

GOVERNANCE INTEROPERABILITY

PROF. DR. ROMAN BECK

 @roman_beck

beck@itu.dk

 roman-beck

romanbeck.com



Prof. Dr. Roman Beck | Professor

IT University of Copenhagen | Rued Langgaards Vej 7

DK-2300 Copenhagen S | Denmark

beck@itu.dk | www.itu.dk | www.romanbeck.com | www.blockchainschool.eu

phone +45 7218 5323 | skype roman-beck | twitter @roman_beck

Head of European Blockchain Center | Blockchain Expert at the United Nations Economic Commission for Europe | Member of the OECD Blockchain Expert Policy Advisory Board | Convenor of ISO TC 307/WG 5 Blockchain Governance | Representative of Denmark at the European Blockchain Partnership Technical Steering Group | Chair of the Danish National Mirror Committee to ISO/TC 307 Blockchain and Distributed Ledger Technologies | Co-Conference Chair ECIS 2022 in Timișoara | Co-Conference Chair ICIS 2022 in Copenhagen | Department Editor, Business and Information Systems Engineering (BISE)

GOVERNANCE INTEROPERABILITY WORKING GROUP



Jari Salo



Gadi Benmoshe



Barry O'Connor



Erol User



Lisa Gus



Helmut Nehrenheim



Fiona Delaney



Galia Kondova

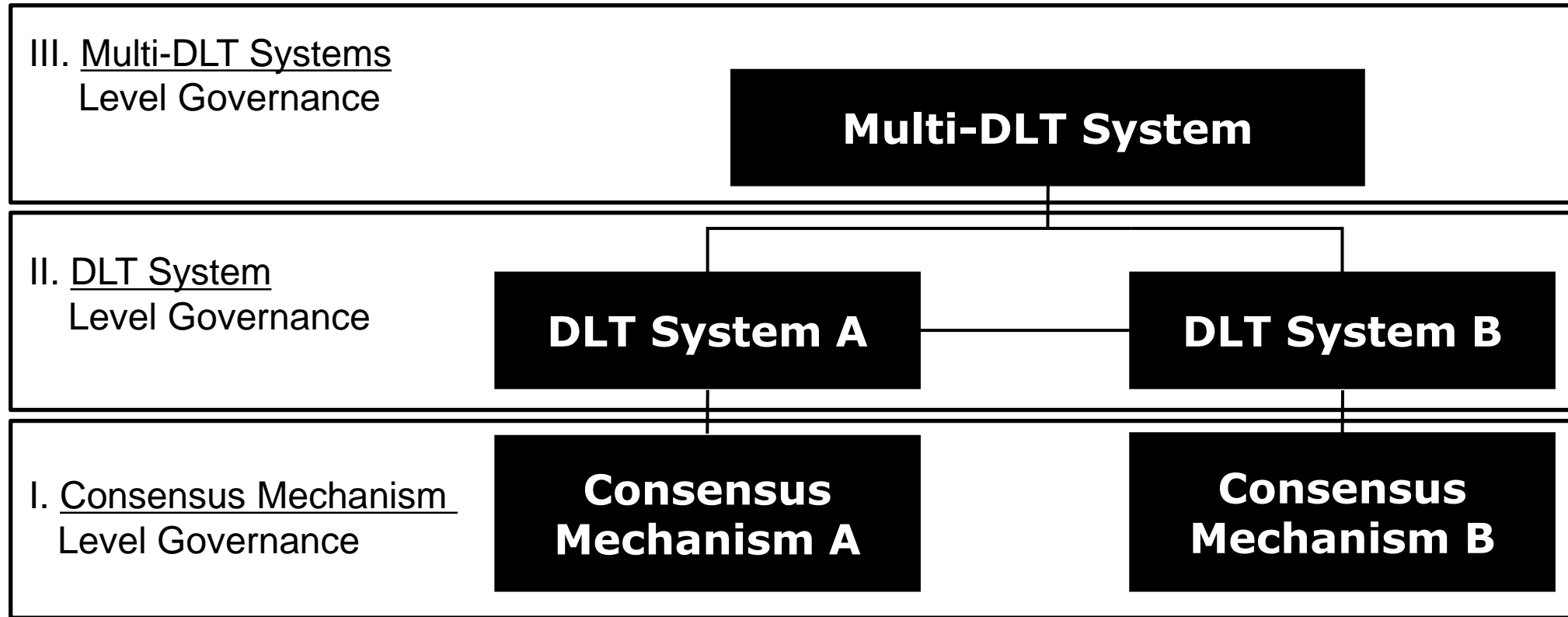
INTEROPERABILITY BETWEEN CONSENSUS MECHANISMS

Governance interoperability for DLT and non-DLT systems provides guidance how to implement...

- ... inter-chain dispute resolution,
- ... auditing mechanisms,
- ... compliance mechanisms,
- ... incident management,
- ... change management,
- ... decision rights,
- ... incentives distribution, and
- ... accountability and liability enforcement

through **on-chain and off-chain instruments** in a **cooperative governance approach** between and **across participating DLT systems**.

BLOCKCHAIN INTEROPERABILITY: WHICH ONE?



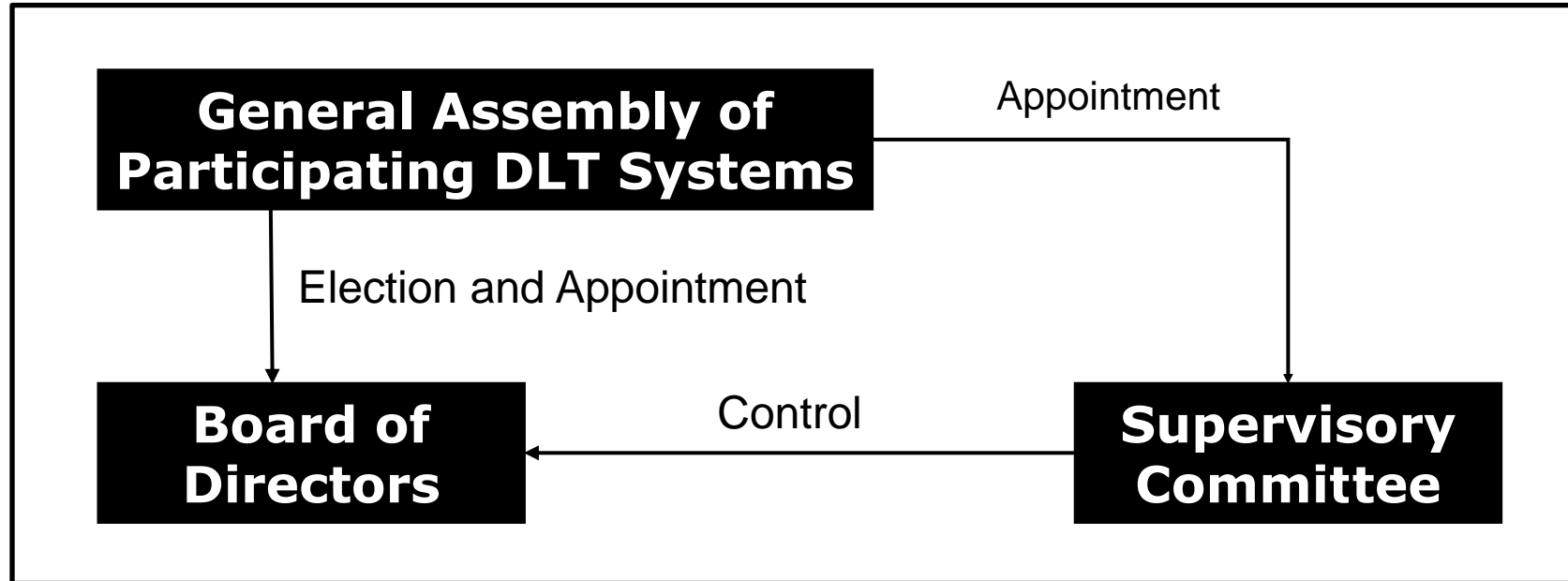
BLOCKCHAIN INTEROPERABILITY SCENARIOS

Area	Scenario „Relay-“ or Multi- DLT Interoperability	DLT Systems Interoperability	Consensus Interoperability
1) Regulatory Interoperability	(Legal frameworks, authentication and authorization, identity, ...)		
2) Governance Interoperability	(Governance models, commercial model, on-chain, off-chain, policies, ...)		
3) Technical Interoperability	(Data standardization, token transfer, certificates, smart contracts, containerization...)		

INTEROPERABILITY GOVERNANCE POLICIES

- **Data Privacy** - Considering the data immutability characteristic of blockchains that poses challenges to compliance with data protection legislations.
- **Trusted Identity** - Identity management is pivotal for blockchain interoperability.
- **Infrastructure Security** - Every blockchain should comply with high infrastructure security standards to ensure interoperability.
- **Law Enforcement Mechanisms** - In case of fraudulence or violation of any of the governance principles, there should be a clearly defined procedure to enforce law.
- **Compliance Monitoring** - Compliance with the adopted governance policies should be ensured. A compliance monitoring body and reporting should strengthen the policy enforcement.

INTEROPERABILITY IS “GOVERNANCE OF GOVERNANCE”



Governance on a supra-organizational, cooperative level

COMMERCIAL INTEROPERABILITY MODELS

	Complementing Commercial Models	Competing Commercial Models
Direct Commercial Models	New services and value creation across complementing systems that enable new commercial models on-chain	New fee and service exchange models where cooperation is unavoidable, or customer bases need to be shared.
Indirect Commercial Models	New supporting service providers such as Blockchain-as-a-Service, jointly operated trusted oracles to provide synergy effects	New support service providers to protect intellectual property, encrypt data, or provide Chinese walls to protect commercial claims.

INTEROPERABILITY GOVERNANCE INSTRUMENTS

Crypto wallets or universal wallets provide the secure environment to access and **conduct transactions on one or more DLT systems**, and thus are off-chain access points to on-chain services.



A simple example for such a crypto wallet is **Metamask**, which is a low-friction web wallet for use on the Ethereum-based networks. It acts as a kind of passport for many decentralized applications on Ethereum-based networks.



For further information please contact me!

Prof. Dr. Roman Beck

Lead Researcher

Head of European Blockchain Center

IT University of Copenhagen

Rued Langgaards Vej 7

DK-2300 Copenhagen S, Denmark

beck@itu.dk | www.romanbeck.com

phone +45 7218 5323 | twitter @roman_beck