NLAB4CIT - Network of Laboratories for Civic Technologies Co-Production: Digital Services for the Public Administrations of the future

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Abstract

Innovation in social services and PA does not only mean the introduction of new technologies to digitize services and for the optimization of work processes, but it also means rethinking the role that citizens (and businesses) have in the public service creation, production and management together with public servants.

NLAB4CIT has the ambition to make public services more accessible making the citizens more active in their design, co-creation and management, demonstrating the applicability of some existing digital solutions in different and new sectors of public services coproduction, widening the understanding of their factor of success and sustainability. The objective of the project is to facilitate citizens access, interaction and active contribution to local public services through co-design, co-creation and co-delivery processes where public administration and citizens collaborate, thanks to digitally enabled innovative solutions (Blockchain, AI, IoT, Augmented Reality, Geolocation in Social Networking, Opinion Formation) that will be provided by a European Network of Civic Technologies Laboratories.

Keywords

Civic technologies, Public Administration, Co-design, Digitally enabled co-production

The European context

On 19 February 2020, the European Commission presented its *Digital Strategy*[1] which aims at making Europe more fit for the digital age. The approach of the digital strategy is to achieve a digital transformation that will benefit everyone, based on three main pillars: technology that works for people; a fair and competitive digital economy; an open, democratic and sustainable society. This was conceived to ensure that Europe seizes the opportunities of digital innovation, and gives its citizens, businesses and governments control over the digital transformation.

In order to promote wider uptake and use of advanced digital technologies such as AI and data, the European Commission has proposed the Digital Europe Programme[2] 2021-2027 (DEP) to support the digital transformation of the European economy and society and bring its benefits to European citizens and businesses.

The programme will reinforce Europe's capacities in key digital technology areas through largescale deployment (e.g. high-performance computing; artificial intelligence; cybersecurity and trust; and advanced digital skills). Furthermore, the programme will widen their diffusion and uptake to ensure that also the public sector and areas of public interests, such as administrations, health and care, education, judiciary, transport, energy, environment, cultural and creative sectors, can deploy and access state-of-the-art digital technologies, in particular high-performance computing, artificial intelligence and cybersecurity.

The call for proposal

The NLAB4CIT project has received a grant of from the EC call for a Preparatory Action in the field of Digital Solutions for citizen engagement (*Preparatory Action - Smart local administration using IoT, AI, VR and Machine Learning tools to get closer and more present to the citizen* - CNECT/2020/3855995) that was launched in July 2020 by the DirectorateGeneral for Communications Networks, Content and Technology.

The aim of the call was to support the development and roll-out of digitally enabled innovative solutions for citizen engagement in policy making and decision making, as well as co-creation and co-delivery of public services at the local level.

The project has been positively evaluated, it started in November 2021 and will run until April 2023.

Partners

The project is Coordinated by the Department of Computer Science of the University of Turin and is carried out by a Consortium of 7 partners:

- 3 Local Authorities: Municipalities of Collegno (IT), Roeselare (BE), Kessariani (EL)
- 3 Research institutions: University of Turin (IT), Howest University of Applied Sciences (BE), Open Lab Athens (EL)
- 1 Network of Local Authorities: Association of Flemish Cities and Municipalities (BE)

Main Problem addressed

Public Administrations need to address the challenge of digital transformation by ensuring that public services meet the expectations of citizens and that civil servants have the skills needed to use new digital tools and technologies. However, introducing new technologies to digitize services, means also rethinking the role that citizens have in the public service creation, production and management together with civil servants. In such arrangements, the government should treat the public not as customers but as partners, expanding the role of the citizen from one of "*mere passive consumption of public services to one of active involvement to jointly tackle social problems*"[3].

Therefore, rethinking the role that citizens have in the public service co-design, co-production and co-management together with public servants can help overcoming the current market-driven, transaction-oriented approach to the management of public services (New Public Management) that leaves little rooms for active citizen participation[4].

Whereas co-creation, co-production and co-management of services in the past were constrained by the limited ability of government to effectively coordinate citizen actions and the difficulty of ordinary citizens to self-organize, the advent of the Internet's unique manyto-many interactivity and of ubiquitous communications promises to reimage the evolution of the government-citizen relationship around the concept of collaboration[5]. Technology enhances and expands the viability of and capacity for citizen co-production, not only in traditional citizen-to-government arrangements ("citizen sourcing"), but also in arrangements whereby the government informs, assists, and enables private actions ("government as a platform") or whereby citizens help one another, as in the case of commons, with IT as vehicle for collective action ("do-it-yourself government"). This can happen at all phases of the stages of the service delivery lifecycle: design, day to day execution and monitoring[6].

Approach

The NLAB4CIT project arises from an interdisciplinary research approach that involves the technological aspects of new digital solutions together with Ethics, Law, Public Right, Social and Political Sciences and Economics, which is studying the potentialities, the risks, the enabling and sustainability factors of the application of some disruptive technologies to innovation in public services.

Innovation here is meant as a combination of new technologies (Blockchain, AI, IoT, Augmented Reality, Geolocation in Social Networking, Opinion Formation) and new approaches to the engagement of citizens (co-design, co-production and co-management of public services).

Starting from this perspective, the NLAB4CIT project aims at validating and spreading existing digital solutions for the engagement of citizens in the co-creation of public services at the local level.

The project resorts to the so called Tech4Good technologies that: 1) advance good social and environmental causes; 2) involve technology-powered, affordable, trustworthy opensource solutions and services: 3) are developed through co-creation methodologies, to adapt to different local contexts; 4) are aimed at integrating inclusiveness and fairness principles into the design and development processes.

The NLAB4CIT work plan (Figure 1) is divided into strongly interrelated Work Packages (WP) which are presented in the following table.
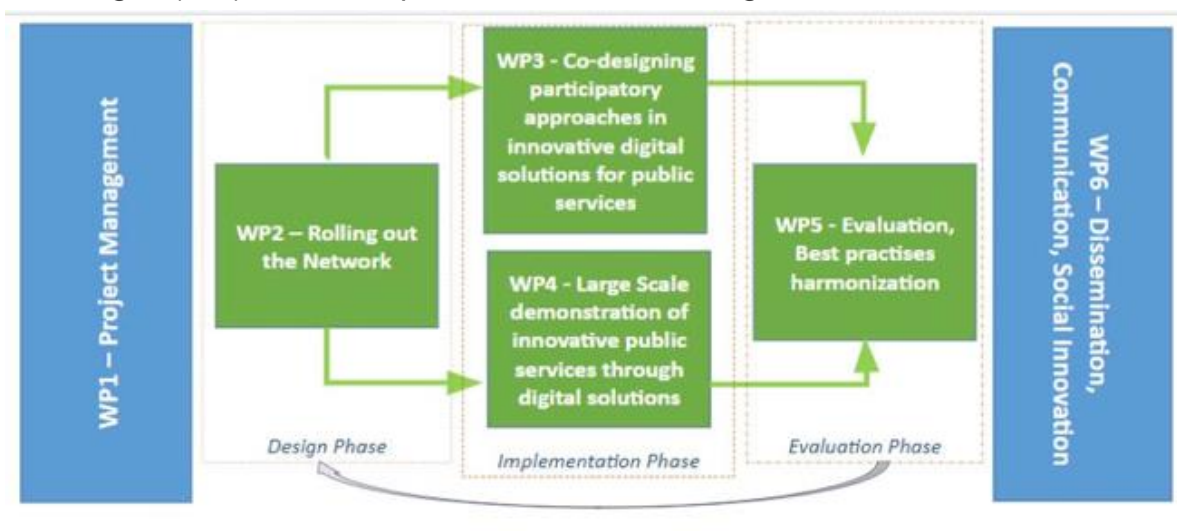

Figure 1. NLAB4CIT project structure.

WPs 2, 3, 4 and 5 are the core phases of the project, namely the design phase that includes the launch of the network (WP2), the two different strictly interrelated aspects concerning:

- the WP3, dealing with the co-designing of scenarios and roadmaps for PA's services development, that covers also the investigation of innovative case studies

- the Large-Scale Demonstrations, the WP4.

WP5 is dedicated to the monitoring and evaluation of what has been produced in WP3 and WP4 so that best common practices can emerge and systematically be shared and integrated in the delivery of innovative public services, involving citizens in the process of co-design, and policy recommendations with future perspectives elaborated. Strong engagement of citizens members is carried out in WP3 and WP4, while WP5 groups all the tasks dedicated to the assurance of the quality and coherence of the project methods and results.

4. Results

The NLAB4CIT project is expected to achieve the following results:

1. An Online Repository of tangible use cases of digital solutions and service co-creation methodologies

2. A Network of Local Laboratories on Civic Technologies (in the Municipalities of Collegno, Roeselare, Kessariani) to:

- exchange of good practices among innovative cities and research institutions;

- identification of common strategies for the adoption of digital solutions by the local administrators;

- easy access to use cases, co-production methodologies and digital technologies;

- further networking and dissemination for the involvement of new followers cities;

- Support the development of digitally enabling innovative solutions for citizens' engagement in policy and decision making, co-creation and codelivery of public services at local level.

3. A Sustainability plan for the scalability and long-term exploitation of the approach and the enlargement of the network.

So far, the project has moved significant steps towards the creation of the three Local Laboratories starting from the definition of a co-design process and scoping the area of intervention, the analysis of the needs, resources and ambitions of public officers, local stakeholders and citizens and the implementation of co-design sessions for the adaptation of the technological solutions for the needs identified. In detail:

Municipality of Kesariani (EL)

The Municipality of Kesariani, coordinated by Open Lab Athens, is developing a Community infrastructuring of Forest Fire Protection with the Volunteer Team of Forest Firefighters of Kesariani (VTFFK) which has a long history during the last decades on the protection of Imittos forest. It is a self-organized team of citizens (70-120 persons) who every year offer their free time in order to protect the forest in the summer months with basic support, resources and infrastructure from the Municipality.

The Local Lab will support actions and activation of resources for the Volunteer Team of forest firefighters of Kesariani focusing on the following areas:

- support in the installation of an archiving system of the communications during shifts in the forest;

- digitalization of radio waves through the integration of hardware on the existing equipment;

- creation of a meteorological station with sensors and Arduino microprocessors in the forest;

- development of a digital coordination platform for the VTFF.

Municipality of Roeselare (BE)

The Municipality of Roeselare, with the support of Howest University, is identifying a digital technology that could allow the involvement of young people in the the co-creation of a specific public space (Pastoorbos Park) by adding new play elements and maintaining existing infrastructure through a participatory design of the park. They are currently investigating different possibilities ranging from Virtual Reality to Minetest. Their interest is also to integrate gamification elements in order to engage children and teenagers in the process of co-design (Reach ages between 10-15 years old).

Municipality of Collegno (IT)

The Municipality of Collegno together with the University of Turin is co-designing services fostering participation and social exchange of different stakeholders (associations, CSOs, citizens, etc) that have as a reference point the Parco Generale Dalla Chiesa.

Based on the needs mapped through the workshops as well as the technologies available by the consortium, the pilot service will consist of two interconnected parts:

- Firstlife[7] instance to develop a territorial approach to promote local retail and cultural activities, networking and collaboration between the different local

stakeholders;

- digitalization of the Collegno Youth Pass (discount coupons) for fostering the participation of all citizens by adapting CommonsHood[8] and developing a value exchange system.

Why is it of interest to the public

All project partners will be present in Turin during the Open Living Lab Days and will be available to share and discuss challenges, results achieved so far and their experience with the development of a Local Lab for Civic Technologies

The Online Repository can be exploited by various stakeholders (PAs, private sector, CSOs) and expanded with new use-cases.

The project provides an insight on a concrete and ongoing experimentation on civic applications of innovative technologies that can be of great interest for the participants.

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