaces of the neighbourhood, in collaboration with two local associations in the area and with the students of the Final Design Studio of both BSc in Interior Design and MSc Communication/Movie Design.

In June 2013 at the Agriculture Civic Award and in February 2014 at the Ortofebbraio, *Coltivando* was submitted in the Urban Gardens category, putting forward the idea that the garden in the city has to be a place for biodiversity, a social incubator of practical knowledge and a public place that promotes the use of green spaces for food production. *Coltivando* is often used for practical assignments by spatial, product and communication design students to encourage a consideration of urban nature, the spread of biological wealth and natural resources, as well as encouraging the aesthetic diversity of human habitats.[11]

DISSEMINATION

The dissemination of the results is twofold. The first started with a purely local activity of publicising the commencement of work, distribution of flyers, coming into contact with key players in the area such as local council, associations and existing urban gardens.

In October 2012, the Facebook page was created – today it has almost 2000 likes. This is the tool most used by the members to tell each other what is going on week after week. In support of this page, in December 2012, the website *www.coltivando.polimi.it* opened (with the aim of explaining the design process and using it as an entry into other media devices such as YouTube) where there is a collection of videos of co-design activities; the Flickr page showing the photo gallery; and a blog that records the sowing sequence and best practices used in cultivation in the form of a weekly diary, which provides a useful reference for decision-making season after season.

Since the beginning, *Coltivando* has attracted the attention of major national media, with articles being published in newspapers and magazines such as *Ottagono* and *Inventario*. *Coltivando* has also been presented at a number of conferences and international competitions along with other research-action projects.[12]

Opposite
Figure 2: Coltivando – the gardeners, Milan, 2012. People in the early stage of the community, building the garden beds. Photograph: Alessandro Sachero.

Above
Figure 3: Coltivando – flyer, Milan, 2012. An example of a communication flyer used to invite the community to come to the garden at the very beginning. Currently, a flyer like this is issued weekly to present the main activity for the coming Saturday. Photograph: Paola Russo.

WHAT NEXT?

This project enabled the research team to garner the interest of the local community, associations, informal groups of people and public bodies such as the municipality. It also has been recognised by other research teams within the Department of Design of the Politecnico di Milano as a valuable resource for both researchers and students to use as a means of experimentation for other design fields such as communication and product. This allowed the research team to engage the multidisciplinary approach with the Department of Architecture and the Department of Management Engineering – the project here was called *campUS – incubation and settings for social practices*. The project includes four main goals to be achieved by the end of 2016. One of them is to replicate the *Coltivando* project in another green area of the neighbourhood by adapting the system (both service and spatial/product solutions) to a different context and by involving over 75 people, including categories of user like the NEET (not in education, employment or training, 16-35 years old).[13] This project has received the Polisocial Award 2014.[14]

Furthermore, some of the *Coltivando* users have started to collaborate with two kindergartens in the neighbourhood: the Politecnico di Milano one, which is based in the same campus, and the Comunale di via Guerzoni. They help the two schools interact with Coltivando by letting them use some garden boxes for small activities with the young children. In the Comunale di via Guerzoni, *Coltivando* users are also working as volunteers with the kids and the teachers to set up a small garden corner within the open-air spaces of *Coltivando*. This collaboration is still in progress and there is the potential that it could lead the research team to develop future solutions more focused on this young target.

NOTES

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4.   Giulia Simeone & Daria Cantù, "Feeding Milan. Energies for change (Nutrire Milano. Energie per il cambiamento). A framework project for sustainable regional development based on food de-mediation and multifunctionality as design strategies" (paper presented at *Cumulus Conference 2010: Young Creators for Better City and Better Life*. Shanghai, September 6-10, 2010). Ed. Yongqi Lou and Xiaocun Zhu (Helsinki: Aalto University School of Art and Design): 457-463. Available at http://www.cumulusassociation.org/component/content/977-cumulus-working-papers-shanghai-in-progress-2010/162.
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7.   Temporary Urban Solutions' workshop was held by Prof. Davide Fassi and provided by the MSc Product Service System Design at the School of Design of the Politecnico di Milano. Helped by Emily Ballantyne Brodie, a practitioner from Urban Reforestation, Melbourne.
8.   Elizabeth Sanders & Peter Stappers, "Co-creation and the new landscapes of design," *CoDesign: International Journal of CoCreation in Design and Arts* 4:1 (2012): 5-18, accessed September 10, 2012, http://dx.doi.org/10.1080/15710880701875068
9.   Anna Meroni & Daniela Sangiorgi, *Design for services* (Farnham, UK: Gower Publishing Limited, 2011).
10.   Andrea Branzi, "Agronica" in *Green Island*, ed. Claudia Zanfi (Bologna: Grafiche Damiani, 2008),13.
11.   Anna Lambertini, *Urban Beauty!* (Bologna: Editrice Compositori, 2013).
12.   DRS conference, Oslo, 2013; Social Frontiers, Nesta, London, 2013; Lille Design for Change, France, 2012.
13.   The other three goals are: the start up of PLUG – the social TV of the neighbourhood in collaboration with Imagis Lab research team of the communication design research area; and PAAI – a self-built and managed pavilion that will host sport and cultural activities around the neighbourhood in collaboration with the Department of Architecture and Urban Studies; the long-term economic sustainability of these three main outcomes is in collaboration with the Management Engineering department.
14.   Polisocial Award is an initiative created by Polisocial, the academic program for social responsibility launched in 2012 by the Politecnico di Milano in collaboration with Fondazione Politecnico di Milano.
'In line with other international experiences, Polisocial aims to place the university in close contact with the dynamics of change in society, extending the university's mission to social issues and needs that arise from the territory, on both a local and global level. Polisocial marks a new way to build and apply knowledge and academic excellence, combining social engagement with the two traditional pillars of academic activity: teaching and research.' The award is granted every year to the best research projects with social purposes. www.polisocial.polimi.it