

# The European Association for Software, Data and Digital Services

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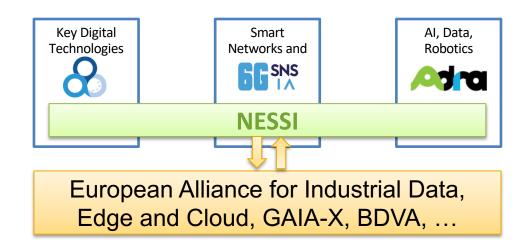
Horizon Europe Info Day

30 January 2022



#### **About NESSI**

- EC-recognized
  European Technology Platform
  since FP7
- 15 partners ("full members")
   and 400 members representing
   major ICT stakeholders
   from industry and academia
- Advocating horizontal, cross-cutting key role of software and service engineering





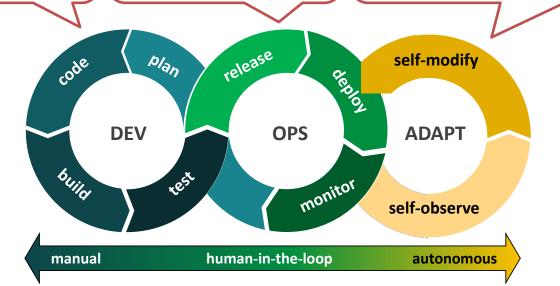
#### **Priority "Software Engineering"**

Need for modern software life-cycle models and engineering methods, e.g.,

- Digital Twins for SE
- Trustworthy SE
- ML/AI for SE

- Al-Ops (automate Ops)
- ML-Ops (automate ML)
- Automatic multi-device deployment

- Decentralized adaptation
- Adaptive trust management
- Cognitive adaptability (reinforcement learning)





NESSI Paper on Software and Artificial Intelligence



NESSI Stresses the Importance of Software Engineering for KDT



## **Priority "Service Engineering"**

Need for engineering methods for end-to-end service delivery

across the cloud-edge-IoT continuum, e.g.,



Trustworthiness of the cognitive computing continuum via Explainable Al

Human-Machine Interface (user interface and user experience)

**Applications** 

(e.g. advanced analytics, self-adaptability, ...)

Application Frameworks (e.g. security, communication, cloud, ...)

Operating Environment (e.g. Real-Time Operating Systems)

Embedded virtualization (Hypervisors, optional)

(e.g. HAL, sensors, acutators, ...)

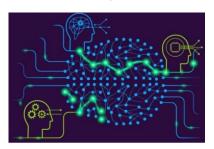
Human-in-the-loop and intent-driven continuum management

Al-driven active exploration of service value chains and orchestrations

Multi-agent, distributed and decentralized intelligence for infrastructure management



NESSI Paper on Software and Human Centricity



NESSI Paper on the Cognitive Computing Continuum

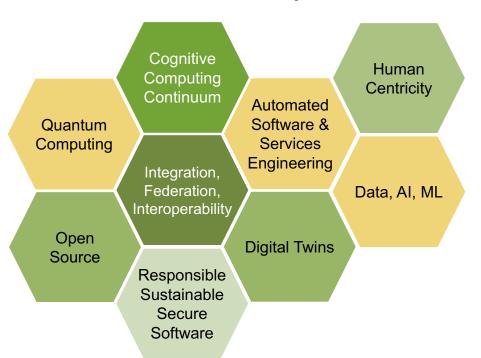
https://nessi.eu/wp-content/uploads/2022/04/NESSI-Human-Centricity-issue-1.pdf https://nessi.eu/wp-content/uploads/2022/07/NESSI-Cognitive-Computing-Continuum-issue-1.pdf



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#### **Current NESSI Topics**



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Get in touch for becoming **Partner**: andreas.metzger@paluno.uni-due.de