EU for the Digital and Green Transformation

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Industrial Internet of Things: the strategic picture for Europe

Next-generation IoT

Power to the edge, where the data is

Seamless connectivity

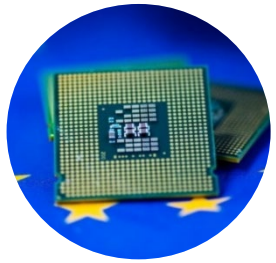
Next-generation operating systems

Decentralised/swarm intelligence

Cognitive computing continuum

Chips Act

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

Investment in Data Spaces

EU 5G & cloud-edge infrastructure/services

Data Strategy

Data legislation:

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

Transition pathways towards resilient, innovative, sustainable & digital ecosystems

Open, dynamic ecosystems for EU tech businesses

New Industrial Strategy

The EU Policy Context:

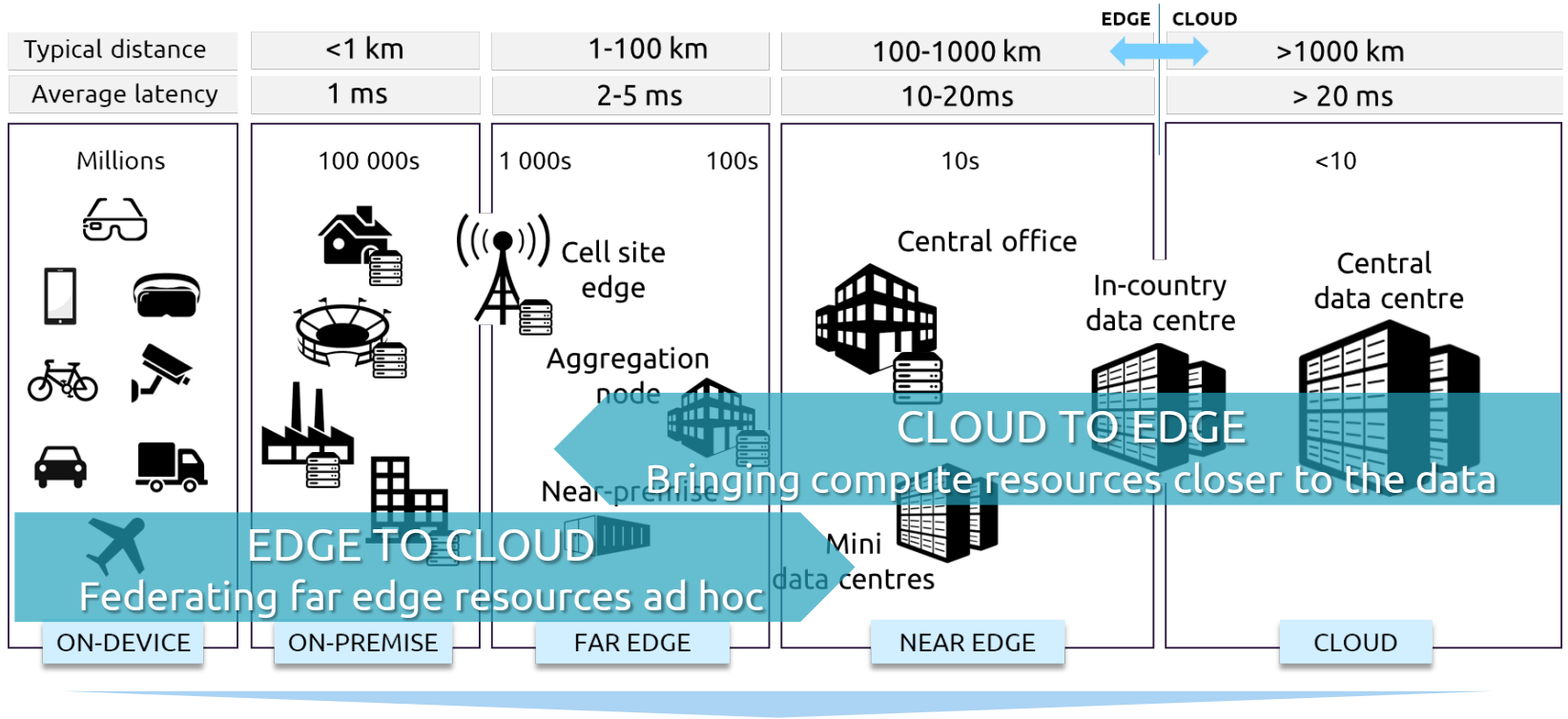
- ❑ NextGenerationEU
- ❑ REPowerEU
- ❑ Twin Transition:
  - Digital Compass
  - Green: Fit for 55

European Commission

Digital Decade objectives for the cloud & edge computing continuum by 2030

Digital Decade policy programme - EU digital ambitions in key areas -> cloud computing, AI, data and connectivity.

- ✓ **>10.000 edge nodes by 2030**
- ✓ **75% of cloud uptake by EU enterprises in 2030**



European Commission

The European Data strategy

IPCEI* on Next Generation Cloud
(*Important Project of Common European Interest)

European Alliance for Industrial Data, Edge and Cloud

EU Data Strategy

Cloud actions:
Cloud Rulebook

Co-Investments in **Cloud / Edge Middleware Platform**, services & marketplaces

Data actions:
New legislation (Data Act, Data Governance Act, etc.)

Co-investments in **common European data Spaces**

Coordination

Data Spaces Support Centre
Coordination and governance

DIGITAL EUROPE PROGRAMME

Federation & interoperability standards

Complementing & integrating private and public initiatives, e.g.:

Use cases; technical architecture

gaia-x

European Commission

Common European data spaces

Health

Industrial & Manufacturing

Agriculture

Finance

Mobility

Green Deal

Energy

Public Administration

Skills

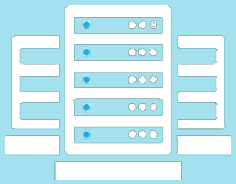
High Value Datasets from public sector

- Driven by stakeholders
- Rich pool of data of varying degree of openness
- Sectoral data governance (contracts, licenses, access rights, usage rights)
- Technical tools for data pooling and sharing

Data Spaces Support Centre

- Coordinating the development of data spaces
- Assuring common standards and interoperability

Technical infrastructure for data spaces



Edge & cloud Services

Smart Middleware solutions

Marketplace

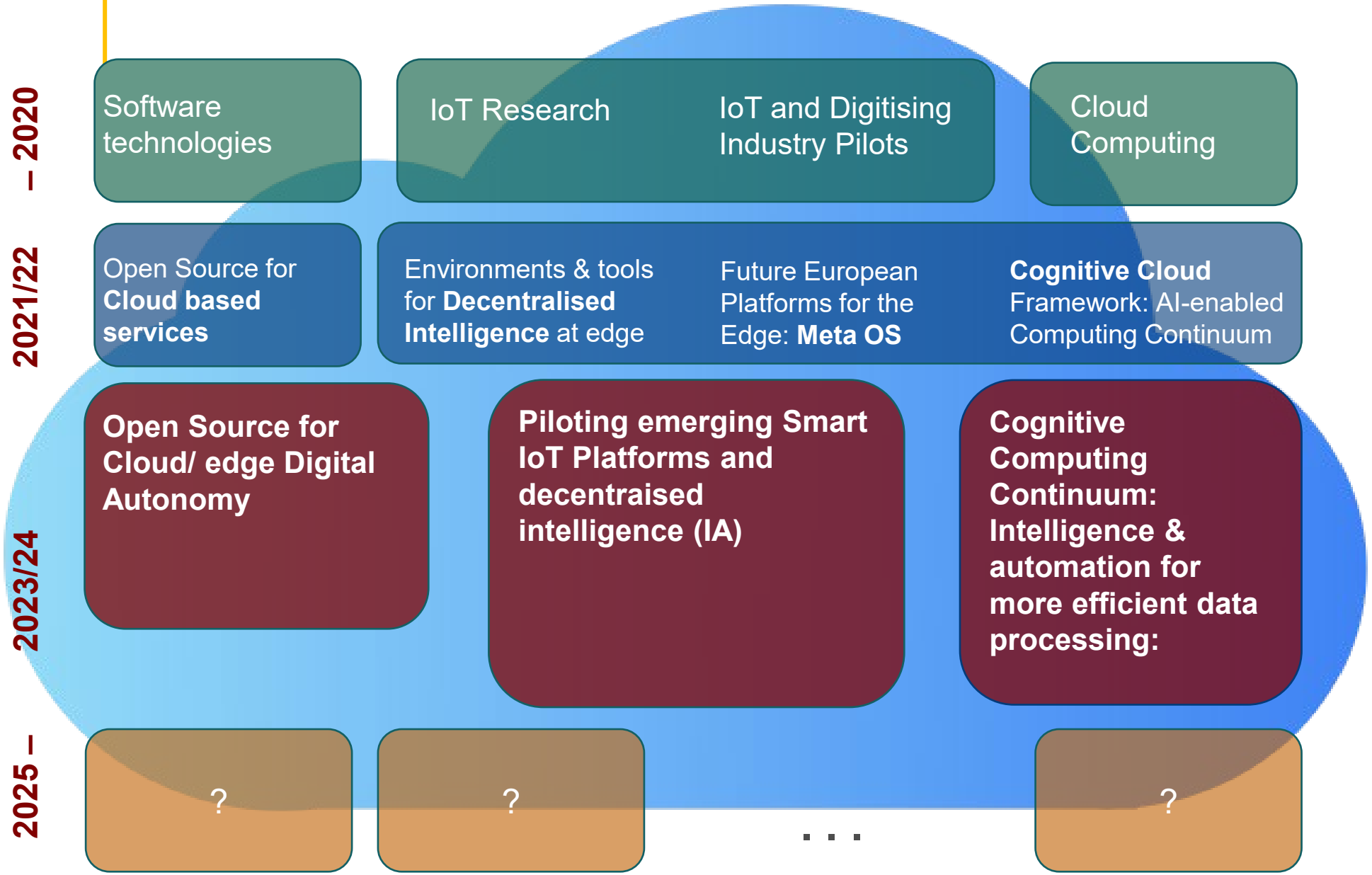
High-Performance Computing

AI on demand platform

AI Testing and Experimentation Facilities

Horizon Europe Work Programmes 2021/22, 2023/24

Innovative technologies for the next generation Cloud-Edge-IoT continuum

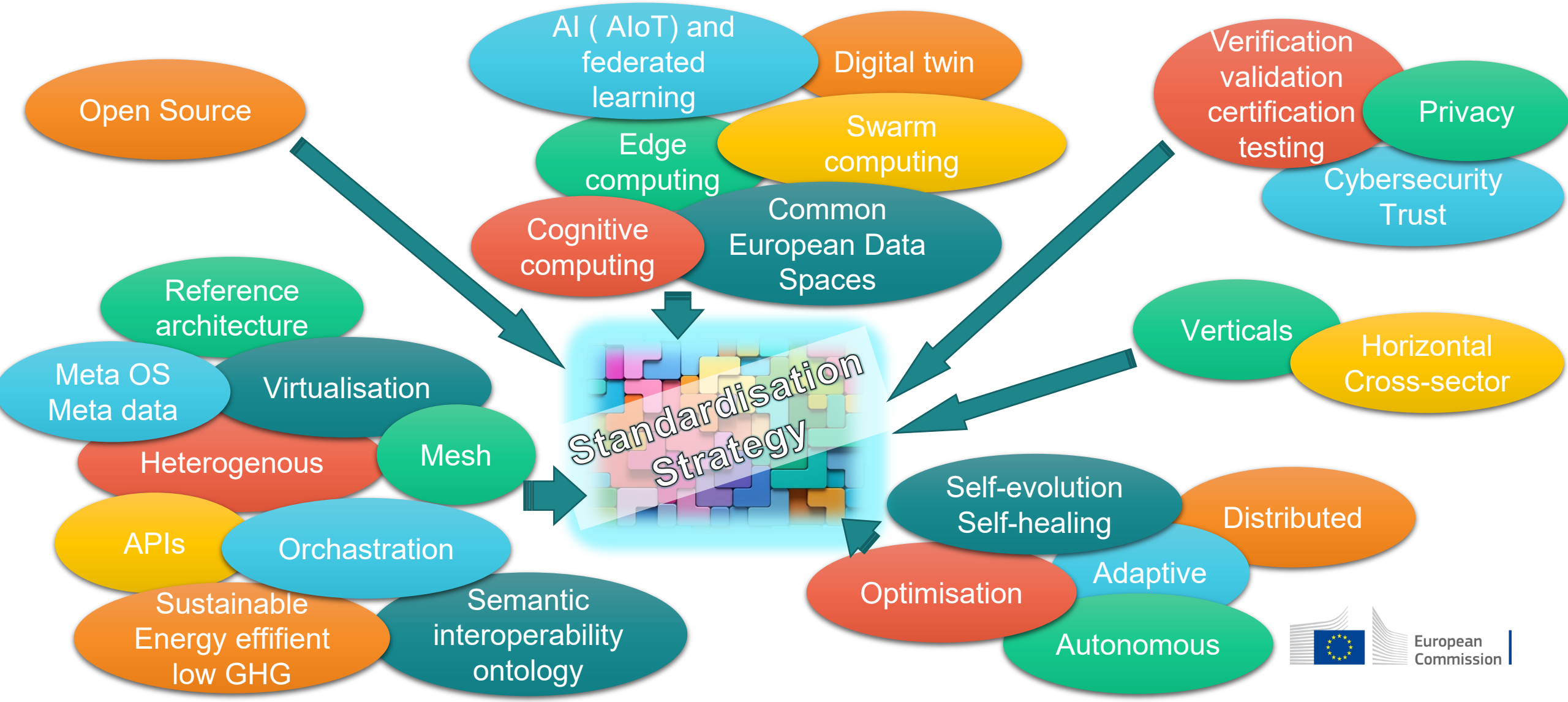


European Commission

Standardisation state of play

- Annual work programme
  - Develop European standardisation deliverables addressing the needs of edge and swarm computing, including interoperability and access to data.
  - Possible action grant on this topic
- Rolling plan for ICT standardisation 2024 - 17 action points in the IoT chapter
- SDOs should update and supplement existing IoT interoperability standards & architectures, incl. semantics (e.g. SAREF) considering multilevel edge computing and autonomy, decentralized/federated intelligence and machine learning/AI, swarm computing, common European data spaces, and digital twins and cover the major verticals, including energy, mobility, agriculture, etc. as well as horizontal cross-sector interoperability.

Areas driving IoT evolution and standardisation



Modernisation of the standardisation process

- Action 17 from the rolling plan: SDOs to work towards a faster standardisation cycle more adapted to the fast pace of IoT technology developments. Some examples already exist (e.g. for SAREF and FIWARE).
- Could automation of the standardization process and/or use of AI be considered in the future?
- Could a “translation mechanism” be standardized rather than all the messages in an ontology, protocols, etc.?

Thank you

European Commission