



Collaborative Innovation between Startups and the Public Sector

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Joining Forces to Become Collaborative Innovators

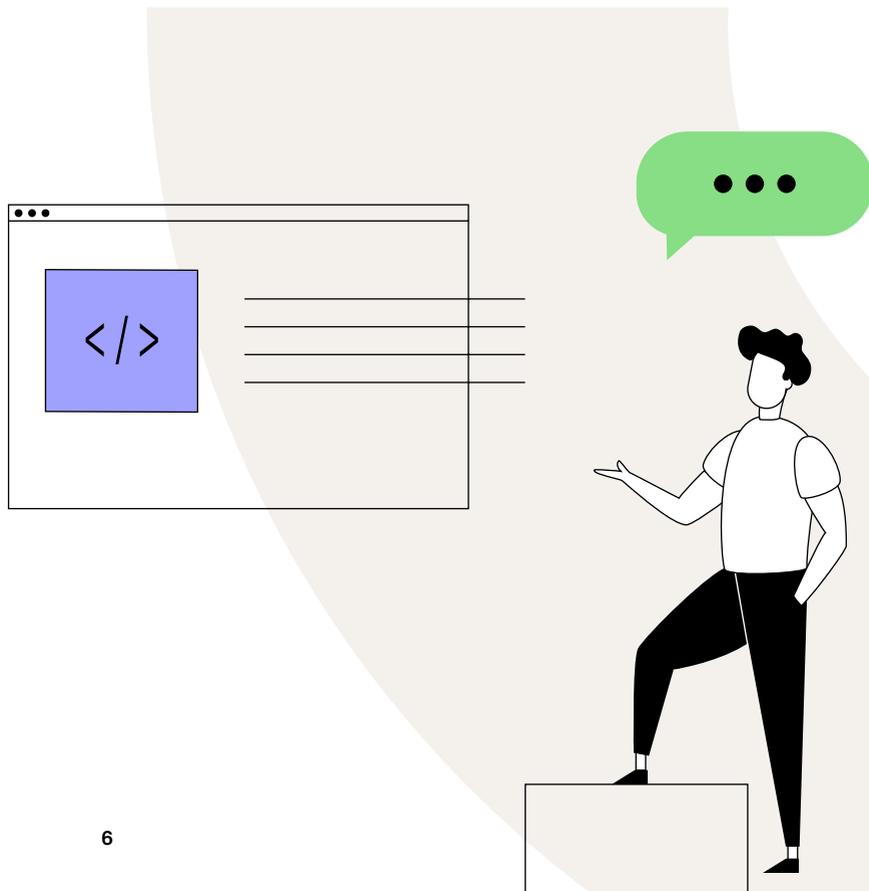
Governments around the world need to provide reliable, inclusive and citizen-oriented services in fields as diverse as education, healthcare, social protection or public safety. The scope of these services is formidable, few businesses could claim their task is as big or complex as that facing the Public Sector, which reaches and impacts the everyday lives of billions of people. At the same time, technological developments and the fast pace of change associated with the digital transformation in the private sector are creating increasing pressure on the Public Sector to increase the efficiency and effectiveness of public service delivery. Paired with rising expectations of citizens in the capacities and delivery methods of the Public Sector comes the need to innovate Public service delivery in a way that caters the needs of citizens, is user-centered, flexible and fast.

Large organizations in the private or Public Sector alike, generally face difficulties innovating to provide new or significantly improved products and services to their customers. Innovation usually takes place at the edges of organizations, where access to new ideas and exposure to different practices and mindsets is greatest. The Public Sector around the world plays already a great role in supporting innovation, through for example creating favorable business environments or through publicly funding research and development for private sector innovation to flourish. The Public Sector can however do more and use its own service delivery mandate and the corresponding purchasing power (government consumption accounts for 17 percent of global GDP as of 2018)¹ to not only support private sector innovation, but to innovate its own service delivery through developing innovative services in cooperation with the private sector. Startups, especially Tech Startups are an important actor to consider for the Public Sector, given their ability to develop and adapt products based on a strong user-need and with iterative and adaptable business models, which can be shaped by Public Sector demand.

¹ The World Bank, "General Government Final Consumption Expenditure." Accessed on February 20, 2021, <https://data.worldbank.org/indicator/NE.CON.GOV.T.ZS?locations=ZG-1W>.

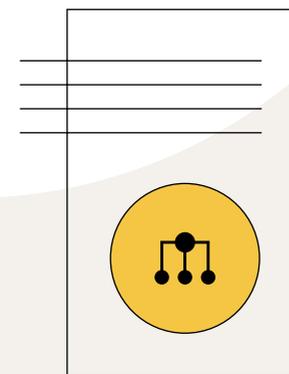
Collaborative Innovation is a method that has its origin in the private sector, aiming to bring the innovative potential of young, dynamic Startup firms together with established larger companies that provide the scaling path for the external innovation to flourish. In the Public Sector however, Collaborative Innovation approaches have not been widely applied, despite the apparent benefits for both involved parties. Because of the complementarity of both actors, Startups and the Public Sector rarely find a way of collaborating and innovation programs specially conceived to attract Startup innovation to pronounced Public Sector challenges are still rare.

The GIZ project Fostering Collaborative Innovation for digital Transformation has developed and piloted different innovation approaches to transfer the Collaborative Innovation method to the Public Sector. The outcome is the **Collaborative Innovators Toolkit** introduced in this publication, that provides a practical framework for Startups and the Public Sector to combine their strengths in different formats of Collaborative Innovation.



This publication aims to provide an overview of the learnings from this project and inspire civil servants, Startups, innovation support organizations, and development practitioners to take the appropriate first steps for introducing Collaborative Innovation approaches in their organization or respective ecosystems. Providing an overview over the What of Collaborative Innovation (Chapter 1) and the Why of Collaborative Innovation (Chapter 2), Chapter 3 introduces the How of Collaborative Innovation in terms of the necessary first steps to kick-start a collaboration, from exposure and learning activities, over first institutional arrangements to the leverages of making Public Sector procurement more Startup friendly. Chapter 4 continues to explore the How of Collaborative Innovation by providing concrete insights into how to implement a Collaborative Innovation program between Startups and the Public Sector, to pilot and jointly adapt Startup solutions in the service delivery context of the Public Sector. Chapter 5 provides a preview of the Collaborative Innovators Toolkit, giving access to concrete and hands-on methodological guidance and tools to enable civil servants, Startups, innovation support organizations, and development practitioners to transfer these approaches into practice in their respective contexts and ecosystems.

The tools introduced in this publication, which are accessible at collaborative-innovators.org can be freely used, adapted and implemented to foster Collaborative Innovation between Startups and the Public Sector.



WHAT

The Collaborative Innovators approach is an innovation framework aiming at enabling Startups and the Public Sector to jointly innovate Public service delivery

1. The WHAT of Collaborative Innovation

Collaborative Innovation is not new. It has become an umbrella term for a range of multi-stakeholder partnerships – however, so far, it was mainly a concept rooted in the private sector. The World Economic Forum championed Collaborative Innovation in 2015 as motor for driving competition and innovation in European economies after the financial and economic crisis.² Collaborative Innovation builds on the assumption that in-house research and development or innovation units are useful in incremental improvements to products and services – what disruptive innovation expert Clayton Christensen terms „sustaining innovations“.³ However, those improvements often do not generate significantly more value or fail to consider entirely new offerings or business models, limiting their impact.

Collaborative Innovation aims to bring actors with different perspectives together and, in doing so, ignite more radical innovation that leads to entirely new products that enable the evolution of systems in its entirety – what Christensen refers to as „market-creating innovations.“

In the private sector, Collaborative Innovation is therefore often associated with bringing young, dynamic Startup firms together with established larger companies that provide the scaling path for the external innovation to flourish. Transferring these approaches to the Public Sector, the Collaborative Innovators’ approach aims at supporting local, regional or national Public Sector organisations and Startups to adapt externally developed Startup innovations to the needs and specific use case of public service delivery, with the aim of establishing a trustful cooperation relationship and long-term scaling path for the Startup innovation.

² “Collaborative Innovation – Transforming Business, Driving Growth,” World Economic Forum, Regional Agenda Report, August 2015. Accessed on February 20, 2021, http://www3.weforum.org/docs/WEF_Collaborative_Innovation_report_2015.pdf.

³ Clayton Christensen, “Disruptive Innovation.” Accessed on February 20, 2021, <https://claytonchristensen.com/key-concepts/>.



Startups

Startups are newly founded profit- or non-profit-oriented organizations that differ from traditional businesses in their value propositions' innovativeness and scalability. Accordingly, Startups are not defined by the economic sector or its entrepreneurial purpose. Successful entrepreneurs develop and test their products iteratively, always with the user in focus. For a Startup to scale, it must allow growth (in terms of expanding the economic or social added value) without equally expanding its operational base or costs.

The Collaborative Innovators' approach deliberately chooses a broad definition of what qualifies as a Startup. What is deemed important is the innovative character of the solution provided, the agile and user-centred ways of working, and first-and-foremost the willingness and ability to adapt the Startup's product or service to the needs of a Public Sector institution.



Public Sector

The term Public Sector refers to all institutions in a country that are publicly controlled and funded, including central, regional and local government institutions such as Ministries, government agencies, publicly owned enterprises and other entities that deliver public services or programs.

Innovation

Innovation is not the invention, but the implementation of an improved- or the introduction of a new product, process, marketing approach (positioning) or business model to solve a problem or benefit from an opportunity. Innovation is not necessarily a matter of replacing what already exists but can also entail adding new value by reconnecting existing elements. Innovation is therefore a discipline

that uses certain methods to achieve specific goals. In general, a distinction is made between incremental innovation, improving existing products or services, and disruptive innovation, changing markets or creating new markets.



Two Examples of Collaborative Innovation

Zipline in Rwanda and Ghana provides an excellent example from the health sector. Zipline is an American medical product delivery company that designs, builds, and operates drone aircraft. In Rwanda, it began drone deliveries of vaccines, blood, and medicines. As of May 2019, more than 65% of blood deliveries outside of Kigali used Zipline drones.⁴ When the Government of Rwanda embarked on this partnership, stakeholders from various Government institutions (Health, ICT, Aviation, and Infrastructure) focused on strong collaboration to establish the appropriate policies and regulatory frameworks for drone delivery. Zipline introduced not only a product and service innovation but also a business model innovation to the Public Sector. Instead of selling the drones to the Public Sector, Zipline chose to sell its service against a fee – commonly referred to as the „Everything as a Service“ model.

Another example is provided by the City of Amsterdam, which in 2015 launched its first Startup in Residence Program to bring together the worlds of Startups and the City administration to scale-up innovative solutions to critical social challenges in the city.⁵ Over six months, Startups and the „challenge owners“ from the municipal administration collaborate, piloting the proposed solutions with the city’s ultimate goal to become a „launching“ customer in the event of successful collaboration. The program is run by the City of Amsterdam on a yearly basis and has proven so successful, that the method has been scaled to almost 20 other Public Sector authorities, from municipalities to line ministries in the Netherlands.

⁴ Adarsh Gangwal, Akshika Jain, Shreeja Mohanta, „Blood Delivery by Drones: A Case Study on Zipline,“ *International Journal of Innovative Research in Science, Engineering and Technology* no.8, Issue 8, August 2019. Accessed on February 20, 2021, https://www.ijirset.com/upload/2019/august/63_Blood.PDF

⁵ City of Amsterdam, The Startup in Residence Program. Accessed on February 20, 2021. <https://startupinresidence.com/amsterdam/>.

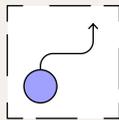
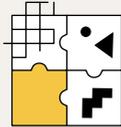
Adapting Startup Innovations to Fit the Public Sector Context

As the two examples above illustrate, at the heart of Collaborative Innovation is the joint development, adaptation and ownership of an externally conceived innovation to the needs and context of the Public Sector. The underlying rationale is that even though external innovation can find manifold use cases for application in a Public Sector context, due to different institutional dynamics of the involved actors and diverging rationales for conceiving and scaling innovation, few externally developed innovations can be introduced to a Public Sector context without adaptation, piloting and a common ownership model. Startups present a promising cooperation actor for the Public Sector in this sense, given the DNA of most Startups that is built around agile development, user-centricity and an openness to adapt their product or service to changing market dynamics or the requirements of their customers or partners. The Public Sector is presented with a unique opportunity to identify innovative Startup solutions to Public Sector service delivery challenges and to further develop and adapt them with Startups to fit the institutional context and requirements of Public service delivery.



The Mindset of Collaborative Innovators

Collaborative Innovation starts with the right mindset. Both Public Sector entities and Startups need to be open, curious and willing to experiment. Each partnership is unique and there is hardly any one-size-fits all process. Beyond tools or processes provided by the Collaborative Innovators approach, setting-up a successful collaboration requires an understanding that...



...organizations do not innovate; people do.

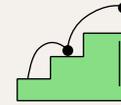
Studies suggest that only 30% of people have entrepreneurial traits. Organizations taking Collaborative Innovation seriously should invest in identifying these people and fostering thriving innovators — and then help them connect with innovation ecosystems.

...unlikely allies need to find one another.

Innovation needs courage. Collaborative Innovation requires both sides to step out of the comfort zone and explore a new field with new partners. Organizations need to bust through barriers that block innovation and build inter-organizational trust. Interaction and exposure to Startup solutions, the working culture or the ecosystem they operate in is the first step to embark on a collaboration journey.

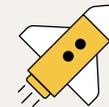
...facilitation and supporting resources increase the likelihood of success.

Aligning the different ways of working, piloting and adapting of Startup solutions in a Public Sector context requires time and expertise. For both sides to be able to focus on collaboration, a dedicated support framework should be provided, either internally from an innovation unit or from an external innovation support organizations. Providing both sides with guidance, moderation and facilitation, in workshops or through additional support offers can significantly boost the collaboration.



...collaboration should build on the strengths of both sides.

The beauty of Collaborative Innovation is that both sides can focus on their core strengths and complement each other on the weaknesses. Startups for example can bring in technical and user-centered experience, while the Public Sector can provide the access to networks and scaling. Focusing on strengths however requires a trustful relationship that makes it possible to identify both strengths and weaknesses on a partnership level.



...collaboration requires a lot of convincing and door opening.

Collaborative Innovation requires both Startups and the Public Sector to be courageous. Partnering with an unlikely ally always

implies that actors within their own organization or ecosystem have to be informed, involved and convinced that the collaboration is beneficial, despite organizational differences or risks involved. In order to succeed, there needs to be a willingness on both sides to open doors and to advocate for the collaboration.



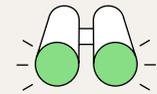
...overthinking needs to be replaced by experimenting.

It is rare that an external innovation is ready to be implemented as it is in the Public Sector and public service delivery. Provide a safe space to experiment and to adapt. Innovations do not follow a linear process as they move from ideas to fully operational and scalable solutions. Public Sector entities must set aside financial and operational resources for experimenting. Startups must be willing and able to adjust their solution or business model to the needs of the public partner.



...clearly communicated expectations build the basis for a trustful collaboration.

To build the foundation for a long-term and equitable partnership, both sides need to know what they expect from cooperation and what they can bring to it. Expectations can change over time but having one's priorities sorted and having communicable and realistic expectations will set the first layer of trust in the co-operation relation.



...it is not a sprint; it is a marathon..

Successfully developing an innovative product or service is only the beginning of a collaborative partnership. Scaling the impact of innovations is the real challenge and takes time and effort.

WHY

While Startups offer a fertile ground for innovation, the Public Sector provides the use cases to test and adapt the Startup innovations

2. The WHY of Collaborative Innovation: Opportunities for Startups and the Public Sector

Why collaborate to innovate?

In a nutshell: Because today's and tomorrow's problems ranging from improving healthcare to fighting climate change require agile and innovative solutions. Startups can not only offer the Public Sector access to innovative products and services but also, given their character as dynamic and young firm, are generally more flexible to work with the needs of the Public Sector and adapt their solution to these. While Startups need reliable and financially potent customers, the Public Sector needs access to new ideas and the knowledge on how to digitalize public service delivery, especially through deploying innovative solutions in the field of future technologies. By cooperating, Startups can bring their user-focus, iterative and agile working culture and their technical knowledge to a partner, that has a rich set of use cases and can provide the opportunity to scale the Startup's solution. By joining forces, Startups and the Public Sector can combine their complementary strengths to develop solutions that work at the required pace, scale and depth.

Growing Public Demand. Government consumption accounts for 17 percent of global GDP (about 13 percent in Sub Saharan Africa) as of 2018,⁶ making the Public Sector the single largest procurer of goods and services in many countries. Against the backdrop of those figures on government consumption, the emergence of government technologies, dubbed GovTech, has the potential of becoming one of the critical sectors in the global digital economy. Estimates see the global GovTech market already at US\$ 400bn,⁷ a number that is likely to grow accelerated by COVID-19.

⁶ "General Government Final Consumption Expenditure." The World Bank. Accessed on February 20, 2021, <https://data.worldbank.org/indicator/NE.CON.GOV.T.ZS?locations=ZG-1W>.

⁷ "Govtech – Europe's next Opportunity." Accenture and Public. Accessed on February 20, 2021, https://www.accenture.com/_acnmedia/pdf-90/accenture-govtech-pov.pdf.

Unexplored Opportunities. Despite the strong government demand, cooperation with Startups or with small, highly specialized companies in general are still rare for the Public Sector. While limited to the UK (globally representative data does not exist), the 2020 annual GovTech SME survey demonstrated, that over 90 percent of SMEs believe the government lacks understanding of how a cooperation could benefit Public service delivery.⁸ On the other hand, a recent survey in Germany carried out on behalf of the Ministry of Economy confirms this picture, stating that only 26 percent of the surveyed Public Sector institutions have contracted Startups.⁹

These figures provide a glimpse that despite Public Sector – Startup Cooperation can develop into a win-win situation for both sides, the opportunity is seldomly used. Startups often struggle to understand the Public Sector’s innovation needs, ways of working and cooperation modalities, and fail to navigate the complex layers of organizational units. This knowledge gap, paired with the reputation of the Public Sector to get lost in lengthy processes, leads to most Startups to not even consider the Public Sector as a potential client and partner for cooperation. From a Public Sector perspective, there are concerns about Startups’ economic performance and their lack of verifiable experience in providing the demanded performance. Public officials are often not aware of the benefits and potential of cooperating with Startups and regard them as young and risky entities that can yield little added value to their organization.

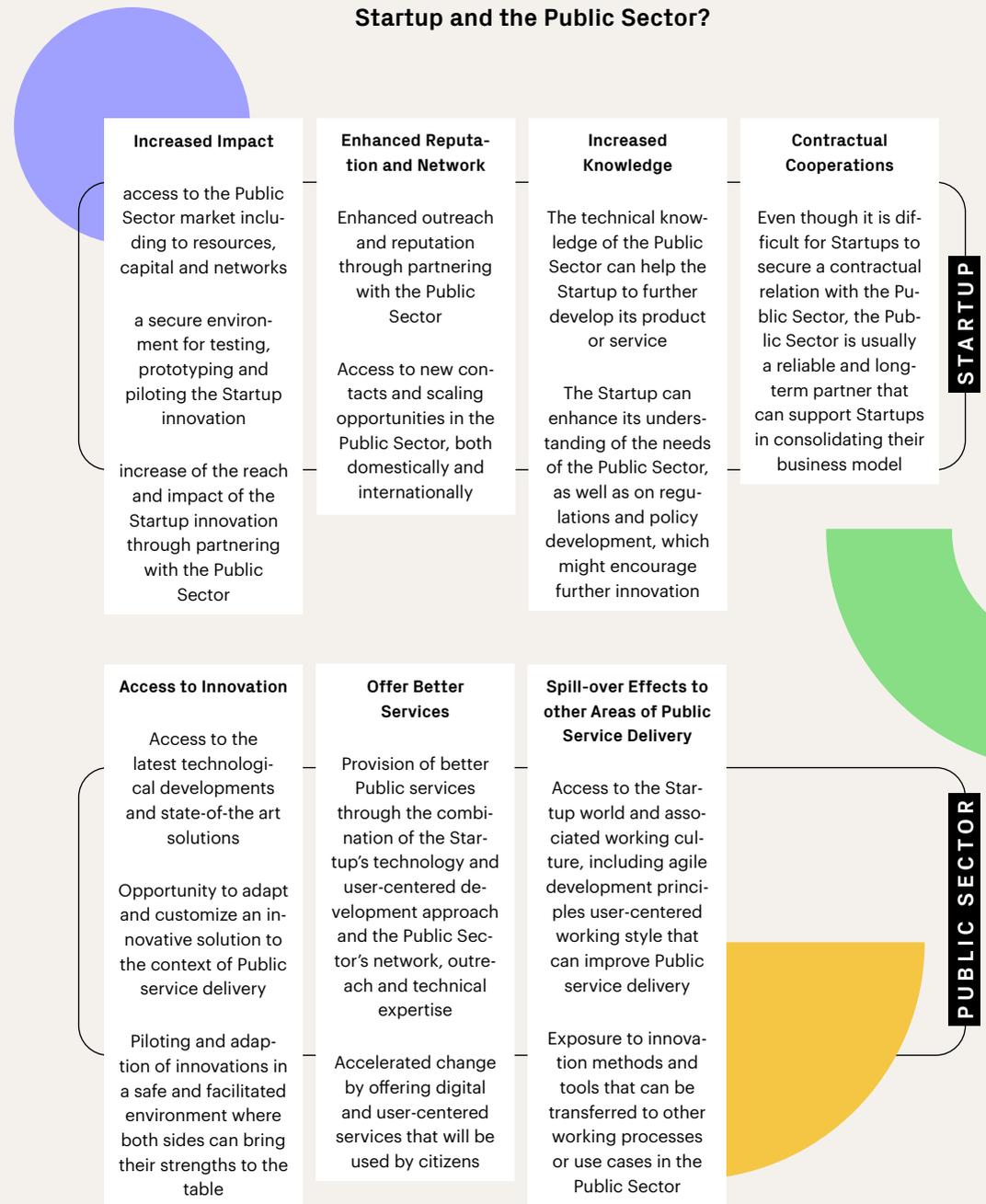
Providing a Safe Space for Innovation

The Collaborative Innovators’ approach is therefore aiming to provide a safe space and guiding framework for Startups and the Public Sector to enter into a collaboration as well as to adapt and pilot the Startup product or service, in order to turn it into a jointly implemented solution. As every collaboration is different, from the context, available resources and expectations, the Collaborative Innovators Toolkit can be adapted and further developed to support collaborations in different context, sectors and cooperation scenarios.

⁸ “Fourth Annual Govtech SME Survey, 2020. TechUK. Accessed on February 20, 2021. <https://www.wired-gov.net/wg/news.nsf/articles/techUK+publishes+results+of+annual+Govtech+SME+Survey+15062020101000?open>.

⁹ “Results of the Survey on Innovation Procurement.” Federal German Ministry for Economy and Energy, May/June 2020. Accessed on February 20, 2021. https://www.bmwi.de/Redaktion/DE/Downloads/E/ergebnisse-der-umfrage-zu-innovativer-oeffentlicher-beschaffung.pdf?__blob=publicationFile&v=4.

What are the benefits for a Startup and the Public Sector?



Providing the right framework and enabling conditions is key for a partnership, as most collaborations between Startups and the Public Sector fail before they even begin

3. The HOW of Collaborative Innovation – Preparation Phase

The following chapter provides an overview of what Public Sector entities can do concretely to kick-off cooperation with Startups depending on the individual context, expectations and motivations. Innovation is dynamic – and so is Collaborative Innovation. While a mutual understanding is the precondition to make this collaboration work it also requires dedicated approaches, processes and resources. Depending on the goal, methods and approaches must be contextualized and adapted to the needs of both the Public Sector entity and the Startup. While Chapter 4 focusses on concrete suggestions to embed Collaborative Innovation in a program-based approach, Chapter 3 introduces concrete suggestions and inspirations to enable Public Sector – Startup cooperation and to open Public Sector procurement to be more responsive to attract and absorb Startup innovations. The approaches presented in this chapter can either serve as the basis for the collaboration phase as described in Chapter 4 or be implemented as independent and stand-alone activities outside a program framework.

3.1 Enabling Innovation – Creating the Necessary Awareness and Framework for Public Sector -Startup Cooperation

Enabling Innovation refers to the measures for laying the grounds for Collaborative Innovation. Building the right environment and understanding is key, as most Collaborative Innovation projects between the Public Sector and Startups fail before they even begin. Enabling Innovation is therefore about building a better understanding about the potentials that lay in a cooperation, to get to know the other side's priorities, problems and ways of working and to find potential common ground for a collaboration. Enabling Innovation is about gaining awareness, the easing of information-flows and the initial building of trust.

Startups often-times struggle to understand the innovation needs, processes for entering a cooperation with Public Sector entities, or the ways of working with the Public Sector to scale their innovations in public spaces. Without a contact in a Public Sector organisation, Startups often fail to

navigate the complex layers of involved organisational units and cannot reach the person or unit that might be interested in their solution. Sending a pitch-deck to the Info@ email-address has seldomly resulted in a fruitful cooperation. Without any specific knowledge about the scope of work, current priorities and planned operations, relying only publicly available information, Startups can only rarely know what the most pressing issues on the Public Sector side are, and how their solution could make a difference. This knowledge gap, paired with the reputation of the Public Sector to get lost in lengthy processes, most Startups do not even try to explore the Public Sector as a potential partner for cooperation.

Likewise, public officials are often not aware of the benefits and potentials of cooperating with Startups and regard them mostly as young and risky entities that can yield little added value to the delivery of public services. On the one hand, in most Public Sector organizations the awareness of the Startup ecosystem is very low, and civil servants are not aware of the solutions out-there that could potentially have an impact on the work in the thematic field of the public official. Even if there is awareness about specific solutions or cooperation benefits, the risk-averse nature of most Public Sector organizations (sometimes also pejoratively referred to as “cover-my-ass mentality”), institutional barriers, such as involving the hierarchy or navigating opaque public procurement regulations leave little motivations for public servants to engage with Startups. With the benefits and collaboration trajectories unclear, most Public Sector officials shy away from making an effort and taping into the unknown.



Overcoming those challenges can be achieved in several ways – from one-time explorative events to creating the first institutional structures and arrangements to open the Public Sector organisation to external innovation and Startup cooperation.

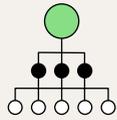
Pitching Events: Exposure activities are the first step for Public Sector entities to explore the Startup ecosystem. Practically, the Public Sector entity can organize a Pitching Event or an Innovation Challenge about a given subject or area of interest, to obtain an overview over existing solutions and to grasp the current trends from a Startup point of view. These events are a great chance for Public Sector officials to enter into a dialogue with Innovators and to get exposed to the Startups’ innovative products.

Ecosystem Tours: Ecosystem tours can be a powerful tool. Public Sector officials can get a thorough introduction to the local ecosystem and observe as well as sense first-hand, how a cooperation could be beneficial for their organization. By partnering with Startups and getting exposed to the broader innovation ecosystem, e.g. Startup hubs, entrepreneurship promotion organizations, incubation or acceleration programs, civil servants acquire knowledge about some of the available solutions that could potentially have an impact on their work. These activities can be organized without any significant cost and time effort and are risk-free.

Startup Officers: A second step, is the establishment of a Startup Officer within the Public Sector entity. This profile serves as an interface between the organization and Startups. Startup Officers are entry points for Startups to learn about the gain and pain points of the Public Sector entity, how to support the Public Sector through their products or services, and how to participate in tenders. They can evaluate on a fundamental level if the Startup’s offering or cooperation proposal is aligned with the interest to the Public Sector entity and they can connect the Startup to the relevant persons within the organization. Startup Officers can also fulfil the role of change agents within the Public Sector and are best positioned to support entrepreneurial and innovation-driven cultural and strategic changes within Public Sector entities by inducing the learnings from their interactions with Startups.

Understanding the Differences

Entering into Collaborative Innovation partnerships requires a mutual understanding of differences and similarities between Public Sector entities and Startups. This understanding will create a common basis that allows to exploit the advantages of this innovative partnership.

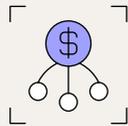


Hierarchical vs flat organizational structure:

In the Public Sector, the hierarchical organization often follows the layout of a pyramid. There are clearly defined leadership levels within the organization. While those organizational structures might seem outdated to people from innovation ecosystems, they fulfil a central purpose in Public Sector entities: they ensure accountability for actions or decisions at different management levels.

On the other hand, Startups have few or no levels between management and staff, which improves the coordination and speed of communication and encourages a more straightforward decision-making process. However, flat organizational struc-

tures also have practical reasons: At early stages, Startups are too small to establish specialized units – instead, "all hands on deck" are required, meaning managers and staff have to help wherever needed to develop products/ services and execute the Startup business model.

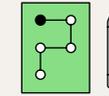
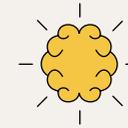


Focus on stakeholders vs users:

While the focus on customers – i.e. the persons or organizations paying for the products/ services offered – is common to Public Sector entities and Startups, there is a fundamental difference between structuring an organization to cater to the needs of stakeholders or of users. Often, the Public sector's products/services target the widest population and

tend to be as inclusive and widely accessible as possible.

This broader scope stands in contrast to the relatively narrow emphasis on (end-) users that is typical of Startups. Startups cater to users (customers) through the entire consumer life-cycle, which begins with customer acquisition and ends with customer retention. Therefore, products or services developed by Startups tend to target a very well-defined segment of users and not embrace broader stakeholder groups.



Political vs economic rationality:

In Public Sector institutions, action strategies result from political considerations and are bound to public support. Agendas and timelines are often closely related to or dependent on pre-approved plans and (annual) budgets, whereas election cycles are sometimes not conducive to setting long-term goals. Therefore, design and execution of multi-year processes that benefit the public happen in close relationship with politics and cyclic changes of authority.

On the other hand, Startups operate in more dynamic environments. Generally, Startups are result-oriented, as they often focus on specific user needs rather than on systemic change. This economic rationality connotes efficiency adaptability meaning a strictly instrumental maximization of actor utility from limited resources and alignment with user needs have to be in balance.

Detailed planning vs experiential learning:

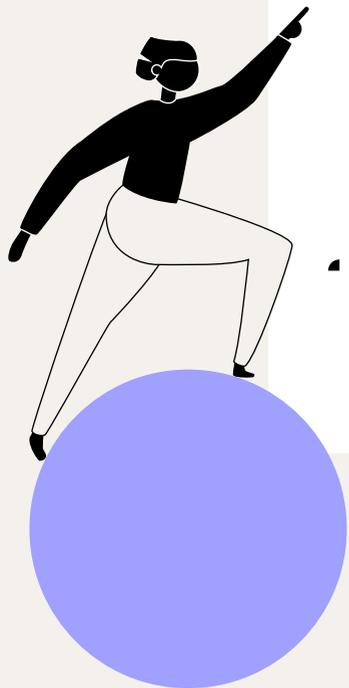
The Public Sector relies on detailed plans that often-times follow institutionalized planning cycles. Adjusting those plans on the go is usually a lengthy process, as it requires the approval of hierarchical levels and stakeholders. Since such a way of working involves several parameters, it becomes difficult for an organization to learn and iterate fast, resulting in stifling innovation. Innovation is inherently uncertain. Startups that genuinely deal with innovation embrace this uncertainty and align their work accordingly through shorter and iterative (i.e. agile) planning and development processes. This process includes working in small batches and utilizing the Build-Measure-Learn feedback loop to minimize the risks of operating in an uncertain environment. In a Startup ecosystem, technologies are never "finished" but are continuously fine-tuned in extremely short product development cycles.

Risk-averseness vs risk appetite:

The Public Sector, which is mandated by strict scrutiny has a reputation for being risk-averse. In the Startup world risk appetite is considered as one of the key entrepreneurial characteristics. Risk averseness in the Public Sector can be attributed to several working characteristics of the Public Sector. The most important factor leading to risk-aversion is public scrutiny. Public entities are prescribed annual budgets which have to be consumed in a given time period. Every expenditure is recorded and must have a clear indication to avoid confusion, or worse; corruption. As a result, the Public Sector, in general, is less tolerant and outspoken on failures, which encourage a more careful attitude of public servants. Startups on the hand are used to navigate the sea of uncertainties and have been accustomed to capitalize on risk and seize opportunities that have not yet been explored.

KEY ASPECTS TO CONSIDER

- Communicate clearly the objectives and expectations when organizing exposure activities such as Pitching Events, Innovation Challenges or Eco-system Tours. Do not overpromise and under deliver.
- Explain upfront your motivation for seeking the collaboration and organizing such activities (e.g., gaining knowledge about available solutions, exploring partnership potentials among others).
- Open up to engaging in user-testing or piloting activities at a small scale when developing new business models, for example through service contracts (many times direct award, if it stays under a certain threshold). This gives both sides a glimpse at the prospects of a partnership.
- Spread the word and build a case for increased Public Sector – Startups cooperation within your organization.



3.2 Procuring Startup Innovations

Rigid procurement procedures are often cited as the main reason as per why Startups and the Public Sector do not cooperate in practice. For Startups, public procurement processes are generally a nightmare. Each Public Sector organisation has different processes and requirements, uses different templates and generally requires first-time bidders to involve in lengthy studying processes to understand the way that public procurement works. Most Startups however are already excluded at the eligibility stage: suppliers to the Public Sector are usually subject to eligibility conditions, such as a certain annual sales volume or a certain number of reference projects, which young companies naturally cannot provide, excluding them from participating in tender processes. In many cases, due to a different jargon applied, Startups can also struggle to understand what the demanded technical requirements mean in practice and how they should present their offer in a way suitable to meet the Public Sector's selection criteria. The effort required on the Startup side to inform themselves and to prepare an offer, with all the necessary support documentation discourages many Startups from applying to a public tender, even if the solution may be a perceived fit. Of course, this challenge requires Startups first to be aware of the public tender, which is another issue often faced by innovative suppliers, given that public tenders are often only announced on specific procurement portals or in newspapers, not in channels that are more accessible to reach Startups, as specialized Startup websites or social media.

While making public procurement processes more agile (balancing objectivity, transparency, non-discrimination and innovation) is a subject of expert discussions since decades, striking an effective balance is difficult. To address these challenges in the following three different possibilities of how to make Public procurement more prone to Startup innovation are explored in the following: Market-Explorations, Pre-Commercial Procurement and Startup-friendly procurement.

Market-Explorations

Pre-procurement dialogues or so-called market explorations can be used successfully before the specifications for a public tender are finalized. It is a useful tool for procurement, to be used when the Public Sector entity knows what the needs are but is not sure on how those needs can be met. Structured dialogues, organized one-to-one or by group sessions, allow the exchange and definition of specifications, and may result in a single solution or in different solutions depending on potential suppliers. They inform

the Public Sector entity about market trends, potential offerings on the market and -to a certain degree- they can also influence the specifications of the procurement. On the other hand, they are beneficial for Startups as they inform them about the tender and provide an early insight on the procurement needs. As the regulations are different from country to country, this process requires a specific evaluation of the existing public procurement measures in place. Nevertheless, elements of market explorations are embedded as an element in most public procurement regulations as a necessary and essential part of specifying the needed product or service.

Pre-Commercial Procurement

If the products or services required by the Public Sector are not yet available on the market, the right solution has to be developed. This entails substantial costs for research and development (R&D) and product development, which is usually a major constraint for Startups. A pre-commercial procurement partnership can mitigate the risks and make a tender attractive for Startups, enabling the Public Sector entity to stimulate innovation and benefit from it. In a pre-commercial procurement partnership, the Public Sector entity buys R&D from several competing suppliers in parallel. In this way, alternative solutions are usually presented to the organization, with a good value for money. Suppliers retain intellectual property (IP) ownership rights, while procurers keep some usage and licensing rights.

CASE STUDY

GovTech Catalyst: The GovTech Catalyst is a £20 million programme that connects private sector innovators with Public Sector organizations in the United Kingdom to solve some of the Government's most challenging problems. A cross-government board chooses challenges, and then they are turned into competitions, which suppliers bid to solve. The Public Sector proposes complex problems (or 'challenges') that up to five suppliers are funded to work on for three months. If results are promising, up to two of those suppliers

will continue to work on it for one year. This year, the aim is to develop a product or service that the Public Sector team has tested in an operational environment and is confident will help address user needs. After the support period, it is envisaged to procure any successful solution that passed the second stage evaluation. The GovTech Catalyst is a good example how in a pre-commercial situation, the development of innovative solutions is supported financially by the Public Sector to have the possibilities to procure successfully developed innovations at the end of the process.

The pre-commercial procurement process is usually split into several phases (solution design, prototyping, original development and validation/ testing of a limited set of first products) with the number of competing R&D providers being reduced after each R&D phase. At the end of the process, the Public Sector entity can purchase at market price a limited amount of the products or services developed by the remaining supplier(s). The possibility to conduct a pre-commercial procurement process is again depended on the specific regulations in the country of interest and possibilities to include such a format to foster Collaborative Innovation should be carefully evaluated on the basis of existing procurement frameworks.

Startup-friendly Procurement

Tender Support: The first challenge for Collaborative Innovation is to reach Startups that could apply for the public challenge to be procured. For a Startup offering a very specific niche product, it does not make sense to regularly check the various procurement portals of different Public Sector organizations. In order to increasingly reach Startups it may make sense to publish them in different channels, e.g. in social media or via the local Startup networks. Equally, using some PR elements in the publication of tenders, e.g. to have a short poster or flyer prepared for the tender helps to raise awareness and to ensure it is cross shared via networks and contacts. This can also be accompanied information event for Startups, to explain and clarify questions about the application process.

Functional Specifications: Working with functional specification is a great and relatively straightforward way to procure innovation and pathing the way for Startup cooperation. A specification entails the description of the product, service or result that the Public Sector aims to procure. Traditionally, these specifications are prepared in great detail, specifying every inch of the desired solution to ensure that bidders can be evaluated according to how they are suited to provide the solution and to make the selection objective and transparent. Many public servants are not aware that although this is a standard process, there is also an alternative: the use of functional descriptions.

A functional specification describes the functions that the product or service must fulfil for the user, answering the question what the product does, but not how this has to be achieved. With functional specifications usually more suppliers can be found than with tightly defined, detailed specifications, so also Startups may have a better chance of submitting their offer to a public tender. Working with functional descriptions however requires

a bit broader change in the standard procurement procedures, given that evaluation criteria also need to be adjusted. If not all bids offer the same solution, the selection criteria must ensure that there is a degree of comparability between the offers, taking for example criteria into account that assess the feasibility or impact of the solution.

Tender Modifications: One major challenge is getting adequate Startups to apply for Public Sector tenders. Startups often struggle to effectively comply with all the necessary documents or simply fail to understand the application procedure. To facilitate this application process and make it more understandable to non-traditional suppliers three core obstacles need to be considered: the role of language (1), the design of the submission form (2) and the evaluation criteria (3).

The first obstacle concerns **language:** many expressions or specific jargon used on a daily basis also finds its way into public tenders, which make it difficult for new suppliers such as Startups to understand and grasp the demands of the Public Sector.

Next to language, the **submission form** for technical offers poses a second challenge to Startups, which are more used to present their offers in nice and catchy presentations or describe them with a few words. For Public Sector officials who are bound to a criteria-based evaluation this can sometimes be difficult, if the offer suggests that it fulfils a given criteria, but this is not explicitly mentioned in the offer, leading to scoring lower points in the evaluation. What could help to overcome this problem is to provide bidders a tender specific form for the submission of the technical offer, outlining which information shall be provided in which section, and according to which criteria the answer will be evaluated. This application structure makes it transparent, what information has to be included and facilitates the process for the Public Sector, given that all technical offers are submitted in the same format.

A third element to make the procurement process more Startup friendly is to work with **evaluation criteria** that are more understandable and reliable. Using criteria that are prevalent also in the Startup world, such as design and innovation, impact, feasibility, scalability or sustainability, can ensure that Startups grasp more easily on which basis their offer will be evaluated. Working with grading scales (e.g. 10 points are awarded if ..., 8 points are awarded if..., etc.) can also make the evaluation process more transparent.

KEY ASPECTS TO CONSIDER

- Seek to involve the procurement department of your organisation from early on to discover the room for manoeuvre that your procurement regulations entail. A lot is possible, while still adhering to the main principles of public procurement – non-discrimination, transparency and objectivity.
- Explore the pre-procurement instruments entailed in most procurement regulations and try to understand what the regulations mean in practice for organizing a market exploration with a pre-procurement dialogue. If a Startup Officer or a similar position is already established, involve them in exploring the pre-procurement process and bridging the likely gap between regulations and practice.
- Promote your tenders through channels that are easily accessible to Startups and Innovators, e.g. on websites used in the local Startup ecosystem, on social media, etc. and use a clear terminology that is understandable also by an audience that is not familiar with your organization's jargon.
- Explore the potential of functional specifications to leave room for innovation. If doing so, ensure that the standard evaluation criteria of your organisation are adjusted to the fact that proposed bids can be very different solutions and therefore need to be evaluated against adapted criteria.



HOW

Collaborative Innovation is best pursued in a facilitated program that enables Startups to offer a solution to a well-defined Public-Sector challenge

4. The HOW of Collaborative Innovation – Collaboration Phase

The Collaboration Phase is where the real magic happens. Based on the readiness of the Public Sector partner and the preparatory steps taken in the Preparation Phase (Chapter 3), this phase encompasses a facilitated adaptation and integration process of the Startup innovation in the service delivery of a Public Sector. In a program-based approach, the Public Sector and the Startup(s) are supported in building a joint solution and cooperation model to sustainably implement it.

In order to ensure productive, impactful and sustainable cooperation between Startups and the Public Sector, the Collaborative Innovation process has to start much earlier than the actual Collaboration phase and it should not end after a time-bound facilitated innovation program, but aim to foster a long-lasting and sustainable cooperation relation between the Public Sector entity and the Startup(s).

Sources of Inspiration – Practical Case Studies of Collaborative Innovation

Opportunities for Public Sector Innovation through the Collaborative Innovators' approach are manifold, independent of the sector, context or country. The Collaborative Innovators' approach can be deployed to innovate Public Sector service delivery in sectors ranging from youth employment, agricultural innovation to diaspora cooperation. The three examples presented shortly in this chapter describe and summarize the experiences of three Colla-

borative Innovators pilots implemented in Armenia, Brazil and Sudan in order to test and further develop the approach and corresponding tools. The pilots confirmed the importance of Public Sector engagement, both in stipulating demand through openness and willingness to cooperate with Startups and integrate their solution in the Public service delivery, as well as in their active support throughout the programs to enable Startups to achieve the adaptation and piloting results. working opportunities in Armenia based on automated and intelligent matchmaking system.

The Collaboration Phase with Startups is based on a clearly defined **Public Sector Challenge**, a pertinent problem in the framework of public service delivery that is prone to be solved by an innovative solution. A good Public Sector Challenge is based on a problem that is understood well, with the needs of the user analysed and that is pronounced by a Public Sector partner, that has the readiness to absorb innovation and cooperated with actors such as Startups. If the collaboration readiness and innovation absorption capacities are not ripe, Enabling Innovation activities as presented in Section 3.1 could be considered.

After the Public Sector challenge has been identified, the Public Sector needs to identify potential Startups to participate in the Collaborative Innovation program. Depending on the available resources and the Collaborative Innovation process' desired outcome, the Public Sector may procure Startup innovation through an adapted procurement approach (Section 3.2) or base the Collaboration on a partnership approach or a process that encompasses the award of a grant or prize money to the winning Startup(s). The Public Sector also needs to secure buy-in from the organization and to identify sponsors for the project, but also to ensure the support for implementing and facilitating the Collaboration process (e.g. through an Innovation Support Organisation like a consultancy or a Startup Hub).

The ideal collaboration process, including aspects of innovation procurement and a four- to twelve- months long program-based approach is based on an existing product or service by a Startup that has passed the minimum-viable-product stage and has been initially tested for feasibility and user-reception. Nevertheless, in some instances the Public Sector may also chose to partner with Startups or aspiring entrepreneurs to develop entirely new solutions, based on a joint human-centred design approach.



CASE STUDY

Connecting Armenia and its Diaspora

Today, an estimated 7 million Armenians live in more than 100 countries around the world. The Armenian diaspora is of great importance to the Armenian government, which seeks to maintain strong relations with the Armenian diaspora, supporting and encouraging repatriation, supporting the integration of returned Armenians and to explore the potential of the Armenian diaspora worldwide. Despite these efforts, the Armenian repatriates and expatriates are still faced with difficulties in finding access to direct and effective public service information.

Partnering with the **Office of the High Commissioner for Diaspora Affairs** and **Impact Hub Yerevan**, a Collaborative Innovation process was kicked-off to develop innovative solutions that the Office of Diaspora Affairs will integrate in their ser-

vice delivery as an official tool to interact, reach and serve the needs and worries of the diaspora and repatriates, in terms of providing precise, efficient, timely, and direct quality information needed. Out of more than 25 applications, 10 Startups were selected to explore the feasibility of their innovation in the service delivery context of the Office of the High Commissioner. After a sprint workshop and evaluation process, four Startups participated in a four-month Collaborative Innovation program to further develop their innovative solutions based on the needs and input of the Office of the High Commissioner for Diaspora Affairs. At the end of the program, the Office of the High Commissioner selected the Startup TechSurfing to continue the joint work on the Connect Armenia Platform that enables the Armenian Diaspora to access professional, educational and networking opportunities in Armenia based on automated and intelligent matchmaking system.

After one or several Startup solutions have been selected to solve the Public Sector challenge, the Collaboration journey can set sails to lay the foundation for a trustful relationship. Getting to know the qualities, ways of working and needs of one another, Startups and the Public Sector gain a better understanding on the Public Sector Challenge and the Startup solution. Based on this process, a piloting plan for the Startup solution in the Public Sector context is jointly developed, and adaptations already foreseen for the Startup solution are included in an Adaptation Backlog. Expected outcomes and key-performance indicators (KPIs) are jointly agreed upon. Depending on the readiness of the solution and team, additional support elements such as an innovation coach, technical mentoring session and legal advice can be provided to the team on a needs-oriented and agile basis. This iterative process can take from four months to a year, depending on the nature of the solution. At the end of this phase, the solution should have been tested and adapted in such a way, that it is ready to be deployed and scaled across the Public Sector's service delivery reach.

As Startups and the Public Sector have at this stage already gathered collaboration and co-creation experience, building a level of trust and knowledge of the other entity, the possibilities for future cooperation can jointly be evaluated, according to both sides' needs and interest. In some cases, it may also result in a solution that is not entirely meeting the needs of the Public Sector. Nevertheless, not all is lost. Since the Startup has further developed its product and piloted it in a Public Sector environment, it has enabled its operational advancement. The Public Sector, on the other hand, through the process would have obtained a better understanding of its problem, potential solutions and insights into a user-centred and agile methodology that can prove useful in future projects.

CASE STUDY

Agricultural Innovation Program, Sudan

In Sudan, the agricultural sector is a key contributor to the country's economy. Together with livestock farming it constitutes the main sources of income for the majority of the Sudanese population. Growth in the agricultural sector has however, predominantly resulted from expanding the cultivated area. Given that natural resources are limited, Sudan faces the urgent challenge of increasing yield productivity to boost its agricultural production. As a result, the **Social Security Investment Authority of the Ministry of Labour and Social Development** joined forces with GIZ and **Impact Hub Khartoum** to identify innovative Startup solutions to increase the yield in cash crops and to increase productivity in the horticulture value chain.

From the beginning of the cooperation, the Social Security Investment Authority was very pronounced in its goal to find innovative Startup solutions to invest in, in order to support their impact and outreach. Out of thirty-three applications, eight Startups were selected to participate in the Collaborative Innovation program, lasting four months. During this program, Startups and the Public Sector partner were supported in structuring and implementing their cooperation through workshops, technical mentoring and process support. Startups were able to benefit from the technical expertise of the Social Security Investment Authority and were able to pilot and test their solutions in one of the state farms owned by the Authority. Out of the eight participating Startups, the Social Security Investment Authority

selected two Startups at the end of the program to receive investment and the possibility to further receive piloting and scaling support by the Public Sector.

Finally, eight Startups pitched their solution concept to an expert panel consisting of representatives from the Public Sector institution, external experts and professionals of the Impact Hub Khartoum. Two Startups were selected to continue their cooperation with the Public Sector and scale their solutions through its support: The Startup Blue Bell build a locally rooted adaptation of an Airbus developed machine-learning software to provide satellite mapping and geoinformation services to increase the yield in cash crops by determining the adequate inputs to grow crops (e.g. fertilizers or pesticides). The second selected Startup Ivorycell uses interactive-voice response technology and the prevalent communication channels used by farmers to disperse practical advice and recommendations by the Agricultural Research Centers in Sudan to increase their agricultural output. The Social Security Investment Authority is not only invested to form a continuous partnership with Ivorycell, but also to encourage a collaboration of the Startup with the Ministry of Higher Education and Scientific Research.



CASE STUDY

Youth Employment Innovation Program

In Brazil, juvenile delinquency and poverty pose a crucial problem. To address this, the government has implemented the legal program Young Apprentice ("Jovem aprendiz") which aims to integrate young adults into the formal labour market and thus reduce juvenile delinquency, poverty and social discrepancies. The implementation so far however, had only little effect. Out of 90.000 available places in Rio de Janeiro, only 40.000 were awarded – and largely excluding the program's actual target group: socially disadvantaged young people. In a first project phase, two solutions were developed that targeted applicants to facilitate their entry to the program. Based on an evaluation, the Ministry of Labor and Social Welfare of the State of Rio de Janeiro discovered however that 50 percent of vacant places were at small and medium sized companies

(SMEs), who were not aware of the program and the legal and practical obligations to hire a Young Apprentice.

Partnering with the **Ministry of Labor and Social Welfare of Rio de Janeiro, the German Chamber of Commerce and the Startup Factory Rio**, the Collaborative Innovation project aimed at supporting especially small and medium sized enterprises to hire more socially disadvantaged youth through the program. Three Startups were supported in their collaboration process with the Ministry of Labor and Social Affairs: Taque Lite and Intelecta developed gamified solutions to provide guidance for SMEs in the recruitment and selection process of a Young Apprentice, while the Startup Edujob piloted a virtual human resource assistant, based on artificial intelligence to support companies in the selection of applicants and matching of (non-formal) experience to the required skills of the company.

KEY ASPECTS TO CONSIDER

- The Collaborative Innovation process is flexible and adaptable to the organization's needs and works with a single Startup or with several Startups, as well as with local or international Startups.
- Collaboration Readiness is paramount. Both sides have to commit resources and must be willing to walk out of their comfort zone/ business-as-usual mindset.
- Secure a broad institutional backing to turn the Collaborative Innovation process into a long-lasting partnership and involve your legal and procurement teams in the discussions early on to make the cooperation work.
- Starting an early dialogue on contractual cooperation helps to ensure a seamless transition from the program phase to a follow-up cooperation phase.
- Make the collaboration a partnership. Startups and the Public Sector, despite being different, having different capacities, experiences and resources available should treat the co-creation as a joint endeavour that can only be successful, if both sides are equal partners with joint responsibilities.
- Agree on the modalities of the collaboration and summarize the outcomes of your discussions in written form. This can be done in so-called Key Tools, which are part of the different modules in the toolkit outlined below. In this way, you always have clarity about agreements, roles and responsibilities throughout the process.
- Retain a certain level of flexibility: it is good to have jointly developed KPIs and milestones defined, but everybody should be expecting certain delays or process adaptations that may arise due to new insights in the piloting process.



5. A Preview to the Collaborative Innovators Toolkit

After this introduction on the What, Why and How of Collaborative Innovation between Startups and the Public Sector it is time to translate the approaches from theory to practice. The Collaborative Innovator's Toolkit encompasses concrete Innovation methods that can be used by Startups, Public Sector entities and facilitators of innovation processes in their specific ecosystems. The Collaborative Innovators Toolkit is composed of **two Phases**, the Preparation Phase (as described in Chapter 3) and the Collaboration Phase (as described in Chapter 4). Each Phase consists of different **Modules** that cover the relevant aspects to ensure a fruitful cooperation between Startups and the Public Sector. The Modules are composed of **Sessions**, that can be used as workshop templates to guide Public Sector organisations and Startups in their structured cooperation. **Key Tools** are integrated in the Sessions to record the most important agreements and goals of the Collaboration partnership but can likewise also be used independently in a fully customized innovation process. All of the materials provided in the Collaborative Innovators Toolkit can be accessed on the website collaborative-innovators.org. All material presented in this publication and on the website can be freely used and adapted to the specific contexts and needed purposes according to a Creative Commons license.

PREPARATION PHASE



MODULE 1
Identifying the Public Sector Challenge

- SESSION 1
Innovation Need Assessment
- SESSION 2
Innovation and Collaboration Readiness Assessment
- KEYTOOL
Public Sector Challenge Canvas



MODULE 2
Prepare to Collaborate

- SESSION 1
Preparation of the Collaboration Phase
- KEYTOOL
Collaborative Innovation Project Brief Agreement
- KEYTOOL
Stakeholder Engagement Plan

COLLABORATION PHASE



MODULE 3
Transparenting Boxes and Setting the Stage for Collaboration

- SESSION 1
Delivery Principles of Collaborative Innovation Programs
- SESSION 2
Kick-Off: Get to explore the Human Factor
- KEYTOOL
Cooperation and Communication Plan



MODULE 4
Fitting the Startup Solution to the Public Problem

- SESSION 1
Unpacking the Public Sector Challenge
- SESSION 2
Getting to Know the Startup Solutions
- SESSION 3
Fitting the Startup Solution to the Public Sector Context
- KEYTOOL
Collaborative Innovation Canvas
- KEYTOOL
Solution Adaptation Backlog



MODULE 5
Piloting the Startup Solution in a Public Sector Context

- SESSION 1
Innovation KPIs and Impact Matrix
- SESSION 2
Planning and Implementing the Pilot
- SESSION 3
Keeping Track of Adaptations and Progress
- KEYTOOL
Collaborative Innovation Impact Matrix
- KEYTOOL
Piloting Plan



MODULE 6
The Way Forward

- SESSION 1
Long-term Cooperation Prospects and Scaling Strategies
- SESSION 2
Organizing a Debriefing and Evaluation

ADDITIONAL RESSOURCES



MODULE A
Introduction to Human-Centred Design



MODULE B
Developing User-centred Solutions with Public Sector Organisations

6. About Us

GIZ is a service provider in the field of international cooperation for sustainable development and international education work. We are dedicated to shaping a future worth living around the world. Together with our commissioning parties and partners, we generate and implement ideas for political, social and economic change.

The project Fostering Collaborative Innovation for digital Transformation was implemented from 2018 to March 2021 as GIZ financed measure to explore the possibilities of increased Startup – Public Sector cooperation especially in the light of the digital transformation and its impact on public service delivery. Through the implementation of our pilots, the design of the Collaborative Innovators’ framework and the concrete innovation methods, we have had a very steep learning curve and have begun to cherish even more the cross-fertilization of ideas – it is correct that innovations are seldomly developed alone. When we embarked on the journey of exploring the potential of Collaborative Innovation two and a half years ago, we were not aware how the exposure to this topic would also influence our way of thinking and working in such a profound manner.

We are thankful to all the partners, like-minded allies and internal and external supporters we have encountered on our journey and who have helped us to step out of our comfort zones to explore new approaches. Collaborative Innovation, as we have learned is not a sprint, but a marathon. However, as it must feel when having run a marathon, this feeling and the impact achieved by a Collaborative Innovation project can make a difference.

Collaborative Innovation in the Public Sector is still in its infancy, and it requires to be further explored. We hope to have gained some new supporters around the world that are eager to start and develop their mechanisms for collaboration. We are always open to feedback and would love to engage in a conversation with you, if you are planning to or have already made progress in some sort of Collaborative Innovation projects. The tools provided on our website are therefore also evolving with time and based on your feedback.



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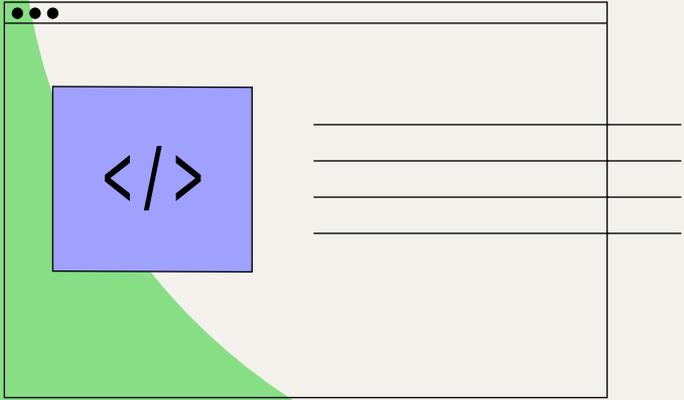
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