MULTIDISCIPLINARY PROJECT
FINAL REPORT

Fas.P.onSite - Fashion Production on Site

D-sign

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Part I: Framing the Team's work
1.1 Executive Summary

D-sign is a place that provides space, tools, and visibility to emergent fashion designers and other creatives in knitting fashion, fostering their creativity and promoting social habilitation and strong link with territorial specificities. D-sign is a hub for fashion talents and, to some extent, for creativity in general.

In designing our service, we envisioned a concept based on the idea of merging. We believe that gathering people, knowledge and technologies can catalyze innovative processes. From a first point of view, our big open space will unify different functional areas: emergent designers and creative people working in fashion, as well as photographers, will share the same space, same facilities and machinery, just for the time they need or they can afford. This obviously will translate into a cost for each person lower than the cost of renting a boutique, but it will also enable the rise of new ideas through synergies. The variety of events held in the space, open everyday even to external customers, will modify also the common relationship between designer and customer in the fashion industry. In D-sign, customers are not only buyers of the final product, but can personally meet designers, view their creations, share impressions and suggestions, or simply spend some time together. Entering our space, the customer himself can share what we called a “widespread sense of creativity”, everyday different, from the one rising from an active Lab during the day, to those originated by fashion shows, showcases or cultural events in the evening.

D-sign is a wide transformable space keen to the organization of many different kinds of events, such as fashion contests, fashion shows, fashion photography events, theatrical performances (where actors wear our garments), local wine and food tasting, workshops and so on. During these events D-sign talents are scouted, involved, and promoted.

Aiming at becoming a unique expression of the urban context in which it arises, D-sign also strengthen his link with the community, renewing an abandoned space in the industrial district of Bovisa, Milano and transforming it into a cultural center and a meeting point, and boosting the feeling of locality with the use and the advertisement of local products.

The report has been organized as follows:

- Part I, which includes the Executive Summary, Introduction, and Users Requirements
- Part II, consisting in an analysis of the state of the art and of our case studies
- Part III, which describes our solution in terms of services and space organization
- Part IV, which analyzes the market and reports on the financial feasibility of the project
1.2 Introduction

1.2.1 Context

Kickoff principles

The first challenge that Fas.P.OnSite had to face was setting a real innovation in the landscape of fashion production, both a new service and a new business idea: setting up an urban scale knitwear production by putting together in a single physical place many different functions and activities involving in the customized knitwear production process.

The first research framework envisaged by the project tutoring team and external partners provided the main Fas.P.onSite concept features. Fas.p.OnSite had to be “a workshop-store where it is possible to design, project and produce knitwear on demand and on site.” The core of the whole concept was the possibility of gathering in the same place design, production and distribution, and this led to the identification of a first set of general problems:

- The ways of interaction between users and concept was to be completely defined
- The entire process was formerly meant to take place in a very short time (“only a few hours between ideation and production”)
- The technical (later economical) feasibility of the whole set of purposes was to be explored and proved.

As a technical starting point, as well as a framework for the concept development, Fas.P.OnSite made use of Shima Seiki knitting technologies: the recent development of the WHOLEGARMENT machinery system, capable of knitting a complete garment in a given time, was pointed out as the one providing the higher production flexibility, a crucial factor in the development of a concept such as ours.

Stakeholders

Shima Seiki mfg. Ltd. is a Japanese company operating for 40 years in the design and sale of knitting machines, as well as in the development of related software (computer graphic systems, apparel CAD/CAM systems) and hardware (special ShimaSeiki SDS workstations).

Apart from taking up, right from the start, the role of main technical advisor, Shima also acted as the technical testing ground for Fas.P.OnSite production models (through a simultaneous prototyping activity), and as a particular kind of customer, searching inside the Fas.P framework for a new employment of its technologies and knowledge.

Sintesi Fashion Group, established in 1983, is manufacturing and distributing woman’s knitwear and prêt-à-porter clothing. Even if the firm was established quite recently, the Company’s partners are in the clothing field with different activities since several generations

CarpiFormazione, Vocational Training company specialized in planning and running training courses for the Fashion field and in services concerning the Textile/Clothing sector.
BasicNet is a company operating in fashion production field, established in Torino in 1994 and currently leading and providing services to BasicNet Group (including Kappa, K-Way, Jesus Jeans, Anzi Besson, Superga and Lanzera.)

The three mentioned stakeholders operated in different times and in different parts inside the Fas.P.OnSite research framework providing technical advice about knitting techniques as well as technical and economical feasibility. CarpiFormazione could most of all act as a partner in the issues concerning the training and knowledge-sharing side of Fas.P concept.

**Action Research practice**

In such a context, made of a great number of different stakeholders and roles (mainly divided into those involved in university context and the external ones), a great value has been assigned to research method, in order most of all to guarantee an equal advancement in the communications between the three project teams and between the teams and the tutoring group, in a continuous practice of problem updating: action research, as a reflective process of progressive problem solving led by individuals in teams or as part of a "community of practice" to improve the way they address issues and solve problems, was identified as the most important tool to reach an adequate level of co-learning:

"Action research...aims to contribute both to the practical concerns of people in an immediate problematic situation and to further the goals of social science simultaneously. Thus, there is a dual commitment in action research to study a system and concurrently to collaborate with members of the system in changing it in what is together regarded as a desirable direction. Accomplishing this twin goal requires the active collaboration of researcher and client, and thus it stresses the importance of co-learning as a primary aspect of the research process."

(Gilmore, 1986)

The aim of such a practice was finally the definition of an operative framework featured with the highest level of information exchange between researchers and the continuous re-definition of problems and tasks.

**First enquiry areas**

This kind of interaction led, through several levels of research and reflection including brainstorming sessions and former case studies, to the identification of four main research fields for Fas.P.Onsite:

- **Business**

  The concept dealt was to be featured with the elements we formerly recognized in an urban knitwear shop-factory: co-creation of value, experience marketing, creation of a made-in-italy sustainable brand image capable of determining loyalty identification in customers.

- **Production**

  Stressing the ideas of prosumer and self-made design in order to define a strong uniqueness of the final product
- **Service**

Providing a new experience in buying clothes by an innovative mix of the mentioned elements and supporting this experience by technological and HR tools such as virtual prototyping devices (avatars, body scan…) or direct contact with professional assistants and designers.

- **Place**

Contrasting de-localization with re-localization, stress the value of an identity to be built by an urban-scale trendsetting, as well as a correct setting of distances in defining of the model, focusing on the km0 model.

**Problem re-setting**

The Fas.P.OnSite design teams took a trip to Carpi to visit Shima Seiki branch factory and Sintesi Fashion Group, and then visited BasicNet headquarters in Torino where they met the President Marco Boglione.

The experience and the question which came out during the meeting led to an important implementation of the technical acknowledgement, as well as to point out the major consequent issues:

- **Timing**: the production process required a precise time, but some operations to be added (e.g. final washing and drying) were not as determined in their timing.

- **Costs**: the high pricing of machinery, and the related expenses required for workstations and specialized personnel immediately pointed out economical feasibility as a binding project constraint.

- **Customization limits**: Wholegarment machinery is characterized by a limited (though larger than usual) range of possible finenesses on the same needle set. This evidently reduces the possibility of an immediate and unlimited customization of garments.

**1.2.2 Fas.P.OnSite project teams**

Blending the former enquiry fields with the issues which soon rose up led to the last subdivision of project teams: this subdivision determined the fields lately deepened by the teams as project themes.

- **Team B: customization and interface**

Customization has become the core issue of team B research, most of all in its aspects of possible “over-intermediation”: the place of creation and sale has no more to be physical, tools like virtual dressing rooms and social-network model lie as the base for a new business model.

- **Team C: sustainability**

His team has focused more on showing the production process and giving its quality chain the possibility of being continuously checked and identified.
Team A: place of experience

Our team defined its research path on the core idea of **building urban values around fashion production**. The aim of our concept is to promote creativity in fashion and innovate knitwear design, defining by these strategies new urban values, i.e. an empowering of social improvement in urban areas. A promotion of urban production and knowledge, a promotion of networking between urban realities and fashion production world. The same way, we explore the possibility of a new experience mode, built on a relationship between users (customers, designers, producers widely involved and interested in the sector) which should be capable to set up a *widespread sense of creativity*

The tools to be employed to reach this aim can be summarized in one of the former concept visions developed by our team: a physical space, providing tools and chances to young people who need to express their creativity in fashion, showing this creative activity during its development and in its results, and linking it to production, sale and visibility in fashion environment.

1.2.3 Team organization and roles: team A

Our team in its final configuration is composed by 5 members; it was formerly made up of 6, but a team reorganization turned one of our members, Francesca Morroni, whose work as an interior designer had been until then very important, to team C.

This is our final team composition: every member of the team worked as a chance for others to enter his own field of research in order to integrate every part of the project into a cohesive proposal.

**Domenico Barile** (Politecnico di Milano, Management, Economics and Industrial engineering) and **Ekaterina Vasilyeva** (Politecnico di Milano, Management, Economics and Industrial engineering) managed the economical and financial research area contributing to the definition of the new business model and its feasibility by comparing to other models and branding strategies, developing management models and market analysis.

**Paolo Cerutti** (Politecnico di Torino, engineering for cinema and Methods of Communication) has worked at the definition of service offer and service identity, at case studies, and at the 3d realization and rendering of final space model.

**Giovanni Comoglio** (Politecnico di Torino, Architecture – construction) has worked at the definition of service offer and service identity, at case studies and at the development of final space concept.

**Marco Triverio** (Politecnico di Milano, Computer Engineering), elected team controller at the beginning of the project, managed team organization -skype and physical meetings, finances and so on-worked mainly on case studies, visits and service definition.

1.2.4 Research and activities

Communication

As mentioned before, the issue of team-to-team and team-to tutors communication has been crucial for a correct development of each research and design phase, and the main tools to enable this communication have been the creation of a blog advertising our activity and gathering our work ([www.newitalianlandscape.it/fasp](http://www.newitalianlandscape.it/fasp)), and a constant use of Skype meetings. The progressive steps of
the field research and the latter concept development have also been debated during *Workshop days* which took place in Bovisa, Milano, all along the duration of the project (March 09, June 09, November 09, December 09, February 10, July 10, October 10) and during the Midterm review in Bardonecchia Winter School, March 2010.

**Visits**

A major role in the implementation of general and specific knowledge about the project issue has been taken by visits. Some of these have been planned by the whole FasP.OnSite Team, some others have started as useful for just one out of the three teams, but in the end helped all the three to deepen their research.

Collective visits:

- On June 18th, 2009, the FasP equipe took a trip to Carpi to visit Shima Seiki branch factory, Anna Rachele (Shima Seiki fashion partner) factory and Sintesi Fashion Group (owning Anna Rachele) headquarters.

  We had the chance to verify the real possibilities and constraints linked to the employment of Shima machinery, as well as to discuss technical feasibility of our concepts with Shima representatives and SIntesi CEO and president: production timing, machinery technical features, flexibility of production flow, total pricing have been the main debated issues.

- Similar discussions took place during the following visit to BasicNet headquarters in Torino, on July 1st, 2009: the teams visited the company seat then met the company president Marco Boglione who gave advice about a correct management strategy of an innovation in fashion production.

As Team A, we organized other meetings:

- **The Hub Milano**, a leading co-working and start-up-incubator space concept that we recognized as the most valid example to refer to in our offer definition.

- The visit has helped deepening the themes of organization and identity of a similar innovating activity.

- **Fabbrica del vapore**, an incubator of innovative projects promoted by the Municipality of Milano

- **Cittadellarte – Fondazione Pistoletto** in Biella, has been chosen as a reference in promoting of creativity and urban values, melting different creative activities in a space which becomes capable of triggering dynamics of urban and multi-scale renewal

- **Toolbox Torino**, a former office complex, nowadays transformed into a co-working space; a meeting Toolbox CEO started a process of useful knowledge exchange on co-working spaces management.
Case Studies

All the steps of action research and concept definition have been built on a specific set of case studies which aimed to refine the definition of aspects of technology, service concept, space concept, business model. Those which remained as final reference are deepened in a related section in this report.

Intermediate deliverables

The results of research and definition processes have been periodically uploaded on the blog:

- case studies research reports
- service descriptions: starting from the early written description, we have gradually shifted to service diagrams, activities description and general functioning description by the use of storyboards
- space concept: presentation of a type –space concept, completed by technical drawings sketches, renderings and general functioning description
- Market analysis developed as a parallel path together with the latest concept definitions.
## 1.3 Users' requirements

<table>
<thead>
<tr>
<th>STAKEHOLDER</th>
<th>NEED</th>
<th>REQUIREMENT</th>
<th>REQUIREMENT TYPE</th>
<th>METHOD TO GATHER REQUIREMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Politecnico - ASP Board</td>
<td>Innovation, Multidisciplinarity, Coordination</td>
<td>Elaboration of a complex and multidisciplinary team project</td>
<td>Technical Interpersonal</td>
<td>Collaboration Division of roles Constant feedback</td>
</tr>
<tr>
<td>Shima Seiki</td>
<td>Success achievement through spread of technology</td>
<td>Application of technology in successful projects</td>
<td>Technical Economical</td>
<td>Strengths and weaknesses analysis of the productive process</td>
</tr>
<tr>
<td>Fashion designers</td>
<td>Initial space and services</td>
<td>Obtain tools needed to start a career in fashion industry, for a reasonable price</td>
<td>Technical Economical</td>
<td>Analysis of users' needs, hypothesis on market size and elaboration of a possible solution</td>
</tr>
<tr>
<td>Other creatives in fashion (photographers,…)</td>
<td>Emerge through collaboration</td>
<td>Develop their network inside the fashion area</td>
<td>Technical Economical Interpersonal</td>
<td>Creation of an integrated service offer</td>
</tr>
<tr>
<td>Universities and fashion schools</td>
<td>Deepen fashion-related knowledge</td>
<td>Provide courses and workshops to creatives, paid or sponsored, using D-sign space and tools.</td>
<td>Cultural Economical</td>
<td>Organize courses, classes and workshops inside the space</td>
</tr>
<tr>
<td>Fashion brands</td>
<td>Advertise their products</td>
<td>Link their creations to an innovative and successful fashion project</td>
<td>Economical</td>
<td>Guarantee a dedicated zone inside the space</td>
</tr>
<tr>
<td>Local producers</td>
<td>Assert their locality and responsibility</td>
<td>Become part of a sustainable and unique cultural offer</td>
<td>Economical Cultural</td>
<td>Reserve relevant roles in production and during events</td>
</tr>
<tr>
<td>Store customers</td>
<td>Unique experience, customization</td>
<td>Participate in a different buying process which becomes social</td>
<td>Economical Cultural</td>
<td>Analysis of the growing need for customization and participation, turned into a new chain of consumption</td>
</tr>
<tr>
<td>Neighbourhood</td>
<td>Revitalize an industrial district</td>
<td>Turn an unused shed from former industry into a cultural pole</td>
<td>Cultural Political</td>
<td>Comparison with similar experiences</td>
</tr>
</tbody>
</table>
Due to the complexity of the problem we had to face, the amount of stakeholders involved is quite relevant. Many actors, with different needs and requirements, had been taken into account in designing a suitable offer for each of them.

The first identified stakeholder is the ASP Board, including members from both Politecnico di Torino and Milano. Aiming at developing an innovative project thanks to team-working, we had to share knowledges from detached fields of interest and collaborate to satisfy requests for an interesting final outcome.

Another actor involved is what we can consider our “institutional one”: Shima Seiki. Providing technologies to produce a complete garment without further sewing, as we'll discuss later, Shima represented the starting point for each of the three teams involved in Fas.P.onSite. Its goal was to include the machineries they created into an integrated and attractive service offer.

In design an innovative concept, our project focused then on the third type of stakeholder: the group of emergent fashion designers, close to their graduation or just graduated. With good ideas and a great creative strength, they usually lack in money to start their own activity inside a studio. D-sign then aims at offering a shared space and share facilities useful to rise and grow in fashion industry.

Beside designers of pieces of garment, many others creative figures are required in fashion, as photographers. Their situation is similar to the one just described: D-sign provides them with tools to create their own network, putting their creativity available also to those who can not afford a traditional photo shoot.

Universities and fashion schools keep on playing a relevant role in the formation process for talents in D-sign. Taking advantage of their collaboration, the project could provide classes, courses and workshops inside the space, adding a new dimension, based on cultural growth, to the productive one.

Already set fashion firms could be also considered as stakeholders, even if marginal. Their desire to link their brand with our innovative experience will be realized through a showcase area, managed independently, where products, posters and logos could be shown.

Undoubtedly more important is the role played by local textile factories and food and wine producers. With D-sign they could promote their attention towards a responsible and sustainable production and consumption chain, becoming part of the productive process (for textile ones), or highlight their locality and uniqueness in many events including tastings (for food and wine).

A major character inside the D-sign system of actors is the store and café customer. The growing request for customization and participation, in fashion industry as in many other sectors, is leading towards a blurring of boundaries between production and consumption. Even if not allowing customers to create their own clothes, D-sign represents a relevant touching point between different ends of traditional productive chain, through shared spaces between designers and customers and various opportunities for a face-to-face meeting. The customer will then feel himself part of a unique experience, overcoming the buying process and shifting to a cultural and creative moment.

Project's benefits also extend onto a wider area, including the whole neighbourhood where the physical space is set. Establishing the fashion pole inside a former industrial district, also a cultural and social centre will be returned to inhabitants of the district.
Part II: Exploring Problems and Opportunities
2.1 Customers: roles and needs

A great number of different profiles of customers, stakeholders, and experts have either been directly involved in the project or are targeted by the final outcome of the project. The former category has been already discussed in Part I; we now analyze the latter.

At the core of our system of actors we find the fashion designers. Many of them, after formal education, aspire to make their designs visible and successful in the fashion world; this usually translates in them becoming independent and opening a new studio. In general, they are trained and ready to design their own garments; yet, at least initially, they might have to rethink their ambitions because of the costs and revenues needed to open, run, and keep a private activity wealthy.

For this reason, after graduation, they usually look for a provisional solution that might help them grow personally, professionally, financially, and in visibility.

Other kinds of creative people (such as photographers) usually find themselves in a similar situation: even when talented, quite a few years have to pass by before they can afford the necessary equipment and they have a substantial number of customers.

On the other side of the consumption chain there are the final customers. They stand for all the people that represent potential buyers of the products of services offered on the market. The role of customers in recent years has dramatically changed. As envisioned by Toffler in the 1980s [27] “the most creative thing a person will do twenty years from now is to be a very creative consumer”. Boundaries between design and use are loosening in many sectors. In the music field, for instance, Yamaha has recently collaborated with some of its customers to create a new type of guitar: the result was a commercial success that has sold five times more than the average product of its category.

Of course such phenomenon is not bound to the music world. Many relevant examples come indeed from the fashion world: as we will see in later section several companies have started to allow a certain degree of customization in their products. Mass customization has become a new way of targeting individual customers instead of categories of customers: this is of course only feasible when the costs and the efficiency resemble those of mass production.

The Fas.P.onSite project has begun its development from this vision: through technologies the user can be brought at the center of the buying experience, replacing anonymous short-term buy-once transactions with long-term financially rewarding relationships [2]. To make the project successful it is absolutely required to build on this concept in order to create a unique and compelling experience that does not simply resemble other solutions already commercially available. This translated in the need for offering not just customized garments but also an appealing environment where the final customer feels inspired. The solution that will be described later in the document will show the balance between customization, uniqueness, and buying experience that we have reached.

During the last ten years customers needs have changed; the increasing attention towards environmental sustainability along with a greater buying awareness are making it necessary to expose a big part of the production and supply process in order to prove to the customer certain quality standards. The origin of raw materials, the transportation method, the CO2 emission related to the production, and many other factors are in the customers (and media) spotlight.

For this reason it is absolutely necessary to take into account the environmental and social sustainability issues when shaping an innovative service. Concepts such as km 0 and Slow Food are just instances of the existing widespread sense of responsibility. This fact has put us in touch with local (and, in our case,
Italian) *textile producers* for what concerns the production of garments: their raw materials can act as symbols of the ecological sustainability and of the uniqueness offered by our service.

Moreover, we believe that the experience a store offers should go well beyond the simple act of buying. This is why our project wants to involve *local food and wine producers* with the aim of creating a place that attracts people not just for its products but also for its events and for the creative environment it fosters.

Fas.P.onSite has its foundations in a sustainable philosophy in order to reach the renewed customer needs and improve the buying experience.

Global companies outsource their production in order to cut costs; the consequences are lower quality and standards of products and poorer company’s reputation. In contrast to multinational corporations Fas.P.onSite becomes a local hub that uses its space to offer a fully new and sustainable experience: for this reason fashion-related classes and workshops might be organized involving local entities such as *school, universities, and teachers*.

### 2.2 State of the Art in the Fashion Industry

The last 25 years have seen an incredible technical and technological development of the machines used to produce knitted fashion garments. Such progress has been driven mainly by the desire of minimizing wasted resources, both during design and during production. For this reason, cutting and sewing have been greatly optimized and automatized. Moreover, the fashion market is demanding short design and production times not only to adapt to the ever-changing desires of the customers but also to allow a certain degree of customization.

Since consumers need to express their personality through customized (or unique) products, fashion brands had to optimize the cost and the time needed for production and customization with the aim of putting on the shelf the right product at the right time. A slow production system might cause disappointment in the customers who cannot find the desired garments; it might also result in lost sales or in an excessive level of unsold goods.

Clearly this is a matter of balance between cost and time: over the years different approach and different technical solutions have brought different results. The whole fashion system can then be seen as an entity that aims at reducing the difference between demand and demand fulfillment (as shown in figure).
There are different kinds of knitting machines [18]: the most common is known as flat knitting machine. There are at least four different methods to produce flat knitted garments:

- cut and sew
- fully fashion
- integral knitting
- complete garment

Cut and sew is the most common method and it consists in the creation of different rectangular panels for front, back and sleeve; such panels are then cut in the right form and sewn together. This very simple production method is compatible with virtually all knitting machines (even the very old ones) but it might lead to wasting up to 30% of the original fabric. Moreover the post-knitting processes are complex and time-intensive, significantly increasing labor costs.

Cut and sew is shown in the figure below.

In the fully fashion production method the front, the back, and sleeves are knitted in the right shape directly by the knitting machine. This way the cut processes is virtually eliminated and subsequent wastes (and labor costs) are minimized.

The fully fashion method is shown in the following figure.

Integral knitting removes the manual intervention that was needed in cut and sew and in fully fashion in order to knit trimmings, pockets, and buttonholes. Post-knitting processes are now reduced to sewing only and cut-loss is further minimized.
Integral knitting is shown below.

In the complete garment production the entire garment is produced in the flat knitting machine and post-knitting human intervention is limited to finishing. With this method there are virtually no wastes and no lengthy post-knitting processes. Moreover complete garment enhances quality (since the entire garment comes from from the same yarn cones) and greatly reduces the time to market, possibly making on-demand knitting feasible.

Our project focuses on complete garment flat knitting machines. There are several companies that have developed machines in this field: Shima Seiki (http://www.shimaseiki.co.jp/), Staiger (http://www.steiger-textil.ch/), and Stoll (http://www.stoll.com/).

2.3 New Technologies for customization

2.3.1 Shima Seiki

As shown in the previous section, Shima Seiki produces complete garment flat knitting machines. Without a doubt, it is one of the most famous and most trusted companies in computerized knitting systems.

Shima’s complete garment technology is called WHOLEGARMENT. As explained in previous sections, it is the most advanced form of knitting so far, whereby an entire garment is knit on the machine without any linking or sewing. Incredible cost-savings can be had as a result of eliminating most of post-knit labor and on-demand knitting capability shrinks production lead-time considerably. With virtually no material waste, WHOLEGARMENT is also environmentally friendly.
Moreover the garment, being seamless, is very comfortable to wear and takes advantage of the stretch-quality of knitwear to its fullest. Such qualities unique to WHOLEGARMENT knitwear offer the potential for establishing WHOLEGARMENT as a completely new type of fashion with great added value. By eliminating sewn seams, WHOLEGARMENT sweaters provide an abundance of benefits for the consumer. Stitches at the shoulders, sides and underarms are gone, offering fit and comfort superior to that of any other textile product. Seams no longer interfere with the natural elasticity of knits, so you can move and stretch more freely. Soft and lightweight, seamless skirts and dresses drape and flow more naturally. And there is nothing to break up the design and silhouette of the garment as originally intended by the designer. Seamless one-piece construction also means that the entire garment boasts the structural integrity of a single piece of fabric, allowing stress to be distributed evenly throughout the knitwear. WHOLEGARMENT products raise the essential attributes of knitwear (softness, lightness, and resilience) to an entirely new level of sophistication.

With over 150 patents and over 20 years of painstaking research, WHOLEGARMENT can certainly be defined as cutting-edge. Yet it is also a fully feasible, efficient, and reliable method of producing unique pieces of fashion. A whole new set of opportunities for the knitter, merchandiser, retailer and consumer is then created.

WHOLEGARMENT knitwear is becoming increasingly popular worldwide and more items every year appear in stores carrying the WHOLEGARMENT product tag. This matches the phenomenon described in previous section: mass customization. Through WHOLEGARMENT, items can also be produced to individual customers' size and tastes.

We had the opportunity of visiting a Shima Seiki branch factory in the Carpi textile district. Such visit has proven fundamental to understand the real potential of real-time customization of clothes on site. Some of the pictures we have taken are shown in the following pages. The main outcomes of the visit were:

- Garments are customized using a software and a PC directly released by Shima at the moment the operators purchase a Wholegarment machine. The software employed is neither simple nor intuitive. It requires from the operator a wide personal experience (that he has got from a formation period in Japan) and a direct practical experience in the field; these conditions are inseparable. The need for a Shima programmer has then proved to be compulsory.

- An on-the-spot substitution of needles is impossible: it is necessary to have a group of machines with different finenesses, shifting from 18 (for lighter garments, i.e. cashmere or silk) to 3 (for heavier sweaters). It is preferable to have about multiple machines, in order to cover all possible finesseses. Four machines are enough to manage a manufacturing shifting from fineness 18 to 3. Yet the newer Shima Seiki machines are equipped with the SlideNeedle technology, which does away with the concept of a fixed "gauge" by permitting an assortment of gauge sizes to be knit "on-the-fly" in a single garment or in the same knitted course. This naturally results in a greater freedom in managing changing seasons and shifting trends without investing in a machine for every gauge or resorting to the complex, time-consuming task of gauge conversion. Product variety and differentiation is also vastly improved by achieving interesting textures and sophisticated visual patterning effects.

- For what concerns colors, a fast substitution of pre-colored yarns is possible, but one can also choose for the successive dye of the completed garment.

- Some materials (such as cashmere) require a post-production phase in order to finish the garment.
• The machines are noisy and for this reason proper acoustic insulation is required.
• Machines have to be cleaned almost daily.
• The lifecycle of a Shima Seiki machine is calculated to be of 20-25 years; of course obsolescence is indeed quick because of the frequent electronics and mechanics updates.
• The cost of one machine equipped with a PC and the necessary software is estimated to be around 170000€. The cost of a similar accessories-knitting machine is 60000€.

The WHOLEGARMENT technology has also already been used outside of the factories. It has been used in a new type of store called “Factory Boutiques”, which offer one-of-a-kind custom-made sweaters designed and produced for the customer thanks to the efforts of fashion consultants, designers, tailors, and manufacturers all sharing the same retail space. Wajima Kohsan Ltd. opened the first “Factory Boutique Shima” in Wakayama, Japan at the end of 1995; this shop combines a production factory and a retail boutique, creating a revolutionary mash-up. This hybrid is of course only possible thanks to Shima Seiki’s technology, which creates one-piece three-dimensional garments directly on the knitting machine. The customer is required to be in the boutique for 1 or 2 hours in order to select a certain style from a sample book, select color and yarn, be photographed in a studio and be provided with the composition which simulates the sweater design on him/her. Prices range from 15,000 to 30,000 Japanese Yen (at present, 125 - 250$).
2.3.2 IntelliFit

The IntelliFit Virtual Fitting Room represents an incredible example of the technologies that are spreading inside the fashion world and that might be used to enhance user experience and outputs of the Fas.P.onSite project. The IntelliFit Virtual Fitting Room has the ability of gathering customer measurements and providing custom made clothes and personalized fit suggestions.

IntelliFit Virtual Fitting Room (VFR) uses a 3D whole body anthropometric scanner that can take measurements of a fully clothed individual. VFR takes only 15 seconds for a full scan and has accuracy of up to 1 cm; it is safe since its antennas have been designed to be harmless; it is unobtrusive since customers are fully clothed during the measure. After each scan of a new customer, the IntelliFit VFR prints a “FitPrint ticket” with her/his personal username and password to shop online for "guaranteed-fit" or custom made clothes.

Levi Strauss & CO., Charming Shoppes, INC. and Alvanon Incorporated already use IntelliFit VFR.

2.3.3 OptiTex

OptiTex is a 2D and 3D CAD software that can fulfill the needs of fashion manufacturers in term of digitizing models and designing fashion products. The stage of prototyping of a dress for example accounts for a relevant part of the costs linked to the creation of a new dress and often prove to be unsustainable due to material waste. OptiTex 3D can solve this problem with a modern idea of prototypes: a virtual simulation of the final dress could be created and displayed on a screen, highlighting design, colors and material properties before the “real creation”.

Traditional development of a seasonal collection is considered to last 200 days. With OptiTex tools, labor times could be cut down to just 40 days.

2.3.4 Magic Mirror

The IconNicholson's Magic Mirror is an innovative technology item that augments typical mirrors, projecting a wide range of information directly on the mirror. The mirror proposes clothes to the customers and virtually simulates their fit on the customer. The mirror is also connected to the major social networks and allows to share details and ask for an opinion to friends on the same network.

The mirror is already used at Nanette Lepore’s Bloomingdales Store in New York. One mirror can cost up to $25,000 and a properly equipped dressing room is sold for four times that price.
2.3.5 Threadless

Threadless (www.threadless.com) is an application of “prosumer” model by competition: users can upload their own t-shirt print design on the website, and if an adequately large number of other users like it, the design will be produced and sold online. Though technical limitations have a heavy role in shaping this kind of business, it comes out as a highly evident example of a low-profile co-designing experience.

Threadless is “a community-based tee shirt company with an ongoing, open call for design submissions”. Whenever a design is chosen the author gets paid $2500 for the first print and $500 for subsequent reprints. Threadless is then a website offering two possibilities: proposing t-shirt graphic designs and buying t-shirts.

2.4 Shared working spaces

2.4.1 The Hub

The Hub defines itself as “the place for the people who want to change the world”. The Hub is a social enterprise that provides services to emerging and innovative entrepreneurs. The Hub started in London and it now has tens of branches in several cities across four continents and a global community made of people from diverse professions, backgrounds and cultures.

The mission of The Hub is to provide access to space, resources, connections, knowledge, experience, and investment for all the people that want to start a company. The Hub rents spaces to entrepreneurs, put them in touch with consultants and managers, organizes events to expand the business of its customers, and, more in general, fosters the innovation that will make them thrive. The Hub is sometimes called a “pre-incubator” in the sense that many of its guests develop their idea and a business plan in a hub before applying for funds from a Business Accelerator.

The basic membership provides an anchor desk in a shared environment, internet, access to all events, personal storage and access to a small kitchen. Extra services include the use of the printer, the rent of private meeting rooms, and a personal mailbox.

2.4.2 ToolBox

ToolBox is similar to the Hub but its focus is not on the network of people yet on the creation of a polished offer. ToolBox does not “pre-incubates” its customers but it provides them with a wide range of tools and resources, such as office space (usually a private desk), phone, internet, printer, relax area, private meeting rooms, a small shared kitchen, parking lot, mailbox, and storage.

Its customers are not only entrepreneurs and start-up managers but also professionals looking for a space less expensive than a studio.
2.5 Business accelerators

2.5.1 Politecnico di Milano and Politecnico di Torino incubators

Every year both the Politecnico di Milano and the Politecnico di Torino fund promising companies in different sectors, usually IT, Life Sciences, and Clean Technologies.

Through a competition the most innovative ideas or business plans are selected and supported in the definition of sales channels and business development, in the tutoring of the entrepreneurs, in fundraising and networking with other investors, in collaborations with research laboratories, and in the organization of events. The newborn companies are also given spaces, tools, and resources (such as internet, phone, printers, etc) fundamental to start the business.

2.5.2 Incubatore della Moda

“Incubatore della Moda” is a project of the Camera Nazionale della Moda Italiana which used to be sponsored by the CNMI and the Comune di Milano. Such initiative aims at promoting the birth and development of small fashion companies and fashion studios; it offers a wide range of supports to young talents who want to become fashion entrepreneurs.

“Incubatore della Moda” selects the best candidates and offers them space, resources, tools, tutoring, consultancy, communication services, promotion, contact with showrooms and buyers, and the possibility of taking part in fashion shows in Italy and abroad.

Compared to typical business accelerators (such as Politecnico di Milano’s) “Incubatore della Moda” explicitly targets the fashion world; unfortunately it has not been sponsored for the year 2010 and 2011 and its future is now uncertain.

2.6 Innovative use of space

2.6.1 Colette’s Water Bar

Colette has opened a café in the basement of its Paris store. The café enhances the shop offer but is physically detached from the clothes area. The characteristic of the café is that it often attracts customers that might not be explicitly interested in the Colette clothes offer. Yet the café experience makes them experience the Colette taste: in the café water and food are considered fashion items. This, mixed with extended opening hours and several events (fashion shows, publishing/art/music production presentations), contributes to define the whole Colette experience.

2.6.2 Armani multi-concept boutique in Milan

Armani case is a good example of integration between fashion-related sales and services. It demonstrates that fashion industry can successfully include a high-level service products to make customers be loyal.
The organization of the shopping place is particularly clever and brings the shopping experience to a new level: the boutique becomes a place where customers can relax, enjoy their time, and have lunch or dinner. In fact the Armani multi-concept boutique offers the possibility of having an aperitif at the Emporio Armani Café or spending an evening at the restaurant Nobu, featuring one of the best Japanese chef in the world: Nobuyuki Matsuhisa. Armani provides an almost unique experience to its customers considering their well being also after shopping.

2.6.3 Teatro Versace

“Teatro Versace” has opened in September 2006 in the same building of Teatro Alcione, a theater built in the Twenties. The theater has been sponsored by the famous Italian maison, which has invested nearly 4 millions of euros. The space has been architected to be multifunctional: it hosts not only theatrical exhibitions but also men and women fashion shows, cultural events, and concerts. Teatro Versace can host up to 1000 sitting people and it is acustically isolated thanks to the use of special material in the ceiling and in the walls. Teatro Versace has been describe by its architect as a “black box that should be the background to the lights of the events”.

2.7 Other case studies

2.7.1 Cittadellarte-Fondazione Pistoletto

Cittadellarte-Fondazione Pistoletto has been established in 1998 as an actuation of Michelangelo Pistoletto’s proposal of a new role for artists; in his vision art has to interact with each and every aspect of the society.

Cittadellarte-Fondazione Pistoletto is a small town near the center of Biella (Piedmont) hosting several laboratory that gather artists with different backgrounds and from all over the world in order to start the process of transformation of society. Each laboratory is known as “Uffizio” and it deals with a specific characteristic of the modern culture and of the modern community. There are several “Uffizi”: Art, Education, Ecology, Economy, Politics, Spirituality, Production, Labour, Communication, Architecture, Fashion e Food.

The Fashion laboratory (“Ufficio Moda”) hosts many local innovative raw materials that merry the Fondazione’s mission: environmental and social sustainability characterize virtually all of them. The motto is “ethic and aesthetic”. In the next years Ufficio Moda aims at proposing collections with strong local roots to be sold on the global market.

The idea of “glocality” is also applied to the restaurant inside Cittadellarte. Therefore it promotes “km 0” products: the local dimension is made available to a vast market. The cafeteria serves the Fondazione’s user all day long (from 8.00 to 24.00) and it is also open for dinner in the weekends. Moreover, the very same space is often used for events and exhibitions.

Fondazione Pistoletto revenues come from café, events, shows, and store; it is also financially supported by local municipalities and some private funds.
2.7.2 Fabbrica del Vapore

Fabbrica del Vapore is a cultural center in Milan open to the young and talented and that has strong connection with the local industries. Fabbrica del Vapore hosts 16 laboratories that deal with Design, Visual Arts, Music, New Media, Fashion, Theater, Culture, and Sustainability. Most of the laboratories rent the space offered by Fabbrica del Vapore at a discounted rate; they sometimes also receives public funds.

Every year tens of events, exhibitions, and installations are organized.

Fabbrica del Vapore is an appendix of Comune di Milano, which finances it entirely.

2.7.3 Eataly

Eataly can be described as a determined reaction to the propagation of low quality food and fast meals. Its mission is to sell high-quality food to the greatest possible audience and to make it aware of the origin and the production process of the items sold in the store. Eataly was born from the coalition of many small local food and wine businesses and it has opened four store in Italy, one in Japan, and one in the United States.

Eataly is innovative in many aspects (for instance, the possibility of dining with items sold in the store) but one of them is particularly interesting for the Fas.P.onSite project. Eataly organizes workshops, teaching sessions, wine and food tasting for its customers: this is of course a way to propose a new kind of experience highly integrated in the service offer; yet its purpose is to improve customer loyalty through education.

2.7.4 Material ConneXion

Material ConneXion is made up of an international team of multidisciplinary experts that create practical manufacturing solutions in different business contexts. Material ConneXion uses its materials intelligence to help companies innovate. Widely regarded as an authority on materials, Material ConneXion is often invited to contribute to publications or speak about materials innovation, the strategic value of materials, and sustainable material solutions, among other topics.

Material ConneXion was founded in 1997 by Beylerian to fill a need in the creative circles where materials are specified and where the future of the built environment is planned. The mission of the company is to scout innovative materials from all around the world: small companies in remote regions and major global manufacturers can both become partners of Material ConneXion, whose “only” task is to separate the best from the ordinary. Material ConneXion has quickly become one of the main sources of innovation and inspiration through the habilitation of its customers to discover the latest and most exciting materials.
Part III: Generating our Solution
3.1 Description of the product/service

3.1.1 General description

Exploiting the possibilities offered by new technologies, described in previous chapter, the Fas.P.onSite project began to imagine a new idea of service offer, based on the integration of several tools and activities in a revolutionary concept for fashion industry. The major assumption guiding our work regarded the fact that, inside the clothing productive area, the chain of consumption is still today too closely tied to mechanisms dating back to industrial era. While the production is almost completely driven by fashion brands, customer role is merely a process of selection among different proposals, in order to find in someone else's product a piece of garment reflecting his style or mood. Some of the tools and technologies previously described aim at reversing this structure, giving back to customers the chance to become creators from the designing phase.

Fas.P.onSite sets its goal as realizing a whole new concept of integrated offer based on one of these technology, namely the Shima Seiki WHOLEGARMENT. Undoubtedly, the machine offers the possibility of complete customization to the user (even if an expert programmer is required to insert the machine code) and guarantees other advantages, as reduction of waste or stocks. Anyway, such a revolutionary tool has never been used in a really successful creative experience, replicable on wider scale, since had never been found the right combination between space, services, actors and tools making the WHOLEGARMENT a so called killer-technology. In considered case studies, WHOLEGARMENT had always been used as a machine for mass production of pieces of garment, exploiting the higher quality of the seamless final product. On the contrary, our idea has been to use the machine to create single products, create models and test prototypes, submitting to the public collections composed by unique pieces, replicable on an on-demand basis.

Through brainstorming and interviews, our team realized that most of the clients, even if aspiring at complete customization of their clothes, have almost any knowledge in designing an item. Offering them complete freedom in creativity could then turn into a negative aspect: if the result is not comparable to expectations, probably the use of the tool and the purchase of the piece of garment will be confined to isolated experiences. Changing our point of view, we decided to focus our project on emergent fashion designers and limit to them the role of creators, providing space and services they need to start and grow their activities. Our proposal, named D-sign, aims at equip designers and other creative people in fashion industry with tools and space, useful to let their activity raise, according with a modular offer based on packages of services. Select the ensemble of services he can afford in terms of time and money, each designer could construct the offer which better satisfy his own needs.

Anyway, alongside the actual customization, fostered and encouraged in designers, we decided to extend also to “common customer” the participation to a shared spirit of creativity, expanding their role of simple buyers and letting them enter inside productive chain. This idea has been realized through the concept of an open space, everyday accessible even to outside customers: here both ends of the chain could meet, discuss and share opinions in a culturally alive and stimulating environment. In this sense, our project also returns the community an innovative pole, always in turmoil, where events, classes and workshops can stimulate everyone's creativity.

In defining the final outcome of the project, we clearly set as our main goal the possibility of merging activities, spaces and people inside the same physical place, located in Milano Bovisa, one of the former industrial areas of the neighbourhood, now converting into a creative innovation pole. Guided by this clear objective, the idea of implementing a hub for creativity in fashion started to arise. Providing services, space and tools to emergent fashion designers, as well as other creative people in knitting fashion, a single space where to share knowledge, cooperate to the outcome of some projects and envisage new opportunities could represent a relevant idea of cultural pole.
The D-sign project immediately focused on recently graduated designers, or fashion students close to get their degree, offering them shared spaces and services, but also showcases and machineries, just for the time they need or can afford. In fashion industry, such a solution represents an innovative way of fostering innovation: since an emergent designer could probably not afford the initial high fee to rent his own boutique and tools he need, he could start up his business inside D-sign, going away once grown enough. In order to satisfy the modularity of the activities, the whole service is structured into a package offer. Each service has its own package: starting from the Basic one, including only a common desk, internet connection and the use of a shared kitchen, any “incubated talent” could build the offer better fulfilling his needs.

Anyway, fashion designers are not the only potential actors and customers which D-sign will address: different talented people, whom work is related to fashion industry could be incubated in our space, as photographers, web designers, organizers of events. Also external figures and institutions could be involved in the project: from yarn producers to Universities and schools, from external visitors of the café to local food producers, the widespread range of possible offers aims at covering multiple service areas, modifying everyday the physical space. The starting point in the definition of a solution was then represented by listing all possible activities held inside D-sign, later organized in a conceptual map. We identified several areas, named as follows:

- Get your Space and Get your services
- Meet, Work and Innovate
- Knit and Show
- Learn and Practice
- Promote and Sell
- Cook and Discuss
- Taste and Enjoy
In this first part of the chapter we would try to explain how the service offer is structured, detailing all possible activities held and which actors, spaces and tools they involve.

3.1.2 Core activities

The first category of activities includes the design and realization of clothes, or related services, mainly involving fashion designers.

Machine activities

While thinking of potential outcomes for D-sign service diagram, the goal was keeping the \textit{WHOLEGARMENT} machine in the middle of the structure. As well as in the space concept, the centrality of the knitting process has been preserved in the definition of the activities map. The first typology of service offered is then what we called \textit{Production}. Initially involving two Shima Seiki machines, to cover different finesses at the same time, this process is mainly located in the functional “bubble” containing these devices. Subsequent developments of the project will bring to the acquisition of a third machine, providing a wider choice of finesses without a new setup of yarns. In accordance with the modular offer of the entire service, the modality of usage for the machines is characterized by an hour-based rent of machine hours: each designer, once drawn his item of clothing
or collection could start with the actual on-demand realization of the piece of garment. Production prices had been compared to other similar experiences: starting from 30€ for one hour (approximately the time needed to complete one entire garment), everlasting subscriptions are available to lower the price per hour paid by the designer (55€ for 2h, 125€ for 5, until 1800€ for 100).

Co-working

The most innovative aspect, in relationship with how the fashion market is still today organized, is certainly represented by the possibility given to designers and other creatives related to fashion industry to share the same physical place. As already proved by various experiences in different areas, joining together men and knowledges, even coming from different fields, could represent a catalysing factor for creative processes, in accordance with the idea guiding D-sing of merging not just operative areas, but also knowledge and experiences.

Respecting the modularity of the service offer, several spaces and different modalities of fruition are available. The simplest and cheapest is the Basic Desk package, offering the rent of a shared table inside the big open space, use of internet, kitchen and access to event for 15, 30, 50 or 100 hours a month. The basic package is meant for fashion students close to their degree, who desire to start working on their own projects and gain visibility without a great amount of money and time.

For those who are creating full time, as recently graduated students, a better option could be the Your Desk package, offering for a higher fee an unlimited time access to a private desk, with some storage space, and all benefits from basic package.

When more privacy and silence is required, as in the case of a meeting, the Subspace package allows to rent a private room with an hour-based fee. A technical room is also available to realize a photo shooting to advertise a collection. Inside the common room, textile walls printable by designers and other talents with the Promotion package could delimit an on-the-go meeting with any additional fee.

Regarding pricing, the comparison with other incubators offering the same co-working services (i.e. The Hub and Toolbox) has led to the following:

Basic Desk:
- 15h/month for 30€
- 30h/month for 70€
- 50h/month for 120€
- 100h/month for 200€

Your Desk:
- unlimited time for 270€

Subspace:
- 15€/hour or 70€/day

Rental and consultancy

Instead of using the machines only during the opening hours in daytime, they could work at night, enlarging their utilization rate. By the way, with a similar approach two orders of problems arise. The
first one is due to noise: even if set into a former industrial district, machines may be too noisy for eventual residents. The second kind of problem is caused by the need of a programmer to launch the creation of the piece of garment, which also has to supervise on the proper operation of any machine, in order to prevent risks of stall. Since won't be easy to hire a night-programmer, the possibility of machine rental during night should be properly considered.

In addition to their role of designers and creative people, users of D-sign services could become consultants for the activity, as well as the store manager. Representing the actual final-end of the service, they will have the chance to influence decision to improve space and offer.

Workshops and classes

The system of actor realized by D-sign also includes major fashion School and Universities, providing, thanks to their contribution, courses, workshops and classes related to the fashion industry. Each one of these lectures or events is open to D-sign talents, for free or with an entry fee depending on its specificities, and could take place in a dedicated big-sized meeting room or even inside the common space. Obviously, in the case of a permanent agreement with some of these Schools to arrange a long-lasting learning path, subscriptions are available for a lower price.

3.1.3 Clothes selling

As already mentioned, the productive process of clothes, particularly knitwear, keeps on playing a relevant role in the designed service offer. Alongside the material realization phase implementing the Production package, D-sign offers a de-intermediate chain for clothes selling, which directly connects the producers to potential buyers. Each designer, renting his own retail space inside the shop area, could access to the Showcase package, being then entitled of mannequins and posters to advertise and sell his/her creations. In addition, the advertisement of products overcomes the static idea of a shop window: during events, but also in the everyday activity of the café, customers could personally meet the designer, expressing him their opinions and asking for some adjustments on the piece they would like to buy. In this sense, a sort of the initial concept of “personalization from the customer” is preserved, even if inside a more traditional creative process.

D-sign won't retain any percentage on the eventual sell of clothes, since designers have already had quite a lot of expenses in designing phase (renting a desk), in production (paying for machine hours) and showcasing (40€/month for a mannequin, 60€ for mannequin and poster).

External companies that want to advertise their products, or simply connect their brand to the D-sign experiment in the fashion industry, could also have their own corner and showcase, inside a particular area. The Promotion package allows them to rent a space unit that could be organized in complete independence according to their visual identity and goals, paying 100€ a month for a space unit.

3.1.4 Assist activities

In addition to services and packages directly connected with ideation, production and sale of pieces of garment, D-sign offers other activities, even linked with different creative areas, meant for expand the “network of fashion” centred in D-sign.
Photography and post-production

Inside the D-sign space, a private room will be entirely dedicated to photo shootings and post-production, offering all tools needed to a professional presentation of products. It could be considered as a double service: on one side for emergent fashion photographers working in D-sign, that will have a complete equipment and a large network of designers and small firms to work with, on the other for designers and companies themselves, which can exploit the opportunity of a more affordable shooting realized with professional tools.

Even this package has hour or day-based fee to suit requests of photographers and designers approaching the fashion industry, approximately 25€/hour and 100€/day.

Fashion shows

The big open space could be rented by external institution during day or/and night, in order to organize different kinds of workshops, classes or events. The basic package to access the space is called Structure. Depending on the period of the week, the space can be rented at a different fee, higher during major events in Milan (fashion week or design week). Other services, offering a more complete package for events, could be purchased only along with the rental of the space. The most relevant is the Catwalk one: when a designer or a firm wants to organize a fashion show, a casting for models will be held for him, avoiding thinking of this issue and exploiting possible contacts with model agencies. The fashion show will then take place inside the common room, where all the tables could be moved and merged in order to form a sort of catwalk.

Concerning prices, following options are available:

Structure package (space only):
- 3000€ during fashion week
- 2000€ during design week
- 1000€ in other time of the year

Catwalk package (space and casting):
- 4000€ during fashion week
- 3000€ during design week
- 1500€ in other time of the year
3.1.5 Related activities

Other services, not directly related with fashion, are offered by D-sign with the idea of diversify the cash inflows and guarantee a complete offer to various actors.

Café

The café represents the actual touching point between the front end of D-sign service and production figures as the creative people. Inside this zone, looking from the outside like an ordinary café, customers could see last creations spread all over the space, meet designers and share opinions, requesting or suggesting changes to pieces of garments, or simply relax and enjoy an active and fashionable place inside a creative pole.

Catering

In addition to the Structure package, during events mainly taking place during the evening the Catering service could be an interesting add-on. It requires the outsourcing of the organization of aperitifs or tastings to a third-party company, completely controlled by D-sign managers, possibly with the signing of long time agreements. An hypothetical pricing had been decided through interviews with catering firms operating in the area: for 50 people, the total amount of money is set to 950€, for 20 people to 500€.
3.2 Space organization

3.2.1 Space Philosophy

The D-sign space concept is primarily defined by his vocation to be set in a urban environment and to be a place to start something, a starting point.

A generator of urban values

As a generator of urban values, D-sign space aims at assuring itself and its users the highest visibility, in order to act as an engine of attraction capable of redefining the economical and social dynamics of its surrounding area. That is the reason why the interior element to be perceived from outside D-sign space is a glass cylinder hosting machinery: fashion production is the pivot of this engine of innovation. It is also the reason why the choice of the “ideal building” is oriented on an industrial/factory space located in an urban outskirt context, to be rented and equipped with everything needed to host social and creative activities.

The operative mode of this re-definition of values is instead placed into the chances offered by the space: D-sign can host exhibitions and events and provide an advertising action for the work of its users.

A place to start

D-sign is the place to start new ideas and projects. D-sign is maybe the first place that a creative will meet on his research path. D-sign looks like the first space a creative will use: everything has to be done, drawn, occupied, adapted. Because of this, D-sign space is only containing tools, providing chances and looking forward for being filled with it, D-sign space does not intrude into creative paths, or at least it reduces its physical and visual intrusion as much as possible.
3.2.2 Solution

Spaces
Gradually shifting from the outside to the core of the D-sign hub activity, the space components of the concept can be recognized:

- **Core: machinery**
  As production is the offer core, **machinery** is hosted inside a glass cylinder working as the distribution pivot of the whole space as well as the highest level representation of Dsign concept principles.
As approaching the threshold area of D-sign, a reception desk appears as first interaction touchpoint between user and space. This point, addressing to the machinery core, divides also three parts of the threshold level:

- **Cafe-relax** area where customers, users and D-sign staff can meet for a break or a tasting of products from local producers. This area hosts some mannequins which are in fact a part of what takes places in the shop area, showing the work of hub users to external customers.

- The proper shop is a new area, built on the principle of the shop space unit, a rentable amount of space equipped with a fixed number of devices such as mannequins or boards: it can be rented by designers working inside D-sign hub, but also by external major fashion brands who could judge the idea of having their own corner in D-sign shop a strategic advantage due to the innovation of our space.

- Another area is devoted to the exhibition of the products of producers linked to D-sign environment: yarn producers as well as food and wine producers can find a temporary or more official corner inside a visible showroom like the one that we envisioned.

- **Hub area: a place for creativity sharing**

  The hub area is the core of creative path inside D-sign: his basic setting is a common workspace setting, containing sharable tables that can be rented by young designers, together with their complementary equipment of shelves, seats, facilities and writable surfaces an printable boards to show the results of design activity. The hub is also a multipurpose space offering its tools to the multiple aspects of the exhibition of creativity. The tables can in fact be re-organised in their disposition, as well as the seats, thus
creating a **catwalk** for fashion show environment, or a **stage** for a theatrical performance environment

The hub area includes a part of the cafe called the **creative’s kitchen**, a basic cooking surface where designers can cook their own meals during work thus completing the atmosphere of shared creativity

The **hub mode** in space building provides the maximum level of creative/customer and creative/creative melting by crossing all the level of **common work**: in the hub individual work enabled by facilities is possible, as well as a real sharing of the workspace and the work tools, or the blending of different disciplines by the use of the space itself as a tool. This last sentence is explained by existence of specific spaces meant to enable this blending (the **ateliers**)

The **uniqueness of the experience**, another major point of our concept, is therefore allowed and fostered by the way the space works, taking advantage from the continuous melting of designers and external customers, and from the possibility of showing work in real time (design and production processes are held in a public open space) and in its results (machinery, shop, printable boards show constantly the result of design, interaction and production)
Some other worktables are set in a less open area (which they share with the private rooms): the tables named YourDesk can be rented for an extended timing without any interruption due to catwalk/stage configuration exigencies.

- **YourDesk areas**

Some detached space units can be rented for any purpose linked to creative activity in fashion production by external users as well as by the people working inside the hub for some more private and quiet meeting. These spaces, equipped with tables, seats and basic facilities, can also host small workshops or classes organized by D-sign staff or external contributors.

- **Private spaces**

Some detached spaces are dedicated to activities requiring specific technical equipment: we proposed a photo atelier for shootings and consequent film processing and a practice atelier for plastic arts, practical workshops and similar activities.

- **Ateliers**
- **Front/back system**
  A service backbone is to be considered, gathering a **back office** for D-sign staff, restrooms, a **storage** area which can also work as a backstage for fashion shows and theatrical performances, a larger event-catering kitchen with professional equipment to be used during larger fashion-linked events, tastings or after-show buffets.
Mood
A similar spatial program, stressing the designers’ need for a space equipping, rather than intruding, their activity, led to the choice of a basic approach to distribution and furnishing.
In such a framework, the main space references in terms of function, distribution and perception of aesthetics have been drawn mostly from the same case studies we employed (and often visited) in the deepening of offer and organization issues. These references have been considered mainly as aesthetic concept references, and have been blended afterwards with other conceptual references, not directly visited by our team.
We soon noticed how our idea of shared basic workspace could take cues from similar concepts developed at Cittadellarte - Fondazione Pistoletto and The Hub Milano.

Fondazione Pistoletto has set since 1999 a creativity incubator known as UnIdee-Univeristà delle Idee, consisting on a series of courses and shared creation experiences, which are held yearly inside the spaces of a refurbished fabrics production plant. The industrial identity of the spaces is kept and stressed as a base for creative production, by showing its productive features, which stand out of the whole built mass, painted white as a discreet background left by history.

The Hub has been considered as an outstanding example of a shared workspace offering tools and whose final form is determined by its use and by the continuously changing users’ requirements. The Hub is made up of juxtaposed parts whose combination and redefinition of relationship gets to build both the distribution and the aesthetics of the workspace.
The *Casa Camper* concept in Berlin has helped developing an important part of the front-back system of D-Sign space: the presence of a sharable, common and visible kitchen capable of working as another engine of experience and knowledge sharing is balanced by the addition of a larger kitchen, set in the service backbone (but in visual continuity with the hub space) which can be used for larger events.

The aesthetics of temporary corners set inside a wider neutral background and considered as proper corner shops have been expressed in many examples: among these ones, the **Dover Street Market** concept powered by Rei Kawakubo from Comme des Garçons stands out, with its one-brand corner spaces often conceived and realized as art performances in the wider sense possible (shifting from graphics to plastic arts). “I want to create a kind of market where various creators from various fields gather together and encounter each other in an ongoing atmosphere of beautiful chaos: the mixing up and coming together of different kindred souls who all share a strong personal vision. I enjoy seeing all the customers coming to DSM dressed in their strong, good looking and individual way. I would like for DSM to be the place where fashion becomes fascinating”, Kawakubo says.
This way, in order to point out the sense of start which affects the users’ first experiences, the whole space looks like a basic set which needs to be defined almost completely in its final outlook by the action of users: tables are rough-wood metal-pipe framed planes, walls are painted white, and the painting is washable to allow people to draw on it; synthetic fabric boards, printed with D-sign people’s creations, are all around to enable temporary divisions or changes in circulation (boards appear both in the hub and in the shop area; they also help defining private rooms). Lighting is placed as a non-directional regular wire netting, covering the whole surface with single light points.

The only element escaping these aesthetical rules is the glass cylinder containing the machinery: a larger employment of glass technology and the reference to more expressive aesthetics are meant to underline the outstanding role of production inside D-sign concept.

Referring to a wider urban context, a certain importance must be assigned to the so-called shed aesthetics: insisting on the industrial, factory features of the building where D-sign finds its space is a signal to be given to the surrounding area, in order not to erase its former industrial identity, but promoting instead its re-interpretation and the possibility of discovering some still unexploited potentialities in it.
Part IV: Considering Feasibility
4.1 Strategy

4.1.1 Mission and objectives

Our mission is to provide services in terms of space, tools, and visibility to emergent fashion designers and other creatives in knitting fashion by developing a concept of a place which is named D-sign and which represents itself a hub for creativity in fashion, and, in particular, in knitting fashion with the complex service offer for different categories of its customers. Moreover this place should foster creativity in general and promote social habilitation and strong link with territorial specificities, such as potential creatives on the territory, food and wine producers, and textile producers.

In order to say about our main objectives, first of all it is relevant to remember the history of steps made in order to come up with the final concept.

From the initial phase of the whole Fas.P.on Site project all our three teams had the task of designing a concept of a new kind of fashion store, which could mix a shop and an atelier (lab), in order to emphasize the idea of total customization in knitting fashion and the idea of innovative lab-store where all steps of fashion knitting design and production process could be done within some hours. Such place should attract customers who can enter to create their own unique garments together with fashion designers (with the help of the technology of Shima Seiki) in just a few hours. In order to understand better the concept and the aim of our project and possible solutions, we analyzed a lot of case studies concerning different sides of the project concept.

After the first phase of the project the teams were splitted and started to focus on really different problems, solutions and possible aspects of the project. With our vision of understanding the problem our team A decided to work on the “social” aspect of the project and we aimed at designing a physical place where different kinds of people can become part of an experience characterized by social and environmental sustainability. Our space targets all the creative talents involved in fashion knitting production who can meet together and design and produce fashion items, make fashion shootings and catalogs, participate in workshops organized by themselves or by third-party companies and of course exchange experience. We aimed at finding a solution to the question: How it could be possible to collect all creatives in knitting fashion in one place by proposing them the multiple service offer (creation, production, photo lab, catwalk, workshops etc....), in order to share knowledge among themselves and get a synergy, but also to held events in fashion knitting in order to make the concept of our potential “client” wider. Moreover, we aimed at offering an alternative channel to make knitted garments, to show them through a wide variety of events, to offer a space also for involved third-party companies, etc.

Therefore main objectives were related to defining:

- which categories of potential users could be interested in a service providing space, tools and visibility through events;
- which activities could take place in our fashion hub of creativity;
- in which exact space parts the hub could be divided;
- and finally how all these three categories of our project could be interconnected (and possible to intercept) and integrated with each other by the help of different touch points and interface of the place in order to provide a clear identification of different space parts for different activities. We aimed that D-sign’s users could identify themselves with a part of the space but, at the same time, also identify with the whole hub and all the other users.

More in general, the mix and integration of all of these different kinds of local traits can create a sustainable, appealing, and unique experience.
4.1.2 Market forces. Competitive positioning

The analysis of competitive positioning is based on the Porter’s 5 forces model [24], which shows that the expected profitability is influenced by market forces and bargaining power of competitors, direct and indirect.

The first and main competitive force is Internal Rivalry. In our case it is direct competition of other incubators of creativity and social institutes with the focus on young designers. On the one hand, we can say that because of almost non-existence or underdevelopment of the concept of the incubator of creativity our social fashion lab doesn’t have strong competitors (and internal rivalry is weak). But on the other hand, if we look into our service from its main sides (depend on the user of service), we can find a lot of internal rivalry, because, for example, there are a lot of atelies in Italy which offer totally customized clothes for buyers. There are also a lot of fashion design courses, schools, laboratories which can offer similar services of workshops and seminars for young designers. Or there are also a lot of social local organizations which aim in increasing local sustainability and social connection and development of personality. They can also offer different services as events, meetings in cafés etc. In this case we can say that our potential customer in some cases can have a big bargaining power, because, for instance, in case of young designer he can switch easily for any other fashion design laboratory in the same area and offering the similar kind of service (if the customer is not really loyal to Shima Seiki machines particularly). But if we look at our service from the whole and complex level (because our incubator of creativity is a complex organization offering different services and utilities for different groups of users), we can say that our customer doesn’t have strong bargaining power, because now we are the only one who propose them this kind of multiple service.

The second competitive force is the Threat of New Entrants. This force is quite strong because it is not so difficult to find right contacts with all suppliers, enhance the locality, and increase the awareness of the concept inside the local area. And if in the city full of fashion designers some other company will be
able to offer similar of better service or if somebody else wants to copy our concept they can do this easily except the feature of Shima Seiki technology but they can find their own suppliers. So, we have to build strong market barriers in order not to allow entering other firms into our niche market. Barriers can be built with accessing and creating good relationships with exclusive best suppliers (all possible supplies – materials for knitting, machines, local food and alcohol for events, catering, third-party companies for workshops and also machines, equipment, furniture etc.) in order to have the best logistic channels and also the best prices for raw materials or services provided by suppliers.

**The 3rd competitive force is Threat of direct and indirect substitutes.** During this period of time in Milan Bovisa area we don’t have direct substitutes because this complex concept is not developed yet in fashion knitting industry or among normal consumers of knitwear production. But there are a lot of indirect substitutes that play on the same needs of customers, such as communication, working together, design, total customization for final buyers, development of creativity, knowing new information about fashion, knitwear production, even local degustation or eating and drinking during aperitivos and Italian local cuisine. These substitutes are companies which play on the same area of customer needs: fashion design schools and courses, local social institutes and associations, photo exhibitions in fashion industry, laboratories for young fashion designers, fashion boutiques, knitwear shops, ateliers, even cafeterias, Italian small exclusive local aperitivo restaurants, other types of cafés, because for social events enhancing the locality and increasing interest we would invite local food suppliers and people there will try to meet, communicate, share their knowledge. So, if we can build some exclusive offer (for example, in our case it is complex multiple offer organized by packages) that can help positioning us as something really different and more interesting for people (and we have this really innovative concept), we can decrease the power of this force and therefore increase our potential profitability.

**Two logistic forces:**

**The 4th force is Suppliers.** This force now doesn’t have great bargaining power because nowadays business relationships between our future company D-sign and Shima Seiki are quite developed and we know all features and possible problems. But on the other hand there are a lot of food suppliers, fashion design course teachers or representatives of third-party companies which could supply us with their products. But there are not so many local materials suppliers. The main problem is to choose better ones: in quality, price and logistics. If we build good permanent relationships with some suppliers, it could be useful for both sides. But if there will be a small amount of exclusive suppliers (for example, local materials for knitting garments), in this case they will have a big bargaining power compared to us.

**The 5th force is Buyers’ power.** The strength of this force is dependent on bargaining leverage, buyer volume, buyer information, brand identity, price sensitivity, product differentiation, buyer concentration vs. industry, substitutes available, and buyers’ incentives. That means that in order to decrease the bargaining power of buyers (customers) our incubator of creativity and fashion store of knitwear have to offer some exclusive services, something that could increase customer loyalty and decrease their price sensitivity. If customers have strong brand and place identity, less substitutes available, less information, they will be weaker in their bargaining with us. But if there is high concentration of substitutes or if customers’ incentives are general (just communicate, study, try their creativeness, share knowledge, watch something new, come to the new place in local area, eat and drink, not to have something really new, innovative, exclusive or different from other or to deal particularly with knitwear fashion), so they could switch easily to other substitutes and it means that they will have big bargaining power. But if our fashion store and incubator of creativity is able to build its own demand, its own loyalty of customers, they will be less sensitive to the price, they will not be able to choose something else, and it will mean that our company will have more bargaining power.
### 4.1.3 Future strategy

In order to analyze opportunities for future strategy and possible expansions, first of all we have to provide SWOT analysis [7] of emerging D-sign Company.

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Multiple offer</td>
<td>• Few initial financial resources (restricted because of high investments in technology and space renting and equipment)</td>
</tr>
<tr>
<td>• Focus on different groups of customers</td>
<td>• Few initial human resources (because of restricted financial resources)</td>
</tr>
<tr>
<td>• Flexible space concept</td>
<td>• Not yet developed and proven financial model because of totally new concept</td>
</tr>
<tr>
<td>• Openness to external customers: buyers of garments, third-party companies, small and big existing brands, local society interested in knitwear fashion</td>
<td>• Complex offer =&gt; difficult self positioning in the market, difficult control of costs and calculating of offer packages characteristics</td>
</tr>
<tr>
<td>• Synergy because of opportunity to work together with different creatives in fashion industry</td>
<td>• Difficulties to build branding strategy because of different associations for different groups of customers =&gt; the need of having good and noticeable interface and touch points</td>
</tr>
<tr>
<td>• Well-developed technology of Shima Seiki</td>
<td>• High dependence on suppliers of local materials</td>
</tr>
<tr>
<td>• New innovative business model</td>
<td>• Low advertising investments</td>
</tr>
<tr>
<td>• Social impact</td>
<td>• For external customers – no clear brand identity because of different designers</td>
</tr>
<tr>
<td>• Different sources and channels for earning money</td>
<td>• Need to have and pay the rent for some space parts which most of the time will not be used (dressing room for fashion shows, photo laboratory, some private rooms)</td>
</tr>
<tr>
<td>• Packages offer =&gt; possibility to choose better for each group of customers</td>
<td>• Need to have sufficient profits for cover all needed investments for human resources compensations, for space costs and machinery costs</td>
</tr>
<tr>
<td>• Customization and possibility to meet designers for garments buyers</td>
<td>• Not to have big number of fashion knitting creatives to get a synergy from their work</td>
</tr>
<tr>
<td></td>
<td>• Not to have sufficient amount of external</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Opportunities</th>
<th>Threats</th>
</tr>
</thead>
<tbody>
<tr>
<td>- To build different marketing strategies for different packages and cover a big market share</td>
<td>- Not to have sufficient profits for cover all needed investments for human resources compensations, for space costs and machinery costs</td>
</tr>
<tr>
<td>- To promote the place through third-party companies activities: renting a catwalk, providing seminars, having exhibitions and events, selling their brands</td>
<td>- Not to have big number of fashion knitting creatives to get a synergy from their work</td>
</tr>
<tr>
<td></td>
<td>- Not to have sufficient amount of external</td>
</tr>
</tbody>
</table>
- To promote the place in universities among recent graduates and emerging designers and other creatives
- In case of success to expand the company by opening the second creativity hub in Milan
- To sell knitwear garment during fashion shows and personal meetings of customers with designers
- To change space features according to the needs thanks to its flexibility
- To compete successfully with other possible substitutes because of providing customized and packaging offer for any possible tastes and categories of customers: creatives, buyers, third-parties

customers who want to buy customized clothes by designers=>$ designers’ interest in packages can decrease because of this threat
- Having different categories of possible substitutes companies offers playing on the same needs of our customers: cafés, exhibition places, photo laboratories, ateliers, designers laboratories, fashion school courses, knitwear boutiques
- A threat to copy our concept by other companies which can find cheaper technology to produce garments and can became more profitable because of lower prices
- Workers and customers loyalty

In the SWOT analysis Strengths and Weaknesses represent internal characteristics of our company and Opportunities and Threats represent its external environment and its possible behavior and dynamics. Therefore from the above SWOT analysis we can make some conclusions about future strategy and expanding the offer:

- In the nearest future the company needs to gain sufficient resources to keep the offer. The resources are both initial investments and profits from different offer packages.
- From the startup of D-sign, it is required to build proper branding strategy at least by having noticeable touch points and interface for entering customers in order to make them clear understand which are the possible activities they can do inside the place, which exact areas are associated with these activities etc. It helps to gain loyalty of customers.
- Before and during starting phase to promote the place inside the universities and local community areas, to make aware third-party companies of our offer and opportunities for them inside the place.
- In the later future if there will be more than sufficient profits, to have possible physical expansions and also expand the offer inside the company by opening another D-sign place in Milan city area and creating new packages for new categories of customers.
4.2 Marketing plan

4.2.1 Market analysis

Data Sources
To draft our marketing analysis, we referred to different data sources. We got the data surfing in the internet, asking to some institutions like the Chamber of Commerce and interviewing design-related schools. Moreover, we made logical assumptions to obtain some results.

POLIMI web site The first data source was the Politecnico di Milano web site. We found that POLIMI students are about 35,000; students annually enrolling in the Bachelor degree first-year are nearly 6900 while those enrolling in the Master of Science degree are 3700. Among them, about 60% study engineering, 25% architecture and 15% design. Students of the PhD School are about 900.

Therefore, we can consider that at POLITECNICO DI MILANO study approximately 5250 (35,000*15%) designers.

POLIMI survey A second source of data was a survey published by the same POLIMI about the future employments of its students, named “Indagine occupazionale dei laureati e laureati specialistici del Politecnico di Milano usciti nell’anno 2007”. The data refer to 2007 and were the latest at the moment of the research. We found that, in 2007, Bachelor degree graduates of the POLITECNICO DI MILANO were 4,584 Italians and 86 foreigners. Engineering graduates were 61%, 24% were those in Architecture, 15% Design. On the other hand, MSc Graduates in 2007 were 3,285 whose 186 were foreigners. Engineering graduates were 65%, 24% Architecture, 11% Design.

Therefore, every year about 360 designers take their MSc from POLITECNICO DI MILANO. Note that, according to this survey, 51% of these MSc graduates are women. Furthermore, 80% of these MSc designers have completed their BSc degree in three years.

Exhibit 1 Average age of the graduates in Design at Politecnico di Milano

<table>
<thead>
<tr>
<th>AGE</th>
<th>&gt;=27 years</th>
<th>26 years</th>
<th>25 years</th>
<th>&lt;=24 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>PERCENTAGE</td>
<td>12%</td>
<td>26%</td>
<td>50%</td>
<td>12%</td>
</tr>
</tbody>
</table>

Fashion Design Than we investigated also the number of designers specifically graduated in the course of study named DESIGN DELLA MODA¹. There are only 55 vacancies every year for this course of study. Whereas at least 90% of students enrolling for this course of study (while the average in Design is 72%), we can consider that every year at POLITECNICO DI MILANO 50 students become new fashion designers. It represents the 14% of that 11% of POLIMI students that graduate every year in Design, and the 1,52% of the total number of graduates. Moreover, considering 5 years students, there are approximately 275 fashion designers at POLIMI. This number represents the 0,7857% of the total number of students and the 5,2380% of the total number of designers.

Milan Chamber of Commerce Another data source was a survey released by Milan Chamber of Commerce regarding household consumption in 2008. It provides us with the most recent data on

¹ http://www.design.polimi.it/new/pages.php?pagina=82
² Visure.Mi.CamCom.it.
families’ distribution around net income and composition in terms of number of members per each family. It could be downloaded by the Chamber of Commerce web site\(^2\).

**Interview** Furthermore, we asked information directly to the management of the major design schools located in Milan. We contacted them via mail, phone or interviewed a representative of the staff.

**Other sources** Finally, other sources to which we referred were case studies (see related chapter), the ISTAT web site and sole24ore.com. On the other hand, we tried to make realistic assumptions in order to formulate the most reliable estimates.

**Market Size Analysis**

The activities we intend to develop in our place, each associated to a stream of revenues, are fundamentally five:

- Rent of the space to young designers and creatives in general (packages involved: Basic Desk, Your desk, Subspace, Showcase);
- Sale of the garments produced by young fashion designers. This let to two different kinds of incomes, rent of Shima machineries to the stylists and sale of their garment. We need to estimate both the number of fashion designers and the Milan fashion market (packages involved: Production and Showcase).
- Rent of the space to big firms which can be interested to organize events (such as real time productions, exhibitions, shows) in which promote their brands and present the work made by their supported creatives, which could already have been working in our place (packages involved: Structure, Catwalk, Catering, Showcase and Promotion).
- Organization of workshops and classes about knitting production, use of Shima machinery, design, etc (packages involved: Workshop and Classes, Production).
- Revenues from a small Café located in our place and able to offer catering for the events cited above (packages involved: Catering).

**The potential designers market**

In order to estimate potential designers market in Bovisa, we decided to implement a methodology suggested by Kotler (2003).

The market size analysis was initially carried out by crossing data obtained from data sources listed before. Results must then been compared with those obtained from the breakeven analysis to verify the economic feasibility of the initiative.

**Potential Market** It is the set of individuals that potentially could demonstrate interest in the service offered. Our proposal is a flexible solution that can offer a space in which all the designers can try to express their activity, creating their own art. They can use our space not only to rent Shima machineries but also to organize photo exhibitions, picture galleries, etc. Therefore, we suggest to

\(^2\) Visure.Mi.CamCom.it.
consider, as yearly potential market, the number of designers that study at any of the design-related schools located in Milan. We considered:

- Politecnico di Milano: using the data cited above we found that 5,250 people study design at POLIMI and that every year 360 designers graduate at one of the MSc courses.
- IED (Istituto Europeo del Design: in the academic year 2009/2010 about 530 students have graduated at IED. The first year there were 585 students and the second 471.
- Academia del Lusso: in the 2009/2010 year there are 280 students, divided in those (80 circa) who attend a BSc or a MSc course and those who attend a Professional Course (200 circa). The latter 200 finish their Professional Course within one year while only graduate every year. Therefore, the total number of students considered in our analysis (students+1\textsuperscript{st} year graduate) is 512 (280+12+220).
- Istituto Marangoni: According to the official web-site\textsuperscript{3}, “every year over 2,000 students from all over the world meet at Istituto Marangoni to pursue a shared dream: design and fashion”. The list of study programs includes programs for designers, product managers, marketing experts, fashion consultants, photographers, buyers, and fashion editors…The MSc program there last about 1 year. So, we can suppose that every year about 2000 students are graduated. From this 4000 about 70% are designers or fashion designers or fashion related creatives (if not consider marketing or manager specialists in fashion and furniture design). The programs are held in London, Paris and Milan. Considering this, we take 30% from 2800 left in order to take into account just Milan students and graduates; therefore it equals approximately to 840 people.
- Scuola Politecnica di Design (SPD);
- CDM (Corsi di Moda Milano);
- GED Fashion Institute;
- Istituto Italiano di Fotografia;

We suppose that the sum of average number of design students and graduates in last 4 schools is 500.

The total number of designer, which represents our potential market, is the sum of all graduates and students from related to design and fashion schools in Milan and it equals to 9048 (5,250+360+530+585+471+280+12+220+500+840). This number is given by the number of students plus the number of the graduated, which can decide in their first post graduation year to develop a project through our initiative, sponsored by a company or as a own entrepreneurial initiative.

\textbf{Available Market} \hspace{1cm} It is that part of the potential market which, as well as potentially interested in our solution, is also in the economic and physical condition to access our service. To estimate available market we considered that the price at which we want to offer our space/machinery to creatives is in a low medium price range. Therefore, it could be reasonable to consider that it is equal to the 90\% of the potential market.

\textsuperscript{3} \url{http://www.istitutomarangoni.com/programmes_milan.htm}
Serviced Market  It consists of that part of the market estimated above which is the real focus of the company. Consequently, we decided to estimate it considering two different constraints:

- placement: since we are located in Bovisa, we suggest to take into account only that part of graduates that have studied near POLIMI Bovisa campus or that can reach easily this area;
- positioning: our idea is an incubator for young talents’ creativity; therefore, it tries to identify that kind of designers interested in developing a form of art, whatever is the shape in which it is showed to the public. Not all the available market is in these conditions: for instance, there is a great number of designers that will not consider our solution.

Combining these two constraints we suggest to consider as serviced market the 50% of the available market estimated above.

Reached Market  It is, finally, that part of the serviced market which decides to buy our service. This should result in the estimate of our market share. To define the size of the reached market, it would be necessary to introduce some highly subjective assumptions. The value obtained would be characterized by high uncertainty related to the goodness of statistical data used and to the accuracy of the assumptions made. It was, therefore, decided not to go forward with the analysis, but to use the serviced market size as a control value for the results of the breakeven analysis. Therefore, we have to compare this analysis with a serviced market of about $9048 \times 0.9 \times 0.5 = 4071.6$ designers and other fashion creatives.

The number of fashion designers

The number of fashion designers is given by the sum of designers of each of the cited schools.

- Politecnico di Milano: the number of students enrolled in the specific fashion course of study for both BSc and MSc is 275. The number of MSc graduates 50 per year. Therefore, the total number of designers to be considered in our analysis (students plus graduates in their first post degree year) is 325. It represents the 5.79% $(325/(5250+360))$ of the designers coming from POLIMI and considered in our potential market.
- IED: about 20% study fashion designer. It is to say that, considering both students than graduates, the IED fashion designers are 317 $(1596 \times 20\%)$;
- Academia del Lusso: we considered only the professional course students (220), since the others study economic and public relations matters.
- Istituto Marangoni: from 840 students related to fashion we consider about 50% (420) of fashion designers because of specific kind of school.
- Scuola Politecnica di Design (SPD);
- CDM (Corsi di Moda Milano);
- GED Fashion Institute;

We will consider for the sum of the last three schools is about 20% of 500 (100) are fashion designers.

The total number of fashion designers operating in Milan (students plus graduates in their first post degree year) is given by the sum of all previous results and equal to $1382 (325+317+220+100+420)$. 
Applying the same assumptions made in the previous paragraph we obtain a serviced market of 621 persons \(((642+220+100+420)*0.9*0.5)\).

For instance, if we plan to be able to attract 62 designers per year, our market share in the Milan fashion designer market would be about 10%. It is possible because not all designers are interested in fashion knitwear. If we consider reasonably that he/she will stay in our spaces for one month - the time necessary to complete a project, we have about 5 designers working together in our place (considering 48 weeks per year). Starting from this conjecture, we considered that we need 2 Shima machineries in our place to guarantee the designers sufficient availability for the garment production. But after the first 2-3 years we possibly plan to buy or lease another one Shima Seiki machine in order to emphasize the core of our place and allow working more designers at the same moment.

According to our project, D-sign can collaborate with some other actors different from designers. For example:

- many different professional profiles, such as freelancers, might be involved in D-sign
- textile and other interested companies might be involved in D-sign because of events, workshops, etc.

But in our marketing plan we decided not to include precise data about possible textile or other partners, different from designers and external customers. We have not included this data for a very precise reason: they might be minor quantities of people; our calculations are by defect because we want to be conservative. Therefore we tried to calculate more realistic and middle-optimistic amount of reached market because we are still not sure which exact companies or freelancers will collaborate with our D-sign project.

The potential fashion market

The fashion market should be estimated in order to understand how many of the garments, produced by the designers involved and presented to the target during our events, can be actually sold. In order to achieve this result, again Kotler (2004) methodology is implemented.

**Potential Market** As a starting point for estimating the potential market available to our incubator of creativity, we decided to use the findings of the survey conducted by the Chamber of Commerce of Milan on households consumption in 2008. This choice clearly does not take into account potential buyers not resident in the City of Milan - the area where 655,363 families have been identified. However, it is considered that this omission has only the potential effect to introduce underestimation.

**Available market** Analyzing consumption by class of net income and family composition, the situation described in the table is observed:
Exhibit 2 Available market

<table>
<thead>
<tr>
<th>Number of components</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Available market</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 15</td>
<td>27.8%</td>
<td>10.8%</td>
<td>6.7%</td>
<td>7.8%</td>
<td>1.3%</td>
</tr>
<tr>
<td>15-30</td>
<td>45.1%</td>
<td>48.5%</td>
<td>24.5%</td>
<td>17.6%</td>
<td>15%</td>
</tr>
<tr>
<td>30-45</td>
<td>15.3%</td>
<td>26.8%</td>
<td>40.5%</td>
<td>42.5%</td>
<td>57%</td>
</tr>
<tr>
<td>45-60</td>
<td>7.5%</td>
<td>7.2%</td>
<td>15%</td>
<td>19.3%</td>
<td>10.6%</td>
</tr>
<tr>
<td>&gt; 65</td>
<td>0.3%</td>
<td>4.1%</td>
<td>7.4%</td>
<td>10.5%</td>
<td>15.2%</td>
</tr>
<tr>
<td>N.A</td>
<td>4%</td>
<td>2.5%</td>
<td>5.9%</td>
<td>2.2%</td>
<td>0.9%</td>
</tr>
<tr>
<td>N. of families</td>
<td>318,552</td>
<td>162,194</td>
<td>96,338</td>
<td>61,007</td>
<td>17,272</td>
</tr>
</tbody>
</table>

Considering only the families highlighted in the table - which really have the economic potential to buy our designer’s garments - under the assumption of a maximum of two potential buyers per each family, it is possible to consider an available market of 87,390 individuals.

Serviced market Since the fashion products of our “laboratory” are expression of creativity, we consider, in order to estimate serviced market, only that number of people that are interested in this kind of fashion. This estimate evaluates also the number of potential visitors to our events. We decided to use a percentage of 10% to reduce the available market to the serviced market, therefore equal to 8,739 individuals. If we consider that every single customer buys 2 garments per year, the serviced market consists of 17,478 clothes. On an average price of 250€, the serviced market consists of 4,369,500€.

Reached Market Once again, the estimate of a market share starting from the serviced market is a very complex and aleatory task. Therefore, we suggest to compare these data with the revenues necessary to achieve the break even.

For instance, if each of the 62 designers forecasted in the previous paragraph produces 10 clothes ready for the sale, we have 620 clothes to sale every year. If we sell the 80% of these garments at an average price of 250€, we have a forecasted market share on the serviced market of 2,84% (124,000/4,369,500). Of course, not all these revenues should belong to us. A part of this revenue can be asked to the designers, for example the 50%.

4.2.2 Marketing strategy

Marketing mix

The main part of each marketing strategy is the model of marketing mix, 4 Ps model [11]. Each company, when implementing a new product and thinking about marketing strategy, should present its solution about 4 main components of their offer.

Product

Our company will provide to its customers a complex offer which can consist of different parts and sides of services. The product of the company depends on the category of its users.
The main product of the company consists of complex multiple offer (non-material component) proposed for different creatives and third-party companies in the fashion knitwear industry.

Non-material component (service) is mainly a possibility for young designers and other creatives related to fashion (in particular to knitwear fashion) to develop their skills because they can use the space of the lab-store and unique machines of Shima Seiki. It provides opportunity to create their own products and get a part of revenue from sold garments therefore for young designers and other creatives the main product of our offer is incubation of their talents and creativity. In D-sign there is also an opportunity for other creatives in fashion, such as fashion photographers, web designers and others, to apply their knowledge to fashion knitwear design. Moreover it is an alternative channel of knitwear production with the possibility for external customers to experience a creative environment.

These dynamics are enabled by tools such as:

- package offers of space using,
- active education (workshops),
- events (fashion contests and shows, fashion photography exhibitions, theater, product presentations, caterings, fashion week events etc.).

The main categories of users of service offer are:

- Studying designers (not graduate)
- Newly graduated designers
- Designers that are trying to became entrepreneurs and create their firms
- Fashion photographers
- Web designers
- Graphic designers
- Theater creatives
- Fashion editors
- Both small and big brands renting shop space

There are several types of events that can attract local creatives, for instance:

- fashion contests to select the best local designers
- fashion shows to advertise products but also to show the designing process
- fashion photography events.

We also believe that providing fee-based services such as different packages of the offer, for instance rental of machine hours, classes, workshops (and potentially a course of study) can help them grow as designers, improve the garments they create, and, consequently, enhance the offer of the store area in D-sign place.
Therefore, we decided to split our complex and multiple offer into some packages which can be combined or bought separately. The packages are the following by categories:

I. Space and creativity packages:
   - Basic Desk - use of the space, internet, kitchen, access to events
   - Your Desk - unlimited use of the space, internet, kitchen, access to events, shelf / locker
   - Subspace - rent of spaces others than common one (private space), daily or per hour
   - Private meeting room,
   - Technical room (PC and photo).

II. Knitting and Production packages:
   - Production - subscription for machine usage (no time expiry)

III. Visibility and sales.
   - Promotion - corner rental for promotion of third-party products
   - Showcase - possibility to rent a part of the retail area inside the shop space

IV. Events and workshops
   - Structure - Rental of common space for events (space only)
   - Catering - Previous package + catering service
   - Workshop and classes - access to workshops and classes.
     - Price depends on event
     - Subscriptions are possible
   - Catwalk - it is the "structure" package plus top-models casting in the previous days

Material component of the offer is the tools and spatial/professional devices needed to develop solo or shared projects linked to knitwear fashion, but they are already considered in service packages component. Therefore we consider here particularly the designed garments which can be sold as-is or, potentially, entirely or partly customized. This is the main product for those categories of external customers which will use our hub of creativity as a store or atelier mainly. The main attractiveness in this kind of clothes is that it is made on Shima Seiki machines; it could be customized and discussed personally with a customer and can be made from yarn by knitting technologically on the machine during 3-5 hours in total. Therefore, client can be in the place for all this time designing together with designer his clothes or participating to different social events while waiting inside the store. Also there is an opportunity to buy already designed and produced clothes which are sold in store area of the space.

Our D-sign place is also a “socio-cultural pole” more in general since it proposes a wide range of events also for external customers and not only for creatives:
• theatrical performances where actors wear our garments
• local wine and food tasting to strengthen the link with the territory and to indirectly advertise the place
• fee-based classes and workshops aimed at a wide public
• guided visits to show the creation process.

The very initial concept which was developed for store area producing customized knitwear garments with Shima Seiki technology was the following:

The project is established on the new unique business model of product-service organization (urban knitwear shop-factory) concentrated in one physical place, which includes all stages of the production process: from co-designing of the fashion product together with customer to selling the finished goods. This business continuity and integration gives a lot of advantages for this really innovative model:

1) Customer is directly involved in the most of all processes that can guarantee a so-called co-creation of value both for producer and for customer.
2) Production starts from Engineering (Design) to Order phase which allows to reach a tailored and almost pure customization and to make the inventory costs very low (because there are very few finished products in inventory).
3) Experience marketing (based on customer’s purchase experience), the high level of customization, using of on-appointment business model and virtual marketing (in case of creating on-line services) make available covering of niche market and establishing a reputation of a high-service unique fashion boutique or trendsetter-company with intellectual property for innovative methods of marketing, communication, service, production and distribution.
4) Supply chain integration creates possible solution of a very big problem for Italy - delocalization of production, this project can revitalize the reputation of the brand “made in Italy”.
5) On demand production, flexibility of services and ECO-friendly production processes guarantee sustainability of business.

Price
This part of our offer is also dependent of the type of product which we consider.

So, for helping young talents to grow as professionals in fashion knitwear sphere and in particular for designers to improve the garments they create, and, consequently, enhance the offer of the store we will provide fee-based services delivered by different packages which can be chosen separately or if needed can be combined with each other. These packages will include rental of machine hours, participation in classes, workshops (and potentially a course of study) and many other services.

For third-party organizations that are interested in other services and this kind of a social place we offer other packages or events aimed at a wide public. For the social events for external buyers the fee will be quite low in order to attract as many local people as possible but not too much low in order to cover expenses for these events.

The main income would come from packages for fashion creatives who want to use our creativity hub and from buyers of the exclusive and customized or designed knitting garment. After certain promotion and spread of information people will know the opportunity to get this experience to create or customize their own clothes or to buy clothes from the young designers. The main feature is technology and exclusive Shima machines which provide the opportunity to create different garment in...
little time by knitting technologically and without any seams. The main positive fact is that it is not only a clothes but also and first of all the experience that customers could get. The average price for designed clothes is 250 euro per garment.

Considering pricing for services packages we decided:

I. **Space and creativity packages:**
   - *Basic Desk* - use of the space, internet, kitchen, access to events
     - 15h/month, 30€/month
     - 30h/month, 70€/month
     - 50h/month, 120€/month
     - 100h/month, 200€/month
   - *Your Desk* - unlimited use of the space, internet, kitchen, access to events, shelf / locker
     - Unlimited time, 270€/month
   - *Subspace* - rent of spaces others than common one (private space), daily or per hour
     - Private meeting room, 15€ per hour, 70€ entire day
     - Technical room (PC and photo), 25€ per hour, 100€ entire day

II. **Knitting and Production packages:**
   - *Production* - subscription for machine usage (no time expiry)
     - 1 hour, 30€
     - 2 hours, 55€
     - 5 hours, 125€
     - 10 hours, 220€
     - 30 hours, 600€
     - 100 hours, 1800€

III. **Visibility and sales:**
   - *Promotion* - corner rental for promotion of third-party products
     - 100€ per space unit per month.
   - *Showcase* - possibility to rent a part of the retail area inside the shop space
     - only mannequin 40€ per space unit per month
     - mannequin and poster, 60€ per space unit per month
IV. Events and workshops

- **Structure** - Rental of common space for events (space only)
  - fashion week, 3000€ a day
  - design week, 2000€ a day
  - other time of the year, 1000€ a day

- **Catering** - Previous package + catering service
  - maximum 50 people, 950€
  - maximum 20 people, 500€

- **Workshop and classes** - access to workshops and classes.
  - price depends on event (from 5 to 60 euro, in the average 30 euro)
  - subscriptions are possible

- **Catwalk** - it is the "structure" package plus top-models casting in the previous days
  - fashion week, 4000€ a day
  - design week, 3000€ a day
  - other time of the year, 1500€ a day

Promotion

Because our "place of experience" involves a number of different actors, they could become in some manner a part of our advertising company, because they can spread the information about opportunities and experience. So, our informational channels for promotion could be:

- local textile companies, that might provide yarn or might be interested in renting the machinery
- local buyers and brands, that might be interested in buying finished or customized clothes
- local producers, that might provide food and/or wine for events
- the advertising within design schools and universities
- social events and third-companies companies workshops held in D-sign place
- fashion shows and fashion weeks used our place and catwalk

The possible financers of the project investments are:

- municipalities. This is usually possible only becoming a "Cooperativa" or a "Fondazione"
- "Camera di Commercio", which sponsors profit projects
- Incubators

For advertising we don’t plan to use TV because it is expensive and almost useless, it cannot reach all of our target customers. In order to decide about advertising and promotional channels we have to do a
macro and micro economical analysis of the region, to understand which are the categories of customers that we will focus on. For instance, what is the percentage in total population of Turin, which could be interested in designing clothes, develop their talents, or share their experience and knowledge in knitting and fashion, which are the percentage of people which could potentially spend the certain amount of money a year for totally or partly customized exclusive clothes. We have to analyze also the age, the other demographic characteristics of our potential customers, their Internet using time and web resources where they get information.

Place

Our physical place is located in Bovisa area because we decided that this city area is more suitable in terms of the number of young creatives because of big number of universities and also it has cheaper rent charges than Milan. This place should enhance the locality, the experience and knowledge sharing, it should be more social than commercial. D-sign – is a physical place that incubates creativity of emergent designers and other fashion creatives providing them with space, tools, and visibility and where the unique products made by such thrived talents are sold. One of the values of this model is valorization of the territorial specificities of which such uniqueness is expression. The place we are creating can be defined as a pole of fashion-related activities. And especially, knitwear fashion. It is an "incubator of creativity and fashion talents", it is also a "socio-cultural pole" more in general since it proposes a wide range of events and it is of course also a store since the designed garments can be sold as-is or, potentially, entirely customized.

The main strength of the place is that this is multifunctional space. We planed to design it very flexible in order to have the possibility for having different activities and events in different or even the same time. And also we aimed at making space areas interconnected and intercept to emphasize the unity. First of all there should be physical place for Shima machines in the core of the D-sign space which must be visible for all, the common and private spaces for designing the clothes, the recreation area with café’ and from the other side the small kitchen for creatives and or place for possible future events and seminars which could be the same as common and private areas. To understand the layout and 3D model of the space, please refer to the previous chapters.

4.3 Organization and HR

Store manager

Store operating manager, or general manager, or administrator keeps the area operating at a profit. To make a profit D-sign must offer service packages for creatives, knitwear garments for external buyers and food and drinks for customers in café area; it must service everything at prices the public is willing to pay. All inside activities are the manager's responsibility. He is indirectly responsible for purchases, advertising, events and hiring staff. He conducts other human recourses who work in this place, he may also greet guests and seat them and have other responsibilities. Store manager (administrator) controls bartender - cashier, and even a hired head cook (part-time for events with catering). The work is mainly administrative. He is usually responsible for equipment preparation; he also directs and coordinates the work of the rest of the staff. The main store manager (administrator) must have a thorough knowledge of the service. He must also understand accounting, budgeting, credit policies, and banking methods. Administrator is responsible for resolving engineering problems as well: equipment used for photo shooting, for cooking in café, computer equipment inside special rooms, lighting, and ventilation. He must know about the cost, installation, and maintenance of such equipment.
Fashion Production on Site: D-sign

Store manager (administrator) studies community interests to devise special advertising. For example, he in a university area may make a special appeal to young professionals by decorating the establishment with some offers and banners.

As for the first years we have to reduce costs, we want this manager to perform activities needed for accountant and forwarding agent positions too. Maybe after first years if we understand that we need more personnel we have to hire a second manager (forwarding agent) and a chief accountant. Later there will be described positions of chief accountant and logistic manager (forwarding agent, the second manager) because they can be hired later.

Chief accountant - For the initial time of functioning of D-sign these activities are performed by the store manager.

The position of Chief Accountant is a high-level managerial position to assist with the administration of all financial affairs of the D-sign and the daily operations. According to all general descriptions of this position, responsibilities include immediate supervision and/or the performance of highly responsible tasks in keeping financial accounts of the space, store and café areas related to budgeting, accounting, purchasing, tax collection, and record keeping. This work usually involves the application of basic world or governmental accounting principles, state reporting requirements and practices but within the limits of policies and procedures established by the region or municipality. The instructions to the employee should be general and the employee must routinely use independent judgment when performing tasks. This employee if different from operating manager normally is under the administrative direction of him. Moreover, he must perform also daily operations of control, bookkeeping, costs statistics, using of accounting equipment, teaching the barmen to deal with cash equipment.

Logistics manager (forwarding agent) - For the initial time activities are performed by the store manager.

It is a person or external business that specializes in the shipment and receiving of goods to D-sign place. He should be responsible for all materials orders and also for other shipments (such as food and beverages, equipment) and inbound logistics in proper time and quantity. He is searching the best transport services for shipping and the best way for keeping materials and ordered goods.

Shima programmer

And also system administrator is a person employed to maintain and operate a Shima Seiki Machines system. As a technical person he could be also in charge for accounting automated machines for extra payment. The duties of a Shima Programmer are mainly to program Shima machines according to designers’ requirements, but if he will be in charge for other techniques the duties will be wide-ranging, and vary widely. Shima programmer is usually in charge with installing, supporting, and maintaining Shima machines and equipment or other computer systems (in case of wide range), and planning for and responding to service outages and other problems. Other duties include scripting and programming, but also project management for Shima systems-related projects, supervising or training people using technical equipment inside D-sign area. Additionally, he could be also the consultant for computer problems beyond the knowledge of technical support staff. For example, if he performs also tasks of system administrator, he may be important to help accounting staff to keep all the information
in a computer automated system in a safe and right way. Shima programmer must demonstrate a blend of technical skills and responsibility in order to perform his job well because Shima Seiki machines are the core of our place.

**Bar tender**

Barman-cashier has to prepare non alcoholic (coffee, tea, and cacao) and alcoholic drinks for clients of the café-bar area where drinks and simple dishes are served. Bartenders also take drink orders, serve drinks, and collect money for drinks. Alcoholic cocktail drinks are made up of many combinations of ingredients, and each drink might be made in several ways. The bartender’s main job is to know the standard drink recipes and be able to mix them quickly and accurately. Sometimes, customers have their own preferences or recipes for a bartender to follow. Bartender also checks the identification of customers seated at bars to ensure that they meet the minimum drinking age if they order alcoholic drinks. In daytime they fill drink orders placed by the diners, but the drinks are usually not served by waiters because we aim to have a small café-bar area. Bartenders have additional duties: to arrange bottles and barware, wash glasses, and clean the bar; also remove empty bottles and trash and replace empty shelves; stock the bar by bringing small snacks packs, coffee packs, tea, liquor bottles, mixed drink ingredients, and other bar supplies from the store place to the bar. He also has to keep track of coffee, wines, beers, liquors, and other supplies and report what is needed to bar supplies to the administrator or to a purchasing agent (if later we will hire this person).

Barman also performs cashier activities; operates drink and food orders into cash equipment, accepts credit cards for payment and issues bills.

Therefore, according to all general descriptions of this position, main duties should include:

- Serving customer drinks and food
- Clearing away glasses
- Making sure that the bar area is kept clean and hygienic at all times
- Ordering of stock to make sure that the bar is always fully stocked.
- Cash handling and cashing up at the end of each service.

**Part-time workers**

**Chief Cook**

During big events with catering we will need to hire a chief cook to prepare dishes and food. He has to plan and write nutritious menus for all meals; also to direct the preparation of food; prepare himself and serve food dishes; he has to arrange and direct the appropriate storage of food and supplies and maintain standards of safety throughout all food preparation and storage areas; the inventory of food and supplies orders must be monitored and maintained in sufficient quantities for daily or weekly events; work schedule and assignments for other cafeteria staff must be determined during events; clean-up of kitchen, service and dining areas should be monitored and assisted; the cook also maintains a variety of records related to served meals, inventory, costs of cafeteria operations and other requirements; if needed he utilizes computerized nutrition analysis and menu planning software; if needed he schedules maintenance and repair kitchen equipment; he trains, directs and monitors work of other café staff and bartender; and in the past the cook should attend related workshops. The cook also has to control freshness and clearness of ingredients of the food.
Cleaner

Previous experience is preferred, but not essential as full training will be provided. Duties include vacuuming, mopping, dusting, polishing, emptying bins, cleaning toilet areas and other associated tasks as required. Weekly or daily cleaning operations of all common and café areas, private rooms and a small kitchen.

Catering

During big events or considering some packages we will need to provide catering service. The personnel should check with customers to be sure that they are enjoying their meals and should take action if needed to correct any problems. It is important also to serve food and/or beverages to clients; if required to serve specialty dishes at tables. Also it is important to remove dishes and glasses from tables, and take them to kitchen for cleaning. Menus should be presented to clients and questions about menu items must be answered. Moreover recommendations upon request must be provided and customers should be informed of specials. Tables should be prepared for meals, including setting up items such as linens, silverware, and glassware. Dishes in preparation for serving should be garnished and decorated; the personnel must fill cream, condiment, and napkin containers. Wine selections should be brought to tables with appropriate glasses, and personnel must always make sure that the customer receives the needed service.

Organization chart

For schematic representation of the personnel structure of our project we choose to create a sort of organization chart. This chart allows to see interdependencies between workers and managers and to understand the main roles and responsibilities inside D-sign organization.
## 4.4 Financial plan

### Revenues

#### Revenues from sold packages

Assumptions: serviced marked for other designers (other than fashion) and fashion creatives is equal to 4071 – 621 = 3450 persons, where 4071 is the serviced marked of all designers and 621 is the serviced marked of just fashion designers. Suppose, that we can reach 1% of this serviced marked. Therefore the reached marked could be equal to 0,01*3450 = 34 persons, it is about half of the quantity of fashion designers using our services.

<table>
<thead>
<tr>
<th>Categories of packages:</th>
<th>Packages:</th>
<th>Description of assumptions:</th>
<th>Revenues:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Space and creativity</td>
<td>We suppose that 80% of 62 designers (49) will buy basic desk package. Inside basic desk package there are 4 different offers with 4 different prices. The average price of this package is 105 euro (30 euro for 15h/month, 70 euro for 30h/month, 120 euro for 50h/month, 200 euro for 100h/month). Therefore, the average annual revenue (in case if each designer stays 3 months a year in average in our place to finish his project) will be 3<em>105</em>49 = 15435 (euro) Moreover if we consider also photographers and other fashion creatives and suppose that they represent 10% of our serviced market for all designers and creatives, we get 34 persons a year totally, in average they stay 3 months in our place, we also suppose that 80% of them will buy basic desk package and then we will come up with 0,8<em>34</em>105*3 = 8568 euro</td>
<td>15435 euro</td>
</tr>
<tr>
<td></td>
<td>Basic Desk</td>
<td></td>
<td>8568 euro</td>
</tr>
<tr>
<td></td>
<td>Your Desk</td>
<td>We suppose that other 20% instead of basic desk package will buy your desk package for the price 270 euro/month (for unlimited time of using during a month). If each designer in average stays 3 months in a year in our place but we consider that he can take this package just once to finish his project, it means that the average annual revenue from fashion designers will be about 3348 euro (0,2<em>62</em>270 euro) and from other designers 1836 euro (0,2<em>34</em>270 euro).</td>
<td>3348 euro</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1836 euro</td>
</tr>
<tr>
<td></td>
<td>Subspace</td>
<td>We suppose that for 50% of all designers (we consider also photographers and other fashion creatives and suppose that they could take this package because of technical room or private) in our space maybe will be requested at least once the private or technical room for working in private conditions to finish some project or to meet clients. It means that about 48 designers (0,5*(62+34)) will buy subspace package. Let’s suppose that for half of these</td>
<td>2520 euro</td>
</tr>
<tr>
<td>Events and workshops</td>
<td>Catwalk</td>
<td>Supposing that the catwalk package will be rented 15 times a year considering designer and fashion weeks and normal fashion events. For example, for fashion week the package will be bought 6 times, for designer week 4 times and for others 5 times. It means that average annual revenue from catwalk package is $6<em>4000+4</em>3000+5*1500=43500$ euro</td>
<td></td>
</tr>
<tr>
<td>---</td>
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</tr>
<tr>
<td>Workshop and classes</td>
<td>During a year we will organize classes and workshops for our customers. Some third-party organizations or our sponsors will act as lecturers and coaches. According to our financial model, 15 people in average participate in each workshop event, the average price is 30 euro, 21600 euro is the average revenue according to our calculations in the financial model</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Catering</td>
<td>Let us suppose that the catering package will be bought 4 times a year along with structure package. Catering package has 2 different prices according to the number of people in the event: 500 euro for 20 people and 900 euro for 50 people. Suppose that events with catering are not free for public, but have the entrance ticket of 10 euro in average. Therefore, there are additional revenues from this packages $10<em>2</em>20+10<em>2</em>50=1400$ euro. Therefore the average annual revenue is $500<em>2+900</em>2=2800$ euro + 1400 euro from tickets and equals to 4200 euro.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Structure</td>
<td>Supposing that structure package without catwalk package will be bought 4 times (days) during fashion and designer weeks +6 times (days) during normal time in a year. So, the average revenue just from structure package will be approximately $2<em>3000+2</em>2000+6<em>1500=19000$ euro. Moreover, if 4 events from 10 are together with catering, it means that they bring money also from tickets and they were calculated before. From 6 other events about 2 will be again not free and will have entrance tickets for 7 euro in average. We suppose that 50% of our designers (62+34) will want to participate in these events for that fee. Therefore, there is another flow of revenue $0,5</em>(62+34)<em>2</em>7=672$ euro</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Visibility and sales</td>
<td>Showcase</td>
<td>This package is for those designers which intend to sell their designed garments inside our store. It can include mannequin or mannequin and poster. Supposing that 70% of our designers will want to use store for selling their</td>
<td></td>
</tr>
<tr>
<td>Promotion</td>
<td>This package is for promotion of third-party products. It costs 100 euro per space unit per month. If we suppose that 4 space units will be rented each month for promotion of third-party products, this means that average annual revenue is about 4<em>100</em>12=4800 euro</td>
<td>4800 euro</td>
<td></td>
</tr>
<tr>
<td>Production</td>
<td>For the first years of functioning we have 2 machines, each works 10 hours a day, in total 20 hours a day. We supposed that for production of 10 clothes a year each of 62 fashion designers will buy production package. For production of one garment they need about 4 hours of work that means that each designer needs in average about 40 hours of machine usage. 40 hours of production package cost 220 euro (10h) +600 euro (30h)= 820 euro. Therefore the average revenues from this package will be 62*820=50840 euro</td>
<td>50840 euro</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>178489 euro</td>
<td></td>
</tr>
</tbody>
</table>

**Revenues from the potential fashion market**

From the information above we saw that our serviced market for fashion items to be sold is estimated approximately as 4,369,500€.

**Reached Market** Once again, the estimate of a market share starting from the serviced market is a very complex and aleatory task. Therefore, we suggest to compare these data with the revenues necessary to achieve the break even.

For instance, if each of the 62 designers forecasted in the previous paragraph produces 10 clothes ready for the sale, we have 620 clothes to sale every year. If we sell the 80% of these garments at an average price of 250€, we have a forecasted market share on the serviced market of 2,83% (124,000/4,369,500). Of course, not all these revenues should belong to us. A part of this revenue can be asked to the designers, for example the 50%. Therefore total revenues from fashion market are 62*10*0,8*250=124000 euro, but 50% of revenues belong to designers, so our revenues equal 0,5*124000=62000 euro.

**The revenues from the organization of events others than in packages.**

Small part of revenues comes from the organization of design related events (others than ordered by packages) by our D-sign company. We refer to both fashion shows that to photographic exhibitions and art galleries in general focused on different public: our internal designers and external local customers.

As we have some big events during the year which will be a part of Structure package and organized by third-party companies, we need some other type of social fashion events which will promote our D-sign space and attract new people. We plan to be required to set up at least one event every four weeks. In this case we have 12 events. If we invite 40 persons to each event, and 50% of events are not free and cost 5 euro than the expected revenues from events are 5*40*6=1200€.
The revenues from our Bar/Café
The Bar/Café we want to open in our place is supposed to offer a service to all the people who will stay in our place. Furthermore, it will offer a catering service during the events organized inside.

Bar/Café
We set up the following assumptions:

- an average expense per client of about 1,50€;
- an average of 5 receipts per hour;
- 8 hours per day (from 9a.m. to 5p.m.);
- a café might be opened at night, but normally in events dates, Fridays and fashion and design weeks. So we'll have also about 100 nights working (1,5*5 receipts*8*100=6000€)

Than we have a total amount of revenues of 60€ per day, i.e. 21,840€ per year. This is the average return revealed by other competitors in the Bovisa area. Therefore adding those 6000€ from working at nights we get 27840€.

In conclusion, total revenues equal to 178489+ 62000+ 1200+ 27840= 269529 euro. The summarizing table of the revenues is shown on the next page.

Costs
The most important thing in every business plan which allows understanding if the project is feasible is costs analysis.

According to the financial model developed, these are the tables of the projected revenues flows for initial 5 years of project functioning and the table of the following projected costs figures for the first 5 years of functioning of the project D-sign:
<table>
<thead>
<tr>
<th>Revenues structure:</th>
<th>Year 0</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Space and creativity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Revenues from Basic package</td>
<td>24 365,1</td>
<td>25 530,4</td>
<td>26 753,8</td>
<td>28 038,3</td>
<td>29 387,2</td>
</tr>
<tr>
<td>Revenues from Your desk package</td>
<td>5 221,1</td>
<td>5 470,8</td>
<td>5 732,9</td>
<td>6 008,2</td>
<td>6 297,3</td>
</tr>
<tr>
<td>Revenues from Subspace package</td>
<td>2 538,0</td>
<td>2 659,4</td>
<td>2 786,8</td>
<td>2 920,7</td>
<td>3 061,2</td>
</tr>
<tr>
<td><strong>Events and workshops</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Revenues from Catwalk package</td>
<td>43 500,0</td>
<td>44 370,0</td>
<td>45 257,4</td>
<td>46 162,5</td>
<td>47 085,8</td>
</tr>
<tr>
<td>Revenues from Catering package</td>
<td>4 200,0</td>
<td>2 856,0</td>
<td>2 913,1</td>
<td>2 971,4</td>
<td>3 030,8</td>
</tr>
<tr>
<td>Revenues from Structure package</td>
<td>19 676,8</td>
<td>19 380,0</td>
<td>19 767,6</td>
<td>20 163,0</td>
<td>20 566,2</td>
</tr>
<tr>
<td>Revenues from Workshops</td>
<td>21 600,0</td>
<td>22 922,1</td>
<td>24 325,1</td>
<td>25 814,0</td>
<td>27 394,0</td>
</tr>
<tr>
<td><strong>Visibility and sales</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Revenues from Showcase package</td>
<td>2 176,7</td>
<td>2 264,6</td>
<td>2 356,1</td>
<td>2 451,3</td>
<td>2 550,3</td>
</tr>
<tr>
<td>Revenues from Promotion package</td>
<td>4 800,0</td>
<td>4 896,0</td>
<td>4 993,9</td>
<td>5 093,8</td>
<td>5 195,7</td>
</tr>
<tr>
<td><strong>Knitting and Production</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Revenues from Production</td>
<td>50 995,8</td>
<td>53 056,0</td>
<td>55 199,5</td>
<td>57 429,6</td>
<td>59 749,7</td>
</tr>
<tr>
<td>Revenues from potential fashion market</td>
<td>62 190,0</td>
<td>64 702,5</td>
<td>67 316,5</td>
<td>70 036,0</td>
<td>72 865,5</td>
</tr>
<tr>
<td>Revenues from Events</td>
<td>1 200,0</td>
<td>1 248,5</td>
<td>1 298,9</td>
<td>1 351,4</td>
<td>1 406,0</td>
</tr>
<tr>
<td>Revenues from café-bar</td>
<td>27 840,0</td>
<td>28 396,8</td>
<td>28 964,7</td>
<td>29 544,0</td>
<td>30 134,9</td>
</tr>
<tr>
<td><strong>TOTAL Revenues</strong></td>
<td>270 303,5</td>
<td>277 753,0</td>
<td>287 666,4</td>
<td>297 984,1</td>
<td>308 724,6</td>
</tr>
<tr>
<td>Costs structure:</td>
<td>Year 0</td>
<td>Year 1</td>
<td>Year 2</td>
<td>Year 3</td>
<td>Year 4</td>
</tr>
<tr>
<td>-----------------------------------------</td>
<td>-------------</td>
<td>-------------</td>
<td>-------------</td>
<td>-------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Operating costs (ex. D&amp;A)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Material</td>
<td>(20 398,3)</td>
<td>(21 222,4)</td>
<td>(22 079,8)</td>
<td>(22 971,8)</td>
<td>(23 899,9)</td>
</tr>
<tr>
<td>Operating Leases expenses</td>
<td>0,0</td>
<td>(37 400,0)</td>
<td>(37 400,0)</td>
<td>(37 400,0)</td>
<td>(37 400,0)</td>
</tr>
<tr>
<td>Space Rent</td>
<td>(48 000,0)</td>
<td>(48 960,0)</td>
<td>(49 939,2)</td>
<td>(50 938,0)</td>
<td>(51 956,7)</td>
</tr>
<tr>
<td>Human resources</td>
<td>(85 000,0)</td>
<td>(86 700,0)</td>
<td>(88 434,0)</td>
<td>(90 202,7)</td>
<td>(92 006,7)</td>
</tr>
<tr>
<td>Utilities</td>
<td>(10 000,0)</td>
<td>(10 200,0)</td>
<td>(10 404,0)</td>
<td>(10 612,1)</td>
<td>(10 824,3)</td>
</tr>
<tr>
<td>Workshop costs</td>
<td>(19 200,0)</td>
<td>(19 975,7)</td>
<td>(20 782,7)</td>
<td>(21 622,3)</td>
<td>(22 495,9)</td>
</tr>
<tr>
<td>Café/Bar</td>
<td>(13 920,0)</td>
<td>(14 198,4)</td>
<td>(14 482,4)</td>
<td>(14 772,0)</td>
<td>(15 067,5)</td>
</tr>
<tr>
<td>Other costs</td>
<td>(84 000,0)</td>
<td>(11 220,0)</td>
<td>(11 444,4)</td>
<td>(11 673,3)</td>
<td>(11 906,8)</td>
</tr>
<tr>
<td>Other costs:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Material (as % of rev. from &quot;Production&quot;)</td>
<td>40,0%</td>
<td>40,0%</td>
<td>40,0%</td>
<td>40,0%</td>
<td>40,0%</td>
</tr>
<tr>
<td>Location Restructuring</td>
<td>53 000,0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Promotion costs</td>
<td>20 000,0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maintenance</td>
<td>5 000,0</td>
<td>5 100,0</td>
<td>5 202,0</td>
<td>5 306,0</td>
<td>5 412,2</td>
</tr>
<tr>
<td>Bureaucratic costs</td>
<td>1 000,0</td>
<td>1 020,0</td>
<td>1 040,4</td>
<td>1 061,2</td>
<td>1 082,4</td>
</tr>
<tr>
<td>Advertisement costs</td>
<td>5 000,0</td>
<td>5 100,0</td>
<td>5 202,0</td>
<td>5 306,0</td>
<td>5 412,2</td>
</tr>
<tr>
<td>Utilities</td>
<td>10 000,0</td>
<td>10 200,0</td>
<td>10 404,0</td>
<td>10 612,1</td>
<td>10 824,3</td>
</tr>
<tr>
<td>TOTAL COSTS (ex. D&amp;A)</td>
<td>(280 518,3)</td>
<td>(249 876,5)</td>
<td>(254 966,5)</td>
<td>(260 192,2)</td>
<td>(265 557,8)</td>
</tr>
</tbody>
</table>
It is obvious that for the first year of functioning of the project the costs will be higher than revenues, but after we consider growth of our market share and other circumstances which could allow D-sign to have more revenues and fewer costs.

From the next diagram we can see that the most visible parts in the structure of costs have HR costs, space rent, restructuring and promotion (which are inside the category of “other costs”). Operating leases expenses are almost 0 here in the diagram because our payments for leasing will start from the second year of the project.
4.4.1 Cash flows

One of the most important diagrams is cash flows diagram because it allows understand the financial dynamics and prognosis. Our financial model is projected for the future 10 years after the first year of opening D-sign place. Therefore we can see good dynamics of FCFO over the years.

By cash flows it is shown that the project is feasible and might return investments in good time period. This good dynamics is partly provided by the fact that technological investments (Shima Seiki machines) will be made by leasing through all years. Therefore we don’t see the huge initial financial outflow during the first year.
Conclusions

In order to better outline major achievements of the project, analyzed and described in previous chapters, it could be useful to conclude by summarizing the main points considered, representing in some ways forms of innovation.

The first relevant aspect is certainly the revolutionary role reversal D-sign brings into an industrial production chain as fashion industry. To realize this goal, many improvements and modifications had been performed. The service designed provides tools and space to fashion designers looking for visibility and business opportunities, without asking them a substantial initial investment but realizing a unique modular offer. On one hand, fashion designers inside D-sign are entrepreneurs of themselves, at the top of their business model, but on the other one they represent one of the most important final ends of the variety of services provided, and a consistent source of profits for funders of the project. In a similar way, customers become more than just buyers of finished products, getting in touch with the creative phase of the process, perceiving themselves as located at the top of the chain. The set of steps, roles and production units, usually detached both physically and conceptually, not only get closer with a shortening of the chain, but actually accumulate in one single point, becoming an innovative productive and cultural pole. It comes then to reality the blending and merging between different roles, summarized by the term prosumer.

A second important topic is regarding the social outcome of the project. Our work started considering the technical framework outlined by Shima Seiki machineries, offering new possibilities thanks to complete garment knitting, but soon had to move towards a wider perspective. Starting from fashion production, D-sign provides services to various characters, from Universities and schools to yarn producers, from artists to inhabitants of the neighbourhood. The involvement of several actors, with their own goals and interests, to create an integrated offer cannot get rid of the new socio-economic model needed. As an example, the physical setting of the pole, located in Bovisa, is meant for giving back to the community an active cultural and productive centre inside a former industrial district, which has experienced decades of decline. An engineering solution to the problem, with model building and cost/benefits calculations, cannot express widespread interests and multifaceted reality: that is the reason why, while facing the problem, an empirical and multidisciplinary approach has been selected inside the team, modifying cognitive habits of members and their attitude towards social issues.

The location of the pole had also influenced the way space concept had been designed. The disused shed, set as our hypothetical background, allowed to create a flexible and multifunctional open space, used during the day as a studio for designers involved, but also as a class or a space for events at night. Different functions are then realized inside one single physical place, a sort of empty box to fill with contents. Sharing of facilities, tools and services between creative people during the day could let synergistic processes raise thanks to co-working; at the same time, the visibility provided by several events, workshops and showcases will help designers in emerge in fashion industry, with positive effects also on D-sign services.

In conclusion, once defined the complex structure of the service offer, considering all points relevant for the large number of stakeholders, the economical feasibility of the project has then been evaluated through usual models, as Porter’s or 4Ps’. What emerges from market analysis and costs/revenues calculation is that the designed service, appealing for its innovative approach towards fashion creativity and for the integration of roles, needs and productive areas inside one multifunctional space, could also obtain an economical success and realize a concept of innovative solution in a traditional industry.
Bibliography


