StandICT.eu 2023

ICT STANDARDISATION OBSERVATORY AND SUPPORT FACILITY IN EUROPE

“Walk & Talk” Webinar on Digital Transformation through Standardisation: IoT and Edge

Overview of Ladscape IoT and Edge Computing Standards Reports

Georgios Karagiannis (StandICT.eu TWG IIoT and Edge chair)

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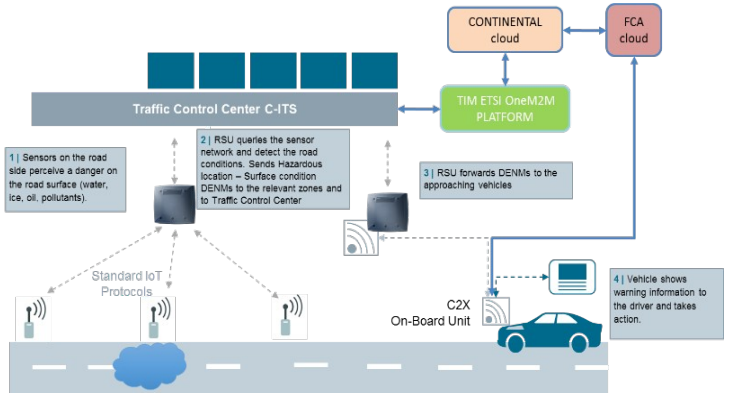
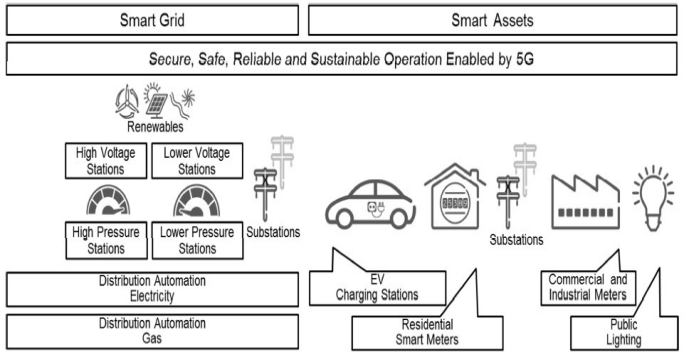
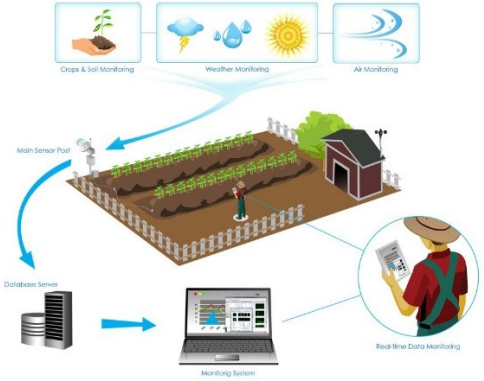
IoT and Edge Computing Use Cases



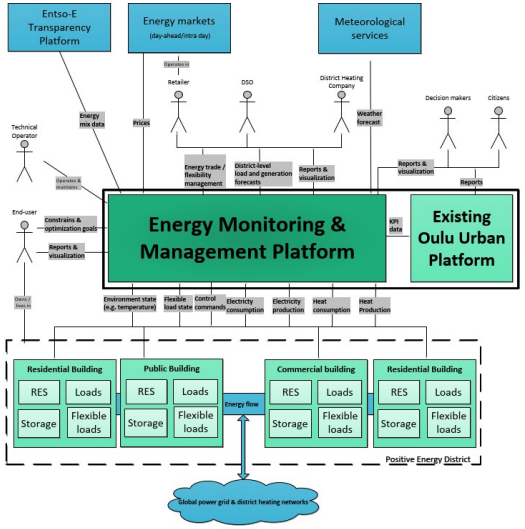
Automotive - source: EC H2020 AUTOPILOT project



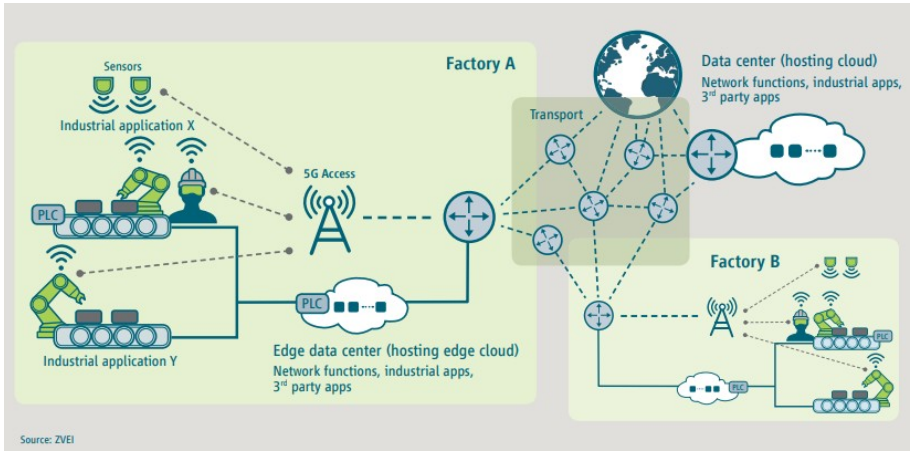
Energy, Smart Grid - Source: H2020 5G-PPP project NRG5



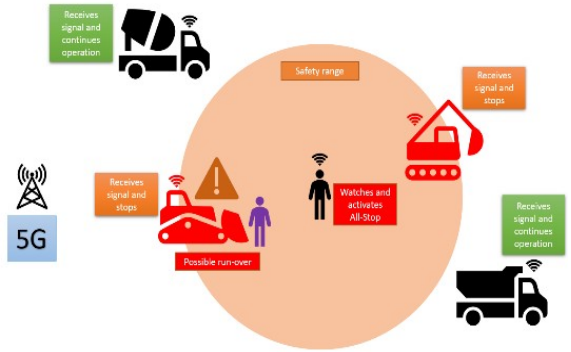
Smart Irrigation – Source: EC FRACTALS



Smart City - Source: EC H2020 MAKING-CITY



5G-enabled smart factory scenario – Source: 5G-ACIA



"All-Stop" in Mining and Construction Site Applications - Source: ISO TC 127 SC2 WG 22 – Autonomous Machine Safety

Technical Working Group IIoT and Edge

TWG IIoT and Edge focuses on IoT and Edge Computing:

- Standards Landscape Report
- Standards Gap Analysis Report
- White Paper

StandICT.eu 2023 & AIOTI Join Forces to Support the IoT ecosystem & speed up the IoT uptake (PRESS RELEASE)

Submitted by on 24 May 2021

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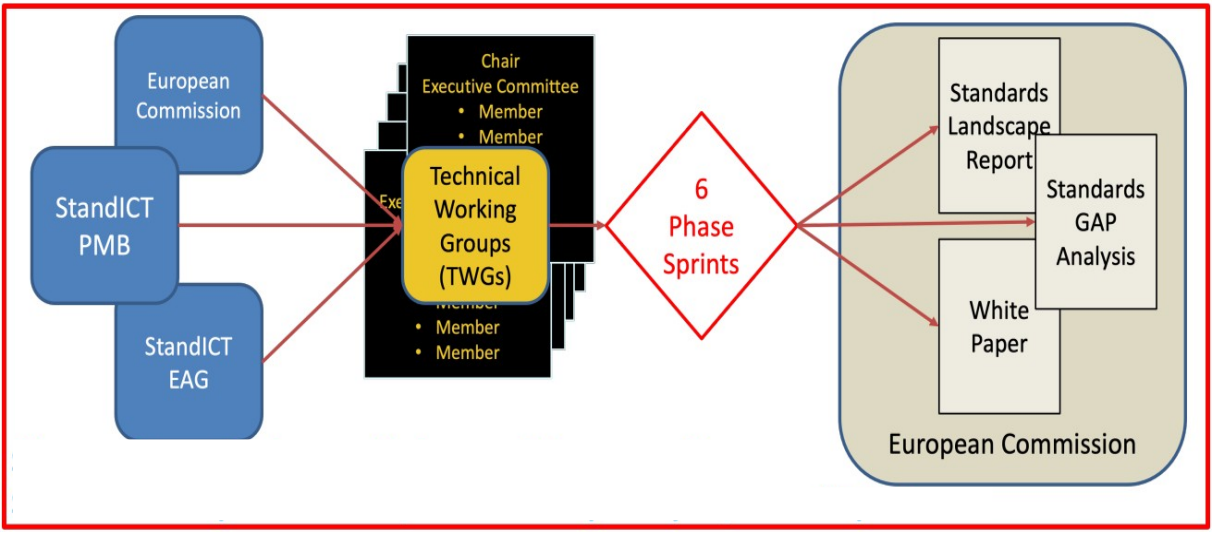
Technical Working Group IIoT and Edge



TWG 6 Phases

- Phase 1: Find the experts in TWG who are willing to work. Identify Liaisons with the relevant SDO/organizations.
- Phase 2: Contact Liaisons and gather the relevant document information in best available format possible (CSV, XLS, DOC etc.)
- Phase 3: Convert all material information into EUOS .xlsm with weblinks.
- Phase 4: Choose Category identifier for the material in spreadsheet (ensure the EUOS Fellows are involved), Categories, Missing Cell info, etc.
- Phase 5: Generate a template WORD DOC from EUOS .XLSM file and check the outputs
- Phase 6: Final formatting, Editing, turn over to Trust-IT Publishing Team

Landscape of Internet of Things (IoT) Standards

- Successful deployment of IoT technologies and IoT applications demands standards and protocols
- Development and promotion of standards is a cooperative undertaking between governments, academia, industry and the public interest
- Depends largely on the work and activities accomplished in SDOs (Standards Development Organizations), Alliances and OSS (Open-Source Software) initiatives
- Goal of this report is to capture the landscape of IoT activities and IoT documents/specifications published and/or under publication by SDOs, Alliances and OSS Initiatives
  - Work started on February 2022, report published on 13 October 2022
  - Identified and solicited contributors and contributions
  - Organized the data -- collected 720 (!) document references
    - Actual Standards, Regulation, Landscape, Technical Reports, Recommended Practices, Open Source, EU & National Funded Open Source projects, Framework, Guideline, Whitepaper, Presentation, Database, Research, Blog, Gap Analysis

2. Acknowledgements

StandICT.eu 2023 gratefully acknowledges the following individuals, who have contributed the present report: **Ray Walshe**, Director EUOS, **Georgios Karagiannis** (editor), AIOTI WG Standardisation Chair & Huawei, **Noleen Campbell**, NSAI Standards, **Maria Ines Robles**, Tampere University, **Michelle Wetterwald**, Netellany, **Orfeas Voutyras**, Institute of Communication and Computer Systems, **Antonio Kung**, Trialog, **Lindsay Frost**, NEC, **George Suciu**, BEIA Consult, **Amelié Gyrard**, Trialog, **Jens Gayko,** VDE Association for Electrical, Electronic & Information Technologies, **Axel Rennoch**, Fraunhofer FOKUS, **Edward C. Zimmermann**, NONMONOTONIC Networks, **Marco Carugi**, Consultant, **Amanda Suo**, UNE - Spanish Standardisation Body, **Carlos Valderrama**, Huawei, **Richard Pitwon**, Resolute Photonics, **Christine Perey**, Spime Wrangler, **Kong Lingbo**, Huawei, **Shen Bin**, CAICT, **Samir Medjiah**, Laas-CNRS Toulouse

Thanks to the European Commission for their continued guidance and support: **Thomas Reibe, Emilio Davila-Gonzales, Eddy Hartog** and **Max Lemke.**

Landscape of Internet of Things (IoT) Standards

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Landscape of Edge Computing Standards

- Edge computing is concept that encompasses paradigm shift from centralised solutions to decentralised and distributed computing architectures,
  - information processing is located close to the edge, where “things” produce and utilise that information, knowledge, intelligence and related experience
- Currently, several SDO, Alliance and OSS (Open Source Software) initiatives are active and competing in the area of edge computing technologies
- Similar to IoT systems, there are several edge computing systems and edge computing applications being implemented and deployed in almost all vertical industry domains
- Goal of this report is to capture the landscape of edge computing activities and documents/specifications published and/or under publication by SDOs, Alliances and OSS.

- Work started on February 2022, report to be published in December 2022
- Identified and solicited contributors and contributions
- Organized the data -- collected 250 (!) document references
  - Actual Standards, Regulation, Landscape, Technical Reports, Recommended Practices, Open Source, EU & National Funded Open Source projects, Framework, Guideline, Whitepaper, Presentation, Database, Research, Blog, Gap Analysis

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Landscape of Edge Computing Standards

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