



# ***BoF: Secure Asset Transfer***

## **Use Cases**

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**IETF 114**

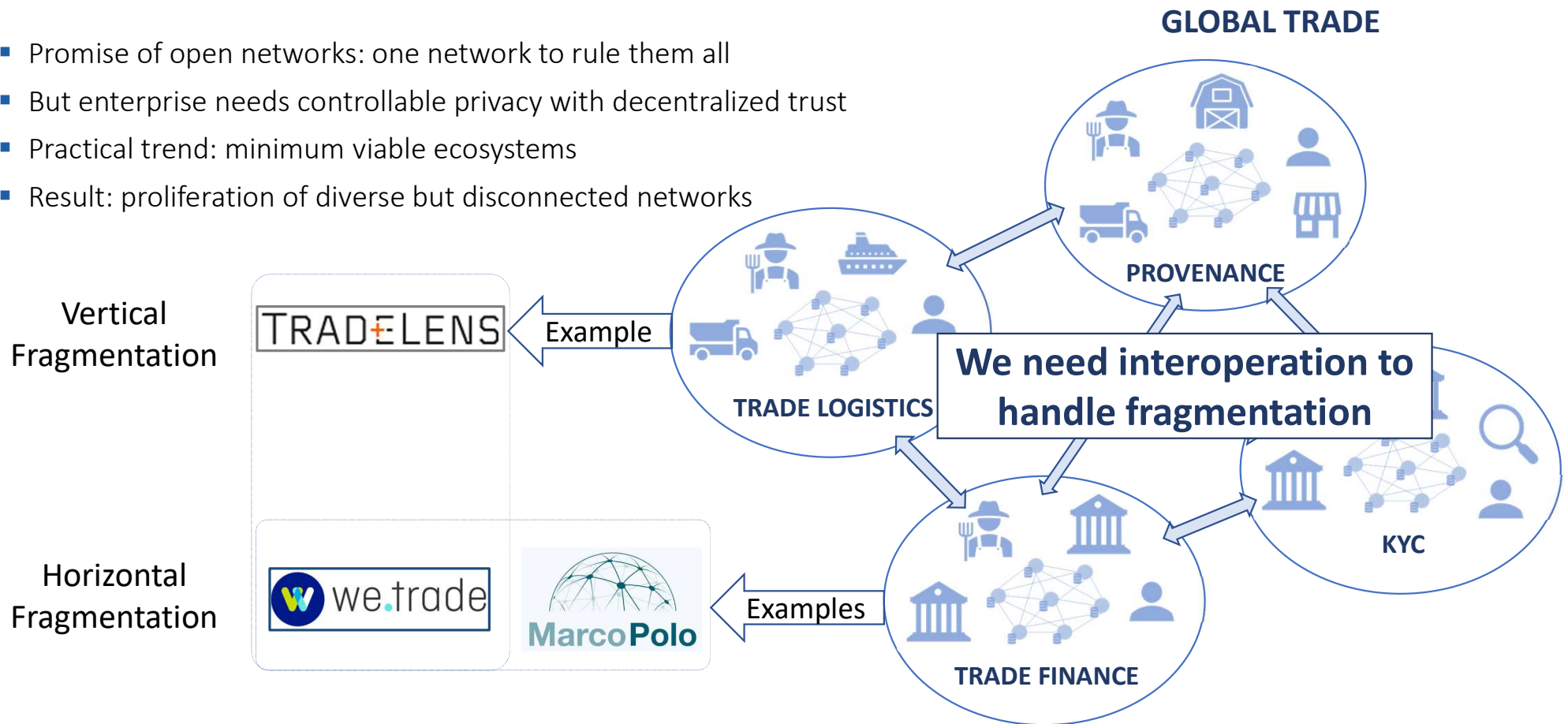
July 26, 2022

 Keppel Terminal  
Photo by @chuttersnap from Unsplash

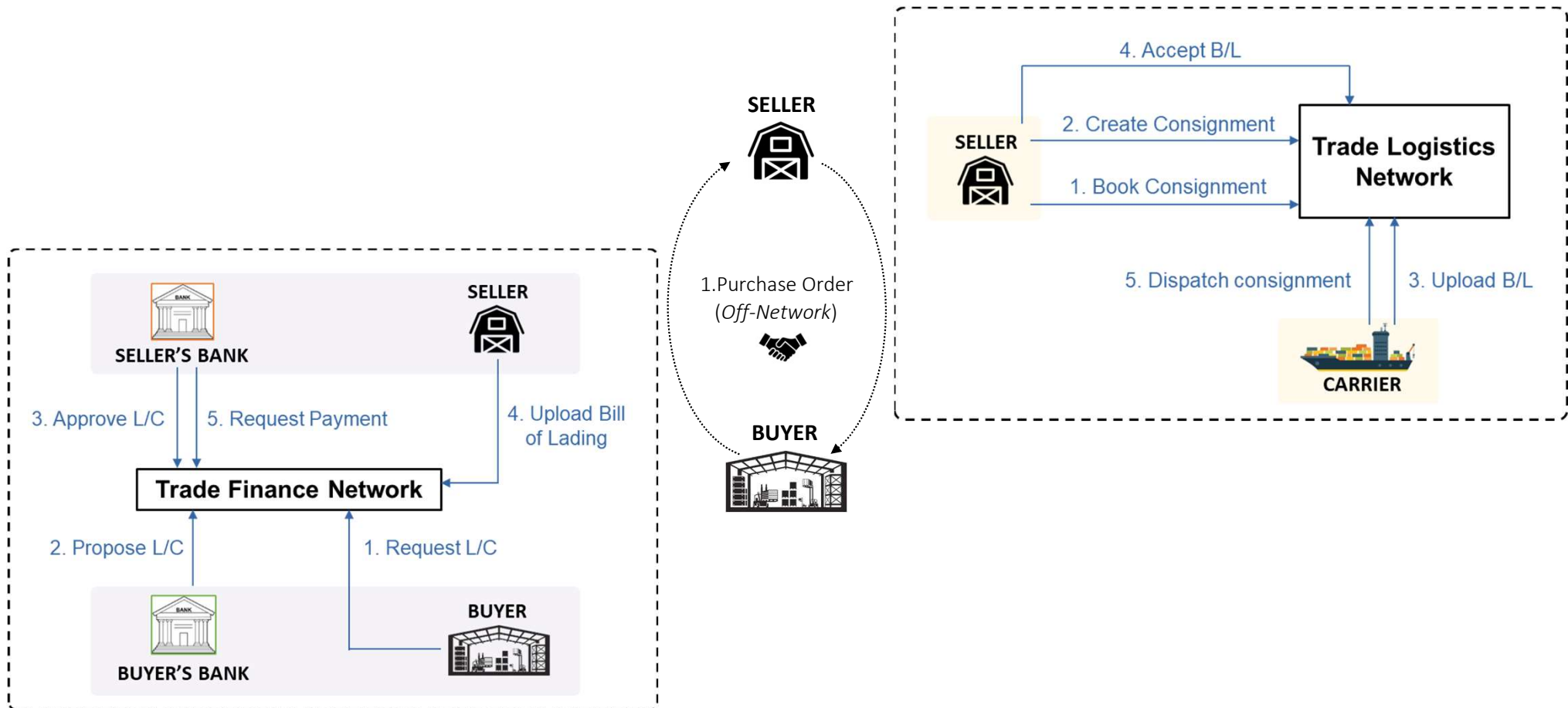


# Fragmented Networks and Siloed Assets

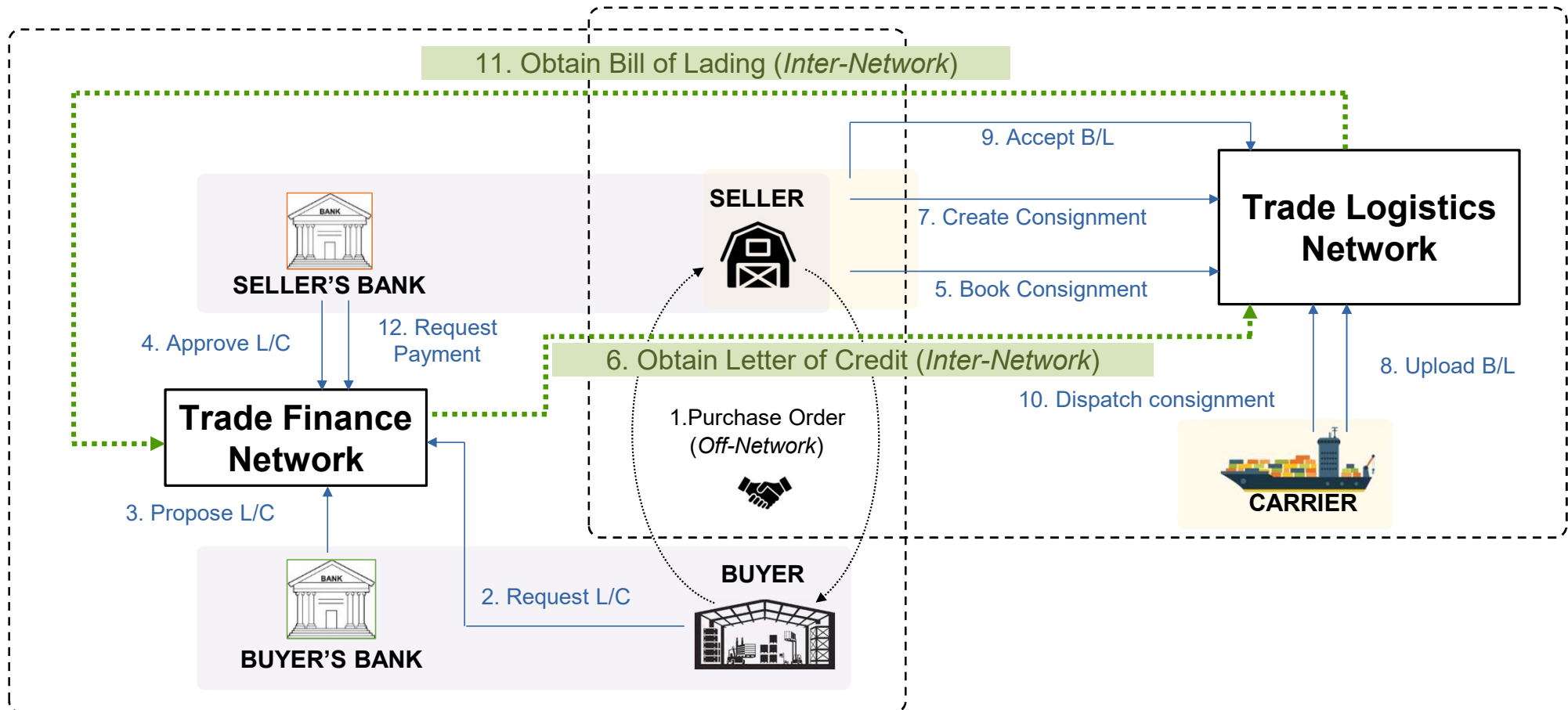
- Promise of open networks: one network to rule them all
- But enterprise needs controllable privacy with decentralized trust
- Practical trend: minimum viable ecosystems
- Result: proliferation of diverse but disconnected networks



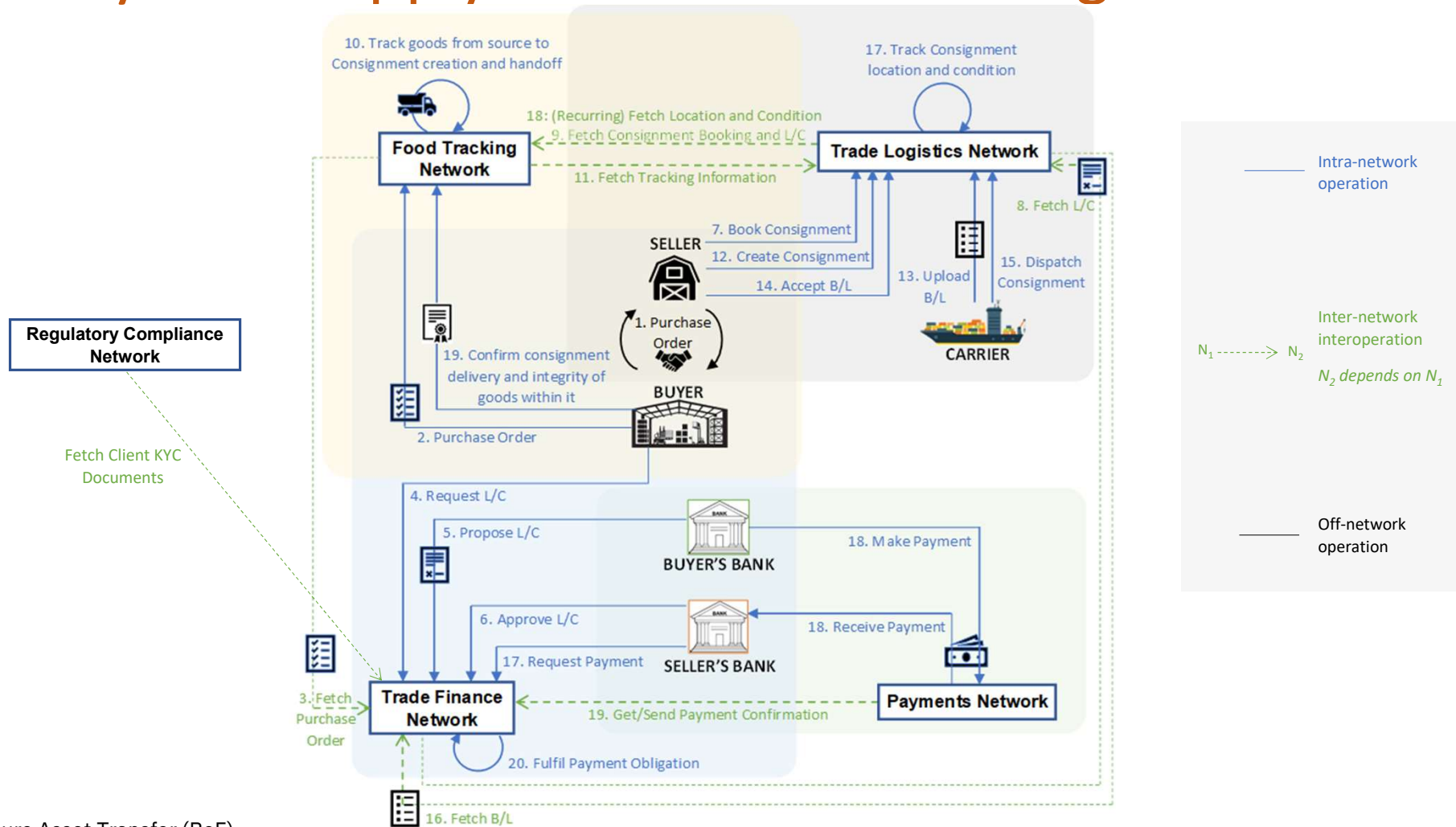
# Trade Systems: Financing and Logistics



# Linking Trade Systems and Communicating Assets

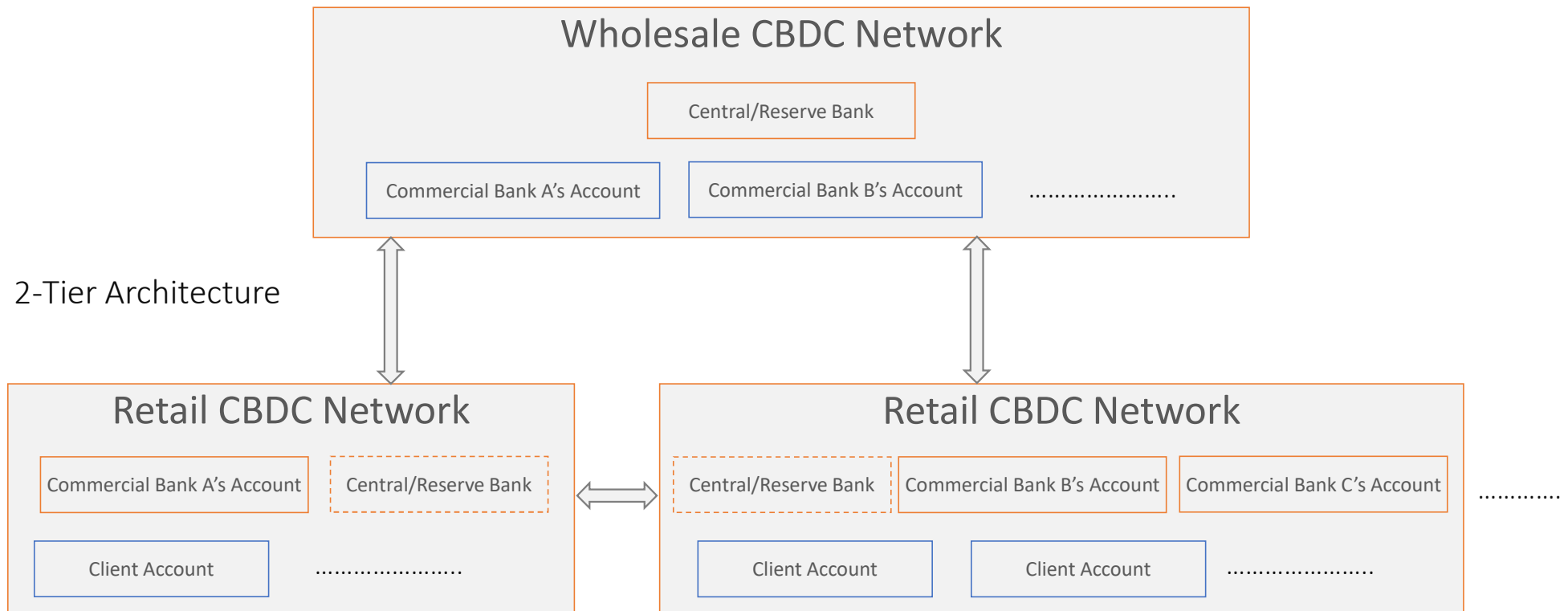


# Multi-System Supply Chains and Financing

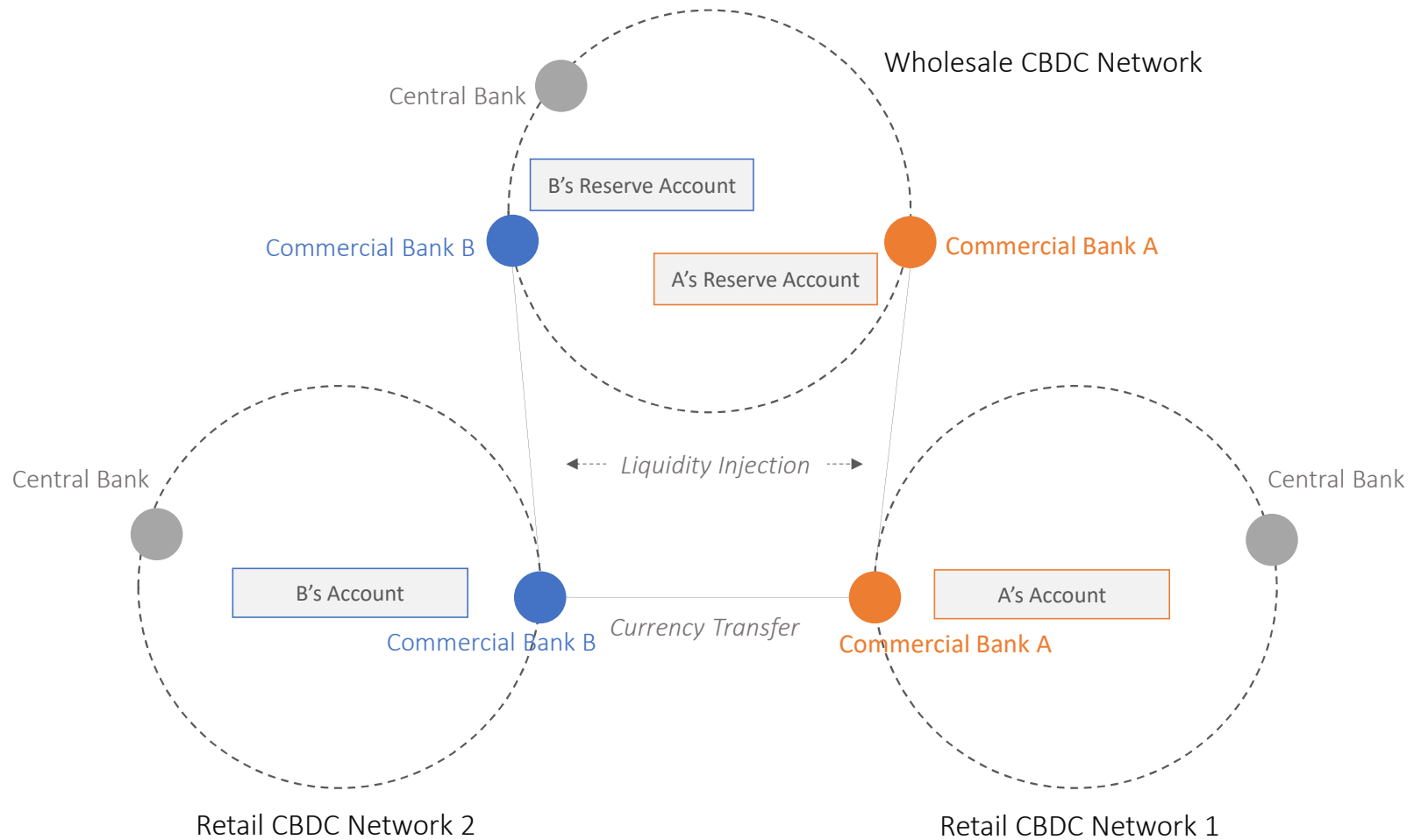




# Central Bank Digital Currency (CBDC) Landscape



# CBDC Transfer (Asset Transfer)



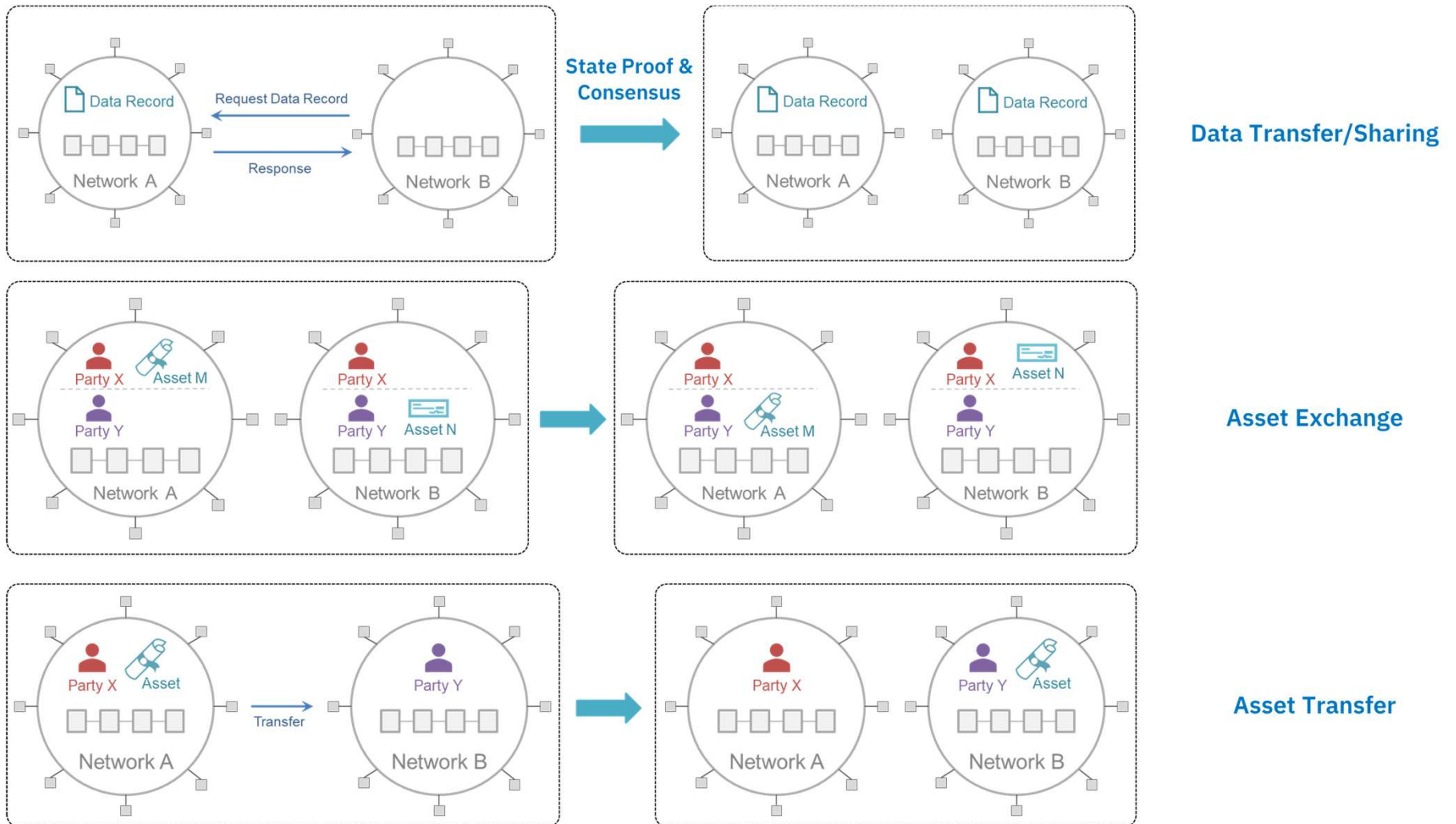
# BACKUP



# Modes of Interoperation: Generic Use Cases

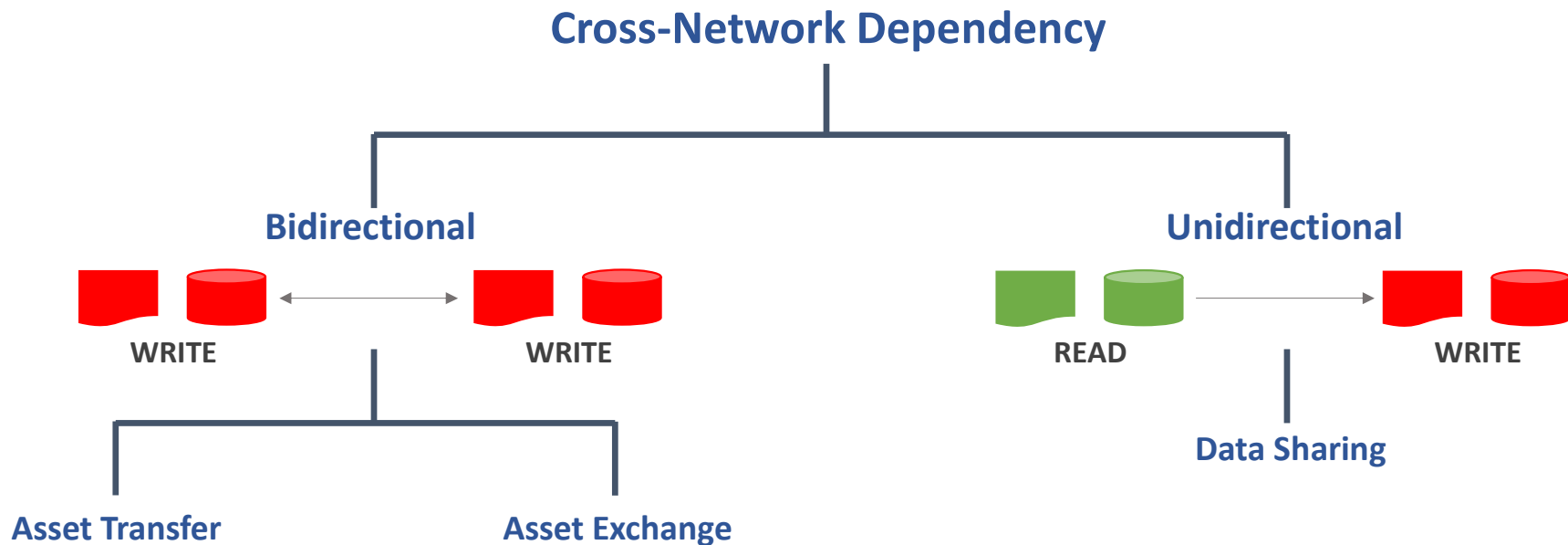
- **Data Sharing:** The transfer of data from a source network to a consuming network. The data transfer can either be a result of a transaction in the source network, or an explicit request from a consuming network.
- **Asset Exchange:** The change of ownership of an asset in a source network and a corresponding change of ownership in another network. No actual value leaves the networks boundaries. Example: atomic cross-chain swap.
- **Asset Transfer:** The movement of an asset from the source network to a consuming network. As an asset cannot be double spent, transfer of an asset should result the termination/locking of its use in the source network, and its creation into the target network. Mechanisms that support such capabilities are one-way and two-way pegs

# Interoperation Modes: Building Blocks of Cross-Network Operations

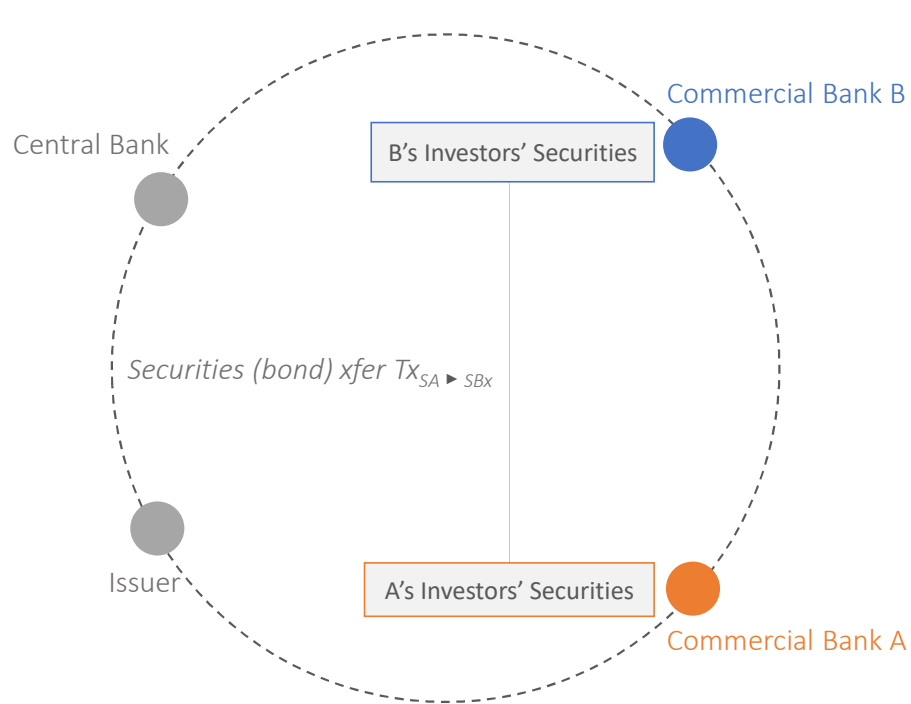


# Interoperation Modes as Building Blocks

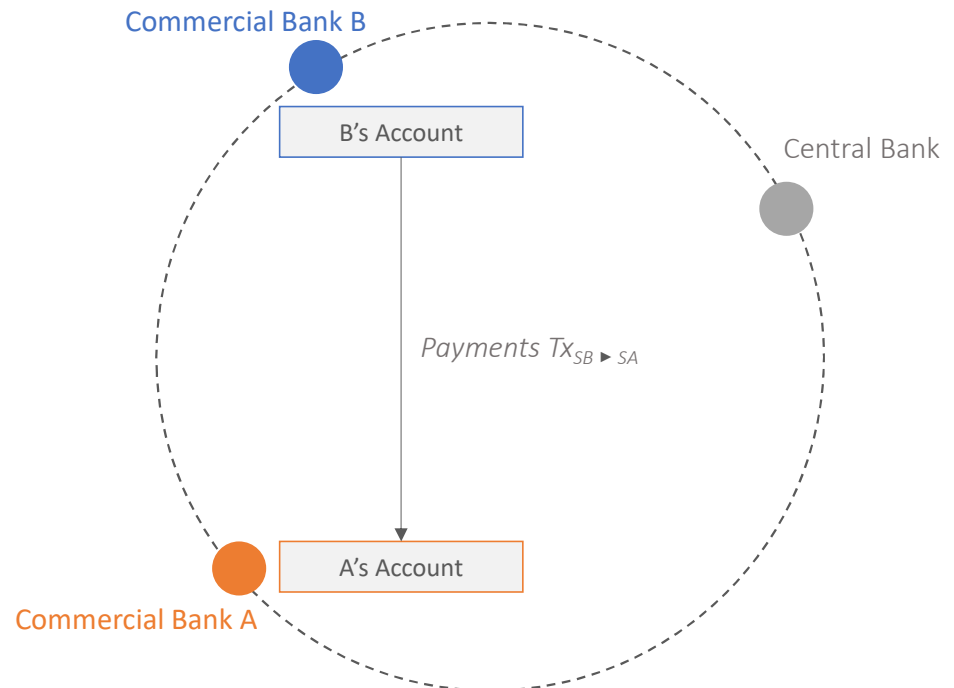
- *Claim:* any cross-network process interdependency can be realized as a combination of data transfers, asset transfers, and asset exchanges



# Delivery-vs-Payment: Bond for CBDC (Asset Exchange)



Financial Securities Network (FSN)



Central Bank Digital Currency Network (CBDCN)

## Other Asset Transfer Use Cases

- Different networks with different clientele may exist for securities trading
  - Inevitably, investors will find the need to transfer bonds from one network to another, either to their own account (migration) or to another's (sale)
- Other kinds of digital assets may also occasionally need to be moved across network boundaries
  - To fulfil a trade or a gift
  - Users may wish to migrate to other systems, to obtain better service or to comply with changing governmental regulations
  - Examples: artwork, property titles