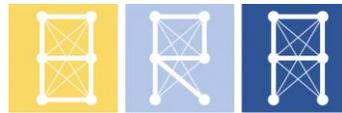




Blockchain – a potential technological revolution for increasing efficiency in cross-border processes?

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BRA Day



Despite numerous technological improvements in trade processes, trade costs remain large compared to the good's value

Trade costs are a sum of different expenses needed to be spent in order to get a good from the producer to the final consumer.

Trade costs in general

Costs imposed by policies

- Often resulting from protectionist measures
- Tariffs, non-tariff barriers, quotas, etc.

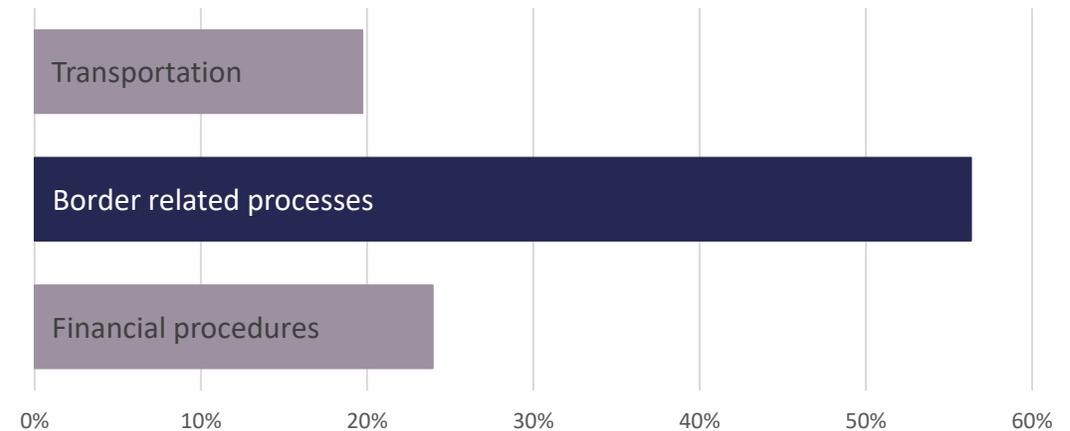
Costs imposed by the environment

- Mostly related to transporting and distributing the good itself
- Transportation/freight charges, insurances against various hazards along the route, costs of time, etc.

“Trade costs still account for 170% of the traded goods’ value.”

(Anderson & Van Wincoop, 2004)

Identifying biggest drivers of inefficiency



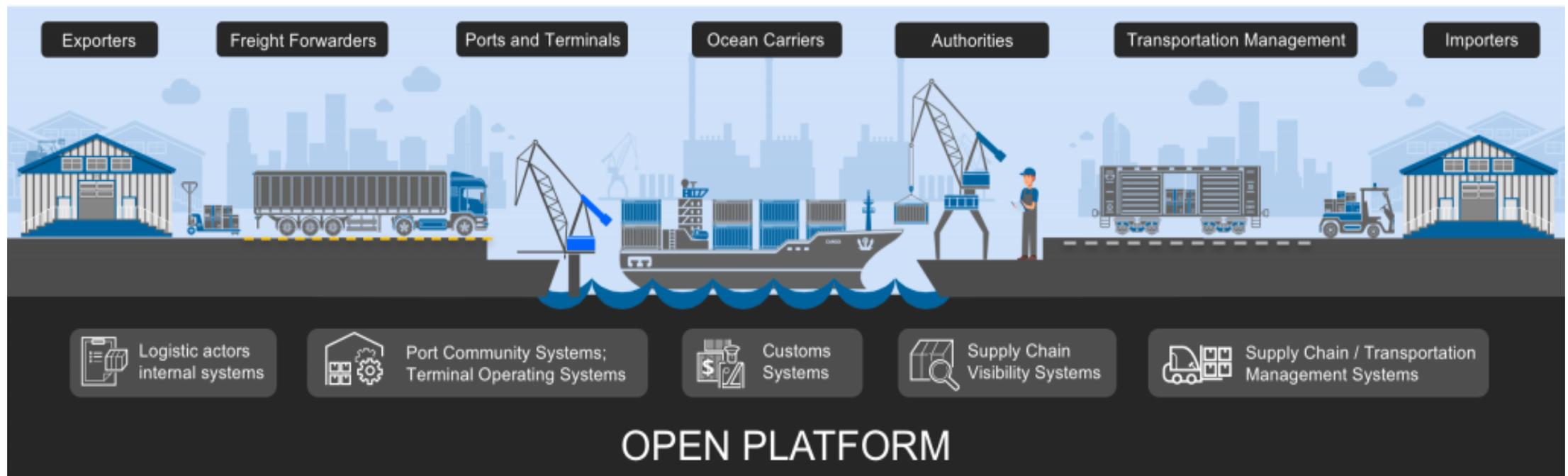
- Can these be speeded up with new technologies?
- Is blockchain a way to do so?

Applying blockchain in international trade – an example case of the IBM-Maersk Joint-Venture

Targeted problems of international trade

- Monitoring and tracking of goods across the whole supply chain
- Transparency increases trust
 - Reduced contracting costs
 - Lower counterparty risks

- Potential of improving efficiency in border processes/reduce time losses
 - Transparency and standardization of documents
 - Direct connection to all participants incl. authorities
- Reduced contracting costs (e.g. afforming letters of credit)



Developing a use case for implementing blockchain in the African Northern Corridor in cooperation with the BRA and Luvent Consulting



Where?

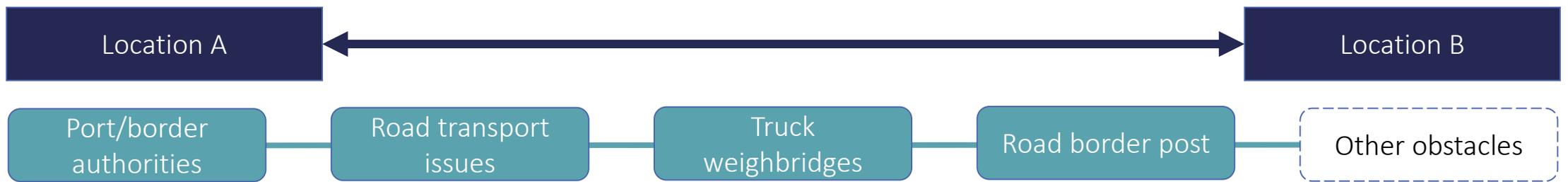
- The Northern Corridor
 - Kenya
 - South Sudan
 - DR Congo
 - Uganda
 - Rwanda
 - Burundi

With whom?

- Luvent Consulting (BRA partner)
- Local experts
- IBM/Maersk experts
- Other blockchain experts

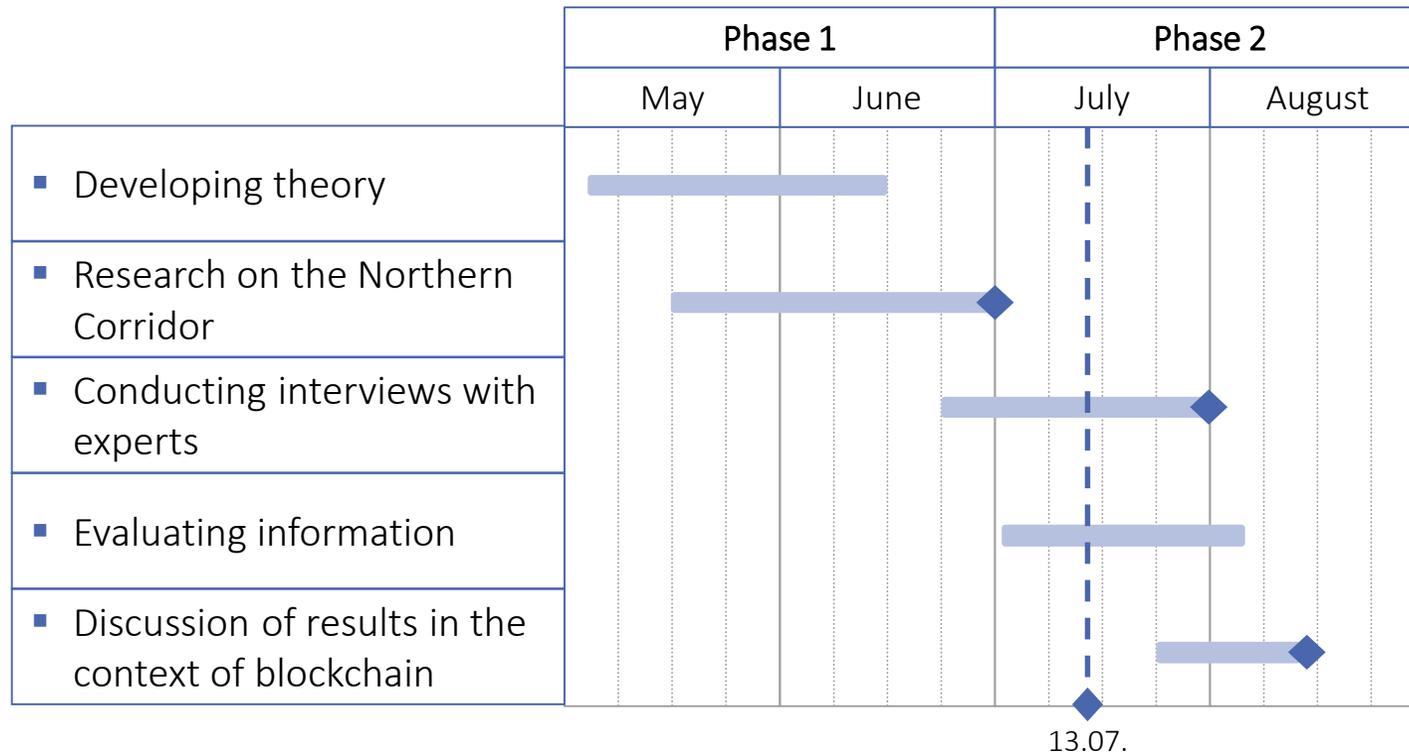
How?

- Analyze a specific trade route
 - Identify bottlenecks
 - Reason why, if and how blockchain could tackle these
- Analysis of quantitative data and qualitative inputs



Initial findings after the first phase of the project research

Current timeline



Initial findings

- Northern Corridor trade processes still lack **supra-regional standardization**
 - Lack of trust and aligning regulation
- **Inefficiencies in bureaucracy** are still existing despite major recent technological developments
- Other **infrastructural issues** could be blocking the full benefit of blockchain
 - Instability in IT systems;
Inefficient road network

Points that are still haunting me and the BRA community could help me with in my research project

Data validation

- How to validate data entered into a blockchain and incentivize the validation?
 - What consensus mechanisms would you recommend in this specific use case?
 - Should the validation mechanism be executed and processed by
 - multiple parties/freight forwarders or
 - only specific authorities?



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Accessibility

- What are your suggestions on accessibility permissions for data stored on the blockchain?
 - Permissioned vs. permissionless?
 - Public vs. private?
 - Channels per node with access rules?

Data storage

- As blockchain is a ledger and not a database information should be time-after-time archived (long-term) – what are your inputs on this point?
- If access to data is limited to defined parties, should then all parties have the whole blockchain stored on their devices?
 - What are ideas on how to limit this without having it centralized?