



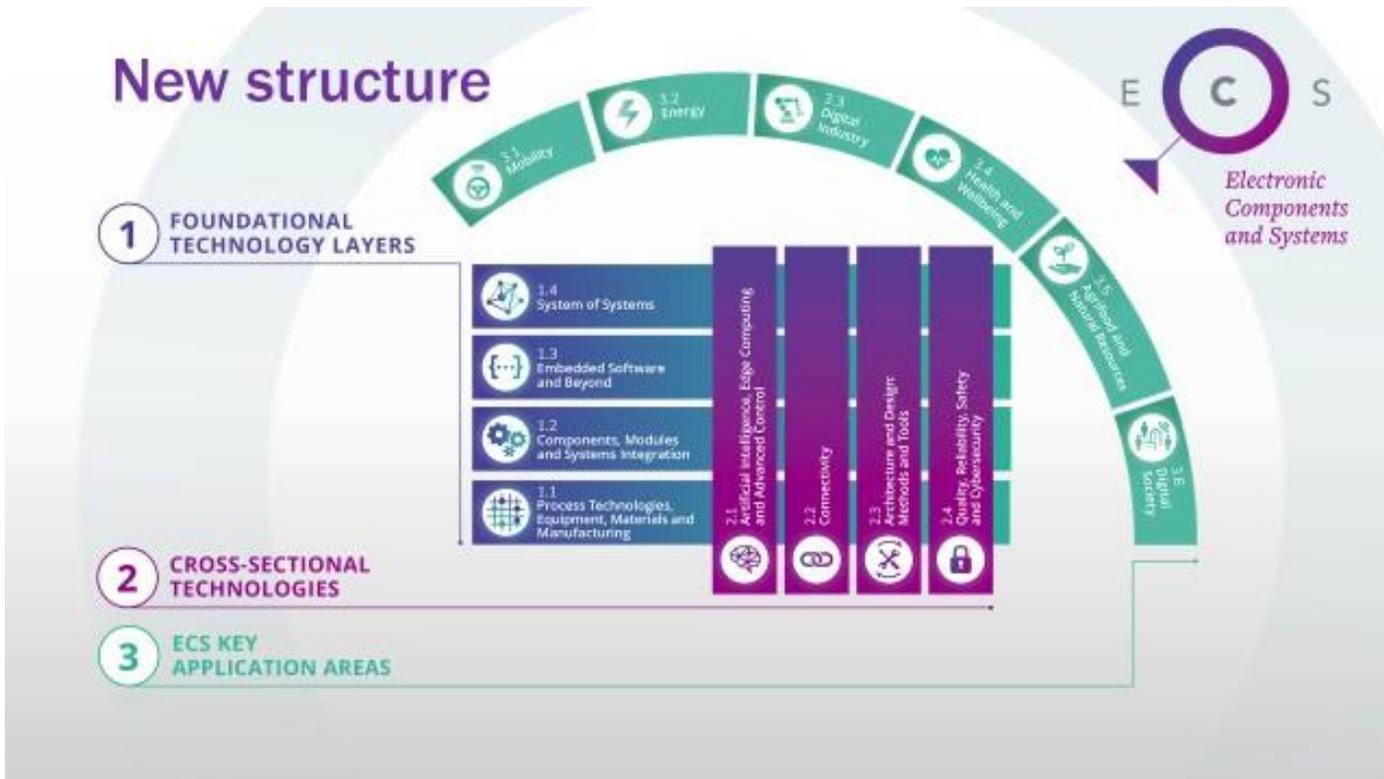
SW IN ECS-BASED SYSTEMS

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KDT: Extended Scope



- **Software:**

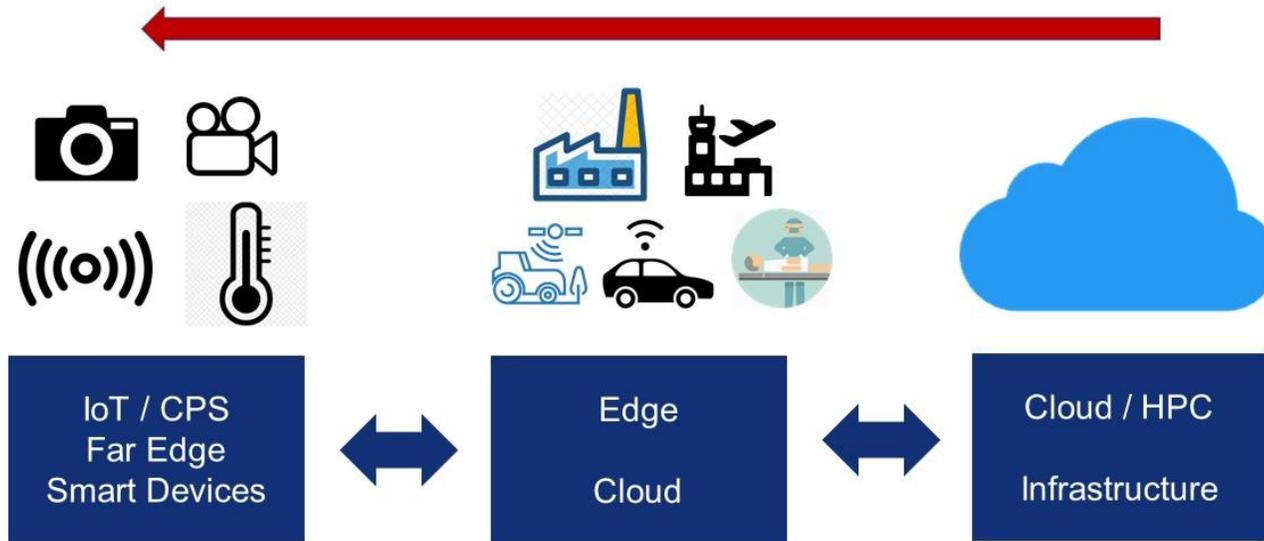
- embedded software, applications and platforms, including relevant tools
- critical functions of electronic systems to be fully implemented within KDT
- KDT to go beyond embedded software to relevant higher layers of software

- **Edge Computing et al:**

- AI requires local data processing: extract, transmit, store or act upon
- Computing and processing is moving from centralised servers to the edge

Convergence

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

- Data – Processing – SW Tools – Connectivity
- Next Generation of the smart IoT and cognitive Cyber-physical Systems
- Digital and operational world
- Consumer and professional applications

Reflections on the ECS-SRIA from a SW perspective (1)

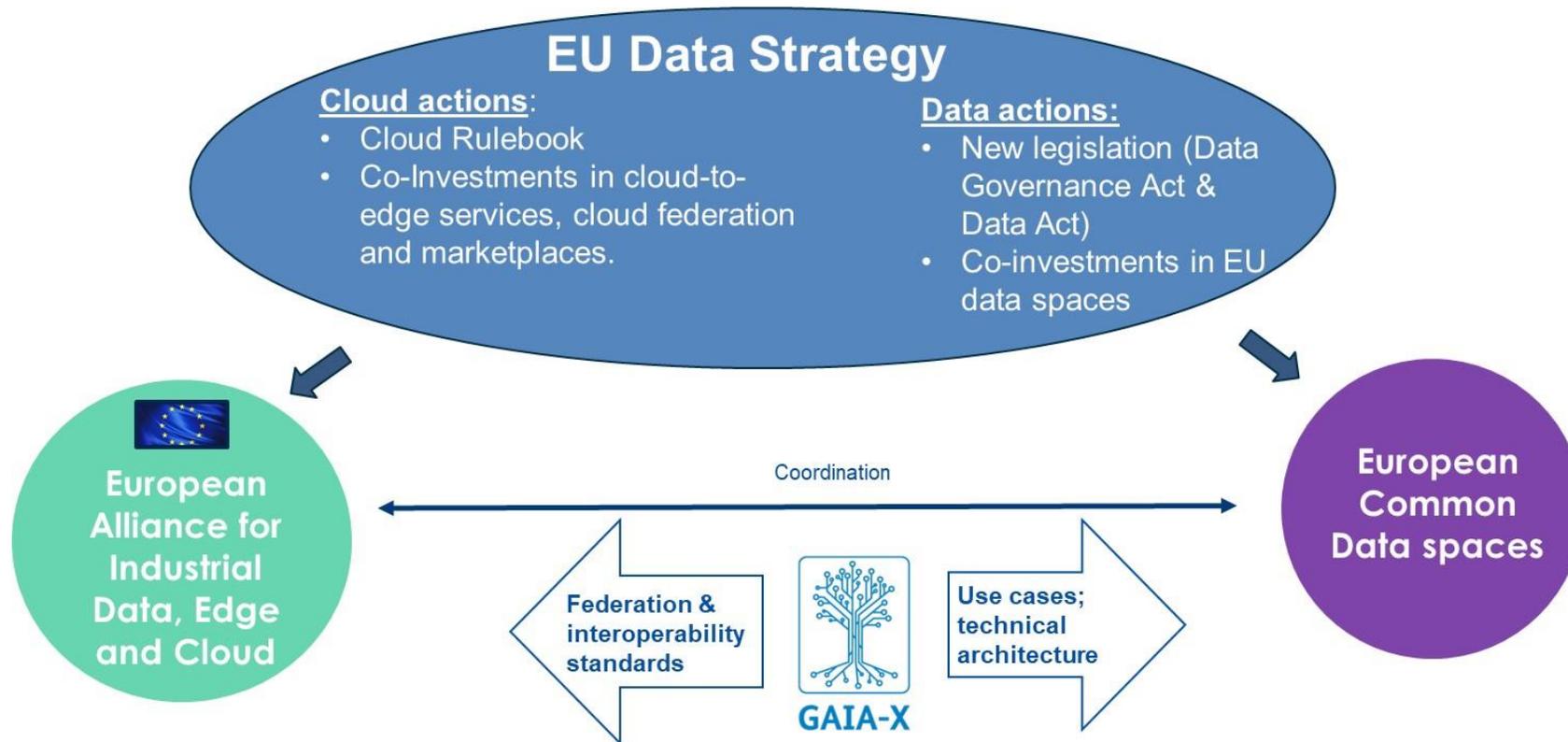
- R&I on SW and SW Engineering are now part of KDT
- Open Source SW (and HW) are important development and business models
 - for pooling resources and building critical mass
 - for adding missing bits and pieces to achieve complete functionalities
- Cloud servers are a large use case for the European Processor Initiative:
 - complementing the HPC and the embedded processor use cases
 - **provided the higher level software stack is made available (open source!)**
 - exploiting spill-over effects to broaden the market potential for a European processor family
- AI is playing several key roles in innovation, e.g.:
 - as an tool for SW development/engineering: robustness, increased productivity, reusability, ...
 - offering a huge potential for new smart services in and across verticals
 - stimulating innovation in HW, SW and applications – cross-fertilisation

Reflections on the ECS-SRIA from a SW perspective (2)

- European actors need to join forces along (software) platforms:
 - Supporting interoperability, sustainability, APIs, fair business models, equal level playing fields for users and suppliers, ...
 - Pooling critical mass to better compete with larger global actors
 - Horizontally and in verticals
- Collaboration between European partnerships, Industrial Associations, and Think Tanks is essential for the success of KDT



Examples for Complementary Programmes to KDT (1)

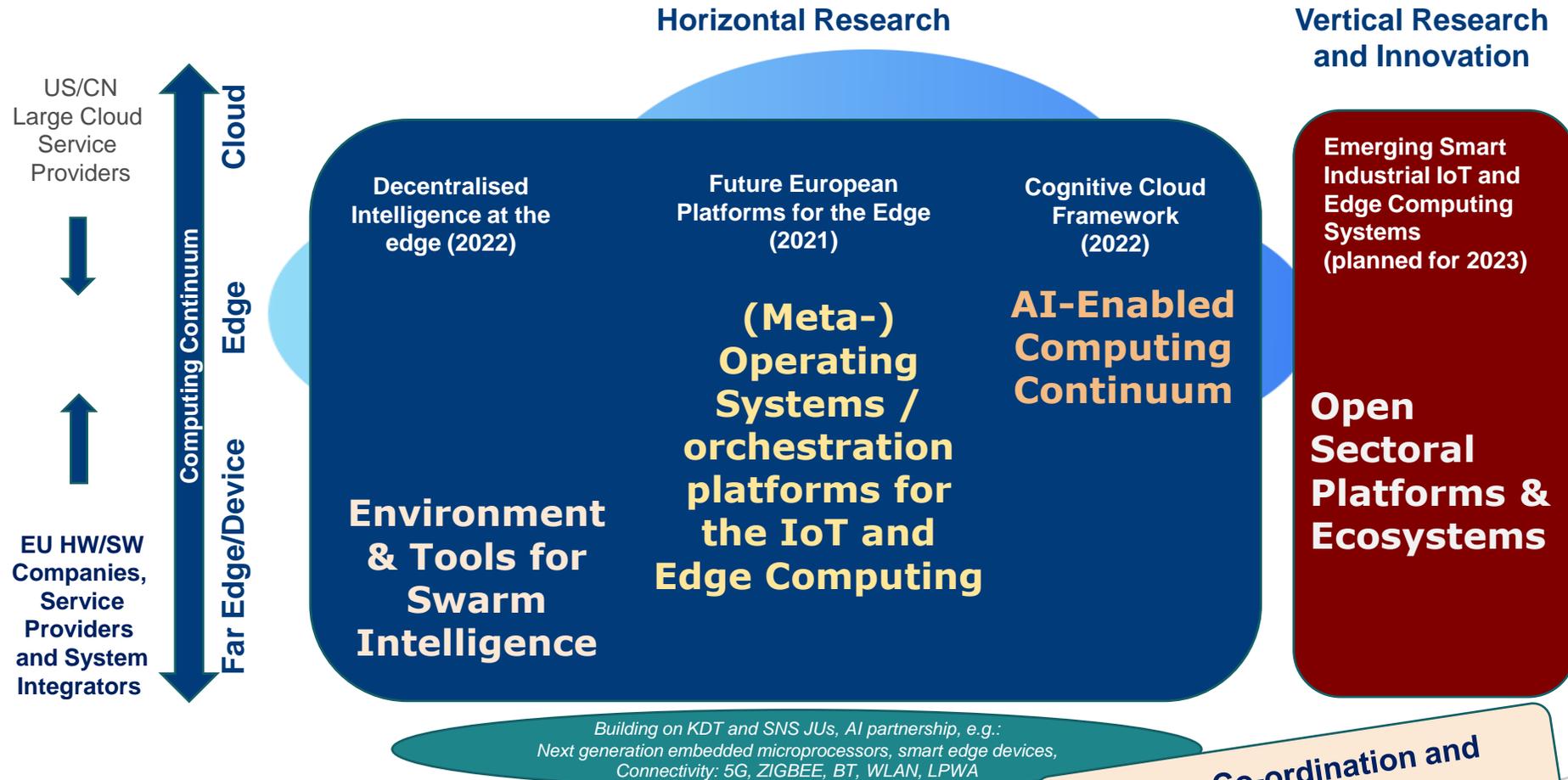


EU Programmes:

- Deployment support: DIGITAL
- Infrastructure: CEF2
- RRF, IPCEIs

Examples for Complementary Programmes to KDT (2)

Horizon Europe: Cluster 4, Destination 3 - From Cloud to Edge to IoT



CSAs: Co-ordination and roadmapping