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# Design projects as drivers for organisational change in the public sector.

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**Abstract** | The demand of a new generation of public services is leading to a systematic exploration of what design can do for public organizations. The article presents and discusses, through the analysis of two design projects conducted in the Municipality of Turin, a design-based theoretical framework for organizational change based on the conduction of long-term processes of engagement and exposition of public sector employees to the design culture. The two cases show that the growth of innovation capacity in the public sector based on service design practices must consider the necessity of coping with long-standing challenges, i.e. the innovation of/in public bodies; the peculiarities of organizational learning processes and of the absorptive capacity of the organizations; and the overall resistance to change in people and organizations.

KEYWORDS | PUBLIC SECTOR INNOVATION, CO-CREATION, ORGANIZATIONAL CULTURE, EXPERIENTIAL LEARNING, INNOVATION CAPACITY, DESIGN THINKING

# 1. Introduction

Confronted with a range of complex challenges, public administrations (PA) are faced with increasing pressure to improve their innovation capacity (Cavenago et al., 2016; Potts & Kastelle, 2010). The emergence of the "co-society" paradigm, nurtured by open innovation and digital technologies, has given way to completely new citizen behaviours (Geraud, 2016), such as mobilization for the "commons", data sharing and service sharing. Hence, the user is no longer simply a receiver or a spectator but an actor (Fluicity, 2015). This new trend is questioning both the decision-making and the implementation processes in the public sphere and is putting increasing expectations of greater citizen participation in the design and delivery of public services meant to address societal challenges that require new solutions.

As a response to these challenges, many PAs have introduced design practices as a tool, with a particular emphasis on the development of a more citizen-driven approach to innovation in order to build a better society (EU commission, 2013; Bason, 2010; Puttick et al., 2014; Tõnurist et al., 2017).

However, many barriers continue to prevent the development of an agile citizen-centric approach to innovation.

The difficulties and barriers that arise from public bodies adopting new and alternative principles like co-creation that are rooted in design and represent a more "horizontal" approach, are notably linked to their complex, vertical and often fragmented structure as well as their organizational culture.

Participatory activities for their nature contain a high potential to tackle exactly this complexity faced by governments and public institutions. Moreover, they have the capacity to include unused knowledge and ideation resources into innovation processes despite - or exactly because of - their contrasting nature, typically clashing with the existing culture and processes. On the basis of these premises, we argue that the focus on end-user/citizen's innovation skills (Bason, 2010) to address the need for an agile and citizen-centric culture in PAs poses the problem that little reflection is being made on how public organizations can internalize and integrate the new knowledge, and how the transformation process can be fostered or managed: this omission could easily lead to reject the new practices, or confine them to a cosmetic role (Deserti & Rizzo; 2015).

In this article the authors present and discuss the results obtained from a long-term programme of design projects that they are developing in the Municipality of Turin. The programme is based on the assumption that the introduction of a user centric innovation culture (Deserti & Rizzo; 2019) in the public sector can rely on developing a longterm process of interaction between the culture of the public sector and the culture of design.

In the following, the theoretical framework at the basis of the implementation of the design programme in the Municipality of Turin is presented. Consecutively, the development of the programme through the implementation of two projects is discussed examining the results with respect to the previous findings and the theoretical framework. Finally, conclusions are identified for the long-term experimentation and validation of the framework.

# 2. Expanding innovation capacities in the public sector through Design Thinking

Even though there are evidence of an increased rate of experimentation of user centred innovation methodologies within the public sector (Bouwman & Grimmelikhuijsen, 2016), it remains unclear under which conditions these become institutionalized practices. How organizational environments authorise and legitimize innovation practices by way of learning and education remains one of the most relevant challenges. To address this issue, the authors propose a programme of design projects that relies on the idea that introduction of innovation capacities in the public sector, should be based on their 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 organizational learning principles (Schein, 1999), but also with the construction of innovation knowledge and culture, which is historically bound to practice. In such a context, the role of experience, a core ingredient of the design disciplines, can be regarded as key to knowledge creation and appropriation.

The programme under development in the Municipality of Turin proposes to combine advanced human centred service development with a learning framework to set up a learning environment (Beckman & Barry, 2007) in which to make possible for a range of diverse actors operating in the organization to experience the processes of innovation. Design Thinking (DT) is particularly effective in this perspective because of two main reasons:

- it grounds the innovation process in co-design activities that are human centred
  and involve multiple actors and perspectives, which is not only useful to better
  develop new solutions, but also to enable interaction, sharing of information and
  mutual learning.
- it is based on an experimental design/prototype/test/redesign loop that can be effectively connected with triple loop learning, which is particularly valuable within complex settings and organisations.

DT is today becoming a mantra in the different areas of innovation (Owen, 2007), including social and public-sector innovation (Manzini & Rizzo, 2011; Deserti & Rizzo, 2015). Design-led innovation approaches are currently being experimented to tackle societal challenges, trying to better manage complex participatory processes involving many actors and stakeholders in a frame of tensions or open conflicts. These processes go beyond the established principle of designing for context-dependent problems, extending the idea of participation to include: 1) the relationship between the context of the problem to be addressed and the design of the network that will co-produce the solution; 2) the experimentation of different configurations of that network until a robust partnership is individualised and established in some institutional form. In this perspective, DT emerges as a suitable approach to user centred innovation.

The DT innovation cycle is based on 2 main pillars: (i) a human oriented approach to innovation that considers the end users of the solutions those who possess the fundamental expertise on the problem/challenge to be solved; (ii) a context based approach to innovation

that considers actors from the external environment as well as the tangible and intangible PAs infrastructures and resources (people, processes, technologies, procedures, knowledge) as enablers or barriers to innovation (Deserti & Rizzo, 2019). DT pursues the activation of the ecosystem as strategic in the process that move from innovation ideation to its real implementation. The design programme developed for the Municipality of Turin interprets the real practice of the iterative design cycle as key for the introduction of design methodologies and tools to support the development of a co-creation culture in public organizations. To reach this objective, the programme integrates the DT methodology, in the form of an iterative design cycle, with Kolb's (1984) model of experiential learning. In other words, the programme is based on the idea that design-led innovation processes can be exploited to set up and pilot experiential learning within organisations.

# 3. The Design Programme in the Municipality of Turin

In the following sub-sections, the description of two design projects implemented by the authors in the Municipality of Turin are reported. The projects have been conceived as a learning by doing experience: the adoption of the DT cycle (from ideation to implementation) for the development of two new services has been observed and monitored as a process of implicit development of innovation capacity in the Municipality. Impacts affecting both the culture of the organization and the competences of its employees have been detected and are discussed in section 8.

# 3.1. First project. TO-Home: a service for vulnerable citizens at risk of eviction. 2016-2017

Turin is the third largest Italian city well known in the world as the hometown of FIAT automobiles. The crisis of the automotive sector that started in 2007 led to the delocalisation of the production and to a relevant increase in the level of unemployment, which has become the biggest challenge for the city. Under these premises, one of the objectives of the Municipality in 2017 was to develop TO-Home a service meant to responds to the complex needs of vulnerable citizens at risk of eviction (families or individuals that received an eviction notice or are at risk of receiving it) due to insufficient income. Politecnico di Milano mentored the Municipality through a service co-design process as a way to develop innovative solutions based on an integration between the employment, housing and social services, which are traditionally approaching the risk of eviction with different perspectives (a labour issue vs. a housing or a social one). The mentoring run through 4 phases: analysing the challenge, envisioning new solutions; detailing the design, prototypes. In phase one participants were supported to understand the challenge from the end user perspective. In the second phase participants were guided to the envisioning of new solutions with end users and the co-design of initial concepts for the new service. In phase 3 the focus was on moving from ideation to implementation in the context of the

organisation. The last phase included the support to prepare the tender to implement the service and the design of the service experimentation with end users. The analysis of this first experience shed light on a few critical issues: (i) the employees' difficulty in assuming the point of view of the end users as an alternative perspective from which to analyse the current services and design the new one; (ii) the employees' difficulty in overcoming internal resistance to change and barriers bound to the current organizational structure; (iii) the employees' difficulty in reconnecting the design of the new service with its real implementation. In particular, during the design of the service blueprint - the synthesis tools used to represent the final configuration of the service - participants were unable to come out with effective solutions to four main problems, which could ultimately affect the delivery of the new service:

- 1. Individualising competences of the operators that should deliver the new service.
- 2. Making the service visible and how to communicate it to the end users.
- 3. Obtaining the availability of enough houses to accommodate fragile families.
- 4. Engaging the users of the services in co-production mechanisms.

# 3.2. Second project: the redesign of the register services. 2019-2020

Being reputed one of the Italian excellent centres of innovation, the Municipality of Turin aims to improve the general access to fundamental services for citizens, also providing new ways of accessing them remotely. The Central Register Office in Turin provides a range of services directly to the citizens that involve a wide range of public entities at the regional and national levels. Services provided regard the civil status, the registration and change of residence and the issue of identity cards. Offering a range of fundamental services not just for Italian citizens but for all residents in the city, the context is multi-ethnic, multilingual, and hosting citizens of all ages. Following the growing need of citizens to carry out procedures remotely, different from most other Italian cities, several services to the citizens are offered online supported by the national digital authentication system, but the system still lacks integration with the services provided on-site, that are left behind. Having a strong connection behind the scenes of on- and offline procedures, conflicts cause all operations to slow down or face obstacles. Long waiting times for service delivery are paired with more practical problems on site linked to the building itself, its organization, and spaces. Having been constructed as a psychiatric hospital the monumental building has been reconditioned to host the central public offices of the registry office. Hence the architectural structure of the building itself bears a challenge in managing and organizing the spaces according to its new purpose without changing the landmarked structure itself. The project aims at facilitating the citizen's access to the offered services and the comprehension of the procedures. The project, divided in different phases starting from an introductory workshop with employees, followed by a period of user research, further workshops to co-create the new services with the stakeholders and a final phase of development and implementation.

The potential and critical issues identified in the first project conducted in 2016-2017 have been used as a foundation of this new one. Having already gained a set of insights on existing and potential barriers in the systems of the Municipality, a knowledge base was available for the set-up of the following activities. Different from the first project, the second one, extensively reported in the following, is aiming at improving and eventually complementing a wider range of existing services in the Registrar's Office in Turin. The entire project is informed by different techniques of co-design applied to innovation in the public sector following 4 key principles:

- 1. Co-design with users
- 2. Analysis of the context of interaction
- 3. Approach based on piloting
- 4. Service design as a driver for organizational change

# 3.2.1. Project description

The entire project is oriented towards a redesign of the access to the public services in the central Register's office in Turin set up as collaboration between Politecnico di Milano and the Division of Innovation of the city of Turin.

The reason for this is that major difficulties have been found in citizens facing difficulties in identifying, accessing, and comprehending the services leading to dissatisfaction and confusion. The main services provided by the Register's office are the change of residence, the issuing of identity cards and official certificates. The services are offered in the central office in the city centre and 13 smaller, decentralized offices in the city. All these services are producing documents do not just allow citizens to identify themselves and benefit from other services in the city, but the services themselves, their organization and planning is therefore closely linked to various entities and designed and delivered by different and specialized team of employees not connected among them. These highly specialized teams are usually focused on one specific element rather than working in groups with mixed competences. With respect to these observations the aim, beyond improving the actual services, is breaking out from old schemes of designing services and introducing new ways and instruments that are following the key principles described in the previous chapter. The project for the register office was set with a duration of 13 months, from January 2019 until February 2020 including execution and testing. The objectives were on one hand to redesign the access to the services provided in the building while introducing competences for design-driven innovation and collaboration across co-design processes inside the organization. The project developed from 2 initial assumptions coming from literature (Cilliers & Greyvenstein, 2012; Stone, 2004) as well as from the evidence of the first project:

the quantity of the entities necessarily involved in the entire service delivery is one
of the main barriers in adapting to change.

the strong organizational culture characterizing public services based on silos is completely opposite to the principles of design.

The second project was also meant as a learning environment were to cope with these two main barriers to transformation. The entire project is divided in three main phases, now only the first 2 have been implemented specified as:

- Research and design.
- Execution.
- Piloting and testing.

# 3.2.2. Project outputs

As an outcome, three of the four suggested dimensions of intervention have been tackled. The first one linked to the physical space that creates discomfort for users and an improper working environment for operators. Dividing the spaces of the operators strictly from the waiting areas the issues with privacy, noise and distress are tackled (Fig.1). A system of digital and physical wayfinding is creating a friendlier atmosphere eliminating handwritten notices and supporting the user in finding his way through the labyrinthine building (Fig. 2). To support comprehension and transparency, the forms have been redesigned (Fig. 3) indicating the important elements for the user supported by an informative leaflet with a checklist of documents applying gamification for assistance throughout the procedure.



Figure 1: Waiting room developed for the intervention in space



Figure 2: Wayfinding system designed to improve the communication on-site



Figure 3: Form and leaflet guiding through the procedure

# 4. Main findings and issues emerged

Especially the research phase and the transition from design to implementation shed light on some issues demanding a closer look and analysis. Already the initial research phase zoomed in on the disconnected and highly fragmented structure of the public office that later appeared to be interconnected to several other obstacles found during the process. Some of these elements are listed in the following to be then explained further:

- Vertical hierarchical structure.
- Missing culture of holistic planning.
- High specialization.

For the first insight the authors notice that the structure being organized in a strictly vertical hierarchy did seem to hinder the building of new capacities especially at the level of civil servants. Having the impression of being purely executing other's decisions and plans has found to be a barrier to the building of new capacities. Building the team/s with the skills and motivation to develop the solution/s was one of the biggest challenges for the project. The employees who had actively participated in the workshops did not feel enough incentive to keep developing the solution deciding to take a role in driving the development. In this second project the development of the innovations was taken on by a smaller group of actors, who were willing and asked to commit to a longer-term process of developing and testing the innovation. The larger groups of employees that participated in the phase of ideation did not take part in that of implementation, not only due to their will but also to the sheer lack of resources and the need to employ them in day-by-day practices. As consequence the project failed in creating a sense of ownership as the level of engagement decreased moving from ideation to implementation of the innovations. In particular, the top management of the register officer became the leader of the project. This insight reflects a larger issue in the process of co-creation, which often sees the phase of ideation being characterized by an intensive and active involvement of all the actors while - as soon as the process moves to implementation - decision, responsibility and power remain in the hands of the top management, impairing the opportunity to transform the organizational culture (Sangiorgi, 2010).

The second insight talks about the absence in the Municipality of a systemic approach to innovation at the level of the middle management, which could help oversee complex processes and think across organizational silos. Instead, an established approach to fragmenting and splitting competences and roles has found to be one of the main barriers in the adoption of the design culture, which claims holism as one of its pillars (Stickdorn, 2011). The redesign of the register office has been based on the attempt to match the grassroots experimentation with the larger strategic vision of the Municipality of introducing a user centric prospective in which the public actors, the citizens and the local stakeholders work together in envisioning and co-producing new solutions. This attempt has been driven by the

strategic dialogue with the top management of the organization and the Deputy Major to innovation. The implementation of this strategic approach has, in turn, questioned the cultural transformation of the organization as the development of new skills among staff and workplace innovation called for a need to overcome silos. The insight then shows that having a strategic vision and a plan to implement it can be not enough if the introduction of the new knowledge is not complemented with the management of systemic and organizational change.

The last relevant point the authors identified is the evidence that high specialization of departments, typical not just for public organizations (March 1991), hampered the adoption of different points of view (e.g. the perspective of users or other stakeholders) and the capacity to consider all necessary factors. This difficulty to change the perspective from where to develop services is closely linked to an issue that emerged mainly in the implementation phase of the project, i.e the non-perception of the various parts of the project (as those presented in figures 1, 2 and 3) as interconnected elements of a whole to create a coherent experience for the citizens. The management of the register office has in fact decided to significantly modify what has been designed together with the researchers and the designers in the phase of ideation due to insufficient budget available for the implementation (the budget could not be defined in the beginning, even though the whole project was conducted with a "frugal" approach). Furthermore, extant public procurement procedures obliged to split the execution in parts realized by different subjects, which require a high level of attention and holistic coordination not always applied due to the necessity to involve different areas that are used to work in an independent fashion. The interconnection of the various elements and its importance for the functionality of the designed experience has hardly been perceived mainly because of the lack of experience of the management in new service implementation. As already seen in the first project, the passage from ideation to implementation (Deserti & Rizzo, 2018) is rarely run relying on internal competences of public organizations. The pervasive adoption of externalization as a strategy to cut costs in the public sector has negatively affected the capacity of the employees to follow a cycle of design-implementation and redesign, transforming them in mere executors of solutions conceived and implemented somewhere else. In quite a few cases, the same execution is externalised, leaving the organization with fairly limited knowledge about some of its processes. In this case especially the struggle to allocate human resources, overcome unplanned architectural hurdles and retrieve financial resources for the realization of fundamental elements of the service experience notably impacted on the executive phase and showed the difficulties in linking and uniting the research phase with that of project development and with putting ideas into effect.

# 5. Conclusions

This article discusses a design-based theoretical framework to face organizational change by conducting long term processes of engagement and exposition of employees from public sector organizations to the culture of design. The framework combines advanced human centred service development (DT) with a learning framework to set up a learning environment in which to make possible for a range of diverse PAs and actors to experience processes of innovation, building knowledge and fostering organizational change. Considering the results of the experimentation conducted so far, and connecting them with existing knowledge, the authors recognize that the development of credible pathways and effective actions to support the growth of innovation capacity in the public sector must consider the necessity of coping with long-standing challenges, i.e. the innovation of public bodies; the peculiarities of organizational learning processes and of the absorptive capacity of the organizations; and the overall resistance to change in people and organizations (Albury, 2005; Brown & Osborne, 2013; Sørensen, & Torfing, 2012). The approach proposed shows that a possible solution to this problem is to reduce the gap between the strategic management and governance structures of public organisations and the everyday implementation of innovation by developing internal processes, spaces, procedures, profiles within public organisations to better integrate the two levels. This reflection will be at the core of further experimentation, for which the authors are currently preparing new research and innovation proposals, which will integrate the proposed design and learning framework with an organizational change framework.

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