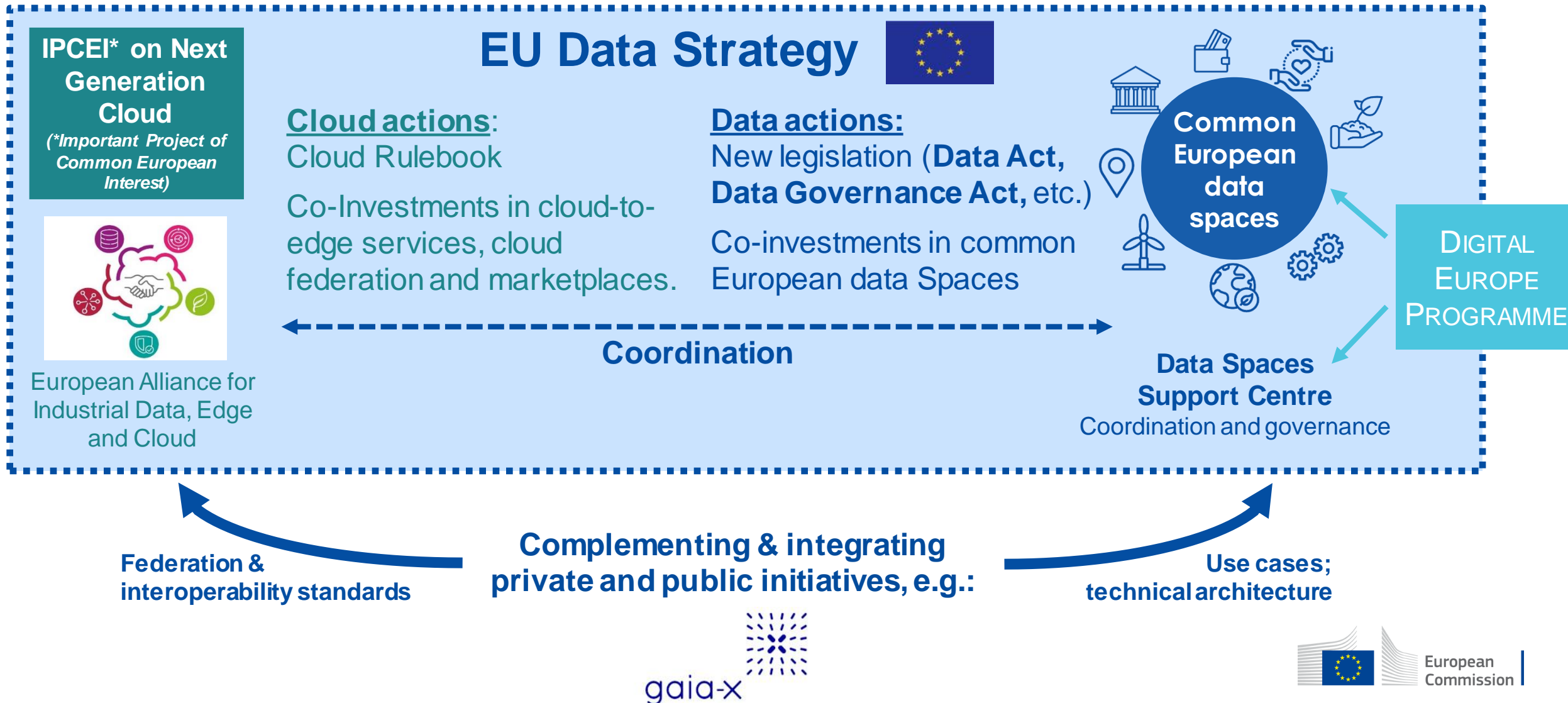


**“Delivering
innovation
through standards”**

Rolf Riemenschneider
DG CONNECT/E4
Internet of Things
European Commission

**IoT and
EDGE Computing**

The European Data strategy



European Strategy for Data and related legislation

4 key instruments

Nov 2020
Data
Governance
Act

Ensure **TRUST** in data transactions

Public sector data, private sector data and personal data voluntarily made available by data holders

Dec 2020
Digital
Market
Act

Regulate **MARKET POWER** based on data

Personal data and private sector data held by online platforms and originating from the users (both businesses and individuals)

Q4 2021
Impl. Act.
High Value
Datasets

Unleash the socio-economic potential of data as a **PUBLIC GOOD**

Public sector data of high value

Q4 2021
Data Act

Ensure **FAIRNESS** in the allocation of data value among the actors of the data economy

Private sector data, personal data and co-generated (IoT) data

Complemented by sectoral legislation

2022
Access to
in-vehicle
data

Promote a competitive market on car data services, expanding the current legislation on non-discriminatory access to repair data

Existing legislation

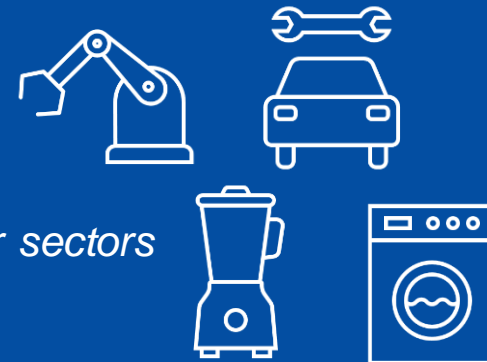
Directive 96/9/EC on the legal protection of databases

General Data Protection Regulation – Regulation (EU) 2016/679

Data Act

Better access to IoT data

Rules for IoT data also frame data sharing in other sectors



**Tackle
contractual
unfairness**



**Make business
data available for
the common good**



**Easier switching
between
cloud services**



Facilitate data flows through technical standards and interoperability

Industrial Internet of Things: the strategic picture for Europe

Next-generation IoT

Power to the edge,
where the data is
Seamless connectivity



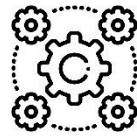
Next-generation operating systems
Decentralised/swarm intelligence
Cognitive computing continuum

Next-generation chips
powering intelligence
at the edge



Low energy semiconductor
chips - made in Europe

**Standardisation,
interoperability**



Vertical, horizontal,
x-sector integration

**Common Open Digital
Platforms & Ecosystem**

Competition law,
geopolitics



Strategic
autonomy

Transition pathways
towards resilient,
innovative, sustainable
& digital ecosystems



Open, dynamic
ecosystems for EU
tech businesses

Investment in Data Spaces
EU 5G & cloud-edge
infrastructure/services



Data legislation:

- Data Act: access & fairness on data market
- Data Governance Act: foster trust in data sharing & intermediaries

Data Strategy

Chips Act

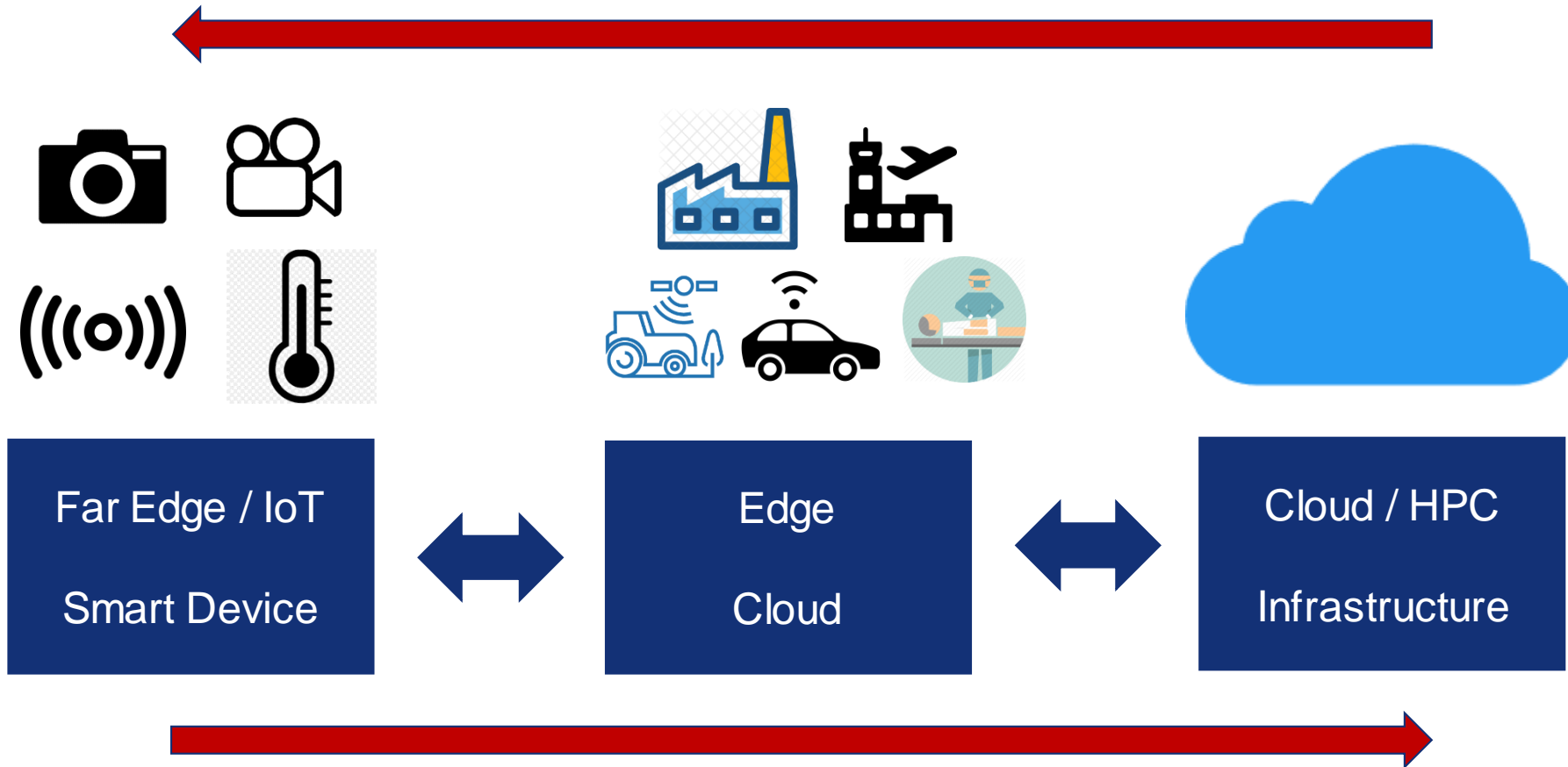
The EU Policy Context:

- ❑ NextGenerationEU
- ❑ REPowerEU
- ❑ Twin Transition:
 - Digital Compass
 - Green: Fit for 55

New Industrial Strategy

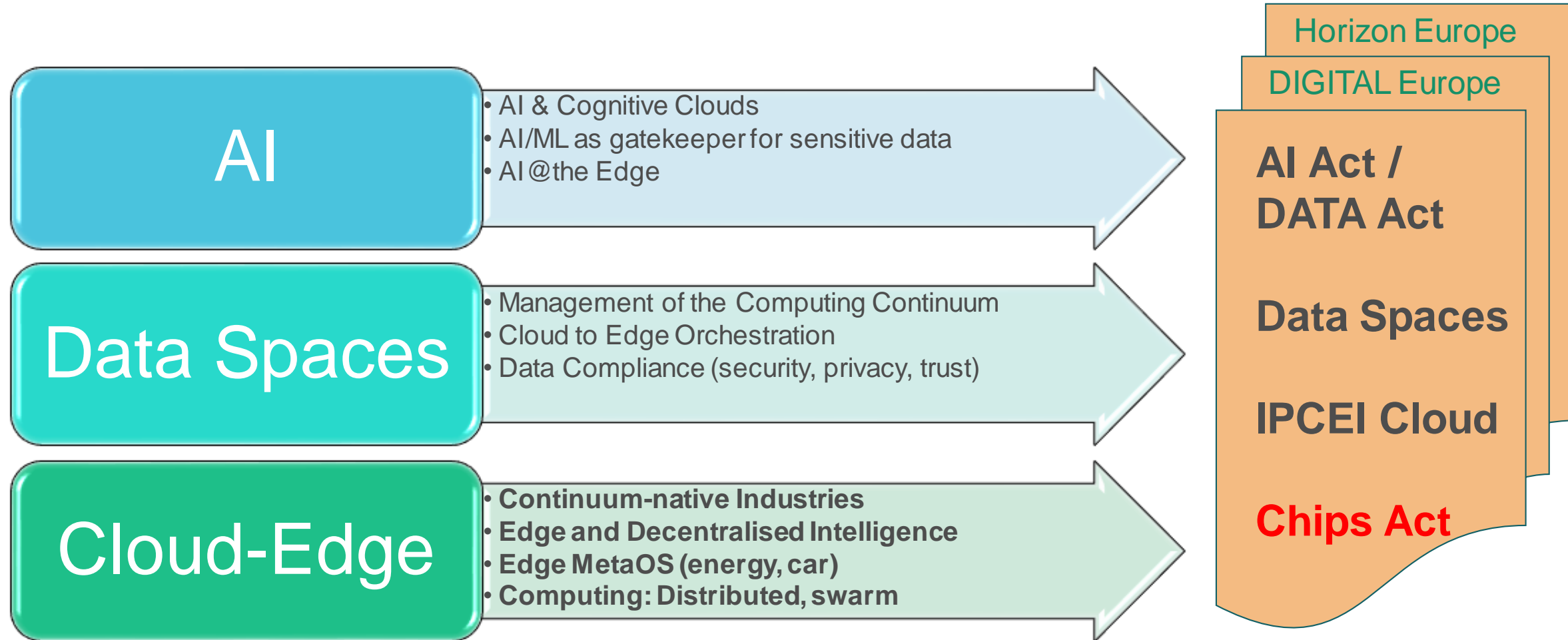
Paradigm Shift: Cloud – Edge - IoT

Trend/Paradigm Shift: from Cloud to Edge
Bringing compute resources closer to the data

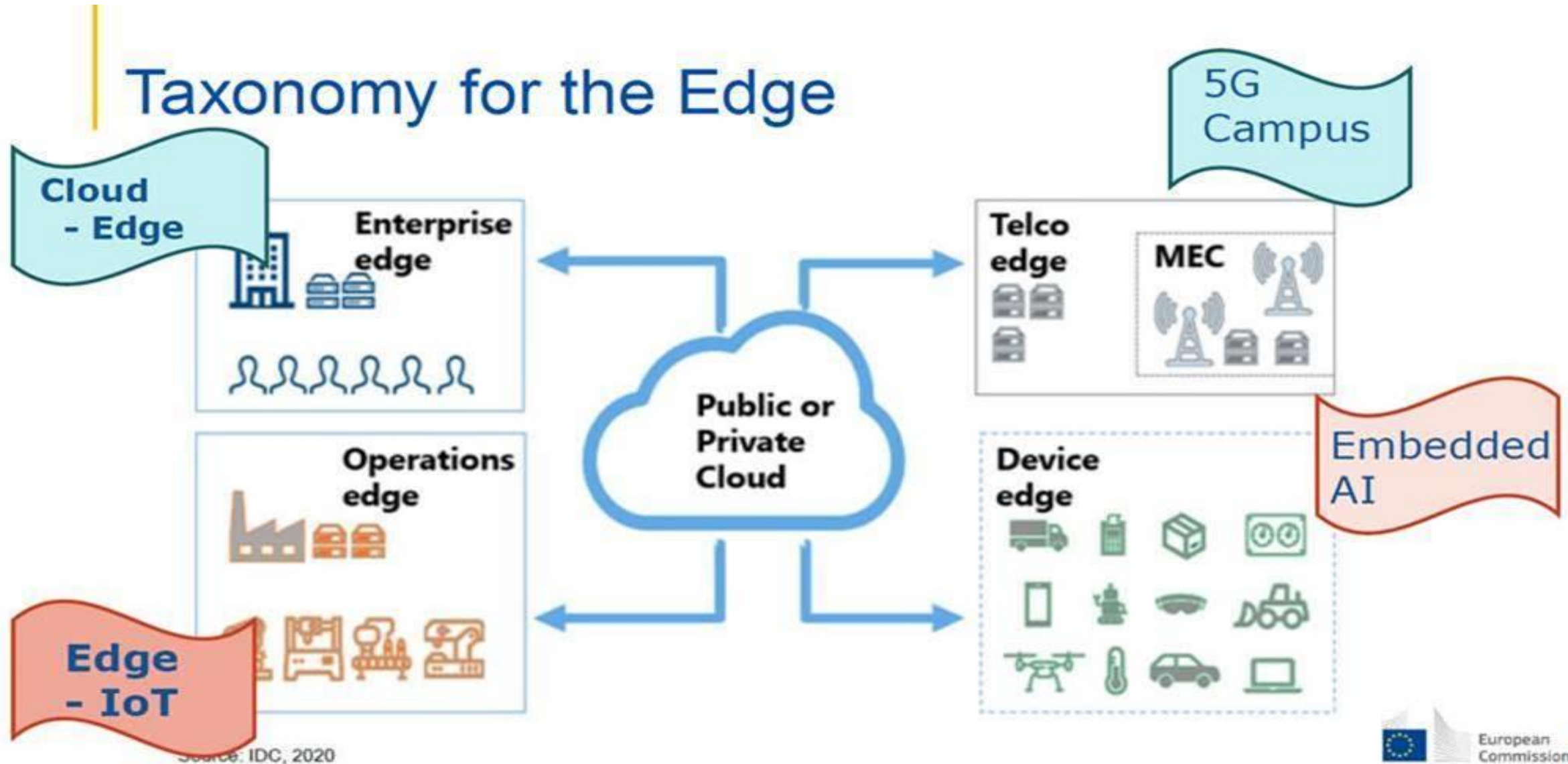


Federating far edge resources ad hoc via 5G
to provide edge-cloud resources close to the edge

Cloud-Edge-IoT Policies



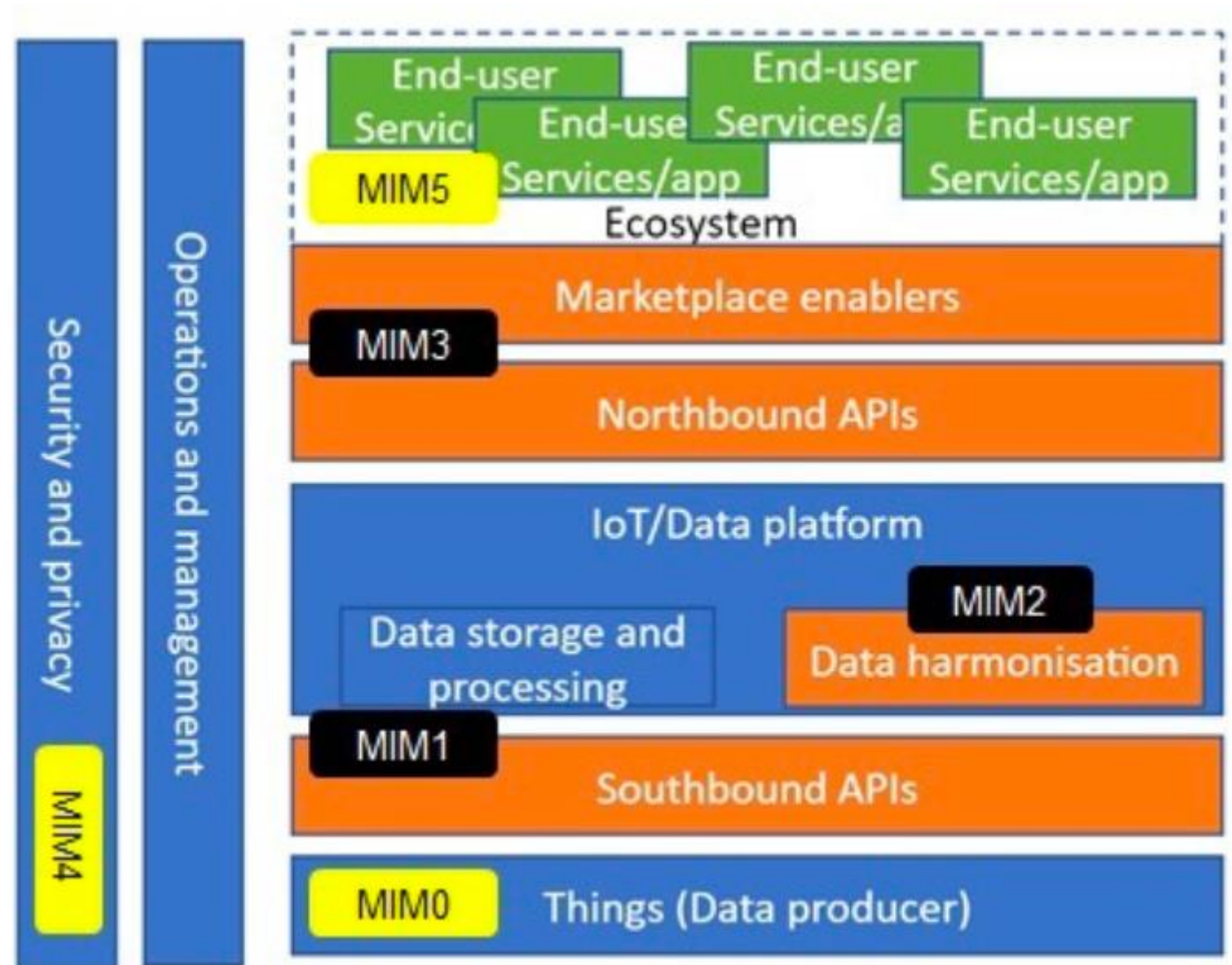
Need of Reference Architecture Models



MIMs – Minimum Interoperability Mechanisms

Living.eu – High-Level Architecture

- A widely agreed reference architecture
- Landscaping on Standards, Gaps
- High-level abstraction, e.g. metamodels
- Focus discussions on key elements of interoperability
- → **MIMs**
as part of a **Standardisation Plan**



THANK YOU

Useful links:

- **European Data Strategy:**

<https://ec.europa.eu/digital-single-market/en/policies/building-european-data-economy>

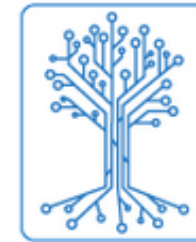
- **ARTEMIS White Paper: From IoT to SoS:**

<https://artemis-ia.eu/news/whitepaper-from-iot-to-sos.html>



- **HIPEAC Vision :**

<https://www.hipeac.net/vision/#/latest/>



GAIA-X

- **The Alliance AIOTI: IoT + Edge Computing Convergence**

<https://aioti.eu/news/>



- **IoT Week in June 2022 -Dublin:**

→ www.Iotweek.org

IoTWeek