ONTO COMMONS

ONTOLOGY-DRIVEN
DATA DOCUMENTATION
FOR INDUSTRY COMMONS

ONLINE WEBINAR

WHAT CAN ONTOLOGIES DO FOR STANDARDISATION?

OntoCommons.eu project in the standardisation ecosystem

30 September 2021
15:00 CEST

REGISTER NOW

FOLLOW US ON

Standardisation priorities in the EC context

———

Silvana Muscella, CEO at Trust-IT

@silvanamuscella

The EU Standardisation strategy roadmap

The European Standardisation System (ESS) supports the overall competitiveness of EU industries. **Some of the challenges identified in the Roadmap are*:**

- Modernise and consolidate the ESS, ensuring it is better oriented towards meeting EU's priorities, notably the green/digital industrial transition;
- Addressing bottlenecks within the standardisation system;
- Incentivise coordination, efficient and flexibility in the timely delivery of European standards;
- Make full use of EU industrial resources to contribute to (pre-) standardisation activities, including research and innovation activities.

*https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/13099-Standardisation-strategy_en

Ontologies can help tackle many of the challenges identified in the roadmap by contributing to the standards harmonisation and interoperability

The Rolling Plan for ICT standardisation

The EU Rolling Plan provides an overview of the needs for ICT standardisation activities in support of EU policy activities.

It is drafted by the EC in collaboration with the European Multi-Stakeholder Platform (MSP) on ICT Standardisation and is updated annually.

It covers technologies of 'horizontal importance', ones whose application have a wide impact across different technical fields!
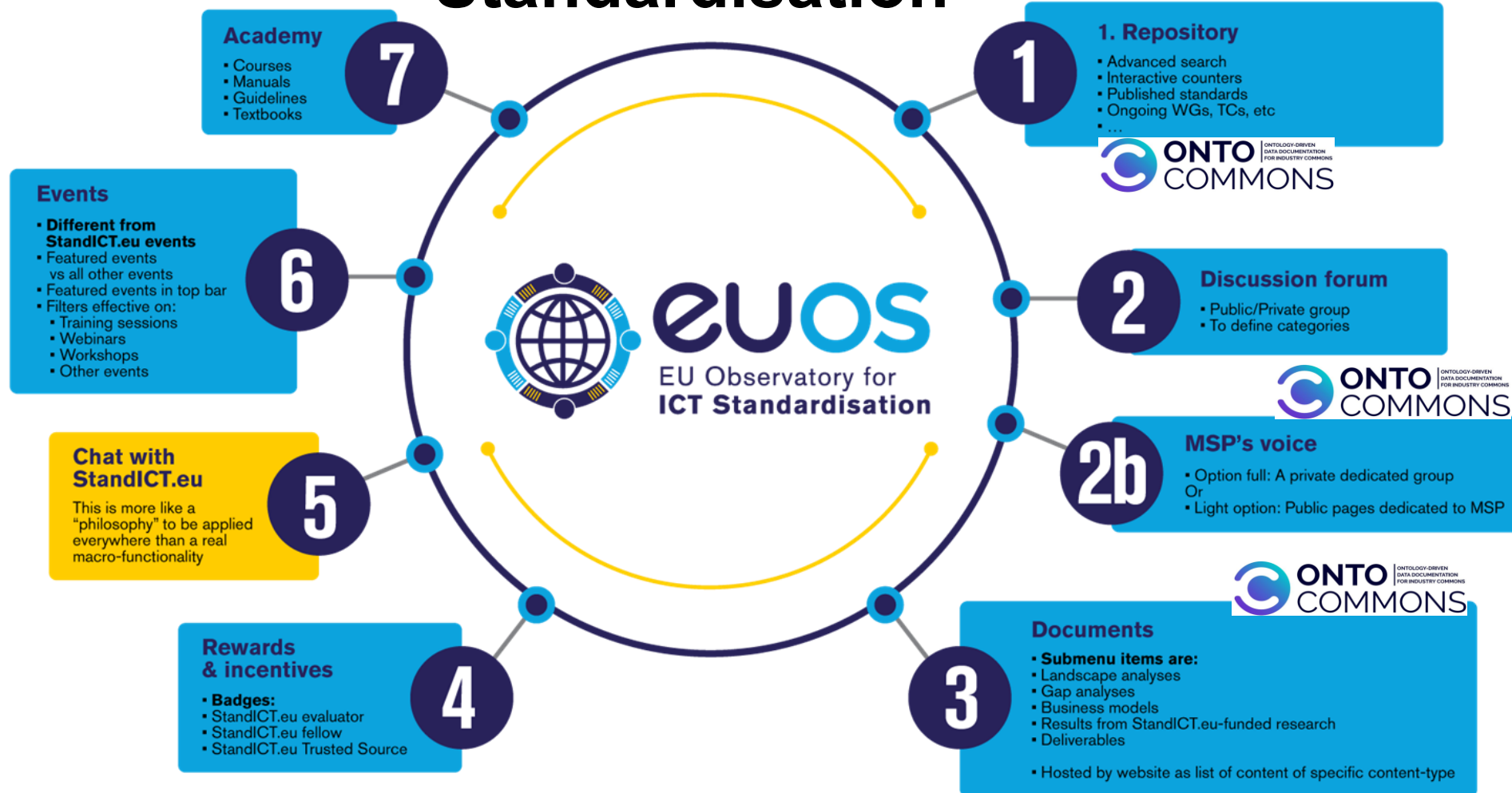
ICT standards play an essential role for interoperability of new technologies with significant benefits to both industry and consumers.

The Rolling Plan for ICT standardisation

- The **ROLLING PLAN FOR ICT STANDARDISATION 2021** provides a deep analysis on requirements, SDOs and ongoing standardisation activities in 4 main areas:

  - **KEY ENABLERS AND SECURITY**
  - **SOCIETAL CHALLENGES**
  - **INNOVATION FOR THE DIGITAL SINGLE MARKET**
  - **SUSTAINABLE GROWTH**

The recommendations in all areas revolve around ontologies

The European Observatory for ICT Standardisation

7 Academy
- Courses
- Manuals
- Guidelines
- Textbooks

6 Events
- **Different from StandICT.eu events**
- Featured events vs all other events
- Featured events in top bar
- Filters effective on:
  - Training sessions
  - Webinars
  - Workshops
  - Other events

5 Chat with StandICT.eu
This is more like a "philosophy" to be applied everywhere than a real macro-functionality

4 Rewards & incentives
- **Badges:**
- StandICT.eu evaluator
- StandICT.eu fellow
- StandICT.eu Trusted Source

eUOS
EU Observatory for ICT Standardisation

1. Repository
- Advanced search
- Interactive counters
- Published standards
- Ongoing WGs, TCs, etc
- ...

2 Discussion forum
- Public/Private group
- To define categories

2b MSP's voice
- Option full: A private dedicated group
Or
- Light option: Public pages dedicated to MSP

3 Documents
- **Submenu items are:**
- Landscape analyses
- Gap analyses
- Business models
- Results from StandICT.eu-funded research
- Deliverables
- Hosted by website as list of content of specific content-type

Related topics:
- IoT Semantic Interoperability
- 3GPP Mobile
- Industry Commons
- Maintenance Domain extension
- Data quality assessment through Contextual Intelligence using the FAIR data methodology
- Open Ethics Transparency Protocol RFC

OntoCommons liaises with StandICT.eu to create a TWG within the #EUOS for experts collaboration and consultation on ontologies and standards

Standardisation IMPACT

#1 - Introduce recommendations, gaps or priorities around the Ontology domain from a **standardisation perspective** and list them in the **Ontocommons Roadmap**;
Send these recommendations to the MultiStakeholder Platform (MSP) & see if the most relevant parts could be included within the next version of the **Rolling Plan of ICT Standardisation**

#2 - Analyse **OntoCommons demonstrators** that may become **valid use cases as part of EOSC to include in the EOSC Set up Task Forces;**

#3 - Monitor the number of **Ontology applications that** are potentially supported as part of StandICT.eu (7 applications as of September 2021;

#4 - Number **of active community members** within the Working Group of EU-OS of StandICT.eu;

The impact is monitored through the development of two standardisation impact reports that provide the state of EU contributions to Ontologies in the international standards arena and how OntoCommons.eu has contributed to progress on the impact in this domain.

Standardisation IMPACT

TITLE	EU PRIORITY	SDO
IoT Semantic Interoperability - Specialization to Energy and relationship to AI	Key Enablers and Security	ISO SC41 IoT and Digital Twins ISO SC42 AI
Participation in SA WG4 and Contributions to Augmented Reality in 3GPP Mobile AR Report TR26.998	Key Enablers and Security	IEEE RAS Standards Working Group - Ontologies for Robotics and Automation
Ontologies' Standardization and Harmonization for Industry Commons (SHICO)	Sustainable Growth	OAGi (Open Applications Group)
Development of content delivery standard for smart content, iiRDS	Sustainable Growth	iiRDS
iiRDS, Working Group participation and Maintenance Domain extension	Sustainable Growth	iiRDS
QuaFair: Data quality assessment through Contextual Intelligence using the FAIR data methodology	Key Enablers and Security	IEEE ComSoc Internet of Things Emerging Technical Subcommittee

- EMC Radiation
- European Global Navigation Satellite System (EGNSS)
- Emergency communications
- e-Procurement – pre- and post award
- European Electronic Toll Service (EETS)
- Fintech and Regtech Standardisation
- Global Standard Governance
- ICT Environmental impact
- Identity Management and Anonymisation
- Industry 4.0
- Intelligent Transport Systems - Cooperative, Connected and Automated
- Justice
- Language Technologies
- Learning and Education
- Machine Learning
- Management of identities for smart organizations
- Ontologies
- Open Data Standards
- Open Source
- Preservation of digital cinema
- Privacy

Through its funded fellows StandICT.eu 2023 is supporting work to align existing ontologies and ultimately contribute to filling the gap in ontology-based Standards to support EU Policy objectives

Standardisation IMPACT

TITLE	EU PRIORITY	SDO
Open Ethics Transparency Protocol RFC	Innovation for the societal challenges	ANEC
Building Information Modeling, WG4 – Support Data Dictionary	Key Enablers and Security	CEN
Improving the adoption of BIM according to ISO 19650 in the construction sector in the Netherlands	Sustainable Growth	ISO
Development of content delivery standard for smart content, iiRDS	Sustainable Growth	iiRDS
Semantics and concepts to enable interoperable conversions between calendar systems	Sustainable Growth	ISO
Danish participation in the ISO/IEC JTC 1/SC 32 WG 3 Database languages (SQL and new GQL), 3rd term	Key Enablers and Security	ISO/IEC

- EMC Radiation
- European Global Navigation Satellite System (EGNSS)
- Emergency communications
- e-Procurement – pre- and post award
- European Electronic Toll Service (EETS)
- Fintech and Regtech Standardisation
- Global Standard Governance
- ICT Environmental impact
- Identity Management and Anonymisation
- Industry 4.0
- Intelligent Transport Systems - Cooperative, Connected and Automated
- Justice
- Language Technologies
- Learning and Education
- Machine Learning
- Management of identities for smart organizations
- Ontologies
- Open Data Standards
- Open Source
- Preservation of digital cinema
- Privacy

Through its funded fellows StandICT.eu 2023 is supporting work to align existing ontologies and ultimately contribute to filling the gap in ontology-based Standards to support EU Policy objectives

Examples of standards and ontologies used in the OntoCommons.eu demonstrators

- IOF Core
- QU4LITY Ontology
- GRACE Ontology
- Z-BRE4K Ontology

- ISO 15926-14
- Material-Core (In-house development)
- Standards Ontology (In-house development)
- ChEBI
- SKOS

- ISO 15936
- QuED
- SSN
- UMATI
- eClass
- OPC-UA (in-house transformation from the standard)
- CFIHOS

AIRBUS DESIGN AND MANUFACTURING
Topic: Aerospace, Manufacturing

BOSCH MANUFACTURING
Topic: Manufacturing

AIBEL PROCUREMENT
Topic: Process industry

MATERIALS' TRIBOLOGICAL CHARACTERISATION
Topic: Manufacturing

DIGITAL MATERIALS MARKETPLACES
Topic: Nanotechnologies, Biotechnology

OAS PRODUCT SERVICE SYSTEM
Topic: Equipment industry

FRAUNHOFER QUALITY
Topic: Quality assurance of powder blends

IRES NANO-MATERIALS
Topic: Chemical, 2D materials

BLM GROUP ONTOLOGY-BASED MAINTENANCE
Topic: Equipment Industry

ELVAHALCOR METAL INDUSTRY
Topic: Manufacturing

SIEMENS DIGITAL MANUFACTURING
Topic: Manufacturing

The work around standards supports the implementation of interoperability and FAIRness principles for the OntoCommons demonstrators.

ONTO COMMONS

Thank you very much for your attention!

Silvana Muscella, CEO at Trust-IT

Thank you

FOLLOW US ON

@ontocommons

linkedin.com/company/ontocommons

CONTACT US

info@ontocommons.eu