Innovation labs in the light of the New Public Service model

Laboratórios de inovação à luz do modelo do Novo Serviço Público

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Abstract

Purpose: This article aims to propose a conceptual framework indicating how innovation labs can improve public service provision in the light of the New Public Service (NPS) model.

Originality/value: The article discusses the relations and theoretical approaches of innovation labs at the interface with the NPS model through a framework; this is relevant, given the possibilities that these spaces provide for enhancing innovation in services and collaboration in the public sector, allowing knowledge exchange and individual and collective learning.

Design/methodology/approach: This is a theoretical essay carried out through a non-systematic literature review. We collected information from books, scientific papers, theses, and dissertations on the Google Scholar platform. Data collected were discussed in view of NPS's potential connections and implications, considering laboratories as intermediaries of innovation for enhancing the quality of public services through innovative solutions.

Findings: Innovation labs are dynamic and collaborative environments that seek to fix shortcomings identified in the traditional policy approach and in designing public services. They are also considered border spaces, acting at the direct interface with citizens and private organizations. They use innovative techniques to change how public organizations operate and stimulate the building of collaborative networks. However, individual, collaborative, and structural barriers may limit the proposition of innovative solutions for public services and the scope of these laboratories for incorporating NPS elements.

Keywords: service innovation, public management, public organizations, barriers to innovation, collaborative networks for innovation

Resumo

Objetivo: Este artigo visa propor um *framework* conceitual indicando como os laboratórios de inovação podem contribuir para a melhoria da prestação de serviços públicos, à luz do modelo do Novo Serviço Público (NSP).

Originalidade/valor: O artigo discute as relações e aproximações teóricas dos laboratórios de inovação em interface com o modelo do NSP, por meio de um *framework*; demonstra-se relevante, tendo em vista as possibilidades que esses espaços oferecem para potencializar a inovação em serviços e a colaboração no setor público, permitindo o intercâmbio de conhecimentos e aprendizagem individual e coletiva.

Design/metodologia/abordagem: É um ensaio teórico realizado por meio de uma revisão bibliográfica não sistemática. As informações foram coletadas a partir de livros, artigos científicos, dissertações e teses, disponíveis na plataforma Google Scholar. Os dados coletados foram discutidos à luz das possíveis conexões e implicações do NSP, inserindo os laboratórios como intermediários da inovação para potencializar e melhorar a qualidade dos serviços públicos prestados, por meio de soluções inovadoras.

Resultados: Laboratórios de inovação são ambientes dinâmicos e colaborativos que buscam reparar as deficiências identificadas na abordagem tradicional de política e no *design* dos serviços públicos. São também considerados espaços de fronteira, atuando em interface direta com os cidadãos e organizações privadas, valendo-se de abordagens inovadoras para modificar a forma como as organizações públicas operam e estimulam a construção de redes de colaboração. No entanto, barreiras individuais, de colaboração e estruturais podem limitar a proposição de soluções inovadoras para os serviços públicos e o alcance desses laboratórios na incorporação de elementos do NSP.

Palavras-chave: inovação em serviços, gestão pública, organizações públicas, barreiras à inovação, redes colaborativas para inovação

INTRODUCTION

Although the public sector has characteristics that, at first, may hinder innovative practices (Bogojeski, 2021), such as bureaucratization of processes, a multiplicity of goals and objectives, risk aversion, distinct people management policies, and the need to consult multiple stakeholders for decision-making, the promotion of these practices has gained strength, in response to the uncertainties and changes in the political, economic, social, and technological environments, arising from the globalized world. These transformations are driven by higher citizen expectations, complex problems, and smaller budgets, which cause increasing pressures on governments (Cavalcante & Cunha, 2017; Hjelmar, 2019).

The digital revolution, associated with the incorporation of information and communication technologies (ICT) by governments, has also required creative and innovative answers from individuals, stimulating new arrangements to strengthen ties between public organizations and society, changing human relations and the balance of power between institutions, governments, and policymakers (Cristóvam et al., 2020). Hence, innovation in the public sector occurs from new elements in management, new knowledge, products, processes, organizations, and new managerial and procedural skills intended to improve public services and policies (De Vries et al., 2016). The innovative process requires individuals and organizations to identify and implement new ideas (improved or renewed) to enhance public sector performance in solving problems efficiently and effectively, resulting in higher value for citizens (Emmendoerfer, 2019a).

The public innovation speech, an efficient alternative for improving the quality of public services, gained notoriety from the managerial reforms of public administration, embedded in neoliberal speeches and incorporating private sector instruments into the public sector (Osborne & Brown, 2005). The New Public Administration (NPA) stream is based on public organizations' actions that constantly search for efficiency and effectiveness, with innovation being a key topic for modernizing bureaucratic structures (Denhardt & Denhardt, 2016). Although having emerged with managerial reforms, such speech had its relevance and contribution to public organizations strengthened by the New Public Service (NPS) line assumptions.

This approach complements NPA assumptions, resuming public administration's political and relational dimensions (Denhardt & Denhardt, 2016). As main attributes, it emphasizes the quality of the services provided, empowering citizens in the process of choosing public services and strengthening

mechanisms of accountability and transparency, as well as in the search for greater participation and voice in political decisions, with greater involvement of society in management and policymaking (Cavalcante, 2017). Hence, we observe a direction toward efficiency and control and collaboration, cooperation, co-production, and networking with citizens and private organizations for designing and delivering innovative public services (Kissler & Heidemann, 2006; Silvestre, 2019).

Inspired by the ideals of NPS, innovative actions seek to increase participation and collaboration but mainly act in the face of the complex problems of the contemporary environment, such as the public health and socioeconomic crises caused by the Sars-Cov-2 pandemic (Covid-19), which reinforced the need for innovative solutions. Therefore, governments are growing concerned about creating different environments for experimentation, innovation, and co-creation in the public sector, especially regarding open government and collaborative innovation to generate efficient results (Hjelmar, 2019; Tõnurist et al., 2017). These elements converge to strengthen the idea of open innovation in the public sector, comprising government actions to harness resources and knowledge from different government departments, citizens, and private organizations to solve public problems, enhancing service innovation and contributing to the creation of public value (Mu & Wang, 2022).

Among the experimentation and open innovation environments in the public sector, the creation of Public Sector Innovation Labs (PSIL) has grown in recent years (Acevedo & Dassen, 2016; Criado et al., 2020; McGann et al., 2018; Sano, 2020; Silva-Junior et al., 2021; Timeus & Gascó, 2018; Tõnurist et al., 2017). PSIL are spaces oriented to experimentation and co-creating services and policies, aiming to strengthen innovation, improve practice, and add public value by incorporating design, creativity, and user-centricity to complex government challenges (Cole, 2022). In these organizations, alternatives are developed to assist the state system and its employees with tools and knowledge for solving complex public administration issues by incorporating and using information technology in management and service provision (Galhardo, 2019).

PSIL, as an organizational innovation, develops innovative solutions that make public organizations more efficient in providing higher-quality services to citizens and strengthens the idea of public innovation as a must (McGann et al., 2018). Innovation relevance is associated with the different challenges governments face, which result in citizens' lack of trust, low legitimacy, and decreased direct representation. Thus, renewal needs to

make government actions more flexible, agile, and responsive (Ferreira & Botero, 2020; Lewis et al., 2020).

Since the risks of innovating in the public sector are high, and the consequences of a potential failure should be considered, PSIL are units that internalize risks and foster new practices in public management (Acevedo & Dassen, 2016). Innovation occurs through a creative and collaborative environment, where new knowledge and ideas are shared and implemented, with the primary goal of bringing government spaces closer to end users. This approach involves State bodies accepting new ideas to provide higher quality public services by meeting citizens' needs (Galhardo, 2019), even involving them in their co-production.

In the specialized literature, studies on innovation labs are still incipient, and one of the challenges is the absence of a consolidated theoretical framework since only practical experiences that produce technical reports and mappings have guided the analysis and tried to theorize these initiatives (Sano, 2020). Although it is a field under construction, some papers have analyzed the role of these labs through different approaches, such as open innovation environments for smart cities (Galhardo, 2019); spaces for fostering smart governance (Criado et al., 2020) and experimental governance (Ferreira & Botero, 2020); collaborative environments to change procedures in the public sector and public policymaking processes (Lewis et al., 2020; McGann et al., 2018; Tõnurist et al., 2017); and instruments for strengthening state capabilities through innovation and design tools (Silva & Tessarolo, 2020).

Therefore, laboratories can play different roles as innovation intermediaries, exploring and incorporating new knowledge, spreading new technologies, managing innovation, and building networks of actors (Howells, 2006). In this sense, it is necessary to explore the possibilities of laboratories providing more innovative and collaborative public services and changes in public organizations from NPS ideas. Hence, based on these arguments, the following question guided the development of this essay: As innovation intermediaries, how can innovation labs contribute to improving the provision of public services in the light of the NPS model?

METHODOLOGICAL CHOICES

This essay proposes a conceptual framework indicating how innovation labs can improve public service provision in light of the NPS model. This paper is timely due to the growing number of public organizations that have

used innovation laboratories as an alternative to create an innovation culture in the public sector, in addition to contributing from an experimental, collaborative, creative, and dynamic environment to the improvement of public services, with potential for replication and use in other public organizations (Lewis et al., 2020). In addition, as innovation intermediaries, laboratories can act to modernize public administration processes and create new mechanisms for citizens' participation (Acevedo & Dassen, 2016).

To prepare this theoretical essay, we had to clarify the choices and procedures adopted (Bertero, 2011). We started with a survey of bibliographic sources inspired by a non-systematic literature review of the publications on NPS, Public Sector Innovation (PSI), and Public Sector Innovation Laboratories (PSIL), from books, scientific articles, dissertations, and theses, available on the internet. The search was based on keywords related to the topic, such as "innovation laboratories," "innovation in the public sector," "innovation," AND "new public service" in Portuguese and English on the Google Scholar platform. We chose this search platform because of its coverage and availability (access) of more papers in electronic format. As inclusion and exclusion criteria, we read the abstracts to select the articles related to the themes and selected those more adherent to the object of study.

The collected papers were discussed in light of possible connections and implications with the NPS stream, considering laboratories as intermediaries to enhance the quality of public services provided through innovative solutions. This discussion is relevant, given the growing, although incipient, specialized literature on PSIL (McGann et al., 2018; Sano, 2020). For data analysis and theoretical propositions, we sought to identify the main characteristics of NSP streams and relate them to the potential of innovation labs to complement existing gaps in the role of these spaces in proposing innovative public services.

NEW PUBLIC SERVICE

The NPS is based mainly on the fact that public organizations' management is different from that of private organizations since, in the former, the managerial work seems less clear, and political actors deal with different perspectives in promoting value, whose measurement is complex and challenging (Moore, 1995). Therefore, the political dimension must be present within public sector actions, which was not so evident in the NPA's assumptions, as its main focus was on goals and results.

The ideas present in the NPS speech argue that public administrations, by adopting this model, will provide resources for all individuals who depend on or relate to public organizations in some way, allowing them to co-create solutions with public servants, changing the decision-making process (Osborne et al., 2022). Decisions start at the lowest level of the system or community and will serve as the basis for decisions at the highest levels of the public sector organizational structure (Benson et al., 2021). Hence, decisions related to public services and policies would shift from a centralized perspective, with citizens as customers, to a decentralized perspective, where citizens are understood as shareholders, thus forming a social model of public administration (Benson et al., 2021; Denhardt, 2012; Gomes et al., 2020).

For Denhardt (2012), this social model of public administration is based on some principles, such as services and public policies should be oriented to the exercise of citizenship to meet citizens' needs and interests; public servants should seek the common good and achieve solutions to public problems, based on principles of equity; they should also act together with citizens, in collaborative spaces, as there is a mutual responsibility in identifying and proposing solutions to public problems; they should base their actions on principles of accountability and responsiveness; and they should act as leaders, to engage citizens in sharing interests.

Public sector actions should be oriented toward joint effort and networking, transparently and shared between the state, private organizations, the third sector, and citizens. Joint action aims to find innovative solutions for social problems through alternatives that seek a sustainable future for all participants (Kissler & Heidemann, 2006). Such innovations can be related to developing more inclusive public services that are transparent and appropriate to the principles proposed by NPS and management models that can support a deliberate and systematic process of other innovations (Klumb & Hoffmann, 2016).

In addition, sharing common values and interests through participation and dialogue with society requires civil servants to assist and engage citizens, sharing power and exercising their function with commitment, integrity, and respect (Denhardt & Denhardt, 2016). Therefore, public servants will be seen as "figures of safety and certainty," contributing to increasing citizens' trust in public administration (Correia et al., 2020).

For Moore (1995), public servants must act as entrepreneurs and go beyond their assignments, with a clear goal of generating public value. Thus,

they must be proactive and creative, build political coalitions, and design innovative alternatives, whether by providing public services or improving organizational efficiency. The availability of organizational platforms for achieving political goals and involving citizens in building policies through mechanisms of deliberative democracy and public policy networks is essential for supporting the idea of public governance (Silvestre, 2019).

There is a need for intrapreneurial skills and behaviors to act in the engagement and collective building of solutions for public problems with creativity, proactivity, and calculated risks (Emmendoerfer, 2019b). Therefore, attention is put on the integration and coordination of multiple participants' actions, especially at subnational levels, given their greater proximity to the demands of society for the provision of public services and implementation of public policies. Understanding the involvement and collaborative relationship between public organizations, the private sector, and citizens is important, as well as knowing the effects on behavior and the adopted structures (Silvestre, 2019).

One of the main assumptions of NPS is to place citizens and civil servants at the center of the political process, which involves the implementation of public services (Oliver-Mora & Iñiguez-Rueda, 2016), in at least three levels: macro, meso, and micro. The macro level comprises government action, including laws, policies, and strategic plans that define the general lines that local and regional agencies should follow for implementing services. The meso level comprises the institutional action, in which each organization defines its action based on its secretariats and specific projects. Finally, the micro level consists of public action, in which the interaction between public servants and society takes place, corresponding to the service provision process to society.

In addition, there are trends for the public sector that emerge mainly from NPS assumptions, such as 1. improvement of transparency mechanisms, open government, and accountability; 2. promotion of e-government as a strategy for expanding and facilitating access and citizen participation in public administration; 3. new public policy arrangements that foster a more active role for citizens in producing public goods; 4. acting in networks and partnerships with state, social, and private actors; and 5. expanding the use of information technology to expand the quality and efficiency in providing public services (Cavalcante & Cunha, 2017, p. 23). Table 1 shows the main elements of NPS.

Table 1

The main elements of the New Public Service

Dimension	New Public Service
Objectives	Achieving public value, which, in turn, involves greater effectiveness in addressing problems surrounding the public sector; it extends from service delivery to system maintenance.
Managers' role	Play an active role in directing deliberation networks and delivering and maintaining overall system capacity.
Definition of public interest	Individual and public preferences are achieved through a complex interaction process involving deliberation on inputs and opportunity costs.
Addressing the *ethos* of public service	No sector has a monopoly on public service *ethos*; keeping the relationship through shared values is essential.
Preferred system for service provision	Different alternatives and a reflexive approach to intervention mechanisms for achieving results are selected pragmatically.
Contribution to the democratic process	Delivering dialogue: integral to everything that is accomplished, a process of democratic exchange is essential.

Therefore, NPS proposals sought to guide the actions of public administration towards a participatory dialogue with the population so that citizens can assist in achieving and providing public services through spaces of dialogue and learning exchanges, seeking to change generated knowledge into innovative solutions. To do that, forming actor networks is an important mechanism to stimulate open innovation in the public sector, and innovation laboratories can be an intermediary channel between governments and society, using agile methodologies and dynamic actions, as discussed in the following sections.

INNOVATION IN THE PUBLIC SECTOR

PSI has gained prominence in the global scenario, from the interest of politicians and rulers in the formation of the modern State, as an alternative to deal with complex socioeconomic challenges in the national territories and their foreign relations with other countries (Emmendoerfer, 2019b). In addition, the incorporation of information technologies by governments since the 1990s to expand and improve the quality of services provided was an important driver of innovation in public organizations, improving

differentiation, efficiency, effectiveness, transparency, and control, besides stimulating collaboration and closeness with citizens as agents of change (Janowski, 2015).

The fourth version of the *Oslo Manual*, developed by the Organization for Economic Cooperation and Development (OECD), states that

> [...] an innovation is a new or improved product or process (or a combination of them) that is significantly different from the unit's previous products or processes, and that has been made available to potential users (product), or used by the unit (process) (OECD & Eurostat, 2019, p. 60).

This is directly related to change, whether in the form of a new product or process for an established organization or stakeholders.

As a result of State actions to improve and increase efficiency within its fundamental purpose of providing services to the population, innovation in the public sector can be defined as the creation and implementation of new processes, products, services, and service provision methods that result in improved efficiency, effectiveness and quality of outcomes (Mulgan & Albury, 2003). Osborne and Brown (2005) relate it to the insertion of new elements, such as new knowledge, a new organization, and new procedural skills, involving "the creation, development, and implementation of practical ideas that achieve a public benefit" (Mulgan, 2014, p. 5).

Among PSI definitions, innovation oriented towards improving or enhancing services stands out since this dimension covers all the others and is associated with direct provision to citizens. Service innovation is defined as introducing a new or significantly improved service compared to the organization's existing services and goods, resulting in new forms of access and delivery (Bloch, 2011; Emmendoerfer, 2019a).

Hertog (2000) presents four dimensions of service innovations in the private sector, which can be incorporated and adapted for the public sector: innovation in the concept of service (a new service for a specific context), innovation at the interface with society (changes in the way citizens are involved in designing the service, producing, and delivering); innovations in service provision systems (changes in the way service providers do their work); innovation in technology (used for innovation in processes and service provision).

For a service innovation to be efficient and create public value, Borins (2006) considers five aspects: 1. use of a systemic approach; 2. use of

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information technology; 3. process improvements; 4. involvement with private organizations and volunteers; and 5. empowerment of communities, citizens, and employees. The first dimension regards the collaboration process between different public sector organizations in proposing solutions for public problems. For Isidro-Filho (2017), innovation should be considered a public value shared among politicians, managers, and civil servants to engage the most different agencies in proposing solutions for society's demands.

The use of information technology has brought benefits to governments, especially regarding the adoption of new management processes that led to improvements in the quality of public services in public policies, as well as in public organizations themselves, as we observe in studies on innovation awards in Brazil (Camões et al., 2017). Tõnurist et al. (2017) argue that governments have sought to adopt and disseminate ICT, exploring the possibilities for organizations, ranging from participatory feedback mechanisms to web analytics and big data.

Process improvement is associated with making the public sector more efficient in providing services because governments operate with fiscal constraints and the constant need for increased productivity and citizens' trust (Cavalcante & Cunha, 2017; Tõnurist et al., 2017). Finally, the involvement of other organizations and citizens' empowerment in the process of collaborative and open innovation in the public sector helps creative problem-solving by gathering different experiences, ideas, and opinions. This fact generates a process of constant learning and minimizes information asymmetry by engaging those who experience public problems daily and can propose solutions to change their reality (Torfing, 2018).

Including new players in thinking of innovative solutions for public problems is inherent to the open innovation speech (Chesbrough, 2003). Such a process aims at developing capabilities and is an innovation strategy focused on collaboration, where organizational boundaries are dissolved, and emphasis is on the process of building coalitions with external actors to solve challenges in a shared way, involving information exchange, resources, and mutual learning (Torfing, 2018). According to Huizingh (2011), open innovation requires managers to make new decisions for developing and exploiting innovation activities, incorporating new knowledge internally, and improving the effectiveness of outcomes externally. In the case of the public sector, the results of open innovation should focus on greater organizational efficiency in providing services and public policies and maximizing

results for citizens in the form of public value.

In open innovation, there are also innovation intermediaries, which are organizations or actors located between the source of new knowledge and the searcher of knowledge and resources needed for innovation (Howells & Thomas, 2022). Intermediaries assist in the creation of relationships between knowledge and complementary resources originating from different actors involved with innovation, who provide services for the search and selection of potential partners, covering the entire process of innovation, from the idea to the implementation and analysis of results (Howells, 2006; Howells & Thomas, 2022).

Therefore, in order to develop an environment conducive to service innovation, open and collaborative, in the public sector, different innovation laboratories have been created to mediate innovation and change the processes of traditional bureaucratic structures or to offer assertive answers for complex public problems, with creative performance by public servants (Acevedo & Dassen, 2016).

INNOVATION LABS AND PERSPECTIVES FOR PUBLIC SERVICES

PSIL are at the heart of the innovation speech as government instruments to bring greater efficiency and effectiveness to public services through experimentation, prototyping, and co-creation with different actors (Acevedo & Dassen, 2016; Ferreira & Botero, 2020; Lewis et al., 2020; McGann et al., 2018; Sano, 2020; Tõnurist et al., 2017).

For Tõnurist et al. (2017), innovation labs are not a new phenomenon since there were similar manifestations during the "government reinvention" process in the United States during the 1990s. However, this subject has gained relevance and political trend, especially in Latin America, due to the growing interest in evidence-based policies and Open Government agenda to foster collaboration, participation, and transparency to increase the trust and credibility of public organizations (Acevedo & Dassen, 2016; McGann et al., 2018; Sano, 2020).

According to McGann et al. (2018), governments have turned to innovation labs to address shortcomings identified in the traditional policy approach and design of public services. Schuurman and Tõnurist (2017) consider that laboratories' mission is to foster citizen-focused services based on information technology solutions, to address external changes,

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and are considered experimentation islands, that is, spaces intended for testing innovative services and policies, taking risks and stimulating dynamism. By looking at the contextual characteristics of the public sector, Tõnurist et al. (2017) identified six reasons why innovation labs should be created: complexity of the external environment, technology, competition between classic and emerging structures, emulation, consolidation of expertise, and learning.

For Sano (2020, p. 18), PSIL can be defined as "collaborative environments that seek foster creativity, experimentation, and innovation through the adoption of active methodologies and co-creation in problem-solving". Lewis et al. (2020) consider them dynamic and flexible spaces that address complex public and social problems that traditional government structures fail to solve. They experimented and proposed new services and innovative public policies while seeking to change government operations by incorporating new visions and attitudes. Among these visions, an important element is the responsiveness of public servants in meeting the needs of citizens, complying with public interest, and fostering transparency and accountability of public actions (Denhardt, 2012).

These spaces are formed by multidisciplinary teams with different competencies and skills and use innovation tools and approaches that combine digital methodologies, data science, behavioral insights, and user-centered design methodologies, such as design thinking and ethnographic design (Acevedo & Dassen, 2016; Lewis et al., 2020). Moreover, labs are oriented towards collaborative innovation, empowering and engaging different stakeholders to propose joint solutions to public and social problems (Emmendoerfer, 2020). In this sense, it approaches a decentralized perspective for proposing public services and policies by viewing citizens as active agents capable of contributing to public actions (Benson et al., 2021).

In a comprehensive research funded by the Inter-American Development Bank (IDB), Acevedo and Dassen (2016) listed the main objectives of innovation laboratories: 1. fostering an innovative environment in public administration; 2. developing specific innovations; 3. introducing technologies in public administration; 4. modernizing public administration processes; 5. creating new mechanisms for citizen participation; 6. introducing new communication methods in public administration; and 7. opening public administration data. Given these goals, laboratories are considered landmarks that intermediate government change by generating ideas and knowledge that enable practical solutions to public problems, causing changes in organizational culture and in the people who act or are involved in that

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context (Ferrarezi et al., 2018).

Puttick et al. (2014), based on a study on PSIL in different countries, ranked them according to four main orientations: developers and creators, facilitators, educators, and architects. Developers and creators focus on developing solutions to specific problems and challenges and introducing technologies in management. Facilitators focus on opening up the government and creating mechanisms for the participation and engagement of citizens, Non-Governmental Organizations (NGOs), and the private sector in search of new ideas.

Educators emphasize changing how governments approach innovation, modernizing processes, developing skills and capacities, and opening up public administration data. On the other hand, architectural labs generate changes with a broader horizon of action and seek to act in a wider social context (Puttick et al., 2014). Although ranked according to different orientations, any laboratory can act in more than one of them or even in all four (Sano, 2020). These classifications strengthen different concepts of innovation intermediation, allowing knowledge and resources to be available to government actors (Howells & Thomas, 2022) and enabling other organizations to develop their innovative capacity.

Laboratories are understood as part of a shift towards more decentralized and networked ruling, oriented to different aspects of governance. The first regards changing the direction of bureaucracies, time, and management of public services towards more agile, flexible, and citizen-centered procedures. The second involves inserting new actors in decision-making processes, making public actions more participative and collaborative. And the third consists of the interest in the experimental development of public policies (Ferreira & Botero, 2020).

Hence, laboratories are considered "border spaces" and intermediaries of innovation focused on the internal environment of the public sector for developing new capabilities in civil servants, as well as reducing the bureaucracy of the processes of public administration; they also emphasize the external environment, oriented to understanding and joint building involving actors with different knowledge and interests (Long, 2020). This strengthens the social and collaborative dimension of innovation laboratories as spaces for civil servants and private actors (companies, citizens) to collaborate and build links for achieving and providing public services (Denhardt & Denhardt, 2016; Kissler & Heidemann, 2006).

Among the innovative approaches used by innovation laboratories for

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improving public services, three stand out: co-creation, design thinking, and experimentation. Co-creation involves building solutions together, allowing the transaction of resources, knowledge, and skills between civil servants and partners in the innovation process (Isidro-Filho, 2017). This approach enables different forms of individual and organizational learning by exchanging information between the laboratory and other members of the collaborative networks formed (Silva-Junior et al., 2021).

Design thinking is an innovative approach that integrates people's needs with what is technically feasible and available to create public value (Laboratorio de Gobierno, 2021). Through this approach, public servants seek collaborative, creative, and human-centered ways of solving complex problems innovatively and knowing users' reality in depth (Escola Nacional de Administração Pública, 2018). Therefore, it involves empathy in viewing reality through beneficiaries' eyes, minimizing biases and preconceptions.
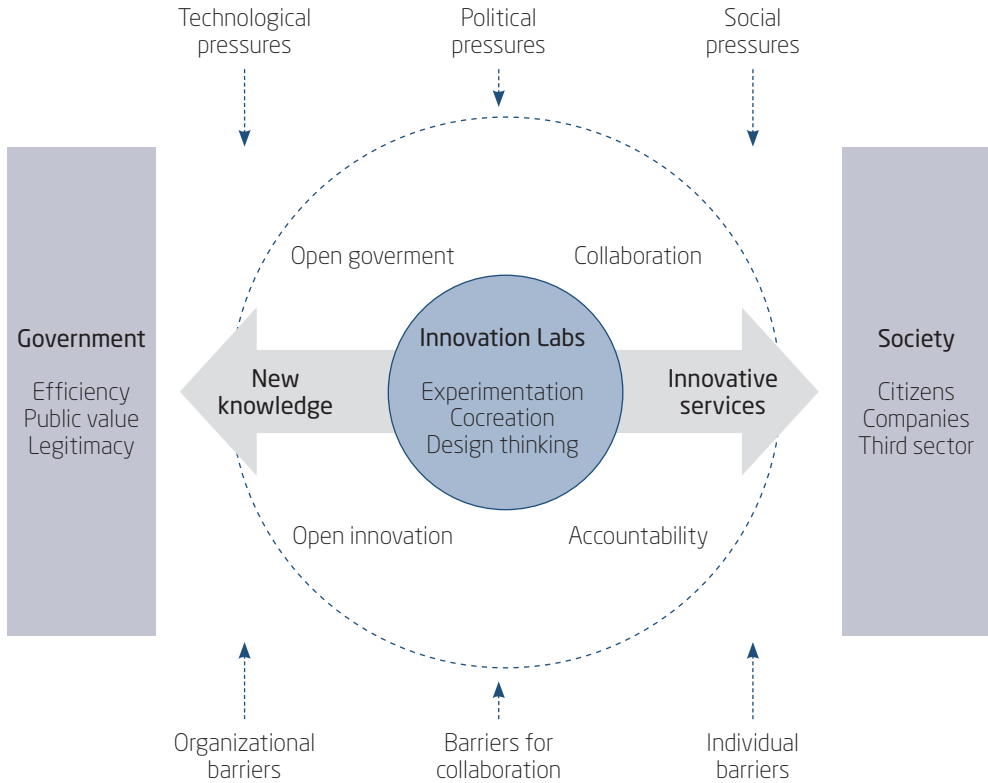
Experimentation is directly linked to innovation labs' mission to serve as an experimental environment for services so projects can be tested before implementation and check if ideas produce effects. This process enables minimizing the risks and costs of failure, as well as assisting in the proposition of more assertive solutions to complex problems, since constant feedback from users and hands-on learning allow a better understanding of the problem and facilitate managing expectations and partners' engagement (Ferrarezi et al., 2018).

Hence, innovation laboratories, as dynamic environments oriented to innovatively changing public services, also seek to implement elements of the NPS, especially in collaboration with citizens and rescuing the political dimension of public administration, allowing knowledge exchange and the development of individual and collective competencies. Figure 1 shows the relationship and possibilities of innovation laboratories for proposing innovative services and incorporating elements of NPS, as well as pressures from the environment (changes and barriers), which can influence their performance.

As intermediaries of innovation, laboratories can play an important role in the interrelation between government and society by proposing innovative and efficient public services. However, some barriers permeate this process, associated with individual, organizational, and collaborative characteristics that can minimize or hinder PSI processes (Cinar et al., 2019).

Figure 1

Interrelationships of Innovation Labs and the New Public Service

Technological pressures • Political pressures • Social pressures

Government — Efficiency, Public value, Legitimacy

Open goverment • Collaboration

Innovation Labs — Experimentation, Cocreation, Design thinking

New knowledge • Innovative services

Society — Citizens, Companies, Third sector

Open innovation • Accountability

Organizational barriers • Barriers for collaboration • Individual barriers

As individual barriers, the difficulty or lack of teamwork habits in the public sector can restrict the role and reach of innovation labs, which may lead to disengagement from tasks (Grzeszczeszyn, 2015). For Torfing et al. (2016), another individual barrier is the difficulty of sharing responsibilities, where politicians see themselves as sovereign in the decision-making process, having all the power and responsibility, and public servants, as efficient managers, may not be comfortable with the idea of collaborating with individuals and other organizations they cannot control.

As organizational barriers, the shortcomings related to people management policies, a low incentive for professional training, and the absence of periodic training programs in innovation and entrepreneurship in the public sector beyond agile method tools may limit the dissemination and implementation of innovative services (Emmendoerfer, 2019b). Another aspect

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consists of the risk of precarization of labor relations or of the efficiency of innovative public services associated with the timing and speed of answering external demands; these may improve the response time but involve questioning the necessary conditions to keep this pace and innovative conditions for providing public services, given the fragility/limitation of remuneration policies and career progression in the public sector (Silva-Junior, 2022).

Regarding barriers to collaboration, we highlight the internal competition and conflicts between entrepreneurial and traditional servants not engaged in providing public services, which can generate resistance and question the feasibility of innovation labs, given the wish to keep the *status quo* (Bloch, 2011). Another aspect refers to inappropriate capacities or unskilled people involved in the co-participation of public service provision. This can cause poor quality or a false image of good public service, increasing transaction costs (Torfing et al., 2016). For Asenbaum and Hanusch (2021), the engagement of stakeholders often hides the fact that only experts, policies, and private sector actors collaborate, making access to laboratories highly restrictive and channeled to personal networks.

Although incorporating NPS postulates by innovation laboratories in proposing innovative services can bring benefits to society and greater legitimacy to the public sector, this process may involve criticisms and individual, organizational, and collaboration barriers, which can affect it. Therefore, including new elements in public management requires a reflexive and holistic analysis of the positive and negative aspects, aiming at greater organizational efficiency and provisions of a higher public value to society.

CONCLUSIONS

Seeking to answer the question proposed at the beginning, this essay shows, through a conceptual framework, how innovation laboratories can contribute to improving the provision of public services in light of the NPS model. In this sense, it sought to demonstrate that innovation labs are important intermediaries to bring public agencies closer to citizens' demands and, based on new knowledge, contribute to improve public organizations' management and suggesting innovative and more efficient services.

As observed, NPS sought to resume the political dimension of public administration, strengthening the values of citizenship and political participation and encouraging collaboration with citizens in suggesting public services. This collaborative process involves state entities being receptive to

new ideas and information exchange, enabling individual and organizational learning and reinforcing the role of laboratories as innovation intermediaries in the public sector (Howells, 2006).

Therefore, PSIL are dynamic environments where public servants can use their creative potential to develop innovative solutions, besides acting directly with citizens, as a border space oriented to collaborative and open innovation. Another point of intersection with NPS concerns delivering public value through more assertive services and public policies, in which informational asymmetries are minimized by immersing in the dimensions of the problem, especially from the citizens' perspective.

As theoretical contributions of the study, based on the proposed framework, we highlight that innovation is an important means to implement NPS postulates, especially from dynamic, creative, and collaborative spaces such as PSIL. In this sense, we encourage the creation of these spaces as an alternative for mediating and fostering the formation of networks of actors and changing the way public organizations operate, shifting from a bureaucratic and reactive structure to a more flexible and proactive one. In addition, we highlight the importance of citizens and private organizations in building solutions for public problems, which can boost their feeling of belonging and, at the same time, contribute to increasing the legitimacy of public organizations.

However, we also highlight the analysis of criticisms while incorporating innovation laboratories and suggesting innovative public services, as these spaces should not be considered salvation for public problems. Moreover, individual, organizational, and collaborative barriers can limit achieving the proposals, demanding revisions of specific characteristics inherent to public organizations for better use of innovation to improve efficiency, effectiveness, and legitimacy of the public sector for society.

As a limitation of the study, we mention the reach of such an essay since we needed to address empirical elements that could validate or refute the presented elements by checking their existence in the daily life of the public sector. However, given its novelty aspect in addressing potential paths to open innovation and of laboratories as innovation intermediaries, it can be a starting point to provide insights and theoretical elements for the public administration field, highlighting the relevance of understanding innovation labs in the public sector, at the interface with NPS.

Finally, as possibilities for a new agenda of future studies, it is important to analyze the different dynamics that may exist in suggesting innovative services that can be done by innovation laboratories, as well as the costs

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and risks inherent to the incorporation of these spaces in the public sector, according to the particularities of each region and level of government, especially in developing countries. We also highlight the analysis of the antecedents and institutional frameworks of the global movement towards PSI in a comparative perspective between countries, as well as the need to observe the role and capabilities of public organizations in the context of the triple/quadruple/quintuple helix.

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