

TC ABSTRACT

I. Basic Project Data

▪ Country/Region:	Regional/IDB
▪ TC Name:	Supporting E-Commerce through New Technologies
▪ TC Number:	RG-T3388
▪ Team Leader/Members:	Corcuera-Santamaria, Sandra (INT/TIN) Team Leader; Jimenez Orjuela, July Emperatriz (INT/TIN); Lucenti, Krista (INT/TIN); Volpe, Christian (INT/INT); Garcia Sanjines, Jose Martin (INT/TIN); Moreno, Michelle Leonor (ITE/IPS); Allende Lopez, Marcos (ITE/IPS); Gomez Gonzalez, Maria Margarita (INT/TIN); Contreras Huerta, Rodrigo Andres (INT/TIN); Libby Hernandez, Margarita (INT/TIN); Rospide, Maria De La Paz (INT/TIN); Valderrama-Celaya, Claudia (INT/INT); Medina Villanueva, Daniela (INT/INT); Esteves, Yasmin (INT/INT); Negret Garrido, Cesar Andres (LEG/SGO); Imana, Zaida Victoria (INT/TIN); Shearer, Matthew Stone (INT/INT)
▪ Taxonomy:	Client Support
▪ Number and name of operation supported by the TC:	N/A
▪ Date of TC Abstract:	29 Apr 2019
▪ Beneficiary:	Customs and Trade institutions
▪ Executing Agency:	INTER-AMERICAN DEVELOPMENT BANK
▪ IDB funding requested:	US\$350,000.00
▪ Local counterpart funding:	US\$0.00
▪ Disbursement period:	24 months
▪ Types of consultants:	Firms
▪ Prepared by Unit:	Trade & Investment
▪ Unit of Disbursement Responsibility:	Integration and Trade Sector
▪ 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; Institutional capacity and rule of law

II. Objective and Justification

- 2.1 The overall objective is to support e-commerce and the security of the logistic chains through the use of new technologies. The specific objective is to improve the capabilities of customs risk management systems through Artificial Intelligence and Blockchain to unlock the potential of e-commerce in the LAC region.
- 2.2 Trade institutions, border authorities and the private sector worldwide are undergoing major structural transformations. New technologies are driving forces for new processes for the production, trading, logistics, marketing, control and even consumption of goods and services. As the Industry 4.0 progresses, new technologies are at the core of innovative trade tools that have the potential to revolutionize trade and logistics.
- 2.3 E-commerce is thriving with an increase access to the Internet, to electronic devices, and to the improvement of transport logistics. This new form of trade is full of opportunities for businesses and consumers. However, it also poses challenges for governments, especially for regulatory entities, such as customs and border agencies. These challenges are related to their limited capacity to cope efficiently with increasing volumes of cross border e-commerce. Furthermore, some of the small shipments and parcels may be used to smuggle illicit goods or to contravene the laws and not pay the

duties and taxes due. Government authorities find it difficult to fulfill effectively their mandates to protect revenue collection and the security of their citizens while facilitating the legitimate flow of goods generated by e-commerce.

- 2.4 An efficient and effective risk management system is an essential tool for customs and border authorities to mitigate the risks associated with e-commerce. At the heart of a sound risk management system, data is the holy grail for successfully profiling the identified risks. The vast amount of structured and unstructured data (including images) available in trade operations is a perfect ground for new technologies such as Artificial Intelligence (AI) and Machine Learning (ML) to strengthen the potential of risk management systems.
- 2.5 Emerging technologies, such as AI, when applied to customs management of e-commerce can unlock the potential benefits of this form of trade for the LAC region. AI can support and enhance customs and border agencies' own risk management systems by helping process and analyze the large amounts of data produced and created by e-commerce with the aim of pinpointing the risks associated with it. In doing so, AI can assist them to reduce the percentages of manual and physical interventions of packages and parcels while improving trade facilitation rates for e-commerce.
- 2.6 Traceability of the tsunami of shipments that arrive at the borders of LAC countries is another challenge for authorities, as it affects the quantity and quality of the data necessary for implementing risk controls. Blockchain technology has already demonstrated its potential for establishing provenance and sharing data among multiple stakeholders. E-commerce could benefit from blockchain technology to help customs and border authorities collaborate with carriers to share data to bring visibility and fluidity to this growing type of trade.
- 2.7 Although AI, blockchain and other new digital technologies are in a nascent stage, proof of concepts and pilot projects are already bearing fruit for those entities looking to innovate in the search for new solutions to their operational challenges. Being near the forefront of this worldwide technical discussion is critical to leading and facilitating innovation for our trade institutions in LAC, and for the Bank's operational agenda promoting trade and integration.

III. Description of Activities and Outputs

- 3.1 With resources of this TC the following activities will be funded:
 - i) Consultancy to draft a report on the opportunities and challenges to apply new technologies to trade and border management. This report will set the stage to present the potential impact of using AI, blockchain, IoT, 3D printing, and others in trade in LAC. The report will consider macroeconomic elements of the technology (productivity improvement, economic growth), integration factors such as the impact in Global Value Chains and Trade Agreements. The report will tackle efficiencies in trade (investment opportunities, services) and in customs administrations by enhancing their controls and improving the levels of trade facilitation and improving business opportunities and reducing costs. Finally, it should also include challenges related to the regulatory aspects around the availability and privacy of data when applying new technologies. A closer look to AI and blockchain applied to e-commerce will be considered.
 - ii) Regional workshop: during the workshop the participants will be exposed to worldwide initiatives applying AI and blockchain in order to mitigate the risks of e-commerce. The participants will identify the business rationale and the functionalities of a use case, as well as the technical requirements in order to draft the specification terms for the pilot projects.

- iii) Consultancy for a pilot project to assist two countries in the design and development of an Information System (IS) to improve customs risk management for e-commerce. The architecture and functionalities will use AI capabilities to improve risk management systems and will be developed to address a specific use case previously identified during the regional workshop.
 - iv) Consultancy for a pilot project to assist two countries to develop a blockchain application to provide traceability and visibility to packages, parcels and shipments entering the country through e-commerce. A strategic alliance will be formed with carriers and customs authorities to jointly work on the pilot project. Synergies with members of the Americas Business Dialogue will be established.
- 3.2 The expected outputs are: i) a report on the opportunities and challenges to apply new technologies to trade and border management with the focus on AI and blockchain; ii) a regional workshop on the application of AI and blockchain in e-commerce; iii) practical solutions developed on pilot projects on the use of AI and blockchain to improve e-commerce by enhancing the capabilities of risk management in the beneficiary countries.
- 3.3 **Component I: Knowledge and technical capacity to apply new technologies enabled and strengthened.** This component will contribute to create knowledge and capacity in new technologies related to trade in the LAC region, and to assist in the drafting of the technical specifications for the use cases to be developed in the pilot projects.
- 3.4 **Component II: Pilot Projects to apply and validate the use of AI and Blockchain to harness the potential of e-commerce.** This component will contribute to the design and development of a solution to improve customs risk management and to develop a blockchain application to provide traceability and visibility to packages, parcels and shipments entering the country through e-commerce
- 3.5 **Component III: Supervision and Monitoring.** Given the regional scope, to create a coordination point to oversee and monitor activities undertaken in this TC, which include the production of status reports, communication with stakeholders, logistical and content-related organization for meetings and for pilot projects implementation.

IV. Budget

Indicative Budget

Activity/Component	IDB/Fund Funding	Counterpart Funding	Total Funding
Knowledge and technical capacity to apply new technologies enabled and strengthened	\$ 100,000.00	\$ 0.00	\$ 100,000.00
Pilot Projects to apply and validate the use of AI and Blockchain to harness the potential of e-commerce	\$ 225,000.00	\$ 0.00	\$ 225,000.00
Supervision and Monitoring	\$ 25,000.00	\$ 0.00	\$ 25,000.00

V. Executing Agency and Execution Structure

- 5.1 The Bank will be the project's executing agency, through the Trade and Investment Division (INT/TIN) of the Integration and Trade Sector (INT/TIN).
- 5.2 This regional project requires high level of coordination and interdependence. Likewise, the Bank has the technical experience and capacity, and well-established collaboration relationships with public and private stakeholders working with these

technologies to ensure a high quality of products and activities to be carried out for this project.

VI. Project Risks and Issues

- 6.1 Implementation of a regional project implies a higher level of complexity, as well as risks related mainly to inter-institutional coordination and asymmetries in information. It is expected that these risks will be mitigated by having the IDB as the executing agency, especially considering that the Bank has and will continue coordinating relevant and related activities with the different public institutions responsible for trade and customs in the LAC region. Another risk to this project is the nascent nature of the two new technologies to be validated. This will be mitigated by selecting countries in the LAC region for the pilot projects where some capabilities on AI and blockchain exist. Also, another mitigation measure to be implemented by the Bank will be to establish communication and technical exchanges with other countries outside the region where they are already conducting proof of concepts on these areas.

VII. Environmental and Social Classification

- 7.1 The ESG classification for this operation is "C".