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INTRODUCING DESIGN THINKING IN SOCIAL INNOVATION AND IN THE PUBLIC SECTOR:

A design based learning framework

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KEY WORDS

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ABSTRACT

Design Thinking (DT) is becoming a mantra in the different areas of innovation: including SI and public sector (Manzini and Rizzo, 2011; Deserti and Rizzo, 2015). Despite its large success DT is still applied in peripheral areas of public sector and SI where it is used as a methodology to conduct small scale experiments often supported by national and EU funds. This article focus on the interaction between DT, public sector innovation and SI from a twofold perspective: as an emergent trajectory of innovation in public sector; and as a framework on which to design processes of change in public organisations.The first line of research deals with the issue of how to produce new services in public sector SI inspired considering constraints like budget cut and the users' expectations for high quality of delivery and interactions; the second one is putting attention on how to support capacity building in public sector in order to develop new competences to deal with innovation. The paper then reports a case conducted in the Municipality of Turin during which DT has been introduced as a design based learning framework to support employees to develop new competences by taking part in a service design project.

1. Background and aim

The economic, demographic, social, and environmental long-term challenges are calling for deep changes, questioning many of the assumptions that have underpinned public services and posing new challenges for institutions, policy makers, civil servants, and communities.

While austerity measures have been adopted all over the world, innovative social solutions based on the active involvement and engagement of citizens emerge as a new paradigm, questioning the established welfare systems, providing alternative solutions but at the same time raising quite a few unsolved problems.

The search for more effective, appropriate and user-friendly public services arises from this framework, and is forcing public bodies to find ways of engaging citizens, together with diverse stakeholders, in a co-creation strategy.

The emergence of the "co" paradigm is radically changing the relationship between public services and citizens, in the sense that different stakeholders and, critically, citizens should be involved in innovating and sometimes producing services. This calls for a new approach, widely based on co-design methodologies and competences. In this scenario, DT (Brown, 2009) is being interpreted as a means to generate innovative solutions, reshape services and change the ways in which they are conceived and delivered: but as it is far from their established culture, many public organizations are striving to introduce it (OECD, 2015).

The rise of service design agencies operating in the public sector, and of other design agencies introducing the public sector in their offering, is testament to the continuous rise in demand of these specific competences.

DT is indeed trying to demonstrate its potential in the public sector, and a few cases in which service design competences have been explicitly applied in the public sector already exist. Looking at these cases, we can say that service designers are primarily involved in the implementation of a new generation of collaborative services (Baek, Manzini, Rizzo, 2012) coproduced by complex networks of actors, including end users.

This new wave of services is giving a relevant contribution to the construction of a middle ground where new players are entering the space traditionally occupied by the public administration, while in turn the public administration is struggling to transform itself opening up to unprecedented forms of collaboration with citizens and external actors and stakeholders. This middle ground is an opportunity to connect social and public sector innovation: two fields that until now were analysed as separate phenomena.

This paper introduces a discussion on the relation between service design, social innovation and the transformation of the public sector (Deserti and Rizzo, 2015), and investigates how DT and participatory design methodologies can be applied to social and public sector innovation linking social innovation and DT to the larger debate on public sector transformation, starting from two assumptions: i) the most relevant actor that may be significantly transformed through and during the design process is the organisation that leads the process itself; 2) the design process can be conceived as a learning process, as people and organisations learn how to deal with innovation by taking parts in design (better: co-design) experiments.

In particular, the paper produces case based evidences on how design can be used as model for implementing learning-by-doing processes, based on prototypes and small-scale experiments (Manzini & Rizzo, 2011). Service design projects can be vehicles for the introduction, in public sector, of a new service culture to give shape to a new wave of collaborative services (social innovation inspired).

In the following the authors present the design based learning framework developed on extensive research and previous publications carried out during the recent years, in EU-funded projects related to social innovation (SIMPACT, SIC) and to the introduction of service design processes in municipalities and public organisations (Life 2.0, Periphéria, MyNeighbourhood, Smart Campus).

They then discuss the application of the learning framework on a real case study conducted in the Municipality of Turin where it has been applied to lead a small scale experiment of innovation within the context of the city social services. The experiment, developed under the SIC project (Social Innovation Community, Horizon 2020) shows how the introduction of DT may provoke and trigger changes in the perspective from where services are designed and delivered but also new organisation challenges such as: resistance to chance towards the development of the "co" innovation paradigm, shifts in the power distribution, needs to innovate the internal competences, needs to change internal and external rules.

2. Design Thinking evolution

Initially meant to introduce research on design and new product development processes, DT is now considered a widespread approach to innovation and to the study and solution of wicked problems, progressively introduced in other domains of research and practice, and mainly in those where the integration of abductive and inductive thinking is expected.

The first notable appearance of the term DT, bound to the idea that design research could and should become an independent area of study, was in Bruce Archer's statement "there exists a designerly way of thinking and communicating that is both different from scientific and scholarly ways of thinking and communicating, and as powerful as scientific and scholarly methods of enquiry when applied to its own kinds of problems" (Archer, 1979). Starting from Archer's idea and from Lawson's research on the mental process that architects undertake in solving problems, Rowe (1987) popularised the term by indicating the different ways in which designers face design situations. From then on, DT became an increasingly relevant topic in design research. By using theories, methods and tools from disciplines such as psychology, cognitive sciences, anthropology and education, research on DT worked to elicit and model designers' thought processes and cognitive style, their tools for application, the composition of the design team and the interaction among its components and the procedures and the processes that designers activate (Lawson, 1980).

Traditionally, this field of research was based on the premise of analysing designers and design practice to understand the "designerly" ways of problem finding, setting and solving by observing the ways they approach the design of different artefacts (Cross, 1982). According to the most relevant studies, in their approach designers make use of empathic skills, envisioning capabilities, divergent idea generation, visualisation tools, synthesising and prototyping, just to mention some of the skills and tools generally associated with designers and their cognitive style. DT can tackle ill-defined or indeterminate problems (Buchanan, 1992) with a solution-oriented attitude, transforming ideas into new solutions (Buchanan and Margolin, 1995).

The idea that DT can be focused not only on products but also on intangible artefacts such as signs, interactions, processes, and services represented the first important expansion of the concept. Near the end of the 2000s, it can be registred a considerable expansion of its scope, particularly the idea that DT can be applied to ill-defined and complex problems.

DT and culture has received many definitions in literature in the last decade (Brown, 2009; Julier, 2008). The notion here embraced is the one that pushes on the front the capability of design to work from a context dependent point of view together with the design attitude to scale solutions through experimentations (Deserti and Rizzo, 2014).

On the specific relationship between Social Innovation and DT only recently SI has been recognised as a product, a service a process that can be designed in order to produce solutions that can be more stable and robust in the market from its beginning (Mulgan, 2007). In this scenario, DT (Brown, 2009) is being interpreted as a mean to generate innovative solutions, to reshape services and to change the ways in which they are conceived and delivered.

In this perspective DT appears the most suitable approach to SI design because of two main reasons:

1. it conceive the process of innovation development to proceeds on the co-design activities that, adopted in the development of new solutions, can be seen as systems enabling scaling up processes;
2. if implemented throughout design-experimenting and redesign phases, it can foster the valuable triple loop learning so valuable when referring to innovation and complex organizations.

When DT applies to societal challenges it assumes the practices of complex participatory processes involving a large number of actors and stakeholders in a frame of tensions or open conflicts. Complex participatory processes go beyond the established principle of designing for context dependent problems, extending the idea of participation to include: 1) the relation between the context of the problem to be addressed and the design of the network that will co-produce the solution; 2) the experimentations of different configurations of that network until when a robust partnership is individualised and established in some institutional form.

Many projects are particularly evidences of this new kind of design practices (Manzini Rizzo: 2012), they exemplify a new development on the relation between design and societal challenges: design is definitively moving toward the design of complex systems gaining a stand as a discipline that can impact on society and on the real quality of life of people as a culture of innovation that transforms contexts.

3. The emerging paradigm of “co” in social and public sector innovation

While social and public sector innovation were analysed as separate fields of study and practice, in our perspective a clear link between them is emerging and becoming ever more clear. This connection is bound not only to the fact that we are discussing about innovation and transformative processes, but also (and primarily) to the fact that co-creation - the emerging paradigm of public sector innovation - runs through the involvement of citizens, communities and actors in a fashion that is mostly similar to the mechanisms in place in the field of social innovation.

The nexus between social and public sector innovation is thus methodological (the social innovation approach, or else participatory design methods and tools, as a lever to transform the PA), but at the same time content-wise, because the territory in which social innovation operates overlaps with that traditionally occupied by the welfare state and the provision of public services. In fact, social innovation is often presented in its reactive aspects, as the capacity of people and third sector organisations to self-organise in response to market and state failures. This means that the

knowledge and the experience built in the field of social innovation can be extremely useful to support the transformative processes that are now affecting the PA. In other words, social innovation can be seen not only as a way to transform public services themselves, but also of the ways in which they are conceived and delivered, supporting or even fostering the change of the PA. The engagement of citizens and of a complex system of actors and stakeholders in conceiving and establishing innovative services responding to the actual needs of citizens - a key characteristic of social innovation – is at the core of the possibility to introduce in the PA methods and tools already experimented in the field of social innovation.

After its forced, and largely disastrous, managerialisation, the PA is struggling to find new and sustainable ways of solving what seems an unsolvable puzzle: increased efficiency, reduced expenditure, citizen-centricity and the provision of better services are supposed to be achieved all together. The search for more effective, appropriate and user-friendly public service design, delivery and policy-making is thus forcing public bodies to find ways of engaging citizens - together with a vast array of actors and stakeholder - in co-design and co-creation strategies and actions. As this attitude is fairly far from their established culture, many public organizations are striving to introduce DT and participatory design methodologies.

This emerging trend, responding to the diffused need to combine conflicting goals such as empathy, efficiency and cost-effectiveness, is calling for a relevant transformation of the same public organisations (involving the above-mentioned array of external actors), affecting both their operative and strategic levels. The more the new practices are new to them, the more the change of the organisations should be relevant, questioning not only on the practices themselves, but also the ways in which they can be introduced and embedded within a complex system that is often not ready to receive them.

Nonetheless, there seems to be a widespread idea that the introduction of the DT methodologies - due to their "positive" attitude - will work per se, without the need of setting up clear pathways to embed them in the hosting organisations or systems.

In our view, this is leading (or threatening to lead) to a sort of "soft rejection": apparently the new approaches and practices are being introduced, while in reality they are being confined to marginal areas. Up to now, the space left to social innovation and participatory design practices is primarily bound to peripheral services that look like the icing of the cake if we consider the big body of the public services (healthcare, transportation, work, housing, education etc.), or to long standing and wicked problems that public organisations are not so willing to deal with (poverty, migration etc.), or else fields where they are more than happy to discharge problems to the third sector or to other external actors. Most attempts to open up the PA and to introduce participatory design practices are thus affecting public organisations only at the superficial level, while at deeper levels the established cultures, mindsets, habits and practices are still dominant.

In this framework, we must observe that a consistent body of literature has raised strong arguments to explain that one of the main agents of change for organisations that want to deal with innovation is their absorptive capacity (Cohen and Levinthal, 1990). To make it simple, innovation calls for transformation which, in turn, calls for knowledge creation and learning.

successful learning organisations are primarily those that are capable of introducing mechanisms of reflective learning and learning by doing (Kolb, 1984; Sange, 1990).

We thus hypothesise that the introduction of DT in any organisation, and specifically in new contexts such as the third and the public sector, should be based on its practice, or else in a learning-by-doing framework that can be complemented with reflection to achieve a sustainable transformation. This is not only in line with generic organisational learning principles, but also with the construction of design knowledge and culture, which is historically bound to practice. In such a context, the role of experimentation, a core ingredient of the design disciplines, can be regarded as key to knowledge creation and appropriation. Design experiments can then be seen not only as part of the design process, typically meant to test solutions and improve them in an interactive way within a trial-and-error framework, but also as boundary objects (Wegner, 1998) that may serve as learning experiences (Beckman & Barry, 2007). Therefore, the experimentation loop can be interpreted as a key element for the introduction of DT methodologies and tools within organisations.

On the other hand - if we want to be realistic and not just relying on an over-enthusiastic approach – we must be aware that any attempt to transform public bodies must take into account that public sector innovation is severely limited by an array of barriers.

The report of the EU Commission expert group on public sector innovation *Powering European Public Sector Innovation: Towards a New Architecture* (2013) individualises the following key barriers:

- Scattered competences and ineffective innovation governance mechanisms, which make policy learning and the diffusion of innovative practices difficult. This is aggravated by the diversity of legal and administrative cultures, which result in regulatory frameworks that often hinder innovation.
- Unfavourable conditions for organisational learning and institutional innovation (including human resources laws, regulations and practices), which limit flexibility, diversity, mobility, and creativity;
- Lack of incentives to create and implement new ideas.

In our perspective, the focus on DT and the claim for an outside-in transformation come into play as reactions to self-referential and closed bureaucratic systems. Nevertheless, they might raise resistance to change, prevent internal participation, and above all hinder a reflection on how public organisations can internalise and integrate the new knowledge, and how their transformation can be fostered or managed. This omission could easily lead to reject innovative practices, or confine them to a cosmetic or marginal role, as it is already happening.

Even though there is evidence of an increased rate of experimentation within the public sector (Bouwman & Grimmelikhuijsen, 2016), there is still a lot to do: understanding under which conditions and how organisational environments authorising innovation in practice can be built emerges as one of the most relevant challenges to be tackled to pave the way for a sustainable and autonomous transformation of European public administrations.

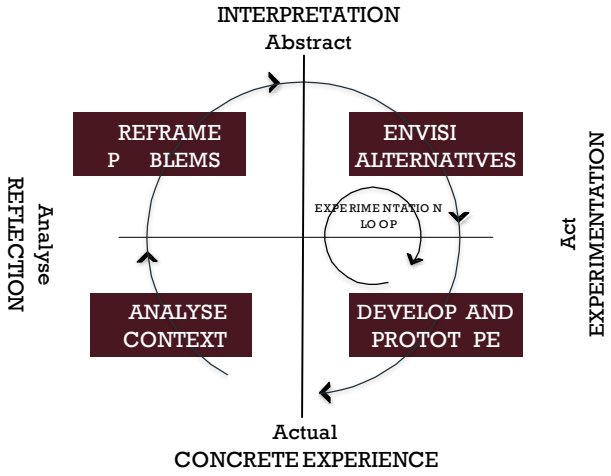
4. Combining design experimentation and learning: a framework for the introduction of DT in social and public sector innovation

At the core of this paper resides the idea that innovation, organisational change and learning are tightly interwoven, and that the introduction of DT as a means to sustain social and public sector innovation can (and should) be integrated with an experiential learning framework. This arrangement gives way to the possibility of engaging internal and external knowledge and resources, establishing a positive transformative environment for both third sector organisations and the PA, based on the external interaction among diverse actors and levels of governance, and the internal interaction among functions/divisions. Innovation projects, typically taking the form of small-scale experiments dealing with the development of new services or with the redesign of the existing ones, are at the core of the experiential learning process, and should thus be interpreted not only - which is their first objective - as ways of giving shape to innovative services better responding to pressing societal challenges, but also as ways of triggering and supporting an interactive and reflective transformation.

We thus propose to combine advanced new service development processes (design experiments) with a learning framework, using this combination to both analyse established and ongoing experiments (to draw insights and provide guidance), and to set up a learning environment (to provide a knowledge-creation space) in which to make possible for a range of diverse PAs and actors operating in the field of social innovation to experiment and find situated and tailored ways of integrating the new approaches and practices.

In particular, we propose an experimentation/learning cycle, based on Kolb's experiential learning framework (Kolb, 1984) representing at the same time the core structure of a participatory design processes (which can be complemented with appropriate tools and applied to the co-creation of new services) and of an organisational learning process (which can be complemented with appropriate structures and actions and applied to the introduction and integration of new knowledge). If we interpret the organisation not only as a closed structure, typically represented by a core actor (a municipality, an hospital, a public transportation service provider etc.), but also as a network of actors concurring to the co-design and co-production of the services, the learning process must be regarded as extended to the whole network, and functioning through to the afore-mentioned interactions.

Fig.1. The design based learning framework map the DT cycle with the Kolb's model (1984) of reflective learning



The scheme in Fig 1 represents the framework (Rizzo, Deserti & Pous, 2017) that combines experimenting and learning. It integrates the DT methodology (Brown, 2009), in the form of an iterative design process, with Kolb's (1984) model of experiential learning: it is based on the idea that design processes can be exploited to set up and pilot experiential learning within organisations. The iterative nature of the design process - based on loops of understanding-designing-and redesigning until when the faced problem is addressed - is complemented with the situated nature of experiential learning, giving way to a "4A" model that starts from the concrete experience of the current situation (Actual) and moves to the design of an experimentation (Act) by reflecting (Analyse), interpreting and envisioning diverse alternatives (Abstract). According to the DT methodology, the phase of experimentation is supported by the development of prototypes, i.e. design artefacts that represent the concrete implementation of the alternative hypotheses formulated to change the initial situation and that offer the possibility to evaluate their effectiveness, to feedback on the hypotheses and to refine the solutions.

Designing the new solutions and prototyping them in real contexts triggers mechanisms of experiential learning within the whole network of involved actors. In particular, if we look at the PA as the leading subject, the experimentation loop may provide a substantial contribution to the transformation of internal processes, knowledge and culture, which need to be changed or developed to effectively deal with the new solutions.

By designing new solutions to unmet problems and challenges, PAs can thus reflect and produce knowledge in a process of continuous learning bound to an experiential learning cycle, including trial-and-error, tolerant with respect to failure (at the micro-scale) as a structural feature of the process, capable of drawing resources from the contexts in which problems arise and based on the engagement with potential users as co-designers, evaluators of the alternatives and even co-producers.

A secondary way to learn from real contexts is by observing, analysing and interpreting already existing prototypes.

Fig. 2. The experimentation/learning loop as a transformative process

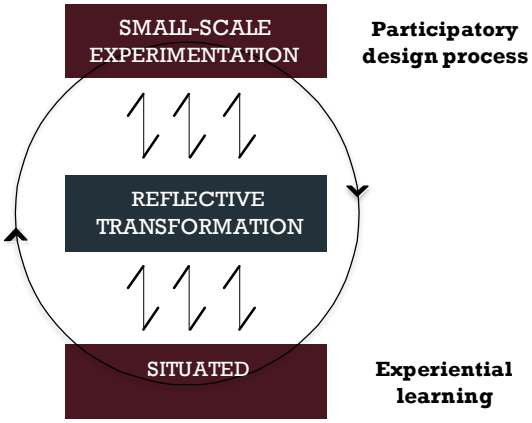


Fig. 2 suggests that PAs and other actors involved in the innovation processes can also learn from the direct observation of small-scale experimentations that already exist in real contexts (this what happens in many best practices in the domain of social innovation). In this case learning starts

from the observation of a real experimentation conducted thanks to the support of a prototype (a new policy, a process, a product, a service).

The two modalities can be combined, so that the detection of a promising prototype can be the starting point of a new process of design/learning whose aim is to replicate, adapt, adopt, improve or scale the prototype in the same or in a different context to solve similar problems. The design process started by the recognition of a good prototype is similar to the scouting of solutions in technological innovation, or to the investigation of weak signals in forecasting. Due to the high level of context-dependency that typically characterises solutions in social and public sector innovation, sheer imitation and replication are almost impossible. Adaptation then triggers a re-design loop, readdressing to the already described learning mechanisms.

Within the context of SIC project we have had the chance to conduct a design experimentation based on the framework described above.

5. Design experimentation public sector: The case of the Municipality of Turin

Turin is the third largest Italian city, situated in the north western area of the country. It is well known in the world as the hometown of FIAT automobiles.

The crisis of the automotive sector (which started in 2007/2008) for Turin (one the largest European automotive districts) produced a re-organization of the different production plants that were present on the city's territory with the decentralization of a large part of the production linked to the sector. This led to a large increase in the level of unemployment in the city and the Municipality: the issue of unemployment has quickly become the challenge of the city.

Under these premises, one of the critical issues for the Municipality is the development of internal capacities to deal with the process of continuous innovation to face these new challenges.
In 2012, a new office was set up in the municipality to join the innovation, labor and economic development division with the social services division.

This proximity has generated a flow of knowledge and a commonality of problems. The first opportunity of a real collaboration between these two divisions was represented in 2016 by the European Social Fund to be invested on social challenges through the design of new services for social inclusion.

At that time, the relationship between SIC (Social innovation Community, H2020 project, 693883) and the Turin Municipality was already established and the municipality was invited during the first SIC Summer School to present its SI policy and strategy. When the SIC experimentation activities (applying service design in five host centers to design social innovation solutions) started, the group of design researchers from the University of Bologna, responsible for the experimentation activity in Italy, decided to contact the Turin Municipality. The SIC experimentation represented for Turin an opportunity to go through a process of learning of new methodologies and tools coming from the field of service design applied to develop SI.

Internally, the municipality of Turin had never dealt with SI development or with open innovation and co-design tools and methodologies to develop them, despite the fact that the city had already experimented with a SI policy (TSI, Turin Social Innovation, to support the flourishing of a

new economy in the city). The real issue for the city, when becoming part of the SIC experimentation, was how to transfer SI knowledge and experience into everyday practices and moreover, how co-design methodologies and co-production models can enter large service providers through experimentation done in EU projects which impact civil servants who are delivering the services daily.

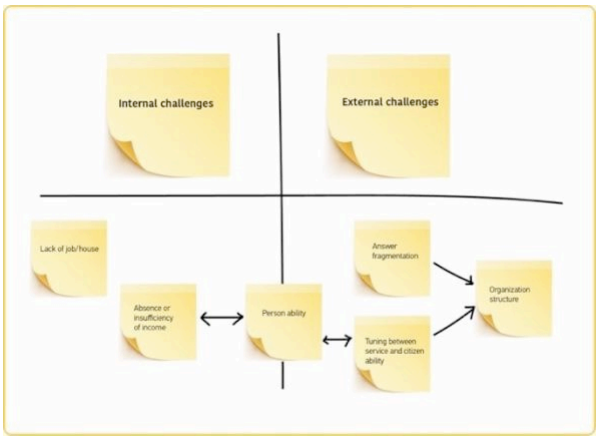
The Municipality, thanks to the support of the designers, decided to exploit this occasion to introduce service design within the social services division (one of the largest in the municipality). The division is structured in several silos, each of which dealing with different services: social housing, unemployment support, education, and support to disadvantaged families. The challenge was to design a service to support people and families at risk of losing their home (as a consequence of unemployment) by becoming economically active through a process of empowerment to employment.

The SIC experimentation allowed 12 employees from the different divisions of the Turin social services to take part in a design studio experience that was run for four months (December 2016- March 2017) by experts/researchers in service design and DT. The aim of the activity was to design a new service capable of facing the problem of how vulnerable people at risk of eviction can better meet their complex needs.

To deal with this challenge, participants were engaged in a service design process composed of different phases: (i) analysis of the problems; (ii) problem reframe; (iii) envisioning through co-design possible solutions; and (iv) prototyping/experimenting.

The first phase was organized around two workshops to support participants in analyzing the main problem and point out the underlying challenges (Fig. 3). Here service design tools such as thinking heads and SWOT analysis have been used. What came out from the analysis of the problem was the individualization of two different underlying challenges: (1) how to reach a complementary and holistic approach to services delivery by integrating all the services belonging to other areas of the municipality but that affect the quality of life of the users of the Social services area. To address this challenge, participants identified a second one linked to the current structure of the organization: (2) how to overcome internal resistance and barriers due to the current organizational structure to support and recover disadvantaged people from their problems letting them integrate in the social system of the city.

Fig. 3. The underlined challenges in the process of service design of a new offering to support vulnerable people at risk of eviction can better meet their complex needs



In the second phase participants were guided to move from the challenges individualized to the envisioning of a new perspective about what should be done in order to overcome them. In this phase employees that were taking part in the design process where supported to co-design rough concepts for the new service. The final idea was a new integrated service that would have include all the services belonging to other areas of the social services and link them to each other in order to reach a holistic and empathic approach improving the users experience in the Social Service area for the mentioned target.

The process then moved from ideation to detailed design. The third phase of the experimentation was focused on the co-design of a systemic solution.
People were guided in three different workshops through a process of designing the fundamental components of the service: the personas for the users' profile, the customers' journey for the users' experience, the system map and the blue print for the internal and external processes to be implemented by the organization that delivers the service.

The third phase of the experimentation was focused on co-designing a systemic solution to the problems the challenge posed. The co-design activity took place between February and March 2017 and has been organised around 3 workshops:

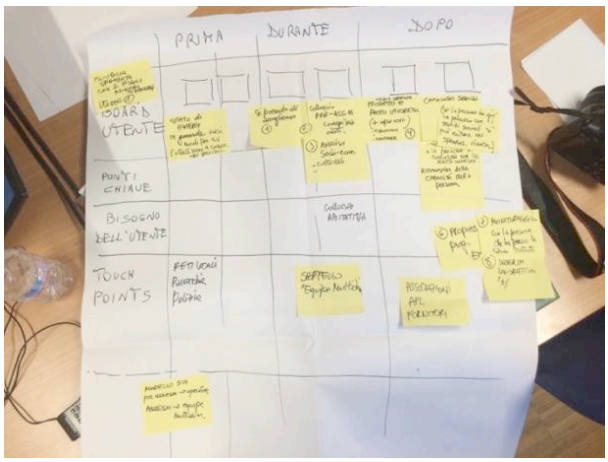
- workshop 1: personas and idea generation;
- workshop 2. From personas to the customer journey;
- workshop 3: From customer journey to the back stage of the service (blueprint and stakeholders' map).

Overall objectives of the co-design phase, as mentioned before, were the following:

- ideating a solution to solve the challenges;
- supporting the participants to learn about the basic service design tools (*Personas*, *Customer Journey*, *Stakeholders map and blue print)* as a way to improve and change their competences.

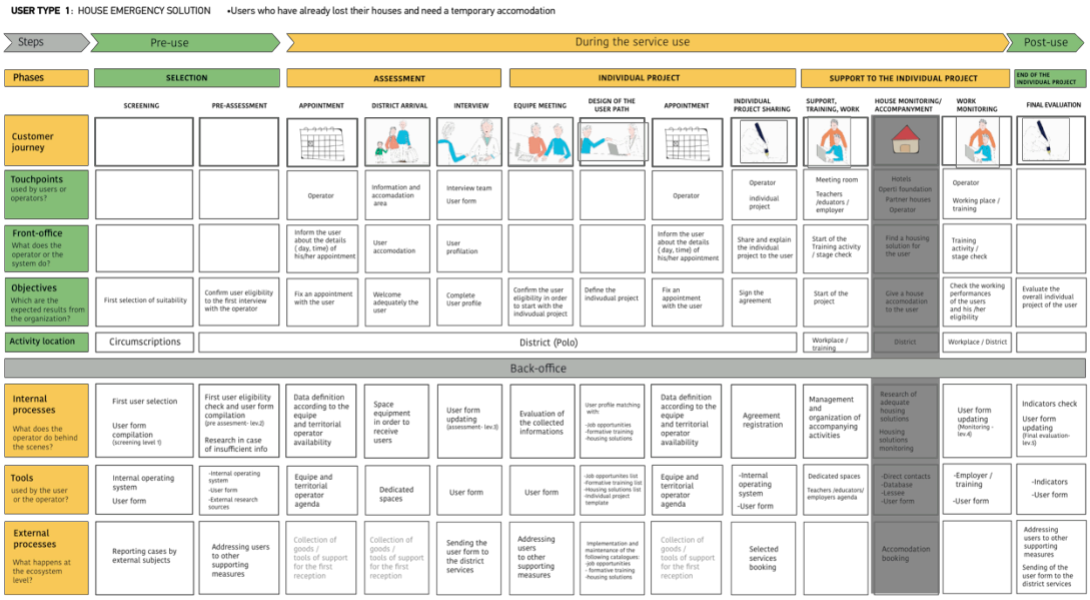
People in the workshop have been guided through a process of design of the fundamental components of any service: the personas for the users' profile, the customers' journey (Fig. 4) for the users' experience, the system map and the blue print for the internal and external processes to be implemented by the organisation that delivers the service.

Fig. 4. The customers' journey completed together with the participants in the ideation phase.



In particular, the service blueprint (Fig. 5) was completed using an iterative process that started from considering the personas, then the customer journey and the stakeholders map.

Fig. 5. The blue print of the TOHOME service



The real experimentation of the new service is currently under delivery by a network of external stakeholders that has been selected following a public procurement process based on the publication of an open bid. The governance of the service experimentation relies on a model of Public Private Partnerships where the municipality is monitoring the experiment's delivery and results and the private stakeholders network effectively implement and deliver the service. The service project developed during the SIC experimentation did not inform the design of the bid but the service and the users' experience have been externalized to the selected stakeholders network. None of the external actor that are currently involved in the design and experimentation of the service were involved in the SIC experimentation.

6. Case discussion

The case of the Municipality of Turin represents a design-based pilot to support innovation and change in the public sector which was conducted with a two-fold aim:

- to design a new specific service represented by tangible touchpoints and interactions, and more intangible experiences and processes – to be then implemented and used; and
- to introduce the culture of service design based on the principles of knowing the users and prototyping/experimenting as the culture of innovation in the public sector and their administrations.

We worked to embed a lasting and meaningful capability and skill set and tools in the municipality by exposing public sector staff members to DT methodology and tools applied to a real service design project they would have to develop; and to anticipate the moment in which

design is commissioned and embedded in public services development at the earlier research and development stage and not in the later development stage as quite often occurs in the public sector (Deserti and Rizzo, 2015).

The main issues we faced were linked to the previous practices the municipality applied to the development of new services and the municipality's internal structure and power and responsibility distribution.

First, employees had difficulties in taking the point of view of the end users as the perspective from which to analyze their current services, how they are delivered and understand current challenges they are facing. They manifested resistance and difficulties in dealing with the idea of user experiences and its design quite often relying only on the point of view of the organization.

Another problem that seemed to prevent the introduction of service design as an internal competence of the municipality was linked to the employees' difficulties in overcoming internal resistance and barriers due to the current organizational structure based on silos that do not allow work in projects and in a multidisciplinary way.

The case of the Turin municipality suggests then that quite often service design introduces new design processes that conflict with the previous ones, producing resistance to change at different organizational levels. DT when manipulates information and processes and ways of doing things within an organization it works on people's tacit and explicit knowledge basis, challenging it as obsolete and asking for an in-depth re-structuring. Knowledge re-structuring (Vosniadou and Brewer, 1987) is a long-term process that has to be managed by slowly sedimenting new practices in the most favorable internal environment the organization held and to start from there a process of learning by doing (Senge, 1990; Schein, 1999).

Another issue faced in the Turin case is the difficulty of the employees to reconnect the design of the new service with its real implementation.
In particular, during the design of the service blueprint we observed that the participants were unable to brainstorm and individualize effective solutions with respect to four main different aspects that would further affect the new service production:

- the problem of the competences of the operators that should deliver the new service;
- the problem of how to make the service evident and how to communicate it at the individualized target;
- the availability of enough houses in the city for fragile families; and
- the involvement through co-production mechanisms of the users of the services.

In the case of the experiment conducted with the Municipality of Turin, the employees in conceiving the TOHOME service only took into account organizational constraints (budgets, resources already available, staff to be able to service, service governance) and they were unable to reconnect their choices with a depletion of the quality of users' experience.

A coherent explanation of this evidence must be linked with the deliberate strategy the public sector has applied, at least in Europe, over the past 15 years, of outsourcing services implementation and delivery to intermediaries. The externalization prevented employees from Turin

municipality to use a co-design approach and to learn from their user's behavior and the data from service uses.

As the public sector has increasingly driven a deliberate strategy of outsourcing services implementation and delivery to intermediaries the employees show difficulties in reconnecting their organisation with the real service delivery. This phenomenon is taking away public sector organisations from their users and is producing a de facto separation between the moment of ideation and that of implementation that can largely affect the diffusion of design culture in public organisations.

The current procurement calls exist largely to deliver outcomes (predetermined by a public body) by a different system of actors that often has not been represented in the process of design and that often implement services on the basis of tender that ask for the best prices leaving them without a full understanding of what is required for an outcome.

7. Conclusions

A number of issues emerged over the course of the experimentation in Turin, which were seen to have wider relevance to public sector contexts across Europe. The following are the key challenges that emerged regarding the introduction of service design and social innovation methodologies in the public sector.

1. Public employees are in need of new skills through hands-on approaches.

Most of the EU public administrations run teaching activities (internal or external courses) meant to re-skill their workforces. For many reasons, these activities are ineffective (old formats, boring topics, approaches far from practical application and the core interest of the attendees, etc.). According to those who took part in the co-design workshops, and to the opinion of the head of the HR department of the Municipality, a hands-on approach (learning-by-doing in practical experimentation) emerges as a much better way of creating knowledge and skills.

2. Public policy silos need to abolished and substituted with systemic thinking and user-centred approaches.

In most established policymaking frameworks, policies are primarily designed to provide answers to specific problems. Increasingly, the field of public sector innovation is asking more of the way policy and services are formulated: dominant public sector responses have a tendency to focus on addressing the symptoms rather than the root causes of social challenges. There is value in having public sector agencies adopt a more systemic, joined-up approach to specific policy areas (e.g. labour, education, housing etc.), and seeking to understand users' needs and realities. It is in fact rare to find policy and service solutions so visionary that they understand that problems (and responses) may be integrated and interdependent, which is exactly what is happing in Turin. If we look at the problem from the perspective of citizens, it is likely that problems of housing, labour market and social integration may systemically and disproportionately affect some groups or individual. Responses are currently diverse and non-integrated, being provided through separate silos of disconnected organizational units or by a scattered system of actors operating at different levels. Also, while the policymaking process may be driven by good intentions, the actual implementation of policies may be ineffective due to cultural and knowledge gaps, a lack of capacity and a lack of readiness.

In particular, the discussion highlighted that policies and policymaking must be re-thought to assume a user-centred perspective: this means taking into account not only what different actors, sectors and measures can improve outcomes for citizens, but also how better outcomes can be achieved through partnerships and collaborations with citizens. This calls for a much stronger integration of different actors around co-creation and co-production processes and tools into the average skill set of public sector employees.

3. Synergies can be found in connecting social and public sector innovation.

Public sector experimentation, such as this ongoing example in the Turin municipality, demonstrate the complex nature of challenges facing the public sector and the need for public administrations to open up to unprecedented forms of collaboration with citizens and external actors and stakeholders. This experimentation is also proving to be a promising opportunity to connect social and public sector innovation: two fields that until now have been largely analysed as separate phenomena.

In spite of this, the value of bringing these two fields of innovation more closely together is emerging. Co-creation with citizens and others, for example, is an emerging paradigm of public sector innovation which sits squarely in the field of social innovation and builds on its values.
The "To-Home" service, resulting from the application of our methodologies, represents a promising step in this direction: the service will respond to the needs of people at risk of losing their house due to insufficient income providing a comprehensive solution, including work integration, social care and housing services, and engaging the constellation of external actors operating in the ecosystem.

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