Workshop on Edge AI
Introduction & conclusions

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Workshop introduction

- Edge AI is expected to be the main driver of future ECS market growth
- Compared to “traditional” AI, it introduces significant challenges due to:
  - resource limitations
  - integration difficulties
  - algorithms optimisation
  - performance
  - limited expertise & lack of skills
  - development time & costs
  - lack of standards
  - Edge AI stack development
Workshop introduction (2)

- Edge AI is challenging but represents a huge opportunity
- EPoSS Task Force “AI at the Edge” and INSIDE organised an EFECS Session on Edge AI to:
  - kick off the new joint working group on Edge AI,
  - assess the state of the art,
  - illustrate the research & innovation opportunity in the next KDT call,
  - identify future research & innovation directions in the area of intelligent embedded systems, AI hardware accelerators, edge AI-based software and services in the domain of Edge AI.
Workshop program

- Panorama of current research & innovation on Edge AI
  - Edge AI state of play
  - Ovidiu Vermesan - SINTEF

- Description of the Edge AI Focus Topic for the 3rd KDT Call
  - Pathway to Edge AI Focus Topic
  - Huascar Espinoza - KDT JU

- Implementing real Edge AI from a SME perspective
  - Gaining real-world insights from tiny devices
  - Jenny Plunkett - Edge Impulse
Workshop program (2)

- Large industry & global player vision on Edge AI
  - Industrial View on the Future of Edge AI
  - Holger Schmidt - Infineon

- Positioning Edge AI in the continuum and road mapping
  - Unlock Cloud Edge IoT Continuum
  - Unlock-CEI CSA
  - Inessa Seifert - VDI-VDE
  - Gaining real-world insights from tiny devices
  - OpenContinuum CSA
  - Albert Seubers – Martel Innovate
Conclusions

■ It is crucial to invest on edge AI: it is the right moment!
  □ For economical reasons
  □ For the industrial & societal impact

■ Focus will shift more and more towards distribution of AI on the edge (the KDT Focus Topic is already on it)
  □ HW solutions is supporting the development of Edge AI (challenge of memory model)
  □ But the large issue is the verification and validation of these solution: the user doesn’t generally trust technology
  □ Edge AI collective and collaborative intelligence
Conclusions (2)

- **Focus Topic:**
  - Start looking at the distributed dimension
  - Tackle heterogeneity and fragmentation (integration)
  - Engineering tools
  - Build trust on Edge AI

- **SME perspective:** we have seen an agile, sustainable e2e solution and business model, an educative example of real technology transfer in a very challenging domain. Highlighted the strength of the SME ecosystem (Oura example).

- **Vision of the large industry is currently oriented to:**
  - Invest on the basement of the stack, the HW platform
  - Identification of a solution for distributed AI
  - Work on trustworthiness (including reliability)
  - Engineering support
Conclusions (3)

- **Edge to cloud continuum**
  - Edge AI has a key position in the continuum
  - Two complementary CSAs
    - OpenContinuum & Unlock CEI
    - Focused on the entire value chain
    - Definition of a roadmap including edge AI
  - **JOIN AND CONTRIBUTE TO:**
    - FUTURE EVENTS
    - COMMUNITY BUILDING
    - ROADMAP DEFINITION
  - For info visit: [https://eucloudedgeiot.eu/](https://eucloudedgeiot.eu/)
Thank you for watching