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The use of behavioral sciences and sustainable development goals (SDGS) by public sector innovation (PSI) laboratories

O uso das ciências comportamentais e objetivos do desenvolvimento sustentável (ODS) nos laboratórios de inovação no setor público (LISP)

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Combate à corrupção e impacto econômico-financeiro nas empresas: a experiência dos acordos de leniência no Brasil*

The fight against corruption and the economic-financial impact on companies: the experience of leniency agreements in Brazil

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Abstract

The Public Sector Innovation (PSI) labs constitute a novelty in the Brazilian Public Administration and aim to promote innovation and modernization inside the public sector. Given the PSI labs' purpose, the paper focuses on understanding the role of the PSI labs in Brazil concerning the alignment and incorporation of the Behavioral Sciences approach and the Sustainable Development Goals (SDGs). We conducted a semi-structured survey with the PSI labs in Brazil to understand their general characteristics, social network, behavioral sciences, and the introduction of the SDG values on PSI labs' projects. The 29 responses collected from the Brazilian PSI labs demonstrate that behavioral science in the PSI labs is restrictedly applied. The labs' projects widely contribute to SDG 16 related to transparency, participation, inclusion, and representative decision-making. However, they do not support SDG 9 related to enhancing scientific research and upgrading organizations' technological capabilities. This study contributes to the characterization of the PSI labs in the Global South and enlightens their social networks, the use of behavioral sciences methods, and SDGs.

Keywords: innovation in government; public sector innovation (PSI) labs; behavioral sciences; sustainable development goals (SDGs); Brazil.

Resumo

Os Laboratórios de Inovação no Setor Público (LISP) se constituem como uma novidade na estrutura da Administração Pública, sendo concebidos principalmente para promover a inovação e a modernização dentro do setor público. Dado o propósito dos LISP, o artigo se concentra na compreensão do papel destas estruturas no Brasil, no que diz respeito ao alinhamento e incorporação da abordagem das Ciências Comportamentais e dos Objetivos de Desenvolvimento Sustentável (ODS) em suas atividades. Metodologica-

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mente, realizou-se uma pesquisa semiestruturada com os LISP brasileiros para entender suas características gerais, redes de interação, ciências comportamentais e a introdução dos valores dos ODS nos projetos desenvolvidos. As 29 respostas coletadas dos LISP, demonstram que a ciência comportamental é aplicada de forma restrita. Os projetos dos laboratórios contribuem amplamente para a transparência, participação e a tomada de decisões responsivas, inclusivas, participativas e representativas (ODS 16). No entanto, eles dificilmente estavam relacionados ao aprimoramento da pesquisa científica e à atualização das capacidades tecnológicas das organizações (ODS 9). Em síntese, este estudo contribui para a caracterização dos LISP no Sul Global e esclarece aspectos discutidos na literatura, como redes de interação, ciências comportamentais e ODS, pouco explorados empiricamente.

Palavras-chave: inovação em governos; laboratórios de inovação no setor público; ciências comportamentais; objetivos do desenvolvimento sustentável (ODS); Brasil.

1 Introduction

Civil society demands increasing innovation in the public sector, but politicians and public organizations face challenges in translating this desire into practice. Predominantly, innovation in the public sector has been introduced through improvements in processes and services to increase speed and reduce costs due to financial constraints¹. Simultaneously, these actions support the increase in State's legitimacy and trust because public policies are demanded to address the contemporary challenges and wicked problems associated with globalization, social inequality, global warming, intense migratory processes, drugs, an increase in life expectancy, among others, with efficient solutions^{2,3}.

To support these goals, a novel organizational structure is rising in the Global South to deal with public sector problems by using innovative approaches, they are the Public Sector Innovation (PSI) labs^{4,5,6}. The labs' focus is acquiring new capabilities and experimenting by testing innovative solutions based on improvisation, trial-error, and risk-taking within public organizations⁷. This new conception allows the PSI labs to adopt a series of methodologies and values, which provides for increasing citizen participation, transparency, and new possibilities for experimental development of public policies, which before were not part of the

¹ CAVALCANTE, P.; CAMÕES, M. Inovação pública no Brasil: uma visão geral de seus tipos, resultados e indutores. In: CAVALCANTE, P. et al. *Inovação no setor público: teoria, tendências e casos no Brasil*. Brasília: Enap; Ipea, 2017.

² CAVALCANTE, P.; CAMÕES, M. Inovação pública no Brasil: uma visão geral de seus tipos, resultados e indutores. In: CAVALCANTE, P. et al. *Inovação no setor público: teoria, tendências e casos no Brasil*. Brasília: Enap; Ipea, 2017.

³ SCHWELLA, Erwin. Inovação no governo e no setor público: desafios e implicações para a liderança. *Revista do Serviço Público*, Brasília, v. 56, jul./set. 2005.

⁴ In this paper, we address the Public Sector Innovation Laboratories as PSI labs, nevertheless the literature also calls them "innovation labs", "i-team", "i-lab", "government innovation lab", "public sector innovation labs", "government innovation labs", "innovation unit", "organizational innovation labs", "policy innovation labs", "public innovation labs", "innovation labs", "design labs", "public policy labs", "social innovation labs", "systems change labs", and "design labs," and "policy labs". WELLSTEAD, Adam M.; GOFEN, Anat; CARTER, Angie. Policy innovation labs scholarship: past, present, and the future: introduction to the special issue on policy

innovation labs. *Policy Design and Practice*, v. 4, n. 2, p. 193-211, 2020.; WHICHER, A. Evolution of policy labs and use of design for policy in UK government. *Policy Design and Practice*, v. 4, n. 2, 2021.; MCGANN, Michael; BLOMKAMP, Emma; LEWIS, Jenny M. The rise of public sector innovation labs: experiments in design thinking for policy. *Policy Sciences*, v. 51, n. 3, p. 249-267, 2018.

⁵ ACEVEDO, Sebastián; DASSEN, Nicolás. *Innovation for better management: the contribution of public innovation labs*. 2016.

⁶ MCGANN, Michael; WELLS, Tamas; BLOMKAMP, Emma. Innovation labs and co-production in public problem solving. *Public Management Review*, v. 23, n. 2, p. 297-316, 2021.

⁷ COLE, Lindsay. A framework to conceptualize innovation purpose in public sector innovation Labs. *Policy Design and Practice*, p. 1-19, 2021.

daily routine of public policies^{8,9}. To understand how these organizations operationalize this new mindset in public sector, our research focuses on two significant novelties in the public sector practices, the usage of Behavioral Sciences and the incorporation of Sustainable Development Goals (SDGs) by the PSI labs.

The behavioral sciences aim to comprehend how humans produce their choices and allow the establishment of nudges, which constitute positive reinforcement and indirect suggestions aimed to influence the behavior and decision-making of groups or individuals while fully maintaining their freedom of choice^{10,11}. Its utilization in public policies has increased significantly worldwide and across different areas, such as education, taxation, and health – including applications in the context of the COVID-19 pandemic and vaccination^{12,13}. The advantages of behavioral sciences for public policies are associated with the low cost and high impact of its interventions¹⁴. Moreover, the SDG constitutes a spillover of the United Nations (UN) Agenda 30 for Sustainable Development. This agenda proposes a worldwide strategy for people and the planet's prosperity. In this agenda, the governments have a crucial role in accomplishing their targets and internalizing their values during the coordination and implementation of bottom-up and top-down efforts¹⁵. The values from Agenda 30 are expressed in SDGs 9 and 16, which focus on innovation, resilient infrastructure, transparency, participation, and accountability¹⁶.

Behavioral sciences and SDGs constitute a recent phenomenon associated with modernization within governments¹⁷. Therefore, given the PSI labs' role as a public institutional structure dedicated to promoting innovation and the use of novel methodologies by the public sector¹⁸, our paper aims to empirically assess the dissemination of these approaches across the PSI labs. Therefore, we conducted a pre-research workshop with 15 PSI labs and, subsequently a semi-structured survey answered by 29 PSI labs, corresponding to 41.4% of all the Brazilian PSI labs universe outlined by Sano¹⁹.

The contribution of our paper is threefold. First, we demonstrate that PSI labs' adoption of behavioral sciences methods was limited. Second, most of the projects conducted by the PSI labs contributed to SDG 16, which is related to transparency, participation, inclusion and representative decision-making. However projects related to SDG 9 aiming to enhance scientific research, and upgrading the technological capabilities in organizations lacked. Third, we empirically demonstrate the relationship between the PSI labs and the formation of social networks among them.

Given these aspects, our paper is divided into four other sections besides this introduction. Section 2 presents the literature review. Section 3 describes the pre-research workshop's methodology, survey design,

⁸ FERREIRA, Maria; BOTERO, Andrea. Experimental governance? the emergence of public sector innovation labs in Latin America. *Policy Design and Practice*, v. 3, n. 2, p. 150-162, 2020.

⁹ LEWIS, Jenny M. The limits of policy labs: characteristics, opportunities and constraints. *Policy Design and Practice*, v. 4, n. 2, p. 242-251, 2021. DOI 10.1080/25741292.2020.1859077.

¹⁰ SUNSTEIN, Cass R. *Behavioral science and public policy*. Cambridge: Cambridge University Press, 2020.

¹¹ RIBEIRO, Marcia Clara Pereira; DOMINGUES, Victor Hugo. Libertarian paternalism and public policies: intervention and transparency. *Revista Brasileira de Políticas Públicas*, v. 11, n. 1, p. 105-120, abr. 2021.

¹² KRPAN, D.; MAKKI, F.; SALEH, N.; BRINK, S.; KLAUZNICER, H. When behavioural science can make a difference in times of COVID-19. *Behavioural Public Policy*, v. 5, n. 2, p. 153-179, 2021.

¹³ HORTAL, Alejandro. Nudges: a promising behavioral public policy tool to reduce vaccine hesitancy. *Revista Brasileira de Políticas Públicas*, v. 12, n. 1, p. 82-98, abr. 2022.

¹⁴ SUNSTEIN, Cass R. *Behavioral science and public policy*. Cambridge: Cambridge University Press, 2020.

¹⁵ SOEIRO, D. Transparent governments, social innovation, and their role in achieving the SDGs. In: LEAL FILHO, W.; AZUL, A. M.; BRANDLI, L.; SALVIA, A. Lange; ÖZUYAR, P. G.; WALL, T. (ed.). *Peace, justice and strong institutions*. Encyclopedia of the UN sustainable development goals. Cham: Springer, 2021.

¹⁶ UNITED NATIONS. *Transforming our world: the 2030 Agenda for sustainable development*. 2015.

¹⁷ ÁVILA, Flávia; BIANCHI, Ana Maria. *Guia de economia comportamental e experimental*. São Paulo: Economia Comportamental, 2015.

¹⁸ SANO, Hironobu. *Laboratórios de inovação no setor público: mapeamento e diagnóstico de experiências nacionais*. Brasília: ENAP, 2020.

¹⁹ SANO, Hironobu. *Laboratórios de inovação no setor público: mapeamento e diagnóstico de experiências nacionais*. Brasília: ENAP, 2020.

application, and social network analysis. Section 4 provides the results; we present the characteristics of the PSI labs in Brazil, their social network, and the characteristics of their methods and incorporation of the SDGs by PSI labs. Finally, the last section poses the conclusions, limitations, and recommendations for future research.

2 Literature review

According to Rodríguez and Grandinetti²⁰, the PSI labs were initially established in the early 2000s, and since then, hundreds of lab units have spread worldwide. For example, Rodríguez and Grandinetti²¹ identified 105 PSI labs distributed around the world. Fuller and Lochard²² recognized 65 PSI labs in European countries, and other studies also show the same trends in the Global South, more specifically in Asia²³ and Latin America²⁴.

The dissemination of the PSI labs is associated with a broader tendency to modernize and expand the governmental interfaces with citizens²⁵. The PSI labs *per se* constitute an organizational innovation in the public sector, developed to internalize risks innovation process by experimenting and prototyping solutions that might later be widespread and incorporated in public organizations²⁶. Despite the essential role of PSI labs, these organizations face many challenges due to public sector institutional regulatory rigidity, budget constraints²⁷, and recognition. In particular, the lack of recognition is related to the poor innovative culture, which rebound in PSI labs' financial constraints²⁸.

Given these limitations, some authors underlined that many PSI labs are not protagonists in conducting the change and directly proposing innovative solutions in the public sector. Instead, many labs have a more indirect role in stimulating innovation activities or methods inside public organizations by conducting training activities for public employees and disseminating design, experimentation, and co-creation methodologies²⁹. Studies also emphasize the centrality of political leaders to support the PSI labs in promoting articulations with citizens, civil society, and the business sector, to strengthen the inter-institutional dialogue as a strategy to foster innovation^{30,31}. However, there is still insufficient evidence of PSI labs impact in terms of policies and public administration innovations because they hardly evaluate the effectiveness of their

²⁰ RODRÍGUEZ, Exequiel; GRANDINETTI, Rita. *Laboratorios de gobierno para la innovación pública: un estudio comparado de las experiencias americanas y europeas*. Rosario: RedInnolabs, 2018.

²¹ RODRÍGUEZ, Exequiel; GRANDINETTI, Rita. *Laboratorios de gobierno para la innovación pública: un estudio comparado de las experiencias americanas y europeas*. Rosario: RedInnolabs, 2018.

²² FULLER, Matt; LOCHARD, Anna. *Public policy labs in European Union member states*. Luxembourg: Publications Office of the European Union, 2016.

²³ TÖNURIST, Piret; KATTEL, Rainer; LEMBER, Veiko. Innovation labs in the public sector: what they are and what they do?. *Public Management Review*, v. 19, n. 10, p. 1455-1479, 2017.

²⁴ ACEVEDO, Sebastián; DASSEN, Nicolás. *Innovation for better management: the contribution of public innovation labs*. 2016.

²⁵ ACEVEDO, Sebastián; DASSEN, Nicolás. *Innovation for better management: the contribution of public innovation labs*. 2016.

²⁶ SILVA JUNIOR, A. C. da; EMMENDOERFER, M. L. Os caminhos para o desenvolvimento de uma gestão pública inovadora no Brasil. *Revista Organizações em Contexto*, v. 17, n. 33, 2021.

²⁷ MCGANN, Michael; WELLS, Tamas; BLOMKAMP, Emma. Innovation labs and co-production in public problem solving. *Public Management Review*, v. 23, n. 2, p. 297-316, 2021.

²⁸ MCGANN, Michael; BLOMKAMP, Emma; LEWIS, Jenny M. The rise of public sector innovation labs: experiments in design thinking for policy. *Policy Sciences*, v. 51, n. 3, p. 249-267, 2018.

²⁹ ACEVEDO, Sebastián; DASSEN, Nicolás. *Innovation for Better Management*. The Contribution of Public Innovation Labs, 2016.

³⁰ WELLSTEAD, Adam M.; GOFEN, Anat; CARTER, Angie. Policy innovation lab scholarship: past, present, and the future: introduction to the special issue on policy innovation labs. *Policy Design and Practice*, v. 4, n. 2, p. 193-211, 2020. DOI 10.1080/25741292.2021.1940700.

³¹ SILVA JUNIOR, A. C. da; EMMENDOERFER, M. L. Os caminhos para o desenvolvimento de uma gestão pública inovadora no Brasil. *Revista Organizações em Contexto*, v. 17, n. 33, 2021.

interventions³². This is especially pronounced in Latin American countries, where the PSI labs are even less rigorous in assessing the results of their solutions³³.

Although the literature revealed extensive use of novel methods applied by the PSI labs such as design thinking, ethnography, randomized control trials (RCTs), agile methods framework, and design sprints^{34,35}, methods such as the Behavioral Sciences, which aim to understand the economic implications of authentic human behavior, were so far sidelined³⁶. The behavioral sciences approach's central idea is that irrational decision exists, and the manner alternatives are presented influences the decision-maker. By applying “nudges”, it is possible to influence people's behavior and could be helpful to improve the results and impacts of policies³⁷.

Given the potentiality of behavioral science, governments' use of this tool is growing significantly worldwide. The book “Behavioral Insights and Public Policy: lessons from around the world” published by the OECD³⁸ showed 202 public entities worldwide apply behavioral insights in their policies. Another report from the World Bank³⁹, “Behavioral Science Around the World: Profiles of 10 Countries”, verified how policymakers employ behavioral sciences to address public problems and challenges in different contexts and areas. These publications present the application of nudges validated by experiments and quasi-experiments and support their dissemination to other countries.

Behavioral sciences constitute a field in full expansion, which opens possibilities for new propositions in the public management area, with interventions often not intensive in financial resources, representing a considerable advantage in the State's current fiscal crisis⁴⁰. Traditionally the behavioral sciences application is related to the existence of specific Behavioral Insights (BI) Units; however, it is not restricted. According to Lewis⁴¹, it has been used by some labs, but they were not so intensively studied.

Another relevant topic in the agenda of a public institution is the accomplishment of the Agenda 2030, which proposes to overcome the social, economic, and environmental challenges societies face^{42,43}. To materialize these challenges, the UN formulated the SDGs, which different governmental levels (national, regional, and local) are responsible for promoting actions. However, before pursuing the SDGs, the public administration should first overcome gaps in the administrative, organizational, and financial capacity since the SDGs have a multisectoral character that points to the need for a high governance capacity to face the

³² MCGANN, Michael; BLOMKAMP, Emma; LEWIS, Jenny M. The rise of public sector innovation labs: experiments in design thinking for policy. *Policy Sciences*, v. 51, n. 3, p. 249-267, 2018.

³³ ACEVEDO, Sebastián; DASSEN, Nicolás. *Innovation for better management: the contribution of public innovation labs*. 2016.

³⁴ LEWIS, Jenny M. The limits of policy labs: characteristics, opportunities and constraints. *Policy Design and Practice*, v. 4, n. 2, p. 242-251, 2021. DOI 10.1080/25741292.2020.1859077.

³⁵ WELLSTEAD, Adam M.; GOFEN, Anat; CARTER, Angie. *Policy innovation lab scholarship: past, present, and the future: introduction to the special issue on policy innovation labs*. *Policy Design and Practice*, v. 4, n. 2, p. 193-211, 2020.

³⁶ THALER, Richard H.; SUNSTEIN, Cass R. *Nudges: improving decisions about health, wealth, and happiness*. New Haven: Yale University Press, 2008.

³⁷ SUNSTEIN, Cass R. *Behavioral science and public policy*. Cambridge: Cambridge University Press, 2020.

³⁸ OCDE. *Behavioural insights and public policy: lessons from around the world*. Paris: OCDE Publishing, 2017.

³⁹ AFIF, Zeina et al. *Behavioral science around the world: profiles of 10 countries*. Washington: World Bank Group, 2018.

⁴⁰ REYMÃO, Ana Elizabeth Neirão; CAÇAPIETRA, Ricardo dos Santos. Public policies and the concretization of social rights: decision-making, architecture of choices and effectiveness. *Revista Brasileira de Políticas Públicas*, v. 8, n. 2, p. 543 – 566, ago. 2018.

⁴¹ LEWIS, Jenny M. The limits of policy labs: characteristics, opportunities and constraints. *Policy Design and Practice*, v. 4, n. 2, p. 242-251, 2021. DOI 10.1080/25741292.2020.1859077.

⁴² BOTO-ÁLVAREZ, A.; GARCIA-FERNÁNDEZ, R. Implementation of the 2030 Agenda sustainable development goals in Spain. *Sustainability*, v. 12, p. 2546, 2020.

⁴³ FIROIU, Daniela; IONESCU, George H.; BĂNDROI, Anca; FLOREA, Nicoleta Mihaela; JIANU, Elena. Achieving sustainable development goals (SDG): implementation of the 2030 agenda in romania. *Sustainability*, v. 11, n. 7, p. 2156. DOI 10.3390/su11072156. 2019.

social problems identified by the agenda^{44,45}. For this to be possible, national, subnational, and local states have the challenge and responsibility, as nucleating agents, to make improvements in their processes, services, and products offered to society, seeking to face the consequences of the transformations of economic, demographic, and social behavioral patterns⁴⁶. Given this scenario, an urgent transformation by public governmental institutions is imperative to redefine their performance and better meet local needs in line with social, environmental, and economic development.

Particularly in Latin American countries, it is relevant to add challenges concerning solid and secure democratic institutions that minimally guarantee the effectiveness and integrity of fundamental rights and freedoms for their citizens since there is still the challenge of establishing a fair and egalitarian society capable of leading economic, social, and environmental transformations in its various contexts⁴⁷. Citizens from developed and emerging countries pressure public structures for access, transparency, and quality in the products, services, and processes. Thus, government innovations from the public administration dialogue with new ways of working and providing services⁴⁸. This agenda of innovations in government is transversal to the SDG agenda, ranging from fighting poverty, education, and decent work to the establishment of intragovernmental and intergovernmental partnerships to achieve the SDGs and the strengthening of effective public institutions (SDG 9 and 16), which are based on evidence-based actions, under a holistic and interconnected view between the different objectives and actors of society.

Understanding the need to conduct these transformations we investigate the conformity of the PSI labs' performance concerning the SDGs, since these experimentation spaces aim to generate improvements in processes, services, management models, and in the implementation of public policies. In this sense, the PSI labs are inducing instruments that facilitate the achievement of goals related to the SDGs, in particular SDG 9 and 16, and by adopting innovative methodologies and, tools seeking improvements in the public services, and new approaches to the diagnosis and treatment of general problems⁴⁹.

3 Methodology

The study aimed first to characterize the PSI labs and then analyze to what extent PSI labs apply behavioral sciences and have projects aligned with the SGD. To accomplish these objectives, our methodology includes (i) literature review; (ii) workshops with PSI labs and participation in PSI labs events; and (iii) semi-structured survey. All the mentioned steps are detailed in the following paragraphs.

First, the literature review comprised articles published in scientific publications and reports on (a) PSI labs, (b) the use of behavioral sciences in public policy, and (c) SDGs in the public sector. After collecting this information, we focused on mapping the PSI labs in Brazil to enable our survey through a workshop with the PSI labs and participation in events promoted by the PSI labs.

Second, our workshop in June 2020 hosted 24 civil servants from 15 different PSI labs participated. The workshop allowed a deeper understanding of the labs' dynamics, challenges, types of projects they conducted, and characteristics of the civil servants leading and organizing this movement. Additionally, we

⁴⁴ ANNESI, Nora; BATTAGLIA, Massimo; GRAGNANI, Patrizia; IRALDO, Fabio. Integrating the 2030 agenda at the municipal level: multilevel pressures and institutional shift. *Land Use Policy*, v. 105, p. 105424, jun. 2021.

⁴⁵ SERAFIM, M. P.; DIAS, R. B. Análise de política: uma revisão da literatura. *Cadernos Gestão Social*, v. 3, p. 121-134, 2012.

⁴⁶ HOWALDT, J.; SCHWARZ, M. *Social innovation: concepts, research fields and international trends*. Aachen: IMA/ ZLW, 2010.

⁴⁷ SÁEZ, M. A. *Una gestión pública por valores orientada a la innovación y la Agenda 2030*. 2019. Disponível em: <http://www.top.org.ar/ECGP/FullText/000020/20298.pdf>. Acesso em: 20 ago. 2021.

⁴⁸ SÁEZ, M. A. *Una gestión pública por valores orientada a la innovación y la Agenda 2030*. 2019. Disponível em: <http://www.top.org.ar/ECGP/FullText/000020/20298.pdf>. Acesso em: 20 ago. 2021.

⁴⁹ UNRISD. *Policy innovations for transformative change: implementing the 2030 agenda for sustainable development*. Geneva: United Nations, 2016. 236 p.

participated in the event “iLabthon” in January 2021, which constituted the world’s first PSI labs online marathon⁵⁰. From the research perspective, attending both events facilitated the establishment of several contacts with PSI lab members from different parts of Brazil.

Third, given the information captured in these events, we elaborate a semi-structured survey to collect PSI labs information, which was divided into four sections: (i) respondent’s information; (ii) PSI labs characterization – the year of creation, structure, network with other labs, administration, and main areas of activity; (iii) methods and approaches employed by the labs⁵¹; and finally, (iv) the use of SDGs. Regarding the SDGs, our goal was focused on questions about SDG 9 (target 9.5) and 16 (targets 16.5; 16.6; 16.7; and 16.8) (**Appendix A**), in which we measured the labs’ awareness through a Likert scale⁵². Additionally, the labs were requested to give information about their projects, and through this data, we validated the PSI labs projects’ convergence with the SDGs.

Our survey was conducted through an online platform from April to July 2021. We sent our questionnaire to 70 Brazilian PSI labs (total contacts collected) via social networks. Our survey obtained 29 responses⁵³ (**Appendix B**), which correspond to 41.4% of the universe in Brazil⁵⁴. Civil servants engaged in PSI labs during this period answered the survey. Using the data collected through our questionnaire, we analyzed the labs’ answers through descriptive statistics, geographically located the PSI labs in the Brazilian territory, performed the graphical representation of labs’ social networks with their interactions, and clustered it through the open-source platform Gephi⁵⁵.

4 Results and discussions

4.1 Characteristics of the PSI labs

Likewise, in other studies that underline a global increase in PSI Lab’s dissemination^{56,57}, our results also captured this trend since 18 (62%) labs were established during the previous three years, and four in 2021. Conversely to the literature, 17 (59%) of the labs were formally recognized, 3 (10%) were dealing with the process of recognition with their institutions, and 21 (72%) account with their own office. These results are different from Ferreira and Botero⁵⁸, which demonstrated a high level of informality of the labs insi-

⁵⁰ A hackathon constitutes a design sprint-like event; computer programmers and other multidisciplinary professionals often participate to develop software or solutions in collaboration.

⁵¹ The PSI labs were questioned about the use of the following methodologies: (1) Design thinking; (2) Brainstorming; (3) Canvas; (4) Participatory Design; (5) Human-centered design; (6) Agile Methods; (7) Minimum Viable Product; (8) Ethnography; (9) Design Sprint; (10) Wicked Problems; (11) Scrum; (12) Design Science Research; (13) Systemic Design; (14) Speculative Design; (15) Sense-Making; (16) Theory of Change; (17) Behavioral Insights; (18) Dataviz; (19) Business Process Management (BPM); and (20) Project Management Institute (PMI).

⁵² In our research, we applied a Likert scale with the following 4 of agreement: “Totally Disagree”, “Partially Disagree”, “Partially Agree”, and “Totally Agree”.

⁵³ In our labs’ sample, we considered government and public sector labs, together with non-government labs that operate directly with the governments and public sector.

⁵⁴ SANO, Hironobu. *Laboratórios de inovação no setor público: mapeamento e diagnóstico de experiências nacionais*. Brasília: ENAP, 2020.

⁵⁵ CRIADO, J. Ignacio; VILLODRE, Julián. Public employees in social media communities: exploring factors for internal collaboration using social network analysis. *First Monday*, 2018. DOI 10.5210/fm.v23i4.8348.

⁵⁶ SANO, Hironobu. *Laboratórios de inovação no setor público: mapeamento e diagnóstico de experiências nacionais*. Brasília: ENAP, 2020.

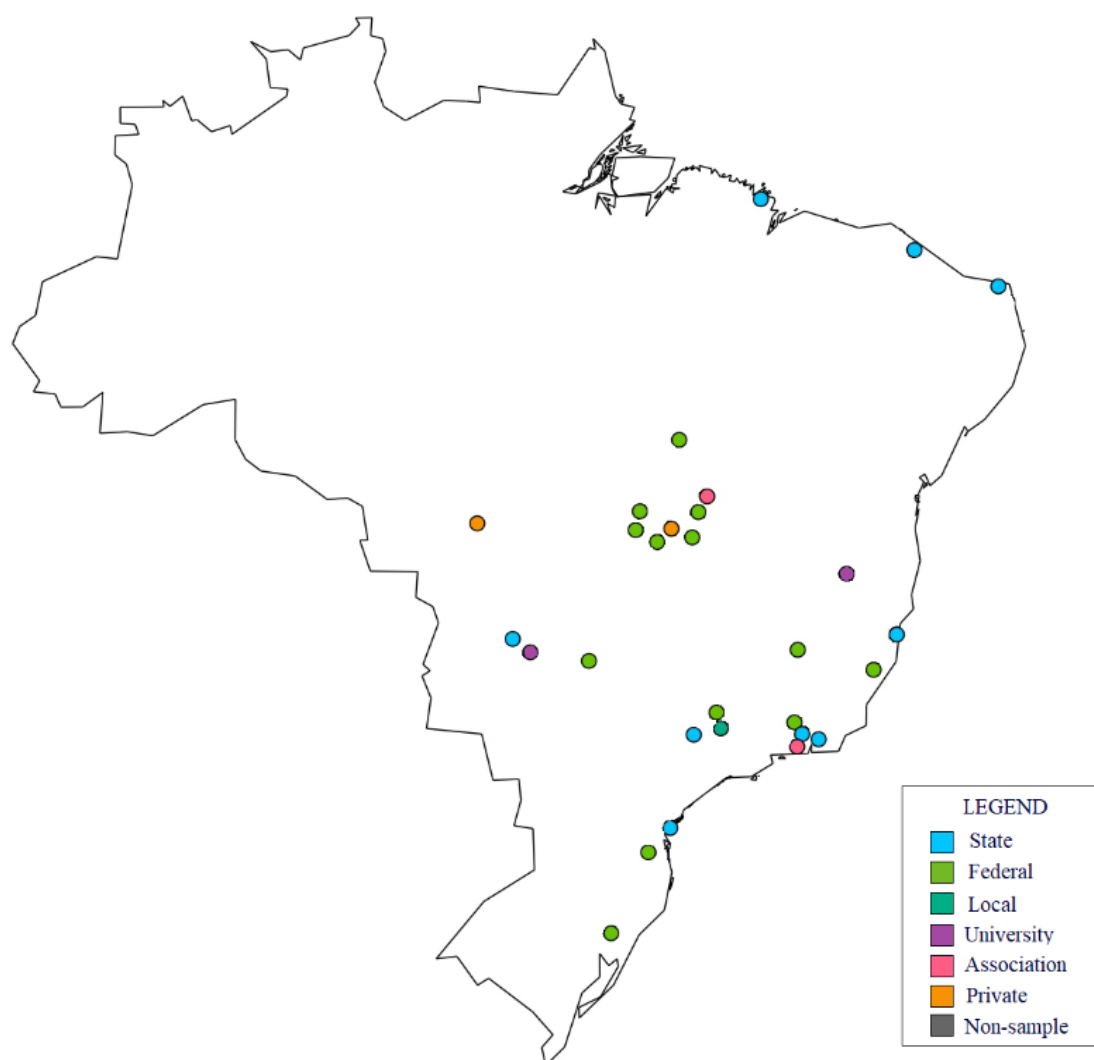
⁵⁷ WHICHER, A. Evolution of policy labs and use of design for policy in UK government. *Policy Design and Practice*, v. 4, n. 2, 2021.

⁵⁸ FERREIRA, Maria; BOTERO, Andrea. Experimental governance? the emergence of public sector innovation labs in Latin America. *Policy Design and Practice*, v. 3, n. 2, p. 150-162, 2020.

de the public administration. This difference in the results might be due to the advancements in Brazilian legislation⁵⁹, which recognized the PSI labs as a formal institution inside the public sector granted in 2021. Regarding their funding source, 19 (65%) laboratories receive funding exclusively via their major institution; 6 (21%) laboratories have additional funding through financial transfer from other resources, such as international institutions and research funding. In addition, 2 (7%) labs do not have a budget, and 2 (7%) other labs obtained funding via grant projects or multilateral organizations.

Figure 1 presents the allocation of the PSI labs from our sample in Brazil by governance level. Most of the labs in our sample, 15 (55%), were allocated at the federal level⁶⁰, 9 (31%) regional level, 1 (3%) local level, and 4 (14%) non-government labs⁶¹. The map also shows the diffusion of PSI labs in Brazil and a high concentration of federal level in Brazil's capital, Brasília. The state-level labs are more widely distributed on the maps in other center-south states' capital.

Figure 1 - Sample of PSI labs in Brazil.



⁵⁹ Law 14,129/2021 legally recognizes PSI labs as space for developing solutions through experimentation, the use of innovative tools and methods within public management, allowing greater sustainability for the labs to conduct their actions in the Brazilian public sector.

⁶⁰ The two PSI labs allocated in the Universities were considered of the federal level because these universities are public federal universities.

⁶¹ The non-government labs include "Association" and "Private" labs.

Concerning their organizational structure, 18 (62%) of the labs have a horizontal structure, and 7 (24%) have a mixed organizational structure. The horizontal structure design is closely related to corporative values such as openness, integration, collaboration, employee empowerment, and responsibility⁶². These characteristics support a more open and collaborative environment, less bureaucratic, with quick communication and creative thinking, contrasting with the traditional public institution's concept as hierarchical, with well-defined roles and competencies⁶³. These characteristics rebound on how project demands are produced, in which 34% of the labs adopt foresight to establish their projects, 28% "collaborative work"⁶⁴, 14% bottom-up, and only 10% top-down. The remaining 17% of PSI labs revealed to adopt a mix of the mentioned approaches. These findings converge with other studies, which emphasize PSI labs' have a collaborative structure and involve different actors' networks in the frame of policy issues^{65,66}.

Regarding the project's scope, 62% of the PSI labs focus on citizens' demands, and 59% are orientated by public administration demands at regional and 55% at federal levels. The predominant focus of labs is on "citizens' demands" and "public administration demands" which converge with the PSI labs' aim to decrease the gap between policymakers and citizens and contribute to institutions' internal processes⁶⁷. However, there are also labs with a well-delimited focus area in human resources (24%) management, education (10%), and health (7%).

Another intriguing aspect explored was the PSI labs' social network, which other studies have previously suggested but not explored^{68,69}. In this sense, **Figure 2** represents the network among the labs of our sample⁷⁰. The PSI labs social network has 45 nodes and 36 edges and is partially connected because 19 (42%) represent disconnected nodes. Lab Íris is the lab with 8 connections in this social network, followed by NIDUS and Lab.ges, both with six connections. According to Ferreira and Botero⁷¹, the PSI labs aspire to develop networks to share their experiences and understand their contributions to public innovation and allow them to discuss their challenges, share stories, gain feedback, and validate their ideas. Additionally, the network seems especially important in the initial incubation and creation of the PSI labs.

Through the PSI labs, modularity analyses emerged in three clusters. Cluster 1 comprises federal-level labs located in Brasília. Cluster 2 aggregates regional and local level labs and is dispersed nationwide. Lastly, Cluster 3 is composed of labs from the federal level geographically in the south region of Brazil, specifically belonging to the National Council of Justice (CNJ). As a result, the clusters reveal that PSI labs' social networks seem to be guided by the governance level, geographical location, and labs' area of concern.

⁶² OSTROFF, Frank. *The horizontal organization: what the organization of the future actually looks like and how it delivers value to customers*. Oxford: Oxford University Press, 1999.

⁶³ WELLSTEAD, Adam M.; GOFEN, Anat; CARTER, Angie. Policy innovation lab scholarship: past, present, and the future: introduction to the special issue on policy innovation labs. *Policy Design and Practice*, v. 4, n. 2, p. 193-211, 2020.

⁶⁴ Collaborative work can be defined and structured as a work methodology built through an articulated and collectively formulated process, based on the enrichment attributed to the dynamic interaction between specific knowledge and cognitive functions. In this way, the collective perspective guides the development of goals, which implies shared leadership and mitigating hierarchical barriers. FORTE, A.; FLORES, M. A. Aprendizagem e(m) colaboração: reflexões sobre um projeto de intervenção/formação numa EB 2/3. *Revista Portuguesa de Pedagogia*, v. 45, n. 2, p. 93-131, 2011.

⁶⁵ LEWIS, J. M.; MCGANN, M.; BLOMKAMP, E. When design meets power: design thinking, public sector innovation and the politics of policymaking. *Policy & Politics*, v. 48, n. 1, p. 111-130, 2020.

⁶⁶ WELLSTEAD, Adam M.; GOFEN, Anat; CARTER, Angie. Policy innovation lab scholarship: past, present, and the future: introduction to the special issue on policy innovation labs. *Policy Design and Practice*, v. 4, n. 2, p. 193-211, 2020.

⁶⁷ LEWIS, Jenny M. The limits of policy labs: characteristics, opportunities and constraints. *Policy Design and Practice*, v. 4, n. 2, p. 242-251, 2021. DOI 10.1080/25741292.2020.1859077.

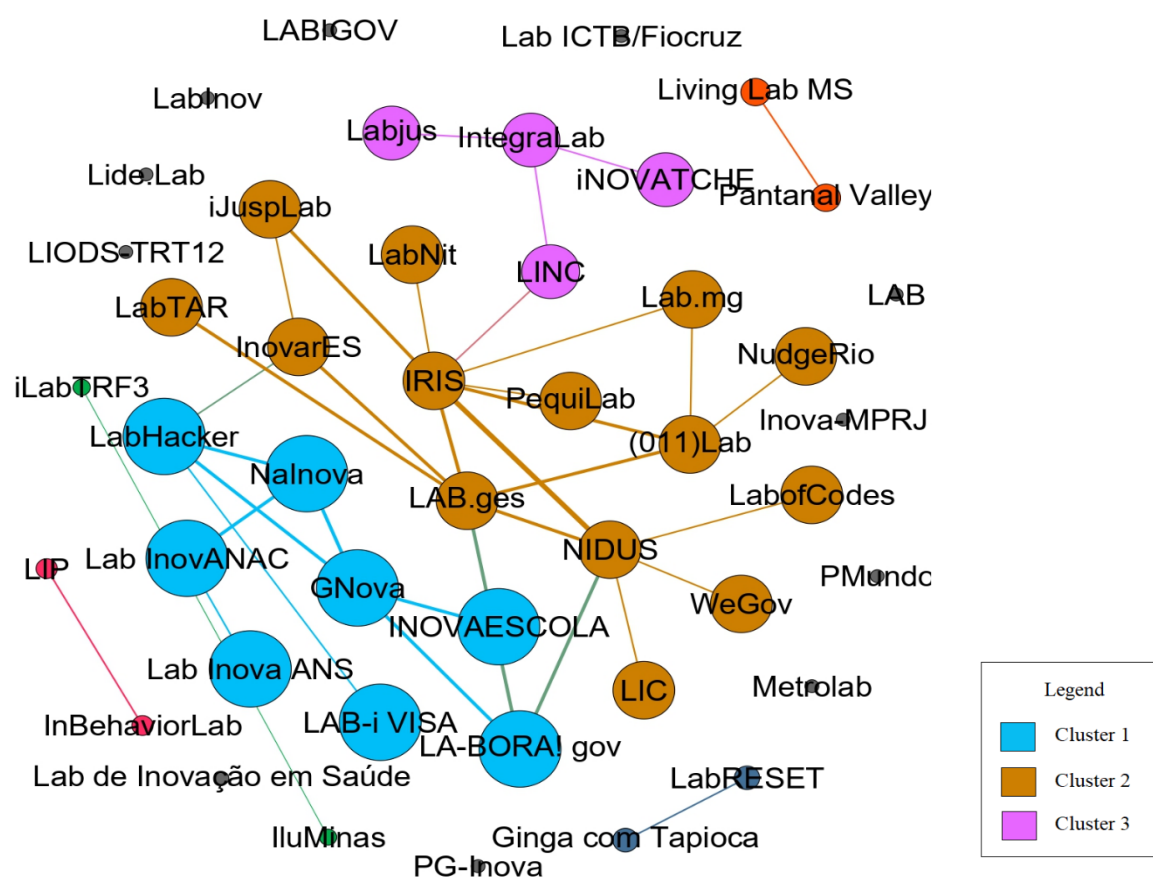
⁶⁸ FERREIRA, Maria; BOTERO, Andrea. Experimental governance? the emergence of public sector innovation labs in Latin America. *Policy Design and Practice*, v. 3, n. 2, p. 150-162, 2020.

⁶⁹ WELLSTEAD, Adam M.; GOFEN, Anat; CARTER, Angie. Policy innovation lab scholarship: past, present, and the future: introduction to the special issue on policy innovation labs. *Policy Design and Practice*, v. 4, n. 2, p. 193-211, 2020.

⁷⁰ In the PSI labs social network, we included 16 labs that were mentioned as part of the network of the PSI labs in our sample.

⁷¹ FERREIRA, Maria; BOTERO, Andrea. Experimental governance? the emergence of public sector innovation labs in Latin America. *Policy Design and Practice*, v. 3, n. 2, p. 150-162, 2020.

Figure 2 - PSI labs social network



4.2 Methods used by the PSI labs

Another distinguishing characteristic of the PSI labs is innovative methods to support government agencies to stimulate the modernization and implementation of innovation initiatives in public administration⁷². In our sample, 96% of the PSI labs used at least one of the 20 methodologies presented in our survey (**Figure 3**).

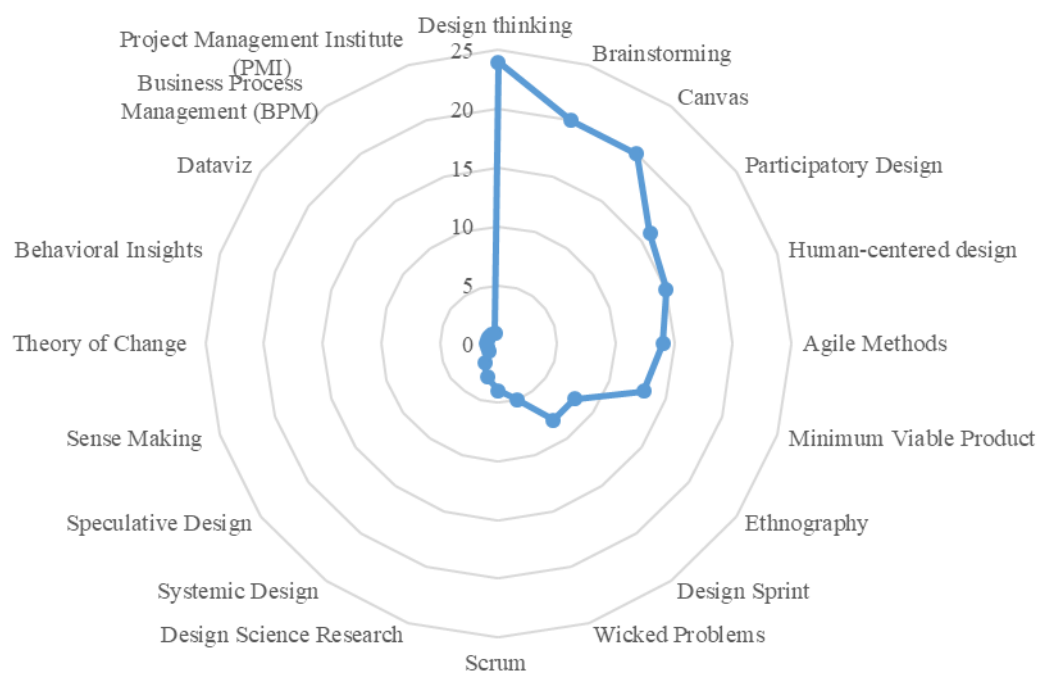
The radar graph illustrates that the most used methodologies are design thinking (83%), brainstorming (69%), and canvas (69%). Other largely disseminated methodologies consist of Participatory Design (55%), Human-centered design (52%), Agile Methods (48%), and Minimum Viable Product (45%). The remaining methodologies are only used by less than 30% of the PSI labs. The labs also mentioned that they combine and adapt methods from various existing methodologies. These results confirm the usage of innovative, ‘designedly’ techniques and human-centered methods by the PSI labs, which are rarely applied in the conventional policy approach⁷³.

⁷² ACEVEDO, Sebastián; DASSEN, Nicolás. *Innovation for better management: the contribution of public innovation labs*. 2016.

⁷³ LEWIS, J. M.; MCGANN, M.; BLOMKAMP, E. When design meets power: design thinking, public sector innovation and the politics of policymaking. *Policy & Politics*, v. 48, n. 1, p. 111-130, 2020.

As Lewis^{74,75} revealed, Design Thinking which constitutes a participatory method focused on collaborative creation and consists of the most employed method by the PSI labs. Despite the novelty of these methods, authors⁷⁶ argue that they present limitations in providing solutions to overcome more structural and systemic challenges. Because they are mainly concentrating on the earlier stages of the innovation cycle - identifying/scoping problems and generating ideas - suggesting an inclination to reframe problems but not presenting consistent solutions.

Figure 3 - Methodologies adopted by the PSI labs



Concerning using behavioral sciences, only 7 (24%) of the PSI labs used behavioral sciences as the primary methodology in at least one project. Additionally, three of these PSI labs affirm that behavioral sciences were already a premise from its conception. Moreover, all labs that applied this method belong to the national and/or regional government level, as Ferreira and Botero⁷⁷ suggested. The low level of behavioral sciences adoption demonstrates that this method still needs to be diffused, at least among the Brazilian PSI labs. Besides, it is noteworthy that only 3 (10%) of them have conducted experiments or quasi-experiments to validate its implementation. To explore the labs' perception of the application of behavioral sciences, the PSI labs were asked whether this method is applicable and its impact on their projects' results (**Figure 4**). All the PSI labs in our sample agreed that the behavioral sciences method effectively increased the impact of their project's actions. Most labs formulate their solutions based on the user's perspective and aim with the behavioral sciences method to change the user's behavior.

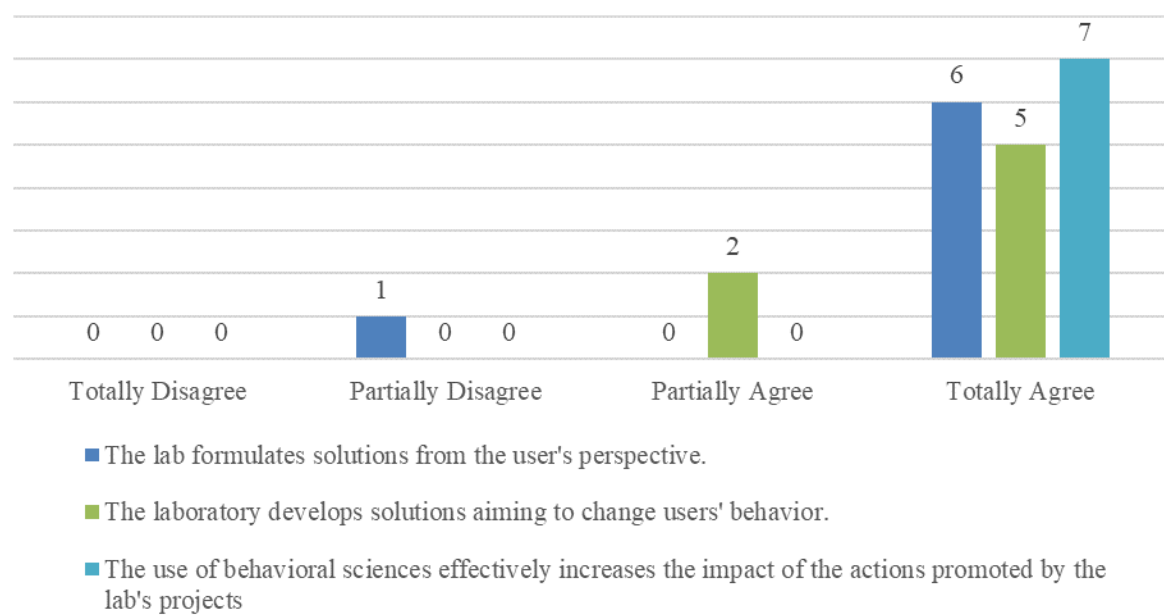
⁷⁴ LEWIS, Jenny M. The limits of policy labs: characteristics, opportunities and constraints. *Policy Design and Practice*, v. 4, n. 2, p. 242-251, 2021. DOI 10.1080/25741292.2020.1859077.

⁷⁵ LEWIS, J. M.; MCGANN, M.; BLOMKAMP, E. When design meets power: design thinking, public sector innovation and the politics of policymaking. *Policy & Politics*, v. 48, n. 1, p. 111-130, 2020.

⁷⁶ MCGANN, Michael; BLOMKAMP, Emma; LEWIS, Jenny M. The rise of public sector innovation labs: experiments in design thinking for policy. *Policy Sciences*, v. 51, n. 3, p. 249-267, 2018.

⁷⁷ FERREIRA, Maria; BOTERO, Andrea. Experimental governance? the emergence of public sector innovation labs in Latin America. *Policy Design and Practice*, v. 3, n. 2, p. 150-162, 2020.

Figure 4 - PSI labs' perception of Behavioral Sciences

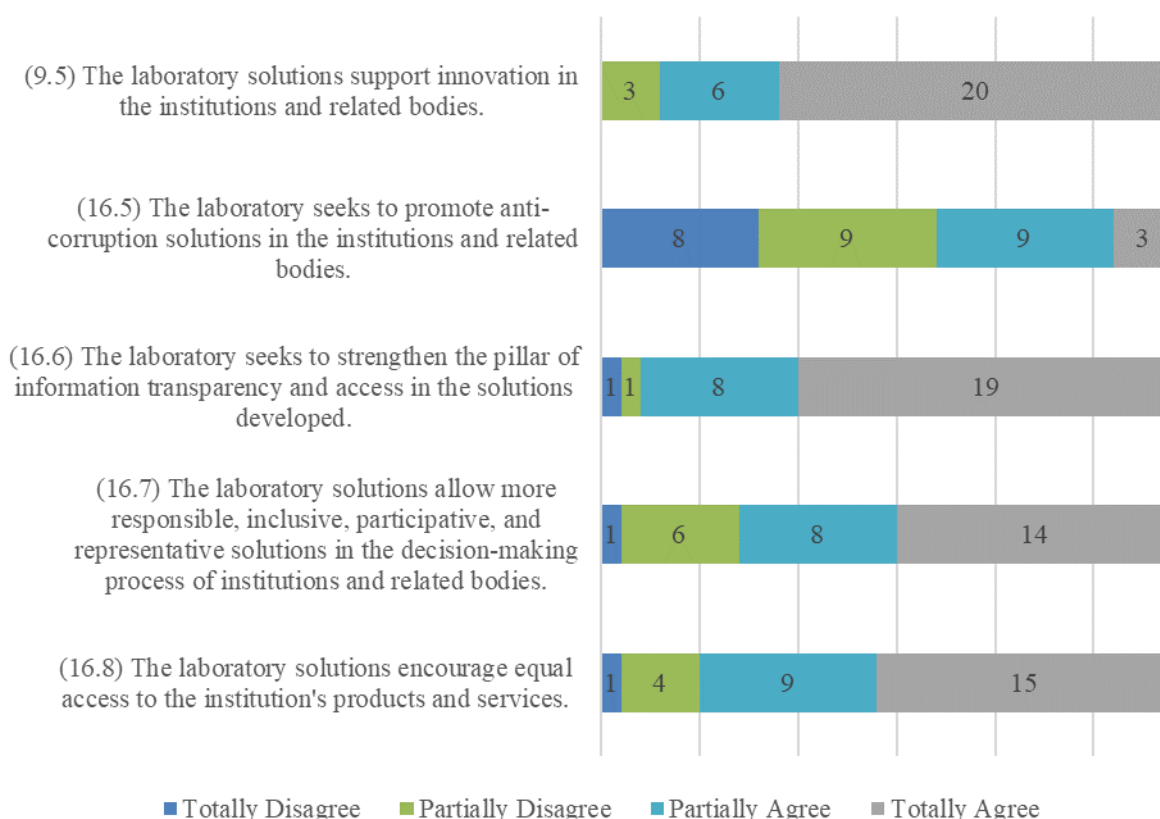


5 Sustainable development goals (SDGs) in the PSI labs

To comprehend the application of the SDGs in the PSI labs, we prepared five statements related to the main targets of public sector performance in SDG 9 and 16 (Figure 5). Based on the results, we identify a high rate of agreement with the statements related to encouragement of innovation (9.5), transparency in the institutions' services and processes (16.6), effort to make institutions more responsible and inclusive (16.7), and equal access (16.8). There is thus a high degree of convergence with SDG 16, particularly in objectives 16.6 and 16.7, about the strengthening of public institutions⁷⁸. Nonetheless, there is a divergence concerning the statement about anti-corruption solutions (16.5). This expresses that anti-corruption is not seen as a topic on the agenda of the PSI labs, despite their projects being focused on improving public administration.

⁷⁸ UNITED NATIONS. *Transforming our world: the 2030 Agenda for sustainable development*. 2015.

Figure 5 - Degree of Agreement with the SDGs statements.



To further understand the relationship between PSI labs with the SDGs, our survey collected information about the projects conducted by the PSI labs. In total, 19 labs provided information about 32 projects. We classified the projects according to all 17 SDGs (**Appendix C**) through this material. As a result, most of the PSI labs projects were classified under the “SDG 16 - Peace, Justice, and Effective Institutions” (63%), and “SDG 3 - Good Health and Well-Being” (11%). The LIODS-TRT12 lab had an initiative of tele-medicine access for employees and their dependents; iJuspLab - JFSP’s through the LIODS Panels initiative on Actions for the Supply of High-Cost Medicines; as well as the ICTB/Fiocruz Innovation Laboratory with the PreClinical IA Project, which seeks to reduce the number of animals used for pre-clinical testing of new drugs. Moreover, a small number of projects related to “SDG 4 - Quality Education” (3%), “SDG 8 - Decent Work and Economic Growth” (3%), “SDG 11 - Sustainable Cities and Communities (3%)”, “SDG 14 - Life below Water” (3%) and “SDG 15 - Life and Land (9%)”. However, only one project was directly related to SDG 9, despite the labs agreeing to support innovation in the public sector. This evidence seems to indicate that PSI labs have limitations in overcoming structural and systemic challenges. Their solutions are in the early stages of the innovation cycle - identifying/scoping problems and generating ideas⁷⁹.

Another finding was that the labs, which belonged to the National Council of Justice (*Conselho Nacional de Justiça*) and were part of the “Laboratory of Innovation, Intelligence, and Sustainable Development Goals” (LIODS) Program, had as a principle in their projects the internalization of the SDGs. This program aimed to integrate the different PSI labs in the Brazilian judiciary to foster an environment of exchange and cooperation⁸⁰. Therefore, they recognized the indivisibility and inseparability of the 17 SDGs and proposed integrating the different existing structures within the judiciary to generate innovations and structured actions.

⁷⁹ MCGANN, Michael; BLOMKAMP, Emma; LEWIS, Jenny M. The rise of public sector innovation labs: experiments in design thinking for policy. *Policy Sciences*, v. 51, n. 3, p. 249-267, 2018.

⁸⁰ CONSELHO NACIONAL DE JUSTIÇA. *O que é LIODS? como surgiu?*. Disponível em: <https://wwwh.cnj.jus.br/programas->

6 Conclusions and policy implications

Our study contributes to the characterization of the PSI labs in the Global South and gives a general perspective on topics under-exploited. For instance, the establishment of social networks between the labs, the application of behavioral sciences and incorporation of SDGs values by them.

Concerning the characterization of PSI labs, the research gives empirical evidence of the increasing number of PSI labs in the Global South as a worldwide tendency⁸¹. It describes PSI labs' organizational structure and practices and topics. Notably, our study captured the effect of a legal framework in enabling more excellent legal stability for the labs and institutional recognition. This legal framework constitutes an advancement and has profound impacts. Its absence leads to poor recognition inside the public administration and constraints in their budget, as noticed in other countries⁸², limiting the capacity of the PSI labs. Therefore, this aspect is a good practice for other countries to mitigate the possible marginalization of PSI labs.

The study also advances the discussion on establishing social networks between the labs, demonstrating expressive cooperation. Their connection shows the affinity between the labs based on governance level, geographical location, and area of concern. The literature labs cooperate in sharing their experiences, challenges, providing feedback, and validating ideas. Additionally, the network seems to be especially important in the initial incubation and creation of the PSI labs⁸³.

In terms of methods, we verified the vast diffusion and application of human-centered and collaborative tools among the labs in the Global South^{84,85}. Notably, the behavioral sciences application investigation revealed that it is restricted to a few PSI labs. Its primary use is changing users' behavior and focusing on nudging it. In general, the findings also support the main critiques in the literature that the PSI labs fail in terms of the technical complexity of the innovations proposed by the labs. In contrast, the continuity of the Labs in the public sector system relies on the robustness of their methodologies and the efficacy of their solutions⁸⁶.

Regarding the application of SDG 9 and 16, we verified that PSI labs are aware of the SDGs and the importance of incorporating them into their principles and solutions. Thus, our findings highlighted that PSI labs constitute one of the forms of implementation of SDGs in the Brazilian public sector, as they are part of an articulated movement of innovations focused on the Conceptual, Political, Institutional, Social and Technological, confirming what was shown by United Nations Research Institute for Social Development⁸⁷.

Additionally, in response to the commitments of the 2030 Agenda and the process of internalizing the SDGs in innovation movements in the public sector, it is vital to consider the initiative of the National Council of Justice concerning the structures of PSI labs - Resolution n. 395/2021. The Resolution connects the SDGs in the formalization and action of these organizations, seeking to foster solutions aimed at the

e-acoef/agenda-2030/labs-cnj-laboratorio-de-inovacao-inteligenica-e-ods/. Acesso em: 17 ago. 2021.

⁸¹ ACEVEDO, Sebastián; DASSEN, Nicolás. *Innovation for better management: the contribution of public innovation labs*. 2016.

⁸² MCGANN, Michael; BLOMKAMP, Emma; LEWIS, Jenny M. The rise of public sector innovation labs: experiments in design thinking for policy. *Policy Sciences*, v. 51, n. 3, p. 249-267, 2018.

⁸³ FERREIRA, Maria; BOTERO, Andrea. Experimental governance? the emergence of public sector innovation labs in Latin America. *Policy Design and Practice*, v. 3, n. 2, p. 150-162, 2020.

⁸⁴ LEWIS, J. M.; MCGANN, M.; BLOMKAMP, E. When design meets power: design thinking, public sector innovation and the politics of policymaking. *Policy & Politics*, v. 48, n. 1, p. 111-130, 2020.

⁸⁵ LEWIS, Jenny M. The limits of policy labs: characteristics, opportunities and constraints. *Policy Design and Practice*, v. 4, n. 2, p. 242-251, 2021. DOI 10.1080/25741292.2020.1859077.

⁸⁶ MCGANN, Michael; WELLS, Tamas; BLOMKAMP, Emma. Innovation labs and co-production in public problem solving. *Public Management Review*, v. 23, n. 2, p. 297-316, 2021.

⁸⁷ UNRISD. *Policy innovations for transformative change: implementing the 2030 agenda for sustainable development*. Geneva: United Nations, 2016.

culture of innovation; focus on the user; participation; collaboration; human development; accessibility; socio-environmental sustainability; sustainable development; debureaucratization and transparency⁸⁸.

Although our study is limited to Brazilian PSI labs, it reaffirmed many characteristics and common trends reported in previous studies in many other labs worldwide. We contributed to advancing the literature about the PSI labs in Global South and reporting tendencies mentioned by other studies. We also contribute to demonstrating their concern with creating networks, behavioral sciences, and incorporation of the SDGs by the PSI labs.

Our findings demonstrate the existence of social networks among the PSI labs. Nonetheless, it was impossible to unveil these connections' primary motivations between the labs. Nevertheless, these associations might constitute a pivotal lab asset to replicate successful projects and approaches. Moreover, the labs should incorporate evaluation metrics into their routines to legitimate their initiatives and actions, systematically demonstrate their contributions towards achieving the SDGs, and incorporate prominent methods such as behavioral sciences in their practices.

For future studies, we verified that the PSI labs' social network and motivations would be essential to analyze in the PSI labs. Another exciting aspect is the impact of a legal framework on the Labs' formalization, consolidation, and expansion inside their national public sector sphere. Finally, there is an emerging need for studies dedicated to measuring the impact of PSI labs on society.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Ethics in Research Committee (CEP)

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References

- ACEVEDO, Sebastián; DASSEN, Nicolás. *Innovation for better management: the contribution of public innovation labs*. 2016.
- AFIF, Zeina *et al.* *Behavioral science around the world: profiles of 10 countries*. Washington: World Bank Group, 2018.
- ANNESI, Nora; BATTAGLIA, Massimo; GRAGNANI, Patrizia; IRALDO, Fabio. Integrating the 2030 agenda at the municipal level: multilevel pressures and institutional shift. *Land Use Policy*, v. 105, p. 105424, jun. 2021.
- ÁVILA, Flávia; BIANCHI, Ana Maria. *Guia de economia comportamental e experimental*. São Paulo: Economia Comportamental, 2015.
- BOTO-ÁLVAREZ, A.; GARCIA-FERNÁNDEZ, R. Implementation of the 2030 Agenda sustainable development goals in Spain. *Sustainability*, v. 12, p. 2546, 2020.

⁸⁸ CONSELHO NACIONAL DE JUSTIÇA. *Resolução nº 395, de 7 de junho de 2021*. Disponível em: <https://atos.cnj.jus.br/files/original1259312021060960c0bb3333a4f.pdf>. Acesso em: 17 ago. 2021.

CAVALCANTE, P.; CAMÕES, M. Inovação pública no Brasil: uma visão geral de seus tipos, resultados e indutores. In: CAVALCANTE, P. et al. *Inovação no setor público: teoria, tendências e casos no Brasil*. Brasília: Enap; Ipea, 2017.

CONSELHO NACIONAL DE JUSTIÇA. *O que é LIODS? como surgiu?*. Disponível em: <https://wwwh.cnj.jus.br/programas-e-acoas/agenda-2030/liods-cnjlaboratorio-de-inovacao-inteligenica-e-ods/>. Acesso em: 17 ago. 2021.

CONSELHO NACIONAL DE JUSTIÇA. *Resolução nº 395, de 7 de junho de 2021*. Disponível em: <https://atos.cnj.jus.br/files/original1259312021060960c0bb3333a4f.pdf>. Acesso em: 17 ago. 2021.

COLE, Lindsay. A framework to conceptualize innovation purpose in public sector innovation Labs. *Policy Design and Practice*, p. 1–19, 2021.

CRIADO, J. Ignacio; VILLODRE, Julián. Public employees in social media communities: exploring factors for internal collaboration using social network analysis. *First Monday*, 2018. DOI 10.5210/fm.v23i4.8348.

FERREIRA, María; BOTERO, Andrea. Experimental governance? the emergence of public sector innovation labs in Latin America. *Policy Design and Practice*, v. 3, n. 2, p. 150-162, 2020.

FIROIU, Daniela; IONESCU, George H.; BĂNDROI, Anca; FLOREA, Nicoleta Mihaela; JIANU, Elena. Achieving sustainable development goals (SDG): implementation of the 2030 agenda in Romania. *Sustainability*, v. 11, n. 7, p. 2156. DOI 10.3390/su11072156. 2019.

FORTE, A.; FLORES, M. A. Aprendizagem e(m) colaboração: reflexões sobre um projeto de intervenção/formação numa EB 2/3. *Revista Portuguesa de Pedagogia*, v. 45, n. 2, p. 93-131, 2011.

FULLER, Matt; LOCHARD, Anna. *Public policy labs in European Union member states*. Luxembourg: Publications Office of the European Union, 2016.

HORTAL, Alejandro. Nudges: a promising behavioral public policy tool to reduce vaccine hesitancy. *Revista Brasileira de Políticas Públicas*, v. 12, n. 1, p. 82 -98, abr. 2022.

HOWALDT, J.; SCHWARZ, M. *Social innovation: concepts, research fields and international trends*. Aachen: IMA/ ZLW, 2010.

KRPAN, D.; MAKKI, F.; SALEH, N.; BRINK, S.; KLAUZNICER, H. When behavioural science can make a difference in times of COVID-19. *Behavioural Public Policy*, v. 5, n. 2, p. 153-179, 2021.

LEWIS, J. M.; MCGANN, M.; BLOMKAMP, E. When design meets power: design thinking, public sector innovation and the politics of policymaking. *Policy & Politics*, v. 48, n. 1, p. 111-130, 2020.

LEWIS, Jenny M. The limits of policy labs: characteristics, opportunities and constraints. *Policy Design and Practice*, v. 4, n. 2, p. 242–251, 2021. DOI 10.1080/25741292.2020.1859077.

MCGANN, Michael; BLOMKAMP, Emma; LEWIS, Jenny M. The rise of public sector innovation labs: experiments in design thinking for policy. *Policy Sciences*, v. 51, n. 3, p. 249-267, 2018.

MCGANN, Michael; WELLS, Tamas; BLOMKAMP, Emma. Innovation labs and co-production in public problem solving. *Public Management Review*, v. 23, n. 2, p. 297-316, 2021.

OCDE. *Behavioural insights and public policy: lessons from around the world*. Paris: OCDE Publishing, 2017.

OSTROFF, Frank. *The horizontal organization: what the organization of the future actually looks like and how it delivers value to customers*. Oxford: Oxford University Press, 1999.

REYMÃO, Ana Elizabeth Neirão; CAÇAPIETRA, Ricardo dos Santos. Public policies and the concretization of social rights: decision-making, architecture of choices and effectiveness. *Revista Brasileira de Políticas Públicas*, v. 8, n. 2, p. 543 – 566, ago. 2018.

RIBEIRO, Marcia Clara Pereira; DOMINGUES, Victor Hugo. Libertarian paternalism and public policies: intervention and transparency. *Revista Brasileira de Políticas Públicas*, v. 11, n. 1, p. 105-120, abr. 2021.

RODRÍGUEZ, Exequiel; GRANDINETTI, Rita. *Laboratorios de gobierno para la innovación pública: un estudio comparado de las experiencias americanas y europeas*. Rosario: RedInnolabs, 2018.

SÁEZ, M. A. *Una gestión pública por valores orientada a la innovación y la Agenda 2030*. 2019. Disponível em: <http://www.top.org.ar/ECGP/FullText/000020/20298.pdf>. Acesso em: 20 ago. 2021.

SANO, Hironobu. *Laboratórios de inovação no setor público: mapeamento e diagnóstico de experiências nacionais*. Brasília: ENAP, 2020.

SCHWELLA, Erwin. Inovação no governo e no setor público: desafios e implicações para a liderança. *Revista do Serviço Público*, Brasília, v. 56, jul./set. 2005.

SERAFIM, M. P.; DIAS, R. B. Análise de política: uma revisão da literatura. *Cadernos Gestão Social*, v. 3, p. 121-134, 2012.

SILVA JUNIOR, A. C. da; EMMENDOERFER, M. L. Os caminhos para o desenvolvimento de uma gestão pública inovadora no Brasil. *Revista Organizações em Contexto*, v. 17, n. 33, 2021.

SOEIRO, D. Transparent governments, social innovation, and their role in achieving the SDGs. In: LEAL FILHO, W.; AZUL, A. M.; BRANDLI, L.; SALVIA, A. Lange; ÖZUYAR, P. G.; WALL, T. (ed.). *Peace, justice and strong institutions*. Encyclopedia of the UN sustainable development goals. Cham: Springer, 2021.

SUNSTEIN, Cass R. *Behavioral science and public policy*. Cambridge: Cambridge University Press, 2020.

THALER, Richard H.; SUNSTEIN, Cass R. *Nudges: improving decisions about health, wealth, and happiness*. New Haven: Yale University Press, 2008.

TÖNURIST, Piret; KATTEL, Rainer; LEMBER, Veiko. Innovation labs in the public sector: what they are and what they do?. *Public Management Review*, v. 19, n. 10, p. 1455-1479, 2017.

UNITED NATIONS. *Transforming our world: the 2030 Agenda for Sustainable Development*. 2015.

UNRISD. *Policy innovations for transformative change: implementing the 2030 agenda for sustainable development*. Geneva: United Nations, 2016.

WELLSTEAD, Adam M.; GOFEN, Anat; CARTER, Angie. Policy innovation lab scholarship: past, present, and the future: introduction to the special issue on policy innovation labs. *Policy Design and Practice*, v. 4, n. 2, p. 193-211, 2020.

WHICHER, A. Evolution of policy labs and use of design for policy in UK government. *Policy Design and Practice*, v. 4, n. 2, 2021.

APPENDIX A - SDGs analyzed

APPENDIX B - Brazilian PSI Labs sample in this study

No	PSI Labs	GOVERNANCE	INSTITUTION	YEAR
		LEVEL		
1	Lab de Inovação do TRF1	Federal	Regional Federal Court of the First Region	2021
2	Lab de Inovação Pública	Federal, Local	Brazilian Micro and Small Enterprises' Support Service (Sebrae)	2021

No	PSI Labs	GOVERNANCE		YEAR
		LEVEL	INSTITUTION	
3	LabRE-SET	Regional	State Taxation Bureau of Rio Grande do Norte (SET-RN)	2021
4	Pantanal Valley	Federal	Federal University of Mato Grosso do Sul (UFMS)	2021
5	Lab de Inovação do ICTB/Fiocruz	Federal	Institute of Science and Technology in Biomodels (ICTB/Fiocruz)	2020
6	LA-BORA! Gov	Federal	Ministry of Economy Personnel Management and Performance Department (SGP)	2020
7	Lab de Inovação em Governo do Maranhão - LABIGO	Regional	Government School of Maranhão (EGMA)	2020
8	Lab de transformação da ESMPU - INOVAESCOLA	Federal	School of the Public Prosecution of the Union (ESMPU)	2020
9	Metrolab	Regional	Metro-SP	2020
10	PG-Inova	Regional	Attorney General of the State of Rio de Janeiro (PGERJ)	2020
11	PMundo Incubadora de Negócios	Local	Independent (with subsidy resources from different projects)	2020
12	Inova MPRJ	Regional	Public Prosecution Office of the State of Rio de Janeiro	2019
13	Lab de Inovação e Criatividade - IntegraLab	Federal	Regional Federal Court of the Fourth Region	2019
14	Lab de Inovação e Dados do Governo do Estado do Ceará - ÍRIS	Regional	Ceará State Civil House	2019
15	Lab de Inovação, Inteligência e Objetivos de Desenvolvimento Sustentável - LIODS-TRT12	Federal	Regional Federal Court of the Twelfth Region	2019
16	Lab de Inovação - LABINOV	Federal	Federal Justice of Rio de Janeiro (JFRJ)	2019
17	Lide.Lab	Regional	State Department of Finance of Mato Grosso do Sul	2019
18	NIDUS - Lab de Inovação do Estado de Santa Catarina	Regional	Secretary of State for Administration: Management of Innovation in Government	2019
19	Núcleo de Apoio à Inovação - NAINOVA	Federal	Federal Senate of Brazil	2019
20	InovarES	Federal	Judiciary Section of Espírito Santo	2018
21	Lab de Inovação na Gestão - LAB.ges	Regional	Management and Human Resources Department (SEGEr) of Espírito Santo	2018
22	(011).Lab	Local	Secretariat of Innovation and Technology (SMIT)	2018
23	Lab de Inovação e Gestão da JFSP - iJuspLab	Federal	Federal Justice of São Paulo (JFSP)	2017
24	Lab de Inovação em Governo da Agência Nacional de Aviação Civil - Lab InovANAC	Federal	National Civil Aviation Agency of Brazil (ANAC)	2017

No	PSI Labs	GOVERNANCE LEVEL	INSTITUTION	YEAR
25	Lab de Inovação Financeira - LAB	Federal	Brazilian Development Association (ABDE)	2017
			Inter-American Development Bank (BID)	
			Securities and Exchange Commission (CVM)	
26	GNova	Federal	German Corporation for International Cooperation (GIZ)	2016
27	Lab Hacker	Federal	National School of Public Administration (ENAP)	
28	Lab de Inovação em Saúde	Federal, Regional, Local	Chamber of Deputies of Brazil	2013
			Pan American Health Association (OPAS)	
29	Lab de tecnologias de apoio a redes de inovação - LabTAR	Federal	World Health Organization (WHO)	2011
			Federal University of Espírito Santo (UFES)	

APPENDIX C - Classification of the PSI Labs projects according to the SDGs

SGDs Goals	Projects	Percentage (%)
ODS 1 - No Poverty	0	0%
ODS 2 - Zero Hunger	0	0%
ODS 3 - Good Health and Well-being	4	11%
ODS 4 - Quality Education	1	3%
ODS 5 - Gender Equality	1	3%
ODS 6 - Clean Water and Sanitation	0	0%
ODS 7 - Affordable and Clean Energy	0	0%
ODS 8 - Decent Work and Economic Growth	1	3%
ODS 9 - Industry, Innovation, and Infrastructure	1	3%
ODS 10 - Reduced Inequalities	0	0%
ODS 11 - Sustainable Cities and Communities	1	3%
ODS 12 - Responsible Consumption and Production	0	0%
ODS 13 - Climate Action	0	0%
ODS 14 - Life Bellow Water	1	3%
ODS 15 - Life and Land	3	9%

SGDs Goals	Projects	Percentage (%)
ODS 16 - Peace, Justice, and Strong Institutions	22	63%
ODS 17 - Partnership for the Goals	0	0%
TOTAL	35	100%

Note: Some of the PSI Labs projects were allocated in more than one SDG.

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