int:net

Interoperability Network for
the Energy Transition

Establishing a continuous improvement process

IntMAS

Ludwig Karg, B.A.U.M.

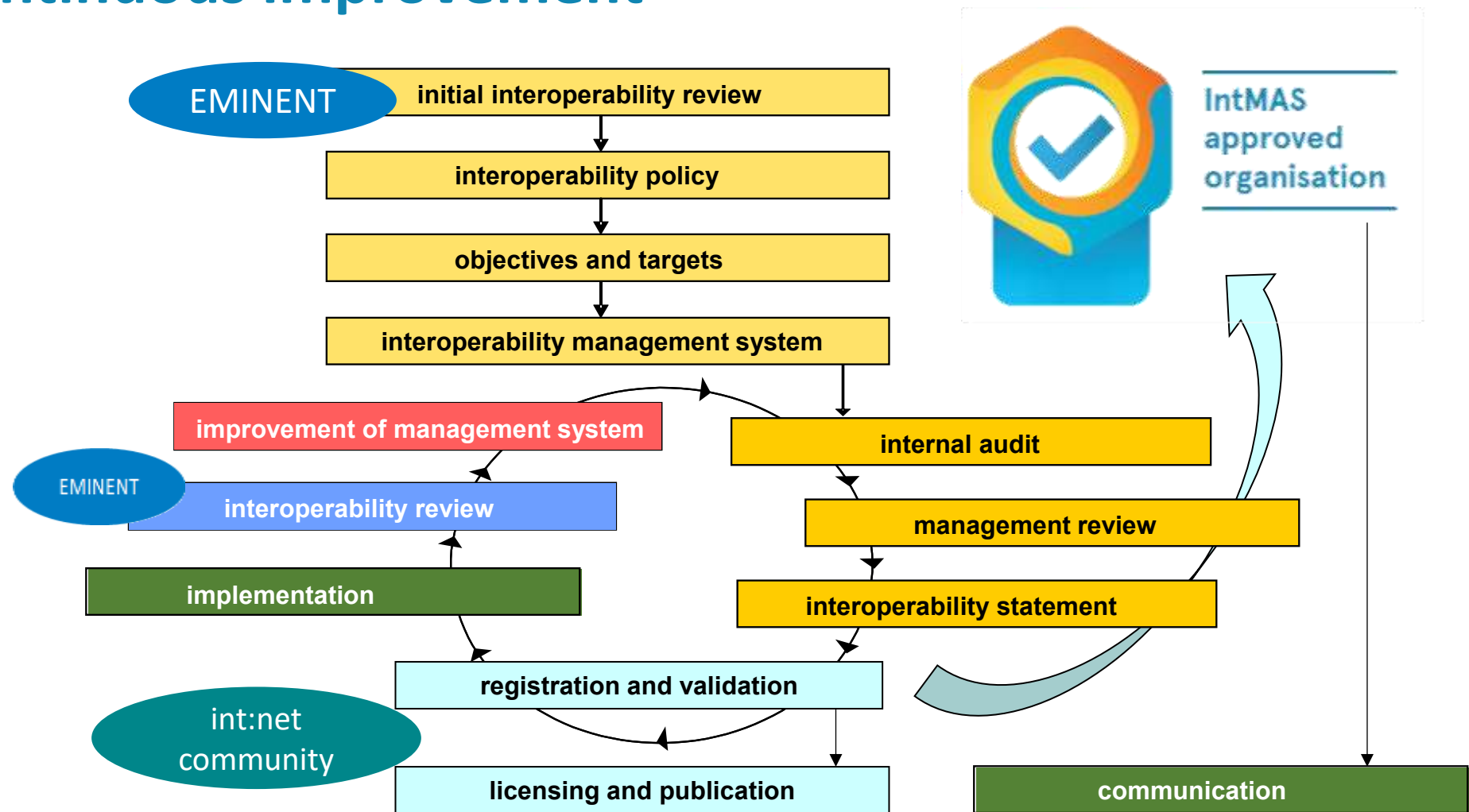18 September 2025

IntMAS

IntMAS approved organisation

Interoperability Management and Audit System

modelled after:

18 September 2025 | Final Conference | Ludwig Karg, B.A.U.M.

A process for continuous improvement

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Guideline and tools

- ✓ reference to backgrounds

- ✓ goals and requirements

- ✓ work process

- ✓ references and links to tools

- ✓ summary of steps

- ✓ step by step guidance

- ✓ key points and hints

- ✓ **templates for the artefacts**

- ✓ **templates for the assessment**

Documentation for the Interoperability Management and Audit System (IntMAS) at <name of organisation>

Version 0.9

IntMAS approved organisation

approved on ??? by ???

IntMAS approved organisation

...ntation of an Interoperability ...System (IntMAS)

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IntMAS artefacts for management and communication

Interoperability Policy (IP)

➢ commitment

➢ strategic goals

Interoperability Performance Programme (IPP)

➢ SMART objectives

➢ action plan with selected measures (for 3 years)

Interoperability Management System (IMS)

➢ management goals and assignments

➢ management structures and responsibilities

publishable summary

IntMAS approved organisation

Interoperability Performance Statement (IPS)

➢ clear messages for communication and dialogue with interested parties

➢ full Interoperability Policy (IP)

➢ summaries of IMS and IPP

➢ result of validation

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Benefits for IntMAS implementing organisations

✓ A systematic approach uncovers all risks and guarantees full compliance with interoperability models, standards and legislation.

✓ Well defined structures of procedures, programmes, documentation and continual assessment help to act efficiently.

✓ A complete assessment of activities and their impact on the energy domain gives a chance to allocate (the always limited) personnel and financial resources in a proper way.

✓ Public relation activities demonstrate commitment and enforce interoperability action by other stakeholders.

✓ The "int:net approved" label supports communication and creates credibility.

✓ Structured management systems allow for step-by-step improvement. Systemic approaches help to avoid starting too many projects at the same time.

✓ The open IntMAS approach allows for combining existing and new tools (e.g. EMINENT, …)

Certification and awarding process

1. goto IntMAS platform https://intmas.eu

2. upload documentation artefacts

3. wait for results of AI and EI check

4. close license contract online

5. get certificate and guidebook to use the label

And the winner is …

ecoplanet

ecoplanet

Lowest energy prices & innovative energy management for German SMEs
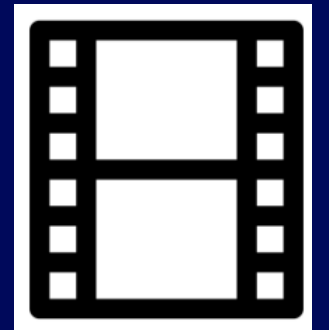
ecoplanet as a transformation platform
for everything related to energy

Interoperability Targets & Performance Program

🚀 Goals with respect to interoperability

- **Maximize the potential of energy management** by integrating and connecting all relevant information and market participants

- **Foster collaboration within the ecosystem** to create differentiated solutions that deliver real added value

⭐ Interoperability Performance Program

- **Proactive standards management**

- **Joint offering with partners**

- **Optimized product testing**

- **Maintain and strengthen partner network**

- **Optimise close collaboration with market participants**

2025

IntMAS APG

APG Interoperability Policy Statement

► **Purpose:** Ensure a secure, efficient, and future-proof electricity system through seamless interaction of actors, systems, and technologies.

► **Key Objectives:**
▸ **Customer-Centric Solutions:** Clear, transparent interfaces for efficient market participation and cost reduction.
▸ **Resilience & Innovation:** Enable integration of new technologies (storage, e-mobility, hydrogen) into the European power system.
▸ **European Harmonization:** Promote common standards for efficient and secure cross-border operations.

► **Strategic Principles:**
▸ **Customer Orientation & Efficiency:** Transparent, efficient processes that lower system costs.
▸ **Resilience & Innovation:** Interoperability as a foundation for secure integration of new technologies.
▸ **Harmonization & Standardization:**
  • External systems: use of unified European standards, data models, and interfaces.
  • Internal systems: flexible but interoperable to external systems
▸ **Regulatory Compliance:** Full adherence to EU/national rules, including cybersecurity.
▸ **Holistic Integration:**
  • **Horizontal:** Across organizations and borders for a consistent European system.
  • **Vertical:** From TSO to DSO to prosumers for transparency and flexibility.

APG IntMAS Action Plan

ID	Target description	Assigned to	Start	End
Int1	Approved Interoperability Policy including guiding principles.	Cross-Function Department	01.06.2025	30.10.2025
Int15	IntMAS integrated into the existing IMS so that interoperability is covered in the next IMS audit.	Cross-Function Department	01.10.2025	31.03.2026
Int2	Interoperability explicitly integrated as a strategic principle in the corporate strategy framework.	Cross-Function Department	01.01.2026	31.12.2026
Int3	Updated Software Development Guideline including clear interoperability criteria.	Cross-Function Department	01.01.2026	31.12.2026
Int16	Interoperability explicitly assessed as part of the project approval process	Cross-Function Department	01.01.2026	31.12.2026
Int5	A single, structured reference list of all key interoperability requirements relevant to APG.	System Division	01.04.2026	31.12.2026
Int6	A single, structured reference list of all key interoperability requirements relevant to APG.	Asset Division	01.04.2026	31.12.2026
Int17	SGAM-based assessment integrated into process analysis for selected critical use cases.	Cross-Function Department	01.04.2026	30.06.2027
Int4	Interoperability explicitly high-lighted by the Executive Board as a key pillar for APG's future	C-Level	01.04.2026	31.12.2029
Int7	Overview of interoperability relevance and maturity across all ongoing research and innovation initiatives	Cross-Function Department	01.01.2027	31.12.2027
Int9	Defining Interoperability for Internal Apps, updated non-functional requirements (NFR)	Cross-Function Department	01.01.2027	31.12.2027
Int10	Resourcing Strategy for Interoperability	System Division	01.01.2027	31.12.2027
Int11	Closing OT Interoperability Gaps	Asset Division	01.01.2027	31.12.2027
Int12	Integrate Interoperability in Risk Assessment	Cross-Function Department	01.07.2027	30.09.2028
Int8	Defining and Integrating Interoperability in Data Policy	Cross-Function Department	01.01.2027	31.12.2028
Int14	Resourcing Strategy for Interoperability	Asset Division	01.01.2028	31.12.2028
Int13	Defined and published standard interface patterns and data exchange formats for internal applications	Cross-Function Department	01.01.2028	31.12.2029

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