The Co-production of Social Innovation: The Case of Living Lab

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Abstract Our article aims to reflect on some key concepts that have emerged in the recent literature on innovation. In particular, it will seek convergence between social and open innovation within the framework of Smart Cities. The Smart cities are embedded in the last 20 years processes of change that have altered conditions and modalities of innovation and knowledge generation. The city is still, like Robert Park in 1915, the "social laboratory" par excellence for the study of human behavior in a modern urban environment. If we consider recent debate on Smart city definition, we can find that ICT can be a powerful tool for building the collaborative digital environment that enhances the intelligent capacity of localities [30]. In that sense we can consider use the most used definition: "a city may be called smart when investments in human and social capital and traditional (transport) and modern (ICT) communication infrastructure fuel sustainable economic development and a high quality of life, with a wise management of natural resources, through participatory governance". Early as at this definition we can find the pillars of our reflection: the innovation as social innovation, the new role of the 2.0 citizen–public, the issue of governance.

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1 Innovation

Innovation seems to be the most urgent need of our society. Innovation, said recently Edmund Phelps is the only antidote to the crisis but also to inequality. A true elixir to satisfy the changing needs of an ever more personalized (and wounded) world.

The post Fordism, the rise of knowledge and creativity economy, the radical change in factors of production (raw material, labor, capital) support an additional power of knowledge creativity.

"In an essential sense, innovation concerns the search for, and the discovery, experimentation, development, imitation, and adoption of new products, new production processes and new organizational set-ups" [16]. This neoschumpeterian definition suggests us to consider innovation as a result of productivity efficiency and adaptive efficiency. Innovation is a social fact driven by individuals as well as large institutions, associations, online or offline community and so on.

Innovation, in polanyian word, is embedded in society: this is the starting point of the large recent literature on social innovation.

2 Social Innovation

If we read some definition of social innovation, we can find, for example: A novel solution to a social problem that is more effective, efficient, sustainable, or just than existing solutions and for which the value created accrues primarily to society as a whole rather than private individuals [29]. We define social innovations as new ideas (products, services and models) that simultaneously meet social needs and create new relationships or collaborations. In other words, they are innovations that are both good for society and enhance society's capacity to act [27]. Social innovation can be defined as the development and implementation of new ideas (products, services and models) to meet social needs and create new social relationships or collaborations. It represents new responses to pressing social demand, which affect the process of social interactions. It is aimed at improving human well-being. Social innovations are innovations that are social in both their ends and their means. They are innovations that are not only good for society but also enhance individuals' capacity to act [21].

These are dense definitions, that should be analyzed word for word, but here it is important that we underline the connection between the concept of social innovation and the stakeholder ecosystem [17]. The social dimension of innovation engages local systems, close-knit territorial networks full of tacit, atypical knowledge and hence of particular relevance. From this point of view every economic, institutional and social actor is able to innovate: the crucial element is that we have to recognize the role of hybridization and the meeting of diverse realities and organizational culture. On the contrary, the incapability to innovate is tied to an ineffectiveness to adopt different perspective when analyzing problems or to

risk collectively not kindly recognized by the majority. If we consider the social innovation as one of the pillars of our theoretical approach, we have to underline that innovation starts when there is a social request that a social need is met. The first step is the recognition of an unmet need, and then the necessity to find one or more solutions. Social innovation approach leads us to a emphatic model: institutions and companies can no longer study the user's profile, but they have to enter in the user's world, sharing opinions and narrations, sharing, we can say, all the process of innovation.

3 Helix of Innovation

We can also say that the contemporary social construction of innovation is very comparable to Triple and Quadruple Helix approach proposed by Etzkowitz and Leydesorff [19] and by Carayannis and Campbell [6]. Starting from a "Mode 1", characterized by a "linear model of innovation", according to which university and research centres are the starting points of innovation process and the role of end users was confined to the "passive consumer one", 20 years ago we passed to a "Mode 2" [22, pp. 3–4], characterized by five principles: (1) knowledge produced in context of application; (2) transdisciplinarity; (3) heterogeneity and organizational diversity; (4) social accountability and reflexivity; (5) quality control. As Carayannis et al. [8, pp. 3–4] pointed out, this Mode paved the way to the Triple Helix model, that stressed on the importance for innovation of university-industry-government relations [19]. But at the same time stimulated the passage to the Mode 3, "that is more inclined to emphasize the coexistence and coevolution of different knowledge and innovation modes (…) accentuates pluralism and diversity of innovation modes as being necessary for advancing societies and economies" [8]. This is an important step because it stressed the importance of cross-fertilization that in any case seems to let into the circle of researchers and firms although with the help of the government. Citizens, consumers, end users, do not come into play yet, in this model, except through the guarantee that the government should ensure their interests. A substantial change occurs with Quadruple Helix model [6, p. 218, 206], that adds a fourth helix: the public, defined bay these authors as "the media based and culture based public" and "the civil society" and associated with the "creative class". In the meantime, social studies about science and innovation proposed the Social Construction of Technology [31] and the Actor Network Theory [24], to underline that innovation is social context dependent and can't be limited to the closed network university-industry, also if this circle is heterogeneous and transdisciplinary.

These theories consider not only the social character of innovation, but also the necessity for a new territorialization. Innovation need to a place-based strategy linked to territorial specificities. Governance must be responsive to a self-potential discovery: the legitimacy, however, requires the involvement of end users. Social innovation, we can say, can be possible, only if we move from triple helix to

Fig. 1 Our elaboration from
Carayannis et al. [8]
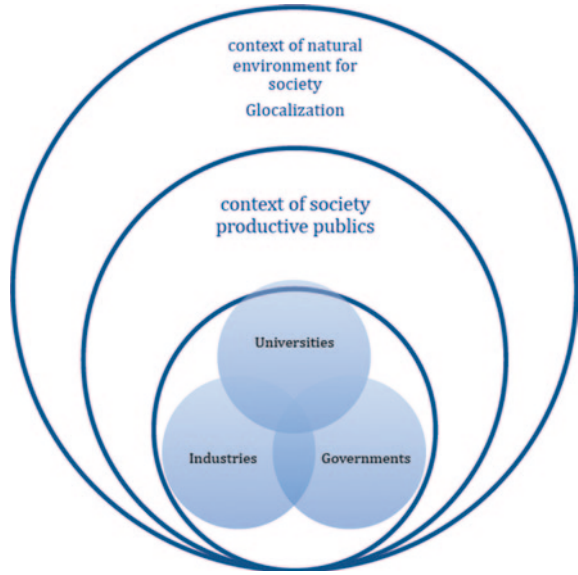
quadruple helix, adding "the General public" to the "classical" three actors,
University, Industries and Government. More recently Carayannis [7] introduce
quintuple helix, adding context of natural environments for society (Fig. 1).

4 Open Innovation

During last two decades companies have realized the progressive loss of impor-
tance about control of innovation according to close traditional model. In tradi-
tional closed innovation, a company generates, develops and commercialized its
own ideas. The approach of self-reliance dominated the R&D operations of many
industrial corporation for most of the 20th century. Chesbrough [10] coined the
term "open innovation" a concept based on the observed fact that useful knowl-
edge today is widely distributed, and no company, no matter how capable or how
big, could innovate effectively on its own [12]. The official definition (2006) said
that Open innovation is the use of purposive inflows and outflows of knowledge to
accelerate internal innovation, and expand the markets for external use of innova-
tion, respectively. [This paradigm] assumes that firms can and should use external
ideas as well as internal ideas, and internal and external paths to market, as they
look to advance their technology [11].

Open innovation, we can say with Joel West, is using the market rather inter-
nal hierarchies to source and commercialize innovation. Firms start with capturing
ideas from a larger group (and often from web community), using the new forms
of collaborating with external actors, creating the environment and the trust, then

managing ideas and interactions and turns ideas into innovation. In open innovation model there are also institutional ways to support the role of the network (business services, company, government), as well as bottom up channels (company, individuals, clients), and together they create an interconnected system. R&D, production, financing, creation, business incubators, marketing, consumption, enduser platform, services providers and customer care become the gears of a complex mechanism.

If we considered public policy it is clear that many measures have their roots in the closed innovation era. They shoot from a logic focused on developing large national or regional markets, defending local firms, restricting foreign workers and students, and subsiding large local firms to keep them innovating. If we consider open innovation approach policy have to change into a strong support to knowledge diffusion: government have to facilitate mobility of workforce and the educational system must systematically create highly qualified labor and new intellectual property norms.

5 Changing Actors in a Changing System

In order to explain the relationship between social and open innovation and the Helix system, we need to focus directly on the dynamic relationships that underlie contemporary innovation systems. Not enough of the traditional dyadic relationships, impromptu and extemporized, between an individual researcher and an individual entrepreneur, or even formal agreements university-government, government-enterprises, universities and enterprises. Today the paradigm of innovation demands joint learning between the three actors in the chain: the activism of a pivot organization is important, but the structural nature of innovation processes assumed synergies and strategic shifts, changes and adjustments for each other. More than specific knowledge, distinguishing the individual actors, it is central the potential collective and place-based knowledge.

In that sense it becomes very important to focus on the players of the fourth helix: the end users, public production, smart cities consumers-citizens who actively participate on the innovation process.

Until a few decades ago, the world of production was describable by actors and roles defined. Economic sociology had its certainties, its patterns. A complex frame inhabited by recognizable subjects: the entrepreneurs, the workers, the employees, the managers, the supervisors, etc. The relationship between public and private was complex, but with recognizable and often governed boundaries.

Economic production was always been a private matter, in private place, often fenced, sometimes secret, mostly closed (cf. [3]).

In 1990s, but its possible to recognize also earlier warning signs, technological innovations and diversification of capitalisms, led to radical changes. From the birth of the Web, in particular, it was possible to put into practice, many desires of the hacker culture, as well as theorization of Prosumer Movement according to "The third wave" of Alvin Toffler.

The collaborative production was possible to a few, but become a reality. In last decade this process was stepped up and economical, and sociological literature coined terms as "co-production" and "co-creation" [23], "the public productive" [3], "societing" [4], "wikinomics" [35], etc.

On its turn, the *digitalization or the democratization of production* not only allowed automatization of existing manufacturing techniques but also brought in life new manufacturing processes such as the additive manufacturing process, well known as 3d printing, F/OSS systems, Wiki platforms and so on. In his seminal 2006 work 'The Wealth of Networks', Yochai Benkler presents a new era in the production of information, the 'networked information economy', facilitating action by decentralized individual users, and in particular 'commons-based peer production' initiatives which provided a feasible, nonproprietary alternative to information production by corporate (or State) entities. Important and revolutionary features of this new kind of production compared to previous forms were the non-hierarchical decentralized organization of the initiatives, their 'non-market' nature i.e. the fact that production took place altruistically and communally without remuneration or proprietary rights for participants and the fact that the information produced could be disseminated worldwide for very little cost.

There is no doubt that some of these systems are contributing to the development of the sharing economy or even of the gift economy, (we talked about it in [2]) but it is necessary to avoid falling in naive optimism. Recent history of New Economy and ICT Giants as Amazon, Apple and Google show how crowd collaboration can be exploited to make profits.

It is useful to recall here that the possibilities of web platforms, and in particular the activation of collaborative processes of participation and co production, are the result of changes, which occurred in the post Fordism. Commenting on the literature on the end of the standard enterprise and mass production, Gary B. Herrigel in 2000 argued that the various forms of vertical disintegration, the flexible specialization, the production of diversified quality, systematic rationalization, were waiting for a new model of practice. Actually it was not a unique model, but rather a set of places and platforms habitable in the Web.

The fragmentation of mass markets had taken place for years. The so-called Original Equipment Manufacturers (OEM) began to realize more and more customized goods [1] to meet in increasingly sophisticated consumers [9], but the personalized production need new technologies. Global markets open up new opportunities, but at the same time, new risks and difficulties to understand the needs of customers. OEMs are under increasing pressure to a strong outsourcing not only to control costs, but also to a request for specialization which fail to support.[1]

The post-Fordism had shown that it was increasingly difficult and expensive to predict and anticipate consumer tastes.

Consumer trends and modalities of the individualistic consumer stressed enterprises facing a situation of increasing complexity: not only is there more of a

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[1] There is a vast literature on this phenomenon: see for example Sako and Helper [33].

consumer-typology to which standardize the production, but the same segmentation appears more difficult. As a result, the similarities between consumers being increasingly temporary and not affecting the totality of the individual's behavior but just specific consumption activities: firms therefore, instead of focusing on the product or consumers are increasingly brought to prioritize the criteria that guide, from time to time, consumers' choices.

Consumers are becoming more eclectic, they make contradictory choices, they move away from old hierarchical prestige symbols by goods acquisition. At the same time they are enchanting [32] by an hypertrophic development of the possibility to choose so many goods on the market, which increases both the variety and the renewal rate and also the growth of communicative and expressive factors of the products. Markets, in that sense, are no longer defined by a set of products that perform the same use function, but by everything that can compete symbolically to satisfy its intangible needs.

Firms are enchanted as their consumers; they are disoriented in a cloud of outsourcing and in a sea of no longer understood consumers. In this climate of uncertainty, companies have started to change their strategies. They began to open up, to look for new ways to interact with suppliers, consumers, consultants, other firms, etc. The new production framework has profoundly converted industrial relations up to risemantization of the notion of competition.

The meaning of competition—from the Latin *cum-pete*—do not in fact refer to a kind of natural selection that rewards the strongest at the expense of others, but rather to the ability to converge towards a common goal while moving from different starting points. If this is the goal that drives cross-cutting subjects of the production of social value through business initiative, the principle of co-ordination that is shown most effective is that of cooperation.

According to Richard Sennett [34] cooperate is very different from simple collaboration: in the first case, in addition to the objectives, it has to be shared also the means and the goals of the action. Networks of relationships increase their importance not only for connection among people and organizations, but through a variety of methods and forms of regulation. Relational systems are not only the output, the result of initiatives that aim to increase the level of coordination, but the input to create complex and more effective systems, in order to generate social value. A value that, to be true, it needs to be shared and so you need to rest on a network able to give voice to the needs and attract resources and availability of a wide area.

A parallel process intervened in the domain of public participation to public choices. For a long period the representative democracy and its decision making process was based on three pillars: the public institution, to which people delegated decisional power by means of the electoral competition; the experts (or the technicians-bureaucrats), whose power was due to scientific or organizational knowledge and, finally, the representatives of the main social economic people's interests, i.e. social or economic organizations (e.g. Trade Unions). For a long time, these three kind of actors represented citizens enough to discourage the direct commitment in decision making processes, according also to the *free rider* Olson's model. But in the last decades, and particularly thanks to the mobilizing

power of ICT, people asked for a direct participation to public choices, especially to the micro or meso level ones. The evolution of ICT interacts with the raising of an "adulthood of citizens" [13] and allows forms of direct and real time involvement of citizens that both integrate or (try to) substitute the "traditional" forms of democratic decision making.

An Italian scholar [25], points out that the social production of knowledge is maximized when you add to the enhancement of knowledge (tacit or explicit) the creation OD organizational structures that allow relationships and cooperation among social actors.

There notations paving the way to further developments, detected by contemporary scholars, that we will find in Living Labs in the next section. The connection between processes of development of individual skills (micro level), and the creation of meso structures where skills can grow with continuity and stability lead to the territorialization of the triple or Quadruple helix. In Smart Cities this is a key phenomenon: what are optimum conditions for innovation? What are the essential networks and nodes for Smart Cities?

Socialization and cultural guide to innovation become crucial: a highly socialized innovation means an innovation perceived and experienced as a collective target priority and a vibrant part of the society (organized actors and individuals). The socialization process, in that sense, transforms innovations, from technical issue into a widespread social action object, while the political and cultural leadership refers to all regulations, policies and initiatives of different institutional levels (International, European, national and local) in order to the same, clear and sharing elements that come into play in the innovation process [25].

For some author [15], the key elements of orchestration are quality of Research, socialization of innovation and governance, while others [14] say that are knowledge mobility, innovation appropriability and network stability. Relations among the player are characterized, necessarily, by *coopetition*, combining competition and cooperation in the value net [28] which is represented as a diamond shape, with four defined player designations at the corners: customers, suppliers, competitors and *complementors*. E.G. Carayannis insists on *coopetition:* already in 1999, in an article written with Jeffrey Alexander, put the attention to the relationships linking the firm to its environment at the market, political and ecosystems levels. The introduction of the ecosystem level, that Carayannis proposes in a number of works, paves the way to the direct intervention of end user in innovation processes, that is one of the key features of Living Labs.

6 The Living Labs

A Living Lab, according to a EC [20, p. 7] document, is "a user driven open innovation ecosystem based on business-citizens-government partnership which enables users to take active part in the research, development and innovation process" or "a user driven, open innovation environment in real-life settings in which

users test and experiment new products or services, in a framework integrating companies, people, research and innovation actors and public sector (the so called Public-Private-People Partnership, PPPP)." Recently also Wikipedia proposes a similar definition: "A living lab is a user-centred, open-innovation ecosystem, often operating in a territorial context (e.g. city, agglomeration, region), integrating concurrent research and innovation processes a public-private-people partnership. The concept is based on a systematic user co-creation approach integrating research and innovation processes. These are integrated through the co-creation, exploration, experimentation and evaluation of innovative ideas, scenarios, concepts and related technological artifacts in real life use cases. Such use cases involve user communities, not only as observed subjects but also as a source of creation."

The concept of Living Labs was born in Boston, where professor William Mitchell was used to observe the living patterns of users in smart homes. The idea was to involving city dwellers more actively in urban planning and city design [26], but suddenly Living Lab was traduced in Europe in wider use to "Enhance innovation, inclusion, usefulness and usability of ICT and its application in society" [18].

The main and more innovative dimensions of a LL are:

(a) The first one is for sure the involvement of end users at the early stages of innovation process. This involvement, however, has different motivations which co-exist in different types of LL submitting different logic. These motivations can be arranged along a continuum, which has at one end a "corporate oriented", in which the early involvement of end users ensures a better compliance of the products to the need of the consumer, reducing time from conception to commercialization: this means a better competitiveness of enterprises. At the other extreme the "need oriented", that is the attempt of putting before the need and the problems instead of solutions and products.

In this case the role of end users is not only limited to an active part in a process driven by firms (or research institutions), but is a guiding role, allowed (we think) by the public governance (and sometimes by public funding) of the Living Lab. Is matter of fact that the first experiences of LLs derives from "enlighten" firms or research centers, that opened their doors to end users, but during their evolution LLs recognized to end users a role of growing importance. Some Authors underline that the methodology and the methods used to build and to conduct the Living Lab play an important role in its future and that the concept design phase is crucial for its success [5, p. 1]. The crucial role of end user is obtained if "we can shift the perspective from problems to opportunities and from requirements to needs" (Ibid.); in this way, from the point of view of users, we have the best insurance that their needs will be put on the center (and on the beginning) of the innovation process and, from the point of view of firms, they'll be sure about the success of the products that will derive from the LL. So empowerment of citizens walk hand in hand with competitiveness of economic sector and an "user driven innovation" will really took place.

(b) Open and social innovation. Living Labs has the function of open innovation intermediaries that aims to provide structure and governance to user involvement. In this sense, Living Lab is home of user contribution, identifying and codifying tacit and practice based knowledge and diffusing into ad hoc innovation network. Living Lab is also a place of social innovation, because it is a real life environment, where is possible to generate new socially negotiated meanings for products and services. If we consider the methodological point of view, the "social" aspect of the innovation process derives not only by the end user's involvement, but also from the "social" character of the process by which a Living Lab works: real or virtual meetings, direct involvement of end users in ideation phase, use of methodologies that can maximize the participation and the interaction (also with other actors, not only end users, but also public, experts, researchers and social representatives). From the substantial point of view, first of all innovative can be the process or the product and the "social" aspect derives from the shared benefits in a bigger community; this is also linked to the main area in which LLs usually works: although quite every matter can be the subject of a LL, a great part of its refers to [20] e-Wellbeing, e-Services in Rural or Developing Areas, e-Democracy and e-Governance, ICT for Energy Efficiency. Also in the Ligurian case of Alcotra the concerned sectors are closely linked to primary needs of citizens (health, energy, mobility). Social innovation is in our opinion closely linked also to the principle of co-creation, that means that all stakeholders must cooperate to the final outcome of the Living Lab and that cooperative way of work are a key feature of a Living Lab.

(c) The (public) governance of the Living Lab. This aspect is not usually quoted, because Living labs can also arise "from the scratch", or thanks to the solicitation of firms or research centers (less probably, by end users' associations). Anyway, we think that a minimum set of rules warrantied by a public body are necessary to give to the participants the starting trust to share knowledge (and to devote time) with other people and to commit in a common effort for common objectives. There is no doubt that in contemporary society there is an increasingly availability to cooperate and collaborate, in particular through new technologies. Phenomenon as Wikipedia, but also open source communities, crowdfunding, peer to peer networks and so on demonstrate [2] that people tend to participate to imagined community sharing knowledge and intelligence: a new and old way to exchange and build relationships. In case of Living Lab the aim is not giving economy but competitiveness: it is very likely and desirable that LL products provide profits to firms and development for territories. The presence of local public organizations should ensure that LL innovation stimulates both companies and research system putting at the center social needs. Local government support the idea that "needs are opportunities waiting to be exploited" [5: 3] albeit in a logic of competitiveness. Public institution, as we see in Alcotra Innovation experience, is an irreplaceable actor because of ensuring costs and organizations of the startup phase of LL with a methodological and monitoring and evaluation system that is

functional to the inclusion of all primary and secondary stakeholders. For a good governance is required an ICT infrastructure, that allows shared participation, immediate feedback, direct democracy in the governance. ICT infrastructure is closely linked to the governance of the LL. Although public governance is an important requirement, a LL works well if it's spontaneous and if all stakeholders play a role in decision making process and cooperate (as suggested above) to final results. So LL must be democratic and participative, not only to be coherent with its philosophy, but also to give room to all competencies and availabilities.

(d) A real life setting and the goal to produce new goods or services, or to improve in an innovative way actual good or services of public interest. This means that a LL is not an arena in which people only debates new ideas, but an ecosystem in which innovation take place and produce something of new and useful for people, firms and the involved communities. Of course in some case the real life experimentation will be most important than in other cases, in which crowdsourcing of ideas will be privileged, but in any case something of new and useful must be the outcome of LLs. This must be also an important part of evaluation, that can't be limited to the process, but must include results and impacts. The way in which profit oriented actors and socially oriented actors can cooperate is linked also to the way in which each of them can have a gain, because a LL must be a win–win game to be seriously played.

7 Alcotra Innovation Living Lab

The Alcotra Innovation strategic project, funded by the Alcotra Italy–France 2007–2013 territorial cross-border cooperation program, had as partners Rhône-Alpes and Provence-Alpes-Cote d'Azur Regions, in France, and those of Piedmont (acting as Coordinator), Liguria and Aosta Valley, in Italy, as well as the Province of Turin. The project, launched in September 2010 and lasting for 3 years, aimed at experimentally introducing the Living Lab approach into the respective innovation policies and practices, according to a transnational perspective, namely through the building up and operation of cross-border Living Labs in the five participant regions. It was therefore quite natural for the Alcotra Innovation partners during the project design phase (in the year 2009), to be attracted by the potential contribution of the Living Lab approach to existing, and upcoming, regional innovation policies and practices. There was already evidence in that sense in the three Regions: Piedmont—being a member of the ENoLL (European Network of Living Labs) since 2008—PACA—with the success story of "PACALabs", one of the earliest examples of user driven and territorially oriented innovation policy promoted by the public hand—and Rhône-Alpes with 7 Living Labs (most of them created in 2009) is particularly active in the domain of media, design and uses innovation. However, a new perception was emerging that the full potential of Living Labs for innovation policy should be grasped in the

broader framework of the Alps-Mediterranean EuroRegion—including Liguria, Piedmont, Provence-Alpes-Côte d'Azur, Rhône-Alpes and Aosta Valley—rather than at single regional level. Therefore, the cross-border dimension was added to the picture.

Four thematic domains were selected for the purpose of Living Lab experimentation, namely:

- Intelligent Mobility, coordinated by Piedmont Region and Liguria Region;
- Smart Energies, alternative sources of power and energy efficiency, coordinated by Aosta Valley Region;
- e-Health, coordinated by PACA Region;
- Creative Industries, coordinated by Rhône-Alpes Region.

In a first phase of the project, each Region organized local workshops with the purpose of raising awareness of the Quadruple Helix stakeholders on the Alcotra Innovation objectives, the cross-border Living Lab's idea and its possible advantages compared to other approaches. With the main exception of PACA Region, where the PACALabs Initiative had been in place since 2008, most regional stakeholders did not know much about user driven open innovation and therefore had to learn about previous successful experiences. In a second phase, having formed the cross-border working groups, which were animated and facilitated by both thematic and methodology experts, participants started to become familiar with the concept and to think about the design of possible pilot actions involving the Living Labs' operational principles in a meaningful and useful way.

The experimentation of Intelligent Mobility was characterized by several starting meetings with interactive methodologies in online and offline contest. The aim of the groups was to develop innovative solutions for tourists and open air travellers and the output of the laboratory was the prototype of an application for mobile device with two different interface. The Living Lab Creative Industries has used a mixed user centered methodology: the aim was create and test innovative solution in museum fruition. After several cross border workshops participants decided to develop two experiments, one in Rhone-Alpes and one in Piedmont, during which artists, software developers, designers, contractors, visitors and museum curators, worked together to prototype interactive museum design. Participants were immersed in the context of the museum: the laboratory where ideas were born, tested, changed, imagined and co created in augmented reality.

8 Conclusions

The experience of cross-border Living Lab Alcotra Innovation show both the potential of this model of open innovation and the need/opportunity to adjust it into local context or in specific issue.

In none of Alcotra Living Lab there is a leadership role of companies, important and articulated are the role of end users, while public institutions were

protagonist. Public institutions has in fact some features that, especially in a cross border dimension, can hardly encompassed:

(a) they establish the basic rules of the game, and solve the functions of trust intermediaries;
(b) they tied most important social need with priority for action planning or regional and transnational programming;
(c) cross border dimension show opportunity and difficulties of coopetition among territories. In particular in touristic field, cross border show how territories are complementary but at the same time, they are in a strong competition. Public institutions, in that case, have to select policies to maximize synergies and minimize replacement effects;
(d) they provide some basic services (animation, sharing platform, administration and payment of pocket costs as travel, hospitality etc.),
(e) they are able to steer, especially in the field of public services, both the demand and the offer. This it was evident in e-health, but in tourism and info mobility too.

It was found in all experiment the role of public institution especially at the end of the project, when the need to results perpetuation, found companies and end user associations unable to build a business plan containing living lab costs. The weak point might be considered that an excess of public intervention could alleviate overly the entrepreneurial component of Living Lab. In a Schumpeterian way we can say that innovation arises out of new combinations of existing capabilities and openness is crucial: the famous NIH (Not Invented Here) syndrome is always around the corner, especially in public institutions. Smart Cities need a profound change: from NIH to TFE (Thankfully Founded Elsewhere): it means not reinvent hot water again, but to "use" what has already been invented elsewhere, restarting from there to some new frontiers.

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