

POLITO INNOVATION DESIGN LAB: THE CASE STUDY OF INNOVATION DESIGN FOR FOOD

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Abstract

The Polito Innovation Design Lab is a University laboratory created to research and promotes initiatives that help to develop innovative projects and broaden the culture of sustainable innovation. The mission of the lab is to manage, coordinate and carry out research projects about products, services or models able to meet real needs of people with a regards to territorial potential perspectives on the technology, environment, economics, culture and social sciences sides. In this paper is presented the Innovation Design For Food (IDF) case study. The innovation challenges faced in this project aimed to redefine, reshape and produce social, economic and environment impacts and effects with a sustainable perspective in the different district of the city using the food as an enabling factor. The final scope of the project was to train and experiment the ability of sustainable design process to enhance a special context or territory, starting from the resources currently present in it. The paper presented is divided in two sections, the first go through an introduction and an explanation of the methodology and the design process adopted to achieve the results of the case study presented in the second section of the paper.

1. Introduction

The design role, inside the company and the society, is radically changing in recent years. If the design has become an essential asset in any product or service delivered in the market, other indicators suggest an increasingly importance of the role of design as a strategic tool in the vast landscape of innovation (Cicoria. 2013). In fact if the innovation is a multifunctional force that must continually refine his form method and his meaning to be able to reply to new outcome issues (Tamborrini. 2014), the multidisciplinary nature of design fit in a natural way into the needs, managing in a proper manner these aspects. In addition, we are witnessing in every social and market field context, a speed and unpredictability that have dealt a blow to the old systems and established "modus operandi". The result is a growing complexity and a lack of predictability that affect industries, corporate and institutions that every day are looking for a right way to navigate into this fog (Josiassen & Rosted. 2014). This scenario became even worst if we pair these kinds of issues with the growing demand of sustainability in the society, economic and environment factors. All these aspects have led to increased attention into the theory and tool research able to handle the increasingly complex and apparent chaotic contexts of today. On this line, following the trend that open up to the "golden age of design" (Walker, 2014), the research team of the Department of Architecture and Design have started to study, to map, to re-frame and to experiment a methodology capable to answer at new meanings and emerging needs for those who create innovation in order to progress and prosper (enterprise) and for those who need it to improve their quality of life (the user/subject) with a sustainable perspective. In order to give a structured response it was created the Innovation Design Lab. In the laboratory researcher and student are challenge in innovative sustainable initiatives with the goal to research and learn how to manage, coordinate and carry out design projects able to meet real needs of people with regards to territorial potential perspectives of technology, environment, economics, culture and social sciences.

2. Sustainable Innovation Design

Sustainable innovation is nowadays not more a feature of the innovation eco-system but is the facto an essential component of the innovation itself (De Biase. 2015) enabling green and growth to go hand by hand (Walker. 2014), and design has gained the multidisciplinary expertise to drive it in the right way. Design with a sustainable perspective means to create new opportunities as new economic model, new social

engagement and lifestyle improvements with a reduced input into the original context of action. Sustainable endeavors are changing the vision of how and why product and service are designed. The context, the focus on reduction and reuse, the smart allocation of resources, the delivery of better and more suitable product/service to users, the creation of new partnerships with the actors involved in the system are in general all action of the innovation system to take into account to make additional revenues or create new lines of business, solving at the same time social issues such as unemployment, social exclusion, health enhancement, education and so on. But when it comes the necessity to design an innovative project, with a sustainable approach, theory and practices are different aspects that have to work together. If the theory is setting the prospective and the guidelines of the innovation project, the practice has to set up the tool able to answer to the challenges identified. To manage this process we need a clear and stable methodology. For that reason the Innovation Design Lab continuously research and study the various innovation theories and design methods come out in this area. But not only the first step of the research was to define a clear scope of this methodology, for that reasons the research team following the studies of Larry Keely (2013) and Roberto Verganti (2009), set its own definition on sustainable innovation. Sustainable Design Innovation is the practice of creating a new viable value/benefits sustainable proposition (Gaiardo & Tamborrini 2015). In this definition, the aim of the innovation is focusing on delivering new, viable and concrete sustainable result activities with a tangible value/benefit for all the actors' involved. Equally the design methodology adopted to guide the stage of product/service design innovation, derives from the Systemic Design approach used and taught in design courses at the Architecture and Design Department (Bistagnino. 2009) and is melt in the well-know design Industrial process.

3. Design Methodology Process

The Systemic Design approach is not amenable to simple recipes or toolkits for his complexity and his multi-faceted process, but it is the right approach to drive with awareness the achievement of the best possible result. The core aim of this approach is to unlock and exploit the innate value of the context as a starting point. Accordingly the entire project has to start with a deep and careful analysis of the complex interactions relationship between different actors (individuals, society, enterprise, culture, territory, etc.) and the related cultural, economic and community area or territory. Data and context are the two central aspect of this approach. Nowadays more than ever the new information and communication technologies and in particular, the ability to gather, analyze and disseminate large swaths of data and connect large number of people over broad areas have enabled a greater understanding of what surround us. This approach is a strategic way to face the design innovation activity to better meet the real need inside the boundaries of the context (real or figurative) where we are acting.

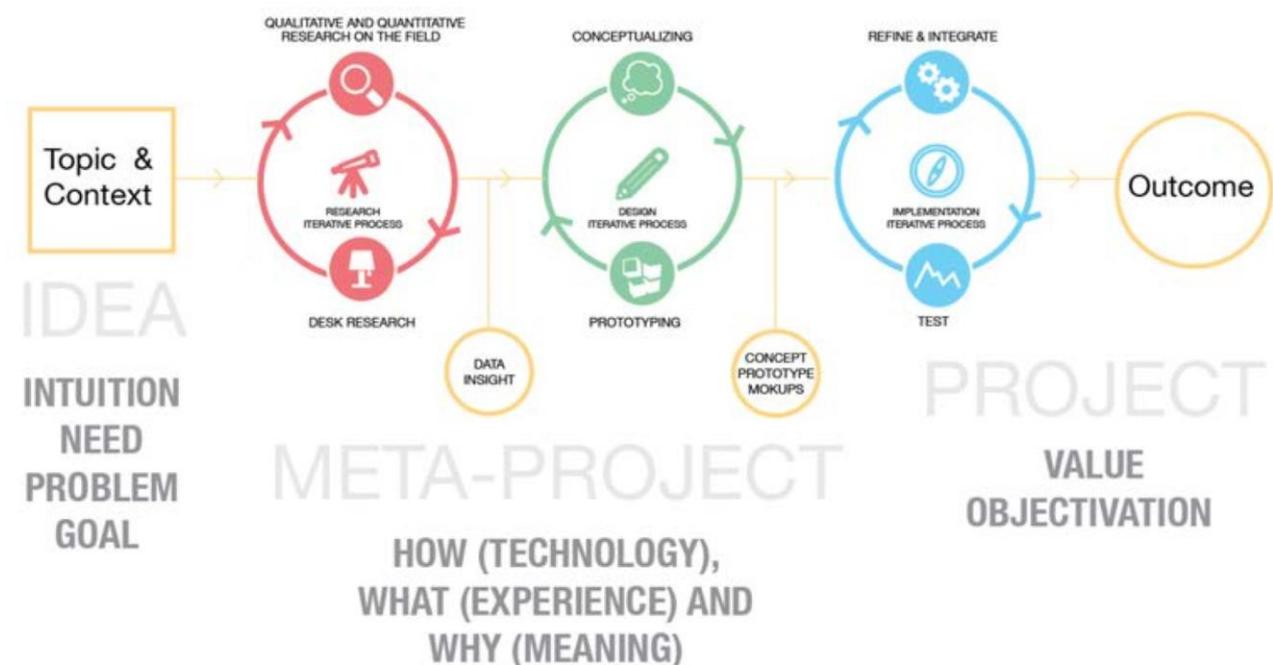


Figure 1 Design Process Schema.

The design process come out, described in general view in the picture (fig. 1), goes through in all the stage of the innovation design process. The preliminary step is the definition of the goal's project with the description of the topic and context action boundaries. The set up of these boundaries derives from what we would like to achieve and it is drive by an intuition, an idea or an issue to solve. The meta-design phase, or rather the design expectations that will provide indications without the specific solutions to implement the project (Germak & Celaschi. 2008), start and end with two iterative processes: the research and the design step. In this phase, the assignment of the designer is to answer to some questions as: why he is adopting a solution, what is the solution adopted and how the solution chooses will work. The research step begins with the exploration and collection of broad and tangential information in order to examine the vast array of issues, features and relationship surrounding the topic. The analysis of this overall picture drives into a deep understand of the topic outlining the real role of all the actors involved within their scope, their development and their relations in their operational context. The amounts of data generate the design analysis/data documentation. This output is the fundamental under layer leading into the second stage where it starts the iterative process of design. At this step, the designer have to develop guidelines and propose solutions in according to the research step, described before. The result of this stage as to be a functional prototype or mockups of the concept developed. The intent of this outcome is to communicate and explain how the concept works and how it answers to the goal's project. The last phase is the implementation of the concept, with his development and the launch test phase where with iterative tests is it still possible correct the problem occurred before to deliver the project over.

4. Innovation Design for Food

Innovation Design for Food (IDF) was born from an academic experience within the innovation master course of the Politecnico di Torino. The aim of it was to introduce a sustainable innovation into the different district of Turin, consistent with their problem and resources, able to improve the social or the economic, or the both aspects, with the use of food (supply chain and related things) as an enabling factor. In fact, the heart of the project was to transform the existing resources in the food sector, then it was necessary to know in deep all the infrastructure, the economic relationship, the human value and the cultural assets involved in this system before studying and conceiving any sort of improvement. The students were challenged in the creation of social and environmental innovations within specific areas of the city of Turin. In particular, the activity involved food as a symbolic element of identity, communication and information, in order to put in relation different cultures and enable initiatives on the socio-economic development. The experience was divided in two different phases: the research phase and the design one. The research phase was structured to provide a large amount of material and details: first of all, the project team performed a complete mapping of the food business in the area (related to sale, consumption and distribution), which allowed us to understand the economic and commercial site. In this collection of data it was added a careful analysis on the livability, the everyday life and the perception of the area: these aspects, crossed with data and sociology, made an important contribution for the knowledge of the neighborhood's social reality. During this phase it was fundamental the continuous research and conversation with merchants and activities related to food. Therefore projects were created thanks to a wide-ranging vision that involved the actual capacities and the possibilities of future development. The selected projects meet all the requirements of environmental, social and economic; they aim to improve the quality of life using a mix of communication, productive and interactive skills.

4.1. Research phase

In order to find out the values of the territories, the different teams analyzed different types of qualitative and quantitative information as a quality of natural and built environment, together with identity elements and cultural living conditions, and the economic settlements of the neighborhoods around the city centre. In particular, this type of research was conducted with a research carried out to investigate the overall context of action in three main fields: environment, socioeconomics and the specific food field. Regarding the first and the second aspects, the project used traditional ethnographic methods to analyze the environment field (natural heritage, infrastructure, public spaces, mobility system, garbage system and quality perceived by residents) and the socioeconomic field (history, economic identity, quality of life, target of residents, culture, events, associations and economic fabric). The tools used in this phase ranged from interviews, empathy explorations, qualitative and quantitative data analysis, contextual maps, case history and value network maps. The food filed analysis was conducted instead with the collaboration of LARTU (Laboratory of Analysis and Territorial and Urban Representations) through an experiment for testing a digital mapping process. The data acquisition was entirely performed on the ground, using a laptop and a smartphone app that allowed users to use, create and share data maps, thanks to the link to a collaborative cloud-based platform. The data collected were divided into four main categories: production (urban garden, social garden,...), distribution (street food, retail store, lorry owner,...), sale (store, market, hypermarket,...) and consumption (coffee shop, restaurant, takeaway,...). For each category was made a distinction based on the

nature of the food in terms of regional, national, ethnic, biological, vegan food, and so on. All the data were put into a map to analyze the distinction and the distribution of the different actors involved inside the food system in the city and in each district. The experiment produced useful data on the chain of production, distribution, sale and consumption of food. It encouraged students to reflect on the objectives of the design proposal, with extensive reflections on methods and times of living in the same city. In this way, it was possible to reconnect food to some aspects, among which:

- food as a source of well-being and health for different populations target, both inhabitants (elderly people, youth, children, foreigners-natives) and city users (employees, visitors);
- food as a testimony of culture and traditions rooted in the territory;
- food as a source of innovation in the agro-industrial chain;
- food as a vehicle for interaction and exchange among different ethnic groups and cultures;
- food as a urban polarity and "attractor", even against new emerging polarities (universities);
- food as a symbolic element of socio-cultural identity.

4.2. Design phase

After the research phase, students knew the characteristics of their district of interest. Therefore, it was possible to pass at the second step: the design phase. In this phase each team proposed design concepts able to introduce a social improvement in their neighborhoods. This was possible passing from the resulting data, of the previous step, into the formalization of guidelines for enhance one territorial aspect, mitigating or solving a problem, or implementing a project that could bring a benefit. In this case, the systemic methodology led the students to formulate design concepts with a general perspective on cause and effect with elements that can support their choices.

4.3. Projects

The study of the field of intervention has driven the iterative phase of idea generation that has resulted in different concepts and prototypes. Here we present the most significant outcomes that exploit the full potential of innovation in food at a local level.

4.3.1. Cibogramma



Figure 2 Cibogramma.

The aim of Cibogramma is to relate the different ethnic groups that reside and live the neighborhood Aurora Rossini. The multicultural aspect characterizes the area, but often it represents a barrier; using food as an instrument for the expression of customs and traditions of a community, the project want to show the

potential of the multiethnic aspect, for stimulating relations and knowledge. Students gave special attention to the research of a communication form that allows each one to interact; this has brought to design postcards, placemats, recipe books, app and website, that illustrate the different recipes using an iconographic language. The Italian language is used to explain ingredients, offering to foreign people the possibility to learn some new words. By the design of some events (workshops, theme meals, games and labs) integration and relation are facilitated. In fact, the events allowed the comparison among people and they fostered the diffusion of the different cultures.

Cibogramma (fig. 2) was designed by Fabio Conte, Stefano Lattanzio, Chiara Lorenza Remondino, Barbara Stabellini.

4.3.2. Cibamenti

Cibamenti is a new way to experience the local market, in order to introduce young people to a targeted and nutritionally correct purchase: it means to educate to quality and sustainable food, through the buying of pre-set bags of food on the online platform, and their distribution through a new stand at the market. The project aims to convey the users towards sustainable eating habits, made of healthy and local food, because it is selected and quantified, based on criteria supported by certifications and by the opinion of experts. In particular, the project is designed for the target of students, so it responds to their needs, re-evaluating territorial relations between the university campus and the near market placed in Vanchiglia; the intention is to inform and educate users, to simplify the recognition and the purchase of products, to provide simple and healthy recipes to cook them.

Cibamenti (fig.3) was designer by Elisa Cravotto, Sara Gomez Gomez, Eric Lindqvist, Luca Magnani, Mauro Sorrentino, Maurizio Vrenna.

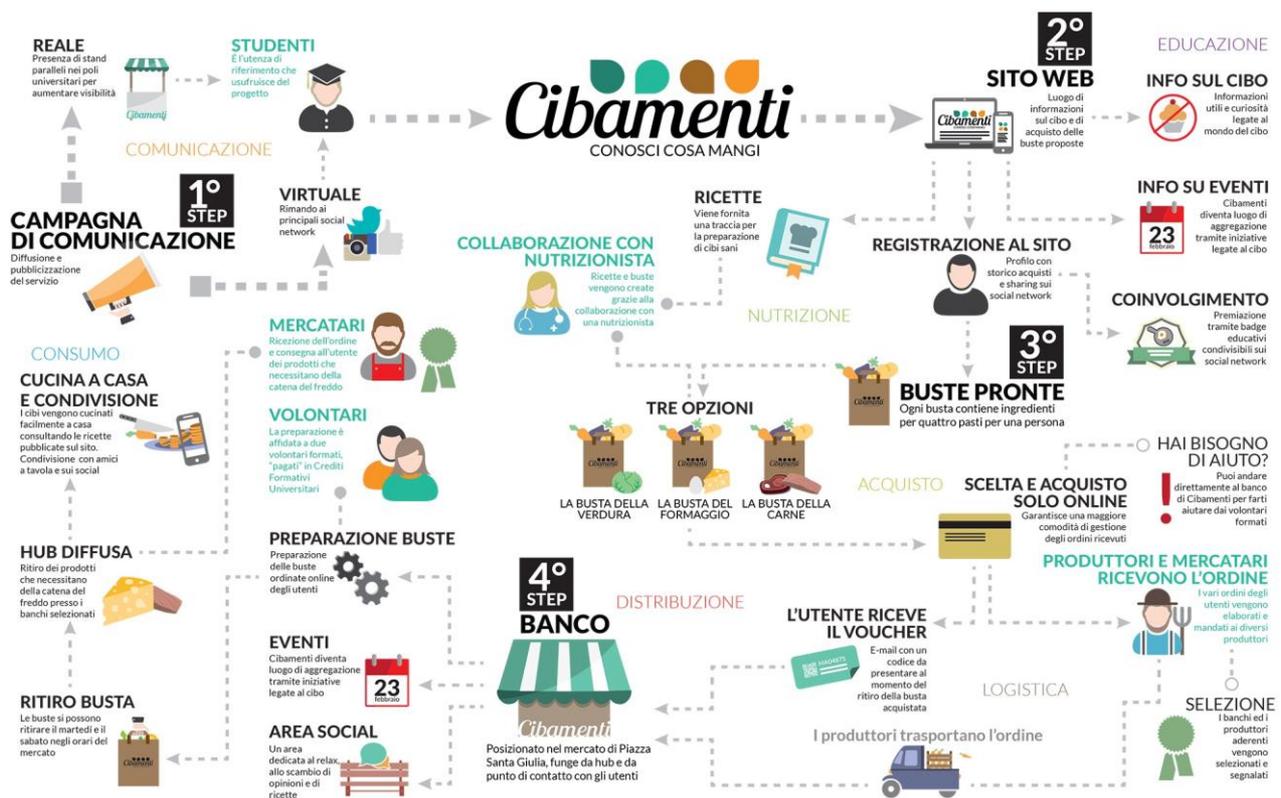


Figure 3 Cibamenti.

4.3.3. BiCibo

BiCibo aims to promote the quality of food, discovering the retail district of San Salvario in Turin. The main purposes of the project are to inform and educate the consumption of healthy food and to facilitate the re-evaluation of the activities involved. The products of these stores can be tasted by people through a "street food truck" that stop in strategic points of the district, reported with a specific communication. This activity takes place 2 or 3 times a week, proposing snacks from the stores involved; each event has a different theme. Users can learn about the products and can be informed about the activities of the retail stores

through a map, a brochure with promotions and product information, and a mobile app. To make identifiable traders involved in the initiative, markings and billboards are exposed on the stores.

BiCibo was designer by Lorenzo Gabini, Laura Jaramillo, Simona Patania, Giada Pezzi, Carola Stinchelli, Tania Tempo.

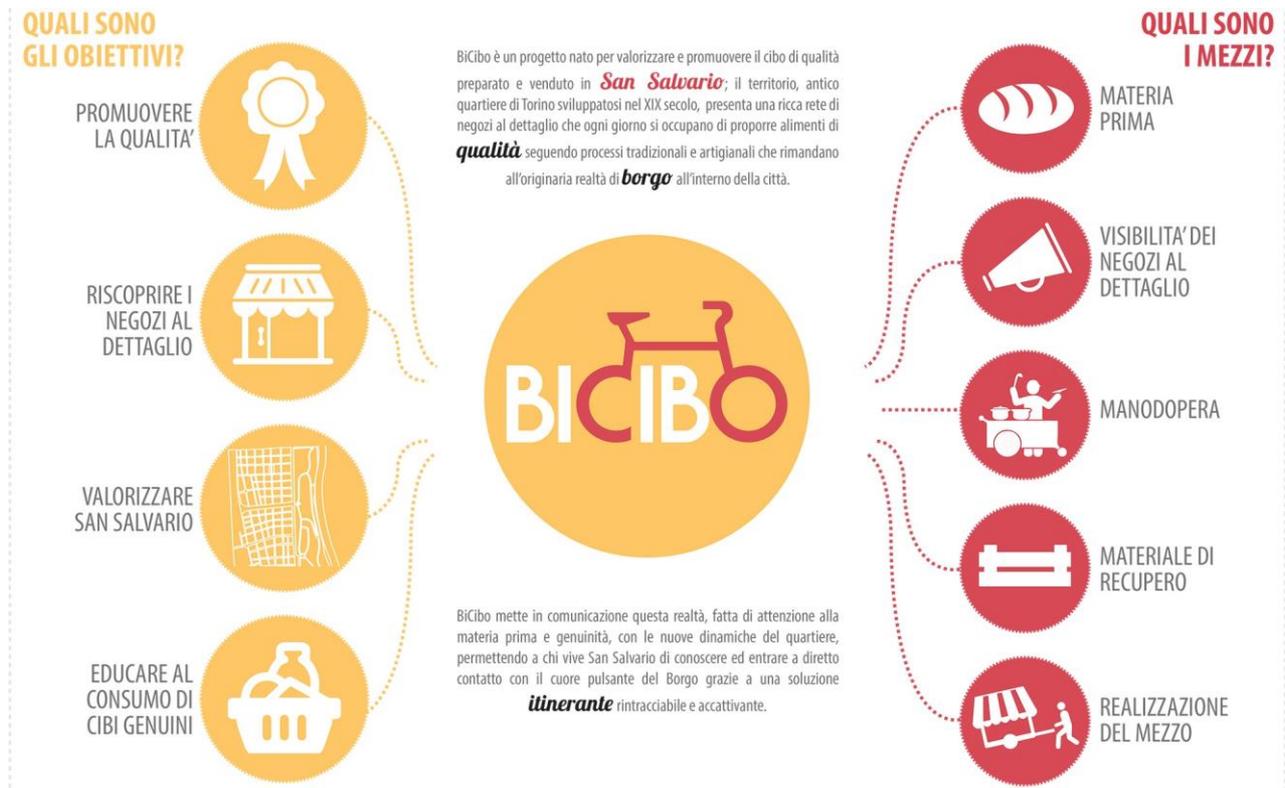


Figure 4 BiCibo.

4.3.4. Qualità Percepita

Explaining what you feel when dealing with food is never easy and that is why the Qualità Percepita was born. Its purpose is to enable clients to describe in the best possible way the experience had in every food related place located in the Crocetta neighborhood. The key idea is to straighten the identity of Crocetta as the "good neighborhood" of Turin, making perceptible his hidden resource: food. Each of us, indeed, perceives quality according to its own logic; Qualità Percepita has the purpose of making more objective the criteria that normally drive to the same perceptions. The project takes the form of a website in which one can search and evaluate food related places through 12 criteria based on perceptual principles. Qualità Percepita is a project designed for those who make their concerns about well-being and their awareness about each purchase, the base of the food culture that binds the interest in good food to the refinement of products with special characteristics.

Qualità Percepita (fig.5) was designer by Alejandra Aguilar, Agnese Mantovani, Debora Pilati, Nikolaj Strömberg Gröndahl, Francesca Tedeschi, Serena Zerbinati.

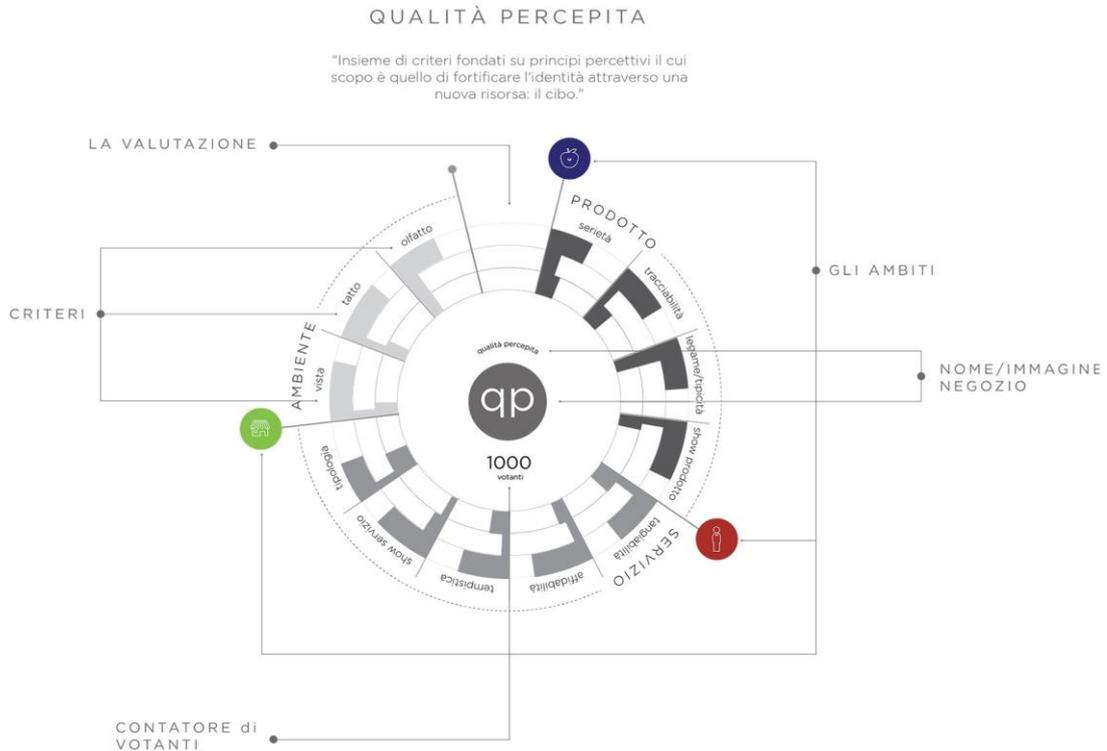


Figure 5 Qualità Percepta

5. Conclusions

Contribute, inspire and advocate to the on-going evolution in innovation process design and innovation-related tool-making in a ceaselessly changing world with a sustainable horizon is one of the core scope of the Innovation Design Lab. Consequently the aspiration of our research and laboratory is to experiment and continuously redefine the best methodology and approach to support the transformation of sustainable initiatives and ideas in a tangible outcome able to improve and progress the human quality conditions. Through the application of these practices on innovation purposes, and with the creation of new visions capable of going beyond the mere commercial and technological exploitation aspects, we strongly believe that, as the first our results confirm it, the sustainable design process can affect territorial value systems by creating new business able to lead the society towards a new equation: Innovation=Sustainability.

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