ISEG

(Interoperable Schnittstellenspezifikationen für Energiegemeinschaften)

Interoperable Interface Specification for Energy Communities

Cross-sector Symposium 2025

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FFG Forschung wirkt.

What is ISEG?

ISEG investigates and enhances an open, standardized interface for energy communities to simplify:

- Data exchange
- Coordination
- Integration of technical systems

Goals:

Enable efficient and secure collaboration between:

- Energy communities Service providers
- Grid operators

Ensure future-proof solutions.

Why is it important?

Energy communities are a key component of the energy transition and enable:

- Local value creation and energy independence
- Reduction of greenhouse gas emissions
- Democratic participation in energy supply
- New business models and innovations

Project details

Duration: March 1, 2025 – February 28, 2028

Project Coordination: AIT Austrian Institute of Technology GmbH

Project Partners:

- Energieinstitut at Johannes Kepler University Linz
- University of Applied Sciences Technikum Wien
- FH OÖ Studienbetriebs GmbH
- Technology Platform Smart Grids Austria

Funding Authority: Federal Ministry for Innovation, Mobility, and Infrastructure (BMIMI)

What does ISEG do specifically?

- Development of a unified interface
- Definition of reference processes
- **Derivation of legal recommendations**
- **Development and provision of test environments**
- **Support for integration and interoperability**
- All while considering the **market processes of the Austrian energy sector**

Who is this relevant for?

- **Energy communities:**
  - Efficient operations
  - Transparent data
  - New services
- **Service providers & technology suppliers:**
  - Faster development and integration
- **Distribution grid operators:**
  - Improved grid stability and data quality
- **Policy makers and regulators:**
  - Basis for legal frameworks and market transparency

Driving innovation through collaboration

Innovations in Focus

ISEG leverages cutting-edge methods and builds on national and international projects such as:

- **IES-AUSTRIA**, **SONDER**, **PARMENIDES**, **EDDIE**, and **INSIEME**

Developed solutions are:

- **Open**
- **Scalable**
- Promote the **digital transformation** of the energy sector

Get Involved and Benefit

ISEG adopts a participatory approach, actively involving stakeholders to create practical and widely accepted solutions.

Current activities and project status

Focus on the architectural requirements and framework conditions based on the specifications of EDA (Energy Data Exchange) and ebUtilities

Identification of challenges during implementation and operation through stakeholder workshops

Prioritization of processes

Architecture of EDA

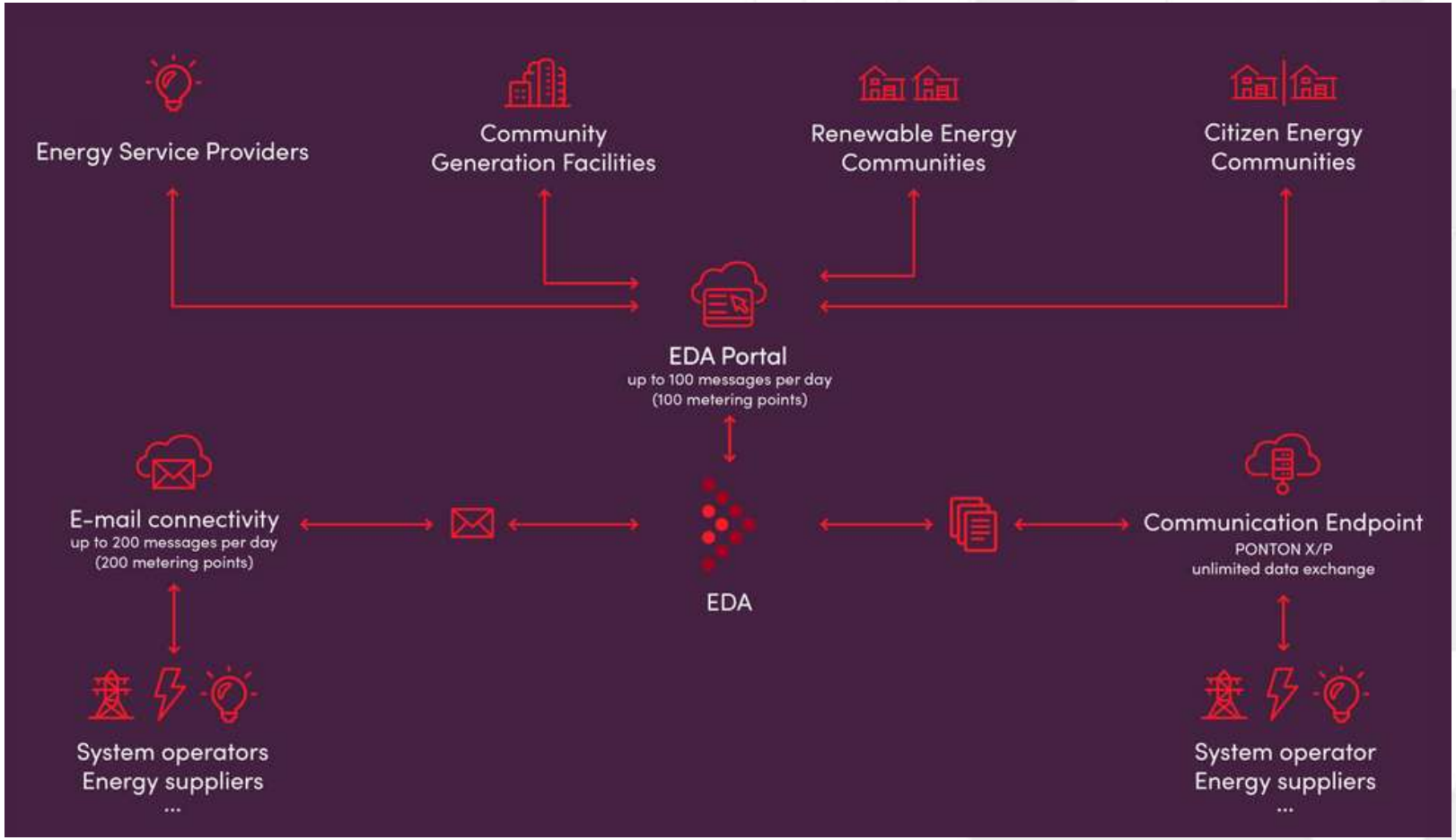


Image from: https://www.eda.at/wie-funktioniert-eda

Communication framework

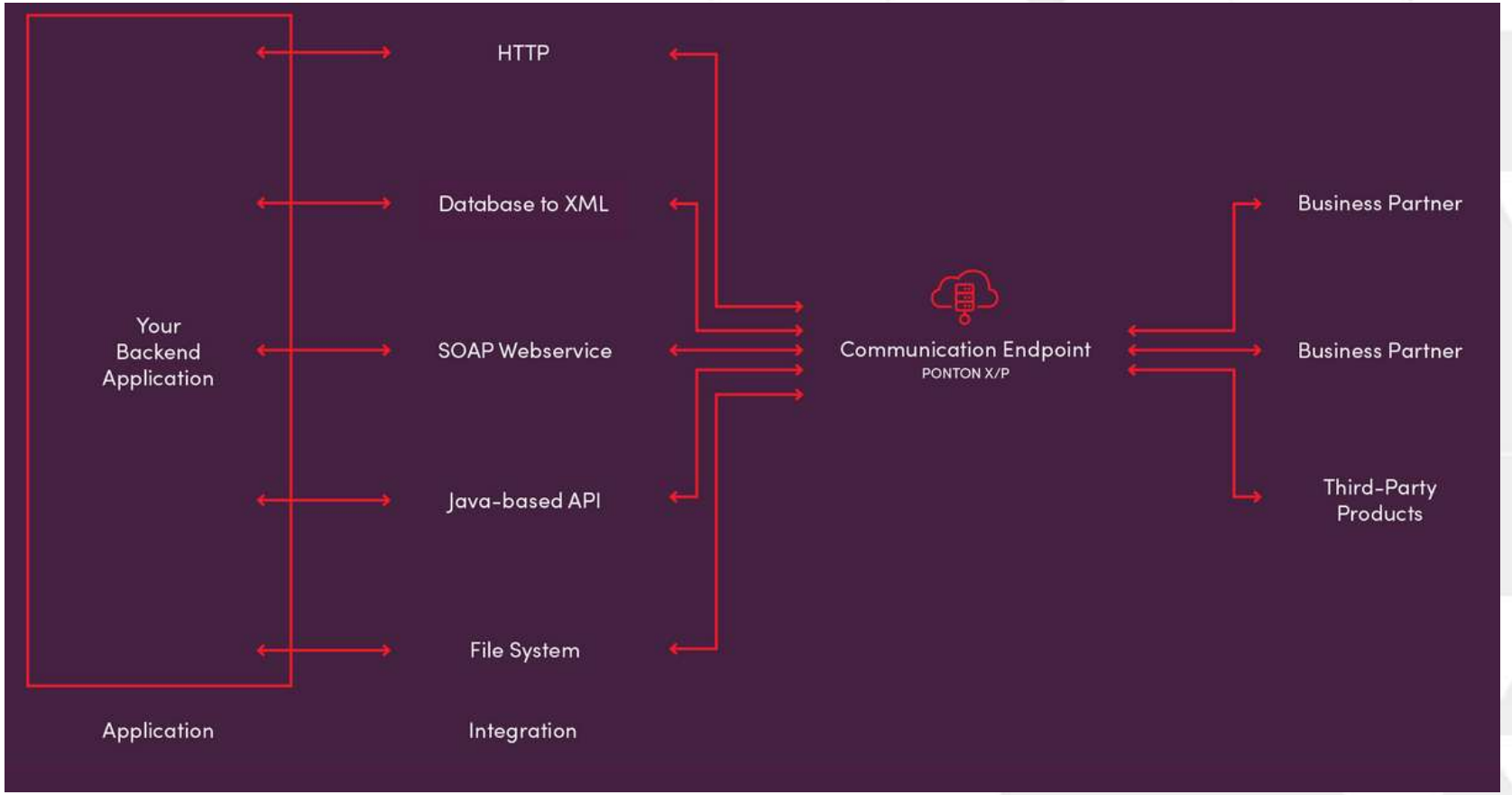
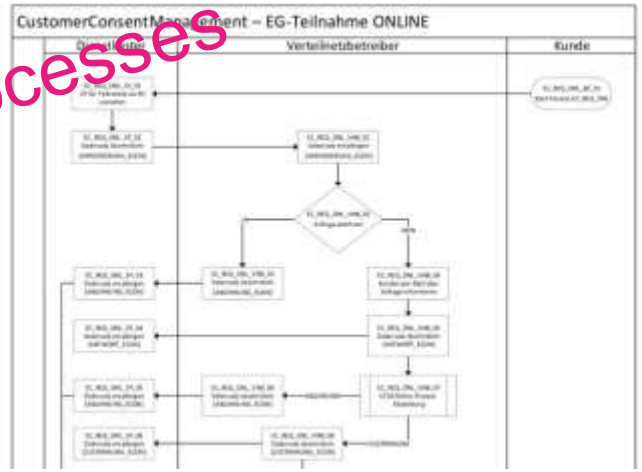


Image from: https://www.eda.at/kommunika

Process and data format definitions from ebUtilities

ebUtilities.at is the information platform of the Austrian energy industry for technical documentation on business processes and data formats in market communication, in accordance with regulatory requirements.

Processes



Requirements

XML Schemas

Evaluation of the EDA processes

E-Control and ebUtilities

E_Control and ebUtilities

ebUtilities specifications

EDA platform and Ponton XP

https://ec.europa.eu/isa2/eif_en/

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