Ventanilla Única de Comercio Exterior con aplicación de Blockchain

Seminario “Cerrando brechas en los procesos de integración latinoamericanos”
Buenos Aires, 17 de julio de 2018


WORLD
ECONOMIC
FORUM


BID
Banco Interamericano
de Desarrollo

Centro para la Cuarta Revolución Industrial

Plataforma global de colaboración público-privada

Su misión es co-diseñar y pilotear protocolos y marcos de política para maximizar los beneficios y reducir los riesgos de la nuevas tecnologías.

Portafolio del C4RI

1 Artificial Intelligence and Machine Learning

2 Autonomous and Urban Mobility

3 Blockchain and Distributed Ledger Technology

4 Data Policy

5 Digital Trade

6 Drones and Tomorrow's Airspace

7 Fourth Industrial Revolution for the Earth

8 Internet of Things, Robotics and Smart Cities

9 Precision Medicine

Ventanilla Única de Comercio Exterior con aplicación de Blockchain

- **Objetivo**: analizar el potencial de la tecnología blockchain en las VUCEs para mejorar la eficiencia, transparencia e interoperabilidad del ecosistema de comercio internacional.
- **Fase 1:** Diseño de un marco de política.
- **Fase 2**: Aplicación piloto.

PROYECTO

OCT’18-ENE’19

- Definir el equipo
- Mapear el ecosistema
- Construir la Comunidad de Expertos

MARCO DE POLITICA

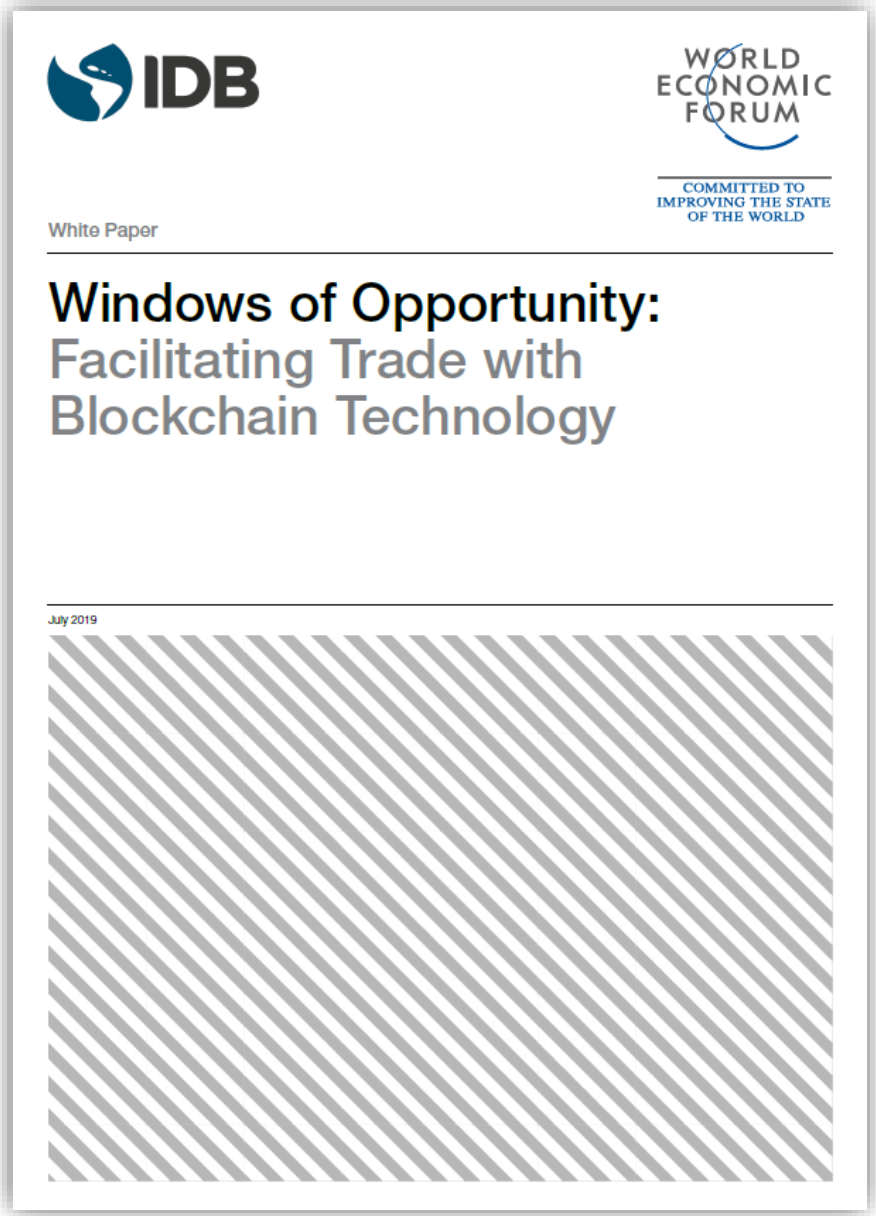
ENE’19-JUL’19

- Diseñar el outline del documento
- Entrevistar actores y expertos
- Desarrollar el marco de política
- Compartirlo y validarlo con la Comunidad
- Publicarlo en AMNC

PILOTO

JUL’19-MAR’20

- Compartir el documento con actors y expertos en comercio
- Identificar un proyecto piloto
- Diseñar e implementar el piloto



[Enlace]

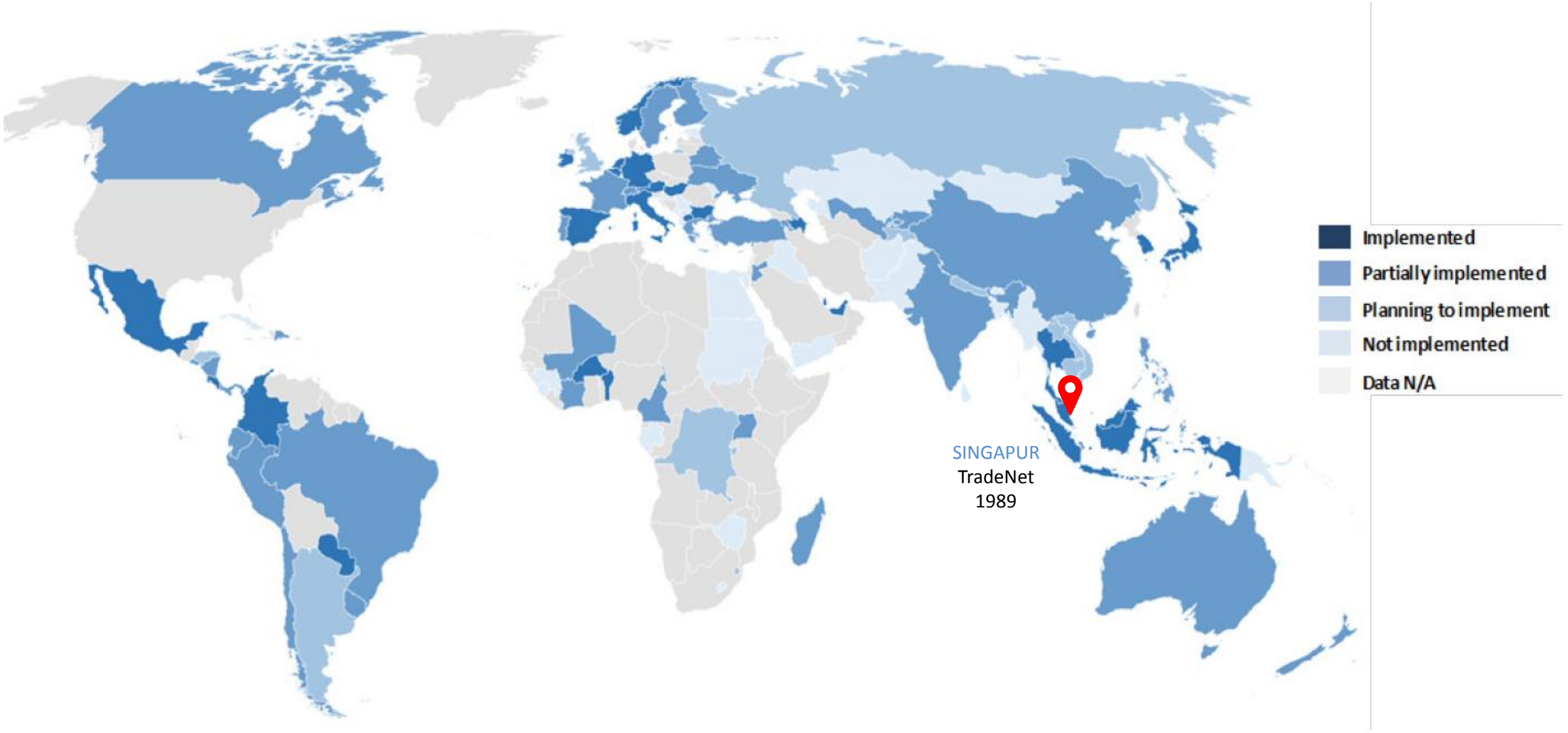
Un trabajo colaborativo:

- **Especialistas** en comercio, aduanas y tecnología del BID y del C4IR
- **Comunidad internacional** de 80 expertos de sector público y privado, organizaciones internacionales, instituciones académicas y sociedad civil.
- **Entrevistas** a funcionarios de VUCEs de Argentina, Chile, Colombia, Brasil, República Dominicana, India, Corea, Dinamarca y Estados Unidos entre otros.

Ventanilla Única de Comercio Exterior con aplicación de Blockchain

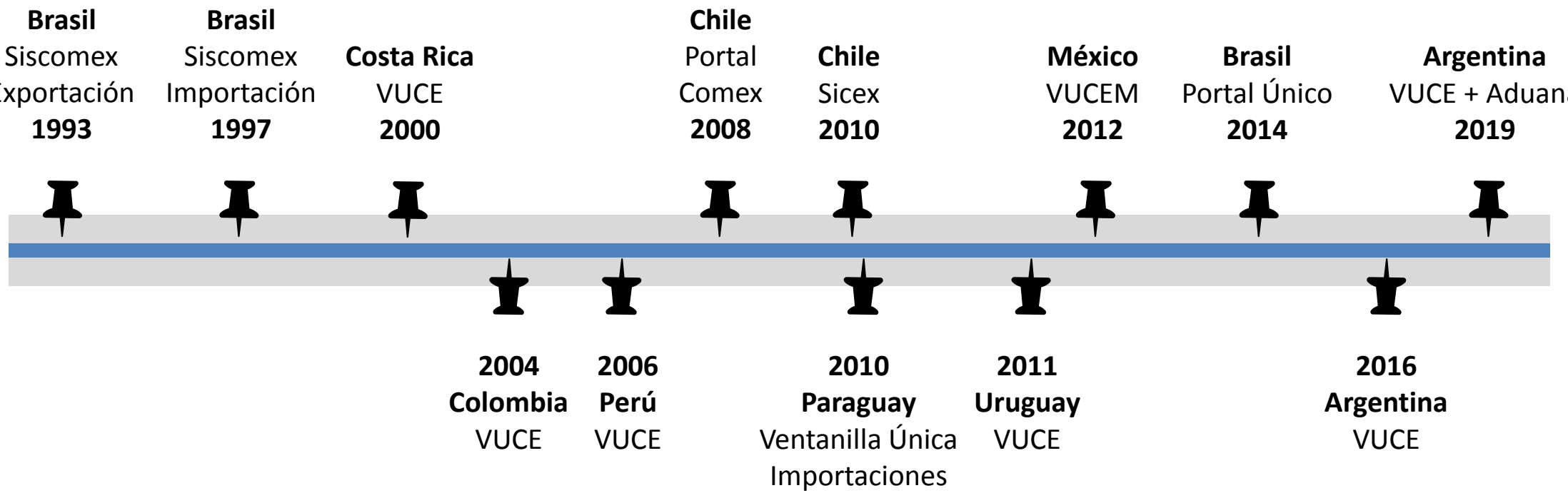
- El comercio internacional es de suma importancia para el desarrollo económico y social en todo el mundo.
- Un costo importante es el requisito de remitir a autoridades múltiples documentos de importación, exportación y tránsito.
- Las VUCEs reducen estos procesos administrativos, permitiendo enviar información estandarizada de manera electrónica a través de un único punto de entrada.
- Existen desafíos y de puntos críticos que impiden desplegar todo el potencial de las ventanillas únicas.

Implementación de VUCE en el mundo



Fuente: Windows of Opportunity: Facilitating Trade with Blockchain Technology. 2019

Ventanilla Única en la Región



Ventanillas Únicas

Puntos críticos

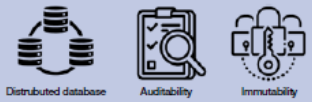
- Interoperabilidad limitada
- Persistencia del papel y falta de automatización
- Trazabilidad limitada de los bienes en la cadena de valor
- Preocupación sobre la confiabilidad y la seguridad de los datos

¿Qué es Blockchain?

- Una única base de datos de registros o transacciones compartido y distribuido entre varios participantes.
- Con muchas copias que se mantienen sincronizadas.
- En el que los múltiples participantes pueden crear registros individuales.
- Cada registro está vinculado al anterior generando una cadena de bloques.
- Asegura que los registros no puedan modificarse ni eliminarse.
- Los registros están disponibles para todos los participantes en tiempo real.

Ventanillas Únicas

Casos de uso

Main pain point	Selected reasons	Use-case	Blockchain's potential	Alternative/ complementary technologies and actions
Limited interoperability	National single windows disconnected from each other	Interoperability and data share among two or more national single windows	Improve all national single windows' visibility into supply chains, ability to manage risks and recognize patterns and conduct pre-arrival processing; share data on Authorized Economic Operator certifications 	Big data and AI; harmonization of national documentation requirements, agreements to share data across borders
	Border agencies that form part of a single window operate in isolation	Interoperability and coordination of actions among agencies making up the single window	Improve all border agencies' ability to share data and coordinate actions, gain 360-degree visibility of transactions and manage risks, improve user experience 	Inter-agency collaboration and APIs to share data; big data and AI
Limited traceability of shipments	Limited sharing of data across the trade network among border agencies and the private sector	End-to-end visibility into shipments and supply chains	Enable more complete data on shipments and supply chains and audit trails on traders by bringing together single windows and/ or private-sector trade intermediaries on a common blockchain with immutable streams of data 	Internet of things applications; agreements to share data with private sector and across borders; machine learning to detect anomalous patterns in data
Inefficient manual processes	Inefficiencies in making and reconciling customs duty and fee payments	Automation of processes to make and reconcile duty and fee payments	Automate payments and their reconciliation; accelerate revenue collection 	Robotic process automation; deferred duty payments; information-rich electronic payments
Limited trustworthiness and portability of identities and data	Limited trustworthiness of data entered on single windows	Improved reliability of data entered on single windows	Make data entered into single windows immutable and unauthorized modification to the data traceable 	Data standards; data-security protocols; AI to detect fraudulent and erroneous data entries
	Companies are unable to access and use their identities and data included in single windows	Authentication of identities and portability of identities and data across service providers, including for commercial purposes (e.g. access trade finance)	Provide single window users with a unique identity and enable users to apportion relevant parts of their identities and transactional data to third-party service providers 	Development of a unique ID such as Global Trade Identity (GTID); government regulations to encourage or demand portability of data

Pillars for blockchain in single windows: electronic signatures and transactions laws, solid IT Infrastructures, mobile-enabled interfaces

Potencial de reducir
tiempos y costos

- Aumentar la interoperabilidad
- Aumentar la trazabilidad
- Automatizar los procesos
- Incrementar la confiabilidad de los datos

Lineamientos para operacionalizar BC en VUCES

	Create vision and business case	Create governance structure, including for data, and implementation plan	Build technology architecture and integrate technology	Manage user identities and data	Measure impact and report on it	Iterate
Actions	Ensure political support exists for trade facilitation Establish a "grand vision" for blockchain in the single window and a business case for stakeholders Adopt blockchain in pilots and iterating to improve outcomes Bring together a multidisciplinary team to pilot and apply blockchain Define how to cover costs and how to engage development banks and donors	Establish a governance structure with mandate, scope, responsibilities and data-share rules Standardize data entered on blockchain and data-security protocols Define reward systems for staff in agencies to implement blockchain Define data-storage needs Assess compatibility of blockchain with existing regulations; consider regulatory sandboxes to fuel blockchain's development	Develop the technology architecture, acquire blockchain technologies and integrate blockchain with existing databases and technologies Retrain agencies' IT staff and acquire new capabilities with technical knowledge of blockchain	Test a single, interoperable identity for single window users and enable them to make their data portable Possibly develop a new identity for blockchain users, e.g. GTID Communicate technology improvements to users	Develop and track KPIs, e.g. time release indicators; operational efficiency in border agencies; and trade facilitation and SME trade growth Reward agencies' staff for meeting targets defined in steps 1 and 2	Assess the pilot and consider ways to improve and scale it Consider blockchain's emerging capabilities and rethink its governance Assess governance structure built into step 2 Consider range of applications in other niche areas in single windows
Who drives	Head of state, agency heads, private-sector users, focus groups	Agency heads, IT leads and users; international experts	Agency IT leads, experts	Agency heads, IT leads	Agency front-line staff, report to head of state	Implementors, private-sector users
Level of effort needed	● ● ● ●	● ● ● ●	● ● ○ ○	● ● ○ ○	● ● ● ○	● ● ● ○
Key questions to address	What is the outcome to be attained by using blockchain? What is in it for each stakeholder? How are costs covered? How could development banks and donors best support via technical advice and funding?	Where is blockchain managed from? What are the responsibilities of the different stakeholders and what are stakeholders rewarded for? How are data and document-sharing governed among stakeholders? How to define and differentiate access privileges? Which international data standards should be considered?	How does the new solution integrate with the current solutions (process and technology)? Can IT create a functionable "digital twin" of a trade? Does blockchain provide a trusted interaction layer for sharing events and information/data? Does blockchain also need to account for and support wider supply chain business models?	Could users make their data portable and for what purposes, and how is off-chain data shown to outsiders certified as "real"? Are data-storage needs an issue? How to best communicate the benefits of blockchain to firms that use single windows?	What is the improvement from baseline and last measurement? What are the weakest links in implementation and why? How does my country compare to others that are also working on trade facilitation, before and after blockchain was adopted?	How to improve on the process and outcomes in steps 1-5? What new properties of blockchain technology and other technologies could be employed? What is the optimal governance structure if pilot is scaled or replicated? In which other areas of trade facilitation could blockchain be tested?

Próximos Pasos

- Realizar pruebas de concepto y proyectos piloto con gobiernos de América Latina y el Caribe.
- Desarrollar las capacidades de los gobiernos para entender y aplicar nuevas tecnologías para facilitar el comercio exterior y compartir las lecciones aprendidas.
- Trabajar en otras tecnologías aplicables al comercio exterior para aumentar los beneficios económicos.

¡MUCHAS GRACIAS!

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