



A SYSTEM APPROACH FOR ESTABLISHING A TRUSTED DATA SHARING ARCHITECTURE INTERNATIONAL DATA SPACES

PROF. DR. BORIS OTTO · TOKYO · 19 DECEMBER 2019



AGENDA

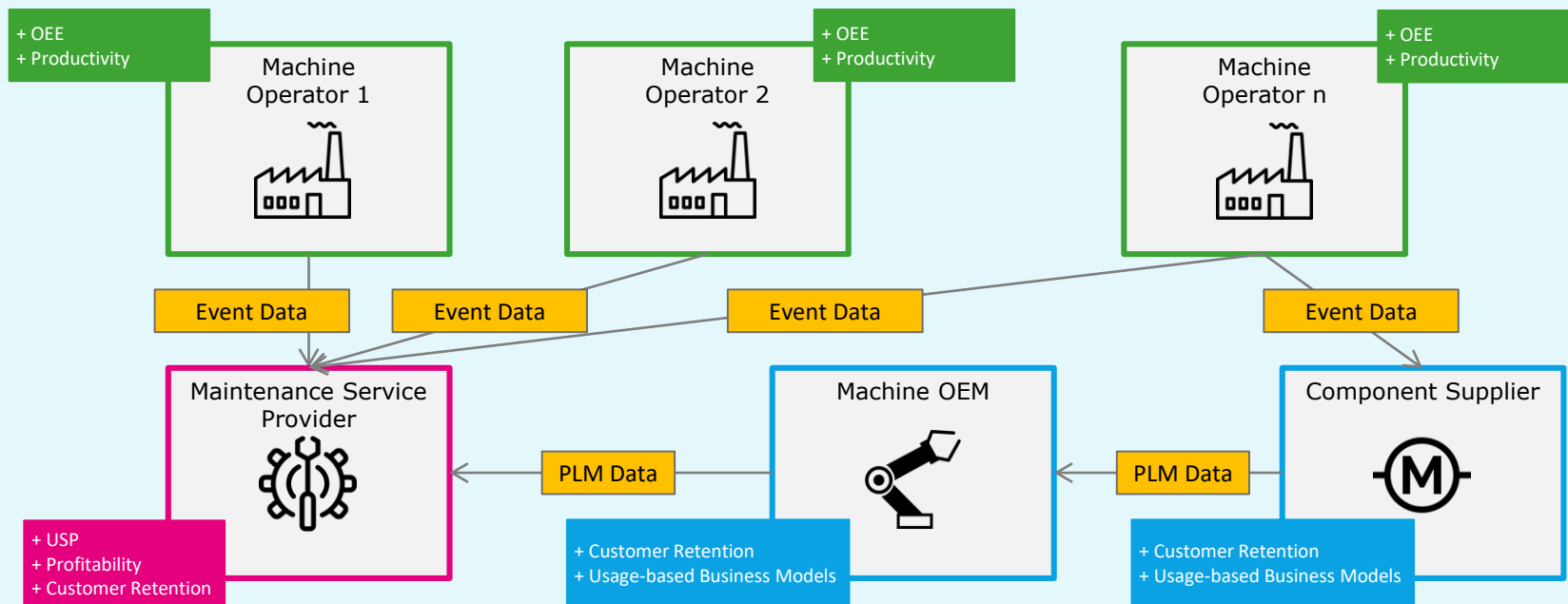
Data Sharing in Industrial Ecosystems

IDS as a Trusted Data Sharing Architecture

Outlook

DATA SHARING IN INDUSTRIAL ECOSYSTEMS

COLLABORATIVE PREDICTIVE MAINTENANCE





A TRUSTED DATA SHARING ARCHITECTURE REQUIREMENTS

DISTRIBUTED DESIGN

DATA SOVEREIGNTY

DATA SECURITY

INTEROPERABILITY

OPENNESS

SHARED GOVERNANCE

300 people
contributing

20 countries



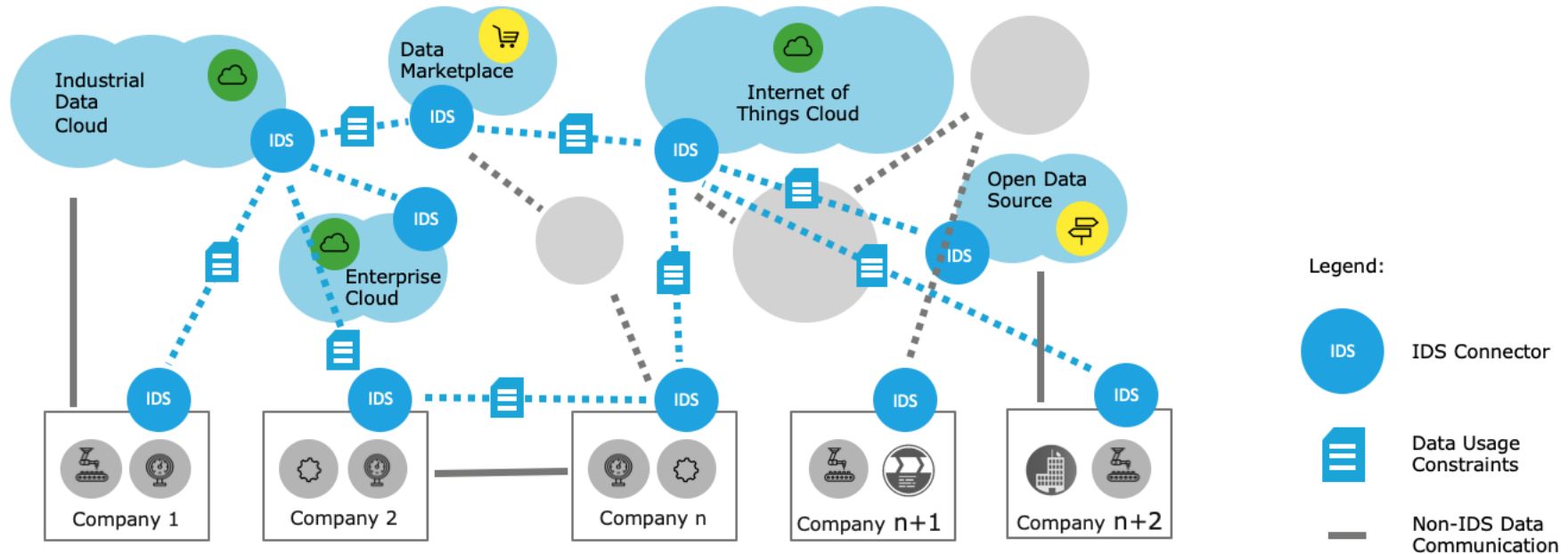
100+

INTERNATIONAL DATA
SPACES ASSOCIATION



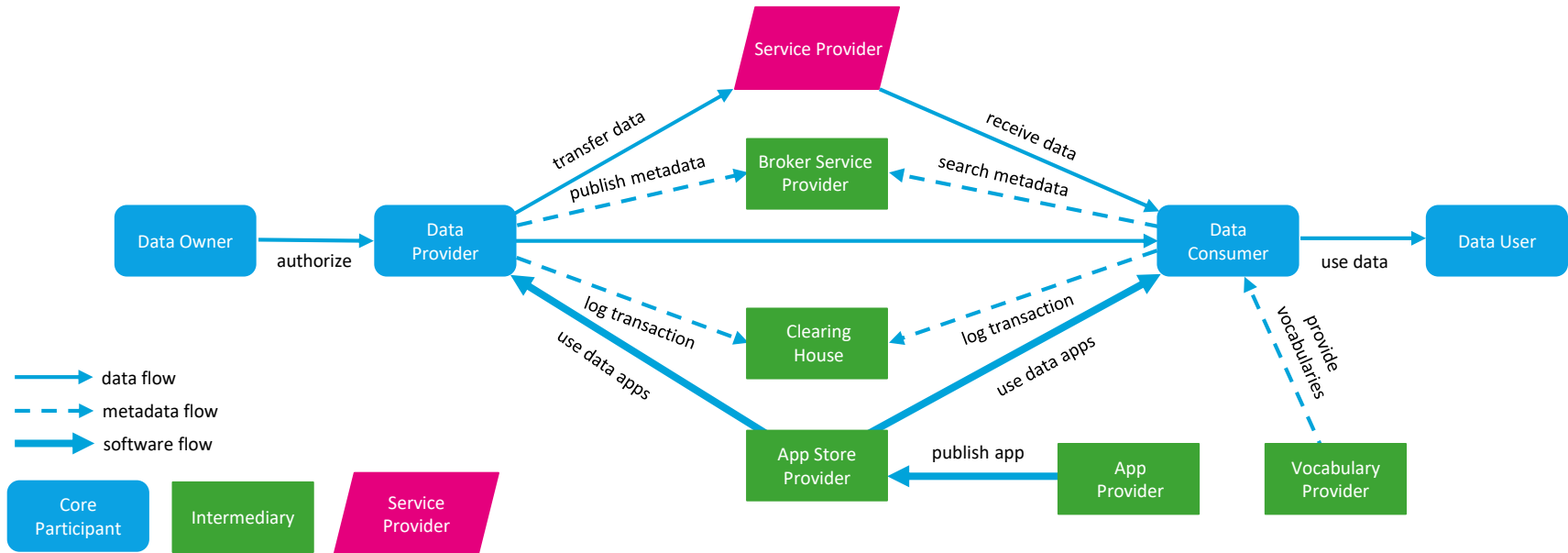
A TRUSTED DATA SHARING ARCHITECTURE

DATA ECOSYSTEM VIEW



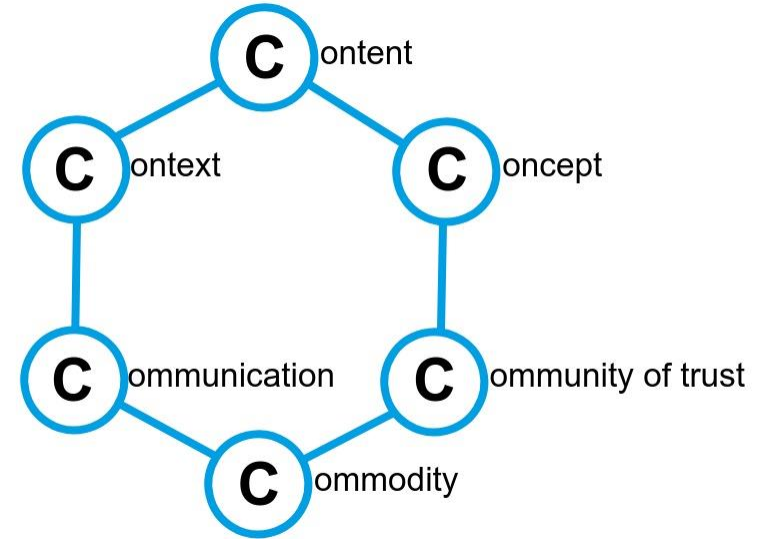
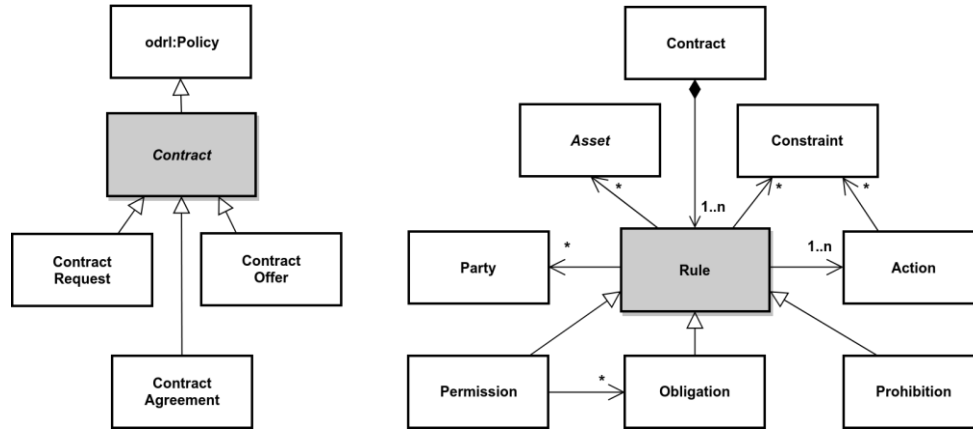
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SHARED DATA INFRASTRUCTURE VIEW



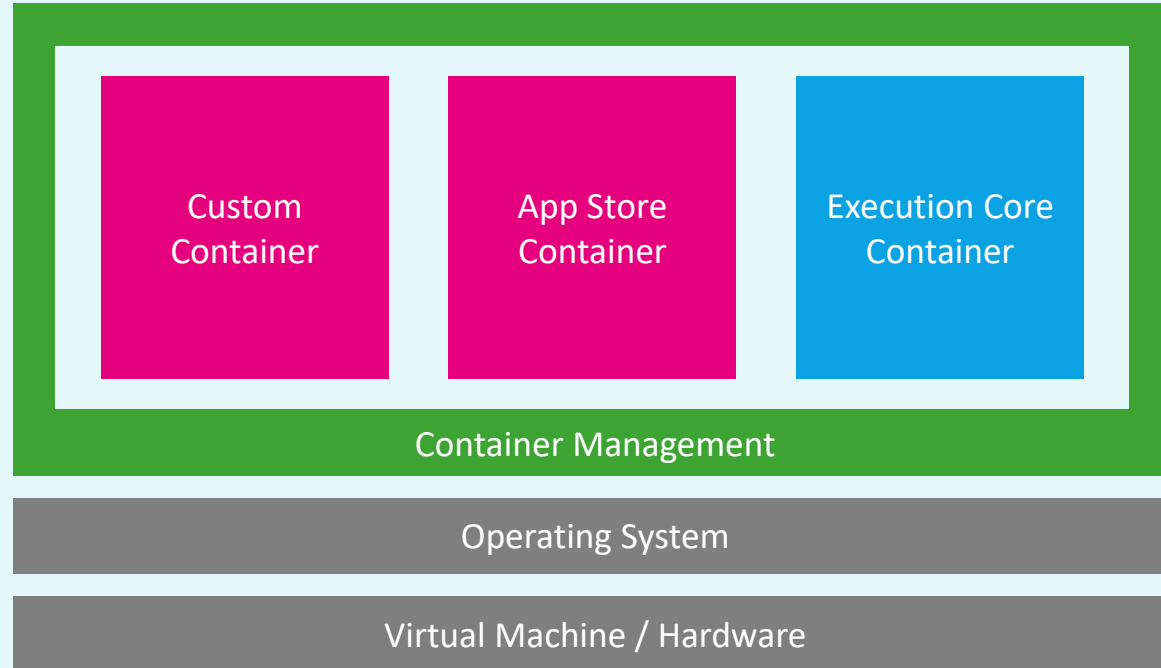
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DATA RESOURCE VIEW



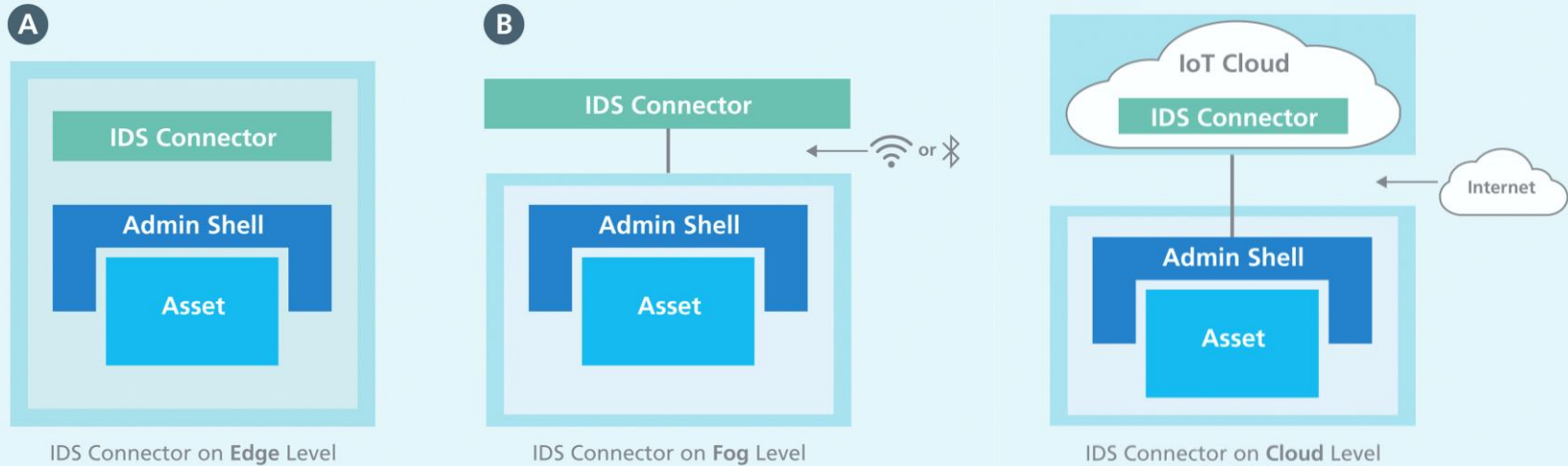
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IDS CONNECTOR VIEW



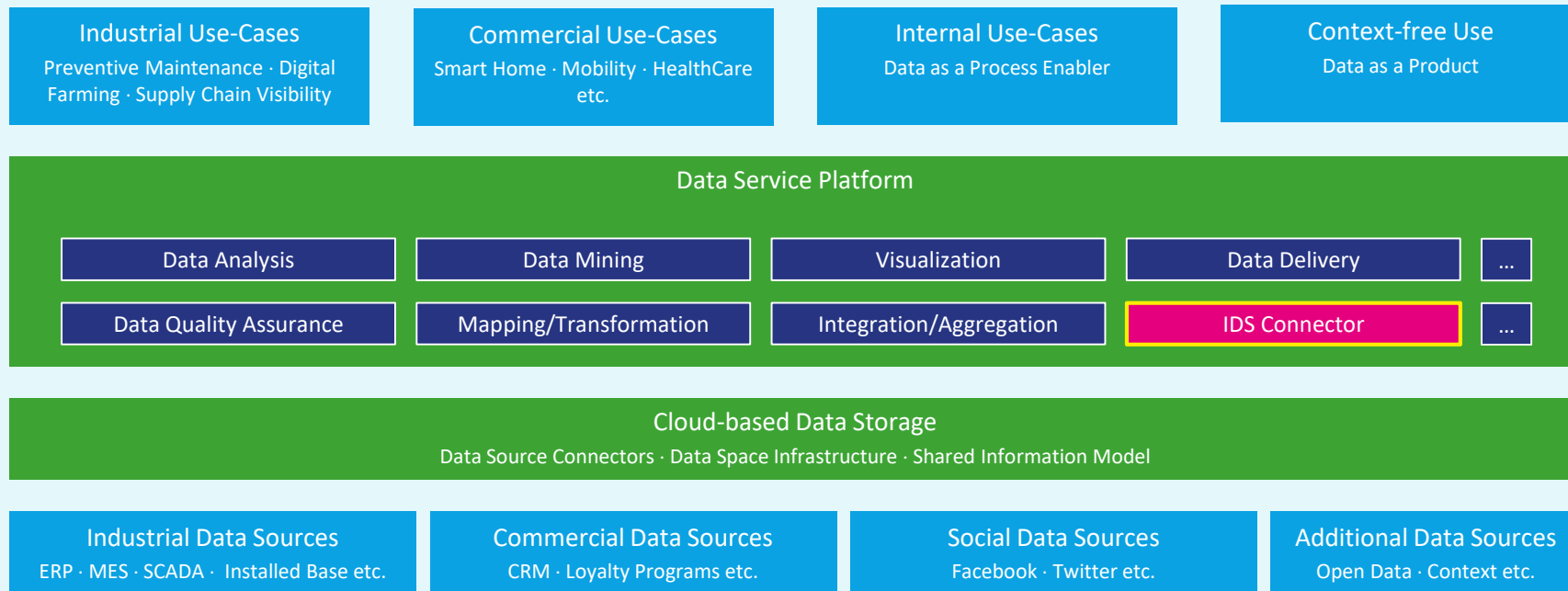
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ASSET ADMIN SHELL INTEGRATION VIEW



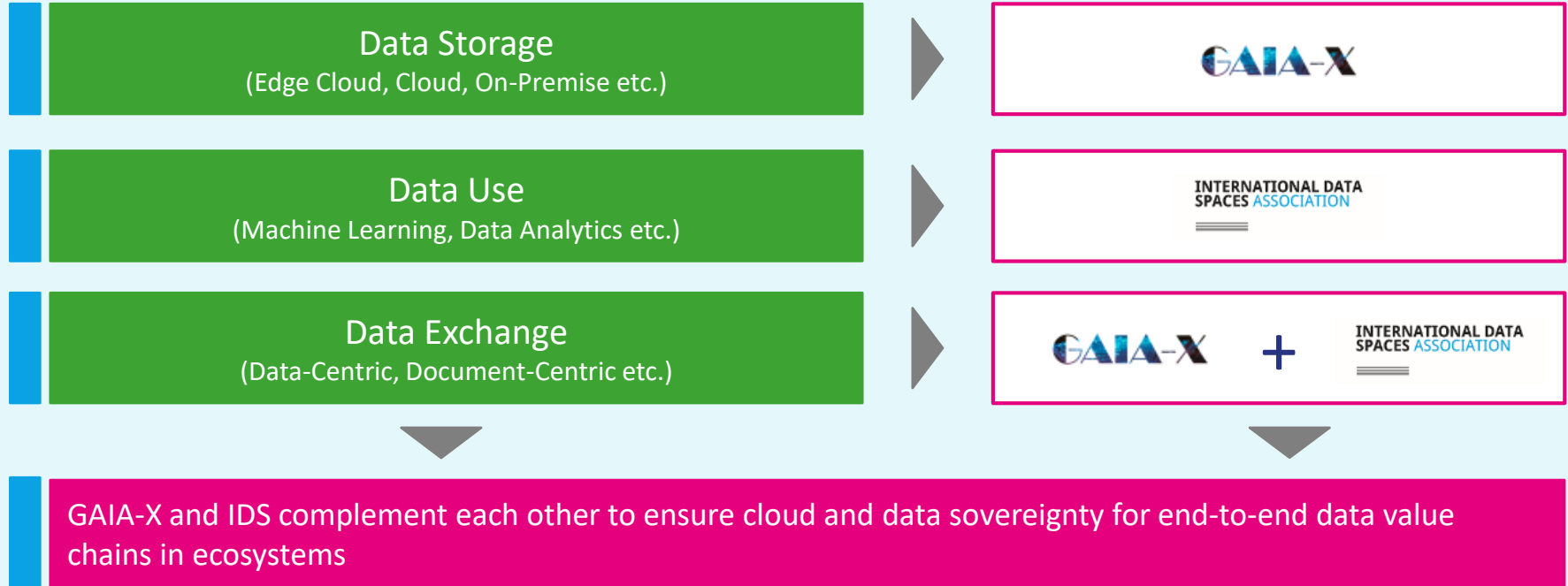
A TRUSTED DATA SHARING ARCHITECTURE

ENTERPRISE-WIDE DATA ARCHITECTURE VIEW



CLOUD AND DATA SOVEREIGNTY

DATA VALUE CHAIN VIEW

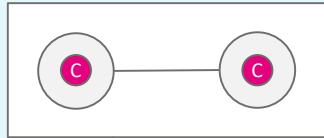


INDUSTRIAL ECOSYSTEM EVOLUTION

STAGE-WISE DEVELOPMENT

I

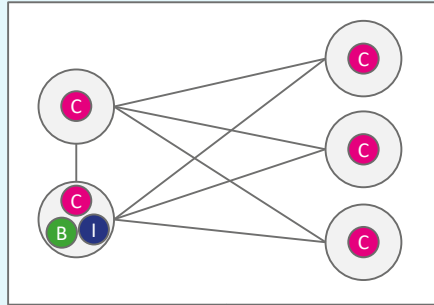
1:1



Bilateral Data Exchange

II

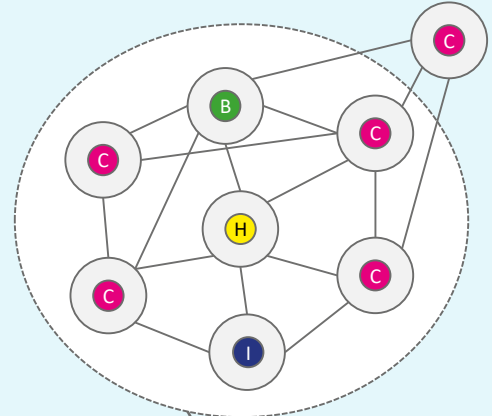
„Few to Few“



Closed Community Data Sharing

III

n:m



Open Dynamic Data Ecosystem

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