

# ShareRadio

(ex)change your time

A sustainable PSS, focused on  
intergenerational dialogue.

Part of the TANGO  
EU funded project

*Master thesis in Product Service System Design*  
*by Elisa Bacchetti*



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# 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 Summer Camp enabled and currently funded by the Punto and Linea project in the district of Gratosoglio.

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 design phase of the project, where the four graduating students, starting from the

most promising attempts 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: “ShareRadio – (ex)change your time”, a platform which merges the Web Radio and the TimeBank of Baggio, through the realization of a new service and a dedicated space in the web radio, to host the time bank of Baggio. This service, as every time bank, proposes to set a network of persons, each one with his/her professionalism, who offers job/hours gaining time credits to be spent for services and works to be done for him/her from other persons with different professionalities among the community (the currency is the time use to do a job, not the hourly cost of a particular service). The Web Radio, can make this mechanism even more efficient and accessible through the design of an online bacheca, with free subscription, where to manage offers and requests, communicate among the community and check directly the debit/credit time. The Product-Service System designed will guarantee also the economic sustainability of the web radio through the job/hours exchanges; involving the final users in managing and delivery the service, giving hours/job directly to the Web Radio management: running the radio initiatives (i.e. weekly broadcasts, searching information,...) as well as for the maintenance of the platform (i.e. newsletter sending, files updating,...). Furthermore will be established some synergies between the project and local associations subscribing to the platform; giving visibility benefits for both, and improving as well the economic sustainability of the new Product Service System.

The “ShareRadio – (ex)change your time” 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.

# ABSTRACT

*italiano*

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'ècole 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 la Web Radio attivata e per ora finanziata dal progetto Punto e Linea nel quartiere di Baggio.

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 ed 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 tentative concepts per le quattro iniziative. Successivamente al corso è iniziata la fase di design concept di progetto, dove i quattro tesisti, partendo dai tentative concepts più promet-

tenti, 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 "ShareRadio (ex)change your time", una piattaforma che propone di creare una sinergia tra la web radio e la banca del tempo di Baggio, ovvero l'attivazione di un nuovo servizio e di un apposito spazio sulla web radio dedicato alla banca del tempo di Baggio. Questo servizio come ogni altra banca del tempo propone di creare una rete di persone, ognuna con la sua professionalità, che offrono servizi/lavoro guadagnando crediti di tempo che poi spenderanno con servizi e lavori per loro fatti da altre persone con differenti professionalità all'interno della comunità (la valuta è il tempo impiegato per fare un lavoro, non il costo orario di una determinata prestazione). La web radio, può però rendere questo servizio molto più efficace ed accessibile attraverso l'utilizzo di una bacheca online, accessibile con iscrizione gratuita, per la gestione delle richieste e offerte, la comunicazione tra le persone e il controllo diretto delle ore in debito/credito. Il Sistema di Prodotto Servizio progettato consentirà inoltre di rendere la Web Radio economicamente sostenibile tramite il meccanismo di scambio ore/lavoro; coinvolgendo gli utenti finali nella gestione ed erogazione del servizio tramite lo scambio di ore/lavoro spendibili per la gestione della Web Radio: sia nella realizzazione di contenuti (programmi radio, raccolta informazioni,...) che per la gestione tecnica della piattaforma (invio newsletter, aggiornamento file,...). Verranno inoltre realizzate delle sinergie tra il progetto e le associazioni del territorio, tramite la loro iscrizione alla piattaforma; con un ritorno di visibilità per entrambi, ed aumentando ulteriormente la sostenibilità economica del Sistema di Prodotto-Servizio.

Il processo progettuale di ShareRadio (ex)change your time 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.







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## ***BIBLIOGRAPHY***



# 1 PSS INNOVATION A PROMISING APPROACH TO SUSTAINABILITY

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

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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 product<sup>1</sup>. 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 satisfaction<sup>2</sup>. 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 publication<sup>3</sup>: 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

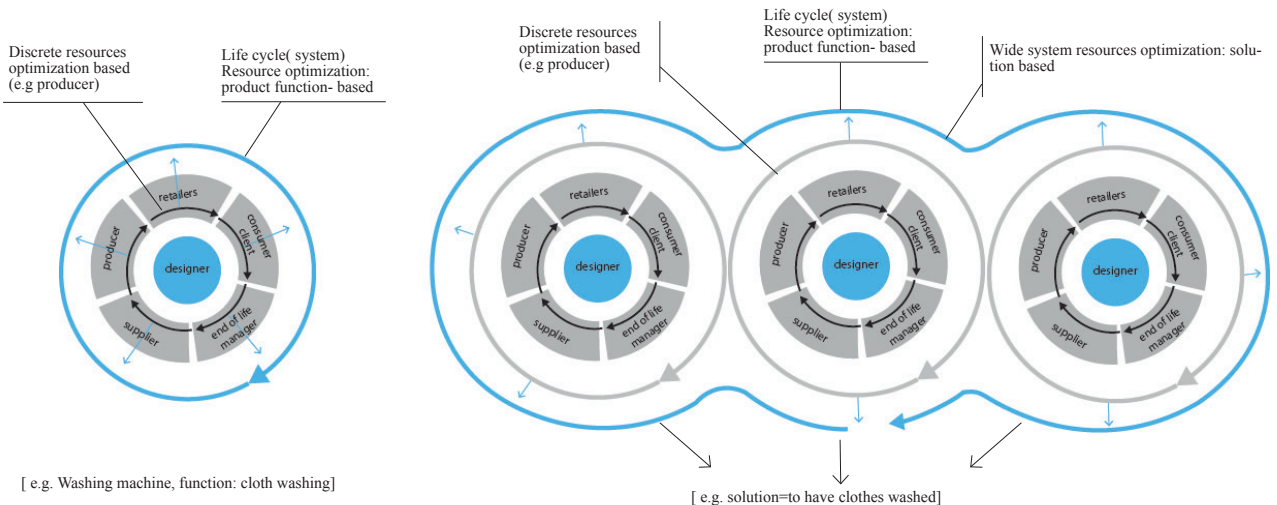
3. UNEP, 2002

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”<sup>4</sup>. 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 environment<sup>5</sup>.

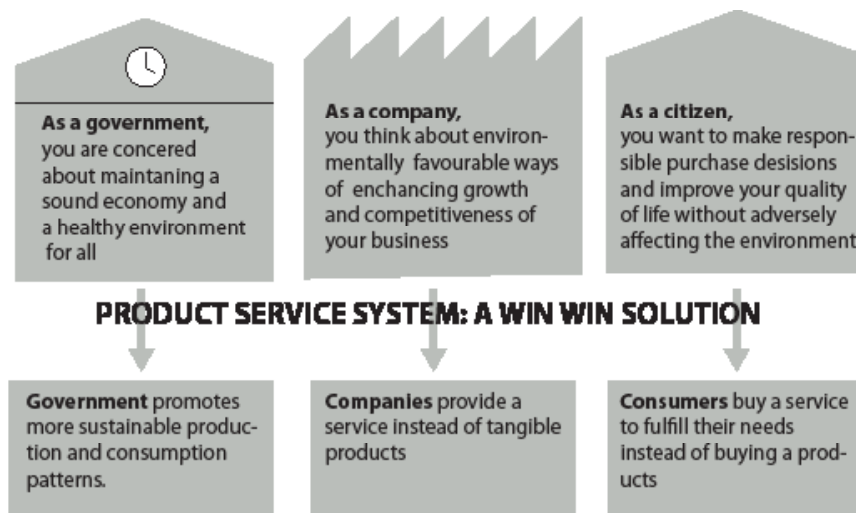
We don’t have to assume that PSS is synonymous of low environmental impact: it does not guarantee environmental improvements. As stated by UNEP (2002) PSSs only have the potential to do so. PSSs in fact offer a promising concept to move in the direction of sustainability; but this potential can be exploited 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 1.3**

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” <sup>6</sup>. 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.

## 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 customer <sup>7</sup>.

Commonly referred to in this context as a Product-Service System (PSS), Mont <sup>8</sup> defines it as “a system of products, services, network

6. Lens, 2011

7. Goedkoop, van Halen, Riele, Rommes, 1999; Brezet, 2001; Charter, Tischner, 2001; Manzini, Vezzoli, 2001; Bijma, Stuts, Silvester, 2001

8. Mont, 2002

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 publication<sup>9</sup>, 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 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.*

*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.*

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”<sup>10</sup>. 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

9. UNEP, Tischner, Vezzoli, 2009

10. UNEP, 2002

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)<sup>11</sup>.

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 competitive 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 paragraphs.

### 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 researchers<sup>12</sup> to both disseminate world-wide

11. Porter, 2006

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.

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 contexts <sup>13</sup>.

### ***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 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 high-

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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> ).

lighted in support of this hypothesis<sup>14</sup>.

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.

## **1.4 DISTRIBUTED ECONOMIES: A PROMISING ECONOMIC MODEL FOR SYSTEM INNOVATION COUPLING ECO-EFFICIENCY WITH SOCIAL EQ- UITY 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 economies<sup>15</sup>.

A well-known institution on economics and sustainability, the Inter-

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

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

national 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”<sup>16</sup>.

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 include<sup>17</sup>:

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*<sup>18</sup> has been increasingly used in relation to several different socio-economic systems: ***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

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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).

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 world<sup>19</sup>. 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 regime<sup>20</sup>. 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.

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.

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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



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 princi-

ple 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 observed<sup>21</sup> 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 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”.***

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21. Sachs, 2002; Sachs, Santarius, 2007

## 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.<sup>22</sup>

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.<sup>23</sup> Under this framework, the term “asset” is restricted to the concept of wealth, including

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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.<sup>24</sup> 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 including<sup>25</sup>:

- 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.

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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.<sup>1</sup>

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

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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.

it includes in one package a number of elements that have the potential 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.<sup>2</sup>

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 interaction<sup>3</sup> and these are discussed separately below. Two recent meta-analyses have reviewed the benefits of physical activity for older persons.<sup>4</sup>

- **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 capital can be seen to **“be the glue that holds society together”** (ibid).

2.Priest & Gass, 2005

3.Alves & Sugiyama, 2006

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

Hence, social capital is positive at a community level but also accrues to individuals.

### **Conclusion**

***Being socially involved has health benefits for seniors***<sup>5</sup>, leads to less cases of depression<sup>6</sup>, and more perceptions of safety<sup>7</sup>. Conversely, low social capital has been linked to dysfunctional and unstable communities with higher problem severity<sup>8</sup>.

## **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”<sup>9</sup>. As a result, public spending for pensions, health care and long-term elderly care will rise significantly<sup>10</sup> while at the same time young people will be facing increasing difficulties in accessing quality education and adequately paid employment<sup>11</sup>. These challenges pose a threat to young people’s ability to live autonomous lives as equal members of society<sup>12</sup>.

*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 accompanied by exchanges between the generations.

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



*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.*<sup>13</sup> 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*<sup>14</sup>.

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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 hopping 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**) method<sup>15</sup> which once, has been examined in the 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

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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

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

In the following pages will be presented 32 best practices<sup>16</sup>, of PSS innovation.

This study cases research started with a theoretical analysis of the social cohesion into the European context. This first approach helped to define the importance of the social cohesion in a society, particularly about the intergenerational dialogue. The research has been done mainly as internet research to include a wider panorama of cases.

Each study case has been defined in relation to the kind of approach and about the interaction objective; moreover each case has been analyzed through social, environmental and economical sustainable characteristics.

At the end of the cases there is an overall qualitative analysis of the best practices, with a trends representation.

*The research of the studied cases, has been made by the four master degree thesis students with the supervision of Carlo Vezzoli.*

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<sup>16</sup> The best practices presented are part of an internal report of the Design and Innovation for Sustainability (DIS) Research Unit of INDACO dept. of Politecnico di Milano.

# TANGO

TOWARDS  
A NEW  
INTERGENERATIONAL  
OPENNESS



SYSTEM DESIGN  
FOR SUSTAINABILITY  
course  
Professor Carlo Vezzoli

Design School  
Politecnico di Milano (Italy)  
Academic year 2011/2012

STRATEGIC ANALYSIS

BEST PRACTICES  
of sustainable  
intergenerational  
dialogue

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POLITECNICO DI MILANO



DIPARTIMENTO  
INDACO

DIS, DESIGN AND SYSTEM INNOVATION FOR SUSTAINABILITY  
Italian Coordinator: Carlo Vezzoli

## **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](http://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 (Anna Meroni – Edizioni Polidesign) – [www.desis-network.org](http://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](http://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](http://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](http://www.scotcip.org.uk) - [www.csv-rsvpscotland.org.uk](http://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](http://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](http://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 overtake 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](http://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](http://www.focusonfood.org) - [www.scotcip.org.uk](http://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](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](http://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](http://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](http://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](http://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](http://www.tuttiinbiblioteca.it), [www.comune.milano.it](http://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**

Calvaire 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](http://www.intergenerationall.org) - [www.scotcip.org.uk](http://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](http://www.ilcerchiodigesso.it) - [www.bergamomemoria.it](http://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](http://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](http://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](http://www.internetsaloon.it)**Eco-Efficiency and Socio-Ethical Character-**

### **istics:**

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 architectonical 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](http://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 revaluation 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](http://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 revaluation 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](http://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.

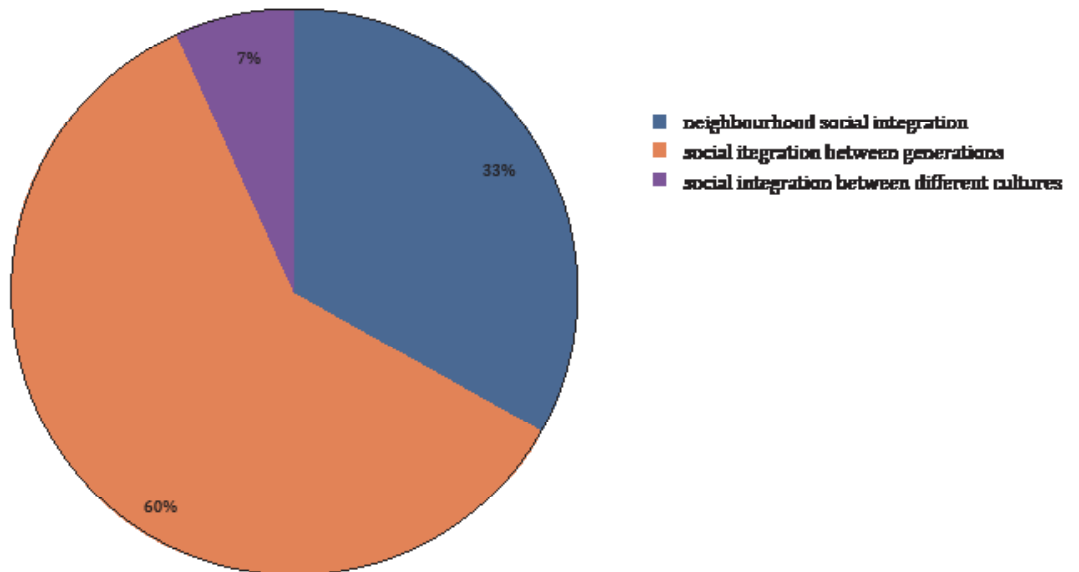
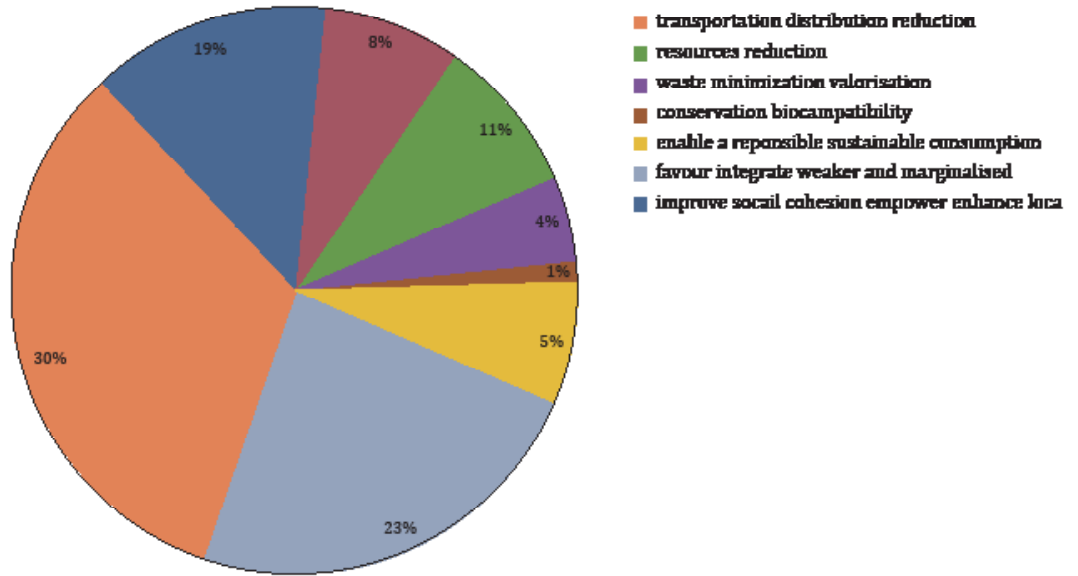
To make this possible have been proposed some guidelines:

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

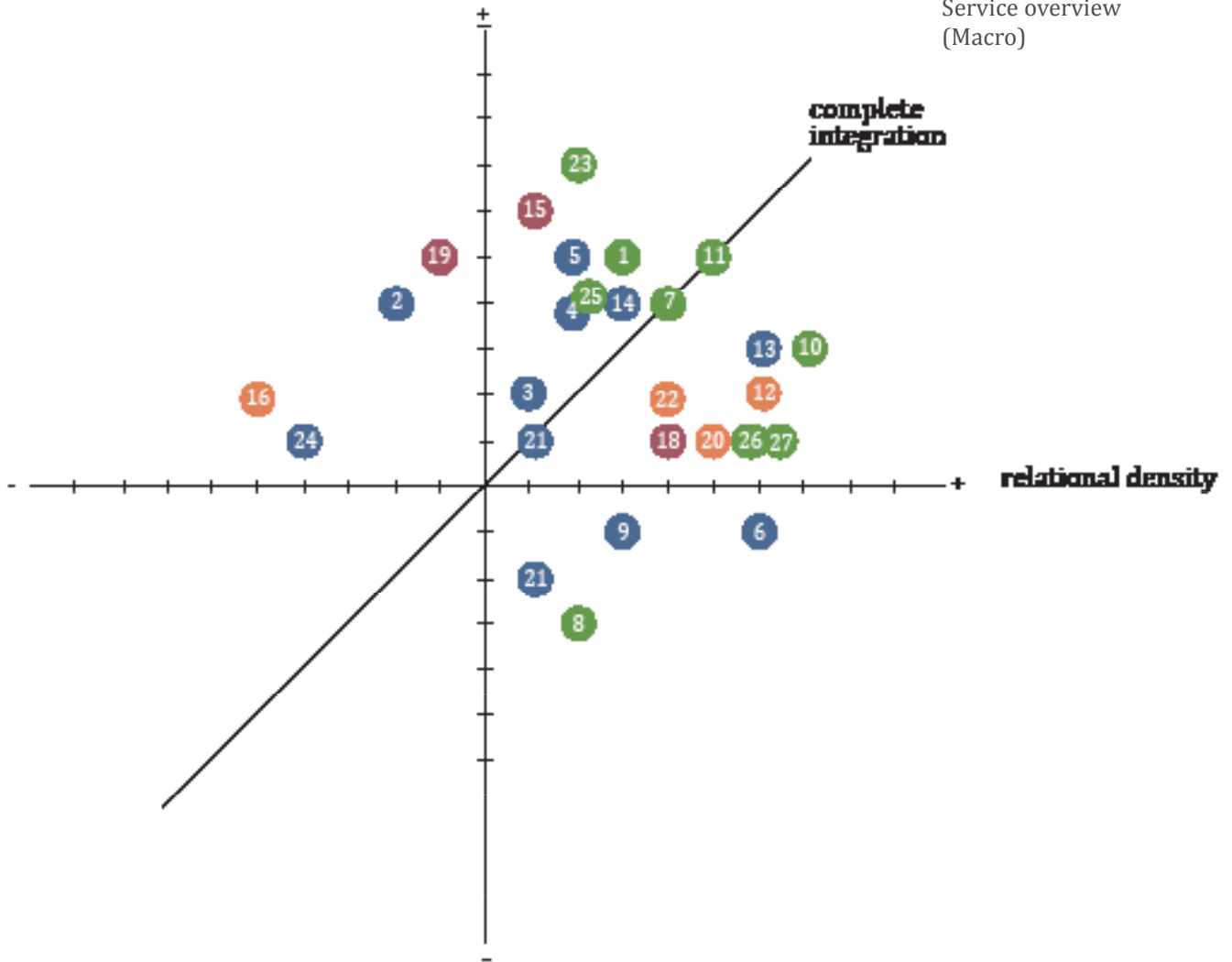
The project, to materialize, choose to use the concept of “community hub” that it means the creation of transition, sorting, cross spaces, to support local communities, including a broad participation of citizens, and to suggest and organize activities and meetings in the territory. To develop the concept 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.

# OVERALL QUALITATIVE ANALYSIS OF THE BEST PRACTICES



**empower civil belonging**

*graph 2.8*  
Service overview  
(Macro)



- knowledge sharing
- relationship creation
- context enhancement
- helping daily activities

no private. no context enhancement. -	Y	area revaluation. belonging sense of different groups. +
no knowledge share. few relations create.	X	many types of sharing. dir-dir/dir-indir

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

**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.



## 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.

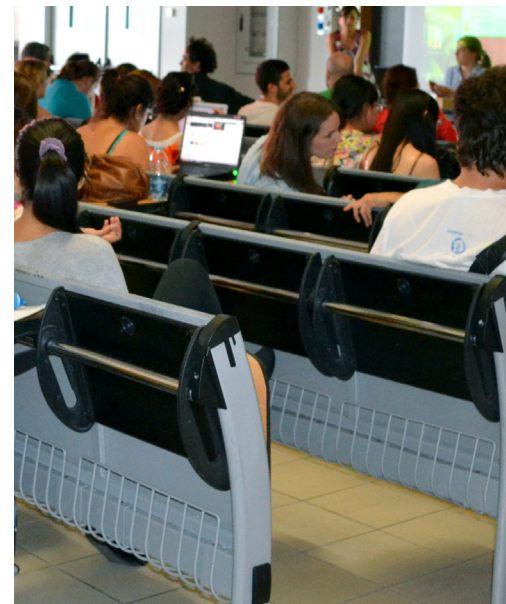
### **Politecnico di Milano in Milan:**

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.



## 3.3 OUTCOMES

The main outcome of the project will be the *Tango interactive exhibition* which will be held 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 *Cariplo Foundation* 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 HUBs<sup>1</sup>, 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 updates<sup>2</sup>.

**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

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

2. . [www.ihaveastream.tk](http://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.

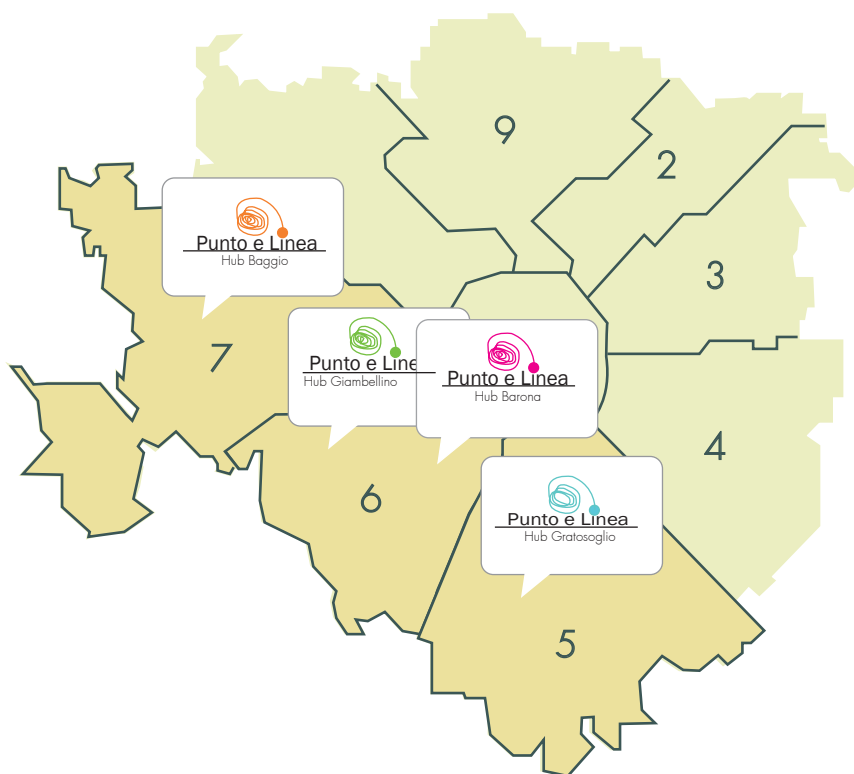
**Share Radio (ex)change your time,** a PSS that merges in the Baggio district the local webradio with the local bank of time, i.e. the web radio will host a web platform to eases the exchange of specific jobs among local inhabitants based on time (of job) exchange. The persons,

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"> <li>Defining the context of intervention and analysing the project proposer.</li> <li>Analysing the context of reference.</li> <li>Defining design priorities for sustainable solutions.</li> <li>Analysing the cases of excellence for sustainability.</li> </ul>	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"> <li>Generating sustainable oriented ideas</li> <li>workshop for generating sustainable system ideas</li> </ul>	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"> <li>selecting the clusters of ideas/ or single idea.</li> <li>developing system concept</li> </ul>	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"> <li>detailed system design</li> <li>environmental, economic and socio-ethical appraisal.</li> </ul>	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°...)

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## 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](http://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.

# 6 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 Baggio district is part of the zone 7 of the city of Milan. The district was annexed to the city in 1923 but the inhabitants still don't consider themselves as Milanese. The district is distributed along Via delle Forze Armate, which goes from the city center to the periphery, and the social condition of the inhabitants visibly changes going out from the city, especially in specific popular areas as Via Nikolajevka and Via Quarti.



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

District	Women	Men	Total
55 - Baggio	15.441	13.883	29.324

### Foreing Population living in Milan 31/12/2010 per district

District	Women	Men	Total
55 - Baggio	2.078	1.997	4.075

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

In the middle of the district there is the old hamlet, which has maintained its structure and its role of focal point of the district. The old center is recognizable by the presence of the "old tower" now symbol of the district; most of the associations have their place there; the zona Council as well has its office in via Pistoia closed to the park, where most of the district events take place. The Olmi area, builded in the '60 is a popular area in the extreme periphery of the district. The ShareRadio (Baggio' HUB) has its office there, and since one year the Bank of Time moved there as well. Muggiano area is far from the rest of the district, and is considered as completely independent part of the district.

In last few years with the the general conditions of the district have been improved, welcoming new families and increasing the social heterogeneity. As a consequence, even if the Baggio district remains a popular district, the general perception of the area has been changed, reinforcing belonging sense of the inhabitants and reducing criminality and unsafeness.

## RELEVANCES FROM THE CONTEXT

The main relevances from the district, emerged during the Strategic Analysis of the context, have been used to define the State of the Art of the district as support to develop the sustainable PSS solution for the Baggio' HUB.

A first relevant aspect is related to the belonging sense of the inhabitants that prefer to identify themselves as Baggesi (mean "people from Baggio") instead of Milanese citizens. This perception is representative of the strong identity of the district, and has been recognized as a common character of the all ages.

Furthermore this aspect is growing in parallel with the safeness of the district which helps in to improve a good perception of the area even from outside.

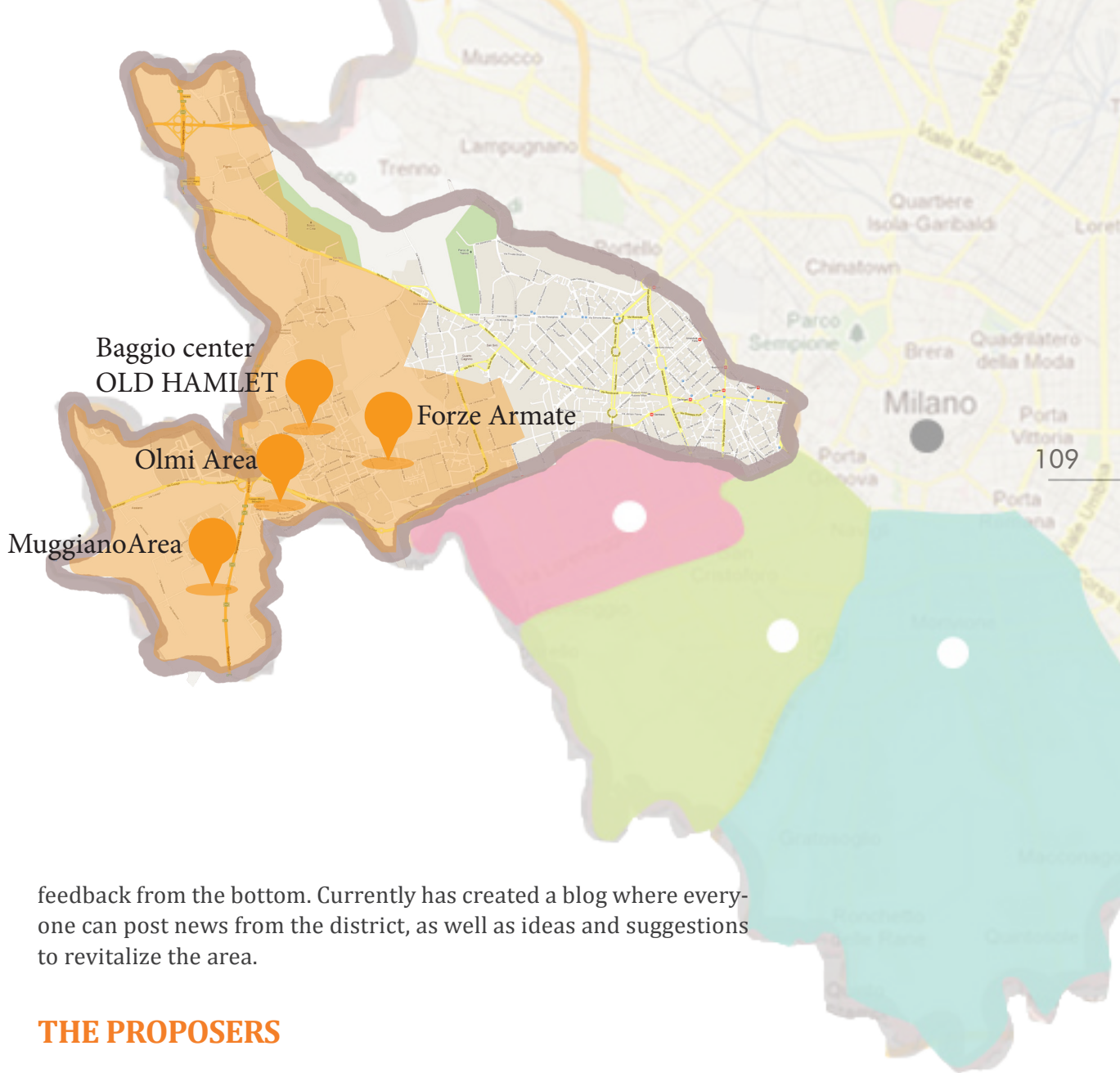
A second relevant aspect is related to the active participation of the inhabitants to the district life. A document from the Comune di Milano states that there are 112 registered associations operative in the zone 7<sup>3</sup>, referred to different topic and dedicated to different ages. This data can be considered as first indicator of active participation in the district life, and as well as social indicator for people necessities: from social-health aid to sport and cultural activities.

As a concrete confirmation of the relevances above there is a specific experience that can be representative of the district State of the Art.

**BaggioCiPiaceCosì** is a bottom-up experience growing in the district, aimed to improve the quality of life of the Baggio' inhabitants, fostering social inclusion and the awareness of the local opportunities. Funded as an informal group of inhabitants has participated at the Baggio' Festival (19 October) with different initiatives, from theater to music,etc, to interact with visitors and to collect operative

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<sup>3</sup> Albo associazioni zona 7 2012 Comune di Milano



feedback from the bottom. Currently has created a blog where everyone can post news from the district, as well as ideas and suggestions to revitalize the area.

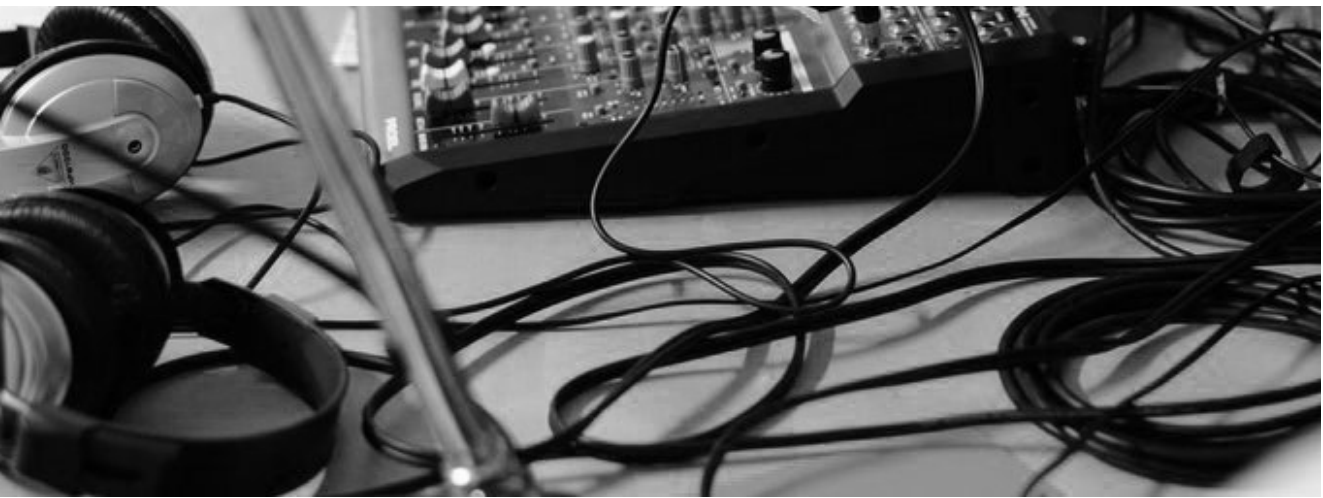
## THE PROPOSERS

The Punto & Linea project, started in early 2010, was aimed to build up an opportunities place for the youth of the district, not to start from the needs or from the challenges of the district but from the resources already present and to see new possibilities and to define new perspectives. The initial idea was to use the Marchiondi building, in the Baggio' center, but due to the high expences needed to renew it no works have been done jet. The SiS consortium, main proposer of the all Punto e Linea project, settled up a collaboration with the Azione Solidale association, already active in the district, and with specific projects for youth.



ola Mogno/ SiS Consortium

Roberto Brenta/ Azione Solidale



### **SiS Consortium**

The System of Social Enterprises (SiS) Consortium, established in 1995, is a union of 32 no-profit cooperatives including social cooperatives, consortiums and associations, aimed to create a collaborative system of associates and to integrate, share and improve the individual ideas, goals and resources of each associate. The main areas of intervention of the SiS consortium are related to social-health and education and job placement for marginalized people. The role of the SiS Consortium in the “Punto e Linea” project for Baggio is to be a supervisor of the HUB activities as well as actuators of the initiatives.

### **Azione Solidale**

Azione Solidale is a social cooperative, funded in 1993, from a previous solidarity association. The main areas of intervention are related to the promotion of the social equity in the territory, and to raising awareness about volunteering activities. Practical actions are about disabled people and minors especially operating in zone 6/7 in the Milanese suburbs. The role, with Grado 16, in the “Punto e Linea” project for Baggio is to be coordinator and actuator of the HUB activities. Azione Solidale is also providing the space to host the radio activities.

### **Grado 16**

The social cooperative Grado 16, has been established in 1994 by a group of community-workers with different professional attitudes. Grado 16 promotes projects and services related to social equity and cohesion, proposing participative approaches especially dedicated to marginalized people of the district.

## **KEY ACTORS**

Key actors and target of the Baggio’ offer are the youth of the territory, mainly from secondary schools to universities. They can participate with different roles through organized path within the school activities, or as individual choice in different radio broadcasts and events. There are two main groups of youth, coming individually, that are constantly involved in the offer delivery:





First group is a team of teenagers from the district which use the ShareRadio as a place to record and to share hip hop music. They were a small group at the beginning but currently are increasing the number of participants. They go to the Share Radio without a specific schedule but are planning to design their own format.

A second group is represented by a team of university students which collaborate in the ShareRadio as speakers in two weekly broadcasts: *RadioCrazy* (Wednesday evening) presents the main events of the week in Milan and the most curious news from the web; *ÈUnaBaggioCheFunziona* (Sunday evening) presents the news from the district and outside with irony and humor. These students collaborate also during the ShareRadio live events, sometimes having the full responsibility of the equipments and contents.

## THE OFFER

The core offer of the Baggio' HUB is ShareRadio: the district web Radio where local 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 world-wide). Main aim and action of the ShareRadio is to involve the youth of the district with broadcasts, courses and events, giving them space and competences to be protagonist of the Radio and to create dedicated opportunities for them into the district.

The Share Radio has an active role in the promotion of local events: through the direct participation and with the web based streaming of the program. In these occasions the youth of the district as well as from outside are invited to participate in music contests for new bands, where to show their personal sound tracks and passions, as well as to experience the speaker role of the events. Furthermore the ShareRadio promotes events not directly related to the music but connected to initiatives from the Zone Council or from local associations i.e. Baggio's festival in the district, the ShareRadio documented the whole festival interviewing participants and visitors; Fa La Cosa Giusta Fair in Milan, the ShareRadio with the web radio network "I have a Stream" documented with interviews the whole fair. Outside from the district Share Radio is coordinating the "I have a stream" network which includes 9 web radios distributed in different Italian

regions: Shareradio, Cross Radio, Pulsante Radio, Radio Cento Passi, Radio dei Navigli, Radio Oltre, Radiosvaldo, Radio Rebelot, 92.10 FM. The aim of the network is to share information, contents and updates, as well as to promote the respective events and initiatives and to collaborate in common communicative projects. ([www.ihaveastream.tk](http://www.ihaveastream.tk))

As parallel activity the Share Radio offers didactic course: from sessions to use the equipments and free software and learn how to record your personal sound tracks to be uploaded in the website of the radio, to school paths to learn about the radio and the importance of the information with practical movie and radio labs. These paths held by the Share Radio in local schools as well as in aggregation centres and oratories of the district, has had an important role in the involvement of teenagers in the district life with initiatives where to show the results, and the organization of contest to promote local music, as well as to settle first partnerships to diffuse and implement the offer with local associations as the local library.



The Offering Diagram and the System Map of the Share Radio system are presented in the following pages describing the specific functions delivered; the system structure with the actors involved, the interactions among them and with the system, undelining the specific roles and flows. *These have been co-designed with the Hubbers during the Strategic Analysis phase.*



## 6.1.2 CRITICAL ASPECT

### EVALUATION OF THE EXISTING OFFER

The share radio offer has been evaluated<sup>4</sup> 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; moreover have been underlined some relevancies about the socio-ethical dimensions of the effects generated by the offer in the field.

### QUALITATIVE SUSTAINABILITY REPORT ENVIRONMENTAL DIMENSION

#### *System life optimisation*

Few videocassettes for the video camera are used and they have a cellophane film to wrap the cassette and its box. The headphones (that need to be replaced often) are delivered in a shaped plastic support and then packed in a cardboard box. Using free software, which need not a lot of computer resources, helps to avoid fast technology obsolescence phenomena. Headphones have a short lifespan: they can't be repaired and so they have to be disposed as a whole.

#### *Transport reduction*

When travelling by car (a methane powered, euro4 one) for the events, the vehicle is always fully used.

#### *Resources reduction*

The server is always on, absorbing about 200 w (only the pc is running, the screen is off). There are no dimmers or auto switch-off sensors. The studio equipment is connected to the grid through multiple adapters that the last person living the Studio at night should switch off.

The studio is in a basement thus completely in the dark apart for a small window, obscured and insulated for acoustic purposes, for one small window, obscured and insulated for acoustic purposes, and it relies completely on artificial lights (neon lamps) for lightning. The studio is a draughty room and heating is supplied by one high consuming electric heater (two would make the lights to fuse since no other heating system is in place. Renovation would be necessary but it would be a decision and responsibility of aler (the institute managing different council houses in milan, among which the one where the studio is). Energy is used also to listen to the radio and it's proportional to the number of the users: the wider the diffusion, the higher

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<sup>4</sup> The sustainability report has been reviewed and implemented by Carlo Vezzoli and Sara Cortesi.

OFFERING DIAGRAM

- training courses for radio broadcasting  
 - lessons in the schools with specific projects

- during the events proposing new broadcast

gaining music materials

- hip hop tracks made by adolescents
- brani di musicisti
- poesie
- interviste



courses



take part live



take part from home



during broadcasting your opinions and comments from the web

events

- construction of the space
- events: live
- on-site interview
- coordination network "I HAVE A STREAM"



listening live

the broadcasts on wednesday and sunday are live to allow active participation from the web



broadcasting fixed

Streaming made by univerty students

- Radio Crazy wednesday 22.15-23.15
- The Baggio that works sunday 21.00-22-00

	lunedì	martedì	mercoledì	giovedì
1	2	3	4	
8		9	10	11
15	16	17	18	19

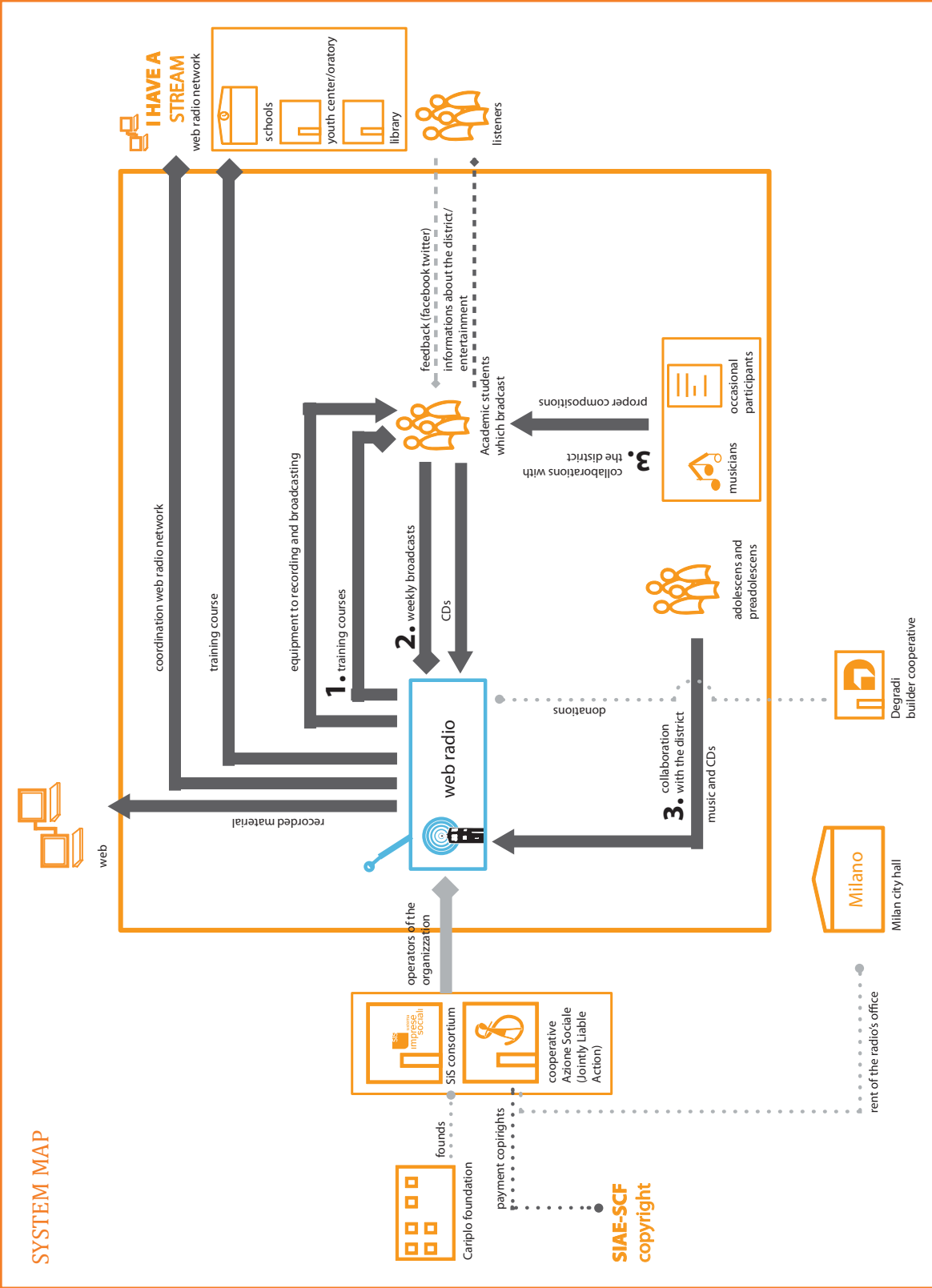
listening again

for those who wants to listen again some broadcasts, can find contents on the web site [www.shareradio.it](http://www.shareradio.it)



LISTEN AND COMMUNICATE YOUR DISTRICT

# SYSTEM MAP



the consumption. Methane is used to power an euro4 car is used to move the mobile studio. The audio is produced and archived digitally only (no cds, dvds, ...).

#### *Waste minimisation/valorisation*

Since almost everything is digital, there is not a huge quantity of waste but computers, speakers, microphones and headphones go to landfill at the end of their lifespan.

#### *Conservation/ bio-compatibility*

Electricity in the studio 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%). It's used to power/charge all the electronic equipment, for lightning (neon lamps) and heating (electric heater). The generator that supplies energy for the mobile studio uses lead-free oil and lubricant. Energy is used also by the listeners, probably mostly using energy from the grid (see above energy share). Plastic, metals, heavy metals and rare elements are all used in computers, speakers, headphones.

#### *Toxicity reduction*

The generator that supplies energy for the mobile studio uses lead-free oil and lubricant, producing toxic emissions (spm, ...) To which the radio worker/s and people joining the events, parties, where the mobile studio is used are more or less exposed. The mobile studio is mostly transported with a methane powered car euro4, producing toxic emissions (spm, ...). The two .mp3 recorders and the wireless microphone mostly work on disposable batteries (though rechargeable could be used), the video camera and the netbooks work on rechargeable ones. Both kind of batteries are potentially toxic, disposable being being more intensively toxic. When using the mobile studio, the equipment that can be connected with wires is powered by the generator.

## **ECONOMIC DIMENSION**

### *Market position and competitiveness*

The radio has a strong strategic position, since it's appreciated in the area and act as a coordinator in the network "i have a stream". It would be possible to exploit better the network dimension to offer larger broadcasting times.

### *Profitability/added value for companies*

Other radios in the network are produced on a voluntary base and so they have lower costs. The information channel/web radio could be

exploited to promote the activities/initiatives of the area (i.e. Advertising of private activities) to get money.

#### *Added value for customers*

The promotion/advertising of activities can be considered as a saving on the printing and distribution costs. The value of the radio is evident during the courses at schools and radio that give the opportunity to get radio and software skills. Maybe it would be good to have a closer, independent look at the offer of the competitors (inside and outside the i share radio network).

#### *Long term business development/risk*

The end of the funding from the punto e linea project (now covering maintenance and siae costs) is the main threat. The customer's needs for the offer will not disappear on the contrary there's a growing interest in listening to and participate in the web radio. The radio feels **the high pressure lately** put on web information (see the wikipedia case). The offer is not threatened by technological or fashion change on the contrary it's benefitting from that.

#### *Partnership/ cooperation*

We use strategic partnership and co-operation since we are part of the "i share radio" network. The competitors are co-operating and therefore have a better market position. We miss technological updated competencies in some areas (i.e. Coding for smartphones).

### **SOCIO-ETHICAL DIMENSION**

The involvement of the youth of the District in the Share Radio initiatives, starting from the group of the Azione Solidale centre (where the radio office set its place) and from the students of the local schools, with specific paths and occasional collaborations, have had a fundamental role in the radio implementation to become a place of opportunities where share, experiment and play with the music, enhancing local resources and competences giving new opportunities to the youth. Moreover the Share Radio has had an important role in the district identity definition even by people who don't listen at the Share Radio but that recognize it as "symbol" of the Baggio' District.

In a more general way it is possible to state that the Share Radio initiative, with the associations action have been effective to improve safety and participation, toward a more cohesive and belonging sense in the District. At the same time due to the technological essence of the Share Radio there is a lack of opportunities for the most fragile components of the society as elderly as well as immigrant, that need

to be covered to make the offer really effective in the District.

## SYNTHESIS

As far as understood from the results of the Strategic Analysis of the context, the Baggio' District is an active area of the Milanese suburbs, where the inhabitants are involved and sometimes are first promoters of events and initiatives, fostering the cohesion into the district. The Share Radio has been introduced in this panorama of associations and proposals to cover a lack of opportunities dedicated to the youth.

Infact excepts for few sport and cultural initiatives there are not alternative proposals for the youth. The work done by the Share Radio into the District in the last two years have had a strong reaction by the youth through their participation to activities and with the proposal of new different projects.

According to the above mentioned facts, related to the district participation and the youth lack of opportunities, having the possibilities to improve and diffuse the offers into the district, using the web based platform of the Share Radio, can be a good occasion. At the same time an important aspect to be considered has to be the accessibility of the web, in order to be not an exclusive service, but a shared bottom up solution.



### 6.1.3 BRIEF

Here the brief designed by the POLIMI\_DIS in collaboration with the Punto e Linea Hubbers, from the results of the SA, for the design students of the SDS course 2012.

***“Self-managed WebRadio”:***

*“ Design a product-service system to transform the Web Radio which has been activated within the Punto e Linea project in to a self-financing service with a low environmental impact that focuses on promoting social cohesion and dialogue between generations. Web Radio was created by the youngsters of the area and it’s already well-functioning and well-known in the area. It is also invited to the events as a reporter to broadcast the novelties and provides opportunities for people of the district to have a program on the radio channel.”*



## 6.2 EXPLORING THE OPPORTUNITY (MSDS PHASES):

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.

### 6.2.1 STUDENTS PROJECTS FROM SDS COURSE:

In this stage of the MSDS process three group of students of the SDS course designed innovative concepts for the Web radio of the Hub Baggio, aimed to reach the sustainability of the existing offer, fostering the intergenerational dialogue between the inhabitants of the district. The design path has been developed by groups mixing italian and foreign students with different background and cultures, using the SDO toolkit section, and co-designing with the Hubbers, to receive an external point of view and to contextualize the designed solutions.

### 6.2.2 MAIN IDEAS AND SUGGESTIONS

The three concepts developed on the Web Radio brief, have been analyzed about the characteristics of the idea, highlighting strengths and

weeknesses in order to find some promising visions and inspiration. During this considerations two common points have been recognized as base of all the three concepts:

A first common aspect is the choice of to exploit the potentialities of the web radio as “dissemination tool“ on small an large scale: with the aim to show and promote the district live (even outside from the area) as well as to use the web radio accessibility to involve everyone in participate at the web radio activities even with few technological knowledge.

The second common aspect, and main relevance of the concepts proposed, is the choice of to use the dissemination potential of the web radio to promote an alternative economy system based on exchanges (advices, services, goods,...) toward a more sustinable lifestyle of the district inhabitants, and to guarantee the social and economic sustainability of the web radio itself.

The concepts systems structures are all based on crowdsourcing: promoting bottom up initiatives and enhancing the local resources, fostering participation and social inclusion.



**AUDIO MEDIUM**

Record your voice offering and listen to other people's offerings just by pressing a button. User friendly medium.



**WEAVING RELATIONS**

By creating a network of service offerings amongst each other we facilitate interactions within a community that helps build long lasting bonds and relationships.



**PARASITE SERVICES**

These services aim at performing a service while an activity is already being carried out. For eg. As you are going to do your grocery, do mine too. It essentially includes- As you go, As you do and As you are passing by



**BEYOND CURRENCY**

**Radio time banking**

A unique service system that allows the local people to benefit from each other's skills and competencies without involving the traditional currency unit. Instead using time (=hours) as an evaluation unit.

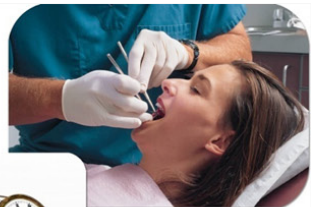
**EARN TIME CREDIT**

Perform services for others and earn credit in hours



**SPEND TIME CREDIT**

Spend the 'hours' earned on services you need from other people's offerings



**INFORMAL ADVISORY SERVICES**

Facilitating young-elder interaction by receiving advisory services like business advice, sharing recipes etc. from the elderly in return of providing services to them



**SERVICES TO THE RADIO**

One can also earn credit by performing services at the radio itself. Especially elderly can do simple jobs like compiling the local news etc.





**Group 1**

**The concept:**

*Beyond Currency* is an interaction system with an online database for a Radio time-bank which will contain information about the needs and competencies of the different people. One person performs a particular task and earns a certain number of hours worth of credit which he can spend on the services that he requires from others in the neighbourhood, or by offering the services which are needed to keep the radio running which helps to make share radio financial independent. Another aspect are parasite services which are- as you go, as you pass, as you do: gaining credits by doing the task for someone else while he is doing it for himself.

**strengths:**

1. Promoting the BdT management to sustain the Share Radio is very important, and good to enhance local resources.
2. The offer can help different generation to start a dialogue exchanging competences and experience together the web radio world.

**weaknesses:**

1. Accessibility, mainly about parasite services, has not be considered particularly to involve the elderly in first interaction with the web radio service.
2. Potentialities of the web radio have not been exploited in the service offer.



PROMOTION OF SUSTAINABLE LIFESTYLE



Exchanging of skills knowledge/ materials



Interaction between generations



Mediator of the Baggio community



**Group 2**

**The concept:**

ProSustainableRadio promotes sustainable lifestyles and spread knowledge to the Baggio community; creating opportunities for sustainable activities: sharing of resources, car pooling, reusing of unwanted items, intergeneration exchange of skills, cooking, art, promoting local products, hand made items. The key financial partners will be both governmental (Consiglio di Zona, Legambiente) and non-state organizations in favor of the creation of a sustainable environment in the near future.

**strengths:**

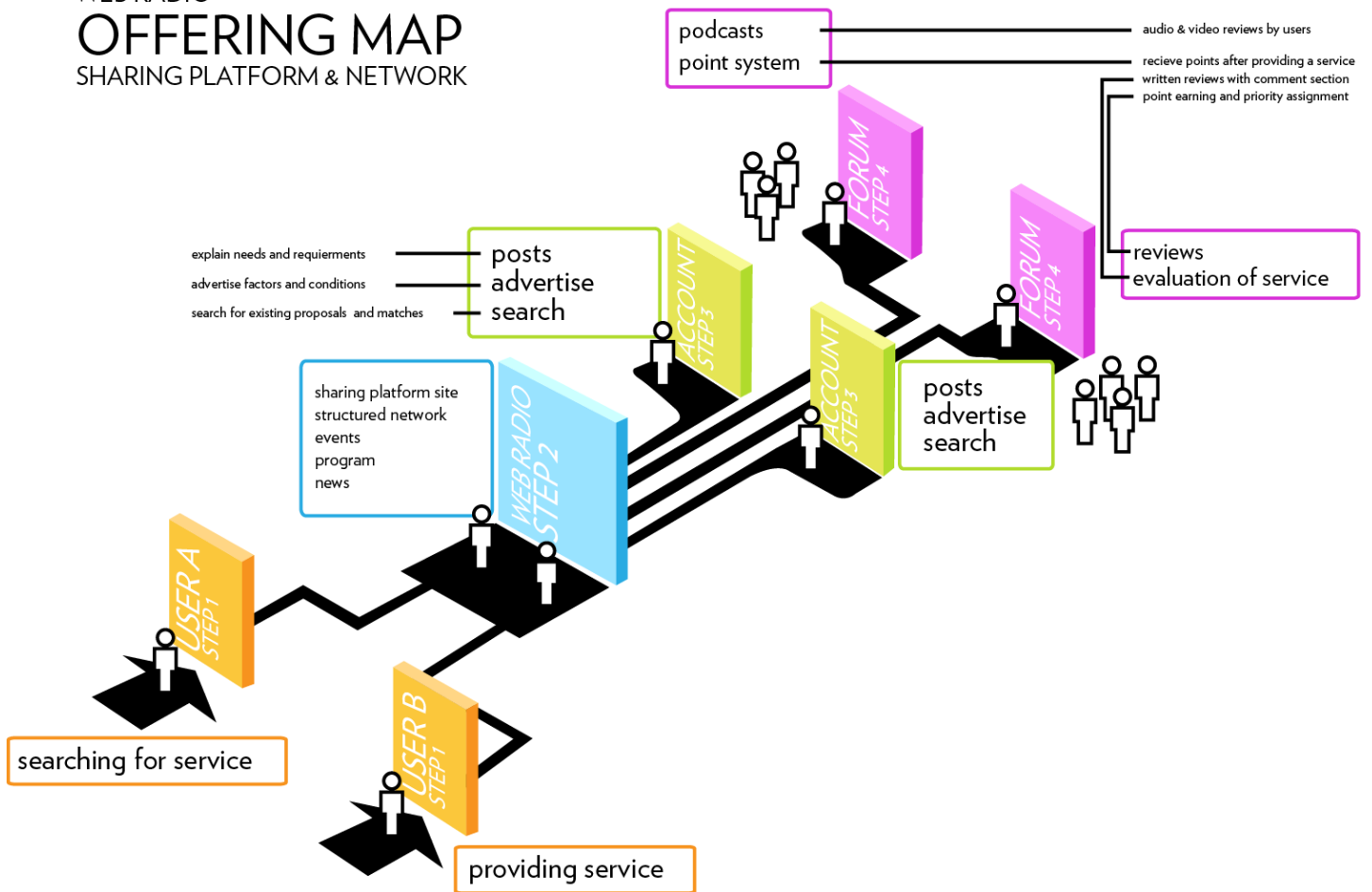
1. The promotion of sustainable lifestyles through the web radio a good way to spread knowledge, and even considering everyday activities as place where to share.

**weaknesses:**

1. The service management is not clear, and even how people can be part of the service and their potential roles.

# WEB RADIO OFFERING MAP

SHARING PLATFORM & NETWORK







**Group 3**

**The concept:**

The *WebShare* radio promotes a sharing platform of knowledge, events and objects. There are two main roles to be covered. the management group, to organize the activities; the searching group who is looking for services: everyone that solve a need can gain credits to be spent in other activities. Main actions organized are sharing events where to promote intergenerational dialogue as entertainment activities. Everyone in the platform is free to vote and put materials and initiatives to be shared.

**strengths:**

1. Voting system can be a good way to involve people in a direct and democratic way, as everyone own a part of the radio.
2. To create events can be a good way to help people to get in touch.

**weaknesses:**

1. The intergenerational dialogue aspect is not specified.
2. the whole system can have potentialities for the channels used, but is not defined about roles, activities and topics.

## 6.3 DESIGN SYSTEM CONCEPT:

### 6.3.1 TRENDS AND NEW BEST PRACTICES

The design inputs from the SDS course generated the need of a deeper analyses of trends, and best practices about: definition of web radio and timebanks models, the web radios as (dissemination) and accessible tools, timebanking method of exchange (within neighborhoods as well as online). For each topic have been added personal considerations useful for further project development.

#### WHAT IS A WEB RADIO<sup>1</sup>

**The Technology:** Web radio, or more commonly referred to as Internet radio is a technology that continuously transmits audio (streaming audio) over the internet to your computer. This technique of broadcasting audio using data transmission is very much like listening to terrestrial radio.

**Audio Formats:** There are a few audio formats that Internet radio uses like, MP3, OGG, WMA, RA, AAC Plus, etc. Most up-to-date software media players can play streaming audio using these popular formats.

**Benefits:** The most obvious benefit of using Web radio is access to thousands of radio stations that you wouldn't normally be able to listen to due to your locale. Another advantage is an almost unlimited supply of music, live events, radio shows, etc., that you can listen to in real-time. This on-demand audio technology gives you access to entertainment at anytime of the day without having to first download files to your hard drive (Podcasts).

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<sup>1</sup> [HTTP://MP3.ABOUT.COM/OD/DIGITALMUSICFAQ/F/INTERNET-RADIO-FAQ.HTM](http://MP3.ABOUT.COM/OD/DIGITALMUSICFAQ/F/INTERNET-RADIO-FAQ.HTM)  
MARK HARRIS

## **TIME BANKING: a different way to volunteer your time.**

### **WHAT IS TIME BANKING<sup>2</sup>**

Time Banking builds on the principle that everyone has something to give. Time Banking is a highly effective tool for developing people's social networks and building social capital - connections and communities between people.

#### **Where did Time Banking come from?**

The idea was developed by Dr. Edgar S.Cahn a civil rights lawyer and speech writer for Robert Kennedy who dedicated his life to the fight for social justice. (...) *"everyone has in common is time - we all start the day with 24 hours at our disposal - it's what we do with that time that makes the difference."*

Those who do paid work gain financial remuneration for their time which helps to define them as people and also gives status and value to their lives. But what about the unpaid work of caring for and raising children, caring for elderly or disabled relatives, volunteering or being a community activist? This Edgar reasoned was the work which underpinned society; in essence the operating system for everything else. He called this work "The Core Economy" - the real work of caring, of loving, of being a citizen, a neighbour and a human being. This work is not valued by the market economy so Edgar Cahn developed Time dollars - or what we now know as Time Banking as a mechanism by which it could be rewarded.

#### **So how does Time Banking work?**

- .One hour equals one time credit - all work is valued equally - the currency is time.
- .Reciprocity: giving and receiving builds trust and respect.
- .Valuing people as assets - not seeing them as problems - people are the real wealth of a community, and valuing their skills, talents, knowledge and experience build their sense of themselves as worthwhile members of society.
- .Building Social Networks - a growing body of research cites loneliness and isolation as impacting negatively on both physical and mental health.

## WEB RADIO AS (DISSEMINATION) AND ACCESSIBLE TOOL

### **A new openness for information?**

The web radio phenomena has been developed since 1995 with the introduction of RealAudio software in to the web panorama, the first streaming Internet broadcast software, elaborated by Rob Glaser for the company Progressive Networks.

*“This technology eliminated the wait time for audio downloads and delivered real-time broadcasts in AM radioquality sound. The only downloading required was the free download of the RealAudio Player.”<sup>3</sup>*

This software introduced people to access to the radio contents directly online, thanks to the accessibility of the web channel diffused in industrialized contexts. It has been a radical revolution in the information panorama improving democracy of information from the masses, fostering people participation. Since this time the web radio has been in constant evolution: improving the accessibility of producing contents and to build a own station where to disseminate niche music or personal contents, as well as increasing the quality of the outputs to be more competitive with the FM sound production, with lower costs.

### **The web radio open and copyleft ethic**

In more recent days the web radio development has been supported by the multichannel possibilities offered by the web i.e. visual and text contents, to increase the offer for the listeners and to give a more wide and satisfactory experience. Moreover the availability of free software solutions i.e. Joomla or Linux, to apply online and create for free own web radios contributed to encourage the listeners in becoming first promoters of local and wide information, even with basic knowledge and using the support of online communities and forums where to receive advices and direct help. To solve the problem of copyright have been diffused online database i.e. Creative Commons to reduce expences for new stations and to spread new music contents.

### **The social value of the web radio**

Due to the web collaborative nature i.e. Wikipedia, in developing and sharing contents, and to the easy procedures to build a web radio,

some social projects, aimed to promote social inclusion and to enhance local resources, are starting to use the web radios as experience tool with a high cohesive value. Most of them has a local based structure, to involve the communities around giving them new opportunities.

### **The elderly role in the web (and radio) development**

*“All the evidence from the studies that report about the online activities of the elderly suggest that they do much the same online as most other age groups – that is, communication and information searches as well as using online services. Kantner & Rosenbaum (2003) [Kantner 2003] observe, that “email and children were primary reasons” why many seniors started to learn using computers; Morris, Goodman and Brading (2007) [MGB 2007] also found that email and communication was an important factor in the elderly being online.”<sup>4</sup>*

From this statment is possible to assume that technology, and especially the web, is seen by the elderly as a possibility to increase the quality of life and to interact with the context. As confirmation of what above the Internet Saloon Service can be analyzed as good example for intergenerational approach to technology. In the Italian panorama it is possibile to underline the different perception of technology according to the geographic placement: in the North people are more tecnhologically advanced (65% in Lombardy); as well as in the big cities compared to small towns. Furthermore, the presence of youth in a family is a fundamental aspect to be considered in the choice of innovation. As final obstacles in the access of tecnhology there are the language and the speed of change of the technology tools that make the youth generations necessary.

### **The Italian orientation on web radio**

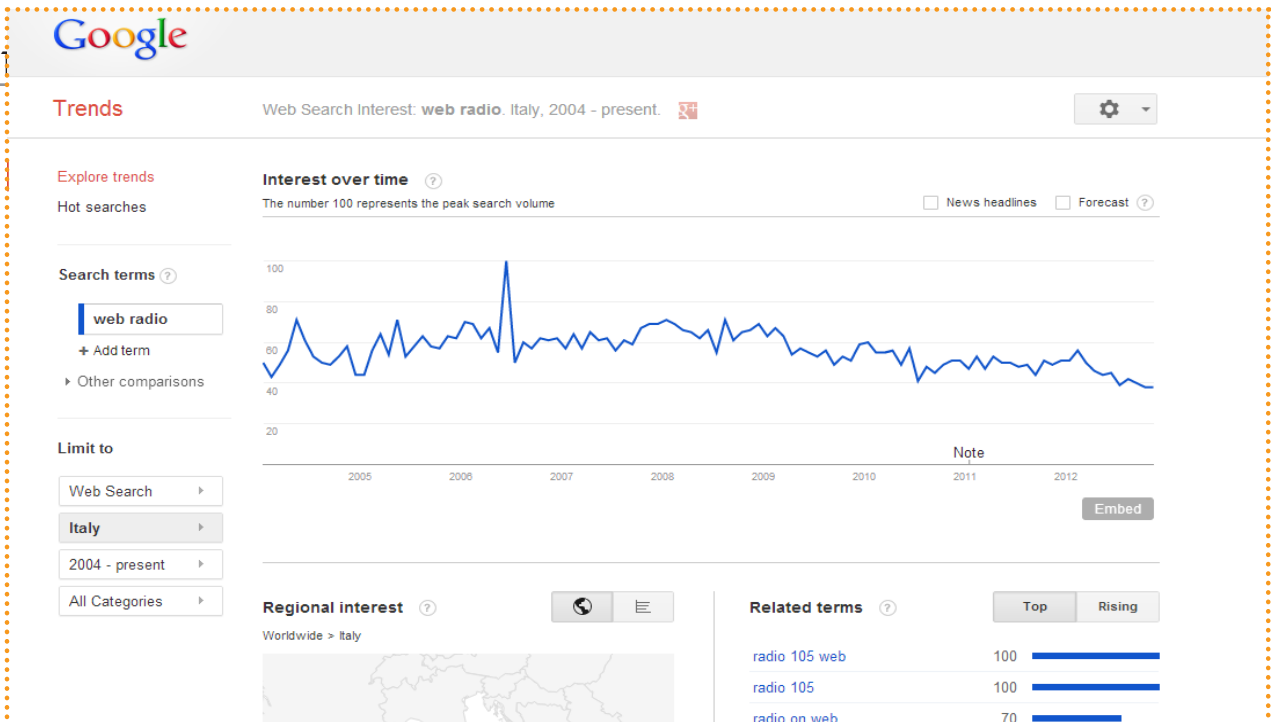
The italian panorama of web radio is not easy to define, due to the intangible nature of the radio themselves, and to their easy way and speed of being created and to disappear. It is possible to state, as confirmed in the table below, that from last years the web radios in Italy are representing a constant presence in the web research as signal of interest in the topic. The competition between the web radios due to the facility to build one increase the need to be very communicative and specific in the offers to be recognized by the listeners.

Moreover the high cost of the music copyright is not encouraging new

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<sup>4</sup> Web Accessibility for Older Users: A Literature Review, W3C Working Draft 14 May 2008  
Author: Andrew Arch (W3C)

experiments on web radio, for this reason some stations are moving toward free music communities, for example creative commons, discovering new musics, artists and satisfying new targets. Currently the web radios, and the music more in general, are covering an important role in social cohesive projects, i.e. I have a stream radio network, due to their participatory and fashionation attitude. The target audience of the web radios is from 15 years old, covering mainly youth ages but without any limitation for everyone is using an internet connection.



*Google trends: web radio research frequency*

## **TIME BANKING METHOD OF EXCHANGE (WITHIN NEIGHBORHOODS AS WELL AS ONLINE)**

### **TIME BANKING: AN IDEA WHOSE TIME HAS COME?**

Nov 17, 2011 - Edgar Cahn, founder and co-chairperson of TimeBanks USA, professor at the University of the District of Columbia School of Law.<sup>5</sup>

### **Why Time Banks?**

<sup>5</sup> <http://www.yesmagazine.org/new-economy/time-banking-an-idea-whose-time-has-come>

Twenty-five years ago, we started the first experiments with a different kind of money that provided a new way to link untapped community capacity to unmet needs. Because the market fails to value or reward many types of critical work—the work of raising healthy children, building strong families, revitalizing neighborhoods, preserving the environment, advancing social justice and democracy—we felt there should be other ways than market price to place a value on people’s time. There had to be a way to honor, record, and reward that kind of work. Long time before the Occupy Wall Street movement, the Time Bank movement represented a determination to take a stand for a more equitable, inclusive economic order. We wanted to demonstrate that a different kind of money could exist alongside the dollar, generating a different set of exchange transactions. We believed it could generate positive community-building efforts that might remedy or prevent the negative externalities created by the relentless pursuit of monetary profit.

After 25 years of experimentation, learning, and expansion, the United States has 300 registered time banks. The smallest has 15 members; the largest, 3,000. At present, time banks have enrolled 30,000 members in the United States, 30,000 in the United Kingdom and an additional 100,000 scattered across 34 countries.

### **Why Now?**

Given the current state of the economy, the question that everyone asks about time banking is: How can it help us get through this recession? In more ways than you might think. The responses fall into different categories:

One involves direct budget relief: People can get the things they need—like house repair, yard work, child care, elder care, haircuts, carpools, or moving services—directly from members of their community, without money having to enter the picture at all. And time banks offer continued access to many of the things cut first when money gets tight—for example, art, dance, or language classes.

Another is the use of time banking to help people build bridges back to the monetary economy. People use time dollars to get help with their job hunt—preparing resumes, practicing interview skills, learning computer skills, or getting support with transportation and child-care.

Time dollars can also offer a less capital-intensive way to set up a new small business. There’s also momentum building around an emerg-

ing use of time banking that's less familiar. As governments cut services and programs for the most vulnerable Americans, time banking is moving beyond individuals: institutions are attempting to fill the gaps by enlisting their communities as partners in their work.

### **An Evolving Tool**

The first phase was about neighbor-to-neighbor skill sharing. Too often, we live close together, but as strangers. We don't know what our neighbors can do; we don't know whom we can trust. Time banking provides the vehicle to discover the vast wealth of capacity that surrounds us—and it makes trust possible because every action creates a track record known to others.

TimeBanking then moved on to the even more catalytic phase of co-production. This has involved getting the nonprofit world and human service professionals to appreciate that they accomplish most when they enlist the clients and community they served as co-workers and partners who “co-produce” the needed outcomes. This can yield major institutional change in all kinds of areas: child development, elementary and secondary education, family support, professional training, juvenile justice, eldercare, violence reduction, returning veterans, re-entry from prison. That transformation is already underway in field after field; it could go viral, as we begin to understand the possibilities that exist beyond conventional money.

Now we are seeing a third phase emerge: Micro-enterprises are emerging to provide respite care, transportation, home repair. They bridge the economy of money and the economy of community. Ultimately, time banking is about hope and possibility. Market price cannot be permitted to monopolize our definition of value. Nor can the availability of money be permitted to define the range of the possible. Time banking is also getting a boost from new software that will make it easier to log, track, and share hours (the software documents engagement, reliability, punctuality, and trustworthiness). The open-source code is available to individual time banks so they can easily build customized websites. By next year, it will be on smart phones and tablets, radically expanding access to one's time bank family.

### **The Italian orientation on Time Exchange**

The Italian panorama of time exchange is represented by 320 Time-

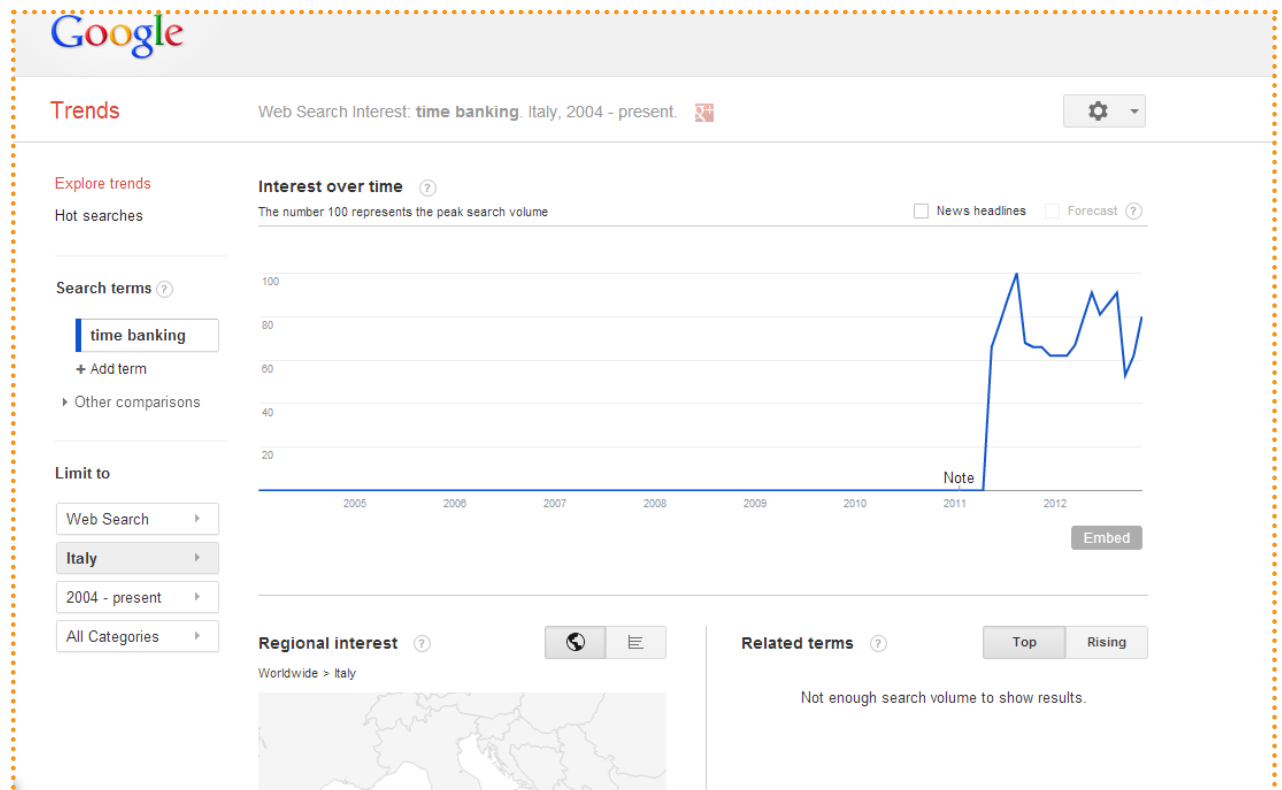


banks distributed in the whole nation. In Lombardia there are 71 active TimeBanks and 11 are distributed in the Milanese area. It is possible to state, as confirmed in the table below, that in the last few years the TimeBanks in Italy are raising the interest of the internet community, and are representing in real situation an important movement of solidarity and exchange. This trend can be motivated by different reasons starting from the actual economic crisis condition.

The target audience of the TimeBanks is mainly between 40-70 years old, including families and pensioners; teenagers and youth are not yet involved in the exchange system.

As a consequence the technological aspect of the TimeBanks is very basic, and most of them don't have a website and are not easy to be reached. Currently some TimeBanks, in order to be more visible and to foster the dialogue between generations, are starting to create their own website or to participate in already active websites. The total absence of technology is in contrast with what is on-going in other states in and extra Europe.

### Google trends: timebanks research frequency



## SPREAKER RADIO

### 1. general information:

**name of the (product-service) system innovation** "Spreaker Radio"

**title** An easy way to become a radio speaker.

**producer/provider name** Angel Funded

**designer's name** Francesco Baschieri, Marco Pracucci, Daniele Cremonini

**nationality** (Italy) USA

**address** San Francisco, California

**e-mail** info@spreaker.com

**web site** www.spreaker.com

**source/contact** www.spreaker.com

**developing stage** in production

SPREAKER

Cerca utenti o podcast



## Dai voce alle tue idee!

Crea il tuo podcast live con Spreaker. E' semplice, divertente e gratuito.

Guarda il video

Accedi con Facebook

O registrati senza utilizzare Facebook

Sei già un utente? Clicca qui per accedere



### Prova la console

Spreaker ti mette a disposizione una semplice una console di mixaggio per gestire voce, effetti sonori e musica.



### Trasmetti in diretta o in differita

Potresti essere in diretta ora! Trasmetti i tuoi episodi in diretta oppure come podcast.



### Collegati con il mondo

Invita i tuoi amici a seguire il tuo show e potrai essere ascoltato in diretta su Facebook.

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

The service goal, about the socio-ethical aspect, is to get people involved creating their own radio broadcasts. The system is easy to access without any specific competence, and helps everyone to participate. On the environmental aspect it allow everyone to receive music, infos and to meet new personal interests in a digital way, without producing any waste.

**3. (product-service) system innovation characteristics:**

Spreaker is an online application for creating and sharing live audio content across the Internet. With Spreaker, users become Radio DJs and host personal radio shows that can be streamed live and listened through a widget which supports all the major social media and mobile platforms. It's very easy to create any kind of radio show - from music to talk - since everything can be made online thanks to a unique DJ console which allows real-time mixing of voice, music and sound effects.

**4. images:**

<http://www.spreaker.com/>

## STREET BANK

### 1. general information:

**name of the (product-service) system innovation** "Streetbank"  
**title** An easy way to show all the things and skills a neighborhood is offering.

**producer/provider name** private group (not formalized)

**designer's name** private group (not formalized)

**nationality** United Kingdom

**e-mail** sam@streetbank.com

**web site** www.streetbank.com

**source/contact** www.streetbank.com

**developing stage** in production



Everybody has their own ladder

**-£££**

bank balance - in the red



community spirit - poor



carbon footprint - hefty



One ladder + streetbank

**££**

bank balance - nicely in the black



community spirit - welcoming



carbon footprint - mini

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

The service goal, about the socio-ethical aspect, is to get people involved in their community, to foster altruism, a generosity of spirit and volunteerism. It is to help local needs to be met by local solutions, reducing poverty by building community. It makes sense environmentally. It helps people to reuse things, and for things that are under-used to be used more, and that all helps to reduce consumption. It also makes sense economically reducing the costs for all neighbors.

**3. (product-service) system innovation characteristics:**

Streetbank is a service based on a site that helps you share and borrow things from your neighbours. Everyone can apply online specific his address and city to get the right community. Main activity of Streetbank is to exchange objects and goods between neighbors, fostering cohesion and avoiding useless costs for everyone.

**4. images:**

[http://www.streetbank.com/in\\_a\\_nutshell](http://www.streetbank.com/in_a_nutshell)

## NEXTDOOR.COM

### 1. general information:

**name of the (product-service) system innovation**

“Nextdoor”

**title** An easy way to connect online with neighbors to receive advice or exchange unused objects.

**producer/provider name** Nextdoor company

**designer’s name** a private group (36 citizens)

**nationality** USA

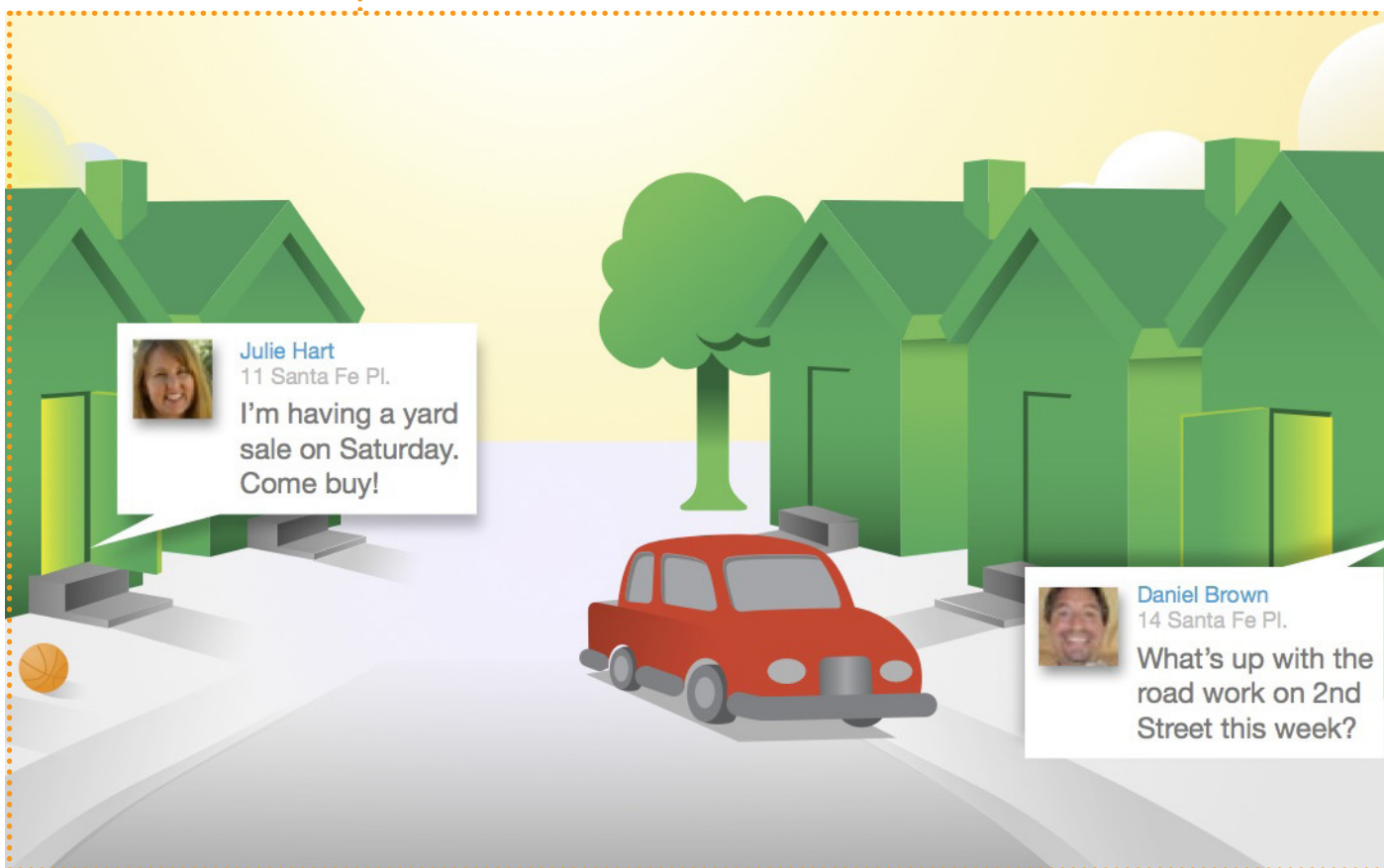
**address** San Francisco, California

**e-mail** feedback@nextdoor.com

**web site** www.nextdoor.com

**source/contact** www.nextdoor.com

**developing stage** in production



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

The service goal, about the socio-ethical aspect, is to make neighbors feel comfortable sharing information with one another. Information shared on Nextdoor is password-protected and cannot be accessed by those outside the neighborhood or found on Google or other search engines. This create a more safe environment in the online communication but minly in the real neighbors world. The sharing service within Nextdoor helps the environmental sustainability of each neighborhood reducing production of new objects, and enhancing local resources from the field.

**3. (product-service) system innovation characteristics:**

Nextdoor is a service where neighbors create private websites for their neighborhoods where they can ask questions, get to know one another and exchange local advice and recommendations. Topics of discussion are as varied as local events, school activities, plumber and babysitter recommendations, recent crime activity, upcoming garage sales or even lost pets. Unlike an email listserv or other online group, neighbor posts are organized and archived for future reference.

**4. images:**

<http://gigaom.com/2012/07/24/nextdoor-the-social-network-for-neighborhoods-raises-18-6m/>

## 6.3.2 CO-DESIGN WORKSHOP

To deeper into the concept definition has been planned a one day workshop activity with the “Punto e Linea” Hubbers in July. They have been invited as social expert from the field to give professional feedbacks and to help in contextualize the concepts in the four districts.

The workshop activities focused on a previous discussion of each concept with a further discussion, through 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;

*In the following pages are shown the offering diagram presented during the workshop activity for the Baggio' concept; and the questions with co-designed considerations in relation to specific touchpoints of the new web radio offer.*

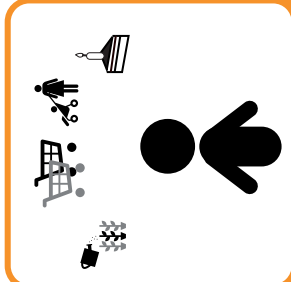




## OFFERING DIAGRAM

**dare/ ricevere informazioni sul quartiere**

contribuire al servizio di mappatura aggiornando/modificando: iniziative/ associazioni/ (...)

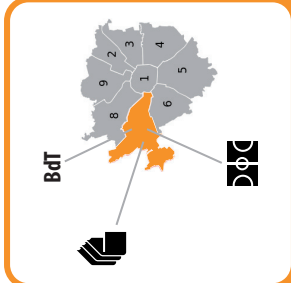


**creare nuovi servizi**

proporre un'offerta/ servizio non ancora disponibile

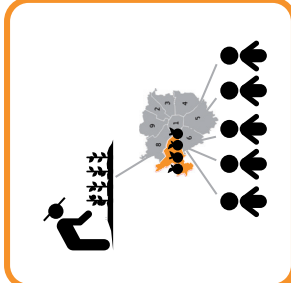
richiedere servizi all'esterno del quartiere creando una rete

coinvolgere persone o associazioni



**promuovere uno stile di vita sostenibile**

promozione di: iniziative (pedibus, biciclette,...) progetti (dimensioni diverse blog) gruppi (gas, BnT, associazioni informali, ...)



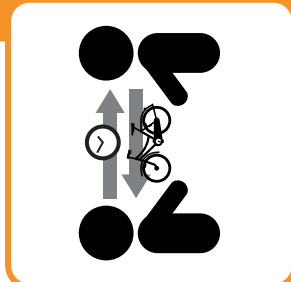
**usufruire di servizi**

scambiare delle ore chiedendo e offrendo competenze

scambiare oggetti

visualizzare/ aggiornare informazioni sul quartiere (associazioni, eventi, luoghi, ...)

"vedere" e interagire con le esperienze dei membri tramite la piattaforma condivisa

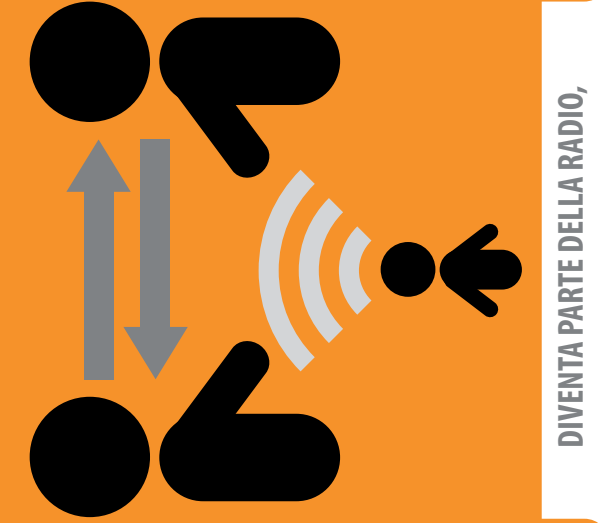


**promuovere una nuova economia di quartiere**

panoramica online di servizi e scambi (sistema debito/credito delle BnT)

creare una rete di collaborazione e condivisione tra abitanti e non solo

creare un profilo con cui connettersi, conoscere gli altri, usufruire e offrire dei servizi



**DIVENTA PARTE DELLA RADIO, CONNETTITI, SCAMBIA, PROPONI. SOSTIENI AL MEGLIO IL TUO TEMPO!**

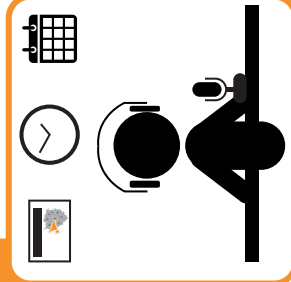
il tempo offerto per la gestione della radio (programmi, aggiornamento database, software ...) sarà considerato come ora di credito

**partecipare attivamente in radio**

dare/ ricevere: tempo (servizi) oggetti informazioni

avere un programma

ascoltare/promuovere



## **Workshop questions with co-designed considerations in relation to specific touchpoints of the web radio offer:**

### **Accessibility\_online**

*Do you think that a direct invitation to participate in the service i.e. a question banner in the library website, can generate curiosity or distrust?*

*Do you think that the direct access from google gives potentiality for the diffusion of the service or becomes too much disorienting?*

*Do you know other web channels to invite people to the service website?*

*Do you agree about the need of to be registered to access to participants contents? How do you feel about it?*

*The online accessibility through google has been seen as a good possibility to enlarge the research channels. At the same time to use already log channels i.e. facebook or twitter, can promote an easy access and ensure that all the datas are safe and visible only for the community participants. Moreover the possibility to register increase the trust and quality of the service, as well as the online access promoted in an already known context i.e. library.*

### **Accessibility:from the district**

*Where you imagine possible to use internet in Baggio district for people without computer at home?*

*Which stakeholders can imagine to promote the system in the district?*

*In Baggio the library is the most intergenerational place where lot of activities are already active for different targets. About other places can be considered the offices of other local associations (not yet defined).*

### **Tangible/Intangible**

*Do you think that to create an online community that becomes real during the service delivery is enough tangible?*

*The perception of an online community it will depends from how big is it and how much the percentage of tangible participation is included. Moreover the perception can be influenced by the age, so has to be balanced according to specific attitudes of the context inhabitants.*

### **Added Value Activities**

*If you have to imagine some group activities to be made in the services exchanges i.e. pedibus activity, which activities would you propose?*

*Which local associations you can imagine to coordinate them?*

*Considering the Baggio' district which kind of territory maps can you see are useful to categorized the service?*

*Are already used in social services some reward systems?How they works? Do they have a positive impact on the participants?*

*How do you feel about the possibility to use the audio access to record and listen to the personal contents i.e. to register your profile? Do you prefer to use/add other format?*

*It can be good to propose social activities as gym courses or cultural activities (not yet defined). About the mapping of the area can be interesting to use the critical or main points of the district for advertise about the new service. Some reward systems are already in use, a good example can be the one used by critical city (<http://criticalcity.org/home/landing>) which propose to give a medal as feedback for each mission completed. A consideration to be done is to use reward as a means of satisfaction avoiding frustration. The audio access can be good to use the radio potential but at the same time has to be a personal choice, so has to be selectable.*

### 6.3.3 THE NEW BRIEF CONCEPT

After the co-design workshop with the Hubbers, and with further researches and considerations, a first concept for the Hub Baggio, to be further studied and implemented through the next phases of the MSDS method for the design process, has been elaborated:

**“ShareRadio (ex)change your time”** is:

*“A sustainable service system that merges in the Baggio district the local web radio with the local bank of time, to promote a new district economy based on services and products exchanges. The web radio will host a web platform to easy the exchange of specific job among local inhabitants based on time (of job) exchange. The participants can decide if giving hours/job to the radio, or to other participants; in both cases they will gain time credits to be spent in other requests. The offer will takes advantages from the web radio potentialities to create accessibility to services and to build up a network between people and local associations that will became participants of the service itself.”*

7

# THE PROJECT

## ShareRadio

“(ex)change your time”

## 7.1 THE OFFER/THE ACTORS

The ShareRadio (ex)change your time is a PSS based on hour/job exchanges, where everyone can give his/her own contribution according to his/her profession and skills: directly to participate in the radio management or to help other participants, gaining hour/job credits to solve other needs.

The PSS is designed for the Baggio' district and is aimed to improve social cohesion, fostering intergenerational dialogue, through the re-design of the local web radio to be more socially, environmentally and economic sustainable.

Key actors of the PSS are the youth and retired of the district, which are involved in the back office and front desk of the service; PCexperts, to update and improve the platform; the local associations as partner and active job/hours exchangers of the service; the radio network "I have a stream" coordinated by the ShareRadio.

The Product-Service System: “ShareRadio – (ex)change your time”, is based on a platform which merges the Web Radio and the TimeBank of Baggio, through the realization of a new service and a dedicated space in the web radio, to host the time bank of Baggio. The service offer is to set a network of persons, each one with his/her professionalism, who offers job/hours gaining time credits to be spent for services and works to be done for him/her from other persons with different professionalities among the community. The currency is the time use to do a job, not the hourly cost of a particular service.

*The ShareRadio PSS mission is “to satisfy daily life needs involving all generations to (ex)change their professional hours/job”.*

### **ACCESS**

The Web Radio proposes, to make the exchange mechanism efficient and accessible, the use of an online platform, where to manage offers and requests, communicate among the community and check directly the debit/credit time.

To access is only needed to make a free subscription, in the ShareRadio website ([www.shareradio.it](http://www.shareradio.it)), and to come for a first meeting with the welcome team during the weekly happyhours of the service. To make the online subscription is available a video-guide to guarantee the easy use, to create the online profile with basic data, indicating “what he/she is offering”, and if the job/hours will be exchanged for the management/speaking into the radio or with other participants. Infact, the Product-Service System designed will guarantee also the economic sustainability of the web radio through the job/hours exchanges; involving the final users in managing and delivery the service, giving hours/job directly to the Web Radio management: running the radio initiatives (i.e. weekly broadcasts, searching information,...) as well as for the maintenance of the platform (i.e. newsletter sending, files updating,...).

Furthermore, to encourage people without computers, three info-points are distributed in the district:

- ShareRadio office;
- TmeBank office;
- Library space.

## OFFERING DIAGRAM

### LISTEN THE RADIO BROADCASTS OF EXCHANGE

Listen the radio weekly broadcasts to find new hour/job to satisfy or to book. Publish a request of hour/job that is not available in the database, and it will be requested in the broadcasts of the web radio network "I have a stream".



### GIVE/RECEIVE FEEDBACK ABOUT JOB/HOURS EXCHANGED!

Leave a feedback on the hours/job deliverer profile to help other in the choice.



### ACCESS JOB/HOURS EXCHANGES!

Subscribe the online exchange platform. Write an email or call the professionalist you need. Book from the weekly bacheca the job/hours you need.

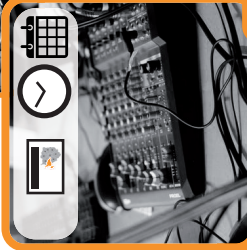


### CREATE YOUR PROFILE IN THE EXCHANGES PLATFORM.

Select a category to insert your hour/job offer. Indicate your availability check your hour/job credit-debit situation

### SUSTAIN THE RADIO

give part of your hour/job offered directly to sustain the ShareRadio platform.



# SHARERADIO

## (EX)CHANGE YOUR TIME

### PARTICIPATE TO THE UPDATES CONTESTS

designing the platform updates to increase the accessibility and usability of the service gaining time and awards



### ATTEND MANAGEMENT AND SPEAKER COURSES

participate to the courses with theory and practice of platform management gaining hour/job.



### ATTEND WELCOME PARTICIPANTS COURSES

participate to the course to learn how to orientate new participants and gaining hour/job.



## EXTERNAL SUPPORTER

### IMPROVE YOUR VISIBILITY SUSTAINING THE PLATFORM

Subscribe to the platform and give your news to be posted in the homepage.



Use the network created by the platform to share and exchange resources and hours/job with participants or other associations

### PAY TO PROMOTE ONE EVENT

Without subscribing you can buy one shot promotion on the platform



### PAY TO SHOW YOUR REQUEST

Without subscribing you can buy one shot request of products or hour/job on the platform



### DO YOU HEAR THE NEWS?

the ShareRadio opened a new online platform where all needs costs one hour/job of your time!

give one hour/job of your profession and you will gain back the hour/job you need!

The TimeBank of Baggio “ORAxORA” includes 100 inhabitants of Baggio’ district from 30 to 80 years old. They meet once a week in the TimeBank office fostering participation.

Fiorenza Bonasio head of the TimeBank agree for a partnership into the ShareRadio (ex)change your time project, to hold the “participant welcome“ courses and becoming tester for the pilot project. Moreover she gives the availability of the space as infopoint of the service.

The Baggio’ Public Library “Biblioteca Rionale di Baggio” is one of the main place in the district, where some cultural activities as exhibitions, concerts, etc. take place periodically.

Antonio Bechelli responsible of the Library agree for a partnership into the ShareRadio (ex)change your time project, to use some pc as infopoint of the service.

In these infopoints is possible to check the personal exchange profile, the offers and needs from the other participants, as well as the news from the partner associations in/out the district promoting their activities and events. For the first access some participants are available for internet support in the three infopoints.

Is even possible to access to the service as “external supporter“ without subscribing, but paying (money) to:

- promote a personal event on the website, both for privates as well as associations;
- promote personal requests/offers on the public homepage.

### **MANAGEMENT**

To manage the back stage of the service, two courses: “radio management and speaking” and “participants welcome“ are held in the web radio office involving 40 participants.

The “radio management (and speaking)” is a training course about radio platform management i.e. platform updating, newsletter sending, etc., and involves 20 people chosen from the Radio group of youth and among local associations, creating the Radio Speaker team. During the course are given basics of computer, and possibilities to test the radio



structures and broadcasts. The course will be held periodically and the actual Radio Speaker team will be the trainer of next editions.

The PC officina based in Bovisa area includes 20 pc experts from 15 to 50 years old. They meet once a week in the PCofficina office to compare problems and solutions and to plan group activities i.e. Linux day (october 2012) to spread around the pc knowledge

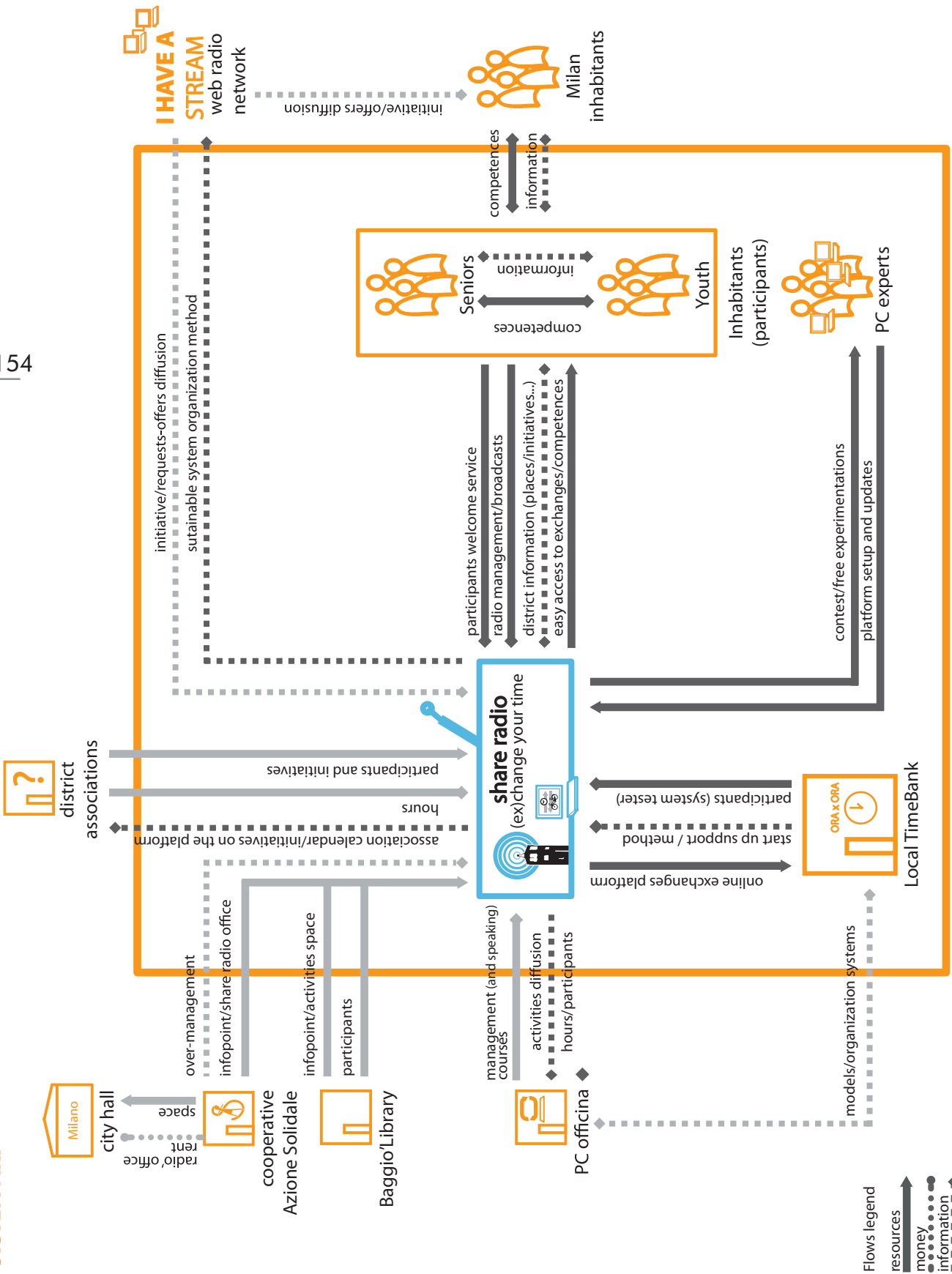
Giovanni Sposito head of the PCofficina agrees for a partnership into the ShareRadio (ex)change your time project, to hold the “radio management (and speaking)” courses.

The “participants welcome” is a training course about orienting new participants in the job/hours exchanges giving a first overview of the whole service, and to lead the choices of participants according to preferences, skills and curiosity as well as to solve needs. The course involve 20 people starting from the district, the Radio group of youth, and among local associations. The course will be held periodically and the actual Welcome participants team will be the trainer of next editions.

To build up the online platform and to constantly improve the accessibility and quality of the service the ShareRadio (ex)change your time organizes one-day contests open to everyone with computer skills, about specific topics to be solved i.e. how to manage the increasing subscriptions without losing accessibility.

To make the service more effective on the district the local associations are invited to become partner of the project. Each association will pay a yearly subscription fee in money and job/hours (according to the number of participants) and will have the possibility to take part to the exchanges, and to show its weekly schedule in the platform to be reachable by every visitor. Moreover each association, creating his own profile can show its office place in a district map with contact information, to have more visibility about activities and intents.

To spread around the available skills, and to satisfy the participants requests the Radio Speaker team participants collaborate with the other web radios of the “I have a stream network” giving and asking advices about offers/requests and district activities.



Flows legend  
 resources  
 money  
 information  
 work

## 7.2 THE SERVICE EXPERIENCE:

The ShareRadio (ex)change your time experience is based on hour/job (as currency), to be exchanged with other participants or to be exchanged directly with the radio through “radio management and speaking“ activities or “welcome participants“ activities.

From this assumption is possible to state that back office and front desk of the offer are strenghtly related and flexible among the possibility to be part of both in the role of the manager as well as in the role of the user. The direct involvement of the users in the back office is the core of the hareRadio (ex)change your time project, which help in reinforcing the belonging sense in to the initiative and in making the Shareradio more economically sustainable.

*In the storyspot below are presented back office and front desk of the offer, to make the offer more understandable, but mainatining its flexibility of the roles.*

SET UP

START UP



FUTURE PARTICIPANT GET IN TOUCH WITH THE SERVICE BY CHANCE GOING TO THE INFOPOINTS OF THE SERVICE DISTRIBUTED IN THE DISTRICT.



WITH THE HELP OF A "WELCOME PARTICIPANT" SUBSCRIBE TO THE PLATFORM CREATING THE PROFILE: PERSONAL DATA WHAT JOB/TIME TO EXCHANGE



THE SHARE RADIO ORGANIZE A FIRST MEETING TO SET THE PARTNERSHIP WITH THE TIME BANK OF BAGGIO AND WITH THE FIRST PC EXPERTS.



THE SHARE RADIO ORGANIZES A FIRST MEETING TO INVITE THE LOCAL ASSOCIATIONS TO BECOME PARTNERS OF THE SHARE RADIO PLATFORM.



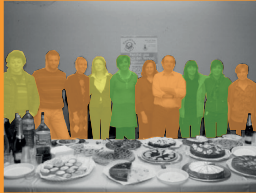
THE SHARE RADIO ORGANIZES A CONTEST TO DESIGN AND SETUP THE PLATFORM INVITING PC EXPERTS.



THE PC OFFICINA HOLDS THE "MANAGEMENT AND SPEAKING" COURSE TO TRAIN NEW PARTICIPANTS TO HELP IN MANAGING THE PLATFORM

- PARTECIPANTI
- SHARE RADIO
- WELCOME PARTICIPANTS
- BANCA del TEMPO ORAxORA
- MANAGEMENT PARTICIPANTS
- EXPER

## MAINTENANCE



RECEIVE THE PROFILE CONFIRMATION AND AN INVITATION TO COME TO A WELCOME MEETING TO DEFINE THE JOB/HOURS TO EXCHANGE AND TO START TO KNOW THE OTHER PARTICIPANTS



START TO EXCHANGE JOB/HOURS SEARCHING IN THE ONLINE DATABASE AND SENDING AN EMAIL TO THE POSSIBLE DELIVERER



ENJOY THE HOUR/job REQUESTED



GIVE A FEEDBACK ABOUT THE RECEIVED SERVICE (JOB/HOURS) AND POST SOME PICTURES OF THE EXPERIENCE



THE TIME BANK HOLDS THE "WELCOME PARTICIPANTS" COURSE TO TRAIN NEW PARTICIPANTS TO HELP IN ORIENTATE DURING THE SUBSCRIPITON



FEW EXPERTS OF THE RADIO WEEKLY UPDATE THE PLATFORM WITH THE NEWS OF THE LOCAL PARTNER ASSOCIATIONS IN THE PLATFORM.



EVERY WEEK THERE ARE RADIO BROADCASTS TO PROPOSE NEW OFFERS IN COLLABORATION WITH THE WEB RADIO NETWORK "I HAVE A STREAM"

.TS



PC OFFICINA



LOCAL ASSOCIATIONS

## 7.2.1 THE PLATFORM INTERACTION

The ShareRadio platform is the welcome place for the all participants, which gives first access to the (ex)change your time service, to the radio broadcasts, and to the weekly associations activities schedule.

### ENTER THE WEBSITE

To access the platform there are two levels of approach: as *visitor* of the website and as *participant* of the service.

The *visitor* level shows in the homepage three main options: to have a first overview of the (ex)change your time service through a short movie (a brief story showing the service and how to get in), to listen to the radio broadcasts and podcasts, to check the weekly calendar of the partner associations initiatives and their distribution into the district.

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ShareRadio  
(ex)change your time

home contacts faq

Online Privacy Notice Highlights

**DO YOU HEAR THE NEWS?**

ShareRadio opened a new exchange platform where all needs costs one hour/job of your time!

**GIVE ONE HOUR/JOB OF YOUR PROFESSION AND YOU WILL GAIN BACK THE HOUR/JOB YOU NEED!**

RADIO BROADCASTS  
listen ON AIR

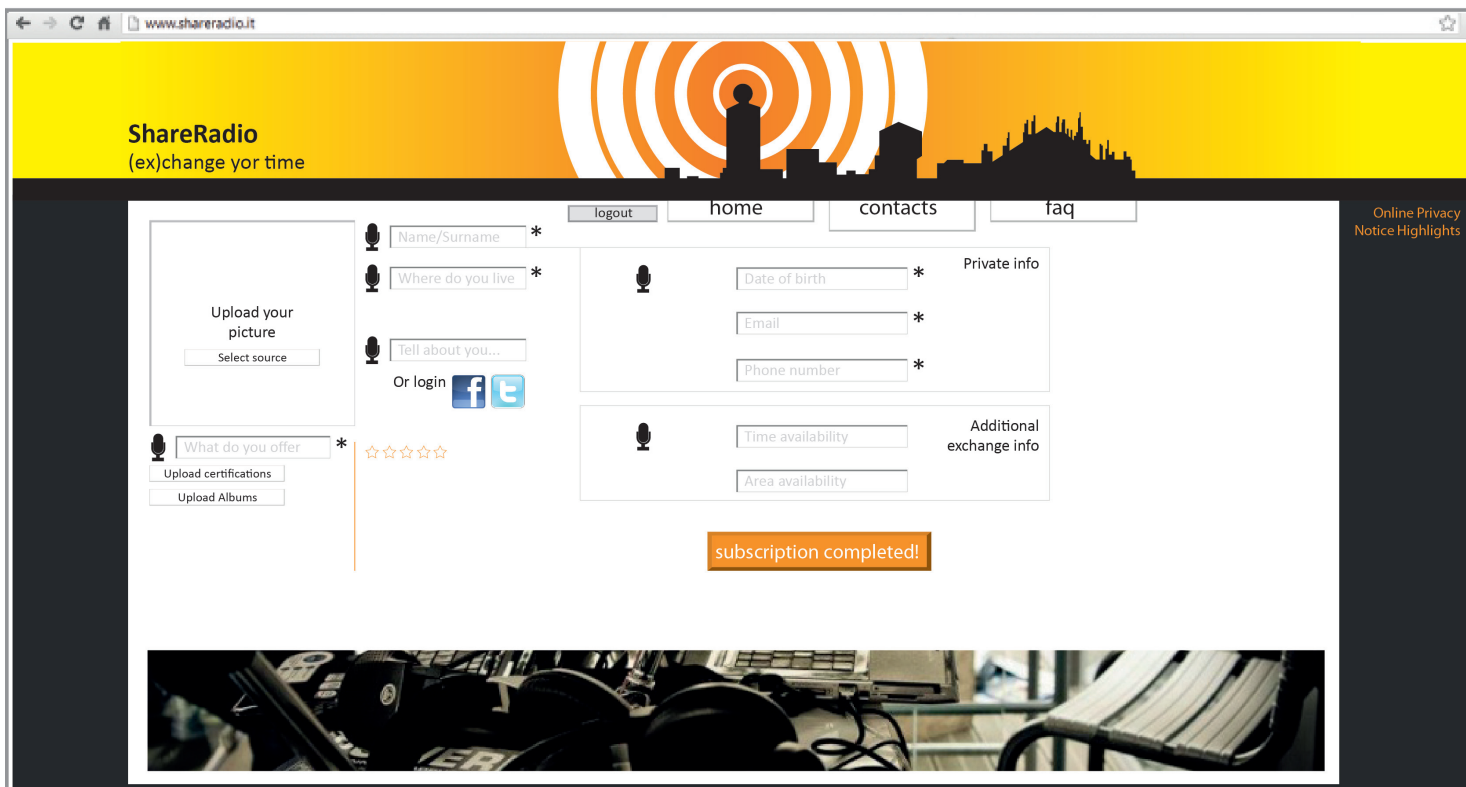
EXCHANGE PLATFORM  
LOOK HOW IT WORKS

ASSOCIATIONS NEWS  
download the NEWS

Moreover, the visitor level, without subscribe to the (ex)change your time service, gives the possibility to ask for a service paying a one-time fee instead of exchange job/hours, supporting the service from outside, getting involved for future exchanges. To ask is possible accessing by the exchange platform area and fill out the online request form, then waiting for an email/call to formalize the service delivery. Privacy is guaranteed by the request form.

The *participant* level starts with the online free subscription to the exchange service: from the homepage there is a dedicated page where to create the personal profile indicating:

- \* *basic data i.e. name, address, etc.,*
- \* *“what to offer“ i.e. yoga lessons, repairing skills, laptop updating, etc.,*
- \* *if the job/hours will be exchanged for the management/speaking into the radio or with other participants.*



To fill the profile the platform gives the possibility to use vocal controls, simply telling information by voice instead of typing, according to the access preferences of the participants. As added aid, if some job/hours availability are constant it is possible to indicate day/time, making them visible in the weekly schedule of activities to be easily reachable by the other participants.

Once the registration is completed the new participant will receive a confirmation email to start the exchange. Furthermore new participants be invited to have the first meeting with the welcome participants team during the weekly meeting of the community. To introduce the new participant into the service and lead he/she in the right choice of requests. i.e. starting with group activities or directly alone, etc.

The screenshot shows the ShareRadio website interface. The header features the logo "ShareRadio (ex)change yor time" and a navigation menu with "logout", "home", "contacts", and "faq". The main content area displays a user profile for "Rose Olmi Area" with a "logout" button, a yellow piggy bank icon with "+0", and two album listings: "Professional cakes" and "Babysitting", each with a "Album" button and a five-star rating. A central white box contains a "Congratulations!" message: "Your subscription has been successfully completed! You will receive a confirmation email by our welcome team." In the bottom right corner, there are two promotional buttons: "DISTRICT NEWS download the NEWS" and "RADIO BROADCASTS listen ON AIR". The footer shows a blurred image of a radio studio.



## START TO EXCHANGE

To start to exchange are offered two options:

From the personal profile, is possible to click on "ask hours/job" write the service needed and select from the list of the possible deliverer according to:

- \* pictures documents showing his/her previous experiences;
- \* feedback from other participants;
- \* time availability;
- \* distance from the place.

After sending the email/call for request and receive the email/call back for confirmation, the job/hours in debit/credit will be automatically updated underlining the current time situation.

When looking to an offer it is possible to see how many are offering it and where they are located in the district. Moreover is possible to see their previous experience (if they decided so) with images, or text or videos, as well as advices and feedbacks from people already took advantages from it.

The screenshot shows the ShareRadio website interface. At the top, there is a navigation bar with "home", "contacts", and "faq" buttons. The main content area features a user profile for "Rose" from the "Olmi Area", including a photo, a "logout" button, and a yellow piggy bank icon with "+3". Below the profile are two service categories: "Professional cakes" and "Babysitting", each with a star rating and an "Album" button. A search results window is open, titled "Gardener/Olmi area/Afternoon". It lists three potential providers: Luca (Olmi Area), Irene (Baggio Area), and Ottavio (Baggio Area). Each provider entry includes a photo, a "select" checkbox, a star rating, and an "Album" button. A "send your request" button is located at the bottom of the search results window. On the right side of the search results, there is a "see also" section with suggestions like "threat exotic flowers", "use medical herbs", and "balcony design". The website has a yellow and orange color scheme with a city skyline graphic in the background.

From the personal profile, to orientate the choice, and to improve a wider use of the service, it is possible to click on “check your week” to see the available offers of the week and to book them in advance.

As additional services the profile gives access to:  
 -the radio broadcasts where receive news about offers/exchanges in and outside the district or to listening music;  
 -the bacheca with the weekly activities of the partner associations of the district, and the other participants offers and advices.

The screenshot shows the ShareRadio website interface. At the top, there is a yellow header with the ShareRadio logo and a navigation bar with links for home, contacts, and faq. The main content area features a user profile for Rose Olmi Area, including a photo, a yellow piggy bank icon with '+3', and two album listings: 'Professional cakes' (5 stars) and 'Babysitting' (4 stars). To the right of the profile is a weekly activity calendar with columns for Monday through Sunday. The calendar contains various events such as 'YOGA SESSION', 'LIBRARY "READ A STORY" EVENT', 'SKYPE SESSION', and 'BAGGIO X OPENING EVENT'. At the bottom of the calendar, there are two buttons: 'book an offer' and 'write your offer'. On the far right, there are links for 'DISTRICT NEWS' and 'RADIO FUNZIONI' with download and play icons respectively. The browser address bar shows 'www.shareradio.it'.

## **THE ASSOCIATIONS ACCESS**

The platform hosts, a dedicated area for the association to participate, to be accessed by the homepage. Each association can create a profile indicating:

*\* basic data i.e. name, social reason, number of participants*

*\* contacts;*

*\*main topic of action;*

Moreover, and primary reason to subscribe, each association can show in its personal page (even accessible for not subscribed people) its initiatives programs, with flyers, pictures,etc. to be visible to everyone accessing the website.

To become partner association of the Share Radio (ex)change your time it is requested a yearly subscription fee which include a predetermined payment plus a calculate amount of job/hours to be exchanged with the radio and/or with other associations/participants, according to the number of associates.

As said in the previous paragraph is even possible to access to the service as “external supporter“ without subscribing, but paying (money) to promote personal events, offers and requests.

## 7.3 THE BUSINESS MODEL

The ShareRadio (ex)change your time settled up a synergy among the ShareRadio and the local TimeBank, creating a new association, aimed to be recognizable for the inhabitants and the local associations, and to improve the trustability of the service.

The ShareRadio association involves:

- the youth of the Web Radio' and TimeBank' users, as first testers of the service, and first group of experienced in radio's and exchange areas;
- some inhabitants of different ages, and with different professionalities, to improve the heterogeneity of the service;
- PCexperts and youth, proposing contests every year, to check and improve the functions of the platform, and fostering contacts between generations. Furthermore the ShareRadio association wants to create synergies with local associations, involving them as partners and sponsors of the service.

In the following table is presented the potential target of the service, and the possible partner associations, as prevision for the next 5 years.

PARTICIPANTS		year 1	year 2	year 3	year 4	year 5
exchange participants	WEB RADIO	15	20	30	30	40
exchange participants	TIME BANK	30	50	80	80	90
exchange participants	INHABITANTS	25	50	70	110	150
pc experts		5	15	25	30	30
TOT participants		75	135	205	250	310
TOT associations		20	30	35	50	80

The target above have been defined considering the current participation in the Web Radio, the TimeBank and the number of registered associations of the district.

The *Web Radio* involves now 20 youth from the district, for the first year the service consider to involve the 75% of them.

As prevision for next years, the number will increase including students from local schools already involved in some RadioLabs, and other youth from associations, local groups.

The local *TimeBank* involves now 100 participants and 60 of them exchange constanlty. For the first year the service consider to invole the 50% of the regular exchangers, considering also the ability to use internet that covers the 70% of them. As prevision for the next years,

the number will increase considering the accessibility of the platform, and the increasing of the offers and of their heterogeneity.

The *inhabitants* has been considered one for each association, with prevision for the next years to exponentially increase the participation. The *experts* are 5 for the first year, as constant help in repairing and updating. Thanks to the contests their number will increase in the next years.

The local *associations* (social, sport,culture,etc.) registered in the zone 7 are 112. For the first year the service considers to involve as partner the 20% of them, and until the 5th year the 80%, including even some associations from outside.

To define an hypothetical maximum target for the service have been considered the number of TimeBank participants, really variable from 7 to 100. The service will include 75 persons the first year and around 300 the 5th year. The possibility to cover this numbers has been considered according to the potentialities of the exchange platform, and to the possibility to involve more generations. On the contrary has been considered not to

exceed these numbers of exchangers, in order to maintain a high quality of the management and the service. For this reason has been considered the opportunity to replicate the service using the Web Radio network platforms, instead of doing a big one.

## **THE MARKET SURVEY: ShareRadio (ex)change your time STRATEGY**

The ShareRadio (ex)change your time strategy is to enter in the Web Radio and TimeBanks world creating synergies. To design a network of collaboration: spreading the knowledge and exploiting the resources. Currently most of the Web Radio are based on volunteering and local associations, and use sponsors or donations to self sustain themselves, and some collaboration to receive, share or repair the equipments.

Here some significant examples:

*Name: Radio dei Navigli*

*Section: District Radio (Culture, News, Sport)*

*Sustainability: Associations Sviluppo e Promozione Onlus, MI and volunteers*

*Name: PoliRadio*  
*Topic: University Radio (Culture, Music, Youth life)*  
*Sustainability: Politecnico, MI and volunteers*

*Name: Radio Popolare*  
*Topic: Social Radio (Culture, News, Politics, Exchanges)*  
*Sustainability: Errepi s.p.a.*

*Name: Spreaker*  
*Topic: Personal Radio (Everyone topics)*  
*Sustainability: Angel Funded and everyone can to try from home.*  
*Name: StereoMood*  
*Topic: Radio on Demand (Music)*  
*Sustainability: Stereomood s.r.l private society*

A different experience are the FM radios which are moving on, extending to the web channel, according to the current habits of listeners. The current situation of the TimeBanks represent a self sustainable model, thanks to the exchange mechanism, but at the same time has difficulties to exploit its potentialities.

Here some significant examples:

*Name: TimeBank, US*  
*Channels: Website*

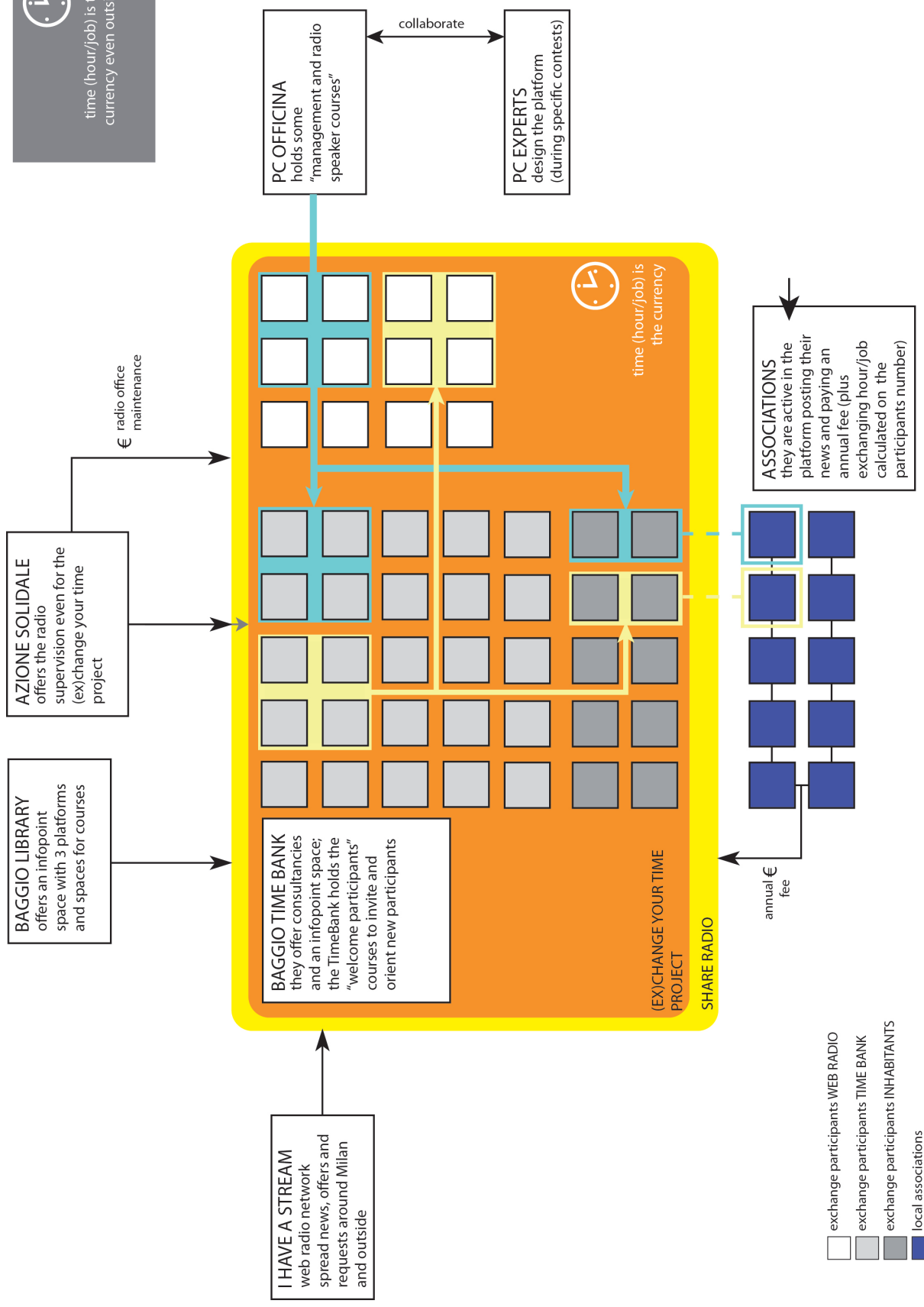
*Name: Banche del tempo Flash, MI*  
*Channels: Weekly meeting-Website*

*Name: TimeBank Cuccagna, MI*  
*Channels: Weekly meeting*

The different experience of TimeBanks depends from the interests of the participants, their age, and their openness to technology. Some TimeBanks are trying to involve youth but is not so easy.

In its strategy the ShareRadio considers the other Web Radio and TimeBanks, not as competitors, but as potential partners with benefits from both sides: The Web Radio could try this “new model” for their management, and use the potentialities of the web channel to diffuse this innovation. The TimeBanks could try the exchange platform in order to easy their exchanges and to involve new people from diffe-

time (hour/job) is the currency even outside



rent generations and more professional attitudes to participate. The ShareRadio benefits on creating synergies are evidents about the possibilities to spread and test the innovation, in order to have more professional hour/job available and more visibility, to guarantee the satisfaction of the participants need. Furthermore the possibility to replicate the model will help the system to have more available experts, to guarantee the accessibility of the service, and to the platform. In the following pages will be presented the business plan of the ShareRadio (ex)change your time, to present the start up prevision and the maintenance during the first 5 year of the service.

### THE REVENUES:

The revenues of the system come from two different sources.

First of all the main revenue results from the associations subscription fee. Each association who want to become a partner of the ShareRadio platform need to subscribe, and will have in exchange these possibilities:

- the logo in the homepage of the ShareRadio platform;
- to post all its news in the dedicated pages to be available to the all visitors of the platform;
- to set partnership with other associations;
- to use the web and radio channel to spread its news/needs.

The platform proposes two different subscription fees according to the quantity of news to be shown, and includes a payment in hour/job for the radio or for other associations, measured on the number of participants.

A second revenue results from the one shot promotion or request. It is possible, without being registered to the platform to show a news, paying a singular fee; or to spread a request i.e. the need to sell a car, for a singular fee but without entering in the horus/job exchange mechanism.

REVENUES	year 1			year 2			year 3			year 4			year 5		
	unit sold	unit price	product revenue	unit sold	unit price	product revenue	unit sold	unit price	product revenue	unit sold	unit price	product revenue	unit sold	unit price	product revenue
association subscription (>2 events in a week)	7	150	1050	12	150	1800	15	150	2250	20	150	3000	35	150	5250
association subscription (<2 events in a week)	13	100	1300	18	100	1800	20	100	2000	30	100	3000	45	100	4500
event promotion	40	10	400	40	10	400	90	10	900	90	10	900	90	10	900
request/offer promotion	40	5	200	60	5	300	70	5	350	80	5	400	90	5	450
events organization			0			0	5	600	3000	5	1000	5000	5	1000	5000
<b>ANNUAL REVENUES</b>			2950			4300			8500			12300			16100



to hour/job exchange mechanism is possible to reduce the costs, and proportionally increase the revenues.

### **THE COSTS:**

A significant cost to be covered is related to the equipments for the radio as initial investment. It could be possible to reduce it setting a partnership with PCofficina who is collecting and repairing hardware, to reuse them for social activities.

The cost of the platform set up is presented with the contest award: in the first contest will be designed and settled up the platform, in the next contests the platform will be updated and/or improved to guarantee quality and accessibility to the services. The labor costs for the platform management are significantly reduced thanks to the exchange of hour/job. Some specific activities as the contests still remain paid with money, because is needed high professional quality and certification.

## SUMMARY:

The following table presents the general plan of costs/revenues and the profit prevision in the next 5 years. The balance value represents the actualization of the TOT profit/year.

The business model, as it is now, will be self sustainable in the second year, thanks to the two raising sources. As will be presented in the chapter 8, will be possible, during future implementations, to re-think about it introducing crowdsourcing systems, increase the role and the power of the participants and decreasing the expences for the partner associations.

INVESTMENT	year 1	year 2	year 3	year 4	year 5
equipment (mixer, 3 pc, microphones, cables)	3000				3000
<b>COSTS</b>					
COSTS	year 1	year 2	year 3	year 4	year 5
depreciation equipments	3000	1000	1000	1000	0
human resources	600	600	600	600	600
advertisement	500	500	500	500	500
event organization	0	0	2000	4000	4000
contests award for updating/checking the platform	600	300	300	300	300
music contents	100	100	100	100	100
SIAE + SCF copyright fees	1600	1600	1600	2000	2000
overheads	336	215.25	320.25	446.25	393.75
<b>ANNUAL COSTS</b>	<b>6720</b>	<b>4305</b>	<b>6405</b>	<b>8925</b>	<b>7875</b>
<b>REVENUES</b>					
REVENUES	year 1	year 2	year 3	year 4	year 5
<b>PRODUCT/SERVICE</b>					
association subscription (>2 events in a week)	1050	1800	2250	3000	5250
association subscription (<2 events in a week)	1300	1800	2000	3000	4500
event promotion	400	400	900	900	900
request/offer promotion	200	300	350	400	450
events organization	0	0	3000	5000	5000
<b>ANNUAL REVENUES</b>	<b>2950</b>	<b>4300</b>	<b>8500</b>	<b>12300</b>	<b>16100</b>
<b>TOT profit/year</b>	<b>-3770</b>	<b>-5</b>	<b>2095</b>	<b>3375</b>	<b>8225</b>
<b>Discounting back</b>		<b>600</b>	<b>1950</b>	<b>3068</b>	<b>7310</b>

## 8 TANGO EXIBITION

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*<sup>1</sup> 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

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<sup>1</sup> 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.

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

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):

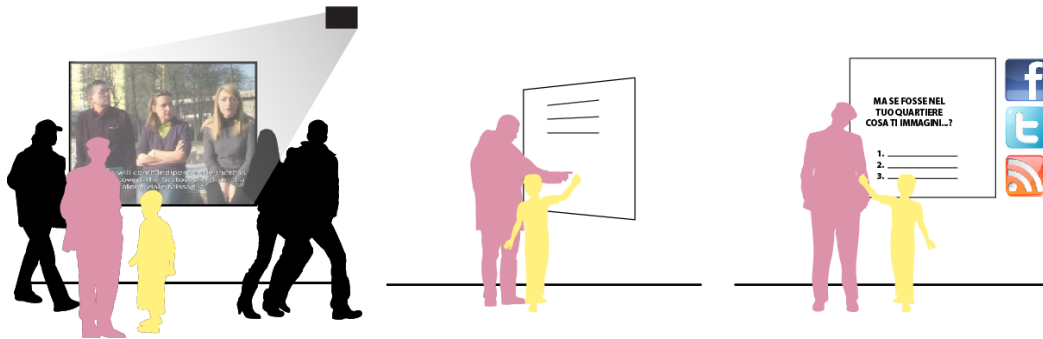
- have the chance to deepen some technical aspects and therefore watch a set of sub-video giving more detailed informations about how the proposal works;

- 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 backstage 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 1*

Youth and retired visiting and interacting with the exhibition



*figure 2*

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.



## 9. EVALUATION: PROCESS AND THE RESULTS

### 9.1 PROCESS: 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.

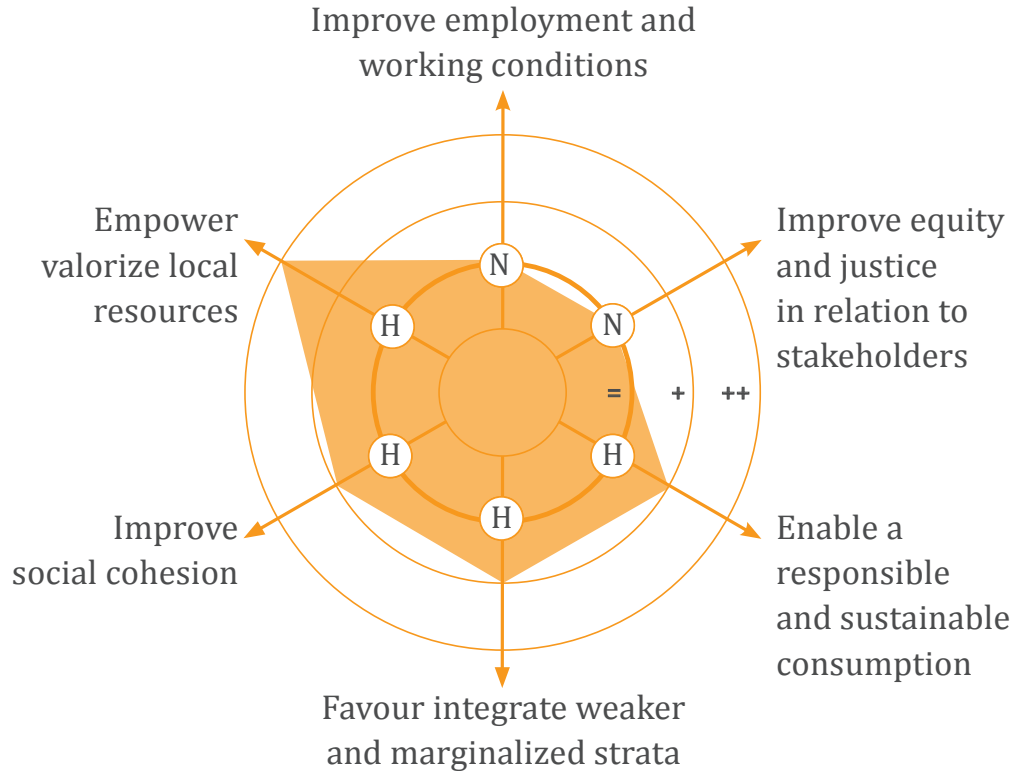
The interaction with stakeholders was the most complex and delicate process, because the experience has moved the theoretical scope from academic to professional practice by highlighting gaps in managing the first interaction communication with the stakeholders and the technical and representative content, 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. 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

SOCIO-ETHIC SUSTAINABILITY:



### *Empower valorize local resources*

The ShareRadio PSS starts from the existing ShareRadio, with the aim of maintaining its identity of opportunity place to enhance youth potentialities and competences. Moreover combining it with the Time-Bank as two promising models gives the opportunity to reach different ages and interests enhancing local resources and giving hour/job and personal rewards for it.

The involvement of local associations is even a way to create enhance local resources, especially in Baggio where the associations have a strong recognized role in the daily life of the inhabitants.

N=No  
L=Low  
M=Medium  
H=High

*Improve social cohesion*

The opportunity given by the ShareRadio PSS is to become actively part of the Radio community, and to collaborate between different ages. The participation is the main bottom up resource of the service, bringing out personal attitudes and passions that automatically generate self esteem, increasing the desire to do to be a resource for the community. The possibility to be recognized by the name (from the profile with pictures and data) is an important aspect of the service, to recreate forgiven habits.

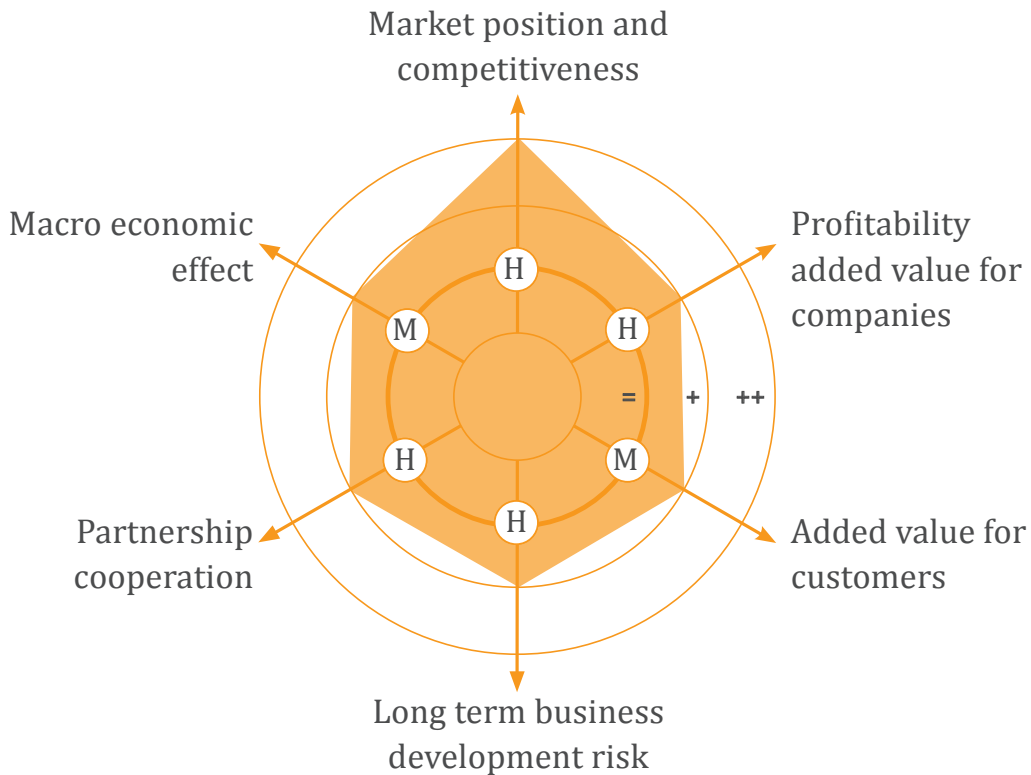
*Favour integrate weaker and marginalized strata*

The opportunity given by the Shareradio PSS is to involve people of different ages, social status, etc. to propose and express their personal and professional resources. Moreover the choice of using hour/job as currency wants to emphasize the equal value of each professional hour/job exchange, not depending from the kind or quality of the offer. The accessibility of the service, and the possibility to use the info-points with the guide of youth, fostering the intergenerational dialogue, is a way to help old generations to enter in the youth world and avoid the solitude.

*Enable a responsible and sustainable consumption*

The exchange mechanism proposed by the ShareRadio PSS promotes a sustainable lifestyle both in terms of reducing costs and consumption, as well as fostering new relations and friendships.

**ECONOMIC SUSTAINABILITY:**



*Market position and competitiveness*

The ShareRadio PSS is entering the Web Radio and TimeBanks market without direct competitors, due to its hybrid nature of tangible intangible for the mix of two model related to different targets and levels of participation. Furthermore, the involvement of associations guarantee the economic sustainability of the ShareRadio, opening new opportunities of development and quality improvement.

*Macro economic effects*

The strategy proposed will influence positively the outside community giving the possibility to satisfy more needs with less expences. On the other hand the visibility given by the website can effect positively the partner associations and companies.

N=No  
 L=Low  
 M=Medium  
 H=High

*Partnership cooperation*

The strategy proposed is to create synergies instead of competitiveness, in order to increase the quality of the outputs both for participants as well as sponsors and providers. The use of intangible tools increase the possibility to replicate the model, to be spread around and connected through a collective network, improving quality and heterogeneity of the offer.

Moreover, the exchange model is a promising way to create collaboration at final users level in a bottom up vision.

*Long term business development-risk*

The opportunity given by the intangibility of the ShareRadio is the possibility to easily replicate it without many expenses, using free equipments and softwares and with the support of a collaborative network. Moreover the heterogeneity of the hour/job offered is helpful to modify the offer satisfying the preferences of the participants. As risk for the PSS is the possibility to have some difficulties in the start up phase to be diffuse; for this reason is fundamental to create synergies in the territory: with singular people and associations or companies.

*Added value for customers*

The ShareRadio PSS empowers the customers giving solutions to personal needs considering hours/job as currency, and valorizing personal and professional competences. The usability of the platform and its availability in the infopoint is a first step to reach unconventional users, as elderly, as main actor of the service. The opportunity to see the associations initiatives in one platform can be an important help for accessibility to the district life and to create partnerships.

*Profitability added value for companies*

The opportunity given to companies is to be visible to a high number of people with heterogeneous characteristics and priorities. Moreover, considering the current trends of Web Radio interest, the possibility to be promoted in a Web Radio network is a good way to sponsor into and outside from the city.

**ENVIRONMENTAL SUSTAINABILITY:**

For the environmental sustainability the ShareRadio PSS, due to its immaterial nature has not done significant direct implementations. On the other hand, on indirect level, is possible to considerate the exchange mechanism



itself as a system life optimisation strategy: fostering the intensive use, sharing materials, transports, etc. Moreover, the use of the web channel, even if it requests energy resources, can minimize the paper use and the printing technology, reducing waste production and the use of resources.

## 9.3 REPLICABILITY IN OTHER COUNTRIES?

The ShareRadio PSS, according to its participatory aim and structure, considers intermediate and final users as the core of the service: receiving as well as sustaining it.

In this view, in order to replicate the PSS in other cities or countries, a good starting point is to map the area of action in terms of:

*people participation,*

*Web Radio and/or TimeBanks presence,*

*associations availability and roles,*

*meeting points availability,*

*people technology level according to age and social strata.*

These data can give a first overview of the social condition of the area, and will help to understand potentialities and resources of its inhabitants, as well as if there is a possibility to start from existing activities or if everything will be a new project. The possibility to start from something existent can be a good solution for the start up, to ensure an economical investment, but mainly to guarantee the trustability of the service and a first group of participants. On the other end considering to start a completely new experience can be good in terms of involving singular inhabitants as well as associations, co-designing the service with specific attention to singular needs and professionalities highlighting customer value.

Due to the ShareRadio PSS technological nature, a possible obstacle for its replicability is the need of participation of some PC experts or lovers, in order to guarantee the quality and accessibility of the service. A support in this direction is firstly given by the free software used, guaranteeing the availability of the starting platform to be replicable without costs, and to give first inputs for future adaptation. Moreover the possibility to create a network of web stations will help to increase the competences and to share

them among the whole community. In this view the balance between web and radio channels will be planned according to the need and to the available knowledge of the singular PSS reproduction.

As final assumption is possible to state that the replicability of ShareRadio PSS, according to its structure, can be made without facing particular obstacles, even with an high or low level of technology. On the other hand the PSS replicability in relations to the participatory aspect can face more difficulties depending on singular contexts. It will be needed to consider the differences about habits and lifestyles. The flexibility of the model, designed on the participants attitudes will be very helpful for the introduction of the service. To conclude the positive trends of Web Radio and TimeBanks researches demonstrate the interests of people in this two topics and represent an opportunity for their replicability. A the step ahead to be done to pass from the theory to the practice will be about their accessibility.

## 9.4 FUTURE IMPLEMENTATIONS

Future implementations of the ShareRadio (ex)change your time PSS can be designed on different area:

### *Involvement method and channels*

Due to the innovative and technologic nature of the ShareRadio (ex)change your time PSS is needed to plan its future implementations starting from the youth, currently less involved in the TimeBanks world. According to this a first step needed will be to involve local high and secondary schools students, to promote the hour/job exchange as part of normal life, and not as a plus, let them perceiving possible benefits and opportunities they can gain from it. To involve them will means to promote a social and cultural change, which will may need time and a designed transition path to be realized and understand as useful for the context. In this view will be important to reinforce synergies with local actors, fostering a bottom up participation and the customization of the offer.

### *Hours/job quality certification*

The ShareRadio (ex)change your time PSS is right now promoting hours/job offers starting from personal and professional competences. A future implementation could be to plan specific courses where to increase professional competences and aquire new skills. In this

vision a possible partnership can be settled up with the Re-Made in Barona PSS by Sara Hatef, where to gain repairing skills to become professional workers. The qualification of the participants can increase the trust in to the project, and gives more opportunities of future request of hours/jobs.

### *PSS replicability*

An implementation of the ShareRadio (ex)change your time PSS, can be done about its model replicability for other Web Radio and TimeBanks in the Milanese context. Most of the local Web Radios are running on a volunteer base and local TimeBanks are trying to introduce websites to increase their visibility and participation. The adoption of the designed model can be useful to increase the technology level of the TimeBanks, solving the lack of accessibility to their resources. The technology introduction can even empower their already functioning model involving youth generations to participate and increasing the exchange mechanism use in the everyday necessities. The introduction of the model for the Web Radio can increase their sustainability in terms of economy, and improve the heterogeneity of their broadcasts as well as internal competences increasing their independence from sponsors. For the ShareRadio (ex)change your time PSS this implementation can be useful, to give more visibility to the project, and to increase the offer of job/hours: to satisfy an higher number of requests making the service part of everyday life.

### *Economical sustainability model*

A future implementation, from the economical and social point of view, could be the introduction of new supporting models as crowdfunding as main source of economic sustainability of the System.

*“Crowd funding describes the collective effort of individuals who network and pool their resources, usually via the Internet, to support efforts initiated by other people or organizations. Crowd funding is used in support of a wide variety of activities, including disaster relief, citizen journalism, support of artists by fans, political campaigns, startup company funding, movie or free software development, inventions development and scientific research.”<sup>1</sup>*

To introduce this model in the ShareRadio (ex)change your time PSS, will empower the participants in decision making, responding to their needs, and promoting their resources and competences; reinforcing the belonging sense in to the project as opportunities place for the district.

<sup>1</sup> [http://en.wikipedia.org/wiki/Crowd\\_funding](http://en.wikipedia.org/wiki/Crowd_funding)

# 10

## RELEVANCES: CO-DESIGN ACTIVITIES 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<sup>1</sup>.(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.”<sup>2</sup>

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 instead 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.

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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

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.

## 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.





