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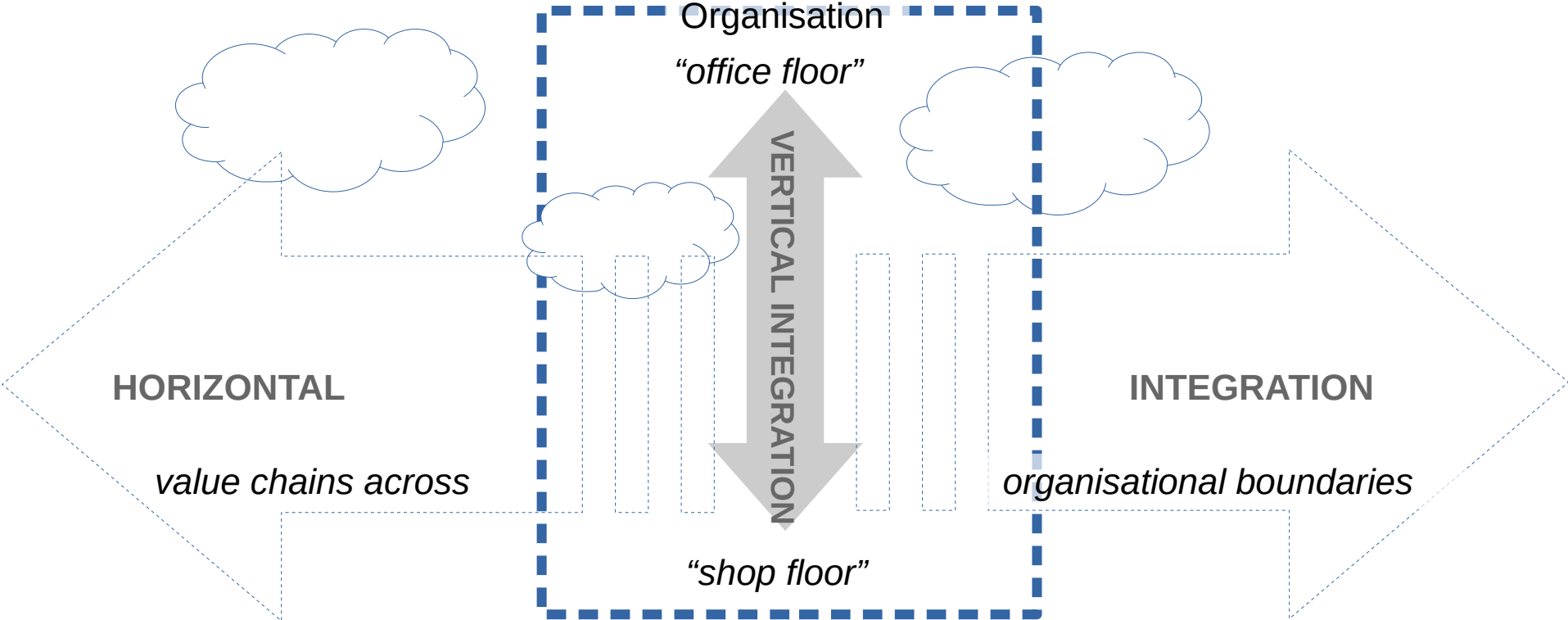
# Standards and Open Source for IoT and Edge

Workshop on IoT and Edge Computing  
Research and Standardisation Convergence

September 2021



# Two Key Dimensions: Horizontal and Vertical Integration



# Digitisation – Clear Competitive Advantage

Access to and analysis and use of data

Real-time visibility into performance of global manufacturing operations

Real-time visibility into quality and compliance data

Key applications

Real-time visibility into status of all processes and manufacturing data

Vertical and horizontal integration

Identify need and schedule predictive maintenance of assets

Ability to integrate manufacturing systems with IoT data

# Focus: Two Key Ongoing Standardisation Activities

**Asset  
Administration  
Shell**

**Digital Twin**

Major standardisation work ongoing in IEC TC 65 and ISO/IEC JTC 1 SC 41

“Pre-standardisation” work ongoing, e.g. in DIN

Complementary open source activities, e.g. platforms, implementations etc.;;  
leading role of Eclipse Foundation

Next step / challenge: Further bring standardisation and open source activities  
together to reap the full benefits

# Increasing Relevance: Interplay of Standards and Open Source (1/2)

## EXAMPLES

Analytics, AI

Quality assurance

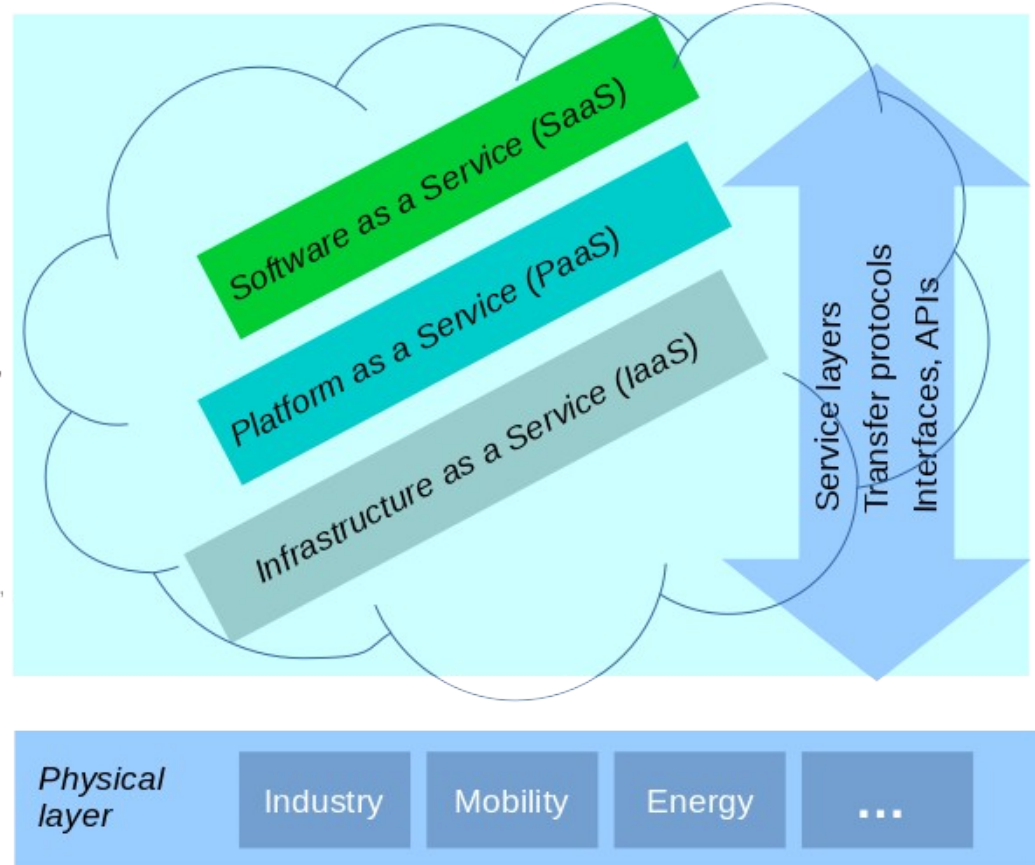
Cyber physical systems, digital twin

Service delivery platforms

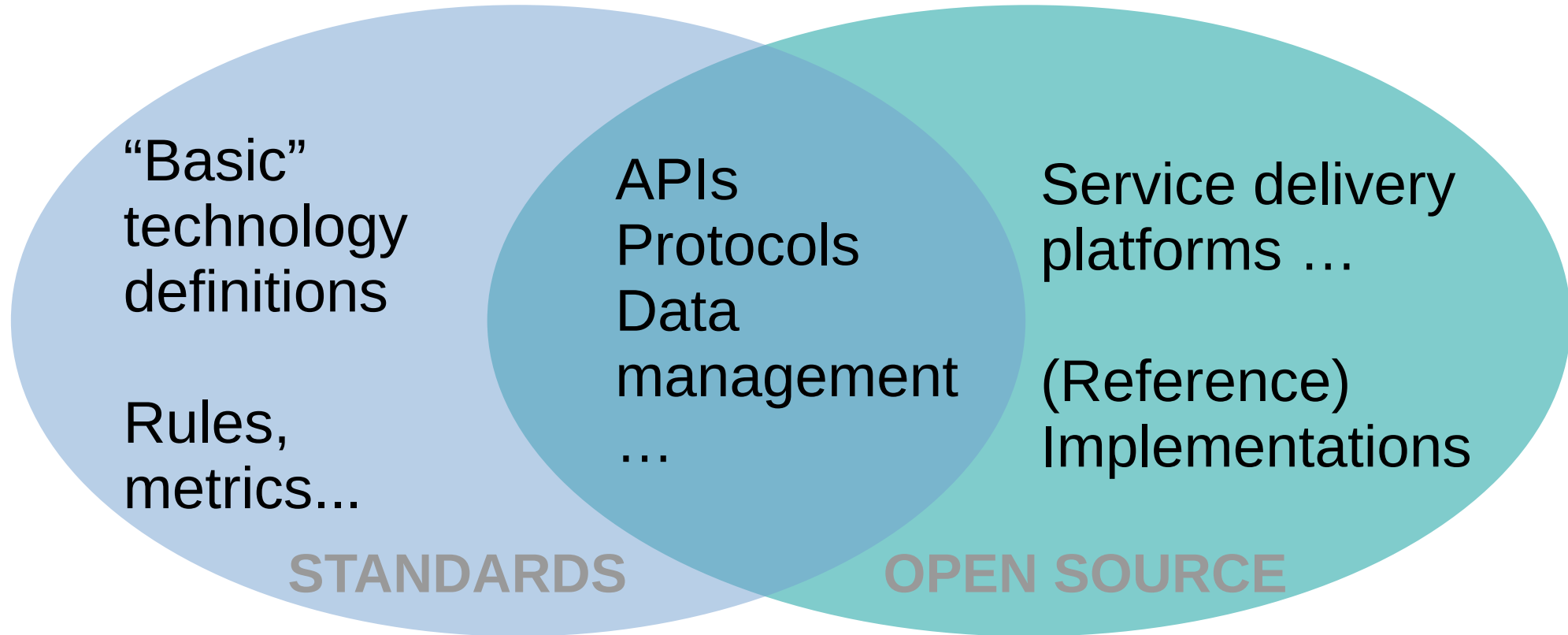
Transfer protocols, APIs

Data governance, security, privacy

Identifiers, Ontologies, Semantics



# Increasing Relevance: Interplay of Standards and Open Source (2/2)



# Many thanks

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