

# Service Design in Public Sector: Boosting innovation through design

*Francesca Rizzo<sup>o</sup>, Alessandro Deserti\*, Onur Cobanli\**

*f.rizzo@unibo.it*

*University of Bologna, Department of Architecture and Territorial Development, Via Risorgimento 2, 40126 BO*

*\*Politecnico di Milano, Design Department, Via Durando 38/a, 20158 MI*

## Abstract

The modernisation of public administrations is one of the priorities of the European policy in order to encompass the crisis and create growth and jobs (European eGovernment Action Plan, 2011-2015).

Design is now commonly seen to have important contributions to make in helping public organisations face these challenges. As it is testified by the number of public ‘Labs’ that have been set up across the worlds to bring an experimental approach to build knowledge and create system-change to address the challenges facing governments and citizens.

In the article the authors examine a project of co-design of public services led by the Municipality of Milano and the Politecnico of Milano in the perspective of reconnecting the introduction of design knowledge to the change of the public body involved. The purpose of this article is exploring the trend in the adoption of design culture as practice to deal with public services innovation.

**KEYWORDS:** service design, co-design, organisational change

## Introduction

Cities are under almost unprecedented pressure to deliver better services while reigning in cost. Meanwhile from Europe to US, austerity measures have been put in place, “wicked” societal challenges abound, spanning from youth unemployment, healthcare issues for elderly population, energy consumptions; mobility and transportation just to mention some of them. All these require smarter solutions and are creating pressure for the public and private sector to deliver innovative services (Bason, 2010).

The purpose of this article is to explore the current trend in the adoption of design culture and knowledge as practice to deal with public services innovation. Until today, there is one notable study (Junginger, 2006) presenting three cases of public bodies that introduced design knowledge and claiming that the adoption of human-centred design can change organisations.

Even though there are some cases of public organisation that are introducing design in their practices (e.g. the introduction of ‘experience-based design’ in the UK National Health Service) and experimentations in this field are flourishing, their focus is still on the change of the services, while very little reflection is being produced on the change of the organisations that are supposed to manage them. There seems to be a widespread idea that the introduction of user-centred practices will work per se, without any need of facing the problem of change in the hosting organisations (Deserti and Rizzo, 2015).

In this article we formulate the hypothesis that the introduction of design knowledge in public institutions should be reconnected to the management of organisational changes to a greater extent than previously thought necessary. In particular authors examine a case of co-design of public services in the perspective of reconnecting the introduction of new design knowledge to the change of the organisations, namely: the design of new services for neighbourhood based communities which has been conducted in Milano in the framework of the My Neighbourhood European Project (Concilio et alii, 2014).

MyNeighbourhood (MYN) is a EU-funded research project started in January 2013 with the goal of applying service design methods and tools in 4 different European neighbourhoods (in Lisbon, Milano, Aalborg and Birmingham) to identify and support the establishment and the upscale of grassroots and community-based initiatives, through the adoption of a web-based service platform. The project is operating in a typical ICT research area, introducing the idea that advanced participatory design methods can make the difference in the level of innovation of the proposed solutions, since the development process starts from people and not from the available technological paradigm.

MYN moves from Peripheria European Project (2010, 2013; Grant Agreement No.: 271015). The treat of originality of the Peripheira project with respect to other Smart City projects that the European Commission was founding in 2010 was the involvement of specific competences on urban planning and design for the conception of new people centred services that would also represent the smartness as the capability of the cities to develop solutions in line with the citizens needs and desire.

This project offered a not expected common ground for research by further developing the idea of collaborative services (Baek, Manzini, Rizzo, 2010) as those, in a urban contexts, that are the results of co-design and coproduction initiatives.

From the Peripheria project, a new vision thus raised: recognizing cities smartness in the capability of cities to include citizen driven developments and productions as concurrent city infrastructures together with physical, technical and technological layers. At the core of this vision there is the human perspective, as elaborated by design culture (Julier, 2013), that considers that participatory design approaches to services can bring contextual and cultural dimensions in the delivered solutions.

In the analysis of MYN case study the authors discuss evidences in favour of a new interpretative framework in which the co-design of new artefacts (service, processes and solutions) can be described as a powerful yet implicit agent of change for public organisation

towards a open and participative culture of innovation (Deserti and Rizzo, 2014, Brown, 2009) based on piloting and participatory learning.

## The case study: My Neighbourhood project

My Neighbourhood (MYN) project can be seen as the continuation of the vision elaborated by Peripheria and as the scaling up of the Peripheria approach in a different city neighbourhood. The aim of MYN was to combine social platform potentialities with the promises of collaborative services as the solutions that would better fit the social challenge of the neighbourhood. The Milano pilot of the project was set up in Quarto Oggiaro, a City borough with specific problems of its own, due to foreign and especially non-European immigration, lack of green areas and places for youth aggregation, a high share of the population being composed of elderly and lonesome people, and little (if any) economic activity with some employment potential.

The municipality of Milano is intensively committed with the neighbourhood and before MYN many attempts have been conducted to achieve the overall objective of inclusion of the neighbourhood with the rest of the city. MYN represented a new opportunity to further invest on Quarto Oggiaro by supporting the revitalising programme the municipality was perusing for the neighbourhood.

MYN platform has been interpreted as a large scale service for Quarto Oggiaro to systematise all of the previous and current initiatives by the means of a digital channel that would help to fulfil 2 unmet areas of needs:

- giving visibility to the neighbourhood initiatives and active groups of citizens;
- providing a new infrastructure for supporting the flourishing of new services that would answer to the neighbourhood challenges.

On the basis of this idea the MYN platform in Milano deployed to support 2 specific areas of needs:

- to make available, in Italian language, all of its generic features to support social interaction at the level of the neighbourhood to make citizens interact each other;
- to complement the generic features with functionalities to support the delivery and access to “off-line” services developed in Quarto Oggiaro.

The idea of the platform as it has been interpreted in Quarto Oggiaro is based on the complementarity between social network services for people that live in the same neighbourhood and specific services developed within the contexts of the MYN project as solutions to local problems that exploit the platform to be disseminated, accessed and eventually scaled.

To achieve this objective the Municipality of Milano, in the role of the proponent and the leader of the platform started a series of actions based on a communication and implementation plan aiming to co-design with the citizens and the stakeholders the deployment of the platform in the neighbourhood. In fact the story of the citizens and stakeholders engagement in the pilot can be read as the strategy developed to prototype/customise and make sustainable the platform in the neighbourhood.

The first round of activities corresponded to the first year of the project. In this phase the aim of the Milano Municipality has been the introduction of the idea of the platform within the context of the neighbourhood to envision together with all the stakeholders the platform role. In this phase all no-profit associations and the neighbourhood authorities have been involved in large meetings during which the platform aims have been explained and the stakeholders have been invited to express their interest with respect to it. After a consistent number of meetings 3 main tables of stakeholders have been established each of which devoted to develop a first set of generic needs into effective solution to be implemented on the platform or with its support (platform as the digital neighbourhood infrastructure).

From the beginning the tables polarised on the need to develop the platform as the digital neighbourhood infrastructure. At the same time two specific issues of the neighbourhood emerged: the youth unemployment and the elderly loneliness that pushed the tables to explore the extent to which the platform would support their active solutions.

This pushed tables to develop into three stakeholders' networks with specific interests with respect to the platform potentialities.

The first stakeholder's network was led by "I portici" association and focused on the platform potentiality to become the communication channel for the neighbours. The second network led by the Quarto Oggiaro elderly association focused on elderly inclusion and active social life. The third network, led by the Quarto Oggiaro the ecology association involved in promoting urban gardening, focused on how to take care of the neighbourhood green areas to make Quarto Oggiaro a better place where to live.

After some month of discussion and co-design activities the tables produces three main ideas to be further developed:

- the customisation of the MyN platform as the Quarto Oggiaro Social network;
- a service that would support elderly to meet each other and spend together time in conviviality (Quarto Food, convivial lunches for elderly)
- the diffusion of urban gardening practice in the Quarto Oggiaro area (quarto gardening, a gardening service for green area of the neighbourhood).

The Milano Municipality decided to scale the first 3 nucleus of stakeholders and their projects by looking at actors that would help to co-produce the three ideas.

Therefore, the Municipality decided to focus on the activation of communication and collaboration channels among students and young people (including foreign immigrants) to generate social innovation experiments and particularly co-design new service concepts of possible interest for the City as a whole, including:

1. the development of an editorial staff that would support contents creation in the platform; organise dissemination events of the platform; work with MYN technical staff to further develop services and solutions to scale the platform in Quarto Oggiaro;
2. the integration of the tables with specific competencies on the two service ideas developed during the co-design period (Quarto Food and Quarto Gardening).

In fact at this stage of the pilot instantiation the problem for the Municipality and the Politecnico research team was how to satisfy the needs expressed by the citizens during the tables meetings by implementing the platform together with the 2 new services.

The occasion was the involvement of the Agricultural School and a Hotel Management School, both holding their premises in Quarto Oggiaro and the fact that a young guy became the president of the “I portici” association.

The Engagement of students in activities of social relevance to be recognized at a later stage as a practical contribution to their education curricula has been the key element for prototyping the 2 services Quarto Food and Quarto Gardening. As well as the change in the management of the “I portici” has been the key factor for the perception of the importance of a customised digital platform to communicate, disseminate and exchange within the neighbourhood.

The involvement of these actors transformed the stakeholders’ networks in three new Private Public People Partnerships with the role of prototyping 3 services:

1. the platform customisation with respect to the communication and dissemination needs of the neighbourhood;
2. the Quarto Food as a restaurant based service that would support elderly inclusion through social events and, at the same time would act as a process of capacity building for students to become entrepreneur;
3. the Quarto Gardening as a garden based service that would support capacity building for citizens in gardening and urban gardening and at the same time would act as a process of capacity building for students by conducting work experience outside the school.

At the end of the 2013 the services prototypes were developed in the pilot and for each of them the production partnership was established.

The implementation of the platform and of the two services started in parallel at the beginning of 2014. The concomitance of the two processes of development offered the possibility of a continuous amplification from the platform to the services and vice versa. This amplification process supported the second phase of pilot scaling from prototypes to small-scale experiments during which the services existed in stable ways.

More than 100 people have been active during the small experiments, 50 from the two participant Schools (both students and teachers) and 50 guests at the lunches. Agreements between schools, sponsors, and Municipality were achieved, leading to obtain the permissions to work on certain areas and to have the materials to work (Work Kit, work clothes, plants and an amount of money to buy needed tools and plants).

The platform was in use at the beginning to communicate and amplify the experiments. Community building and engagement has been achieved through numerous open workshops and closed door meetings held in the schools and local associations of Quarto Oggiaro. During these induction workshops, after a presentation of the MYN Platform and the web app, hands-on experiments for the services were used as a means to increase effectiveness of communication. As a result, a good level of knowledge and understanding of the project by the key communities of stakeholders and the whole neighbourhood were reached.

On the other hand, the preparation of flyers, posters and other printed material for distribution in public events was realised to invite to the experiments.

In terms of engagement, many formal partnerships with local communities have been established since 2013 and are now active (nearly with 20 entities, or a total of approx. 100 stakeholders). The students of Istituto Lagrange and Istituto Pareto have been involved and trained during numerous meetings (6 classes, with a total of approx. 150 students). About 50 elderly and foreign people have attended the two “small experiments” of service validation, mentioned previously, which have been quite successful.

Currently platform is exploited by Quarto Food and Quarto Gardening services to manage the booking and as a mean of communication. Future steps include the flourishing of new collaborative services in Quarto Oggiaro that will exploit platform.

At the same time the MYN platform community is becoming larger and it is currently animated by an editorial staff composed by members of the “I portici” association.

As soon as the platform and the services were ready to be used the Municipality of Milano together with the help of the Politecnico di Milano started a process of dissemination of the platform outside the Quarto Oggiaro towards other areas of Milano and other cities: currently 6 MYN have been established on the platform.

## Evidences from the case

MYN as a design led project has focused more and more on building alliances among one leading partner (the Milano Municipality) and the stakeholders, the citizens, the representative of public sector in the neighbourhood (the school, the municipality), the representative of the private sector (small shops, bars and restaurant) with the aim to impact on the processes of decision-making and transformation for Quarto Oggiaro.

From this point of view the case point out two remarkable elements of discussion: (i) the vision behind the processes of alignment that the MYN implemented; (ii) the specific characteristics of the configuration of stakeholders’ networks.

In the meaning of Manzini and Rizzo (2011) that conceive infrastructures also the process of designing a design project to set the precondition within which to experiment with policy and people needs; MYN represents a designed infrastructure to support the interplay between bottom-up experiments and top down policymaking and regulation frameworks.

About the nature of the process of building networks, we agree with the argument discussed by Pell Ehn and his colleagues in many papers (Binder et alii, 2011; Björgvinsson, 2012) that consider the process through which design help to build linkages and support small scale initiatives to become connected as a process of network configurations as infrastructures.

In this sense infrastructures basically means that MYN cultivated long-term working relationships with diverse actors and slowly built a stable designing network that changed the configuration with respect to the specificity of the faced challenges; the interests and needs of the different stakeholders; the constraints as well as the affordances that the socio-economic and regulation framework impose and offer. Thanks to a long-term perspective the project built trust among diverse stakeholders, supported mutual learning and slowly gained authority attention and worked on a more systemic level.

Considered as all MYN can be read as “framework programme” (Manzini and Rizzo, 2011) for cities, a large supporting infrastructure that could move local cases, experiments, projects out of isolation and increase their capacity to impact on the development of a new vision for a city.

In framework projects when contradictions emerge between bottom-up and top-down processes of alignment are designed and implemented with the aim to produce a possible change in the bigger picture by trying to modify regulations, work procedures and cultures, public policy, and indicators of project success (Deserti and Rizzo, 2015).

Framework design projects recognise that there is a need for a more permissive innovation culture in public sector and policy making, so that stakeholders would be allowed to experiment and even to fail and to support these processes they use the concept of prototyping quite extensively.

But at the same time framework projects also recognise the value of discussing how regulations could be stretch, and how things can be done without breaking any regulations or laws. To make this possible framework projects develop larger vision and scenarios within which to discuss policy and through which inform policy decision-making.

Framework projects reveal a model and a structure here presented as a re-elaboration of a first model discussed in Manzini and Rizzo (2011). The new version of the framework project model re-organise design activities in two larger phases: one of designing/envisioning and one of piloting/mainstreaming.

What emerges here as original with respect to the first version of the model is the idea of complex participatory design processes as the experimentation of networks of co-production along the three piloting sub-phases of: infrastructuring, experimenting, strengthening. In the following all the phases of the model:

#### 1. Design/Envisioning:

- ANALYSING. The exploration and mapping of existing solutions and initiatives oriented toward the inspiration of new solutions or systems of solutions. It includes the identification of a consistent design opportunity for a competitive and innovative solution.
- ENVISIONING. The development of scenarios, visions and proposals, used both to define the overall directions to take and to stimulate and align the actors and stakeholders in the development process.
- DESIGNING. The development of the solution through the adoption of participatory design tools supporting interaction and convergence among the involved parties.
- COMMUNICATING. The development of presentations, visualisations, and communication tools and actions to inform about the solution before, during and after its development, with different aims such as convincing potential actors to join or sponsor the initiative, create consensus, foster the adoption of the solution etc.

#### 2. Piloting/mainstreaming:

- INFRASTRUCTURING. The development of digital platforms, toolkits and other supporting tools and actions (such as knowledge-transfer initiatives), to enable the new network of actors in carrying on the development process by themselves.
- EXPERIMENTING. The solution experimentation in a local and small scales; including the assessment and the testing of the network of the involved actors, to give feedbacks for the assessment of the new idea.

- **STRENGTHENING.** The activities oriented towards organising synergies and multiplication effects among different single projects and different elements of the same project.

The model suggests as the design phases (analysing, envisioning, designing, communicating) are usually followed by a long-term period of experimentations (piloting/mainstreaming) that aims to infrastructure the context of the project through the institutionalisation of partnerships that co-produce solutions inducing innovation in the organisational culture that leads the framework project.

## Conclusion

Current cities' challenges and problems represent new opportunities for design. Some of the most urgent and costly challenge facing welfare systems are those that require an understanding of the personal, contextual and invariably multidimensional aspects of people's real lives. Others require types of services that are able to engage and collaborate more productively with people, others build on individual and social assets to create fruitful change.

Design is now commonly seen to have important contributions to make in helping public organisations face these challenges. As it is testified by the number of public 'Labs' that have been set up across the worlds to bring an experimental approach to building knowledge and creating system-change to address the challenges facing governments and citizens. This is pushing design into the upper echelons of governments even inside the systems, institutions and rhetorics of public organisation across the world.

Different projects and programs are trying to explore how design potentially could have an impact on larger systems and, especially, how design could reach into the public sector and into municipal offices (Bason 2010; Christansen and Bunt 2012; Burns et alii, 2006; Manzini and Staszowski: 2013; Deserti and Rizzo, 2015). MYN is a clear example of this kind of projects and many other cases are going on in Europe.

In these projects design in playing more a transformative role that argues for challenging established structures and triggers changes in public organisations and how they produce innovation and policy instead of focusing on productivity, efficiency, users' experience, or improving services within existing societal structures (Deserti and Rizzo, 2015; Botero and Saad-Sulonen 2013; DiSalvo 2012).

Moreover, this new wave of projects is disseminating a new view on innovation in public services as experiments in progress that can affect the way in which public institutions work and how they produce policy.

First, design culture and methods help to create a legitimate space for experimentation that contains risks and expectation, and supports learn from (low-cost) failure where the cause of a problem is unknown, or where practices still are evolving.

This is different from working by running an initial pilot prior to launching a full programme that is often the way in which public organisations deal with innovation (and which has its own risks). When pilots hold profile, political capital and considerable investment, failure can have considerable costs. The expectation from experimentation is not necessarily success, but learning from practice. The concept of prototype is relevant here. It changes



expectations of performance and permanence of public services, given the signal of early-stage development and on-going learning. Prototypes not only welcomes feedbacks but proactively encourages challenges and critique from the public, potential users, colleagues, partners, experts and other relevant actors. In this way imperfection become a legitimate and even expected part of the processes devoted to experiment with innovation.

Second, projects like these show how much design is fruitful with regard to design policy since it takes the dynamic relationship as the premise in their development (Christiansen and Bunt, 2012; Brown et alii, 2010; Burns, 2006). Policy can no longer be seen in its own right, but only makes sense when seen in relation to its practical outlook and consequences. Unlike the traditional understanding of policymaking and governance as the rational development of models, design is predisposed to more iterative creation and stewardship, closing the gap between development of the model and its implementation. Design as a discipline is also more comfortable with complexity and uncertainty, and is therefore commonly used as an innovation method. Though over-simplified, a core strength of a design approach is that it starts from understanding the architecture of the problem; both focusing on the concrete causes and consequences involved as well as the interconnected systems and networks involved in dealing with it. Taking on different perspectives, asking new questions, reframing challenges can introduce innovation into thought or action processes by creating a tension with common interpretation. In asking different questions, a design approach can point to different trajectories for addressing the problem.

However the current trend for involving designers and developing design-based project in public services to deliver innovation creates new opportunities and this is a huge chance to embed design into different public processes. A lot of work as to be done to find ways to measure the provoked innovation and impacts effect of design culture in the public sector, both at services level and at organisation level.

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