



Re-Made in Barona

*A sustainable PSS, focused on
intergenerational dialogue.
Part of the TANGO, EU funded
project.*

SUPERVISOR:

Prof. Carlo Vezzoli

SUPERVISOR ASSISTANT:

Eng. Claudio di Benedetto

Prof. Francesca Piredda

STUDENT:

Sara Hatef

764453



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*I wish to dedicate this thesis to my husband,
Behrad, who has given lots of love and support to the
continuance of my education.*

ABSTRACT

ENGLISH

In the last decades the research and application fields of design profession have widen so much as the definition of design as a discipline that concern the conception of industrial artefact appear not sufficient to describe a comprehensive profession. One of the transversal and fundamental characteristic of this transformation has been the introduction of the concepts of sustainability and sustainable development into design project. The change has concerned also the design methodology: in the last years the attention has switched from the design of industrial products to the conception of articulated solution with the aim to fulfil the user's needs and desire through the elaboration of integrated system of product and service.

The joint of a sustainable approach with a systemic methodology has led designers to focus on new sectors, among the others the social sector. In this new area the design profession is starting to experience new directions, including the design of solutions for the improvement of living conditions of community where people, ideas, needs and problem can find a support to build new collaborative and participated and creative solutions.

The thesis intends to work on existing manual activities in social house Via "Lope de Vega" in Barona district. This project is based on the extended project, "Punto e Linea". The aim is to propose an innovative system of products and services to improve the social cohesion and intergenerational dialogue between inhabitants and visitors of the building and the attached area.

The thesis work consists in designing a system of product-service to be able to self-sustain from the economic point of view even after the end of “Cariplo Foundation” funds in an “organized sociability” and also with a low impact on the environment by an operative strategies with the special focus on the relationships among the stakeholders within Barona district.

The activity which has supported the entire project, has concerned of four different fields.

The first part is based on literature review and aims to identify the approaches, processes, practices and directions of design for sustainability in the social context.

The second part of the research is about TANGO (AH-DEsign) sustainable social inclusive EU project and the activities which is going on according to its objectives and their results in 3 different universities in Europe.

following the above mentioned part the Tango project activities in Milano described in details in relation to different associations and stakeholders linked to it, This part has analysed the existing activities in the social houses of Via “lope de Vega” and the thesis project is intended to improve them by discovering the social and environmental problems of the existing project.

The Third chapter is concerned in detail, the PSS design project and the MSDS method by some changes comparing to

the original method in order to adapt to the new context area.

The second part of the third chapter, focuses on the context of hub Barona and special traits of this zone. This part contains demographic and context analysis data and the existing executive stakeholders to know the potentials and limitations of the working work in this district and the results of the co-design activities which through them the new concepts have been emerged and become a basement for the final project “ReMade in Barona”. Following this part the new project “Re-Made in Barona” and its offerings to the people of Barona has been shown in detail.

Along with the fourth part, the future activities of Tango project which is the interactive exhibition and workshops about the designed thesis projects, with the stakeholders and normal people, has been presented.

Finally, to summarise the process and the results, an evaluation from different points of view has been done. In this part also the final project’s replicability in different contexts and the future scenarios has been taken into consideration.

ABSTRACT

ITALIANO

Negli ultimi decenni i campi di ricerca e di applicazione della professione del design si sono allargati così tanto come la definizione del design come disciplina che riguardano la concezione del manufatto industriale non sembrano sufficienti a descrivere una professione completa. Una delle caratteristiche trasversali e fondamentale di questa trasformazione è stata l'introduzione dei concetti di sostenibilità e sviluppo sostenibile in progetto di design. Il cambiamento ha riguardato anche la metodologia di progettazione: negli ultimi anni l'attenzione è passata dalla progettazione di prodotti industriali per la concezione della soluzione articolata con l'obiettivo di soddisfare le esigenze dell'utente e del desiderio attraverso l'elaborazione di un sistema integrato di prodotti e servizi.

L'articolazione di un approccio sostenibile con una metodologia di sistema ha portato i progettisti a concentrarsi su nuovi settori, tra gli altri, il settore sociale. In questa nuova area della professione del design sta iniziando a sperimentare nuove direzioni, compresa la progettazione di soluzioni per il miglioramento delle condizioni di vita della comunità in cui le persone, le idee, le esigenze e problematiche possono trovare un supporto e le competenze per la nuova costruzione collaborativa e le soluzioni creative .

La tesi si propone di lavorare sulle attuali attività manuali in casa sociale Via "Lope de Vega" nel quartiere Barona. Questo progetto si basa sul progetto esteso, "Punto e Linea". L'obiettivo è quello di proporre un sistema innovativo di pro-

dotti e servizi per migliorare la coesione sociale e il dialogo intergenerazionale tra abitanti e visitatori del palazzo e la zona circostante.

Il lavoro di tesi consiste nella progettazione di un sistema di prodotto-servizio che sia in grado di auto-sostenere dal punto di vista economico anche dopo la fine dei fondi della "Fondazione Cariplo" trasformandosi in una "socialità organizzata" e anche con un basso impatto sull'ambiente da un strategie operative con particolare attenzione ai rapporti tra le parti interessate all'interno del distretto Barona.

L'attività che ha sostenuto l'intero progetto, ha interessato quattro campi diversi.

La prima parte si basa sulla revisione della letteratura con l'obiettivo di individuare le strategie, i processi, le pratiche e le indicazioni di design per la sostenibilità nel contesto sociale.

La seconda parte della ricerca è sul progetto TANGO (AH-Design) sostenibile sociale inclusiva progetto UE e le azioni che è in corso in base ai propri obiettivi e dei loro risultati in 3 diverse università in Europa.

la sezione di Milano del progetto Tango menzionato precedentemente e' stata descritta in maniera dettagliata in relazione alle varie associazioni e stakeholder a questo associati. Questa parte ha analizzato le attività esistenti nelle case popolari di via "Lope de Vega" e il progetto di tesi ha lo scopo di migliorarle scoprendo i problemi sociali e ambientali del progetto esistente.

Il terzo capitolo affronta in dettaglio, il progetto di design PSS e il metodo MSDS da alcuni cambiamenti confronto al metodo originale per adattarsi al nuovo contesto zona.

La seconda parte del terzo capitolo, si concentra sul contesto del hub Barona e tratti particolari di questa zona. Questa parte contiene dati demografici e l'analisi del contesto e le parti interessate esecutive esistenti per conoscere le potenzialità e i limiti del lavoro in questo quartiere e dei risultati delle attività di co-design, che attraverso di loro i nuovi concetti sono stati creati e diventare la base per la parte finale del progetto "Remade in Barona". A seguito di questa parte il nuovo progetto "Remade in Barona" e le sue offerte al popolo di Barona è stato illustrato in dettaglio.

Lungo la quarta parte, è stata presentata le future attività del progetto Tango che è la mostra interattiva e workshop sui progetti tesi progettati, con gli stakeholder e i normali frequentatori.

Infine, per riassumere il processo ed i risultati, è stata fatta una valutazione da diversi punti di vista. In questa parte anche replicabilità del progetto finale in diversi contesti e gli scenari futuri sono stati presi in considerazione.

داریم، از نقطه نظر اجتماعی و محیط زیستی پرداخته شده است.

قسمت سوم، به طور دقیق به مراحل متود "MSDS" پرداخته که برای هماهنگی با زمینه جدید کاری، تغییراتی در نمونه اصلی آن ایجاد گردیده است. در ادامه این بخش تحقیق در مورد منطقه "بارونا" و خصوصیات آن انجام گرفته است. این بخش شامل اطلاعات آماری و آنالیز زمینه می باشد تا پتانسیل ها و محدودیت های این منطقه مشخص گردد. اطلاعات این مرحله به همراه طراحی مشترک با اکتورها و شرکت های محلی منجر به وجود آمدن کانسپت جدید "Re-Made in Barona" گردیده است.

در بخش چهار، فعالیت های آتی پروژه "تانگو" مورد بحث قرار می گیرد که شامل نمایشگاه تعاملی و ورکشاپ با شرکت های محلی می باشد که موضوع بحث در همگی آنها همان پروژه های پایان نامه دانشجویان است، که "Re-Made in Barona" یکی از آنها می باشد.

در پایان، نتیجه گیری نهایی و ارزشیابی نهایی می باشد که شامل: ارزیابی امکان تکرار این سیستم در ایران، و سناریوی محتمل در آینده است.

ABSTRACT PERSIAN

در دهه های اخیر تحقیق و کاربرد حرفه طراحی گسترش چشمگیری یافته است به طوری که تعریف طراحی تعریف طراحی به عنوان مقوله ای که فقط به مصنوعات صنعتی توجه دارد، دیگر برای توضیح این تخصص جامع، کافی نیست. یکی از اساسی ترین خصوصیات این دگرگونی معرفی کانسپت پایداری و توسعه پایدار در پروژه های دیزاین می باشد. این تغییر متودولوژی رانیز مورد توجه قرار می دهد، که در آن توجه از طراحی محصولات صنعتی به کانسپت راهکارهای بند بندو همه جانبه با هدف رضای نیازهای مصرف کنندگان از طریق سیستم یکپارچه و به هم پیوسته محصول وسیستم معطوف گشته است.

به هم پیوستن روش پایدار با یک متودولوژی سیستماتیک، باعث شده است که طراح به بخش های جدیدی توجه نماید، که بخش اجتماعی یکی از آنهاست. در این بخش جدید، حرفه طراحی وارد تجربه ابعاد جدیدی شده است، از جمله آنها: طراحی راهکارهایی برای پیشرفت و بهبود شرایط زندگی مردم در جوامع است، یعنی جایی که مردم، ایده ها و مشکلات پشتیبانی می شوند تا اینکه نتایج همکارانه و مشارکتی خلق شوند.

این پایان نامه قصد دارد، تا بر فعالیت های دستی که هم اکنون در خانه های سازمانی واقع در خیابان "لوپه دوگا" جریان دارد تمرکز نماید. پروژه ذکر شده زیر مجموعه ای از یک پروژه بزرگتر با نام "پونتو لینه آ" می باشد. هدف از این پایان نامه پیشنهاد سیستمی خلاقانه از محصولات و خدماتی می باشد که باعث ارتقا برابری، تعامل اجتماعی و گفتگوی میان گروه های سنی مختلف در محله نامبرده و اطراف آن گردد.

این پروژه مجموعه ای از محصولات و خدماتی خواهد بود که به سیستم پایداری اقتصادی مورد نظر را میدهند تا حتی پس از پایان یافتن بودجه "کاربیلو" با هماهنگی اجتماعی و تاثیرات اندک بر روی محیط زیست با راهکارهای خاص و همکاری با شرکت های محلی، قادر به ادامه حیات باشد.

فعالیتی که برای رسیدن به پروژه نهایی صوت گرفته است، شامل چهار بخش می باشد. اولین قسمت بر اساس مرور ادبیات موجود شکل گرفته است، که هدف از آن شناسایی راهکارها، مسیر و جهت آنها برای طراحی پایدار می باشد.

دومین بخش، تحقیق در مورد "پروژه تنگو" و فعالیت و هدف و نتایج این پروژه می باشد که هم زمان در سه دانشگاه در اروپا در حال اجراست.

در ادامه این بخش توجه خاص تری به پروژه های در حال اجرا در میلان شده و فعالیت و ارتباطات با ارگان ها و سازمان های مختلف توضیح داده شده است. در این بخش همچنین به فعالیت های موجود در "لوپه دوگا" که در این پایان نامه قصد بهبود آنرا

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Part 1
THEORETICAL
BACKGROUND

1 PSS INNOVATION A PROMISING APPROACH TO SUSTAINABILITY

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

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

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

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

To clarify this concept we can take the example used in a UNEP publication³: given the “satisfaction” in having clean clothes, we do not need only a washing machine but also

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

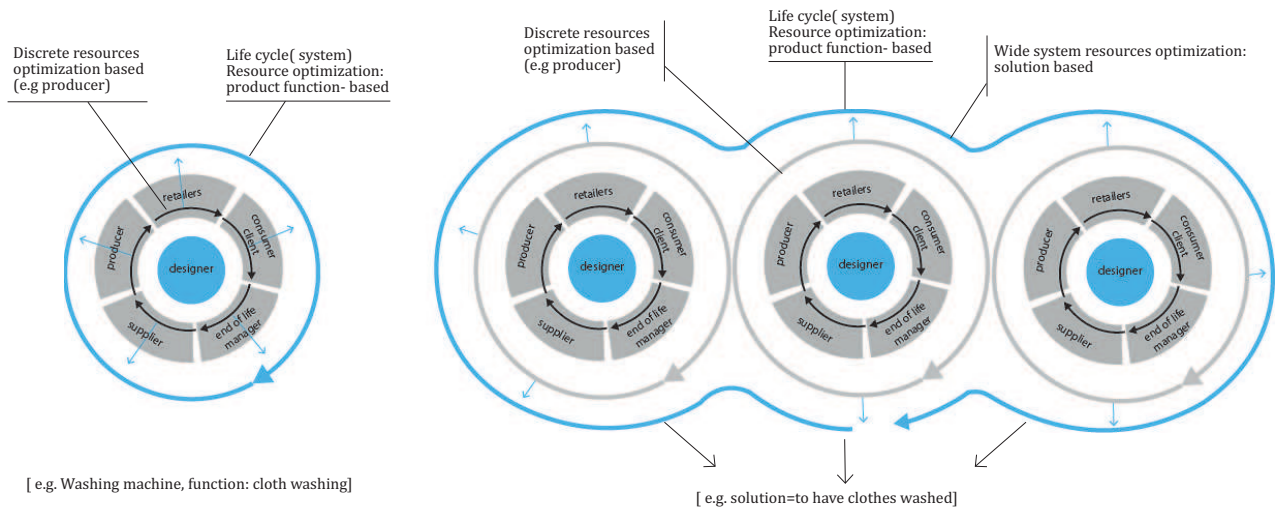
2. Goedkoop et al. 1999; UNEP 2002

3. UNEP, 2002

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: 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

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



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.

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

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

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

We don’t have to assume that PSS is synonymous of low environmental impact: it does not guarantee environmental improvements. As stated by UNEP (2002) PSSs only have the

4. UNEP 2002

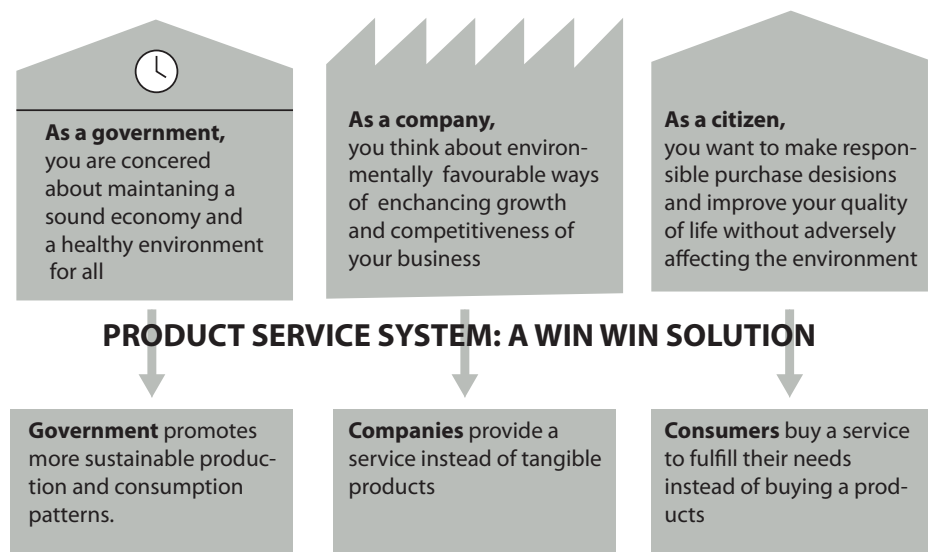
5. Vezzoli, 2006

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. 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

Figure 1.3
PSS:
a winning solution
(adapted from UNEP
Division of Technology,
Industry and Economics)



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

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 ¹.

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.”

Commonly referred to in this context as a Product-Service System (PSS), Mont ² defines it as “a system of products, services, network of actors and supporting infrastructure that continuously strives to be competitive, satisfy customer needs and have a lower impact than traditional business models”.

More recently, in the United Nations Environment Program publication³, 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”.

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

2. Mont, 2002

3. UNEP, Tischner, Vezzoli, 2009

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.

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”⁴. Thus eco-efficient system innovation derives from a new convergence of interest between the different stakeholders: innovation not only at a product (or semi-finished) level, but above all as new forms of interaction/partnership between different stakeholders, belonging to a particular value production system. A value production system includes the value chains of a firm’s supplier (and their suppliers all the way back), the firm itself, the firm’s distribution chan-

4. UNEP, 2002

nels, and the firm's buyers (and is presumably extended to the buyers of their products, and so on)⁵.

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 paragraph.

5. Porter, 2006

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 researchers¹ to both disseminate world-wide the concept of Product-Service Systems innovation, and start exploring new PSS potentialities, which can be summed up in the following queries.

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

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

To clarify this working hypothesis let’s look at an example of Product-Service System innovation in low-income and emerging contexts².

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

1. 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.

2. 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>).

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 Brazil's 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 highlighted in support of this hypothesis³.

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 of-

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

fer 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 Equity and Cohesion.

Several authors argue that a favourable economic model to couple socio-ethical and environmental dimensions of sustainability is that of the so called distributed economies¹.

A well-known institution on economics and sustainability, the International Institute for Industrial Environmental Economics (IIIEE) in Lund, defines distributed economies as a “selective share of production distributed to regions where activities are organized in the form of small scale, flexible units that are synergically connected with each other”².

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 include³:

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;

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

2. Johansson et al., 2005

3. Johansson et al., 2005

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*⁴ 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 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 lead to a series of highly centralized production and distribution infrastructures. The

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

Without access to resources and to energy in particular, individuals have little control over their own destiny.

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 world⁵. 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 regime⁶. 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

5. 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

6. Rifkin, 2002

significant way, but already today the installation and management of photovoltaic (sun) is infinitely less complex than plant for oil wells and refineries. They are therefore also installable and manageable by small scale economic entities, even by a single residential complex or single individuals.

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

In short, such a decentralized infrastructure supplied by renewable sources, usually referred to as *distributed energy generation*, on the one hand would reduce environmental impact, and on the other could facilitate a democratization

of resources and energy, enabling individuals, communities and nations to reclaim their independence while accepting the responsibility that derives from their reciprocal interdependence (self-sufficiency and interdependence).

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

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

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

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

It has also been observed⁷ 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

7. Sachs, 2002; Sachs, Santarius, 2007

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”.

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.¹

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

Focusing on what the neighbourhood lacks also takes a psychological toll on neighbourhood pride.

1. Kretzmann and McKnight 1996

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.² Under this framework, the term "asset" is restricted to the concept of wealth, including 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.³ 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,***

Neighbourhood assets include the talents and skills of individuals, organisational capacities, political connections, buildings and facilities, and financial resources.

2. Page-Adams and Sherraden 1997

3. Page-Adams and Sherraden 1997

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 including⁴:

- 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.

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.

ABCD creates an opportunity for residents to not only take part in, but also lead the neighbourhood planning process.

4. Mathie and Cunningham 2003

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

2.1 Actual European Situation_ Ageing

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

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

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

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.

older people to:

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

What is unique about the Third Age outdoor adventure context is that it includes in one package a number of elements that have the potential for *substantial benefits* and *well-being* of older people. These elements include *self chosen physical Involvement* in outdoor pursuits, *strong social contexts*, and *immersion in natural outdoor environments*. In addition, adventure activities provide opportunities for engagement with risk and challenge and experiences of uncertainty.²

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

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

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

- **Social Benefits:** Meet new friends, engage in cooperative activities, maintain social networks, experience fellowship

2.Priest & Gass, 2005

3.Alves & Sugiyama, 2006

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

and goodwill, give and receive social support

- **General Wellbeing:** An independent lifestyle, improved sleep patterns, learn new skills, enjoy life, feelings of well-being, 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). Hence, social capital is positive at a community level but also accrues to individuals.

Conclusion

Being socially involved has health benefits for seniors⁵, leads to less cases of depression⁶, and more perceptions of safety⁷. Conversely, low social capital has been linked to dysfunctional and unstable communities with higher problem severity⁸.

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

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”¹. As a result, public spending for pensions, health care and long-term elderly care will rise significantly ²while at the same time young people will be facing increasing difficulties in accessing quality education and adequately paid employment ³. These challenges pose a threat to young people’s ability to live autonomous lives as equal members of society ⁴.

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. **This way, young people can learn from the experience of older peo-**

1. COM(2009)

2. *ibid.*

3. European Youth Forum 2008;

4. *ibid.*; European Youth Forum 2009

*ple, 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.*⁵ 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*⁶.

figure 2.1
<http://mtova.org.il>



5. European Youth Forum 2009
6. Centre for Intergenerational Practice 2009

2.1.2 DIFFERENT METHODS

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

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

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

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

According to our researches in order to see if there is any other method exists within this context of research, there has been no specific design method just for improving and fostering intergenerational dialogue. The only referable method, is the Community-Based Participatory Research (**CBPR**) method¹ 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 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.

1. 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

2.1.3 BEST PRACTICES

The research of the following 33, study cases 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 practical analysis, made by seeking and chasing the internet resources, has been focused on the integration between generations, realized with activities, shared activities and interactions. The second research part became real in the selection of Milanese cases analysed in first person. Each study case, has been defined in relation to the kind of approach and about the interaction objective; moreover each case has been analysed through social, environmental and economical sustainable characteristics.

The research on the studied cases, has been made to give some materials and inspirations to the *SDS course* students. They'll be useful in development of the four design briefs during the System Design for Sustainability course.

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

The three section are:

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

Name of The Product-Service System Innovation

Orti del Parco Nord

Content

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

Producer/Provider Name

Consorzio Parco Nord Via Fabrizio Clerici- Sesto San Giovanni MI

Source/Contact

www.parconord.milano.it

Eco-Efficiency and Socio-Ethical Characteristics:

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

Product-Service System Innovation Characteristics:

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

Name of The Product-Service System Innovation

Andiamo a scuola da soli – Walking bus

Content

The service, promotes the autonomy in children goin and re-
turning 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 volun-
teers)

Source/Contact

Creative Communities (Anna Meroni – Edizioni Polidesign) –
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 peo-

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

Name of The Product-Service System Innovation

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

Content

Cohousing service to favour elderly and students

Producer/Provider Name

City of Modena and Reggio Emilia

Source/Contact

www.comune.modena.it

Eco-Efficiency and Socio-Ethical Characteristics:

The project goal is about helping in daily activities and creating relationships; the service promotes the social aspect of the cohabitation that can be for both an occasion to sensitize the other. The service allows both students and elderly people to save some money: a cheap rent for the student and some extra money at the end of the month for the elderly. This cohabitation can encourage other kind of collaboration behaviours, like sharing the cost of the food or the dispensa-

bility on both sides to 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. 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 he has to help in daily activities and to keep company to the elderly. The aged person has to provide a room and a kitchen to the student. The cohabitants are completely free to organize which activities and times they want to share. In case of incompatibility is possible to withdraw from the cohousing contract.

Name of The Product-Service System Innovation

SWAYED ECO project

Content

Creating connections between ages: sharing spaces and doing collaborative activities

Producer/Provider Name

SWAYED (South West Area Youth Engagement and Diversion)

Source/Contact

www.scotcip.org.uk

Eco-Efficiency and Socio-Ethical Characteristics:

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

Product-Service System Innovation Characteristics:

The “ECO project” service was born from the need to defuse some tensions in a housing community. Bharati Bundhoo, employee of the centre, thus she decided to introduce the two groups (young and old) to dialogue with the intent to smooth over the contrasts and rebuild the physical and communication spaces. This gave birth to “ECO project”: repurposing 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. Until now, the center is working to build a soccer field and a computer classroom for adult residents.

Name of The Product-Service System Innovation

Schools Project

Content

School assistance by elderly volunteers to support children with different problems

Producer/Provider Name

Retired and Senior Volunteer Programme (RSVP), Edinburgh

Source/Contact

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

Eco-Efficiency and Socio-Ethical Characteristics:

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

Product-Service System Innovation Characteristics:

The "School Project" was born through the collaboration between a primary school and the volunteers of RSVP of the

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

Name of The Product-Service System Innovation

Bonnets and Baseball Caps

Content

Intergenerational partnership in school activities.

Producer/Provider Name

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

Source/Contact

www.scotcip.org.uk

Eco-Efficiency and Socio-Ethical Characteristics:

The service goals, about socio-ethic aspect, is to share knowledge between generation; the project allows to use the theoretical and practical skills of young and old people, to achieve

something concrete in order to create a greater cohesion and participation within the community. Another future goal is to repeat this service model in other schools in order to help guys with relational problems. About the eco-efficiency of the service: the activities, made into the school classrooms, use the classes tools which are usually used for the lessons; sharing already existing resources and space reevaluating the area and avoiding to buy new objects.

Product-Service System Innovation Characteristics:

The “Bonnet 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



figure 2.2
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 resul 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

To keep providing every activity there are some elderly volunteers who want to give something back to their community through passing their knowledge and skills making a vital contribution to the project. These self-sustaining groups contribute to the plan out the program day by day and to the ongoing success of the WOOPI activities listed above. All the families and the associations of the area (es. Scout groups, youth groups...) are also invited to join the activities to open a dialogue between generations and to take advantage of the area’s resources.

Name of The Product-Service System Innovation

Nessuno escluso! Un ponte tra giovani e anziani

Content

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

Producer/Provider Name

Bologna – VOLABO (volunteers centre Bologna)

Source/Contact

www.volabo.it/cd/blu025.pdf

Eco-Efficiency and Socio-Ethical Characteristics:

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

Product-Service System Innovation Characteristics:

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

ciations already existent; Auser and associations decided together the activities and co-projected the way to follow the objectives.

Realized Activities:

- Short film lab to involve young and old people to tell the II World War and the Resistance (Castel d'Aiano);
- Dancing and traditions lab for everybody (Vergato - Don Mario Campidori Foundation);
- Ceramics and painting lab for everybody (Catello di Serravalle - Family House Sant Agostino);
- Basic theatre techniques for everybody (Savigno);
- Clown lab for young to middle age (Hospital Maggiore - Andare Association);

To show the activities, at the end of the project, has been made a documentary movie and an informative journal in order to show to the citizens the successes and possible developments in the community. The visible results were: the birth of a "rotating group", which debuted in the local theatre, and the interest of plenty of olds and young's to become volunteers of the local hospital (with clown activities).

Name of The Product-Service System Innovation

Cooking Bus

Content

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

Producer/Provider Name

Community Food and Health (in collaboration with Focusonfood)

Source/Contact

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

Eco-Efficiency and Socio-Ethical Characteristics:

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

Product-Service System Innovation Characteristics:

The "Cooking Bus" service, promoted by the Community Food and Health, has been offered to Pilmeny Development Project for a project of inter-generational cohesion through the development of culinary workshops aimed at promoting the consumption of healthy food. The activity was carried out in a pickup truck equipped with kitchen, with the participation of four seniors, three boys and three team members. There have been prepared different recipes which follow are

some guidelines on healthy cooking in everyday life. Anyone passing outside, close to the cooking bus could be able to see through a screen what happened inside and somehow feel part of it.

The service was proposed in 2010, is still active and dedicated to the schools.

Name of The Product-Service System Innovation

Omaabi- self help community

Content

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

Producer/Provider Name

Elderly of the neighbourhood, Tallin

Source/Contact

Creative Communities (Anna Meroni – Edizioni Polidesign)
http://www.sustainable-everyday.net/main/?page_id=19

Eco-Efficiency and Socio-Ethical Characteristics:

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

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

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

Product-Service System Innovation Characteristics:

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

Self Help Community is always looking for outside help, because their financial situation is not quite enough to keep going independently.

The service started in 1992 is nowadays active and almost completely self-sustainable.

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



figure 2.3

<http://www.comune.modena.it/cultura/allegati/modena-e-reggio-ospitali-da-sempre/view>

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



figure 2.4
reative Communities
(Anna Meroni – Edizioni
Polidesign) (Pg. 135)

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 re-used. 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. Everything happen virtually, except the delivery of the book with is borne by the owner of the book (from 0.80€ to 1.40€). In the last years was introduced a forum to share ideas and informations, increasing the efficiency of the service.

Name of The Product-Service System Innovation

Exchange corner in Radio Krakow

Content

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

Producer/Provider

Radio Krakow

Source/Contact

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

Eco-Efficiency and Socio-Ethical Characteristics:

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

Product-Service System Innovation Characteristics:

The “Exchange corner” service allows users to exchange various objects and “practical helps”, without purchasing or pay-

ing 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.

The club was started by a small group of senior residents, who collected furniture and materials and looked for a suitable location, ending up with three classrooms in a primary school. They combined two of these rooms by breaking down a wall, creating a cosy place open on Tuesday and Thursday afternoons. The seniors run the club themselves, doing the cleaning, washing the dishes, doing the shopping and taking turns in bar shifts. This keeps the prices low and the feeling of involvement high. There’s no membership fee.

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).

"Prendi a casa un infermiere" instead started as a test in 2007 for the 20.000 nurses that work in the city, with the need to find a quiet, cheap and compatible with the work timetable accommodation. To the hosted is not requested assistance, but simply company and a little help.

Name of The Product-Service System Innovation

Coach house trust

Content

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

Producer/Provider

Coach House (no-profit organization)

Source/Contact

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

Eco-Efficiency and Socio-Ethical Characteristics:

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

Product-Service System Innovation Characteristics:

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

Name of The Product-Service System Innovation

Ci vediamo tutti in biblioteca!

Content

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

Producer/Provider

Comune di Milano (with the funds of Fondazione Cariplo)

Source/Contact

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

Eco-Efficiency and Socio-Ethical Characteristics:

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

Product-Service System Innovation Characteristics:

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

CITIZENS OF ONE CITY

Calvairate Sormani Libraries (zone 1 and 4)

Partner: ABCittà

The experiment, made especially for guys from 14 to 16 years, move to increase their sense of identity and belonging to the city, through the comparison between center and periphery. Workshops and events will be made to accommodate young people in libraries with the chance to combine traditional culture and multimedia.

TWB - TV Web Library

Valvassori Peroni Library (zone 3)

Partners: Consorzio SIS – Sistema Imprese Sociali

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

NON E' MAI TROPPO TARDI

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

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

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

LA BIBLIOTECA CREATIVA

Dergano-Bovisa library (zone 9)

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

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

GIOVANI DENTRO

Affori library (zone 9)

Partner: La Lanterna - Associazione Teatrino al Rovescio

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

Name of The Product-Service System Innovation

Connecting Generations

Content

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

Producer/Provider

Calouste Gulbenkian Foundation's IntergenerationALL programme

Source/Contact

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

Eco-Efficiency and Socio-Ethical Characteristics:

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

Product-Service System Innovation Characteristics:

The "Connecting Generations" service aims to connect grandparents and nephews; to lower the loneliness in elderly and give more stability in the growth of the children. This project,

made mainly for those families with internal problems, runs through many proposal in one year:

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

The intent is to restore roles and stability in the family so that all ages have a space and you can make better use of resources of each. Every interaction moment is coordinated and co-projected with worker of Calouste Gulbenkian Foundation's to create a safe atmosphere and to promote in a correct way the relations. The organization is made year by year by the workers and can be modified to follow the necessities of the users.

Name of The Product-Service System Innovation

I giovani e la memoria

Content

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

Producer/Provider

Il cerchio di gesso ONLUS (funded by Fondazione Cariplo)

Source/Contact

www.ilcerchiodigesso.it - www.bergamomemoria.it

Eco-Efficiency and Socio-Ethical Characteristics:

The project helps, with the media presentation, to track and share the history of the area. This choice make easier to get and share the contents and contribute to revive traditions

that would otherwise be lost. The collaboration between the two different generations also helps to bring the elderly to media reality and let the youth know their origins to learn to appreciate them. The main socio-ethical purposes are the relationship creation, knowledge sharing and to maintain the history and traditions of the territory. Environmentally there's a preservation of the area.

Product-Service System Innovation Characteristics:

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

Name of The Product-Service System Innovation

ab-IT: Auchinairn & Bishopbriggs IT Project

Content

Young students help old people to approach the internet network.

Producer/Provider

Strathkelvin Activities Club (in collaboration with Bishopbriggs Academy)

Source/Contact

www.scotcip.org.uk

Eco-Efficiency and Socio-Ethical Characteristics:

Socio-ethically the project create relationship and share knowledge. The project indeed allowed older people to learn a new way to communicate with the outside, getting to understand the digital world that usually creates a lot of mistrust in them. The possibility also to attend the course outside the community and supported by young students helped make the experience even more effective and of exchange. Young people had the opportunity to test their explanatory power, getting from the university a reward for volunteering.

The environmental aspect is not considered in this project.

Product-Service System Innovation Characteristics:

The “ab-IT” project, to learn the basics of computer and browsing the net, was followed by ten members of the Club Strathkelvin and led by six students of the Bishopbriggs Academy university. Young volunteers supported and directed the group to learn in a 15 hours course. During the lessons, kept into the university itself, good relations of understanding

and cooperation were born and, in older participants, it was clear that many skills were acquired and this has created a sense of accomplishment in both groups. Most of the older students were enthusiastic and anxious to continue learning the computer to create a Twitter page and use Skype. At the end of the course was organized a big party, where were given the certificates and, to students / teachers, were given some tickets to cinema.

Name of The Product-Service System Innovation

Internet Saloon

Content

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

Producer/Provider

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

Source/Contact

www.internetsaloon.it

Eco-Efficiency and Socio-Ethical Characteristics:

The service move toward the creation of new relationship and the knowledge sharing among different generations. It is totally free, offers to the over 50 people a good opportunity to get into the media reality. Giving also the possibility of repeating the experience and use the resources on site, gaining more knowledge each time. The participation of students allows them to test and exploit the knowledge gained

in comparison with another generation. The materials and spaces are enjoyed and shared by several people allowing to optimize the use and ensuring a secure financial savings to participants. The setting of the service, based on a single lesson, allows, to people on the move, to participate increasing massively the number of attendees.

Product-Service System Innovation Characteristics:

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

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

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

Characteristic of all Internet Saloon is the casual, friendly atmosphere where senior students can share experiences, exchange ideas and forge new friendships.

The service started in 2000, is still active and implemented in seven sites: in Milan, Sondrio, Pavia, Ancona, Bari, Naples and Catania.

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



figure 2.5
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



figure 2.6
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 “Bonnetts 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 re-integration 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;

To access this service you must contact the local Social Services. Among the participants there are seven volunteers who, every day, help and coordinate the work flow in order to get everything done with professionalism and efficiency. The cooperative is always looking for new members to satisfy, respecting the delivery, the increasing workload that is commissioned.

The service, born in 1989 is still active.

Name of The Product-Service System Innovation

Punto e Linea

Content

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

Producer/Provider

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

Source/Contact

site www.progettopuntoelina.it

Eco-Efficiency and Socio-Ethical Characteristics:

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

rience 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 young people 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

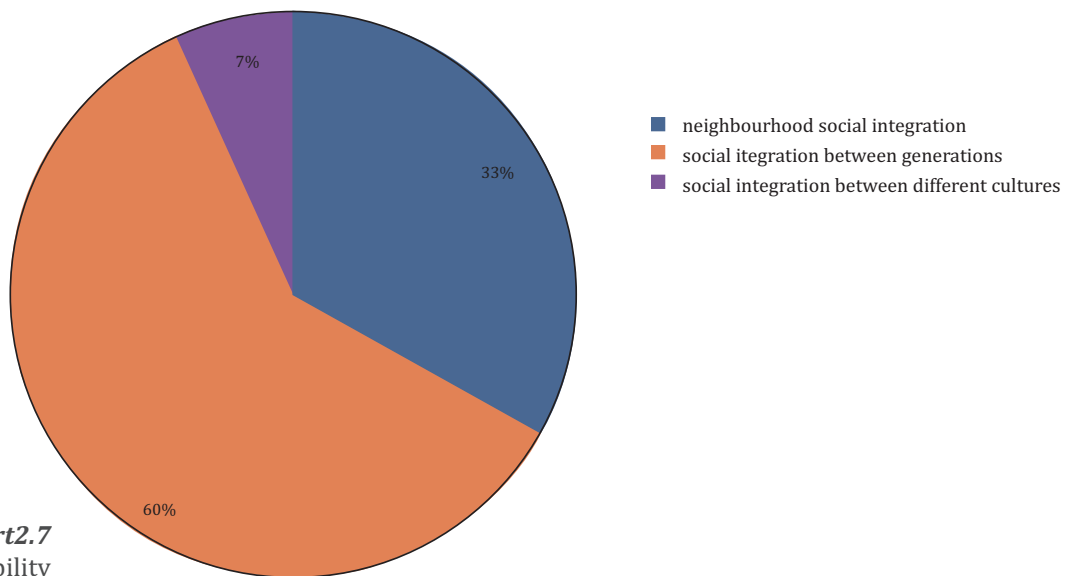
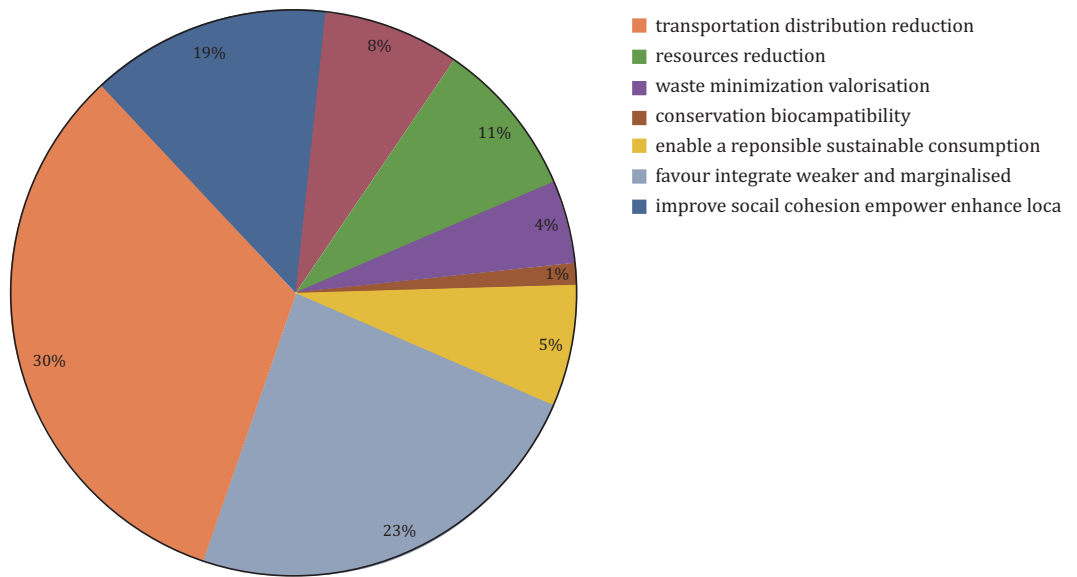
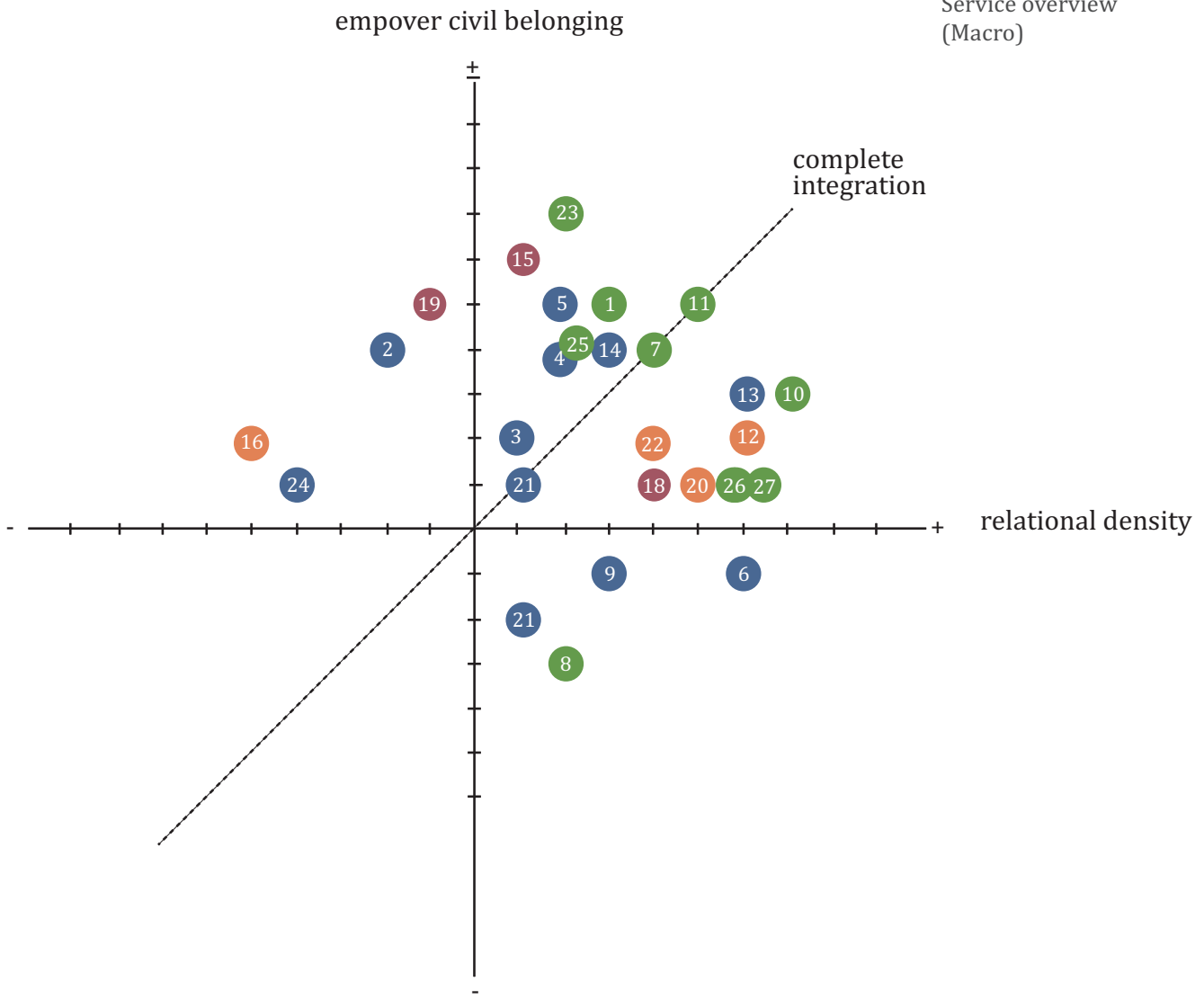


chart2.7
System Sustainability

graph 2.8
Service overview
(Macro)



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

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

Part 2
TANGO
AH-Design PROJECT

3

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.



figure3.1
TANGO project's postcard

3.2 ACTIVITIES

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

Aalto university in Helsinki:

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

Furthermore, Aalto activated the workshop Intergenerational Accessibility in a Sustainable Exhibition (October-December 2012). The focus of the workshop is on pedagogical models where people of different ages would meet each other and create new understanding of design and intergen-

erational 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 focus of the workshop is to explore inter-generational 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, flayers 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 inter-generational 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 Sarcì (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

figure3.2
Final presentation of the
SDS course's project.



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.

figure3.3
Students of the SDS course explaining their project to a hubber.



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 Provincie Lombarde since 180 years ago, to pursue its philanthropic mission and to give ideas a future.

The Socio-Ethical Characteristics:

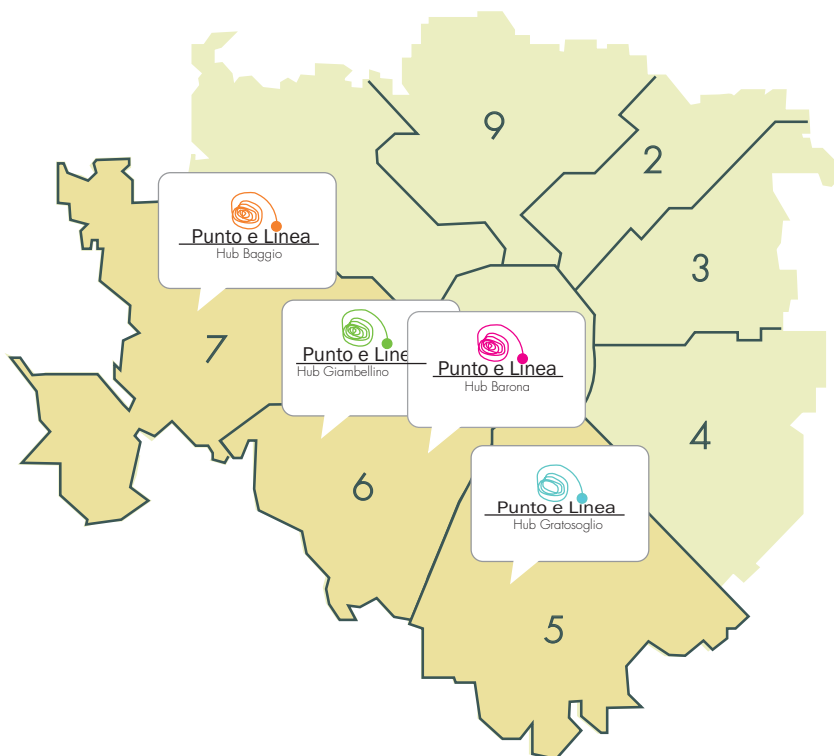
The project’s socio-ethical aspect, which operates in four areas of Milan: *Baggio, Giambellino, Barona, and Gratosoglio*, has as its main goal the revitalization the power of suburban youths. This project has raised many initiatives in the four district of Milan. Above all, improving the neighbours 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 collabo-

ration 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;



4.3 THE “PUNTO E LINEA” INITIATIVES

The Politecnico di Milano has identified (for the Tango project) 4 main activities already activated within the HUBs¹, 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 world-wide). 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

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

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 updates².

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 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.

2. . www.ihaveastream.tk

4.4 THE FOUR DESIGN THESIS

our 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 ease 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, 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 Fossati, Claudio Sarci (January-December 2012)**

Figure 4.1
An Event in Social Houses “Lope de Vega”



Part 3
TANGO IN MILAN
2011- on going

5

PSS DESIGN PROCESS: MSDS METHOD

5.1 INTRODUCTION

The Tango Milan design process has followed the Methodology for System Design for Sustainability (*MSDS method*) properly developed to support a Product-Service System design process and to orientate it toward sustainable solutions. The method and its five phases are flexible about: procedural phases, tools to use, dimensions of sustainability to consider (environmental, socio-ethical and economic), and about the possibility to integrate other tools and activities; to be adapted to the specific needs of the designers/companies and to different context's conditions. It is organized in the following phases:

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

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

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

TOOLS

RESULTS

ACTORS

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

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

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

SDO toolkit: orientate+ check concepts, offering 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 concepts

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 un-

PHASE

PROCESS

AIM

FIRST PHASE

STRATEGIC ANALYSIS

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

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

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

derstand 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.

- **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°...)

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.

5.2.1 THE PROCESS

The first action of the SA have been two meetings with each initiative' Hubbers (proposers-responsible of the HUB) to understand their role in the HUB, with mission and goals, to define the main offer underlining the structure and the actors, as well as strengths and weaknesses, using co-design tools. Another relevant aspect investigated was the economic, environmental and social sustainability of the offer, and referred to the general HUB management.

In parallel to these meetings have been organized some sessions with the real actuator of the offer, (sometimes they were the hubbers themselves) during the offer delivery, to explore and understand the dynamics as timing, actions as well as actors involved and their interactions and roles. These further on field explorations have been useful to see in detail the structure of the offers and the roles of the participants in it, as well as the as to understand (in and outside the initiatives) the habits of the inhabitants of the district, with their situations and expectancies, and to verify the awareness and reaction of the neighbourhood to the "Punto e Linea" intervention.

To set the above analysis have been used the following co-design tools:

- **Offering diagram** to define in detail the functions that the system delivers to the user;
- **System map** to visualize the system structure of the offers indicating the actors involved and their interactions; furthermore to present the value chain of the existing business involved in the project, and the organization of the system;

- **Qualitative sustainability report** to evaluate the current offer about (two of) the three dimensions of sustainability (economic and environmental);

- **Sustainability Design-Orienting toolkit (SDO)** to analyse the existing initiative in terms of environmental, economic and socio-ethic sustainability and to define priorities for action planning ;

- **District map** to investigate and represent the characteristics of the reference context, displaying the associations in the area with some pop ups and a legend which shown the exact address of each point, in order to create and show the possible network of stakeholders;

- **Demographic district map** to represent the characteristics of habitants of the reference context in detail about gender, citizens and foreigner;

- **Best practices** (about social inclusion and intergenerational dialogue in the Italian and European panorama) to make a comparison with the “Punto e Linea” initiatives structures and systems and to get first design inputs.

From the above co-design tools have been produced the results of the Strategic Analysis about each initiative which have been collected, elaborated and divided in different supports. These are the following:

- **MINIdoc:** This tools have been tested as very effective visualization to share information during the co-design process: in particular the MINIdoc has been used to show to the design students of the SDS course the SA results about “Punto e Linea” contexts, offers and proposers.

- **pdf files:** qualitative sustainability report, demographic district data, district map.

- **ppt files:** system map, offering diagram

The audiovisual files have been used to represent selected results of the Strategic Analysis which describe the context, the proposer and the existing initiative of each HUB, from the point of view of the proposers (backstage) and of the final user (front desk). These have been shoot and post produced by the degree students, starting from interviews and clips shoot in the territory. All the produced outcomes of the SA have been published online on web-based sharing platforms: youtube.com, slideshare.net and mydrive.ch., to enable the streaming view and free download in an open source and copy left logic.

A collaboration with the Movie Design Lab of the Politecnico di Milano has been activated to better reach a high quality for above audiovisual files designing together the best way to show the information, periodically checking the filming, providing the shooting equipments. Furthermore the Movie Lab contributed in the editing of the filming through a short course about editing software i.e. Adobe Premiere and Adobe After Effects and with specific adjustments and suggestions related to the representation of each HUB.

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)

PHASE

PROCESS

AIM

SECOND PHASE

EXPLORING OPPORTUNITIES

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

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

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

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.

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

TOOLS

SDO toolkit: orientate+ check concepts, pffering 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.

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.

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.

| | PHASE | PROCESS | AIM |
|-------------|--|---|---|
| THIRD PHASE | DESIGN SYSTEM CONCEPT <ul style="list-style-type: none"> • selecting the clusters of ideas/ or single idea. • developing system concept | The outcome of the course is analysed and the most promising are selected. in 4 co-design workshops with the degree students and hubbers the proposals are re-defined in terms of, system structure, actors interaction, promising stakeholders. | Determine one or more system concepts oriented toward sustainability. |

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 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;

TOOLS

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

RESULTS

4 sustainable PSS concepts

ACTORS

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

- ***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.

5.5 DESIGNING AND ENGINEERING 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.

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.

| | PHASE | PROCESS | AIM |
|--------------|--|--|--|
| FOURTH PHASE | DESIGNING & ENGINEERING THE SYSTEM <ul style="list-style-type: none"> • detailed system design • environmental, economic and socio-ethical appraisal. | Detailed system design by the assessment of the environmental, socio-ethical and economical aspects are developed through the stakeholders contribution and technical experts. | To develop the most promising system concept into the detailed version necessary for its implementation. |

This phase will go 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). 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;

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.

- **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 being 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.

| | PHASE | PROCESS | AIM |
|-------------|---------------|---|---|
| FIFTH PHASE | 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. |

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.

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

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

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

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

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

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 material flows
- the fine square-dotted arrow indicates information flows
- the fine round-dotted arrow indicates money flows
- the full, thick arrow with 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 and the existing system, and radar diagram to visualise the result of the analysis.

ciated with the three dimensions of sustainability compared to the existing system. This is done by using checklist to compare the designed solution and 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 level. 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 interaction 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

6.1 STRATEGIC ANALYSIS: THE RESULTS

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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.*

6.1.2 THE PROPOSER/THE OFFER/ THE CONTEXT



Michela Bellodi • LaCordata

Manuel Ferreira • Alma Rose



Silvia Bartellini • LaCordata Director

figure 6.1
photos from
the interviews

The “Champion Stakeholders” of “Punto e Linea” Project in Barona district

La Cordata

The Consortium; is a social enterprise that since twenty years ago offers residence to everyone: tourists, students, workers, families, foreigners, children, single mothers with children, people with disabilities. They offer accommodation, social support, education and housing and hotel hospitality in a short - medium - long term. Their goal is to create and sustain relationships between people, activate networks of support and solidarity for those who live in an uncomfortable situation and finds it difficult to fit into the city.

Alma Rose

Alma Rosé is a theatre company that was founded in Milan in 1997 , and since then it began a process of research and reflection, ranging from fairy tale themes of political and civil. Interested to promote a dialogue with the authorities, public and private, operating in the city of Milan, the capital of culture. Brings its show not only in theatres but also in unusual places.

Art kitchen

A creative organization that promote and produce artistic, creative and social projects through the realization of exhibitions, projects and ethical campaigns. The aim is to popularize the art, create the unique experiences.

ASP

A local non-profit association.

What The “Manual Activities“ Offers to The People of Barona?

The system offers, 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 social 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.

The offering diagram of the existing project

experimenting

5 meeting with fixed dates

-topic introduction
-practical tests
-creation of artifacts

acquire new skills for the
everyday life

-greater independence
-job opportunities

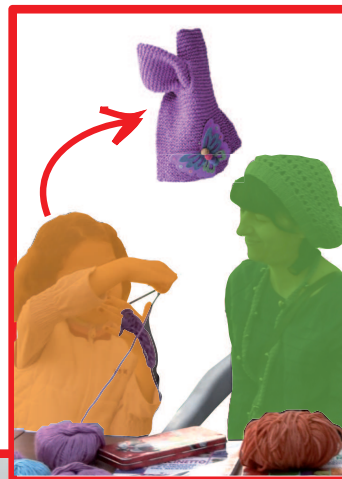
147

acquire new skills

video



knitting



propose activities



everyone can feel free
everyone to propose new
ideas

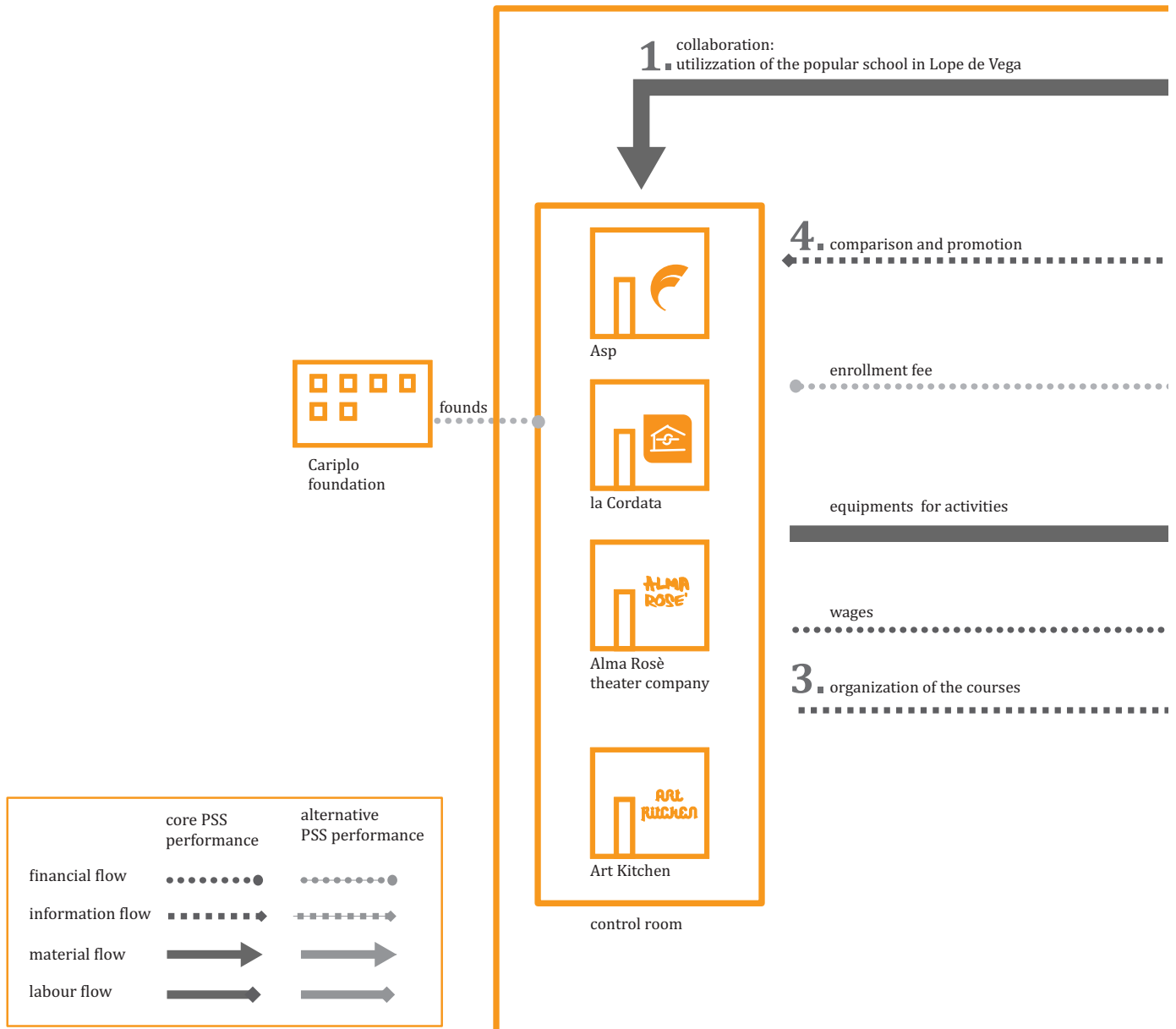
make up

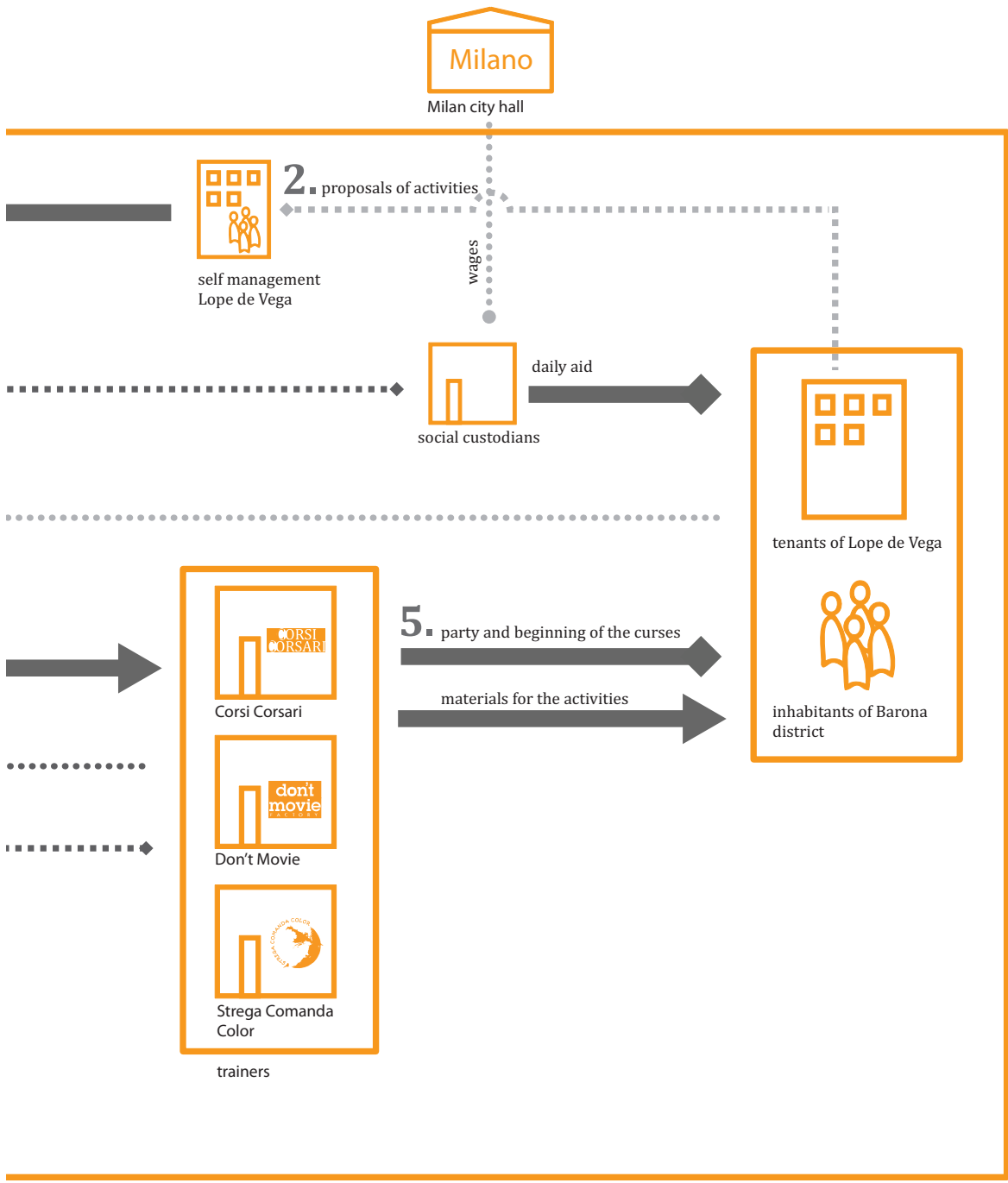


kitchen with "everything" LET'S GO TO CREATIVITY'S SCHOOL

the system map of the existing project (manual activities)

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Demographic Data Of Zone 6

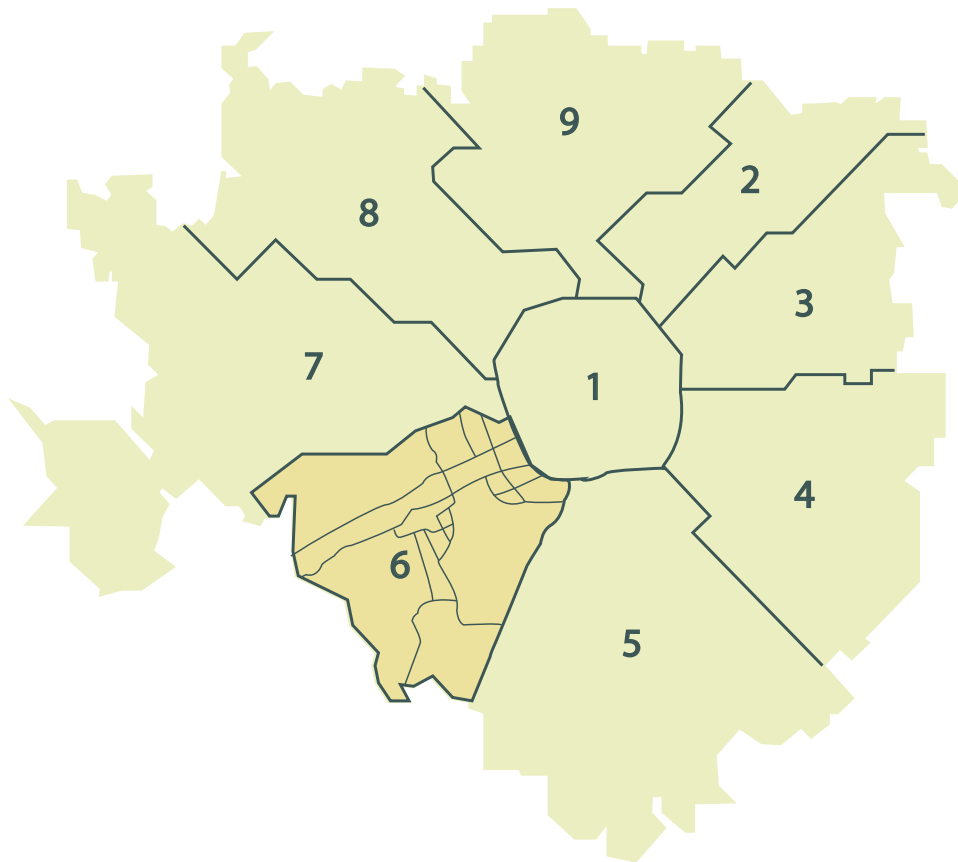
Italian Residents Population:

F: 78,471 M: 146.606 TOTAL: 146.606

Foreign Residents Population:

F:10.348 M: 9,222 TOTAL: 19.570

Barona is a heterogenic zone, within the zone 6 of Mian, in which the people form different social and economic levels, live close to each other.





Via Giacomo Watt - Via Giovanni Enrico Pestalozzi

Close to via Alzaia Naviglio Grande. A reach area with many wealthy people and lots of advertising agencies around.



Barona Village - Via Lope de Vega

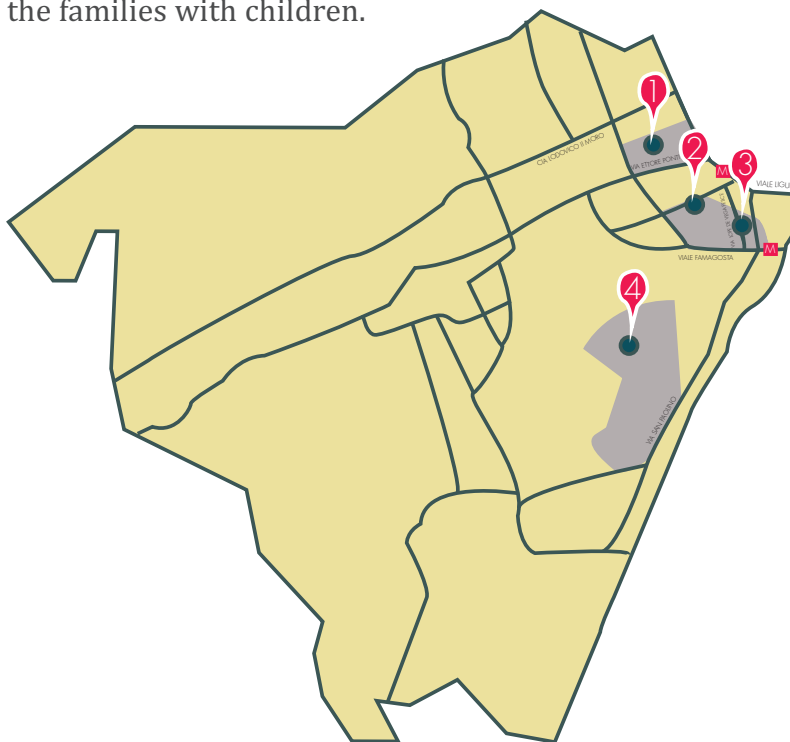
Middle class families live in this area. This part is worked as a passage between the reach and poor areas of the district.



Via Sanpaolino

Mostly the low income families live in this part and the big population of this district are the old people who live in the houses that was built in 60's, 70's. In that period of time the population of this district was extremely young but after the decades the characteristic of this place has been changed and grew old.

There is just a few shops and stations in this zone and the access to the other parts of the city is difficult for the elderly and the families with children.



Barona Village, is a vast open land that owned by “Cassoni Foundation” and “Banca Popolare di Milano”. There is 90 affordable apartments available for the rent to the low income families.

Talking about the economic management of this zone, there is a contract to use the space for 20 years. The financial revenue of this system comes from the rents of the apartments and salons that sometimes citizens or the private companies rent them for different aims. And the public organizations funds is around 30% - 40% of all. But the private organizations and volunteers supports plays a crucial role in running this system. An special characteristic of this place is The **strong volunteers support** which has existed during the years.

About the work of Punto e linea project, should be mentioned that at the beginning of the work of “Punto e Linea” project in this district there was an unreliability among people about this project but day by day this distrusting disappeared and in recent activities more people attend the events and follow the courses. And the “Lope de Vega” is become a sort of a cultural transition place between different parts of the district. It is hoped that **The “Punto e Linea” project would be accepted by the people of this district, in the time.**

figure 6.2
Festival in social
houses” Lope de Vega”





6.1.3 CRITICAL ASPECTS

Environmental Dimensions:

There is variety of disposable materials in the system, such as cutlery, dishes, paper towels, foils, plastic boxes and wraps for the cuisine course or cotton and tissues for the make-up courses. The packages used for the cosmetics in the make-up course are thrown away. Mobile phones and computers used for the video course tend to be technologically obsolete and in a short time, they would be directly disposed.

Transportation

The part of the yarns for the knitting course, initial products for the cuisine course, cosmetics for the make-up course, mobile phones and computers for the video course are not from the local source. People commute the distance between their home's to the courses by different means, among them mopeds, cars, bikes or by foot are the most important ones. In general there is a lack of public transportation in this district that has caused some difficulties for the people specially elderly and the families.

Energy Resources

The cuisine course consumes both methane gas and electricity in a large amount, it consumes a high quantity of water as well. The video course uses energy, both for mobile phones(it's not so much)in video recording and for computers in post-production process. It's important to mention that there is a scape of the heat in the school of Lope de Vega because the school is not well thermally insulated. The lighting in the school is provided by neon lamps and no sensors

figure 6.3
Knitting course in
"Lope de Vega"

or dimmers were installed. The make-up course uses a high quantity of cosmetics, detergents, disposable cotton pads and tissues.

Waste Management

Organic food waste from the cuisine, cosmetics, detergents, disposable cotton pads, tissues, discarded yarn, cell phone and food packages go to landfill. In general, there is a lack of management in term of waste minimization.

Economic Dimensions and Socio-Ethical Dimention

In this period of time, there is no other better and innovative proposer that could offer an innovative business model and as a result bring value to the chain. This project doesn't have any revenue for its coordinators and only relies on the funds which has been received from the "Cariplo Foundation", however the proposers of this project could succeed to get a sponsor for the make up course but they are still looking for some other sponsors for the cuisine, video and knitting courses and they are trying to save some money by re-using some stuffs. By saying all this, it's crystal clear that there is a lack of comprehensive management during the designing and operating of the system. And because of that the future of the system is unclear in term of economic dimension, after finishing this fund, because the inhabitants of the district also are not showing enough enthusiasm in participating in the activities and so having a system which could self sustain after finishing the fund is seems to be necessary.

Conclusion:

During the interview with the executive responsables of the project understood that they have all the common point of view about the Barona district's people which is their strange and unfriendly reaction toward the ongoing cultural and social project in some specific zones of Barona. They look at them as a strangers and hardly open the doors of their communities and let them in their society. This reaction might has been occurred, because of the needs-based approach of the executive members toward the citizens in this district. Focusing just on what the neighbourhood lacks takes a physical toll on neighbourhood's pride and in this situation citizens no longer view themselves as a useful and they wouldn't contribute in the projects or propose the new ideas. The distance between them and the social organizations has been always viewed as a problematic issue, but never has been done any deep research on the reasons of this problems. This unfamiliarity with the society has been caused to the reduction of voluntary precipitation.

Furthermore, according to the result of the strategic analysis of the context, the economic dimension of the existing service could be considered as the most delicate and un-sustainable part of the system.

In following pages the SDO toolkit has been used to understand the most problematic parts in detail and set the priorities for designing a new and innovative concept.



6.2 EXPLORING OPPORTUNITIES (MSDS PHASES):

The aim of this stage is to itemise the specific requirements of the system concept to enable its implementation process.

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 the four thesis projects were switched on and the four degree thesis students were following the course and tried to orient the students with the MSDS method.

In following pages, you will see the 3 briefs of the new concepts that have been designed by the SDS course students, related to the “Manual Activities”.

6.2.1 STUDENTS PROJECTS FROM SDS COURSE: MAIN IDEAS AND SUGGESTIONS

2. Cooking Course

- receive the natural products from the Bike Association
- prepare and pretreat the raw materials
- cook the food and organic make-up products
- socializing with the other habitants
- deliver the products to Bike Association



3. Make-up course

- receive the natural products from the Bike Association
- prepare and test the products
- Socializing
- Demonstration of using the make up products

4. Acting Course

- receive the products from the make-up courses
- prepare their masks/ make-up for the shows
- Socializing
- give a performance



"THE CIRCLE OF CULTURAL EXCHANGE"

Habitants share their ideas and skills in the community and self-produce some materials in an economical and sustainable way to reinforce the society



5. Bike Assosiation

- doing physical exercise,
- socializing,
- deliver all the physical materials on request

1. Community Gardening

- sow seeds which have been chosen
- take care of the plants
- harvest the plants
- socializing with the other habitants
- deliver the products to Bike Association



6. Web Radio and Video Lab

- record the lessons
- edit the radio program and the videos
- Publish them to Internet



Group 1

Brief of the Project:

The four hubs of the Punto e Linea project already have their coordinators appointed by the Sovralocale Hub. They will become a group of people organizing the continuous exchange and coordination among the different stakeholders of the project. The coordinator of Barona is capable of organizing the continuous exchange and coordination among the different stakeholders of the project. Furthermore he is responsible for the functioning of the activities.

strengths:

1. Participation of different hubs and interaction between them.
2. Bike association could be considered as a good stakeholder.

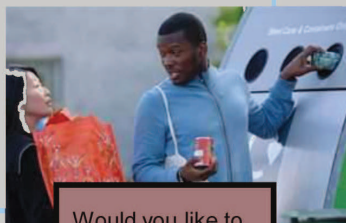
weaknesses:

1. Hasn't done any research to see whether having collaboration of all hubs together is feasible or not. Because on one side it seems to be a lack of interest between different hubs to work together and on the other side by having all of them together we lose the concept of zero kilometre goods and localization which is the main goal of this project. But shouldn't forgotten that some neighbour hubs could be considered as a potential stakeholder for one another.
2. The intergenerational dialogue has been forgotten.

create a compost

People bring their own left over food

Learn how to recycle non biodegradable materials



Would you like to learn about the recycling reusing?

Would you like to learn everything about the garden and cooking ?

Would you like to learn how to create your own energy with solar panels ?

Learn about agriculture and compost how and why

Cooperatives local producers and resources

Biologic food

Make your own solar panel

Learn about energy system

Enjoy/Use the energy made in other workshop



What about through FOOD EVENT , meeting, learning about garden, recycling and energy?



Group 2

Brief of the Project:

The aim of this project is to bring the community together through a series of workshops and events, which will rise the awareness about saving them energy, while bridging the generational gap. Our core idea revolves around the food cycle. Thinking of where food comes from, we are going to use their existing greenhouses to grow the vegetables and then we will collaborate with local producers and the agricultural market and hold the cooking classes in which elderlies could share their unique recipes with the rest of the neighbourhood. We encourage the community to bring vegetables, spare food and materials that they would normally throw away.

strengths:

1. Participation of local market in the service and considering the zero kilometre food.
2. Participation of elderlies in the service through offering the new food recipes.

weaknesses:

1. The solar panels are so costly and massive for a small place like the school of Lope de Vega and unnecessary at least for the beginning of the activities, this issue shows the lack of information about the people of this district and their real needs.

Sustainable interARTing

RE-THINK!...



Saving resources by installing solar panels in the buildings



Re-design course

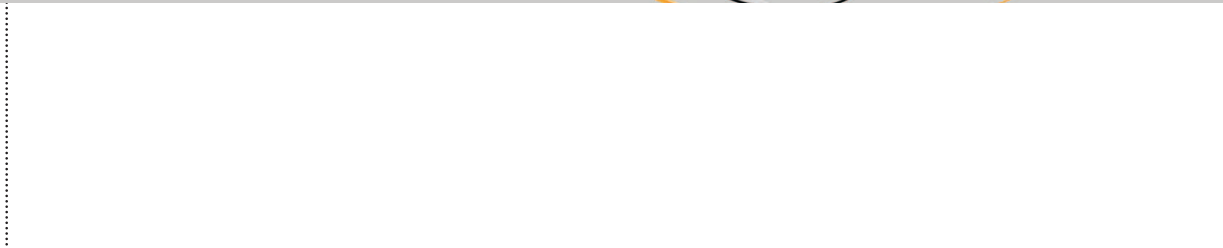
Community soccer game

Computer for beginners



Solar panel contest

...EXPERIMENTING





Group 3

Brief of the Project:

Through this project, we want to offer courses with a short duration, we organised 4 courses divided in 2 categories:

- solar panel contest; re-design course (sustainable)
- computer course; football course

The main idea of these courses is to teach a specific skill to a selective group of people, the lessons will be hold by an “expert” in the field. In order to make this a fun, and interesting learning project, and be able to integrate the artistic component of the hub, the courses will work in a very specific way; We believe that by presenting the results in this artistic way the interest in future courses increase.

strengths:

1. The emphasize on the artistic ways of presenting the results of the courses.
2. Connecting the sustainable contests to the other courses to motivate people to participate.

weaknesses:

1. The participation of elderly has been neglected.
2. Offering the football course without thinking about the space limitation.



6.3 DESIGN SYSTEM CONCEPT:

In this step, after defining the new concept and the most promising ideas a deep and specific analysis started, in order to reach to a feasible and comprehensive project.

6.3.1 NEW BEST PRACTICES AND TRENDS

The best practices which has been collected during the design system concept phase, has been selected among different successful examples and mainly has been studied to understand their strengths and weaknesses in order to get inspiration from some parts and see if there is a potential for localizing them or not.

In the following pages you would see some successful examples.

figure 6.5
Quick fixes with wool
filler were done on the
spot
by:Johannes Abeling

MILLOR QUE NUO!

MADRID

The project gives repairing aids and free advice to citizens. So that they can repair themselves some devices and objects. The project is part of a strategic program of the Metropolitan Area of Barcelona "AMB" to promote repair of objects and exchange markets as mechanisms to avoid the generation of waste. The project has the support of the Waste Agency of Catalonia (ARC).

The Metropolitan Area of Barcelona "AMB" aims to prevent waste and a way to achieve this is to promote reuse of objects and devices that do not become waste before completely exhausted its useful life. The people could learn everything about repairing through online database, self Repair workshops and specific courses.

figure 6.6
<http://www.mil-lorquenou.cat/>



REPAIR CAFE' AMSTERDAM

Repair Cafés are free meeting places and they're all about repairing things (together). In the place where a Repair Café is located, you'll find tools and materials to help you make any repairs you need. On clothes, furniture, electrical appliances, bicycles, crockery, appliances, toys, etc. You will also find repair specialists such as electricians, seamstresses, carpenters and bicycle mechanics.

Visitors bring their broken items from home. Together with the specialists they start making their repairs in the Repair Café. It's an ongoing learning process. If you have nothing to repair, you can enjoy a cup of tea or coffee. Or you can lend a hand with someone else's repair job. You can also get inspired at the reading table – by leafing through books on repairs and DIY.

figure 6.7
<http://repaircafe.org/>



REPAIR HUB(PLATFORM 21)

The Repair HUB is a database of information of repair persons and will grow into an on-site and people could share their secret knowledge on good repair addresses in the Netherlands and abroad. The Repair HUB is an on-site and online database.

When you visit Platform21 you can fill out an address card. And your repair ideas would be published on this platform. You can also contribute your repair recommendations by sending an e-mail.

figure 6.8

<http://www.platform21.nl/page/4404/en>

04.11.2012
PLATFORM21


Home
Calendar
Projects
About us
Log in / english / dutch


The Repair HUB

Share a secret address

We usually jealously guard the phone numbers of skilled Mr and Ms Fix-Its who still know the tricks of their trades. The Repair HUB, by contrast, requires to share hard information like names and addresses as well as positive personal experiences.

The Repair HUB is a database of information on these repairpersons and will grow into an on-site and online map of the extensive repair knowledge still available around us today. Please share your secret knowledge on good repair addresses in the Netherlands and abroad.






Amsterdam

De Tijdmeester

For watches and clocks

Name of repairperson: Joop Gerritsma




Amsterdam

Mender of dolls E. Kramer

For dolls and cuddly toys

Name repairpersons: Klaas and Daan Kramer




Forrest Hills, Queens

Marty's Camera Repair

For digital cameras

Name Repairperson: Marty



Enschede

Huckriede Lederwaren

For umbrellas

Name repairperson: Roger Häschen

REPAIR ROAD SHOW

during the Strawberry Earth film festival in Amsterdam

The Platform21 travelled in Netherlands with the Repair Road Show. The Repair Team executes quick fixes on all sorts of broken things that can be found on festivals: from ripped bags, belts and other garments to picnic blankets and broken tent-poles.

They served a free cup of coffee while tell you about the Repair Manifesto and the Most remarkable repair contest. By the Repair Road Show they want to enthuse even more people about repairing and give many more products in this country a longer life.

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figure 6.9

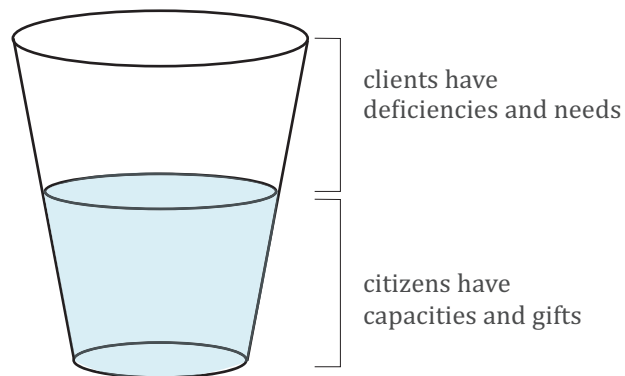
<http://www.platform21.nl/page/5381/en>



A GUIDE TO CAPACITY INVENTORIES: Mobilizing the Community Skills of Local Residents

This guide¹ is written for people working in communities and struggling to understand *how best to capture the potential of all citizens*. Every single person has capacities, abilities, and gifts, and the quality of an individual life in part depends on the extent to which these capacities are used, abilities expressed, and gifts given. Just as individual lives are enhanced by the opportunity to give, communities are made stronger when residents use their full potential by directing their capacities toward the well-being of the neighborhood.

As communities attempt to build a healthy future, they must often struggle against a development perspective that encourages them to see only their needs and deficiencies. But most communities have already experienced what happens when they focus solely on what is missing in their community, and they know that this approach does not produce positive results. In fact every community has needs, problems, and deficiencies; the choice for community groups is whether that is all they want to focus on. Like a glass of water filled



1. A Community Building Workbook (1997) Kretzmann & McKnight

to the middle which can be viewed as either half empty or half full. If clients have deficiencies and needs and citizens have capacities and gifts full, ***a community can be seen as a half-empty place comprised of clients with needs and deficiencies, or as a place half-full of citizens with capacities and gifts to give.***

One critical part of building ***a healthy community is finding out what individual capacities each resident possesses. Collectively, these individual capacities represent an important asset for the community.*** They comprise a powerful “tool” that can be used to address problems, promote growth, and enhance the quality of local life. The less a community knows about itself and its citizens’ capacities, the easier it is to fall into a pattern of seeing the community and its people only through a “needs” perspective. The more a community becomes familiar with itself and its citizens, the more obvious it becomes that what is good about a community far outweighs whatever needs it may have. Additionally, it becomes clear that the challenges a community faces can be addressed most effectively by using the capacities that already exist there, rather than looking somewhere else for answers.

What is the purpose of this guide?

This guide was developed to report how a number of community groups used an asset-based approach in their community-building efforts, and how they developed and implemented a capacity inventory project through which they identified and mobilized the gifts and skills of local people. The asset-based community-building approach illustrated in this guide was developed by John McKnight and John Kretzmann and presented in their manual, *Building Communities*

From the Inside Out. That book contains a single example of an individual capacity inventory. This guide introduces a much wider variety of inventories, used in different kinds of communities for many different community-building purposes.

Who should use this guide?

Groups and organizations of all kinds have used the asset-based approach in their community building efforts. The range of groups who have developed and used a capacity inventory include:

- Large and small organizations ranging from government entities with many partners, to small neighborhood groups with just a few members.
- Formal organizations and informal collections of community residents.
- Groups addressing a variety of issues, such as health, education, economic development, cultural enhancement, youth development, etc.
- Rural groups and urban groups.
- Funded groups and groups who operate with volunteers.

More about the capacities communities discover.

Community organizations are almost always surprised by the extent of the individual capacities they find as a result of doing a capacity inventory. Individuals possess many more capacities than are apparent without asking, because most people do not publicize their individual capacities beyond listing them on a resume, using them in the voluntary work they do, or sharing them with immediate family members. The leader of one community organization in rural California expresses the general astonishment shared by most groups

who have started to discover the extent of the gifts of local people through the use of the capacity inventory:

We never guessed how much we would find! People checked off so many things they could offer to each other!

In fact, what all community groups discover through the capacity inventory process, is that every community resident possesses an extensive array of individual capacities. The capacities that have been discovered by most groups come in the form of:

- Skills in a wide range of categories, including creative skills, office and retail skills, service-related skills, caregiving skills, ***maintenance and repair skills***, construction skills, and many more.
- Abilities and talents including art, story-telling, crafts, gardening, teaching, sports, political interest, organizing, volunteering, and more.
- Interests such as the sharing of skills, enthusiasm for learning and exploring new ideas, participating in a new activity.
- Experiences such as travel experiences, educational, or life experiences that give the individual a unique perspective to share.

6.3.2 TRENDS

USE A LOCAL CURRENCY TO KEEP MONEY WHERE ITS NEEDED

In an effort to improve the local economy, the people of Ithaca, New York, introduced a local currency called Ithaca Hours. Businesses receiving Hours must spend them on local goods and services, thus building a net inter-supporting local businesses.

One way *to stem loss of industry, rising unemployment and increased cost of living is to introduce a local currency.*

Local currency has the potential *to keep money in the communities that need it rather than allowing capital to migrate to outside interests in faraway places.*

Ithaca Hours provides an interesting example. In the small upstate New York university town, workers can elect to have all or a portion of their wages paid in Ithaca Hours at 1 Hour per hour of labor (effectively valued at \$10). *These dollars can then be spent at any participating business, which include everything from coffee and book shops, to cinemas and bowling alley.* Even a bank in Ithaca accepts the local currency.

The beauty of the model is that Ithaca Hours can only be used in Ithaca. That means that any money made in Ithaca stays in Ithaca - *creating jobs and sustaining economies* in Ithaca. Furthermore, with a recognized currency, the community can adjust the local monetary supply to make investments in itself.

Several million dollars value of HOURS have been traded since 1991 among thousands of residents and over 500 area

businesses. Ithaca Hours has also inspired similar systems in Madison (Wisconsin) and Corvallis (Oregon).¹

What's the point of all this pretty, community-printed currency?²

Money spent at locally owned companies tends to create more business for local suppliers, accountants, etc. The New Economics Foundation (NEF), *a London think tank, compared the effects of purchasing produce at a supermarket and at a farmer's market and found that twice the money stayed in a community when folks bought locally.* A study of Grand Rapids, Mich., released last fall by consulting firm Civic Economics, concluded that a 10% shift in market share from chain stores to independents would yield 1,600 new jobs and pump \$137 million into the area. "Money is like blood," says NEF researcher David Boyle. Local purchases recirculate it, but patronize mega-chains or online retailers, he says, and "it flows out like a wound."



Picture 6.10
LAUREN FULLER
FOR TIME
Berkshares, local
currency, of Great
Barrington, MA.

1. <http://www.openideo.com/open/vibrant-cities/inspiration/use-a-local-currency-to-keep-money-where-its-needed>

2. TIME Magazine- By Judith D. Schwartz- Monday, July 13, 2009

ROUNDTABLE ON “THE REUSE OF WASTE MANAGEMENT”¹- ROME - July 12, 2012

“The Reuse of Waste Management: A Common Evil Can Become A Common Good”

The field of *Re Use* continues to play a very important role in *social inclusion*, *representing an opportunity for all those who have difficulties in entering the labour market and have no capability to start other businesses.*

A source of income with the ability to reinvent itself through the sale of used goods could be considered as one of the few new sources of income for a growing range of the population. This field comes to the help of some migrants, unemployed and over fifty elderly needy people, former drug addicts, ex-prisoners, invalids, persons at high risk of economic and social exclusion.

flea markets have become also a major meeting places for ethnic groups, generations and different social classes, and the activities of its operators allows the recovery and survival of the culture of our past. *Thanks to this peaceful movement, every year tens of thousands of tons of used goods are returned to a second life.* This trend started from the good initiated practices in some areas of the country, like in the city of Turin, the UN Regional Coordination Network of Lazio and now Eye Riciclone invites the representatives of 'local administration of the Municipality of Rome III, associations, citizens and business operators in a panel discussion on ' establishment of Free Trade Areas dedicated to used as an effective response to the economic, social and environmental.

1. www.occhiodelriciclone.com

6.4 CO-DESIGN WORKSHOP

On the base of the most promising sustainable PSS concepts from the SDS course, the designing system concept phase was started by merging the most promising concepts and adding personal ideas to design a first draft of a new concept for further implementations.

The emerged concept was discussed with the Punto e Linea Hubbers within a workshop that hold in Edu Cafe', Politecnico di Milano, Leonardo Campus. The workshop that started with a short description on 4 new emerged concepts by thesis students (Sara Hatef, Elisa Baccheti, Claudio Sarci, Albero Fossati). Followed by each thesis student presentation of her/his own project by the mean of story board which was

Figure 6.11
Co-design activity with the “Champion Stakeholders”



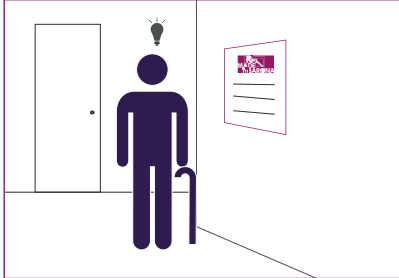
Figure 6.13
Co-design activity
with the “Champi-
on Stakeholders”.

Figure 6.12
Co-design activity
with the “Champi-
on Stakeholders”.

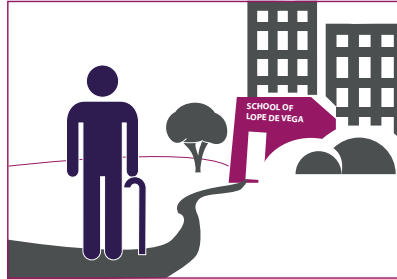
attached to the wall. Then his/ her questions about each part of the project step by step were asked by a questionnaire paper which was in front of each person. After finishing the presentation the participants was asked to write the important and essential comments on blue post-its and the other lateral advises on the yellow one. Then each of them had a time to talk over their ideas and suggestions and discuss over it with the other participants. During the discussion some new ideas and comments emerged that were useful for the following strategies toward designing the project. For instance for the next step to who should we go or with which organization should we have an interview and so many other instructions.



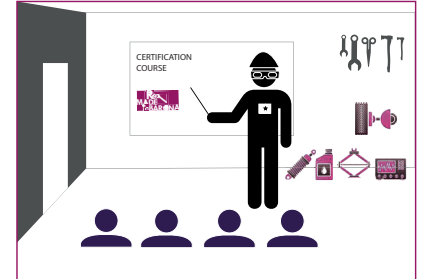




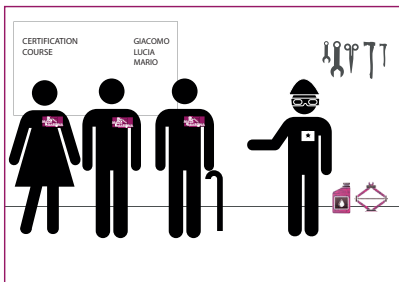
GIACOMO È UN FROGOFERO ESPERTO. UNO GIORNO VEDE UNA PUBBLICITÀ DI "REMADE IN BARONE" SUL QUALE HA SCRITTO: ABBIAMO BISOGNO DA UNA PERSONA ESPERTO NEL SETTORE DELLA RIPARAZIONE FRIGORIFERO, CARPENTIERE, CUCITO, CAMPUTER, BICICLETE E ... PER FARE UNA COMUNITÀ 'LOCALE DI RIPARAZIONE LE COSE.



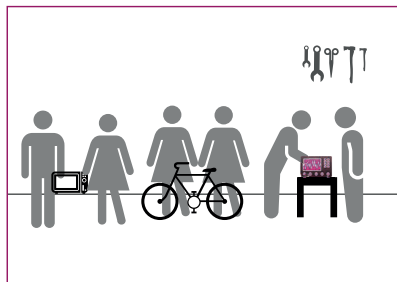
PER ALTRI INFORMAZIONI GIACOMO VA AL "LOPE DE VEGA" SCUOLA O VA WEB SITO DI OTTENERE ALCUNI INFORMAZIONI SUI CORSI CERTIFICAZIONE.



ALCUNE ORGANIZZAZIONI CERTIFICATE TENERE CORSI PER LE PERSONE COME GIACOMO IN DIVERSE CATEGORIE.



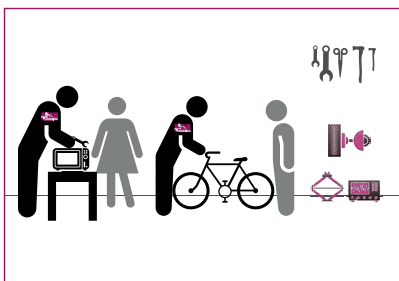
GIACOMO E ALCUNE ALTRE PERSONE DA "LOPE DE VEGA" ATENERE LA CERTIFICAZIONE E DIVENTARE DI UN MEMBRO ATTIVO DELLA "REMADE IN BARONE" E POI POTREBBE DARE QUALCHE SERVIZI AL QUARTIERE.



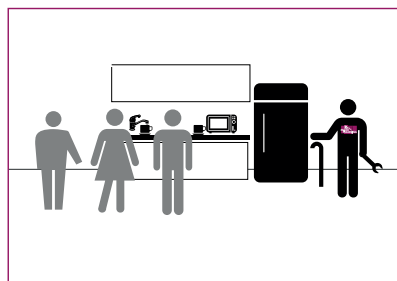
IN ALCUNE ORE DEL GIORNO SCUOLA SARA APERTO PER TUTTI A VENIRE E RIPARARE LE SUE COSE. MA SAREBBERO SOLO AVERE ACCESSO AGLI STRUMENTI DI SICUREZZA.



UNA PERSONA DELLA "LOPE DE VEGA" CHE HA UN ROTTO FRIGORIFERO VA AL SITO E PRENOTA UN GIORNO IN ANTICIPO CON UN ESPERTO DI "REMADE IN BARONA".



GIACOMO DÀ QUALCHE LEZIONE NELLE OFFICINE O AIUTA ALLA GENTE PER FISSARE LE PROPRIE COSE NELLA SCUOLA DI "LOPE DE VEGA".



COSÌ POTEVA RIPARARE LA SUA FRIG AL SUO POSTO SENZA SOLDI MA POTREBBE BISOGNO DI OSPITARE 2,3 SOGGETTO CHE VERRÀ 'DAL LABORATORIO AL IMPARARE A RIPARARE. IN QUESTO CASO L'INSEGNANTE PORTARE EQUIPMENT DA SCUOLA. E POI SI PUÒ BERE UNA TAZZA DI CAFFÈ E CONOSCERSI MEGLIO.

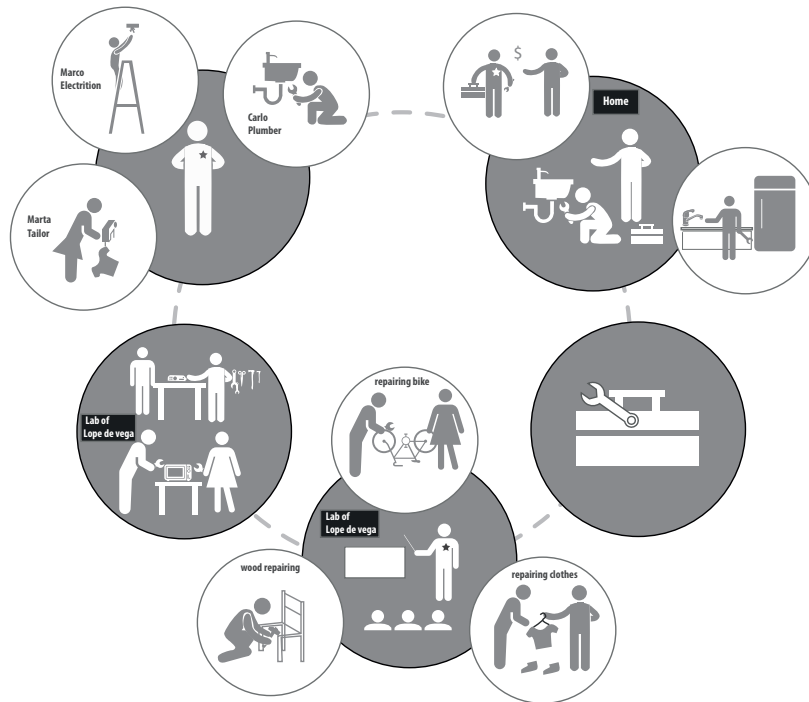


Figure 6.15
The offering diagram of the new concept to be discussed.

Figure 6.14
The story board of the new concept to be discussed.

The below mentioned advices form the co-design activity, helped the designer in discovering some local existing assets and understanding the condition of the district:

- The possible coordinators for the service: La Cordata, Barrio's;
- The possible Promoters: schools, shops, web radio; supermarkets, people of barona, local associations, Made in Barona, using a bacheca in the buildings, Art Kitchen, Alma Rose';
- sponsors: local shops, supermarkets, AFOL ¹;
- equipment: neighbourhood, Brico², Leroy Merlin³;
- the ways to link the people to each other: Tool sharing/ artistic activities/ using a bacheca in the buildings;
- The most needed repairing activities: bicycle fixing,

1. AFOL Milano, special agency of the Province of Milan is active in the area to offer services in the field of education with vocational training centers and work with the Center for Employment, the preselection services, service Match for the work placement the disabled and guidance services.

2. The largest DIY chain in Italy, that have more than 100 shops and among them there are also many franchise stores.

3. As a major actor on the worldwide DIY market, Leroy Merlin helps residents and homeowners with their home-improvement projects.

carpentering, dress making, repairing small electronic devices;

After this stage the co-design process with the possible partners of the service was done in a face to face condition and by getting appointment and visiting them at their offices. This step was done individually, because in this condition the potential stakeholders were showing more sense of amenability in responding to our questions and feel more free to express their opinions straightforward. So to have a more comfortable conversation with them we avoid of recording their voice or taking photo.

The documents which we have collected from the interviews are our notes during the conversation or the email that they sent after the interview to give more information.

Key Places for The Projects Activities, Resulted From The Meetings:

1 *the School of Public Houses, Lope de Vega:* This small school located in public houses, in via Lope de Vega, which has been a gathering place since the beginning of the previous service (Manual Activities), would be considered again as a main meeting place of neighbourhood for “Re-Made in Baroan”.

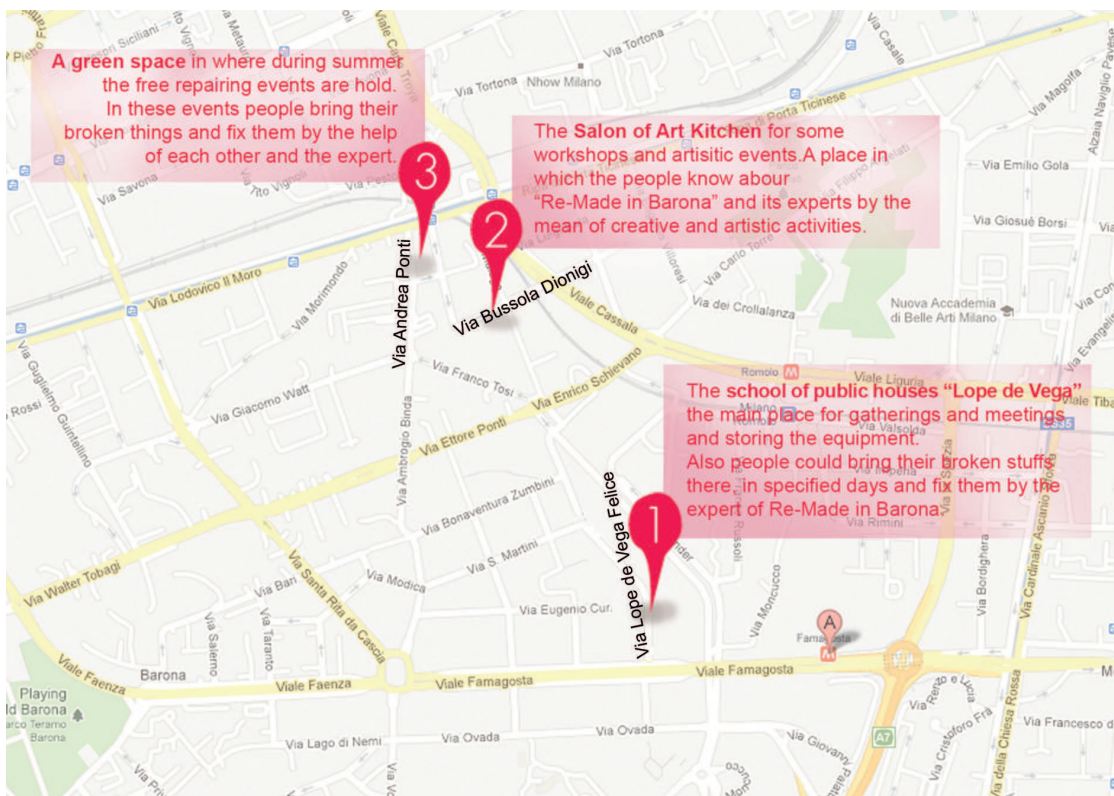
2 *the Salon of Art Kitchen:* The Salon of Art Kitchen, located in *Via Bussola Dionigi* considered as a place for holding some artistic events. After having a meeting with *Elisa Rossi*, the responsible of Art Kitchen, the two sides agreed on holding the artistic workshops and events within the vast salon of Art Kitchen at the beginning and finishing of each course of activities of “Re-Made in Barona”.

3 *the Green Space in Via Andrea Ponti:* The meeting with *Marizia Biraghi* who is the President of Comitato Ponti which

is one of the components and founding members of MadeIn-Barona, she offered the green place which is located in via Andres Punti as a gathering place of the neighbourhood during the summer time. This field which belongs to Municipality of Milan supposed to be allocated to the community gardening activities, but after this meeting she decided to consider a part of this land for repairing activities of “Made in Barona” .

Key, Economic Concept:

The key economic concept which has been considered in this thesis was suggested by “chamber of commerce” of Milano. This concept after a vast research has been adopted to the local condition and as you would see in the following chapter this strategy is hoped to help to the system to become a self sustainable system after a few months.



7

THE PROJECT

Re-Made in Barona

7.1 THE BRIEF

“Re-Made in Barona” is a PSS that offers a series of cheap and the most needed, repairing services to the neighbourhood.

The PSS, has been designed for the Barona district and is aimed to improve the social cohesion and foster the inter-general dialogue through the re-design of the already existing manual activities within the public houses of Via “Lope de Vega” and around.

The main activators of this system are the competent, well experienced and talented people that are mainly retired people or the young ones who have enthusiasm and free time to do some repairing works for their neighbourhood and earn some money(Ticket).

7.2

THE OFFER: HOW IT WORKS

Offering Diagram

“Re-Made in Barona” offers a part time job, for two groups : One is the already experienced and qualified ones that their qualification is assessed by “Re-Made in Barona” and AFOL in order to become the “Expert of Barona”. Despite of this group, are the young, motivated people that could attend the short periodic courses according to the existing work categories and get the certification of “Re-Made in Barone”. The both two groups, would be prepared in a short time, to work and act in the Barona district with the pre specified contract. Following this step, they would be in contact with the clients who are the people of Barona district that ask for a cheap and easy repairing method.

There is 4 meeting points for the users of “Re-Made in Barona”:

1. The school of Public housing Via Lope de Vega: which is a common meeting place and the place of some workshops in where the interested people would learn the common repairing skills from the “Expert of Barona” with a little tuition fee.
2. The Art Kitchen’s Salon: which is a free meeting place that people of Barona district meet regularly there and learn about the experts and their skills by the mean of selected innovative and marvellous works of them and their students and as a result become interested in learning new skills from them.
3. The Made in Barona’s open space in Via Punti: in which people are free to bring any broken thing that they want to fix and repair it together. During the event some “Experts”

would be available to help to the participants.

4. The people's home: that the people who are looking for the cheap repairing services, could arrange a meeting with the "Experts of Barona" and ask him to come to their homes by seeing the free times and skills of the "Experts" through the already existing page of "Barona Live" and contacting with them through their personal info which is available in the web page.

The "Experts" would receive the "Re-Made in Barona'S" supermarket ticket in return of their work and they could go to the selected local supermarkets and buy the products by the existing amount of money on the card.

All users of the service, could lively listen to the online repairing courses which is thought by the "Expert" of "Re-Made in Barona" through Web Radio Navigli every Monday.

Furthermore the users would have the access to the well equipped school of public housing via Lope de Vega and could use and share the equipment within the community.

There is some info points of the service that all the people of Barona could be updated by them. One is the web page of "Barona Live", the other one is the Baccheca of some condominiums and finally, the local supermarkets that they play a crucial role in promoting the service.

Generally "Re-Made in Barona" is a local-based service that its aim is to focus and discover the local assets and stakeholders in order to bring an economical sustainability to its members by making a local capital and thereupon, resuscitate the local values and rise the social cohesion within the neighbourhood.



THE CHEAP REPAIRING SERVICES BY THE "EXPERT OF RE-MADE IN BARONA" FOR THE BARONA NEIGHBOURHOOD.

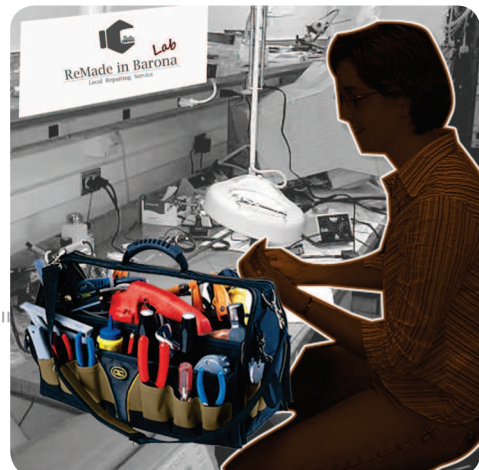


THE CHEAP AND AFFORDABLE REPAIRING SERVICES FOR EVERYONE IN BARONA.

By "Remade in Barona" Nobody would throw out something, just because couldn't afford the repairing cost. From now on, a cheap repairing service is available for everyone in Barona.



REPAIRING WORKSHOPS, FOR THE PEOPLE OF BARONA IN WHICH THEY LEARN SOME COMMON AND USEFUL REPAIRING SKILLS.



FREE USE AND SHARE OF THE SPECIAL EQUIPMENT OF THE LAB FOR THE PEOPLE OF BARONA.



PERIODIC ARTISTIC AND ENTERTAINING EVENTS FOR THE PEOPLE OF BARONA.



ONLINE, FREE REPAIRING COURSES VIA "BARONA LIVE" WEB RADIO FOR THE USERS OF THE SERVICE AND CHECKING THE FREE TIMES OF THE "EXPERTS" & DATES OF THE WORKSHOPS THROUGH IT.



CERTIFY THE EXPERIENCED PEOPLE AND PUT THEM IN CONTACT WITH THE PEOPLE WHO NEED THE REPAIRING SERVICE.



THE SHOPPING TICKET FOR THE "EXPERT" TO DO SHOPPING FROM THE LOCAL SUPER MARKET, IN RETURN OF EVERY HOUR OF WORK.

- EXPERT OF REMADE IN BARONA
- BARONA'S PEOPLE

7.3 THE ACTORS

LA CORDATA

The Consortium; is a social enterprise that since twenty years ago offers residence to everyone: tourists, students, workers, families, foreigners, children, single mothers with children, people with disabilities. They offer accommodation, social support, education and housing and hotel hospitality in a short - medium - long term. Their goal is to create and sustain relationships between people, activate networks of support and solidarity for those who live in an uncomfortable situation and finds it difficult to fit into the city.

<http://www.lacordata.it/cms/>

ALMA ROSE

Alma Rosé is a theatre company that was founded in Milan in 1997, and since then it began a process of research and reflection, ranging from fairy tale themes of political and civil. Interested to promote a dialogue with the authorities, public and private, operating in the city of Milan, the capital of culture. Brings its show not only in theatres but also in Brings its show not only in theatres but also in unusual places.

<http://www.almarose.it/site/>

ART KITCHEN

A creative organization that promote and produce artistic, creative and social projects through the realization of exhibitions, projects and ethical campaigns. The aim is to popularize the art, create the unique experiences.

<http://artkitchen.org/>

BARONA LIVE

The program dedicated to Barona district of Milan, radio broadcasts "Barona" stories, experiences, characters, problems, places, events, news, opinions and ideas from the point of view of the most experienced people of Milan, every Monday night at 21.

<http://www.facebook.com/BaronaLive/info>
<http://www.radiodeinavigli.com/>

LEROY MERLIN

Is a French home-improvement and gardening retailer serving thirteen countries. Generally established on the outskirts of major town and cities, Leroy Merlin stores are large centers (9000 m2 on average) providing self-service and sales assisted services. Its business is centered around six main sectors: DIY, building, gardening, sanitary equipment, renewable energy, and interior decoration.

<http://www.leroymerlin.it/>

MADE IN BARONA

Coordination of Associations and Committees in the district of Milan Barona dealing with the environment, culture and society. Made In Barona born spontaneously by a group of organized bodies who live and act on the Barona district. MadeInBarona is a network that brings together different entities, together with the need to bring out the potential of an area that is too often left in the shadows, and whose activities and potential would be made more visible to the city of Milan.

The associations involved so far are:

ARCI Cleats, The Consortium, Barrios, Connecting Cultures Art Kitchen, Arci Biko, Bridges Committee, Alma Rosé, Radio Navigli, Collective ZAM, Languages Creative, ASP, Mirage CicloBarona

<http://www.facebook.com/pages/Made-in-Barona/243182875727388?sk=info>

AFOL MILANO

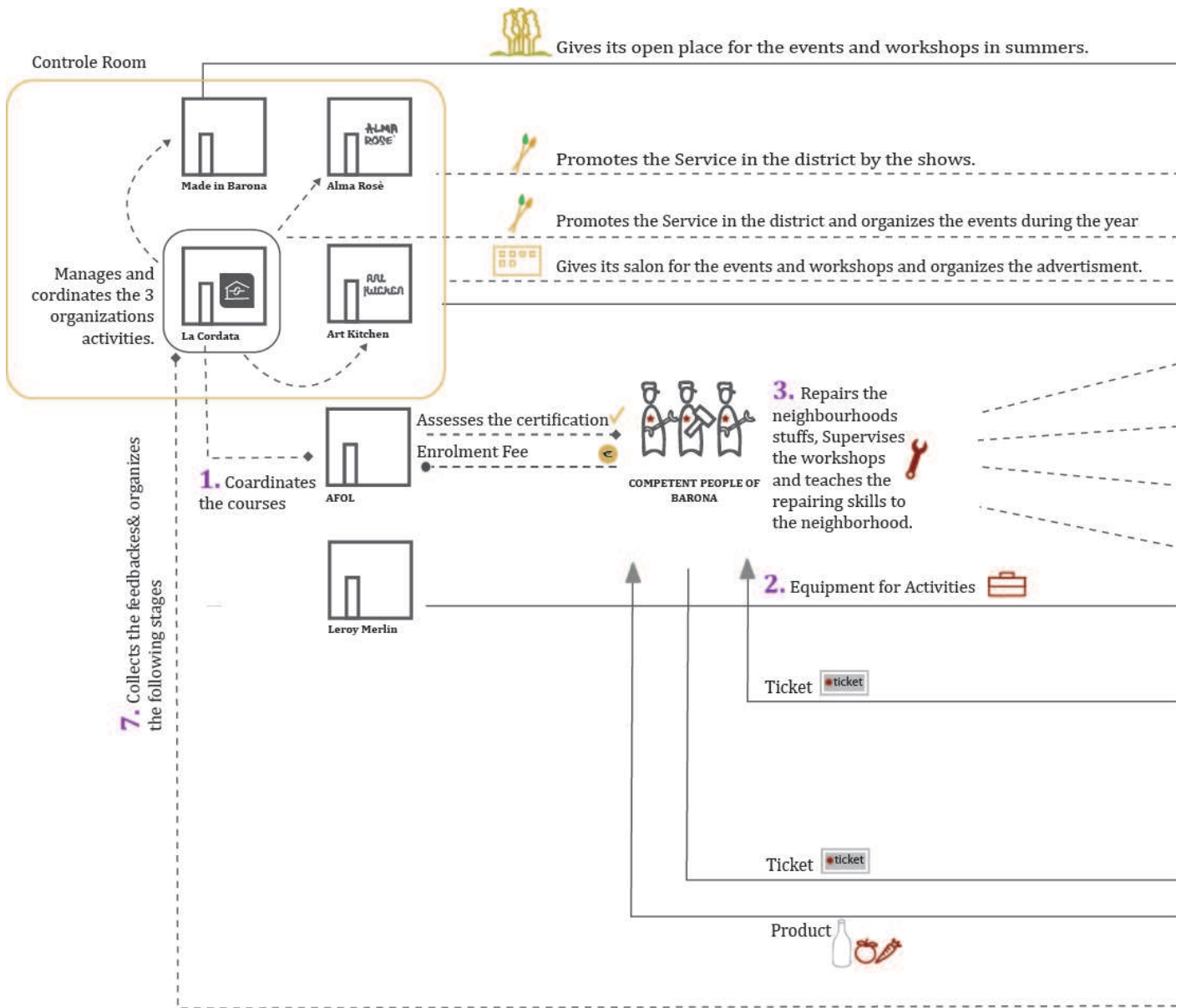
Special agency of the Province of Milan is active in the area to offer services in the field of education with vocational training centers and work with the Center for Employment, the preselection services, service Match for the work placement the disabled and guidance services.

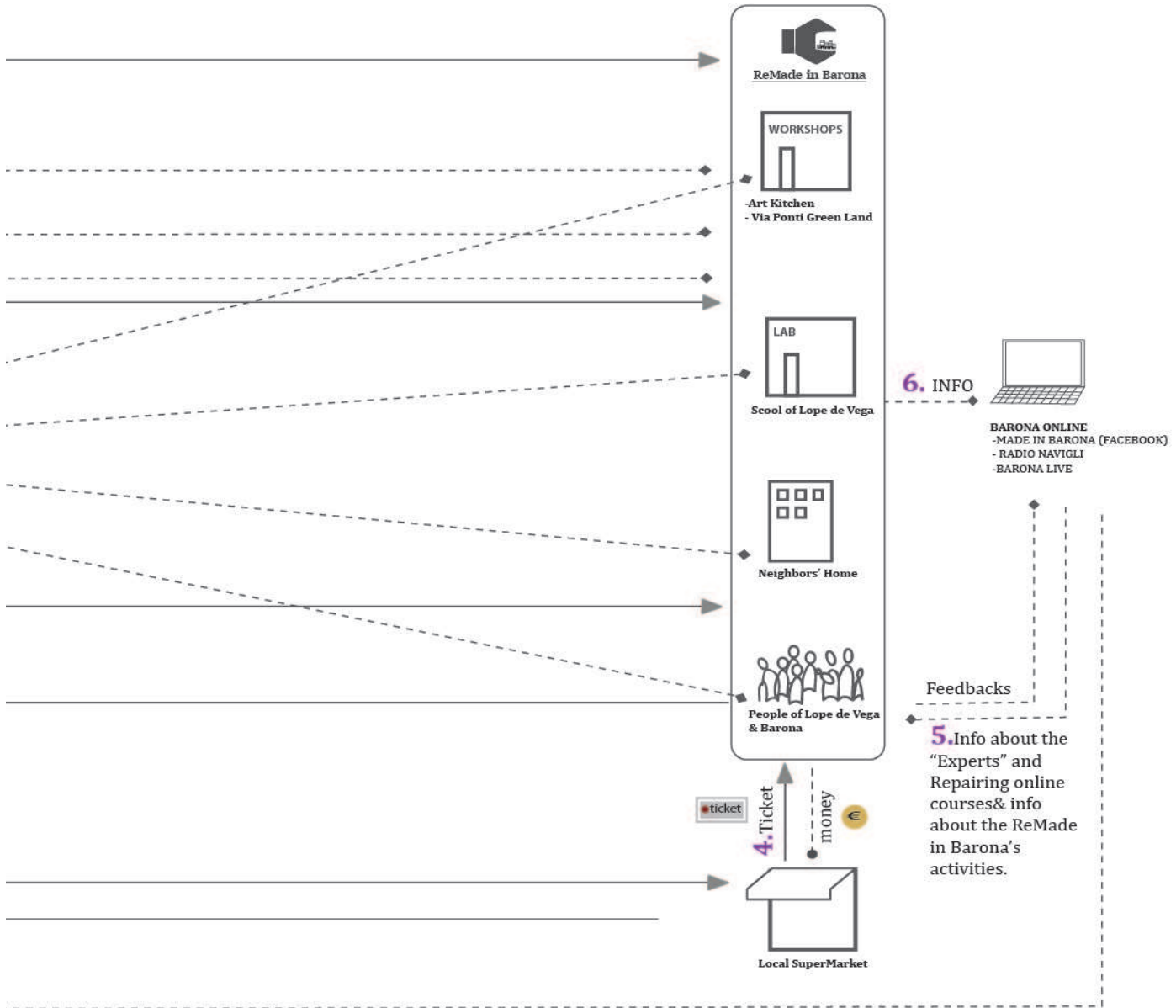
<http://agenzia.provincia.milano.it/>

LOCAL SUPERMARKETS

Local Supermarkets would be one of the main partners of the service. They would sell the tickets of "ReMade in Barona" and promote the service within the district.

7.3.1 SYSTEM MAP





7.3.2 STORY BOARD



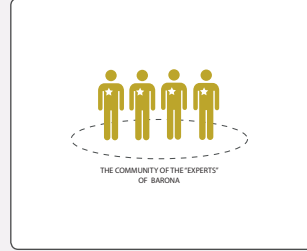
1

The competent people of Barona see the advertisement of “Re-Made in Barona”, In which is written: come to Us and become the “Expert” of Barona.



2

Their repairing qualification is assessed and they become the “Expert of Re-Made in Barona”.



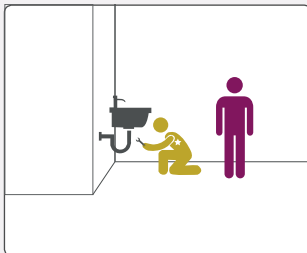
3

The community of expert people is built.



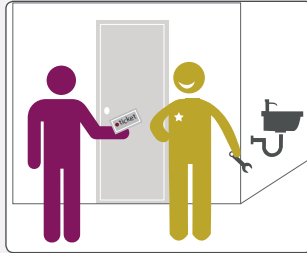
4

The “Expert of Re-Made in Barona” goes to the home’s of people.



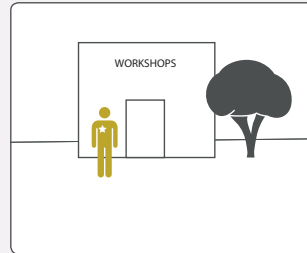
5

And repairs the common problems according to his/her experience, like leaking pipe in a cheap price.



6

The house hold gives the ticket in return of every hour of his/her work.



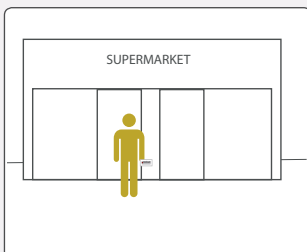
7

The “Expert of Re-Made in Barona” spend some hours of his/her weak in the workshops.



8

The “Experts” teach some common skills like how to fix a bicycle, chair, shoe, clothes, bag etc, To the interested people with a little tuition fee.



9

The “Experts”go to a selected local supermarket.



10

and buy their required things by the collected tickets from different works they have done during the weak.



The “Expert of ReMade in Barona”



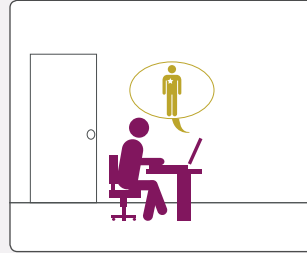
1

The people of Barona, that can't afford the expensive cost of repairing services, don't have any chance but throwing out the damaged device!



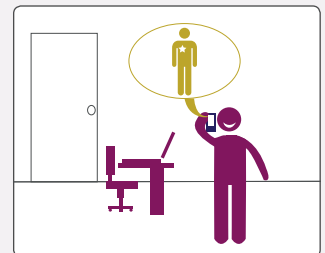
2

The people of Barona, see the advertisements of "Re-made in Barona" in which is written: if you want to repair your stuffs in a very cheap way, please contact us.



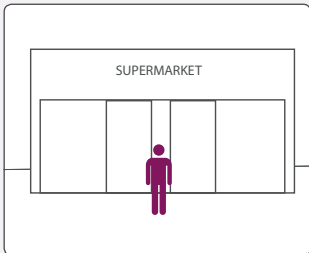
3

The "User" of the service is referred to the already existing web page of "Barona Live" in which could see the experts info, their contacts and free times.



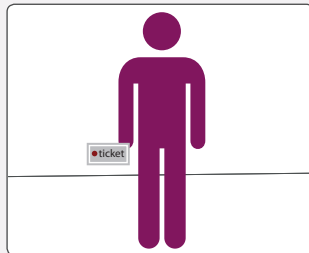
4

The "User" of the service calls the "Re-Made in Barona" and arrange a meeting with a required person through the phone call or email.



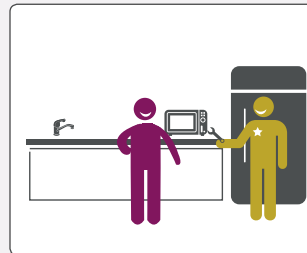
5

The "User" goes to the local supermarket and buys the mentioned ticket of "Re-Made in Barona".



6

The "User" buys the ticket according to his/her required repairing hours. The tickets are started from one hour



7

The "User" of the service meets the "Expert of Re-made in Barona" and the "Expert" repairs his/her device with a few cost.



8

The "User" of the service gives the ticket to the "Expert". For example if the work lasts for around one hour, he give the one hour ticket.



The "User of ReMade in Barona"

7.4 THE BUSINESS MODEL

The business model that has been designed for “ReMade in Barona” is based on “Ticket”. The ticket based business model brings an initial capital to the service by just integrating the local supermarkets, into the system.

How does it work?

“Re-Made in Barona” and the “Local Shop” close a contract. After that, The “Local Supermarket” puts the “Re-Made in Barona’s” tickets for sale, within its shop and the users of “Re-Made in Barona” who are looking for a cheap repairing service, buy the ticket from that special supermarket that is the partner of the service. Then they give it to the “Expert of Re-Made in Barona”. and the “Expert “ goes to the supermarket and buys his/her needed products from there.

This sort of business model has the benefits for two sides of the contract. “Re-Made in Barona” for instance negotiates with the local supermarkets and gets a discount in return of buying a large number of tickets. If “Re-Made in Barona” could find another partners like local coffee shops or gyms and theatres this amount of discount in each ticket could be increased up to 2, 3 euro according to the identity of these places that is more service based than product based. However, closing the contract with these organizations would be considered as the second step.

Another benefit of this contract for “Re-Made in Barona” is that, “Re-Made in Barona” doesn’t need to pay the tickets money in advance, and this is the “user” of “Remade in Barona” that goes to the supermarket and buys these tickets so,

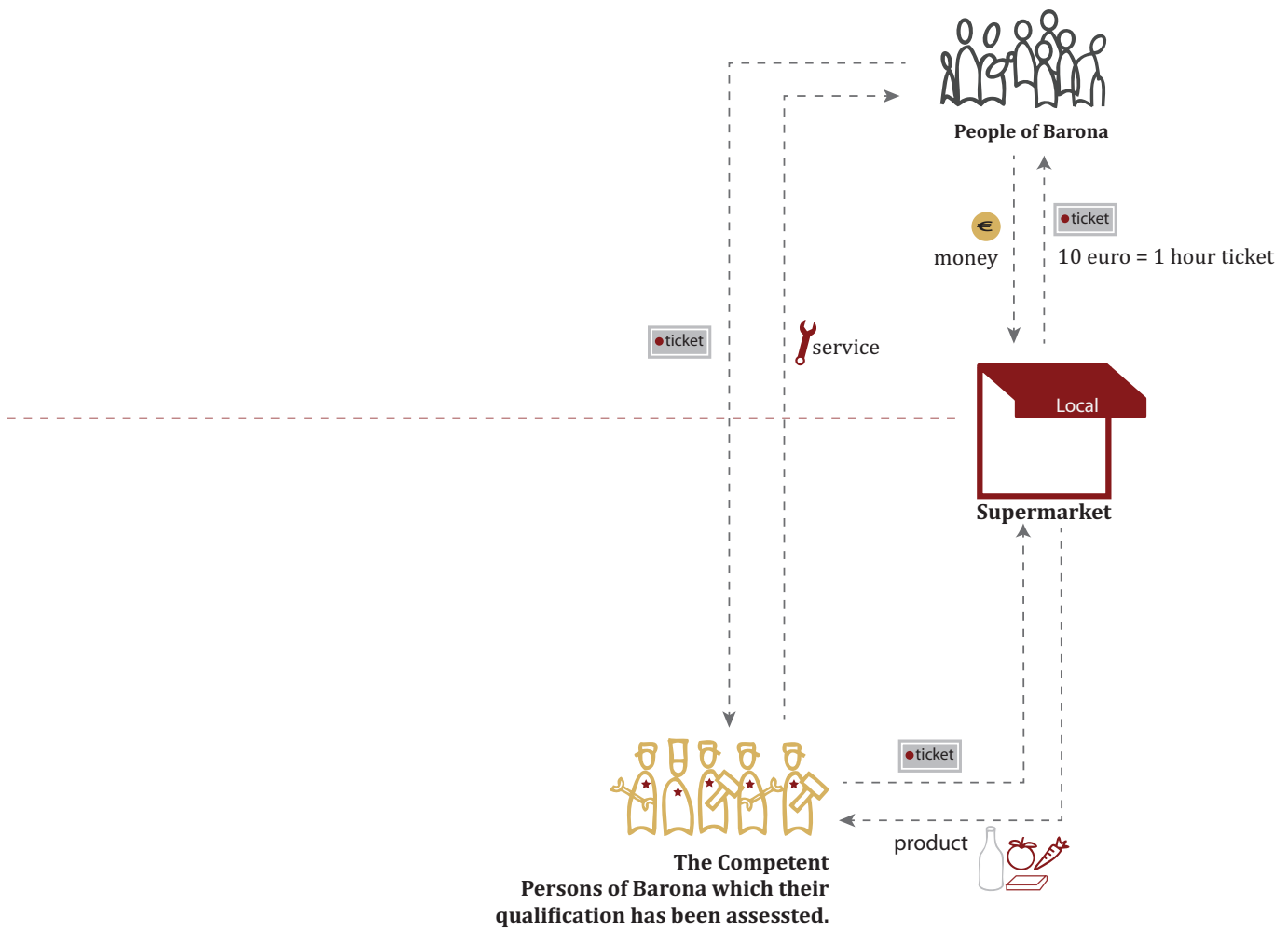
an initial capital would come to “Re-Made in Barona”.

On the other hand, the “Supermarket” would increase its customers through the advertisements of “ReMade in Barona” because each client of “Re-Made in Barona” would be referred to the “Supermarket to buy the ticket, as a result it causes to the extension of the “Supermarket’s” business.

As a secondary effect of this system is helping to the local economy by involving the more local actors and would resuscitate the forgotten cultures in which the people used to meet each other and dispel their needs within the local shops like coffees, supermarkets, cinemas and etc. In this system the money would turnover at least 2 times more in the district and would bring a kind of wealthy and win-win relationship between the neighbourhood and the local shops. This culture would increase the environmental sustainability as well by reducing the unnecessary out of district, transportations.

In brief, the ticket brings 4 main benefits to the system:

1. Brings the initial capital(money) to the system
2. Involve the local economy like: supermarkets, Bars, book stores, Theatres and etc. In the system and by referring the clients to them, gets the sponsorship of them.
3. By keeping the money within the neighbourhood, helps to the local economy.
4. Strengthen the ties of the neighbourhood.



7.4.2 BUSINESS CANVAS

KEY PARTNERS

- Local Supermarkets
- Alma Rose
- Art Kitchen
- Leroy Merlin
- La Cordata
- Made in Barona
- Radio Navigli

KEY ACTIVITIES

- repairing things
- learning new repairing skills within the community

VALUE PROPOSITION

- Part time job opportunities for Barona's people & cheap repair services for the neighbourhood.
- Strengthening the neighbourhood ties by having the asset-based approach.
- Helping to the local economy to be stronger and functional.

COST STRUCTURE

- A part of the tuition fee of vocational courses for the young persons (one part would be paid by the students another part by "ReMade in Barona.")
- costs of advertisement activities (poster, catalogue,...)
- maintenance of the physical space
- The equipment cost, if Leroy Merlin doesn't accept to give some equipment.
- executive organizations.
- events
- Lab furniture (table, chair, white board,shelves,...)

***CUSTOMER
RELATIONSHIP***

- local and asset-based relationships.
- co-creation of the service by time and by finding new potentials(asset) within the neighbourhood.

***CUSTOMER
SEGMENT***

- The competent persons of Barona which their qualification has been assessted.
- The local people who need the repairing services.

CHANNELS

- the people of Barona (word of mouth)
- Local shops like supermarket
- Events
- Barona Live (Radio)
- bacchecas and stands
- web site(Made in Barona)

KEY RESOURCES

- 3 physical places or the events, gatherings, workshops
- Leroy Merlin's equipment
- The already existing web page of "Made in Barona"
- active members of Barona

REVENUE STREAM

- The supermarket, coffee shop, book store gives the ticket in a less price to Remade in Barona because Remade in Barona has a major purchase and sends customer for them. So Remade in Barona would have a revenue from each ticket.
- people's donation, sponsors aid (Equipment and Place)

7.4.3 STAKEHOLDERS MOTIVATION MATRIX

THE OFFERINGS TO THE SERVICE



-Directs & controls the quality of the activities & has the strategic management for the future activities by collecting feedbacks and considering the needs of the people in each era.



-promotes “ReMade in Barona” around the neighbourhood by some theatrical shows.



-promotes “ReMade in Barona” around the neighbourhood by giving the advertisement services
-The salon of “Art Kitchen” for the events and workshops.



- Gives some special equipment to “ReMade in Barona”.



- Puts the tickets of “ReMade in Barona” for sale and promotes The service within Barona district.



- Assesses the qualification of the experienced people
And let them to become the “Experts of Barona”



- Gives some live lessons, related to repairing activities and
Introduces the “Experts of Barona” to the neighbourhood.



- Gives an open space in which people meet each other
Work together under the observation of the
“Expert of Barona”.

THE MOTIVATION TO TAKE PART

- La Cordata as a main executive organization collects the revenue of the system at the end of each year and takes a part of this revenue and the other part would be devoted to "Alma Rose", "Art Kitchen" and the social activities for the neighbourhood.

- "ReMade in Barona" decreases its socio-ethical aspect and after a while, that "ReMade in Barona" grows "Alma Rose" could be integrated in the ticket-based relations of the service, in which "Experts of Barona" could receive the ticket of "Alma Rose" in return of their services.

- "ReMade in Barona" decreases its socio-ethical aspect by the time and "Remade in Barona" also would become a client of "Art Kitchen" that asks for the advertisement service and would give the ticket to the designers of "Art Kitchen" in return of their services.

- "Leroy Merlin" is promoted in the district by attaching its logo, on the equipment and the clothes of the "Experts of Barona".

- "ReMade in Barona" refers the customer to the "Local Supermarket".

- The tuition fee is given by the students and "ReMade in Barona"
- "AFOL" would be promoted in return of its discount in the district by attaching its logo, on the equipment and the clothes of the "Experts of Barona".

-The activity of "Barona Live" is completely voluntary, by the help of some young Volunteers.

-The activity of "Made in Barona" is completely voluntary, by the collaboration of some local voluntary organizations and associations.

7.4.4 BUSINESS MODEL CHART

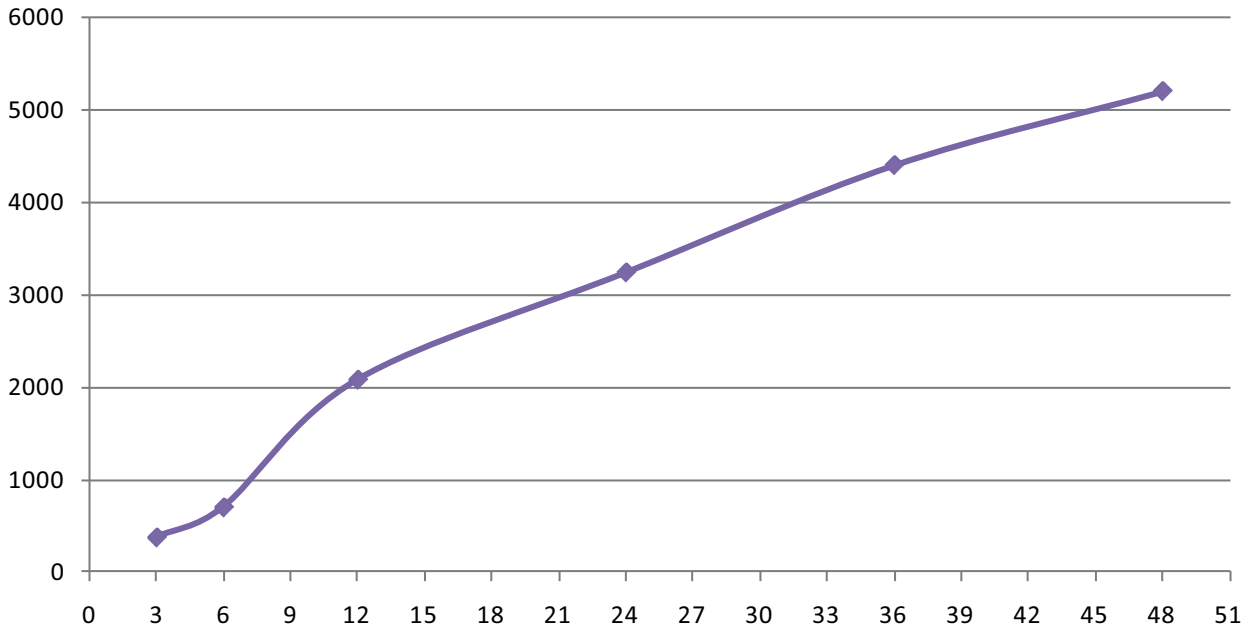
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| | 0 month | 3 month |
|-------------------------------------|---------|---------|
| participants | | 25 |
| hours of work for each expert | | 30 |
| amount of work | | 750 |
| sold out ticket | | 7500 |
| profit of each ticket | | 0.05 |
| profit of the sold out ticket | | 375 |
| periodic profit | | 1125 |
| overall revenue | 0 | 1125 |
| | | |
| | | costs |
| executive persons | | 800 |
| maintanance | | 200 |
| advertisement | | 200 |
| vocational lessons | | 0 |
| events | | 400 |
| monthly costs | | 1600 |
| every period costs | | 4800 |
| total cost up to end of each period | 8000 | 12800 |
| | | |
| periodic performance | | -475 |
| overall performance | | -11675 |

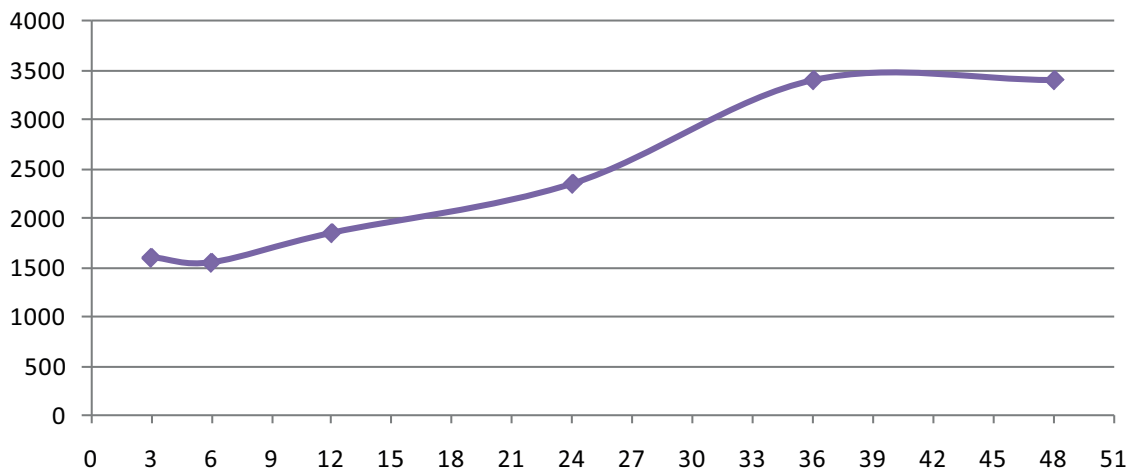
| 6 month | 12 month | 24 month | 36 month | 48 month |
|---------|----------|----------|----------|----------|
| 40 | 65 | 90 | 110 | 130 |
| 35 | 40 | 45 | 50 | 50 |
| 1400 | 2600 | 4050 | 5500 | 6500 |
| 14000 | 26000 | 40500 | 55000 | 65000 |
| 0.05 | 0.08 | 0.08 | 0.08 | 0.08 |
| 700 | 2080 | 3240 | 4400 | 5200 |
| 2100 | 12480 | 38880 | 52800 | 62400 |
| 3225 | 15705 | 54585 | 107385 | 169785 |
| | | | | |
| | | | | |
| 800 | 800 | 1000 | 2000 | 2000 |
| 200 | 200 | 300 | 300 | 300 |
| 150 | 150 | 150 | 200 | 200 |
| 0 | 300 | 500 | 500 | 500 |
| 400 | 400 | 400 | 400 | 400 |
| 1550 | 1850 | 2350 | 3400 | 3400 |
| 4650 | 11100 | 28200 | 40800 | 40800 |
| 17450 | 28550 | 56750 | 97550 | 138350 |
| | | | | |
| | | | | |
| 550 | 10630 | 36530 | 49400 | 59000 |
| -14225 | -12845 | -2165 | 9835 | 31435 |
| | | | | |

Income Monthly Base

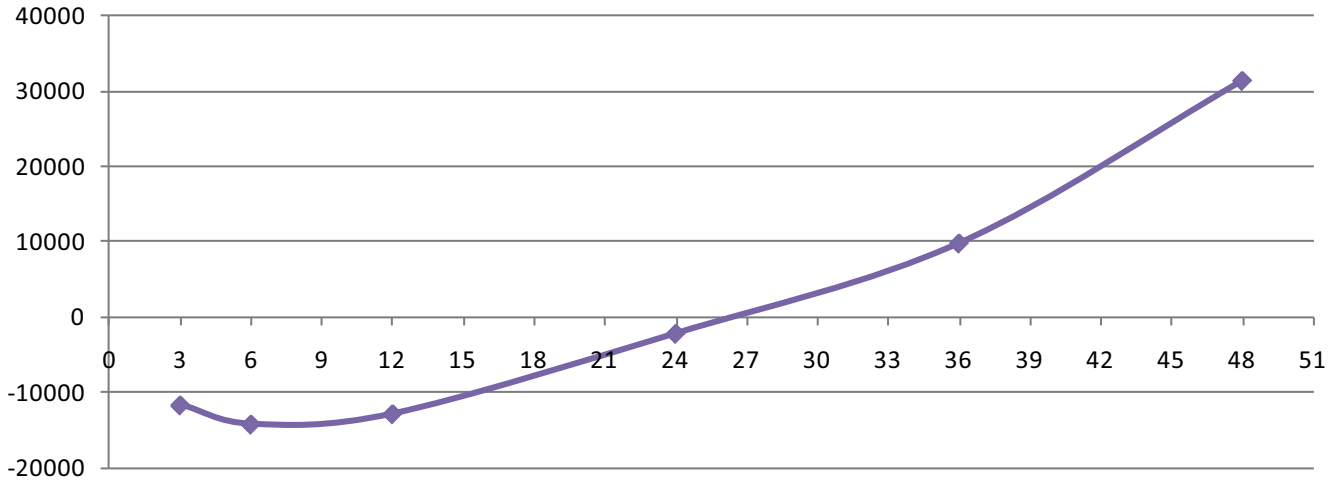
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Service Expense Monthly Based

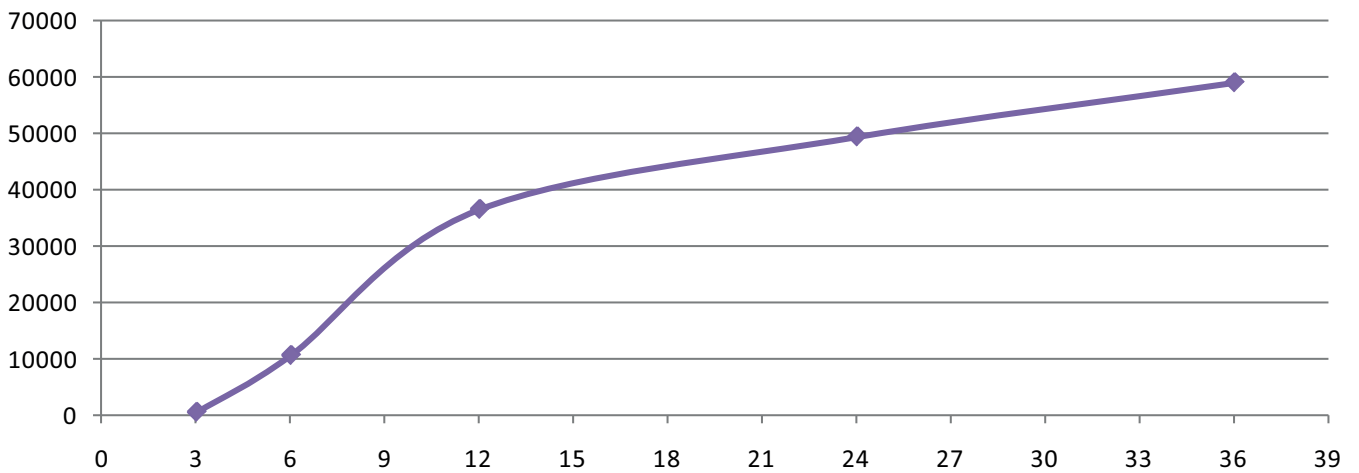


Total Benefits



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Monthly Performance



7.5 EVIDENCES

The evidences are the most important, physical and virtual touch points of the service in which the users get to know about the service. This part consist of the logo, web page, ticket, poster, clothes of the “experts” and the events.

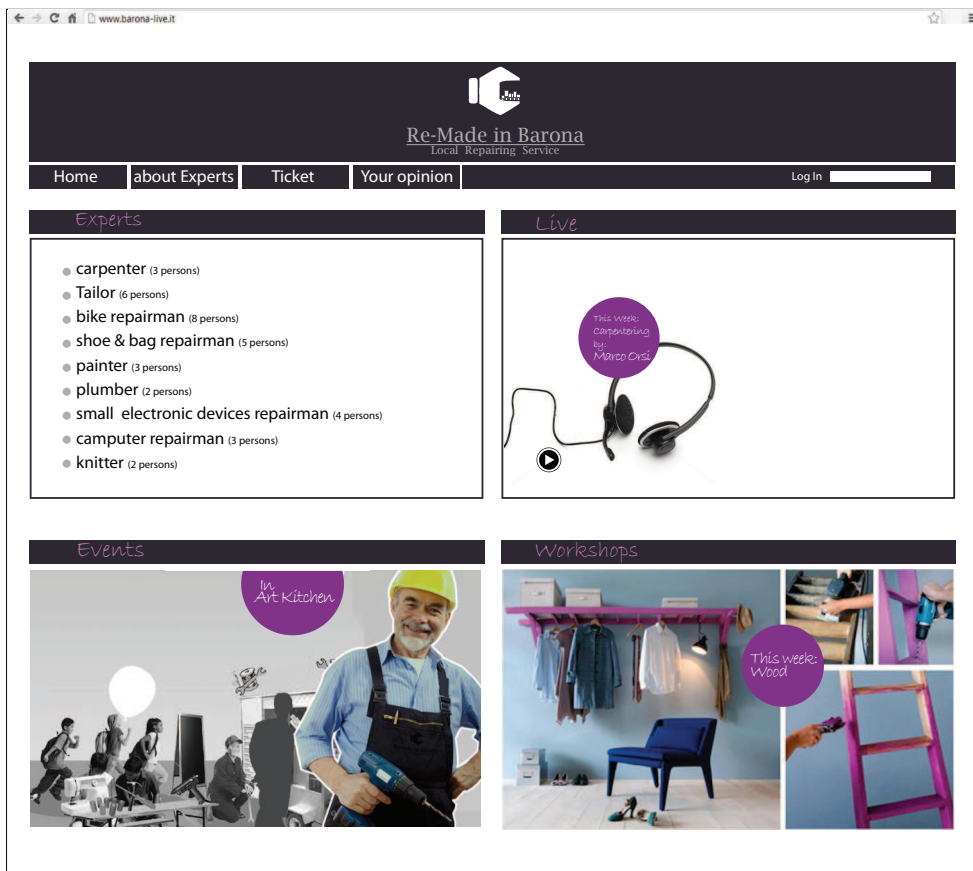


7.5.1 WEB PAGE

It is important to mention that the web page of “Re-Made in Barona” is not the only way of giving information. Some physical ways of giving information have been considered to give the information about the service like: bacchecas of apartments, local supermarkets and the school of Lope de Vega, that through these touch points the people receive the necessary information and updated about the events. These physical places aim, is to improve and foster the intergenerational dialogue because for some of the old people this is the only way to know about the service and their neighbourhood.

But for integrating young people in the service and encouraging the elderly to adapt themselves to the technology which is one of the important means of communication nowadays, a web page would be considered as a secondary platform of giving information and news to Barona people.

The web page of “Re-Made in Barona” would be a platform in which the users of the service could get information about the “Re-Made in Barona” Experts(Their experience, when they are available, their personal data), events and workshops and also listen to the weekly live lessons by one of the “Experts”through web radio “Navigli”. They could also know about the way of payment which is “Ticket” and the places that they can afford them,




www.barona-live.it

Re-Made in Barona
Local Repairing Service

Home | about Experts | Ticket | Your opinion | Log In

Experts


● carpenter (3 persons)



Giacomo Casano
65 years old

Giacomo has more than 35 years experience in repairing wood stuffs. His specific experience in repairing chair, table and sofa.


Contact:
giacomo-casano@remadeinbarona.net



Alberto Gigante
53 years old

Alberto works as a carpenter in his free times since 10 years ago. His specific experience in repairing chair, and parquet.

Contact:
alberto-gigante@remadeinbarona.net



Marco Amaneo
30 years old

Marco is a young deisgner. He designs the unique furniture with wood. He likes to work for the neighbourhood in his free times .


Contact:
alberto-gigante@remadeinbarona.net

www.barona-live.it

Re-Made in Barona
Local Repairing Service

Home | about Experts | Ticket | Your opinion | Log In

Live




This Week:
Carpentering
by:
Giacomo Casano

the Syllabus:

- How to polish your old wood stuffs.
- How to fix your wood chair, if it is not well balanced.
- How to change the color of the wood stuffs.

www.barona-live.it




Re-Made in Barona

 Local Repairing Service

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Event



This Week: Meet us in Art Kitchen

Address: Via Bussola Dionigi
 Wednesday, 19th of December.
 19:00-22:00

www.barona-live.it






Re-Made in Barona

 Local Repairing Service

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Workshops

[Wood](#) | [Textile](#) | [Bike](#) | [Electronic](#)

workshop

| | |
|-----------|--|
| Saturday | |
| Sunday | |
| Monday | |
| Tuesday | |
| Wednesday | |
| Thursday | |
| Friday | |

7.5.2 TICKET

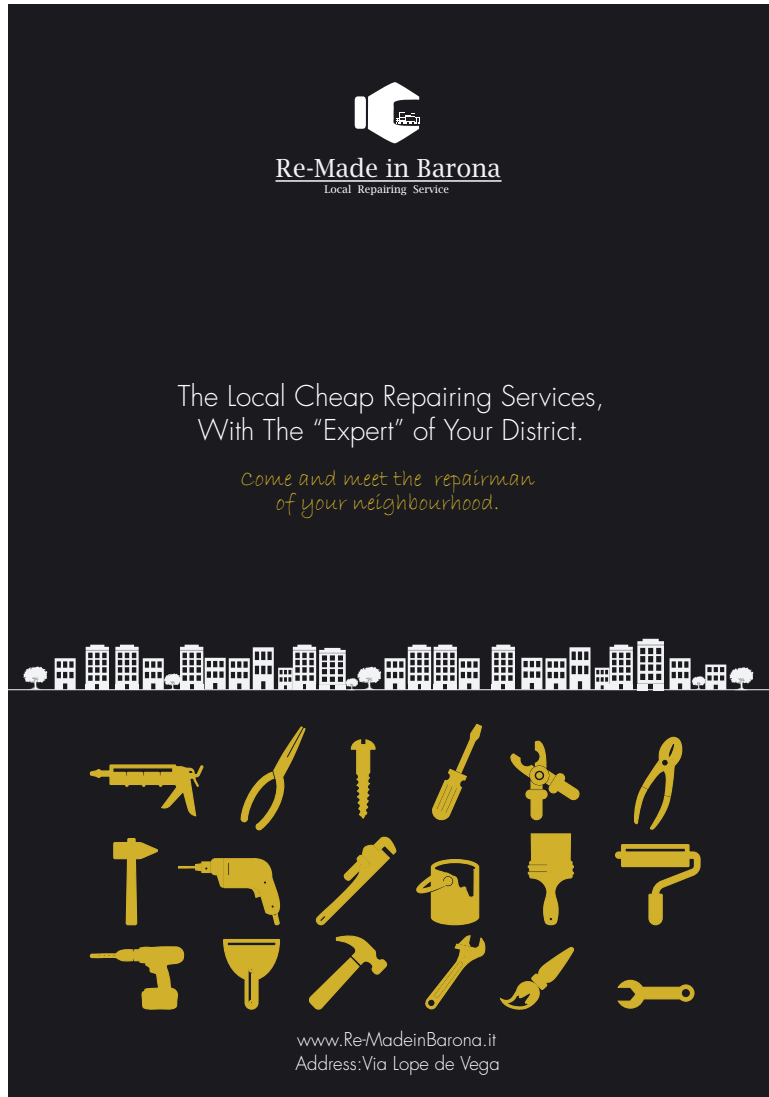
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7.5.3 POSTER

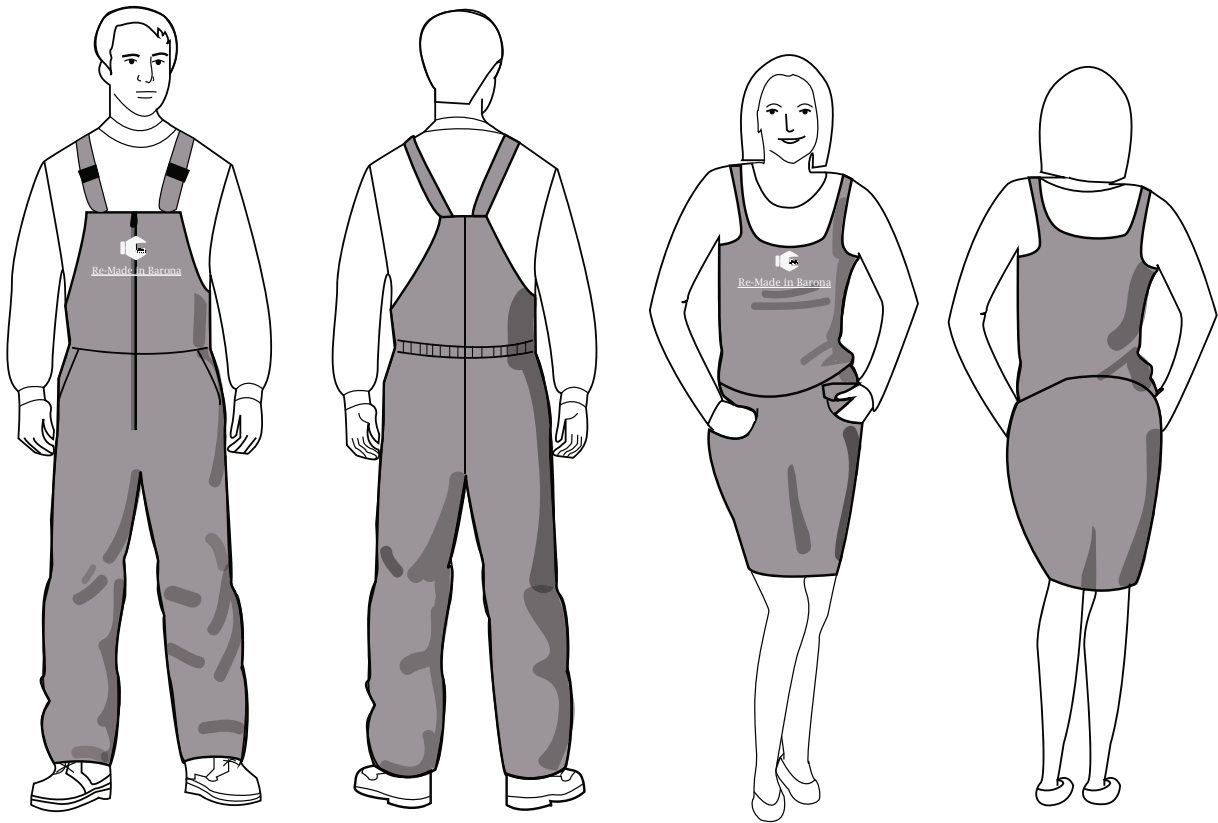
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7.5.4 “EXPERT” CLOTHES

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Re-Made in Barona
Local Repairing Service

8 TANGO EXHIBITION

8.1 PROJECT AS CONTESTS TO EXPLAIN AND DRIVE THE CHANGE (GUARDARE TESI SUD AFRICA)

An important and specific feature of what is the co-design process related to the actors involvement will be the Tango interactive travelling 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 travelling exhibition, moving around Europe and it will be held in Nantes in March 2012, in Milan between the 9-14 of April during the Furniture Fair *Salone del Mobile*¹ within a Cultural Partner's space within the well known trademark "Zona Tortona" area, and in Helsinki in June 2013.

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

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

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 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.

8.2 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)

8.3

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).

8.4 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 district 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 definition, 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 materials 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

Figure 8.1
the future Tango
exhibition



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 work flows 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).

8.5 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.

Figure 8.2
the future Tango
exhibition

It can be said that from the results obtained so far, partners and local administration had started to show their interest



to change their habits and remove socio-cultural and administration barriers. Especially during the workshop we want this forecast to pass through, even in order to deepen the final details of the agreements with the relevant actors, make the final fine adjustments and sign documents of commitment to finally give the real kick-off to the start-up of the Product Service Systems.

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

Part 4
CONCLUSION

9

EVALUATION: PROCESS AND THE RESULTS

9.1 PROCESS: GOOD-BAD RECOMAND (MSDS REDEFINEMENT)

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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.

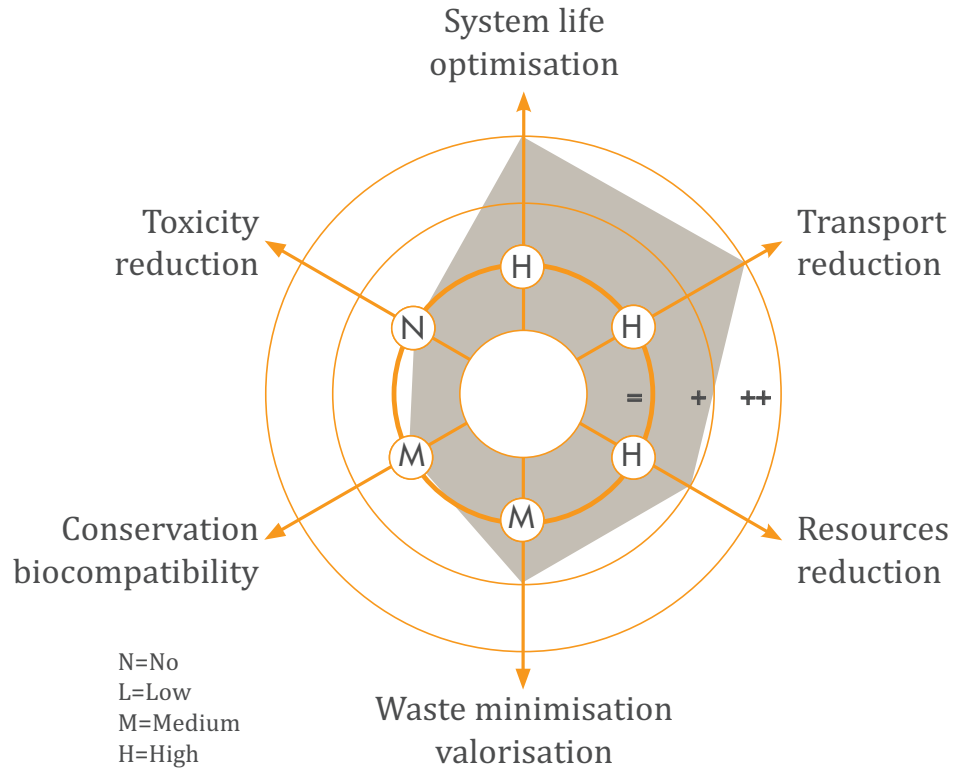
Finally, it is possible to consider a difficulty emerged during the System Design Concept derived from the decision to leave the process of co-design is also open in phases of engineering. On one side it was good to give the opportunity to the stakeholders to take an active role in the design, giving 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 (SOCIAL, ECONOMIC, ENVIRONMENTAL)

In following pages, you see the “SDO Radar” that has been used to evaluate the new system from the sustainable Product Service System innovation point of view.

This tool visualizes the improvements, in relation to an existing reference system and its sustainability priorities in 3 dimensions: Environmental, Social and Economic.

Environmental Radar



system life optimisation:

All the infrastructures are long-span, except a few products that are used during the courses which are mostly from the neighbourhood's home like: fabrics, wool, wood... about the other stuffs like, tables, chairs, boards, they would be re-designed and re-used sometimes by changing their function.

transportation reduction:

The focus and emphasize of the project is switched to the locally preparation of the needed equipment and products for the repairing meetings and workshops. Furthermore executive persons are from Barona district that reduces the unnecessary transportations. The distance between 3 main meeting points is max. 5 km. that the best way for commuting between them is going on foot.

resources reduction:

Except the heating system of the “Lab of Lope de vega” during winter time and some equipment which use electricity to work,, the other parts of the system could be considered as a low energy consumer. The repairing activities at the people’s home also wouldn’t last more than one or two hours. The executive persons would be a part time persons that work as a employee at their own offices and just coordinate the service from their offices and so they wouldn’t use any energy resources other than some specific hours of workshops and events.

waste minimization:

The repairing equipment would end up in landfill. But as they would be used very carefully, they would last longer. The strategy of the courses is to teach the re-using and repairing methods to people, so in general there would be the waste minimization after starting the courses and workshops.

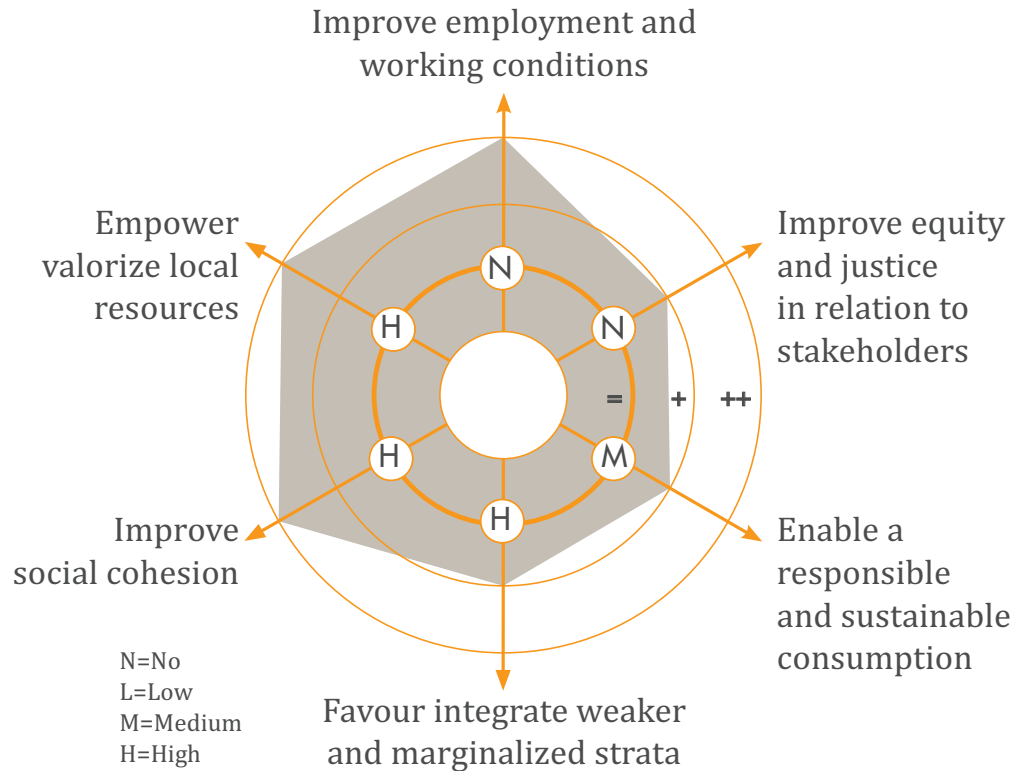
conservation biocompatibility:

There is not any special improvement in the energy producing comparing to the previous system(Manual Activities).

toxicity reduction:

The resources as well as the pervious system, are prepared from the biological resources.

Social Radar



improve employment and working conditions:

There is not any health and safety problems, because all activities would be executed by or under the observation of the experienced and qualified persons. The system offers the part time job to the citizens so from this point of view it would rise the work opportunities.

improve equity and justice in relation to stakeholders:

The new service is in harmony with the district and opens a free and clear criticising atmosphere for everyone about the service like the previous system(Manual Activities).

enable responsible and sustainable consumption:

The users would be integrated in the service from the beginning.

And the following strategies would be in parallel with their needs. The new concept is aimed to bring the forgotten sustainable consumption values into the people's of Barona lives.

favour integrate weaker and merchandized strata:

This system has been designed in a easy and communicative way for everyone. The special effort has been done to remove all the possible communication obstacles in order to integrate the weaker and marginalized people.

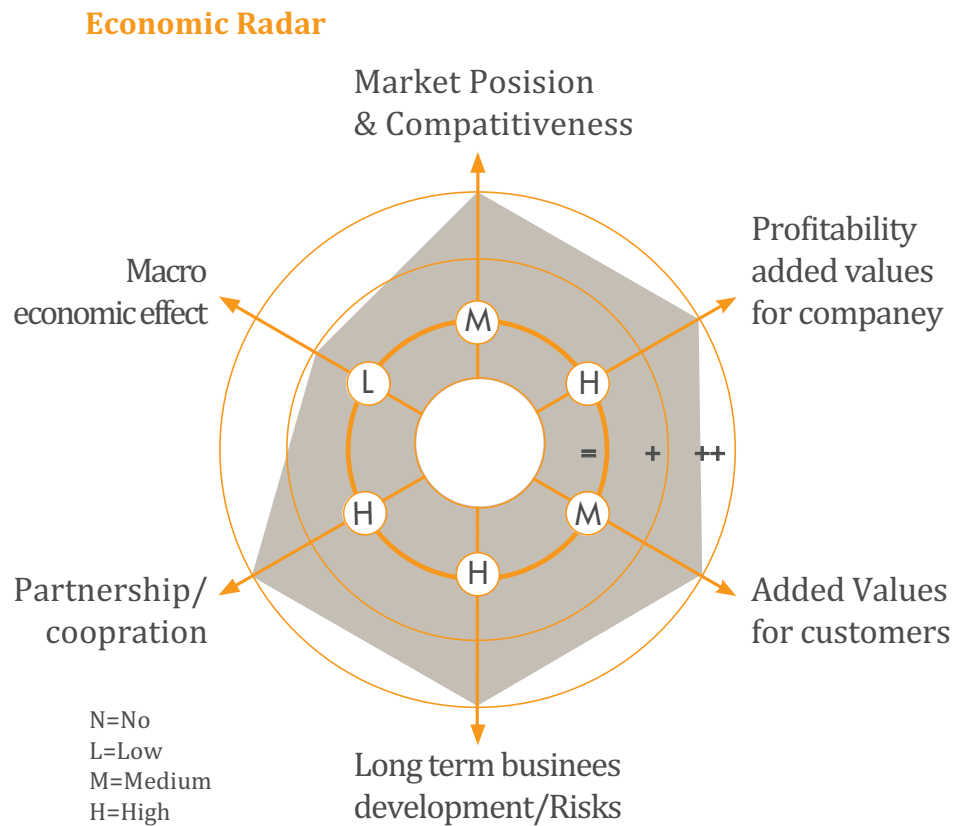
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improve social cohesion:

This system has been designed specially for the elderly and marginalized people not only to find a part time job but also to be involved in the social and economic activities.

empower valorize local resources:

The local-based and asset-based strategy would improve the cultural and local values.



market position and competitiveness:

The ticket-based business model brings the initial capital to the service and would open the opportunities for it by integrating the local shops in the system.

profitability/added values for company:

The profitability would be decreased by integrating the local stakeholders, people and shops and would bring the opportunities to create more value in the whole chain.

added value for the costumer:

The costumers would locally reduce his/her repairing costs while some other experienced and competent people would find the part time job.

long term business development/ risks:

The business model which has a long term strategy toward the market involvement. The business model at the beginning will integrate a limited number of local supermarkets while by the time this number and the variation of the shops would be decreased. Also for the costs reduction at the starting point, only the qualified people who don't need to attend the vocational courses would be integrated but after a period of time by growing the system the other not skilled people could also participate and attend the system's vocational courses.

partnership/ cooperation:

There is a strong ties between the stakeholders and partners of the service because of the benefits that the system brings for every single partner.

macro economic effect:

There is not any specific macro economic problems like the previous system.

9.3 REPLICABILITY IN OTHER COUNTRY?

Inter-generation dialogue is a common topic in both developed & developing societies. Even we could say that concerning to the fast speed of cultural changes in third world countries these days, it is more important than the other societies. In Iran that youth is the largest population bloc in it, over 60 percent of 73 million people are under 30 years old, the gap of communication between the elderly and young is quite visible. The elderly who are the minority, have been marginalized in recent years and all the attentions have been focused on the young people and their needs.

On the other hand, regarding to the fact that people in previous generations, were struggling with more economic problems than now the maintenance of the stuffs has had a special place in their life and so the skilled persons or crafts men were also in the central attention of their region. In that era , people admired the craft men and it was encouraging, them to improve their skills day by day. In fact in that time they were not only the technicians but most of them were also designer and inventor.

But in recent decades by globalization and industrialization, some countries like Iran has rapidly switched their structure of economy which was more productive and depended on the local and regional assets, to an open economy in which the import of technologies from the other industrialized countries is considered as an important value. This phenomena has been occurred, without making a suitable infrastructures for it. Actually at the first glance it could be seen, as an op-

portunity for the people, because by opening of the economy a variety of products are available in the market and the massive market is offering something new every day. So the people use to consume and throw out the stuffs very easily. But in recent years the economy of Iran went through a deep crises because of the political isolation from some industrial countries sides. In this situation the people had to change their economic priorities and go back to their traditional ways like taking care of what they have and try to use their and the neighbourhood capacities in order to tackle with the se economic problems. As an effect of this phenomena, is re-using and sharing the things, which is becoming as an habit for every one in Iran nowadays. For instance the housewives has been started to keep and use some usable parts of the fruits and vegetables at the kitchen that they used to throw them away before this. The young people switch their skills with each other, for instance a person who want to learn a new language from a friend, gives the tennis lesson to her instead of money or the people the people help to each other in fixing things. And in general the people are more interested in public facilities like the exercise equipment in parks or the manual courses in libraries and even mosques.

“ReMade in Barona” in my opinion has the potential to be implemented in Iranian neighbourhoods due to its potential in improving the social cohesion, the inter-generational dialogue and offering some part time jobs to the citizens. In fact, It would work as a platform that facilitates the meetings of the experts and the people who need the cheap repairing services. The service would discover the skilled but marginalized ones and put them in contact with the others. In this condition the “ReMakers” would become available every time and every where and would help to the neighbourhood.

9.4 THE FUTURE SCENARIO

“Share Radio” could support “Re-Made in Barona” in terms of categorizing and giving a bank of information in which “The Experts of Re-Made in Barona” could register their information and these information could be accessible to the people who require the repairing services. In return “Re-Made in Barona” could develop the vocational activities part of “Share Radio”. And also could help to the economic sustainability by reducing the service expenses, by proposing a ticket based business model to “Share Radio” and sharing the physical places which already have with “Share Radio”.

As the future business model for “Re-Made in Barona” , is aimed to integrate the wider range of local shops in order to satisfy the needs of all target groups. The shops which could be considered as a possible partners, are: local book stores, local gyms, local coffee shops, local theatres and cinemas.

And finally, in order to attract more young people to this system after the first 6 months, is supposed to start the free vocational courses, for some interested young people.

10

RELEVANCES: CO-DESIGN ACTIVITIES_ WHY TO CO-DESIGN

10.1 METHOD AND GOALS

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Co-design is a concept, based in the American pragmatist tradition, which argues that all people have different ideals and perspectives and that any design process needs to deal with this.(1) It is also a development of systems thinking, which according to C. West Churchman “begins when first you view the world through the eyes of another.”¹

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.

1. (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

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.

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.

10.2 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.

10.3 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 vis-

ibility 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 has 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 whom 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.

10.4 **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 Re-picturing 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 methodolo-

gies 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.

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