

Designing and Implementing AgTech Innovation Challenges and Competitions

Guidebook for Practitioners

Diego Arias, Martín Gurria, and María
Victoria Traverso



THE WORLD BANK
IBRD • IDA | WORLD BANK GROUP



FONTAGRO

© 2024 International Bank for Reconstruction and Development / The World Bank
1818 H Street NW
Washington DC 20433
Telephone: 202-473-1000
Internet: www.worldbank.org

This work is a product of the staff of The World Bank with external contributions. The findings, interpretations, and conclusions expressed in this work do not necessarily reflect the views of The World Bank, its Board of Executive Directors, or the governments they represent.

The World Bank does not guarantee the accuracy, completeness, or currency of the data included in this work and does not assume responsibility for any errors, omissions, or discrepancies in the information, or liability with respect to the use of or failure to use the information, methods, processes, or conclusions set forth. The boundaries, colors, denominations, links/footnotes and other information shown in this work do not imply any judgment on the part of The World Bank concerning the legal status of any territory or the endorsement or acceptance of such boundaries. The citation of works authored by others does not mean the World Bank endorses the views expressed by those authors or the content of their works.

Nothing herein shall constitute or be construed or considered to be a limitation upon or waiver of the privileges and immunities of The World Bank, all of which are specifically reserved.

Rights and Permissions

The material in this work is subject to copyright. Because The World Bank encourages dissemination of its knowledge, this work may be reproduced, in whole or in part, for noncommercial purposes as long as full attribution to this work is given.

Any queries on rights and licenses, including subsidiary rights, should be addressed to World Bank Publications, The World Bank Group, 1818 H Street NW, Washington, DC 20433, USA; fax: 202-522-2625; e-mail: pubrights@worldbank.org





Acknowledgments

This Guidebook was prepared by a World Bank team led by Diego Arias Carballo (Lead Agriculture Economist) and Parmesh Shah (Lead Rural Development Specialist), and composed by Martin Gurria (Senior Innovation Specialist), Maria Victoria Traverso (Agriculture Specialist), Marie Agnes Jouanjean (Agriculture Economist), and Vivek Prasad (Agriculture Innovation Specialist).

The Guidebook benefited from important contributions and guidance from Adam Sturve (Principal Investment Officer, IFC), Alvaro Larrea (Lead Procurement Specialist), Armine Juergenliemk (Agriculture Specialist, WB), Asuka Okumura (Operations Officer), Balakrishnan Madhavan Kutty (Rural Development Specialist, WB), Beryl Winnie Atieno Agengo (Consultant), Daniel Chalupowicz (Financial Management Specialist), Debaraj Behera (Consultant),

Elizabeth Grandio (Senior Procurement Specialist, WB), Enrique Pantoja (Operations Adviser, OPCS), Gustavo Canu (Senior Procurement Specialist, WB), Katie Kennedy Freeman (Senior Agriculture Economist, WB), Lourdes Linares (Senior Financial Management Specialist, OPCS), Martin Sabbatella (Procurement Specialist, WB), Paul Voutier (Senior Advisor, Grow Asia), Sitaramachandra Machiraju (Senior Agriculture Economist, WB), Tomas Ricardo Rosada Villamar (Senior Agriculture Economist, WB), Vinay Kumar Vutukuru (Senior Agriculture Specialist, WB), Viviana Maria Eugenia Perego (Agriculture Economist, WB), Wei Li Woo (Innovation Lead, Grow Asia).

The team acknowledge the generous support of the Data Driven Digital Agriculture Team of the Agriculture and Food Global Practice in funding this analytical work.



Abbreviations and Acronyms

AgriMSME	Micro, Small and Medium Agribusiness
AgTech	Agriculture Technology
AICC	AgTech Innovation Challenge and Competition
EU	European Union
GEF	Global Environment Facility
IFC	International Financial Corporation
IPF	Investment Project Financing
MIS	Management Information System
PIU	Project Implementation Unit
POM	Project Operations Manual
PP	Procurement Plan
Q&A	Questions and Answers
R&D	Research and Development
SWFF	Securing Water for Food
TTL	Task Team leader
UN	United Nations
US	United States
USDA	United States Department of Agriculture
WBG	World Bank Group



Contents

I. Background	7
1. Introduction	7
1.1 Purpose of the guidebook	9
1.2 Who is it for?	9
1.3 What is an AgTech innovation challenge or competition?	10
1.4 Why are AICCs important and what is its value added?	11
2. History of Innovation Challenges and Competitions	12
2.1 Lessons learned from implemented AICC	15
II. Preparing and implementing AICCs	18
3. Defining the problem	18
3.1 Common mistakes in problem definition	19
4. Public – Private Partnerships and engagement	19
5. Dissemination approach	20
5.1 Stakeholder Platform	21
6. Defining the AgTech innovation ecosystem of potential participants	22
7. Defining the appropriate type of AICC	24
8. The AICC cycle	27
8.1 Estimated timeline of the AICC cycle	28
9. Internal organization of the AICC	30
9.1 The AICC administration team	30
9.2 The evaluation committee or jury	30
10. Investment strategies	31
11. Eligibility, selection criteria and documentation	32
11.1 Required information	33



III. World Bank corporate requirements at post AICC stages	36
12. Award process	36
12.1 Fiduciary Requirements	36
12.2 AICC Implementation process	39
12.3 Grant implementation support	40
12.4 Procurement methods for grants	41
12.5 Bidding process	42
12.6 Sanctions	42
13. AICC Monitoring & Evaluation (M&E)	43
14. Environmental and Social Risk Management	44
15. Grievance Redress Mechanism	46
16. Bibliography	47
17. Annexes with examples of AICC's related documents	48
Annex 1. Tools for identifying the problem(s)	48
Annex 2. Building a partnership tool	50
Annex 3. Sample of Memorandum of Understanding (MOU) for partnership agreements	51
Annex 4. Documents related to the AICC evaluation process	54
Annex 5. World Bank operations or analytical work that support and promote AICC events	54
Annex 6. Examples of AgTech and innovations developed in the Agri-food sector	57
Annex 7. Examples of the typology and level of information related to an AICC needed to be included in the Project Operations Manual	58
Annex 8. Environmental and social form	59



I. BACKGROUND

1. Introduction

Agriculture and food systems worldwide make vital contributions to a diverse set of development objectives including growth, poverty reduction, food security and nutrition, employment, and climate resilience. It represents 3.5 percent of the world GDP¹ and it accounts for around 27 percent of global employment (ILOSTAT, Jan. 2021)². Evidence shows that growth within the agriculture sector is two to three times more effective at reducing poverty than an equivalent amount of growth generated in other sectors³.

Between 2015 and 2017, the number of people affected by hunger rose by 36.4 million, to 821 million⁴. In addition, more than 2 billion people are deficient in key vitamins and minerals necessary for growth, development, and disease prevention⁵. Energy and micronutrient deficiency affect to 151 million children under the age of five who are stunted and cannot grow to achieve their full potential. At the same time, more than 2 billion adults are overweight and obese⁶, increasing the risk of non-communicable diseases such as Type 2 diabetes, hypertension, heart attacks, and certain cancers. Furthermore, one person in 10 is impacted by contaminated food⁷.

Global agricultural production practices are currently unsustainable. The annual cost of land degradation is

about US\$300 billion per year⁸, about one-third of the world's largest aquifers are being depleted⁹, and agricultural pollution is on the rise¹⁰. Under current practices, greenhouse gas (GHG) emissions from agriculture and land use change are projected to represent 70 percent of total allowable emissions from all economic sectors to limit global warming to 1.5°C by 2050¹¹. If climate change goes unmitigated, the total days under drought conditions are projected to increase by more than 20 percent in some regions¹². Furthermore, food that is harvested but then lost or wasted occupies total arable land equal in size to China, consumes about 25 percent of all water used in agriculture each year, and accounts for about 8 percent of global GHG emissions.

The food and agriculture-related United Nations (UN) agencies estimated back in 2019 that ending poverty and hunger worldwide would require additional financing of US\$140 billion per year in agriculture and rural development. Of this US\$140 billion, around 35 percent (\$50 billion per year) would be required from the private sector, mainly in on-farm and agro-processing investments, and almost 65 percent (\$90 billion per year) would be needed from the public sector to invest in public goods such as agricultural innovation and rural infrastructure of a public nature that is economically justified¹³.

¹WBG, Agriculture, forestry, and fishing, value added (% of GDP). Recovered in September 2021 from: <https://data.worldbank.org/indicator/NV.AGR.TOTL.ZS>

²WBG, Employment in agriculture (% of total employment) (modeled ILO estimate). Recovered in September 2021 from: <https://data.worldbank.org/indicator/SL.AGR.EMPL.ZS>

³LUC CHRISTIAENSEN and WILL MARTIN, Five new insights on how agriculture can help reduce poverty, (2018). Recovered from: <https://blogs.worldbank.org/jobs/five-new-insights-how-agriculture-can-help-reduce-poverty>

⁴FAO, IFAD, UNICEF, WFP, and WHO, The State of Food Security and Nutrition in the World 2018: Building Climate Resilience for Food Security and Nutrition (Rome: Food & Agriculture Org., 2018).

⁵FAO (Food and Agriculture Organization of the United Nations), The State of Food and Agriculture 2013: Food Systems for Better Nutrition (Rome: FAO, 2013).

⁶Development Initiatives, 2018 Global Nutrition Report: Shining a Light to Spur Action on Nutrition (Development Initiatives Poverty Research Ltd, Bristol, 2018).

⁷WHO, WHO Estimates of the Global Burden of Foodborne Diseases: Foodborne Disease Burden Epidemiology Reference Group 2007–2015 (Geneva, Switzerland: WHO, 2015).

⁸E. Nkonya, A. Mirzabaev, and J. Von Braun, eds., Economics of Land Degradation and Improvement: A Global Assessment For Sustainable Development (Cham, Switzerland: Springer International Publishing, 2016).

⁹A. Richey, B. Thomas, MH. Lo, et al., "Quantifying Renewable Groundwater Stress with GRACE," *Water Resources Research* 51, no. 7 (2015): 5217–238.

¹⁰E. Cassou, S. Jaffee, and J. Ru, The Challenge of Agricultural Pollution: Evidence from China, Vietnam, and the Philippines (Washington, DC: World Bank, 2018).

¹¹T. Searchinger, R. Waite, C. Hanson, J. Ranganathan, P. Dumas, and E. Matthews, Creating a Sustainable Future: A Menu of Solutions to Feed Nearly 10 billion People by 2050 (Washington, DC: World Resources Institute, 2018).

¹²Ibid.

¹³World Bank, Operationalizing MFD in the Agriculture and Food Sector (2018): Guidance Note (V1)



Based on these findings, the World Bank Group developed the Mobilizing Finance for Development (MFD, 2017) approach, which contains specifications to operationalize the integrated approach in the Food and Agriculture Sector (2019). This approach involves leveraging the private sector and optimizing the use of scarce public resources in a way that is fiscally, environmentally, and socially sustainable. It follows the International Financial Corporation (IFC) Performance Standards, as well as the World Bank Safeguards or Environmental and Social Framework.

To meet UN Sustainable Development Goal¹⁴#2 of ending hunger and malnutrition by 2030, innovative food systems transformation is required. Agriculture technologies (AgTech) and innovations have the potential to accelerate such food system transformation. For instance, new technologies like solar energy and digital technologies have been spreading rapidly across various sectors and regions driven by lower costs, better connectivity, and advanced analytics. Internet, communications network coverage, and mobile phone use has increased significantly in recent years. As of 2017, there were 5 billion unique mobile subscribers - 66 percent of the world's population¹⁵, and 3.3 billion mobile internet users - 43 percent of the world's population. Advances in analytics are transforming enormous amounts of digital data into useable forms for decision makers.

Over the past 10 years, agriculture has experienced remarkable growth in AgTech investments, with US\$ 6.7 billion invested in the past five years¹⁶, most of which has been done in developed countries. However, agriculture is currently the slowest sector in terms of adopting digital technologies, according to McKinsey's Industry Digitization Index¹⁷. New AgTechs such as digital technologies have the potential to improve efficiency, equity, nutrition and health, and sustainability of food system. In terms of efficiency,

AgTechs can: (i) improve the use of capital investments within the food system, including machinery and equipment, thereby increasing their technical and allocative efficiency; (ii) facilitate the acquisition of skills and knowledge required for agricultural production, thereby improving labor efficiency and the optimal use of inputs; (iii) improve farmers' decision making through accurate, timely, and location-specific price, weather, and agronomic data and information that will become increasingly important in the context of climate change; and (iv) reduce costs associated with matching producers and consumers, which will help expand output markets and improve producer access to inputs. Improved production decision and production efficiency can improve farmer profits.

In terms of improving equity, AgTechs have the potential to address unequal access to information, knowledge, technologies, and markets and thereby improve relative incomes of poor people. In terms of improving nutrition and health, a recent study shows that the use of mobile phones was associated with increases in household income, gender equality, and food and nutrition security¹⁸. Regarding environmental sustainability of food systems, AgTechs can enhance the use of natural capital such as water and land, while improving the use of inputs such as fertilizers. For example, remote sensing technologies can measure water use and monitor net withdrawal of groundwater, which can help determine sustainable use targets for better irrigation water management.

Thus, food systems transformation requires the development and implementation of innovation and technology within the agriculture sector for the enhancement of the global food security situation. Current UN targets related to the agriculture and rural sector will not be achieved if the business-as-usual model continues to be implemented.

¹⁴UNDP, The Sustainable Development Goals (SDGs). Recovered in September from: <https://www.undp.org/sustainable-development-goals>

¹⁵GSMA, The Mobile Economy 2018 (London: GSMA 2018).

¹⁶Finistere Ventures, "2018 Agtech Investment Review," available at: <https://pitchbook.com/news/articles/finistere-ventures-2018-agtech-investment-review>.

¹⁷McKinsey Global Institute Analysis.

¹⁸H. Sekabira and M. Qaim, "Can Mobile Phones Improve Gender Equality and Nutrition? Panel Data Evidence from Farm Households in Uganda," *Food Policy* 73 (2017): 95–103.



1.1. Purpose of the guidebook

The purpose of this Guidebook is to provide World Bank and Government project teams practical information and decision-making considerations for the design and implementation of AgTech Innovation Challenges and Competitions (AICCs).

The intention for this Guidebook is to help project managers and teams design and implement AICCs to address agriculture sector problems and opportunities, as well as crowdsourcing innovative AgTech solutions.

The main objectives of this Guidebook are (i) to help teams identify and define problems and opportunities to be addressed by new AgTech initiatives, while (ii) providing information on the different types of AICC and guidance on which type of AICC should be used considering the identified problem, and (iii) to guide the preparation and decision-making process of an AICC to successfully mobilize finance for development (MFD) and crowd in private capital towards the agriculture sector.

1.2. Who is it for?

The AICC Guidebook is an operational document that was elaborated for World Bank and borrowers/recipients' teams who are designing and/or implementing operations in the agriculture innovation space. The Guidebook will support borrowers/recipients, through Project Implementing Units (PIUs), in the design and implementation of AICCs within their projects. Although the AICC focuses on AgTechs, it can be used by project teams working in a variety of sectors and topics beyond agriculture, including private sector development, environment, natural resource management, water, and climate change, among others.

Although innovation challenges and competitions have been applied by different sectors worldwide for a long time, very little information has been published so far related to its operationalization. The World Bank's Agriculture and Food Global Practices have been designing and implementing AICCs for several years, and it has been increasing their use in Investment Project Financing¹⁹ (IPFs) and Advisory Services and Analytics (ASAs), in part due to client demand. This Guidebook is partially based on those experiences, practical knowledge, and lessons learned. Nevertheless, the Guidebook uses concepts and language that are accessible for those without experience in AICCs.

¹⁹ Investment Project Financing (IPF) provides IBRD loan IDA credit/grant as well as IBRD and IDA guarantee financing in support of clients for activities that create the physical or social infrastructure necessary to reduce poverty and create sustainable development. IPF focuses on long-term (5-10 years) finance of goods works services and other types of expenditures.



1.3. What is an AgTech innovation challenge or competition?

An AgTech Innovation Challenge and Competition (AICCs) is a process to generate and/or reward AgTech innovative ideas or solutions to address a specific problem or take advantage of an opportunity. An AICC is a tool based on the principle of competing participants who are asked to generate ideas, present solutions, and/or AgTechs for addressing a pre-specified problem or opportunity. AICCs often ensure that participants are engaged throughout the process, provide networking opportunities among participants and/or with potential investors and partners

with pre-established clear rules and processes for selecting the winner(s). AICCs are characterized by their "game-style" format and broad-based participation, differing from traditional procurement or grant award methods, creating a high level of engagement, participation from non-sector actors, start-ups, and offering a strong culture of innovation and belonging to the process.

The following are common elements of an AICC:

- Low entry requirements of participants to have broad-based participation
- Mechanism to crowdsource "out-of-the-box" solutions to difficult problems
- Ex-ante rules and prizes/awards
- Large communication (dissemination approach) efforts for promotion of the challenge/competition and of the participants and winners to encourage participation and investors.

AICCs are different from other AgTech innovation instruments since they have a different structure, participation process, and timeline. The table below compares the different AgTech innovation instruments available to the public sector.

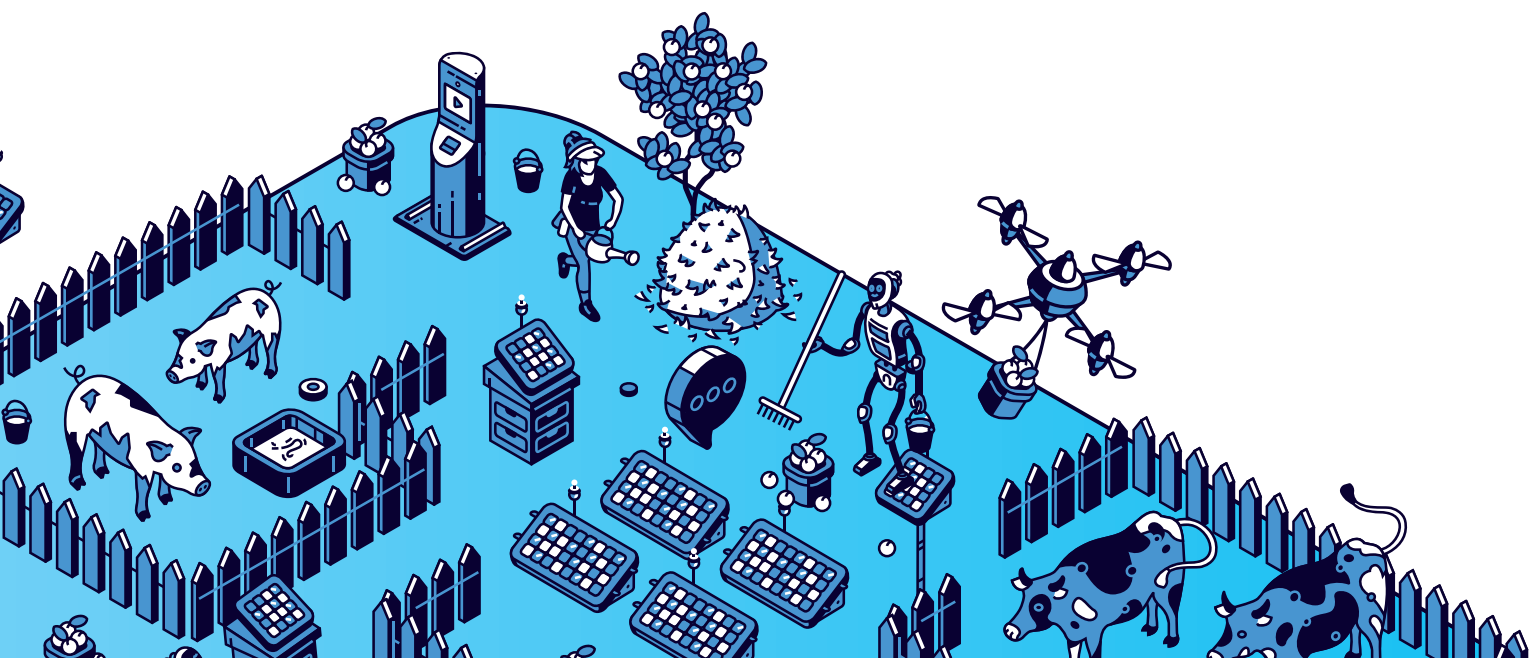




Table 1. Pros and cons of the different types of AgTech innovation instruments available to the public sector

AgTech innovation instrument	Advantages	Disadvantages
AICC	<ul style="list-style-type: none"> • Crowdsourcing from large participation base. • General public awareness. • Short implementation. 	<ul style="list-style-type: none"> • Difficult for very specific/technically complex problems. • Important organization effort of events and processes.
Call for Research Proposals and Grants	<ul style="list-style-type: none"> • Known method of agriculture researchers and national agriculture technology institutes and research centers. • Allows for detailed description of plans and proposals. 	<ul style="list-style-type: none"> • Not tailored for non-traditional agriculture research areas (non-agronomists) and private sector participants. • Long research and grant cycles (often following cropping seasons).
Procurement of Agriculture Technologies / Services	<ul style="list-style-type: none"> • Allows the use of funding from existing projects and investments using public sector procurement rules. • Pre-specified detailed Technical Specifications/TORs of solutions needed. 	<ul style="list-style-type: none"> • Not very inclusive since companies with experience in public tenders tend to win. • Requires expertise for designing Technical Specifications/TORs (ex-ante work).

Source: Authors.

1.4. Why are AICCs important and what value do they add?

Although AICC do not replace other traditional agriculture innovation programs and mechanisms such as standard research grants and service contracts, they complement adequately a set of other policies and programs that promote the identification of new AgTechs.

AICCs provide the public sector with a strategic tool to engage with private sector innovation and technology players, which allow the development of a wider network among entrepreneurs and innovators. Additionally, AICCs can raise public awareness beyond the traditional AgTech innovators, provide opportunities for businesses, and assist in finding innovative solutions for the agriculture and food sector.

Governments might be reluctant to modify their business-as-usual approaches related to the agriculture innovation sector and continue to implement their traditional way of developing AgTechs, even if it is not the most efficient one. Therefore, it is important to showcase not only successful examples of countries that have embraced AICCs²⁰ in their projects and programs (see Box 3), but also the positive impact and added value of AICCs for the public sector in terms of cost and time reduction and/or income increase. However, it is also important to ensure that AICC implementation complements with existing agriculture innovation methods and mechanisms, so that they are not perceived as a threat, but rather as an opportunity for the agriculture research and agribusiness community.

²⁰ A good alternative could be to organize south-south learning, providing a platform for WB colleagues, clients, policymakers, and practitioners to exchange experiences, share innovations, and advance practices in the AICC area.



2. History of Innovation Challenges and Competitions

The innovation challenge/competition approach has been used for centuries by governments and private institutions to foster the achievement of a specific objective. Formal and large-scale challenges/competition can be traced back to 1851 with the first World Expo (the Great Exhibition) held in London. The objective was to find solutions to pressing challenges of the time by offering exposure of a large public to the most recent and innovative scientific, technological, economic, and social challenges. In the said exhibition, there was an agricultural court that included farm machinery from Garrett & Sons Leiston. There have also been world-renowned challenges and competitions, particularly in the areas of math, aviation, and recently space

exploration. Challenges and competitions have gained a renewed interest from the 1980s among stakeholders to demonstrate the feasibility of implementing cutting-edge ideas without specifying how the problem will be solved and by offering recognition to the contestant with the best solution²¹. Although this renewed interest emerged on private platforms and non-governmental organizations, US Federal Agencies have promoted these types of contests since the early 2000s (see Box 1). Following the recommendations provided by participants of the National Academy of Engineering (NAE) workshop in 1999, innovation challenge contests are based on simple design and structure rules.

Box 1. The United States innovation policy

Prize competitions and challenges are an important innovation promotion policy instrument in the United States. Government units dealing with Agriculture have used different types of prize competitions. The America Competes Re-Authorization Act promoted the creation of a web platform (Challenge.gov), which allows entities in the United States who set up contests to use participatory provision for the benefit of specific goals. Since 2010, more than 100 United States (US) federal agencies have promoted innovative challenge contests. The objective of the above is to address issues that affect people, communities, and industries all over the country and around the world.

Innovation policy in the US was traditionally oriented to produce new practical solutions for specific goals, encouraging high technology innovation in American society. For instance, the **Small Business Innovation Research (SBIR)** program emerged with the objective to "enhance US competitiveness by promoting innovate and high-technology small firms²²". To this end, all federal agencies allocate 4 percent of their annual budget to restore US international competitiveness by funding innovative small firms. Similarly, major Research and Development (R&D) agencies allocate a share of the research budget to innovative firms.

The SBIR program has three phases: (i) phase I determines the scientific and technical merit and the feasibility of a proposed research idea; (ii) phase II extends the technological idea, and the award is granted to only the most promising projects; (iii) phase III involves additional private funding for the commercial application of a technology.

The United States Department of Agriculture (USDA) has used the SBIR Program extensively. USDA SBIR's flexible research areas ensure innovative projects; since 1983, the Program has awarded over 2,000 research and development

²¹Liotard and Revest, 2019. Private and Public Innovation Platforms. Journal of Digital Studies. Volume 2, No. 8.

²²Audretsch, 2003. Innovation and Spatial Externalities. International Regional Science Review. Vol 26, Issue 2, p. 130. Link: [Innovation and Spatial Externalities - David B. Audretsch, 2003 \(sagepub.com\)](https://doi.org/10.1080/01674544.2003.10555555)



projects, allowing hundreds of small businesses to explore their technological potential, and providing an incentive to profit from the commercialization of an innovative idea.

The Agriculture Research Service (ARS) of the USDA has partnered with "Conservation X Labs, a 501 (c)(3), an organization whose mission is to improve conservation efforts via innovation challenges to attract solutions from a large pool of innovators. ARS and Conservation X Labs have significantly expanded their solver community, increasing their capacity to address Grand Challenges at the interface of agriculture and the environment.

Open innovation (i.e., prize competitions, grand challenges) is an approach to problem-solving that broadens and diversifies participation in solution delivery. Prize competitions and Grand Challenges, two notable examples of this approach, have demonstrated significant value in advancing technological solutions. A recent outcome of the abovementioned partnership is the 'Ohi'a Challenge, a 2018–2019 challenge competition seeking solutions to rapidly detect and prevent the spread of an invasive fungal disease threatening the survival of Hawaii's iconic 'Ohi'a trees²³.

The National Institute of Food and Agriculture (NIFA) is an important USDA unit within the competitive grant structure to promote innovation. Its role includes finding innovative solutions to solve issues related to agriculture, food, and the environment. One of the four agencies that belong to the Research, Education, and Economics (REE) area of the USDA, aims to effectively direct federal funding to programs addressing key national and global challenges²⁴.

NIFA-supported programs bring discoveries from research laboratories to farms, communities, and classrooms. NIFA supports research, education, and extension activities that address national agricultural priorities through three funding mechanisms—**competitive grants, formula grants, and non-competitive grants**.

The United States Agency for International Development (USAID) also uses prize competitions to foster innovation in agriculture. The Securing Water for Food (SWFF) program proved a great success. The SWFF's Social Rate of Return Analyses on 17 of its investments reached an average of 41 percent return. The SWFF programs led to a net farmer income increase of US\$1,833 during their three-year program; Based on a US\$ 35 million investment, the said program has added more than US\$1 billion to more than 10 countries' economies over a nine-year period²⁵. Through SWFF more than 6 million farmers and their families have received increased support to grow more than 3.5 million tons of food.

Due to the successes achieved by the SWFF, the Donor Partners decided to merge the SWFF with its sister program Powering Agriculture: An Energy Grand Challenge for Development (PAEGC), launching the Water and Energy for Food (WE4F) prize competition, a US\$65 million four-year program, back in 2019. Apart from the USAID, other partners include the German, British, and Swedish development agencies.

The first WE4F prize competition was still ongoing as of May 2020. Prizes include a US\$355,000 cash envelope for winners and runners-up, and travel sponsorship to participate in the Clean Asia Energy Forum in Manila (June 2020). Participants of the program have access to customized acceleration services from the WE4F Asia Regional Hub. In addition, 10 mid-stage and 5 youth innovator prize finalists will benefit from recognition on the WE4F website, communications materials, and travel support to participate in a co-creation workshop in Bangkok, Thailand, to discuss challenges and opportunities in the renewable energy and agriculture nexus in Asia²⁶.

Source: Authors.

²³USDA, ARS Disruptive Pest Challenge (2019–2020). Recovered in September from: <https://www.ars.usda.gov/research/project?accnNo=435959>

²⁴National Institute of Food and Agriculture. United States Department of Agriculture: <https://nifa.usda.gov/who-we-are>

²⁵SWFF. Pag. 8. Securing Water for Food Technical Assistance Facility Final Report, October 1, 2014—March 31, 2020. Link: [SWFF_FinalAnnualReport_Oct2014-March2020_4-15-2020-update.pdf](https://www.swoff.org/~/media/SWFF/FinalAnnualReport_Oct2014-March2020_4-15-2020-update.pdf) (we4f.org)

²⁶Water and Energy for Food, [Calls for Innovations and Prizes - MENA - Water and Energy for Food Grand Challenge](https://www.we4f.org/) (we4f.org)



During recent years, the World Bank (WB) has implemented AICCs in Analytical and Advisory Services (ASAs) and Investment Operations (IPFs, P4Rs). As of today, most WB AICCs have been implemented in the Africa, Southeast, and Central Asia regions. However, the Latin America and the Caribbean region has recently started to implement AICCs. The following table mentions most of the WB projects linked to an AICC or that include an AICC in their components (see Annex 5 for more details).

Table 2. World Bank projects containing an AICC

Country	Institution	Project name and P-code
Solomon Islands	World Bank	Solomon Islands Agriculture and Rural Transformation Project – (P173043)
Indonesia	World Bank	Cultivhacktion – Indonesia Digital Agriculture Hackathon. Agriculture Value Chain Development Project (ICARE) (P173487)
China	World Bank	China Henan Green Agriculture Fund Project – (P169758)
Kenya	World Bank	Kenya Climate Smart Agriculture Project (KCSAP) (P154784) and National Agricultural and Rural Inclusive Growth Project (NARIGP) (P153349)
Guatemala	World Bank	Responding to Covid-19: Modern and Resilient Agri-Food Value Chains – (P173480)
Argentina	World Bank	Climate Intelligent and Inclusive Agri-Food Systems Project – (P176905)

Source: Authors.

Box 2. Disruptive agricultural technology challenge and conference – The Kenya experience

In April 2019, the Korea-World Bank Partnership Facility organized a knowledge and innovation challenge conference in Kenya. The objective of this initiative was to bring together a group of best-in-class Disruptive Agricultural Technologies (DATs) in Kenya and link innovators to experts, investors, agribusinesses, and government partners at national and county levels. The challenge mobilized knowledge across four subjects, namely (i) Advisory and Information for Agricultural Productivity to help Kenyan farmers be more efficient and adopt more sustainable planning, production, and management systems; (ii) Market Linkage to facilitate market links between buyers and Kenyan farmers produce; (iii) Farmer Financial Inclusion to expand coverage of financial product and services to farmers; and (iv) Data Analytics and Agricultural Intelligence to enable data-driven decision-making by critical stakeholders in the agriculture sector.

All activities focused on a common mission of delivering value to one million Kenyan smallholder farmers (and related intermediaries) covered by the program. Another objective of the initiative was to generate consistent results to validate the replication of the digitally enabled innovation ecosystem platform beyond Kenya. The World Bank later replicated the initiative in other African countries, drawing on lessons learned in Kenya.

Source: Authors.



In terms of international experience, there are several examples of non-World Bank AICCs implemented recently, as shown below:

- Unlock and promote innovation potential among start-ups, students, and AgTech MSMEs. (University of Maryland, Innovation Gateway, USA)
- Find quick AgTech solutions for smallholder farmers not served by large AgTech companies. (CGIAR, Big Data in Agriculture, Global)
- Accelerate the AgTech innovation cycle by introducing a faster dynamic of crowdsourcing solutions to agriculture sector problems and opportunities. (UNEP, Sustainable AgTech Challenge, Global)
- Link public sector agricultural innovation investments with private sector solutions to improve products, processes, services, technologies, and environmental AgTechs for the agriculture sector. (Farm Bureau, Ag Innovation Challenge, USA)
- Optimize agricultural Research and Development (R&D) resources and enhance performance through a culture of collaboration between the public and private sectors and other stakeholders. (Bureau of Reclamation, USA)
- Take advantage of the digital technology advances to find solutions and technologies that can serve the agriculture sector and bridge the rural digital divide. (California Department of Education, USA)
- Take advantage of automation innovation opportunities for specific industries. (Nokia, Nokia Open Innovation challenge 2019).

2.1. Lessons learned from implemented AICCs

World Bank teams who have recently implemented AICCs agree that the success of AICC activities depends on common elements listed in Box 3 below.

Box 3. Elements that determine the level of success of an AICC

- Clear definition of the problem statement.
- Strong ownership of the activity by the Government/PIU.
- Time invested in the preparation of the event is lower (30%) than time invested on post-events activities (70%) such as private-public partnerships, engagements, etc.
- Create the partnership ecosystem by engaging with as many stakeholders as possible, including potential investors, financial institutions, incubation agency, private and public sector, etc.
- Clear knowledge of the Government/PIU budget for each activity planned. How much money is coming from IPF activates and how much from the Government, or any other source of financing.
- Clear and common-known knowledge of the amount of the final award for innovators/winners, being that in kind or cash.



Additionally, below are some specific lessons learned from the implementation of World Bank AICCs to be considered.

1. Gender in agriculture innovation: AgTech innovators (MSMEs, start-ups) sometimes struggled to reach women as customers, clients, and employees, both at the staff and management levels. Nevertheless, the experience showed that many innovators became profitable, in part, because they incorporated design and marketing feedback from women to address specific challenges they face. In many cases, women's user's experience of the proposed innovations benefitted them more than men, given the time savings in household chores and caregiving tasks such as cooking, collecting water, and performing other on-farm work. Therefore, it is essential to include a gender focus throughout the design, implementation, and monitoring and evaluation (M&E) of AICCs to ensure that innovators pay particular attention to the role of women in the business model, which will provide both impact on the innovator's bottom line and to women's participation in the innovation technology developed.

2. Poverty reduction: Innovators often face competing needs to create financially sustainable enterprises while meeting the needs of vulnerable people whom water/agricultural technology providers frequently leave behind. In many instances, the innovators created credit and end-user financing systems that allowed farmers to place a down payment and then pay the remainder of the cost in installments. Some innovators made significant progress working with smallholder farmers; however, more incentives are needed to reach this segment. In the future, AICCs should continue to focus on the unattended segment of low-income farmers, following an approach of "bottom of the pyramid," attracting innovators to uncovered populations.

3. Early networking and partnership: In some AICCs, failures to communicate often led to misaligned expectations; therefore, clear communication and detailed expectations led to the successful implementation of AICCs. To strengthen the partnerships, it is crucial to start early on to build alliances with other donors, governments, the private sector, and universities, all committed to a consensus-driven process where partners are involved in all significant challenge decisions through

frequent communication, such as weekly emails and/or calls, and periodic in-person meetings. This also applies to the donor, partners, and World Bank team interactions.

4. Acceleration support versus monetary awards: Together with acceleration support services, Milestone-based funding generates a more significant impact than just monetary awards to the program and the individual innovators. Experiences from implemented AICCs demonstrated that more than grant funding was needed to lead to many innovators reaching a sustainable scale. Instead, from both awardee surveys and program reporting, there was little to no evidence that grants strengthened innovators' operations (i.e., by expanding innovator market shares, product development, etc.) beyond providing an influx of cash. Evidence from the investment community shows that milestone-based funding that is realistic but ambitious works well if paired with technical assistance since it increases AgTech innovator's technical capacity.

5. Early and good understanding of the entire value chain and inner actors: To scale, AgTech innovators must define their customer segments and validate their assumptions on the added value they deliver to customers, distribution channels, and cost structures. Innovators' critical challenge is understanding customers' needs and behavior. In some cases, an innovator would request sales and marketing support without a clear understanding of the value proposition of their product or service from the perspective of their customers. In multiple instances, innovators do not conduct customer surveys and/or interviews to gather enough data to clarify the pain points and create a value proposition that addresses those pain points. The World Bank's coaching and technical assistance linked to AICCs helped innovators recognize that their products and services needed to be demand-driven rather than supply-driven. To have more probability of reaching their milestones, innovators, especially NGOs and non-profits, need to focus on financial sustainability and develop viable business models in the earliest stages of their innovation's development. Experience shows that customer-centric coaching and technical assistance support kept innovators more engaged with the AICC program. As a result, innovators better understood how to engage with customers and which problems needed to be solved.



6. Agriculture innovation systems should introduce a preferred-vendor mechanism: An efficient alternative to providing market access to innovators would be a rolling admissions mechanism to qualify and onboard those innovators/vendors (for projects, research institutions, Ministries of Agriculture, private agriculture technology firms, etc.) who were successfully selected from the AICCs event. During their acceleration support planning process and through this mechanism, public or private sector institutions could invite the vendor to apply to their vendor's system to qualify them for membership. This rolling admissions mechanism can enable the hiring institution to better align to the time required by innovators rather than force them to wait until another formal call for vendors is conducted. This way, potential innovators can enter the program with the confidence that the program prioritizes utilizing innovator-preferred vendors when vendors currently available in the system do not best fit the need.

7. Strategic formal engagement and partnerships mechanisms determines AICC success: Creating a formal engagement strategy with the AgTech investor community and creating a variety of partnership mechanisms is critical for the proper implementation and successful development of the AICC. For example, the World Bank team attempted to develop investor-innovator connections through (i) bespoke support engagements and (ii) matchmaking events before the AICC's launch. None of those efforts achieved the desired outcomes for various reasons. Regarding bespoke support, the liaison was made through a single support provider, who did not provide a technologically and geographically relevant investor network to the innovators according to their needs. In the case of the matchmaking events, most of

the investor audience participating was also part of mostly innovators' networks, not being consistently appropriate for the participating innovators.

8. Baseline data collection on the AgTech innovation ecosystem is critical: Without baselines, evaluations are hindered. In many cases, innovators did not provide, nor did the Bank team collect initial baselines. Thus, it isn't easy to recreate an accurate view of the positive impact generated by the subproject on innovators after their award. However, World Bank teams managed to collect data that otherwise could not have been collected by incorporating field surveys asking innovators for expected changes. Therefore, it is recommended that innovators proactively gather baseline measures at the beginning of the AICC through (i) the provision of the said database from innovators themselves or (ii) the fulfillment of a tailored questionnaire²⁷ to collect baseline information to subsequently allow measuring the subproject's impact. Based on this database, indicators could be elaborated to frequently monitor the positive impact (i.e., return on investment) on customers/end users from a particular region or country. Semi-annual monitoring of indicators and subsequent reports' elaboration should consider the inclusion of new producers, expansion, and/or change of crop selection or production patterns, among others. This would also improve data collection methods and monitoring for innovators.

²⁷This might, for instance, include information related to the average income levels, levels of crop production, and other necessary details.





II. Preparing and implementing the AICC

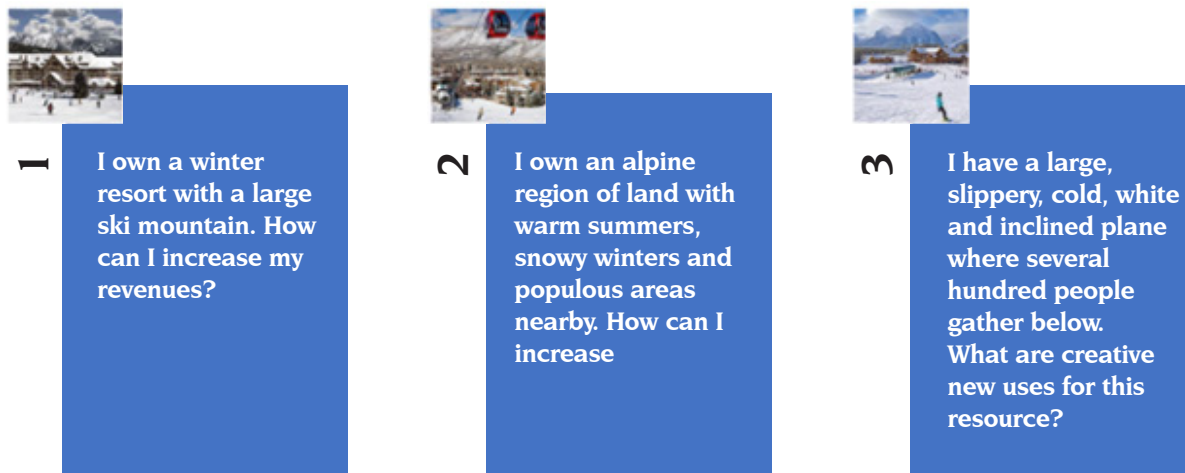
3. Defining the problem

The first and most important step in designing an AICC is to clearly identify and define the problem (or opportunity) to be addressed. A great part of the AICC's success depends on the clarity and specificity of the problem's definition. Problems can be described in a general, i.e., solve the pesticide pollution problem of the sector, or specifically, i.e., present technologies that can prevent the contamination of water by pesticides used on vegetables in region X (see Figure 1 below). However, the more specific the definition of the problem, the

more likely it is to find a more adjusted solution for that particular problem.

Figure 1 shows how the problem evolves from more precise, with specific business language, to more inclusive to all type of participants while remaining precise, going from the initial problem statement #1 to the improved one in #3. This transitional process is critical to move the potential pool of participants from exclusively experts to include non-expert participants.

Figure 1. Degree of specificity in the definition of a problem



Source: Authors.

There are two key elements to consider during the problem's definition drafting stage that help teams achieve a good definition of the problem, that is: (i) an early stakeholder engagement: Make sure you engage with relevant and diverse stakeholders when defining the specific problem. At least undertake one stakeholder workshop to facilitate the problem's identification. Annex 1 includes several useful tools (i.e., fishbone

framework or the problem definition tool) that could be implemented during the stakeholder discussions to help identify the problem; and (ii) a careful review of the problem's statement main criteria: Once the problem is clearly identified, teams should revise the ground rules that the problem's definition should meet. The table below presents some examples of criteria that should be used given the experience with implementing AICCs.



Table 3. Minimum content required for a good definition of the problem

Purpose-driven	The problem needs to be aligned with the Project Development Objective, but also with the needs and opportunities of a representative amount of AgTech innovators so that it can attract participants to the AICC.
Useful and attainable	The problem should not be impossible to solve or to solve in the very long term.
Tailored and attractive	The problem statement should speak to what the country/region is going through in terms of agricultural sector challenges and opportunities.
Clear and Complete	The problem’s definition should be as straightforward as possible so as not to give rise to confusion. It should also be provocative to the extent possible.
Time-bounded	Ideally, the problem should have a delimited time frame, such as "increasing productivity in X year."

Source: Authors.

3.1. Common mistakes in problem definition

There are several typical mistakes made during the elaboration of a problem statement (see Table 4 for more details). To avoid these recurring mistakes, it is recommended that a communications specialist participate in the process of problem definition to ensure that the statement speaks to the previously identified target audience. Additionally, the communications

specialist should be responsible for properly conveying the problem statement through the different means of communication depending on the communication material designed for the specific AICC, with the main objective of attracting the widest type and largest number of AgTech participants.

Table 4. Common mistakes made during problem definition

Unfamiliar or distant	The problem uses unfamiliar vocabulary, wording, or expressions making it difficult to understand in certain circles of participants.
Ambiguous or unclear	Linguistic complexity, such as unclear or convoluted sentences, could cause the audience to lose focus and attention.
Unattractive and not tailored to stakeholder’s reality	If the problem is detached from the current stakeholder’s interest or sectoral strategic alignment, the call for proposals might have a low level of participation.
Too technical	If the problem has too many technical terms or business jargon, it might discourage a larger part of the target audience or potential candidates. Remember that the broader the number of participating candidates, the higher the probabilities of getting out-of-the box solutions to the problem.
Too abstract	Remember that the wider the scope of the problem statement, the higher the number of people submitting general ideas for the defined problem.
Too narrow	Yet, if you limit too much the scope of the problem statement, you may miss some relevant AgTech solutions.

Source: Authors.



4. Public – Private Partnerships and engagement

One of the success factors of AICCs is the Government's (the client) ownership of the process and the ability to develop strong partnerships. Therefore, it is recommended that stakeholders identify and engage with partners as early as possible in the process, ideally before or during the problem identification phase, although partners should have the possibility to join the activities at any time during the AICC implementation process. However, skepticism may prevent partners from joining the AICC event in the first place. In other words, partners might not show their interest in joining the event until they have seen the results of an implemented AICC, including the type of innovators participating and solutions offered.

Many of the problems identified in the agricultural sector may have different yet related causes – limited financial resources, lack of knowledge of leading-edge technology, little access to data, statistics and networking, lack of experts in the subject, among others. Consequently, partnerships are a helpful way of reducing some of the obstacles faced by the different value chains' members within the agriculture sector. Building partnerships takes a lot of time and effort from all those involved to build high-quality working relationships that underpin effective collaboration. However, it is a cost-effective alternative when preparing an AICC, since partners might contribute from a different perspective during the identification of the problem statement, provide an overall and strategic

perspective of the specific value chain, including the challenges and opportunities, networking opportunities, ad-hoc solutions to specific problems, among others.

There are two types of partnerships: formal or informal. The latter may simply be an email or verbal agreement between the parties to collaborate or exchange specific information during the design, dissemination, implementation, or eventual organizing of events and activities. Keeping a partnership informal has its advantages since it allows changes related to the partnership without needing formal internal approval from either organization. Informal partnerships tend to be more common in AICCs, since there is no transfer of resources. However, some activities or partners may require more formality to ensure the commitment of specific support; as would be the case if there were monetary awards or grants for winning participants of an AICC. In that case, it is advisable to adopt a more formal approach to delineate the partnership, through either a formal letter between the parties or a Memorandum of Understanding (MOU) (See Annex 3 for MOU examples).

Annex 2 presents a tool for breaking the process of identifying and entering partnerships into steps, to facilitate PIUs' anticipation of specific difficulties and challenges in the design and/or implementation of partnerships for AICCs.

5. Dissemination approach

This is one of the most important activities to be carried out before and after an AICC event. Much of the level of success of the event will depend on the success of communication efforts made to promote it, since it will determine the number of candidates that participated.

The Government, Project Implementation Unit (PIU), Innovators, and other stakeholders will be responsible for promoting the event to encourage as much participation as possible through different channels and mechanisms, including the different alternatives mentioned below:



a) Information Display Boards. The PIU, with the support of the government and Innovators, will display physical and/or virtual boards to promote and provide information about the requisites, schedules, and deadlines of the event, among other details. Subsequent announcements or event-related information will be published on the same pre-selected websites, which might also be visited by the general public.

b) Branding of Assets. The Innovator might be able to brand all subprojects' assets (equipment, tools, plants, machinery, etc.) to make the company's name more visible and promote the brand through the daily use of the equipment. This will also encourage the correct use of the assets while enhancing project visibility.

c) Project promotion through websites. In case the AICC is incorporated under an IPF or a specific project component, and for transparency reasons, the PIU will display general information related to the subproject (or related component) on the Ministry or project website and/or any other related site that might be visited by potential participants. The information to be provided might include, but not be limited to, the subproject's name, objective, number of beneficiaries, and total cost, including the percentage of contribution by government and beneficiaries; location, sublocation and district of influence; main targets met and level of disbursements; GPS coordinates (latitude and longitude); as well as names and telephone contacts of the Innovator.

d) Leaflets. The PIU will prepare and finance simple leaflets with information on innovation subproject activities, to be distributed to stakeholders who might potentially engage with the Innovators.

To ensure inclusion and/or equal participation opportunity to all candidates, the PIU should ensure all mechanisms of inclusion are being considered when designing dissemination activities and oral/written promotion. For instance, the importance of translating all promotional materials in local languages (inclusion of indigenous people and Afro-descendants), ensuring that promotional activities reach lagging rural areas, and including women and youth networks.

5.1. Stakeholder Platform

A Stakeholders' platform is a key element for the success of the AICC event, as well as for the development and implementation of innovative subprojects. The platform brings together a group of individuals (stakeholders) with different background and motivations to identify solutions to common problems or to achieve common goals. Its main objectives are to: (i) diagnose problems and identify opportunities and problems to frame the AICCs, (ii) enable Stakeholders to learn through interaction and networking, (iii) implement activities as a platform, or coordinate activities by individual members, and (iv) facilitate change

through collective action and linkage with the Innovators' solutions identified.

Stakeholders' participation in AgTech Innovation Challenges is critical both to ensure comprehensive and effective decision making, and to create ownership among stakeholders and leverage their support for the AICC. Efforts should be made to ensure as large and diverse participation as possible. An indicative, but not complete, list of stakeholders might include: **(i)** Producers (Farmers, pastoralists, fisher folk and their organizations



and associations), **(ii)** Environmental, Agriculture, Forestry, Fishery Service providers, **(iii)** Industry, **(iv)** Traders, **(v)** Regulators and Research institutions, **(vi)** Other Development Partners, **(vii)** Policy makers, **(viii)** Investors and Financial Institutions with an interest in AgTech, **(ix)** SME association representatives, **(x)** Universities, and **(xi)** Incubators and Accelerators.

The stakeholder platform should be an on-going, self-sustaining body that identifies and allows communication exchange and technical discussions, and represents the stakeholders involved with AgTech Innovation Challenges at the local, regional, and national levels. The Stakeholder platforms also allow to identify and address issues of common concerns more effectively.

The stakeholder platform should be created to reflect and represents AgTech sectors of the country. Its size should allow for debate and decision-making in AgTech development strategies, considering it should incorporate representatives from leading organizations that are already active in the topic either at the local or national level, as they may become effective partners in implementing the

strategy. Ideally, the platform should be composed of leading representatives from both the public and private sector, and the leadership of the platform should be under the private sector.

The stakeholder platform should be composed of 11 to 20 elected members, based in the country, representing the following clusters: **(i)** representatives of technology/service suppliers, **(ii)** producers/producer organization representatives, **(iii)** financial services representatives, **(iv)** market/traders' representatives, **(v)** representatives from government and regulators, **(vi)** research organizations, **(vii)** Incubators/accelerators, **(viii)** NGOs/Development partners, **(ix)** Representative from local government.

The representatives should be based in the country, and the following are some of the qualities that should be considered during election of cluster representative: **(i)** Leadership and vision, **(ii)** Motivated to see the platform succeed, **(iii)** Hard-working, **(iv)** Technical knowhow in the subject matter/experience, **(v)** Good communication skills, **(vi)** Entrepreneurial and private sector oriented.

6. Defining the AgTech innovation ecosystem of potential participants

Once the problem has been defined, the team needs to acknowledge if the problem statement requires innovative solutions from the international or national network. Depending on the problem, the call for proposals will be open for global engagement or not. Oftentimes, the problem is identified as such especially because there is no AgTech available in the country to solve such a problem, and therefore opening the AICC to international participants becomes necessity. Additionally, participants could be non-experts, or they will need to be experts in that field.

To gauge the potential universe of candidates for an AICC, a diagnostic of the AgTech innovation ecosystem in the country (or region) should be carried out to understand the existing capacity and constraints of local entrepreneurs, organizations, and AgTech companies to respond to the problem set forth in the AICC. Indeed, undertaking an AgTech innovation ecosystem diagnostic can also yield information regarding aspects that are important for the design of the AICC. Below is some important information that the said diagnosis could include:

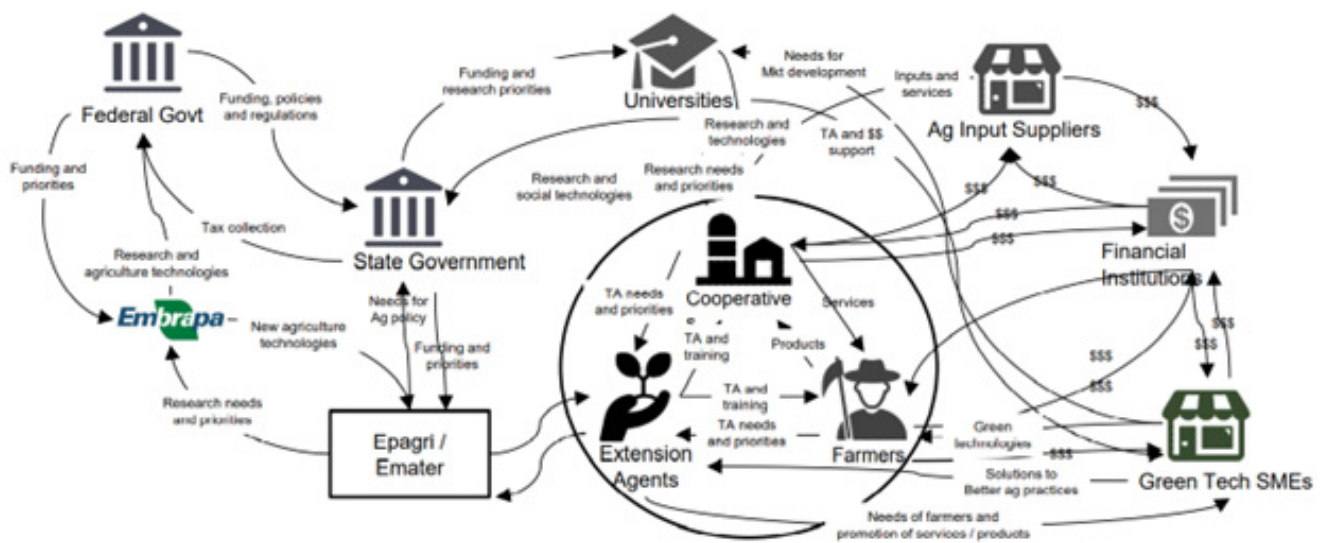


(i) **Where are the nodes of AgTech innovation in the country?** Universities, private companies, public agricultural research centers, CGIAR centers, NGOs, farmer organizations?

(ii) **What kind of access to financing do AgTech innovators?** Formal credit, equity, public grants, incubators, accelerators?

(iii) **Are other existing agricultural innovation programs from public and private actors that are promoting new AgTech?** Ag R&D grants, private investments, university grants, SME development funds, Business Development Services (BDS), Productive Alliances model, matching grant schemes, among others.

Figure 2. Example of a stakeholder map of Green AgTech innovation ecosystem in Brazil



Source: World Bank (2016)

The general suggestion and default choice should be for AICCs to be open to all AgTech innovators globally to participate. If the country decides to restrict participation geographically in any way, the AgTech innovation ecosystem diagnostic in the country and region becomes a necessary condition to ensure that there is a sufficiently large potential pool of candidates to participate in the AICC. This decision would also have implications regarding the communication efforts, language, and potential partners to be approached for collaboration in the AICC.



Table 5. Advantages and disadvantages of a particular scope

	Global Scope (preferred)	National/Regional Scope
Advantages	Larger pool of participants Potential to bring international partners and investors	Reduced communication efforts Able to interact more with participants as they are local
Disadvantages	Larger communications effort and language barriers Need to explain more details of the problem and country context Difficulty organizing a live event (time differences)	Reduced pool of participants and partners

Source: Authors

Aside from the origin of the pool of potential participant, the design of the AICC should incorporate whether non-experts will be targeted as potential participants. One of the advantages of AICCs is that they can appeal to non-experts, particularly if the problem statement is formulated in a way that is accessible to a wider audience (see previous section) and can therefore generate non-traditional and out-of-the-box solutions. As with having a global scope of participation, the preferred option is for AICCs to appeal to non-experts for AgTech solutions. This requires specific communication efforts to reach networks of innovators not necessarily linked to the agriculture sector or specific AgTechs.

7. Defining the appropriate type of AICC

There are a wide variety of AICC structures that could be implemented, depending on the identified problem and its scope (potential pool of participants). The selection and design of the AICC structure should be tailored to the problem, the potential pool of candidates, and other contextual factors such as timeframe and budget availability, as well as level of partner’s interest and

preliminary ownership. The table below describes the different typology of AICC structures that could be implemented. The AICC could adopt one or a mix of them; and simultaneous implementation of the different structures could also be applied in case more than one problem has been identified.

Table 6. Types of AICC with their advantages and disadvantages

Type of AICC	Considerations	Advantages	Disadvantages
Ideas	Seeking only ideas to feed into solving a problem. This is often done as short processes to get crowdsourcing of ideas that can then be picked up by others to bring them to fruition or testing.	Could promote out-of-the-box thinking from non-experts	They remain abstract and mostly unrealistic.

Source: Authors



Type of AICC	Considerations	Advantages	Disadvantages
Concept Prototype	For more specific problems where participants need to present a clear design or proposal to signal its technical (or other) viability.	Low-cost participation by participants as it is only a concept (paper-based) being requested.	Given that it is only a concept, although more detailed, it is still untested.
Real Prototype	For problems where there has already been some progress done, a real prototype allows to bring it closer to implementation. It is very appealing to showcase real results.	It focuses on AgTech innovators that have already been thinking or working on similar topics and that have the means to take the project forward.	It costs money from participants to develop a real prototype to participate in the process, and therefore may discourage participation from smaller entrepreneurs/innovators.
Proven Solution	This is often based on a large award for attracting existing players to try to solve problems and try to get the reward at the end. It is also useful to showcase examples and for the organizer to position themselves as a leader in supporting innovation in a specific AgTech area.	It generates exposure (marketing) to the winner that would not get it otherwise and rewards them for innovating, creating an incentive for others to do the same. Ensures 100% of success.	The non-winners may have invested significant resources in deploying the solution without any gain. It focuses on past innovations, not future ones.
Multiphase	A 2 or 3-step process could be established to filter the initial set of participants asking them for a minimal proposal, and then, the shortlisted ones can be asked for more information and details.	It reduces the burden on participants of producing full written proposals from the beginning and allows for an initial screening to focus evaluation resources.	It takes more time and overall communication efforts. Needs to have two sets of judges.
Grant/ investment	Grant awarded to a winner to invest in future activities related to the proposed solution, usually for proposals that are already at the concept stage and need to be implemented/tested.	Concrete outcome from grant activities, providing support to ensure results.	Requires resources and experts to accompany the grant implementation. Often small number of known applicants. Success is not guaranteed.
Networking	This is a useful type of AICC, often embedded in other processes to encourage participants and winners to collaborate and exchange ideas and feed off each other's experiences and solutions.	It is often low cost and can generate large payouts as oftentimes entrepreneurs say that networking opportunities are difficult to achieve.	It does not provide any concrete immediate result, so often used as part of another existing process.
Award (Prize)	Often linked to a proven solution, but not necessarily. This means that the winner gets an award in the form of cash, training, mentoring or other service or support.	This is often what attracts participation to the AICC, so the larger the award the more interest it will generate. Often generates new participants of different sectors.	It pays for things that may have already been achieved without guarantees of future innovations.

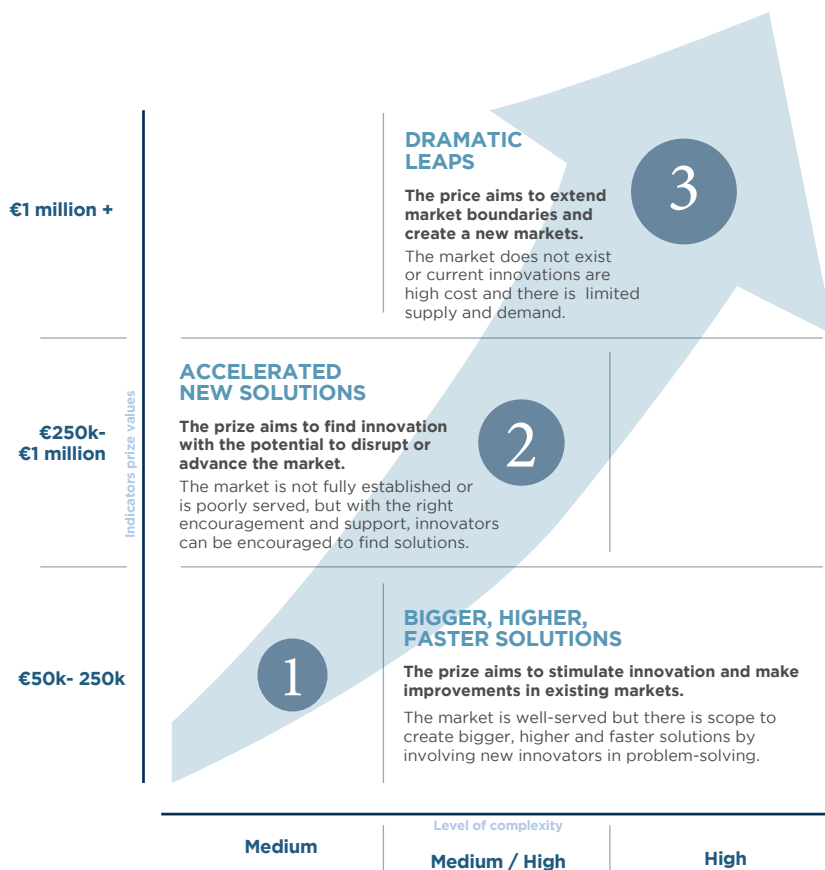
Source: Authors



While deciding the type of AICC to select, an important aspect to consider is the extent to which participants will share the risk of failure. In that regard, if the selected AICC is a prize for a proven solution, the risk of failure is entirely placed on the participants, considering that the winning participant, by definition, will have presented a proven solution. At the other extreme, grants or investments AICC does not transfer the risk of failure to participants, since they finance ideas that come out from the AICC. Between these two extremes, there is a spectrum of options depending on the level of risk that the organizing partners and the potential AgTech innovation ecosystem

are willing to assume, as well as their capacity to invest in the proposal preparation stage. In the case of the Awards or Grants AICC, the value of the monetary prize will be directly related to the type of candidate running the event. Additionally, the final prize will be closely related to the level of complexity of the identified problem and, consequently, to the potential solutions. Box 4 shows the different elements that should be taken into consideration when organizing a Grant/Investment AICC with a monetary award.

Figure 3. Types of private-sector monetary prizes.



Box 4. Elements to consider when selecting a monetary award

- Greater attractiveness for participants to current and/or future rounds of AICC.
- Risk transferred to AgTech innovators.
- Require investments from AgTech companies, innovators, and investors.
- Either well known or unknown problem statement.
- Higher level of complexity of the potential solutions.

Source: Blue Globe Innovation Consultants, 2018.



Depending on the problem identified and the type of AICC selected an appropriate monitoring system with precise indicators will be required to measure the level of success of the proposed solution to solve solving the stated problem presented under the AICC (see Section 11). Well-defined indicators will help the team assess the level of positive impact generated in the sector by a proposed solution achieved during an AICC, including its business value. However, designing a sound results framework that adequately reflects the AICC’s solution impact in the sector, economy, and/or potential beneficiaries/actors, among others can represent a great challenge.

8. The AICC cycle

To complete the design phase of the AICC activity, the problem statement should be clearly defined and the structure of the AICC should have already been selected. Subsequently, there are several activities that need to be carried out, which are part of the AICC implementation process. However, they will directly depend on the type of AICC selected. As an overview, and for illustration purposes, below is a generic AICC activity cycle that shows the general steps of the AICC preparation and implementation phase.

Figure 4. Activities comprising an AICC event.



Source: Authors



- 1. Scoping.** Refers to the initial stage where the problem is identified and defined.
- 2. Design and Development.** Includes choosing the type of AICC and preparing forms, communications, and partnership agreements.
- 3. Pre-launch.** Involves arranging logistics for the launch event and ensuring the selection committee and administration team is aware of the process, roles, and deadlines.
- 4. Launch.** An event is meant to generate the communications impact to advertise the AICC and invite candidates to submit proposals.
- 5. Support.** If the problem is not straight forward or the AICC is multiphase, an information session could be useful. Otherwise, a Questions and Answers (Q&A) channel should be open to clarify doubts that may arise before the submission deadline.
- 6. Deadline.** Gather all applications and distribute to selection committee.
- 7. Assessment and judging.** During this phase, juries of the selection committee evaluate proposals and submit their recommendation as per the rules for the announcement of results.
- 8. Award.** This is an important stage within the AICC cycle, both to showcase innovations but also to motivate AgTech innovators to participate in future AICCs.
- 9. Post-Award.** This phase includes technical assistance, mentorship, and acceleration programs for winner innovators/businesses, monitoring and evaluation of grants and subsequent activities, awards, and data collection on impact.

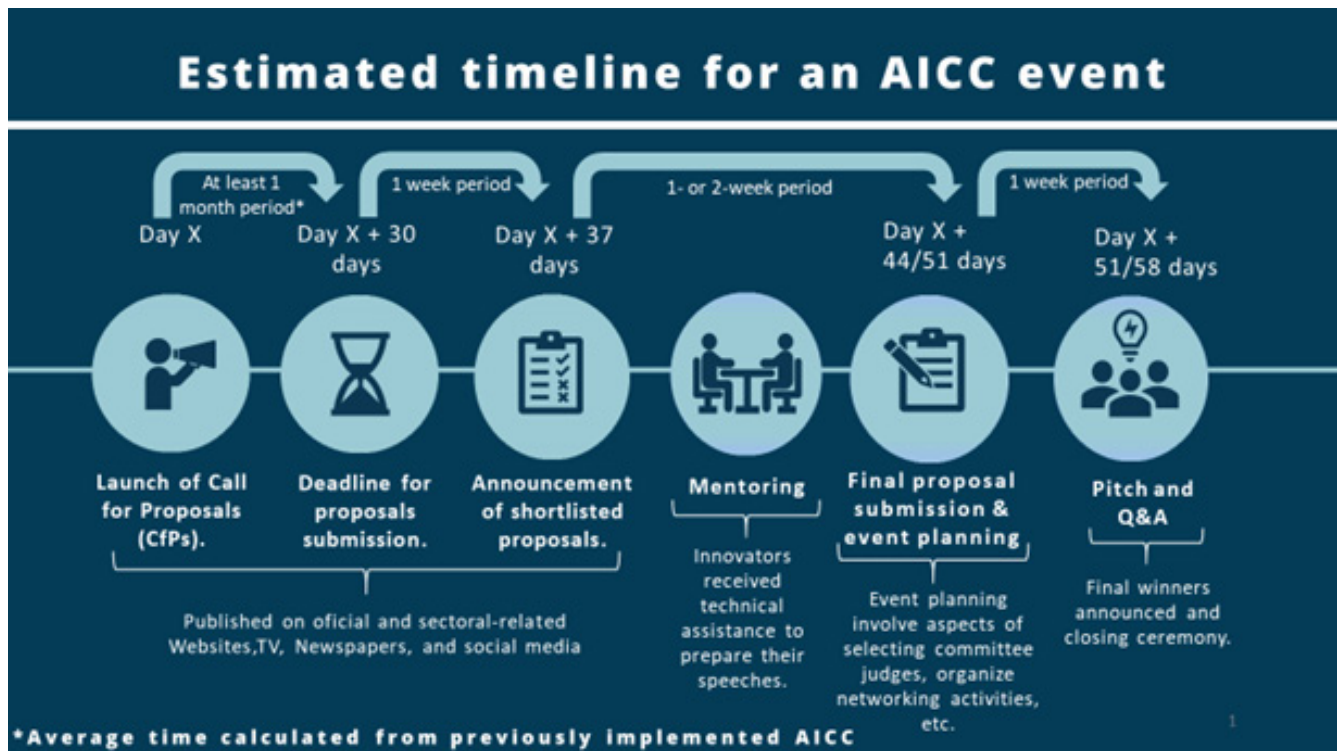
8.1. Estimated timeline of the AICC cycle

The timeline for designing, implementing, and monitoring/evaluating an AICC can vary widely. Often, it is not less than 3 to 6 months, although the time for call for proposals and prize delivery can be relatively short (1 to 2 months). Below is a timeline estimate, calculated based on different AICCs. The timeline will depend on the type of AICC that is designed and often, due to constraints in funding or project financing (project closing dates), the design of the AICC is also influenced by the available time to implement it. However, it is important to consider the project cycle

according to the problem/opportunity that the AICC will address, and then align the AICC timeline appropriately in each stage. Below is a theoretical timeline from the launch of the call for proposals to the prize delivery, excluding AICC design and monitoring and evaluation (M&E) phases. Finally, it is worth mentioning the importance of leaving margins for error in case the deadline for presentation of AICC proposals or the date of the final event is delayed for unforeseen reasons.



Figure 5. Estimate timeline for an AICC event, excluding AICC design and M&E phases.



Source: Authors





9. Internal organization of the AICC

9.1. The AICC administration team

To properly implement an AICC event, a solid Administration Team is required at the Borrower/recipient level with different specialists and/or experts in different relevant areas of expertise such as fiduciary, procurement, safeguards, etc. Each member of this new team will work in close coordination with each homologous specialist at the World Bank. Therefore, after selecting the type of AICC to implement, the Administration Team should organize internally, deciding and distributing internal tasks. It is key to clearly state what is the responsibility of each specialist/team member at each stage of the AICC process. The said team should have, at least, the following members:

- 1. An AICC Administrator**
- 2. A Communications Specialist**
- 3. An Innovation Challenge Specialist**
- 4. A Technical IT/Database Management**

Specialist

5. Partnership-relations specialist

Depending on the number of AICCs to be implemented, the abovementioned roles might be part-time or would need to be full-time. Eventually, the same person might be capable of filling two roles.

The said team is responsible for designing, organizing, managing, and implementing all the activities related to the different AICC phases. Additionally, the Administration Team will be responsible for reviewing and selecting, based on the pre-established eligibility criteria, the proposals submitted the participants. After a preliminary screening, the proposals will be revised and carefully evaluated by the Evaluation Committee.

9.2. The evaluation committee or jury

The composition of the members of the selection and evaluation committee (grand jury) will depend on the partners involved in the AICC, on the problem stated and on the selected structure of the AICC. The jury could be responsible for short-listing the proposals at the initial stage, or it could be a deliberative body to review, evaluate, and discuss the submitted proposals directly with the candidates (shark tank).

The grand jury would often be composed of stakeholders' representatives such as the public sector, Universities, Civil Society Organizations (CSOs), private associations, partners, etc. It is recommended that the evaluation committee be made up of a maximum of 5 people to facilitate the discussion and decision-making process. The committee is often chaired by the representative from the public sector.



Box 5. Rules to be considered by the 'Evaluating Committee' when evaluating proposals

- Arrange Shark-Tank style session where participants can present their proposals and judges request clarification or ask questions, if necessary.
- Members of the Evaluation Committee are not allowed to evaluate any proposal where they have worked on (cooling period of 2 years), nor is it allowed that members of the jury have any kind of family relationship with any of the participants for ethical reason.
- The available time during a live shark-tank session is often limited, thus the number of questions to ask participants might also be limited, especially if candidates' responses are extensive. Therefore, it might be more efficient to pre-designate only 2 or 3 members of the jury to ask clarification questions about each proposal. Those juries could vary from candidate to candidate, to grant equal participation to all juries, although the order of their interaction would be previously designated. However, clarifications can be requested by any judge and time permitting, further questions could be asked by any other member of the jury apart from the 2 or 3 predesignated.
- Each participant will have 5 minutes to present their proposal to the jury, followed by a 5-minute Q&A from the Evaluation Committee.
- Agreed on a clear evaluation form, with previously established scores, to keep the evaluation as objective as possible (see Annex 4 for further examples).
- The members of the jury will hold a breakout session to determine the final winners
- Judges will participate in the award ceremony.

10. Investment strategies

The overall objective of the AICC is to directly support investments in the selected innovative solutions (Innovators) as well as to generate interest in the overall AgTech ecosystem of the country or region, attracting investors beyond the specific winners of the AICC. Therefore, it is critical to engage with potential investors as early as possible, either to attract them to become partners of the AICC, observers, individual participants (i.e., jurors) or even co-funders of the winners by directly providing financing (grants, credits, equity, etc.) or supporting networking of innovators and financing sources.

There are different approaches for integrating investors into AICCs (see Table 7), which vary depending on the type of AICC selected. For instance, if the AICC is more geared towards developing a public good/service, potential investors may be NGOs or public sector entities; however, private investors may be more interested in AICCs that identify private goods/services. On the other hand, the degree of interest of investors will not be the same if the AICC is at the 'idea development' phase as if it is at the prototype development or market access phase.



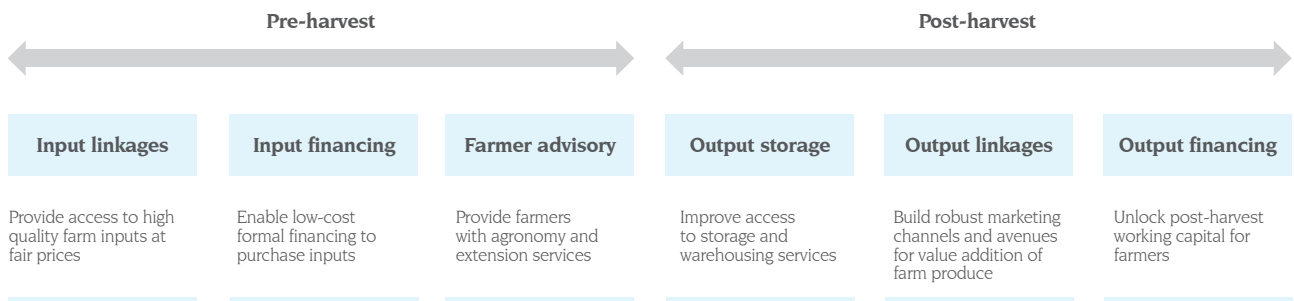
Table 7. Different approaches to integrate investors within an AICC.

Investor integration approach	Characteristics of the AICC
Partner	When the AICC is aligned to the investor’s overall objective of the participating AgTech companies, having them be an integral part of the event can guarantee further financial support during and after the AICC.
Participant	Involving the investor in specific activities of the AICC event (evaluation committee, jury, sponsor, coach, etc.) could be another alternative if the investor is not fully convinced of the alignment of the AICC solutions featured or if there is no interest in participating as partner.
Funder	An additional alternative would imply the investors assessment of the winners’ business plans and decide if they would be willing to invest (grant, equity, credit).

Source: Authors

Most recently-designed innovations have been developed to provide specific products or services to farmers in currently untapped markets while enhancing their green, resilient, inclusive, and development approach among the Food and Agriculture sector. In that context, Agtech and farmer platforms that provide products or services to farmers across the entire agricultural life cycle tend to focus on either the pre-harvest or post-harvest stage. These innovations typically focus on 1 or 2 core services initially, before expanding to other adjacent opportunities as shown below.

Figure 6. Typology of AgTech innovation depending on the Value Chains’ stage in which is focused.



Below are some examples of innovation solutions and technologies that have recently been developed, and that might serve as examples of potential successful solutions to be developed and financed under an AICC.



Table 8. Examples of AgTech innovations developed for each value chain stage of the Agri-food sector.

AgTech Innovations	Input linkages	Input financing	Input Advisory	Output Storage	Output linkages	Output financing
FarmDrive		✓				✓
Kuza	✓	✓	✓			
M-PESA		✓				✓
Harvesting		✓				
TROTRO Tractor	✓					
Hello Tractor	✓					
Plantix			✓			
Digital Green			✓			
DeHaat	✓	✓	✓		✓	
Arya.ag				✓	✓	✓
ReshaMandi	✓	✓	✓		✓	✓
Animall.in	✓	✓	✓			
AquaConnect	✓	✓	✓		✓	✓

Annex 6 provides a table with additional details of the abovementioned Agtech innovations, including the countries where they have been developed or implemented, as well as a brief description of their objectives.

11. Eligibility, selection criteria and documentation

Clear and prior selection criteria should be defined by the Administration Team to be used during the evaluation of final proposals, once winners' participants have been selected - or prequalified for a next stage.

This eligibility criteria will not be used at the beginning of the process when few proposals are selected from the

entire pool of submissions but rather at the end of the AICC process, when the Evaluation Committee (jury) review and evaluate the final proposals to determine the winners, and before signing any grant agreement or receiving any award.

Common basic requirements and information requested of AICC participants are:



1. To be an individual or a legally established organization - business, association/cooperative, NGO, University. Public institutions are often not able to apply if the goal of the AICC is to leverage private solutions.
2. Provide personal information such as: Name of the natural or legal person, ID, email, phone number, and videoconferencing preferences (i.e., Zoom, Teams, Skype, etc.)
3. Fill out an Environmental and Social form (see Annex 8 for an example).
4. Proposals cannot fall into the negative list of AgTech innovations, which includes the following:
 - o Innovations related to weapons, production of tobacco, alcohol, illegal drugs.
 - o Innovations that discriminate against vulnerable groups
 - o Innovation that can put at risk protected areas
5. Be a national of a specific country/region or have a local partner in case of international participants. These criteria tend to be used when the AICC is held domestically, and only national participants are expected to submit proposals.

However, more precise additional information could be requested depending on the need and specifications required under each AICC.

The eligibility criteria will ensure the prioritization of vulnerable groups such as women-owned companies, women's leadership within organizations, and women's inclusion in teams, youth, indigenous people (IP) and afro-descendants (AF). In terms of selection criteria, additional points will be given to solutions coming from or involving the said vulnerable group, including youth, IP, AF, and women.

11.1. Required information

Information required during the selection period will depend on the type of AICC selected. Below are some potential additional selection criteria that could be requested of participants under the **Awards and/or the Grants/Investment AICC** – even if they are in kind, such as training on Business Administration.



In case participants are firms	In case participants are Start-ups or individual innovators
Documentation required for proposal (after announcement of selection)	
Provide details of legal status of the firm	Provide Personal ID number
Complete a detailed Environmental and Social screening form	
Provide details of the legal representative of the firm (including contact information)	
The proposal must include the following information	
Be aligned with the problem presented in the AICC	
Provide evidence on the socioenvironmental and economic viability	
Sources of support used for the development of the proposed solution/activities should be indicated (disclosure clause)	
Clearly indicate monitoring and evaluation models or arrangements	
In case the selected applicants is currently working on potential solutions for the stated problem, they should clearly indicate their current role, specific tasks, and/or responsibility	
New major capital investments cannot be fully financed by grants. However, selected firms/organizations can request co-funding from other sources to cover some of their costs	
AICC Activities and/or subprojects must be completed and fully closed six months before the Project's closing date	
Selected organization is the main responsible entity for formulating solutions or activity proposals.	Innovators are those mainly responsible for formulating solutions or activity proposals.
Specify the roles of the organization's staff that will work on the proposed solution under the AICC event.	
Documentation required for grant awards	
Bank information	
Copies of documents showing the legal status of the organization.	Copies of the identification and documents of the innovator.



III. World Bank corporate requirements at post-AICC stages

12. Award process

The awards stage is one of the most critical ones. It not only represents the reward for the effort and hard work of participants, but it also provides the opportunity to advertise the event to the general public and to give exposure to the winners. The awards stage is also an opportunity for partners and investors to engage with participants and winners in future effort to support AgTech innovations in the sector.

Rewards are meant to recognize and motivate officials and Innovators who demonstrate exemplary performance in

project implementation. Thus, the exposure and prestige that innovators get during this stage can be more valuable for their future AgTech solution than what they can get from any monetary or technical assistance support they receive. This may involve providing certificates of recognition, recommendations for national or county awards, trophies, medals, educational visits, and/or tours. Therefore, during this phase the communications effort to advertise and promote the AICC event among the different channels will be key.

12.1. Fiduciary Requirements

The following section outlines the Financial Management, Procurement, Anticorruption Guidelines (AGC), and disbursement process of the grants and monetary awards type of AICC. It refers to borrower/recipient executed funds, and displays some good practices that might be considered for the award phase of an AICC event. It is worth mentioning that they should be taken as examples and that they can be adjusted depending on the type of AICC selected and the problem statement identified.

Monetary awards are often released in one installment without strings attached, while grants are often released in two (or more) installments. In the case of grants, and based on the approved proposal, the innovators are required to

submit a disbursement request for the first installment, providing the following documents: (i) list of activities, (ii) procurement plan, and (iii) budget estimates." The request should be reviewed by the technical officer, procurement, and financial management specialists/officers.

The second and subsequent monetary installments will be released upon receiving a physical and financial progress report and the related supporting documentation (procurement processes, expenditures, etc.), as defined in the Project Operation Manual (POM). Usually, the initial installment is destined for the procurement of equipment and physical materials, while the second (and/or subsequent) installment are often used for paying services



such as labor force, consultancies, training, legal services, among others. Subsequently, the AICC Administration Team should carry on supervision visits to innovators; the frequency and typology of the supervision visits (technical, fiduciary, etc.) would depend on the nature, size, and duration of the innovation grants, as well as on the risks. There might be environments where due to the capacity of the innovators more frequent visits will be required. If the visit is favorable, the AICC Administration Team will certify that the innovator has completed all the activities as per the milestones previously established in the proposal. Consequently, the AICC Administration Team will approve the release of the last batch of resources (subject to the innovator's presentation of expenditure documentation associated to the first installment(s)).

Below are some examples of funds disbursement procedures for grants:

Grants should be released in two (or more) installments. In general terms, the first installment should be to finance any expenditures required for the implementation of the activities defined in the proposal, which should be approved from a technical point of view. This might include, but is not limited to, consultancies, training, services, procurement of initial equipment, materials, and other start-up investments defined in the initial proposal and agreed upon in the procurement plan.

Procurement Plan (PP) approval and disbursement of the first tranche:

- a. After approval of the proposal/solution, innovators prepare a PP, based on their approved proposal, with details of their expected expenses.
- b. Innovators submit their PP to the AICC Administration Team for its approval.
- c. Upon evaluation and approval of procurement and fiduciary specialists, the AICC Administration Team releases the first tranche to the innovators.

d. Innovators purchase the required materials as stated in the PP and present the required documentation of the purchases to the AICC Administration Team for accessing the second (and any further installments).

Required conditions to move to the second (or further) installments:

1. Subprojects should have reached a minimum implementation state of X% (related to both physical progress and/or specific procurement goals, according to agreed milestones in the proposal). See Table 10 for more details.
2. Subprojects should present necessary documents to justify expenditures under first tranche(s).

Second (and further) tranche(s):

- a. Subprojects prepare the second-phase application for the disbursement of the remaining funds.
- b. The AICC Administration Team to carry out a face-to-face supervision visit to verify the status of implementation of activities of subproject activities.
- c. If the supervision visit is satisfactory and the subproject presents the necessary documentation related to the justification of expenditures under the first tranche, the AICC Administration Team will disburse the second tranche.

Project's Certificate

The AICC Administration Team will certify the innovation subproject when it has fully completed all their planned activities.



Table 10. Milestones for grant installment disbursement for implementation

Installments of disbursement <i>(payment to innovators)</i>	Milestones <i>(To be accomplished before receiving each installment of grant)</i>
Prerequisites Activities to be completed before approving the first disbursement.	<ul style="list-style-type: none"> • A Memorandum of Understanding (MOU) has already been signed between the innovator and the AICC Administration Team. • Innovation subproject proposal has been approved by the AICC Administration Team. • The previously arranged percentage of monetary contribution for innovator is available (in the bank account)²⁸. • The innovator/signatories have opened a current bank account and received a checkbook. • The technical, procurement and finance staff of the innovator²⁹ has been formed, trained, and are operational.
1st Installment The amount requested for implementing activities under the 1st stage, as per the approved innovation subproject proposal.	<ul style="list-style-type: none"> • Initial innovation subproject activities to be undertaken before receiving the grant are on course or completed.
Documents to be presented after the 1st installment and before initiating the 2nd installment.	
<p>Supporting documentation will be required for documenting project expenditures under the advance and Records evidencing eligible expenditures (i.e., copies of receipts and supplier/contractor invoices) for payments allocated to:</p> <ul style="list-style-type: none"> • Civil works against contracts valued at US\$200,000 or more, • Consultant services against contracts valued at US\$100,000 or more, and/or • Consulting firms, and US\$50,000 or more for individuals. <p>Statement of Expenditure (SOE) for all other expenditures for payments for contracts below the thresholds mentioned above, operating costs and training.</p>	
2nd Installment Amount required for implementing activities under the 2nd or final stage of activities, as per the approved innovation subproject proposal	<ul style="list-style-type: none"> • In case the innovator has an ongoing business related to the innovation subproject to be submitted in the AICC event, all books of accounts and accounting records must be up to date and available to be verified by procurement/FM teams at any time during the implementation process, if necessary. • Updated information of the innovation subproject implementation status is on the innovator website (disclosure). The information should include: (i) Funds received from the donor for the implementation of the subproject; (ii) money received from community contributions; (iii) expenditure and balances; (iv) Contracts under implementation and contracts awarded³⁰; and (v) list of assets procured, cost, and the projects implementation progress achieved thus far in terms of final targets. • At least 90% of the resources released during the first disbursement tranche have been properly utilized. • The AICC Administration Team has already recommended the release of the second disbursement tranche. • Periodic³¹ financial and technical progress reports are submitted to the AICC Administration Team by the innovator, as defined in the POM. • Arrangement for the operation and maintenance of the sub-project are in place.

²⁸ Applicable for AICC involving matching grants

²⁹ Enterprises, start-ups, MSMEs, individual innovators.

³⁰ It refers to the contracts specified in the procurement plan.

³¹ The frequency of the reporting should consider the size, complexity, and nature of the activities.



12.2. AICC Implementation process

The implementation of all project activities will be the responsibility of the AICC Administrator and their respective AICC Administration team. The AICC Administration Team will prepare a previously agreed AICC Intervention Schedule (AICCIS) or intervention timetable, share with the AICC Administrator for concurrence and distribute it with relevant partners. The individuals and entities listed below are responsible for the effective implementation of the AICC.

1. Central Line Ministries in charge of the agriculture sector and innovation

2. National Agriculture Research Institute
3. Project Implementing Unit (PIU), if that is the case
4. AICC Administration Team
5. Selected Innovators
6. Partners

They are expected to use their best judgment and willingness to ensure that the AICC is properly and successfully implemented.

Table 11. Implementation arrangements

Institution	Responsibility
PIU	Responsible for overseeing implementation of specific interventions
AICC Administration Team	The team is often within the PIU and it is responsible for preparing and implementing the entire AICC.
Innovator	Responsible for the implementation of all innovation subproject activities
Ministry of Agriculture	Since the PIU is often part of (and reports to) the Ministry, the latter has overall responsibility for the project, including ensuring the highest political exposure to the AICC through promotion, socialization, and political support.
Ministry of Technology and Innovation	This Ministry is often involved to provide expertise and networking support for startups, including other professional contacts for accelerators and incubators that can end up being partners or providing participants.
National Agriculture Research Institute	Usually actively participating in the event, especially when dealing with innovation at the primary production level. Additionally, depending on the focus of the AICC, extension services may also be involved in the process.
Partners	Responsibilities varies according to the MOU and the type of partnerships previously arranged, but it often involves funding, communications, administration, coaching, etc.



12.3. Grant implementation support

The Innovators receiving a grant (subproject) will, through the AICC Administration Team's guidance, prepare and submit monthly, quarterly, and annual progress reports to the AICC Administration Team. The said reports will include a summary of activities undertaken during that period and a state of progress towards achieving the milestones described in the approved proposal. At the end of the subproject, a completion report will be prepared by the Innovator, focusing on results obtained and the likely or apparent outcomes and impacts, providing the degree of fulfillment of the end target indicators (milestones) established in the approved proposal. Such completion reports will be required to be submitted within 3 months after the completion date of the subproject. It is recommended to establish some requirement to allow the release of the last tranche of disbursements, therefore, the submission of this last report could be an example of a required condition.

Each Innovator is responsible for reporting to the AICC Administration Team on the progress of the implementation of funded innovation subprojects. Reports will be submitted as agreed in the AICC implementation manual³²; however it is recommended that subprojects submit quarterly progress

reports. Reports will cover approvals, funds disbursed, consultancy/service reports received, compliance with social and environmental safeguards, and an overview of procurement and financial management. Reports will include any other issues that the innovator may raise for discussion and recommendation by the AICC Administration Team. The Innovator and the AICC Administration Team will regularly arrange in-person supervision visits to all funded projects and activities, especially before approving second (or further) disbursements installments. The M&E Officer at the AICC Administration Team will upload in the project's Management Information System (MIS) the subproject approved proposal and regularly updated the innovation subproject status, including photos and video clips on project implementation. To the extent possible, the AICC Administration Team (using GEMS or other tools) will map locations and basic information on each approved subproject, including name, type of activities funded, budget and key contacts.

The AICC Administration Team will ensure the funds for the Monitoring and Evaluation (M&E) functions are considered both in their work plans and budgets.

Box 6. Illustration of the M&E Framework

To track the achievements of the payment benchmarks.

- The AICC Administration Team, with the guidance of the AICC Administrator, will prepare and submit monthly, quarterly, and annual progress reports to the World Bank during AICC implementation.
- To monitor outcomes and innovation subprojects' impacts.
- The Innovator prepares a completion report within 3 months after the completion date of the subproject. As mentioned before, the submission of this last report could be an example of a required condition.
- To monitor disbursed funds, frequent reports, and the progress status of the approved grants.
- The AICC Administration Team/PIU is responsible for reporting the World Bank on the implementation status of innovation subprojects. Reports will be quarterly submitted to the WB.
- To verify the implementation progress as captured on the project's MIS
- The AICC Administration Team will regularly arrange in-person supervision visits to all funded subprojects and activities.

³² This training will be provided by the execution unit (i.e., the Project Implementation Unit)



Innovators will be provided with appropriate and tailored training. Training sessions and materials on fiduciary (procurement and financial management), M&E, social and environmental safeguards, and GRM will be provided by the AICC Administration Team/PIU. Other types of trainings such as technical aspects will be comprised in the subproject proposal, as part of the proposed activities, and funded by the grant and/or the innovator. The training packages usually provided to innovators include the following topics:

Mandatory (directly funded by the AICC Administration Team/PIU)	Subproject specific (funded by subproject grant and/or innovator)
Trainings related to project’s planning, reporting, monitoring, and evaluating projects.	Training to improve business and entrepreneurship skills.
Awareness on rights and responsibilities of Innovators regarding WB social and environmental standards.	Capacity building on AgTech services analysis.
Training on procurement and financial procedures and practices, to enhance efficiency and economy in procurement processes and to avoid incurring irregular practices.	Technical training to learn the correct use of new specific equipment.
Provide knowledge on the available channels for reporting and resolving grievances i.e., preestablished telephone numbers, email account, SMS, and suggestion boxes.	Other topics that could be necessary as per the reality of the subproject.

12.4. Procurement methods for grants

The Innovators will work closely with the AICC Administration Team/PIU procurement assistants to assist the organizations in the procurement of their requirements under all funded innovation subprojects.

In terms of procurement management within the subprojects, there are two alternatives:

1. The AICC Administration Team/PIU, on behalf of the Innovators, manages the procurement of all subprojects. In this case, procurement will be carried out following the procedures for the Project, agreed in the Loan Agreement; or
2. The AICC Administration Team/PIU delegates the procurement and financial management responsibilities to each Innovator. In this latter case, procurement will be carried out following the

procedures set up in the Project Operation Manual (POM) in line with the Procurement Regulations.

The first option is recommended in terms of efficiency, considering that aggregating procurement processes is a more efficient way of implementing.

If the second option is selected, the procurement processes should be carried out using competitive methods (simplified) by default. Any direct contracting/selection should be an exception. Below is a more detailed description of the second option.

The scope of procurement will vary from Innovator to Innovator, since it depends on each procurement plan (PP), which is developed by each Innovator with support of the AICC Administration Team/PIU. The PP must identify the person responsible, the specificities and mechanisms



for contracting goods, works and services. The Innovators, with the support and guidance of the AICC Administration Team/PIU's procurement assistant will share the procurement plans with the AICC Administration Team for their approval, supervision during the implementation phase, and subsequent monitoring.

In this context, the Innovators' procurement and general management responsibilities include the following: **(i)** Procure all goods and services which meet the requirements of the organization, **(ii)** Publish when corresponding, request, open, review, and award bids/proposals and quotations, **(iii)** Ensure that the procurement process meets the requirements set up in the POM, **(iv)** Maintain a stock register of every receipt and issue, **(v)** Storage and

manage goods, identify any obsolete and non-functioning inventories, and make recommendations for the disposal of such inventories to the management committee, **(vi)** Ensure proper installation of equipment and/or machinery where necessary, **(vii)** Supervise the maintenance of the equipment and endorse payment for such services rendered, **(viii)** Ensure the correct identification of storage premises intended to house the new, renovated, and/or rehabilitated machinery and equipment, as well as all the necessary agreements and contracts required to be signed before the procurement is done, **(ix)** In consultation with the management committee, ensure that the assets of the organization are secure and insured, and **(x)** Keep records of the procurement process and contract execution.

12.5. Bidding process

The Innovator will be responsible for carrying out bidding processes, if necessary, according to the typology of AICC selected. In that context, below are some procedures to be followed by Innovators during bidding processes.

- 1.** The Innovator prepares technical specifications/TORs and procurement documents (following standard templates) under the assistance of the AICC Administration Team/PIU, identifies potential suppliers/service providers, invites them to submit quotations or advertises the call requesting bids/proposals when necessary.
- 2.** Once the quotations/bids/proposals are received, the Innovator evaluates them and awards the most convenient quotation/bid/proposal as per the set qualification/evaluation criteria established in the procurement document agreed with the AICC Administration Team/PIU.
- 3.** All bidders/proposers are then informed in writing of the result of the evaluation process and contract award.

- 4.** The Innovator sends a copy of the signed contract to the AICC Administration Team/PIU.
- 5.** The Innovator verifies the quality and quantity of goods/services delivered before their receipt is acknowledged. This is recorded in a stock/asset register.
- 6.** Makes payments according to the contract.
- 7.** Keeps records of the process.

To facilitate the recording of a bidding process, the Innovator will keep record of each stage of the bidding process, including bids of participating firms, prices offered, a comparison schedule between the different firms, technical details that lead to the final selection, among others. The records should also include information on contract execution such as delivery and payments. Up-to-date inventories of the assets owned by the Innovator should always be maintained and can be inspected without notice.



The AICC Administration Team should develop standardized forms/templates for Innovators to prepare procurement documents (request bid/proposals/quotation, evaluation reports, award letters, etc.).

It is worth mentioning that more detailed procurement regulations such as the maximum amount allowed for

each bidding process or quotation will be specifically detailed in each project's POM so that they can be tailored according to the scope and magnitude of the grant. However, Annex 7 provides an overview of the type of information and level of detail that will be required to establish in the Project Operations Manual for the AICC activity.

12.6. Sanctions

In the event of a breach of the MOU and/or non-compliance with pre-established financial management or procurement regulations, the AICC Administration Team/PIU will have the right to apply the following sanctions in the framework of the project:

- **Termination of subproject funding.**
- **Suspension of subproject funding.**
- **Refund of the disbursed funds to the subproject.**
- **Legal action against Innovators who have incurred irregular practices related to the project funds.**
- **Naming and shaming of the culprits.**
- **Blacklisting of the suppliers involved in the procurement malpractices.**

13. AICC Monitoring & Evaluation (M&E)

As mentioned in previous sections, Monitoring and Evaluation (M&E) is critical in any innovation process and, especially in AICCs, which in most cases are new mechanisms that require follow-up to identify any potential improvements to enhance efficiency. Based on previous experiences of AICC design and execution, it is recommended to keep track of subprojects implementation through frequent (quarterly, semi-annual) reports that provides quantitative and qualitative information of the subprojects implementation status and impact on the

sector/society. Below are some aspects to be considered within an AICC M&E systems to be supervised both during and after the event.

Engagement. It's essential to track the engagement metric independently of other outcomes. Therefore, an alternative would be to measure the number of ideas that are being generated by the innovators/stakeholders during the AICC event and who exactly is generating them.



Functional ideas. Ideas need to go into a project management framework, through a sorting system, so they can be mobilized for execution. This is what is called functional innovation – the number of ideas that make it through the filter systems to be selected for the implementation phase. Close monitoring of these processes will provide information on the bottlenecks faced by the sorting process. Every functional idea that comes out of an AICC will need to be assessed for its potential profitability. Otherwise, decision-makers will have difficulties deciding which functional idea is valuable to the sector, region, and country. The projected profitability of an AICC is the total sum of each individual subproject projection. Projections should not be overestimated since it can hamper the Innovator's growth in the long term.

Actual profitability. In case there are innovation subprojects that have already been launched, an actual profitability figure could be calculated with a sum of their gross income calculations. It is worth mentioning that some intangible subproject benefits, such as efficiency building or collaboration, can have very real effects on your bottom line, although it might be difficult to quantify. For these types of subprojects, we recommend looking to company-wide growth metrics. The contribution of specific

innovation subprojects could be isolated by removing projected growth figures in other departments from the total growth metric.

Costs. To reach an actual value analysis, the costs of the AICC will need to be removed from your profitability metrics. In that sense, it is worth mentioning that there are two cost metrics involved: the cost of getting the AICC and the project run. However, there is flexibility on how to divide the labor of these separate liabilities, although it is worth mentioning that it is not accurate to take away total project costs from a single subproject since there is more profitability within an AICC event/innovation program than in a single project outcome. Additionally, if there is concern regarding the program costs, digital platforms can be a good alternative to keep overheads low.

Cultural impact. This is perhaps the most difficult metric to capture. However, an AICC can be the catalyst for broader working changes across your entire AgTech ecosystem. To measure these sorts of changes, it is worth considering a long-term approach to indicators. For instance, indicators could be improvements of the overall team performance, business-market interactions, employee satisfaction and retention, or any other aspect relevant to the Innovators culture.

14. Environmental and Social Risk Management

To ensure the environmental and social sustainability of development projects and other development activities promoted by the WBG, the World Bank has established an Environmental and Social Framework that sets out the World Bank's commitment to sustainable development, through a Bank Policy and a set of Environmental and Social Standards.

The Environmental and Social Framework comprises (i) a vision for Sustainable Development, which sets out the Bank's aspirations regarding environmental and social

sustainability; (ii) The World Bank Environmental and Social Policy for Investment Project Financing, which sets out the mandatory requirements that apply to the Bank; and (iii) The Environmental and Social Standards, together with their Annexes, which set out the mandatory requirements that apply to the Borrower and projects³³.

The Bank is committed to supporting client countries³⁴ in the development and implementation of projects or development activities that are environmentally and socially sustainable, and to enhancing the capacity of the

³³2016. "World Bank Environmental and Social Framework." World Bank, Washington, DC. <https://thedocs.worldbank.org/en/doc/837721522762050108-0290022018/original/ESFFramework.pdf>

³⁴ Unless the context requires otherwise, the term "Borrower" means a borrower or recipient of Bank financing for an investment project, and any other entity responsible for the implementation of the project.



client's environmental and social frameworks to assess and manage the environmental and social risks³⁵ and impacts³⁶ of projects or activities implemented. To this end, the Bank has defined specific Environmental and Social Standards (ESSs), which are designed to avoid, minimize, reduce, or mitigate the adverse environmental and social risks and impacts of projects. The Bank will assist clients in their application of the ESSs to projects supported through

Investment Project Financing or development activities in accordance with this Environmental and Social Policy for Investment Project Financing (Policy).

Projects, analytical products, or development activities supported by the World Bank are required to meet the following Environmental and Social Standards:

Box 7. World Bank Environmental and Social Standards

ESS1: Assessment and Management of Environmental and Social Risks and Impacts.

ESS2: Labor and Working Conditions.

ESS3: Resource Efficiency and Pollution Prevention and Management.

ESS4: Community Health and Safety.

ESS5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement.

ESS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources.

ESS7: Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities.

ESS8: Cultural Heritage.

ESS9: Financial Intermediaries; and

ESS10: Stakeholder Engagement and Information Disclosure.

Source: Authors

Detailed information regarding the Environmental and Social Standards, Policy, and the entire Framework can be found in the World Bank Environmental and Social Framework.

In this sense, the supervision of compliance with the E&S standards will be the responsibility of specialists from the World Bank, AICC Administration Team/PIU, or

public institutions in the Environmental and Social areas. Thus, during the implementation of an AICC, the AICC Administration Team, PIU, and/or jury will require the support of an Environmental/Social Specialist, who will be responsible for the application and compliance of social and environmental safeguards, as well as its monitoring and evaluation.

³⁵ Environmental and social risk is a combination of the probability of certain hazard occurrences and the severity of impacts resulting from such an occurrence³¹ The frequency of the reporting should consider the size, complexity, and nature of the activities.

³⁶Environmental and social impacts refer to any change, potential or actual, to: (i) the physical, natural, or cultural environment, and (ii) impacts on surrounding community and workers, resulting from the project activity to be supported.



15. Grievance Redress Mechanism

A grievance is an expression of dissatisfaction or complaint about wrongdoing in the process or the innovation subproject implementation. It can be made by any AICC stakeholder, project beneficiary, project staff or a participating innovator/business, etc. For instance, (i) service-related grievances may include delays, mistreatment, lack of courtesy, poor response/feedback, among others; (ii) corruption and integrity related: mismanagement of resources, procurement, abuse of office, financial mismanagement, etc.; (iii) lack of information: queries or grievances that require explanation and/or clarification. A Grievance Redress Mechanism (GRM) is a procedure for addressing grievances and queries and for solving problems that may arise during the AICC event and/or subprojects implementation.

The Bank will require the Borrower/Recipient, through the AICC Administration Team or Project Implementing Unit (PIU), to receive and facilitate resolution of concerns and grievances of activities-affected parties arising in connection with the AgTech Innovation Challenge and Competitions, about the AICC's environmental and social performance during its preparation and implementation. This mechanism might include, but is not limited to, a specific webpage or email where grievances and/or consultations could be sent, a direct telephone number, and a live chat, among others.

Parties affected by the implementation of Innovation Challenge or Competition activities may submit consultations, doubts, and/or complaints regarding the process and/or operationalization of activities to the AICC's grievance mechanism (GM). The GM ensures that complaints received are promptly reviewed to address activity-related concerns. Activity-affected parties should bring their concerns directly to the Decision-makers' attention and give the responsible team a reasonable opportunity to respond.





16. Bibliography

McKinsey . (n.d.). McKinsey Global Institute Analysis.

A. Richey, B. T. (2015). "Quantifying Renewable Groundwater Stress with GRACE," *Water Resources Research* 51, no. 7 5217–238.

Audretsch. (2003).

(2018). Case Study: Food Retail Industry Challenge Fund – A private sector-led food innovation initiative. Washington, DC: The World Bank Group. License: Creative Commons Attribution CC BY 3.0. Retrieved from https://www.infodev.org/sites/default/files/food_retail_industry_challenge_fund_-_a_private_sector-led_food_innovation_initiative-case_study-agribusiness_entrepreneurship-infodev-2018.pdf

Development Initiatives, 2. G. (2018). *Shining a Light to Spur Action on Nutrition*. Bristol.

E. Cassou, S. J. (2018). *The Challenge of Agricultural Pollution: Evidence from China, Vietnam, and the Philippines* . Washington, DC: World Bank.

E. Nkonya, A. M. (2016). *Economics of Land Degradation and Improvement: A Global Assessment For Sustainable Development*. Cham, Switzerland: Springer International Publishing.

FAO. (2013). *The State of Food and Agriculture 2013: Food Systems for Better Nutrition*. Rome: FAO.

FAO, IFAD, UNICEF, WFP, and WHO. (2018). *The State of Food Security and Nutrition in the World 2018: Building Climate Resilience for Food Security and Nutrition*. FAO, Rome.

Finistere Ventures,. (2018). 2018 Agtech Investment Review. Retrieved from <https://pitchbook.com/news/articles/finistere-ventures-2018-agtech-investment-review>.

GSMA. (2018). *The Mobile Economy 2018*. London: GSMA.

Qaim, H. S. (n.d.). "Can Mobile Phones Improve Gender Equality and Nutrition? Panel Data Evidence from Farm Households in Uganda," *Food Policy* 73 (2017): 95–103.

Revest, L. a. (2019).

(October 1, 2014 - March 31, 2020.). *Securing Water for Food Technical Assistance Facility Final Report*, .

T. Searchinger, R. W. (2018). *Creating a Sustainable Future: A Menu of Solutions to Feed Nearly 10 Billion People by 2050*. Washington, DC: World Resources Institute.

USDA. (n.d.). ARSX Disruptive Pest Challenge (2019-2020). Retrieved September 2021, from <https://www.ars.usda.gov/research/project?accnNo=435959>

WHO. (2015). *Estimates of the Global Burden of Foodborne Diseases: Foodborne Disease Burden Epidemiology Reference Group 2007–2015*. Geneva, Switzerland.



17. Annexes with examples of AICC’s related documents

Annex 1. Tools for identifying the problem(s)documents

Problem definition worksheet

Problem Definition tool works to both open a problem up – presenting it in a way that can be examined from several angles – as well as helping to define the broad context and associated issues involved.

This tool has been designed to structure the problems' analysis more effectively. It introduces a small set of critical criteria by which an issue can be articulated and assessed to make the activity highly efficient. It also provides a standardized way to compare several different problems, which might seem very different at first.

Go through the Problem Definition worksheet (see below) individually or in small teams and reflect on specific issues identified, exchanging thoughts while writing down your notes. The main objective is to capture, compare and discuss different viewpoints of the problem.

Finally, it is recommended to review and discuss the notes by teamworking to ensure all members make the same assumptions and frame things the same way.

This exercise may lead to 'reframing' the problem initially addressed – for instance, the exercise could help find out that older people have capacities rather than needs. Reframing problems in such a way could guide teams on how the solution can take shape.

Working on a Problem Definition worksheet with different stakeholders, including but not limited to your team members will bring up new contexts. For instance, working with service users, staff or volunteers may provide a slightly different angle to the tool than when working with managers or entrepreneurs. It is recommended to experiment and rephrase questions in the worksheet to keep them relevant in such situations.

I want to clarify my priorities
by focusing on key critical issues

PROBLEM DEFINITION

<p>What is the key issue you are trying to address and why is it important?</p>	<p>Who is it a problem for?</p>	<p>What social/cultural factors shape this problem?</p>	<p>What evidence do you have that this is worth the investment?</p>	<p>Can you think of this problem in a different way? Can you reframe it?</p>
---	---------------------------------	---	---	--



Fishbone Framework

What is the root cause of a problem? Often, there is not a simple answer. The bigger the problem, the more likely the roots will be widespread; mapping the causes can quickly get out of hand, making the problem look overwhelming.

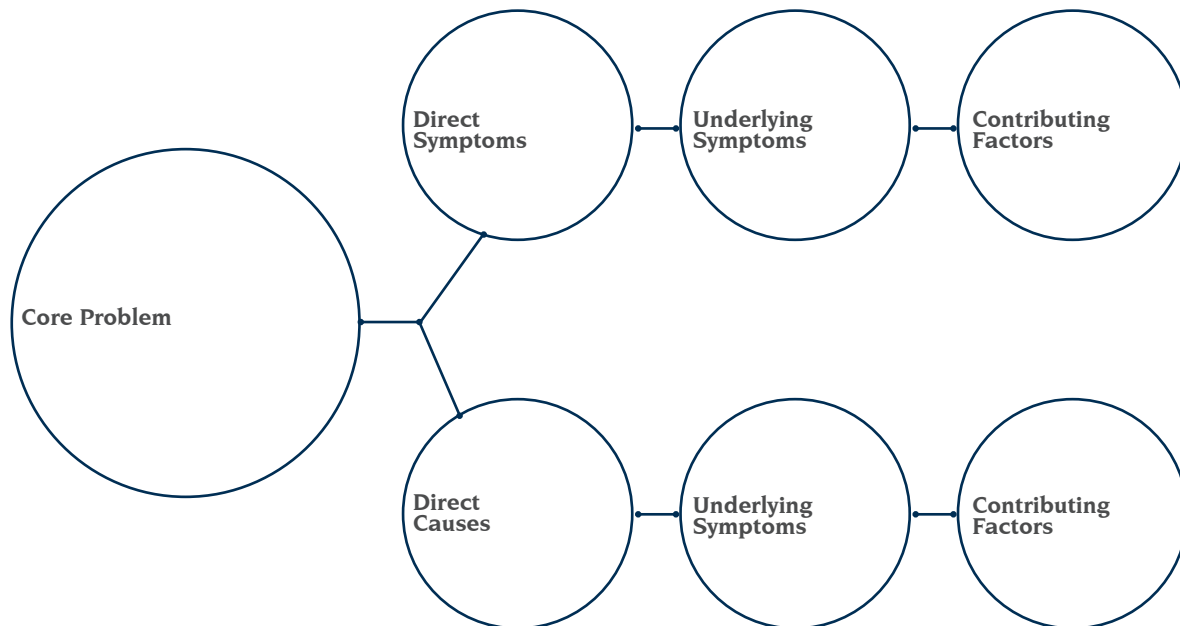
The Fishbone Framework (also called Causes Diagram) allows teams to think of a problem thoroughly and provides a structured way to analyze it. It helps deconstruct all possible causes for the problem rather than the obvious ones. It can be used both to analyze a new problem and/or to highlight the gaps in an existing problem. Additionally, it helps differentiate causes from effects or symptoms, providing a clearer idea of the solutions needed to solve a problem permanently. It also helps build a shared understanding of the core issue in which the team is working.

In terms of steps, the first should identify and write down the core problem that is intended to be solved. Subsequently, the team should write down the direct, underlying, and contributing symptoms identified as a causes. These might imply people involved with the problem, systems, materials, external forces, etc. It is advised to identify as many contributing factors as possible.

Secondly, fill out the causes that correspond to these symptoms. Once the worksheet has been filled, the team should go through each symptom and cause to assess if they are correctly placed. Finally, discuss what you can learn from this exercise to clarify objectives. Be careful not to mix the causes of a problem with its symptoms as you note these down – a cause is a reason why something happens, while a symptom is usually what we see as the result of the problem.

I want to clarify my priorities
by breaking down a complex issue

CAUSES DIAGRAM





Annex 2. Building a partnership tool

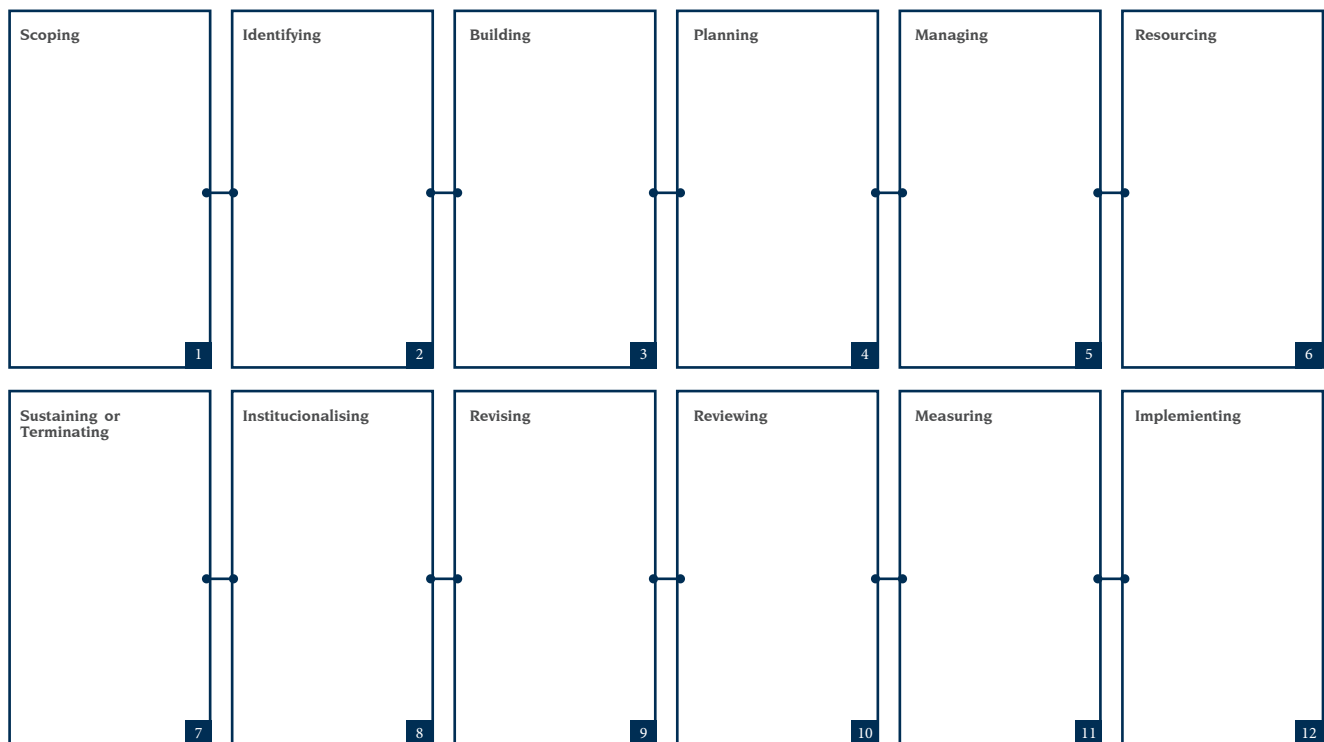
The **Building Partnerships Map** describes a series of phases that a partnership might involve. The map indicates what is needed at each stage to make such partnerships work, offering guidelines rather than rules. As outlined on the worksheet below, each stage of the tool has equal importance and should not be neglected if the partnership is to remain balanced and on course to achieve its goals.

Effective partnerships need to be mutually beneficial to all partners involved. The Building Partnerships Map should be used to analyze at what stage of a partnership a team and its partners are, allowing teams to move through the following phases to build a strong partnership.

- Identify the stage that shows where the team is currently at.
- Identify the stage where the team would like to be.
- Use the template as a map to build a pathway towards that stage.
- The mapped pathway gives an outline of the activities that need to be done in between.

I want to develop a clear plan
for working with other groups that have the same vision as me

BUILDING PARTNERSHIPS MAPS





Annex 3. Sample of Memorandum of Understanding (MOU) for partnership agreements

Sample 1.

This MOU states the intents of collaboration between [TBC1] and [TBC2] to provide a framework for the collaboration for the Agriculture Innovation Challenge that should take place in the first days of [TBC].

Roles and Responsibilities

[TBC1] will engage in the following:

- In collaboration with the [TBC2], build and construct the framework of the pitch competition in order for it to align with the organizers and expectations of the participants
- Accompany the [TBC2] in the recruitment of participants by tapping into the [TBC1] network and collaborating through channels of communication in order to raise awareness through the challenge and recruit the most relevant participants globally
- Provide content to participants and local partners during the event in order to push for the event to contribute to the spark of innovation through technology in the Black Sea
- With the contribution of sponsors of the event, incubate the winning startups through the [TBC2] acceleration program. A full or partial tuition scholarship will be explored. This cost does not include living expenses such as food and board.

In exchange, [TBC2] will commit to the following:

- In collaboration with [TBC1], [TBC2] will provide communication channels, materials and designs in order to raise awareness around the competition and its objectives

- Reach out to sponsors in order to support the competition and facilitate the incubation of the winning startups through [TBC1]'s training program.

Communication Strategy. Marketing of the other Party as a preferred vendor should only be undertaken with the express agreement of both Parties. Where it does not breach any confidentiality protocols, a spirit of open and transparent communication should be adhered to.

Marketing Approvals. Notwithstanding the foregoing, for clarity neither Party shall issue any press release or public statement or use the name of the other Party in any marketing, advertising, or other public announcement with respect to the subject matter of this letter or the Parties' relationship or respective products or services, without the other Party's prior written approval.

Intellectual Property. Each Party will own all worldwide rights, title and interest in and to its Marks, and the other Party will acquire no rights in such Marks except as follows: each Party under the letter will grant to the other Party a non-exclusive, royalty-free, term-limited, non-transferable, and, revocable license to use its Mark with respect to promoting the other Party as a preferred vendor. Each Party's use of the other Party's Marks will be subject to the other Party's reasonable approval as to form, content, and context.

"Marks" will mean the trade names, trademarks, service marks, logos, domain names, and other distinctive brand features of each Party, respectively, as secured by such Party from time to time.

Term. This relationship is in effect from the Effective Date until (1) the execution of a formal written agreement between the Parties; or (2) the date which is 12 months from the Effective Date. The relationship may be extended by the express written consent of both Parties. Any Party may terminate its participation in this relationship by providing written notice to the other Party.



Confidentiality. Each Party agrees not to reveal or disclose any Confidential Information to any third party, or to use any Confidential Information for any purpose other than to evaluate and engage in discussions concerning this MOU, without the prior written consent of the other Party. Each Party shall not disclose Confidential Information or permit the disclosure of Confidential Information to its employees, except that each Party may disclose Confidential Information to its employees who are required to have the information in order to evaluate or engage in discussions concerning this MOU. Each Party agrees to take reasonable measures to protect the secrecy of and avoid disclosure and unauthorized use of any Confidential Information. Confidential Information shall not, however, include any information that a Party can establish: (1) was publicly known or made generally available without a duty of confidentiality prior to the time of disclosure by the Party; (2) becomes publicly known or made generally available without

a duty of confidentiality after disclosure by the Party through no action or inaction of the Party; or (3) is in the rightful possession of the Party without confidentiality obligations at the time of disclosure by the Party as shown by the Party's then-contemporaneous written files and records kept in the ordinary course of business.

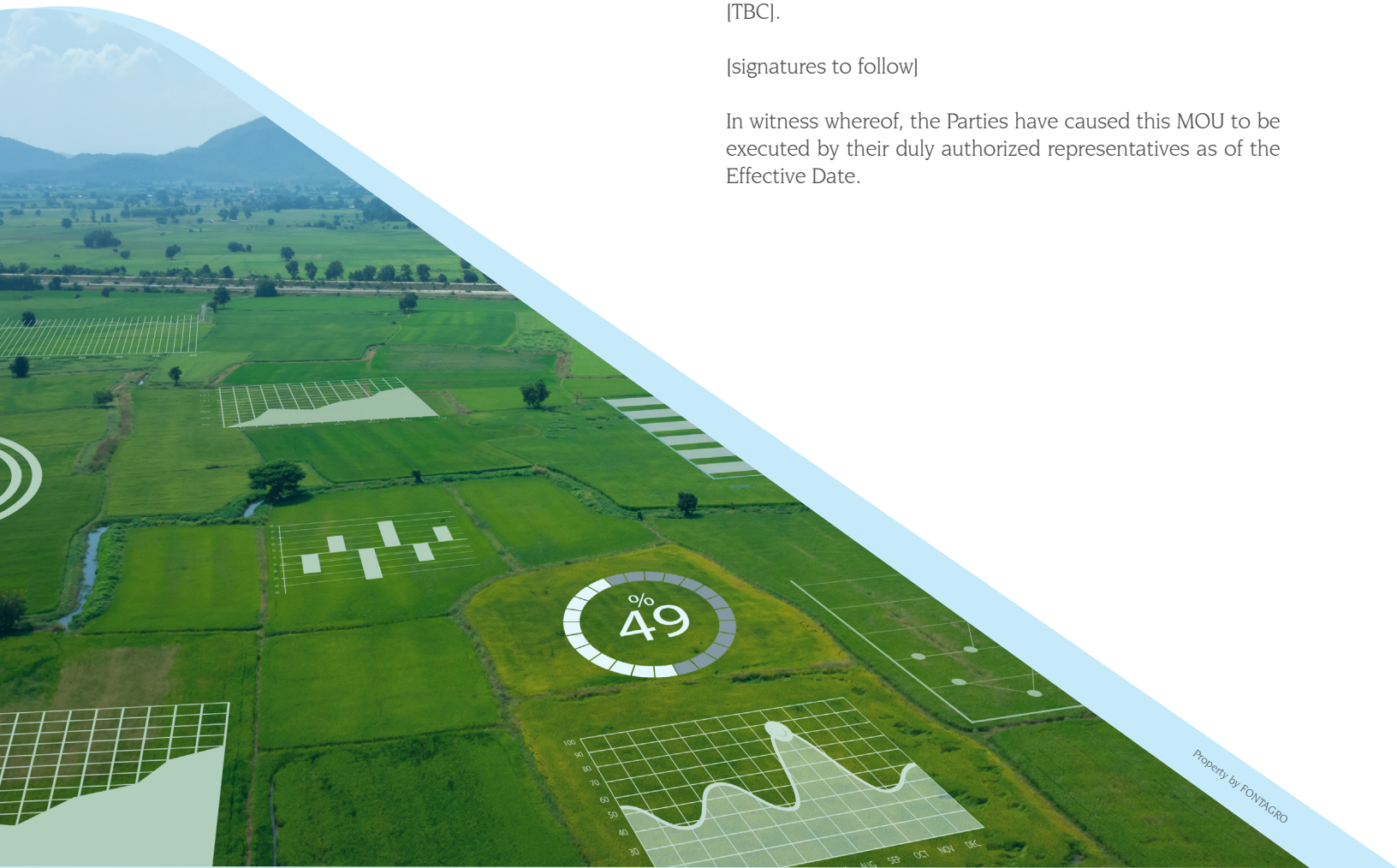
"Confidential Information" shall mean any information used to evaluate and engage in discussions concerning this letter and all of its terms and any non-public information furnished by a Party to the other that is shared as a result of this letter.

Liability. Except for a breach of the legal binding sections set forth in the preamble, no liability will arise or be assumed by DDD unless and until the Parties have executed a definitive agreement in writing.

Conflict Resolution. Any disputes between the Parties shall be resolved via negotiation. In the event that a resolution cannot be reached, disputes shall be resolved by final and binding arbitration before a single arbitrator administered by [TBC].

[signatures to follow]

In witness whereof, the Parties have caused this MOU to be executed by their duly authorized representatives as of the Effective Date.





Sample 2. Example of the Kenya Innovation Challenge.

Memorandum of Understanding

This memorandum of understanding is made between the Count(r)y Government of [TBC] and the [TBC] on [month] [day], 20XX

that

they shall work together towards the launch and implementation of the [Name of the AICC event] that will support [typology of beneficiaries]. The [Name of the AICC event] is an initiative of the [institutions participating] and other partners to ensure that [beneficiaries] can [objective of the AICC event].

The count(r)y is committed and will provide full support to the cohort and cover costs for farmer mobilization, training, and operational expenses at the county level where applicable. The county will leverage resources available under the World Bank project [Name of the project] and utilize other county resources towards investments at farmer level.

The cohort will provide technical assistance to the county through their human resources and expertise in digital technologies. They will leverage this support through the grants received from the World Bank Group and other partners where applicable. Details of the specific role of each the innovators are given below:

[TBC]

The term of this MOU is for a period of [TBC] years from the effective date of this agreement and may be extended upon written mutual agreement. Any party may terminate this MOU upon [TBC] days written notice without any penalties or liabilities.

Authorization

The signing of this MOU is not a formal undertaking. It implies that the signatories will strive to reach, to the best of their ability, the objectives stated in the MOU. On behalf of the organization I represent, I wish to sign this MOU and contribute to its further development.

Count(r)y Government

[TBC]

Cohort

[TBC]

[TBC]

[TBC]



Annex 4. Documents related to the AICC evaluation process

Example of a judging score sheet

Scoring Sheet			
Scoring Elements	Score (1-5, poor through excellent)	Weight	Cumulative score (automatically calculated)
1. Product / Service Quality		20%	
2. Scalability		20%	
3. Ecosystem Engagement		20%	
4. Impact		15%	
5. Business Model Financial Sustainability / Viability		15%	
6. Picht Delivery		10%	
TOTAL	N/A	N/A	TBD

Annex 5. World Bank operations or analytical work that support and promote AICC events³⁷

Country, Projects, and P-codes	PDO	AICC activity/investment	Date of approval and effectiveness
Solomon Islands: Solomon Islands Agriculture and Rural Transformation Project – (P173043)	To increase household food production and improve market access in selected value chains in the Project Provinces, and in the event of an Eligible Crisis or Emergency, to provide an immediate response to such Eligible Crisis or Emergency.	Sub-component 2.3. Innovations and Development Market Place (US\$0.25 million). This sub-component will support and promote the exchange of ideas as well as innovations/ best practices successfully implemented or demonstrated among youths, producers, entrepreneurs, buyers, policy makers, and investors. It is compounded of two parts:(i) Annual Innovation Competition and (ii) Development Market Place. Under the first part, the project will invite submissions of innovations from individuals, producer organizations, and entrepreneurs on an annual basis.	Approval: Expected on February 24,2022. Effectiveness: pending

³⁷There are also other ways through which the WB contributes to the design and implementation of innovation challenges, for instance, through TFs such as the Global Risk Financing Facility (GRIF). The TF has already launched its third Innovation Challenge Fund called "Innovations in Risk Financing" to pilot and support the development of innovative risk financing mechanisms. Visit the following website for more details: <https://www.globalriskfinancing.org/publication/grif-technical-talks-fact-sheet-4-challenge-fund>.



Country, Projects, and P-codes	PDO	AICC activity/investment	Date of approval and effectiveness
<p>China: Henan Green Agriculture Fund Project – (P169758)</p>	<p>The proposed objective is to demonstrate the viability of financing green agriculture investments and foster the innovation and adoption of green agriculture standards and technologies in Henan.</p>	<p>Subcomponent 2.3: Risk-capital Challenge Fund (US\$6 million, IBRD). The proposed project would pilot an early-stage Venture Capital (VC)/ angel investment-like product to stimulate the market testing and development of new or emerging green technologies and other high-impact solutions for green agriculture, which will be selected through a process of “innovation competition”.</p>	<p>Approval: March 26, 2020</p> <p>Effectiveness: pending</p>
<p>Kenya: Disruptive Agricultural Technology Challenge and Conference: Creating an innovation ecosystem to connect a million Kenyan farmers to disruptive agricultural technologies. Financed through the KCSAP (P154784) and NARIGP (P153349) project.</p>	<p>To provide a forum for entrepreneurs and ecosystem enablers to share information on existing Disruptive Agriculture Technologies, the opportunities and barriers to further their expansion and growth, as well as launch the One Million Farmer Initiative. The initiative aims to provide solutions to the challenges faced by farmers by developing a digital platform, which will bring together different disruptive technology innovators to offer an end-to-end platform solution keeping farmers’ challenges as a focal point.</p>	<p>The World Bank through two of its existing projects, the Kenya Climate Smart Agriculture (KCSAP; P154784) and the National Agriculture and Rural Inclusive Growth Project (NARIGP; P153349) is cumulatively investing 450 million USD to enhance productivity, resilience, and profitability of the million farmers across all 45 rural counties in Kenya.</p> <p>The first cohort of entrepreneurs selected from the Challenge competition included the following categories: (i) Productivity; (ii) Market linkages; (iii) Financial inclusion; and (iv) Data analytics.</p>	<p>Date of the event: 5-6 Apr 2019, Villa Rosa Kempinski, Nairobi, Kenya.</p>
<p>Kenya: Joint Korea-Africa Disruptive Agricultural Technologies (DATs) Study</p>		<p>Deliverable 2: Korea-Africa Innovation Knowledge and Challenge Event. Building on the outputs generated by the activity 1, this event will activate identified matching opportunities through a large-scale event in South Korea. The team will draw on the Bank’s convening power and existing relationships to organize an event structured around the following sessions: a) Bootcamp and business pitches for Korea-Africa agri-tech collaborations, b) Korea-Africa investment roundtable with development partners and private investors, and c) Korea-Africa policy panels with government representatives.</p>	<p>Date of the event: expected to be launched in</p>



Country, Projects, and P-codes	PDO	AICC activity/investment	Date of approval and effectiveness
Guatemala: Responding to Covid-19: Modern and Resilient Agri-Food Value Chains – (P173480)	The objective of the Project is to promote an agro-industrialization strategy that reduces food losses, increases the adoption of climate-resilient technologies, and supports the COVID-19 emergency response for beneficiaries in select value chains.	Subcomponent 2.3: Agro-industrial innovation window. This subcomponent will feature an Innovation Challenge Fund to competitively identify promising enterprises in any field related to climate-smart agriculture, post-harvest or food safety technologies. The fund will support innovation subprojects to pilot promising technologies and developing and testing new technologies or productive processes for post-harvest processing, storage, aggregation, logistics, or other food safety and climate-smart solutions (e.g., renewable energy, energy-efficient, and low-carbon technologies). Inclusive and gender-sensitive innovations and interventions adapted to the needs of women, Afro-descendants and Indigenous populations will also be emphasized, to close the gaps arising from lack of productive inputs adapted to their needs.	Approval: December 8, 2020 Effectiveness: pending
Argentina: Climate Intelligent and Inclusive Agri-Food Systems Project – (P176905)	The objectives of the project are to (i) support economic recovery and promote climate smart practices among Project beneficiaries in Argentina's agri-food system; and (ii) respond effectively in case of an eligible crisis or emergency.	Subcomponent 3.2. Agri-food Tech ecosystem investments. This subcomponent will provide finance through four windows for the development of new climate-smart technologies and practices through matching grants. Window 4 - Innovation Challenge Funds: this window will support open competitions and challenges to finance individual entrepreneurs/innovators who are in the ideation/prototype phases of developing solutions to specific problems related to climate-smart agriculture development. For the first three windows, the Project will award matching grants to the beneficiaries (Agri-food Tech MSMEs) with the most innovative and promising proposals, so that they can leverage further private investment (equity or credit). For the fourth window, grants will be awarded primarily through open competitions and challenges where solutions to specific problems will be submitted and an interdisciplinary, inter-stakeholder panel will evaluate and select the most promising proposal.	Approval: December 9, 2021 Effectiveness: Expected before end of March 2022.
Indonesia: Cultivhacktion – Indonesia Digital Agriculture Hackathon.	Serve as a platform for young innovators to co-create together with Ministry of Agriculture, Indonesia, and address these problem statements with the datasets and demonstrate viable solutions.	CultivHacktion is the beginning of a series of innovation effort to operationalize data-driven agriculture at the national level and provincial level, starting with West Java horticulture sector. It is a crowdsourcing approach and pilot promising digital agriculture solutions that could scale out and mainstream under Agriculture Value Chain Development Project (ICARE) (P173487).	Launched of the event: Sept 24, 2021.



Annex 6. Examples of AgTech and innovations developed in the Agri-food sector

AgTech Innovations developed ³⁸	Country	Brief description
FarmDrive	Kenya	FarmDrive uses mobile phones, alternative data, and machine learning to close the critical data gap that prevents financial institutions from lending to creditworthy smallholder farmers.
Kuza	Africa and Asia (India, Kenya, Mozambique)	Kuza engages rural youth as Agripreneur each supporting a cohort of 200 smallholder farmers from their communities. It provides incubation and training on agronomy, business, entrepreneurial, and soft skills through a digital toolkit with video content on good agricultural practices to offer agri-extension services. It also provides agripreneurs the possibility to join a network of private sector partners that provide mentorship and business support services, while facilitating access to inputs, credit, markets, and other allied services, to create a sustainable business for Agripreneurs.
M-PESA	Kenya, Mozambique)	Mobile phone-based money transfer service, payments, and micro-financing service launched in 2007. It has since then expanded to Tanzania, Mozambique, DRC, Lesotho, Ghana, Egypt, Afghanistan, and South Africa.
Harvesting	Uganda	This is an Agriculture Intelligence Engine that leverages aspects related to remote sensing satellites, agriculture, artificial intelligence, and financial inclusion to help drive financial inclusion by providing actionable data to financial institutions to help farmers get a loan in Uganda.
TROTRO Tractor	Ghana	The platform provides farmers the possibility to request, schedule and prepay for tractor services, making agricultural mechanization (Tractor) service available, accessible, and affordable to enhance productivity, improve efficiency and reduce post-harvest loss.
Hello Tractor	Ghana, Kenya, and Nigeria	This is a tractor sharing application that aims to connect tractor owners and smallholder farmers in need of tractors, allowing users to make use of the tractor for a certain time without the need to acquire ownership of the said asset.
Plantix	India	It is a mobile crop advisory app for farmers, extension workers, and gardeners, which aims to remotely diagnose pest damages, plant diseases and nutrient deficiencies affecting crops and offers corresponding treatment measures.
Digital Green	South Asia, Sub-Saharan Africa, and LAC	Among other services, this platform produces video recording of technical assistance and trainings on Agriculture in different topics and languages.

³⁸This includes Digital FinTech solutions, Digital platforms, Agriculture Apps, Bid Data and Advanced Analytics, among others



Annex 7. Examples of the typology and level of information related to an AICC needed to be included in the Project Operations Manual

In terms of goods and services procurement, Innovation subprojects will be required to adhere to the following procurement regulations, depending on the country and subproject sector:

- Goods and services that do not exceed \$XXX during the whole process/fiscal year will be procured without written quotations or agreement. However, the items must be received and issued, and all transactions need to be recorded in the store’s ledger or register.
- Goods and services with prices over \$XXX during any fiscal year will be procured in consultation with the AICC Administration Team/PIU procurement specialist provided the following is observed:
 - a) To enhance competition in the bidding process,

as many quotations as possible should be invited. A minimum of three competitive quotations is expected to be obtained from reputable firms; in cases where that does not happen due to lack of relevant vendors, it must be indicated.

- b) Recurring goods or services’ orders will not exceed \$XXX in any fiscal year.

Quotations for goods and services amounting to between \$XXX and \$XXX during any fiscal year will be awarded by the Innovator in consultation with the AICC Administration Team/PIU’s procurement officers. In this context, the evaluation of the offers/bids will be done using a standardized mechanism (see form below) to come up with a price comparison scheduled for deliberation and award by the procurement sub-committee.

5 quotations were invited from the following pre-qualified firms
i. Firm No 1
ii. Firm No.2
iii. Firm No 3
iv. Firm No.4
v. Firm No.5
The following firms did not respond:
i. Firm No. 3
ii. Firm No. 5
The following firms responded:
i. Firm No. 1
ii. Firm No. 2
iii. Firm No. 4



Subsequently, a price comparison schedule will be prepared, as shown below.

Price Comparison Schedule				
Item No.	Item description	Unit of issue	Quantity	Quotation
				Firm No 1 No 2 No 4
1				
2				
3				
4				
5				

After the evaluation exercise, the Innovator will select the most suitable firm to award the bid. In normal conditions, and considering all factors remain the same, including quality among the different offers, the lowest offer should be the one awarded. However, in case the lowest bidder offer is not considered the best one to be accepted, the Innovator will provide sufficient convincing arguments to support the final decision. The AICC Administration Team and the Innovator will keep a record of the deliberations as well as the final decision.

- Goods and services that overrun \$XXX and up to \$XXX, will be carried out through an invitation to quotation from qualified suppliers within the geographical area, and it will be adjudicated by the Innovator through the AICC Administration Team.
- Goods with an estimated cost that overrun \$XXX per single item in any fiscal year will be procured through open tender or restricted tender to be adjudicated by the Innovator through the AICC Administration Team.

Annex 8. Environmental and social form

Example (in Portuguese) of a verification form for the environmental and social screening and categorization of subprojects:

<https://drive.google.com/file/d/1Ua8W-C5a-wyWv044KwhtB9d6Wr40N6Ns/view>

