

# Performance of the Innovation Laboratory in the GNova Government in the Public Sector

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**Abstract:** *This research article aims to demonstrate the performance of GNova, a pioneering innovation laboratory of the Brazilian federal government for the public sector, analyzing its innovation concepts, characteristics and objectives. The analyzed laboratory is an innovative space whose work focuses on experimental methods and the development of creative solutions to public problems. The objective is to present the performance of the innovation laboratory in the public sector in the process of developing creative solutions to public problems. As a research instrument, primary data from the GNova Open Doors for Innovation in the Public Sector workshop and secondary documents from websites with information about the GNova laboratory were analyzed. Based on the results, it can be concluded that GNova is important for innovation in government in the public sector, as its performance contributes to new ways of thinking about public challenges and acting in government, prospecting, experimenting and disseminating new approaches in facing challenges audiences in a collaborative, creative way and with constant learning.*

**Keywords:** *innovation in the public sector;GNova; innovation laboratory*

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## I. INTRODUCTION

Innovation in the public sector is a crucial factor for improving the services provided. Wasting time to address a demand is increasingly less tolerated by the population, which demands respect and high-quality service. Innovation in the public sector involves the introduction of new elements that bring about a discontinuity in previous practices and result in improvements in the public sector, thereby creating public value for society.

In Brazil, experiments and project creation have emerged with the aim of promoting innovation in the public sector through innovation laboratories. The government innovation laboratory "GNova" was created in partnership with MindLab from Denmark and is located at the National School of Public Administration (Enap). GNova employs various methodologies such as design thinking, ethnographic design, agile immersion: reality checking in public policies, and behavioral insights. These methods are used as a strategy for generating government solutions for various activities in the public sector.

The partnerships that GNova develops with Federal Public Administration agencies are tailored to the challenges to be faced. Typically, these projects are developed in cycles that involve immersion in problems, ideation, prototyping, and testing of solutions. Throughout these cycles, the laboratory uses agile methodologies and multidisciplinary approaches inspired by design, social sciences, and behavioral economics. All projects generate innovative capacity in the teams of partner organizations, who participate and learn by doing throughout the process.

GNova is structured around three axes of action: experimentation, prospecting, and dissemination. The experimentation axis is predominant in the laboratory's activities, encompassing 70% of its actions and projects.

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GNova has developed more than 20 projects, supporting the development of solutions in partnership with various requesting institutions. Therefore, this article aims to answer the following question: How does the GNova Innovation Laboratory operate in the public sector?

The purpose of this article is to demonstrate the operating methods of GNova and its quest to use new ways to solve public challenges and act in government by creating a new vision of government based on innovative practices and values centered on people. More specifically, to understand the importance of the government innovation laboratory (GNova), show its actions, and present the innovation methods of this laboratory that make a difference in the public sector.

The study of innovation in the public sector becomes relevant by presenting the importance of the information generated by the demonstrations that will directly influence the process of public sector action. Laboratory teams are formed based on the initiative of political leaders and carry the expectation of overcoming barriers to innovation in the public sector, such as normative rigidity, the absence of a culture oriented towards experimentation and change, inflexible budgets, among others (PUTTICK et al., 2014).

For the purpose of understanding this work, it is divided into the following parts: firstly, the introductory part of the work exposed concepts related to innovation in the public sector, innovation laboratory, and GNova; then, in the literary foundation, topics related to the innovation laboratory in the public sector were presented; in the third part, the methodological techniques used for data collection in the research were presented; then, the explanation of the results obtained based on the data collected in the development of the article; and finally, the concluding remarks followed by the bibliographic references.

## **II. THEORETICAL REFERENCE**

Here the concept of innovation was addressed, highlighting innovation in the public sphere, innovation laboratories that are a physical space, in which new knowledge is exchanged and ideas are developed and the contribution that the GNova Innovation Laboratory offers to the public sector.

### **2.1 Innovation in the public sector**

Innovation creates new and transformative things that have a positive impact on quality of life and human development. One of the first concepts developed about innovation was created by Schumpeter at the beginning of the 20th century, associating the act of innovation to bring new products to the market, to discover a new way of manufacturing or marketing products; or mining new sources of raw materials, or even reconstructing the current market structure (SCHUMPETER, 1982). According to Christopher Freeman (1988), innovation is a method that includes methodological activities, development, management and that leads to better commercialization. The Oslo Manual (1990-1992-1997) defines innovation as the introduction of something new into human activity.

Innovation in the public sector is a point that is present in all public administration records in the world. The improvement of public services, the improvement of the citizenship offer, among other things, has sparked increasing interest and growth in this topic. Albury (2005) warns that innovation is not a luxury item for the public sector, but a profound public value shared by all. Likewise, Crossan and Apaydin (2010, p. 1155) define innovation as simultaneously a process and result, thus establishing their concept as follows: production or reception, assimilation and exploration of new added value in the economic and social area; renewal and expansion of products, services and markets; development of new production methods; and creating new management systems (CROSSAN; APAYDIN, 2010, p.1155).

Innovation is essential, can solve many complex problems and is always causing changes in contemporary society. It is no different in the public sector, innovation supports the programs, policies, projects and practices that governments carry out with the aim of having good positive results in the quality of life of citizens. The commitment of public organizations is to always innovate their services, allowing society, citizens and users of public services to have the trust and legitimacy of the State, (POTTS & KASTELLE, 2010, VIGODA-GADOT, SHOHAM, SCHWAMBSKY & RUVIO, 2008, BRANDÃO AND BRUNO-FARIA, 2013). An innovative public sector is one that offers quality services to citizens, offers access opportunities and manages to have a good relationship with citizens. Vigoda-Gadot and collaborators (2008) state that the competence of a country's public sector and the provision of quality public services are essential to achieve more transparent goals and reach the point of providing satisfactory results to users with services.

### **2.2 Innovation labs**

Innovation laboratories (i-Labs) are places that provide services to society through the development of solutions to problems, they are a structure that is linked to public administration and generally have their own structure and team, and aim to support creativity and experimentation for developing innovations, improving public services and solving complex problems that harm society.

According to Emmendoerfer et al., (2019), these laboratories are based on the need to make state bureaucracy more flexible. Thus, I-Labs are understood as a place for production, collaboration and sharing of knowledge and information CAVALCANTE; CUNHA (2017).

According to Werneck et al. (2020), has approximately 120 innovation laboratories on all continents. In Brazil, according to surveys, there are approximately 40 innovation laboratories between the executive, legislative and judicial branches (SANO, 2020). In Brazil, in the mid-1990s, innovations in the public sector began to be formulated and implemented under the influence of international management trends, known as New Public Management. The political guide for the new public sector reform was neoliberalism, which advocated significant debureaucratization in the administrative structures of public institutions. The implementation of these new measures in public administration was legitimized by the inefficiency of public services motivated by the interventionist and centralizing State. However, over the years, social inequality began to grow in Brazilian society and the population began to demand public policies that corresponded to their needs (HENRIQUE, 2021).

Since then, the idea that public administration is limited only to issues related to changes in its administrative structure has become obsolete. The emergence of innovation labs in the public sector has therefore granted governments the ability to address and manage potential problems in uncertain and adverse situations. In this way, laboratories encourage the participation of different actors in society to contribute new ideas to the formulation of public policies, favoring the plurality of voices and the sharing of visions between actors (HENRIQUE, 2021).

i-labs innovation labs are used by governments as tools to experiment and disseminate innovation in the public sector. These are places that try to solve public problems (CRIADO et al., 2017; FERRAREZI et al., 2018). Several activities are developed for the solution to work, such as research, consultancy, training, challenges, experimentation, implementation and evaluation (SELLONI, et al., 2013). These aforementioned activities are always focused on the mission of improving public products and creating principles for citizen

### **2.3 GNOVA**

The Government Innovation Laboratory of the National School of Public Administration (Gnova/ENAP) is the Brazilian government's first i-Lab. It was created in 2016, through a partnership between ENAP, the Ministry of Planning, Development and Management (MPDG) and the government of Denmark with support and mentoring from MindLab. Brazil and Denmark share a common interest in making public services efficient and transparent. Valdir Simão, who was Brazilian minister of the (MPDG), in the Dilma government, emphasized the common interests of cooperation: "Collaboration will help create an environment for innovative solutions in the public sector".

The National School of Public Administration (ENAP), is an entity linked to the Ministry of Economy of Brazil (federal government), its purpose is to carry out human resources training programs for the federal public administration, with a focus on advancing management technologies for increase the effectiveness and permanent quality of services provided by the State to citizens. Decree No. 10,369, of May 22, 2020, specifies ENAP's activities and one of these activities is to support and disseminate innovative solutions in the public sector through experimental projects within the scope of the Government Innovation Laboratory.

In its day-to-day activities, GNova has been guided by the promotion of research, experimentation and dissemination of innovations in the public sector, with the aim of improving the provision of services and the service more suited to the needs of citizens, companies and organizations in the third sector. In this way, prospecting is a process of communication with other laboratories in Brazil and around the world, to guarantee financing for projects such as innovation grants and support for reducing bureaucracy in Brazil and in carrying out the aforementioned Innovation Competition in the Public Sector, aiming at the possibilities of transformation of the new and for the future. In the dissemination, it includes projects focused on events such as innovation competition, Gnpapo, Innovation Week. In terms of experimentation, these are projects focused on digital transformation, behavioral insights, agile immersion, ethnographic design and design thinking. Experimentation takes place at a safe distance from everyday life under controlled conditions, to generate useful ideas that meet users' needs and demonstrate their effectiveness (ELISABETE FERRAREZI, JOSELENE LEMOS, & ISABELLA BRANDALISE, 2018).

Gnova adopted design as the main methodological basis for project development, incorporating other methods according to each situation. Design thinking is an approach taken from the field of design and adapted to the context of public administration as a way of dealing with so-called (insidious) problems and creating public value. Design is a concept that remains today and is only growing. Herbert Simon (2001) defines design practice as a human effort of real conversion into preferred situations. Human-centered design thinking emphasizes the importance of in-depth exploration of human lives and problems in order to generate solutions that best meet these human needs (LIEDTKA, SALZMAN, & AZER, 2017).

Other methods used in Gnova projects are ethnographic design and agile immersion: reality check in

public policies. Ethnographic design is a way to learn about people, their needs and their contexts in order to identify opportunities for innovation that more closely match the perspectives and lived experiences of those affected by a product, service or public policy. According to Fetterman (2010), Ethnography is telling incredible and authentic stories. Angrosino (2009, 30) adds that “Ethnography is the art and science of describing a human group, its institutions, its interpersonal behavior, its material production and its beliefs”.

Agile Immersion, as translated from the original in English, Practice Check (reality check), is a methodology whose objective is to quickly attract experts, users and other actors who show interest in seeking understanding or creating solutions to problems, challenges in the sector public, management practice or public policy. It is a process to verify the reality of the problem or challenge under investigation and can be used at different stages of public policies. This methodology reflects some of the values and guidelines that GNova uses to carry out activities: collaboration, proactivity, openness to risk, networking, empathy and focus on the user, experimentation and creation of public value (SANO, 2020)

Therefore, Gnova is important for the public sector, as it builds its points through ideas, knowledge and technologies available in other sectors of society. Public service innovation happens through people and involves innovative redesign of the design of institutions (CAVALCANTE, 2019).

### **III. METHODOLOGICAL PROCEDURES**

A pesquisa a ser apresentada utilizou métodos de modo a subsidiar os resultados que serão obtidos. Desenvolvendo-se os procedimentos necessários e úteis para discorrer sobre a atuação do GNova no setor público.

The research to be presented used methods in order to support the results that will be obtained. Developing the necessary and useful procedures to discuss GNova's activities in the public sector.

The study methodology was developed through bibliographic sources and observations acquired at the GNova Portas Abertas workshop. The purpose is to carry out basic research, as it generates knowledge to improve existing scientific theories.

Bibliographical research is a data collection technique that leads the researcher to come into contact with what has already been published on the subject, being developed based on materials already prepared, consisting mainly of books, articles in scientific journals and annals of congress, and its main advantage lies in the fact that it allows the researcher to cover a much wider range of phenomena than that which could be researched directly. Bibliographic research seeks to understand and analyze past cultural or scientific contributions on a given subject, theme or problem (Cervo & Bervian, 1983; Flick, 2008; Gil, 2010; Köche, 2010; Dresch et al., 2015).

As for characterization, the procedure used was qualitative research which, according to Pinheiro (2010), presents itself as experiences for a more detailed understanding of what it means and how the situation that the interviewee presents is characterized.

Qualitative research, by not relying on specific methods, allows the interviewee to freely express their point of view. As is the case in this article, the informal conversation with the coordination of Gnova Portas Aberta, the main points of the informal conversation will be described to better develop the research carried out. Regarding the technical aspect, the

The chosen procedure was the case study which, like Pinheiro (2010), is a technique that provides a deep-rooted and somewhat exhaustive study of one or a few parts in order to allow broad and detailed knowledge of the information.

The research was carried out at GNOVA - Government Innovation Laboratory, based on the objective of knowing the importance of the laboratory's performance and its contribution to innovation in the public sector, in addition to its contribution to solutions to government demands for the community. .

The analyzed object, in this case, GNova - Government Innovation Laboratory - is located at ENAP - National School of Public Administration Campus Asa Sul, Room 117 SAIS Area 2A Brasília-DF.

. The information presented in the following research was used as a technique for collecting primary data from participation in the GNova Open Doors workshop, in the laboratory itself, in addition to bibliographical research of secondary data with an exploratory and descriptive approach, being based on data obtained in research on websites, magazines and articles to highlight relevant data to obtain the results intended in this study.

After participating in the workshop, the next stage included the transcription of the collected data. The content obtained through the workshop was grouped and listed according to its theme, due to the fact that the research seeks to better understand the proposal presented by the workshop, extracting its most important moments and then content analysis carried out on electronic websites was carried out. articles available as SCIELO and Google Scholar. Subsequently, a qualitative analysis of this information was carried out in order to investigate the research problem presented.

Obtaining results seeks to identify how the innovation laboratory can achieve its goals and achieve the

expected results.

#### **IV. RESULTS AND DISCUSSIONS**

One of the mechanisms to minimize risk and save resources in the public sector consists of reducing scale by carrying out experiments and prototypes, allowing the implementation to be evaluated and improved prior to its expansion. One of the characteristics of innovation laboratories is precisely the adoption of experiments to address public issues through innovation processes that require hypothesis testing, verifying in practice whether the innovative idea translates into results. Therefore, in the area of innovation, the ideal is to think about experiments, as they make it possible to quickly capture a wrong decision and retrace the route.

GNova's aim is to dare new ways of thinking about public challenges and acting in government, through its activities in prospecting, experimenting and disseminating new approaches to face public challenges in a collaborative, creative way and with constant learning. GNova uses agile methods, prototypes, experiments, tests and interviews with users in a combination of social science and design methodologies to build new responses to public challenges.

GNova supports public institutions to find their purposes and develop solutions to problems relevant to people. Furthermore, strategies and solutions are created based on the principles of collaborative construction based on evidence, through agile methodologies, with empathy and focus on the user, with openness to risk and experimentation, to generate public value.

In this context, although still in small numbers, innovation laboratories have begun to emerge all over the world that aim to bring new forms of innovation in government in addition to serving society, through the redesign of services in a logic characterized by experimentation as a economic and viable form of public administration in a collaborative governance logic. It is in this sense that relations between public and private must be strengthened with the aim of sharing practices between both sectors, and contributing to bringing the user, the citizen, closer together.

One of the laboratory's activities in prospecting is the Cátedras Brasil Inovação Program, which aims to encourage the development of research applied to the public sector that contributes to innovation in the management and design of public policies. The program also allows Enap to get closer to innovators working in universities and the private sector, as well as identify new fields of activity. (SANO,2020)

Another objective presented at Portas Abertas is to prospect innovation units in Brazil and the world through Benchmarking. In convergence with this objective, it is essential to highlight the concept of benchmarking, which is a methodological Organizational Management tool practiced by many organizations in the USA since the beginning of the 1990s. These organizations use it to compare products, services and processes in order to improve and become more competitive in the market. There are some steps to effectively carry out this prospecting, they are:

Benchmarking is divided into three stages: planning, execution and implementation of improvements. In order for it to be carried out successfully and bring results that contribute to maximizing organizational competitiveness, it is necessary to give the same attention and importance to each of these stages. (CARLINI, VITAL WANDERLEY, 2004, p.61)

Another form of prospecting presented is related to the target audience, innovation ecosystem, themes or methodologies of interest. In the innovation ecosystem, the action is in conjunction with the purpose of innovation, producing in a cooperative manner, with the objective of developing government solutions that satisfy the bodies involved in addition to society.

The themes or methodologies of interest that have been tested by GNova can be used by government teams at various stages of a public policy, with the aim of understanding the needs of citizens and organizations and better structuring problems or challenges.

In general, despite the variation according to the object, the methods used in the projects developed presented one or more of the following stages:

- a) identification and characterization of the problem and its context, priorities and key tasks;
- b) carrying out research with users to understand reality and identify innovation opportunities;
- c) creation of ideas that impact the problem;
- d) indication of ways to promote changes and obtain results;

- e) design and testing of solution prototypes with users and relevant actors; It is
- f) validation or readjustment of the solution.

In order to achieve the Laboratory's goals, some of its activities to be carried out are described, such as the need to work with researchers, consultants from different regions of the country; the definition of prospecting products for dissemination and experimentation; and the hiring of foreign experts in some methodologies that are identified.

GNova's second role is directly related to experimentation. Experimenting is basically testing hypotheses and checking whether reality reacts in the expected way. It is a way of putting into practice and rehearsing a solution, instead of just thinking about it. This action is in line with the considerations of Puttick et al., (2014), which highlights experimentation as a means of overcoming challenges to innovation in the public sector.

The dissemination of innovation laboratories in the public sector is part of the improvement strategy mainly in the management of the public sector and in specific areas of public policies. The initiatives are significantly concentrated at the federal level, both in the Executive and Legislative Branches (SANO,2020). GNova operates within the scope of dissemination through the creation of repositories through different mechanisms: dissemination on the website, preparation of publications, mentoring, GNPapos, Simples mente - application to support the use of behavioral sciences in public policies.

Publications for dissemination are made on an electronic website in the ENAP repository, in addition to the printed version of these publications. Below in figure 1 are examples of publications made by GNova:

Figure 1 - Purely illustrative image of publications



Source: prepared by GNova, 2020

Mentoring and lectures with guidance on innovation in the public sector are held for the public who are interested in this subject, based on prior registration, which is the case, for example, of participation in the Open Doors workshop to learn about GNova and carry out this article, as well as several Brazilian and foreign bodies and institutions can participate. Every month the GNova team welcomes those interested in learning about the Laboratory's work and vision on the challenges for innovation in the public sector for an informal conversation.

GNPapo is an open space for conversation and exchanges about new ways of thinking and acting in government, which reinforces the GNova Laboratory's aspect of disseminating knowledge and developing capabilities for innovation, based on presentations, reports, dialogues and exchanges undertaken between participants and guests. This is an initiative aimed at employees interested in new approaches, methodologies, tools and means that increase the capacity to innovate in organizational processes and public policies.

Simply mind is an application created by the Laboratory to be used on a daily basis by public servants and others interested in applying behavioral sciences to public policies. Users are guided to better understand a public problem and generate ideas for possible solutions with behavioral elements.

“Simples mente” is a tool materialized in a card game that allows the generation of insights for action in public policies based on the application, in a clear and accessible way, of behavioral elements identified in practice and literature, including international literature. The organization of letters in the form of an acronym represents 12 behavioral elements: Simplification, Incentives, Messenger, Priming, Reminders and commitments, Emotion, Saliency, Mental models, Ego, Social norms, Standard tendency and Scarcity. Below is a demonstration of the application in figure 2.

Figure 2 - Application image



Source: prepared by GNova, 2020

The book that gave rise to the *Simple mente* app “Behavioral sciences and public policies”, by authors Antonio Claret Campos Filho, João Sigora and Manuel Bonduki was launched in 2020, when attention and efforts were focused on combating the Covid-19 pandemic. In its preface, the book already stated that “tragedy inevitably makes itself felt in human ways and poses significant and growing economic and social challenges. We are experiencing a unique moment, in which discussions about the role of behavioral sciences, in individual behavior and in society, have gained increasingly more relevance”

Such initiatives reveal the importance attributed to GNova's work in prospecting, experimenting and disseminating by actors and institutions committed to the transformation of public administration.

## V. FINAL CONSIDERATIONS

This article sought to assess the importance of the work of the GNova innovation laboratory and its contribution to Public Administration. The analysis carried out revealed that continuous improvement and innovation processes in the public sector are now fundamental factors for resolving public challenges in public bodies, aiming to solve problems of public interest and society. A goal to be achieved is the increase in quality benchmarks in the provision of services, or gains in efficiency in processes and in achieving the desired results.

The analysis of this research demonstrated that the government solutions presented by GNova have been a reference and shared, for example, by the *Portas Abertas* workshop and through the dissemination of work carried out by the laboratory, it can be said that the practices of this laboratory have influenced other laboratories of innovation.

As it is a dynamic and interactive project that uses different techniques for innovation in government, creativity, the desire to learn and even create an intra-organizational approach in the elements of the organizations that are willing to innovate. In future terms, there are several issues that deserve reflection and analysis: Assessment of projects prepared by GNova with their implementation and development, as the laboratory goes to the prototype and does not follow the pilot project. What are the factors that enhance subsistence and the consequent success or failure, an end to the project developed by the innovation laboratory?

It is in this way that it can be concluded that the GNova innovation laboratory acts as an example of an instrument for experimentation and innovation in the public sector.

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