

TRANSFORMATION FOR OUR SHARED GOALS

A white paper examining innovation labs as a tool to advance sustainable development

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Introduction

Context

Governments are finding it increasingly difficult to meet the needs of their populations with increased pressures on service delivery due to converging crises, including climate change, pandemics and other public health challenges, growing economic inequality, racism and discrimination, and political violence and repression. Moreover, a lack of trust, a reduction in public-spending budgets, societal concerns, and increased demands for more flexible, agile, and responsive governmental policies and practices are further contributing to calls for public sector renewal (Ferreira & Botero, 2020). The standard modes of operating within existing governance systems are seen to be insufficient in enabling the public sector to navigate complexity and address the multitude of mutually reinforcing challenges governments face. As such, there is a pressing need for governments to transform policies, practices, and services in order to address these challenges and leverage emerging opportunities to innovatively improve government capabilities in meaningful ways, building trust with citizens, supporting people's needs and agency, and advancing sustainable development.

Simultaneously, there is a trend towards increased digitization of both public and private spaces and services. While presented as a net benefit for people (including citizens and people without citizenship status), digitization has varied impacts on individuals, communities, and the environment. Marginalized communities are more likely to experience the negative impacts of digitization and lack meaningful digital access as a result of deepening digital divides and inadequate governance systems (Ebadi, 2023). The proliferation of digital devices, platforms, and infrastructure has not resulted in accelerated progress towards achieving the sustainable development goals (SDGs) or solving the seemingly intractable challenges people and institutions are facing, despite (often grandiose) claims to the contrary. It is thus evident that digital technologies alone are insufficient in achieving the SDGs and must be supported by systems transformation and innovative governance, policy, and community engagement reforms, practices, and strategies.

Against this backdrop, innovation labs, often regarded as a safe space for experimentation, have emerged as a tool to support different stakeholders, including governments, in advancing their strategic goals and priorities. The models for innovation labs around the world are varied in accordance with their operational and cultural context, goals and priorities, funding model, relationship with government bodies, and participating actors (including team composition, stakeholders, partners, and funders). There are currently no

systematic, comprehensive reviews of innovation labs around the world. This paper aims to provide an overview of the role of innovation labs as a tool in advancing sustainable development, using examples from different contexts, in order to help inform NIGSD's development of its first prototype innovation lab. The goal is to provide a state-of-the-art overview of selected innovation labs to deepen NIGSD's understanding of a specific modality and/or tool used by various stakeholders to promote and advance sustainable development with a particular focus on civic, social, and technological innovations and interventions.

Methodology

In order to ensure a strong theoretical framework and capture diverse and relevant experiences, this study used mixed methods of research, identifying challenges and best practices, and sharing insights based on existing models of innovation labs that have been implemented in various countries. This paper begins by examining existing literature and case studies to better understand the conceptualizations and applications of innovation and innovation labs, especially in relation to government or the public sector. As part of this literature review, we conducted an unstructured search on Scopus and Google Scholar, identifying the most recently published academic articles, papers, and reports on Government and Policy Innovation Labs. Document selection resulted in 27 publications spanning from 2012 to 2023, providing information on foundational concepts and case studies.

A rapid mapping exercise was also undertaken to scope and identify relevant experts and innovation labs to engage with as part of the study. Over a 2.5-week period, a survey was designed and distributed to approximately 30 relevant stakeholders from innovation labs, with the aim of gathering insights on the strategy and operations of labs working on sustainable development. Identified experts were also invited to engage in a 1-1.5 hour-long interview to provide a reflection and discuss the inner workings and challenges faced by these labs. A total of eight respondents participated in the survey, and it was possible to conduct one interview. Survey responses were reviewed and, where possible, verified with data from interviews or publicly available information (e.g. organizational websites). The resulting insights from the survey have been synthesized and presented in Table 5. The results of and insights from the literature review, survey, and interview are presented throughout this paper. The paper draws insights from more than 12 innovation labs (refer to Appendix for a list of these labs), including 7 labs featured as case studies.

Structure

The white paper begins by exploring the concepts of innovation, comparing definitions from different contexts in order to help frame the discussion on the role of innovation labs in promoting sustainable development in Egypt. We present a working definition of innovation and innovation labs and propose the articulation of a contextually informed conception of innovation, rooted in the local language and culture. In addition, the review also covers the most conventional forms of internal organization and risk management strategies embedded in lab design to circumvent the most problematic issues related to their existence, particularly the paradox/trade-off between lab size and innovation potential.

The paper then proceeds by highlighting the most common types of innovation labs and their relationship to the SDGs. We present seven case studies, highlighting their structure, activities, mission, funding sources, partnerships, and contribution(s) to the SDGs. Through this comparison of innovation labs from different contexts, the paper presents best practices, challenges, and lessons learned that can help inform the development of a tailored model that can be implemented by the NIGSD and other relevant entities in the Egyptian government for the Egyptian context.

Based on the primary and secondary research conducted as part of this study on innovation labs, we present key considerations and actionable recommendations to inform the design and development of innovation labs and accompanying strategies. The paper concludes with a summary of key findings and suggested areas for further inquiry and action.

Innovation Labs and Sustainable Development

Defining innovation

Innovation is contemporarily frequently associated with the development of disruptive, often digital, technologies and advanced scientific inventions and discoveries (e.g., quantum computing, autonomous air taxis, solar powered electric vehicles, lab-grown meat for human consumption, or blockchain supported payment systems). This hyperfocus on outcomes can serve to equate innovation with the development of technical products instead of recognizing the myriad of ways innovation is defined [as a strategy, process, perspective, methodology, or theory of change], driven, and realized across industries, sectors, geographies, and generations.

A review of existing literature demonstrates that there is no clear, agreed upon definition of innovation. A majority of academic literature on innovation cites scholars in what is commonly referred to as the Global North or Developed countries¹, and largely defines innovation from a ‘Western’ or Eurocentric perspective. These definitions of innovation largely derive from and are informed by industrialization, globalization, and market-expansionism. Most conceptions and definitions found in academic literature (notably in the English language) define innovation in the context of the private sector, largely representing the models and practices of corporations and consulting firms.

For example, Schumpeter (1934) encapsulates the following five phenomena in their definition of innovation:

- (1) The introduction of a new good or of a new quality of a good.
- (2) The introduction of a new method of production.
- (3) The opening of a new market.
- (4) The conquest of a new source of supply.
- (5) The carrying out of the new organisation of any industry.

As one of the first well-documented definitions of innovation targeting the manufacturing industry, it was foundational to many more recent definitions in different areas and types of organizations. For example, the fourth edition of the Oslo Manual defines innovation as “a new or improved product or process (or combination thereof) that differs significantly from

¹ Many of the states included in UNCTAD’s definition of developed countries or economies (UNCTAD Statistics, 2024) have historically and/or currently engaged in settler colonialism, as well as occupation of unceded Indigenous lands or territory. As part of a process of decolonization, it is important to acknowledge and consider that many of the dominant conceptions and models of innovation in these contexts are derived from or in service of systems that generate wealth through the exploitation of people and the environment.

the unit's previous products or processes and that has been made available to potential users (product) or brought into use by the unit (process) (OECD and Eurostat, 2018, p. 20). The manual acknowledges that this definition and its guidelines for collecting, reporting, and using data on innovation are primarily relevant for the business sector.

The most extensive analysis of published definitions of innovation to date was conducted about 15 years ago and proposed that “innovation is the multi-stage process whereby organizations transform ideas into new/improved products, services, or processes in order to advance, compete, and differentiate themselves successfully in their marketplace” (Baragheh, Rowley, and Sambrook, 2009). These market-centred ideas of innovation can unnecessarily confine innovation as a tool for market expansion or product development. Relying on narrow definitions or conceptions of innovation, no matter how widely cited and utilized they may be in scholarship and practice, limits our understanding and application of innovation, and can result in the discarding, disregarding, or exclusion of theories or models of innovation that do not fit dominant or dominating paradigms.

These theories and conceptions of innovation can impact the way innovation is practised. Senior innovation consultant, Julius Zubé's comparison of the concepts of closed and open innovation enable us to further extend the critique of ‘exclusionary innovation’ presented in this paper, to include the process(es) of innovation. The term *open innovation* was first coined by Henry Chesbrough to refer to an approach that “places external ideas and external paths to market on the same level of importance as that reserved for internal ideas and paths to market during the Closed Innovation era” (Chesbrough, 2003). Zubé argues that “open innovation can be better understood by examining *closed innovation*, which he defines as the notion that the only good idea comes from within, that “if you want something done right, you must do it yourself.” Closed innovation embraces a strategy of vertical integration and exclusive control. But increasingly, this isolationism stifles innovation.” Within the context of an organization, closed innovation is the notion that innovation can solely be achieved from within [a group or organization], whereas open innovation extends the scope of relevant stakeholders to include ‘external’ contributors. Notably, this framing of innovation (in and outside of an organization) is still limiting in that it does not consider innovation outside of the formal organizational paradigm.

In practice, innovation is a concept that is often ill or undefined. In some cases, organizations use the term innovation, without explicitly defining it: “we have no clear definition of the term that we have been using” (Silvano Lieger, former Co-Managing Director of Sentience). The diversity of responses (refer to Table 1) received from experts working in or associated with innovation labs further demonstrates the heterogeneous nature of conceptions and definitions of innovation.

Table 1: Table of Survey Respondents' Definitions of Innovation

EXAMPLES OF THE WAYS IN WHICH RESPONDENTS DEFINE INNOVATION	
<p>Eric Asmar CEO of happy smala</p>	<p>“Innovation is the process of creating or adapting and implementing new solutions to solve problems in a specific context. An innovation can be a product, service, process, organizational or partnership model, or business model. An innovation does not need to be brand-new; it can exist elsewhere but be new to the specific context. Pure research or invention, while important, is not an innovation until it is put into practice.”</p>
<p>Imene Ben Dhaou Project Manager at Future Islands</p>	<p>“[Innovation is defined as] effective and integrated solutions towards better practices using collaborative intelligence.”</p>
<p>Jorge Lagarto Director of LabX</p>	<p>“Innovation is a different way to do things more effectively. Innovation makes it possible to find new ways of providing public services in more effective and efficient terms, and involves experimentation, which helps to reduce the risk inherent in processes of change.”</p>
<p>Julius Zubé Senior Consultant at NRD Companies and Development Cooperation Advisor at INFOBALT Association</p>	<p>Informed by the work of Henry Chesbrough, [I conceptualize] "open innovation" [a]s a more distributed, more participatory, more decentralised approach to innovation, based on the observed fact that useful knowledge today is widely distributed, and no company or organisation, no matter how capable or how big, could innovate effectively on its own.”</p>
<p>Máximo Plo Seco Open Innovation Labs Director at Sustainable Startup & Co.</p>	<p>“We define innovation by dissecting the word: "inno-nova-action", the novel action that comes from within. We believe that robust innovation must come from the people of the ecosystem that we want to change. It must be transversal and involve actors both from within and outside the organisation that want to lead the change.”</p>
<p>Nora Wilhelm Creator at the well • change atelier, PhD Researcher at the University of Geneva, Founder at Parayma, and Co-Founder of collaboratio helvetica</p>	<p>“The innovation relevant to our context is social innovation, which I define as the act of addressing complex social and environmental challenges.”</p>
<p>Tigran Tshorokhyan Innovation and SDG Finance Portfolio Manager at UNDP; Armenia’s SDG Innovation Lab Lead</p>	<p>“In simple terms, we define innovation as doing things differently or doing different things in ways that create impact.”</p>

Innovation is distinguished from invention (i.e., the creation of something new or that has never been made before) in so far as its processes and outcomes do not necessarily entail something new. While conceptions, definitions, and practices of innovation differ across and between organizations, schools of thought, sectors, geographies, and cultures, there seems to be a common aspect anchoring them: **transformative change towards a desired outcome or goal**. This shared aspect can serve as the foundation for contextually informed articulations of innovation for the NIGSD and peer organizations within the Egyptian government. However, this anchor point alone is insufficient in applying and implementing innovation (and innovation labs) as a tool to advance sustainable development in practice.

Applying a more equitable, values-based approach to innovation

It is thus imperative that innovation practitioners, scholars, and policymakers critically examine and acknowledge the underlying power structures, systems, and dynamics underpinning certain conceptions of innovation, including colonialism, imperialism, capitalism, and techno-solutionism. Innovation has historically been used as a critical tool to advance and realize specific development agendas. The specific role innovation plays is posited to change depending on the specific theory of development referenced (refer to Table 2: Theories of Development and Innovation). Across these development agendas, innovation is seen to be an important factor because of its role in promoting the generation of value and economic growth (Arocena & Sutz, 2000; Aubert, 2004). Jimenez, Delgado, and Merino (2022) argue that when innovation is underpinned by “Western market-framed agendas” it reinforces “colonial imaginaries of progress, individualism, and universalism”. Instead of presenting ‘the’ universal decolonial approach to innovation, they present the Andean concept of Buen Vivir (loosely translating to well-being or good living) as a **decolonial approach**² to innovation that “advocates for renewing social and economic relations based on reciprocity, solidarity, and respect for non-humans as subjects of rights” (Jimenez, Delgado, and Merino, 2022). The example of Buen Vivir and its practical applications in realizing community-led, relationship-centred development serves as an inspiration of what is possible when organizations and institutions broaden their conceptions of innovation from what is promoted in mainstream discourse and literature.

² Recognizing the multitudes of decolonial approaches that exist and may exist, Buen Vivir is presented as “a decolonial approach” instead of the definitive decolonial approach to innovation.

Table 2: Theories of Development and Innovation (Jimenez, Delgado, and Merino, 2022)

Theory of development (period)	Framings of development	Role of innovation
Modernisation (1950–1960)	Development is the result of adopting and adapting values and strategies from industrialised, developed countries for economic growth.	Innovation is instrumental for industrialisation, adopting, and transferring international innovation trends in a process of catch-up.
Dependency (1960–1979)	Development involves a process of strengthening national sovereignty, decentering the power from industrialised, developed countries.	Domestic innovations increase productivity in strategic sectors for national economies.
Neoliberal (1980–onwards)	Development is achieved by liberating individual entrepreneurial freedoms within a framework characterised by strong private property rights, free markets, and free trade.	Entrepreneurs as key actors in the promotion of innovation to enhance market efficiency. Private sector as prominent actor in development. Innovation is key for people to lift themselves out of poverty on their own.

By applying an intersectional³, decolonial, and community-led approach to research and innovation one can better promote sustainable and equitable development. This approach can enable practitioners and policymakers to conceptualize and implement innovation as a tool to support transformative change across diverse sectors and contexts, beyond commercial purposes. This may be especially relevant for the work the NIGSD is undertaking in designing and developing a strategy and tool to leverage innovation as a means of advancing sustainable development. One potential way NIGSD can implement this recommended approach into practice is by localizing the idea of innovation or rooting its ‘innovation’ work in language that is more accessible, familiar, and understandable to the context it is operating within. For example, the term حَوَّل or hawwala (transcribed in English) is an Arabic word that is rich in both its meaning(s) and significance, acting as a noun, verb, preposition, and adjective to denote change and transformation. حَوَّل most

³ The term intersectionality emerged in 1989 when Kimberlé Crenshaw, an African American civil rights advocate and feminist legal scholar, published *Demarginalizing the Intersection of Race and Sex: A Black Feminist Critique of Antidiscrimination Doctrine, Feminist Theory and Antiracist Politics* in the University of Chicago Legal Forum (1989). Intersectionality is an analytical framework used to understand multidimensional experiences of discrimination, inequality, injustice, and oppression based on how systems privilege or marginalise people’s political and social identities, including their gender, ethnicity, religion, class, sexual orientation, nationality, citizenship status, disability, and age.

closely aligns with the conception and definition of innovation presented in this paper and is distinguished from other commonly used words that are intended to signify innovation, such as ابتكار or ibtikar (transcribed in English). ابتكار serves as both a verb and noun in Arabic and means to invent, to be early or the first at doing something, to be an initiator, the ability to create, originality, or ingenuity. The word ابتكار often conjures metaphors of giving birth or being the first born/offspring. ابتكار can therefore be understood to be more proximately or closely related to the concept of invention or creation, and as such may not adequately encompass the full meaning of innovation presented in this paper.

In relation to NIGSD's innovation work, حَوْل could potentially be used to represent and signify a commitment to and process of transformative change informed by a deep understanding of agency, power, and systems and embodying the values of community, equity, justice, sustainability, and wellbeing. This conception of innovation can serve as a framework within which practices of innovation can be seeded and nurtured.

Innovation Labs: A tool to promote innovation

In the same way that there is no one, universal conception or definition of innovation, there is also not one singular model for implementing innovation into practice. Innovation, as a practice, invites a recognition from individuals and institutions that they do not necessarily have or know the answers to all of the challenges they are facing. Independent of its intended application or desired outcome, organizations and communities need a conducive and nurturing space to explore their creativity, engage in collaborations, develop a culture of continuous learning, and co-create innovative policies, interventions, or programmes guided by and in partnership with affected communities. One of the most common spaces or tools to achieve this are innovation labs.

Innovation labs are a recent topic of academic research with most journal articles and book chapters published in the past five years. Despite this recency, there are already multiple definitions emerging from this burgeoning literature. While most commonly associated with and used by the private sector, innovation labs are increasingly being used by the public sector and civil society to transform their practices, policies, and services. There are many different types of innovation labs with varying structures, formats, and practices, including but not limited to: corporate innovation labs, collaborative labs, community labs, design studios and labs, maker spaces, public sector labs, technology labs, and university-affiliated labs. Overall, despite their varying types, innovation labs commonly seek to be a place that centres the creative process, offering approaches, skills, models, and tools that enable innovation (Carstensen and Bason, 2012).

In Focus: Public Sector Innovation Labs

To draw insights that will support NIGSD and other government agencies in developing an innovation lab pilot, the following section specifically focuses on government or public sector innovation labs. We begin by outlining the intended purpose of government innovation labs, the ways in which they are organized, and the factors influencing the successes of these labs.

In various government institutions around the world, innovation labs have emerged as “permanent structures with a mission to temporarily unfreeze organisational practices” (Carstensen and Bason, 2012), trying to defy the stereotypical notion that government organizations are highly bureaucratic, uncondusive environments that pose several barriers to realizing transformative change and public sector innovation. Some scholars define government innovation labs as public sector-led organizations that focus on the creation, development, or substantial improvement of processes, services, or public policies in response to societal demands (Ferrarezi, Brandalise, and Lemos, 2021). Government innovation labs can thereby be distinguished from other types of innovation labs by the combination of their intended purpose (to improve government processes, services, and policies) and their proximate connection to or embedding in the public sector.

The ways in which these labs are organized vary. Some labs are directly connected to the government (at the national, regional, and/or local levels), while others are supported by or affiliated with the government but operate in distinct or separate ways. Some labs can be set up at temporary locations and have a limited duration, as demonstrated by the Brazilian experience with citizen labs (Silva and Emmendoerfer, 2023). In other instances, government innovation labs are primarily set up and controlled by national agencies for administrative modernization, operating at a distance from traditional public administration services, with the aim of developing and testing innovative solutions for the government based on experimentation (Roth, Asmi, and Husar, 2020). Operating independently can insulate these labs from the conventional pressures of traditional public administration so that they can experiment with novel methods and technologies without disrupting [or impeding] day-to-day public sector operations (Timeus and Gascó, 2018).

Government innovation labs can be generalist in nature, as those dedicated to innovating public policy or public service delivery or application or use of emerging digital technologies and digital transformation strategies. For example, in Trinidad and Tobago, the government worked with partners to launch the Developers’ Hub as a means of facilitating the creation and use of open-source programs and applications for public sector use (see Vignette: Developers’ Hub for more details). In contrast, other labs focus on specific policy

areas, including, but not limited to, health, urban planning, environment, economic development, and defence and security. In contrast, other labs are essentially driven by interactions with civil society, focusing on social innovation and co-creation (McGann, Wells, and Blomkamp, 2019). For example, citizen labs in Latin America⁴ target issues such as gender inclusivity, urban mobility for individuals with disabilities, and the integration of newcomers. These citizen labs involve a more direct interaction between government and its citizens and require deeper levels of civic engagement, collaborative endeavours, and deliberative democratic practices, highlighting the role of “citizens as catalysts for transformative social change” (Silva and Emmendoerfer, 2023, p. 12). Overall, the structure of government innovation labs and how and who they work with seem to be largely influenced by their goals and the specific topics or issues they work on.

Vignette: Developers’ Hub

In 2023, the Republic of Trinidad and Tobago’s Ministry of Digital Transformation (MDT) and iGovTT launched the Developers’ Hub¹, a platform enabling the collaborative development of open-source programs and applications for public sector use. As of February 2024, five ministries, departments, or agencies (MDAs) and almost 700 developers have joined the platform as members. Participating MDAs include the: Ministry of Health, Immigration Division, Customs and Excise Division, Environmental Management Authority, and the Trinidad & Tobago Postal Corporation (TTPost). Hub members are able to join general (online) and tailor-made trainings (in-person and hybrid) to build their competencies to innovate and collaborate with the public sector. Examples of training topics include public sector innovation, co-creation and participatory processes in GovTech, user research, defining the problem solution and value proposition, and pitching innovative ideas to the public sector.

The Developers’ Hub is largely seen to be a success for its ability to convene developers and public sector actors to share knowledge and co-develop interventions to tackle specific challenges the public sector is facing. In its first (pilot) award series (teams are invited to apply to tackle identified challenges within the public sector, as presented by MDA challenge owners), 15 out of 50 developer teams were selected to develop 15 PoCs by 15 January 2024 to address 5 public sector challenges. In December 2023, the Developers’ Hub initiative was recognized by the InterAmerican Development Bank (IADB) with the President’s Award for Innovation and Service Excellence (Pr.A.I.S.E) in the Public Sector, which honours outstanding projects and services by government ministries, state-owned agencies, and public entities.

Innovation labs deploy different methods and tools to address identified challenges or issues and advance their objectives. Some labs have their own tailored methodology, building of existing innovation practices and methods, and refined through experimentation. Many labs deploy a tool or set of tools to help guide participants through the process of identifying and understanding the problem or challenge, exploring

⁴ Some examples include Laboratorio de Innovación Pública de Bogotá - iBo (<https://ibo.bogota.gov.co/>), Laboratorio de Innovación de la Localidad de Suba - SubaLab (<https://subalab.gov.co/>), and Laboratorio de Innovación Ciudadana de Montevideo – MvdLab (<https://montevideo.gub.uy/node/41513>).

opportunities for transformative change, and designing interventions. Innovation labs can cover the entire innovation process, from research to implementation, or focus specifically on a part of the process, such as idea generation and testing. The specific tools, methods, and stages the innovation lab engages in are influenced by the duration of the lab, desired and expected outcomes, and the background and experiences of participants. For example, where participants are unfamiliar with innovation processes and tools, the lab may focus on introductory workshops and learning modules to help acclimate and prepare them for more comprehensive exercises and programmes in the future. Based on the responses from surveyed labs, it was possible to identify a set of methods and tools⁵ that are commonly used by different labs (see Table 5). These tools and methods, accompanied by a brief description, are listed below (in order of popularity among survey respondents):

- *Systems mapping*, “a set of different methods for visualising and analysing complex adaptive systems” (Kiekens, Dierckx de Casterlé, and Vandamme, 2022) that enables the creation of a shared understanding and, often, visual representation of a system.
- *Design Thinking*, a non-linear, iterative process of ‘problem-solving’ that is used to understand complex issues, challenge and test assumptions, redefine problems, and create ‘solutions’ through five stages: empathizing and understanding, problem definition, ideation, prototyping, and testing. According to Peter Rowe, design thinking is the “fundamental means of inquiry by which [people] realize and give shape to ideas of dwelling and settlement” (1987, p. 1). Rowe’s work helped articulate and inform the process(es) of design thinking that is currently applied in different sectors, disciplines, and contexts.
- *Prototyping*, producing a tangible depiction, model, or scaled-down version of an idea or proposed solution to generate feedback and insights.
- *Journey Mapping*, a graphic visualization or map of a user’s experience with a product, service, or policy which depicts significant changes in users’ needs, satisfaction, or outcomes (Howard, 2014).
- *Hackathons and Design Sprints*, an event gathering and generating ideas from diverse groups of people through a collaborative process in a short period of time (usually 1-2 days).

⁵ Please note, the survey provided a list of commonly used innovation tools and provided respondents with an opportunity to select multiple options, and to also indicate other tools that may not have already been listed. A definition for each tool was not provided; respondents therefore have their own unique understanding and experiences with these tools.

While the identification, deployment, and use of innovative methods and tools provide the host-institution or organization and lab participants with an opportunity to approach complex challenges in different ways, they are not the sole determining factor of a lab's effectiveness and success. Instead, the successful management and implementation of government innovation labs depends on several factors, including resource mobilization, team composition and dynamics, as well as knowledge generation and transfer.

Government innovation labs require sufficient and reliable resources to carry out their activities. These labs often have a mix of internal and external funding (Tönurist, Kattel, and Lember, 2017). Most of the surveyed innovation labs had a singular funding source from either government, multilateral organization(s), or philanthropy (refer to Table 5). A couple of the respondents, specifically happy smala and UNDP Armenia's SDG Innovation Lab, indicated multiple funding sources such as government, philanthropy, multilateral organizations, and self-funding. By diversifying their funding sources, labs can ensure greater financial sustainability and, more importantly, that key stakeholders are included and invested in the resulting innovations they may be responsible for implementing or realizing.

To manage and implement their projects effectively, labs need a skilled and experienced team of people that can deliver on multiple fronts. Specific member roles and team composition vary depending on the lab's focus areas, size, and scope of work. For example, the labs surveyed as part of this study ranged in size from 7 to 50 members, reflecting the diverse structures, activities, and contexts of each lab (refer to Table 5). It is important to note that many labs emerge and operate "in a separate but adjacent space from the rest of the [government] organization" as this is often perceived as the best way to "improve internal administrative efficiency and drive cultural change" (Timeus and Gascó, 2018, pp. 994-995). Typically, these labs are staffed with smaller teams, with a core group of people capable of fostering a culture of innovation through agile and flexible methodologies. As government innovation labs gain recognition for their work and demand for their services increases, they may adopt a more complex organizational structure (Whicher, 2021), including a leadership team comprised of a director and deputy director; innovation managers responsible for and dedicated to specific projects; researchers, data analysts, and scientists; design and development experts; partnership and collaboration managers; office administrators overseeing finances, human resources, and logistics; and communication professionals. In addition to a dedicated team responsible for the day-to-day operations of the organization, innovation labs benefit from mobilizing knowledge and support through external partnerships and collaborations. To realize this in practice, government innovation labs may engage an external advisory board to provide strategic

advice, expertise, and knowledge to the lab from different backgrounds, fields, and perspectives.

How innovation lab teams work, both internally and with collaborators or partners, has a notable impact on their processes, outcomes, and impact. For example, GNova – the Brazilian federal government’s innovation lab, has found that treating their projects as experiments, working dynamically, and systematically documenting their learning process has positively affected the quality of their lab results, and in changing behaviours and practices of lab participants (Ferrarezi, Brandalise, and Lemos, 2021). Based on their study of innovation labs in Armenia, Georgia, former Yugoslav Republic of Macedonia, and Moldova, Bazalgette, and Craig (2017) proposed seven key principles for the optimal functioning of labs, applicable to other contexts. These principles are summarized and listed below.

- 1) Take innovation slowly into the government's realm, proving its **value** and establishing **trust** in the lab.
- 2) Prioritize citizens’ needs and regularly involve civil servants in this research.
- 3) Have a **clear vision** of the systemic changes you want your lab to help realize and focus on **scaling the impact** of your lab.
- 4) Have a **future-oriented focus and create partnerships** that help demonstrate the transformative power of new technologies, challenging the established assumptions of governments’ inner workings.
- 5) Be the **changemaker: communicate** regularly and clearly what you are doing, foster **collaboration** with easy access tools, search for and adopt **new innovation methodologies**, and retain a continuous **experimentation mindset**.
- 6) It is relevant to start with a group of innovation supports from inside and outside of government but on the long run, labs’ work should **be oriented to policy-areas** and not rely on specific people.
- 7) A lab is more than a physical space - it is a **network of critically thinking people** with a set of innovation approaches to problem-solving.

Most of Bazalgette and Craig’s recommendations are further reinforced and affirmed by Nora Wilhelm’s study on the challenges and strategies of social innovation labs. Wilhelm found that most of the challenges associated with labs pertain to the phase before the lab is implemented, including poor understanding of the lab approach, conflicting stakeholder priorities, difficulties including marginalized communities, inequitable power distribution with funders and other stakeholders wielding disproportionate power, collaboration challenges within the team, and a high risk of burnout for team members. To address these challenges, Wilhelm proposes twelve key actions and considerations when organizing a

social innovation lab, which can arguably also be applied to government innovation labs, especially those with a focus on social objectives.

- 1) Be strategic about who is convening the lab. When looking to start a lab, consider the name or group of names from whom the invitation [to participate in the lab] is sent.
- 2) It is easier to include and engage actors who have previously been exposed to the lab approach. Prior participation in a lab, whether personal or via someone else from the same organization, will be hugely beneficial to encouraging engagement.
- 3) Identify and clearly articulate the challenge and goal of the lab. Choose a very context-informed, narrow lab focus. Either choose a specific piece of the system, or a moment in a trajectory within a system to focus on.
- 4) Do not design anything without people who are from the context. Develop a plan to ensure your lab is inclusive and accessible to the people you are trying to reach.
- 5) Hire experts from the outset to support the creation of a co-design group that engages representatives from five key stakeholder groups to co-design the invitation and structure of the lab.
- 6) Never make a lab that is shorter than 3 months; anything less than this limits the impact of the lab. Have enough time to host the lab and avoid rushing things.
- 7) Invest time and resources in teambuilding and cohesion, including through team retreats that are considered part of work time. (Note: Wilhelm specifically recommended exploring the offerings of Sekem to support team and capacity building in the Egyptian context.)
- 8) If you are inviting organizations, invite at least two to three representatives per organization with a contractual agreement with the organization, acknowledging that their participation in the lab is considered part of their work. This can help ensure retention of the relationship(s) being developed with the organization, even if one of the representatives is no longer able to participate or engage with the lab.
- 9) Preparation is key. Conduct stakeholder interviews and research prior to the onset of the lab. Present top notch, cutting edge academic research at the onset or as part of the design of the lab.
- 10) Embody lab practices as a team. Foster a culture of collaboration and support.
- 11) Invest resources in the follow-up work coming out of the lab. Recognize that this is long-term work; these challenges will not be resolved through one lab. Conceive of yourself and your lab as part of a larger movement, building on the prior work of researchers, changemakers, and other people who organized labs. Consider how this is valuable beyond what is being done right now. Think of and plan for who will

come in and support the prototypes to their implementation and carry the work forward after the lab itself is completed.

- 12) Look for the right partners and funding structure. Consider to what extent is it possible to have the people who have a stake in the issue(s) the lab is working on to fund part of the lab. Look for ways to put as much ownership as possible with the organizations and the people that are participating in the lab. If people invest in something, they are more likely to prioritize and spend time on it. Be very diligent about who is coming on board as funders and what they are getting in exchange for being funders. Diversify funding sources, while prioritizing alignment of values.

Research has shown that risk management in government innovation labs is imperative to fostering an environment conducive to creativity and innovation. Different types of risks require specific approaches to manage them. On the one hand, small-scale pilots and prototyping can be effective ways to explore novel ideas, test concepts, or garner sufficient evidence from feedback before deploying policy and service delivery innovations in a larger scale. On the other hand, for labs invested in social innovation, inclusive decision-making, co-design, and co-innovation are crucial to secure support from stakeholders. The issue of lab size also has important implications for risk management. Smaller labs have clear advantages in terms of their agility, flexibility, and creativity; however, they are also more dependent on high-level political and/or administrative sponsorship for their survival (Tönurist, Kattel, and Lember, 2017). Once this support diminishes or disappears, public innovation labs based on a sponsorship model may struggle and shy away from risk-taking/high reward initiatives. Even the perception that the main sponsor for a project or lab may be retreating can raise concerns within the team and stifle innovation, thereby increasing the risk of failure (Timeus and Gascó, 2018). By contrast, larger public innovation labs reliance on multiple sources of funding (sponsorship, collaborative, and commercial funding) spreads the risks over a more diverse portfolio of projects (Whicher, 2021). However, their increased formalization and institutionalization may also reduce their main strengths in promoting fringe ideas, experimentation, and risk-taking behaviours or initiatives. This potential trade-off between size and a culture of innovation is highlighted by Tönurist, Kattel, and Lember (2017) and demands awareness by public officials invested in advancing innovation labs.

Due to their nature, government innovation labs work with multiple partners, including academic and research institutions, international organizations, private firms, non-profit organizations and NGOs, local communities and citizens groups, other governmental organizations, among others. The importance of working with partners and relationship building with different entities and actors is further reaffirmed by survey respondents who

universally listed networking as a key innovation tool deployed by their respective labs (see Table 5). Canada’s Policy Development Units (PDUs), for example, rely on the influence of non-profit and private sector partners to enact policy change (Brock, 2021). Academic institutions and external consultants are often employed to design and enact independent evaluations, as in the case of GNova – the Brazilian federal government’s innovation lab (Ferrarezi, Brandalise, and Lemos, 2021). In other instances, government innovation labs can be purposefully designed to embrace marginalized views/perspectives on and solutions to public problems that tend to be side-lined by hierarchical public administrations and external consultancy firms (McGann, Wells, and Blomkamp, 2019). More importantly, because government innovation labs often involve citizen participation, they require a culture change, necessary to convert users from passive informants to active co-creators (Lynch and Farrington, 2018; Unceta, Barandiaran, and Restrepo, 2019). This means “crafting new solutions *with* people, not just *for* them” (Carstensen and Bason, 2012, p. 6). This aligns closely with the idea of *nothing for us without us*, which is increasingly articulated by marginalized communities in global advocacy and governance forums. This idea has been inspired by the work of disabled people and their advocacy around *nothing about us without us*, a call to “to achieve the full participation and equalization of opportunities for, by and with persons with disabilities” (UN Chronicle, 2004).

Given the widespread institutionalization of the 2030 Agenda for Sustainable Development, which was adopted by all UN Member States in 2015, many governments are attempting to link their activities to the promotion of the UN SDGs. This is either done directly, through government innovation labs, such as Armenia’s SDG Innovation Lab, or indirectly, through the funding of external labs or initiatives, such as *collaboratio helvetica*, a self-described catalyst lab based out of Switzerland⁶. Depending on their areas of activity, these government-supported innovation labs can produce outcomes targeting one, a few, or multiple SDGs (Roth, Asmi, and Husar, 2020). Given the vast number of topics and issue areas covered by the SDGs governments often need to rely on insights, advice, and support from external experts. There are a diversity of models and structures governments can pursue in developing innovation labs and strategies dedicated to advancing and promoting the realization of the SDGs. The following section will present seven examples of innovation models from diverse contexts, providing a high-level overview of their purpose, key projects and activities, organizational structure, and impact.

⁶ <https://collaboratiohelvetica.ch/>

In Practice: Innovation Lab Models

Innovation labs are organized and presented in different ways within and across organizations and country contexts. There is no one-size-fits-all or ready-made model that can be replicated and implemented in each unique context. As such, this study undertook an analysis of diverse, illustrative examples of innovation labs working to advance sustainable development through their activities. By examining the approach, structure, strategy, and activities of different innovation labs, this paper showcases the multitude of ways innovation labs can manifest. Our research demonstrates that the development of innovation models is informed by a diverse set of factors that include operational context, theoretical frameworks and/or theories of change, stakeholder demographics, funding sources, culture, and team dynamics.

The surveyed innovation labs that are presented in this section operate in country contexts whose SDG Index rankings range from 14th to 69th (see Table 3). Comparatively, Egypt ranked 83rd in the latest Sustainable Development Report (Sachs, Lafortune, and Fuller, 2024). This study aimed to present examples of innovation labs working to promote sustainable development from different regional or geographic contexts (North Africa, West Asia, and Western Europe) and with different approaches and/or organizational models.

Table 3: SDG Index Rankings for countries innovation labs are based in

Lab	Country	SDG Index Rank (out of 166) ⁷
collaboratio helvetica	Switzerland	22 nd
Future Islands	Tunisia	60 th
GovTech Lab	Lithuania	31 st
happy smala	Morocco	69 th
LabX	Portugal	16 th
Sustainable Startup & Co	Spain	14 th
UNDP Armenia SDG Innovation Lab	Armenia	49 th

The following section presents concrete examples of innovation labs and is based on primary research (survey and interview insights). Not all of the labs presented below identify as public sector or government innovation labs. The types of innovation they work on or promote in their work and the tools they deploy are diverse. For example, many labs

⁷ Sachs, J.D., Lafortune, G., Fuller, G. (2024). The SDGs and the UN Summit of the Future. Sustainable Development Report 2024. Paris: SDSN, Dublin: Dublin University Press. <https://dashboards.sdgindex.org/rankings>.

work on climate/environmental, digital/technological, or social innovation (refer to Table 5). However, it should be noted that despite not explicitly identifying as a public sector or government innovation lab, all surveyed labs, with the exception of Future Islands, indicated that their work targets the public sector and/or government. Their experiences and insights are therefore relevant for and can help inform the development of an innovation lab pilot in the Egyptian context.

collaboratio helvetica

<https://collaboratiohelvetica.ch/en/>

collaboratio helvetica was founded in 2017 “to catalyse systems change towards the Sustainable Development Goals” in Switzerland, building from the country’s long tradition of collaboration and dialogue across languages and religions. The organization leverages participatory and collaborative approaches to foster cross-sectoral innovation through capacity building and multistakeholder convenings. Its core activities include workshops, trainings, (innovation) labs, knowledge sharing via a toolbox⁸, prototyping and experimentation, project development and planning, and event facilitation.

The organization implements two sets of labs: the Catalyst Lab, and topically focused social innovation labs in the form of workshops. These labs differ in their duration and the ways they are structured. The Catalyst Lab was launched in 2019 as “the first future laboratory for Switzerland”; collaboratio helvetica is currently recruiting participants for the fifth edition of the Catalyst Lab, with the theme: future-proofing society through intergenerational combining. Participants, also referred to as Catalysts, undertake a 9-month-long learning journey to support societal change through a deeper understanding of systems thinking, systems change, awareness-based change methodologies, and participatory processes. Catalysts are supported by a team of experts and mentors to develop a “collective systems intervention project” to apply their learnings in practice.

Project highlight: collaboratio helvetica has hosted at least two social innovation labs since its inception: the Gender Lab (2017-2018) and the Beyond Waste Lab (2018-2019). The **Gender Lab**⁹, touted as the first of its kind in Switzerland, brought together 20 participants (referred to as Explorers) from different organizations over a 7-month period in order to advance gender equity in the workplace in Switzerland. Gender Lab explorers developed 4 prototypes: workshopping a weekend retreat to engage in focused self-reflection on social activism and gender-related burnout and self-care; a saving scheme for care leave or

⁸ More information on the Toolbox can be found here: <https://collaboratiohelvetica.ch/en/toolbox>.

⁹ More information the Gender Lab can be found here: <https://collaboratiohelvetica.ch/our-impact/2020/2/12/gender-lab>.

caretakers (beyond the parental leave model); a creative dialogue event to ‘spark’ institutional cultural change towards gender equal and inclusive organisations; and publishing children’s books that provoke greater awareness of limiting gender norms and stereotypes. Overall, the lab curated an experience to foster interventions (primarily focused on cultural change) to meaningfully contribute to the realization of SDG 5 in the Swiss context. The **Beyond Waste Lab**¹⁰ aimed to “explore the potential of ecosystem awareness and facilitate the co-creation of solutions for circular economy transformation in Canton de Vaud”, involving 21 participants. The four-month-long lab was co-organized in 2018 with Sustainable Living Hub and the Living Lab Lausanne. Overall, the social innovation labs focused on curating collaborative learning experiences to foster perspective shifts on localized issues connected to the SDGs through experimentation and a deeper understanding of systems.

Future Islands

<https://futureislands.net/>

Future Islands is a Tunis-based innovation lab launched in 2021 with the goal of enabling individuals to create and co-create solutions to the challenges they are facing. The organization is guided by 5 core values: inclusion, resilience, shifting power, driving impact, and reserving resources. The innovation lab matches enterprises and start-ups to increase their knowledge and help reduce (operational and opportunity) costs. The lab works with both organizations and individuals, building their innovation capacity through the development of innovation teams, departments, or labs; guidance on innovation techniques, approaches, and resources; and implementation of impact-focused innovation projects to meet the demands and requirements of clients. Future Islands has four core service offers: system-centered strategic planning, innovation evaluation, the design and implementation of innovation hubs, and sharing of open innovation competencies. Its approach deploys techniques such as empathy-based user design, participatory-based testing and experimentation, structured problem-solving, documentation of results, and full-cycle impact evaluations.

Thus far, the lab’s initiatives have concentrated on promoting digital, climate, environmental, and social innovation. In 2021, it introduced a five-month-long project which culminated in the prototyping and implementation of a **Digital Summit** for the MENA region in February 2022. The project involved collaboration between Future Islands, Sawaed19 (Palestine), Arab Youth Sustainable Development Network (Yemen), and the

¹⁰ More information on the Beyond Waste Lab can be found here: <https://collaboratiohelvetica.ch/our-impact/2020/2/12/beyond-waste-lab>.

Arab Youth Climate Movement (Qatar). In partnership with UNDP, the lab supported the development of four projects prototyping **Green Solutions** through capacity building training, bootcamp workshops, structured prototyping, and a dedicated team to provide participants with personalized support. An especially notable project for NIGSD team members, Future Islands' **Citizen-Centric Digitalization for Government** project (CCD4government) supports a group of project leaders in proposing and developing digital transformation interventions for the public sector. CCD4government includes a capacity building program that supports public institutions in adopting digital transformation tools, peer-to-peer collaborative learning experiences, and a hackathon to prompt the emergence of innovative ideas to address challenges faced by governments. In order to “democratize innovative concepts”, Future Islands launched غدوة LAB [Ghodwa Lab], which leverages strategic foresight methodologies, including scenario planning and narratives, to explore and co-create future possibilities with participants.

Project highlight: In July 2023, Future Islands launched **Cleantech216**, a digital innovation hub focused on *promoting technologies to address environmental and climate change, and advance sustainable development in Tunisia*. The hub provides: access to innovation for SMEs at reduced costs through open innovation; access to clean-tech solutions and digital skills; and personalized support to guide ‘digital and green transformation’, tailored to the expertise and experiences of participating experts. The first co-cohort of participants for this digital innovation hub were granted free admission (normally priced at \$15,000 per small-medium enterprise). Through the Cleantech216 hub, Future Islands has contributed to improving the accessibility and sustainability of SMEs’ operations and practices both nationally and internationally.

Future Labs functions as an innovation lab with a combination of consultative services, project development, knowledge sharing and curation, and the development of in-house and/or time-bound innovation labs specific to a partner and challenge area. While technology or digital innovation feature prominently in its work, the development or promotion of technologies is not seen as an end-goal in and of itself, but rather a tool for addressing larger societal, sectoral, and organizational challenges.

GovTech Lab Lithuania

<https://govtechlab.lt/>

GovTech Lab was initially started in 2019 as “Create Lithuania” as a Ministry of Economy and Innovation initiative, housed in the Agency of Science, Innovation, and Technology. Since August 2022, GovTech Lab has been operating within Lithuania’s Innovation Agency. GovTech Lab aims to improve digital government services; facilitate innovation within the public sector; and build trust between citizens, government, and innovation actors; and develop a robust ICT ecosystem. The Lab works together with different public sector institutions, start-ups, and SMEs, providing training, consulting and/or advisory services related to business development, public procurement, product development, marketing, and partnerships. Its activities are concentrated across two initiatives: GovTech Challenges and GovTech Community.

GovTech Challenges involves a structured process of connecting innovative start-up teams with government partners to design innovative digital solutions to public sector challenges. Each cycle or series of challenges involves five stages: the selection of the public sector challenge(s), an open call for ideas, shortlisting of the best ideas and teams, development of the selected proposed solutions through a co-creation programme, and the presentation of solutions on a Demo Day. Since its inception, GovTech Lab Lithuania has undertaken over 70 GovTech-related challenges¹¹ with public institutions across 6 cycles, resulting in the creation of proof of concepts (PoCs), minimum viable products (MVPs), and fully developed products. The selected challenges or issues relate to one or more of the following areas: agriculture, culture, cybersecurity, data privacy, ecology, education, fintech, forecasting, health, infrastructure, law-making, med-tech, mobility, public services, security, special needs, and tourism.

The **GovTech Community** provides a space to convene start-ups, companies, and other private sector actors who are working on developing tech-based tools and interventions for the public sector. The Lab hosts events for community members, including gatherings and networking for GovTech leaders, innovation workshops, demo days, showcases for GovTech solutions, hackathons, lunch & learns, and CivicTech Alliance programmes.

GovTech Lab has been recognized as a leading innovation institution in the EU and has diverse experiences working with partners to support the development of GovTech Labs in other country contexts.

¹¹ For more information on challenges, please refer to: https://govtechlab.lt/version_serie/1-0/.

Project highlight: In order to crowdsource and share developed or upcoming digital innovations, GovTech Lab Lithuania has launched a **GovTech Innovation Bank**¹², enabling diverse stakeholders to register their innovative products, services, or interventions. Registered innovations are then presented to public sector organizations that are seeking support to improve public service offerings, internal processes, and the development of data-driven policies. Of note, registered innovations must meet a set of four criteria; innovations must:

- be based on emerging technologies, such as artificial intelligence, biometrics, blockchain, data analytics, etc.;
- be replicable in other organizations;
- have the potential to improve organizational processes, services, or products OR develop data-driven policies;
- and be sufficiently mature to be tested with users.

happy smala

<https://en.happysmala.com/>

“When North African tribal chiefs travelled, they set up their camps in concentric circles, with the tribal leader in the center. The closest circle, comprised of trusted family and advisors, was called the “zamala”. Today, “smala” has lost its hierarchical connotations, but still refers to one’s closest and trusted peers.”

happy smala is a Rabat-based innovation lab operating in Africa and Europe that aims to create sustainable and inclusive impact in collaboration with diverse partners. Using a combination of risk management and collaborative approaches, the lab brings together experts and partners across disciplines and cultures, including entrepreneurs (social and green entrepreneurs), public institutions, corporations, financial institutions (banks, MFIs, investors, donors), and third sector actors (civil society, aid organizations, international organizations) to create and “find innovative paths to join local inclusion with global sustainability”. happy smala’s work is informed by four core values: *collaboration* as a means of creating impact, *co-ownership* and equal power-sharing, *hybridization* of teams to facilitate creativity and innovation, and *sustainability* to deliver global progress. The lab provides consulting and advisory services in four areas: studies and diagnostics, design and delivery of innovation programs, capacity building and training, and design and deployment of digital platforms. Key activities include impact assessments (e.g., design and evaluation of CivicTech, EdTech, and FinTech projects), field implementation, and

¹² To view registered GovTech innovations, please refer to: <https://govtechlab.lt/govtech-innovation-bank/>.

policymaking “to support sustainable transitions across sectors”. The lab works with marginalized communities (women, youth, urban and rural communities, and persons with disabilities) across the region and continent to realize inclusive and sustainable development by leveraging collective power, building and supporting CIRCLES OF TRUST, and valuing innovative ideas.

Since its inception in 2014, happy smala has supported the launch of five start-ups through its start-up studio; the passing of Morocco’s law 15.18 on Crowdfunding; the development of various national strategies and regulations related to entrepreneurship, investment, and financial inclusion; and the creation of innovation programs (related to Open Innovation, digital transformation, entrepreneurship, inclusion, and sustainable development) across the public, private, and third sectors. The organization has supported thousands of entrepreneurs and project leaders, and trained thousands of people on innovation-related topics, such as design thinking, impact measurement, financial education, lean and agile start-up methodologies, and collective intelligence.¹³

Project highlight: Wuluj is an online crowdfunding platform dedicated to innovation projects in the Arab world. The platform enables entrepreneurs to sell their products or services in the early prototyping stage. By enabling entrepreneurs to attract customers at an early stage of product or service development, the platform can help them overcome challenges attracting and securing funding. Entrepreneurs launch a campaign on the platform; if they are able to meet their campaign goals the funds are transferred to them within 10 days (minus an 8% commission charged by the platform).

LabX - Centro para a Inovação no Setor Público¹⁴

<https://labx.gov.pt/>

Created in 2016 as the Portuguese Public Administration’s experimentation laboratory, LabX works with public entities and civil servants to foster innovation in public services, administrative simplification, and collective participation. Since 2021, LabX has been housed in the Center for Innovation in the Public Sector. The purpose of LabX is to support Public Administration in its continuous transformation process. The lab is focused on the various themes related to public sector innovation, including digital transformation processes, the adoption of new technologies, and the (re)design of public services and policies through participatory processes. LabX’s methodology focuses on the process of identifying the ‘correct’ problem to solve, and then ‘solving the problem correctly’ through research, co-creation, and experimentation. In order to support public servants and

¹³ For more information on the Wuluj platform, please refer to the official site: <https://www.wuluj.com/>.

¹⁴ English translation: the Centre for Public Sector Innovation

entities, LabX focuses its work in four areas: the creation and implementation of strategies and action plans; identifying relevant societal and sectoral patterns and trends to support knowledge generation and mobilization; developing people-centred projects in collaboration with the public and private sectors and academia; and facilitating capacity building and networking in the public sector.

LabX is now focusing on a new approach called **Programa Transformar** (Transforming Programme) that aims to realize 3 related objectives: innovation of public services, administrative simplification, and joint participation. The goal is to include public servants, citizens, companies, and civil organizations in the identification of emerging problems and opportunities to improve public services while reducing complexity.

Project highlight: Rede de Inovadores (Innovators Network) is a community of practices (CoP) for public servants that are enthusiasts of innovation and its applicability in governmental entities. The goal of this CoP is to promote collaborative work within Public Administration. The idea is to share knowledge and experiences resulting from experimental approaches to government innovation that showed promising or effective success. The network has a regular publication presenting projects, case studies and tools used by the LabX team. The other crucial element of this network are the workshops to showcase experimental projects, identify challenges and opportunities for innovation within government organizations, learning and knowledge exchange, and perform collaborative work.

UNDP Armenia SDG Innovation Lab

<https://www.sdglab.am/en>

The SDG Innovation Lab is the first of its kind in the world. Founded in November 2017, the Lab was created as a joint initiative between the Government of Armenia and UNDP's national office in Armenia to “disrupt policy- and decision-making practices in Armenia by making them more data-driven, human-centred, and behaviourally informed”. The Lab strives to mainstream a culture of innovation and experimentation into the public sector to advance sustainable development and accelerate implementation of Agenda 2030. With a focus on public sector innovation at both national and local levels, the Lab runs experiments to provide policy-relevant insights and recommendations to the government, informing the digitization of public services and the development of impact-focused policies, services, and institutional transformations. The core methodologies informing the work of the lab include behavioural experimentation, data science, design thinking, and systems thinking. A team of innovators conduct rigorous academic research to inform

policymaking and prototype “ready to scale” interventions to sustainable development challenges.

The organizational model for the SDG Innovation Lab is unique both in terms of its structure and its funding mechanisms. The Lab is part of UNDP and mobilizes resources from diverse sources, including from donor organizations, UN funds, and contributions from civil society organizations, the government, and private sector. The Lab has a broad portfolio of projects¹⁵ in 11 policy areas (agriculture, AI and digitalization, defence, education and employment, entrepreneurship, environment, health, justice, road safety, tax, and tourism) that address complex societal, environmental, and economic challenges.

In November 2022, the SDG Innovation Lab organized a Public Sector Innovation Forum to stocktake and reflect on its journey five years¹⁶ after its inception. The Forum recognized the efforts and achievements of public sector innovators, and the critical role of mainstreaming innovation to manage complexity and achieve transformational impact across all sectors. The success of the lab has helped inspire the development of UNDP Accelerator Labs in other contexts to support host-countries in “leapfrogging” in their development plans and activities.

Project highlight: The **SDG Monitor**¹⁷ is an AI-powered, open-access interactive online data analytics platform developed by the SDG Innovation Lab team in cooperation with the UNDP's "Rule of Law and SDGs in Armenia Reform Agenda" project and implemented in partnership with the Government of Armenia. The platform was inspired and informed by **UNDP's Oslo Governance Centre**'s work monitoring progress towards the achievement of SDG 16. The SDG Innovation Lab team partnered with the **Global Data Barometer** to collect in-depth, country-level insights and measure progress on SDG 16 for the beta version of the platform. The SDG Monitor platform currently pools data from 8 public institutions, official government websites, and social media, enabling users to explore and monitor Armenia's progress towards achieving SDG targets and indicators.

¹⁵ For additional information on project please refer to: <https://www.sdglab.am/en/projects>.

¹⁶ Please refer to the 5-year Journey report for additional reflections and information on the SDG Innovation Labs' experiences.

¹⁷ The SDG Monitor can be accessed here: https://sdgmonitor.live/#section=section_1&sub=content.

Sustainable Startup & Co

<https://sustainablestartupco.com/>

Sustainable Startup & Co, based in Spain, was launched in November 2023 with the goal of helping organisations “solve wicked challenges by engaging in fun participatory processes” that enable a diversity of stakeholders to reach consensus on a specific issue. The organization brings together diverse stakeholders to rapidly workshop (sometimes within 2 days) change roadmaps to realize impactful change related to the SDGs in collaboration with and adapted to the local community and engaging relevant actors that will need to be part of the implementation process.

These activities are informed by a methodology that is based on the metaphor of a kite. Sustainable Startup & Co initiates an innovation lab with an ambitious grand or intractable challenge related to sustainability and regeneration and then identifies and articulates connected sub-challenges to promote a more systemic understanding of the grand challenge. Participating stakeholders are encouraged and guided through a process of identifying multiple solutions for each sub-challenge and shortlisting the best solution for further development through the lab. Each participating team classifies the proposed solutions proposed by their impact and viability. The lab results in participants collectively deciding and finalising the top 3 ‘best global solutions’. Prior to the official onset of the lab, a pre-laboratory event is hosted with key stakeholders from the private, social, public, and civic sectors to gather insight and invite participation from diverse perspectives and experiences. Invitations to the lab are generally extended to about 150 people from the community, with the aim of encouraging diverse representation across sectors, disciplines, and generations.

To date, Sustainable Startup & Co has facilitated five thematic innovation labs. Each of these innovation labs has resulted in the co-development of a shared roadmap of sub-challenges and solutions related to a selected grand challenge. Specific outcomes include the creation of a public tender and a working group to implement proposed solutions; and the organisation of a forum with technicians and politicians from 9 provinces to disseminate lab results and engage provinces in shared action.

Project highlight: The **Innovation4Gov Lab** is a dedicated innovation laboratory that aims to address complex challenges faced by government administrations. Using an integrative and collaborative processes, participating teams tackle various challenges related to different issue areas or topics, including sustainable development, climate change, waste, and energy.

Key Challenges and Success Factors

This section covers the key challenges and success factors identified by survey respondents and interviewees. While each lab has specific challenges that are unique to its context, organizational structure, and goals, there are common themes that emerge. Across all represented labs, the most common challenge is the lack of innovation culture, with difficulties in making stakeholders understand and trust the lab’s approaches, methodologies, and processes. This is also associated with the difficulty in having leadership support for the lab’s endeavours. Financial and human resources constraints also emerge as challenges in several labs.






















All lab representatives identified adaptability, leadership support and innovative methodologies as key success factors for lab existence. Other frequently mentioned success factors include the presence of a diverse team, culture (including local and organizational culture), local and regional partnerships, and the existence of a strategic plan.

Table 4: Comparing Innovation Lab challenges and success factors












Innovation Lab	Challenges	Success Factors
collaboratio helvetica	<ul style="list-style-type: none"> • Poor understanding of lab approach by stakeholders • Focus on short-term, quantifiable results by funders and politicians • Inequitable power distribution • Lack of support or buy-in from policymakers • Conflicting stakeholder priorities • Accessibility and inclusion of marginalized communities • Funder influence on lab approach • Team burnout, stressors, and trust • Investing in paid time for team cohesion and collaboration 	<ul style="list-style-type: none"> • Adaptability • Culture • Concrete and actionable topic/issue that is anchored in a specific context • Diverse team • Diversified funding sources • Innovative methodologies • Leadership support • Local partnerships • Strategic plan • Sufficiently long timelines (before and during the lab)
Future Islands	<ul style="list-style-type: none"> • Communication • Lack of innovative culture 	<ul style="list-style-type: none"> • Adaptability • Leadership support • Innovative methodologies











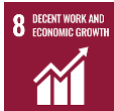






Innovation Lab	Challenges	Success Factors
GovTech Lab	<ul style="list-style-type: none"> • Resource constraints • Government resistance to experimentation • Management of expectations 	<ul style="list-style-type: none"> • Adaptability • Diverse team • Global partnerships • Innovative methodologies • Leadership support • Local partnerships • Regional partnerships • Strategic plan
happy smala	<ul style="list-style-type: none"> • Complex and heterogenous regulation across countries they operate in • Limited access to tailored and sustainable funding for ‘beneficiaries’ • Institutional cultural hurdles, including resistance to change and innovation • Lack of consistent impact measurement standards across sectors and organizations • High turnover in sectors in which they operate, impacting partnerships and organizational continuity when implementing changes 	<ul style="list-style-type: none"> • Innovative methodologies • Diversified funding sources • Culture • Adaptability • Leadership support • Local partnerships • Regional partnerships • Strategic plan
LabX	<ul style="list-style-type: none"> • Leadership support • Lack of innovation culture 	<ul style="list-style-type: none"> • Adaptability • Culture • Diverse team • Innovation methodologies • Leadership support
UNDP Armenia SDG Innovation Lab	<ul style="list-style-type: none"> • Financial sustainability • Long-term engagement with primary challenge areas/issues • Talent acquisition and retainment • Lack of innovative culture 	<ul style="list-style-type: none"> • Adaptability • Diverse team • Diversified funding sources • Global partnerships • Innovative methodologies • Leadership support • Local partnerships • Regional partnerships • Strategic plan
Sustainable Startup & Co	<ul style="list-style-type: none"> • Support for and/or trust in lab methodology from clients • Sustaining high levels of participation • Engagement with diverse and representative stakeholders • Securing sustained funding and resources for implementation 	<ul style="list-style-type: none"> • Adaptability • Culture • Diverse team • Innovative methodologies • Leadership support • Local partnerships • Regional partnerships

Table 5: Comparing key information across surveyed innovation labs

Innovation Lab	City, Country	Creation Date	SDGs contribution	Innovation Type	Target Group(s)	Types of Partners	Action Context	Team Size	Funding Source	Innovation Tools
collaboratio helvetica	Bern, Switzerland	2017	            	<ul style="list-style-type: none"> · Civic · Climate/ Environmental · Social · Policy 	<ul style="list-style-type: none"> · Public sector · Private sector · Society in general 	<ul style="list-style-type: none"> · Academia · Activists · Civil Society · Community Organizations · Foundations · Private Sector 	<ul style="list-style-type: none"> · Local · National 	7	Philanthropy	<ul style="list-style-type: none"> · Councils · Community Building Exercises · Nature-based exercises · Networking · Presencing · Prototyping · Sensing journeys · Stakeholder dialogues · Stakeholder interviews · Systems Mapping
Future Islands	Tunisia	2021	 	<ul style="list-style-type: none"> · Climate/ Environmental · Digital/ Technological 	<ul style="list-style-type: none"> · NGOs · Enterprises · Start-ups · Experts 			50	Multilateral organization	<ul style="list-style-type: none"> · Community Building Exercises · Design Thinking · Hackathons · Networking · Systems Mapping
GovTech Lab	Vilnius, Lithuania	2019	     	<ul style="list-style-type: none"> · Digital/ Technological · Institutional/ Organization · Policy · Social 	<ul style="list-style-type: none"> · Government institutions and their¹⁸ beneficiaries 	<ul style="list-style-type: none"> · Academia · Government · Multilateral Institutions · Private sector 	<ul style="list-style-type: none"> · Local · National · Regional · International · Global 	7	Multilateral organization	<ul style="list-style-type: none"> · Community Building Exercises · Design Sprints · Design Thinking · Journey Mapping · Networking · Other

¹⁸ Presencing is “the capacity for sensing, embodying, and enacting emerging futures” (Scharmer, 2000, p. 2).

Innovation Lab	City, Country	Creation Date	SDGs contribution	Innovation Type	Target Group(s)	Types of Partners	Action Context	Team Size	Funding Source	Innovation Tools
happy smala	Rabat, Morocco	2014	            	<ul style="list-style-type: none"> · Civic · Corporate · Climate/ Environmental · Design · Digital/ Technological · Institutional/ Organization · Policy · Social 	<ul style="list-style-type: none"> · Vulnerable communities in the Middle East and across Africa · Entrepreneur · Public institutions · Corporations · Financial institutions · Third sector actors 	<ul style="list-style-type: none"> · Academia · Civil Society · Community Organizations · Foundations · Government · Multilateral organizations · Private sector · Social sector 	<ul style="list-style-type: none"> · Local · National · Regional · International · Global 	8	Self-funded, Philanthropy & Multilateral organization	<ul style="list-style-type: none"> · Design Sprints · Design Thinking · Journey Mapping · Networking · Policy Prototypes · Prototyping · Storyboarding · Strategic Foresight · Systems Mapping · Community Building Exercises
LabX - Centro para a Inovação no Setor Público	Lisbon, Portugal	2016	      	<ul style="list-style-type: none"> · Civic · Design · Digital/ Technological · Institutional/ Organization · Social 	<ul style="list-style-type: none"> · Public servants · Managers 	<ul style="list-style-type: none"> · Academia · Activists · Civil Society · Community Organizations · Foundations · Government · Private sector · Social Sector 	<ul style="list-style-type: none"> · Local · National · Regional · International · Global 	10	Government	<ul style="list-style-type: none"> · Community Building Exercises · Design Sprints · Design Thinking · Journey Mapping · Hackathons · Networking · Prototyping · Storyboarding · Strategic Foresight · Systems Mapping

Innovation Lab	City, Country	Creation Date	SDGs contribution	Innovation Type	Target Group(s)	Types of Partners	Action Context	Team Size	Funding Source	Innovation Tools
Sustainable Startup & Co	Spain	2023	   	<ul style="list-style-type: none"> Corporate Civic Climate/ Environmental Design Digital/ Technological Institutional/ Organization Social Policy 	<ul style="list-style-type: none"> Local government 	<ul style="list-style-type: none"> Social Sector Private Sector Government Academia Civil Society Activists Community Organizations Foundations 	<ul style="list-style-type: none"> Local National Regional 	7	Government	<ul style="list-style-type: none"> Art of Hosting Design Thinking Liberating Structures Public Innovation Cycle Strategic Foresight Systems Mapping Networking
SDG Innovation Lab	Yerevan, Armenia	2017	            	<ul style="list-style-type: none"> Business model Civic Climate/ Environmental Design Digital/ Technological Ecosystem Institutional/ Organization Policy Service Social 	<ul style="list-style-type: none"> Central and local public sector 	<ul style="list-style-type: none"> Academia Civil Society Community Organizations Foundations Government Multilateral Organizations Private Sector Social Sector 	<ul style="list-style-type: none"> Local National Regional International Global 	12	Government & Multilateral organization	<ul style="list-style-type: none"> Advanced data analytics including development of AI powered dashboards Behavioural science tools such as RCTs Business process reengineering Community Building Exercises Design Sprints Design Thinking Functional review of institutions Institutional modelling Journey Mapping Networking Policy Prototypes Prototyping Systems Mapping

*Please note this information is derived from a survey response and could not be validated independently.

Recommendations for Innovation Lab Development

Approach

- Invest significant time and resources in the design and development phase of the lab (prior to implementation) to identify and understand different innovation models and approaches, the operational context, stakeholder interests and priorities, the actors and communities (most) impacted by the lab’s work, team needs, funding models, and power dynamics. Understanding these factors is crucial to conceptualizing and defining the lab model and its operational approach.
- Localize definition(s) and conception(s) of innovation beyond industrialization, globalization, and market-expansionism and intentionally.
- Articulate and share a localized working definition of innovation (e.g., transformative change towards a desired outcome or goal), clearly distinguishing it from related concepts, such as ‘invention’ or ‘creation’. For example, حَوْلَ (hawwala) or تَحْوُلُ (tahawol/tahawwul).
- Critically examine and acknowledge underlying power structures, systems, and dynamics in operational and organizational contexts.
- Adopt and apply a more equitable, values-based approach to innovation rooted in intersectionality¹⁹, decoloniality, and community and that promotes sustainable, community-led, relationship-centered development.
- Co-design innovation lab strategy with directly affected and implicated communities, and in partnership with relevant policymakers and public sector officials who may or will be responsible for implementing resulting lab outcomes, proposals, or insights in practice.
- Develop and implement a community engagement strategy for the lab, tailoring practices and methods based on the needs, contexts, and experiences of the specific communities the lab engages with.
- Map out relevant stakeholders and actors in the systems, areas, or topics the lab will be working on and invest time and resources in developing meaningful partnerships with key actors.
- Integrate community and civic engagement throughout lab activities, prioritizing the needs and interests of affected populations in guiding the lab’s work and focus areas of the lab.

¹⁹ Understanding multidimensional experiences of discrimination, inequality, injustice, and oppression based on how systems privilege or marginalise people’s political and social identities.

- Adopt accessibility best practices and design standards to ensure the lab is inclusive and supportive of people with disabilities or differing needs.
- Promote a culture of ethical and intentional experimentation, creativity, and openness to help foster innovation both within the lab and in partner agencies.
- Develop a Monitoring, Evaluation, Accountability, and Learning plan and system to help assess the impact of the lab's activities.
- Systematically document the lab's (and lab team's) learning process and develop a practice to share and incorporate these learnings into the lab's work.
- Create a strategy and implementation plan for integrating and mainstreaming innovation into the public sector over the short, medium, and long term to help familiarize colleagues and relevant stakeholders at large and build trust in the work of the innovation lab.
- Complete a review of existing work on sustainable development within the government to identify existing opportunities, challenges, gaps, and best practices to inform the work of the innovation lab.
- Conduct research on decolonial, just, and sustainable models of development, identifying relevant theories, practices, and examples that can serve as foundations for a localized approach to sustainable development that supports the agency, rights, and wellbeing of people in Egypt.

Finance/Funding

- Secure multi-year funding to support the design, development, and implementation of the innovation lab and its activities prior to the launch of the pilot.
- Be diligent about who is funding the lab's work and the terms of funding agreements or arrangements to safeguard from corruption, undue influence, abuse of authority, and conflicts of interest. Implement appropriate policies and practices to encourage and realize safeguarding measures.
- Develop a funding policy to assess potential funders against a set of ethical guidelines and criteria, ensuring their alignment with lab's stated values and with key principles and guidelines, such as accessibility human rights, ecological and/or environmental sustainability, justice, equity, and wellbeing. Incorporate practices to deter, prevent, and address conflicts of interest, corruption, money laundering.
- Diversify funding sources, where possible, in alignment with lab funding policy.
- Invite relevant government agencies, departments, units, or teams to contribute funding to lab activities that have direct implications on their work and/or aim to improve their processes, policies, or activities.

- Invest resources in the follow-up work of the lab, ensuring longer term engagement and planning.
- Identify opportunities to pool and share resources with values-aligned partnering organizations or entities on areas or issues of shared interest to help amplify the reach and impact of the lab's work.

Structure

- Ensure innovation lab engages and has support of policymakers and government to help promote the uptake of resulting policies, programmes, interventions, and insights into relevant government departments or units.
- Support the independent operation of the innovation lab from traditional government structures and processes in order to help the lab experiment with novel methods, processes, and technologies without being anchored by existing public sector operations and bureaucracies.
- Identify specific focus areas and goals the lab will work towards and ensure the lab is equipped with the tools, methodologies, and team capacities to support its activities and objectives.

Team

- Map out the labs' activities, functions, stakeholders, and methods and build a well-equipped team to support the lab with its needs.
- Start with a small, dedicated team in the lab's early phases or stages, and draw in support from relevant external experts as needed.
- Recruit a dedicated team of skilled and experienced people to develop, manage, support, implement, and evaluate lab activities.
- Recruit and develop a roster of experts based on their functional and subject expertise and experiences to complement lab team capacities.
- Explore the feasibility and relevance of establishing and engaging an advisory board of external experts from different backgrounds, fields, and perspectives to share advice, insights, and support with the lab team and participants.
- Curate and facilitate opportunities for lab team to engage in trust and team building as part of their work time and responsibilities (i.e., within regular working hours where possible).
- Identify relevant professional development opportunities or experiences and support team members in accessing and engaging in them. For example, the lab may have a dedicated professional development fund that provides each team member with a budget for education, learning, training, skills building, etc.

- Adapt the innovation lab team composition based on the changing needs, activities, and goals of the lab.
- Foster a culture of collaboration and support within the lab team, and with lab participants with participatory tools and horizontal organizational structures (avoiding hierarchies and rigidity).

Tools & Methodologies

- Leverage diverse methods to support meaningful civic and community engagement in designing, developing, and realizing the lab's structure and activities.
- Develop strategic foresight and anticipatory governance skills and capabilities both within the lab team and with partners and community members.
- Communicate regularly with the public about the innovation lab's activities, outcomes, and impacts to foster greater awareness, a culture of accountability and transparency, and opportunities to collaborate and join efforts with different communities.
- Introduce local people and organizations to innovation lab activities through innovation workshops or mini-series to help acquaint them with new methods and ways of thinking and working they may not otherwise be exposed to.
- Adopt a learning mindset and continuously seek out opportunities to learn about historical, contemporary, and future-oriented innovation methodologies.
- Ensure all projects or initiatives are co-designed with people from the context. Co-create solutions **with** people, not **for** them.
- Dedicate sufficient time to lab activities and exercises, ensuring a duration of at least three months to adequately explore and address the identified challenge(s).
- When extending invitations to lab participants, it is important to invite at least 2 individuals from each participating organization or group to engage in lab activities. By doing so, the lab can ensure more sustained engagement and mitigate the risk of losing relationships to these organizations or groups and the work that has been undertaken when an individual is no longer able to continue working with the lab.
- Integrate prototyping and facilitate the development of small-scale pilots to support lab participants explore novel ideas, test concepts, and gather evidence and feedback before implementing initiatives or interventions at a larger scale.

Conclusion

Innovation labs are emerging both in discourse and practice as a tool to address complex, intersecting global challenges. Public sector innovation labs have the potential to support governments in advancing sustainable development in partnership and collaboration with diverse communities and across different sectors, issue areas, and disciplines.

In order to effectively develop and implement an innovation lab, governments ought to first understand and articulate the theory and conception of innovation that will inform the vision, structure, activities, and operations of the lab. While no universal, agreed-upon definition of innovation exists, an analysis of different definitions and conceptions from literature and survey responses identified “**transformative change towards a desired outcome or goal**” as a core aspect of innovation that can serve as a foundational element in NIGSD’s work developing a pilot for a public sector innovation lab. It is recommended that NIGSD adopt a more equitable, values-based approach to innovation to simultaneously mitigate risks and harms and leverage emergent opportunities. Specifically, a hybrid intersectional, decolonial, community-led approach is proposed as means to avoid the pitfalls, challenges, and inequalities that may stem from innovation concepts rooted in techno-solutionism, market-expansion, capitalism, and instead encourage the development, articulation, and promotion of a meaningful, localized, and transformative concept of innovation.

By examining innovation labs from different contexts, we were able to identify key factors influencing the design, development, operations, and impact of labs, as well as insights that can be applied by policymakers, practitioners, community groups, and other relevant stakeholders interested in or actively engaging in innovation labs. It is important for governments to invest time and resources in understanding the issues, subject areas, and/or sustainable development goals they intend to work on, as well as their intended goals, since this will shape the lab’s structure, tools, methods, collaborations, and partnerships. The paper concludes with a set of key recommendations for NIGSD, related to the lab’s approach, financing or funding, structure, team, and tools and methodology.

Further research is needed to deepen our understanding of the local innovation ecosystem in Egypt, as well as emergent models and practices of innovation labs led by communities from diverse geographic and socioeconomic contexts. As a next step it is recommended that NIGSD commission a study mapping innovation labs and actors in Egypt, with the aim of learning from and identifying opportunities to collaborate and partner with local innovation leaders to collectively advance sustainable development and people’s wellbeing, rights, and agency.

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Appendix A

List of Innovation Labs mentioned in the white paper

- collaboratio helvetica
- Developers' Hub
- Future Islands
- GNova
- GovTech Lab Lithuania
- happy smala
- Laboratorio de Innovación Ciudadana de Montevideo – MvdLab
- Laboratorio de Innovación de la Localidad de Suba - SubaLab
- Laboratorio de Innovación Pública de Bogotá - iBo
- LabX – Centro para a Inovação no Setor Público
- Sentience
- Sustainable Startup & Co
- UNDP Armenia's SDG Innovation Lab



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