Alliance for AI, IoT and Edge Continuum Innovation

Webinar • 28.04.2025

Presentation of Standardisation Reports

IoT and Edge Computing EU funded projects landscape Report R3

AI, IoT and Edge Continuum relation and impact on 5G/6G R4

Opening and Welcome

Damir Filipovic, AIOTI Secretary General

Agenda

Agenda

15.00 **Opening and Welcome (10 min)**

Damir Filipovic, AIOTI Secretary General

15.05 **Presentation of the IoT and Edge Computing EU funded projects landscape Report R3 (20 min)**

Zbigniew Kopertowski, Orange, report editor

15.25 **Presentation of AI, IoT and Edge Continuum relation and impact on 5G/6G R4 and use cases (20 min)**

Damir Filipovic, AIOTI Secretary General

Konstantinos Dafloukas, Inlecom Systems

15.45 **Questions from the audience (10 min)**

Moderated by Damir Filipovic, AIOTI Secretary General

15.55 **Wrap up and end of Webinar**

Damir Filipovic, AIOTI Secretary General

About AIOTI
WG Standardisation

About WG Standardisation: Leadership, Vision, Highlights

Leadership:

Chair
Antonio Kung
Trialog

Highlights:

96 member organisations

193 participants

Main Achievements:

Deliverables	Collaborations	Events
▪ IoT Landscape Reports ▪ High priority gaps Reports ▪ IoT relation and impact on (beyond) 5G Reports ▪ High Level Architecture ▪ Ontology Landscape ▪ Computing Continuum Report	▪ Cooperation with SDOs/Alliances to foster co-creation and interworking (MoUs and Liaisons) ▪ SNS Partnership ▪ one6G ▪ Stand.ICT - EU OS ▪ EGDC ▪ HLF on European Standardisation ▪ ICT MSP	▪ AIOTI signature event 2023 ▪ SC41 Workshop ▪ Standardisation workshop on energy, mobility and buildings ▪ ETSI IoT Week ▪ Webinars to promote reports (2 in 2024) ▪ AIOTI Days 2024

Vision:
To be recognized as a major contributor to the worldwide interoperability, security, privacy and safety of IoT and Edge Computing systems and applications, and particularly for the development of the market in Europe

Deliverables:
https://aioti.eu/resources-standardisation/

AIOTI

Priorities 2025

GROUP	WORK ITEM	STATUS
Standardisation	Guidance on integration computing continuum (includes security and privacy)	
	Stand.ICT Landscape IoT	Published
	Stand.ICT Landscape Edge Computing	Finalised
	IoT and relation to 5G and beyond	Published
	EU funded projects landscape	Published
	HLA report R7	
	Computing Continuum	
	Stand.ICT Gaps IoT	
	Stand.ICT Gaps Edge	
	Data to Ontology Mapping	Ongoing
	Ontology Landscape R2	Ongoing
	AI integration in IoT/Edge computing and computing continuum	

Work just started by defining Table of Content	Initiated
Work on iterations of content is ongoing	Ongoing
Deliverable is finalised but not yet published or approved	Finalised
Deliverable is approved and published	Published

Presentation of the Report on IoT and Edge Computing EU funded projects landscape R3

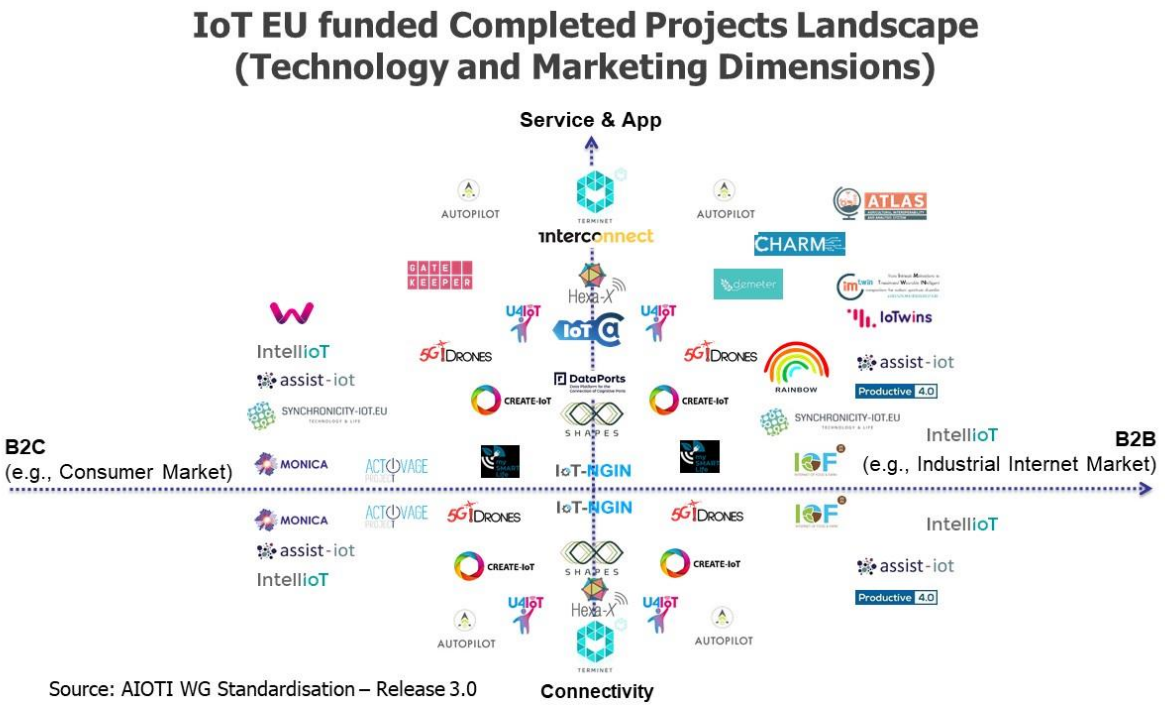
Zbigniew Kopertowski, (Orange), Report Editor

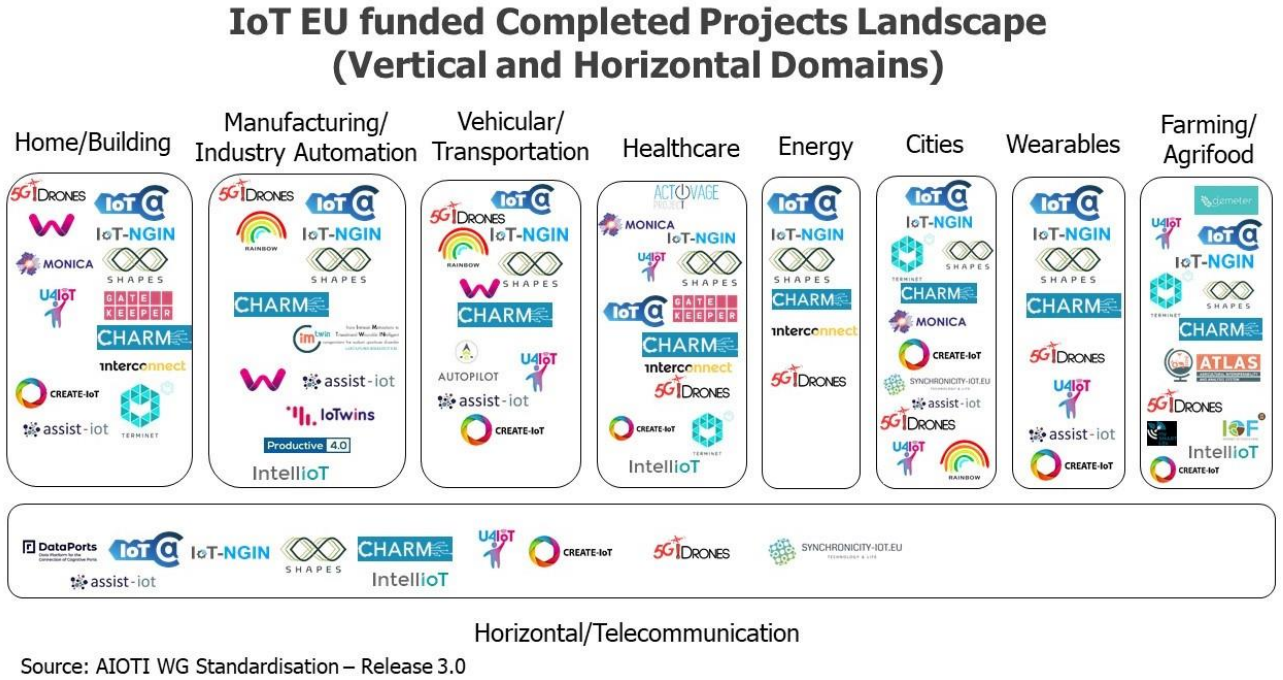
Goal and Content of the Report

- **Published on 31 January 2025**: "IoT and Edge Computing EU funded projects landscape, Release 3.0", Link to Report
- **Goal of report:**
  - Analysis of the completed and ongoing EU funded projects focusing on IoT and edge computing subjects for:
    - ✓ leverage on existing IoT and edge computing research and innovation challenges in Europe, as well as standardisation activities
    - ✓ provide input to IoT and edge computing standardisation gap analysis activities
- **Method of collecting information:**
  - ✓ Using template
  - ✓ Analysis of public deliverables of the projects
  - ✓ Inputs provided by AIOTI members coming
- **Table of contents:**

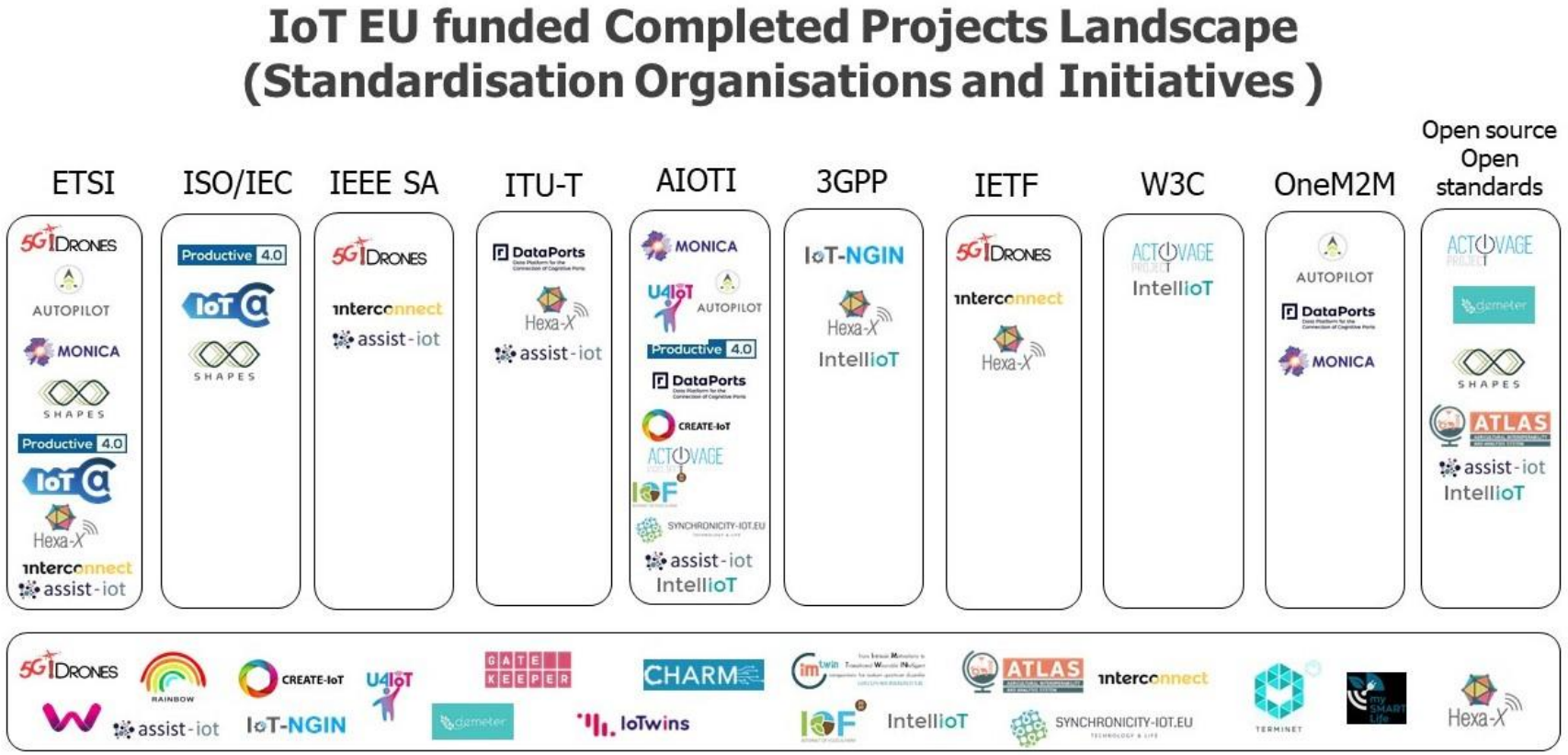
- **Summary of used template**
  - Title of the EU funded Project
  - URL/Reference
  - Abstract
  - Starting and (target) end time of project
  - IoT and/or EC **research challenges**
  - Expected/achieved activities on "**Dissemination and Impact on Standards**"

IoT EU funded Completed Projects Landscape (1)
Technology and Marketing Dimensions
Vertical and Horizontal Domains



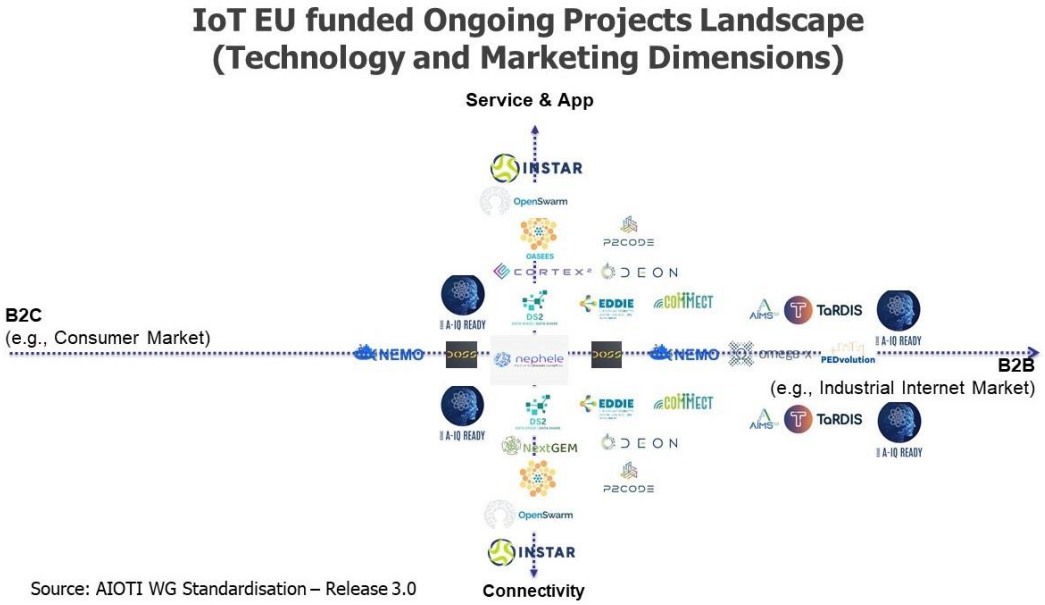


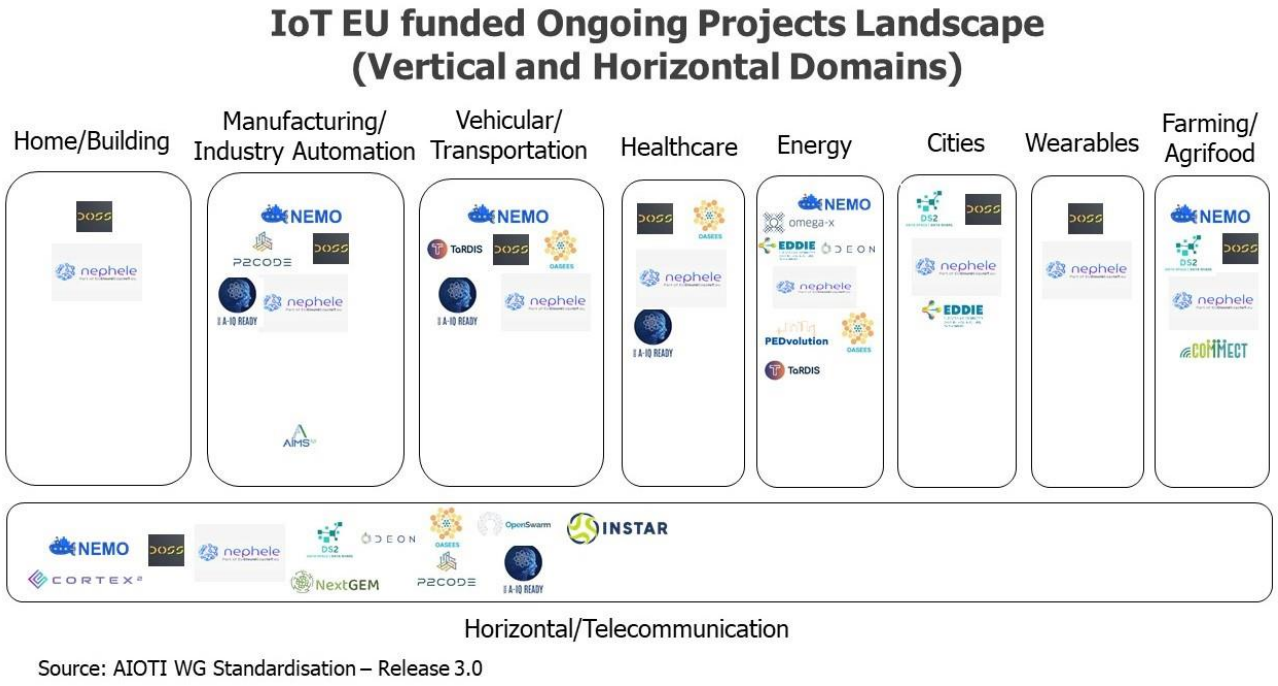
IoT EU funded Completed Projects Landscape (2)
Standardisation Organisations and Initiatives projects' activities



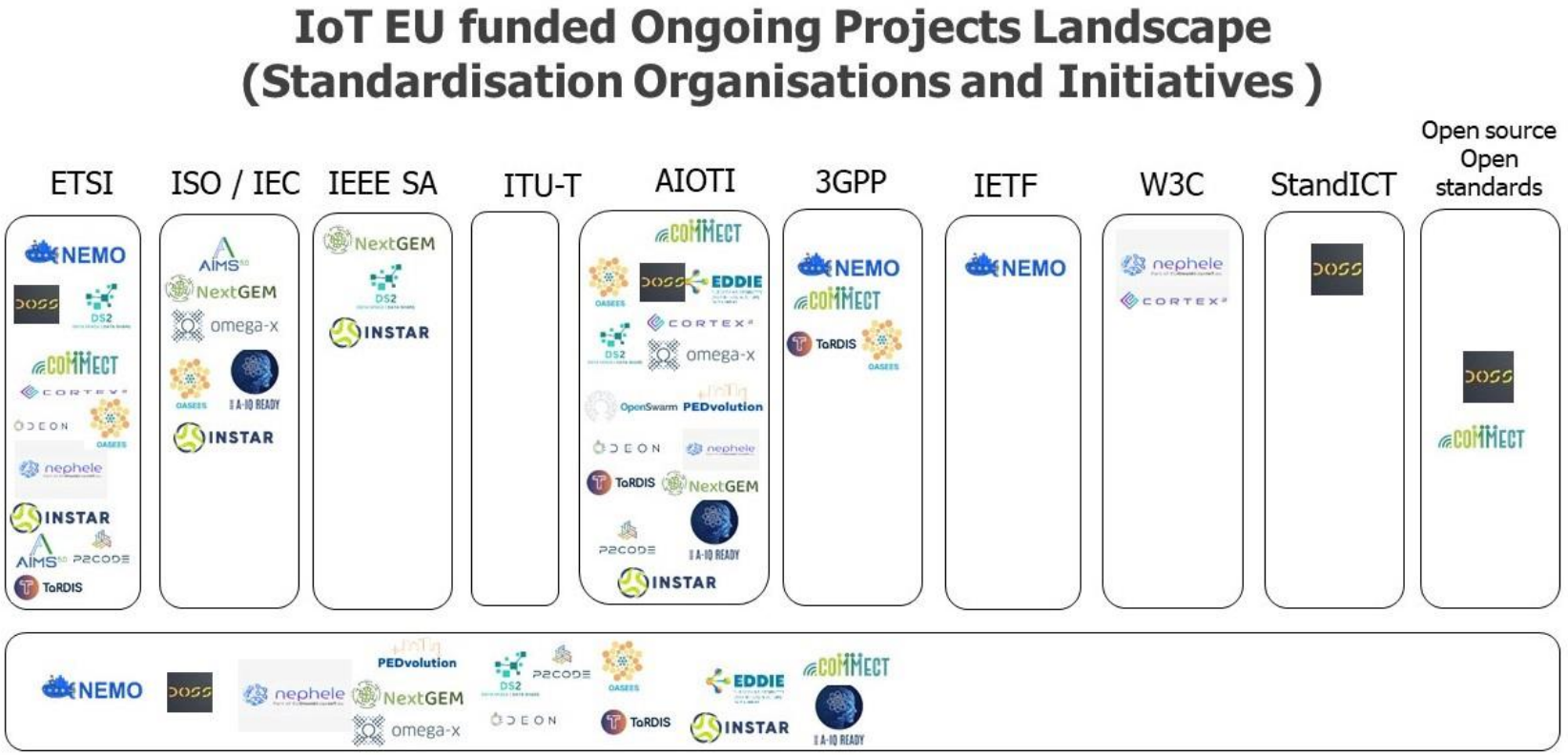
Source: AIOTI WG Standardisation – Release 3.0

IoT EU funded Ongoing Projects Landscape (1)
Technology and Marketing Dimensions
Vertical and Horizontal Domains





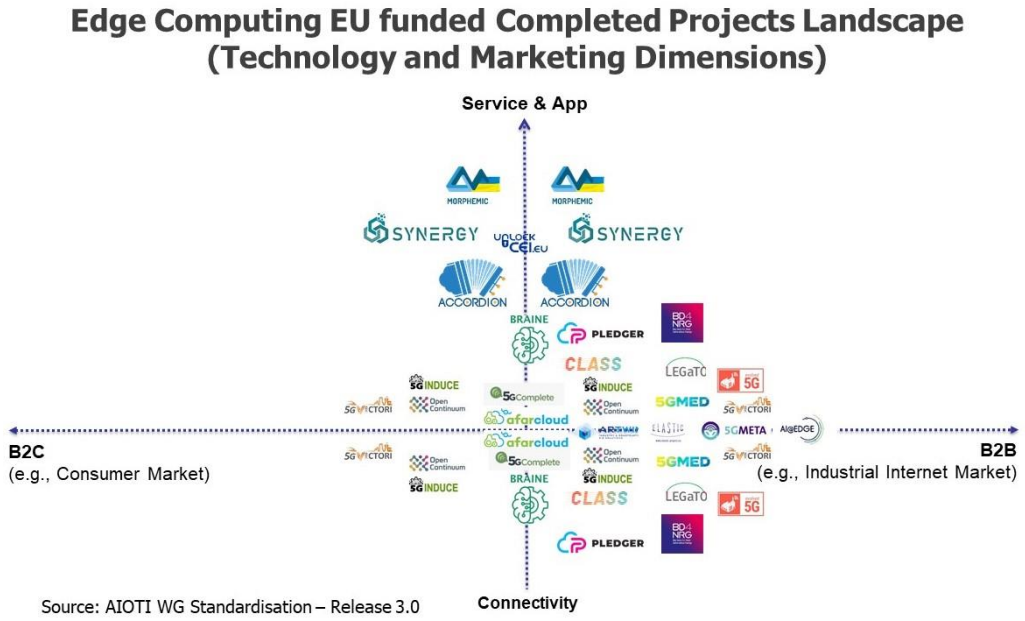
IoT EU funded Ongoing Projects Landscape (2)
Standardisation Organisations and Initiatives projects' activities

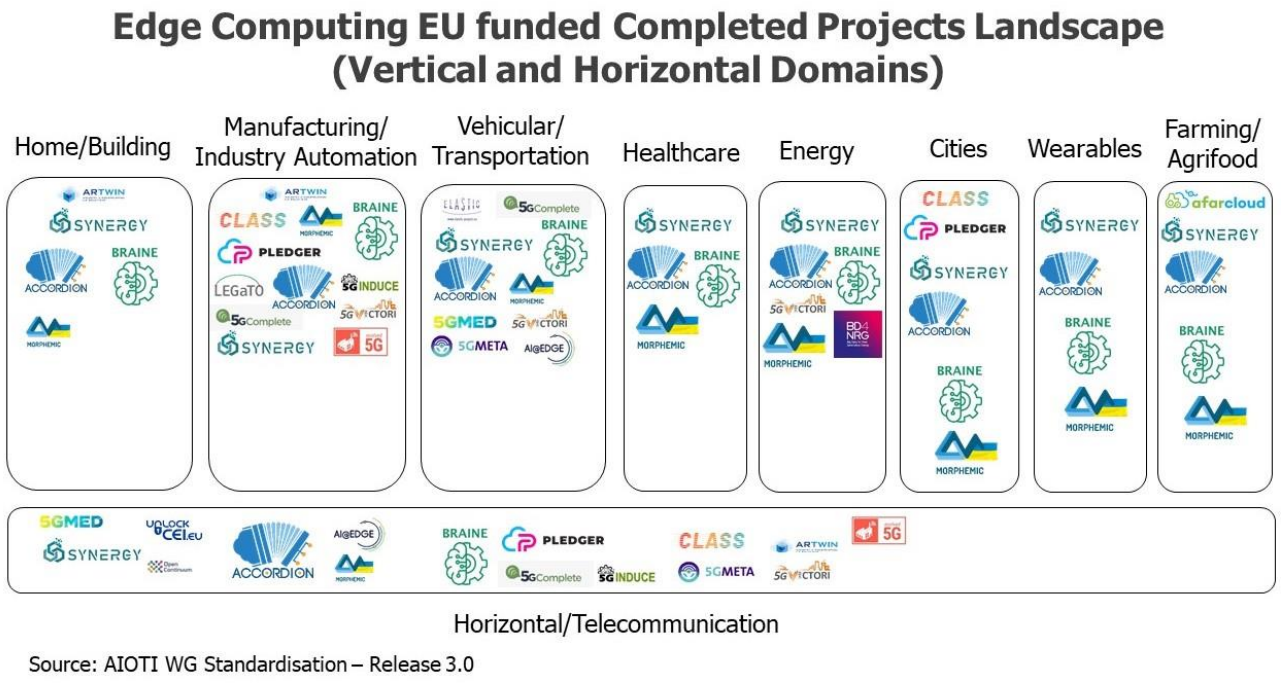


Others: BDVA, OneM2M, 5GPPP, 5G ACIA, 6G-IA, NGMN, NIST, CEN/CENELEC, ENISA, GAIA-X, BRIDGE, etc.

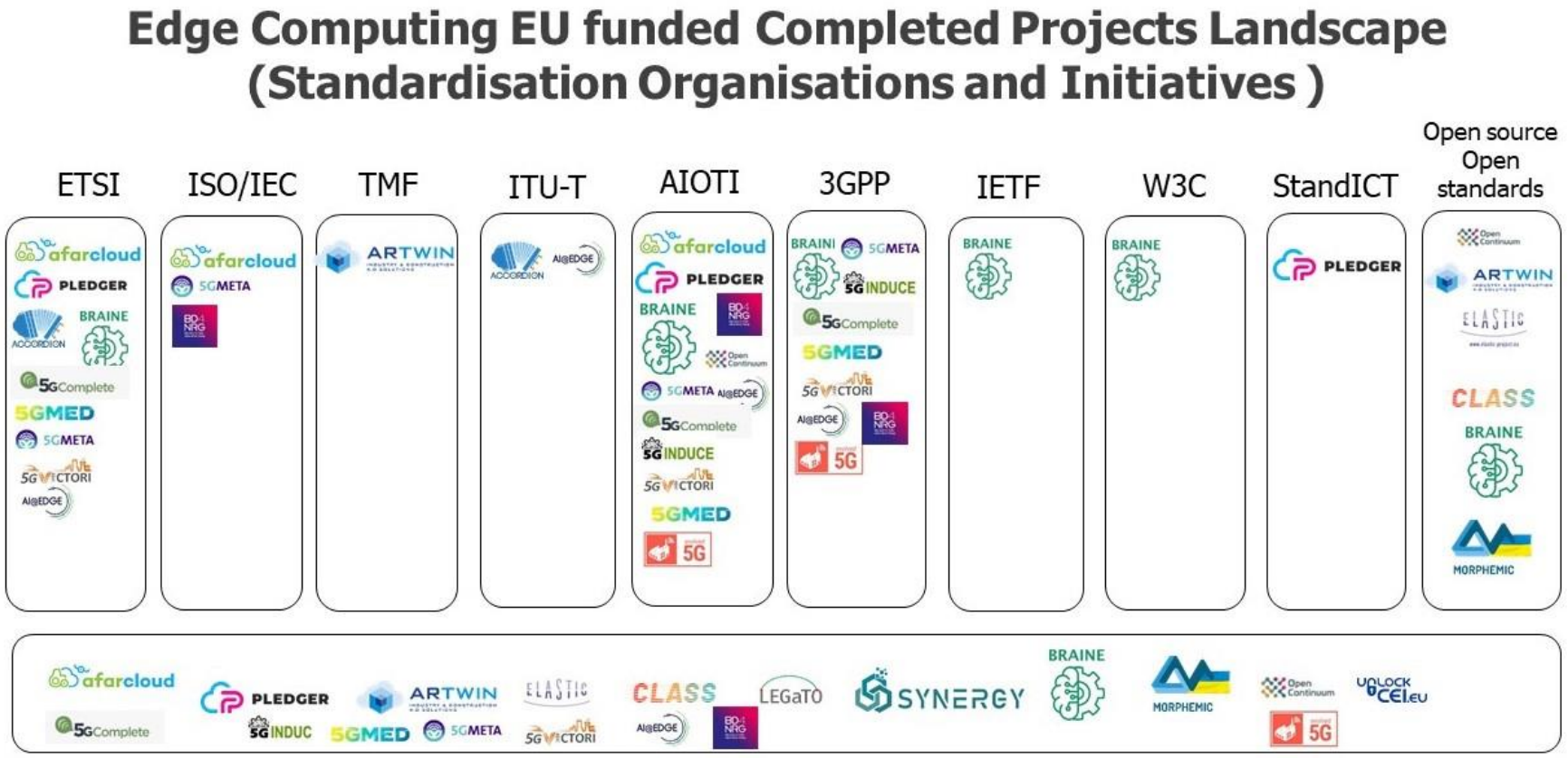
Source: AIOTI WG Standardisation – Release 3.0

Edge Computing EU funded Completed Projects Landscape (1)
Technology and Marketing Dimensions
Vertical and Horizontal Domains



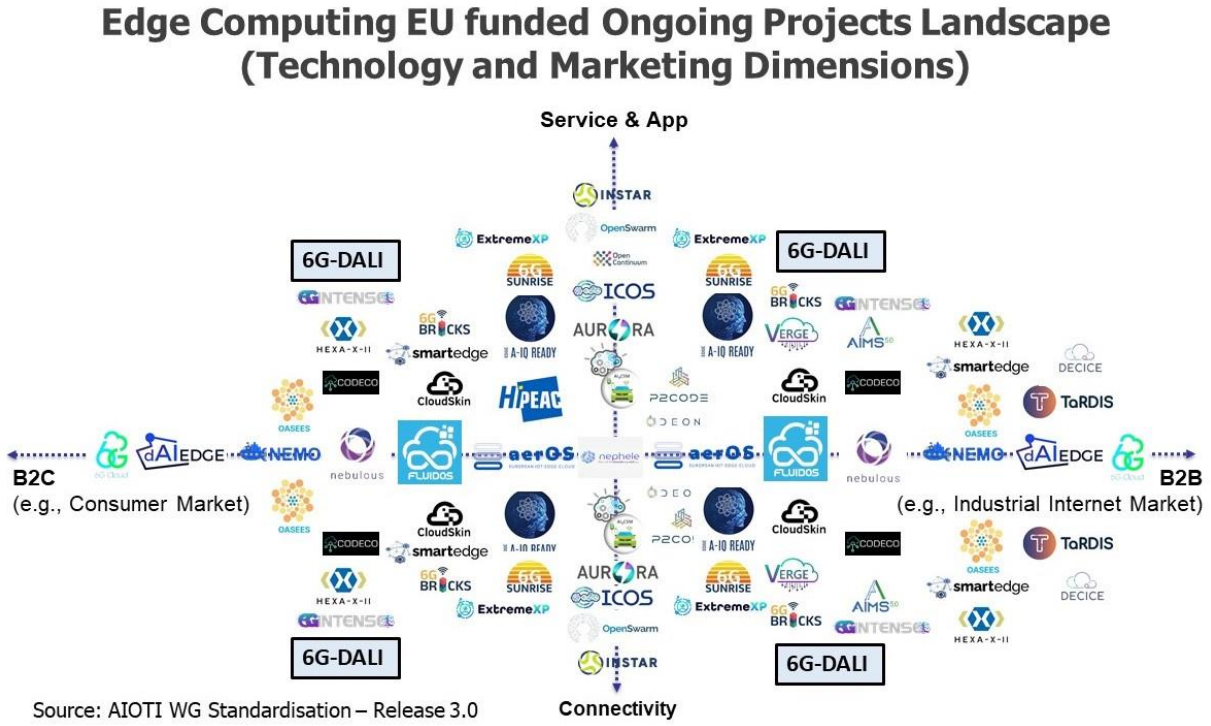


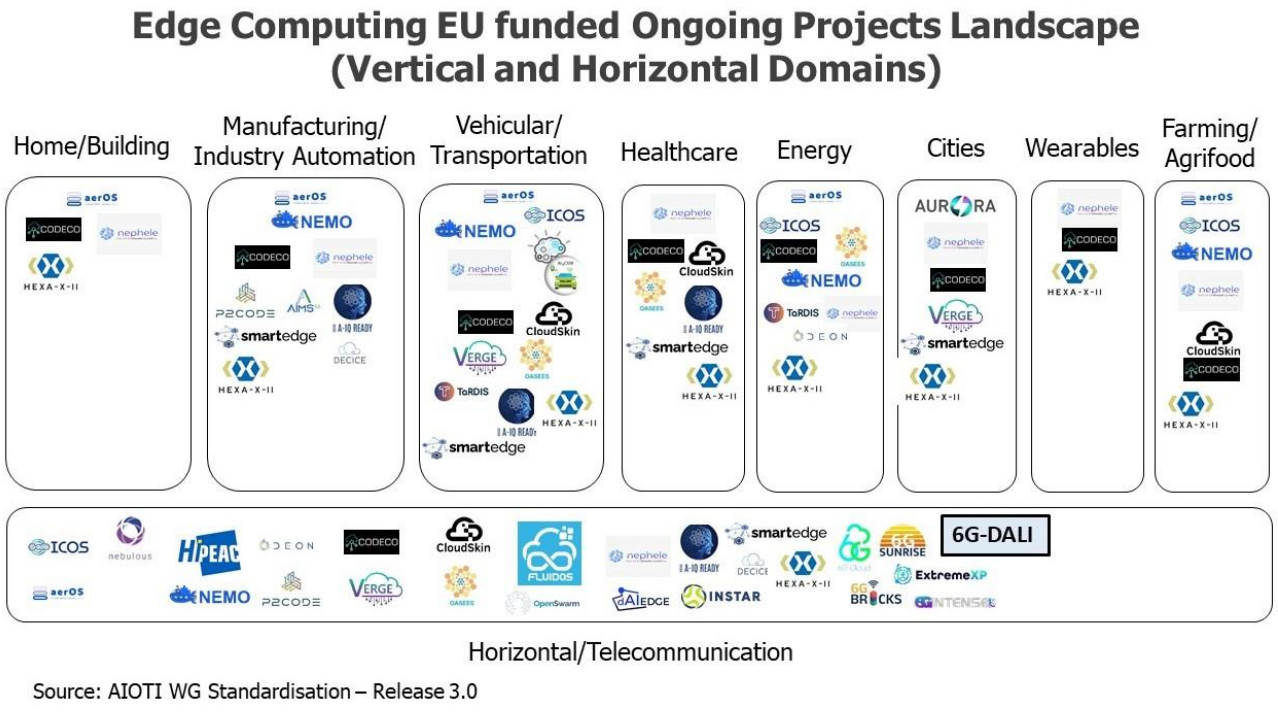
Edge Computing EU funded Completed Projects Landscape (2) Standardisation Organisations and Initiatives projects' activities



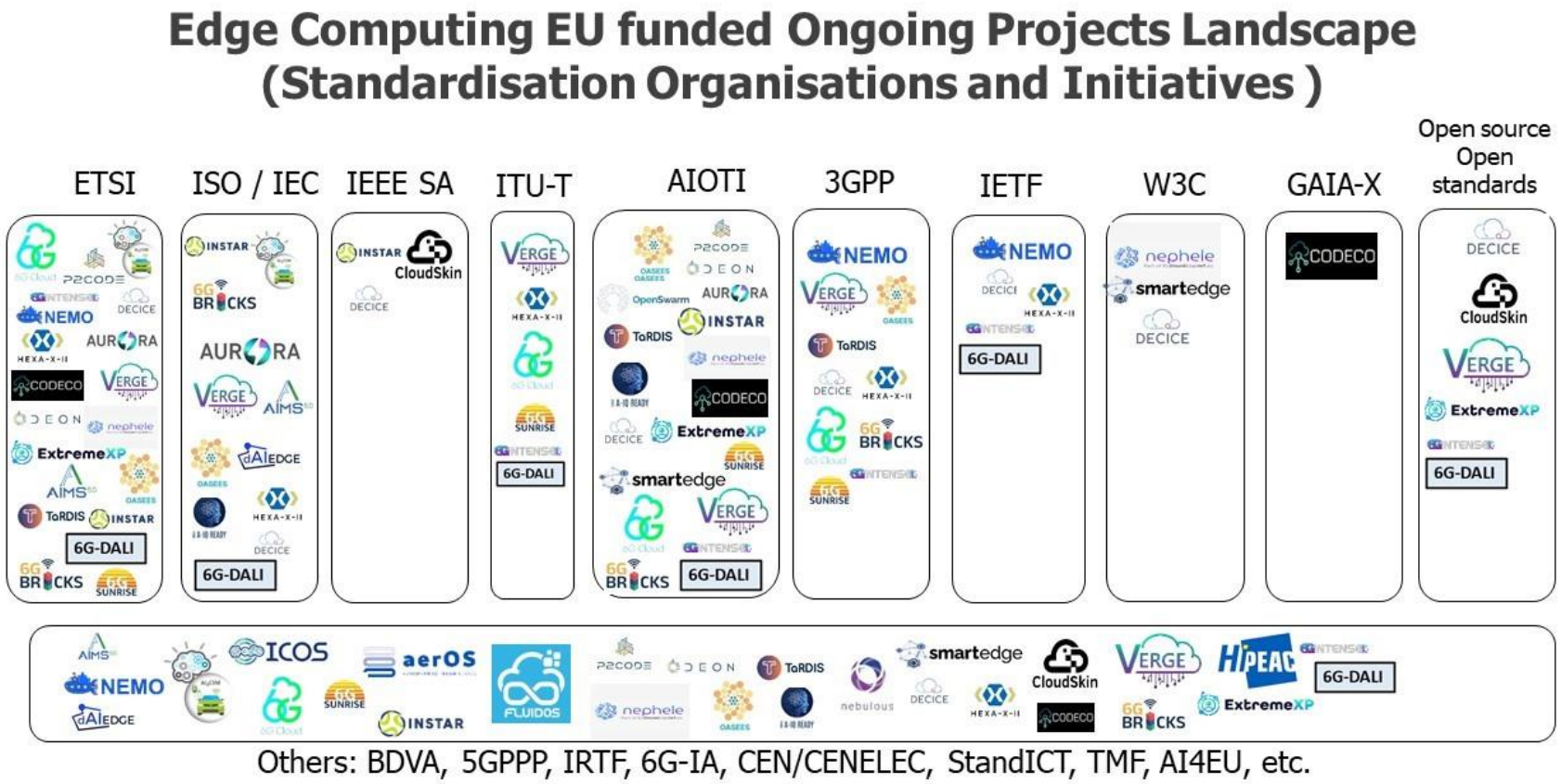
Source: AIOTI WG Standardisation – Release 3.0

Edge Computing EU funded Ongoing Projects Landscape (1) Technology and Marketing Dimensions Vertical and Horizontal Domains





Edge Computing EU funded Ongoing Projects Landscape (2) Standardisation Organisations and Initiatives projects' activities



Source: AIOTI WG Standardisation – Release 3.0

Summary

- **Goal of this presentation** is to promote the key results documented in the "IoT and Edge Computing EU funded projects landscape, Release 3"
- **96 projects included** (selected) (61 in R2.0)
  - 46 IoT, 50 Edge Computing
  - 47 completed, 49 ongoing

- **IoT projects landscape**
  - **Challenges** in (most effort):
    - System architecture
    - Data security
    - Interoperability
    - Intelligence
  - **Standardization**
    - organizations and initiatives (most popular):
      ETSI, AIOTI, ISO/IEC, 3GPP, ITU-T, TMF, IEEE SA, IETF, BDVA
    - Activities:
      - Usage of standards
      - Contributions to technical reports and SDO's
      - Use case specific

- **Edge Computing projects landscape**
  - **Challenges** in (most effort):
    - Platform architecture
    - Cloud-edge-IoT (CEI) computing continuum
    - AI support
    - Security
  - **Standardization**
    - organizations and initiatives (most popular):
      ETSI, AIOTI, StandICT, ISO/IEC, TMF, BDVA, 3GPP, ITU-T
    - Activities:
      - Usage of standards
      - Contributions to SDO's
      - Contributions to technical reports

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Next Steps and Discussion

- **Updated version of the report** "IoT and Edge Computing EU funded projects landscape, Release 4" is planned with:
  - New projects added
  - New technical challenges
  - Updated analysis of the standardisation activities

- **Questions to the audience**
  - Is this report useful for your community?
    - ✓ If yes, we can have one-to-one meetings to discuss details on topics interesting for your community
  - Are there any IoT and Edge Computing EU funded projects known to your community that need to be included in a subsequent Release?
    - ✓ If yes, we can have one-to-one meetings to discuss the way on how this input can be provided to AIOTI

- **Open Discussion**

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Presentation of the Report on AI, IoT and Edge Continuum relation and impact on 5G/6G R4 and use cases

Damir Filipovic, AIOTI Secretary General

Konstantinos Dafloukas, Inlecom Systems

Goal of the Report

- **Published on 31 January 2025**: **AI, IoT and Edge Continuum relation and impact on 5G/6G R4**
- **Goal of the Report:**
  - The report highlights several AI, IoT and Edge Computing vertical domain use cases collected by AIOTI and determines the specific requirements they impose on the underlying 5G/6G network infrastructure
  - These use cases and requirements can be used by SDOs, such as 3GPP, ITU-T, ISO, and IEEE as requirements for automation in vertical domains focusing on critical communications
- **Changes in Release 4:**
  - 14 additional use cases in the areas of: (1) Digital Twin, (2) autonomous urban transportation, (3) critical Infrastructure support applications (smart health and connected vehicles), (4) preliminary 6G use cases, (5) use of drones, (6) smart manufacturing and automation, (7) service trust and liability management, (8) Edge-Cloud orchestration and (9) smart agriculture

Summary of used template

- **Method of collecting information:**
  - Using template
  - Analysis of public deliverables of the 5G and 6G projects
- **Content of the used template:**
  - Use Case (title)
  - Description
  - Source
  - Roles and Actors
  - Pre-conditions
  - Triggers
  - Normal Flow
  - Alternative Flow
  - Post-conditions
  - High Level Illustration
  - Potential Requirements
  - Radio Specific requirements

Content of the Report

Next Steps and Discussion

- The plan is to initiate the work on Release 5.0 of the report in May
- **Questions to the audience**
  - Is this report useful for your community?
    - ✓ If yes, we can have one-to-one meetings to discuss details on topics interesting for your community
  - Are there any IoT and Edge Computing EU funded projects known to your community that need to be included in a subsequent Release?
    - ✓ If yes, we can have one-to-one meetings to discuss the way on how this input can be provided to AIOTI
- **Open Discussion**

AIOTI

ERATOSTHENES – Standardization and Certification Roadmap

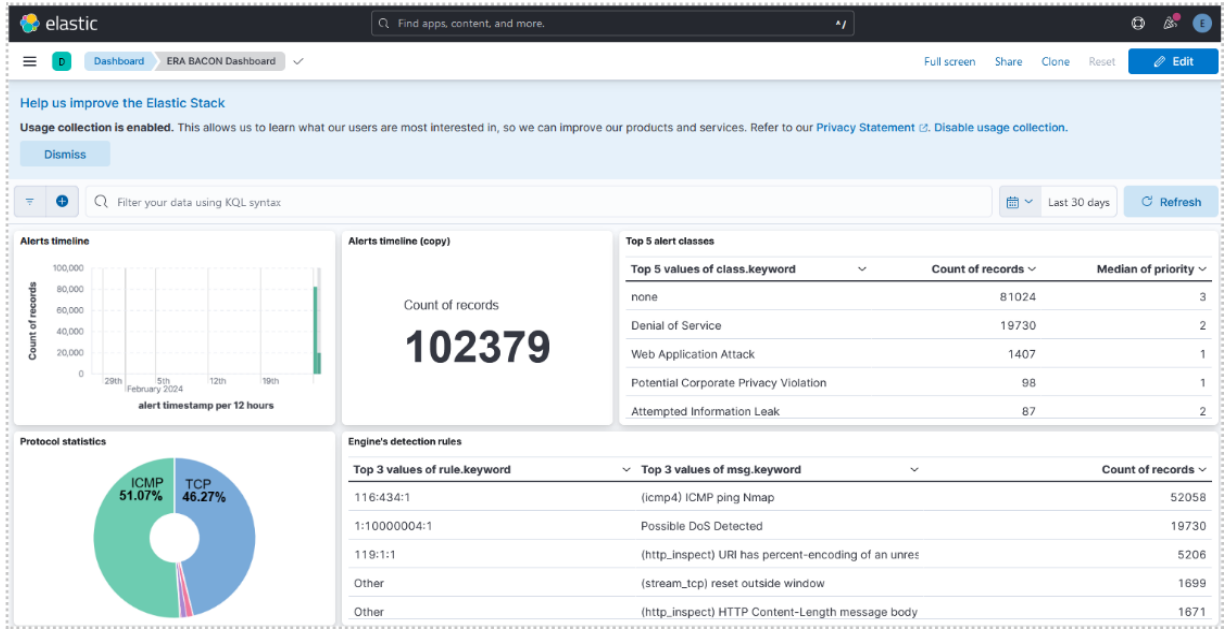
- **ERATOSTHENES contribution:**
  - Facilitate the secure development of digital products and their components
  - Define cybersecurity rules for placing products on the market
  - Define requirements for the design, development, and production of products
  - Define requirements for the processes for handling vulnerabilities
  - Establish rules on market surveillance and enforcement
  - Establish different proof of conformity processes (self-declaration, third-party assessment) depending on the category the products

ERATOSTHENES Pilot 1: Connected Vehicles

Pilot 1: Connected Vehicles

- Interaction with vehicle (V2V) and road infrastructure (traffic lights)
- Software updates in the vehicles

IDS Detection test



ERATOSTHENES Pilot 1: Connected Vehicles

Functional & Non-Functional Requirements

- Integration of Advanced driver-assistance systems Platform Tool client with ERATOSTHENEES modules
- Secure and Privacy-Preserving Information Sharing

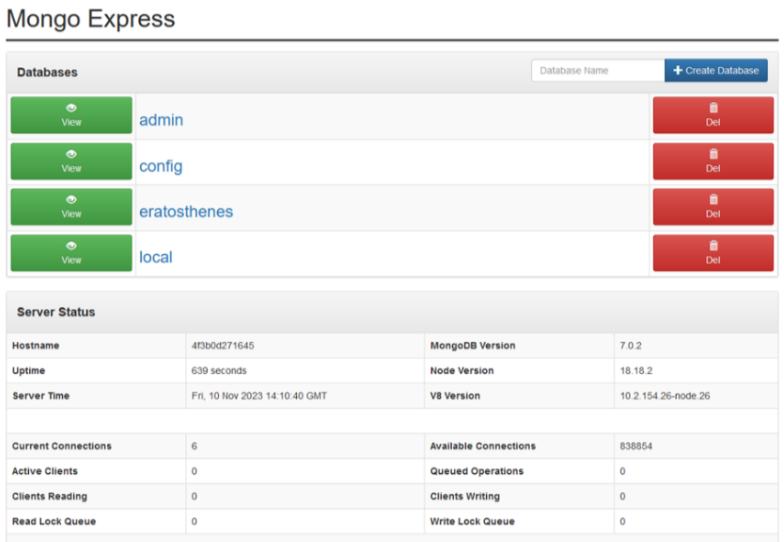
Performance measures

- Time between first message send/receive, Timely response to attacks (detailed fully in trials plan)

ERATOSTHENES Pilot 2: Smart Health

- Zero-contact enrolment of users and devices
- Integrate with third-party services.
- Extending the platform with private devices
- Emergency situations
- Continuous monitoring and lifecycle management of the Tellu service

Trust Manager and Broker component & Docker containers



ERATOSTHENES Pilot 2: Smart Health

Data flow through the integration of three key technologies developed in the ERATOSTHENES project:

- Physically Unclonable Function (PUF)
- SelfSovereign Identity (SSI)
- Distributed Ledger Technology (DLT).

Key features

- Automatic deployment and update of software
- End to End Cryptography

Questions from the Audience

Moderator: Damir Filipovic, AIOTI Secretary General

Wrap up and end of the Webinar

Damir Filipovic, AIOTI Secretary General

Thank you for listening

Any questions?

You can email us at sg@aioti.eu