Chapter 6
Artificial Intelligence in Innovation Labs:
Map of Cases for the Public Sector

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ABSTRACT

Living labs are settings for open innovation that offer a collaborative platform for research, development, and experimentation in real-life contexts. The research question is: What are the characteristics of AI projects developed in innovation labs for the public sector? The authors collected data from exploring the innovation labs in Latin America, Europe, and Asia. The selection of the laboratories leads to four cases: the Civic Laboratory of AI in the Netherlands, the Laboratorio de Gobierno in Chile (Government's Lab in Chile), Secretaría de Innovación y Transformación in Argentina (Innovation and Transformation Secretary in Argentina), and the Smart Government Innovation Lab in Hong Kong. This chapter comprises five sections beginning with an introduction describing the context of artificial intelligence in the public sector and innovation labs. The second section presents a literature review with similar studies and a conceptual framework. The third section describes the methodology, and the fourth reports on the main findings. The last section contains conclusions, limitations, and future research.

INTRODUCTION

Vilariño (2021) stated that digital transformation is a human transformation. This research agrees with this, but it is noted that transforming the living labs of the public sector is necessary for transforming artificial intelligence. Several examples to foster this trend in different industries have been accounted for

by McKinsey (Baptista et al., 2021). However, the public sector moves through baby steps into different areas such as national strategies, regulations for artificial intelligence, infrastructure, and conditions.

The use of some functions of artificial intelligence to solve specific problems in governments worldwide (Sandoval-Almazán, 2021) provides some evidence about the dynamics of this trend in the present times.

Living labs are defined as settings or environments for open innovation, which offer a collaborative platform for research, development, and experimentation in real-life contexts, based on specific methodologies and tools, and implemented through specific innovation projects and community-building activities (Gascó, 2017, p. 91).

There are several types of living labs: narrow but 'sizable' communities of expert users, whole bounded populations, living labs for technical service development, and living labs for non-technical research using service platforms (Stewart, 2007).

According to (Huang & Thomas, 2021), the living lab concept is associated with two mainstream research approaches: open and user innovation (Almirall & Casadesus-Masanell, 2010; Hossain et al., 2019). "Open innovation" is about firms opening in the research and development process while exchanging knowledge with external parties (Chesbrough, 2003).

Innovation labs are another recent trend in the public sector. Van der Meer et al. (2021) research on innovation labs proposed some new interpretations of this trend. These organizations focus on developing new solutions for wicked problems in several government areas. Government universities or big companies often sponsor innovation labs. However, their original purpose of serving as an autonomous and independent source of new knowledge is unquestionable. An example of this relationship between the innovation labs and the public sector is Belgium's CitizenLab, which has developed a public participation platform that uses machine-learning algorithms to help civil servants efficiently process thousands of citizen contributions and use these insights efficiently in decision-making (OECD, 2019).

Laboratories are the hinge between government and society to drive these developments. This chapter explores how the connection between innovation labs and artificial intelligence developments is producing new solutions for the public sector. The research question is expected to be answered: What are the characteristics of AI projects developed in innovation labs for the public sector?

The methodology for answering this question is to explore and collect data from innovation labs in Latin America, Europe, and Asia. The selection of the laboratories and their projects led us to focus our research on four cases: the Civic Laboratory of AI in the Netherlands, the Laboratorio de Gobierno in Chile, Secretaría de Innovación y Transformación in Argentina, and the Smart Government Innovation Lab in Hong Kong.

The remainder of this chapter includes five sections. The first introductory section will address the context of artificial intelligence in the public sector and the innovations labs state of the art. The second section is a literature review that includes similar studies, a conceptual framework of innovation labs, IA, and developments. The third section describes the methodology for data collection, research question, variables, and case study description. This is quantitative research. The fourth section will describe the main findings of the four cases, compare them and discuss some connections. The last section will provide some conclusions, limitations, and future research ideas on this topic.

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