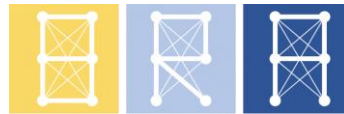




Blockchain – a potential technological revolution for increasing efficiency in cross-border processes?

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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.

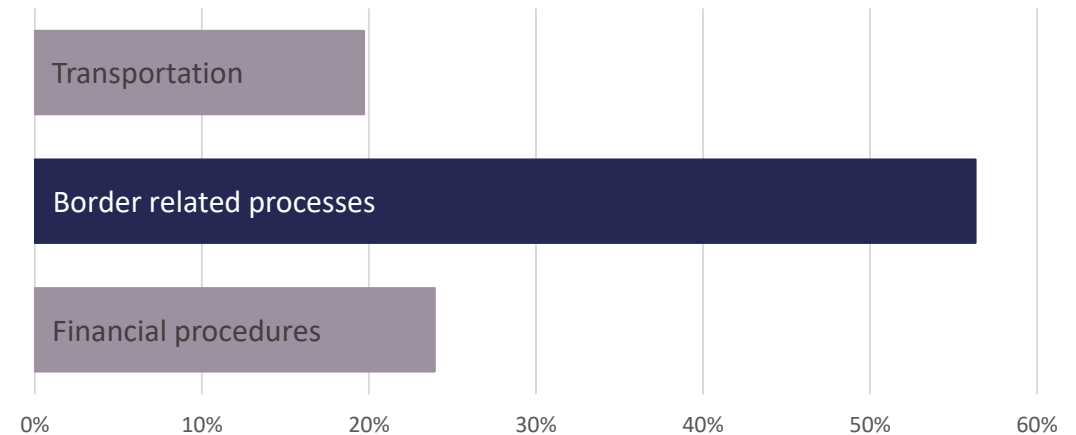
Costs imposed by the environment

- 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



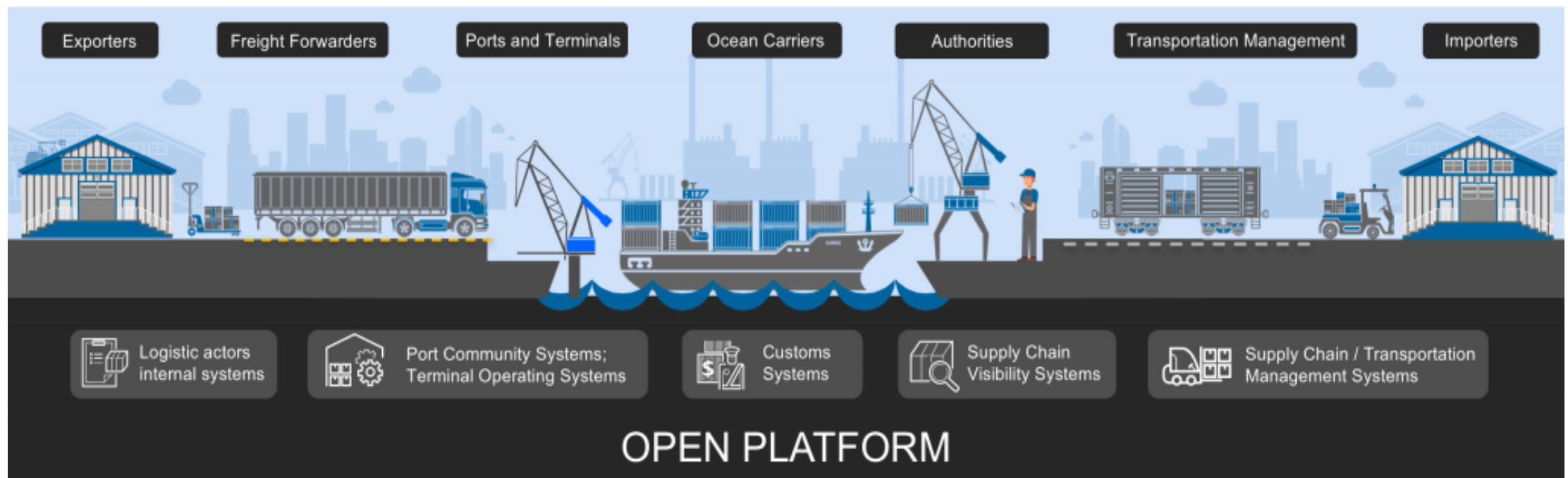
- Can these be speeded up with new technologies?
- Is blockchain a way to do so?

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

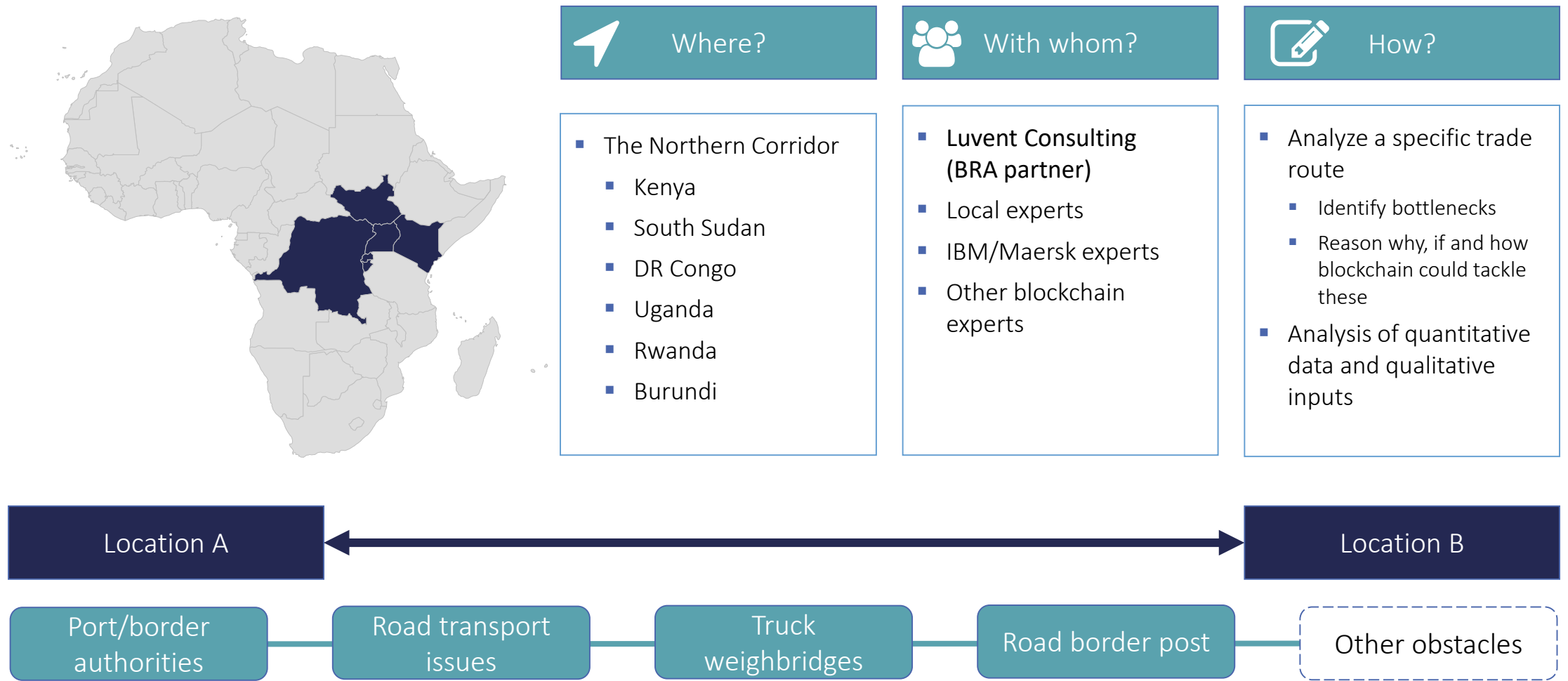
Targeted problems of international trade

- 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)

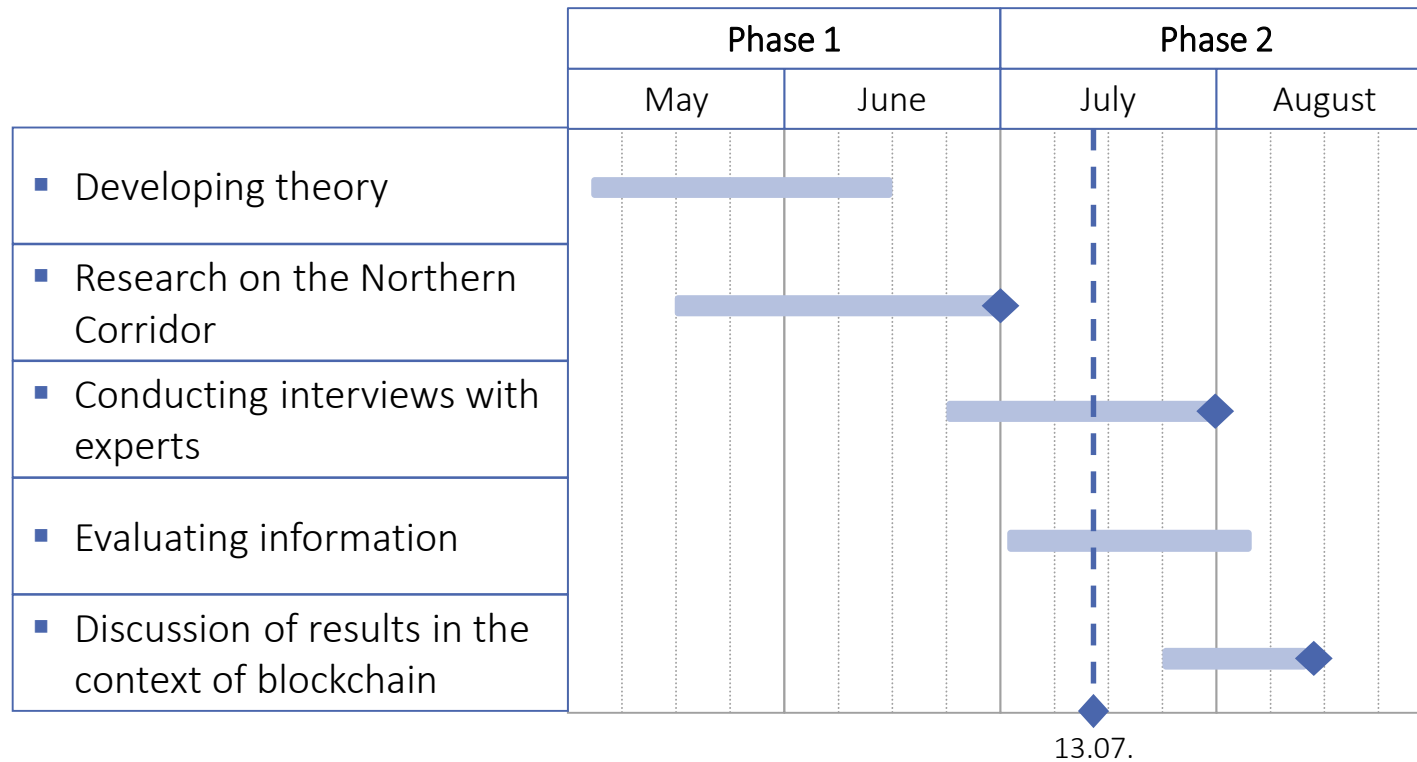


Developing a use case for implementing blockchain in the African Northern Corridor in cooperation with the BRA and Luvent Consulting



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?