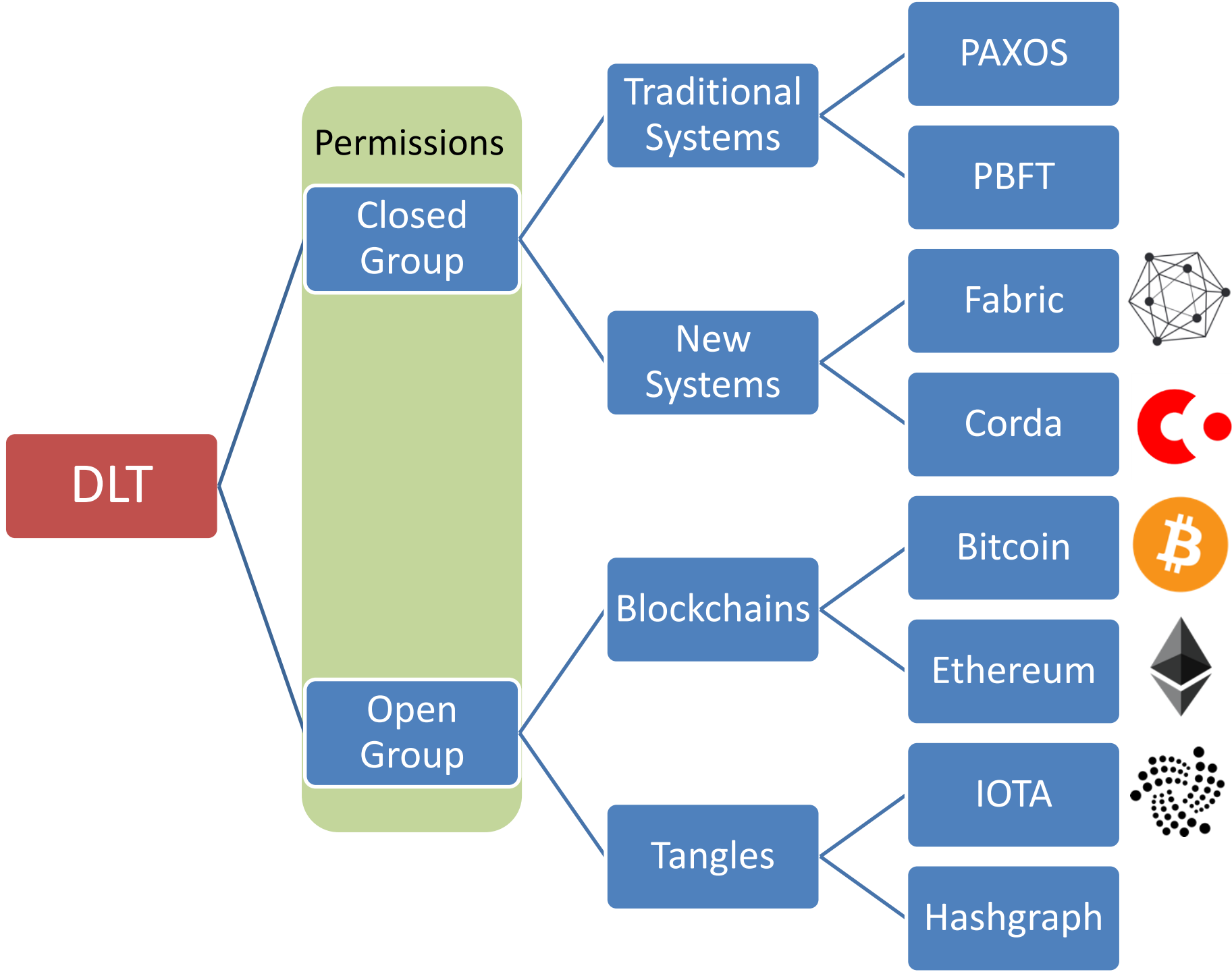


# DLT at Digital Catapult

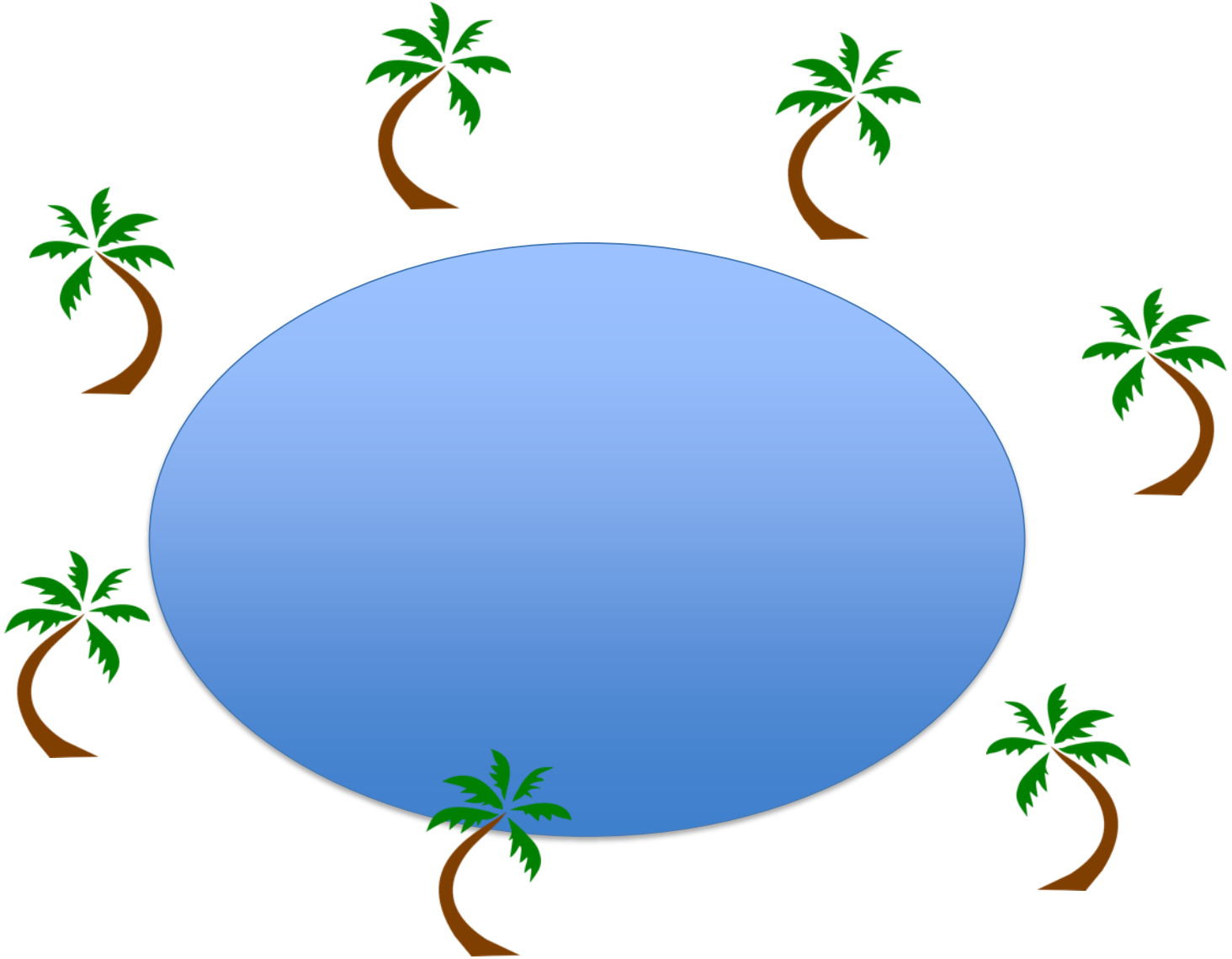
Dr. Robert M. Learney

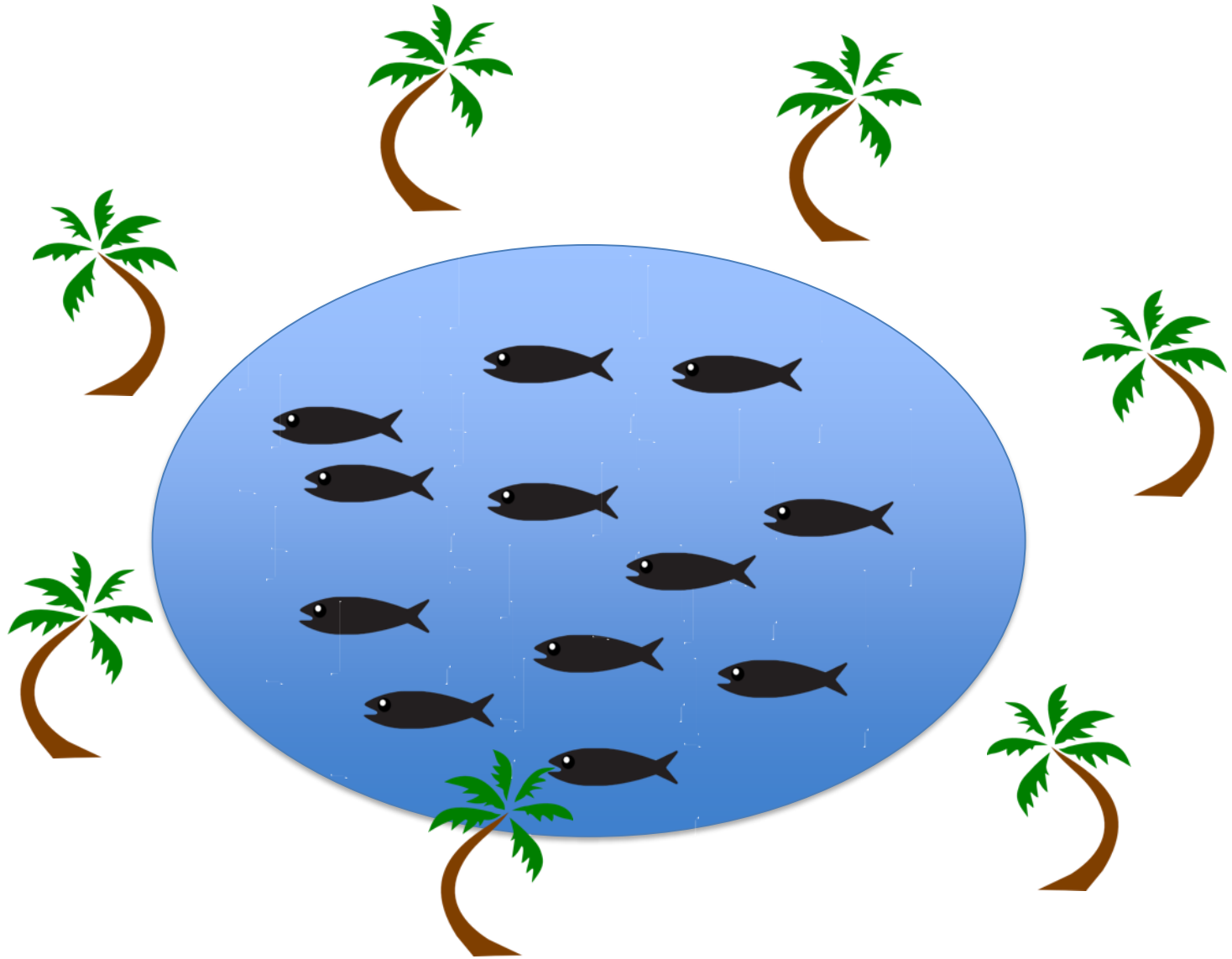
Lead Technologist – Blockchain & DLT  
Digital Catapult

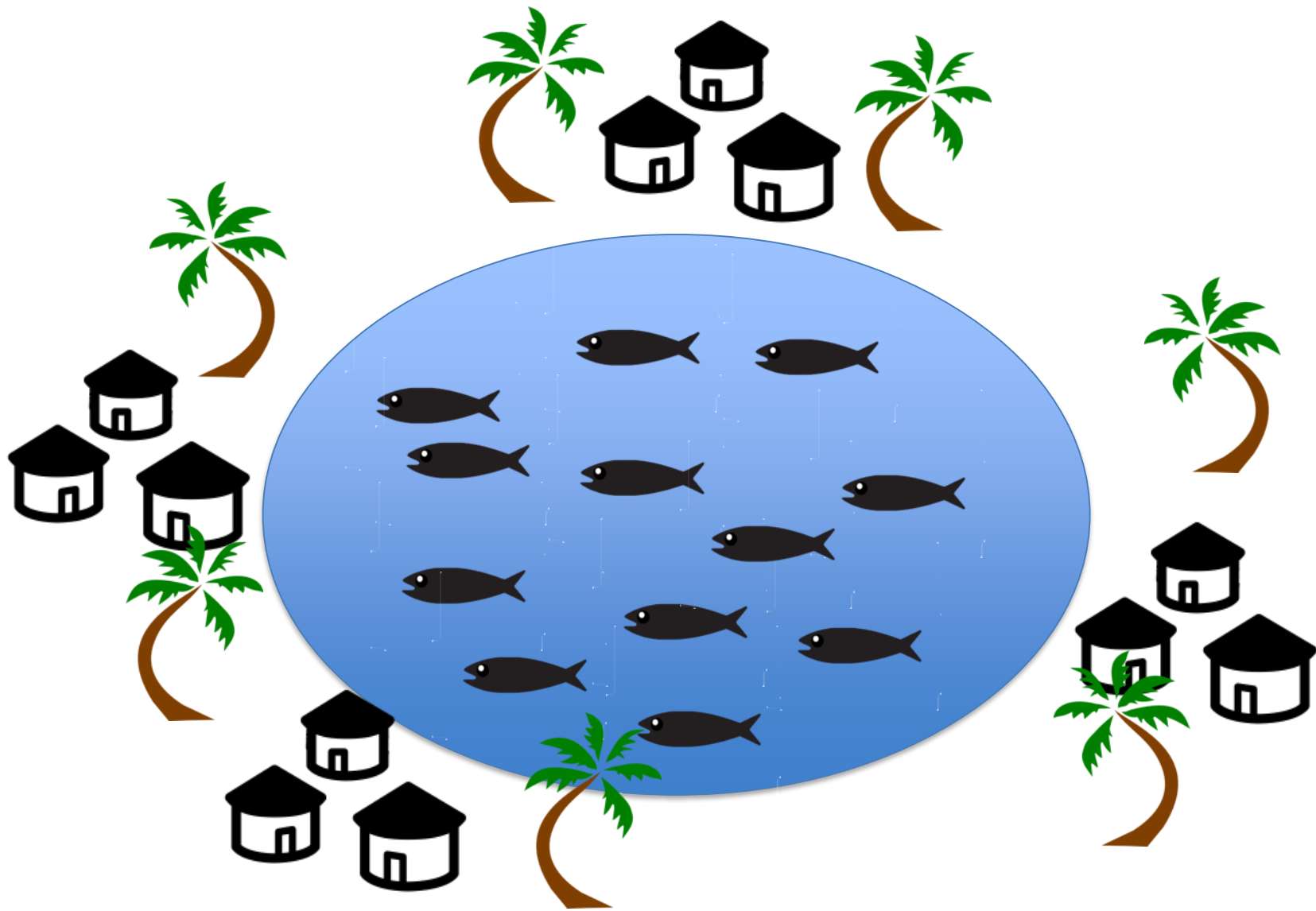


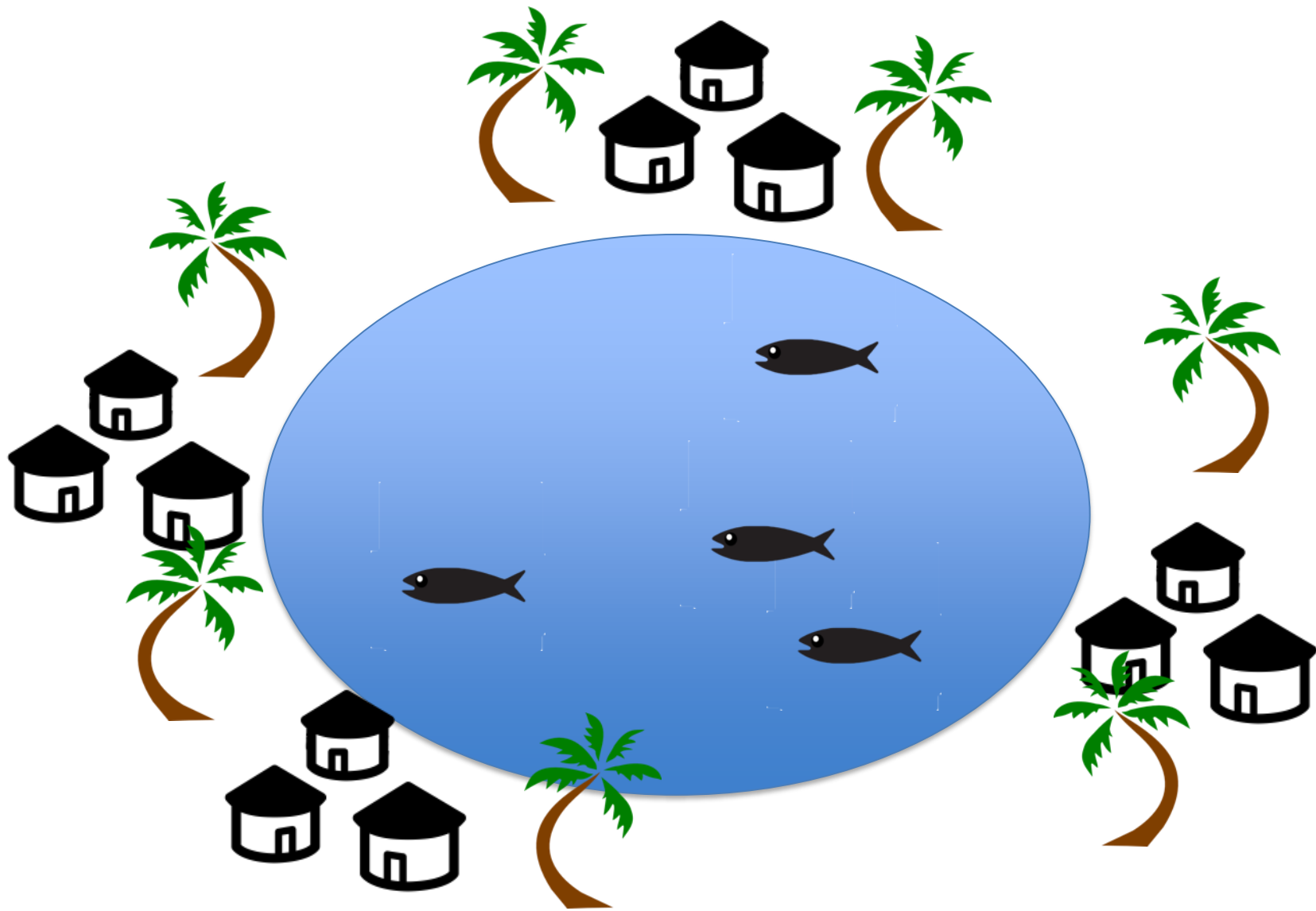


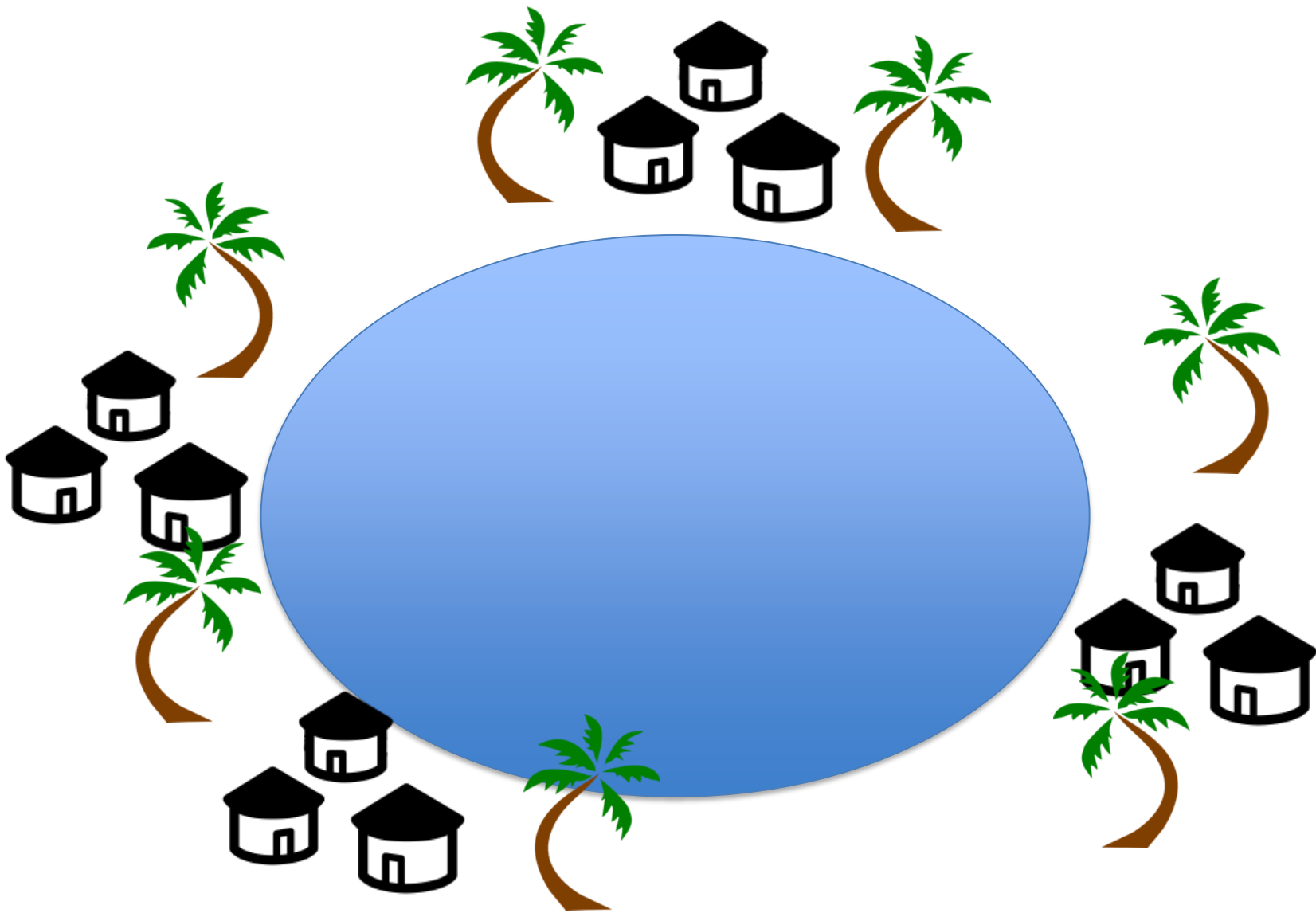
What is a 'DLT Problem'?









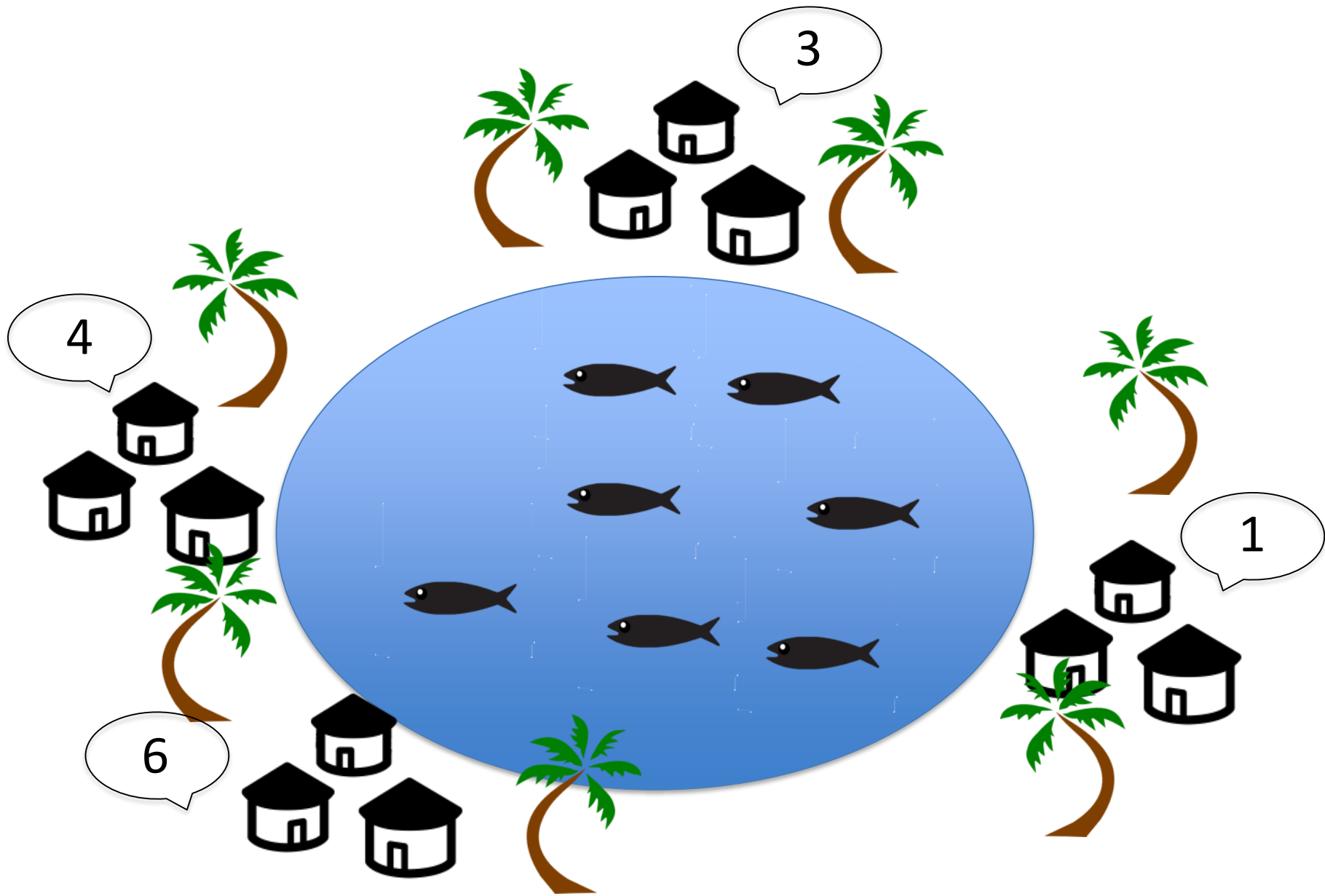




# Tragedy of the Commons

- Poor resource management
- Lack of cooperation
- Unable to trust other participants





3

4

1

6

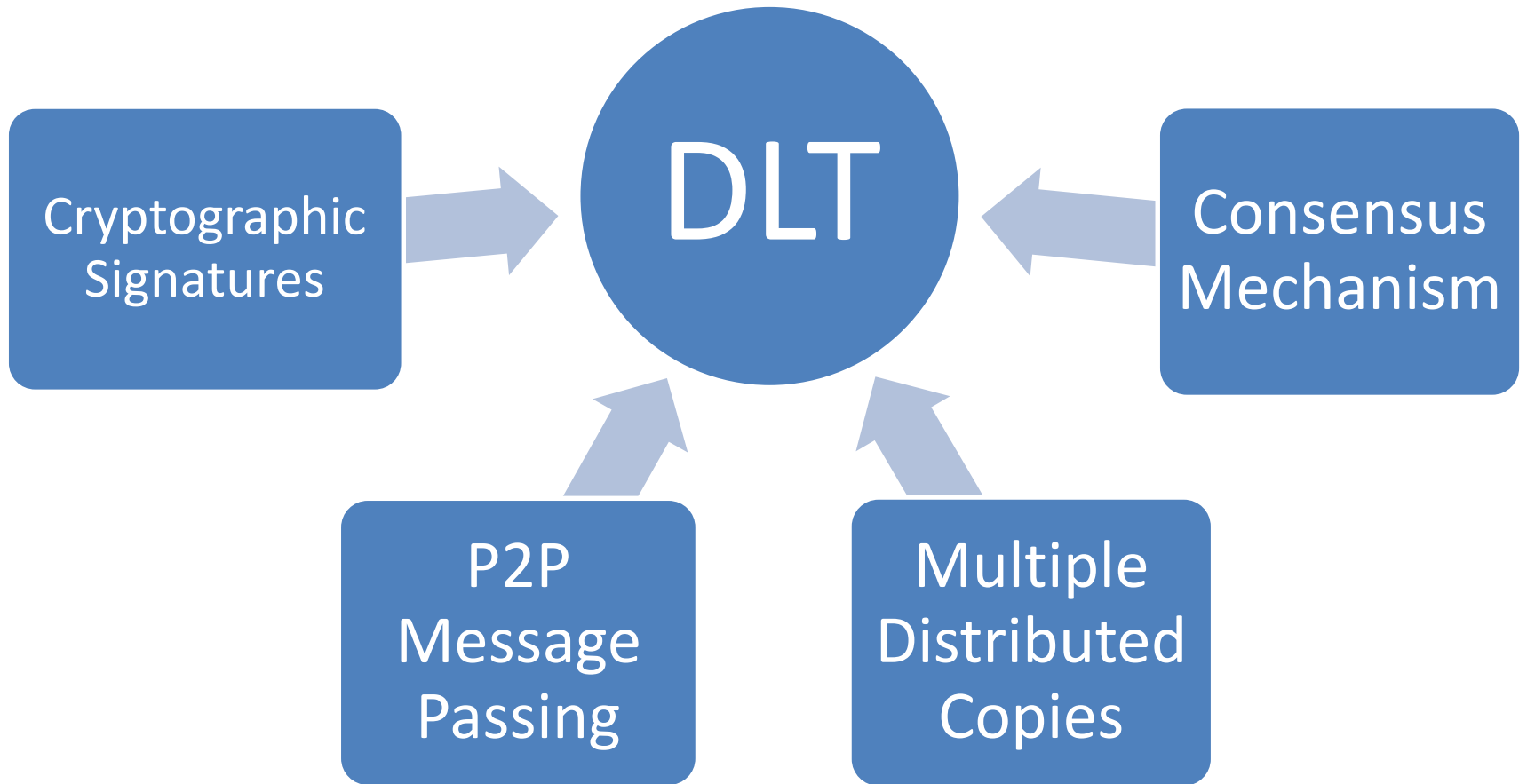
So What?



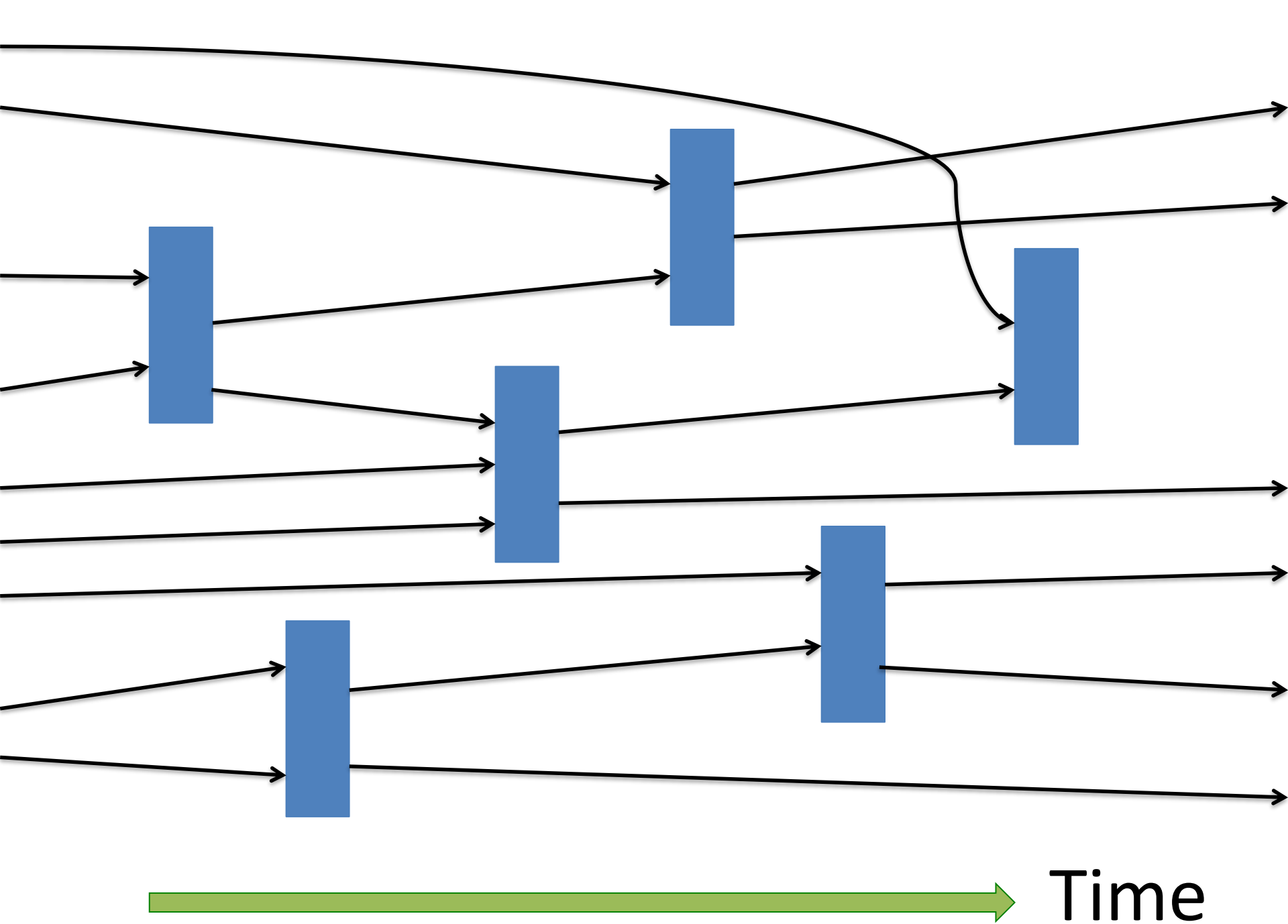
# What is DLT?

- Fundamentally about **data**
  - Trust
  - Provenance/audit
  - Sharing
  - Governance

# Core Components of DLT

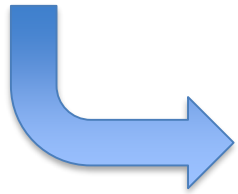








Database



Access  
Control

Transaction  
Records



# Isn't this just a Distributed Database?

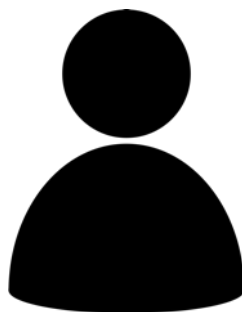
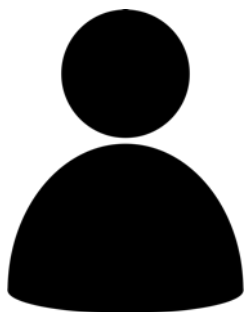
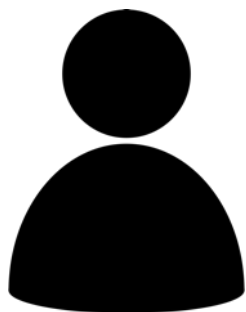
- In a sense

**BUT**

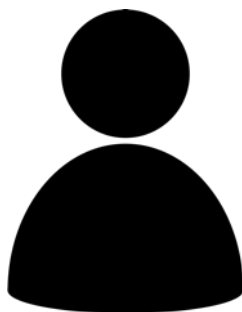
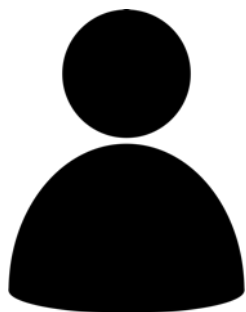
- Multiple entities with read/write permissions
- Competing interests – remember the fishermen!
- Achieving **trustless consensus** is key

# Consensus Mechanism

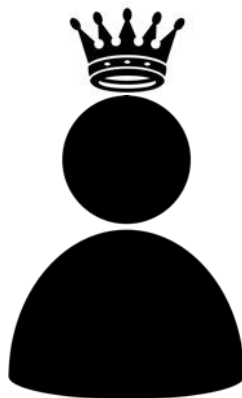
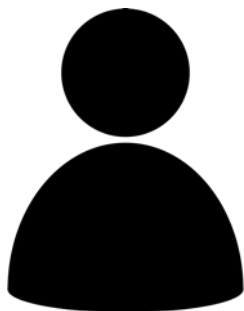
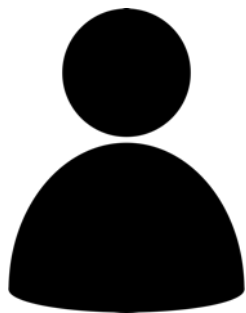




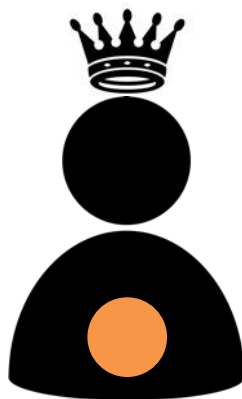
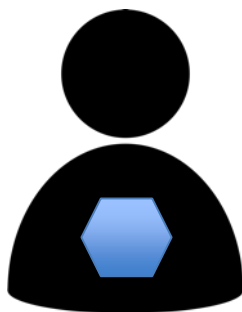
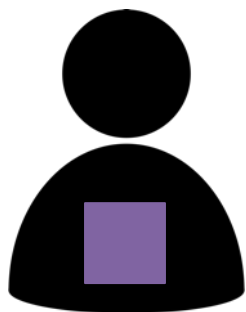


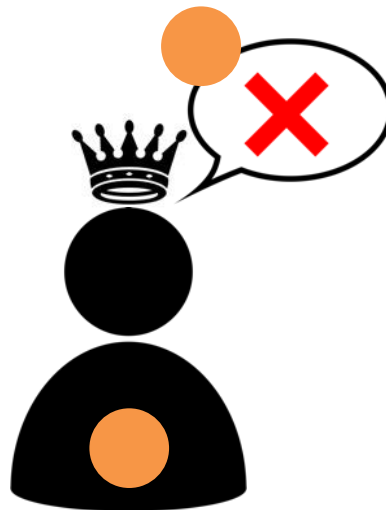
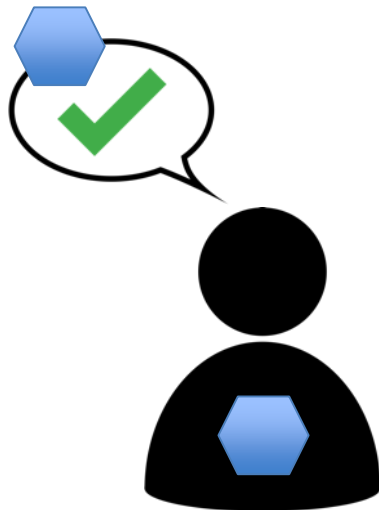
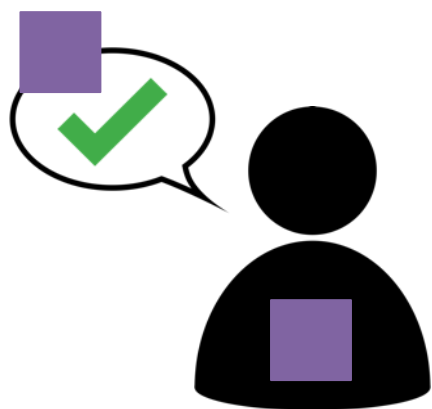


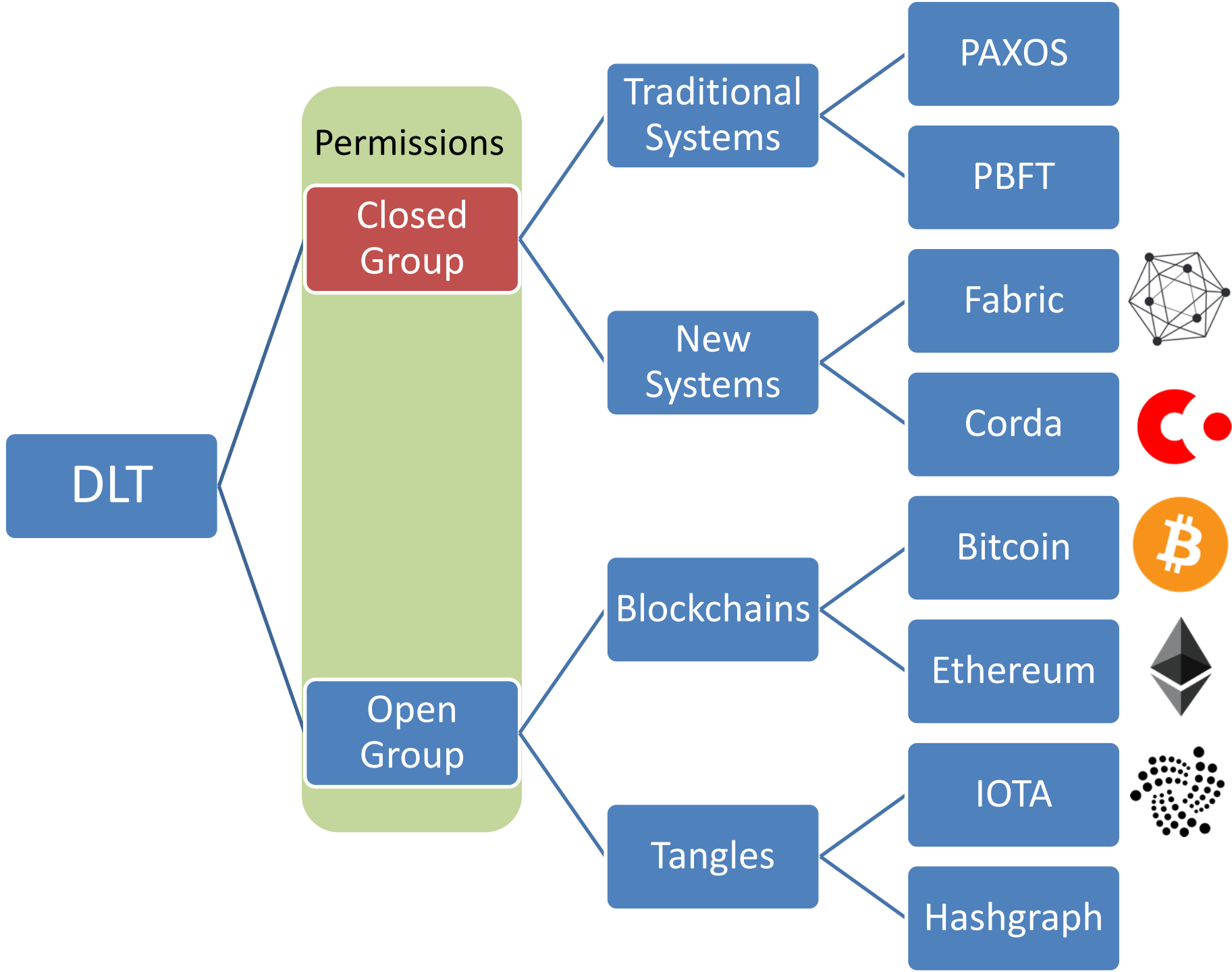












# Re-Imagining the 'Stack'

## DLT Solution

Digitised Objects

Transfer Rules

Payment Rail

Consensus Protocol

# Thank You!

[robert.learney@digicatapult.org.uk](mailto:robert.learney@digicatapult.org.uk)