

ARTICLES

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INNOVATION LABORATORIES AND BARRIERS TO INTRAPRENEURSHIP IN GOVERNMENTS

Laboratórios de inovação e barreiras ao intraempreendedorismo em governos

Laboratorios de innovación y barreras al intraemprendimiento en los gobiernos

Alessandro Carlos da Silva Junior^{*1} | alessandro.junior@ufv.br | ORCID: 0000-0003-3467-9093

Magnus Luiz Emmendoerfer¹ | magnus@ufv.br | ORCID: 0000-0002-4264-8644

Nayara Gonçalves Lauriano² | nayara.lauriano@ufv.br | ORCID: 0000-0002-0992-9882

Maysa Alves Correa Silva² | maysa.correa66@gmail.com | ORCID: 0000-0003-4479-1353

^{*}Corresponding author

¹Universidade Federal de Viçosa, Departamento de Administração e Contabilidade, Viçosa, MG, Brazil

²Universidade Federal de Minas Gerais, Departamento de Ciências Contábeis, Belo Horizonte, MG, Brazil

ABSTRACT

This article analyzes the potential of innovation labs to minimize the barriers to intrapreneurial behavior within the public sector. Employing a qualitative approach, the study uses bibliographical sources, documental research, and structured questionnaires applied to a sample of 22 civil servants working in 18 innovation laboratories identified in South America. The results reveal that innovation labs contribute to minimizing the barriers to intrapreneurial behavior, especially those related to the bureaucratization of processes, low flexibility, resistance to change, and arrogance. These spaces achieve this by simplifying processes, using methodologies and training courses to stimulate creativity and innovation, and fostering a closer alignment between public servants and citizen demand. This research contributes valuable insights into how innovation labs can create a culture of entrepreneurship and innovation in the public sector, given the dynamic characteristics of these spaces and the use of agile methodologies, transforming the mentality of public servants.

Keywords: innovation laboratories in government, intrapreneurial behavior, barriers, potentialities, South America.

RESUMO

O objetivo do artigo é analisar as potencialidades dos laboratórios de inovação para minimizar as barreiras do comportamento intraempreendedor no setor público. Para tal, utilizou-se de uma abordagem qualitativa, com base em fontes bibliográficas, documentais e questionários estruturados, para uma amostra de 22 servidores públicos em 18 laboratórios identificados na América do Sul. Como resultados, destaca-se que os laboratórios de inovação contribuem para minimizar as barreiras do comportamento intraempreendedor, sobretudo relacionadas à burocratização dos processos, baixa flexibilidade, resistência à mudança e arrogância, a partir da simplificação de processos, utilização de metodologias e cursos de estímulo à criatividade e inovação, e aproximação dos servidores públicos com a demanda cidadã. Como contribuição, destaca-se que a implementação de laboratórios é importante para a criação de uma cultura voltada ao empreendedorismo e inovação no setor público, dadas as características dinâmicas desses espaços e uso de metodologias ágeis, transformando a mentalidade dos servidores públicos.

Palavras-chave: laboratórios de inovação em governo, comportamento intraempreendedor, barreiras, potencialidades, América do Sul.

RESUMEN

El objetivo del artículo es analizar las potencialidades de los laboratorios de innovación para minimizar las barreras del comportamiento intraempreendedor en el sector público. Para ello, se utilizó un enfoque cualitativo, basado en fuentes bibliográficas, documentos y cuestionarios estructurados, para una muestra de 22 servidores públicos en 18 laboratorios identificados en América del Sur. Como resultado, se destaca que los laboratorios de innovación contribuyen a minimizar las barreras del comportamiento intraempreendedor, relacionadas principalmente con la burocratización de los procesos, baja flexibilidad, resistencia al cambio y arrogancia, mediante la simplificación de procesos, uso de metodologías y cursos para estimular la creatividad y la innovación, y acercamiento de los servidores públicos a la demanda ciudadana. Como aporte, se destaca que la implementación de laboratorios es importante para la creación de una cultura enfocada al emprendimiento y la innovación en el sector público, dadas las características dinámicas de estos espacios y el uso de metodologías ágiles, transformando la mentalidad de los servidores públicos.

Palabras clave: laboratorios de innovación en gobiernos, comportamiento intraempreendedor, barreras, potencialidades, América del Sur.

INTRODUCTION

Intrapreneurial behavior in the public sector refers to the proactive and coordinated actions of public servants, individually or collaboratively, to identify innovative opportunities within organizations. This behavior is characterized by creativity, calculated risk-taking, and a focus on creating public value by leveraging public and private resources to explore social opportunities (Emmendoerfer, 2019; Diefenbach, 2011).

Despite the importance of promoting intrapreneurial behavior to drive change in public organizations, several outdated and ineffective management practices represent obstacles to public servants' willingness to innovate. These practices include bureaucratic processes, limited managerial autonomy, ambiguous or conflicting goals, flawed or absent human resource management tools, and inefficient reward and punishment systems (Diefenbach, 2011; Emmendoerfer, 2019; Sadler, 2000).

For Gomes et al. (2015), the very existence of barriers to intrapreneurial behavior as well as the challenges faced in contemporary public administration, reinforce the need for intrapreneurship in government. In this sense, governments increasingly focus on creating environments conducive to experimentation, innovation, and co-creation (Väyrynen et al., 2023), such as innovation laboratories (Criado et al., 2020; Sano, 2020; Santarsiero et al., 2023). The government innovation labs (GILs) offer spaces where public servants can develop alternatives to address complex public administration issues by incorporating new technologies and tools (Galhardo, 2019).

GILs play a critical role in managing the significant risks of innovating in the public sector. These labs can internalize risks and promote new practices in public management (Acevedo & Dassen, 2016). They are oriented toward experimentation, co-creation, and user-centered design to address complex challenges while fostering innovation, improving practices, and adding public value (Cole, 2022).

By encouraging creativity and collective learning within a flexible environment that embraces trial and error, these labs can stimulate public servants to adopt intrapreneurial behaviors (Lewis et al., 2020). For instance, in South America, GILs have shown a high capacity to empower public servants to become intrapreneurs and prepare them to proactively take on leadership roles, look for new opportunities, and be closer to citizen needs (Silva-Junior et al., 2022).

Thus, GILs are valuable tools for promoting intrapreneurial behavior, providing spaces for experimentation, co-creation, and prototyping that foster innovation in public services and policies. By training public servants and reducing resistance to innovation, GILs have the potential to cultivate a culture of innovation within the public sector (Silva-Junior & Emmendoerfer, 2023).

Because cultural change within organizations requires preliminary actions to minimize organizational barriers and individual resistance, the following question arises: What is the potential of innovation labs to minimize the barriers to intrapreneurial behavior in the South American public sector?

This study analyzes 18 innovation labs in the continent seeking to answer this question. It is a qualitative study based on documentary research and structured questionnaires. Data was

submitted to content analysis and examined using the diagram for minimizing barriers to intrapreneurial behavior (DMBIB) created to help us understand the potential of these labs. The findings indicate that GILs have the potential to overcome both internal and external barriers to intrapreneurial behavior in the South American public sector.

This study is timely considering the increasing number of innovation labs in Brazil and globally, yet research is scarce on their role in enhancing innovation capacity within the public sector (Silva-Junior & Emmendoerfer, 2023; Timeus & Gascó, 2018). Specifically, few studies focus on how these labs influence the intrapreneurial behavior and learning of public servants (Rosenow-Gerhard, 2020). Therefore, there is a clear need for new research from an integrative and holistic perspective to provide a more comprehensive understanding of the potential of innovation labs.

This article is divided into five sections. Following this introduction, the next section presents a literature review covering the barriers to intrapreneurial behavior in the public sector and the role of GILs. The third section outlines the research methodology. Based on the DMBIB, the results and discussions are then presented, exploring the potential of innovation labs. The last section offers the main conclusions and final considerations.

LITERATURE REVIEW

Barriers to the intrapreneurial behavior in the public sector

Entrepreneurship in the public sector focuses on individuals or groups dedicated to driving change within government organizations (Kearney et al., 2009). While entrepreneurial principles such as innovation and optimization are often associated with the private sector, public organizations must also create value. This can be achieved by delivering services with greater efficiency, quality, variety, or citizen satisfaction; by promoting social outcomes such as improved security, health, education, and poverty reduction; or by enhancing trust and legitimacy among citizens (Bloch & Bugge, 2013). Within public organizations, these entrepreneurial activities are referred to as intrapreneurship (Silva-Junior et al., 2022).

Intrapreneurial behavior involves not only encouraging idea generation and innovation but also providing public employees with the resources and autonomy to deliver greater value to citizens (Morais et al., 2020). Key factors in fostering this behavior include enabling participatory or decentralized decision-making, aligning objectives and goals, promoting integration within cohesive workgroups, and granting access to specialized innovation knowledge (Lauriano & Ferreira, 2022).

A rigid or inflexible organizational environment poses a significant challenge to intrapreneurial behavior, particularly in public organizations characterized by bureaucratic control, hierarchical structures, and centralization (Valadares & Emmendoerfer, 2015). These organizations often tackle complex and structural problems (Lauriano & Ferreira, 2022).

The need for greater flexibility for public agents is connected to the demand for agility and the ability to address contemporary challenges (Bekkers & Tummers, 2018). This flexibility is also related to state reform ideals (Pollitt & Bouckaert, 2011), the adoption of new technologies, and the growing emphasis on transparency and social participation (Young, 2020).

The bureaucratic processes public employees are often subjected to can present significant obstacles to intrapreneurial behavior (Sadler, 2000). Public organizations tend to be more bureaucratic than private entities due to governmental regulations, formal procedures, and complex hierarchies (Kearney et al., 2009). Communication failures (Gomes, 2017) and limited managerial autonomy (Valadares & Emmendoerfer, 2015) are additional factors that can stifle or even prevent intrapreneurship.

Public organizations are more stable and less prone to abrupt change (Timeus & Gascó, 2018). However, resistance to change is a key limiting factor for intrapreneurship. Skills such as leadership and a willingness to take risks are essential to develop innovative solutions in the public sector (Lewis et al., 2020). These skills directly influence intrapreneurial qualities such as proactivity, creativity in problem-solving, autonomy in coordination, and the experimentation of value propositions (Criado et al., 2020).

Low incentives for civil servant training and inadequate reward systems can significantly hinder public employees' engagement in intrapreneurship (Sadler, 2000). This behavior must be encouraged by initiatives that empower them to create more effective work plans to promote innovation (Lauriano & Ferreira, 2022). Additionally, successful intrapreneurship depends on establishing well-structured rewards and punishments, motivating civil servants to generate innovative ideas, pursue creative solutions, and take calculated risks while maintaining the integrity and efficiency of public administration (Sadler, 2000; Silva-Junior et al., 2022).

Intrapreneurship is particularly crucial for public organizations when facing adversity and crisis. Budget constraints, limited control over resources, and political interference often act as barriers to intrapreneurial behavior, leading to instability and a lack of support for innovation (Bernier & Hafsi, 2007; Sadler, 2000; Valadares & Emmendoerfer, 2015).

However, the work by Arundel et al. (2019) suggests that these barriers can also be understood as contexts where public organizations are propelled to seek innovative and efficient solutions. The reduced control over resources may offer intrapreneurs a degree of autonomy, enabling them to pursue opportunities for improvement and implement changes without the burden of excessive bureaucracy. Similarly, political interference can expose gaps in management and policy, pushing intrapreneurs to devise creative alternatives that address immediate challenges while fostering long-term improvements (Lauriano & Ferreira, 2022).

The very presence of numerous obstacles to intrapreneurial behavior in the public sector stresses the importance of such behavior for public administration and service delivery (Gomes et al., 2015). In response to this need, new organizational structures have emerged, designed to facilitate internal adaptations and foster the development of intrapreneurial practices within public institutions.

Government Innovation Labs (GILs)

Government Innovation Labs (GILs) are dynamic spaces within and outside government structures designed to test and promote public sector innovations. Their primary goals are to redesign existing services and processes, develop prototypes, and enhance citizen participation. These labs foster learning, expand innovative capabilities, and strengthen networks (Silva-Junior & Emmendoerfer, 2023; Timeus & Gascó, 2018; Tönurist et al., 2017). GILs are versatile organizations that may be led, enabled, or controlled by government entities, operating with varying degrees of autonomy and funding, including partial or no government support (McGann et al., 2018; Sano, 2020).

These labs facilitate creative processes through co-creation strategies, design thinking, agile methodologies, digital product development, data science, and behavioral analysis (McGann et al., 2018; Rizzo et al., 2017). By adopting experimental approaches to governance, GILs test innovative ideas and techniques to improve public sector-citizen relationships (Schuurman & Tönurist, 2017).

Their work addresses specific challenges and drives broader policy and systemic changes in government (Puttick et al., 2014). GILs bridge the gap between external demands and internal governance needs, such as modernizing management processes and adapting to technological transformations (Acevedo & Dassen, 2016).

In addition to responding to demands by delivering public services and redesigning internal processes, GILs strengthen public management's connection with citizens, preparing the interface between government programs and users (Blomkamp, 2018; Puttick et al., 2014). Because citizens often lack alternative service providers, open government initiatives prioritizing citizen participation are essential for enhancing the accuracy and legitimacy of government actions (Acevedo & Dassen, 2016; Metello, 2018).

GILs have an important role in reorientating strategies, improving processes, optimizing plans, ensuring service delivery, and promoting user engagement. Moreover, GILs contribute to the expansion and dissemination of the culture of innovation by, for example, participating in public servants' training (McGann et al., 2021). These labs facilitate mindset shifts within public organizations, which is critical in developing competencies and the diffusion of knowledge required for public sector innovation (Tönurist et al., 2017).

METHODOLOGICAL PROCEDURES

This study aims to explore the potential of innovation laboratories to reduce barriers to intrapreneurial behavior in the public sector, employing qualitative, descriptive, and exploratory approaches. The research mapped 23 innovation labs across five South American countries between March and September 2021, gathering data from various sources, including documents, books, manuals, websites, databases, and the laboratories' social media channels.

Eighteen mapped labs, representing 80% of the total, agreed to participate in the research. The concentration of these labs in Brazil did not compromise the analysis, given the descriptive and exploratory nature of the study designed to offer insights into the broader South American context of innovation labs, particularly in light of their recent regional expansion (Silva-Junior & Emmendoerfer, 2023).

While the study could not identify the specific sample population of public servants working within these laboratories, prior literature suggests that such teams are often small and dependent on the level of investment and support provided by public organizations (Tönurist et al., 2017). Given the undefined nature of the population, the research sample is classified as non-probabilistic and purposive, consisting of 22 participants (Table 1). Ethical research principles were strictly adhered to, with approval obtained from the Research Ethics Committee (CEP – Opinion 4593592).

Table 1 – Coding of Research Participants

RESEARCH PARTICIPANTS	CODE	COUNTRY	INNOVATION LAB
Research participant 1	RP1	Brazil	(O11).Lab – São Paulo's City Government Innovation Lab
Research participant 2	RP2	Brazil	LA-BORA!gov – Laboratory of Innovative Management of the Secretary of Management and People's Performance of the Ministry of Economy
Research participant 3	RP3	Argentina	LabBahia – Government Laboratory for Citizen Participation and Democratic Innovation
Research participant 4	RP4	Uruguay	MvdLab – Montevideo's Citizen Innovation Lab
Research participant 5	RP5		
Research participant 6	RP6	Brazil	GNova – Brazilian Federal Government's Innovation Lab
Research participant 7	RP7		
Research participant 8	RP8	Brazil	Lab.MG – Innovation Lab of the Government of the State of Minas Gerais
Research participant 9	RP9		
Research participant 10	RP10		
Research participant 11	RP11	Brazil	PequiLab – Innovation Lab of the Government of the State of Goiás
Research participant 12	RP12	Brazil	LAB.ges – Innovation Lab of the Government of the State of Espírito Santo

(continue)

(conclusion)

Table 1 – Coding of Research Participants

RESEARCH PARTICIPANTS	CODE	COUNTRY	INNOVATION LAB
Research participant 13	RP13	Chile	Laboratório de Gobierno – Chilean Government Innovation Lab
Research participant 14	RP14	Argentina	NQNLab – Neuquén's Citizen Innovation Lab
Research participant 15	RP15	Brazil	CEMICAP – Arcos' Municipal Center of Innovation and Training
Research participant 16	RP16	Colombia	LabTeusaquillo – Teusaquillo's Innovation Lab
Research participant 17	RP17	Brazil	LABNit – Niterói's Municipal Innovation Lab
Research participant 18	RP18	Colombia	EiP – Colombia's Team of Public Innovation
Research participant 19	RP19	Brazil	Nidus – Santa Catarina's Government Innovation Lab
Research participant 20	RP20	Colombia	iBO – Bogotá's Public Innovation Lab
Research participant 21	RP21	Brazil	Iris – Ceará's Government Data and Innovation Lab
Research participant 22	RP22	Colombia	SubaLab – Suba's Innovation Lab

Both primary and secondary data were employed for data collection. Primary data were gathered through a structured questionnaire of open and closed-ended questions in Portuguese and Spanish. Additionally, exploratory interviews were conducted with representatives from four of the laboratories identified in the research. The questionnaire was the key instrument to address the central question: “Among the barriers to innovation in the public sector, which do you believe the innovation laboratory has contributed to overcoming and/or minimizing?”

Secondary data were obtained from a comprehensive review of relevant literature and documentary research. This phase included an analysis of publicly accessible materials such as books, scientific articles, regulations, legislation, and decrees. These were sourced from institutional websites, official social media accounts (Facebook, Instagram, Twitter, or LinkedIn), and academic databases like Google Scholar.

The diagram for minimizing barriers to intrapreneurial behavior (DMBIB) was developed to analyze the data. It was based on the responses to the structured questionnaires and created from a 5-point Likert scale, as outlined in Table 2. After individual results were tabulated, a final average was calculated for each barrier to identify the areas in which GILs most significantly contribute to minimizing obstacles to intrapreneurial behavior.

Table 2 – Criteria of the Diagram for Minimizing Barriers to Intrapreneurial Behavior

VALUE OF THE LIKERT SCALE	CLASSIFICATION
Scale 1	Very Low
Scale 2	Low
Scale 3	Medium
Scale 4	High
Scale 5	Very High

Additionally, content analysis was employed, focusing on two key dimensions: (1) barriers to intrapreneurial behavior and (2) the potential of GILs. These dimensions were defined as analytical categories, which guided both the data collection and analysis processes, as detailed in Table 3. The categories related to barriers were established based on the literature review, while those related to the potential of laboratories emerged from the collected data, reflecting real-world insights from the participants. This approach allowed for a structured examination of the challenges and contributions of GILs in fostering intrapreneurship in the public sector.

Table 3 – Analytical Categories

DIMENSION OF ANALYSIS	CATEGORIES
Barriers to intrapreneurial behavior	Low flexibility (LFL)
	Processes bureaucratization (PRB)
	Resistance to change (RCH)
	Communication failures (CFL)
	Limited Managerial Autonomy (LMA)
	Risk aversion tendency (RAT)
	Leadership challenges (LEC)
	Low incentive to professional training (LIT)
	Distorted reward and punishment system (DRP)
	Budget restrictions (BUR)
	Lack of resource control (LRC)
	Political intervention in management (PIM)
Potential of innovation labs	Change-driven
	Bringing public administration closer to citizens
	Changes in the public servants' mindset

RESULTS AND DISCUSSIONS

Innovation Labs and Barriers to Intrapreneurial Behavior

Innovation labs have played a pivotal role in encouraging public servants to embrace change by fostering creativity, agility, commitment, and the pursuit of opportunities. These initiatives aim to address public sector challenges more efficiently. Participants were asked to identify key barriers to intrapreneurial behavior and assess how innovation labs helped minimize or overcome these obstacles. The results, summarized in Table 4, highlight the impact of labs in mitigating various challenges, offering insights into how these environments contribute to fostering a more innovative culture within public organizations.

Table 4 – Diagram for Minimizing Barriers to Intrapreneurial Behavior (DMBIB)

PROCESSES BUREAUCRATIZATION (PRB)	LOW FLEXIBILITY (LFL)	RESISTANCE TO CHANGE (RCH)	RISK AVERSION TENDENCY (RAT)	COMMUNICATION FAILURES (CFL)	LOW INCENTIVE TO PROFESSIONAL TRAINING (LIT)	LEADERSHIP CHALLENGES (LEC)	LIMITED MANAGERIAL AUTONOMY (LMA)	POLITICAL INTERVENTION IN MANAGEMENT (PIM)	BUDGET RESTRICTIONS (BUR)	LACK OF RESOURCE CONTROL (LRC)	DISTORTED REWARD AND PUNISHMENT SYSTEM (DRP)	KEY	
												Very High High Medium Low Very Low	
4.00	5.00	5.00	5.00	4.00	5.00	3.00	4.00	3.00	5.00	4.00	5.00	(011).Lab	
5.00	5.00	5.00	4.00	4.00	4.00	4.00	4.00	4.00	2.00	2.00	2.00	LA-BORA!gov	
5.00	5.00	5.00	5.00	3.00	4.00	4.00	4.00	4.00	3.00	3.00	4.00	GNova	
5.00	4.00	5.00	5.00	4.00	3.00	3.00	4.00	2.00	2.00	2.00	2.00	Lab.MG	
4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	1.00	1.00	1.00	3.00	PequiLab	
5.00	4.00	4.00	5.00	4.00	4.00	3.00	3.00	4.00	5.00	4.00	3.00	LAB.ges	
5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	CEMICAP	
5.00	5.00	5.00	4.00	5.00	2.00	1.00	2.00	4.00	1.00	4.00	5.00	LABN!t	
4.00	4.00	4.00	4.00	4.00	4.00	3.00	4.00	3.00	3.00	3.00	4.00	Nidus	
5.00	5.00	5.00	5.00	4.00	4.00	5.00	3.00	5.00	3.00	3.00	3.00	Iris Lab	
5.00	3.00	3.00	3.00	3.00	3.00	3.00	5.00	4.00	4.00	5.00	3.00	LabTeusaquillo	
5.00	4.00	4.00	5.00	3.00	5.00	5.00	3.00	4.00	5.00	4.00	2.00	EiP	
3.00	5.00	5.00	5.00	5.00	3.00	5.00	3.00	5.00	3.00	3.00	3.00	iBO	
4.00	4.00	3.00	4.00	3.00	4.00	1.00	3.00	1.00	5.00	1.00	3.00	SubaLab	
4.00	3.00	3.00	2.00	4.00	3.00	3.00	3.00	2.00	2.00	5.00	3.00	LabBahia	

(continue)

(conclusion)

Table 4 – Diagram for Minimizing Barriers to Intrapreneurial Behavior (DMBIB)

PROCESSES BUREAUCRATIZATION (PRB)	LOW FLEXIBILITY (LFL)	RESISTANCE TO CHANGE (RCH)	RISK AVERSION TENDENCY (RAT)	COMMUNICATION FAILURES (CFL)	LOW INCENTIVE TO PROFESSIONAL TRAINING (LIT)	LEADERSHIP CHALLENGES (LEC)	LIMITED MANAGERIAL AUTONOMY (LMA)	POLITICAL INTERVENTION IN MANAGEMENT (PIM)	BUDGET RESTRICTIONS (BUR)	LACK OF RESOURCE CONTROL (LRC)	DISTORTED REWARD AND PUNISHMENT SYSTEM (DRP)	KEY	
												Very High High Medium Low Very Low	
4.00	5.00	5.00	5.00	5.00	5.00	5.00	1.00	3.00	3.00	3.00	1.00	NQNLab	
3.00	3.00	3.00	2.00	2.00	1.00	3.00	3.00	2.00	2.00	2.00	1.00	MvdLab	
5.00	5.00	5.00	5.00	5.00	5.00	5.00	3.00	4.00	5.00	3.00	3.00	Laboratório de Gobierno	
4.41	4.27	4.27	4.23	3.86	3.64	3.50	3.36	3.14	3.09	3.05	2.91	Total Average GILs	

Note: For most labs, the full questionnaire results were used to tabulate individual responses based on the Likert Scale. However, for MvdLab (2 responses), Lab.MG (4 responses), and Gnova (2 responses), the average of participants' responses was calculated, with values rounded for standardization and consistency in presenting the results for each lab. The scores for each barrier were then averaged according to the following criteria: up to 1.40 points – Very Low (1.00); 1.50 to 2.40 points – Low (2.00); 2.50 to 3.40 points – Medium (3.00); 3.50 to 4.40 points – High (4.00); above 4.50 points – Very High (5.00).

Overall, the performance of GILs shows a positive, though not highly impactful, contribution to minimizing barriers to intrapreneurial behavior in the public sector. While none of the barriers were categorized as “Very Low,” indicating that GILs have made meaningful strides, their influence was not strong enough to be rated as “Very High.” This moderate impact can be attributed to these labs’ intermediary role, focusing on training public servants, addressing citizen demands, and proposing innovative solutions to public challenges (Silva-Junior et al., 2024).

GILs have primarily concentrated on reducing bureaucratization, increasing flexibility, addressing resistance to change, mitigating risk aversion, resolving communication failures, promoting incentives for professional training, and tackling leadership challenges. However, their influence has been less pronounced in areas such as limited managerial autonomy, political interference in management, budgetary constraints, lack of resource control, and distorted reward and punishment systems.

Among the factors contributing to the limited influence of GILs in overcoming the aforementioned barriers are the short lifespan of most labs (Werneck et al., 2020) and their reliance on political support, which restrict their ability to introduce long-term strategies or policies. GILs often lack the autonomy needed to propose significant reforms, which depend heavily on approval and support from higher government agencies (Sano, 2020; Tönurist et al., 2017).

This reliance, combined with the rigid structures of public organizations characterized by hierarchy and reduced autonomy for civil servants, tends to limit innovation capacity (Timeus & Gascó, 2018; Valadares & Emmendoerfer, 2015). Despite these restrictions, labs such as Gnova excel in scouting initiatives to reduce bureaucracy, identifying trends, methodologies, and technologies, and engaging stakeholders across sectors (universities, civil society, businesses, and citizens) to form partnerships that accelerate innovation. Additionally, they provide training in methodologies to streamline projects, offering incubation, mentoring, and prioritizing initiatives aimed at modernizing the state and simplifying processes (Gnova, 2024).

The leadership challenges in the public sector refer to external factors, such as strategic actions taken by higher-level leaders, and internal ones, including civil servants' attitudes and behaviors toward leadership, coordination, and cooperation (Bernier & Hafsi, 2007). Many GILs focus on fostering leadership not only among top officials but also among all public servants engaged with their initiatives. For instance, the Chilean Government Innovation Lab in collaboration with the National Health Fund (Fonasa), has promoted leadership initiatives that give greater autonomy to public servants to implement transformative ideas (Laboratorio de Gobierno, 2021).

Similarly, 011.Lab stands out for its efforts to build networks among collaborators, citizens, and participants within the innovation ecosystem, which are crucial for co-creating solutions to complex problems and enhancing public servants' capabilities while bridging the gap between governments and citizens (011.Lab, 2020).

Laboratories use methodologies that stimulate creativity and proactivity to deal with risk aversion, low flexibility, and resistance to change, guiding public solutions toward the needs of citizens. In addition, they offer mentoring to other government departments and agencies. It is also worth noting that laboratories such as 011.Lab, EiP, iBO, LAB.ges, and Nidus connect public servants with the innovation ecosystem, promoting a culture of entrepreneurship and innovation by collaborating with startups and various public organizations (011.Lab, 2020; Departamento Nacional de Planeación [DNP], 2022; iBO, 2024; LAB.ges, 2024, Secretaria do Estado de Administração [SEA], 2020).

Regarding change, the data indicate that all laboratories, except MvdLab, develop some type of award, event, or guide to disseminate the practices developed to other public bodies, departments, and organizations. This aims to promote systemic changes in how public services are developed and offered.

Interpersonal and interorganizational communication is a strategic activity and a crucial element in achieving objectives and building coalitions to solve public problems, as it helps organizations add value and maximize the quality of results (Canel & Luoma-Aho, 2019). However, as pointed out by Gomes (2017), organizational complexity, hierarchy, and the multiplicity of actors involved in decision-making for public actions tend to hinder communication and can inhibit intrapreneurial behavior.

The data corroborate the findings in the literature by highlighting that GILs develop actions to improve internal communication between public sector agencies and departments and external communication by simplifying public documents and service charters (Acevedo

& Dassen, 2016; McGann et al., 2021; Silva-Junior et al., 2023). To this end, some laboratories have reformulated traditional communication and restructured documents to simplify and make communication processes more accessible to both citizens and public servants. A notable example is Gnova, which participated in the development of insight maps to consolidate ideas originated in project discussions, providing support for the formulation of government initiatives. As highlighted by Ferrarezi et al. (2018), an “insight” goes beyond a simple idea; it is a deep and insightful understanding of the essence of a problem.

GILs also maintain open communication channels and share relevant information between organizations, making everyone aware of the effectiveness, success, or failure of innovations, which is crucial to fostering intrapreneurial behavior (Gomes, 2017). In addition, communication plays a strategic role in improving services, public policies, and the transparency of public sector actions.

As for the barrier of low incentives for professional training, the public sector still lacks effective policies for people management and career progression, which are restrictive and limit the interest and involvement of civil servants in the search for new knowledge applicable to public management (Diefenbach, 2011; Emmendoerfer, 2019; Sadler, 2000). Therefore, all the laboratories analyzed, except MvdLab, seek to train civil servants through workshops, courses and extensive and intensive training in various topics such as design thinking, service design, user experience (UX), prototyping, lean inception, process management, among others. Initiatives such as the Neuquén Public Open Innovation Facilitators School by NQNLab (PP14), the SubaLab School by SubaLab (PP22), and the 011.Lab (PP1) stand out. The first two initiatives were created to train civil servants and citizens in open innovation and development of theoretical and practical capacities for experimentation, and 011.Lab has one of its lines of action dedicated to the development of innovation capacity.

In addition to the barriers mentioned, the research participants also highlighted challenges such as the lack of physical space for innovation and arrogance. Laboratories are precisely the spaces that enable experimentation, teamwork, a culture of innovation, generation and prototyping of ideas, and the formation of coalitions between individuals and citizens to foster innovation (Labteusaquillo, 2022). Having a space for innovation allows public servants to take risks in an experimental environment, isolated from reality, without worrying about the consequences of eventual failure (Tönurist et al., 2017).

As for the issue of arrogance, innovation labs address it by deeply immersing themselves in the realities of citizens’ demands and needs, which are often complex and evolving. By integrating new information into the formulation of public policies and service design, these labs emphasize the necessity for public servants to continuously update their knowledge and engage directly with citizens. This approach highlights that despite extensive experience in a specific field, it is crucial to seek new insights and maintain direct contact with the population being served. As one participant noted:

The civil servant, in general, often believes they know a lot. For instance: “I’ve been at the Federal Revenue Service for twenty years, so I know everything about my taxpayers. I’ve

worked with poor and rural populations for two decades, so I understand their needs.” So, I think that when, mainly in the labs, we actively listen to real people – there are laboratories that [do not listen to real people and] work with fictional personas: “Ah, let’s imagine the needs of a poor person in the rural area,” then you end up working with your prejudices, isn’t it? – [...] We go there and listen to the person that lives there, in the rural areas. I think that we strip away preconceived notions, you know? I think this is a great barrier when we think that we know everything about others (PP7).

Innovation labs aim to instill a new culture within the public sector that transcends mere innovation. They focus on incorporating citizen perspectives into the solution development process, fostering closer interaction and empathy with their lived experiences. By promoting collaboration, empathy, and immersion in real-life contexts, these labs work to overcome the arrogance barrier and enhance administrative awareness of the significance of citizens’ experiences. This, in turn, improves the effectiveness of public service implementation (McGann et al., 2021).

Potentials of Government Innovation Labs

As highlighted in the study, GILs are crucial in reducing barriers to intrapreneurial behavior within the public sector. They contribute to reshaping not only the operational processes of public organizations but also the mindset of public servants in relation to their daily tasks and understanding of societal challenges. The research participants identified numerous contributions of GILs (Table 3). In terms of their potential to drive change, participants provided the following examples:

Culture change, by guiding a public administration aware of the need to experiment before large-scale implementation as a way of generating useful learning to increase the chances of success (PP6).

They strengthen the capacity for innovation, stimulate civil servants, and help to develop and strengthen a culture of innovation among civil servants, bringing approaches, methodologies, and management tools that enhance the performance of agencies in providing better services and solving complex problems in different ways (PP12).

Innovation units are platforms for organizational responses to the many barriers to public innovation. In addition to being experimental spaces that promote change, they can be spaces for possibilities and actions based on citizen trust, active participation, and co-responsibility (PP18).

Changing cultural patterns, promoting the innovation movement, and consequently changing how public challenges are understood and addressed (PP19).

Innovation labs have the potential to deliver solutions to complex problems. They function as environments for experimentation and appear as an opportunity to rethink structures and propose a new organizational culture focused on innovation (PP21).

Based on the insights from research participants, the desired changes driven by GILs are primarily focused on implementing a culture of innovation guided by experimentation and strategic planning to achieve specific objectives. Additionally, overcoming barriers to innovation is emphasized, which relies on the commitment of employees dedicated to generating value for citizens. These findings align with the perspectives of Carstensen and Bason (2012), Schuurman and Tönurist (2017), and Tönurist et al. (2017), who argue that innovation laboratories are essential for reinventing the public sector and enhancing its mechanisms. By leveraging Information and Communication Technologies (ICTs), systemic approaches, and cost reductions, GILs contribute to more effective public sector performance.

Carstensen and Bason (2012) further emphasize the role of GILs in the evolution of public administration by driving transformations in procedures and behaviors that challenge entrenched and outdated aspects of bureaucracy and internal management. As “islands of experimentation,” innovation labs test and expand public sector innovations while maintaining a degree of autonomy from existing structures and institutions. This autonomy allows labs to act as independent advocates for change within the public sector (Schuurman & Tönurist, 2017).

Another potential of GILs in South America lies in their ability to bridge the gap between the demands of citizens and public organizations. According to the research participants, the laboratories excel in the following areas:

Bringing civil servants closer to citizens, breaking down structural barriers, adapting solutions, and promoting improvements for civil servants and citizens (PP2).

Ensuring other forms of participation: Citizens today articulate their interests in a network and connect in an expanded way, recognizing themselves as agents of change, capable of identifying opportunities in the problems of their communities, and generating initiatives that allow them to be a driving force for social transformation (PP4).

Recognition of citizens as the ultimate recipients of public services and alignment of activities, services, and policies based on the experience, vision, and listening of the people directly affected or involved (PP6).

The main potential of an innovation laboratory in the public sector is to provide structured listening to citizens, contributing to the design of public services that are truly aligned with the population's needs (PP10).

They also bring the government closer to citizens through user-focused approaches and methods that, through collaborative construction, testing, and iteration, increase the capacity to meet citizens' pains and desires (PP12).

We believe that laboratories improve trust between government and citizens, and the participatory-inclusive-transdisciplinary methodologies that we develop in public innovation laboratories have strengthened spaces for citizen participation (PP14).

Innovation labs not only drive internal changes within public organizations but also foster external transformations in the provision of public services, which are increasingly guided and co-created by citizens. This positions the labs as catalysts for collaborative governance and participatory processes, acknowledging society as a key agent of change capable of proposing solutions to community issues (Ferreira & Botero, 2020). Central to this is the enhanced empathy of public servants towards citizens' needs and concerns, which reduces information asymmetries and facilitates the development of more effective, responsive solutions (Lewis et al., 2020).

By promoting interaction between public institutions and society, innovation labs introduce models, strategies, and tools that are often absent in routine public sector practices. These approaches are used to design, test, and implement user-centered solutions, emerging from collective creative processes (McGann et al., 2021; Puttick et al., 2014). McGann et al. (2021) emphasize that labs align with participatory public policy theories, underscoring the importance of active citizen involvement in developing solutions that directly impact them.

The transformation in the mindset of public servants and the development of skills necessary for delivering public services and policies are also noted as key strengths of innovation labs, particularly in their role as educators. Labs contribute to building state capacity by promoting cooperation and collaborative governance, as well as by introducing new processes, technologies, and skills. These aspects were highlighted by research participants, who pointed out the significant educational and transformative role that labs play in modernizing public service delivery.

The focus is on building state capacities to practice innovation, on the state's capacity to deliver more effective public policies, based on the transformation of civil servants [...] the proposal is to create value through a combination of delivery, training, and strengthening of communities, using different approaches and collaborative work experiences to question and reformulate how the city of São Paulo solves its challenges (PP1).

Development and promotion of new skills, including new attitudes, guided by the vision of transformation and agency of civil servants as agents of improvement in providing public services (PP6).

Change in the mentality of civil servants, put innovation on the agenda, not as an additional but as a way of acting that should be perennial and for everyone, regardless of the area of activity or function performed (PP11).

We are convinced that collaboration, cooperation, and creativity should be approaches to open up government in general (PP14).

Paradigm shift, new technologies, new way of thinking (PP15).

These spaces recognize the need to promote creativity in the design of new public policy solutions (PP18).

The GILs excel in developing skills through hands-on, experiential learning activities, where civil servants engage in “learning by doing” to identify, address, and analyze the root causes of issues (Seravalli, 2021). This process is further enhanced by co-creation and experimentation with citizens, promoting mutual learning.

Indeed, GILs operate as spaces for entrepreneurial learning (Acevedo & Dassen, 2016; Rosenow-Gehard, 2020), embodying organizational features that nurture intrapreneurial behavior, as described by Gomes (2017) and Sadler (2000). These features include participatory or decentralized decision-making, shared goal-setting, formal and informal learning activities, diverse teams, and flexible, smaller organizational structures.

Thus, GILs hold considerable potential for driving systemic transformations in public administration. They do so not only by improving internal processes and organizational dynamics but also by shifting the mindset and enhancing the capabilities of public servants. Additionally, they strengthen relationships with society, bringing the government closer to addressing social issues. In this way, innovation labs work to redefine public sector operational standards and service dynamics, aiming to democratize power in the creation of public value (Criado et al., 2020).

FINAL CONSIDERATIONS

This article aimed to examine the potential of government innovation labs (GILs) in minimizing barriers to intrapreneurial behavior within the public sector. The findings reveal that GILs play a significant role in addressing these barriers, particularly among public servants. GILs were shown to foster behavioral changes related to risk aversion, inflexibility, resistance to change, and, most notably, arrogance and preconceived notions about citizens’ needs. This highlights the importance of public servants being in close contact with citizens and developing a deep understanding of their evolving needs. Such changes impact both the public organization and the transformation of its processes and services, making them more accessible and efficient for civil servants and the broader society, ultimately resulting in cost reductions.

These advancements are driven by the dynamic nature of the labs and the use of agile methodologies focused on co-creation and experimentation. This approach enables public organizations to develop innovative solutions to public problems, while experimentalism supports practical learning, reducing the risks and negative consequences of failure. The public administration model proposed by Weiss (2021), which emphasizes entrepreneurship as a transformative tool for public management, particularly during crises, exemplifies the value of this approach.

A key practical contribution of the research is the recommendation that public organizations at all levels of government implement innovation labs as a foundational step to overcoming barriers to intrapreneurship. These labs foster a culture of innovation, transforming public sector practices. Additionally, GILs are recognized as essential tools for promoting governance and social participation, strengthening the relationship between public servants and citizens.

It is important to note the scarcity of studies on this topic, which may limit the characterization and comprehensive understanding of the subject, highlighting the need for further research to validate and expand the field. One limitation of this study is that it did not fully incorporate the perspective of those who experience the changes brought about by GILs daily.

To gain a more complete understanding, future research should explore the perspectives of other public employees who are directly affected by the changes introduced by innovation labs. Investigating how these initiatives help overcome barriers to intrapreneurial behavior and why GILs do not have a “Very High” influence in some areas will be crucial for deepening our knowledge and further developing this field.

REFERENCES

- 011.Lab – Laboratório de Inovação da Prefeitura de São Paulo. (2020). *011.Lab: Inovação pública para transformar o governo com as pessoas*. Prefeitura Municipal de São Paulo.
- Acevedo, S., & Dassen, N. (2016). *Innovando para una mejor gestión: La contribución de los laboratorios de innovación pública*. IADB.
- Arundel, A., Bloch, C., & Ferguson, B. (2019). Advancing innovation in the public sector: Aligning innovation measurement with policy goals. *Research Policy*, 48(3), 789-798. <https://doi.org/10.1016/j.respol.2018.12.001>
- Bekkers, V., & Tummers, L. (2018). Innovation in the public sector: Towards an open and collaborative approach. *International Review of Administrative Sciences*, 84(2), 209-213. <https://doi.org/10.1177/0020852318761>
- Bernier, L., & Hafsi, T. (2007). The changing nature of Public Entrepreneurship. *Public Administration Review*, 67(3), 488-503. <https://doi.org/10.1111/j.1540-6210.2007.00731.x>
- Bloch, C., & Bugge, M. M. (2013). Public sector innovation: From theory to measurement. *Structural Change and Economic Dynamics*, 27, 133-145. <https://doi.org/10.1016/j.strueco.2013.06.008>
- Blomkamp, E. (2018). The promise of co-design for public policy. *Australian Journal of Public Administration*, 77(4), 729-743. <https://doi.org/10.1111/1467-8500.12310>
- Canel, M. J., & Luoma-Aho, V. (2019). *Public sector communication: Closing gaps between citizens and public organizations*. Wiley-Blackwell.
- Carstensen, H. V., & Bason, C. (2012). Powering collaborative policy innovation: Can innovation labs help. *The Innovation Journal: The Public Sector Innovation Journal*, 17(1), 1-26.
- Cole, L. (2022). A framework to conceptualize innovation purpose in public sector innovation labs. *Policy Design and Practice*, 5(2), 164-182. <https://doi.org/10.1080/25741292.2021.2007619>

- Criado, I., Dias, T. F., Sano, H., Rojas-Martín, F., Silvan, A., & Isidro, A., Filho. (2020). Public innovation and living labs in action: A comparative analysis in post-New Public Management contexts. *International Journal of Public Administration*, 44(6), 1-14. DOI: <https://doi.org/10.1080/01900692.2020.1729181>
- Departamento Nacional de Planeación. (2022). *Innovación pública*. Gov.CO. <https://2022.dnp.gov.co/programas/Grupo-Modernizacion-del-Estado/Paginas/Innovacion-Publica.aspx>
- Diefenbach, F. E. (2011). *Entrepreneurial orientation in the public sector* (Doctoral dissertation, University of St. Gallen, St. Gallen, Switzerland).
- Emmendoerfer, M. L. (2019). *Inovação e empreendedorismo no setor público*. Enap.
- Ferrarezi, E., Lemos, J., & Brandalise, I. (2018). *Experimentação e novas possibilidades em governo: Aprendizados de um laboratório de inovação*. Enap.
- Ferreira, M., & Botero, A. (2020). Experimental governance? The emergence of public sector innovation labs in Latin America. *Policy Design and Practice*, 3(2), 1-13. <https://doi.org/10.1080/25741292.2020.1759761>
- Galhardo, C. (2019). *Laboratório de inovação no setor público: Um estudo sobre o MobLAB da cidade de São Paulo* (Master's thesis, Universidade Nove de Julho – UNINOVE). <http://bibliotecatede.uninove.br/handle/tede/2039>
- Gnova. (2021). *Quem somos*. <https://gnova.enap.gov.br/index.php/pt/quem-somos>
- Gomes, R. K. (2017). *Melhores práticas intraempreendedoras para a gestão pública: Um estudo de multicascos* (Master's thesis, Universidade Federal de Santa Catarina). <https://repositorio.ufsc.br/handle/123456789/188514>
- Gomes, R. K., Consoni, D. P. G., & Lapolli, E. M. (2015). Intrapreneurial competence of the public servants of IBGE and IFSC from the perspective of their managers. *Business and Management Review*, 4(5), 704-712.
- Kearney, C., Hisrich, R., & Roche, F. (2009). Public and private sector entrepreneurship: Similarities, differences or a combination? *Journal of Small Business and Enterprise Development*, 16(1), 26-46. <https://doi.org/10.1108/14626000910932863>
- Laboratorio de Gobierno. (2021). *Otro ángulo: ¿Cómo lograr impacto en un proyecto de innovación pública? la experiencia de ágil*. Gobierno de Chile.
- Laboratorio de Innovación Pública de Bogotá. (2024). *Propósito público*. <https://ibo.bogota.gov.co/>
- Laboratório de Inovação na Gestão. (2024). *PITCH GOV ES: Governo e startups juntos por um estado melhor para os capixabas*. <https://labges.es.gov.br/pitchgoves>
- Laboratório de Innovación Pública Teusaquillo. *El lab: espacio*. <https://labteusaquillo.gov.co/laboratorio/>
- Lauriano, N. G., & Ferreira, M. A. M. (2022). Laboratórios de inovação em governo como intermediadores de problemas públicos na América Latina. *Internext*, 17(3), 413-429. <https://doi.org/10.18568/internext.v17i3.691>

- León, L. R., Simmonds, P., & Roman, L. (2012). *Trends and challenges in public sector innovation in Europe*. DG Enterprise. <http://innovation.fo/wp-content/uploads/2013/09/Trends-and-Challenges-in-Public-Sector-Innovation-in-Europe.pdf>
- Lewis, J. M., McGann, M., & Blomkamp, E. (2020). When design meets power: Design thinking, public sector innovation and the politics of policymaking. *Policy & Politics*, 48(1), 111-130. <https://doi.org/10.1332/030557319X15579230420081>
- McGann, M., Blomkamp, E., & Lewis, J. M. (2018). The rise of public sector innovation labs: Experiments in design thinking for policy. *Policy Sciences*, 51, 249-267. <https://doi.org/10.1007/s11077-018-9315-7>
- McGann, M., Wells, T., & Blomkamp, E. (2021). Innovation labs and co-production in public problem solving. *Public Management Review*, 23(2), 297-316. <https://doi.org/10.1080/14719037.2019.1699946>
- Metello, D. G. (2018). *Design etnográfico em políticas públicas*. Enap.
- Morais, M. C. A., Valadares, J. L., Emmendoerfer, M. L., & Resende, T. C. (2020). Quais as evidências do empreendedorismo no setor público? Uma análise da produção científica internacional. *Empreendedorismo, Gestão e Negócios*, 9(9), 454-474. <https://doi.org/10.5281/zenodo.4519152>
- Pollitt, C., & Bouckaert, G. (2011). *Continuity and change in public policy and management*. Edward Elgar Publishing.
- Puttick, R., Baeck, P., & Colligan, P. (2014). *I-Teams: The teams and funds making innovation happen in governments around the world*. Nesta and Bloomberg Philanthropies.
- Rizzo, F., Deserti, A., & Cobanli, O. (2017). Introducing design thinking in social innovation and in public sector: A design-based learning framework. *European Public & Social Innovation Review*, 2(1), 127-143. <https://doi.org/10.31637/epsir.17-1.9>
- Rosenow-Gerhard, J. (2020). Lessons learned—configuring innovation labs as spaces for intrapreneurial learning. *Studies in Continuing Education*, 43(2), 1-17. <https://doi.org/10.1080/0158037X.2020.1797662>
- Sadler, R. J. (2000). Corporate entrepreneurship in the public sector: The dance of the chameleon. *Australian Journal of Public Administration*, 2(59), 25-43. <https://doi.org/10.1111/1467-8500.00149>
- Sano, H. (2020). *Laboratórios de inovação no setor público: Mapeamento e diagnósticos de experiências nacionais*. Enap.
- Santarsiero, F., Schiuma, G., & Carlucci, D. (2023). Driving organizational digital transformation through innovation labs. In H. Väyrynen, N. Helander, & H. Jalonen (Eds.), *Public innovation and digital transformation* (pp. 154-164). Routledge.
- Schuurman, D., & Tönurist, P. (2017). Innovation in the public sector: Exploring the characteristics and potential of living labs and innovation labs. *Technology Innovation Management Review*, 7(1), 7-14.

- Secretaria do Estado de Administração. (2020). *Saiba mais sobre o Nidus – Laboratório de Inovação de Santa Catarina*. <https://www.sea.sc.gov.br/blog/saiba-mais-sobre-o-nidus-laboratorio-de-inovacao-de-sc/>
- Seravalli, A. (2021). *In search of (organizational) learning and translation in public innovation labs*. <https://www.diva-portal.org/smash/get/diva2:1585845/FULLTEXT01.pdf>
- Silva-Junior, A. C., & Emmendoerfer, M. L. (2023). Innovation labs in South American governments: Congruencies and peculiarities. *BAR – Brazilian Administration Review*, 20(4), 1-19. <https://doi.org/10.1590/1807-7692bar2023220173>
- Silva-Junior, A. C., Emmendoerfer, M. L., & Silva, M. A. C. (2024). Innovation labs in the light of the New Public Service. *RAM. Revista de Administração Mackenzie*, 25(3), 1-25. <https://doi.org/10.1590/1678-6971/eRAMC240079>
- Silva-Junior, A. C., Emmendoerfer, M. L., Silva, M. A. C., & Pontón, M. B. Z. (2022). Análisis del comportamiento intraemprendedor en el sector público: Un estudio de los Laboratorios Gubernamentales de Innovación en Sudamérica. *Revista Mexicana de Análisis Político y Administración Pública*, 11(21), 81-108. <https://doi.org/10.15174/remap.v11i21.380>
- Timeus, K., & Gascó, M. (2018). Increasing innovation capacity in city governments: Do innovation labs make a difference? *Journal of Urban Affairs*, 40(7), 992-1008. <https://doi.org/10.1080/07352166.2018.1431049>
- Tönurist, P., Kattel, R., & Lember, V. (2017). Innovation labs in the public sector: What they are and what they do? *Public Management Review*, 19(10), 1455-1479. <https://doi.org/10.1080/14719037.2017.1287939>
- Valadares, J. L., & Emmendoerfer, M. L. (2015). A incorporação do empreendedorismo no setor público: Reflexões baseadas no contexto brasileiro. *Revista de Ciências da Administração*, 17(41), 82-98. <https://doi.org/10.5007/2175-8077.2015v17n41p82>
- Väyrynen, H., Helander, N., & Jalonen, H. (2023). *Public innovation and digital transformation*. Routledge.
- Young, M. M. (2020). Implementation of digital era governance: the case of open data in US cities. *Public Administration Review*, 80(2), 305-315. <https://doi.org/10.1111/puar.13156>
- Weiss, M. (2021). *We the possibility: harnessing public entrepreneurship to solve our most urgent problems*. Harvard Business Review Press Boston.
- Werneck, C., Ferrarezi, E., Brandalise, I., Vaqueiro, L., & Bonduki, M. (2020). *Ciclo de vida dos laboratórios de inovação pública*. Enap.

NOTE

The structured questionnaire can be accessed at: https://drive.google.com/file/d/1WoH8GZ-7gyvOtyrz_qcZbH5VGXEWt0DvE/view?usp=sharing

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CONFLICTS OF INTEREST

The authors declare no conflicts of interest.

AUTHOR CONTRIBUTIONS

Alessandro Carlos da Silva Junior: Conceptualization, Data Curation, Formal Analysis, Funding Acquisition, Investigation, Methodology, Project Administration, Resources, Software, Supervision, Validation, Visualization, Writing – Original Draft, Writing – Review and Editing.

Magnus Luiz Emmendoerfer: Conceptualization, Funding Acquisition, Methodology, Project Administration, Resources, Supervision, Validation, Visualization, Writing – Review and Editing.

Nayara Gonçalves Lauriano: Conceptualization, Data Curation, Formal Analysis, Methodology, Validation, Visualization, Writing – Original Draft, Writing – Review and Editing.

Maysa Alves Correa Silva: Conceptualization, Formal Analysis, Methodology, Validation, Visualization, Writing – Review and Editing.