



CaseVerdi.net

A sustainable PSS, focused on
intergenerational dialogue.

Parte del progetto TANGO, EU funded

Tesi magistrale in Disegno Industriale
by Alberto Fossati





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ABSTRACT

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La tesi fa parte del progetto TANGO / AH-Design finanziato dal Culture Programme of European Union-Education and Culture DG, volto ad esplorare il problema dell'inclusione sociale ed in particolare del dialogo intergenerazionale, proponendo soluzioni innovative. I partner del progetto sono Aalto University Helsinki (Finlandia), L'École de Design Nantes Atlantique Nantes (Francia) e Politecnico di Milano Milano (Italia).

La tesi si colloca all'interno dello sviluppo Italiano del progetto, per il quale l'Unità di ricerca DIS (dip. INDACO) del Politecnico di Milano ha attivato una collaborazione con il Consorzio SiS, promotore del progetto Punto e Linea (finanziato da Fondazione Cariplo), con iniziative di inclusione sociale in quattro aree della periferia di Milano: Barona, Baggio, Giambellino e Gratosoglio.

In particolare la tesi ha avuto come brief di ricerca e progetto lo sviluppo di un Sistema di Prodotto e Servizio economicamente ed ambientalmente sostenibile e che promuova il dialogo intergenerazionale, per l'orto comunitario attivato e per ora finanziato dal progetto Punto e Linea nel quartiere di Giambellino.

Il percorso di ricerca e progetto (partito a Febbraio ed attualmente in corso) ha adottato il metodo MSDS (Methodology for System Design for Sustainability) in un percorso di co-progettazione che ha coinvolto diversi attori esistenti e potenziali della proposta di progetto. In particolare, sin dalle prime fasi sono stati coinvolti gli Hubbers (referenti delle singole iniziative) come attori centrali. Prima fase del processo è stata la Strategic Analysis (SA), i cui risultati sono stati rappresentati tramite dei file audiovisivi dove descrivere contesto, promotori ed iniziativa di ogni HUB (entità che rappresenta il progetto in ogni quartiere) del progetto Punto e Linea. Per la realizzazione e post produzione degli audiovisivi è stata creata una collaborazione con il Movie Lab. Del Politecnico di Milano. Nella fase di Exploring opportunities sono stati coinvolti gli studenti del corso System Design for Sustainability, per la progettazione di primi explorative concepts per le quattro iniziative. Successivamente al corso è iniziata la fase di design concept di

progetto, dove i quattro tesisti, partendo dai explorative concepts più promettenti, hanno iniziato la progettazione di nuovi PSS. Durante tale fase sono stati coinvolti possibili portatori di interesse del territorio relativi ad ogni HUB ed esperti dal settore di Ingegneria Gestionale del Politecnico di Milano, nel ruolo di consulenti per l'aspetto economico della progettazione. Il Sistema di prodotto-Servizio progettato è CaseVerdi.net, che propone di creare una rete urbana locale di pensionati esperti che coltivano sui loro balconi/giardini alcuni prodotti di nicchia ad alto valore; piccolissime coltivazioni distribuite che però nel loro insieme (e gestite come tali attraverso una apposita piattaforma web), assumono la dimensione di un orto di medie grandi dimensioni: CaseVerdi.net, abilita lo scambio all'interno della comunità locale che aderisce così come la vendita al quartiere, o a specifici negozi e ristoranti (secondo i prezzi del mercato). La sede centrale, situata nella Casetta: certifica e gestisce gli mini-orti distribuiti e permette di mappare la produzione complessiva(e collettiva) e di proporla come tale; mettendo in contatto le persone o i negozi o i ristoranti offrendogli i prodotti di cui hanno bisogno; organizzando corsi per coltivazioni specifiche.

Il processo progettuale di CaseVerdi.net proseguirà con il coinvolgimento di ulteriori attori, e avrà un momento cardine all'interno della mostra TANGO a Milano che si terrà al Salone del Mobile 2013: sarà infatti qui presentato, insieme alle altre proposte di PSS sostenibili per gli altri HUB, in una mostra intesa e progettata come "laboratorio" e "vetrina", nonché come "agente del cambiamento" per innovazioni radicalmente più sostenibili. La mostra TANGO è in altri termini immaginata essa stessa come uno "strumento" di co-progettazione e lancio per una reale implementazione di innovazioni di Sistemi di Prodotti-Servizi sostenibili che debbano superare delle inerzie sia sul lato utente, che su quello dei produttori o erogatori di servizi che su quello più istituzionale e governativo.

ABSTRACT

english

The thesis is part of the TANGO / AH-Design project funded by the Culture Programme of the European Union-Education and Culture DG, aiming to explore the issue of social inclusion and in particular the intergenerational dialogue, proposing innovative solutions. The project partners are the Aalto University, Helsinki (Finland), the Ecole de Design Nantes Atlantique, Nantes (France) and the Politecnico di Milano, Milan (Italy).

The thesis fits within the development of the Italian part of the project, for which the research unit DIS (Department INDACO) of the Politecnico di Milano has started a collaboration with the Consortium SiS, promoter of the Punto e Linea project (funded by Cariplo Foundation), with social inclusion initiatives in four areas on the outskirts of Milan: Barona, Baggio, Giambellino and Gratosoglio.

In particular, the thesis had as research and project brief the development of a Product Service System economically and environmentally sustainable and that promotes intergenerational dialogue, for the Community Garden enabled and currently funded by the Punto and Linea project in the district of Giambellino.

The research and design path (started in February and currently in progress) has adopted the MSDS method (Methodology for System Design for Sustainability) in a process of co-designing which involved different existing and potential actors into the project proposal. In particular, since the first stages were involved the Hubbers (referents of the individual initiatives) as champions stakeholders. First phase of the process was the Strategic Analysis (SA), the results of which have been presented through audiovisual files which describe the context, the promoters and the initiative of each HUB (entity representing the project in each district) of the Punto e Linea project. For the production and editing of the videos was created a partnership with the Movie Lab of the Politecnico di Milano. During the Exploring opportunities phase were involved the System Design for Sustainability course's students in the first attempts to design concepts for the four initiatives. After the course has started the effective concept de-

sign phase of the project, where the four graduating students, starting from the most promising explorative concepts, have begun the design of the new PSSs. During this phase were involved possible stakeholders in the area relating to each HUB and experts from the Industrial Engineering department of the Politecnico of Milan, in the role of consultants in the economic aspect of the design.

The product-service system designed is CaseVerdi.net, which aims to create an urban network of local retired experts who cultivate on their balconies / gardens some niche products with high value, small crops distributed but as a whole (and managed as these through a special web platform), take the size of a medium to large garden : CaseVerdi.net, enables the exchange within the local community that adheres as well as the sale to the neighborhood, or to specific shops and restaurants (according to the price the market). The headquarters, located in the Casetta: certifies and manages the distributed mini-gardens and allows to map the total (and collective) production and to propose it as such, linking people or shops or restaurants offering them the products they need; organizing courses for specific crops. “CaseVerdi.net” design process will go on with the involvement of other actors, and will have a fundamental moment in the TANGO exhibition which will be held in Milan during the Salone del Mobile 2013 fair: will be presented here, indeed, together with the other sustainable PSS proposals for the others HUB, in an exhibition intended and designed as a “laboratory” and “window”, as well as an “agent of change” for innovations radically more sustainable. The TANGO exhibition is in other terms imagined itself as a “tool” to co-design and launch a real implementation of innovations of Systems Products-Services sustainable which must overcome the inertia both on the user side, on the producers or service providers one and on the more institutional and government clients one.

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Part 1

THEORETICAL
BACKGROUND

1 PSS INNOVATION A PROMISING APPROACH TO SUSTAINABILITY

1.1 WHAT IS A SUSTAINABLE PRODUCT-SERVICE SYSTEM(PSS)?

Over the last few years, starting with a more stringent interpretation of sustainability, the attention has partially moved to design for eco-efficient system innovation, therefore to a wider dimension than that of the single product¹. A wide debate on the definition of eco-efficient system innovation took place between design researchers and they decided to use the term Product-Service system.

A Product service system (PSS) is a specific type of value proposition that shifts the business focus from selling products to offering a combination of products and services jointly capable to fulfil a final customer satisfaction². In other words, a PSS can be described as an integrated system of products and services delivered by a network of stakeholders, and designed to be competitive and satisfy customer needs.

To clarify this concept we can take the example used in a UNEP publication³: given the “satisfaction” in having clean clothes, we do not need only a washing machine but also water, detergent and electricity (and the service that supply them), and maintenance, repair and disposal services. In the case of a traditional product sale, the producer of the washing machine has an interest in reducing material and energy consumption during the production phase (as well as the producer of the detergent and the one of the electricity) but he has no direct economic interest either in limiting consumption during use or reducing the impact of the resulting waste in the environment. So when we talk about system innovation, it is meant an innovation that involves all the different socio-economic stakeholders in this satisfaction system:

A Product service system (PSS) is a specific type of value proposition that shifts the business focus from selling products to offering a combination of products and services jointly capable to fulfil a final customer satisfaction

1. Stahel 1997; Hockerts 1998; Goedkoop, van Halen, Riele, Rommes 1999; Lindhqvist 2000; Cooper 2000; Brezet 2001; Charter, Tischner 2001; Manzini, Vezzoli 2011; Bijma, Stuts, Silvester 2001; Zaring 2001; Mont 2002; UNEP 2002; Scholl 2006

2. Goedkoop et al. 1999; UNEP 2002

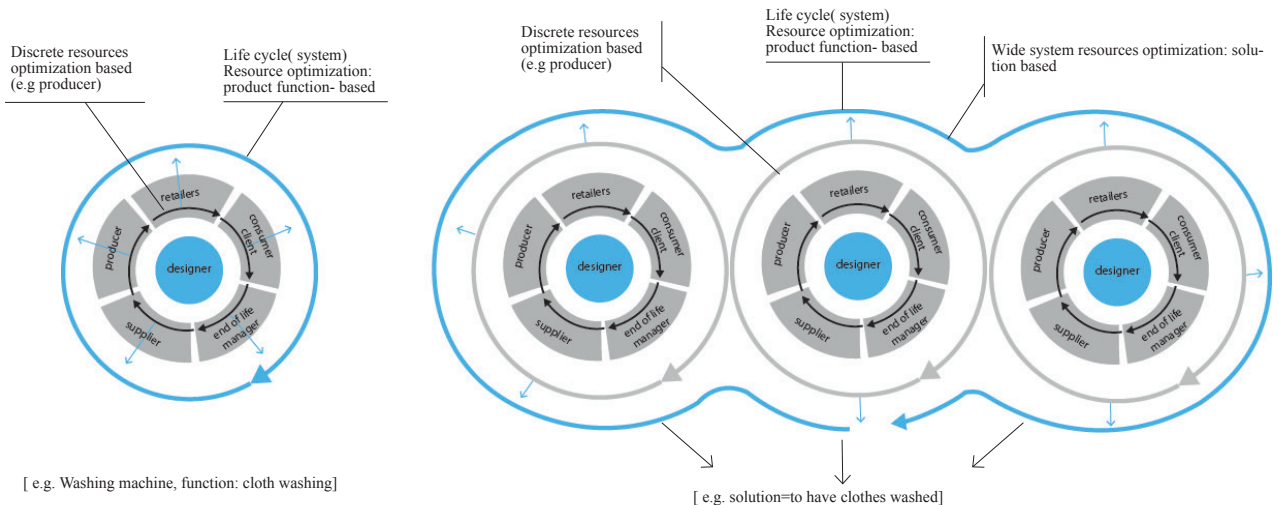
3. UNEP, 2002

the washing machine and detergent producers, the water and the electricity suppliers, the user and those responsible for maintenance and disposal. A perfect solution linked to the satisfaction of having clean clothes is the Pay-per-Use solution offered by Ariston (an Italian appliances producer).

In this example Ariston, rather than selling a washing machine, provides access to it enabling clients to have their clothes cleaned. The company provides to the users a washing machine delivering it to their home (the washing machine is not owned by the customers), electricity supply (not directly paid by the customer), maintenance, and end-of-life collection. The customer payment is based only on the number of washes he does. Basically, rather than the “traditional” forms of sales, ownership, consume and disposal, this value proposition is focused on delivering a particular satisfaction, in this case “having clean clothes”; and this satisfaction is delivered through a mix of products (owned by Ariston) and services. Within this business model Ariston is not economically stimulated in accelerating the replacement of washing machines in order to increase sales. Rather the company is interested in reducing as much as possible the washing machine energy consumption in order to reduce operational costs and maximise profits, and in designing and providing long lasting, reusable and recyclable washing machines in order to postpone the disposal costs and reducing the costs for the manufacturing of new washing machines.

Chart 1.1
Stakeholders in a product life cycle: discrete vs. system resources optimization

Chart 1.2
Stakeholders in a products and services life-cycle mix: discrete vs. wide system resources optimization



These innovative PSS could lead “to a system minimization of resources, as a consequence of innovative stakeholder interaction and related converging economic interests”⁴. PSS innovation can be seen as a possible choice for companies to separate resource consumption from its traditional connection with profit and standard of living improvements; to find new profit centres, to compete and generate value and social equity while decreasing total resource consumption.

PSS innovation is potentially a win- win solution: winning for the producer/providers, the users and the environment⁵.

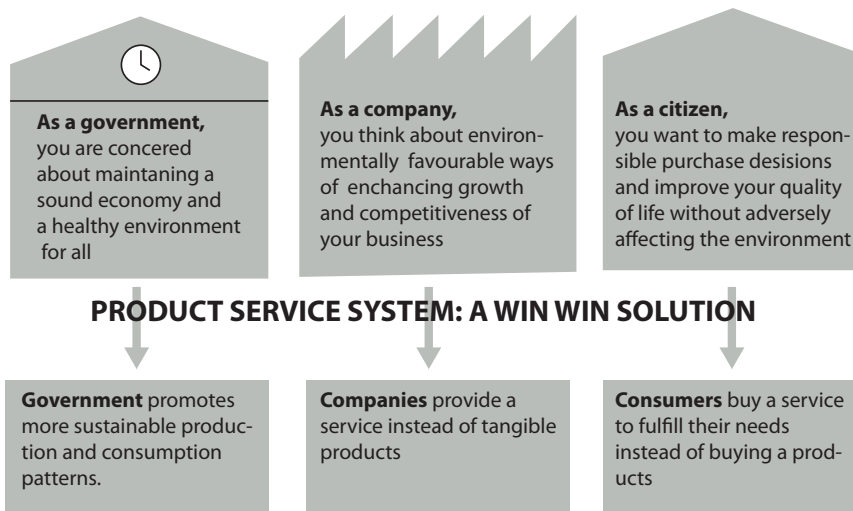
We don’t have to assume that PSS is synonymous of low environmental impact: it does not guarantee environmental improvements. As stated by UNEP (2002) PSSs only have the potential to do so. PSSs in fact offer a promising concept to move in the direction of sustainability; but this potential can be exploited only if PSSs are properly designed, developed and delivered (Ceschin, 2010).

In order to be eco-efficient, a PSS should create economic and competitive incentives to decrease and optimise material and energy consumption for all the actors of the network. Secondly, all the products belonging to the PSS should be properly designed and developed with a low environmental impact in the various phase of the life cycle.

innovative PSS could lead “to a system minimization of resources, as a consequence of innovative stakeholder interaction and related converging economic interests.

Figure 1.1

PSS:
a winning solution
(adapted from UNEP
Division of Technology,
Industry and Economics)



4. UNEP 2002

5. Vezzoli, 2006

The configuration of new stakeholders' interactions constitutes the starting point towards achieving certain environmental results, but it is only with the proper design of the products associated with the PSS that these results can be actually achieved.

Starting from these considerations an eco-efficient PSS can be defined as a PSS "where the economic and competitive interest of the providers continuously seeks environmentally beneficial new solutions" ⁶. Eco-efficient PSS is not always a sustainable PSS. In order to be sustainable, we have to include also the socio-ethical dimension. The socio-ethical dimension can be classified in three socio-ethical groups: ***benefits for customers, for the value chain, and for the society at a whole***. These three socio-ethical aspects in a PSS allow to: improve quality of life, enable a responsible/ sustainable consumption, increase equity and justice in relation to stakeholders, integrate weak people (e.g. kids, elderly, differently able, etc.) and marginalized people (e.g. unemployed, illiterate, etc.) in the value chain, increase in local employment and a consequent dissemination of skills, create new business opportunities for entrepreneurs, improve social cohesion, empower and enhance local resources.

6. Lens, 2011

1.2 PSS AS ECO-EFFICIENCY OPPORTUNITY FOR INDUSTRIALISED CONTEXTS

Over the last few years some design research centers, starting with a stringent interpretation of environmental sustainability (that requires a systemic discontinuity, i.e. radical innovation in the production and consumption patterns), have reset part of the debate on design for sustainability starting from system innovation. According to most researchers a significant ambit in which to act promote radical changes for sustainable consumption seems to be the widening possibilities for innovation beyond the product. More specifically, this entails innovation of the system, i.e. an integrated mix of products and services that together are able to satisfy a particular demand of the customer⁷.

Commonly referred to in this context as a Product-Service System (PSS), Mont⁸ defines it as “a system of products, services, network of actors and supporting infrastructure that continuously strives to be competitive, satisfy customer needs and have a lower impact than traditional business models”.

More recently, in the United Nations Environment Program publication⁹, a PSS is defined as “a system of products and services (and related infrastructure) which are jointly capable of fulfilling client needs or demands more efficiently and with higher value for both companies and customers than purely product based solutions”. In fact, it is a shared opinion that “PSS could decouple the creation of value from consumption of materials and energy and thus significantly reduce the life-cycle environmental load of current product systems”.

To clarify this assumption let us make an example.

The ‘solar heat service’, AMG, Palermo, Italy

The ‘solar heat service’ is a full-service providing a final result, consisting in ‘selling’ hot water as a finished product. Hot water is produced by new equipment that combines solar energy and methane, with economic and energy savings. Hot water is measured by means of a specific heat meter and the whole system is monitored, in order both to control

a PSS is defined as “a system of products and services (and related infrastructure) which are jointly capable of fulfilling client needs or demands more efficiently and with higher value for both companies and customers.

7. Goedkoop, van Halen, Riele, Rommes, 1999; Brezet, 2001; Charter, Tischner, 2001; Manzini,

Vezzoli, 2001; Bijma, Stuts, Silvester, 2001

8. Mont, 2002

9. UNEP, Tischner, Vezzoli, 2009

in real time how the system works and also to apply the Guarantee of Solar Results. AMG has tested this service in a Tennis Club in Palermo city (Italy), providing hot water for the dressing rooms. The innovative feature of this Product-Service system is that AMG will not invoice the client for the methane consumed to obtain hot water, but rather, hot water is sold as an entire service. With AMG the consumer pays to receive a comprehensive service covering installation, thermal-energy meters and transportation of methane to the boilers. With equipment maintenance provided as well, the customer is buying a 'final result'. Billing is by unit of service and not per unit of consumed resources, the company becomes motivated to innovate in order to minimize the energy consumed in use: the less methane consumed (the higher the use of solar energy and the greater the efficiency of the system) the higher the income for AMG.

As is clear from this example, it is a shared opinion that these innovations could lead “to a system minimization of resources, as a consequence of innovative stakeholder interactions and related converging economic interests”¹⁰. Thus eco-efficient system innovation derives from a new convergence of interest between the different stakeholders: innovation not only at a product (or semi-finished) level, but above all as new forms of interaction/partnership between different stakeholders, belonging to a particular value production system. A value production system includes the value chains of a firm’s supplier (and their suppliers all the way back), the firm itself, the firm’s distribution channels, and the firm’s buyers (and is presumably extended to the buyers of their products, and so on)¹¹.

The characteristics of a Product-Service System innovation are the following:

- ***They are rooted in a satisfaction-based economic model***, i.e. each offer is developed/designed and delivered in relation to a particular customer “satisfaction” (unit of satisfaction);
- ***They are stakeholder interaction-based innovations***, i.e. they are radical innovations, not so much in technological terms as in new interactions/partnerships between the stakeholders of a particular value/satisfaction production system;
- ***They have an intrinsic eco-efficiency potential***, i.e. they are innovations in which it is the company/companies’ economic and com-

10. UNEP, 2002

11. Porter, 2006

petitive interest that may lead to a reduction in environmental impact (system eco-efficiency: decoupling the creation of value from resources consumption).

Most of the research efforts investigating PSS have been focusing mainly on the environmental and economical dimensions of sustainability and have mainly considered industrialized contexts. Nevertheless, an emerging hypothesis we came upon has proposed that such innovations are also favorable for emerging or low-income contexts and help to tackle the socio-ethical dimension of sustainability together with the environmental (and economical) one. These issues are discussed in the following paragraph.

1.3 PSS INNOVATION FOR SUSTAINABILITY: AN APPROACH FOR EMERGING AND LOW-INCOME CONTEXTS

In year 2000 the United Nations Environment Program (UNEP) set up a group of international researchers¹² to both disseminate world-wide the concept of Product-Service Systems innovation, and start exploring new PSS potentialities, which can be summed up in the following queries.

The international group of experts engaged by UNEP, has been given the following research working hypothesis:

“PSS may act as business opportunities to facilitate the process of social-economical development in emerging and low-income contexts - by jumping over or by-passing the stage of individual consumption/ownership of mass produced goods - towards a “satisfaction-based” and low resources intensive advanced service-economy” (UNEP, 2002).

To clarify this working hypothesis let’s look at an example of Product-Service System innovation in low-income and emerging contexts¹³.

Distributed Solar Energy and electrical devices as an all-inclusive package, Brazil

Fabio Rosa founded both a for-profit corporation, Agroelectric System of Appropriate Technology (STA) and a not-for profit organization, the Institute for Development of Natural Energy and Sustainability (IDEAAS). TSSFA developed a basic photovoltaic solar home system and in 2001, Rosa began exploring a new business model to provide Brazils rural people with what they needed: energy services, not just solar energy. To that end TSSFA developed a leasing structure whereby customers pay a monthly fee for the use of cost-effective solar energy packages. TSSFA customers sign a three-year service contract but can end the contract at anytime by paying the cost of un-installation. Solar home kits, as TSSFA calls them, include the hardware needed to generate energy, while also

12. The work involved a group of researchers (including the author) from industrialized, emerging and low-income countries; it was set up in 2000 and ended in 2002 presenting the main achievements within the publication UNEP, 2002. Product-Service System. Opportunities for Sustainable Solutions.

13. The cases presented in this chapter come from the already mentioned UNEP booklet of 2002 and from a case databank of the WBCSD, both freely available at their respective web site (<http://www.unep.fr/scp/publications/details.asp?id=WEB/0081/PA> and <http://www.wbcscd.ch/plugins/DocSearch>).

providing the installation service and products that use the electricity generated by the solar home system, such as lighting and electrical outlets. All of the tangible inputs are owned by STA and only the service provided by these materials are leased to customers. It is environmentally sustainable because it uses the solar energy; it is socioethically sustainable because give to poor people access to useful services; it is economically sustainable because is a business for TSSFA company.

The case presented shows Product-Service System innovation as an approach applicable even in emerging and low-income contexts. Others could be made, nevertheless the following arguments can be highlighted in support of this hypothesis¹⁴.

First of all, if PSS are eco-efficient at system level it means that they may represent opportunities, for a context with fewer economic possibilities, to respond with a lower overall costs (more easily) to unsatisfied social demands.

Secondly, PSS offers are more focused on the context of use, because they do not only sell products, but they open relationships with the end user. For this reason, an increased offer in these contexts, should trigger a greater involvement of (more competent) local, rather than global, stakeholders; thus fostering and facilitating the reinforcement and prosperity of the local economy.

Furthermore, since PSS are more labor/relationship intensive, they can also lead to an increase in local employment and a consequent dissemination of skills.

Finally, since the development of PSS is based on the building of system relationships and partnerships, they are coherent with the development of network enterprises on a local basis for a bottom-up re-globalization process. This last issue is clarified in the next chapter where the model of distributed economies is introduced.

14. UNEP, 2002, This hypothesis has also been examined in a series of case studies, collected by the group engaged by the UNEP.

1.4 DISTRIBUTED ECONOMIES: A PROMISING ECONOMIC MODEL FOR SYSTEM INNOVATION COUPLING ECO-EFFICIENCY WITH SOCIAL EQUITY AND COHESION.

Several authors argue that a favourable economic model to couple socio-ethical and environmental dimensions of sustainability is that of the so called distributed economies¹⁵.

A well-known institution on economics and sustainability, the International Institute for Industrial Environmental Economics (IIIEE) in Lund, defines distributed economies as a “selective share of production distributed to regions where activities are organized in the form of small scale, flexible units that are synergically connected with each other”¹⁶.

The mainstream economic model of industrialized contexts, characterized by centralized and large-scale production units, determines dynamics that undermine sustainability, both on environmental and socio-ethical levels. Examples of such dynamics include¹⁷:

1. increasing the movement of raw materials and products over larger distances, mainly relying on decreasing transportation costs;
2. distancing production from consumers and thereby hiding the environmental and social costs (Dahlberg et al. 1998);
3. weakening the local actors' possibilities to have ownership and control over their immediate economic environment;
4. distorting or destroying cultural identities;
5. limiting diversity in regional economic activities.

Besides these disadvantages, being large-scale and centralized limits the ability of such production units to respond to a rapidly changing demand. In recent decades the adjective *distributed*¹⁸ has been increasingly used in relation to several different socio-economic sys-

15. Mance, 2001; Rikfin, 2002; Sachs et al. 2002; Johansson et al., 2005; Vezzoli, Manzini, 2006; Crul, Diehl, 2006

16. Johansson et al., 2005

17. Johansson et al., 2005

18. To distribute: to divide something into portions and dispense it (from: Wiktionary – the wiki-based Open Content dictionary).

tems: *information technologies, and distributed computing; energy systems and distributed energy generation; production and the possibilities of distributed manufacturing; the processes of change and distributed innovation, distributed creativity, distributed knowledge*. And finally, in relation to overall *socio-technical systems, to describe a new economic model: distributed economies*.

To exemplify the distributed economies model and its sustainability win-win potentials let's consider the (fundamental) transition from non-renewable fossil fuel resources (oil, coal etc.), to renewable resources (sun, wind, hydrogen etc.).

As we know from a strictly environmental point of view, using oil (and other fossil resources) determines most of the carbon dioxide emissions that have their fair share in causing global warming. There are also many widely-known problems and environmental risks associated with the various extraction and transformation processes, and the transport of these resources.

Let's now look at the fossil resources model from an economic and socio-ethical point of view. Resources from fossil fuels – due to their localization and the complexity of extraction and transformation processes – have led to a series of highly centralized production and distribution infrastructures. The consequence has been a widespread centralization of the economic infrastructure which has resulted in reduced opportunities for access to resources, above all to energy, and particularly electricity. This is the key factor in perpetuating poverty in the world¹⁹. It is therefore said that the enlarging rift between rich and poor can to a large extent be attributed to the very nature of the fossil fuel energy regime²⁰. Without access to resources and to energy in particular, individuals have little control over their own destiny. Only by freeing themselves from oil, coal and natural gas imports, can low-income and emerging contexts emerge, improving the economic conditions and quality of life of their populations.

As an alternative to fossil fuel, the use of renewable, local resources, such as sun and wind hydrogen, presents indubitable environmental advantages, due to their reduced greenhouse effect (and its impact), inexhaustibility and lower environmental cost compared to the various processes of extraction, transformation and distribution when using fossil fuels.

19. For example, many have observed (Stiglitz, 2002) that the rise in oil prices during the seventies and eighties was the main cause of debt increase in the third world. These nations were forced into debt, for billions of Euro, with international monetary institutions and with banks,

to guarantee oil imports. In many of the world's poorest

20. Rifkin, 2002

Here we are interested in underlining that expansive usage of these (renewable) resources could lead to an extensive redistribution of power towards many single individuals, which is necessary to establish conditions that would allow the Earth's riches to be shared more fairly. This is the essence of a policy for bottom-up re-globalization. Briefly, let's see why.

Sun, wind, hydrogen, etc. can be used locally through relatively simple processes. The sun is inexhaustible and present everywhere, though in varying intensity (curiously, there is more sun in the so-called "Global South"). Technology for these renewable resources has still not been developed in a significant way, but already today the installation and management of photovoltaic (sun) is infinitely less complex than plant for oil wells and refineries. They are therefore also installable and manageable by small scale economic entities, even by a single residential complex or single individuals.

If adequately exploited, sun and wind would enable every human being to have more power and move towards a democratic regime of resource management. These sources would allow micro-plants to be set up close to the end-user, who would no longer be only a consumer but also producer of the energy he uses. Autonomous photovoltaic panels and combustion cells could supply electricity rapidly and at a favorable cost. When a sufficient number of such micro-plants have been installed (whether purchased or managed), they could be connected together into micro energy-grids, and therefore into a constantly expanding (potentially global) energy grid. Individuals, residential complexes and local communities could in this way share and exchange energy, achieving self-sufficiency and consequently increased power, in a framework of greater interdependence. Ultimately, they could challenge the traditional centralized energy generating plants (born and developed during the age of fossil fuels), and escape the grip of the huge, powerful, energy and electricity companies, causing a radical change in important flows of power: no longer from top downwards, but from bottom upwards.

In short, such a decentralized infrastructure supplied by renewable sources, usually referred to as *distributed energy generation*, on the one hand would reduce environmental impact, and on the other could facilitate a democratization of resources and energy, enabling individuals, communities and nations to reclaim their independence while

accepting the responsibility that derives from their reciprocal interdependence (self-sufficiency and interdependence).

Giving access and power to local communities also contributes to enhancing the positive aspects of humanity's cultural plurality, where local cultural forms should aspire less and less to being possessions to defend, and more and more to being opportunities for positive cross-fertilization towards a general improvement in the conditions of life on earth.

Renewable energy sources have the characteristics that lead to low environmental impact, decentralized and democratic production systems, but all this may not necessarily happen.

More in general (i.e. not only in relation to solar and wind derived energy) we can observe that in an interconnected context a principle that double ties the environmental question to social ethics can be summarized as follows:

use primary local, conservative, regenerative (i.e. locally sustainable) resources and introduce decentralized system networks for the extraction, production and use of those resources.

It has also been observed²¹ that when there are local stakeholders involved in the extraction, transformation and sale of resources, then they pay far more attention to preserving (resource) renewability. The obvious underlying reason is that their economic subsistence depends, in the short but also in the long term, on these resources. Therefore they are not in favour of exhausting them quickly.

Summing up distributed economies can be described by two main characteristics:

- They are locally-based, i.e. enterprises or initiatives based on sustainable local resources and needs, but could become open to non-local or global systems.
- They are network-structured enterprises or initiatives, i.e. they can gain critical mass and potentialities by their connections in networks.

Finally, to answer the question posed at the beginning of this paragraph the following research hypothesis could be formulated, characterizing the former assumption of PSS being applicable to emerging

21. Sachs, 2002; Sachs, Santarius, 2007

and low-income contexts (Vezzoli, 2010):

“A PSS approach may act as a business opportunity to facilitate the process of social-economical development in an emerging and low-income context – by jumping over or by-passing the stage of individual consumption/ownership of mass produced goods – towards a more “satisfaction-based” and low resource intensity advanced service-economy, [from here the added part to the former assumption] characterized by locally-based and network-structured enterprises and initiatives, for a sustainable re-globalization process aiming to democratize access to resources, goods and services”.

1.5 THE ASSET-BASED APPROACH TO COMMUNITY DEVELOPMENT

In recent years, Asset-based Community Development (ABCD) has caught the attention of numerous community development practitioners. As an alternative to the more commonly practiced needs-based approach, ABCD shifts the focus of community development from “problem solving” to “asset building”. ABCD takes a “grassroots” approach to community development, drawing upon the best of what a neighbourhood has to offer. As American cities continue to struggle with massive economic shifts that have depleted the *employment opportunities of many low-income neighbourhoods*, the asset-based approach provides an example of how to create *sustainable neighbourhoods* across the country.

From a Needs-based to Asset-based Approach

The main concern with the needs-based approach is a fostering of leadership that denigrates the neighbourhood.²²

In order to attract the necessary resources for the neighbourhood, leaders are forced to exaggerate the severity of the problems. Rather than looking inward for solutions to neighbourhood problems, leaders are measured by their ability to attract outside resources. Focusing on what the neighbourhood lacks also takes a psychological toll on neighbourhood pride. Citizens begin to believe what their leaders are saying and view themselves as unable to take charge of their neighbourhood, creating a self-fulfilling prophecy. In this situation, citizens no longer view themselves as capable producers, but rather consumers of services. The negative results associated with the needs-based approach have led to the recent development of other approaches.

In the late 1980’s and early 1990’s, asset building became an emerging theme in neighbourhood revitalization. The work of Sherraden (1988, 1990, 1991) suggested that households and neighbourhoods develop not by income alone (the dominant theme of the welfare state), but also by savings and asset building.²³ Under this framework, the term “asset” is restricted to the concept of wealth, including

22. Kretzmann and McKnight 1996

23. Page-Adams and Sherraden 1997

both property and financial holdings. Expanding on the work of Sherraden, Kretzmann and McKnight took a broader view on the concept of asset building in their 1993 book, *Building Communities from the Inside Out*.

The Asset-Based Approach Defined

Asset building following the ABCD approach involves identifying and tapping all of the potential assets in a neighbourhood. Neighbourhood assets include the talents and skills of individuals, organisational capacities, political connections, buildings and facilities, and financial resources.²⁴ According to Mathie and Cunningham (2005), Kretzmann and McKnight's ABCD approach operates under the premise that neighbourhoods can drive the development process themselves by identifying and mobilizing existing (but often unrecognized) assets, thereby responding to and creating local opportunity for positive changes. ***Such unrealized assets include not only personal attributes and skills, but also the relationships among people that fuel local associations and informal networks. Mobilizing social assets can activate more formal institutional resources such as local government, formal community-based organizations, and private enterprise. In this way, the neighbourhood development process is sustained and scaled up while it continues to recognize local associations as the driving force – the vehicles through which all the neighbourhood's assets can be identified and then connected to one another in ways that multiply their power and effectiveness.***

Accompanying the ABCD approach is a set of methods for mobilizing community members including²⁵:

- Collecting stories of community successes and analysing the reasons for success;
- Mapping community assets;
- Forming a core steering group;
- Building relationships among local assets for mutually beneficial problem solving within the community;
- Convening a representative planning group;
- Leveraging activities, resources, and investment from the outside community.

24. Page-Adams and Sherraden 1997

25. Mathie and Cunningham 2003

Conclusion

The ABCD approach provides an alternative to the more commonly practiced needs-based approach. Rather than focusing on what neighbourhoods lack, ABCD uncovers what each neighbourhood has to offer. ABCD creates an opportunity for residents to not only take part in, but also lead the neighbourhood planning process. In Austin, an asset-based approach has been introduced in the ECC neighbourhood. The asset-based approach was successful at increasing resident involvement in the neighbourhood planning process of ECC.

2 SYSTEM DESIGN FOR APPROPRIATE INTERACTIONS: FOSTERING INTER- GENERATIONAL DIALOGUE

2.1 ACTUAL EUROPEAN SITUATION_ AGEING

Ageing is an individual blessing, costly and challenging to societies but also a global necessity to avoid critical and dangerous resource shortages and an environmental collapse. All societies that have to down sized strategy toward their population control by peaceful means have to go through a period of ageing. It is the transition decades that causes the adaptation problems in terms of redistribution of income, changing behaviour and most likely changing ethnic composition of societies.¹

The European Commission, in conjunction the European Parliament and the European Council, dedicated 2012 as the European Year for Active Ageing and Solidarity Between Generations.

The aim of the European Year is to facilitate the creation of a ***sustainable active ageing culture***, based on a society for all ages and on solidarity between generations. National, regional and local authorities as well as social partners, businesses and civil society should promote active ageing and do more to mobilise the potential of the rapidly growing population in their late 50s and above. The year will encourage older people to:

- ***stay in the workforce and share their experience;***
- ***keep playing an active role in society;***
- ***live as healthy and fulfilling lives as possible;***

What is unique about the Third Age outdoor adventure context is that it includes in one package a number of elements that have the poten-

1. Michael Cichon, Director of the Social Security of the ILO, presented this keynote on "Social Cohesion and Demographic Development in a Sustainable Europe" at the joint Parliamentary Meeting of the European Parliament, the Polish Sejm and Senate and other National Parliaments.

tial for **substantial benefits** and **wellbeing** of older people. These elements include **self chosen physical Involvement** in outdoor pursuits, **strong social contexts**, and **immersion in natural outdoor environments**. In addition, adventure activities provide opportunities for engagement with risk and challenge and experiences of uncertainty.²

There is considerable research literature that has focussed on the discrete entities of : (1) benefits of involvement in physical activity; (2) contact with natural elements; and (3) social interaction³ and these are discussed separately below. Two recent meta-analyses have reviewed the benefits of physical activity for older persons.⁴

- **Physical Benefits:** improved sleep, prevention/delay of illness, improved functional ability, reduced chance of falling, stronger with better endurance, better flexibility, better balance and co-ordination, a longer life span, maintenance of velocity of movement and better chemical balance (e.g. glucose, catecholamine & endorphin levels).

- **Psychological Benefits:** improved cognitive performance, less cognitive decline, better memory, feelings of control and positive effects on negative emotions.

- **Social Benefits:** Meet new friends, engage in cooperative activities, maintain social networks, experience fellowship and goodwill, give and receive social support

- **General Wellbeing:** An independent lifestyle, improved sleep patterns, learn new skills, enjoy life, feelings of wellbeing, delay aging, life satisfaction.

- **Societal:** More cohesive communities, reduce health and social care costs, enhance a positive and active image of older adults.

There is also a compelling body of literature that supports the importance of **regular quality social interactions** for the wellbeing of seniors. To be a valued member of a small community, be that a family unit or a friendship group, is a social asset to an individual leading to positive health outcomes. Wood & Giles-Corti (2008), identify these aspects as social capital: "**those intangible assets that count for most in the daily lives of people: namely good will, fellowship, sympathy and social intercourse...**" In a broader picture, social capi-

2.Priest & Gass, 2005

3.Alves & Sugiyama, 2006

4.Alves & Sugiyama, 2006; Chodzko-Zajko, Schwingel, & Park, 2009

tal can be seen to “*be the glue that holds society together*” (ibid). Hence, social capital is positive at a community level but also accrues to individuals.

Conclusion

*Being socially involved has health benefits for seniors*⁵, leads to less cases of depression⁶, and more perceptions of safety⁷. Conversely, low social capital has been linked to dysfunctional and unstable communities with higher problem severity⁸.

2.1.1

THE “DIALOGUE BETWEEN GENERATIONS”

The gradual ageing of Europe populations has far-reaching consequences for the social security systems of EU Member States. For instance, “the need for public provision of age-related transfers and services will increase”⁹. As a result, public spending for pensions, health care and long-term elderly care will rise significantly¹⁰ while at the same time young people will be facing increasing difficulties in accessing quality education and adequately paid employment¹¹. These challenges pose a threat to young people’s ability to live autonomous lives as equal members of society¹².

To ensure that demographic change is not viewed only as a conflict and battle for resources between young and old but that the challenges it poses can also be understood as opportunities, there must be more dialogue and more solidarity between the generations.

To ensure that demographic change is not viewed only as a conflict and battle for resources between young and old but that the challenges it poses can also be understood as opportunities, there must be more dialogue and more solidarity between the generations. The objective is to ***improve contacts between different generations and ensure that all groups can benefit from these contacts***. This will help reduce inhibitions and prejudice between the groups and promote intergenerational respect and solidarity. According to the European Youth Forum, intergenerational solidarity can be achieved by ensuring that prosperity is equitably distributed between the generations as well as by providing adequate livelihood possibilities for people of all ages. However, the debate on the sustainability of European pension systems that this will inevitably trigger should also be accompa-

5. Araya et al., 2006; Ziersch, Baum, MacDougall, & Putland, 2005

6. Kawachi & Bergman, 2001; Semenza, March, & Bontemp, 2006

7. Kweon, Sullivan, & Wiley, 1998; Wood et al., 2007

8. McCulloch, 2003

9. COM(2009)

10. ibid.

11. European Youth Forum 2008;

12. ibid; European Youth Forum 2009

nied by exchanges between the generations. *This way, young people can learn from the experience of older people, seniors can pass on their experience and share their knowledge with the younger generation, while the older generation can profit from the young people's knowledge and skills as well as from their energy and dynamic force.*¹³ Some approaches could be: *exchanges of knowledge and skills* between young and old, *mutual assistance* ("the young help the old – the old help the young": household or similar assistance for seniors provided by young people, *seniors acting as mentors* for school students etc.) or *common activities involving certain social issues*¹⁴.

13. European Youth Forum 2009

14. Centre for Intergenerational Practice 2009

figure 2.1

<http://mtova.org.il>



2.1.2 DIFFERENT METHODS

The *MSDS method* (Method for System Design for Sustainability) which has been developed by the research unit System Design and Innovation for Sustainability (DIS) in the INDACO department of Politecnico di Milano will examine within the intergenerational context through the **TANGO** project (Toward A New interGenerational Openness)/ AH-Design project which is an European Community (Culture Programme of European Union-Education and Culture DG) financed project which has, as main issue, to explore the issue of social inclusion and in particular the intergenerational dialogue.

The ongoing project, which has been started in September 2011 and will last for two years until August 2013 with 3 partners; *Aalto University* (Finland), *Politecnico di Milano* (DIS) and *L'École de design Nantes Atlantique* (France), as its goal has the promotion of social inclusion and specifically improving the intergenerational dialogue. In particular, the project which is going on in Politecnico di Milano has focused on 4 different districts of Milan to examine the existing MSDS research method on these zones of Milan.

Since the beginning of the research activity of (DIS) department, few changes has been done on the existing method to be adapted to the specific needs of the designers/companies and to different context's conditions.

The ongoing research results with the evaluation of the process would be presented by hoping that the new method would become as a method and guide for the researches on the similar contexts, in the future.

According to our researches in order to see if there is any other method exists within this context of research, there has been no specific design method just for improving and fostering intergenerational dialogue. The only referable method, is the Community-Based Participatory Research (**CBPR**) method¹⁵ which once, has been examined in the

15. Lisa Wexler, School of Public Health and Health Sciences, University of Massachusetts Amherst, United States, Intergenerational Dialogue Exchange and Action: Introducing a Community-Based Participatory Approach to Connect Youth, Adults and Elders in an Alaskan Native Community

community- Based participatory research within the intergenerational context, in order to see if it could bridge the gap between different ages or not. This method has attracted the researchers attention thanks to its potential in including the community members in the knowledge generating process where the local understanding and priorities are required to be reflected in the information gathering. The process of this methodology also has been highlighted as a capacity-building exercise that enhance community members' research skills, abilities and interest while engaging them in empirical investigations. Other benefits include generating knowledge that is practical and addresses community needs.

The researchers argue that by developing a research agenda that is in-line with local understandings and respond to community priorities, the (CBPR) project could offer a ***step-by-step IDEA (Intergenerational Dialogue Exchange and Action) process that can maximize the potential of this approach in communities.*** The examined (CBPR) in the intergenerational context, describes how data collection processes can, in themselves, be meaningful to and beneficial for participants.

In short, the study actively engaged indigenous young people in doing research while learning about their culture, their community and themselves. It also provided adults and Elders with opportunities for reflecting on their lives and teaching young people important lessons from their experiences.

2.1.3 BEST PRACTICES

The selected 4 best practices in this book, has been chosen from the 39 gathered best practices, with the qualitative analysis.

The research on the studied cases, has been made to give some materials and inspirations to the SDS course students. They'll be useful in development of the four design briefs during the System Design for Sustainability course. Due to the importance of intergenerational dialogue which has been mentioned before, all 39 samples have been selected among a variety of existing practices which have the intergenerational characteristic in themselves.

The research field has included all the European context, in order to gather the broader cases created in different cultural backgrounds and to compare them with each other from the social cohesion point of view. The case selection, has been done mainly through the internet research with the support of some essays to support the meaning of the social cohesion in a theoretical and practical way.

Every case is organized in three sections to be easily readable.

The three section are:

- general information;
- eco-efficiency and/or socio-ethical characteristics;
- (product-service) system innovation characteristics;

Name of The Product-Service System Innovation

Orti del Parco Nord

Content

Renting an allotment of land to cultivate, spend time together, and enjoy the open air.

Producer/Provider Name

Consorzio Parco Nord Via Fabrizio Clerici- Sesto San Giovanni MI

Source/Contact

www.parconord.milano.it

Eco-Efficiency and Socio-Ethical Characteristics:

The service goal, about the socio-ethical aspect, is to promote the creation of new relationship between the participants and also with people of the neighborhood. As a consequence the area starts to live and the already present resources, like spaces, water (...) are now used to grow healthy vegetables and fruits. To produce some vegetables for local consumption improve the eco-efficiency of the system: it reduces the demand for food from further away, avoiding the packaging, carriage and delivery stages. It encourages the use of organic home waste as compost and promotes a culture of natural food.

Product-Service System Innovation Characteristics:

Orti del parco Nord is a service implemented in the Milanese suburbs. The participants can rent an allotment very close to the residential area to grow their own fruit and vegetables. The service is open to pensioners, housewives and people over 60 years old. The goal of the project is to give people the chance to socialize and enjoy outdoor activities. The participant can grow whatever they wish, and have to maintain their part and the common areas. The service includes periodic lectures about composting and garden maintenance for the all participants.

Name of The Product-Service System Innovation

Andiamo a scuola da soli – Walking bus

Content

The service, promotes the autonomy in children going and returning from school.

Producer/Provider Name

Circolo Didattico “ G.B.PERASSO “ Plessi di via Bottego,4 - via S.Mamete,11
(with the collaboration of Auser and other volunteers)

Source/Contact

Creative Communities – www.desis-network.org

Eco-Efficiency and Socio-Ethical Characteristics:

The project goal, about socio-ethical aspect, is to promote the context/territory enhancement; the service allows the children of the neighborhood to go to school and come back home safely without the need to use any public or private transport. This solution has also a positive impact on the social network of the area, giving to the children the chance to walk in groups and involving other people and volunteers of the area (20 friend grandparents took part for Auser). About the eco-efficiency this solution helps to reduce the air and noise pollution near the schools which would otherwise be produced by all the cars to bring the children to school and back before and after the lessons, making the streets more pleasant to live in. During the two school year sessions of 2002/2003 and 2003/2004 the Lombardia region gave the Bollino Blu (Blue Sticker) to the schools for helping to lower of the 10% the pollution in the surroundings areas.

Product-Service System Innovation Characteristics:

The service walking bus” allows children to interact, during the home-school path, with the neighborhood and the people who is living there. This create more independence and awareness in children. Besides that offers a new way to manage the common spaces for a greater safety and less pollution within the neighborhood; creating a big social collaborating network toward a common target. The volunteer that help the children are from Auser, or are inhabitants of the neighbourhood. Every day to go to school the children meet volunteers on a starting point of the path; during the path other children joint the walking bus. With some meetings the parent were informed about the walking bus service and knowing the future volunteers.

Name of The Product-Service System Innovation

Modena e Reggio ospitali da sempre (Giovani cercano anziano – anziano cerca giovani)

Content

Cohousing service to favour elderly and students

Producer/Provider Name

City of Modena and Reggio Emilia

Source/Contact

www.comune.modena.it

Eco-Efficiency and Socio-Ethical Characteristics:

The project goal is about helping in daily activities and creating relationships; the service promotes the social aspect of the cohabitation that can be for both an occasion to sensitize the other. The service allows both students and elderly people to save some money: a cheap rent for the student and some extra money at the end of the month for the elderly. This cohabitation can encourage other kind of collaboration behaviours, like sharing the cost of the food or the dispensability on both sides to help each other about some tasks.. The eco-efficiency improvement is about the reduction of energy consumes (sharing spaces, cooking together, etc..) and about the extension/intensification of the use of the products.

Product-Service System Innovation Characteristics:

The project, started in 2009, offers to the students of Modena and Reggio Emilia universities a solution of cohabitation with some elderly people. This solution provides a cheaper accommodation for the students who don't have plenty of money and like the idea to share a part of their time and space with an elderly person. Before starting the cohousing experience the municipality of Modena and Reggio Emilia organize some meetings between young and elderly. These occasions helps both to start to know each other in order to create the perfect cohousing situation and to avoid future problems. During the cohousing year the meeting service is available to discuss about problems or to help in particular circumstances. Before starting the experience student and the elderly they have to sign a contract called "Good relations code" to ensure a set of rules to support coexistence.

Name of The Product-Service System Innovation

SWAYED ECO project

Content

Creating connections between ages: sharing spaces and doing collaborative activities

Producer/Provider Name

SWAYED (South West Area Youth Engagement and Diversion)

Source/Contact

www.scotcip.org.uk

Eco-Efficiency and Socio-Ethical Characteristics:

The project goal, about the socio-ethical aspect, is to create new relationship to defuse some tensions between the different ages. The service allows to live with greater confidence the common areas through improvements and planning the expansion to introduce new activities. This reinforces the sense of belonging of the individuals to their communities, ensuring a better management of the entire system. The eco-efficiency is not reduced or implemented in the project.

Product-Service System Innovation Characteristics:

The “ECO project” service was born from the need to defuse some tensions in a housing community. Bharati Bundhoo, employee of the centre, thus she decided to introduce the two groups (young and old) to dialogue with the intent to smooth over the contrasts and rebuild the physical and communication spaces. This gave birth to “ECO project”: re purposing the common area, creating collaborative activities to give a greater sense of integration and belonging. The first stage of the project simply entailed a clean up of debris and litter. The second stage involved weeding and preparing the soil for new plants, bulbs, flowers and shrubs. Adults who were too frail to participate were still keen to actively offered advice. A Garden Tea Party was held in early October and a survey of all 35 attendees - from 5 years upwards to the over 55s - gathered opinion on how to move the project forward for 2011. In the evening a bouncy castle, animal petting, face painting and traditional games were organised. Untill now, the center is working to build a soccer field and a computer classroom for adult residents.

Name of The Product-Service System Innovation

Schools Project

Content

School assistance by elderly volunteers to support children with different problems

Producer/Provider Name

Retired and Senior Volunteer Programme (RSVP), Edinburgh

Source/Contact

www.scotcip.org.uk - www.csv-rsvpscotland.org.uk

Eco-Efficiency and Socio-Ethical Characteristics:

The project goal, about the socio-ethical aspect, is to promote the knowledge sharing between elderly and children during school activities. It helps the children in gaining schools competences and is customized with the personal skills of the elderly volunteers. The service has a good effect on the satisfaction of the young students, volunteers and teachers; helping to create a strong exchanging connection and mutual help between schools and territory. The environmental aspect is not implemented or reduced in the service.

Product-Service System Innovation Characteristics:

The "School Project" was born through the collaboration between a primary school and the volunteers of RSVP of the neighbourhood; the aim is to help children with difficulty (behavioral problems, poor social skills or children after a long absence from school) in school activities. The presence of volunteers into the classrooms is a constant figure one day a week, to ensure continuity of the working path. They often start off with listening to children read and this can lead to helping with a range of school activities depending on the needs of the children and the skills of the volunteers. Usually volunteers support in reading and writing, mathematic, computer science and English speaking. In particular occasion they can do also less conventional activities emphasizing abilities and skills of each individual volunteer (eg. Ecology project – gardening lessons to involve the children in agricultural activities). The service is still active and in constant evolution because of the availability of the volunteers and it is very important for schools that otherwise wouldn't be able to provide

Name of The Product-Service System Innovation

Bonnets and Baseball Caps

Content

Intergenerational partnership in school activities.

Producer/Provider Name

Hamilton Gardens Sheltered Housing (in collaboration with Stewarton Academy – East Ayrshire Volunteer Centre)

Source/Contact

www.scotcip.org.uk

Eco-Efficiency and Socio-Ethical Characteristics:

The service goals, about socio-ethic aspect, is to share knowledge between generation; the project allows to use the theoretical and practical skills of young and old people, to achieve something concrete in order to create a greater cohesion and participation within the community. Another future goal is to repeat this service model in other schools in order to help guys with relational problems. About the eco-efficiency of the service: the activities, made into the school classrooms, use the classes tools which are usually used for the lessons; sharing already existing resources and space reevaluating the area and avoiding to buy new objects.

Product-Service System Innovation Characteristics:

The “Bonnets and Baseball Caps” service aims to involve people of the same community from 16 to 90 years old into educational activities in order to lower the intergenerational barriers by creating new partnerships. The proposed initiatives are carried out within the school system and cover English, art, music, computer science (...). These are all ideas that involve a collaboration between the generations and aim to get effectively into every school. On the 30th of April, “European Day of Solidarity Between Generations”, was made a theatre show about the intergenerational issue, in order to motivate people and eliminate prejudices.

Name of The Product-Service System Innovation

Connecting Generations - Playbusters

Content

Workshops for old and young to encourage integration, knowing the territory and to feel part of it.

Producer/Provider Name

Playbuster organization

Source/Contact

<http://www.playbusters.org.uk> - <http://www.scotcip.org.uk>

Eco-Efficiency and Socio-Ethical Characteristics:

The project goal, about the socio-ethical aspect, is to promote the knowledge sharing between elderly and children during workshop activities. The service, which includes the use of public areas for different activities, get the best from the local resources, from volunteers to the spaces, for a common use. This choice allow people to create a strong link to the territory creating a sense of belonging. The improvements to the space, as consequence, have further raised up the vitality of the area itself with a clear increase of participation and integration. About the environmental aspect the collaboration during the workshop allows to share tools and spaces with a lower cost to purchase and transport materials and resources.

Product-Service System Innovation Characteristics:

“Connecting generations” service, included into the wider Playbuster projects network, offers workshops and activities to promote the social inclusion in the territory. The service is available for people of all ages and take place in schools, community centers, youth clubs, community gardens, housing associations and community groups. The workshops are periodically repeated, always improved involving some external entities.

Name of The Product-Service System Innovation

New Spin Project

Content

Creating new friendships between generations through periodical free time activities.

Producer/Provider Name

Formed as a partnership between The Citadel Youth Centre and Pilmeny Development Project

Source/Contact

www.scotcip.org.uk

Eco-Efficiency and Socio-Ethical Characteristics:

The goal of the project, is to promote a new relationship between generations through collaborative activities. Intergenerational work aims to bring people together in purposeful, mutually beneficial activities which promote greater understanding and respect between generations and contributes to building stronger communities. Intergenerational work is inclusive, building on the positive skills that the young and old have to offer. It is important to mention that, unfortunately the eco-efficiency dimension not implemented in the project.

Product-Service System Innovation Characteristics:

The “New Spin Project”, proposes the intergenerational dialogue through a series of well planned activities together. To help and coordinate activities and relationships, there are two workers that support and guide the younger and older persons, respectively. On Friday there’s an “intergenerational café”, which is a place where all different ages can meet and do something together: from cooking, table gaming, to manual and practical works. These sharing moments are very important and allow to create and strengthen a deep understanding among generations with a continuous exchange of skills and information. An important aspect of this service is the possibility to propose new activities time by time. This characteristic of the service helps to make the experience more personal and participatory.

Name of The Product-Service System Innovation

Free To Be Your Age

Content

Students and old people work together on a DVD about the integration among different generations

Producer/Provider Name

Big Lottery - Wester Hailes Education Centre (in particular the Community Education department)

Source/Contact

<http://www.scotcip.org.uk> - <http://www.freewebs.com>

Eco-Efficiency and Socio-Ethical Characteristics:

The project is socially sustainable, indeed it can be re-used, in different context where is necessary to improve the exchange between generations, as a model to bring together young and old people. The use of multimedial systems made curious the two groups: uniting and equipping them with skills that, especially for the elderly, were not considered at all. The use of technology was a good common way between the groups and the skills gained can be re-used in many other occasions. So the main socio-ethical sustainable aspect in this case are: knowledge sharing and the enhancement of the territory.

The environmental side is not one of the main aspect of the project.

Product-Service System Innovation Characteristics:

"Free to be your age" project has been realized by the Wester Hailes Education Centre of Edinburgh, whose goal was to promote integration at all ages through the use of multimedia to produce music and images. Part of the work was done by the two separated groups (young and old people) to be then joined in a workshop to outline the main concepts to follow for the project. At the end of the collaboration the result were a poster to show the work done and a DVD which figured out the common and different points of different ages suggesting how to overcome them to create more complicity. The DVD is available to be use to make more and more people aware about the issue of social cohesion between generations.

The project has been developed in 2008 as a test but it was not repeated

Name of The Product-Service System Innovation

WOOPI (Wider Opportunities for Older People - Inverclyde)

Content

Becoming teachers or students: elderly and young share practical and theoretical skills.

Producer/Provider Name

Inverclyde Council's Community Learning & Development Department
(with the collaboration of Big Lottery)

Source/Contact

<http://www.scotcip.org.uk>

Eco-Efficiency and Socio-Ethical Characteristics:

The project goal, about the socio-ethical aspect, is to promote the knowledge sharing between elderly and youth through practical and theoretical activities in which young and elderly are alternatively "teachers or students". The service is self supporting with the funds provided by Big Lottery and thanks to the presence of many volunteers who plan and direct the activities. A significant help is given by the associations present in the area that make more different the age of the participants and so the offered activities. Thanks to the constant presence of initiatives the area became safer; people use the resources of that place, like volunteer spaces, staying there and pushing other people to join. The possibility to use the local resources and spaces increase the eco-efficiency, reducing the transportation costs and intensifying the use of products.

Product-Service System Innovation Characteristics:

"WOOPI" service offers to the old people of the most disadvantaged areas, a program of practical and theoretical activities with the participation of young people who may be "teachers or students" according to the proposal. The goal is to create interaction between the generations to help and improve sharing skills.

The activities:

- Multimedia: digital photography, video editing, computer classes and web browsing;
- Practical work: sewing, creating the design, make flower arrangements;
- History of Scotland;

- Creative-arts: making jewelry, and musical theater workshops
- Sports: aerobics, dancing;

Personal support: dialogue group for families

Name of The Product-Service System Innovation

Nessuno escluso! Un ponte tra giovani e anziani

Content

The service, through the creation of all ages labs and involving the local associations, want to create a community of the territory joining and reinforcing the resources already present there. And to motivate volunteers that will operate even beyond the end of the project.

Producer/Provider Name

Bologna – VOLABO (volunteers centre Bologna)

Source/Contact

www.volabo.it/cd/blu025.pdf

Eco-Efficiency and Socio-Ethical Characteristics:

The service allows the local associations sharing the spaces and exploring the different realities of the community. Moreover the use of already present local resources: from volunteers to materials and the spaces offered by the associations, contributed to reinforce the cohesion by making sure that anyone could take part of the activities without moving too far and sharing the experiences with new and known people. Not last the creation of many artifacts, then exposed in the suburbs streets, contributed to strengthen the feeling of belonging to the territory.

Product-Service System Innovation Characteristics:

“Nessuno escluso!” service, that involved several organizations in its implementation, moved about the social intergenerational cohesion, through the creation of highly aware and motivated volunteering; who would be able to overtake the limits of the welfare state to build a resource for the community even after the end of the project. The Auser employees coordinated all the activities in collaboration with the associations already existent; Auser and associations decided together the activities and co-projected the way to follow the objectives.

Name of The Product-Service System Innovation

Cooking Bus

Content

roaming bus offers free cooking sessions to promote consumption of healthy food.

Producer/Provider Name

Community Food and Health (in collaboration with Focusonfood)

Source/Contact

www.focusonfood.org - www.scotcip.org.uk

Eco-Efficiency and Socio-Ethical Characteristics:

The social goals of this project are: relationship creation and help in daily activities/sharing a good knowledge. In general the service aims to bring young and old to eat more healthy foods. This is made possible using a bus to move into different areas and to make try the experience of cooking with good standards for daily nutrition. The cooking bus are autonomous for the production of electric energy, necessary for the use of the equipment, and they take care to produce the minimum amount of waste possible. The experience offered is also intended to invite people to the consumption of healthy food not only during the course, but giving and trying the recipes, to reproduce them in everyday life.

Product-Service System Innovation Characteristics:

The "Cooking Bus" service, promoted by the Community Food and Health, has been offered to Pilmeny Development Project for a project of inter-generational cohesion through the development of culinary workshops aimed at promoting the consumption of healthy food. The activity was carried out in a pickup truck equipped with kitchen, with the participation of four seniors, three boys and three team members. There have been prepared different recipes which follow are some guidelines on healthy cooking in everyday life. Anyone passing outside, close to the cooking bus could be able to see through a screen what happened inside and somehow feel part of it. The service was proposed in 2010, is still active and dedicated to the schools.

Name of The Product-Service System Innovation

Omaabi- self help community

Content

Elderly people support each other; earn extra income and dine out cheaply.

Producer/Provider Name

Elderly of the neighbourhood, Tallin

Source/Contact

Creative Communities (Anna Meroni – Edizioni Polidesign)

http://www.sustainable-everyday.net/main/?page_id=19

Eco-Efficiency and Socio-Ethical Characteristics:

Society. Elderly people who feel in good shape rich, in experience, can keep being active and useful in the neighbourhood. They can help others and the others help them. A very important task of the Self Help Community is maintaining Estonian national handicrafts, keeping the tradition going and passing knowledge to younger people. Now it has joined the EU, Estonia, a small nation, needs to keep its own cultural traditions and national character.

Environment. The handicrafts use local and traditional materials and resources, and their manufacture suits the local environment.

Economy. Estonia's cost of living is increasing and most old people in Estonia are very poor. Omaabi enables consumers to buy things for cheaper prices, and the elderly can buy cheap food and services and get benefits from their work.

Product-Service System Innovation Characteristics:

The self-help community of elderly retired people runs a shop and a little diner, providing opportunities to socialise, sell home-made handicrafts and eat out for the lowest prices in town. The community began as a few pensioners making handicrafts together, and selling them when they got the current building. It now has 48 pensioner members. Its building, near the city centre, with a ground floor acting as handicraft shop, cafeteria and hairdresser. The cafeteria is where elderly and lonely people meet up, hear live music once or twice a week, and eat very cheaply. The prices in the handicraft shop are also low. Most of the goods are made by members, with some from outside craftsmen, but the shop will only sell beautiful things. Self help was created to give old people a new lease of life and a new sense of 'family'.

Name of The Product-Service System Innovation

Modena e Reggio ospitali da sempre (Giovani cercano anziano – anziano cerca giovani)

Content

Cohousing service to favour elderly and students

Producer/Provider

City of Modena and Reggio Emilia

Source/Contact

www.comune.modena.it

Eco-Efficiency and Socio-Ethical Characteristics:

The project goal is helping the elderly in daily activities and creating relationships between different generations. The service promotes the social aspect of the cohabitation and allows both students and elderly to save some money (a cheap rent for the student and some extra money at the end of the month for the elderly). This cohabitation can encourage other kind of collaborative behaviours, like sharing the cost of the food or helping to each other in some tasks. The eco-efficiency improvement is the reduction of energy consumes by sharing spaces, cooking together, etc.. and by the extension/intensification of the use of the products.

Product-Service System Innovation Characteristics:

The project, started in 2009, offers to the students of Modena and Reggio Emilia universities a solution of cohabitation. This service, provides a cheaper accommodation for the students who don't have so much money and like the idea of sharing a part of their time and space with an elderly person. Before starting the co-housing experience the municipality of Modena and Reggio Emilia organize some meetings between the young and elderly. These occasions helps both sides to start to know each other in order to create the perfect co-housing situation and to avoid future problems. During the cohousing year the meeting service is available to discuss about problems or to help in particular circumstances. Before starting the experience student and the elderly have to sign a contract called "Good relations code" to ensure a set of rules. Moreover both have to sign a document to define the cohousing time that can be renewed year by year. The rent is 180 € per month for the student and they have to help to the elderly in daily activities. On the other side, the elderly person has to provide a room and a kitchen to the student.

Name of The Product-Service System Innovation

Buchticket - Book exchange

Content

Get new books and DVDs, share them easily, without have them all at home.

Producer/Provider

Get new books and dvds, share them easily, without have them all at home.

Source/Contact

Communities (Anna Meroni – Edizioni Polidesign) -
www.tauschticket.de

Eco-Efficiency and Socio-Ethical Characteristics:

The socio-ethical aspect is about the involvement of the users as a primary source of the service, it creates a greater trust and sense of sharing among the users who feel useful in first person. The service live only with an online platform, it doesn't have big costs and is therefore able to self-sustain itself. It doesn't even need ads and commercials thanks to the potential of the web and the members communication and this further lower the managing costs. About the eco-efficiency aspect, the service allows to lower the quantity of books produced, making them be read more than just one time and then putted away, but continually shared and reused. This, in addition to the chance to have a lot of different titles available, make people get more passionate about reading becoming themselves a main structure and resource of the service. Fewer books need to be produced. Statistically people buy or borrow a new book when they've just finished a previous one, meaning that reading encourages more reading. By offering people easy access to new "used" books, the idea of using instead of owning diffuses into people's minds.

Product-Service System Innovation Characteristics:

The "Buchticket" service, created by 5 friends to exchange books each other, now has 18000 users that have the opportunity to share books and dvds, through a website, without any membership cost or the prices of the books. To join the service you got to create an account, select the chosen book and put on some others to exchange. To have a book you must offer other books back as a warranty, giving the service the opportunity to gain more and more resources.

Name of The Product-Service System Innovation

Exchange corner in Radio Krakow

Content

Exchange of tools or “practical help” for the habitant through a radio program

Producer/Provider

Radio Krakow

Source/Contact

Creative Communities (Anna Meroni – Edizioni Polidesign) – www.radiokrakow.pl

Eco-Efficiency and Socio-Ethical Characteristics:

About the socio-ethical aspect of the project the opportunity to offer “practical help” allow to valorise the users competence; making them a service main resource and helping the birth of new friendships. Using the offer, without any financial transition, allows anyone to afford it, making the process even more open, useful and satisfactory for the users. The only cost of the radio is the radio operator, while is suggesting the exchanges contacting the people only telephonically. The eco-efficiency improvement done by the service is the possibility to exchange not-so-used-anymore objects with other objects or “practical helps”; it allows to produce less objects, ensuring sharing and, as a consequence, a longer and more intense use.

Product-Service System Innovation Characteristics:

The “Exchange corner” service allows users to exchange various objects and “practical helps”, without purchasing or paying anything. The offer moved from Krystyna Wojcik, Krakow citizen, who have noticed the need to have objects and services in everyday life which often the cost is too high and they stay unreachable. “Exchange corner”, because is free, was largely successful and is, today, very active and used by many old people of the city. Its achievement was possible thanks to Radio Krakow which offers a “transmission-space” on the Saturday morning: people are invited to call to ask or reply to some requests and will then be the radio itself to put in touch the people to solve the questions. The service is offered to old people of the neighbourhood but is now used also from adults from outside the district.

Name of The Product-Service System Innovation

Meerhoven senior Club

Content

Elderly people spend time together in a new facility.

Producer/Provider

Senior Club, Eindhoven

Source/Contact

Creative Communities (Anna Meroni – Edizioni Polidesign)

Eco-Efficiency and Socio-Ethical Characteristics:

The service, which include a bar and a laboratory room; use for the activities some modified classrooms in the local primary schools. The reuse of these spaces include the already existent furniture: tables, chairs (...) avoiding to produce and buy new stuff. The active participation of the olds for the bar turns and the laboratory managing, allow the service to self-sustain economically and to go on just with the support of the local authorities. This inclusion into the activities and managing of the service have an important social value, due to the use of the olds skills and competences, giving them satisfaction and autonomy. The main social purpose is heading to the relationship creation and the context enhancement. Although the main purpose is social integration, the club shows environmental benefits, such as re-using a location and materials from previous activities.

Product-Service System Innovation Characteristics:

The “Meerhoven senior Club” service offers the use of a common space to take part to activities to promote socialization among the neighbourhood elderly. The feature of the initiative, which consist of a bar area and a workshop lab in a school, is that it was wanted and implemented by the old people themselves with the only support of the local authorities. Is, indeed, a reality which is self-sustaining itself thanks to the elderly who manage the bar, where the prices are very affordable, and other olds who put their skills into the laboratory works. Some other supporting activities are made in the centre, as the free Christmas lunch to anybody want to take part and welcome someone less lucky home.

Name of The Product-Service System Innovation

“Prendi a casa uno studente”

Content

Two generations cohabitate for a mutual help.

Producer/Provider

MeglioMilano (from 2011 with Fondazione Cariplo)

Source/Contact

Creative Communities (Anna Meroni – Edizioni Polidesign) -
www.megliomilano.it

Eco-Efficiency and Socio-Ethical Characteristics:

The service, which offers a cohabitation program for young and old, environmentally allows to the guests and hosts to save money encouraging the sharing of spaces, resources and objects. This coexistence also allows more students, at a competitive price, to live in the city, limiting the number of commuters and the crowd on public transport. The opportunity to share the spaces also allows to optimize the use of the light and heating. The created relationship result in a better inclusion of the old people who have in this way constant company and security. Socio-ethically the touched aspect are: relationship creation and context/territory enhancement.

Product-Service System Innovation Characteristics:

The “Prendi a casa uno studente” service offers the cohabitation between youngs and olds in the city of Milan. The young hosted don’t pay a real expensive but they monthly help with the house’s costs with 250-280 euro, and they collaborate with small aid and company. This way retirees suffer less loneliness and they find back the joy to still feel useful. To the achievement of the service, MeglioMilano collect the requests, deepens the knowledge of young and less young people and organize the meetings; offering its assistance all the way along the knowing and cohabitation path. Consistent with the received offers they try to put the young guy as close as possible to the uni or working key point, minimizing the commuting and leaving more free time to give to study or rest. The cohabitation is regulated by an hosting agreement at least 6 months long, renewable for the needed time or cancellable due to mutual dislike. From 2004 started over 650 cohabitations of which just 8 interrupted for incompatibility.

The service born in 2004 is still active and is expanding from 2007 with the variation “Prendi a casa un infermiere” (Bring home a nurse).

Name of The Product-Service System Innovation

Coach house trust

Content

The service propose, for less able people with addiction and mind disorders, theoretical and practical activities to help them to get some skills and to re-integrate in the society.

Producer/Provider

Coach House (no-profit organization)

Source/Contact

Creative Communities (Anna Meroni – Edizioni Polidesign) www.thecht.co.uk

Eco-Efficiency and Socio-Ethical Characteristics:

The service self-sustain itself economically thanks to the handcrafts made, which allow some earnings to the centre, used to raise up the quality and quantity of the proposed activities. Among them the participants have healed some areas next to the Coach House; creating new green spaces for the citizens and reusing the scrap materials to achieve their own creations. To use at the best their vegetables production the Coach House sell to privates and restaurants the vegetables, and make some lessons about gardening and children feeding in the neighbourhood schools. On the social level the offer is very wide and are followed the inclination of every person for planning the proposal. The opportunity, about the socio-ethical aspect, is to re-evaluate and put people back into the society; it is a positive result for themselves and for the Coach House, but also for the whole town that will be more secure, collaborative and efficient.

Product-Service System Innovation Characteristics:

The service, offered by the “Coach House”, allows people with addictions and mind diseases to access to a protect community; within which increase their own skills for a possible rehabilitation into the society and in the working world. All this is possible thanks to the proposed activities: wood work, ceramics, gardening activities and materials recycle. The works are made by people in collaboration with external actors, and then are sold in the Coach House shop at the city centre. The opportunity to sell their handcrafts give satisfaction to the makers and help citizens to get in touch with the activities of the centre. The participants are around 100 people, 80 sure every year.

Name of The Product-Service System Innovation

Ci vediamo tutti in biblioteca!

Content

Library activities for all ages, rebuilding neighbourhood memories and promoting the future of the town.

Producer/Provider

Comune di Milano (with the funds of Fondazione Cariplo)

Source/Contact

www.tuttiinbiblioteca.it, www.comune.milano.it

Eco-Efficiency and Socio-Ethical Characteristics:

The socio-ethical aspect of the service promotes the knowledge sharing allowing participants to deal with new media and learning important concepts which can be exploited in the future. Moreover the project approach in a new way the argument of libraries as a source of knowledge, promoting media for transmitting information. With WebTV and some documentaries about the memory and the place, the project give more space for the active participation of young and old. The opportunity to use the library space also gives greater visibility to the library itself and make them more actual, and promotes the sharing of space, books and knowledge even more strongly than before. The choice to document and represent the territory and the inhabitants also helps ensure a contact and a possible integration between space and people. The eco-efficiency of the service is done by promoting the share of the books, avoiding to produce more book and leading people into the share/exchange logic.

Product-Service System Innovation Characteristics:

The “Ci vediamo tutti in biblioteca!” project has as its goals the social cohesion and intercultural and intergenerational dialogue; to integrate the different age groups, with activities and targeted proposals in the areas of Milan. The different activities are also an excellent chance to discover and know the area of Milan and what it can offer:

CITIZENS OF ONE CITY

Calvairate Sormani Libraries (zone 1 and 4)

Partner: ABCittà

The experiment, made especially for guys from 14 to 16 years, move to increase their sense of identity and belonging to the city, through

the comparison between center and periphery. Workshops and events will be made to accommodate young people in libraries with the chance to combine traditional culture and multimedia.

TWB - TV Web Library

Valvassori Peroni Library (zone 3)

Partners: Consorzio SIS – Sistema Imprese Sociali

The experiment, made for teenagers and young adults, consist in the creation of a Web TV that documents the territory of Lambrate and promotes the activities in the library. Giving young people the opportunity to acquire skills, to make them more aware of: both the expressive potential of multimedia and web, both the complexity and transformations of space and territory in which they live.

NON E' MAI TROPPO TARDI

Accursio, Harar, Lorenteggio, Sant'Ambrogio, Sicilia Libraries (zone 6, 7 e 8)

Partner: Equinozio - Barrios -Teatro Sguardo Oltre - Associazione Art&Sol

The experiment will involve citizens in the elderly to help them overcome social isolation linked to the technical inability to access information sources on-line, providing them services for the practical learning of new technologies and opportunities for training, meeting and leisure.

LA BIBLIOTECA CREATIVA

Dergano-Bovisa library (zone 9)

Partner: Asnada onlus - Centro Culturale Multietnico La Tenda - Voci di Mezzo

The test aims to foster dialogue between Italian and foreigners citizens, with the imaginary and the various creative vehicles in the middle of the building of a relations of familiarity platform that would make the library a shared space, full of experiences, voices, memories, narratives.

GIOVANI DENTRO

Affori library (zone 9)

Partner: La Lanterna - Associazione Teatrino al Rovescio

The test move to involve over 65 years people of the neighborhood in the organization of the cultural offer in the library, so that the elderly will return to the role of active actors and promoters, sharing their memories with youth.

Name of The Product-Service System Innovation

Connecting Generations

Content

Lower the loneliness in old people and give more familiar stability for the youngs.

Producer/Provider

Calouste Gulbenkian Foundation's IntergenerationALL programme

Source/Contact

www.intergenerationall.org - www.scotcip.org.uk

Eco-Efficiency and Socio-Ethical Characteristics:

The service propose, about the socio-ethical aspect, is to re-create or make stronger the relationship-connection between grandparents and nephews; through spaces and activities. Keep this relationship is very important to avoid loneliness in elderly, remarking their abilities and help them to keep a good autonomy level. Children, from the grandparents inclusion in the close family would have back a better stability and the opportunity to learn some practical skills that may be useful in their future. For the parents, to have a good relationship with the grandparents could mean a good alternative to babysitting with more safety and economy. The eco-efficiency is not reduce or implemented in the project.

Product-Service System Innovation Characteristics:

The "Connecting Generations" service aims to connect grandparents and nephews; to lower the loneliness in elderly and give more stability in the growth of the children. This project, made mainly for those families with internal problems, runs through many proposal in one year:

- Regular sessions of mediation between generations for the whole family;
- periodic discussion sessions separated;
- dedicated space for grandparents and nephews, where they interact, play and regain trust and confidence;

The intent is to restore roles and stability in the family so that all ages have a space and you can make better use of resources of each.

Name of The Product-Service System Innovation

I giovani e la memoria

Content

Pictures of the area as a background of the elderly speaking.

Producer/Provider

Il cerchio di gesso ONLUS (funded by Fondazione Cariplo)

Source/Contact

www.ilcerchiodigesso.it - www.bergamomemoria.it

Eco-Efficiency and Socio-Ethical Characteristics:

The project helps, with the media presentation, to track and share the history of the area. This choice makes it easier to get and share the contents and contribute to revive traditions that would otherwise be lost. The collaboration between the two different generations also helps to bring the elderly to media reality and let the youth know their origins to learn to appreciate them. The main socio-ethical purposes are the relationship creation, knowledge sharing and to maintain the history and traditions of the territory. Environmentally there's a preservation of the area.

Product-Service System Innovation Characteristics:

The project "I giovani e la memoria" is part of the "Bergamo nella memoria" that has as target the digital collection of memories of the area. The results achieved, videos and photographs will be uploaded on the website www.bergamomemoria.it and divided along the following themes: Food and Wine, Work, Places, Society, School, History. The project involves young people in schools, Italians and foreigners, and the elderly who were born and raised in the territory. By creating opportunities for meeting, will be made videos and shared experiences to introduce young people to their history and allow older people to bring out memories and traditions. The use of digital media support has been chosen to make the material easily accessible and shareable, giving young people the opportunity to learn something new.

Name of The Product-Service System Innovation

ab-IT: Auchinairn & Bishopbriggs IT Project

Content

Young students help old people to approach the internet network.

Producer/Provider

Strathkelvin Activities Club (in collaboration with Bishopbriggs Academy)

Source/Contact

www.scotcip.org.uk

Eco-Efficiency and Socio-Ethical Characteristics:

Socio-ethically the project create relationship and share knowledge. The project indeed allowed older people to learn a new way to communicate with the outside, getting to understand the digital world that usually creates a lot of mistrust in them. The possibility also to attend the course outside the community and supported by young students helped make the experience even more effective and of exchange. Young people had the opportunity to test their explanatory power, getting from the university a reward for volunteering. The environmental aspect is not considered in this project.

Product-Service System Innovation Characteristics:

The "ab-IT" project, to learn the basics of computer and browsing the net, was followed by ten members of the Club Strathkelvin and led by six students of the Bishopbriggs Academy university. Young volunteers supported and directed the group to learn in a 15 hours course. During the lessons, kept into the university itself, good relations of understanding and cooperation were born and, in older participants, it was clear that many skills were acquired and this has created a sense of accomplishment in both groups. Most of the older students were enthusiastic and anxious to continue learning the computer to create a Twitter page and use Skype. At the end of the course was organized a big party, where were given the certificates and, to students / teachers, were given some tickets to cinema.

Name of The Product-Service System Innovation

Internet Saloon

Content

Students teach to people aged 50+ the big world of internet

Producer/Provider

Associazione Interessi Metropolitani (with the initial support of Gruppo Bancario Credito Valtellinese, HP - Hewlett Packard, Microsoft Unlimited Potential-CTS e Telecom Italia).

Source/Contact

www.internetsaloon.it

Eco-Efficiency and Socio-Ethical Characteristics:

The service move toward the creation of new relationship and the knowledge sharing among different generations. It is totally free, offers to the over 50 people a good opportunity to get into the media reality. Giving also the possibility of repeating the experience and use the resources on site, gaining more knowledge each time. The participation of students allows them to test and exploit the knowledge gained in comparison with another generation. The materials and spaces are enjoyed and shared by several people allowing to optimize the use and ensuring a secure financial savings to participants. The setting of the service, based on a single lesson, allows, to people on the move, to participate increasing massively the number of attendees.

Product-Service System Innovation Characteristics:

The "Internet Saloon" service offers: The internet basic course lasts just one day and is set up in a way that anyone, even without any knowledge of the PC, after six hours of lessons, can surf the net and use the e-mail. The teachers are university students prepared for this kind of teaching. Each location of Internet Saloon is organized on two structures:

- Classroom for courses with multimedia stations and big screen
- A computer "gym", with other multimedia stations where the "students" can come back and become more and more familiar.

The Milan office is a 160 square meters internet school, without any architectural barrier within the "complesso delle Stelline" in Corso Magenta 63.

Name of The Product-Service System Innovation

YOBS - Youths On Bikes Scheme

Content

Some kids deliver food to the old people by bike.

Producer/Provider

Designer: Rosalie McCluskey

Source/Contact

www.scotcip.org.uk

Eco-Efficiency and Socio-Ethical Characteristics:

The service offers an ecological way of delivery of fruits and vegetables, by the mean of bicycle. The opportunity that is given to the kids to deliver fruits and vegetables, helps them to know their district better, while they are helping to the elderly. And also use the bicycle for the rest of the week freely. This collaboration, which has the advantages for both sides, has created a self-sustain service and has this potential to be implemented within many other contexts. The main socio-ethical aspect is the relationship creation within different contexts.

Product-Service System Innovation Characteristics:

The "YOBS" service offers the weekly delivery of fruits and vegetables during the winter months for the old people. By the half of the week, the food lists are collected and young and middle-age volunteers meet up at the centre to pack the bags for delivery. The orders are provided, divided and collected carefully by the local retailers in a cheap price. The final delivery, which is the main feature of the service, is done via bike during the weekends by a group of guys. They could use the bike for the rest of the week for free.

Name of The Product-Service System Innovation

Liberi Spazi

Content

enable young people of the valley to live in the area, and feel great in there.

Producer/Provider

Comunità Montana della Valcuvia (in collaboration with the comune of Cocquio – municipalities of Valcuvia)

Source/Contact

Daniele Donati (teacher comune of Cocquio) – Paola Bacchetti (teacher Comunità Montana of Valcuvia)

Eco-Efficiency and Socio-Ethical Characteristics:

The service goal, about the socio-ethical aspect, is to promote relationship creation between youth and with the context/territory. The opportunity to have an hangout place for the teenagers, allows them to participate more actively in the community, not having to look elsewhere for entertainment, or to have none because of the distance from the other towns; helping their integration with other residents and a reevaluation of the territory with less vandalism and liabilities of youth. About the eco-efficiency of the service, it allows young people to use, at different times and for various activities, a room of the municipality. In this way the space is used for collective use, and at the same time, empower young people who must keep it in good condition and to better manage the equipment included to be use later.

Product-Service System Innovation Characteristics:

“Liberi Spazi” project, dedicated mostly to Valcuvia’s young people, offers the use of space in the town of Cocquio and the collaboration of some educators to promote youth participation in communities and connect different areas of the valley. The structure of the project includes the self-proposal of some activities by the young people involved, making it more flexible and addressed the real needs of participants.

The space has become:

- test-playing room (with materials funded by the municipality);
- venue for the basic guitar course;

- film club-room;
- hangout place;

Young people, after following the first activities as participants, have become co-organizers of the activities themselves, in particular about the management of the time schedules, materials and spaces. Influenced by the collective enthusiasm and by the constant support from the area, young people have put forward additional proposals aimed to make the initiative become something to involve the citizens and the others youngs not directly involved.

Among the proposal:

- Rock-festival (to give visibility to the emerging bands and create an event open to all);
- realization of an painting exhibition;
- course of photography / poetry;

The activities carried out have given visibility to the presence of youth in the valley, considered almost nothing until that moment. This has also meant that young people would motivate each other, involving more and more people and giving an opportunity to the area to take an advantage of a resource to involved as much people as possible, idea so far not really considered.

Name of The Product-Service System Innovation

Bonnets and Baseball Caps

Content

Intergenerational partnership in school activities.

Producer/Provider

Hamilton Gardens Sheltered Housing in collaboration with Stewarton Academy – East Ayrshire Volunteer Centre

Source/Contact

www.scotcip.org.uk

Eco-Efficiency and Socio-Ethical Characteristics:

The service aim is to examine the misunderstandings that can occur between older and younger members of the community and to help break down barriers between the generations. The project was developed to address these issues by providing an opportunity to involve pupils in voluntary work within the community and across the generations. Additionally, it was hoped that this would allow the schools to be engaged in activities that would meet outcomes from the Curriculum for Excellence. The main focus is on the concept of stereotyping and the similarities and differences between the generations. All the participants considered the experience to be life changing and had increased their confidence in taking part in activities and interacting with different generations. Furthermore, the young people gain valuable experience in volunteering and gained an insight to the practical difficulties older people can sometimes face.

Product-Service System Innovation Characteristics:

The “Bonnets and Baseball Caps” service aims to involve people of the community from 16 to 90 years old in the educational activities in order to decrease the inter generational barriers by creating new partnerships. The proposed initiatives are carried out within the school system and covers English, art, music, computer science.

Name of The Product-Service System Innovation

Cooperativa Arcisate Solidale

Content

Work for some local companies to get out of the difficulties

Producer/Provider

Parrocchia S. Vittore – Comune di Arcisate (in collaboration with Consorzio Prov.le SOL.CO. Varese S.C.R.L.)

Source/Contact

Don Luigi Sacchi – actual referent Montalbetti Aldo
via Arcimboldi, 23 - 21051 Arcisate (VA)

Eco-Efficiency and Socio-Ethical Characteristics:

Environmentally the project involves the use of the church's spaces gave by the initiative, ensuring a secure environment for the members and the proper management of the church's spaces. The impact of the service on the community is significant, but not always understood by those who live outside; it is a good opportunity for participants to have a successful reintegration into society and to have a constant rehabilitating managing in time. For companies that collaborate is positive to give some works out to get a lower price of production and help, in the meantime, one part of society with a re-evaluation system through work.

The main socio-ethical aspects touched by the project are the relationship creation and the context/territory enhancement as the Area reevaluation and the spatial/belonging sense improvement.

Product-Service System Innovation Characteristics:

The "Cooperativa Arcisate Solidale" service, dedicated to disabled people, people with addictions, ex-prisoners and invalids, provides a daily work schedule to promote the upgrading and retraining of participating people in the community. The proposed activities are commissioned by companies in the area, the tasks include:

- clean environments;
- various assemblies and packaging;
- transportation of non-independent persons;
- land-management services;
- services to various government agencies;

The service, born in 1989 is still active.

Name of The Product-Service System Innovation

Punto e Linea

Content

To develop social project co-operating with the districts habitants to reevaluate areas and people

Producer/Provider

consorzio SIS - consorzio SIR - Local non-profit association (ASP) - City of Milan (in collaboration with social cooperatives: Azione Solidale - Grado 16 - La cordata - Open Space Services, Associations: Alma Rosé - Art Kitchen) (funded by Fondazione Cariplo creator of the notice)

Source/Contact

site www.progettopuntoelina.it

Eco-Efficiency and Socio-Ethical Characteristics:

The project socio-ethical aspect, which operate in four areas of Milan: Baggio, Giambellino, Barona, and Gratosoglio, has as main goal the revitalization of suburban youth: turning them from problem to be solved to ignition of change. This choice has raised many initiatives to be promoted in the areas where these guys belong: improving the neighborhoods, using existing resources (space and associations), and making sure that young people will find solutions without moving, enhancing the areas where they live. This has resulted in: in Giambellino and Barona 's case to exploit the local associations (Giambellino Cooperative - Alma Rosé, Art Kitchen) in the case of Gratosoglio to use sports facilities in the area. The proposed multimedia activities web radio and web TV, which involved a lot the youngs, didn't require the use of large spaces, becoming almost self sustainable and a repeatable experience in other situations. Finally, the opportunity to offer to young people of the suburbs the occasion to improve their areas, can make Milan a safer, cohesive and alive city.

Product-Service System Innovation Characteristics:

The vision of "Punto e Linea" project is to make the youngs play a protagonist role in the suburbs.

To make this possible have been proposed some guidelines:

-create new polarity in the peripheral areas (hubs) promoting posi-

tive and constructive relations among young people;
-Enhancing connecting potential of these sites;
-focus on the youth aggregation as an engine for the redemption of the territories.

The project, to materialize, choose to use the concept of “community hub” that it means the creation of transition, sorting, cross spaces, to support local communities, including a broad participation of citizens, and to suggest and organize activities and meetings in the territory. To develop the concept in practice were made five Hubs in the suburban areas: Baggio, Giambellino, Barona, Gratosoglio and Sovralocale (central hub for managing all the others Hubs). The common target is to reorganize the reports and services system, strengthening it and giving him new, solid bases.

Part 2

TANGO
AH-Design PROJECT

3 TO SUSTAINABILITY THE TANGO (AH-DESIGN) SUSTAINABLE SOCIAL INCLUSIVE EU PROJECT

3.1 THE TANGO: A PROJECT TO DESIGN AND FOSTER INNOVATIVE SOLUTIONS FOR SOCIAL INCLUSION

75

TANGO (*Toward A New interGenerational Openness*)/ AH-Design project is an European Community (Culture Programme of European Union-Education and Culture DG) financed project which has, as main issue, to explore the issue of social inclusion and in particular the intergenerational dialogue.

The project started in September 2011 and will last for two years until August 2013.

Partners of the project are **Aalto University** (coordinator - Finland), **Politecnico di Milano** (the Design and Innovation for Sustainability (DIS) *research unit of the INDACO dept.*, Italy) and **L'École de design Nantes Atlantique** (France).

The general objective of the Tango project is to promote the social inclusion directly as a part of the design process of the project, involving external participants from the very beginning of the process to plan and develop together the path to design, innovative solutions.

In other terms the three partners are carrying out the Tango project as a co-design process involving the local actors, with a key requirement of activating elderly and youngsters, and communities as well as companies, associations and administrations as active parts of the design phases. They will be co-designers, final users or possible partners of the innovations to set the stage for future implementations.

In particular, every partner has been planned didactic courses as well as workshops and meetings to understand the local point of view and to add more trust to the projects.



Figure 3.1
tango postcard

3.2 ACTIVITIES

The three partner universities, activated 6 university courses, as well as workshops and/or degree thesis in the respective cities between 2011 and 2013:

Aalto university in Helsinki:

The Aalto university has activated the course Repicturing Suburban Neighborhood (May 2012). The objective of the course has been to define the identity of Kannelmäki area (a suburban area in the north of Helsinki) to address ways for increasing its potential and profile in relation to intergenerational dialogue. During the course the students has started to design meeting places for intergenerational and multi-cultural inhabitants. Local culture and the arts have been utilized as mediums for delivering beneficial intergenerational interactions and revitalization models in the everyday life of suburban neighborhoods. The assignments of the course consist of individual and group work, lectures, workshops, field study and an activist/interventionist approach to design. During the course students evaluated their ideas with the locals in real context situations through design interventions. The process and results of the course are now published in Aalto University and World Design Capital 2012 web site.

Furthermore, Aalto activated the workshop Intergenerational Accessibility in a Sustainable Exhibition (October-December 2012). The focus of the workshop is on pedagogical models where people of different ages would meet each other and create new understanding of design and intergenerational exhibition pedagogy. The students are able to respond creatively to the exhibition context and exhibits, and gain knowledge on different age groups, gallery education in the field of design, and reflect upon the notion of a good life. Through the workshop, e-learning and tutoring students will learn and find ways of how the different groups of people can encounter interactively during the organized activities in a museum, in public spaces or/and in a design fair. The issues of intellectual accessibility are also emphasized.

L'École de Design Nantes Atlantique in Nantes:

L'École de Design Nantes Atlantique has activated the workshop Prototyping empathy-Design and prospective project (May 2012). The fo-

cus of the workshop is to explore intergenerational empathy exploiting developing and prototyping an 'Empathy methodology' related to seven different themes: Impacts of physical ageing, Memory, Health, Sexuality, Autonomy - socialization, isolation, Youth in the world of Adults, Older generations empathizing with digital natives and broader challenges of generation. Working in small groups of local and international students each thematic group have been responsible for identifying a design opportunity (problem), developing and prototyping an 'Empathy methodology' – an experience that illustrates enhances our understanding of the problem (empathy), and creatively ideate and communicate a TANGO scenario. While the processes of analysis and creation constantly alternate and overlap, the project is punctuated by intermediary presentations defining 2 phases: context analysis and preliminary designs, proposals; prototyped empathy expressed through innovative methodologies and illustrative design concepts.

Furthermore, L'École de Design activated the course Designing a sustainable catalogue (November 2012-January 2013). The focus of the course will be related to the design of the layout for Tango Exhibition Catalogue and Tango End Publication and the Exhibition communication elements i.e. panels, postcards, flyers to sponsor the Exhibition event in the Tango partner cities.

Politecnico di Milano in Milan:

The Politecnico di Milano has integrated the master course System design for sustainability (March-June 2012) hold by prof. Carlo Vezzoli as part of the Tango project. The course introduces to the theory and practice of Product-Service System (PSS) design for Sustainability. A first theoretical part presents the following topics: sustainable development and designer's role; evolution of sustainability within design; Life Cycle Design: methods, tools, strategies, guidelines and examples; system (PSS) design for eco-efficiency: criteria, guidelines and examples; system design for socio-ethical sustainability: criteria, guidelines and examples; designing transition paths for the introduction and diffusion of sustainable PSSs; methods and tools for system design and system design for sustainability. The second part of the course is a design exercise in which the students are asked to design new sustainable PSSs to promote social inclusion and intergenerational dialogue in 4 districts of Milan (Baggio, Barona, Giambellino and Gratosoglio). Four master degree thesis projects have been activated in parallel with the above course aiming at the co-coordinating the co-design process

towards the detailed design and incubation of 4 projects of Sustainable Product-Service System, promoting social inclusion and intergenerational dialogue in four districts of Milan. The design process coordinated by Prof. Carlo Vezzoli has involved four degree thesis students: Elisa Bacchetti, Alberto Fossati, Sara Hatef, Claudio Sarci (January-December 2012).

These being the core interest for this paper, will be described through their co-design processes in the following paragraph.

Furthermore, the Politecnico di Milano has integrated the undergraduate courses Design for environmental sustainability hold by prof. Carlo Vezzoli (October 2011-January 2012 and October 2012-January 2013) part of the Tango project. The course presents an approach to design environmentally sustainable products. The first part of the course includes a series of lectures and particular attention will be paid to the design of sustainable exhibitions and to relevant case studies in that sector. The second part of the course is dedicated to a design exercise aiming at designing environmental sustainable concepts using tools to orientate the design towards environmentally sustainable solutions (e.g. Life Cycle Assessment, indicators of strategic environmental priorities, eco-idea tables, environmental multi-criteria radar diagram, etc.). A master degree thesis project has been activated in parallel with the above course aiming at the detailed design and production of an environmentally sustainable exhibition system, that will be used for the Tango exhibition and as the new exhibition system of the involved universities (substituting existing unsustainable ones). The sustainable exhibition system is carried out by the degree student Alberto Aprea coordinated by prof. Carlo Vezzoli in a collaboration with the exhibition Lab of INDACO dept. of Politecnico di Milano.

Figure 3.2

Sds students presentation



3.3 OUTCOMES

The main outcome of the project will be the ***Tango interactive exhibition*** which will be hold in Nantes in March 2012, in Milan between the 9-14 of April during the Furniture Fair (Salone del Mobile) with a Cultural Partner in the Tortona Area, and in Helsinki in June 2013. The contents will be innovative concepts developed by the students in the three partner Higher Education Institutions, to foster intergenerational dialogue and setting the stage for future local implementation (Milano, Helsinki, Nantes). The proposal projects will be sustainable in social, environmental and economic terms.

The exhibition is being designed to act as a “tool” of the co-design process as a lab and window, involving the visitors with different levels of interactions: to be an agent of change:

- launch event for a real implementation of the sustainable social innovations designed (to be presented as concrete innovations that already ‘tomorrow could become a reality’)
- launch event to involve specific actors related to the sustainable social innovations (the actors are already involved in the co-design process and in the exhibition design, with the wish that during the design week they will make a commitment for the implementations defining roles and modalities)
- diffusion event for the development of the sustainable social innovation models in different contexts (to gather feedback about :the appeal of the models, the necessary conditions and characteristics to replicate the models in other contexts).

The exhibition is being designed to be a sustainable and accessible one, in an open source and copyleft ethos, allowing its free of charge replication/adaptation in other worldwide contexts

4 TANGO/AH DESIGN PROJECT IN MILAN: system design for social inclusion and sustainability in four suburban districts of Milan

4.1 THE MILANESE EXPERIENCE

The TANGO/AH-Design project for Milan is the result of a collaboration that the DIS (Design for system Innovation for Sustainability) research unit has activated with the System of Social Enterprises (SiS) Consortium, in relation to the “Punto e Linea” project, designed and managed by the SiS Consortium and funded by the Cariplo Foundation through the announcement: “Promuovere percorsi di coesione sociale nelle comunità territoriali”(Promote social cohesion pathways in local communities)2009.

The start-up meeting of the Tango Milan design process took place in February 2012 to settled the partnership between the DIS research unit and the SiS Consortium, to agree on the partnership and assign the operative roles and to plan the actions of the co-design process.

4.2 THE “PUNTO E LINEA” PROJECT

The “Punto e Linea” project started in 2010 through the **Fondazione Cariplo** funds and the participation of **SiS Consortium**, is an on-going project aims at fostering social cohesion through participatory initiatives in four suburban areas of Milan. The interventions have been developed in four HUBs distributed in four districts in the south-west area of Milan.

Fondazione Cariplo is one of the world's main philanthropic organizations, is a grantmaking foundation aimed to support the social, cultural, political, and economic development of a country . The foundation operates on the basis of the principle of subsidiarity, anticipating needs and fulfilling its special mission of being a resource that helps social and civil organizations better serve their community. The foundation manages the assets gathered by Cassa di Risparmio delle Province Lombarde since 180 years ago, to pursue its philanthropic mission and to give ideas a future.

The Socio-Ethical Characteristics:

The project's socio-ethical aspect, which operates in four areas of Milan: **Baggio, Giambellino, Barona, and Gratosoglio**, has as its main goal the revitalization the power of suburban youths. This project has raised many initiatives in the four district of Milan. Above all, improving the neighbours relationship by using existing resources (space and associations), and making sure that young people will find solutions for their problems without moving to the other parts of the city. These ideas, found their ways to the real life in collaboration with different local organizations and associations. In Giambellino and Barona districts by the help of (Giambellino Cooperative - Alma Rosé, Art Kitchen, Asp), in Gratosoglio by using the local sport facilities in the area and in Baggio by proposing the web radio and web TV activities, which involves a lot of the young people. Finally, this project by improving the social cohesion in each district aims to make a safer city for all inhabitants.

Product-Service System Innovation Characteristics:

The vision of the project is to see the young protagonists of the suburbs through the following actions:

- creation of new polarity in the areas;
- increase the connectivity between places;
- creation of the new places that can increase the constructive relations among young people;
- see the aggregation of the youths as an engine of the progression of the territories;

4.2.1 THE “PUNTO E LINEA” INITIATIVES

The Politecnico di Milano has identified (for the Tango project) 4 main activities already activated within the HUBs¹⁶, with the aim of re-design them to be more sustainable in environmental, economic and social terms; to be shown as agent of change in the Tango Milan exhibition, involving local actors, mainly final users as young and retired, as well as possible stakeholders to plan future implementations.

HUB BARONA: A system of cultural activities, composed of four courses related to creative and useful activities: video editing, cooking, make up and knitting. All the courses have been organized inside the popular school of Lope de Vega public house that it is a room inside the building and since the Punto e Linea’s project has been started, is being used to hold some useful courses in order to encourage the people to come together and be more socialized. An important aspect of the interventions is the collaboration with other social initiatives already existing in the district, to create more solid bases to interact with the inhabitants and promote a more comprehensive social involvement.

HUB BAGGIO: a Web Radio where district information, news from outside, as well as interviews to new bands or guests are shared and online available for all the residents (being on-line, in fact even worldwide). Everyone is invited to participate proposing new programs, giving feedbacks and ideas or taking part at the many different events. Furthermore the web radio offers didactic activities: from courses to use the equipment and free software, to school paths to learn about the radio and the importance of the information, as how to record your personal sound tracks that can be uploaded in the website of the radio. The Web radio has also an active role in the promotion of local events: through the direct participation and with the web based streaming of the program. Outside from the district the radio is coordinating “I have a stream” network of web radios to share information, contents and updates¹⁷.

HUB GIAMBELLINO: a Community Garden activity in the “Casetta Verde” space in Giambellino, that is an open location where to talk about the district’s issues and where to work together to promote the local context and shared priorities with concrete actions that would

16. The HUB represents the core management of each district. The Punto e Linea HUBs are five: HUB BARONA, HUB BAGGIO, HUB GIAMBELLINO, HUB GRATOSOGGIO distributed in three different zones of Milan, and HUB SOVRALocale which as the task to supervise and coordinate the other HUBs activities.

17. . www.ihaveastream.tk

improve the quality of life of the territory. The gardening activity has been proposed by a resident of the neighbourhood and is carried on with the support of the “Punto e Linea” project. The lab is aimed to the active use and participation of the space, people design and plan together the activities to be done. The participants garden together every Saturday and end the activity having lunch together with the products of the garden.

HUB GRATOSOGLIO: a Summer Camp is a one month per year activity with the aim of promoting sport as preventive action for deviances in the youth and as help for the social aggregation, creating connections between associations and local people and using public parks, parishes and other open places as already existing fields to carry out the sport activities. The Summer Camp offers to children participants: a guide, a street’s educator, and a coach for free, to teach the basic rules of three sports (football, basketball and volleyball), create challenging groups for a final tournament.

4.4 THE FOUR DESIGN THESIS

Four master degree thesis projects have been activated in parallel with the SDS course aiming at co-coordinating the co-design process towards the detailed design and incubation of 4 projects of Sustainable Product-Service System, promoting social inclusion and intergenerational dialogue in four districts of Milan, starting from the 4 identified initiatives of the “Punto e Linea” project.

ReMade in Barona, a PSS set-up in the Barona district a Repairing platform based in Lope De Vega school, activating a team of skilled retired persons to repair various stuffs with a very low price. The platform: assess the re-pair team’s qualification (mostly elderly and retired persons) qualification; put in contact with who needs repairing service; hosts specialised repair equipments.

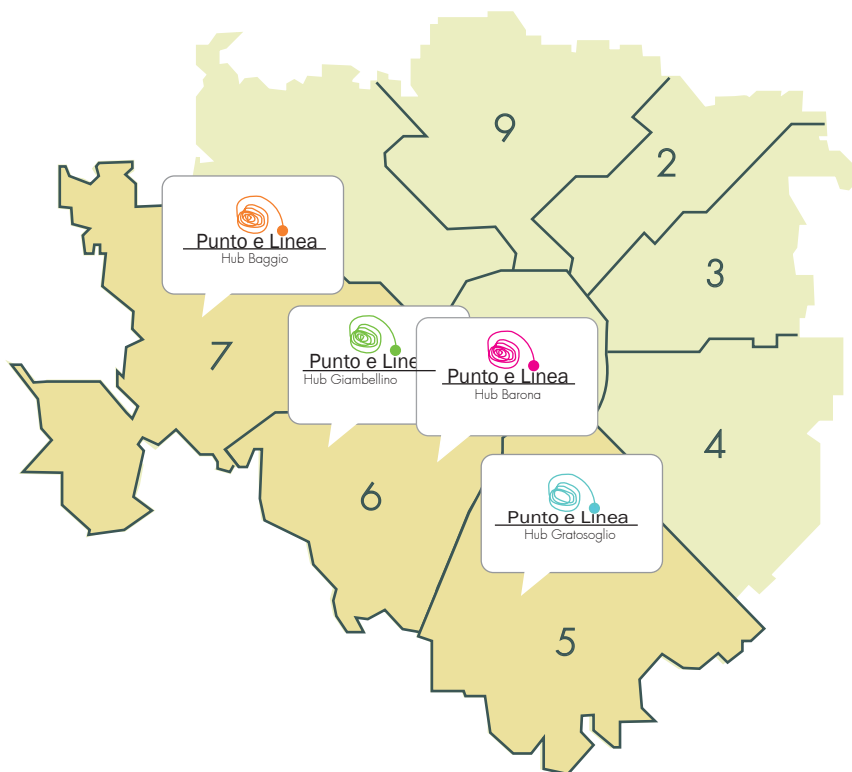
Share Radio (ex)change your time, a PSS that merges in the Baggio district the local webradio with the local bank of time, i.e. the web radio will host a web platform to eases the exchange of specific jobs among local inhabitants based on time (of job) exchange. The persons,

especially retired and youngsters, giving job/hours to the radio, will gain time credits.

CaseVerdi.net, a PSS set-up in Giambellino district a team of skilled retired persons cultivating in their balconies/gardens a set of niche gardening products with a high value; to be exchanged within the community or sold to the neighborhood, to specific shops or restaurants (with a market price). The platform, placed in la casetta: over check and manage the distributed gardens and its produces; put in contact persons or shops or restaurants with those having the produces they need; organises courses for specific cultivation.

SUN LIGHT intergenerational playground, a PSS set-up in Gratosoglio district a team of skilled retired persons able to offer to local primary schools and to their municipality-managed summer camps, a 2 hours a day services to take and follow the children in a set of sport activities organised in local parks properly equipped.

The design process coordinated by **Prof. Carlo Vezzoli** has involved four degree thesis students: **Sara Hatef, Elisa Bacchetti, Alberto Fos-sati, Claudio Sarci (January-December 2012)**



Part 3

TANGO IN MILAN
2011- on going

5 PSS DESIGN PROCESS: MSDS METHOD

5.1 INTRODUCTION

The Tango Milan design process has followed the Methodology for System Design for Sustainability (***MSDS method***) properly developed to support a Product-Service System design process and to orientate it toward sustainable solutions.

The method and its five phases are flexible about: procedural phases, tools to use, dimensions of sustainability to consider (environmental, socio-ethical and economic), and about the possibility to integrate other tools and activities; to be adapted to the specific needs of the designers/companies and to different context's conditions. It is organized in the following phases:

- ***strategic analysis;***
- ***exploring opportunities;***
- ***designing system concepts;***
- ***designing (and engineering) the system;***
- ***communication.***

The MSDS method has been integrated in the co-design process of the Tango Milan projects as support to orient the design of PSS innovations, and to facilitate the co-design process, adapting the method with few new tools, to involve the “Punto e Linea” Hubbers as champion actors, as well as the final users, mainly youth and retired, and new potential stakeholders.

	PHASE	PROCESS	AIM
STRATEGIC ANALYSIS	<ul style="list-style-type: none"> Defining the context of intervention and analysing the project proposer. Analysing the context of reference. Defining design priorities for sustainable solutions. Analysing the cases of excellence for sustainability. 	It has been done in collaboration with the Hubbers (Punto e Linea responsible) to understand: the context, the offer and the proposers. For each initiative has been made 2 video recorded meeting.	To obtain the information about the existing project, necessary to facilitate the generation of sustainable ideas.
EXPLORING OPPORTUNITIES	<ul style="list-style-type: none"> Generating sustainable oriented ideas workshop for generating sustainable system ideas 	The 60 students of System Design for Sustainability course co-designed with the hubbers the draft concepts for the 4 Tango briefs, i.e. In 3 meetings reviewed the PSS which have been developed with co-design visualization tools.	To make a "catalogue" of promising available possibilities, in other word, the sustainability orienting scenarios.
DESIGN SYSTEM CONCEPT	<ul style="list-style-type: none"> selecting the clusters of ideas/ or single idea. developing system concept 	The outcome of the course is analysed and the most promising are selected. in 4 co-design workshops with the degree students and hubbers the proposals are redefined in terms of, system structure, actors interaction, promising stakeholders.	Determine one or more system concepts oriented toward sustainability.
DESIGNING THE SYSTEM	<ul style="list-style-type: none"> detailed system design environmental, economic and socio-ethical appraisal. 	Detailed system design by the assessment of the environmental, socio-ethical and economical aspects are developed through the stakeholders contribution and technical experts.	To develop the most promising system concept into the detailed version necessary for its implementation.
COMMUNICATION		Draw up the documentation and the layout of the exhibition.	Draw up reports to communicate the general, and above all sustainable characteristics of the system design.

TOOLS	RESULTS	ACTORS
System map, Offering diagram, Qualitative sustainability report, SDO, district map, demographic district data	Set of mini doc(audio-video) Presentations and set of textual documents.	Polimi DIS team, 4 master degree thesis students, Punto e Linea hubbers key actors Of the 4 initiatives.
SDO toolkit: orientate+ check concepts, pffering diagram, system map, interaction table and story board.	animatic presentation: 12 sustainable PSS concepts	Polimi DIS team, SDS students (60), Punto e Linea hubbers, key actors from the initiatives.
Story board, offering diagram, stakeholder system map, questionnaire.	4 sustainable PSS consepts	Polimi DIS team, 4 master degree thesis students, Punto e Linea hubbers
Story board, offering diagram, stakeholder system map, business model, interaction table, interaction storyspot, motivation matrix, SDO, animatic and arduino	4 PSS innovation and audio visual	Polimi DIS team, 4 master degree thesis students, Punto e Linea hubbers, primary and secondary stakeholders, technicians of related field.
Visual tools, and tools used in the past phases	Exhibition lay out and documents	Polimi DIS team, 4 master degree thesis students

5.2 STRATEGIC ANALYSIS (SA)

First step of the design process has been the Strategic Analysis (SA) of the selected initiatives of the “Punto e Linea” project. It has been developed, in collaboration with the “Punto e Linea” Hubbers (management responsible of the initiatives) and with the key actors of each initiative organizing periodical meetings.

Main aim of this SA was to obtain information about the existing situation/offer, the proposer of the project and the context of intervention in which the offer is integrated.

Here the SA process phases followed for each “Punto e Linea” project initiative analysis:

- **Defining the context of intervention and analysing the project proposer.** Given that the project proposer may be companies, public institutions, research centres the aim of this activity is to define the areas of design intervention. The characteristics of the project proposers are examined carefully: the “mission”, the main areas of expertise, the strength and weaknesses, opportunities and threads, in relation to the areas of intervention. Also the value chain is analysed to understand how this is structured, what stakeholders are involved and what problems they could meet.

- **Analysing the context of reference.** The aim of this activity is to analyse the context, or rather the socio-technical regime, of which the new innovation will become a part. Firstly, the structure of the production and consumption system is analysed: what actors come into play, the relationships are among them, and the specific dynamics characterise the system itself.

PHASE

- Defining the context of intervention and analysing the project proposer.
- Analysing the context of reference.
- Defining design priorities for sustainable solutions.
- Analysing the cases of excellence for sustainability.

PROCESS

It has been done in collaboration with the Hubbers (Punto e Linea responsible) to understand: the context, the offer and the proposers. For each initiative has been made 2 video recorded meeting.

AIM

To obtain the information about the existing project, necessary to facilitate the generation of sustainable ideas.

- **Defining design priorities for sustainable solutions.** The aim of this activity is to analyse the existing context from an environmental, socio-ethical and economic point of view in order to identify the design priorities. This operation is fundamental to steering the design process towards the solutions that are the most able to foster sustainability.

The following activities has been done in other phases of the design process:

- **Analysing cases of excellence for sustainability.** The aim is to analyse in detail cases of excellence but in the process they act both as a stimulus during the generation of ideas, both as method to look for the presence of sustainable services in the adjacent territory and to locate the project to be undertaken and redeveloped. (find out more information and tools in the chapter n°...)

to identify the design priorities. This operation is fundamental to steering the design process towards the solutions that are the most able to foster sustainability.

The following activities has been done in other phases of the design process:

- **Analysing cases of excellence for sustainability.** The aim is to analyse in detail cases of excellence but in the process they act both as a stimulus during the generation of ideas, both as method to look for the presence of sustainable services in the adjacent territory and to locate the project to be undertaken and redeveloped. (find out more information and tools in the chapter n°...)

TOOLS

System map, Offering diagram, Qualitative sustainability report, SDO, district map, demographic district data

RESULTS

Set of mini doc(audio-video) Presentations and set of textual documents.

ACTORS

Polimi DIS team, 4 master degree thesis students, Punto e Linea hubbers key actors Of the 4 initiatives.

5.3 EXPLORING OPPORTUNITIES

Second step of the design process has been the Exploring Opportunities of the selected initiatives of the “Punto e Linea” organized involving the students of the System master course System design for sustainability (March-June 2012) held by prof. Carlo Vezzoli as part of the Tango project, and aimed to generate sustainability-oriented ideas for the development of sustainable PSS innovations.

Here the Exploring Opportunity process phases followed to design PSS concept innovations for each initiative’ brief:

- generating sustainability-orientated ideas. The idea generation has been orientated towards satisfying a specific demand for wellbeing. In this sense particular attention is paid to coming up with system level ideas.

Special guidelines have been drawn up to steer idea generations toward sustainable system solutions.

- workshop for generating sustainable system ideas. The idea generation has been orientated with workshop activities by using design criteria and guidelines Sustainability Design-Orienting toolkit(SDO)

It must be stressed that the aim of this idea-generating process is not to come up with incremental improvements at product or service level, but rather to come up with possible innovations at system level, characterized by radical improvements from an environmental and economic point of view.

PHASE

- Generating sustainable oriented ideas
- workshop for generating sustainable system ideas

PROCESS

The 60 students of System Design for Sustainability course co-designed with the hubbers the draft concepts for the 4 Tango briefs, i.e. In 3 meetings reviewed the PSS which have been developed with co-design visualization tools.

AIM

To make a “catalogue” of promising available possibilities, in other word, the sustainability orienting scenarios.

5.3.1 THE PROCESS

First action of the exploring opportunities phase have been the SDS course exercise. Starting from the produced outcomes of the SA for each “Punto e Linea” initiative, to have a complete overview of the “Punto e Linea” project contexts, proposers and initiatives, the students were asked to design PSS concepts for the four selected initiatives, with the support of co-design tools to orientate them towards sustainability.

The settled interactions between the DIS research unit, the design students of the SDS course and the Hubbers of the “Punto e Linea” project have been intensified during the exploring opportunities phase. The main tasks for the Hubbers in the course have been: to design together with the DIS research unit and the degree students the design brief for the students, starting from the existing “Punto e Linea” initiatives and from the SA outcomes; to review and co-design the students concepts during the course giving them inputs and information, in the role of expert of the social field, and of the Milanese context.

In parallel have been activated the four master degree thesis projects aimed at the co-coordinating the co-design process, during and after the exploring opportunities phase, towards the detailed design and incubation of 4 projects of Sustainable Product-Service System.

TOOLS

SDO toolkit: orientate+ check concepts, offering diagram, system map, interaction table and story board.

RESULTS

animatic presentation: 12 sustainable PSS concepts

ACTORS

Polimi DIS team, SDS students (60), Punto e Linea hubbers, key actors from the initiatives.

To set the exploring opportunities phase have been used the following co-design tools:

- ***Orientate concept section-SDO toolkit*** to generate new ideas using sustainable criteria and guidelines (social and environmental dimension) defined in the SA and to access potential improvements on the generated ideas;
- ***Offering diagram*** and ***System map*** to define in detail the functions that the system delivers to the user and to visualize the system structure of the offers indicating the actors involved and their interactions;
- ***Interaction table (storyboard)*** to visualize the sequence of interactions occurring at front desk level and at back stage level;
- ***Radar section-SDO toolkit*** to verify the potential level of improvement (radical, incremental or zero) about (two of three) dimensions of sustainability comparing the new concept values with the existing system ones.
- ***Animatic***: the presentation of each students group was made as an animatic with these contents: offering diagram, concept brief explanation, interaction storyboard, stakeholders system map, sketches of evidence, environmental radar, socio-ethical radar.

As final result of the design phase of the System Design for Sustainability course has been developed by the students twelve (three for each initiative) sustainable PSS concepts.

These have been plenary presented as animatic at the end of the course in June 2012 and as a further step of the co-design process, where the Hubbers were invited to giving their feedback about the developed projects, selecting the most promising and highlighting their motivations in the choices. The most promising sustainable PSS concepts have been merged to be further implemented in the four thesis projects.

5.4 DESIGN THE SYSTEM CONCEPT

Third step of the design process has been the Design System concept, aimed to collect clusters and single ideas, selected and sorted into various groups to be developed in greater detail, defining set of services that make up the offer, together with the actor system that produces and delivers it, and the potential environmental, socio-ethical and economic improvements it offers are assessed.

Here the Design System Concept process phases followed to design and improve system concepts for each HUB:

- selecting clusters of ideas and/or single ideas. The most promising ideas are selected and combined to develop a system concept, to understand, after a careful analysis, what are the most promising clusters and single ideas and what they need and then reaching implementation of a concrete idea of the system design.
- developing system concept. One or more system concepts emerged from the combinations of ideas previously singled out. The following elements are then defined for each of these system concepts: the set of products and services that make up the offer and the functions it fulfils; the actor system that produces and delivers the offer; the interaction between user/client and the offer system.

5.4.1 THE PROCESS

On the base of the most promising sustainable PSS concepts from the SDS course, the degree thesis master students started in July 2012 the design system concept phase of re-design and implementation related

PHASE

- selecting the clusters of ideas/ or single idea.
- developing system concept

PROCESS

The outcome of the course is analysed and the most promising are selected.
in 4 co-design workshops with the degree students and hubbers the proposals are redefined in terms of, system structure, actors interaction, promising stakeholders.

AIM

Determine one or more system concepts oriented toward sustainability.

to the four HUBs: merging the most promising concepts and adding personal ideas to design a first draft of a new concept for further implementations.

To receive professional feedbacks and to detail the new concepts the degree thesis master students designed a co-design workshop dedicated to the “Punto e Linea” Hubbers and to the DIS research unit members. The workshop activity has been planned as a one afternoon meeting focused on the following stages and with the use of co-design tools:

- visual presentation of each concept first implementations using storyboard tool to show the sequence of interactions occurring at front-desk level and backstage level-the storyboard was printed and hanged on the wall to be visible by the all participant, with questions related to specific frames of the story; offering diagram tool to define in detail the functions that the system delivers to the user;
- questions answering to solve/re-design specific interactions occurred in the concepts delivery;
- open discussion to sum up the workshop results and considerations.
- questioner to evaluate the workshop design and contents by the Hubbers, and DIS research unit members;

Going on in the co-design process each sustainable PSS concept has been further defined about: the system structure, the interactions occurring at front-desk level and back stage level and the stakeholders identification, with the support of different visualization tools.

The outcomes of the workshop experience have been positive about both the concepts implementations and the personal knowledge of the degree students, fostering the good quality of the feedbacks and an active participation of the Hubbers.

TOOLS

Story board, offering diagram, stakeholder system map, questionnaire.

RESULTS

4 sustainable PSS concepts

ACTORS

Polimi DIS team, 4 master degree thesis students, Punto e Linea hubbers

5.5 DESIGNING THE SYSTEM

The last phase of the MSDS method, is Design (and Engineering) the System which is aimed to determine in detail the feasibility and actualization of the systems designed, defining: the set of products and that make up the offer; all the actors(both primary and secondary) involved in the system together with their roles and interactions; all the interactions between actors and client/end user that occur during delivery of the offer; all the elements (both material and non-material) required for delivery of the offer and who will design/produce/deliver them.

process:

- detailed system design. The aim of this activity is to develop the system concept in detail, defining: the set of products and services that make up the offer; all the actors involved in the system together with their roles and interactions; all the elements required for delivery of the offer and who will design/produce/deliver them
- environmental, economic and socio-ethical appraisal. The aim of this activity is to assess more accurately the environmental, economic and socio-ethical improvements that the system innovations will produce once implemented. The result will be a description of the potential improvement of each project, a visualization of these improvements by means of a radar diagram and a visualization of the improvement bringing interaction.

PHASE

- detailed system design
- environmental, economic and socio-ethical appraisal.

PROCESS

Detailed system design by the assessment of the environmental, socio-ethical and economical aspects are developed through the stakeholders contribution and technical experts.

AIM

To develop the most promising system concept into the detailed version necessary for its implementation.

5.5.1 THE PROCESS

As first action to going deep into the detail of each sustainable PSS concept each degree student identified in the relative Hubbers the champions to help achieve the enlargement of the network of stakeholders to be involved into the co-design process. In fact, in collaboration with the Hubber, some meetings have been organized where to involve possible stakeholders i.e. actors, communities as well as companies, associations and administrations for the growing sustainable PSS, and end-users. Each meeting has been scheduled as follow (with few modifications depending on the stakeholder) and has been supported by some of already presented co-design tools (thought with a higher level of details):

- visual presentation of the sustainable PSS concept using the offering diagram tool to define in detail the functions that the system delivers to the user and the storyboard tool to show the sequence of interactions occurring at front-desk level and back stage level and the stakeholder matrix to show possible roles and benefits.
- open discussion to solve/re-design specific interactions occurred in the concepts delivery, and to understand possible collaborations.

This phase will goes on until the Tango exhibition (April 2013), which will include activities organized with stakeholders and the collection of feedback from visitors. This will be possible by having before some meetings with potential stakeholders that may be interested in active involvement in projects and with the support of technical experts (internal resources of the Politecnico).

TOOLS

Story board, offering diagram, stakeholder system map, business model, interaction table, interaction storyspot, motivation matrix, SDO, animatic and arduino

RESULTS

4 PSS innovation and audio visual

ACTORS

Polimi DIS team, 4 master degree thesis students, Punto e Linea hubbers, primary and secondary stakeholders, technicians of related field.

Furthermore, thanks to the technical experts contribution has been made for each sustainable PSS concept, the economic assumption through the use of tools such as the executive's model and the graph of payback on the cost of each project.

To set the Design (and Engineering) the System phase have been used the following co-design tools, to show in all its complexity and completeness a system with different instruments. Some have also been used in the previous phases but at this stage assume a role of description in detail as the voice of the project:

- System map: detailed map of the principal and secondary actors and their relationships(material, information and money flows);
- Offering diagram: may be used to describe and list all the single functions and relative sub-functions required to implement the designed solution;
- Interaction table: the purpose of the tool is to support the (co)designing and visualization of a sequence of interactions between user and the product-service system designed; with a more detailed, in-depth description for every single interaction is required, in order to process all the information necessary for the implementation of the solution;
- Interaction story-spot: images and text where two lines of interaction are shown representing front office and back office of the service;
- Motivation matrix: its purpose is to represent the solution from the point of view of the motivations of the single actors taking part in the system.
- Radar section-SDO toolkit: used to check and visualize potential improvements of the design concepts;

In this phase of the MSDS method has been designed, the Tango Exhibition as a "tool" of the co-design process currently on-going. It will be a very useful occasion to present the Tango results to the user with a direct language proposing different level of interaction according to three main target: general public: who can visit the exhibition and give feedbacks, retired youngsters as final user of the sustainable PSS projects exhibited: they will be invited to leave their feedback about the proposals, and the stakeholders: they will be invited to participate to active workshops, one for each project, with the aim to define details and/or changes to be implemented for a possible kick off of the projects.

For the thesis session, and to be shown during the Tango exhibition, the sustainable PSS projects implemented have been designed as animatic files. In animation and special effects work, the storyboarding stage may be followed by simplified mock-ups called “animatics” to give a better idea of how the scene will look and feel with motion and timing. At its simplest, an animatic is a series of still images edited together and displayed in sequence with a rough dialogue and/or rough sound track added to the sequence of still images (usually taken from a storyboard) to test whether the sound and images are working effectively together.

This allows the animators and directors to work out any screenplay, camera positioning, shot list and timing issues that may exist with the current storyboard. Editing the film at the animatic stage can avoid animation of scenes that would be edited out of the film. Often storyboards are animated with simple zooms and pans to simulate camera movement (using non-linear editing software). These animations can be combined with available animatics, sound effects and dialogue to create a presentation of how a film could be shot and cut together. Animatics are also used by advertising agencies to create inexpensive test commercials. Using it into the msds process, it is used to visualize the main core and innovation of the four thesis through a short tale.

The final animatic outputs, will be further developed after the thesis discussion to become 4 audio-visual presentations: as narrative tool during the exhibition; fostering the interactions with the general public and the selected targets: testing the Tango exhibition as Lab and Window for co-design experimentations and as an agent of change proposing concrete sustainable PSS innovations. These audiovisual files will be interactive tales: to tell the projects as a story with one or two people who use the services delivered emphasizing its innovations; it will be interactive because the user can choose which parts to see further details and specific content related to the proposals.

The 4 audiovisual files will be edited, with the technical support of the Movie Lab of the Politecnico di Milano, and, about the interactive part, with the active contribution of Phyco.lab the Politecnico, which will provide support to the project team to create interactive experiences in visualization of the contents of the video through the use of interface Arduino.

5.6 COMMUNICATION

The communication stage, which works across all the others, is aimed to communicate the general characteristics of the solution designed, and above all those of sustainability, to the outside world. The main aim is to provide documents to present:

- the design priorities for sustainable solutions. The priority criteria are shown for each dimension of sustainability, to steer designing process toward sustainable solutions.
- the general characteristics of the product-service system. The elements that make up the system innovation (the set of products and services that the offer consist of; the primary and the secondary actor involved in the system and their respective roles and interactions; the interactions between the actors and the client/end-user) are described.
- the sustainability characteristics of the product-service system. The potential improvements (from an environmental, socio-ethical and economic point of view) to be had from the implementation of the solution are shown, with an indication of the elements of the system that will bring the improvements.

5.6.1 THE PROCESS

First action of the communication phase, has been the design of the Tango Milan promocard to be used as evidence when proposing the project outside from the University, to possible actors and stakeholders.

PHASE

PROCESS

AIM

Draw up the documentation and the layout of the exhibition.

Draw up reports to communicate the general, and above all sustainable characteristics of the system design.

To present the Tango Milan project during the “Fa La Cosa Giusta” Fair in Milan has been designed also a poster: to be exhibited in the “Punto e Linea” stand as representation of the settled up partnership and as a declaration of aims and goals of the project.

As outcome of the Tango Milan project, and as consequent communicative action is possible to consider the animatic files, as well as the audiovisual files designed as “tools” to represent the results in a visual and communicative way and as evidences of the project, representing the sustainability dimensions of the PSS projects, as well as their characteristics, actors and interactions.

About the Tango project international the main communicative actions are the Tango exhibition, as interactive communication of the project experiences; as well as the tango website (www.designtango.eu) that is the main evidence of the wall process, available from everyone to spread the innovations worldwide.

The all communicative elements designed and improved during the Tango/AH-Design process have been designed and developed as sustainable and accessible ones, in an open source and copyleft ethos, allowing its free of charge replication/adaptation in other worldwide contexts. Most of the tools used in the previous phases to design and visualize the various elements of the solution are also used in this stage to support the communication.

TOOLS

Visual tools, and tools used in the past phases

RESULTS

Exhibition lay out and documents

ACTORS

Polimi DIS team, 4 master degree thesis students

5.7 TOOLS

Offering diagram: a graphic static representation of the system functions delivered to the user usable as design and visualization tool. It is made up of images and text elements showing: the core function (represented by a significant image, a title and possibly an accompanying text) positioned in the centre of the layout, the basic functions and the added value functions positioned around the core function in relation to their importance, and the sub-functions positioned in text form around the referred functions. The main users are highlighted (with different colours) in relation to the functions they perform in the various sub-offers.

The tool does not require any specific software but can be drawn directly on paper.

System map: a co-design and visualization tool to show the system structure of the offers, showing the various actors (both main and secondary) involved in the system and the different interactions among them in terms of: material/product flows, information flows, money and work flows. This tool is both codified and progressive. Codified in the sense that is a “technical drawing” of the actors system represented in a fixed format of presentation, an open library of graphic elements and a set of rules. Progressive in the sense that is a formalization in progress of the solution actor map giving an increasingly accurate picture of the project as it develops; the detail of the actors system are gradually specified at each step of the designing process. The tool requires the use of slide show software to define and modify the actor map using a standardized set up of purpose created icons. The system map is built up on the single slide. By the convention the limit of the slide is the boundary of the system and a rectangle drawn on the slide shows the system platform boundaries: core actors performing the system are situated inside, and secondary actors outside. Each actor is represented by one icon, made of three elements:

- the structure, which indicates the typology of actor (e.g. company)
- the characterization, which defines the actor activity (e.g. food producer)
- the slogan, which specifies the actor activity (e.g. organic food producer)

The icon resulting from putting together these three standardized elements is able to specify an actor and differentiate him from the others on the map.

The nature of the flows among the different actors is marked by different arrows:

- the full,thick arrow indicates materiel flows
- the fine square-dotted arrow indicates information flows
- the fine round-dotted arrow indicates money flows
- the full, thick arrow wit a diamond at its tip indicates work flows.

It is possible to distinguish between one-way and two-way flows. In addition the colour of the arrow indicates whether it is a primary flow(dark grey), or secondary flow(light grey). The actors and flows are positioned during the construction of the map. In order to make the system organization easier to understand, it is necessary to specify the various flow and define a reading order by indicating a starting point and numbering the progression of the various flows.

Qualitative sustainability report: a tool to evaluate the current offer about the economic and environmental dimensions of sustainability which can be useful in the design phase. From the point of view of environmental sustainability resources used were considered for their toxicity, transportation used in the service, biocompatibility of the goods and the waste at all stages of their life cycle. To achieve the economic sustainability in the design phase have to be considered the economic nature, for both the market position and the competitiveness of the service , profitability and added value for companies and end users, developments and risks involved in long-term partnerships and collaborations already active.

Sustainability Design-Orienting toolkit (SDO): a tool to orientate the design process towards sustainable system solutions. This thanks to the different function of the tool, which is able to support designers in: setting sustainability priorities; analyzing best practices; using sustainable design orienting guidelines; checking and visualizing the potential improvements in relation to an existing reference system.

It is basically a tool that is able to support several functions, with a modular structure so that it can be used as a whole or in part, according to the special needs and circumstances of each design project.

The purpose of this tool is:

- to define the design priorities for all the three dimensions of sustainability; this is done by using check list to analyse the existing system.
- to stimulate the generation of ideas for potentially sustainable system; this is done using design criteria and guidelines oriented towards sustainability.
- to assess potential improvements, or any worsening, associated

with the three dimensions of sustainability compared to the existing system. This is done by using checklist to compare the designed solution with the existing system, and radar diagram to visualise the result of the analysis.

Best practices: a tool aimed to analyse in detail cases of excellence that could act as stimulus during generation of ideas. The result will be a document summarising the offer in each case of excellence, interactions with the user, the offer producers and providers, and its sustainability characteristics.

Interaction table (storyboard): a tool to support the (co)designing and visualization of a sequence of interactions between user and the product-service system designed. The tool visualizes and shows the sequence of interactions occurring at front desk level and at back stage levels. Specifically the aim of the tool is:

- to describe and visualize the sequence of main user interactions with the offer system;
- to describe and visualize the sequence of interactions and roles of various actors involved
- to describe and visualize in further detail the sequence of interactions and roles of the various actors and users.

Basically the tool consists of a graphic representation showing:

- a sequence of images (with a concise description) showing the various interactions during the production and/or delivery of the offer.
- an indication, for every interaction, of additional information: e.g. Who the various actors involved are, their roles and the elements (material and non material) required to complete it, etc.

Interaction story-spot: a tool made by images and texts that are divided in two lines of interaction representing the front desk and back office. The displays, to be visualized on a single screen/page, contains the following key elements:

- the key interactions of the client/end user with the offer delivered by the system;
- the key interactions of the various actors during production and delivery of the offer;
- how the designed solution achieves given aims.

The composition, Each interaction consists of:

- an image in which the colour of the actor matches the background (for suggestion about how to process the image see section dedicated to the interaction table)
- brief description

Motivation matrix: a tool to represent the solution from the point of view of the motivations of the single actors taking part in the system. It is basically a tool for defining the role and the contributions each actor can supply to the general partnership, and to each of the other actors. It is a two way table where the various actors are positioned on both sides; by crossing the various actors it is possible to see, for each actor, what are:

- the motivations for taking part in the system;
- the contribution made to the partnership in general, and to other single actors in particular;
- the contribution received from the partnership and from other single stakeholders
- the potential areas of synergy or conflict with the various actors

In System designing and engineering the stakeholder motivation matrix evolves together with the designing process: the hypothetical actors (previously identified) are replaced by real actors; their intentions, contributions and expected benefits are redefined and itemized; the synergies between the actors are reinforced and any conflicts reduced and resolved.

PSS DESIGN RESULTS

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6.1 STRATEGIC ANALYSIS: THE RESULTS

In this step each thesis student have had a more in details view over her/ his part(hub) in collaboration with the “Punto e Linea” Hubbers and other related stakeholders who are present in each zone in order to reach to obtain information about the existing situation/offer, the proposer of the project and the context of intervention in which the offer is integrated. To reach to this goal each thesis student has had a periodic meetings with the actors of each district.


Here the SA process phases followed for each “Punto e Linea” project initiative analysis:

- Defining the context of intervention and analysing the project proposer.
- Analysing the context of reference.
- Defining design priorities for sustainable solutions.
- Analysing cases of excellence for sustainability.



6.1.1 THE CONTEXT

The district Giambellino is currently part of Zone 6 of the city of Milan. The first urbanization of the area occurs at the end of the thirties. The group of houses generally referred to as “Giambellino” is located in the quadrilateral Via Giambellino, (Piazza Tirana), Via Deception, Via Lorenteggio, Via Odazio and was completed in late 1939 and early 1940. Until today in via Odazio it was forbidden to pass for children and adolescents, because in that street there are dealers, high level of criminality: so it’s the main point of critical aspect. Giambellino has always been, historically, a very crowded popular district, where actually there were many industries, farmhouses because the land was rural. Forty years ago Giambellino was a carefree and united neighbourhood, but also proletarian and popular.

 **Population living in Milan 31/12/2010**
per district

District	Women	Man	Total
49 - Giambellino	16.287	14.443	30.730

Foreign population living in Milan 31/12/2010
per district

District	Women	Men	Total
49 - Giambellino	3.139	3.243	6.382

Chart 6.1

Demographic Giambellino
Data

Source: Comune di Milano
Settore Statistica e S.I.T. -
Servizio Statistica

In the last ten years, the district hasn’t been considered at all. There are no particular attraction, nothing interesting, who come in that district are local habitants of the neighbourhood. The district is actually very crowded, but the houses and and the structure have a low quality of life conditions. Many people in the district lives alone, or lives in a uncomfortable or economically precarious situation, or have health problems. The Giambellino district, is in a state of steady decline and many are the reasons that led to the exasperation of many citizens who reside there.

Complex reasons and permanent over time, which can be attributed to a gradual withdrawal of the government of the territory of the social changes taking place in the neighbourhood, but more deeply to a total absence in managing the care and protection of spaces and relationships, housing of public housing are now at the level of degradation unbearable, and the absence of even the most trivial maintenance of the same, has created distrust in institutions and dramatic worsening of relations between citizens, even in the absence of certain guidelines for compliance with the relevant standards of civil society.

People feels strongly to belong to the district but it's missing a union among the people, in fact there are many immigrants, and there is a very low level of cohesion and social inclusion of them, so there are some schools with no Italians and just foreigner children and people that argued about foreigners in their building, although there are many attempts inclusion of foreigners as the presence of onlus association Radice e le Ali that promotes Italian language courses for foreigners . Anyway, because of the degradation and the unemployment, people starts to be less proud to belong to Giambellino. So in this place there are lot of problems also because people stays at home and doesn't come out, and lives in this degraded situation: it becomes difficult even to live well together.

Moreover there are positive aspects, for example, historically the district used to offer different forms of socialization, once it has a much more strong social network, it would not be so difficult to get back, in fact there are lot of people that works for the district. For example the Laboratory of the district was created by the actions of local promotion conducted by the Community of Giambellino over the years. It is housed in a small property with a garden in via Odazio in the heart of popular Giambellino, granted for use by the Council of Zone 6. The volunteers of the local organizations sponsoring the project have renovated and equipped as a multi-purpose center, to give space to the work of the groups of inhabitants of the neighbourhood. The Laboratory wants to support the deployment of resources in the area, to promote interest in the neighbourhood, giving references to a non-virtual social and stimulate the dialogue between the different social groups that live in this suburbs. One of the promoter of Laboratory of the district said: "We received some suggestions from people who would like to do something more to help the district, and change the current situation", lighting a hope for the future of the neighbourhood, as it was in the past. This laboratory also called Casetta verde is located in the

middle of frequented gardens by Odazio, connecting Giambellino Via Via Lorenteggio, visible and accessible by local residents. The house consists of an open space of 100 square meters, within a large garden with a basketball court, (but lacking the baskets), bowling alley and comfortable benches to enjoy the coolness of the many trees. The lodge houses the information office which is housed in a part of the living room and is the seat of the Secretariat and of meetings of the promotional booth.

THE PROPOSER

Figure 6.1
Giambellino District Map
with main association
linked to La CasettaVerde





Punto & Linea project together with other associations in the area, began in early 2010 the Laboratory of headquarters or Cottage Green, a project aimed to give value and to contrast the division of the associations and cooperations that anyway works on social aspects.

This will allow the district to make activity not from individuals that are unhappy about the situation, but from a group that can make actions to stay and work together. The perspective of the project is not to start from the needs or from the challenges of the district but it was decided to start from the resources of the district to see new possibilities and to define new perspectives

The interaction they aim to create is an active participation, in this place they don't sell/offer services, they offer qualifying possibilities for the district but with the need of an active participation from the inhabitants. On the same time there is the offer of different experiences expressed with the same modality: some people offer their competences to encourage people to participate as an example there is a crochet lab mostly for foreign women, then there are activities for elderly as meetings, for the youth there is a collaboration between meeting centers and other associations. Some activities proposed are: on Thursday there is the crochet lab and after soft gym for elderly, the main idea are not the courses themselves but is to offer spaces where share ideas and experiences, to involve people in different activities done personally so the perspective of including different activities became a little difficult to organize, as they are mainly in the same time: in this way actually we give old ladies and for example foreigner one, the opportunity to have contacts and chat together.

This space is used by nine different associations and cooperatives. In fact at the beginning there were mainly the social cooperative "Comunità de Giambellino", "Azione Solidale", "Spazio Aperto Servizi", "Il balzo", "a77" and after came associations like "Samarcanda", "Seneca", the scout group and "Giambellitaly". All this cooperatives and associations fused together and have been allowed to use this place by the area 6 council until 2013. There are some entities that day by day start coming here and have been involved, for example: "Radice e le Ali" and "Serpica Naro" t; there are many different and interesting initiatives made from individuals or by associations. The Casetta is open to different collaborations for example with "Ci vuole un fiore" that works for children and families, "Dinamoscopio" a reality that started using the

Figure 6.2
view of a social housing
of Giambellino



Figure 6.3
External view of
La Casetta Verde

Casetta Verde before Punto e Linea.

The two main proposer that are really involved in the management of the laboratory of the district are:

Spazio Aperto Servizi:

Spazio Aperto Servizi was founded in 1993 by a group of educators for years engaged in social activities. The idea with which the Cooperative toddler is imbued with a strong sense of solidarity and a strong desire to share new ways to respond to social needs increasingly emerging. From the idea is born and develops the projects of Spazio Aperto Servizi over the years, aimed at promoting and supporting the well-being of our community, through paths of shared social responsibility and participatory.

Comunità del Giambellino:

It was founded in 1979 in Milan by the initiative of Don Renato Rebuzzini and some groups of volunteers in the neighbourhood of Giambellino that worked on different fronts: youth marginalization and

social disadvantage. In 1993 it became Cooperative.

Work in the areas of drug addiction, reintegration and social housing, education and support to children and young people, assistance to people in AIDS, community development. Interventions are conducted by teams of professionals and organized groups of volunteers.

The organization of the roles is made of 5 operators of the equip, they are also a link between the area 6 council and the city institutions and with the other hubs in Milan. The equip directs the projects, convene the meetings with all the people that works with us. The director studio is made by 40-50 persons that works on the projects and the planning of the events and the activities. That thanks to the network of local gardens: Free Rape subways, it was possible to organize sporadic events to involve the neighbourhood in gardening activities of the Cassetta. There are also some subgroups to better work on the different activities and exactly one of them is the community garden. For example: The direction studio in this moment is the one who decides everything, then the subgroup decides what to grow in the garden: this group cares more about "details". Usually they try to give to the volunteers some jobs, then the equip thinks on where to find resources or how to use them, or we help them to develop some tasks.

The main actuators are:

The group that actively works consists of fifteen persons residing in the district, which contribute to the project in different participatory ways. The activity is self-sufficient to the exclusion of economic resources and communication. The gardening activity started in January-February 2011, while inside the hub Giambellino they were deciding about possible path to adopt based on the requests of the district inhabitants. It is primarily managed by a single member, Manuel Della Rosa, a gardener in the botanical garden of Brera and former resident of the neighborhood Giambellino. Her roles within the activity are many:

- ***Proposer.*** Participating in an event of the house, proposed the gardening activities as a means to socialize people, working on a concrete project. The idea after being discussed by the heads of the house has been accepted in a positive manner.

- ***Planner.*** The planned activities are run solely by him which plants and where you can put, quelì it will do given the green zone, so as not to impact on the surrounding environment. Timing and methods are uniquely determined by the conceptual contribution of the other par-

participants. There is a program on the bulletin board, but any activity Syene scheduled every Saturday morning, according to the needs of the garden. The Green house is responsible for the management of communication and payment of goods necessary to carry out the activities. **-Resources manager.** By liaising with the botanical garden was able to find some materials such as equipment for the works and seeds. Furthermore there is a special participant his name is Ercole he lives near by and has decided to participate helping also during the week to support in some activities because the two hours dedicated on Saturday are not sufficient to do all is needed to be done we see him as a resource for the group both on Saturday to meet the group and during the week to work separately to experiment on a different level, other participants are also involved in the assembly to take decisions for the community garden but also for other projects of social cohesion. One of the most critical aspect after the first year working, is the communication: in fact the most difficult part is the approach with the district, and how to reach the people and their interest. They are also working on a Logo which could better identify our place. The promotion through events is difficult too, the people who inhabit the buildings in front of the Casetta sometimes complains about too much noise, but on the other side other people see the house as an oasis of plants and floral colours that create a sense of fulfilment and Beauty in a neighbourhood so difficult. The inheritance they want to give with the project is an ability for the district to recognize the area's possibilities by itself without or before external interventions.

Figure 6.4
interview to the hubbers
inside La Casetta



THE OFFER

Within the Giambellino district there's a multifunctional space called "Casetta Verde" where there is a group of people manage and realize several activities open and dedicated to the habitants of the neighbourhood – elderly, children, families, disabled, teenagers. Primary objective of this place is to be an open, cosy location where to talk about the district's issues and where to work together to promote the local context to be able to act onto the shared priorities with concrete actions that would improve the quality of life of the territory; one of the proposal, which is also one of the most active, is the community garden lab, it has a shared habitants participation in an gardening action. So the main offer is a community experience of gardening in the heart of Giambellino, via Odazio, offering the chance for local residents to spend time with other people, it is not dedicated to a specific age but is open to everyone from children to elderly, Italians and foreigners. They can work all together to create a community garden were cultivate vegetables fruits and flowers.

The objectives are to create the group to take care of the district spaces, another goal is to extend this experience to everyone without focusing on one target, a new challenge is to go outside the green "house" to make people aware about the initiatives and to involve the inhabitants of popular houses as possible future participants. The initiative started effectively in March 2011 and right now the group is made of 10-15 community gardeners works together, they are a constant presence with some new participants that are mainly inhabitants who decide to participate seeing from outside the activities and giving their help once happened that a person give us some flowers and it has helped a lot to communicate the initiatives and to involve people to participate. Every Saturday morning from 9 to 12 there is this group of people that works in the garden, also in the winter period. This activity is the most constant and have a fixed group of participants. At the end of the activity every Saturday for lunch there is a collective brunch among the participants where the group enjoy together the goods of the land. All the products are available not only for the gardening participants but also for the other participants. An example was the sharing of products because there is a variety of vegetables tomatoes, zucchini, pumpkins, gelso and some fruits as apricots there are many things and so every Saturday after gardening they have a brunch together. There is also constrain about the space, the council zone allows to do activities only

The professional gardener Manuel is always available to teach and help

a professional gardener can help you



plan together



You have the chance to maintain and design the garden

bring and take the garden products



it is possible for the users to make change or add new vegetables or fruits

everyone, even if not enrolled, can felle free to pick vegetables or fruits

you will learn socializing



On saturday morning from 9 to 12 a.m. Gardening activities ends with a brunch all together.

Thank to socializing between promoters and enrolled people you can gain gardening skills.

cultivate a garden near your home



for free, they can have some exceptions, but generally every initiative we do has to be approachable from the all district.

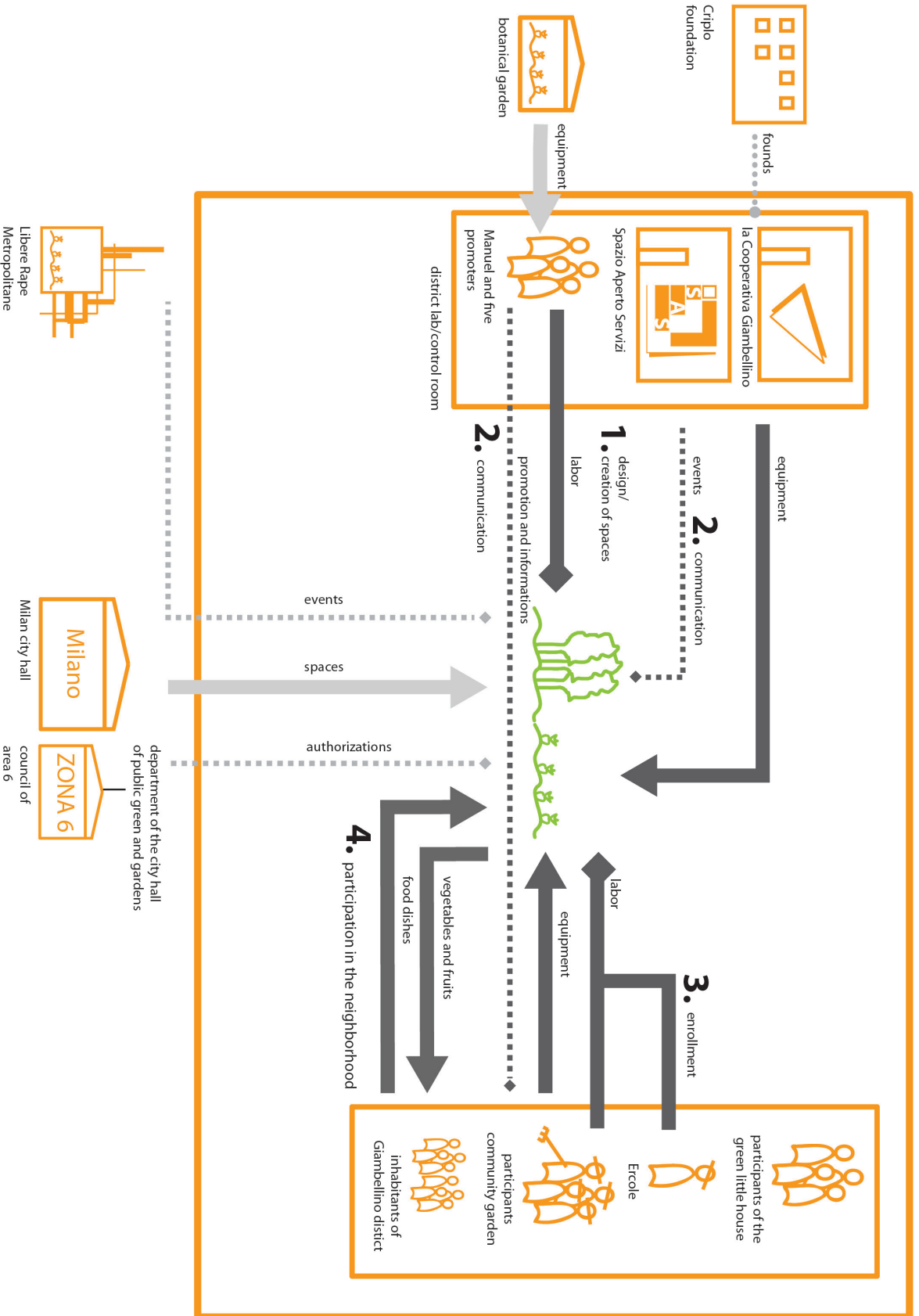
This activity has been the most attractive for the Casetta Verde thanks also to the figure of Manuel a professional gardener. He is really interested in involving more and more people in the Casetta Verde activities to use the space that is now focus of this new gardening lab where people can come autonomously or work together starting from this idea in January February the community garden has been set up with a special event the Casetta distributed some seeds to invite the inhabitants. Manuel is the expert he knows what is needed but he shares everything with the group and for specific decisions also with the equip, most of the things are decided in an informal way. The activity started with a design of the spaces that is every time in progress to verify month by month the green's conditions, there is not an internal program for gardening activities but every action is decided day by day as needed. Manuel lead the group and they together with the assembly give their opinion.

New design strategy

There is a will deeply felt by the participants and the proposer to spread this Community activity as much as possible among the people of the neighbourhood. In this direction they would like to have some meetings with the popular houses' inhabitants and the gardening activity to focus on some unused spaces in these houses and ask to Aler the permission to enter in the popular houses to involve the inhabitants to participate taking care of the green areas, of the flowers and of the common spaces. They want to present the laboratory to make people aware about this existence and to involve the inhabitants of popular houses as possible future participants. It is not so easy to go in a court with a project because is necessary that the proposers know the situation and that are known otherwise no one will participate, starting from there with entertainment ideas to involve people the objective is to encourage people to understand that they can make the change happens to live together in a better situation.

Chart 6.2

Offering Diagram of the actual situation in Giambellino



6.1.3 CRITICAL ASPECT

The Casetta Verde offer has been evaluated about environmental and economic dimensions of sustainability, and according to the results of the Strategic Analysis, with the report presented below based on the SDO toolkit guidelines section*¹⁸; moreover have been underlined some relevancies about the socio-ethical dimensions of the effects generated by the offer in the field.

* The sustainability report has been reviewed and implemented by Carlo Vezzoli and Sara Cortesi.

Chart 6.3

System map of the actual situation in Giambellino

ENVIRONMENTAL DIMENSION

System life optimisation

Dishes, cutlery, towels, ... used for the garden lunches are plastic, disposable ones. Raffia is used for binding.

Vegetable seed packets used in the garden are paper, disposable ones. The community garden produces seedlings that the neighbours plant at home. Those seedlings are delivered in disposable small paper pots made by the gardeners with recovered paper. Disposable flacons are used for detergents. The equipment used in the garden has a low technological level and so it's not affected by technological obsolescence. A laptop computer is used in the Casetta, e.g. for Facebook, and it can be affected by technological obsolescence.

The following products/components tend to wear out more easily (shorter lifespan than others):

- the cutting edge of scissors
- raffia for binding
- gardening gloves made of cotton
- anything that gets rusty

Transport reduction

All the garden produces (vegetables, fruits, flowers, etc.) are used or exchanged within the neighbourhood. Seeds and seedlings are not all locally-sourced: some are from the supermarket or the farmers' association (Consortio Agrario), coming from other parts of Italy or even from abroad (e.g. asparagus from France), others are brought from gardeners and collected in different places and occasions (a fig-tree and pumpkin seeds received as a gift from a fair in Piedmont –

¹⁸ The sustainability report has been reviewed and implemented by Carlo Vezzoli and Sara Cortesi.

North-West of Italy, hot pepper seeds coming from the father of one of the gardeners living in Calabria – South of Italy, ...). People joining the community garden are all more or less from the neighbourhood (moving with bikes, by foot, ...). Some of the gardeners come to the garden by moped or by car, usually alone.

Resources reduction

The Casetta is not well thermally insulated and heating is provided by electric heat pumps, it is not connected to the gas mains. Lightning in the Casetta is provided by neon lamps and no sensors or dimmers are installed. The community garden uses gasoline for the thresher. The community garden takes water from the water mains/system for watering and cleaning. Drip (localized) irrigation is in place in the garden with three zones controlled by dedicated irrigation control units (including a timer and an electromagnetic valve). Fifty kilograms of palletized manure was used to fertilized the soil before starting the community garden two years ago, then compost from the garden is used as fertilizer.

Waste minimisation/valorisation

Waste from the garden (e.g. from mowing the grass, leaves, ...) is composted.

Conservation/ bio-compatibility

Gasoline for the lawn-mower is oil based. Energy for lighting, provided by neon lamps, thermal comfort, provided by electric heat pumps, and laptop computers in the Casetta comes from the grid (energy share:

natural gas 47,8%, renewable sources – included hydroelectric - 26,8%, coal 13,3%, oil products 3,9%, nuclear 1,3%, other sources 6,8%). Garden tools are made from metal and/or plastic. The little shed for tools, tables, chairs, ... is made of sheet metal.

Toxicity reduction

Different types of detergents are used to clean the Casetta, to wash hands, ... No synthetic pesticides, fertilizers, ... (which could be toxic) are used.

ECONOMIC DIMENSION

Market position and competitiveness

This is the only one community garden in the area, there is an other garden but it is divided into allotments for private use only, with an annual fee per allot. But even though the activity is free, there is a strong sense of distrust and lack of participation and with proper and more direct communication would be possible to improve the level of engagement.

Profitability/added value for companies

Some opportunities are not fully exploited, such as to share materials and results, to train persons to design the garden, to sell (part of) the garden produce, to prepare food (e.g. pies/cakes, jams, ...) with (part of) the garden produce, for instance using over ripened fruits and vegetables.

Added value for customers

Vegetables produces in the garden are available for anyone for free and they can represent an economic saving. The objective is to create a group helping socializing in the neighbourhood, people can get new skills and benefit from spending time outdoors but, so far, the users are not paying and it's difficult to understand if they would be willing to pay in the future or not. There are other community gardens but not in the area.

Long term business development/risk

There are not any threats in the current system for the business in the longer term and the interest in costumers is increasing. The only risk is if the contract would not be renewed.

Partnership/ cooperation

they a good market position and we collaborate with community gardeners in Milan to discuss or to get authorizations. It could be helpful to have More competent persons involved in order to share the design work and maybe also to expand.

SOCIO-ETHIC DIMENSION

Via Odazio used to be a crime street, now it is more active but fears remain for people that stay alone during the hours of darkness, because the Casetta is allocated in an isolated context.

The system is open to the neighbourhood but still looks exclusive and private due to a gate that defines the garden spaces from the public space of the communal gardens.

The house is not very active, the activities proposed in addition to gardening are inside the Casetta, and gardening sees the participation of only a few hours during the week, showing an aseptic environment and not a gathering and socializing as it would be.

SYNTHESIS

The district Giambellino is a low income neighbourhood, once one of the main topics of Milan news reports, today is a district that wants to get back into play, enhancing their resources. Over the years it has built a growing number of organizations in from the area support of local people. The workshop area, built in Casetta in Green Via Odazio was created with the goal to socialize people through the promotion of some collective activities.

The lack of participation in the activities of the neighbourhood is mainly due to the difficulty that the various associations in carrying out the projects, once ending funding by a third party. Nowadays the community garden, is the experience able to attract a growing number of participants, although they continue to have communication problems. Because, once initiated, with funding requirements it is an activity that does not require large investments and technical expertise.

In addition, with constancy and commitment ensures income state-

Figure 6.5
external view of the
La Casetta



CORAZZA
E BANCIO
CEMENTATI
E CROMATI



CHROMED
HARDENED
CASE AND
SHACKLE

GAMMA Co. - Italy

ment characterized by the products of the earth, reducing the supply chain enhances their competencies and resources. The activation of the inhabitants through the increasing use of spaces in via Odazio, helps the appreciation of the area with a path of exchanges and gatherings that turn away the crime creating a growing sense of confidence in the district.

Figure 6.6
view of Community
Garden at the La
Casetta



6.1.4 BRIEF

“Design a product-service system that allows the community garden in the center of the Hub district of Milan Giambellino to self-sustain from the economic point of view even after the end of the Punto e Linea project, becoming a driving force for improvements in social cohesion and intergenerational dialogue for the neighbourhood and helping in reduction environmental impact.

The center of the Giambellino Hub is a small house, situated in a public park within the neighbourhood.

Currently many initiatives and events are being carried out. One of the activities is in fact linked to a community garden, created around the cottage, which is taken care of once a week, by a group of people of different ages and backgrounds (passerby by are free to participate in the care of the community garden).”

6.5 EXPLORING THE OPPORTUNITY (MSDS PHASES) :

STUDENTS PROJECTS FROM SDS COURSE: MAIN IDEAS AND SUGGESTIONS

First action of the exploring opportunities phase have been the SDS course exercise. Starting from the produced outcomes of the SA for each “Punto e Linea” initiative, to have a complete overview of the “Punto e Linea” project contexts, proposers and initiatives, the students were asked to design PSS concepts for the four selected initiatives, with the support of co-design tools to orientate them towards sustainability.

The settled interactions between the DIS research unit, the design students of the SDS course and the Hubbers of the “Punto e Linea” project have been intensified during the exploring opportunities phase. The main tasks for the Hubbers in the course have been: to design together with the DIS research unit and the degree students the design brief for the students, starting from the existing “Punto e Linea” initiatives and from the SA outcomes; to review and co-design the students concepts during the course giving them inputs and information, in the role of expert of the social field, and of the Milanese context.

SHAPE GARDEN

The main idea is to create a system in the neighbourhood, where people know their neighbours, share skills, knowledge and goods in order to build a sustainable community.

In order to achieve this we start with promotion of the project as the first phase. Promotion would consist of open activities for everyone (Fund-raising monthly market, brunch made from products of garden and open days at workshops in Casetta). In order to involve more people we propose informative flyers being developed and distributed in the neighbourhood as well as direct invitation to elderly houses and local schools.

The second phase of the system will be renovation of the “Casetta” supported financially by donations from the current and new participants, that later will be partly reimbursed. In this phase people from the neighbourhood are involved by sharing their skills, possible spare materials, tools and equipment. Local schools and elderly associations (Associazione Seneca) can contribute by being involved as volunteer both by sharing skills and participating in renovation works, which would promote interaction between different ages and will encourage people to join other activities in “Casetta”. In the end of this phase the Tool library platform will be developed, in order to promote access over ownership.

In further development of the project, the collaboration and sharing system will be applied to all the upcoming events and activities held in the community garden and “Casetta”. All the service is based on a sharing network for tools and skills, which can be extended to the all neighbourhood, even outside the project.

strengths and weaknesses:

- ✓ create a monthly stall where the Casetta products will be distributed to self-finance
- ✓ include schools as a possible user of the service
- ✓ use of spare materials and tools to renew infrastructure
- ✓ tool library as a way to create a cohesive network of participants
- ✗ low level of innovation compared to the current situation
- ✗ large number of volunteers with no real benefits, are a risky resource for the effective development of projects.

Learn and share your skills!



Giambellino community garden,
Shape your neighbourhood!



Fundraising monthly market!



Share your tools!



Enjoy community garden!



Chart 6.2
Offering Diagram of
the actual situation in
Giambellino

Chart 6.4
Offering Diagram of the
Shape Garden concept

BIODIVERCITY

The main aim is to create a service system that focuses on biodiversity and integration of marginalized groups. To ensure financial independence from the “Punto e Linea” project it fosters cooperations with companies from different professional fields. It achieves those goals by acting on several levels. The primary idea is to cultivate medicinal plants that are endangered of being extinguished or forgotten. The seeds will be provided by seed banks, which as a return service can observe the outcome to get new data.

Medics and specialists (herbal shop) will help to find interesting plants regarding health criteria. They will then hold lectures and make workshops to inform the local community about the effects of the plants. The organisation slow food can give guidelines on organic cultivation.

Foreigners will be called on to provide information on cultivating plants of their home countries. Also the integration of elderly people, who still know how to grow plants without fertilizers or advanced technologies will be fostered.

To strengthen the interaction with disabled people we analyse the tasks in the garden and extract works which can be done by disabled persons. Eg., Can help to pot seedlings, wash plants, cut plant leftovers for compost or advertise the community garden.

Once the plants are harvested parts will be traded off against the information being given by medics and specialists. The rest will be given to the neighbourhood, processed or sold to restaurants of the “slow food” movement. Seeds, obtained during cultivation will be given to the seed banks, neighbours or stored for the next season.

strengths and weaknesses:

- ✓ valorisation of niche products and local resources as a solution to differentiate the offer from the other community gardens
- ✓ involve in the offer different professional fields
- ✓ promote the active exchange of seeds between seed banks and the Casetta
- ✓ inclusion of the slowfood restaurants to increase the economic sustainability
- ✗ low contribution of young people
- ✗ onerous certifications are necessary for the production of medicinal
- ✗ low benefits for medics and herbal shops

Exchange with medics and herbalists

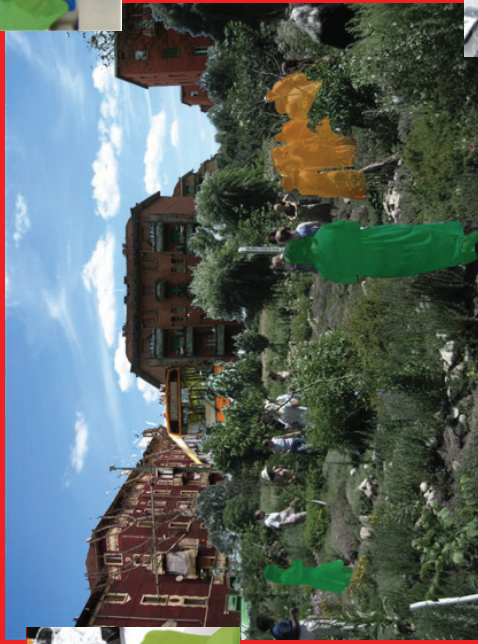


Medics and herbalists can give information on the effects of plants.

Information, accumulated during cultivation, will be made publicly accessible.

Some plants can be sold to herbalist.

Cultivate your own medicines



Seed banks can give seeds to the garden and provide advice in cultivation.

Seeds obtained by the garden can be sold or given to the seed banks.

Plan together



The chance to maintain and design a garden.

The young can visualize the layout of the garden on the computer

The old can advise the members of the community garden and explain traditional ways on how to grow plants.

The tasks are organized to allow everybody to participate, even the disabled.

Exchange with seed banks



Chart 6.5 Offering Diagram of the Biodiversity concept

LIVING CASETTA

For the relocation of the hub Casetta as a central space of the neighbourhood in order to facilitate, promote, and empower urban communities and to maintain healthy lifestyles through sustainable involvement in local food production.

Their offering sees the presence of volunteers in the management and planning of farming activities and workshops, to the sale of crops. Indeed volunteers will take care of plants, they will provide vegetables to the community, and if the production is at an efficient level they can offer supplies to local restaurants.

To defeat the social exclusion of marginalized groups and especially elderly, a group of young volunteers are involved in running “meals on wheels” to deliver vegetable meals to them, while the inhabitants take care of their private plots and gardens.

The Casetta needs a big investment by the local council. So after a careful renovation could become a store maintained by volunteers, where the inhabitants can buy fresh and organic vegetables at km 0. Inhabitants can also buy or rent equipments from the store and find their own information at communal library.

Participants and the hubbers have the opportunity to share each others through the implication of the community planning and doing workshops.

strengths and weaknesses:

- ✓ transformation of an activity aimed at socializing in a small company that can bring benefits to the participants
- ✓ inclusion of the local restaurants to increase the economic sustainability
- ✓ intensive use of local resources e.g. the library
- ✗ requires large investments to expand municipal spaces for sale and storage
- ✗ large number of volunteers with no real benefits, are a risky resource for the effective development of projects
- ✗ the field in the Casetta garden is too small to start agricultural production to guarantee the sale of products

Eat biological at the Casetta Restaurant



Become an healthy lifestyle producer



Buy/rent tools for your garden



Enjoy the gardening workshop



Take care of neighbours plants



Chart 6.5
Offering Diagram of the Living Casetta concept

SYNTHESIS

To be essential for the economic sustenance priority to sell the products of the local residents. To not require exorbitant investments to renovate and expand the space it needs to install in the space of the head-quarter a temporary stall on a monthly basis. Through the development of niche products in km 0 could be the winning solution to be competitive in the market, even if it requires a larger field for a production intensified.

For the initial start-up the use of resources in the district as spare materials or waste keeps investments low. The creation of a network of resources in the network may increase the use of local resources. Include municipal authorities could increase the possibility of municipal funding.

The participation of schools and University offers to the service more scientificity and credibility.

6.3 DESIGN SYSTEM CONCEPT

6.3.1 CO-DESIGN WORKSHOP

The activity of co-design with Hubbers saw a restatement of original concept created by students during the course SDS. Feelfine, the name of the new revised concept, proposes Community gardening activity characterized by the production of natural medicines and sophisticated and difficult to find food. It offers the opportunity to promote activity for the physical and taste benefit, rediscovering the values of proper nutrition. The exchange of knowledge and sharing of the harvests, is strengthened with the support of universities, which help to create and test high quality products.

The draft offer proposes two levels of service. On the one hand, participants can take courses, kept by the university to learn the techniques of cultivation and benefits of the plants. Can exchange the products grown with each other while maintaining a policy based on “short chain”. Moreover, the idea of organizing some dinners allowed the community to know.

On the other hand, for non-members have the opportunity to purchase products at pharmacies and herbalist shops and you can taste the products at restaurants in the area. In addition, a further offer was aimed at schools where it was proposed a training program at the headquarters of the garden at Via Odazio and the private gardens of the participants.

After the presentation of the projects were asked some questions about offers and ideologies of the proposed project. Questions which were then the basis for an open discussion among participants Hubbers.

1. Which school may be interested in the offer?

Interested schools could be the primary and secondary of the neighbourhood, the more open to alternatives is Rinascita, other schools may be Stainer and other public schools, however, teachers who have interests.

2. Anyone may participate in the community to teach?

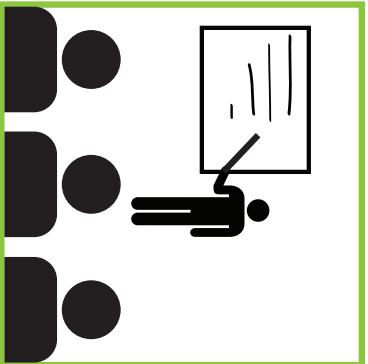
The participants of the Saturday morning may voluntarily, otherwise

PARTECIPANTS

LEARN MORE ABOUT YOUR HEALTH!

participate and watch the lessons of agriculture and pharmacy

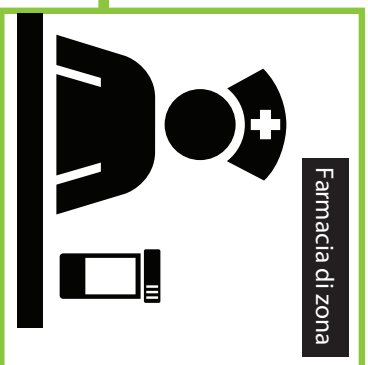
techniques of plant breeding and production of natural medicines



Farmacia di zona

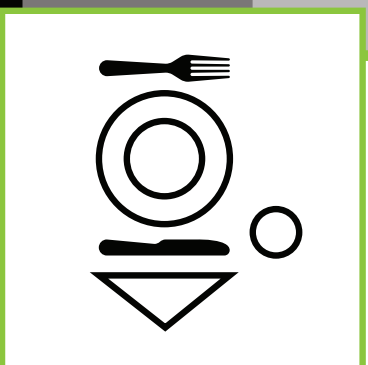
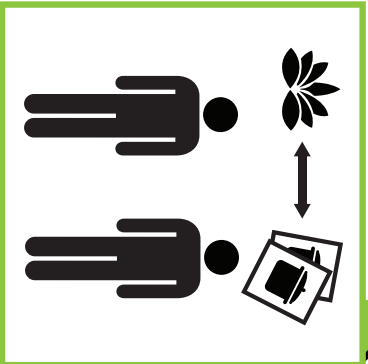
TREAT YOURSELF KM ZERO

local pharmacies sell products certified by the Casetta, made from natural plants.



SHARE AT KM ZERO

free exchange of goods and knowledge with the community

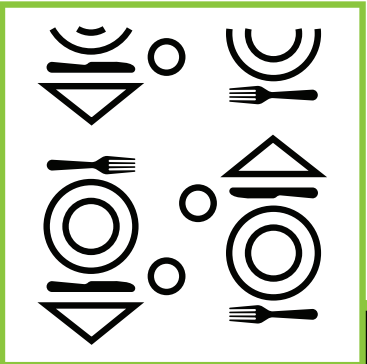


TASTE NEW FOOD

Anyone can buy products of distant lands, cultivated in the district while maintaining the same quality

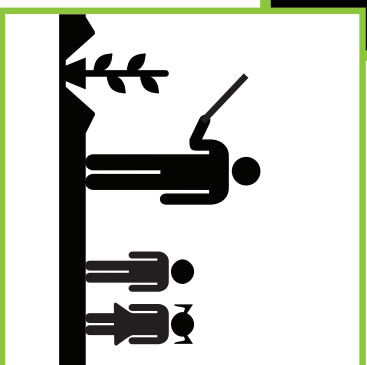
MEET THE NEIGHBOURS

dinner organized by the Casetta, show harvests cooked in homes and shared



GROW YOUR TASTE AND YOUR HEALTH WITH THE PRODUCTS DELLORTO

Biodiversity, new products, biological organoleptic properties and medicinal



KNOW THE NATURE

La Casetta becomes a place of study and workshop for schools in the district

it should pay someone to give the lectures or to request the assistance of Giardino delgi Aromi already active in teaching

3. Are there possible funding from schools?

In the hubbers experience schools would be willing to pay for extra educational activities, alternatively even the local council could finance them.

4. Which other ways are usable use are more involve the inhabitants of the district?

The mainstream media tried and also: flyers, parties with the distribution of seeds, dinner and presentation of products through collaborations with shops and restaurants of the area.

5. Anyone may stay at the Casetta to explain and distribute the information material?

The use of a website would facilitate communication, which supports the information desk on Saturday morning to allow wider dissemination of information.

6. It would be possible to obtain financing through registration?

It is the result that it could pay a small fee, but would lead privileges for members such as discounts on products and goods.

7. Which University may contribute?

The Agricultural University was not the most collaborative to the project, but it was proposed to investigate the possibility to set up partnerships with organizations that already promote horticultural courses.

8. The university may create a lab at the Casetta where to support the people in cultivation?

The lack of space inside the structure would require investments to expand the plan, but it could promote with some agreements with the universities of agriculture can arrange internships for students.

9. How could be managed / updated the archive? Which size?

Through a web platform where to store the video lessons, and through a hardcopy archive at the local library.

10. La Casetta can provide the materials for free loan to use? Who would initially invest? Possible sponsor? La Casetta could become a store?

As different solutions have been identified: the first takes the methods of exchanging and sharing individualized with students during the course, the second promotes the opportunity through membership of a discount at stores and plants such as Leroy Merlin store or Ingegnoli

11. How often an expert may assist them?

The solution that would guarantee greater certification and quality of the harvest is a visit once a week, while the lower quality would be guaranteed only monthly. Although probably it should find an expert who would be paid for home visits.

12. the community dinners are free service or on payment?

It was considered necessary to suppose that each participant is required to pay a little to get back in the expenses and also it could include GAS to further reduce costs.

13. How to create and medicinal-culinary recipes to share with all the community?

Once again, the website or a blog would be the best solution to exchange and communicate recipes.

14. Other gardens may be affected? How to create a network?

It may involve the local private gardens, or the network of gardeners in Milan (Libere Rape Metropolitane)

15. Who should earn money from the sale? Participants? All the equip?

The money from the sale should be divided among the equip operating the service and experts or professionals who check the quality of products

6.3.2 TRENDS

CITY-GARDEN, THE PHENOMENON OF THE NEW MILLENNIUM

From Manhattan to Cairo, from Berlin to Havana, the smart cities open their doors to agriculture, get creativity to grow, but also raise animals, and perhaps in a small space without land. A trend from positive impacts on several fronts: energy, environmental, economic, and social, is supported internationally by universities and research centers, organizations such as the FAO and by private citizens. If one considers that more than 50% of the world population lives in cities, and that this part of 250 million people suffer from hunger, it is easy to understand the impact it would have self-produced agriculture and kilometer zero. In the world it is estimated that 800 million people are involved in urban agriculture, saving 40 to 60% of their spending to feed. In 2015, 26 cities in the world will reach 10 million inhabitants, with a quantity of food to be transported each day is around 6 tons.¹⁹

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BERLIN, RENT THE FISH AND THEN EAT IT

Aqualung has a big success in the German capital it is an integrated system that raises fish and vegetables grown without soil, using one another waste of two activities: fish fertilize the water plants, which in turn keep it clear and oxygenated_ Several examples have sprouted

Figure 6.7
Efficient city farming
container

19. Michela Dell'Amico life.wired.it



on the rooftop, the last one is in the district of Schöneberg, where it is grown, and breed impact and with zero kilometers_ Efficient City Farming Berliners invites to book their perch. With 20 Euro will be raised for 6 months in a completely organic, sustainable and ethical way and - although the price is not yet quite competitive- are already booked 200 fish. The ECF is therefore planning to make the roofs of car parks, supermarkets or abandoned buildings on the suburbs of the city: the goal is to reach one thousand square meters dedicated to vegetables and 800 fish. It is healthy , but this fish is fostered in this way is incomparably more sustainable than beef, the production of which uses 70% of the water consumed on the planet.

EGYPT AND CUBA, THE GROW ON THE ROOF

In Egypt, working since 2001 to support the 'agriculture on the roofs of buildings.

The country had a population explosion and farmland have been reduced to the progressive enlargement of the city. With the help of Ain Shams University in Cairo aims to improve the environmental conditions of Egypt, critical in many aspects, and to support the poorest part of the population. At the Havana is the law that supports the development of systems called organoponicos in the gardens and terraces citizens. are known problems of Cuba in the supply of fuel, public transport virtually non-existent and those individuals are in part prohibited. It is therefore important to focus on the zero kilometer and already in 2002 the production of town food exceeded 3 thousand tons bringing the Cuban capital to produce 90% of the fresh food it consumes.

Figure 6.8
workers on an Egyptian
roof



CHINA CHOOSES AQUACULTURE

China is at the forefront, with Beijing which produces 70% of vegetables and milk consumed in the city and a research park on the city of Xiaotangshan, the Modern Agricultural Science Demonstration Park. The city of Shenzhen has chosen aquaculture: are cultivated mulberry trees to feed silkworms which in turn feed with their excretions, fish. Also derived farming of pigs and cows is used as food for fish, and in turn the cattle eat grain grown thanks to the waste of aquariums. The cycle is complex and closed, ensures water conservation, recycling, and fresh food. Almost 9 billion yuan (one billion euro) were allocated to projects that include the new eco-tourism agriculture.

USA, URBAN AGRICULTURE AGAINST OBESITY AND HUNGER

New York faces the problem overweight with urban agriculture. It supports the use of small portions of land in poor neighbourhoods and teach the basic techniques for its inhabitants. Associations such as GreenThumb City Farms project and provide seeds and teach you how. Here, too, spread hydroponic systems and rooftop gardens. In California, the Pomona Valley Urban Agriculture Initiative has identified six cities (Pomona, Montclair, Ontario, Fontana, Chino and Rialto) a majority of Latinos and risk of poverty and unemployment to raise their fortunes and reduce emissions with smart urban gardens constantly updated thanks to the collaboration of research institutes and universities.

MILAN, FOR THE EXPO: LAUNCH OF THE URBAN GARDENS COLTIVAMI

Milan, September 21, 2012 - To promote the cultivation of urban gardens, also in view of Expo 2015 as a citizen's socialization tool, promotion of unused spaces in the city and the recovery of green areas, education in the proper use of the territory in full respect of 'environment'.²⁰ It is the goal of the project "Coltivami", approved September 21, 2012 by the Government to bring environmentally sustainable agriculture in Milan through the experiences of the gardens, with particular focus on community involvement of older people, young people, families, citizens of all countries. The council has already identified nine municipal areas located in the streets Boffalora (Zone 5), Hip-

²⁰ Agenord.it

podrome, Monte Stella, Falck, Alassio (Section 8), Rubicon, Cascina de Prati (Zone 9), for a total of 25 thousand square meters made of 309 allotments of vegetables. At the same time, have been approved by the Government guidelines to enter into agreements with three different categories of public and private entities with headquarters in Milan, an interest in the areas subject to the presentation of projects of urban gardens: third sector (non-profit and co-operative social non-profit organizations, associations of social promotion, environmental protection, volunteer or cultural purposes), associations of citizens, organizations and public or private companies that operate within the framework of corporate social responsibility in order to achieve one of its employees valorisation activities of leisure and social and cultural issue. The agreements have a maximum term of nine years, with the possibility of renewal for a further three years.

The metropolis, that feed themselves, are becoming more numerous, including Milan, that attends an increasing in green spaces. Not only private spaces are increasing with a greater extension of the gardens on the balconies, but also public spaces, which are experienced by most people and have seen the rise and spread of community garden.

WHAT IS A COMMUNITY GARDEN?

A community garden means many things to many people and therefore, there are several ways to define it. For some, a community garden is a place to grow food, flowers and herbs in the company of friends and neighbors, while for others, it's a place to reconnect with nature or get physical exercise.²¹

In just a few words it could be defined: 'community gardens are places where people come together to grow fresh food, to learn, relax and make new friends.'²² In a more explanatory approach, it could be considered an area of shared land in which members of a community participate in the cultivation of food and other plants. The term 'community garden' is an inclusive term for different types of activities that involve practices such horticulture of foods, community involvement, and government support and participation. Community gardens are multifunctional places with a great diversity of spaces, plants, environments and opportunities.

According to the definition of the journalist Russ Grayson there are two main types of community gardens – communal and allotment.

²¹ Grayson, 2007

²² ACFCGN, 2009

Communal gardens involve participants sharing maintenance of an entire garden which most of the times is focused on its convivial component rather than on its cultivating one. On the other hand, allotment gardens are based on members having a defined area of land for which they are responsible and have exclusive rights to grow and harvest produce.

Community gardens are often grass roots initiatives aimed at revitalizing low-to-moderate income neighborhoods in urban areas. These bottom-up associations however, are widely supported by social service agencies, housing authorities, and local councils. They are less about gardening than they are about community, offering non-commercial places outside of work and home where people can gather, network, and identify together as residents of a neighborhood.²³

THE BENEFITS OF COMMUNITY GARDENS

'Community gardens are more than places to grow food. They are places of significance in the urban landscape where individuals, friends and families can gather. They are special places that combine many different activities'²⁴.

Community gardens possess a multitude of benefits. Some of their benefits include, access to nutritious food, food security, waste minimization and conservation, education on sustainable living practices, physical exercise, recreation, crime reduction and reclamation of public spaces. Community gardens also contribute to social and community development. They do this by allowing friendship formation, social interaction, social skills development, the breaking down of cultural barriers, community involvement, the development of a sense of belonging and community spirit and interaction with strangers, ultimately helping regenerating the social fabric.

Studies have been conducted examining the impact of community gardens on urban areas that have suffered from economic downturns. Establishing a large shared space in the form of a community garden alleviated some of the area problems, such as violent crime and drug activity. The gardens transformed vacant junk-laden spaces into attractive, safe places that foster social interaction among community members. They also offered young people who had a tendency to gravitate toward drug use and other adverse activities an alternative, educational option. The cost to fund a community garden is significantly less than the cost of a city-developed park.

²³ George Mobayed, *Community Gardens: A place for cultivating social and community development*, October 2009

²⁴ Russ Grayson, 2007

Community gardens can foster an understanding of gardening and its benefits in the youth of the area. Glenwood Elementary School, which specializes in environmental studies, has planted a moderate-sized garden behind the school's main building. Already abloom with an array of vegetables as tomatoes, cucumbers, raspberries, among others, the garden will yield produce to be sold or used in the school's cafeteria, allowing the students to make a direct connection between their workshop outside in the garden and what's on the plate in front of them, a connection adults often take for granted.

By promoting student participation in a garden, teachers at Glenwood add a level of direct involvement that reinforces the information they teach in the classroom. From the process of a seed becoming a plant to photosynthesis, the garden serves as a visual aid to supplement textbook learning. Gardening can work in tandem with every major subject in the primary school curriculum, from math and science to language and visual arts. School administrators find this type of integrated learning beneficial to both the children and the surrounding community. At harvest time, the children, teachers, and a Danville Master Gardener pick the produce, fostering a sense of community in all involved.

By learning from and working with an older generation of residents who have a history of agricultural activity, children gain a tangible connection with the history of the community through its land, a concept that has particular meaning in the Danville area, once an agricultural hub for tobacco and other produce. Though on a much smaller scale, the students still gain a valuable, personal connection with the kind of work their parents and grandparents may have done, forging a tie to family and state history. Additionally, children who garden experience a connection with the natural world that they often times overlook.²⁵

Despite the abundance of natural beauty in the area, some children in south side Virginia suffer a deficiency in the exploration and understanding of nature. Having children take ownership of student gardens provides a chance to learn more about their natural surroundings. By engaging the children at an early age, teachers begin to expose ideas of sustainability, food chains, energy cycles, and the ways human action impacts the environment. The students learn that such action is not limited to destructive or negative results. Environmental education, both academic and personal, will instill in the children a respect for nature that they will carry with them into adulthood.

25 danville regional foundation .doc

EDIBLE BALCONY

In many cities of the world, people are discovering that grow fruit and vegetables is a wonderful activity that does not take much space to do it.²⁶ The inhabitants of urban centers, many of them are completely devoid of experience as farmers, tasting the pleasure of eating their products collected directly from the plant. Do it yourself reduces the costs and the supply chain, allows to taste your efforts, sacrifices but also the successes.

26 Alex Mitchell

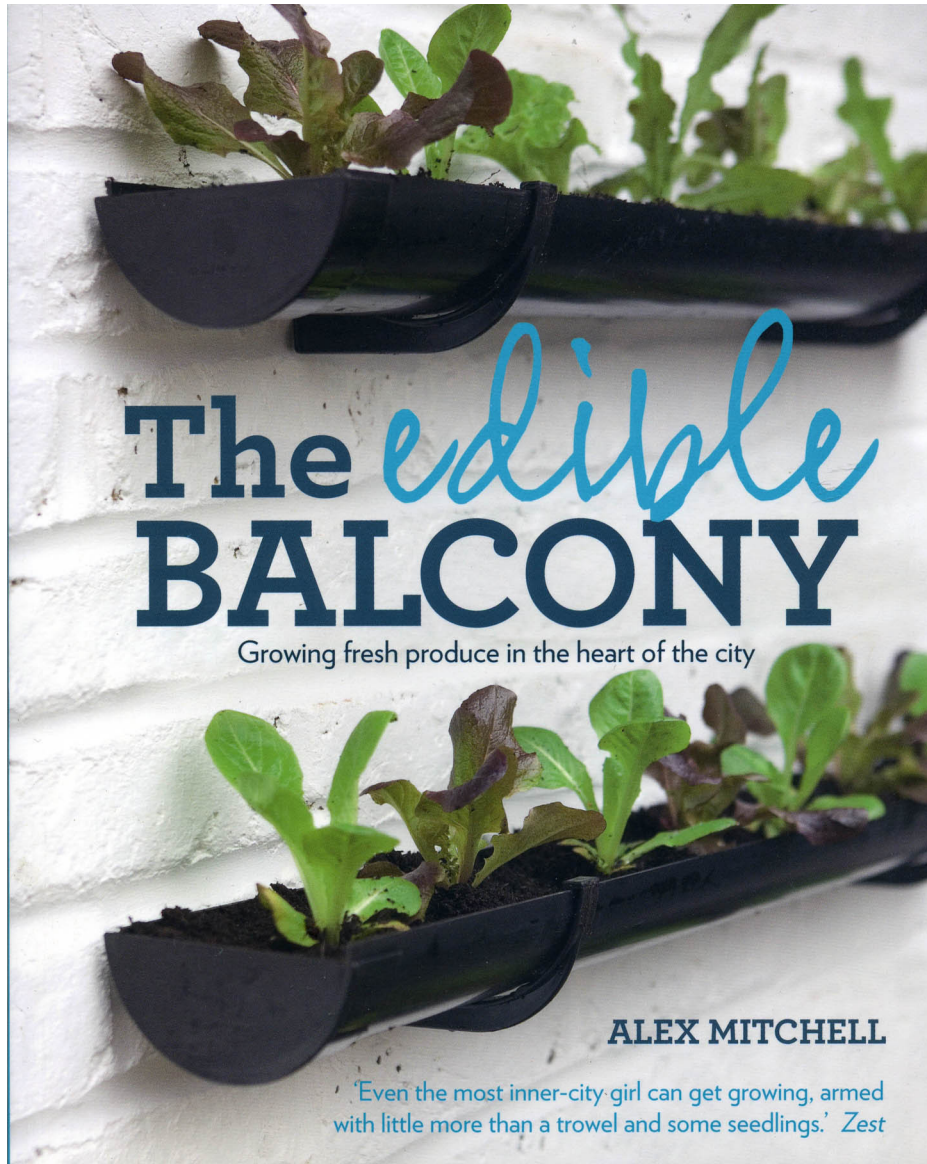


Figure 6.9

Cover of the book "The Edible Balcony"

Blogs, books report the gardener community on their balcony, their invention, creativity and quality that transform small urban spaces into lush gardens.

Planting edible products and flowers on the balcony not only creates a most beautiful corner aimed at relax or the supply of fresh and good ingredients for lunch, but there is a substantial reduction of the environmental impact. Fruit and vegetables grown on the balcony can also be called “to km zero”, also referred to with the more technical term “short chain”, are local products that are sold or given close to the production site. These foods have mostly a low price due to low transport costs and distribution, lack of commercial intermediaries, but also to poor reloading of the seller which is often the same farmer or rancher, that at the level of domestic production would be reduced to zero. Foods “to Km zero”, as well as coming from a specific production area, provide more certainty and freshness because of the absence, or almost, transport and passage.

The built-up areas retain the heat, raising the temperature of the city up to three degrees above those of the country. With global warming the urban temperatures are likely to increase. Growing plants on rooftops and, where possible, on balconies, insulates buildings from heat for about 20% thereby reducing the waste of money caused by the air conditioning. In addition, cities are increasingly constructed, full of pavements, streets and parking it follows an accumulation of rain water drains instead of the safe absorption of the ground. Growing on the balcony or on the roof, it creates a barrier that keeps the water before letting fall back into the exhaust pipes. Finally plants improve air quality, absorbing the emission of carbon dioxide and releasing oxygen. A green roof also absorbs noise contamination from urban air by road traffic.

The balconies are a private place but also public and consequently they contribute to urban decor. With this mission were born groups of people who believe in the importance of the balconies in urban areas. One of these is ‘Balconism’ and is a Facebook group born from the idea of Margherita Helzel, journalist, design to sensitize people of the urban decor. The Facebook group has more than 380 people that describe themselves: “It is an initiative that comes from the observation of how the balconies are used. Small green oasis, smoking room furnished, open closets, workshop or tool shop, the point is that those few yards are part of the apartment, could be lived better, but above all they are visible from the street and therefore contribute to the ap-

pearance of facades, of the roads, of the city.”²⁷

Balconism aims to collect material of all types to support the cause of the balconies treated with photos and information of all kinds about the green and everything related to improper or bizarre use of balconies to tickle especially the attention of local institutions.

The Balconism wants to become a communication project that involves professionals and citizens to change the facades of mammy mediocre buildings, unfortunately we have left.

27 Sara Piselli had interview during Start di Radio Uno, th proposer Margherita Helzel

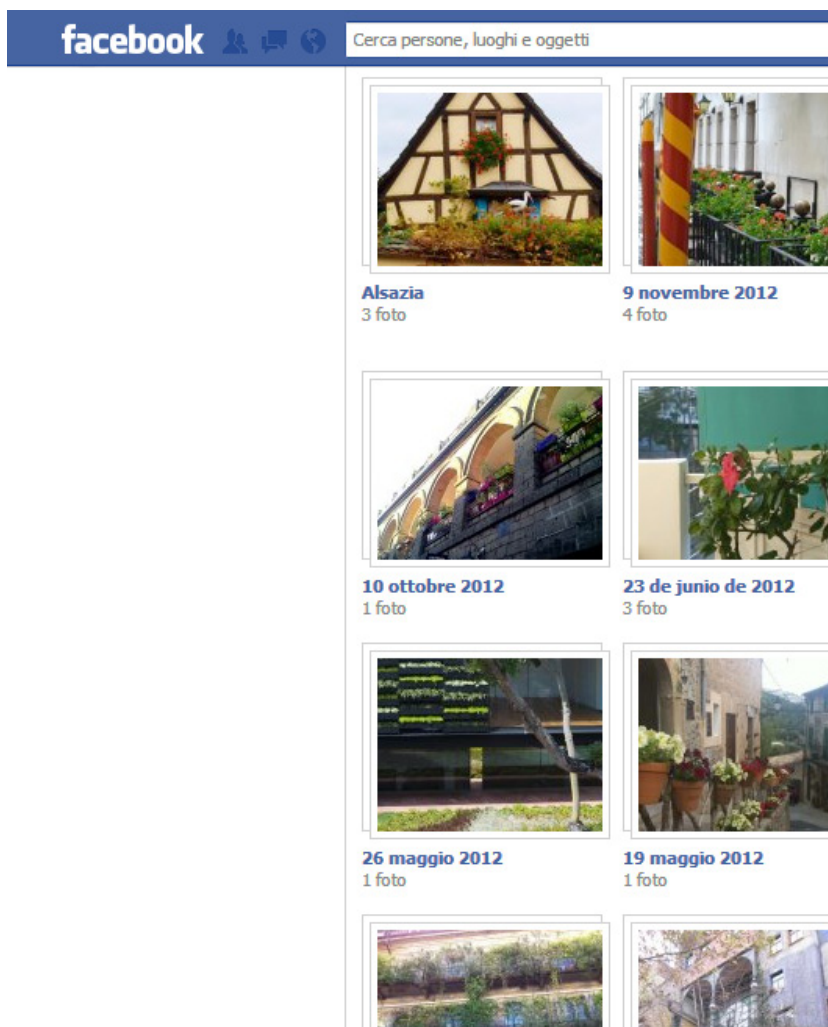


Figure 6.10
Balconism Facebook
website

THE ITALIANS, GARDENING EXPERTS

According to Coldiretti four out of every ten Italians make self-production, saving at least 300 € per year. By Carlo Petrini, founder of Slow Food, “the reasons are not only economic. There is the desire to know what you put on your plate, but above all the taste, which is priceless, you can say “That ‘s what I did.” And Petrini speaks of “growing demand for school gardens, because it was understood that put the hands in the soil has enormous educational value.” The ‘garden in the city, ensures the’ Tuscan agronomist Fabio Pinzi is within the reach of everyone, even those who live in the apartment: “A family just needs two square meters for stress-free lettuce, radishes, smells.” In Rome, Alessandro De Angelis has created a web community of urban farmers (ortourbano.it) where, with a webcam, it follows directly the growth of seedlings, and similarly to this site other ones are emerging in support for gardeners in all stages (www.growtheplanet.com). And there are many, says Coldiretti, varieties of plants terrace: small those obtained from crosses and standard products suitable for growing in pots. According to the study the study made by FoodSaver, reference brand of vacuum packaging systems: 25.9% of respondents said to have a piece of land to be cultivated at home. Although behind all this enthusiasm green is a significant proportion of ‘ignorance about the ways, the time and the attention that it needs an hobby like this: 56.6% of the respondents replied that makes the work at random. Only a low minority said they had taken a course in gardening (13.2%) or have a professional equipment, like a automatic irrigation

Figure 6.11

Rosa Maiorelli's balcony,
Via via Civerchio, Milan



system (11.3%).

What are actually the reasons behind the Italians to invest in order to have fresh fruit and vegetables on their balcony? Only 17.3% of them, says the difficult period we are going through, and the need to to tighten one's belt. The majority instead takes hoe and rake except like the green gym fanatics, at least as a way to relax, be a bit 'in the middle of nature and to fight stress (22%). Others indicate different reasons but similar to a responsible approach to consumption: 34.6% for "knowing what you eat", or because an urban garden is "bio oriented" (21%).

6.2.4 THE NEW BEST PRACTICES

1.Orto Condiviso

1. general information:

name of the (product-service) system innovation "Orto Condiviso"
title Pick up your garden, instead of continuing to say that it is yours, begins to think that it is our
producer/provider name Associazione Terra Libera Tutti - Via Gramsci 13 - 50066 Reggello (FI)
web site <http://www.terraliberatutti.org/ortocondiviso/index.php>
source/contact <http://www.terraliberatutti.org/> ortocodiviso@terraliberatutti.org cell. 348 5155095
developing stage start up

2. eco-efficiency and/or socio-ethical characteristics:

The service goal, about the socio-ethical aspect, is to share goods, in order to obtain results and benefits to all participants. Who is without an allotment can participate in the space of others, sharing the hard work and together celebrate the harvest. Through some simple rules stimulates to a sustainable way of life, their are strictly in accordance with the ethical and biological cycles of life and nature. Rejecting the logic of con-modification of life and exploitation of non-renewable resources.

3. (product-service) system innovation characteristics:

Orto condiviso is is a network of owners of allotments, which together share the land, allowing specific crops most appropriate based on the characteristics of Light exposure, location, altitude. For best results in full respect of natural resources and the sharing of goods, design, skills and harvests

Figure 6.12
Workers in Orto
Condiviso



2.Orto Botanico Didattico Sperimentale di Cascina Rosa

1. general information:

name of the (product-service) system innovation“Orto Botanico Didattico Sperimentale di Cascina Rosa”

title botanical garden for the conservation and development of plant species, research, culture in general, relaxation and socializing.

producer/provider name SOCIETA' BOTANICA ITALIANA ONLUS via Giorgio La Pira, 4 - 50121 Firenze tel +39 055 2757379 | fax +39 055 2757467 email sbi@unifi.it | web www.societabotanicaitaliana.it

web site <http://www.ortobotanicoitalia.it/lombardia/milano/>

designer's name Carlo Soave

source/contact Via Valvassori Peroni 7 - 20133 Milano

tel: +390250312886 Uffici, +3902503120890

Segreteria - fax: +3902503120007

email: orto.didattica@unimi.it - web: www.unimi.it/ateneo/3821.htm,www.reteortibotanicilombardia.it/

developing stage In progress

2. eco-efficiency and/or socio-ethical characteristics:

through educational paths in the nature for children and adults, the intent is to educate people about the conservation and enhancement of local plant species.

3. (product-service) system innovation characteristics:

Guided tours are offered to schools and adult groups. Teaching proposal is divided into paths for neighborhood schools, which can be several times during the year; and so they can follow more complex programs (visits and experiences in the laboratory and in the field) and initiatives aimed at schools farther that may come only once during the year and then make a tour of the garden.

Specifically, the Orto di Cascina Rosa has been made rebuilding some environments typical of Lombardy, one of the richest regions of plant and animal species, unfortunately increasingly stifled by the increasing rate of human settlement in the area. The green area of Cascina Rosa is an attempt to combine the activities of a botanical garden (conservation and enhancement of local plant species) with the everyday life of a public space and research.



Figure 6.13

view of Orto Botanico
Didattico Sperimentale di
Cascina Rosa

3.Orto Scolastico

1. general information:

name of the (product-service) system innovation “Orto Scolastico”
title “We learn hoeing”

producer/provider name ISTITUTO COMPRENSIVO - VIA DEI SESAMI
designer’s name Pietro Lucisano, Paola Turrone

source/contact rmic8ez00b@pec.istruzione.it - Via Dei Sesami,20 - 172
Roma (RM)

developing stage in progress

2. eco-efficiency and/or socio-ethical characteristics:

The service goal, about the socio-ethical aspect, is to insisted on the use of the garden in order to take the child into useful work and outdoors, to the satisfaction of seeing a result, the work of their commitment, instruct them on the cycle of the seasons and the life of nature, educate the sense of ownership and responsibility.

3. (product-service) system innovation characteristics:

Orto scolastico is a ‘teaching about gardening that combines theory and practice, in fact the children are learning the benches behind the processes of plant life and after lessons have the ability to see in the garden (a small allotment of 40 square meters) that they studied. Learn more and better. In addition there is also a vegetable cooking workshop. Where children with teachers confront the recipes for the best use of the products grown.

Figure 6.14
Teaching activity



4. Little City Gardens

1. general information:

name of the (product-service) system innovation “Little City Gardens”
title “customers need farms- farms need customers”
designer’s name Brooke Budner and Caitlyn Gallowa
source/contact <http://www.littlecitygardens.com/>
developing stage in progress

2. eco-efficiency and/or socio-ethical characteristics:

The service goal, about the eco-efficient aspect is to produce and sell the harvests from the city garden not to depend on municipal funds. About the socio-ethical aspect, they seek to serve a diverse population, and to build a community dialogue about food systems, by involving and educating members in our processes and problem solving.

3. (product-service) system innovation characteristics:

Little City Gardens is a small urban farming business in San Francisco, CA. Born from the re-qualification of communal spaces that grows, sells and distributes healthy food within the city. Thanks to the city council of San Francisco, California, that passed an ordinance that allows anyone to sell to neighbors, in markets, restaurants and bars, the products it produces in the garden



Figure 6.15
workers in the Little City
Gardens

5. The Urban Orchard

1. general information:

name of the (product-service) system innovation “The Urban Orchard”

title “customers need farms- farms need customers”

designer’s name Friends of the Earth Adelaide and the Goodwood Goodfood Co-op

source/contact <http://www.adelaide.foe.org.au>

developing stage in expansion

2. eco-efficiency and/or socio-ethical characteristics:

The Urban Orchard project was initiated in Adelaide by local community members passionate about gardening, good food and building community. Through providing a central space for community members to come together and share their homegrown or gleaned surpluses, the exchange offers a number of strong social and environmental benefits, including

- reducing waste by redistributing surplus fruit, vegetables, herbs and seeds
- cultivating networks within the neighbourhood and building stronger communities
- providing healthy, seasonal food for the community
- sharing valuable skills in gardening and food preparation
- avoiding greenhouse gas emissions by reducing the need for produce transported from outside the local area

3. (product-service) system innovation characteristics:

In November 2007, Friends of the Earth Adelaide and the Goodwood Goodfood Co-op launched a homegrown fruit and vegetable exchange in the inner south-western suburbs of Adelaide. It’s a concept that has been practised formally and informally in communities probably since time began. The basic format of this particular exchange was inspired by the Urban Orchard project initiated by Melbourne’s CERES community environment park. Since beginning the exchange in Adelaide, Friends of the Earth has received a strong response from others seeking to start a similar project in their own local communities across Australia.

Figure 6.16
exchange moment



6.2.4 THE NEW BRIEF

“Develop a service that allows a small garden to expand its farmland to the entire Giambellino district. Creating a network of experts and trained gardeners cultivating in their domestic spaces, a set of niche gardening products with a high value; to be exchanged within the community or sold to the neighborhood, to specific shops or restaurants (with a market price) to achieve economic sustainability. Becoming at the same time, teaching experience for the neighbourhood and for local schools to spread the culture of consuming healthy local food doing gardening activities.”

Figure 6.17
Beirut Wonder Forest,
visionary project by
StudiInvisible



7

THE PROJECT: CASEVERDI.NET

The pss, CaseVerdi.net see the small space in Via Odazio in Milan headquarters of district laboratories, become the focus and the basis for community garden a distributed in the district Giambellino. Which develops a production of refined and niche products, presenting variety of forgotten the traditional fruits and vegetables, and other varieties with high nutritional values. The idea of a production of niche products with high organoleptic quality has been designed to allow people who live in the neighbourhood to consume the products of excellent quality and hard to find at a minimum cost. Bringing this production to sale, as an attempt to create exclusive products of the area, as a sign of recognition in the area, that will not be the degradation and poverty but the quality at zero km.

7. 1 THE OFFER: HOW IT WORKS

Some varieties have been selected with the technical assistance of Professor Livia Martinetti, and the doctor Alberto Spada from Università Statale, facoltà di scienze agrarie e alimentari(Faculty of Agricultural Sciences and Food). Attention has been focused on the selection of new varieties and species, as the introduction of new species unknown in the market in lack of knowledge would limit the sale.

Martinetti Livia is a professor of the courses 'Agronomy' and 'Cultivation of medicinal plants' in the degree course in 'Herbal Techniques' at the Faculty of Pharmacy. Moreover, his research interests are Agrotecnica of different species of flowers, vegetables and herbs, with particular reference Optimization of nitrogen fertilization of leafy vegetables in organic and conventional cultivation of vegetable crops in closed-loop systems in the presence of different levels of salinity. She was contacted by the faculty website providing materials and techni-

Alberto Spada is a professor and researcher of General Botany, Faculty of Biology, University of Milan and scientific director of the Botanical Garden Cascina Rosa, University of Milan. He was contacted as an expert and technical support for the implementation practical offer.

With their technical contribution has been possible to select some high nutritional value and niche varieties, suitable for the growth in the territory and climate of Milan:

(in the following pages)

Chart 6.7

Black Crimea Tomato card

Chart 6.8

White eggplant card

Chart 6.9

Candela coda di Ghiaccio
Radish card

Chart 6.10

Rossa Italiana Chicory

Chart 6.11

Ramata di Milano onion



LATIN NAME

Solanum lycopersicum or *Lycopersicon lycopersicum* var. *Nero di Crimea*

PLANT ORIGIN

The tomato variety called the Crimea seems to have been obtained on the island of Krim in the Black Sea off the Crimean peninsula.

Antique variety, medium early maturity, characterized by plant habit and indeterminate, vigorous and productive.

MORPHOLOGY

Crushed fruit round, furrowed surface,

180-350 grams, red dark purple when ripe, primarily intended for the fresh market

CULTIVATION

The sowing in seedbed occurs between January and February with 30 days after transplanting and harvest between June and October.

In the field sowing takes place between March and April, thinning and harvesting after 30 days between June and September.

It is a plant with indeterminate growth that bears fruit very quickly coming to maturity in 80 days.

NOTES

Tomato is rich in vitamin C and carotene, low in calories, ideal in slimming diets.

The black Crimea is rich in lycopene, which, together with the chlorophyll, giving them the typical greenish-brown.

The lycopene, one of the most potent antioxidants present in nature in fact would seem to have an active prevention against different types of tumors, particularly against those of the human prostate (already established) and that of the breast to the woman



LATIN NAME

Solanum melongena var. Bianca

PLANT ORIGIN

Variety early cycle of Southeast Asia, introduced recnetemente in Europe. Its plant is vigorous, productive, strong and durable.

MORPHOLOGY

The berry looks small oval, white - cream.

The surface is glossy and smooth.

CULTIVATION

It prefers temperate climates or hot, and suffers from frost.

It is grown in heated nursery in southern Italy in January-February, in the center-north in March.

The irrigation of the land must be constant.

The harvest lasts from June and lasts until the end of September.

It has a growth cycle of 70 days.

NOTES

The nutritional value of eggplant is quite poor: low calorie, low fat, protein and carbohydrates, but rich in calcium, phosphorus, vitamins A and C and potassium.

Eggplants stimulate kidney activity with a substantial water content.

It seems that they are useful for lowering cholesterol and as a mild laxative.

The white eggplants have a complete absence of anthocyanins. Rich in polyphenols, antioxidants useful in the cardiovascular system, diseases related to aging and stopping tumor growth.



LATIN NAME

Raphanus sativum var. Candela di Ghiaggio

PLANT ORIGIN

E 'of Japanese descent and is widely used nellacucina Eastern Europe, and known by the name of daikon, but is also cultivated in our country.

MORPHOLOGY

Root long, flattened, white.

The flesh is firm and crisp.

CULTIVATION

It grows well in soils well dissolved, which allow the root easier growth, and containing a high rate of organic matter.

It prefers a temperate climate and trembles at very high temperature and a drought.

It is therefore sown in the period from February to the end of October, the best time to avoid scorching.

NOTES

Presents remarkable properties that allow to facilitate the purification of the organism, starting from the urinary tract, helping to counteract the water retention.

It 'diuretic and draining and can be considered a real panacea to add to your recipes.

And 'considered beneficial for the liver and in the case of mild respiratory disease, as it helps to clear the airways of mucus.

Promotes buonadigestione and has a low-calorie, equal to only 18 calories per 100 grams of product.

Can be considered as a good source of vitamin C, beta-carotene, calcium and iron.



LATIN NAME

Cichorium intybus var. *Rossa Italiana*

PLANT ORIGIN

Hardy plant varieties and wild very adaptable, early maturing. the result of selection of *Cichorium intybus* to work of seed companies.

MORPHOLOGY

Compact tuft of leaves of 15-25 cm presenting a central rib red close to the base, and a leaf blade of green color.

CULTIVATION

Chicory is very adaptable and can be done on land colitvazione quite varied, from loose to medium textured clay and till, on land exposed to the sun.

Is sown at a depth of 1 inch at a distance of 25 centimeters and 40 centimeters line between the lines.

It is sown from June to August, with thinning after a month and a scalar collection after 60 days from September until January.

Harvesting is done by hand.g.

NOTES

The chicory has a high rate of edible part (80%).

Each 100 grams contains 93% of water, 1, 4% protein, 0.2% fat, 0.7% carbohydrates available, 3.6% fiber.

There are also 236 mg potassium, 74 mg calcium, 31 mg phosphorus, 14 mg of sodium.

Chicory are attributed functions diuretic and mild laxative, promote the secretion of bile and and diuresis with consequent purifying and detoxifying to have a tonic and re-mineralizing, due to the good amount of minerals and also hypoglycaemic and vasodilator action.



LATIN NAME

Allium cepa var. of *Ramata di Milano*

PLANT ORIGIN

Varieties with late cycle day long (requires at least 16 hours of light because it can form the bulb)

MORPHOLOGY

Bulb size large, oval-shaped, red, white pulp.

CULTIVATION

For a good harvest the soil should be very light, well exposed and rich in

phosphorus and potassium, previously subjected to a digging deep, so that the bulb develops in a homogeneous way and without any resistance from the ground in the same growth phase.

It needs a temperate climate and fears temperatures near or below 0 ° C.

It is sown at a depth of 1 inch at a distance of 15-20 cm on the row and of 25-30 cm between rows.

NOTES

The onion contains 92.1% water, 1% protein, 0.1% fat, 5.7% carbohydrate, 1.1% fiber. Each 100 grams of edible provide 140 mg potassium, 35 mg phosphorus, 25 mg calcium, 26 and 109 kcal kj.

The onion is diuretic, purifying, antiglycemic. It's good for the respiratory system and provides benefit in the case of influenza, rhinitis, tonsillitis, pharyngitis, bronchial pneumonia.

It is particularly useful in diseases of the prostate. Fights hypertension, aging, atherosclerosis and ailments of the urinary tract. It is indicated against intestinal fermentation and facilitates digestion.

Has the ability to lower cholesterol lowering triglycerides, and blood lipids.

Many of its beneficial properties are lost during cooking, so if tolerated, should be eaten raw, in salads.

The good news is that the seeds of these varieties can be found easily on the market. Picked them up the Council for Research in Agriculture (CRA) at the Fascination of Plants Day 2012, which was celebrated all over the world for on May 18th 2012 to promote the key role of plant science in the agri-food, pharmaceutical, energy and environmental protection.

The laboratory activities of collective gardening takes place every Saturday morning from 9 am to 1 pm at the space of Verde Casetta where five trained experts follow and guide the community cultivation.

Through the course Orti da Balcone (Edible Balcony) kept by Slow Food and financed by the Casetta, the expert will be instructed on the following issues to support of the community at all times. Through the course learn the principles to be followed a slow vegetable garden, find out about soil: analysis, protection and choice, compost and water use, also how to manage school, urban, community, social gardens and how to design crops offering guidelines of some good practices: rotation and inter-cropping and possible defences in the garden. Finally they will be instructed on the techniques of cultivation, seeds: types, selection, storage and certifications.

The lectures held by experts, will then be recorded and stored to facilitate the dissemination among the members. These will take place at the local library, that is adjacent to the Casetta which is also digital and hard-copy archive for more information on cultivation techniques and solutions.

Nora Lualdi, local manager of the Library of Via Odazio has been willing to create a gardening section, both in hardcopy and virtual, for the participants of the gardening collective. The interior spaces will be used to give lessons, even if there is not the possibility to pay the staff involved. They will also have a dominant role in communication by offering their resources as local printing house to promote the activities of the Casetta.

The new strategy is proposed to people who can not actively participate on Saturday morning, for reasons of physical effort and time, and have plenty of time is the possibility to actively participate in gardening in their living spaces. As well as the more or less active participation in collective activities it is possible to experience the information learned directly at home, in courtyards and private balconies. Subsequently to the enrolment to the service with a small admission fee,

each participant will purchase with some discount, a box of products to start a small garden in their available space. According to the exposure, the availability of space and participation are available three different boxes containing pots, soil, seeds and tools (low, medium and high participation box). The experts will be careful and available for the support and certification of the quality of private gardener, verifying the quality of the harvests through home visits.

Each participant according to the characteristics of their own garden grows the varieties best suited to share the harvest with the community CaseVerdi.net. The use and free exchange of resources is guaranteed and certified. A web platform facilitates this stage of contact and exchange of products, recording and storing exchanges and interactions among users. Also on the site will be available technical content, recorded lectures and a section of tips and recipes. Moreover every month during the activity of the Saturday morning there is a moment of collective exchange among the participants, in fact resources are redistributed among them creating various and balanced crops. A register collects information and the level of productivity of each gardener so that it is correctly "paid".

Yields of the Casetta are cooked by the participants to promote products through collective dinners and events in the neighborhood. It is required only small financial contributions to recoup one's costs

Some training activities have been arranged for local schools, one of them, that was identified during the research in the area and the suggestion of the Hubbers and the Library, is the Institute of the Renaissance. Having previously worked as a gardening community through its structures and defining a modern school to continue to study and understand the reality, and open to such proposals might be interested in active participation in the project. In fact, for the school participants take courses at the Cottage that enable children to study plants, their benefits and methods of cultivation. In addition, training courses bring children on their private balconies where some lessons are entertained on the specific varieties and their nutritional characteristics.

The offer will be extended to local residents and local restaurants. In fact, after an initial phase in which the pilot project only focused on the production and exchange, to make the project self-sustainable products will be on sale for the community. After that the production will be started and certified, and after obtaining the certification by

SHARE/EXCHANGE YOUR HARVESTS

ASK THE COMMUNITY THE PRODUCTS YOU NEED WHEN YOU WANT

EVERY SATURDAY MORNING A STAND EQUIPPED AND MANAGED BY TWO PERTECIPANTI WILL PLACE OF BARTER AND COLLECTION OF PRODUCTS

IMMEDIATE EXCHANGE OR CREDIT GUARANTEED

CULTIVATE ON YOUR BALCONY

PARTICIPATION ALSO ON PRIVATE BALCONIES OR PATIOS POOL

MATERIALS (POTS, SOIL, SEEDS AND INSTRUMENTS) FOR PRIVATE USE ARE PROVIDED FREE OF CHARGE FROM THE LODGE

EACH BALCONY IS FOCUSED ON A VARIETY

ACTIVE SUPPORT OF FIVE TRAINERS / EXPERTS

LEARN TO CULTIVATE

EVERY SATURDAY MORNING FROM 9 TO 13

5 TRAINED SPECIALISTS (IN 5 DIFFERENT VARIETIES), WORK THE LAND TOGETHER WITH THE COMMUNITY

IN TURN PRACTICAL CLASSES WILL BE HELD AT THE LODGE, THE THEORETICAL AT THE LOCAL LIBRARY

KNOW YOUR PLANTS

TECHNICAL INFORMATION VERY SERIOUSLY AND ARE AVAILABLE IN THE LOCAL LIBRARY

COMPUTER, ONLINE INFORMATION AND PHYSICAL MEMORY OF THE TERMINALS

A SPECIFIC SECTION OF THE LIBRARY WILL COLLECT BOOKS AND TECHNICAL

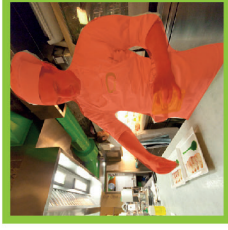


ASK THE PRODUCTS TO THE COMMUNITY

A PLATFORM FOR THE EXCHANGE GUARANTEE PRODUCTS FROM BALCONY WITH FREE CREDIT



OTHER CONSUMER



BUY PRODUCTS AT KM ZERO
ACTIVE STALL EVERY SATURDAY MORNING WITH TWO PARTICIPANTS IN THE COMMUNITY
PRODUCTS ARE SOLD TO LOCAL RESIDENTS

TEST SPECIAL PRODUCTS COOKED BY CHEF OF THE AREA
SLOWFOOD RESTAURANTS PREPARE DISHES WITH THE PRODUCTS PURCHASED AT THE COMMUNITY

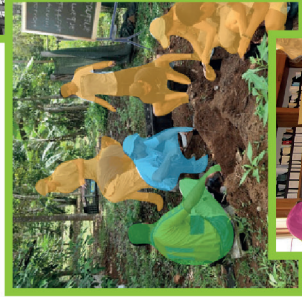
SCHOOL IN THE NATURE
BY TURN A PARTICIPANT ARE PRESENTED SPECIAL PLANTS TO LOCAL SCHOOL CHILDREN

THE CHILDREN VISITED THE VARIOUS BALCONIES WHERE THEY DISCOVER THE NEW VARIETIES. PRIVATE LESSONS WILL BE ENTERTAINED ON THE SPOT.



GROW YOUR TASTE AND YOUR HEALTH WITH GARDEN PRODUCTS DISTRIBUTED IN THE BALCONY AND GARDENS OF GIAMBELLINO

OFFERING NICHE AND BIOLOGICAL PRODUCTS, TO THE PEOPLE MEMBER OF THE INITIATIVE, RESTAURANTS AND HERBALISTS SHOPS



some members about the hygiene package paragraph 852, part of the harvest will be on sale for private citizens in order to achieve economic sustainability.

the 1th January 2006 a series of Community legislation enter into force(Regulation 852/04, Regulation 853/04, Regulation 854/04, Regulation 882/04 and Directive 2004/41), known as “Hygiene Package”, which together with the Legislative Decree no. 155/97 (HACCP Hazard Analysis Critical Control Points) can be considered the consolidated text of the dietary laws.

Preserving and enhancing the goals of safety and wholesomeness of food products contained in 155/97, the new legislative regime amending and repealing many Community provisions on food hygiene and control activities of the competent bodies.

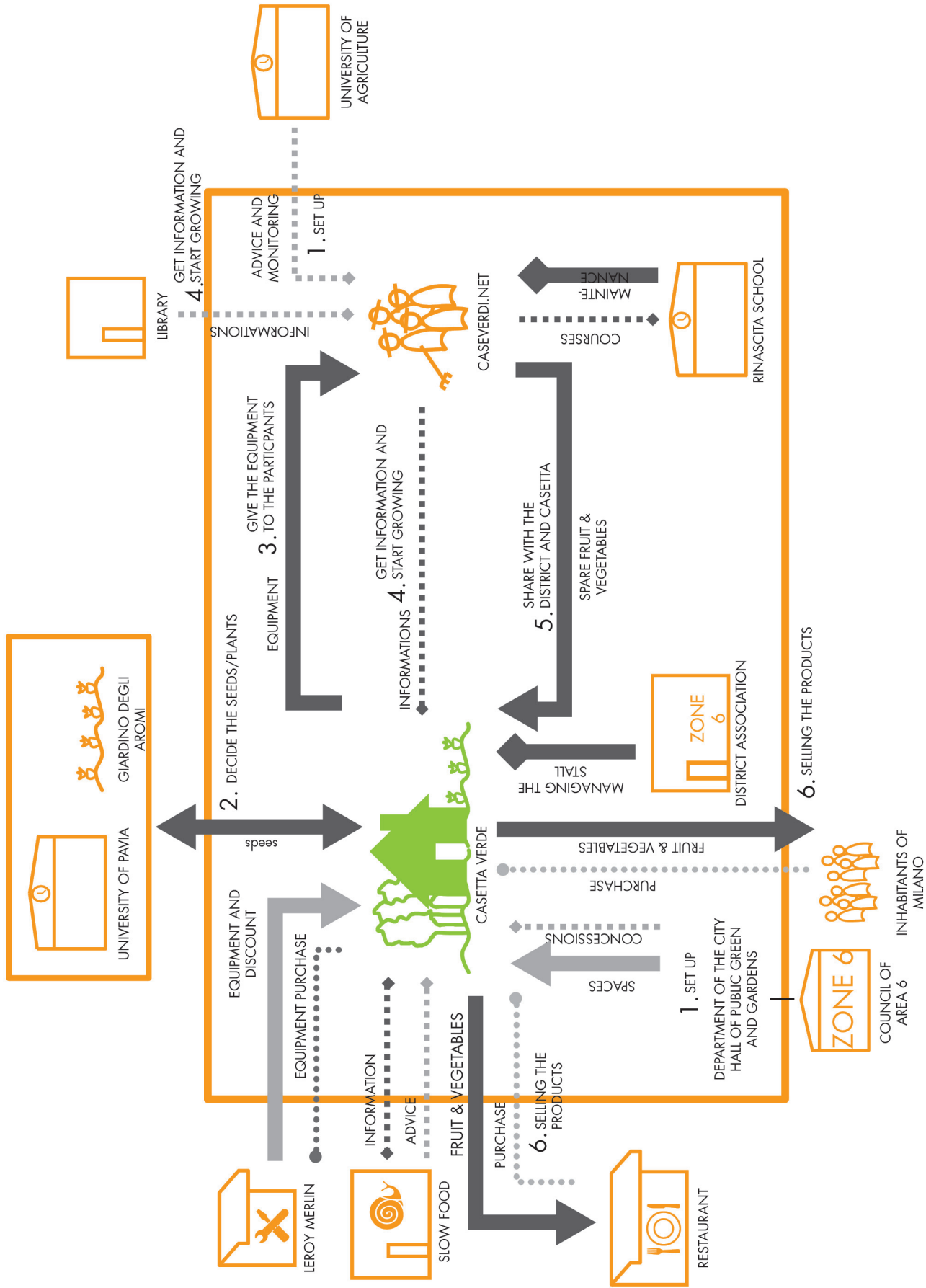
It was also considered the presence and participation of Slow Food, both to promote educational programs for schools, which has been operating for several years, and that will create sales network with local street restaurants that rally to the cause of Slow Food. The restaurants can buy products at kilometer zero, traditional fruit and vegetables and elaborate unique meals from the area.

Slow Food was founded in the city of Bra, in the province of Cuneo, and it aims to the promotion of the right to enjoy the meal, and the whole world of food, primarily as a pleasure. Founded by Carlo Petrini and designed as a response to the spread of fast food and the frenzy of modern life, Slow Food studies, defends and disseminates agricultural and culinary traditions from all over the world.

Slow Food is committed to the protection of biodiversity and the rights of peoples to food sovereignty, fighting against the standardization of taste, the large-scale agriculture, and genetic manipulation.

To allow the sale of the products will be monthly set up a stall at the Casetta, which is already used for the moments of exchange, where the revenues in addition to economic sustainability will allow investment in new tools and services to make the project more and more inclusive, professional and competitive.

Chart 6.13
System map
of CaseVerdi.net



7.2 THE ACTORS

Initially, it is essential to have the participation of various associations already living spaces of the Casetta, to get the Culture Announcement for zone 6. Indeed, this allows to obtain space via Odazio guarantee and getting some permission by the Council of zone 6 the opportunity to sell the products of public land in the district. Moreover, the managing of offers of CaseVerdi.net offers is managed by the associations already living space offering their own experiences to the community. In return receive new association membership and participation in the neighbourhood. The identification of seasonal varieties appropriate to the Milan area, are selected with the support of the teacher of the faculty of agriculture and food science, Alberto Spada, that also plans varieties that are better suited for each area identified in relation to its exposure, remembering the priorities of the products of niche.

With the cooperation of the University of Pavia, that has a seeds bank of native plants of the Lombardy, and the contribution of some consortia it is possible to find the most suitable and refined seeds. The preservation and storage of seeds is guaranteed by the contribution of the Giardino degli Aromi, is an association based in Milan, non-profit utility (Onlus) was founded in 2003 by a group of women with experience of growing and harvesting aromatic plants. This association takes place between its proposals raising activities and storage of seeds, so they are interested in enhancing their catalogue and to increase the supply of vegetable plants.

The Casetta then is responsible for collecting the registration of participants and to buy materials at the plant shops / DIY shops and then redistribute them among members. Contemporaneously experts would take the theoretical and practical courses in the structures of via Odazio, so start private farming activities. At the end of the harvest Participants will exchange products, spare fruit&vegetable are available for sale to the inhabitants and restaurants.

7.3 THE SERVICES EXPERIENCES

a tool to support the (co)designing and visualization of a sequence of interactions between user and the product-service system designed.

(in the following pages)

Chart 6.14

Interaction Storyspot

Chart 6.15

Interaction Table

(in the following page)

set up

start up

maintenance

FRONT DESK



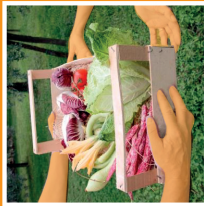
JOIN THE COMMUNITY:
- REGISTER
- ENTER THE NETWORK
- DECIDE PLANTS



PARTICIPATE TO OCCASIONAL WORKSHOP ABOUT CULTIVATION



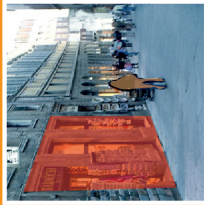
RECEIVE TOOLS, VESSELS, SOIL AND SEEDS FROM THE HQ AND START CULTIVATION



EXCHANGE FRUITS & VEGETABLES WITH THE COMMUNITY EVERY SATURDAY MORNING AT THE HQ



GIVE SPARE FRUITS AND VEGETABLES TO THE HQ.



BUY PRODUCTS AT KILOMETRO ZERO

BACK OFFICE



ARRANGES A MEETING WITH EXPERTS AND START WITH THE DESIGN AND SELECTION OF PLANTS



EVENTS TO PROMOTE THE INITIATIVE IN THE DISTRICT



5 PARTICIPANTS FOLLOW COURSES TO SUPPORT THE COMUNITY DURING THE CULTIVATION



PRINTED AND VIRTUAL ARCHIVE OF SPECIF INFOS ABOUT PLANTS VARIETY AND TECHNIQUES ABOUT SPECIFIC CULTIVATION



REGULARLY CHECK UP TO BALCONIES OR GARDENS OF THE RESULTS AND SUPPORT IN CULTIVATION



SELLS SPARE PRODUCT TO THE DISTRICT HABITANTS/ SHOPS AND RESTAURANTS



THE RESTAURANTS PREPARE MEAL AND HERBALIST SHOPS THEIR PRODUCT WITH SOME PLANTS AT ZERO KILOMETER



HABITANTS OF THE NEIGHBOURHOOD



HEADQUARTER MANAGERS



EXPERT FROM UNIVERSITY



LOCAL SHOPS & RESTAURANTS



COUNCIL ZONE 6










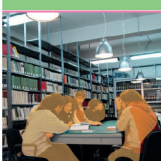






LOCALS LIBRARIANS



LEROY MERLIN INGENNOLI

Set up

Start up

CaseVerdi.net Participants		some participants attend special lessons/ courses		join the community: - register - enter the network - decide plants		participate to workshop about cultivation		receive tools, vessels, soil and seeds from the HQ and start cultivation
Scuola Media Rinascita				partedpation to the events, with possible show				
Association Zona 6		arranges a meeting to partecpate to the council announcement		events to promote the initiative in the district				
Library						expert give theoretic lessons to each other		hardcopy and virtual archive of specif infos about plants variety and techniques about specific cultivation
Diy/plants Shops						give materials to the HQ with special contract(soils, tools, vessels)		
Slow Food								
Restaurant Herbalist Shops								
University Of Agricultur				plan spaces for the cultivations				
University Of Pavia Fojanini Foundation Giardino Degli Aromi						create a network to give and exchange seeds to the hq		
Council Zone 6		proclaim announcements for the sale of space						
Habitants of the neighbourhood				free participation				



regularly check up to balconies or gardens of the results and support in cultivation



private participation in take care of own plants



exchange fruits & vegetables whit the community



give spare fruits and vegetables to the hq.



in turn visits to the Casetta to follow bothanical lessons



in turn visits to balconies



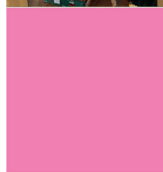
makes an event to promote niche products(with community dinner, lessons, show)



sells spare product to the district habitants/ shops and restaurants



communication and participating promoting the Casetta ctivity



create links with local activites to sells products/ communication



the restaurants prepare meal with some plants at zero kilometer



give concessions to sell products periodically in the association



free participation buying products at kilometre zero

7.4 THE BUSINESS MODEL

GENERAL DESCRIPTION OF THE COMPANY

COMPETITIVE POSITIONING

“CASEVERDI.NET” provides a service for the social that is placed on the market of community gardens situated on public land and those privately owned. In particular, acts involving secondary schools and residents of the Giambellino.

INTERNAL ACTIVITIES:

- . Manage and direct organization of a distributed vegetable garden, which provides space management to better identify the varieties to be grown, to receive memberships and manage the balance
- . manage the sale and exchange of crops, the exchange can be either free inside the community, at the discretion of the participants linked to the activities of Saturday morning where a stall manage the buy / sell and exchange
- . Organization and distribution of equipment and materials purchased under a collective buying by participants from the producers of equipment for gardening activities (e.g., Leroy Merlin, Ingegnoli).
- . Monitoring and verifying the production
- . Managing contacts with the Municipality of Milan and with local institutions (library, slowfood, restaurants, universities)
- . educational workshops
- . Maintenance of the green space of the municipal Casetta in Verde Street Odazio
- . promotional summer events with tastings of local products

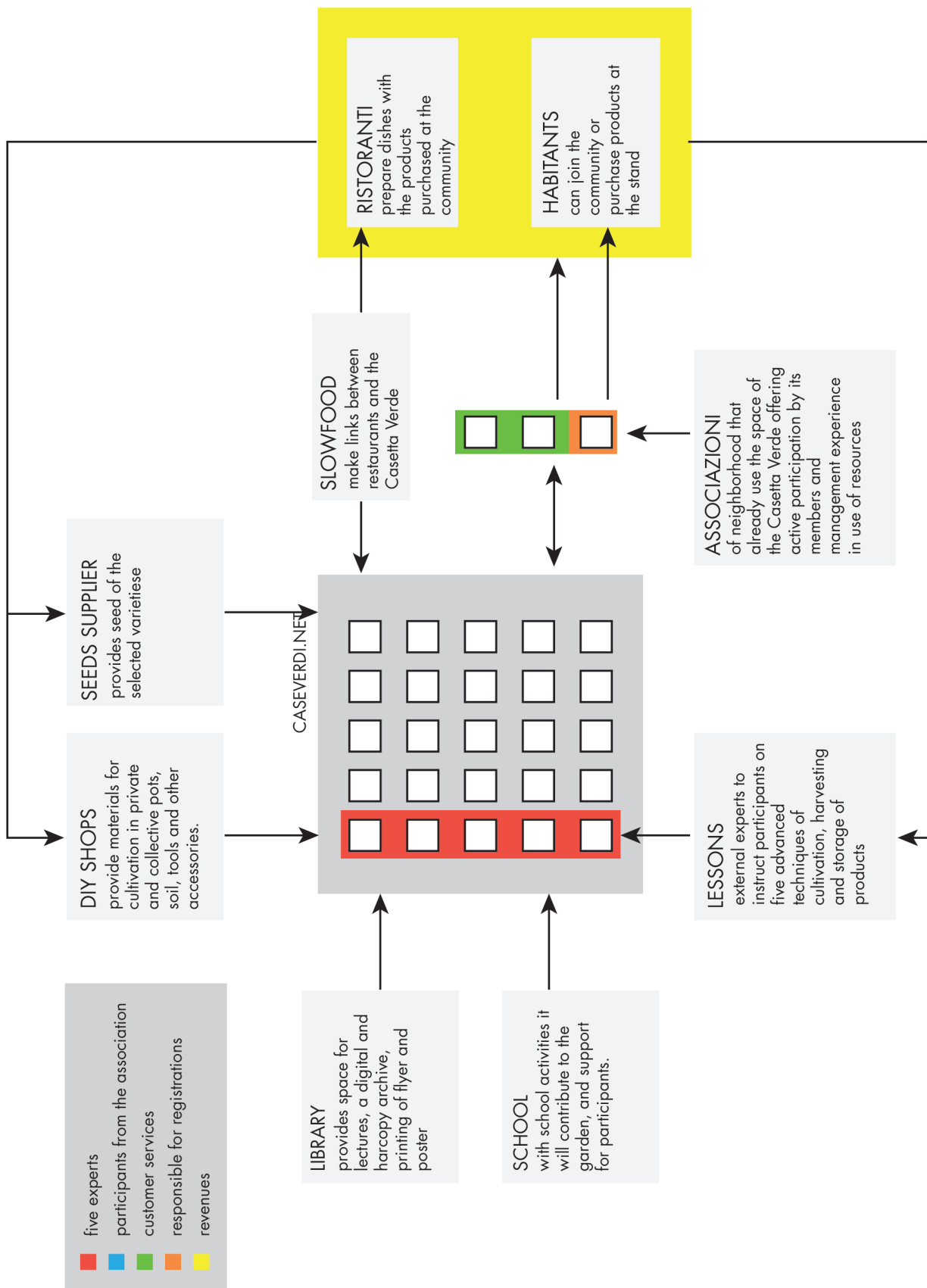
EXTERNAL ACTIVITIES:

- . Training
- . Advertising of the and event service
- . School activities within the structures
- . Teaching and information material

BUSINESS GROUP

- . Association ONLUS founded and managed by local residents and neighborhood associations, which together manage the production

Chart 6.16
Business model



and training. After the start-up phase, which was scheduled for the first two years of activity, it changes social status becoming for-profit, for the sale of products and self-financing and to promote new activities.

HUMAN RESOURCES

Within the association in addition to active participants in cultivation there are 3 people who will be responsible for managing the registration, sale and exchange. These activities will be carried out by the associations that are already developing activities in the house, increasing their diffusion within the neighborhood.

STRATEGIC PLAN

MISSION

Create a distributed network of crops in private spaces of the district Giambellino that satisfy the request of the participants by sharing the harvest.

EXTERNAL ANALYSIS

the major competitors considered are the producers and sellers of fruit and vegetable products that meet this demand which is estimated by ACNielsen-Food, ending in September 2011, responding to a volume of production / sales amounted to 5.77 billion tons per year.

IL PESO DEI CANALI IN VOLUME

Iper e Super	39,5%
Libero servizio	3,5%
Discount	3,6%
Alimentari tradizionali	5,2%
Negozi ortofrutta	23,9%
Cash&Carry+Spacci	0,6%
Ambulanti	22,9%
Autoproduzione	4,4%

Distributed according to the table:

community gardens: quality vegetables grown in urban areas

price range: low

in the Milan area there are about 70 activities that includes the par-

ticipation about 20 people each.

plant shops: products for the private cultivation of fruit and vegetables

price range: medium-low

health food stores-niche: specialized in seasonal and high quality organic products

price range: high

gas(jointly liable purchasing group):seasonal organic high quality products

price range: medium-low

neighbourhood market: medium to low quality fruits and vegetables

price range: low

supermarket or hypermarket: medium to low quality fruit and vegetable

price range: medium-low

STRATEGY CHOICE

promote the contribution of experts (Agricultural university, slow-food, hygiene package) to ensure the quality of the service, which promotes cultural activities to support the opportunity to cultivate fruit and vegetable at home in a small space (balcony), offering a wide and continuous range of products niche (fruit and vegetables from the local tradition and high nutritional value) through an organized network of intra-Community trade.

MARKETING PLAN

ANALYSIS AND EVALUATION OF THE POTENTIAL MARKET REFERENCE

In zone 6 of Milan is considered the number of people who respond to possible targets identified (20-74 years), which corresponds to 71% of the population, and 26270 inhabitants of Giambellino. Considering that make up about 15 230 family units, and interpreting the data obtained in the description of trends, it appears that about 26% have in their homes a cultivable area home for a total of 3808 households, of which 1028 have already grown on their balconies and courtyards.

TARGET

Potential participants and / or interested in the offer produced are about 40% the people who grow fruit and vegetables on the balcony which are likely to be 400 individuals.

As a starting point for the activation of the service was necessary to identify a minimum number of participants trying to involve an increasing number of participants, divided into experts, community garden and distributed network participants.

PARTICIPANTS	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
EXPERTS	5	7	10	10	10
HOME PARTICIPANT	10	25	35	45	55
HOME PARTICIPANT+ GARDEN	10	15	20	25	25
TOTAL	25	47	65	80	90

Chart 6.18
Participants

-The strategy identified wants to actively involve local residents who, for reasons of time and health may not be involved in community gardening activities proposed in the neighborhood.

-The considered target to be sensitive to issues of economic and environmental sustainability, available hours and to exchange skills with the community.

-Interested in attracting people to taste and / or production of quality fruit and vegetables in favor of the enhancement of biodiversity of niche products.

-The system aims to involve the current participants and enable retired people who can make available their free time in promoting a service cohesion and economic development within the district. Interested not only in the production of fruit and vegetables but also in the opportunity to learn and develop activities through active exchange of expertise.

MARKETING MIX

PRICE

Each participant contributes with a registration fee of € 10 per year for the management of training and exchange, while the cost of personal tools, seeds, pots, soil and tools will be paid individually, through the mediation of the house that buys the products Community price. To decrease the cost of the first year and to start the system, the components are used for recycled vessels and structures for plants. With the start of intensified production intensified, aimed at the sale, every participant invests, always through a Community purchase, buying the most suitable materials that will ensure increased production units. The costs of the activities of the Casetta are currently provided to get a break-even point at the end of five years of activity.

PROMOTION

The promotion is done mainly with the help of the local library in Via Odazio that can print, posters and flyers to be distributed to the district. In addition, promotional dinners organized during the summer to promote the service with a low price of participation, through grown and cooked products by local residents with the intention to increase the number of participants.

Chart 6.19
Produced benefits in 5 years

PRODUCED BENEFIT	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
TOTAL (OPPORTUNITY-COST)	53,3	78,6	62,45	111,85	126,8
COMMUNITY TOTAL	1332,5	3694,3	4059,5	8948	11411

PROSPECTIVE FINANCIAL STATEMENTS

Selected varieties grown in a year require operating costs to be made individually, firstly including recycled materials to reach without major investments the value of the offer. Vessels and instruments bought are then used for subsequent crops. The land impoverished after production is regenerated thanks to the Casetta, where operations mulch can use it again for successive times.

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OPPORTUNITY VALUE	YEAR 1			YEAR 2		
SELECTED VARIETIES	UNITS PRODUCED KG	UNIT PRICE €/KG	OPP. COSTS €	UNITS PRODUCED KG	UNIT PRICE €/KG	OPP. COSTS €
NERO DI CRIMEA TOMATO	7	3,3	23,1	8	3,3	26,4
WHITE AUBERGINES	6	2,4	14,4	7	2,4	16,8
CANDELA DI GHIACCIO RADISH	8	3,4	27,2	9	3,4	30,6
RAMATA DI MIALANO ONION	6	2	12	7	2	14
ROSSA ITALIANA CHICORY	7	2,5	17,5	8	2,5	20
TOTAL OPPORTUNITIES	10		94,2	39		107,8
TOTAL OPPORTUNITIES WITH RISK	27,9		77,2	32,7		90,5

Have been estimated for the same variety, value opportunities that each plant can yield in a year. Whereas, moreover, to keep your area cultivated constant, but through the use of suitable materials and experts, more and more trained that support the cultivation, production volumes will increase substantially allowing the partial sale of 20% of the harvest of each domestic space . For this was also considered as a percentage of decreasing risk on total production.

Chart 6.20
Opportunity Value private gardener

Chart 6.21
Private gardener costs (following page)

YEAR 3			YEAR 4			YEAR 5		
UNITS PRODUCED KG	UNIT PRICE €/KG	OPP. COSTS €	UNITS PRODUCED KG	UNIT PRICE €/KG	OPP. COSTS €	UNITS PRODUCED KG	UNIT PRICE €/KG	OPP. COSTS €
9	3,3	29,7	10	3,3	33	11	3,3	36,3
8	2,4	19,2	9	2,4	21,6	10	2,4	24
10	3,4	34	11	3,4	37,4	12	3,4	40,8
8	2	16	9	2	18	10	2	20
9	2,5	22,5	10	2,5	25	11	2,5	27,5
44		121,4	49		135	54		148,6
37,84		104,4	43,12		118,8	48,6		133,7

PRIVATE PLANTS MANAGEMENT	YEAR 1		YEAR 2	
COST UNIT	USED UNITS	COSTS €	USED UNITS	COSTS €
NERO DI CRIMEA TOMATO SEEDS	2 seeds	0,75	2 seeds	0,75
WHITE AUNERGINIES SEEDS	2 seeds	0,45	2 seeds	0,45
CANDELA DI GHIACCIO RADISH SEEDS	6 seeds	0,7	6 seeds	0,7
RAMATA DI MIALANO ONION SEEDS	10 seeds	0,4	10 seeds	0,4
ROSSA ITALIANA SEEDS CHICORY	15	0,65	15	0,65
SOIL	25 litres	5	25 litres	5
TOOLS	4 tools	12	-	-
POTS	recicled material		recicled material	
WATER	1,5 mc	4	1,5 mc	4
PRIVATE PLANTS OPERATING COSTS		24		11,95

YEAR 3

YEAR 4

YEAR 5

USED UNITS	COSTS €	USED UNITS	COSTS €	USED UNITS	COSTS €
2 seeds	0,75	2 seeds	0,75	2 seeds	0,75
2 seeds	0,45	2 seeds	0,45	2 seeds	0,45
6 seeds	0,7	6 seeds	0,7	6 seeds	0,7
10 seeds	0,4	10 seeds	0,4	10 seeds	0,4
15	0,65	15	0,65	15	0,65
-	-	-	-	-	-
4	15	-	-	-	-
25 litres	20	-	-	-	-
1,5 mc	4	1,5 mc	4	1,5 mc	4
	27		7		7

The following table shows the costs of equipment and expenditure necessary for the performance of the services offered by the Casetta. An initial investment in informatic technology includes the purchase of materials for the recording of lessons to show to the following members. In the fourth year is planned to replace obsolete equipment already in Casetta. At the current location tools are already available to ensure the activities of 20 people, so spending will be needed over the years. The materials for the sale and exchange, which are already present tables and gazebo, provide for the purchase of scales, registers and boxes / bags for the distribution of goods.

The lectures that participants must follow provide courses on cultivation and certifications necessary for compliance with the rules of hygiene. That will be constantly updated over the years to ensure the quality of service supporting the increase of participants.

The foreseen consumptions are analyzed on the current average fees paid until today by the associations that are on the book of Casetta and they consider an increase in consumption with the introduction of professional refrigerator for storage of spare food .

The creation of an internet platform will be constantly updated over the years .

Overheads consider whether the costs of administration and services management (5% of total expenditure)

Chart 6.22

Casetta management costs

CASSETTA COSTS €	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
TECHNOLOGICAL DEVICES	400	-	-	1000	-
COLTIVATION TOOLS	25	35	50	60	70
EXCHANGE/SALE EQUIPMENT	200	30	70	80	90
EXPERT + HYGIENE COURSES	250	350	170	170	170
CONSUMPTION	150	150	150	170	170
COMPOST CONTAINER	150	-	-	150	-
WEBSITE	850	300	300	300	300
MULCH	70	70	70	70	70
2 PROMOTIONAL DINNES	400	450	500	550	600
REFRIGERATOR	-	-	1000	-	-
GENERAL COSTS	125	69	116	128	74
COSTS TOTAL	2620	1454	2425	2678	1544

Revenues contribute to the affordability of the service considering the enrolment fee of 10 € for each participant, the two promotional Community dinners and the products sold to third parties on estimates of current market prices.

Chart 6.23
CaseVerdi.net revenues

REVENUES€	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
2 PROMOTIONAL DINNER	500	550	600	650	700
PARTICIPANTS FEE	250	470	650	800	900
SINGLE BALCONY PROFIT	-	-	12,5 (7,5 KG)	22,4 (8,5 KG)	25,4 (10 KG)
TOTAL BALCONIES PROFIT	-	-	812	1789	2282
TOTAL REVENUES	750	1020	2061	2462	3240

Chart 6.24
Balance

From the perspective assumed, the balance of Casetta will be positive (discounted at a rate of 2.5% per year) at the end of 5 years.

BALANCE €	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
COSTS-REVENUES	- 1869	- 434	- 363	562	2338
DISCOUNTING BACK TOTAL BALANCE					211

8 TANGO EXHIBITION

An important and specific feature of what is the co-design process related to the actors involvement will be the Tango interactive traveling exhibition. It is going to be the final event, also designed as an experience, the main outcomes of the whole Tango project and its process, in which there will be shown all the projects carried out by the students and the professors of the three universities involved in the project research. As said it is going to be a traveling exhibition, moving around Europe and it will be held in Nantes in March 2012, in Milan between the 9-14 of April during the Furniture Fair *Salone del Mobile*¹ within a Cultural Partner's space within the well known trademark "Zona Tortona" area, and in Helsinki in June 2013.

The exhibition is still in progress of design in order to act as a lab and a window, involving the visitors onto different levels of interactions: to be an agent of change indeed. With this we mean that we are trying to design an intrinsic experience toward the exhibition's visitors, both random people and direct stakeholders, which somehow stimulate the user to get in touch with the innovation, make the live an experience and energize new views of what's offered for them and what they can do.

In sum the aim of the exhibition is to create a fertile field-base to get promising opportunities to implement the pilot projects and to scale up the PSSs in similar context and other areas. This will be possible setting-up an interactive experience oriented to attract some target-figures among the crowd, which are important for the system, explain in an easy but communicative way what has been taught and done (for them), trying to make them feel instantly reflected within the

¹ The Salone del Mobile is the global benchmark for the Home Furnishing Sector in Milan (Italy). An invaluable tool for the industry as well as an ongoing, quite extraordinary promotional vehicle.



Barona



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king



system and let'em the opportunity to leave a sign, such as ideas, comments or any other kind of feedback. As well as the design of a specific workshop with the direct stakeholders in which the touched points will be more real functional elements. This part is explained deeper in details in the next chapters.

For Milan the overtaking of the technical issues and the final editing part of the audio-visual contributions of the interactive exhibition will be the result of the agreed and active collaboration between the design team and the Movie Design Lab of the Politecnico di Milano. In particular in the persons of: *prof. Marisa Galbiati* and *Francesca Piredda* (INDACO Dept.), *Dario Sigona* and *Gabriele Carbone* (Movie Design Lab, INDACO Dept); to plan the contents' telling, to design the most accessible interaction with the contents, to use in the most efficient way the video-interactive technologies.

Furthermore some guidelines about the affordance of the path and accessibility supplied to the exhibitions' visitors have been studied by the curatorial group of the Tango project. In particular the topic is: how to design the exhibitions under a pedagogical point of view and approach.

8.1 PROJECT AS A CONTENT TO EXPLAIN AND DRIVE THE CHANGE

These kind of events represent a strategic opportunity to develop and implement radical innovations, such as sustainable PSS. Design socio-technical experiments, in our case focused on the exhibition, starts with the generation of ideas: guidelines are important to direct and orient the design process in a way that the experiment is able to act as an "Agent of Change". In this sense we want to raise the interest of the direct and indirect stakeholders on the innovations introduced through the "experiment" and attract new potential users and actors to be involved in the project.

More in general the exhibition is in course of design also in order to stimulate changes in users' and actors' behaviour, habits and mind

Figure 8.1
Exhibition render layout

set, and create favourable conditions for the introduction and the implementation of the innovation into the society.

As said the event will take place at the “Design Library” in Zona Tortona and is addressed not only to the important key actors invited, such as the Municipality of Milan, the main associations and the sponsors, but also to the community, to induce them to get the motivation to look forward the innovations and change their habits, since they could feel the support of the key actors.

As explained in the previous chapters we could in fact state that the exhibition in this project has to be seen as a “tool” of the design process, aimed to:

- launch events and the activities for a real implementation of the sustainable social innovations purposely designed.

(to be presented as concrete innovations that already ‘tomorrow may become a reality’)

- perform an event to involve specific target-actors related to the sustainable social innovations.

(the actors are already involved in the co-design process and in the exhibition design, wishing, though, that during the design week they will make a commitment for the implementations of the projects, deepening the definition of roles and modalities)

- attract youngster and retirees through an interactive presentation of the concept for the development of the sustainable social innovation models in different contexts.

(in order to gather feedback about: the appeal of the models, the necessary conditions and characteristics to replicate the models in other contexts)

8.2 THE EXHIBITION DESIGN GOALS

The most explicit and evident goal of the exhibition is to show innovative and sustainable proposals in order to foster social cohesion and intergenerational dialogue, and promote the requalification of local contexts. In particular the exhibition, and the linked workshop, are aimed at officially launch and present the pilot projects, illustrate the

potential future developments, and discuss with an array of some invited actors about why, what and how to support and to develop the next step and the potential concrete kick-off of the projects.

Moreover, even if these proposals are focused and were developed on specific areas of Milan, they have the potential to be replicated and adapted to other ones, that's why we call them "pilot projects".

There are also some side goals which are important as well to make the experiment really fruitful and everybody satisfied.

Firstly the exhibition is thought in part even to influence and affect contextual conditions in order to favour the societal embedding process. This means designing the experiment in order to induce behavioural changes and stimulate the user to get in touch with the experiment itself, and during the performance of the event it is important to provide to users information on the benefits linked to the PSS offer compared to the other existing alternatives to understand the feature of the project and its sustainability (economical, environmental and social). In the experiment's design process it is furthermore important to influence contextual conditions in order to stimulate local administration and policy makers and influence relevant actors to adopt measures to support the introduction of the PSS.

The exhibition therefore will be the moment to officialise the begin of the agent of change, moreover during the workshop will be provided even an economical draft model in order to share with the actors invited to the workshop how the project is going to be economical sustainable for the different stakeholders and stimulate them showing how many years are needed to cover the costs of the project investment and start to earn (Break even point).

8.3 THE EXHIBITION'S CONTENTS EXPERIENCE

The contents of the Tango Milan exhibition will be a presentation of the three partners' experience into the european project with a focus on the Italian context. Relevant space will be given to the role of the Milan districts within the project and to the ideas, concepts and services carried out by the Milan's designers team in order to highlight the process and the results: starting from the projects briefs defini-

tion, through to the co-design process and activities linked to it, getting to the state of the art and feasibility of each proposed sustainable PSS. These material will be shown using two different media: posters on hanging panels to show the process and projected audio-visual, always on hanging panels, to show the results.

It is very important indeed to understand which are the kind of person is wanted to communicate and why. The idea of the Tango in-Milan exhibition is to combine into the same event two different experiences: an interactive exhibition where to show the proposals (and the international contents); and a workshop space where to co-design with some key stakeholders. As interactive “tool” of the co-design process, therefore, it will have two main targets which will be involved (plus the general public passing by the fair’s spaces), acting in the Milan contexts with dedicated interactions: young and retired people and stakeholders.

Let see all of them more in detail:

- **general public:** visitors passing by the exhibition being interested in intergenerational dialogue and design for sustainability. They will approach the 4 sustainable social innovations proposals for milan in the form of 4 short videos in loop with a incisive narration of the proposals. Visitors can select italian or english language for the audio and the subtitles.

- **young and retired:** involved as final users of the sustainable PSS they could interact with the audiovisual files about the sustainable PSSs to (phase still in phase of design):

- have the chance to deepen some technical aspects and therefore watch a set of sub-video giving more detailed informations about how the proposal works;

- have the chance to give some feedbacks about the quality and repeatability of the project in different contexts, about some lacking aspects or anything they may believe important (web or paper-based storage is possible);

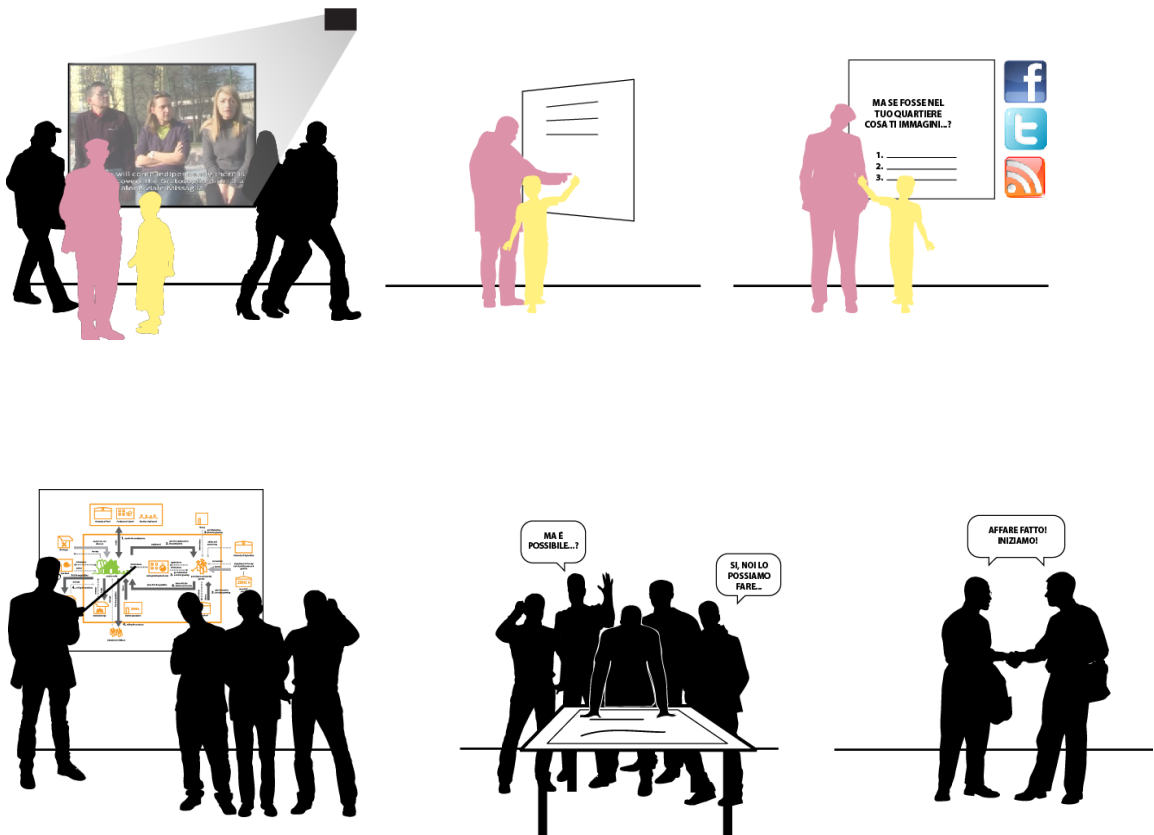
- have the chance to download the prepared and/or collected documents available to keep the interaction alive even after the exhibition or to re-use them in an open source and copy left logic (will be possible to choose all the contents’ language in both italian or english).

• **stakeholders:** involved as potential concrete partners of the sustainable pss projects shown during the exhibition, they will take part of dedicated workshops (one per each proposal) based on the following stages and co-design tools:

- visual presentation of the sustainable pss using a set of sub-video which give a deeper and more detailed narration about the operation of the projects and a set of technical visualization tools: i.e. offering diagram, system map, interaction table-storyboard. Tools that are providing more informations about the interactions and the back-stage workflows occurring during the performance of the proposal;
- open discussion in order to gather feedbacks on feasibility/opportunity for proposal improvements (paper-based database is foreseen) and incubation/effective start-up. (the workshops will be held in Italian).

Figure 8.2
Youth and retired visiting and interacting with the exhibition

Figure 8.3
Stakeholders during the workshop activities



8.4 MAKE THE CHANGE HAPPEN!

We wish that the results of the event will be positive, to leave a sign during the whole “*Salone del Mobile*” fair and put seeds to make people aware that changing things is possible starting from today. With this statements is meant that first of all, the local actors estimate the projects as a valuable ones for the local communities, because of their potential to bring tangible economic, environmental and socio-ethical benefits.

Also is wished to make people, and in particular youngsters, retirees and the stakeholders involved, aware that the innovations are already implantable, to make the real core communication subject pass through, be absorbed by them and to make themselves reflect in a vision in which with a small mental effort, they can effectively improve their social situation and enjoy all the related benefits.

Considering that the project has started from a PSS concept vision proposed and shared by a “closed” network of actors, it’s all the way important that it will led to build up a broad and stable network of actors that will be able to re-define a common shared vision. At this time there are already actors committed in the projects but they can become a larger and more distributed array.

It can be said that from the results obtained so far, partners and local administration had started to show their interest to change their habits and remove socio-cultural and administration barriers. Especially during the workshop we want this forecast to pass through, even in order to deepen the final details of the agreements with the relevant actors, make the final fine adjustments and sign documents of commitment to finally give the real kick-off to the start-up of the Product Service Systems.

In sum there are promising opportunities to implement the pilot projects in the related areas of Milan and transform them in an economically sustainable business, independent that doesn’t need neither economic or technical support and scale up the PSS in similar contexts and other areas of the city, of europe or of the world.

Part 4

CONCLUSION

9 EVALUATION: PROCESS AND THE RESULTS

9.1 PROCESS: GOOD-BAD RECOMAND (MSDS REDEFINEMENT)

The MSDS method has been integrated in the Tango Milan co-design process as support to orient the design of the PSS innovations towards sustainability, having the “Punto e Linea” Hubbers as champion stakeholder of the co-design process and possible stakeholders.

Further support is derived from the presence of some experts at different phases of the process: communication experts for the representation of strategic analysis and final projects, experts in business management for the project definition. For each project were involved experts in the individual sector. For interaction and communication with these actors it was necessary to configurate or change the instruments used to co-design (ie system map, offering diagrams, ...), encouraging the participation and the creation of a common language. This aspect was also significant in the opposite situation, when it was necessary to build the business plan of the project, in collaboration with the Department of Management Engineering, who has asked to learn and use new languages and tools for the financial settlement of the project.

From these experiences, the need emerged is to provide guidelines for the co-design, in particular for the use of specific tools for each sector, in order to facilitate the use of the same in less time and to obtain more effective results. The same adaptability of the tools is needed during meetings with key stakeholders who have seen the need to reconfigure and design tools, highlighting their role and their interaction with the service.

The interaction with stakeholders was the most complex and delicate process, because the experience has moved the theoretical scope from academic to professional practice by highlighting gaps in managing the first interaction communication with the stakeholders and the technical and representative content, instead it was important to reveal roles, interactions and benefits. It is therefore essential to plan a methodology that facilitates the interaction with stakeholders, starting with the management of the first contact to the organization and management of meetings, within which to show the project on different levels of detail and interaction.

The contribution of Hubbers has been crucial during the various phases of the process. During the Strategic Analysis of the land, _ Hubbers each zone have played the role of local representatives, presenting difficulties and potentialities, in order to enhance them in the offered services. were The most Consider the potential of each neighborhood starting not from the actual unwell motivations and needs but encouraging opportunities. Even in the later phases of the process _ Hubbers have played an important role in supporting the redirecting of concepts development to make them more in line with reality, reference, and giving stakeholders as the most promising contact. Finally, it is possible to consider a difficulty emerged during the System Design Concept derived from the decision to leave the process of co-design is also open in phases of engineering. On one side it was good to give the opportunity to the stakeholders to take an active role in the design, giving feedback and building projects that come close to their reality. The other was limiting when engineering services needs to establish took priority over the involvement, not bringing real benefits to the co-design, but slowing down the definition of the PSS.

9.2 PROJECT: SUSTAINABILITY DIMENSIONS EVALUATION (SOCIAL, ECONOMIC, ENVIRONMENTAL)

196

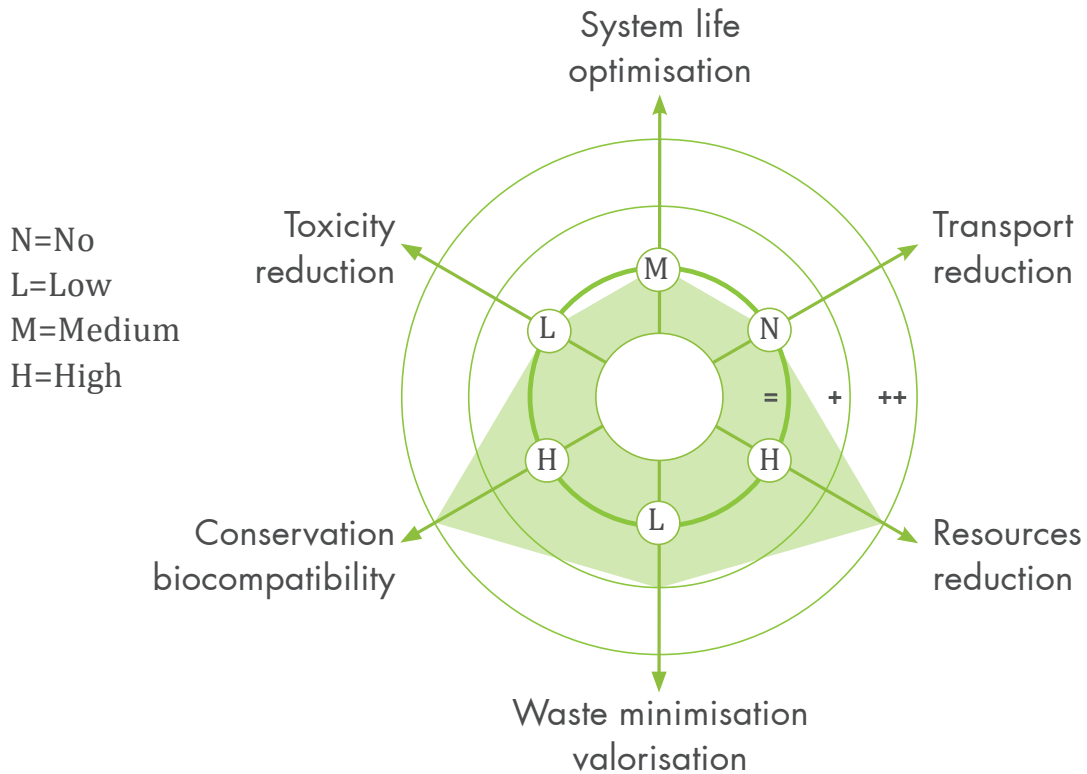


Chart 9.1

Environmental sustainability radar

RESOURCES REDUCTION

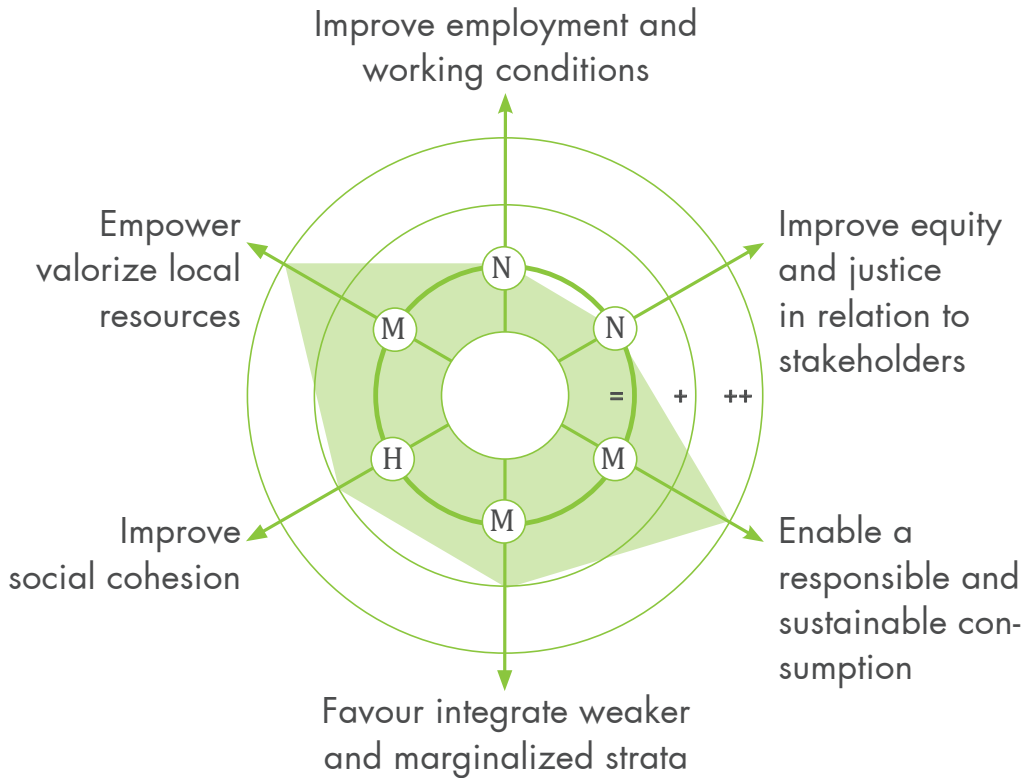
the system provides gardening from the first exploitation of recycled materials to create structures and vessels for private use, and their use in cyclical time

WASTE MINIMISATION VALORISATION

reuse of the soil impoverished recovering it through mulch methods.

CONSERVATION BIOCOMPATIBILITY

the use of traditional local products and niche products enhance the ability of the environment and local climate



ENABLE A RESPONSIBLE AND SUSTAINABLE CONSUMPTION

the use of local resources to at kilometer zero, and promotion of organic crops enhancing advanced products for sale.

FAVOUR INTEGRATE WEAKER AND MARGINALIZED STRATA

the service includes more participants than the current service by meeting the needs and possibilities of each one

IMPROVE SOCIAL COHESION

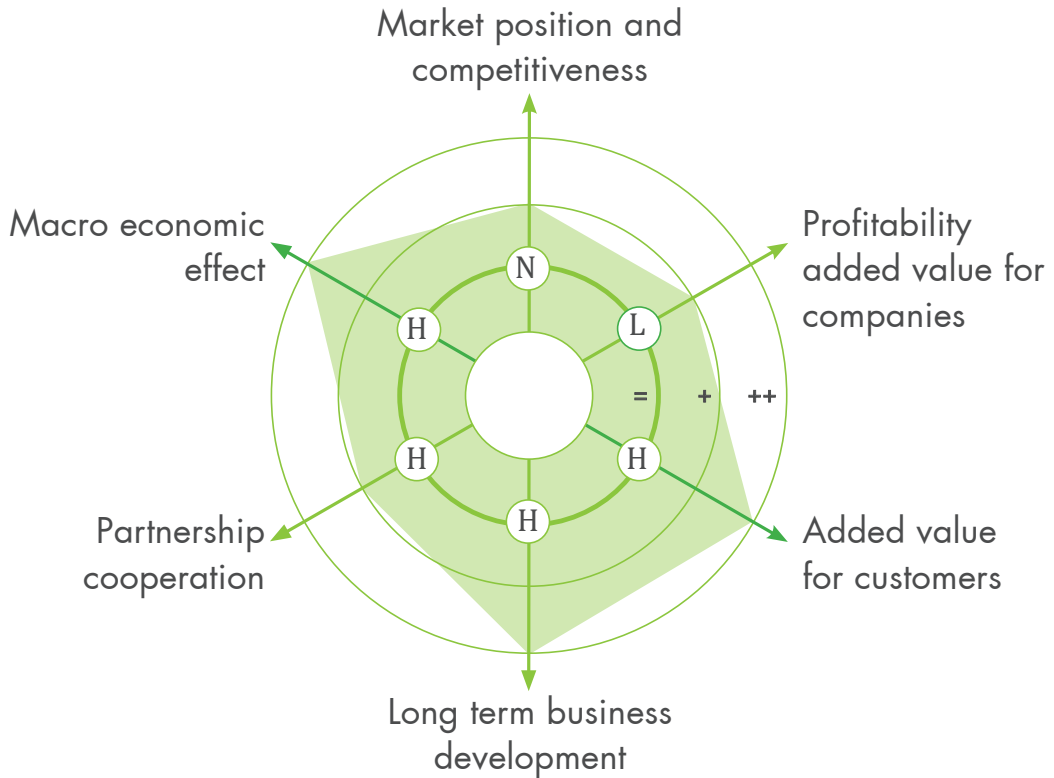
collective participation is guaranteed on Saturday morning, but by encouraging the exchange and interaction among the participants on the need to present products in the district.

EMPOWER VALORIZE LOCAL RESOURCES

the production of the local tradition, and the use of resources at kilometer zero enhance local resources

Chart 9.2

Socio - ethic sustainability radar

**Chart 9.3**

Economic sustainability radar

MARKET POSITION AND COMPETITIVENESS

improves the market position of answering the question of niche products, being the only activity in the district to provide similar products

PROFITABILITY ADDED VALUE FOR COMPANIES

The restaurants and shops in the district, sell products at kilometer zero and high value, traceable in the adjacent area

ADDED VALUE FOR CUSTOMERS

have variety of fresh seasonal produce on a large range and high nutritional values

LONG TERM BUSINESS DEVELOPMENT-RISK

if it will get the second year an adequate amount of crops it can activate the sale of 20% of crops in order to reach the break-even point as early as 5 years.

PARTNERSHIP COOPERATION

The University of Milan has already expressed interest in creating partnership management and sale of expanding the field of action.

MACRO ECONOMIC EFFECT

the service provides a increasing membership and extension to include local residents in the sale of local goods and involving local restaurants and shops.

9.3 REPLICABILITY IN OTHER COUNTRY

The system assumes initial investment, so it will be necessary for the start-up phase to find them and interested stakeholders in the various management activities. The phenomenon of community gardens and their variations (as is clear from current trends) is increasingly common. So a system that aims to bring economical as well as environmental benefits has great potential to animate in every suburb of the largest city. It has been suggested a method of actualization for each context that is ensured by the following steps:
Method

1. Talk about the idea with people who it think might be interested in participating. They could be neighbours or group of friends in its area. If it can find people who are excited by the idea, begin to plan together which kind of niche product could be part of the exchange.
2. Brainstorm what venues would be good to hold the exchange at, to carry out workshops, collect material and sell products. Ideally, it should be public, easily accessible and open to the involvement of a broad spectrum of participants. It could be a community or farmers' market, it could be in a town square, or in or near a community centre. Consider what facilities it may need to have:
 - toilets
 - a kitchen if you plan on conducting workshops on food preserving
 - a space to actuate a community garden
 - a storage for tools

Think about what other regular events happen in its community that the exchange could be a part of. For the project CaseVerdi.net was thought every Saturday workshop activity during the community garden.

3. Consider approaching its local council and discussing the idea with them. It's the kind of thing that councils often like to support, and they could be willing to offer support with a venue, publicity, photocopying and advertising. They may already have a similar project running that you could support.

4. It may wish to develop a brief questionnaire to distribute in your community. This can serve a number of purposes:

- it begins the process of building a network of contacts interested in the project,

- it gives you a sense of what produce is available when (and thus allows you to get an indication of what workshops will be appropriate and whether the exchange will go into hibernation during certain times of the year),

- it allows people to offer ideas and suggestions for what they'd like to see as part of the project and,

- it promotes the concept.

Consider also whether you'd like to get the questionnaire translated into other languages.

5. Contact community and school gardens in the area and invite them to participate with teaching path.

Consider what kind of membership system it would like. The responsibility to contribute is on individuals, demonstrating trust that people will "do the right thing". That no one keeps count of how much individuals have taken and brought is something people appreciate. After all, the central idea of the exchange is to share surplus, guided by the simple principle of contributing what everyone can and taking what everyone can use .

6. Once there are the basic details of the exchange and sell sorted out (venue, regularity, starting and finishing times, starting date and selection of niche products), start promoting it to the contacts you've collected through the questionnaire, through the council or community centres, relevant community groups (permaculture groups, seed savers, rare fruit societies, Slow Food and restaurants) and your local media. Getting local media coverage will give your exchange extra exposure and may draw in further participants.

7. Consider what equipment it might need to have for the cultivation,

the exchange, and the sell. It is necessary begin to assemble a basic kit made of home-made or new pots, seeds, soil and tools, to be sell to the participants to start the private cultivation.

8. As the project grows, think about developing some kind of roster system for setting up, monitoring and packing up the stall. Train some expert/participant to allow that. This will ensure that the responsibilities for running the project are shared over a greater amount of people, cultivating broader community involvement and ownership of the exchange.

WHY TO CO-DESIGN (METHOD AND GOALS)

Co-design is a concept based in the American pragmatist tradition, which argues that all people have different ideals and perspectives and that any design process needs to deal with this.(1) It is also a development of systems thinking, which according to C. West Churchman “begins when first you view the world through the eyes of another.”(2) - riferimenti:

(1) Ackoff, R. L., J. Magidson, et al. (2006). Idealized design : how to dissolve tomorrow’s crisis...today. Upper Saddle River, Wharton School Pub.

(2) Churchman, C. W. (1968). The systems approach. New York: Delacorte Press. p 231

In particular to use a co-design method means to leave during all the design path the process “open” (as previously said related to the exhibition experiment), as a shared main-stream between the designers and the other people involved (internal and external) that “helps” each other, and in which the information’s tributaries flows constantly arrive from both sides.

Deepening this concept, it is important to call the stakeholders to give their contribute. In particular in designing services, in each step of the design process, there’s the need of more consults by the people involved and to be all the way updated about the changes and the new opportunities. It is therefore a continuous mutual adapting to the possibilities in play.

This is even more notable especially in designing with the will to create pilot projects to be used even in other contexts but where is possible that some values could be different, first of all the percentage ratio of involvement of the actors is one of the main thing that may change in another context. For instance, a sponsor can provide 10 balls in-

stead of 20 so you have to find somewhere else those 10 balls missing; or an association can provide 100 seeds instead of 200 so you have to involve someone else; so, at the end, you got to constantly adapt your global system to the local conditions.

Related to the Tango project it has been important to head toward the use of this method for three main reasons:

- The main topic of the project is tightly linked to a social response. Is a key point to involve local context people in order to get support and ideas for a proper social design, this step will have the biggest expression during the “Salone del Mobile” exhibition;
- There was the will to involve local real actors at many level, therefore not just the final users. For the Milan department this meant to get in touch with entities that were already concretely acting on field with activities and research, as the “Punto e Linea” project and its hubbers;
- As a logical consequence of the points above, the last, but not least, reason has been the will to get to a real design feasibility of the PSS projects under a socio-ethical, economical and environmental sustainable point of view.

During the months of strategic analysis and design, since the beginning ‘till now, there have been several occasions, experiments, events and meetings in which each time has been improved the rhetoric of the communication and the tools used, and the results achieved in relation to the target audience, explained more in details in the next paragraphs.

10.1 HUBBER EXPERIENCE

The Tango project itself is born with a participative nature, firstly among the three universities, then among the different students and then between the students and the several actors involved into the developments of all the concepts design. Doubtless for the Milan reality, the fact to be an European project and the array of students who took part of the SDS course had a great relevance within the co-design process but there's a third main entity in the middle which has been even more essential: The hubbers.

They were the first stakeholder we got in touch with since they were already working on the hubs into the different areas of Milan as detachments of the "Punto e Linea" project. That's why we can consider them (and they'll be called in this way) "champions stakeholders". The hubbers, as champion stakeholders, supported and followed us since the beginning. Their contribute can be divided in three parts: before the SDS course; during the course and after the course.

Before the course: they showed us the lacks of the existing offers, had defined with us the briefs and the promising opportunities were to "operate" on and have been the subject of the video interviews about the territory.

During the course: they came to give their contribution and their opinions to the students, as well as participate to the final presentation;

After the course (still in progress phase): they attended a dedicated workshop in late July during which the projects carried on were shown a little more in detail, and from September to the present their availability allowed us to move forward, mutually and constantly adapting to the new possibilities that opened up along the path;

This last third phase is the one we can consider the most relevant in the whole process of co-design with the champions stakeholders in order to create credible and concrete projects. Their experience into the social field allowed us to "exploit" their network of contacts to organize meetings with new actors which could be either interested in our projects or giving focus suggestions, and to get in touch with sector's experts and direct stakeholders in order to show them our PSSs to improve and refine more and more the quality and operational feasibility of the designs carried out.

However during all three stages of their involvement, a challenge has been to find the most effective communicative ploy to act as a bridge between two realities operating in two pretty different fields on one side, and to find the best way to gather all the feedbacks, so that they wouldn't be lost, on the other side.

For Both the issues has been useful to have the hubbers as champions stakeholders in order to be able to make some “tests” on the best communication strategy to use, and refine it each time, step by step. It was observed that the communication tools of the MSDS method proved to be effective for this purpose. Our effort has been to modify the tools used to communicate a service in a design way, in order to “adapt” them to be understandable even by those who are not directly involved into the design world. And by the hubbers the effort has been to expand a little bit their social-focused view to imagine new design opportunities and the different perspectives presented.

Figure 9.1
Co-design hubber
workshop



10.2 STAKEHOLDER EXPERIENCE

Another challenge was to switch from the champion stakeholder to the direct project stakeholder. With the first ones during the months of closely working occurred a better knowledge of each other and it was possible to establish a relationship of working-friendship and mutual respect, while with the seconds had to start over. The contacts of some of these new actors has been provided by the champions stakeholders (the hubbers) that played a role of a “mediators/facilitators/enablers” and reviewed with us the material to show during those meetings in order to make it as clear and understandable as possible.

Other actors instead were contacted without the help of the hubbers, through research, reputation or already existing projects. The categories of stakeholders which it has been tried to get in touch with are:

- Other Universities
- Municipality of Milan
- Enterprises / companies
- Associations / Foundations
- Individual experts

The first contacts has been done via email, writing as research and development team of the DiS department of the Politecnico of Milan. This mode was quite effective with the other universities and the research institutes, a little less with the other categories. In general, however, the communication by mail resulted dispersive. It gave more depth and relevance to the messages to add as an attachment in the email that the project in course of design were taking part of a European project on a large scale, and that this could provide wide visibility to the partners. This worked especially if the mail was accompanied by the official project documentation (such as the Tango project postcards). Probably without these two bases to lean on it wouldn't have been possible to overtake the first step and would never have received any response to the emails sent.

The next step was the contact by telephone, we can say that at this stage they all have been quite helpful and it as been a necessary step to make appointments and arrange in-person meetings with the persons concerned.

The meetings with these stakeholders have been very useful in the

process of co-design to define many details of the project, especially regarding technical issues in various fields in which we had knowledge gaps, and even in these cases sometimes were encountered with differences of expression.

The stakeholders related to the funding issues (mainly the municipal employees and the sponsor-stakeholders) were the ones with who there has been more difficulties, because they put their focus almost exclusively to the economic aspect of the projects. These stakeholders have advised to rely on existing and acknowledged entities regarding the introduction of the economic flow part, for example, going to the meetings as spokesperson for the SiS (social enterprise) and even better if accompanied by a person being really part of the company. For these reasons linked to the economic aspect it has been activated a collaboration with the Department of Management Engineering, in particular with Irene Bengo and Claudio Di Benedetto, in order to ensure the economic sustainability of the projects and the creation of a solid business models.

Finally it is worth emphasizing that this phase of co-design is still in course of planning and design and will have its maximum expression during the fair Salone del Mobile in April 2013.

10.3 INTERNATIONAL EXPERIENCE

During the development of the projects there have been the opportunity to meet the other two partner universities in their home countries, which has been a great chance to have a better idea about how they were approaching the problematic and a closer view about the way they were, and they still work.

The main reason why we went first in Finland (in the beginning of May, precisely from the 1st to the 10th) and then in France (at the end of May, precisely from the 21st to the 26th) was their invitation to take part of two workshops about social cohesion and intergenerational expressly organized for the students involved into the project.

The course activated by the Aalto university was called Repicturing Suburban Neighbourhood, while the one activated by L'École de Design Nantes Atlantique was called Prototyping empathy -Design and

prospective project.

In both cases, for the carrying out of the workshop and even beyond that, had a relevant importance from simply walking around the streets in order to get a real understanding of the local context to speak with the people living there, with all the socio-cultural differences.

At the beginning it has been hard to suddenly dive into a new culture but it finally allowed us to design having a wider view and less “corrupted” by the environment in which we’re used to live and work.

Thanks to these workshops and to the Finnish and French professors which showed us the state of the art, we can say that, related to the Tango project:

The Helsinki team is having more a participatory design approach. They designed and experienced participated events and labs in order to define the identity of Kannelmäki area (a suburban area in the north of Helsinki) to address ways for increasing its potential and profile in relation to intergenerational dialogue. Local culture and the arts have been utilized as mediums for delivering beneficial intergenerational interactions and revitalization models in the everyday life of suburban neighbourhoods. During the course students evaluated their ideas with the locals in real context situations through design interventions. The process and results of the course are now published in Aalto University and World Design Capital 2012 web site and the outcomes will be published onto an End Publication Book.

The Nantes team is testing the effectiveness of an empathic methodology in the design process. Their project has been punctuated by intermediary presentations defining 2 phases: context analysis and preliminary designs, proposals; prototyped empathy expressed through innovative methodologies and illustrative design concepts. During the workshop each group conceptualized, developed and tested an empathy tool-box aimed to make the user of this box feel empathic with the linked problem, to make the user be into the shoes of someone else, to find the best solution of a problem from the right point of view.

The Helsinki approach is more activist/interventionist, to observe and to get in touch with people, in particular during some inspiring events; while the french one is more aimed to “force” the designers to look at the problems from the “real” point of view of the unaware user; but both ways and methods are very useful to explore new design opportunities especially linked to social aspects.

7

IL PROGETTO: CASEVERDI.NET

The pss, CaseVerdi.net vede il piccolo spazio in via Odazio a Milano sede di laboratori di rione, diventare il centro e la base per un orto comunitario distribuito per il quartiere di Giambellino. Che sviluppa una produzione di prodotti ricercati, di nicchia, riproponendo varietà di frutta e verdura, dimenticate e della tradizione e altre varietà ad alti valori nutrizionali. L'idea di una produzione di prodotti di nicchia dalle elevate qualità organolettiche è stata pensata per permettere alle persone che abitano il quartiere di consumare dei prodotti di eccellente qualità e difficile reperibilità a costi minimi. Portando questa produzione alla vendita, come tentativo di creare prodotti esclusivi della zona, come segno di riconoscimento della zona, che non sarà più il degrado e la povertà ma la qualità a km zero.

7. 1 L'OFFERTA: COME FUNZIONA

Alcune varietà sono state selezionate con il contributo tecnico della professoressa Livia Martinetti, e del dottore Alberto Spada dell'università statale, facoltà di scienze agrarie e alimentari. L'attenzione è stata concentrata sulla scelta delle varietà e non delle specie, in quanto introdurre nuove specie sconosciute all'interno del mercato ne limiterebbe la compravendita.

Livia Martinetti è un docente dei corsi di 'Agronomia generale' e di 'Coltivazione delle piante medicinali' per il corso di laurea in 'Tecniche erboristiche' presso la Facoltà di Farmacia. Inoltre i suoi interessi di ricerca sono agrotecnica di diverse specie floricole, orticole ed officinali, con particolare riferimento all'Ottimizzazione della concimazione azotata di ortaggi da foglia in coltivazione biologica e con-

venzionale e coltivazione di specie orticole in sistemi a ciclo chiuso in presenza di differenti livelli di salinità. È stata contattata attraverso il sito di facoltà offrendo materiali e consulenze tecniche.

Alberto Spada è un docente e ricercatore di Botanica Generale presso la Facoltà di Biologia, Università degli Studi di Milano e responsabile scientifico dell'Orto Botanico Cascina Rosa, Università degli Studi di Milano. È stato contattato come esperto e il suo ruolo tecnico avrà un'importanza dominante nella gestione degli spazi privati, in quanto in base all'esposizione, lo spazio e altre caratteristiche selezionerà le varietà più adeguate.

Con il loro contributo tecnico è stata possibile la selezione di alcune varietà, ad alti valori nutrizionali e di nicchia, idonee alla crescita nel territorio e clima di Milano. In cui risultano più evidenti le proprietà nutrizionali e tradizionali del territorio:

(nelle pagine seguenti)

Scheda T.1

Pomodoro nero di Crimea

Scheda T.2

Melanzana Bianca

Scheda T.3

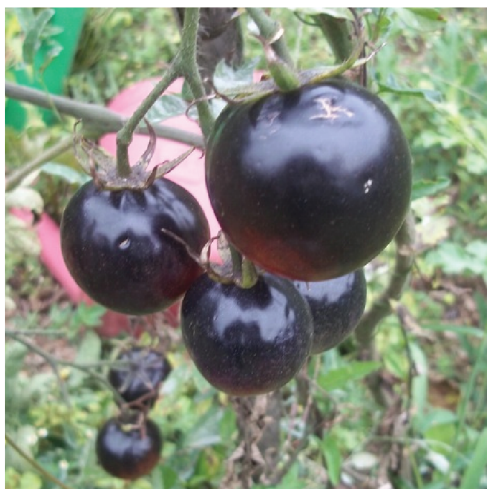
Ravanello Candela di Ghiaccio

Scheda T.4

Cicoria Rossa Italiana

Scheda T.5

Cipolla Ramata di Milano



DENOMINAZIONE LATINA

Solanum lycopersicum o *Lycopersicon lycopersicum* var. Nero di Crimea

PIANTA DI ORIGINE

La varietà detta pomodoro di Crimea sembra sia stata ottenuta nell'isola di Krim nel Mar Nero, al largo della penisola di Crimea.

Antica varietà da mensa, a maturazione medio precoce, caratterizzato da pianta dal portamento indeterminato, vigorosa e produttiva.

MORFOLOGIA

Frutto di forma tonda schiacciata, a superficie solcata, di 180-350 grammi di peso, di colore rosso viola scuro a maturazione, destinato prevalentemente al mercato del fresco

COLTIVAZIONE

La semina in semenzaio avviene tra gennaio e febbraio con trapianto dopo 30 giorni e raccolta tra giugno e ottobre.

In campo la semina avviene tra marzo e aprile, diradamento dopo 30 giorni e raccolta tra giugno e settembre.

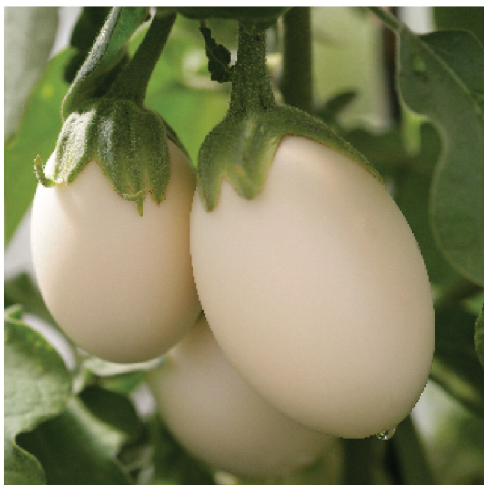
È una pianta a crescita indeterminata che produce i suoi frutti molto rapidamente che arrivano a maturazione anche in 80 giorni.

NOTE

Il pomodoro è ricco di vitamina C e di carotene, povero di calorie, ideale nelle diete dimagranti.

Il nero di Crimea è ricco di licopene che, insieme alla clorofilla, conferisce loro il tipico colore verde-marrone scuro.

Il licopene, uno degli antiossidanti più potenti presenti in natura infatti sembrerebbe avere una prevenzione attiva contro diversi tipi di tumori, in particolare contro quelli della prostata dell'uomo (già accertato) e quello del seno per la donna



DENOMINAZIONE LATINA
Solanum melongena var. Bianca

PIANTA DI ORIGINE
Varietà a ciclo precoce del sud est asiatico, introdotta recnetemente anche in Europa. La sua pianta è vigorosa, produttiva, robusta e resistente.

MORFOLOGIA
La bacca si presenta ovale di piccole dimensioni, di colore bianco - crema .

La superficie è lucente e liscia.

COLTIVAZIONE

Predilige climi temperati o caldi, e soffre il gelo.

Viene coltivata in semenzaio riscaldato nel sud Italia in gennaio-febbraio, al centro-nord in marzo.

L'irrigazione del terreno deve essere costante.

La raccolta si effettua da giugno e si protrae fino a fine settembre.

Presenta un ciclo vegetativo di 70 giorni.

NOTE

Il valore nutritivo delle melanzane è piuttosto scarso: poche calorie, basso contenuto di grassi, proteine e glucidi, ma piuttosto ricche di calcio, fosforo, vitamine A e C e potassio.

Le melanzane stimolano l'attività renale grazie al consistente contenuto di acqua.

Sembra che siano utili per abbassare il colesterolo e e come blando lassativo.

Le melanzane bianche hanno una completa assenza di antociani. Ricca di polifenoli, antiossidanti utili a livello cardiovascolare, contro le malattie legate alla senescenza e nell'arresto della crescita tumorale.



DENOMINAZIONE LATINA

Raphanus sativum var. Candela di ghiaccio

PIANTA DI ORIGINE

E' di origini giapponesi ed è ampiamente utilizzato nellacucina orientale, e conosciuto con il nome di daikon, ma viene coltivato anche nel nostro Paese.

MORFOLOGIA

Radice lunga, appiattita, di colore bianco.

La polpa è soda e croccante.

COLTIVAZIONE

Cresce bene nei terreni ben sciolti, che permettono alla radice una più facile crescita, e contenenti un alto tasso di sostanza organica.

Predilige un clima temperato e teme le temperatura molto elevate e le siccità.

Viene pertanto seminato nel periodo che va da febbraio alla fine di ottobre, evitando il periodo più torrido.

NOTE

Presenta spiccate proprietà che permettono di favorire la depurazione dell'organismo, a partire dalle vie urinarie, contribuendo a contrastare la ritenzione idrica.

E' diuretico e drenante e può essere considerato un vero e proprio toccasana da aggiungere alle proprie ricette.

E' ritenuto benefico per il fegato e nel caso di lievi malattie respiratorie, in quanto contribuisce a liberare le vie aeree dal muco.

Favorisce la buonadigestione e presenta un basso contenuto calorico, pari a sole 18 calorie ogni 100 grammi di prodotto.

Può essere considerato come una buona fonte di vitamina C, beta-carotene, calcio e ferro.



DENOMINAZIONE LATINA
Cichorium intybus var. Rossa Italiana

PIANTA DI ORIGINE
Varietà con pianta rustica e selvatica molto adattabile, a maturazione precoce. frutto di selezione di cichorium intybus ad opera di ditte sementiere.

MORFOLOGIA
Cespo compatto di foglie di 15-25 cm che presentano una nervatura centrale rossa stretta alla base, presenta foglie lunghe, frastagliate, molto aperte, di colore verde.

COLTIVAZIONE

La cicoria è molto adattabile e la coltivazione può essere fatta su terreni abbastanza variati, da sciolti a medio impasto e fino ad argillosi, su terreni esposti al sole. Viene seminata alla profondità di 1 centimetro alla distanza di 25 centimetri sulla linea e di 40 centimetri tra le linee.

Si semina da giugno ad agosto, con diradamento dopo un mese e raccolta scalare dopo 60 giorni a partire da settembre fino a gennaio.

La raccolta avviene esclusivamente a mano.

NOTE

La cicoria presenta un elevato tasso di parte edibile (80%). Ogni 100 grammi contengono il 93% di acqua, l'1,4% di proteine, lo 0,2% di lipidi, lo 0,7% di glucidi disponibili, il 3,6% di fibra. Sono inoltre presenti 236 mg di potassio, 74 mg di calcio, 31 mg di fosforo, 14 mg di sodio.

Alla cicoria si attribuiscono funzioni diuretiche e di blando lassativo, di favorire la secrezione della bile e la diuresi con conseguenti effetti depurativi e disintossicanti, di avere un'azione tonica e rimineralizzante, grazie alle buone quantità di minerali contenuti e inoltre un'azione vasodilatatrice e ipoglicemizzante.



DENOMINAZIONE LATINA

Allium cepa var. di Ramata di Milano

PIANTA DI ORIGINE

Varietà a ciclo tardivo con giorno lungo (sono necessarie almeno 16 ore di luce perchè si possa formare il bulbo)

MORFOLOGIA

Bulbo di pezzatura grossa, di forma ovale, di colore rosso, a polpa bianca.

COLTIVAZIONE

Per un buon raccolto il terreno deve essere molto leggero, ben esposto e ricco

di fosforo e potassio, previamente sottoposto ad una vangatura profonda, per far sì che il bulbo si sviluppi in modo omogeneo e senza trovare resistenza dal terreno stesso nella fase di crescita.

Necessita di un clima temperato e teme temperature prossime o inferiori a 0 °C.

Si semina a una profondità di 1 centimetro alla distanza di 15-20 cm sulla fila e di 25-30 cm tra le file.

NOTE

La cipolla contiene il 92,1 % di acqua, l'1% di proteine, lo 0,1 % di lipidi, il 5,7% di glucidi, l' 1,1% di fibra. Ogni 100 grammi di parte edibile apportano 140 mg di potassio, 35 mg di fosforo, 25 mg di calcio, 26 kcal e 109 kj.

La cipolla è diuretica, depurativa, antiglicemica. Fa bene alle vie respiratorie e apporta giovamento in caso di influenza, rinite, angina, faringiti, bronco-polmoniti.

È particolarmente utile nelle affezioni alla prostata. Combatte l'ipertensione, la senescenza, l'arteriosclerosi e le affezioni all'apparato urinario. È indicata contro le fermentazioni intestinali e facilita la digestione.

Ha la proprietà ipocolesterolemizzanti con abbassamento dei trigliceridi e dei lipidi del sangue.

Molte delle sue proprietà benefiche si perdono con la cottura per cui, se tollerata, andrebbe consumata cruda, nelle insalate.

I semi di queste varietà si possono trovare facilmente in commercio. Li ha raccolti il Consiglio per la ricerca in agricoltura (Cra), in occasione della Fascination of Plants Day 2012, che si è celebrato in tutto il mondo il 18 maggio per vuole promuovere il ruolo chiave delle scienze vegetali nel settore agro-alimentare, farmaceutico, energetico e nella tutela ambientale.

L'attività di laboratorio di giardinaggio comunitario si svolge ogni sabato mattina dalle 9 alle 13 presso lo spazio della Casetta Verde dove cinque esperti formati seguono e guidano la coltivazione.

Attraverso il corso orti da Balcone tenuto dall'associazione Slowfood e finanziato dalla Casetta vengono istruiti sui seguenti temi per essere di supporto per la community in ogni momento.

Attraverso il corso apprendono i principi da seguire per un orto slow, informazioni sul suolo: analisi, tutela e scelta, il compost e l'uso dell'acqua, inoltre come gestire orti scolastici, urbani, comunitari, sociali, come progettare le coltivazioni offrendo cenni su alcune pratiche utili: rotazione e consociazione e le possibili difese nell'orto. Infine verranno istruiti sulle tecniche di coltivazione, sui semi: tipologie, scelta, conservazione e sulle certificazioni.

Le lezioni teoriche, saranno poi registrate e archiviate per facilitarne la diffusione fra gli iscritti. Queste sono tenute presso la biblioteca rionale adiacente alla Casetta che svolge anche la funzione di archivio digitale e cartaceo per ulteriori informazioni sulle tecniche e soluzioni di coltivazione.

Nora Lualdi, responsabile della Biblioteca rionale di Via Odazio si è dimostrata disponibile, a creare una sezione Giardinaggio, sia cartacea che virtuale, per i partecipanti del collettivo di giardinaggio. Gli spazi interni verranno usati per poter tenere lezioni teoriche, anche se non vi sarà la possibilità di una retribuzione del personale coinvolto. Inoltre avranno un ruolo dominante nella comunicazione offrendo le proprie risorse come stamperia comunale per promuovere le attività della casetta.

La strategia proposta per innovare il servizio per le persone che non possono partecipare attivamente il sabato mattina, per motivi di impegno fisico e tempo, e che hanno molto tempo a disposizione, è la possibilità di partecipare attivamente al giardinaggio nei propri spazi abitativi. Infatti, oltre alla partecipazione più o meno attiva alle attività collettive è possibile sperimentare le informazioni apprese, diret-

tamente negli spazi domestici, cortili condominiali e balconi privati. Successivamente all'iscrizione al servizio con una piccola quota di partecipazione ogni partecipante acquista con degli sconti, una scatola di prodotti per avviare un piccolo orto nel proprio spazio disponibile. In base all'esposizione, alla disponibilità di spazi e partecipazione vengono creati tre pacchetti diversi contenenti vasi, terra, semi e strumenti (low, medium and high participation box). Gli esperti sono attenti e disponibili nel supporto e nella certificazione delle qualità degli ortisti privati, verificando la qualità dei raccolti attraverso visite a domicilio.

Ogni partecipante in base alle caratteristiche del proprio orto coltiva le varietà più adeguate per condividere i raccolti con la community CaseVerdi.net. L'uso e scambio libero delle risorse è garantito certificato crediti/debiti. Una piattaforma web facilita questa fase di contatto e scambio dei prodotti, registrando e memorizzando gli scambi e le interazioni fra gli utenti. Inoltre sul sito saranno disponibili contenuti tecnici, lezioni registrate e una sezione di consigli e ricette. Mensilmente durante l'attività del sabato mattina si tiene un momento di scambio collettivo fra i partecipanti, le risorse infatti vengono ridistribuite fra i partecipanti creando dei raccolti vari ed equilibrati. Uno schedario raccoglie le informazioni e il livello di produttività di ciascun ortista in modo che venga correttamente retribuito.

I raccolti della casetta vengono cucinati dai partecipanti per promuovere i prodotti della casetta, attraverso cene collettive ed eventi nel quartiere. Sono richiesti solo piccoli contributi economici per rientrare nelle spese investite.

Alcune attività formative sono state predisposte per le scuole locali, una di queste, individuata durante la ricerca sul territorio e il suggerimento degli hubbers e della Biblioteca è l'istituto sperimentale Rinascita. Avendo già svolto attività di giardinaggio comunitario attraverso le sue strutture e definendosi una scuola moderna per continuare a studiare e capire la realtà, e aperta a questo genere di proposte potrebbe essere interessata alla partecipazione attiva del progetto. Infatti per le scuole si tengono dei corsi tenuti presso la Casetta dai partecipanti che permettono ai bambini di studiare le piante, i loro benefici e i metodi di coltivazione. Inoltre percorsi formativi portano i bambini sui balconi privati dove vengono intrattenute alcune lezioni

Scheda T.6

Diagramma dell'offerta

BARATTA/SCAMBIA I TUOI PRODOTTI

CHIEDI ALLA COMMUNITY I PRODOTTI DI CUI HAI BISOGNO, QUANDO VUOI

OGNI SABATO MATTINA UNA BANCARELLA ALLESTITA E GESTITA DA DUE PARTECIPANTI SARÀ LUOGO DI BARATTO E RACCOLTA DEI PRODOTTI

SCAMBIO IMMEDIATO O CREDITO GARANTITO

COLTIVA SUL TUO BALCONE

PARTICIPAZIONE ANCHE SU BALCONI PRIVATI O CORTILI CONDOMINIALI

I MATERIALI (VASI, TERRA, SEMI E STRUMENTI) PER USO PRIVATO SONO FORNITI GRATUITAMENTE DALLA CASETTA

OGNI BALCONE SI CONCENTRA SU UNA VARIETÀ

SUPPORTO ATTIVO DEI 5 FORMATORI/ESPERTI

IMPARA A COLTIVARE

OGNI SABATO MATTINA DALLE 9 ALLE 13

5 SPECIALISTI FORMATI (IN 5 VARIETÀ DIFFERENTI), LAVORANO LA TERRA INSIEME ALLA COMMUNITY

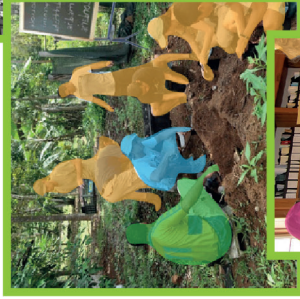
A TURNO LEZIONI PRATICHE SI TERRANNO ALLA CASETTA, QUELLE TEORICHE PRESSO LA BIBLIOTECA DI ZONA

CONOSCI LE TUE PIANTE

SCHEDE TECNICHE E INFORMAZIONI SONO DISPONIBILI NELLA BIBLIOTECA DI ZONA

COMPUTER, CON INFORMAZIONI ON LINE E MEMORIA FISICA DEI TERMINALI

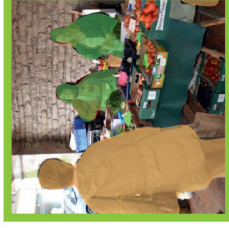
UNA SEZIONE SPECIFICA DELLA BIBLIOTECA RACCOGLIERÀ LIBRI E SCHEDE TECNICHE



CHIEDI I PRODOTTI ALLA COMMUNITY

UNA PIATTAFORMA GARANTISCE LO SCAMBIO LIBERO CON CREDITO DEI PRODOTTI DEI BALCONI

ALTRI UTENTI



ACQUISTA I PRODOTTI A KM ZERO

BANCARELLA ATTIVA OGNI SABATO MATTINA CON DUE PARTECIPANTI DELLA COMMUNITY

VENDITA DEI PRODOTTI AGLI ABITANTI DEL QUARTIERE

PROVA I PRODOTTI SPECIALI CUCINATI DAGLI CHEF DELLA ZONA

I RISTORANTI SLOWFOOD PREPARANO PIETANZE COI PRODOTTI ACQUISTATI ALLA COMMUNITY

A SCUOLA NATURA

A TURNO DA UN PARTECIPANTE VENGONO PRESENTATE LE PIANTE SPECIALI AI BAMBINI DELLE SCUOLE LOCALI

I BAMBINI FANNO VISITA AI VARI BALCONI DOVE SCOPRONO LE NUOVE VARIETÀ. LEZIONI PRIVATE SARANNO INTRATTENUTE IN LOCO.

COLTIVA IL TUO GUSTO E LA TUA SALUTE CON I PRODOTTI ORTO DISTRIBUITO NEI BALCONI E GIARDINI DEL GIAMBellino

CHE OFFRE PRODOTTI DI NICCHIA E BIOLOGICI, AGLI ABITANTI ADERENTI ALL'INIZIATIVA, RISTORANTI ED ERBORISTERIE

sulle particolari varietà coltivate e le loro caratteristiche nutrizionali. L'offerta verrà ampliata anche agli abitanti del quartiere e ristoranti di zona. Infatti dopo una prima fase che vede il progetto pilota concentrato unicamente sulla produzione e scambio, per rendere il progetto auto-sostenibile è prevista la vendita dei prodotti della community. Dopo che la produzione sarà avviata e certificata, e dopo il conseguimento di alcuni iscritti della certificazione del pacchetto igiene comma 852, parte del raccolto verrà destinato alla vendita ai privati in modo da conseguire la sostenibilità economica.

Il 1° gennaio 2006 segna l'entrata in vigore una serie di norme comunitarie (Reg. 852/04, Reg. 853/04, Reg. 854/04, Reg. 882/04 e la Direttiva 2004/41), conosciute come "Pacchetto Igiene", che insieme al D.Lgs. 155/97 (H.A.C.C.P. Hazard Analysis Critical Control Points) possono essere considerate il testo unico delle leggi alimentari. Conservando e potenziando gli obiettivi di sicurezza e la salubrità dei prodotti alimentari contenuti nel 155/97, il nuovo regime legislativo modifica ed abroga molte disposizioni comunitarie in materia di igiene degli alimenti e delle attività di controllo degli organi competenti.

È stata prevista anche la presenza di Slowfood e compartecipazione, sia per promuovere percorsi formativi per le scuole, su cui opera da diversi anni e sia per creare reti di vendita con i ristoranti rionali che aderiscono ai principi di Slowfood. I ristoranti così potranno acquistare prodotti a chilometro zero, legati alla tradizione e rielaborare pietanze esclusive della zona.

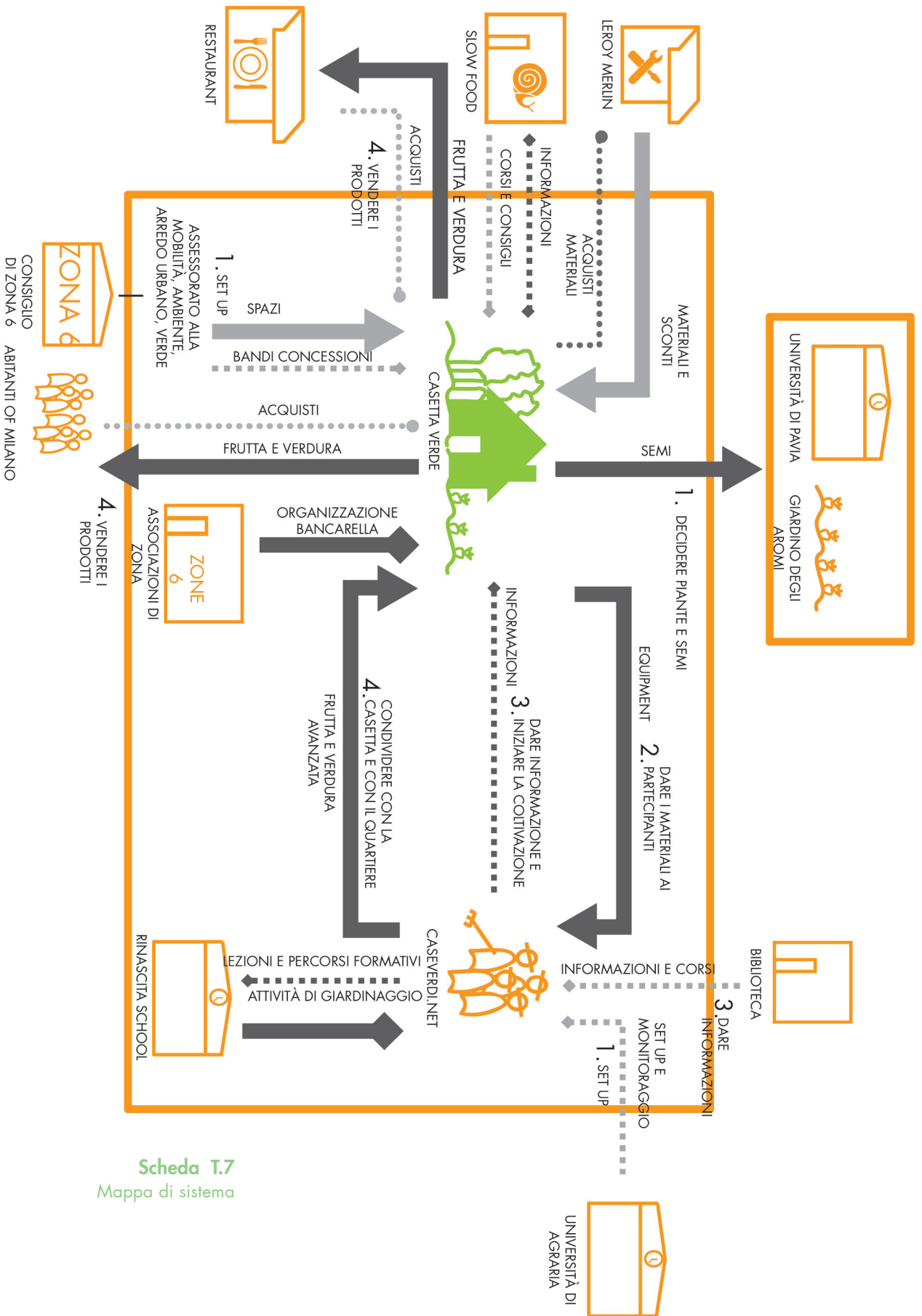
Slow Food nasce nella città di Bra, in provincia di Cuneo, e si pone come obiettivo la promozione del diritto a vivere il pasto, e tutto il mondo dell'enogastronomia, innanzitutto come un piacere. Fondata da Carlo Petrini e pensata come risposta al dilagare del fast food e alla frenesia della vita moderna, Slow Food studia, difende e divulga le tradizioni agricole ed enogastronomiche di ogni parte del mondo. Slow Food si è impegnata per la difesa della biodiversità e dei diritti dei popoli alla sovranità alimentare, battendosi contro l'omologazione dei sapori, l'agricoltura massiva, le manipolazioni genetiche. Per consentire la vendita dei prodotti verrà allestita una bancarella mensile presso la Casetta, la stessa già utilizzata per i momenti di scambio, dove i ricavi ottenuti oltre a garantire la sostenibilità economica permetteranno l'investimento in nuovi servizi e strumenti per rendere il progetto sempre più inclusi, professionale e concorrenziale.

7.2 GLI ATTORI

Inizialmente è essenziale che via sia la partecipazione delle varie associazioni che già vivono gli spazi della Casetta, per ottenere il Bando Cultura per la zona 6. Infatti ciò permette di ottenere la garanzia dello spazio di via Odazio e ottenendo alcuni permessi dal consiglio di zona 6 la possibilità di vendere i prodotti al quartiere su luogo comunale. L'inviduazione delle varietà stagionali consone al territorio milanese, sono selezionate con il supporto del docente della facoltà di agraria e scienze alimentari, Alberto Spada che pianifica inoltre le varietà più consone per ciascuno spazio individuato relativamente alla sua esposizione, ricordando le priorità dei prodotti di nicchia.

Con la collaborazione dell'Università di Pavia, che ha recentemente inaugurato una banca dei semi di piante autoctone della Lombardia, e il contributo di alcuni consorzi è possibile reperire i semi più adatti e ricercati. La conservazione e storage dei semi è garantita dal contributo del Giardino degli Aromi, è un'associazione con sede a Milano senza scopo di lucro di utilità sociale (Onlus) nata nel 2003 dall'iniziativa di un gruppo di donne con esperienza di coltivazione e raccolta di piante aromatiche. Questa associazione svolge fra le sue proposte un'attività di raccolta e stoccaggio dei semi, pertanto sono interessati ad arricchire il loro catalogo e ad aumentare l'offerta delle piante da orto.

La Casetta poi si occuperebbe di raccogliere le iscrizioni dei partecipanti e di comprare i materiali presso i negozi di piante/bricolage per poi ridistribuirle fra gli iscritti. Contemporaneamente gli esperti terrebbero dei corsi teorici e pratici presso le strutture di via Odazio, così da iniziare l'attività di coltivazione privata.



Scheda T.7
Mappa di sistema

7.3 IL SISTEMA D'ESPERIENZA E INTERAZIONE












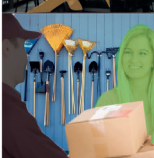




Scheda T.8

Interaction story spot

(nella pagina seguente)

Scheda T.9

Interaction story Table

	Set up			Start up				
Partecipanti CaseVerdi.net		alcuni partecipanti frequentano corsi e lezioni		iscriversi alla community		partecipare to workshop about cultivation		ricevono il materiale dalla casetta per attivare la coltivazione privata
Scuola Media Rinascita				partecipazione ad eventi, con possibile esibizioni				
Associazioni Zona 6		incontri per partecipare al bando comunale		eventi per promuovere iniziative nel quartiere				
Biblioteca						gli esperti insegnano alla comunità informazioni teoriche		archivio cartaceo e virtuale di informazioni su specifiche varietà vegetali e le tecniche di coltivazione
Negozi Piante e FaiDaTe						dare materiali alla casetta con contratto speciale		
Slow Food								
Ristoranti della Zona								
Università di Agraria				planificare gli spazi da coltivare				
Università di Pavia Fondazione Fojanini Giardino Degli Aromi						creare una rete di scambio e conservazione dei semi		
Consiglio di Zona 6		emissione del bando per la cessione dello spazio						
Abitanti di Gaimbellino				partecipazione libera				

	<p>verifica dei balconi e supporto tecnico</p>		<p>partecipazione privata e attenzione alle proprie piante</p>		<p>scambio di frutta e verdura con la community</p>		<p>dare le verdure avanzate alla Casetta</p>
	<p>a turno visite alla casetta con attività di laboratorio</p>		<p>a turno visite ai balconi privati</p>				
					<p>eventi per la promozione dei prodotti di nicchia</p>		<p>vendere i prodotti avanzati agli abitanti del quartiere e ai ristoranti</p>
					<p>comunicazione e promozione delle attività della Casetta</p>		
							<p>creare collaborazione fra Casetta e ristoranti associati</p>
							<p>i ristoranti preparano le pietanze con i prodotti della Casetta</p>
					<p>Dare concessioni per la vendita dei prodotti</p>		
							<p>libera partecipazione e acquisto dei prodotti</p>

7.4 IL BUSINESS MODEL

DESCRIZIONE GENERALE DELL'IMPRESA

POSIZIONAMENTO COMPETITIVO

“CASEVERDI.NET” fornisce un servizio per il sociale che si colloca sul mercato degli orti comunitari su suolo comunale e di quelli a gestione privata. In particolare agisce coinvolgendo le scuole secondarie di primo grado e gli abitanti del quartiere di Giambellino.

ATTIVITA' INTERNE:

.Gestione e organizzazione diretta di un orto distribuito, che prevede la gestione degli spazi per meglio individuare le varietà da coltivare, ricevere le iscrizioni e gestire il bilancio.

. gestire la vendita e lo scambio dei raccolti, lo scambio potrà essere sia libero interno alla community, a discrezione dei partecipanti che vincolato alle attività del sabato mattina dove una bancarella gestirà la compra/vendita e scambio

.Organizzazione e distribuzione dell'attrezzatura e materiali acquistati a fondo collettivo dai partecipanti presso i produttori di materiale per attività di giardinaggio (es: Leroy Merlin, Ingengnoli)

. Controllo e verifica della produzione

.Gestione dei contatti con il Comune di Milano e con istituzioni locali (biblioteca, slowfood, ristoranti, università)

. workshop didattici

. Manutenzione dello spazio verde comunale della Casetta Verde in via Odazio

. Eventi estivi di promozione con degustazioni dei prodotti tipici della zona

ATTIVITA' ESTERNE:

. Corsi di formazione

. Pubblicizzazione degli eventi e del servizio

. Attività di scuola natura all'interno delle strutture

. Materiali didattici e informativi

GRUPPO IMPRENDITORIALE

. Associazione ONLUS fondata e gestito all'interno dagli abitanti del quartiere e dalle associazioni di quartiere che insieme gestisco-

no la produzione e formazione. Dopo la fase di start up che è stata prevista per i primi due anni dell'attività, cambierà stato sociale diventando a scopo di lucro, finalizzata alla vendita dei prodotti e all'autofinanziamento.

RISORSE UMANE

All'interno dell'associazione oltre ai partecipanti attivi nella coltivazione sono previste 3 persone che saranno responsabili della gestione delle iscrizioni, della vendita e dello scambio. Queste attività saranno svolte dalle associazioni che già sviluppano attività nella casetta, incrementando la loro diffusione nel quartiere.

PIANO STRATEGICO

MISSION

Creare una rete distribuita di coltivazioni in spazi privati del quartiere Giambellino che soddisfano la richiesta dei partecipanti tramite la condivisione del raccolto.

ANALISI ESTERNA

i maggiori competitori considerati sono i produttori e venditori di prodotti ortofrutticoli, che rispondono a tale fabbisogno che secondo le stime di ACNielsen-Food, terminante a settembre 2011, rispondono a un volume di produzione/vendita pari a 5.770 milioni di tonnellate annui. Distribuite secondo la tabella:

IL PESO DEI CANALI IN VOLUME

Iper e Super	39,5%
Libero servizio	3,5%
Discount	3,6%
Alimentari tradizionali	5,2%
Negozi ortofrutta	23,9%
Cash&Carry+Spacci	0,6%
Ambulanti	22,9%
Autoproduzione	4,4%

Scheda T.10

Canali di volume
produzione ortofrutticola

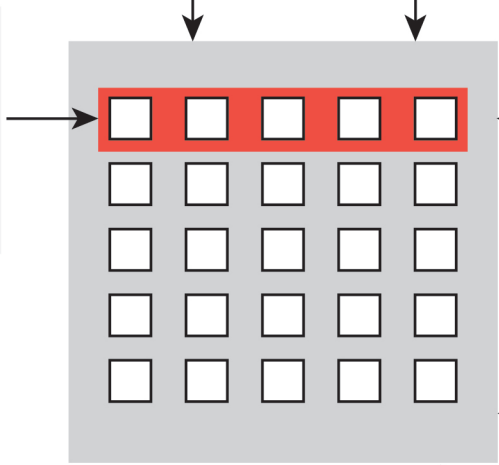
- cinque esperti
- partecipanti delle associazioni
- addetti alle vendite
- responsabile delle iscrizioni
- flusso delle entrate

NEGOZI FAI DA TE
forniscono materiali per la coltivazione a uso privato e collettivo: vasi, terra, strumenti e altri accessori.

FORNITORE SEMENTI
mette a disposizione sementi di cinque varietà selezionate

BIBLIOTECA
mette a disposizione spazi per lezioni teoriche, un archivio digitale e cartaceo, stampa di flyer e poster cartacei

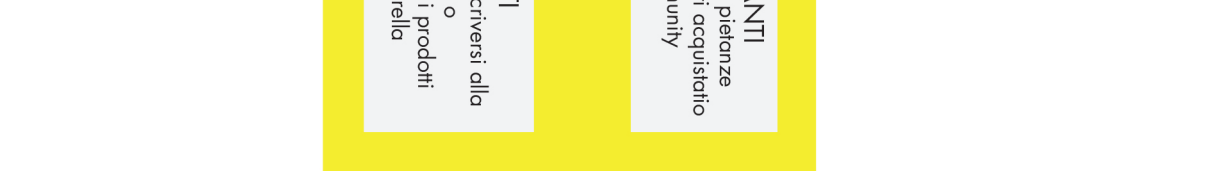
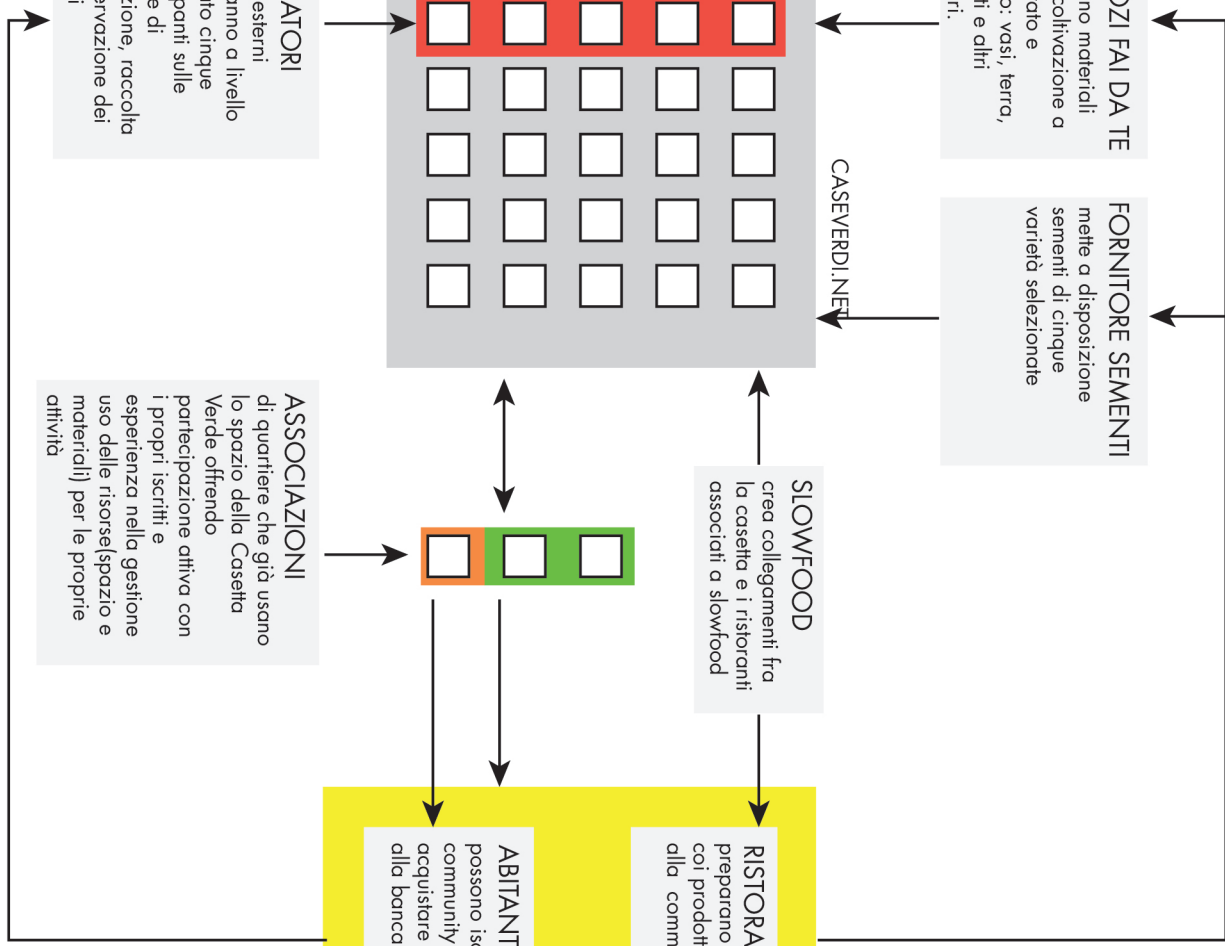
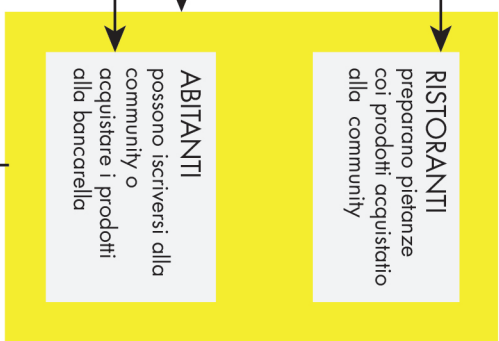
SCUOLA
con attività di scuola natura contribuirà alla realizzazione dell'orto, e di supporto degli utenti partecipanti.



FORMATORI
esperti esterni formeranno a livello avanzato cinque partecipanti sulle tecniche di coltivazione, raccolta e conservazione dei prodotti

SLOWFOOD
crea collegamenti fra la casetta e i ristoranti associati a slowfood

ASSOCIAZIONI
di quartiere che già usano lo spazio della Casetta Verde offrendo partecipazione attiva con i propri iscritti e esperienza nella gestione uso delle risorse (spazio e materiali) per le proprie attività



orti comunitari: verdure di qualità, coltivate negli spazi urbani
fascia prezzo: bassa
nel territorio milanese sono presenti circa 70 attività che contano la partecipazione di circa 20 persone cad.

negozi piante: prodotti per la coltivazione privata di ortofrutta
fascia prezzo: medio bassa

negozi biologici-nicchia: prodotti biologici- specializzati di stagione e alta qualità
fascia prezzo: alta

gas: vendono prodotti biologici- stagionali di alta qualità
fascia prezzo: medio bassa
mercato di quartiere: prodotti ortofrutticoli di medio bassa qualità
fascia prezzo: bassa

supermercato o ipermercati: prodotti ortofrutticoli di qualità medio bassa
fascia prezzo: medio bassa

STRATEGIA SCELTA

promuovere il contributo di esperti(università agraria, slowfood, pacchetto igene) per garantire la qualità del servizio, che favorisca attività culturali ortofrutticole di supporto alla opportunità di coltivare a casa in poco spazio(balcone), offrendo una vasta e continua scelta di prodotti di nicchia(ortofrutta della tradizione locale e ad alti valori nutrizionali) attraverso una rete organizzata di scambi comunitari.

PIANO DI MARKETING

ANALISI E VALUTAZIONE DEL MERCATO POTENZIALE DI RIFERIMENTO

Nella zona 6 di milano è stato considerato il numero degli abitanti possibili che rispondono al target individuato (20-74 anni) che cor-

risponde al 71% della popolazione, e 26270 abitanti di Giambellino. Considerando che compongono circa 15 230 nuclei familiari, e interpretando i dati emersi nella descrizione dei trend risulta che circa il 26% ha a disposizione nelle proprie abitazioni una superficie domestica coltivabile per un totale di 3808 famiglie di cui 1028 già coltivano sui loro balconi e cortili. I potenziali partecipanti e/o interessati all'offerta prodotta sono (circa il 40%) le persone che coltivano prodotti ortofrutticoli sul balcone che verosimilmente sono 400 individui.

Come base di partenza per l'attivazione del servizio è stato necessario individuare un numero minimo di partecipanti cercando di coinvolgere un numero crescente di partecipanti divisi in Esperti, partecipanti all'orto comunitario e distribuito e in partecipanti all'orto distribuito.

PARTECIPANTI	ANNO 1	ANNO 2	ANNO 3	ANNO 4	ANNO 5
ESPERTI	5	7	10	10	10
PARTECIPANTI CASLAINGHI	10	25	35	45	55
PARTECIPANTI CASANLINGHI+ ORTO	10	15	20	25	25
TOTALE	25	47	65	80	90

Scheda T.12
numero dei partecipanti

TARGET

-La strategia individuata vuole coinvolgere attivamente gli abitanti del quartiere che per motivi temporali e di salute non possono essere coinvolti nelle attività di giardinaggio comunitario proposte nel quartiere.

-Il target in considerazione sarà attento alle questioni di sostenibilità economica e ambientale, disponibile a scambiare ore e competenze con la comunità.

-Interessato ad attrarre le persone alla degustazione e/o produzione di ortofrutta di qualità in favore della valorizzazione della biodiversità dei prodotti di nicchia.

-Il sistema vuole coinvolgere gli attuali partecipanti e attivare le persone pensionate che possono mettere a disposizione il loro tempo libero in promozione di un servizio di coesione e sviluppo all'interno del quartiere. Interessati non esclusivamente alla produzione di ortofrutta ma anche alla possibilità di imparare e approfondire le attività svolte attraverso scambio attivo di competenze.

MARKETING MIX

PREZZO

ogni partecipante contribuisce con una quota di iscrizione di 10 € annui per la gestione delle attività di formazione e scambio, mentre i costi degli strumenti personali, semi, vasi, terra e strumenti saranno pagati individualmente, attraverso la mediazione della Casetta che acquista i prodotti a prezzo comunitario. Per diminuire le spese dei primi anni e per avviare il sistema vengono utilizzate componenti di riciclo per ottenere vasi e strutture per le piante. Con l'avvio della produzione intensificata finalizzata alla vendita ognuno investirà, sempre attraverso un acquisto comunitario, comprando materiali più idonei che garantiranno unità produttive crescenti. Le spese delle attività della casetta sono attualmente previste a fondo perduto per ottenere un punto di pareggio al termine del 5 anno di attività.

PROMOZIONE

La promozione viene effettuata principalmente con il contributo della Biblioteca rionale di Via Odazio che può stampare, poster e volantini da distribuire al quartiere. Inoltre cene promozionali organizzate nel periodo estivo vedono la vendita a prezzi partecipativi, promuovono i prodotti coltivati e cucinati dagli abitanti del quartiere con l'intenzione di incrementare il numero di partecipanti.

BILANCI PROSPETTICI

Scheda T.13
valore opportunità per
singolo partecipante

Scheda T.14
Spese di gestione
piante private
(nella pagina seguente)

Le varietà selezionate coltivate nell'arco di un anno richiedono delle spese di gestione che saranno effettuate dai singoli partecipanti, prima includendo materiali di riciclo per far recepire senza grossi investimenti il valore dell'offerta. Vasi e strumenti verranno poi utilizzati per le colture successive. La terra depauperata dopo le produzioni viene rigenerata alla Casetta dove attraverso operazioni di pacciamatura sarà possibile riutilizzarla per lo colture seguenti.

Sono state stimate per le stesse varietà, le opportunità di valore che

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VALORE OPPORTUNITÀ	ANNO 1			ANNO 2		
VARIETÀ SELEZIONATE	UNITÀ PRODOTTE KG	PREZZO UNITARIO €	COSTO OPP. €	UNITÀ PRODOTTE KG	PREZZO UNITARIO €	COSTO OPP. €
POMODORO NERO DI CRIMEA	7	3,3	23,1	8	3,3	26,4
MELANZANA BIANCA	6	2,4	14,4	7	2,4	16,8
RAVANELLO CANDELA DI GHI- ACCIO	8	3,4	27,2	9	3,4	30,6
CIPOLLA RAMATA DI MIALANO	6	2	12	7	2	14
CICORIA ROSSA ITALIANA	7	2,5	17,5	8	2,5	20
TOTALE OPPORTUNITÀ	10		94,2	39		107,8
TOTALE OPPORTUNITÀ CON RISCHIO	27,9		77,2	32,7		90,5

ogni pianta può creare in un anno. Considerando inoltre che mantenendo costante la superficie coltivata, grazie all'utilizzo di materiali più idonei e di esperti, che sempre più formati supporteranno la coltivazione, i volumi di produzione aumenteranno notevolmente permettendo la vendita parziale dei prodotti considerata al 20% per i raccolti di ogni spazio domestico. Per questo è stata anche considerata anche una percentuale di rischio decrescente sulla produzione totale.

ANNO 3			ANNO 4			ANNO 5		
UNITÀ PRODOTTE KG	PREZZO UNITARIO €	COSTO OPP. €	UNITÀ PRODOTTE KG	PREZZO UNITARIO €	COSTO OPP. €	UNITÀ PRODOTTE KG	PREZZO UNITARIO €	COSTO OPP. €
9	3,3	29,7	10	3,3	33	11	3,3	36,3
8	2,4	19,2	9	2,4	21,6	10	2,4	24
10	3,4	34	11	3,4	37,4	12	3,4	40,8
8	2	16	9	2	18	10	2	20
9	2,5	22,5	10	2,5	25	11	2,5	27,5
44		121,4	49		135	54		148,6
37,84		104,4	43,12		118,8	48,6		133,7

GESTIONE PIANTE PRIVATE	ANNO 1		ANNO 2	
VOCI DI COSTO	UNITÀ USATE	COSTO €	UNITÀ USATE	COSTO €
SEMI POMODORO NERO DI CRIMEA	2 semi	0,75	2 semi	0,75
SEMI MELANZANA BIANCA	2 semi	0,45	2 semi	0,45
SEMI RAVANELLO CANDELA DI GHIACCIO	6 semi	0,7	6 semi	0,7
SEMI CIPOLLA RAMATA DI MIALANO	10 semi	0,4	10 semi	0,4
SEMI CICORIA ROSSA ITALIANA	15	0,65	15	0,65
TERRICCIO	25 litri	5	25 litri	5
STRUMENTI	4 utensili	12	-	-
VASI	materiali di riciclo		materiali di riciclo	
ACQUA	1,5 mc	4	1,5 mc	4
TOTALE SPESE GESTIONE PIANTE PRIVATE		24		11,95

ANNO 3		ANNO 4		ANNO 5	
UNITÀ USATE	COSTO €	UNITÀ USATE	COSTO €	UNITÀ USATE	COSTO €
2 semi	0,75	2 semi	0,75	2 semi	0,75
2 semi	0,45	2 semi	0,45	2 semi	0,45
6 semi	0,7	6 semi	0,7	6 semi	0,7
10 semi	0,4	10 semi	0,4	10 semi	0,4
15	0,65	15	0,65	15	0,65
-	-	-	-	-	-
4	15	-	-	-	-
25 litri	20	-	-	-	-
1,5 mc	4	1,5 mc	4	1,5 mc	4
	27		7		7

Scheda T.15
Spese di gestione della
Casetta

Nella tabella seguente sono riportati i costi delle strumentazioni e spese necessarie per l'erogazione dei servizi offerti dalla Casetta. Un'iniziale investimento in strumenti informatici prevede l'acquisto di materiali per la registrazione delle lezioni da mostrare ai successivi iscritti al servizio. Al quarto anno è prevista la sostituzione dell'attrezzatura obsoleta già presente in Casetta. Presso l'attuale locazione sono già disponibili strumenti per garantire l'attività di 20 persone, quindi saranno necessarie piccole spese nel corso degli anni. I materiali per la vendita e lo scambio, di cui sono già presenti tavoli e gazebo, prevedono l'acquisto di bilance, registri e cassette/sacchetti per la distribuzione della merce.

I corsi che alcuni partecipanti dovranno seguire prevedono corsi sulla coltivazione e sulle certificazioni necessarie per il rispetto delle regole igieniche. Che vedranno un costante aggiornamento negli anni per garantire la qualità del servizio supportando l'aumento dei partecipanti. I consumi previsti son stati analizzati sulla media attuale delle spese pagate fino ad oggi dalle associazioni iscritte alla Casetta e considerano un aumento dei consumi con l'incremento del frigorifero professionale per la conservazione degli alimenti destinati alla vendita. La creazione di una piattaforma internet vedrà negli anni spese di aggiornamento costante. Le spese generali considerano le se spese di amministrazione e gestione del servizio(5% delle spese totali)

SPESE CASSETTA €	ANNO 1	ANNO 2	ANNO 3	ANNO 4	ANNO 5
STRUMENTI INFORMATICI	400	-	-	1000	-
MATERIALI TERRA	25	35	50	60	70
MATERIALI SCAMBIO/ VENDITA	200	30	70	80	90
CORSI ESPERTI + PACCHETTO IGIENE	250	350	170	170	170
CONSUMI	150	150	150	170	170
CONTENITORI COMPOST	150	-	-	150	-
SITO INTERNET	850	300	300	300	300
PACCIAMATURA	70	70	70	70	70
2 CENE PROMOZIONALI	400	450	500	550	600
FRIGORIFERO	-	-	1000	-	-
SPESE GENERALI	125	69	116	128	74
TOTALE SPESE	2620	1454	2425	2678	1544

Scheda T.16
Ricavi Casetta Verde

I ricavi per contribuire alla sostenibilità economica del servizio considerano le quote d'iscrizione di 10 euro per ogni partecipante, le due cene comunitarie e promozionali e i prodotti venduti a terzi sulle stime dei prezzi di mercato attuali.

RICAVI €	ANNO 1	ANNO 2	ANNO 3	ANNO 4	ANNO 5
2 CENE PROMOZIONALI	500	550	600	650	700
ISCRIZIONE PARTECIPANTI	250	470	650	800	900
VENDITA SINGOLO BALCONE	-	-	12,5 (7,5 KG)	22,4 (8,5 KG)	25,4 (10 KG)
VENDITA PRODOTTI COMUNITARI	-	-	812	1789	2282
TOTALE GUADAGNI	750	1020	2061	2462	3240

Scheda T.17
Bilancio prospettico

Dalle prospettive ipotizzate risulta che il bilancio della casetta sarà positivo (attualizzato con un tasso del 2,5% annuo) al termine del 5 anno.

BILANCIO €	ANNO 1	ANNO 2	ANNO 3	ANNO 4	ANNO 5
SPESE-RICAVI	- 1869	- 434	- 363	562	2338
ATTUALIZZAZIONE DEL BILANCIO AL TERMINE DEL 5° ANNO					211

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