

Technical Cooperation Document

I. Basic Project Data

▪ Country/Region:	Regional
▪ TC Name:	Support to Catalyze LAC Deep Tech Solutions Exchange in Response to COVID-19
▪ TC Number:	RG-T3720
▪ Team Leader/Members:	TL: Fermin Vivanco (LAB/DIS), Gyoung Joo Choe (LAB/INV). TM: Ruth Houlston (DIS/CBA), Jeehyon Yoh (LAB/INV), Smeldy Ramirez (DIS/CDR), Lorena Barrenechea (FML/LAB), Taitt Nayaatha (DIS/CBA), Patricia Guevara (LAB/DIS), Josette Hernandez (DIS/CCR), Alexandra Hambrook (FML/LAB)
▪ Taxonomy:	Client Support
▪ Number and name of operation supported by the TC:	
▪ Date of TC Abstract:	May 2020
▪ Beneficiary:	Startups from IDB Borrowing Member Countries
▪ Executing Agency:	Inter-American Development Bank through the Office of Multilateral Investment Fund ("IDB Lab")
▪ IDB funding requested:	Korea Private Sector Development and Innovation Fund (KPS)\$ 1,000,000.00
▪ Local counterpart funding:	\$360,000
▪ Disbursement period:	24 months
▪ Types of consultants:	Individuals; Firms
▪ Prepared by Unit:	IDB Lab
▪ Unit of Disbursement Responsibility:	IDB Lab
• Donors providing funding	Korea Private Sector Development and Innovation Fund (KPS)
▪ TC included in Country Strategy (y/n):	No
▪ TC included in CPD (y/n):	No
▪ Alignment to the Update to the Institutional Strategy 2010-2020:	Productivity and Innovation; Economic Integration
▪ MIF co-financing:	\$600,000 ((\$450,000 from Prototype financing under Proposal for the Creation of a Technical Cooperation "Sandbox," Line of Activity for Innovation Prototypes RG-O1676 and \$150,000 in-kind)

II. Objective and Justification

- 2.1. **Objective:** The objective of this TC is to support COVID-19 responses developing startup ecosystems in Latin American and the Caribbean (LAC) countries through fostering key technology transfer and knowledge exchanges around deep technologies (Deep Tech), with a special emphasis on innovation for inclusion. This exchange of knowledge will connect LAC with the learnings of startup ecosystems with successful

COVID-19 responses, such as that of Korea. This will be achieved by supporting and financing of collaboration, partnerships and joint venturing between LAC organizations (startups, innovation hubs/accelerators, research institutes, etc.) and advanced deep tech startups that provide key solutions for both short term health and medium-term economic challenges. This project will also support knowledge exchange and dissemination activities between LAC and developed deep tech entrepreneurial ecosystems, with the goal of fostering a longer-term mechanism for collaboration.

- 2.2. Amidst the continued outbreak of COVID-19 across LAC, the region has already been suffering from both inadequate public health capacity and a sharp reduction in economic activity. Among the USD 2.3 trillion of global real GDP loss LAC is expected to take a particularly hard hit,¹ while leaving its vulnerable population particularly at risk of both public health and economic damages.² With COVID-19's health and economic impact predicted to push over 49 million to poverty in 2020 alone, poor and vulnerable populations in LAC are being disproportionately being impacted by the lack of access to healthcare and opportunities in education, employment, production, among others. Hence, knowledge transfer for innovation for inclusion in various sectors is more needed than ever in the region.³
- 2.3. Amidst the continued outbreak of COVID-19 across Latin America and the Caribbean, the region has already been suffering from both inadequate public health capacity and a sharp reduction in economic activity. With three times less expenditure in public health than the EU average, LAC healthcare systems often lack access to adequate technology, not to mention effective and affordable systems of universal diagnostics, patient care, and data management⁴⁵. However, perhaps more daunting than the immediate public health situation is the long-lasting economic crisis that is looming across the entire region. Approximately USD 2.3 trillion of global real GDP loss is predicted, which is expected to hit developing economies such as the LAC the hardest⁶. Moreover, a recent survey on Chile revealed that the pandemic was broadening inequality, leaving vulnerable population particularly at risk of both public health and economic damages⁷.
- 2.4. On the other hand, Korea became a model example for its effective, fast, and technology-based COVID-19 response. Korea is so far the only country with a population of over 50 million that has flattened the outbreak curve, without imposing

¹ Warwick McKibbin (2020). Brookings Institution. "What are the Possible Economic Effects of COVID-19 on the World Economy?" <https://www.brookings.edu/blog/up-front/2020/03/06/what-are-the-possible-economic-effects-of-covid-19-on-the-world-economy-warwick-mckibbins-scenarios/>.

² IDB (2020). <https://blogs.iadb.org/ideas-matter/en/novel-dataset-reveals-the-deepening-effects-of-the-covid-19-pandemic-on-inequality/>.

³ World Bank (2020). <https://blogs.worldbank.org/opendata/impact-covid-19-coronavirus-global-poverty-why-sub-saharan-africa-might-be-region-hardest>

⁴ <https://www.bbc.com/mundo/noticias-america-latina-51916767>

⁵ <https://www.weforum.org/agenda/2020/04/zero-hour-latin-america-caribbean-pandemic/>

⁶ Warwick McKibbin (2020). Brookings Institution. "What are the Possible Economic Effects of COVID-19 on the World Economy?" <https://www.brookings.edu/blog/up-front/2020/03/06/what-are-the-possible-economic-effects-of-covid-19-on-the-world-economy-warwick-mckibbins-scenarios/>.

⁷ <https://blogs.iadb.org/ideas-matter/en/novel-dataset-reveals-the-deepening-effects-of-the-covid-19-pandemic-on-inequality/>

personal travel restrictions or closing airports and thereby minimizing negative effects on the economy⁸. Central to such efficient control measures was the countries' deep technology (or *deep tech*) ecosystem of laboratories and startups, who were able to source intelligent and science-based solutions at the agile speed required by the Korean public healthcare system. Defined as “developing technologies that advance scientific and technological frontiers as diverse as agriculture, healthcare, energy and transportation,” deep tech solutions that were swiftly offered included rapid diagnostic kits, Big Data based real-time tracking systems, drive-through testing pods, quarantine robots, AI-based diagnostics, thermal detection, among many others⁹. Not only so, Korean deep tech startups have already been tackling further non-health solutions to COVID-19 crisis, such as remote education platforms, work management platforms as well as AI-based productivity platforms for SMEs.

- 2.5. While LAC startup ecosystems have been producing a vast array of effective locally-sourced solutions, there is a general lack of companies with a strong level of deep tech capacity, due to a general dearth of government-sponsored R&D financing and an overall weak innovation ecosystem. As an illustrative example, although LAC's VC market has evolved quickly since 2016 (nearly 2x every year), 78% of the deals are focused on three sectors (logistics, fintech, transportation), many of which lack core deep technology or use imported technology. The gap in deep tech capacity then leaves space for technology and knowledge transfers, not only in immediate response to the current health crisis but also for a long-term collaboration to build solutions to post-COVID-19 challenges the region will face, as well as to strengthen LAC's own deep tech ecosystem.
- 2.6. International collaborations, partnerships, and joint venturing can serve as an effective method for short-term local solution adaptation, as well as long-term technological transfer. International collaborations, joint venturing, and partnerships have repeatedly proven to be an effective mode of knowledge transfer and far-reaching productivity spillover across the overall industries (Jiang et al. 2018). Joint Ventures (JVs) are more agile than general partnerships yet can foster long-term partnerships. JVs thus have become the preferred mode of business for innovative companies, especially after economic a trough (Deloitte 2020).
- 2.7. This Technical Cooperation project will include the following key components: (i) prototype support for deep tech partnerships, collaborations and/or joint ventures for short and medium-term solutions to COVID-19.; (ii) catalyzing Partnerships for LAC Deep Tech Innovation Ecosystems and (iii) LAC Deep Tech Ecosystem Acceleration - knowledge and dissemination .Some of the key ecosystem actors to be actively involved in the project include Born2Global Center, Seoul National University, KIC (Korea Innovation Center), The Entrepreneurship Network (TEN) Habitat, NXTP Labs, Thalesab, among others.

⁸ Ministry of Economy and Finance of Korea (2020). Tackling COVID-19: Health, Quarantine and Economic Measures of South Korea.

⁹ <https://www.techinasia.com/korea-response-covid19-praised-startups-helped>

- 2.8. **IDB Lab** has a proven track record with extensive experience both in working with agile prototypes for innovative projects, as well as managing international joint ventures in areas such as HealthTech, AgTech, and many others. Examples being in the case of Paraguay (PR-T182) where an Israeli Agtech solution was adapted and implemented by a local organization; and EcoMicro (RG-O1649), which consisted of a multi-donor collaboration on joint ventures. Moreover, IDB Lab's prototype facility under RG-O1676 has proven to be an effective tool for agile solutions and local adaptation processes, especially in times of crisis such as that of COVID-19. The prototype facility is currently being used to finance approximately 20-24 locally sourced solutions across 23 countries, mapped from IDB Lab's COVID-19 Challenge – for which 500 applications were received.

III. Description of Activities and Output

- 3.1. **Component I: Prototype support for deep tech partnerships, collaborations and/or joint ventures for short and medium-term solutions to COVID-19.** Component I will seek to finance up to (2) short-term solutions to immediate health crisis as a result of COVID-19, especially in HealthTech and Biotech, , and up to (4) partnerships for medium-term solutions for economic recovery and adaptations of key services in other vital industries for vulnerable populations, in sectors such as FinTech, ClimateTech, AgTech, CleanTech, EdTech, and IndustryTech, among others. Each partnership will be valued at approximately US\$100,000-150,000 for prototype support in line with the three stages of IDB Lab TC Prototypes defined under RG-O1676 (definition, implementation, evaluation, and dissemination of results). LAC Innovation Hubs will be engaged to support the execution of Prototypes (via direct contracts) including acceleration, data gathering/tracking of results, local ecosystem engagement, mobilization of local mentors, and investors. LAC Innovation Hubs will receive up to US\$20,000 per Prototype for these services.¹⁰
- 3.2. To facilitate partnerships and exchanges with successful deep tech COVID-19 solutions this TC will single source Born2Global's leading Tech Innovation Hub in Korea to support the sourcing and matching process. Born2Global will also provide support for the accompanying process of Korean Startups. Priorities will be given to those partnerships that address short to medium-term problems caused by COVID-19 in the LAC region, especially those that address problems of inclusion and vulnerable populations.
- 3.3. **Component II: Catalyzing Partnerships for LAC Deep Tech Innovation Ecosystems.** For a more sustainable cross-regional collaboration beyond the individual joint ventures/partnerships, IDB Lab will catalyze connections between LAC and Korean deep tech Innovation ecosystems. Building on the partnership built-in

¹⁰ In the context of this project, "Partnership" can be defined as a collaborative business effort between a Korean entity and an entity from Latin America and the Caribbean. They can take one of the following forms (not exhaustive): Joint Venture Knowledge/Technical Transfer, Collaborative Creation.

Each partnership format will be accompanied, accelerated, and monitored by a LAC accelerator/ecosystem actor partner, in close coordination of the Korean accelerator partner.

Component I, this component will promote the exchange and engagement of key ecosystem players, including accelerators, universities, and relevant government players, including ministries of the Korean Government, such as Ministries of SMEs and Startups; Agriculture; and ICTs. Given the effects of COVID-19, most of the events will be held virtually, and when possible, physically, exploring engagement in alignment with IDB Group sponsored events, including LAC-Korea Tech Summit in 2021; LAC-Korea Business Summit in 2022).

- 3.4. Component III. LAC Deep Tech Ecosystem Acceleration - knowledge and dissemination.** For a long-term collaboration between the deep tech innovation ecosystems, the IDB Lab will commission a knowledge product that will map the deep tech solutions within LAC as well as from Korea, with a special emphasis on innovation for inclusion. At the same time, recommendations on the role of the IDB Lab in connecting LAC's Deep Tech Ecosystem with global partners will be explored. Additional efforts will be made to extract deep tech lessons on how to harness deep tech for inclusion aligned with the IDB Lab priority areas. The findings of these assessments will be disseminated via IDB Lab's knowledge exchange channels.

IV. Indicative Budget

4.1. The indicative budget for this project will be the following:

Component/Activity	KTF	IDB Lab	Counterpart*	Total
Component 1.-Prototype support for deep tech partnerships, collaborations and/or joint ventures for COVID-19 solutions (short & medium term)	\$ 900,000	\$ 550,000	\$ 360,000	\$ 1,810,000
i) Prototype financing	\$ 800,000	\$ 450,000	\$ 360,000	\$ 1,610,000
COVID-19 Prototype grants (approximately \$100,000 to \$150,000 in cash & \$30,000 in-kind provided by local accelerators, for up to 5 partnerships)	\$ 600,000	\$ 450,000	\$ 360,000	\$ 1,410,000
LAC Innovation Hub - acceleration, local ecosystem engagement, mobilization of local mentors and investors (up to US\$20,000 per Prototype)	\$ 100,000	\$ -		
Korean startup ecosystem matching, market research, data collection and analytics (Born2Global)	\$ 100,000	\$ -	\$ -	\$ 100,000
ii) Partnership Facilitation and Coordination	\$ 100,000	\$ 100,000	\$ -	\$ 200,000
Program overseeing, monitoring, partnership mobilization, internal coordination (DTC Contractual)	\$ 100,000	\$ -		\$ 100,000
Program facilitation in countries, specialist expertise in selection and execution of partnerships (in kind IDB Lab)	\$ -	\$ 100,000		\$ 100,000
Component 2. Catalyzing Partnerships for LAC Deep Tech Innovation Ecosystems	\$ 50,000	\$ -	\$ -	\$ 50,000
i) LAC-Korea Deep Tech Learnings Exchange Events	\$ 50,000	\$ -		\$ 50,000
Organization of virtual outreach events for key investors/ecosystem actors in LAC and Korea (Born2Global)	\$ 25,000			
Travel for startups and innovation hubs to participate for knowledge events	\$ 25,000			
Component 3. LAC Deep Tech Acceleration - knowledge and dissemination	\$ 50,000	\$ 50,000	\$ -	\$ 100,000
i) Knowledge dissemination on LAC deep tech ecosystem and learnings from Korea	\$ 50,000	\$ 50,000	\$ -	\$ 100,000
Mapping, knowledge production on LAC deep tech ecosystem with case study from Korea (Born2Global)	\$ 50,000	\$ 50,000	\$ -	\$ 100,000
TOTAL	\$ 1,000,000	\$ 600,000	\$ 360,000	\$ 1,960,000

*both in-kind and cash

4.2. IDB Lab's contribution will sum up to \$600,000, of which \$450,000 will come from Prototype financing (under RG-O1676) and \$150,000 in-kind (that will represent IDB Lab teams mobilized to support the broader implementation of the Prototypes under this TC as well as to provide in-Country support).

V. Executing Agency and Execution Structure

5.1. Inter-American Development Bank, through the IDB Lab, will be the executing agency for this TC. IDB Lab will single source the services of LAC Innovation

Hubs/Accelerators,¹¹ via direct contracting to execute the Prototypes financed under this TC. Each Prototype Contract, issued to the LAC accelerator/ecosystem partner who will disburse the prototype grant and accelerate the partnership, will have a maximum value of US\$170,000. Out of this amount, approximately US\$100,000-\$150,000 will be to support the implementation of the 3 Prototype stages, as established in RG-O1676 (definition, implementation, and evaluation/dissemination) and up to US\$20,000 will be to support the acceleration, local ecosystem engagement, investor and mentor network mobilization (provided by the LAC Innovation Hub). Individual LAC Innovation Hubs/Accelerators will be identified by the IDB Lab via an agile origination process described in Annex 2, which will be finalized before the execution of this TC. IDB Lab will single source Born2Global via direct contracting to provide specific facilitation and coordination tasks relating to engagement with Korean deep tech startups, knowledge events, and knowledge product development, as defined in the Components I, II, and III. IDB Lab contributions will be mobilized via Technical Cooperations up to US\$450,000 (equivalent to three prototypes with up to US\$150,000 each) via delegated authority to Country Representative, under RG-O1676.

- 5.2.** IDB Lab will ensure close collaboration with the Bank Group during the execution of this TC. IDB Lab will be communicating with CTI, SPH, and other relevant parts of the IDB Group, through holding informational sessions post-approval to explore options for collaboration and disseminate program timeline. There are also specific opportunities for close collaboration with IDB Invest to open Business to Business (B2B) pathways for adoption and scale of deep tech prototypes supported under this TC. The project team will explore such opportunities in alignment with IDB Lab's new corporate venturing initiative in preparation. Initially the opportunity to build connections for scale – and jointly develop know around deep tech acceleration – will be advanced with IDB Invest under their *Exponential Impact Program (RG-T3597)*, which seeks to drive sustainable digital transformation across LAC ecosystems, generate knowledge and provide opportunities for digital transformation across different industries, aimed at building digital capacity at the company level. IDB Lab will coordinate with IDB Invest to explore other opportunities for collaboration around Deep Tech Acceleration in LAC.
- 5.3.** For the three prototypes contributed by the IDB Lab through RG-O1676, each prototype partnership will be processed through the standard RG-O1676 eligibility and approval process.

VI. Project Risks and Issues

¹¹ Some example candidates could be: Thales Lab (Uruguay), NXTP (Regional/Argentina), CUBO (Brazil), TEN Habitat (Barbados), TechBeach (Jamaica), Impact Hub (Regional/Honduras), among others

- 6.1 Implementation of a regional project implies a higher level of complexity, as well as risks related mainly to inter-institutional coordination. It is expected that these risks will be mitigated by having the IDB Lab as the executing agency.

VII. Environmental and Social Classification

- 7.1 The ESG classification for this operation is "low risk".