

Global Smart Energy Federation Board call September 2023

Thursday Sep 21st

Gianluca Lipari

Technical Leader - European Projects Coordinator
glipari@epri.com





int:net

Interoperability Network for
the Energy Transition

Coordinating Interoperability Developments for the Energy Transition

Gianluca Lipari

EPRI Europe

September 21st 2023, Online

Overview

- Why?
- int:net in a nutshell
- Interoperability, a capability perspective
- Conclusion

Energy transition requires interoperability to be omnipresent

The Energy transition requires collaboration across organizations

DER, EV, Demand Response, energy markets, reliability coordination, energy sharing platforms

Yet... interoperability remains... elusive.

Interoperability Network for the Energy Transition

- **Horizon Europe Call HORIZON-CL5-2021-D3-01-0**

- **Coordination & Support Action (CSA)**

- **Duration: 36 months**

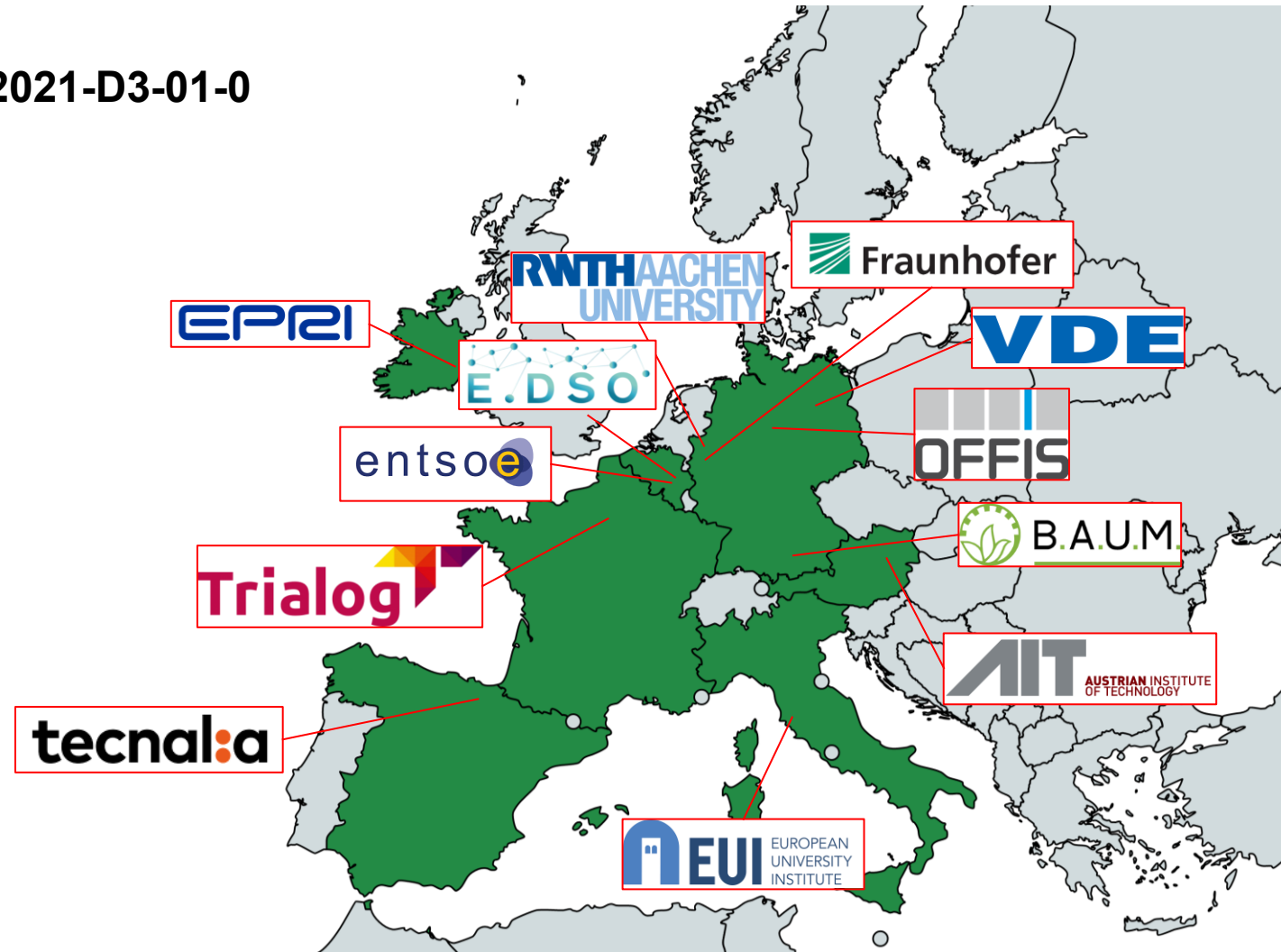
- **Runtime: 01.05.2022 – 30.04.2025**

- **Consortium: 12 Partners**

- 7 Countries

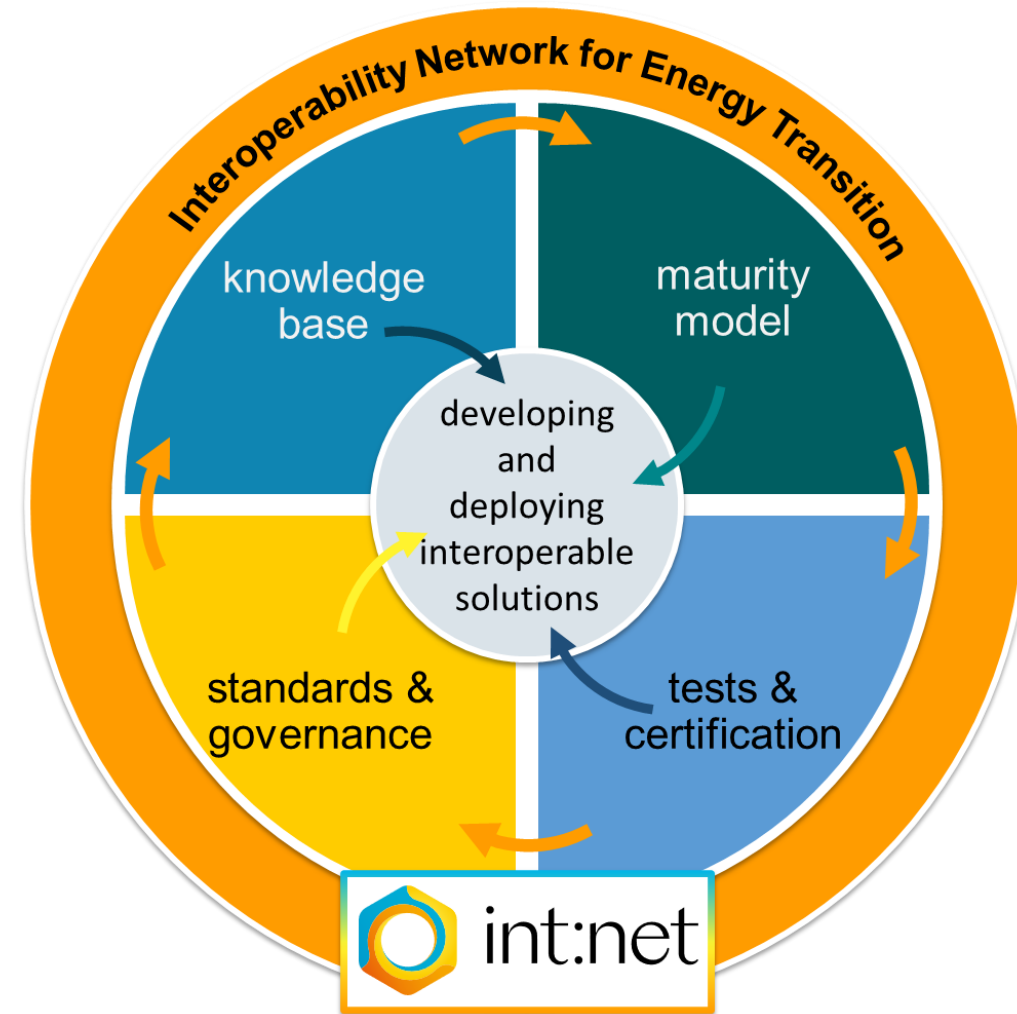
- 1 Associated Partner

- **Budget: 5 M€**



Project objectives

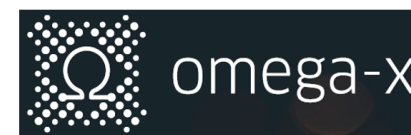
- Consolidating a common knowledge base for interoperability activities on energy services in Europe
- Developing a comprehensive and accepted Interoperability Maturity Model (IMM)
- Deploying a framework for interoperability testing in a network of interoperability testing facilities
- Fostering a community network of standards and regulatory environment for a European interoperability ecosystem



Energy data spaces projects cluster

- Identify the **key use-case from the pilots** towards a common European energy data space
- Analyze the **interoperability challenges** and the minimal necessary actions to address them
- Focus on each level of interoperability:
→ on **business layer and governance aspects** too

projects of call HORIZON-CL5-2021-D3-01-01 + DSSC:

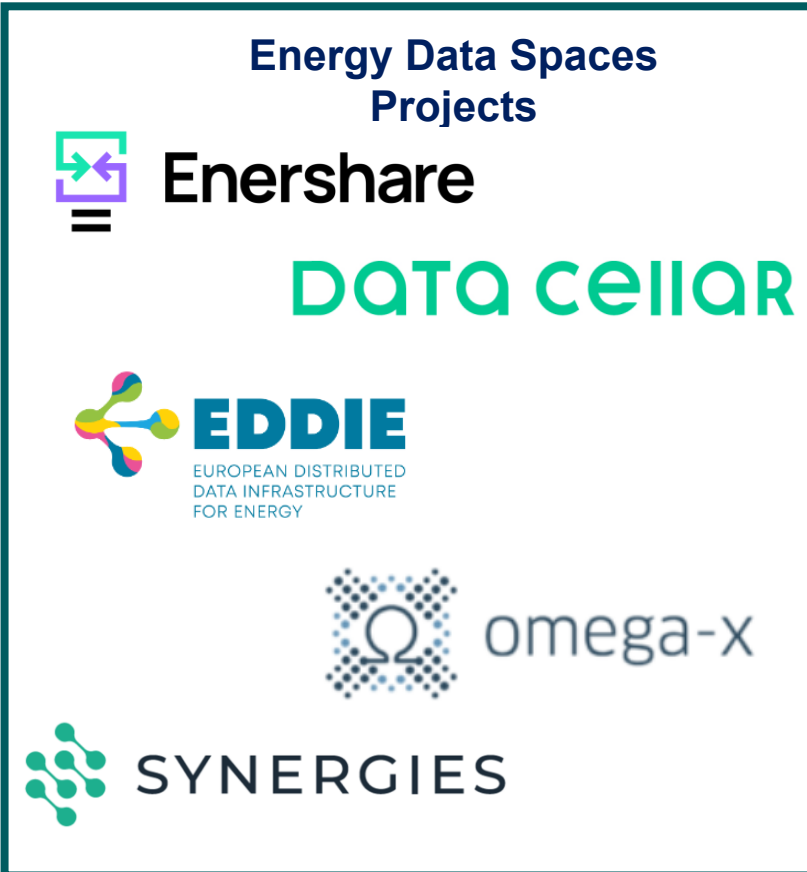


DATA CELLAR



Energy data spaces projects cluster & ecosystem

Energy Data Spaces Projects



Enershare

DATA CELLAR

EDDIE
EUROPEAN DISTRIBUTED DATA INFRASTRUCTURE FOR ENERGY

omega-x

SYNERGIES

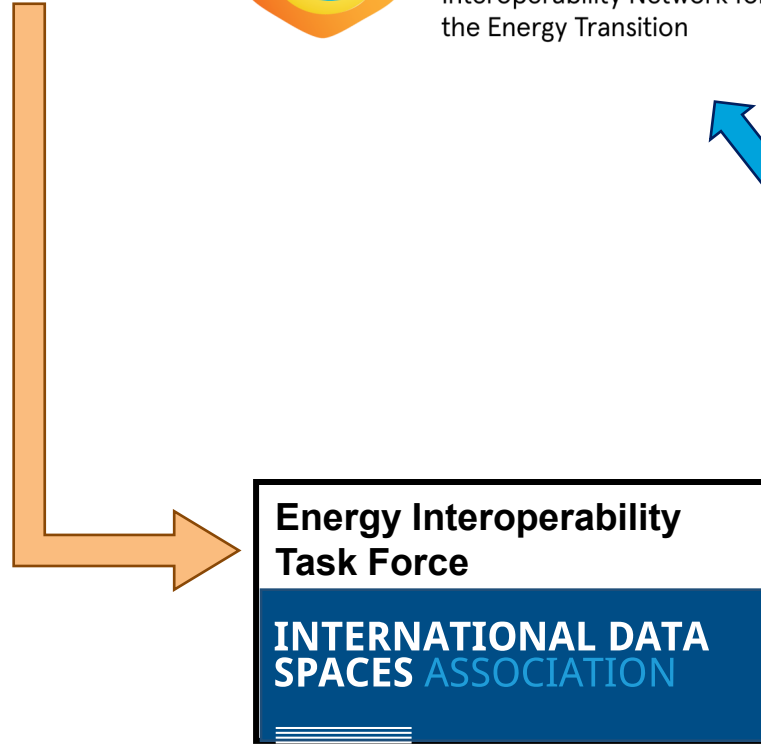


And other CSAs:




GREAT
Green Deal Data Space

PrepDSpace4Mobility



New! March 2023

Data Management WG



bridge



ETIP SNET
PLAN. INNOVATE. ENGAGE.

Where do we see value in Data Space for the energy sector?

- Predictive maintenance and supply chain optimization
- Cross-sector uses case for energy communities
- Digital Twin for electrical and beyond electrical use cases
- Aggregated management of flexibility
- Cross value chain services for green financing
- Support to scientific community and analytic developers
- Energy trading



RENEWABLES



LOCAL ENERGY
COMMUNITIES



ELECTROMOBILITY



FLEXIBILITY

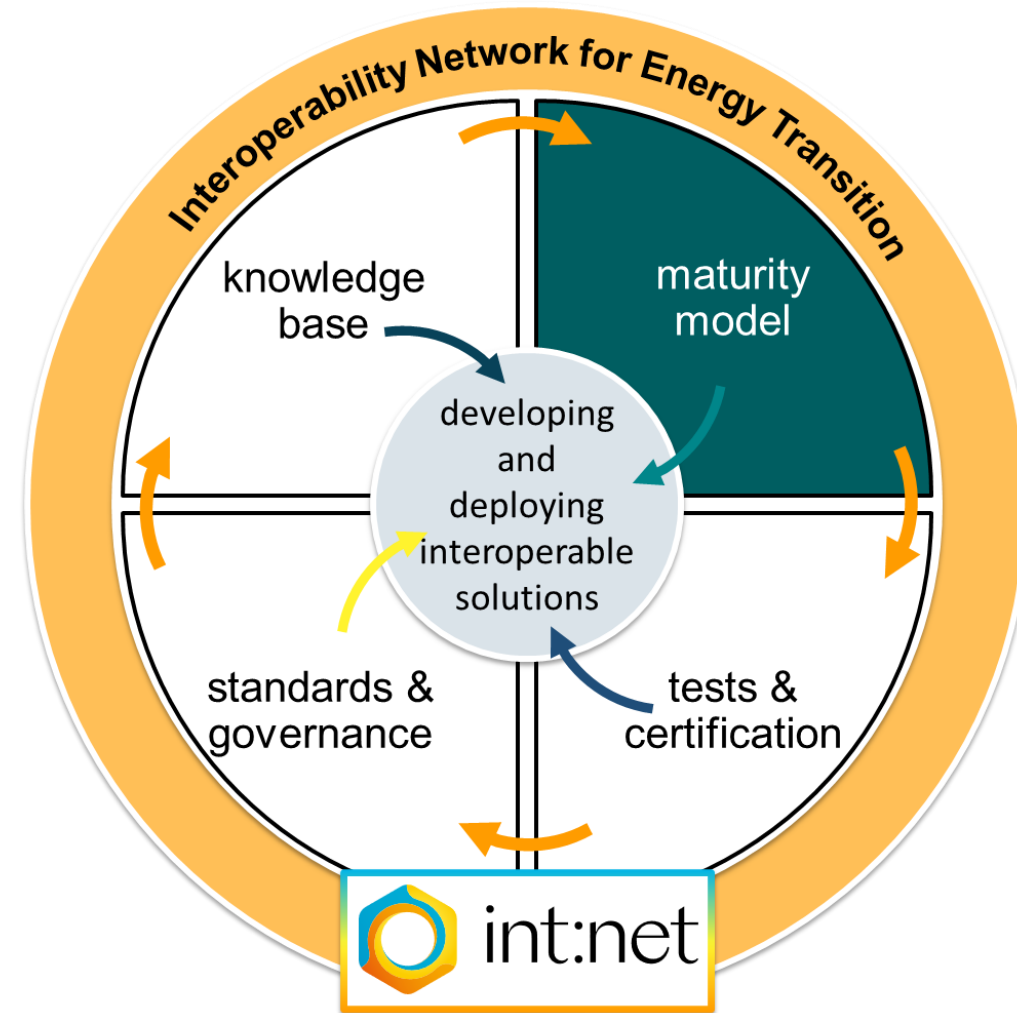


Enershare

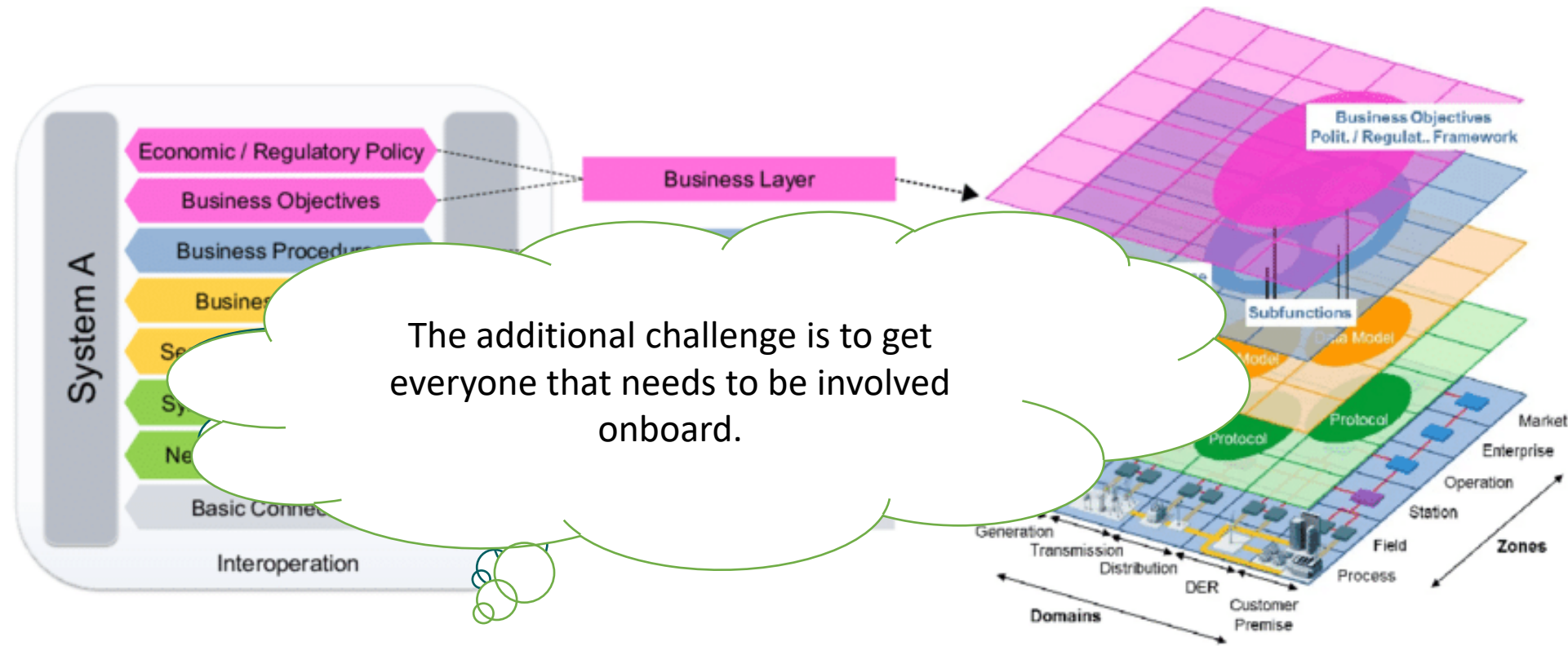
DATA CELLAR

int:net – Maturity Model

- Develop an Interoperability Maturity Framework or Model
- Develop tool for assessing interoperability maturity for an organization/system
- Develop database and system for tracking maturity and engage industry for assessments

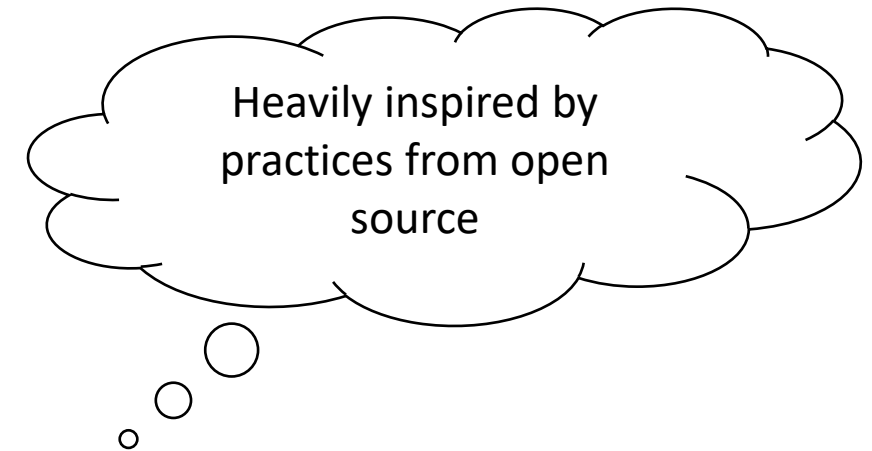
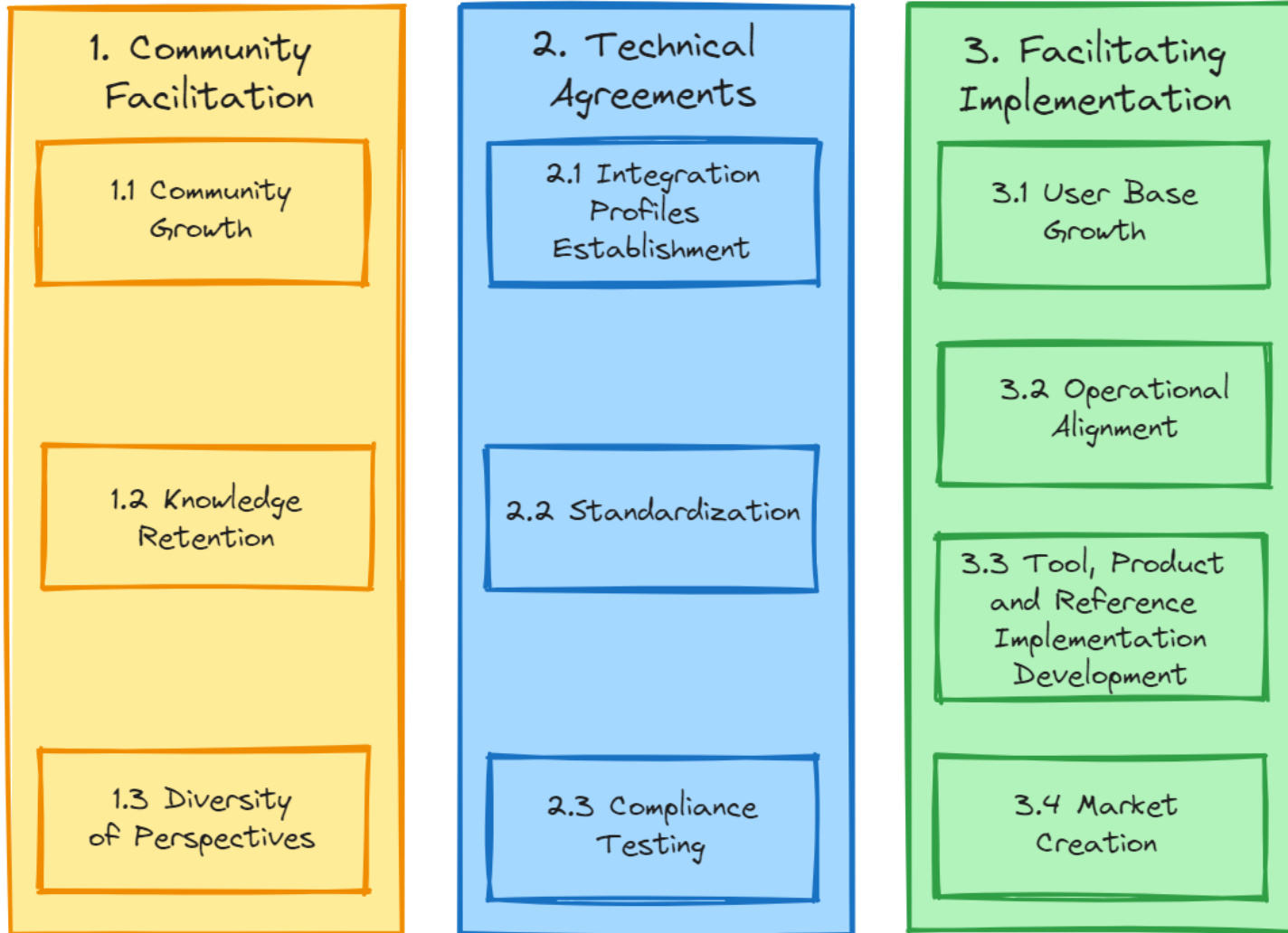


Interoperability, from the ivory tower to the trenches



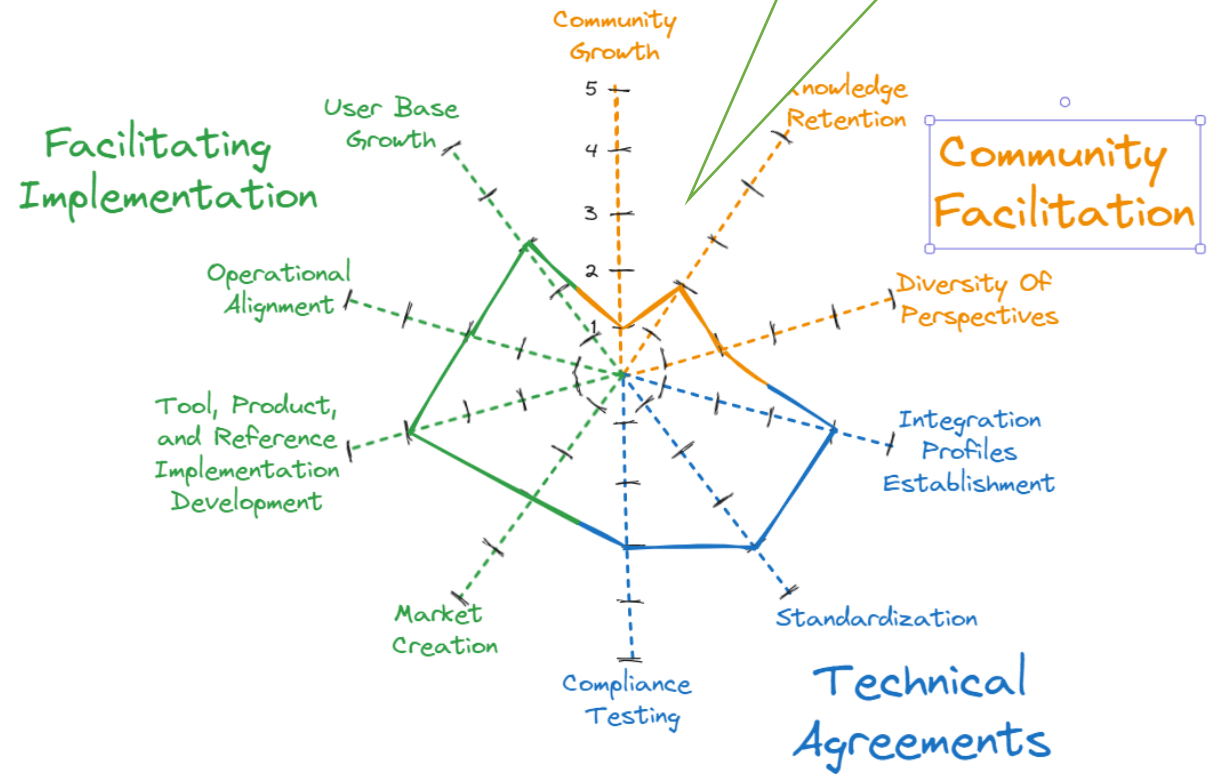
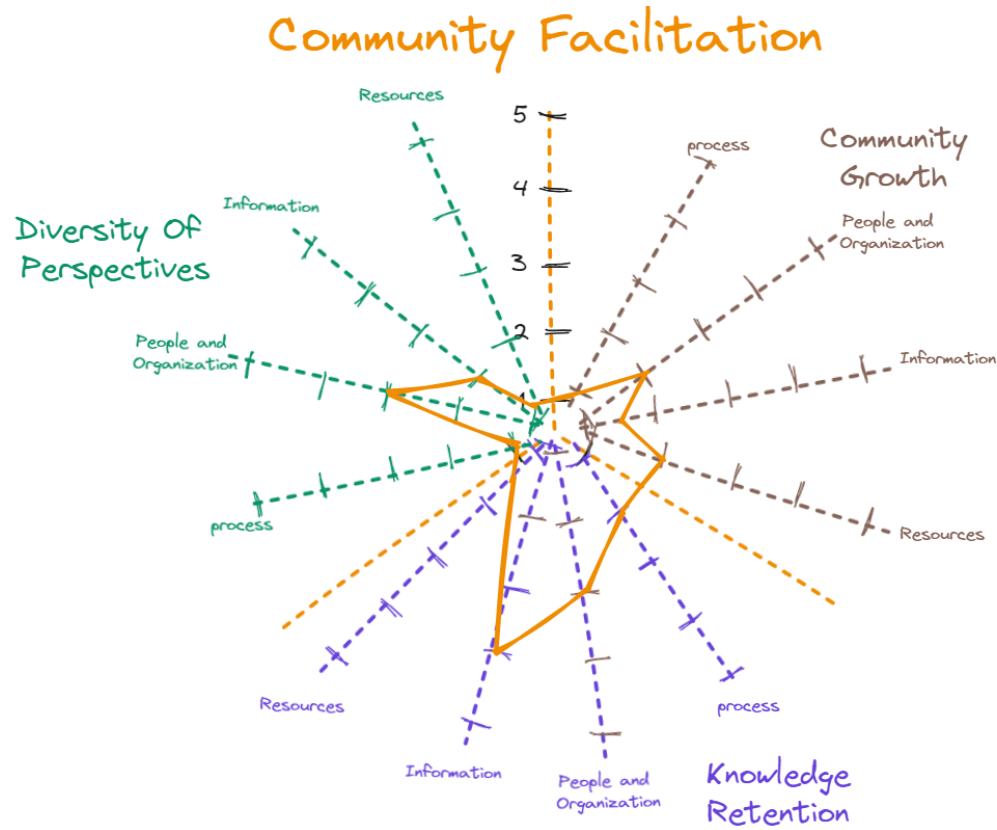
Hanna, Sebastian. (2020). Ein Prozess zur Unterstützung im System of Systems Engineering. 10.13140/RG.2.2.14515.66080.

Capability model (work in progress)



Dimensions
Process
People and Organization
Information
Resources

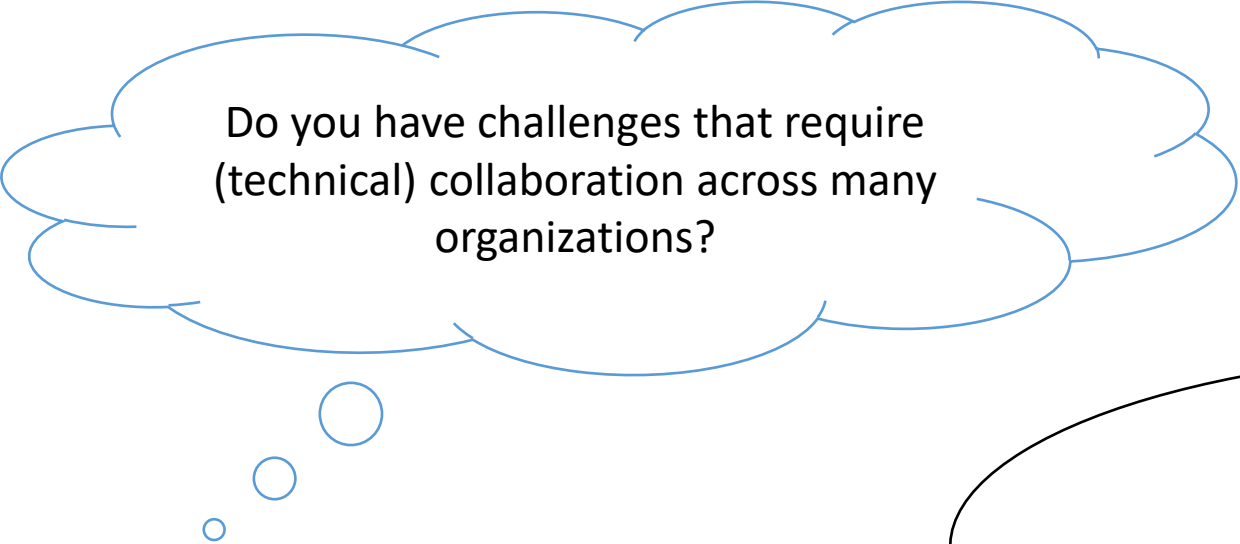
Maturity model example (work in progress)




Conclusion

- Interoperability requires both technical as well as organizational harmonization across organizations: it is a property of a community of organizations.
- No one organization has the final say in an interoperability community: the strongest influence you have is the decision to participate or not to participate.
- A maturity model and maturity assessment can help organizations understand their status and progress with respect to making interoperability a priority, participating in development of interoperability standards and approaches and adoption of these standards and approaches.

Evaluating Interoperability Maturity for your organization



Do you have challenges that require
(technical) collaboration across many
organizations?



Get in touch with us!
(glipari@epri.com
mmcgranaghan@epri.com
jvanguenuchten@epri.com)



int:net

Interoperability Network for
the Energy Transition

Additional info



<https://intnet-project.eu/>



<https://www.linkedin.com/company/int-net-project/>



www.twitter.com/intnetproject



info@intnet-project.eu

Gianluca Lipari

EPRI Europe



Questions?

glipari@epri.com