

**Background Note 3 for  
UN Workshop on building capacity and scaling up adoption of STI4SDGs Roadmaps in  
Africa**

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**Summary of Guidebook on Innovation for the SDG Roadmaps: Establishing a  
Network of Banks of Ideas and Funds for Innovation and of Procedural Guidelines  
for its Implementation**

**Executive Summary**

This is a 10MG proposal - elaborated by [José Ramón Lopez-Portillo R.](#) - for creating a [Network of Banks of Ideas](#) and Funds for Innovation, led by autonomous Ethical Councils and supported by a collective of experts within a global digital platform under the auspices of the UN System. The objective is to create a global innovation ecosystem within the TFM's STI4SDG roadmaps that is coherent, self-adapting, self-financing, scalable, collaborative and widely informative (Mexico is a pilot country).

The proposed Network seeks to address the growing innovation divide between disadvantaged communities (mainly in the Global South) that lack the resources and opportunities to participate equitably in the global innovation ecosystem and the few nations and corporations that dominate the field and perpetuate the former's exclusion. It does so by addressing the concerns of most innovators that their ideas will be disregarded, taken without due consent or compensation, or exploited by third parties (among others). It focuses on specific problems, integrating local and indigenous solutions, accessing necessary funding for SDG-relevant projects, and offering seed capital for MSMEs, individual innovators and vulnerable communities in exchange for participating in any resulting companies' profits or shares. It focuses on the need for Partnership in Action, inclusive use of intellectual property rights and collective action, learning, and cooperation between R&D, policymaking, entrepreneurial, financial, and civil society stakeholders, leaving no one behind.

## **Background**

This summarises the “Guidebook on Innovation for the SDG Roadmaps: Establishing a Network of Banks of Ideas and Funds for Innovation” and “Procedural Guidelines for its Implementation”.

The first draft follows the UN-DESA “*Guidebook for the Preparation of Science, Technology and Innovation (STI) for SDGs Roadmaps*”, and the second, “Implementing Science, Technology, and Innovation (STI) for SDG Roadmaps at the Country Level: Operational Note”. These two references and other relevant UN documents provide a coherent framework for all stakeholders, policymakers, and development practitioners to empower STI to achieve the SDGs.

## **Objective**

Under the auspices of the United Nations system, the main objective of the Guidebook and the Procedural Guidelines is to close the innovation divide and test and develop an international ecosystem based on Banks of Ideas and Funds for Innovation that systematically identifies specific problems in search of innovative solutions; solutions in search of problems to solve; solutions to problems in search of expertise support; solution ideas in search of funds; ethically aligned innovative solutions; a bottom-up and top-down approaches that leave no one behind; and an innovation capacity building and evidence-based policymaking ecosystem. These proposals seek to be a systemic way to advance towards the SDGs in an efficient, financeable, collaborative, inclusive and sustainable way.

## **Preamble**

In the current disruptive global dynamics, innovation is of growing strategic importance to navigate the great technological transition. But unfortunately, the ingredients to foster a strong and sustainable innovation culture and system towards the SDGs still need to be discovered for most countries in the Global South, particularly for disadvantaged and vulnerable people in all countries. Moreover, a growing disparity in STI capabilities between countries and within societies threatens to rapidly increase socioeconomic disparities and cancel the possibility of equal opportunities for all.

Most countries in the Global South are ill-equipped to face and benefit from technological acceleration and could easily fall into international irrelevance. Only a few nations possess powerful and far-reaching innovation ecosystems that can determine the world's fate. The competition will speed up innovation. They will probably seek geopolitical supremacy, market predominance, and economic gain. They have easy access to political, legal, and financial resources that protect and promote all stages of their innovation processes, which often do not translate into greater well-being, social inclusion, and positive environmental impact.

Support for basic science is essential to drive innovation. However, while industry researchers have free access to academic work, academic scientists typically cannot use industry findings, making it difficult for them to patent. Scientific communism could be said to create direct profits for capitalist entities. The public pays for scientific and technological research risks, but private corporations reap many rewards. The risks are socialised, but not the benefits. So there should be a requirement for the industry to share proprietary research.

Furthermore, the rapid emergence of frontier technologies and innovations prevents most governments, businesses, and social groups, especially in developing countries, from keeping up and benefitting while averting negative impacts.

Most companies and individuals need help assessing risks, receiving expert advice, implementing best practices, and accessing crucial financing. They rightly fear that their ideas will be ignored, stolen, sabotaged, or exploited by more powerful or cunning third parties and that the ability to innovate will continue to be found elsewhere. But crucially, they need more capacity and support to implement their ideas effectively.

After decades of the dichotomy and dispute between laissez-faire and state-led (government intervention) economics, we could be at the dawn of a third option of direct bottom-up creative innovation and economic planning. This implies that governments go beyond mainly stabilising markets or centrally choosing winners towards a development driven by innovation and creative socioeconomic dynamics. The role of governments would include coordinating knowledge sharing, helping identify opportunities to commercialise inventions, and funding innovative solutions.

## **Prospect**

Nonetheless, crises are cradles of significant transformations. STI4SDG roadmaps elaborated by the TFM can offer countries and communities effective ways to enhance their economic competitiveness in a globalised context. More broadly, they can provide the most viable route towards the type of sustainable development and global solutions expressed in the SDGs and collaborate on equal footing to work out and test answers that bring them closer to the SDGs.

A thriving, accessible, harmonious and transparent ecosystem for innovation can bring together public, business, financial and academic/R&D stakeholders in virtuous cycles of exchange. However, there is no universal formula for creating a flourishing ecosystem and no guarantee that it will produce practical, responsible, ethical, inclusive, and sustainable results or can contribute to addressing global problems. Therefore, these parameters must be embedded in a globally coherent and collaborative SDG innovation network.

## **Proposal**

Under the auspices of the UN System, create a network of Banks of Ideas and funds for innovation led by autonomous, ethical councils to guide Innovation4SDG in an effective and self-financing manner, respecting IPR regulations and the legal framework of each country. The network would induce long-term strategic funding to promote, encourage and protect creative ideas, innovators, research and development, scientific demonstration, and systems deployment.

Each bank would support its respective national innovation ecosystem by connecting to the global network to work together towards achieving the SDGs. This network is intended to create economies of scale to support and guide the generation and application of SDG-relevant ideas and innovations in a coherent, homogeneous, collaborative and systemic way.

## **Conditions and challenges**

All innovation ecosystems depend on accessible, affordable, reliable electricity, Internet, information and communication systems, education, training, and technical skill formation. National innovation agencies and local innovators must be empowered. Technology parks, universities, public and private research centres, incubators, accelerators, start-ups, creative individuals, and impact entrepreneurs must be invited to be part of the respective Bank of Ideas and, through its digital platform, to the global network. Within it, they must be strategically

supported. A culture that embraces creativity, diversity, sustainability, equity and inclusion must be reinforced.

Universal Internet access is the *sine-qua-non* condition to strengthen the innovation ecosystem; stimulate competent risk capital; develop talent; attract innovators; establish international and domestic market access.

Unfortunately, more than a third of people in the Global South, particularly those in vulnerable situations, lack access to the Internet, and many users are not meaningfully connected. They face numerous barriers, such as costly broadband connections, poor supporting networks with low quality of service, difficulties in financing the fibre-optic technologies required, unfavourable market dynamics and lower purchasing power. Moreover, the lack of digital skills and digital literacy exacerbates digital divides and can limit the adoption of digital tools and of benefiting from innovation ecosystems.

All innovation strategies must be embedded in communication, learning, experimentation, collaboration, access to financial sources, feedback, evaluation, horizontal and vertical diffusion of knowledge (working across silos), scalability, reach and adaptation to uncertainty. In addition, the innovation strategies' preparation and organisational arrangements must be constantly reviewed and adapted. They require leadership, active competition, stakeholder collaboration, learning, experimentation, and preparedness for complex dynamics and uncertainty.

### **Ecosystem for Innovation with Banks of Ideas: Main Endeavour**

There are clear advantages in building an ecosystem for innovation that is coherent, interconnected, standardised, accessible, resilient, far-reaching, scalable, self-learning and self-reinforcing.

The primordial endeavour for such an ecosystem to be viable is to set the proper mechanisms to know, in each case, what concrete problems need to be solved to advance towards the SDGs; who needs these problems to be solved; who are the primary beneficiaries; who could pay in the case of vulnerable groups in non-market value situations; how to assess the financial, technical, and marketplace risks for direct participants and stakeholders in general; how to evaluate what the innovators' impact is going to be in terms of reaching the marketplace.

Strategic management must focus on learning to maximise value-creation and public purpose through collaboration within the quadruple helix model, which includes science, policy, industry, and society. Within this context, Banks of Ideas must be self-financing.

### **Bank of Ideas: Main Scope**

Beyond being incubators, the scope of the Banks of Ideas is to identify the specific problems in the search for socially and environmentally significant solution ideas within the framework of the SDGs. Each Bank of Ideas' digital platform must be standardised with the global network and have high scalability, reach, expert input and access to best practices, success stories and stakeholders. Excellent global and regional connectivity, free from corporate or political vested interests, is essential to empower all stakeholders by offering equal opportunities to be creative and effective. Indeed, its varying success will depend on each country's cultural and institutional disposition and capabilities for innovation. Still, the interconnectivity, homogeneity, expert collaboration and potential access to finance that this network intends to offer at a regional and global scale could boost innovation in an inclusive and widespread manner.

## **Banks of Ideas: Main Features**

Banks must be low-cost, transparent, self-financing and practical instruments for identifying national, regional, and sectorial priority problems to be solved and aligning STI strategies and roadmaps correspondingly. They should be conceived as hubs within a global and collaborative network for innovation, where stakeholders can find expert consultation and financial support for absorbing, adapting and applying technologies and know-how in agreement with the SDGs and their national priorities and needs. On the other hand, they should be designed as goal-keepers to help tackle external pressure to adopt technologies unfavourable to people and countries' needs, preferences and capacities. Thus, they must help adjust existing infrastructure, institutions, policies, and technologies to solve those recognised problems.

## **Banks of Ideas: Main Functions<sup>1</sup>**

To be effective, Banks of Ideas must systematically and consistently register, protect, categorise, incubate, accelerate, develop and evaluate socially inclusive and environmentally friendly ideas towards the SDGs by providing:

- a basic online digital registry service for all eligible innovators - creative individual participants or companies
- a registry service for consultation experts who can assess the viability, desirability, similarity and coherence of innovative ideas
- a registry of concrete problems that need to be solved within the SDG framework (by all registered stakeholders) that includes the description and relevance of the problem, market opportunities, ongoing R&D&I projects, existing prototypes of ideas that could represent a solution to those problems, proof of concept, stage of commercialisation
- mentorship and management support to analyse and collate the registered ideas and the projects presented (according to the network of experts mentioned above)
- application of a digital programme to investigate and cross-reference registered ideas with other national and international innovation projects as a first filter to avoid failures, duplications and misplaced aspirations
- application of a second filter to ensure that the remaining innovation ideas and projects are well conceived and structured, using more sophisticated algorithms and the network of registered experts, but in a random and anonymous way
- explore national or international organisations and digital platforms to gather strategic technological information and to train expert project evaluators, data scientists, programmers and systems engineers
- guarantee the response to national priorities; as well as use or develop well-defined metrics and criteria to guide the evaluation of projects and their economic, social and environmental benefits
- ensure that those (few) ideas that are commercially viable or merit support with public money cover the costs of running the Bank of Ideas and the experts involved in it (as will be described later)

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<sup>1</sup> A reference example is India's "Ideas Bank", which is a platform launched in 2020 by the Government of India to promote innovation and entrepreneurship. The platform is designed to connect innovators with investors, mentors, and other resources. It works by allowing innovators to submit their ideas online. These ideas are then reviewed by a panel of experts, who assess their impact potential and commercial viability. If an idea is selected, it is featured on the platform and made available to investors and other interested parties. The Ideas Bank also offers a number of other resources to innovators, including mentoring, training, and access to funding. The platform is designed to help innovators turn their ideas into reality and have a positive impact on society.

## **Bank of Ideas: Basic Services**

The algorithms of the Banks of Ideas' digital platform should generate an initial crossing and comparison between the ideas and projects collected and the information related to other inventions or similar projects, national and international. This initial service will identify the likeness and compatibility of the ideas deposited in each Bank with comparable products, services, procedures, and existing markets.

Consequently, it should be capable of recognising promising and consistent innovation projects (aggregate project plans), apparent copies and close resemblances, and the advisability of recommending funding for further development and eventual commercialisation.

It is essential that the Network of Banks of Ideas identifies and includes public entities that promote investment and support startups to connect them with potential users, clients and financing funds that said promoters have listed and with collaboration agreements.

## **Bank of Ideas: First Phase**

Each Bank will assess the current national innovation ecosystem by elaborating a map and a catalogue of its main innovation assets, institutional and legal framework, economic agents, economic relations, past and present accomplishments, academic strengths, prevailing skills for innovation, cultural peculiarities and identifiable stakeholders. This is not very demanding since the information is generally available.

Each Bank must provide widespread national and international collaboration to identify SDG-relevant problems, opportunities and niches – similar to incubators and accelerators, but with a greater reach and tolerance. By forming part of a digital online platform and connecting to other important platforms, like the TFM's online platform and websites from the ISC, FMSTAN, INGSA, SPIDER, IIASA, and other international organisations, the network of Banks of Ideas can attract relevant stakeholders and inspire them through successful examples and best practices worldwide. It should also point to available open-source technologies, software and hardware and their relevance for the SDGs.

Each Bank must also call available and willing experts, including trained volunteers and retirees, who have the time to help build the SDG-relevant ecosystem for innovation. Vetted and registered experts must sign a non-disclosure agreement (NDA) to protect the solution ideas they will assess. Experts can offer and charge for tutoring and management services to analyse and collate the registered ideas and the R&D projects presented to them. The experts will confirm the SDG relevancy of the innovative ideas and projects that have passed this first step.

Ad-hoc algorithms and initial functions could help digitally and inexpensively protect the registration process of ideas (e.g., recording authorship chronologically, possibly using a non-ledger version of blockchain). They could also access like-minded innovators and compatible projects and success stories. For those ideas that pass certain milestones, the Bank must ensure that everyone submitting ideas for innovation will receive an answer as to whether and why they are significant. The Bank must offer a statement of facts with exclusivity agreements under a temporary protection contract. This should lead to compiling a portfolio of promising ideas and projects.

## **Banks of Ideas: Second Phase**

Each Bank should help structure promising innovation ideas to be processed as “patents pending” (to avoid the financial and bureaucratic burden of patenting procedures) while analysing and evaluating their funding feasibility.

A team of registered consultants will scrutinise the respective innovation ideas and advise on whether they merit legal protection and initial financial support to take them to angel investors, international and national funds, and charitable foundations for their proof of concept and eventual commercialisation.

The network of Banks of Ideas will facilitate connecting funds, investors and global business partners with innovative groups and experts in national and local markets in support of businesses and individuals whose ideas are viable and could have a positive social and environmental impact towards the SDGs.

### **Banks of Ideas: Massive Database**

One of the most significant potential advantages of the global network of Banks of Ideas is creating a massive database relevant to the SDGs and providing access to various innovation ecosystems. This database would encompass several key elements:

- a) Communities of innovators: The database would include information about communities of innovators, both individual participants and companies, who have registered their ideas within the Banks of Ideas network.
- b) Perceived opportunities and problems: It would catalogue the perceived opportunities and problems to be solved, along with their market value, sectors, and topics. This information would help identify priority areas for innovation.
- c) Concentration and proportionality of ideas: The database would provide insights into the concentration and proportionality of different topics and types of ideas for innovation. This information can help identify areas that require more attention and resources.
- d) Locations and sectors: It would map the geographical locations and sectors associated with the registered ideas. This information can assist in identifying regional strengths and areas for potential collaboration.
- e) Economic and social environment: The database would include information about the economic and social environment of innovators, such as their economic status, geographical location, gender, ethnicity, age, religion, etc. This data can shed light on the diversity and inclusivity of the innovation ecosystem.
- f) Successful innovation patterns: It would capture information about the types of ideas that have led to successful innovations in each country. This knowledge can guide the development of strategies to foster successful innovation in specific contexts.
- g) Agents and specialists involved: The database would identify the agents and specialists involved in the innovation process, including experts, mentors, investors, and partners. This information can facilitate connections and collaborations among relevant stakeholders.
- h) Bottlenecks and obstacles: It would highlight the bottlenecks and obstacles that hinder the development of ideas and innovation. This insight can inform policy and intervention strategies to overcome barriers and create a more conducive innovation environment.
- i) Infrastructure for innovation: The database would assess the quality and accessibility of infrastructure for innovation, including research facilities, incubators, accelerators, and funding mechanisms. This information can guide investments in strengthening innovation infrastructure.

- j) Human capital and talent training: It would provide an overview of the adequacy and quality of human capital and talent training in the innovation ecosystem. This information can inform initiatives to enhance skills and knowledge relevant to innovation.
- k) Financing availability: The database would evaluate the sufficiency, accessibility, and affordability of financing along the different stages of research, development, and innovation. This information can guide efforts to ensure adequate financial support for innovative ideas.
- l) Equity and discrimination: It would analyse the degree of discrimination, bias, and abuse against innovators based on economic status, geographical location, gender, ethnicity, age, religion, etc. This insight can inform policies and interventions to promote equity and inclusivity in the innovation ecosystem.
- m) Risk assessment and cost-benefit analysis: The database would generate indicators and metrics to assess the innovation risk and cost-benefit analysis for different ideas and projects. This information can guide decision-making and resource allocation.

### **Criteria for ideas to be registered in the Bank of Ideas**

The registry of ideas for innovation within the Bank must have the following characteristics:

- a) circumscribed within a defined SDG framework and criteria
- b) address a real need in society, in the market, or the environment within the framework of the SDGs, and its potential for growth and reproduction
- c) it must be sustainable, with a positive impact on the environment, society or the economy and be meaningful to the SDGs
- d) it must be technically feasible and capable of being developed and implemented using existing or emerging technologies, and whether this is available and scalable
- e) it must be profitable in terms of its public or economic value relevant to the SDGs and exceed the costs of its development, production and commercialisation
- f) it must lead to solutions that identify problems that can catalyse collaboration between different sectors and stakeholders
- g) encourage market creation, empower the 'willing', promote adaptive change and be an integral part of goal-oriented pathways to the SDGs

Innovative ideas are worthless if they are half-cooked. What distinguishes success from failure is rarely the quality of the idea itself but rather how well it is executed to deserve funding. Market preferences generally determine this based on criteria different to being relevant to the SDGs. This is why the Bank must promote funding and help materialise ideas.

### **Innovative financing alternatives**

Within the STI4SDG framework, value creation is a collective effort that demands from all stakeholders shared risk-taking, experimentation, long-term finance, learning and cooperation among all participants. It must reward all value creators by investing and empowering the sources of creativity, the generation of ideas and replenishing the financing sources. "All contribute, all participate, and all benefit".<sup>2</sup>

Therefore, the public purpose must be fundamental to creating and distributing wealth and guiding society's creative powers. It should guide the formation of markets and include all active and potential value-creators. Policy instruments such as budgets, loans, grants, and acquisitions

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<sup>2</sup> See for the motto: Expert Working Group on Global Public Investment: "Building a better system: Making Global Public Investment a reality, July 2022; see also <https://globalpublicinvestment.net/what-is-gpi/>



should focus on driving the most innovative solutions to address specific problems. The risks and benefits of public action must be shared equally, not resulting in socialising risks and privatising the resulting rewards.<sup>3</sup>

An effective ecosystem for innovation in support of the SDGs must be inscribed and structured within these parameters. Most governments have the proprietary capacity to transform markets and the economy to the desired scale and values, shift businesses away from only (or mainly) focusing on shareholder value and include public goods in their risk models. On the other hand, the role of companies is to foster inclusive and environmentally friendly innovations and embed the risks in their business models. The network of Banks of Ideas would focus on strengthening the fragile innovation ecosystems and inducing the private and academic sectors to find efficient solutions to SDG-related problems, including sectors without market value.

This would make something unfeasible viable, that is, economic activities of zero value, into functional markets. Thus, the private sector would efficiently respond to an SDG-relevant problem by seizing the opportunity, searching for a solution, developing a strategy to find the necessary funds and applying a technology solution that already exists innovatively somewhere else, like making things more efficient and reducing costs, rather than inventing something new. Private companies, academic institutions, individuals and stakeholders linked to the banks' network would spontaneously investigate who has found a possible solution and who is exploring one. They would establish the necessary links and develop the appropriate IP strategy without interference from third parties.

### **Fund for Innovation: An Option**

Funding innovative ideas and projects leading to their commercialisation or public value is difficult for most stakeholders. A network of Banks of Ideas working in collaboration with Funds for Innovation could pool together and organise a systemic, attractive, and transparent way to access the necessary funds and investments. Banks of Ideas could call on governmental resources linked to R&D&I, which generally are dispersed in various sectors (e.g., agricultural, social, industrial, etc.), and entice charitable and non-for-profit funds, as well as those from interested private national and international origins, under a single source of financing, with a harmonious purpose.

Funds for Innovation could boost the systematisation of distributed public funds to promote innovative ideas and projects vetted by the Banks of Ideas under an annual budget that includes them. All interested government entities could have a budget item within the Funds, which could have different financial instruments, for example, financing some non-reimbursable studies of ideas directed to Banks of Ideas under a format to recoverable financing and credits in support of commercial projects. Likewise, there could be subordinated credits that give financial viability to projects or guarantee schemes.

The Fund for Innovation could administer national budgetary funds towards innovation missions, in addition to multilateral financial programmes and dispersed private financial support, mainly from charities and NGOs. The Fund for Innovation could become an instrument for participating in an organised, coherent and reproducible way at a national and international level.

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<sup>3</sup> See Mazzucato, Mariana, **The Entrepreneurial State: Debunking Public vs. Private Sector Myths**, Anthem Press, 2015

The Fund for Innovation would attract national and international risk investors and resources. It would provide seed capital to the projects selected by the Bank in exchange, for example, for participation in the profits or in the shares of the companies that result from the innovation process. This scheme should be structured to overcome simulation, inefficiency, profiteering and political biases under responsible, ethical, capable, transparent and socially meaningful entrepreneurship.

Under the auspices of the UN, it could access financial mechanisms like the World Bank and sources of regional development financing (e.g., the African Development Bank, the Asian Development Bank, the Inter-American Development Bank, the European Bank for Reconstruction and other regional development banks).

At the same time, the Fund for Innovation and Bank of Ideas would seek to bring together already established and viable innovative companies to generate the conditions to:

- a) support its operating value based on a consultative-digital platform that would help high-growth companies to access the market in exchange for tariff, capital, and investment rights. It could:
  - i) extend the mentoring and management service to experts and their supervisors with more experience, who register with credentials and under non-disclosure agreements (NDA)
  - ii) include universities and institutes for higher education and consulting companies that are accredited
  - iii) guarantee such specialists a percentage of the profits from any successful project they evaluate
  - iv) explore, for example, the set of corporations featured on the Global 2000 list to establish strong links with innovative teams and members of the senior management of international companies.
- b) associate the Bank of Ideas projects with incubators, accelerators, and leading global programmes that can support their portfolios.
- c) support specialist networks through investors, institutions, the media, and allies, among others
- d) pursue strategic alliances with international funds, family wealth managers, angel investors, universities and laboratories.
- e) hold conferences/events and representation services, exclusive connections at industry conferences
- f) weave a network between global business partners and innovative groups that are experts in the local market, in support of the companies promoted by the Fund, to open and penetrate new markets (this could be similar to risk capital and also serve to attract international funds)
- g) avoid non-refundable investments and the long-term dependence of the funds on national development banks. Investments should mainly focus on productive innovation projects of MSMEs and specific large-corporation projects
- h) the Fund should also provide the means to have a regular revision of the funding effectiveness and to adapt the funding instruments subsequently

### **Multi-purpose Financial Instrument for Innovation**

The Funds for Innovation could offer multi-purpose financial instruments. It would be coherent with the objectives of the Banks of Ideas to promote ideas and innovations compatible with the

SDGs. The main challenge of a financially viable innovation ecosystem is to serve communities and MSMEs with the maximum innovative potential.

Most MSMEs, communities, individuals, and other stakeholders, have limited physical and financial assets beyond their potential IPR capital associated with new technologies. Since financing sources generally require some tangible collateral before agreeing to commit their loans, most Banks of Ideas' stakeholders need help accessing financing to develop their innovation projects leading to their commercialisation. The Fund for Innovation will require alternative innovative financing schemes that overcome these limitations of the formal financial system.

They may include the fintech industry, the non-profit sector, particularly charities and the development of specialised funding sources. The projects and products of private companies are fundamentally oriented to create value, generate profits and maximise returns for shareholders, and not to accommodate ethical, justice or environmental issues in their business models.

Since the most vulnerable countries and communities lack the technological capabilities and a robust ecosystem for innovation, vulnerable people who need help have no economic or financial value to attract funds. Furthermore, communities that need financial and technical support, but have practical ideas to solve/overcome their specific problems, lack economic value of their own even though their ideas could be more financially viable. This is a crucial fact: there is no innovation without a market.

Each Bank of Ideas must provide the necessary information and data on problems relevant to the SDGs, including those with zero market value. Businesses, academia and other stakeholders would be induced to develop strategies and find practical solutions because they would be encouraged by access to funds, investors and support for creating new markets.

Even when companies are encouraged to include these non-market values in their models, those that do, and those that survive, are the ones that perceive it as financially convenient. Therefore, there is less innovation and effectiveness in the solutions to the problems faced by vulnerable communities. If these premises are accepted, then, to modify the conclusion, at least one of the premises must be broken.

The question is then: how to give economic value to those who do not have it? How to generate an incentive towards innovative ideas that lack value in the market? How to use market mechanisms to generate that value and incentives? How to invest financial resources from international or national sources, public or private, in communities and individuals that are not economically viable and give them a market value (open market valuation)?

There are two apparent ways to answer these questions generally:

- a) Generate value through a direct payment to a company or group of companies to solve one or a series of specific problems
- b) Generate value by turning the vulnerable themselves into actors with economic value

The first proposal contains several problems:

- a) direct payment always leads to distortions in the private market in which vested interests dominate and reduce competition (this might be necessary for larger infrastructure projects, but not for consumer solutions and products)
- b) lack of coordination - money is not spent efficiently (as there are unforeseen expenses) and is not always aligned with needs (leading to inefficiencies)

- c) the non-profit sector (charities) is frequently not as effective in responding to the problem of vulnerable people

The second proposal involves turning people of no economic value into people of economic value. It could be done through actions like:

- a) direct payments to vulnerable people so that they have some economic value (the problem with these methods is that they create perverse incentives which can lead to violence/theft and unexpected side effects)
- b) another possibility is offering direct incentives (e.g., vouchers) where each person has a certain amount to use against a specific benefit via “smart contracts” or any methodology that guarantees that resources are used appropriately within specific parameters
- c) resorting to the non-profit system, but conditional on close coordination and collaboration between charitable organisations and public financial institutions, seems a desirable path, although it implies a complex system
  - i) the benefits involve an alignment of incentives - philanthropic organisations and institutions invest capital as a “sunk cost” for ethical/moral/ideological purposes, while the private sector invests to maximise its returns
  - ii) the benefits of the private sector would be used in terms of competition, efficiency, transparency

Through private funds, charities and aid organisations, the Bank of Ideas and the Fund for Innovation could make people financially viable (worthy) and, thus, create value where there was none. An idea for innovation, a start-up, or a project that solves a specific problem, or captures a market niche, should receive funding because it creates market value and makes people and small businesses economically viable and technologically capable. Charities, aid organisations and public/private funds would be ideal stakeholders in effectively funding middle-low-income environments within the SDG framework.

In summary, a potentially helpful strategy for initiating, developing, and making the Fund for Innovation effective in these cases could be attracting and coordinating existing charities, the non-profit sector, national and international aid organisations, national development banks, and other public or private organisations funds. The funds would induce these agents to focus on specific problems and ideas and invite the community of innovators and specialists within the banks to participate in solution-finding and opportunity-seizing projects. For example, participating members could submit their solutions, and the winner would get a prize.<sup>4</sup>

### **Proposal for Financing Innovation in Weak Ecosystems and Vulnerable Communities**

An accurate proposal for the ecosystems for innovation contained in this note is that the Bank of Ideas and Fund for Innovation unite all the agents and interest groups to generate economic value for people who do not have it and then use market mechanisms where people can pay a financial agent, such as a company, to apply the innovated solution to a specific problem.

Meanwhile, stakeholders who own the funds - such as national development banks, charities, and sunk public funds - could turn them over to businesses, such as start-ups, which are a valuable source of external innovation in exchange for a service or a good. Using these funds to finance ideas conceived as viable could make these communities and individuals economically viable.

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<sup>4</sup> See the crowd-solving startup “Zindi” as a recent example: <https://techcrunch.com/2020/03/26/zindi-taps-12000-african-data-scientists-for-solutions-on-covid-19/>

The Bank of Ideas could facilitate building a bridge between, on the one hand, the promising ideas of start-ups and local individuals and, on the other hand, the innovation needs of vulnerable communities.

Such ideas for innovation would create a market by solving a problem and receiving funds (non-recoverable or recoverable, as the case may be) from donors. When a business solves a specific issue, it accepts payment to service people. This creates a market. In this case, the Fund for Innovation and the other donors 'represent' the clients (that is, the people who, with these acts, become economically viable).

These procedures could also lead to establishing a certification catalogue of companies, donors of funds, ideas, problems and vulnerable communities. It creates a transparent mechanism, independently audited, under standards accepted at the national level and by the international community.

### **Joint Bank of Ideas and Fund for Innovation efforts**

Each Bank would bring the best experience from the private sector to incubate, accelerate and commercialise the selected innovation projects and ideas. It would advocate for reorienting public policies and actions to offer strategic financial support for innovation. It would create and develop markets for improved products, services and derivatives of the innovation process.

The Fund for Innovation would explore national and international financial support and adjust its structure to be more receptive to existing funds or programs for economic development and promoting social and environmental impact entrepreneurship. In addition, the Fund would channel its risk-capital design to the entire innovation-drive process, using existing national and international risk capital to offer legal certainty to the innovation process, especially in its initial stages.

A multi-purpose financial instrument is created to promote ideas and innovations compatible with the SDGs.

### **Binational/multinational ecosystems**

Another promising avenue is negotiating collaborative schemes in binational /multinational contexts, mapping areas of complementary capacities and needs between countries. Binational/multinational ecosystems should seek to identify the stakeholders interested in the promotion and scope of innovation in the four categories governmental, business, academic and financial. Progress would depend on complementarities and interdependence ties between various economies, which will lead to identifying themes or areas of interest in the binational relationship towards innovation; marketing potential; and available sources of financing, incubation, acceleration and scalability of joint or related efforts.

### **Innovation4SDG and Environmental, Social, and Governance (ESG)**

To ensure that innovation contributes effectively to sustainable development, it is essential to incorporate ESG considerations into the innovation ecosystem. ESG principles provide a framework for companies to align their innovation practices with the broader goals of environmental sustainability, social inclusiveness, ethical governance, collaboration, and long-term value creation.

The private sector and academia must be attracted to develop technologies and solutions that positively impact the achievement of the SDG. This involves ethically designing products and processes that contribute to advancing the SDGs by focusing on environmental and social inclusion considerations, like climate action, clean energy, responsible consumption and production, and biodiversity conservation.

ESG also emphasises the importance of social considerations in business and private practices. By incorporating ESG principles into innovation, companies and private stakeholders can ensure that their solutions address the needs of diverse social groups and promote social inclusiveness and respect for cultural diversity, human rights, labour standards, and community engagement. As part of the STI4SDG roadmap, Banks of Ideas aim to bridge social gaps, promote equal access to opportunities, and contribute to poverty eradication, quality education, decent work, and sustainable economic growth. By prioritising social inclusiveness, combining the network of Banks of Ideas with ESG becomes a powerful tool for achieving the SDGs and leaving no one behind.

Similarly, the proposed Ethical Councils for Innovation emphasise transparent, accountable, and ethical practices in innovation. Incorporating ESG principles into innovation fosters responsible decision-making and prevents unethical behaviour. By adhering to ethical governance principles, companies and academia can build trust among stakeholders, maintain the integrity of their innovation processes, align innovation practices with societal values and enhance the credibility and acceptance of innovative solutions.

Partnership in Action would also benefit from incorporating ESG as a standard reference for the Banks of Ideas. It encourages collaboration and stakeholder engagement, which are essential for innovation to address the multifaceted challenges of the STI roadmap towards the SDG. This can establish partnerships within the quadruple helix model government, business, academia and social communities. Incorporating ESG would facilitate the Banks of Ideas' network aim to encourage knowledge-sharing, pooling of resources, leverage diverse expertise, and promote collective action towards the SDGs.

Similarly, ESG focuses on long-term value creation and sustainable business practices aligning with innovation4SDGs. By considering the long-term implications of innovation, ESG induces the business sector to ensure that their efforts contribute meaningfully to sustainable development and create shared value for all stakeholders.

## **Possible Structures for the Banks of Ideas and Funds for Innovation**

### **The Bank of Ideas**

The Bank of Ideas is crucial in incubating, accelerating, and commercialising selected innovation projects. It advocates for reorienting public policies and actions to provide strategic financial support for innovation while creating and developing markets for improved products, services, and derivatives of the innovation process. To ensure its effectiveness, the Bank of Ideas can adopt one of the following structures:

1. **Public-Private Partnership:** Establishing a public-private partnership would involve both parties becoming shareholders in the Bank of Ideas. National banks and funds could finance the bank and be members of the Administrative Council, known as the Council for Innovation. This structure ensures the integration of private sector expertise in incubating and commercialising innovation projects.

2. Private Company: Alternatively, the Bank of Ideas can be created as a private company financed by various national and international funds, including national development banks. In this scenario, investors participate by owning a percentage of the profits or shares in the companies incubated by the Bank of Ideas. This approach allows for flexibility and diverse sources of funding.

### **Fund for Innovation**

The Fund for Innovation focuses on exploring national and international financial support, adjusting its structure to be more receptive to existing funds or programs for economic development, and promoting social and environmental impact entrepreneurship. It aims to channel risk capital to the entire innovation-driven process, offering legal certainty, particularly in the initial stages. The following structures can be considered for the Fund for Innovation:

1. Public-Private Partnership: A public-private partnership model can be adopted, wherein both parties become shareholders in the Fund for Innovation. National development banks or funds participating in the financing would be part of the Administrative Council, which includes the proposed Ethical Council of Creative Ideas. This structure ensures collaboration and guidance from various stakeholders.
2. Private Company: Another option is establishing the Fund for Innovation as a private company financed by national and international funds, including national public banks and development funds. Investors would participate by owning a percentage of the profits from the Fund for Innovation or shares in the companies incubated and accelerated by the Bank of Ideas. This structure incentivises the involvement of private stakeholders in supporting innovative projects.

The Banks of Ideas and Funds for Innovation can adopt either a public-private partnership or a private company structure to ensure financial support and incubation of innovative projects. These structures facilitate collaboration between the public and private sectors and non-profit organisations and promote the reorientation of policies and actions to support strategic innovation. By exploring national and international financial support, these institutions can contribute to achieving the SDGs by providing legal certainty and fostering the commercialisation of innovative solutions.

## **Ethical Council for Innovation**

Innovation ecosystems for the SDGs need to be trustworthy, transparent, open to public scrutiny, accountable, free of political and economic vested interests and circumscribed to criteria, indicators, metrics and methodologies accepted within the UN system.

An Ethical Council for Creative Ideas could offer such conditions if established and integrated with renowned, independent members of society and the STI community: an effective interlocutor for the causes and needs of STI4SDG within the quadruple helix model and each country's institutional and legal framework.

## **Annexes**

The “Guidebook on Innovation for the SDG Roadmaps: Establishing a Network of Banks of Ideas and Funds for Innovation” and “Procedural Guidelines for its Implementation” contain necessary annexes. In this summary, only the *Innovation4SDGs: A Pilot Country Roadmap* is included:

- 1. Governance for the Innovation4SDG Roadmap**
- 2. Procedural Guidelines for the Innovation4SDG Roadmap**
- 3. Tackling External Pressure to Adopt Technologies and Systems**
- 4. Integration of the impact-entrepreneurship platform<sup>5</sup> towards the SDGs**
- 5. Draft Questionnaire for Including Impact Entrepreneurship in the Bol-Ffl Digital Platform**
- 6. Innovation4 SDGs: A Pilot Country Roadmap (Prepared by Karen de Brouwer Vazquez, Director of Financing for Development and Technologies, Ministry of Foreign Affairs, Mexico)**

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<sup>5</sup> This section was prepared by me and Paola Desentis