

New Models For Sustainable Fashion Industry System: A Case Study About Fashion Net Factories

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Abstract

The paper aims to describe a design methodology in design strategy and design services sectors, it highlights the importance of designing new models of production and distribution in the fashion driven sector. In complex industrial systems you have passed from a "product oriented" concept to a "customer oriented" one. This strategy focuses on customization of the production and distribution mechanisms that increase globally competitiveness. In the "network society" defined as a social network that spreads through the network logic and which is powered by information technology, it emerges a new form of communication based on horizontal networks of communication.

Keywords:

Sustainable productive system, Network society, Virtual and creative communities.

1 INTRODUCTION

The topic of this paper relates to remarks upon the impact that the new economy has on production systems which are linked to the fashion system, especially to the creation of use and exchange values.

The fashion system is mainly based on creativity supported by continuously renewing contents.

Peter Drücker defined these products as "knowledge based products". He outlined a production system characterized by a "cultural" industrial configuration.

According to Drücker, production linked to fashion can be defined as "highly cultural". As a matter of fact, its main value depends on design and creative support. [1]

In the old economy, the industry's value lied in the manufacturing industry, leaving out the contribution from a different kind of knowledge that comes from other fields. Very few resources were dedicated to research, experimentation, design and creativity. Moreover, knowledge and manufacturing industry were strictly separated.

Nowadays, the challenge lies in acknowledging the economic value of creativity and services in order to boost their development by integrating them in the production processes.

Referring to the "design oriented" Italian industry, a meta-industry is often mentioned. It is an industry in which the productivity is directly proportional to the ability of elaborating knowledge and turning it into Capital.

In order to make our factories competitive, it is necessary to consider the ways in which they can incorporate culture in our products and integrate as much as possible the competences in the creative process to produce a real innovation.

You must reconsider the concept of innovation by connecting non technological elements of the process to it. The creation of the immaterial value takes place in "a complex combination in which the technological innovation plays a key role, but its representation, as well as

information sharing, ideas, senses and symbols are important too".

The relevance of design and research in creating worth and value in the economy of Made in Italy products, as well as the integration of knowledge in the product and the connection between services, manufacturing industry and the entire creative laboratory, are at the core of the whole process.

In the industrial model of the new economy, an integration takes place. In it "the manufacturing basis still plays a key role, but the creation of the value and the inner nature of the products depend on the immaterial knowledge offered by the specialised services". [2]

Some aspects of consumer dynamics, like customerization, need special co-design methodologies that deal with customers.

Generally speaking, the co-construction of productive sectors which relates to fashion requires considering the professional figures and the opportunity that young creativity is given.

In the current industrial configuration, goods production is carried out where services and industry meet.

For example, the production branches connected to made in Italy products are based on a system in which leader factories are mainly set in Northern and Central Italy, where there already is an appropriate system of infrastructures and services. In Southern Italy, instead, small factories work especially as sub-suppliers and represent the weak link of a system that produces in the global market.

The automatic work without any kind of creativity (well-finished manufacturing) that includes the final packaging of the product (mostly based on labour rather than design) is set outside Italy. Nevertheless, there is some kind of countertrend, especially in fashion industry, where production excellence is necessary to a luxury oriented system.

Italian factories that operates in this system, find offering totally made in Italy products (whose productive process is traceable and certified) strategically convenient.

There are more and more initiatives in this field, which include also the problems of certifying the origin of products. Traditional productive organizations like industrial districts, that nonetheless represent one of the main characteristics of Italian productive system, are not the solution to this problem. Industrial districts evolved into Factories nets which are the best way of replying to the globalized economy.

By using information and communication technologies, the competitiveness of Italian territorial systems grows. Factories nets, especially those with "multiple gravitational centres" – large factories and lots of small and medium ones – may, depending on the market, merge in "centres" that act as the engine of the whole system.

The main problem of competitiveness is coordinating all factories "constellations".

Generally in vertical factories nets, this task is carried out by the main factory, which acts a catalyst. In more complex situations, when you need to act strategically in relation to the system Country, you need a recognised excellence centre which can guide the innovation and transformation progress of the whole system and gather all figures in a shared vision.

This excellence centre can act as a place where creativity, research, excellence of production and new technologies can serve the real innovation process of the factories.

Innovation should not only consist of transferring know-hows to the factories, but also sharing new ideas to keep up to the external changes.

2 THE EVOLUTION OF THE PRODUCTIVE FASHION INDUSTRY

2.1 The evolution of the industrial districts and the role of Design in the Fashion industry

In the Italian scientific debate industrial districts are the subject of remarks upon the nature of the productive model and its ability of adapting to the ever-changing market.

The likely decline of the districts, the continuous rise of new industrial groups, the establishment of new characters call for new innovative development strategies.

The rise of competitive pressure (relating to placement in global markets) must be fought by a better integration of "knowledge" and "actors" of the scientific and economic world.

If the industry can be compared with a "connective texture of cells and technology and innovation provide it with filling", the productive activities based on technological innovation, which can not be easily reproduced, can revitalize the economic scene.

It is worth thinking of the evolution of the Italian production system in the last years, over which the district models have played a key role. [3]

After a growing phase, an assessment one followed to which the districts reacted in different ways according to their own characteristics. Today there's a more complex condition. As a result, the birth of so called "technological districts", founded on the development of specific branches, requires political strategies which have already been tested in international contexts.

It is necessary to use competitive strategies and act in a highly innovative way to help develop a new cooperation between prominent figures of the world of research and production.

In this context, a remark on design and creativity as competitive tools and opportunities to boost industrial districts is strictly necessary.

The associative model of the industrial district has led to higher competitive advantages compared to the ones achieved by the single units which it is made of, and today the districts system is the most vital part of the Italian productive system.

The close link with the territory, the territorial concentration of the productions, the competences derived from an "excellence know how" start the engine of a machine which takes advantage of the complex system of connections between productive units.

The competitive advantage of this model depends on both the nature of the organization model, which has technically highly qualified competences, and the versatility and adaptation that enable it to reply effectively to the requests and changes of the market.

This model has been further developing over the last years, moving from a first generation industrial district to a second generation one or meta-district. It has been trying to overcome the problems derived from the so called "short nets", a system of relations based only on local areas. The establishment of the second generation of industrial district model characterises the passage from "the local dimension to the global one". [4]

It widens the global idea and fosters the interaction with the outside. The current direction of the development leads towards the birth of new forms of diversified specializations. They aim to reset a balance between competitiveness actions, territorial synergies and new cooperative forms in highly technological branches.

The industrial districts, which do not substitute or overlap the classic ones, open up to specialized areas and global relations.

The industrial district, defined as a "socio-territorial entity, characterised by the active presence, in a environmentally and historically defined territorial area, of a group of people and industrial enterprises", has an explorative and design aptitude which enables very complex innovation processes to take place. [5]

The model is founded on systems of connections between competitive small and medium enterprises in a narrow territorial sphere. It can boost new synergies between independent and widespread productive units.

The district is an open and flexible form of collaboration, where the units, which exchange explicit (codified) and implicit (contextual) knowledge, are play an active part in a circuit in which the local and global cognitive spheres integrates.

Several studies on district economy show that the most effective districts in terms of innovation move towards three guide lines: the promotion of high quality products in order to boost international visibility; the application of institutional forms of organization of nets of connection; the experimentation of wider and more open outlines.

On the one hand, there's the need to realize design strategies that boost quality levels of productions and to set up stronger connections between research institutions and productive realities. On the other hand, the likely reduction of strategic value units, which determines the district by crossing the limits to a global level, emerges.

In the last case, the scenario that has been developing lately leads to virtual districts which, supported by Information and Communication Technologies (ICT), boost global associations and integrated systems.

This is possible on condition that every single enterprise can run a complex net and transfer and share its know-

how. As a consequence, design plays a key role in the productive system and works in several decisional and design areas. Design is defined as an "incessantly starter of innovation". It is included in the interaction process between the economic system and the productive system, through the setting of enterprise strategies and the planning of products and services.

It is the new innovative resource which fosters the competitiveness of the enterprises and guides them toward new scenarios and new association methodologies. Design has very unstable action limits. The overlapping and integration of fields helps build a complex planning course.

Through design you can put together management, environment, product and services system.

2.2 Planning methodology to innovate fashion oriented production.

The composition of fashion oriented productive branches is a competitive advantage (flexibility and productive excellence, connection to traditionally productive handmade branches, close links to the territory...). The dimension of the factories itself, though, stops the economic growth. Small and medium factories which characterize this field cannot afford the investments necessary for the research and the creative and design processes. As a result, innovation is out of reach for most of the "actors" of the system, who aim to the excellence of some productions and to the ability of acting as a "die". According to Richard Florida, the University of Stanford and MIT were of paramount importance in the development of Silicon Valley and of the even more productive area in Boston. Every important innovation is based on university and young creativity. An important evaluation in order to plan strategic guidelines of development in the areas in which Universities work is the brain drain/gain index. It corresponds to the capability of keeping the talents in the area in which the university is based. The key to the economic development of new industrial systems is planning even more effective ways of transferring university researchers and human wealth to the territory in which it works. In the current productive system, in which the winning enterprise is the one which can put as much know how as possible in the products, the strategy which should be used at a "country" level, lies in the creation of an ecosystem in which the main figures, according to the role they play, contribute to the development of really competitive strategies. The core of this idea is to realize a series of strategies in order to create an engine for creativity and innovation, which can gather all phases - creativity, research, services, transfer of know how to the enterprises, production. Research centres, main enterprises, sub-suppliers factories, young researcher and creative talents must all be taken into consideration in this phase. The core of this project will be the realisation of a centre dedicated to research, the transfer of the achievements of the enterprises, and the development of creative ecosystems. The centre will be founded on both a university and an enterprise basis. The university will supply it with education and research while the enterprises will put together university resources, development and innovation. As a result, there will be a district dedicated to research, innovation, education in the design and fashion driven field.

3 CASE STUDIES

3.1 Design Polling Lab and Fashion Net Factories

In order to define strategic actions and new creative models of interaction between productive areas,

innovation and design, you can refer to areas of interactive innovation or Living Labs, whose experience is highly innovative. The Living Lab model, created by a group of Scandinavian factories, was planned with the purpose of involving several users in the development of new design ideas (especially the ones relating to ICT), in urban workplaces and areas. In time, this experimentation turned into a network that involves many European cities. It also represents strategies that relate to cooperation plans which are based on the reproduction, through systems of shared creativity, of the dynamics of fertilization of the territory. Considering this experience as a model, you can give birth to a creative lab that supports the productive field and guarantees a more effective and structured cooperation between university and productive branches. The Design Polling lab is an itinerant lab that relates to all figures that take part in the process, from designers to entrepreneurs to consumers. [6]

Moving from the evolution of the idea of co-design, which lives in the one to one relation between entrepreneur and designer and materializes in the product (as a sum of planning choices, actual realization and consumer needs), the DP Lab experiments a new planning methodology by widening the number of figures which take part in the project. This new model of design environment consists of resources and methods that make interactions between designer, producers and users more effective. In the current scenario, there is an even bigger need to reduce the time that passes between the design and the commercialisation of the product. As a result, needs analysis and the direct or indirect involvement of the users make a product successful in the market. Users who buy an experience, actually pay for spending some time enjoying a series of unforgettable events that the enterprise organises in order to keep them "directly" busy. Consequently, at the origin of products/services or system of services design, new ways of interaction with users must be planned. In this scene, the quick evolvement of the demand and the consequent change of the offer, shed more light on the role of the user in the chain of value. The boosting of relations between client and supplier (which have a biunique nature and that realize in the offer of services and instruments of socio-economical mediation) contributes to the realization of knowledge intensive goods. These very intense relations widen the spheres and the competences that help define the design choices and support the birth of a collective collaboration. Therefore, the concept of product changes completely. In addition to its actual dimension, there is a more complex dimension which is linked to the other and sometimes overshadows it. This dimension includes cultural and social aspects of the place the product belongs to. In this direction the DPLab aims both to define cooperative solutions among different figures which take part in the same design process and to build an efficient system which can involve entrepreneurs, institutions, designers and consumers since the very first phases of the planning of products/services. It is an area of research and innovation where you can experiment new comparison and innovation between university and productive design oriented branches. It is a free space, characterised by the direct exchange of knowledge, in which you can design and test new products for innovative scenarios. The wider and wider involvement of figures is even more effective if it works, simultaneously, through different actions. So, the more various the actions in the Lab is (workshops, talks, seminars) the wider the community involved in it is. This will lead to a wider range of ideas connected to the Lab. Consequently, on the one hand this will create a bigger amount of solutions of a specific problem, on the other hand it will enhance the project that will be closer to the needs of the users. This

cooperative model includes the expectations of the consumers. It also deals with the innovation projects related to the final product. The DPLab, which is by nature itinerant, has a flexible structure and fosters the connection of the different figures to the territory that play a role in the production and consumption process of a product, a service or a system of services. Each and every experience in the Lab relates to a different group of stakeholders, university departments, public agencies of development, consumers. They all aim to the realization of an innovative product, which can be created in the short term. The creative lab community, which aims to common targets, is based on the symbiotic integration. It highlights the characteristics of every single components according to their own knowledge. [7]

Consequently, an actual application of the DPLab model is represented by the experimentation of a virtual fashion city. It is a virtual city that favours communication and information which, from the inside, involves the units of the district. The FNF enterprise consists of a whole that is made up of many equivalent parts, put together by the will of creating a model in order to use not just the fashion product, but the whole system. The virtual district is like an agora made up of places that are like pictures of the identity of the brand they belong to. They are places where the relationship between clients and enterprises can be customized and the communicative identity realizes itself. They are like imaginary spaces where the real places are reproduced in a virtual way. Body features are linked to relation ones, so relationships define the place-meeting among users. The city derives its shape from the pictures of every brand while users became active part of the process. By sharing information a learning relationship takes place. During it the producer obtains information about the client. The main advantage of the new one to one relationship is founded both on customized communication and on location of goods and services. You can reach a high level customisation of services, which leads to customer fidelization (one of the most important dynamics of the e-commerce). Distances between offers are deleted and competition stays on the same level. Individual communication with a single client overcomes mass communication, goods become a unique individual experience, so the clients approaches and relates to the brand in an exclusive way. Internet favours the combination of different types of communication linked

to nature, use, dimension and quality of the interface, internal and external environment of the organizations. Consumers and factories share the same space. By stimulating the biggest amount of contacts with users, you boost the chances to offer targeted solutions. Involvement, emotional participation, critics and the creation of a virtual community shed light on the clients' attention and the fidelization process. Through e-consumers the use of goods and services is actually a free choice, justified by personal taste and interests. In this experimentation, the virtual promotion of the activities of the districts deals with a specific planning methodology. In addition to this, it defines the methodology's requirements, the way in which communication and distribution take place, the content of the interface in the virtual environment and the consequent way of interacting with users community.

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