

# Global Smart Energy Federation Board call September 2023

Thursday Sep 21<sup>st</sup>

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int:net

Interoperability Network for  
the Energy Transition

# Coordinating Interoperability Developments for the Energy Transition

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EPRI Europe

September 21<sup>st</sup> 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**

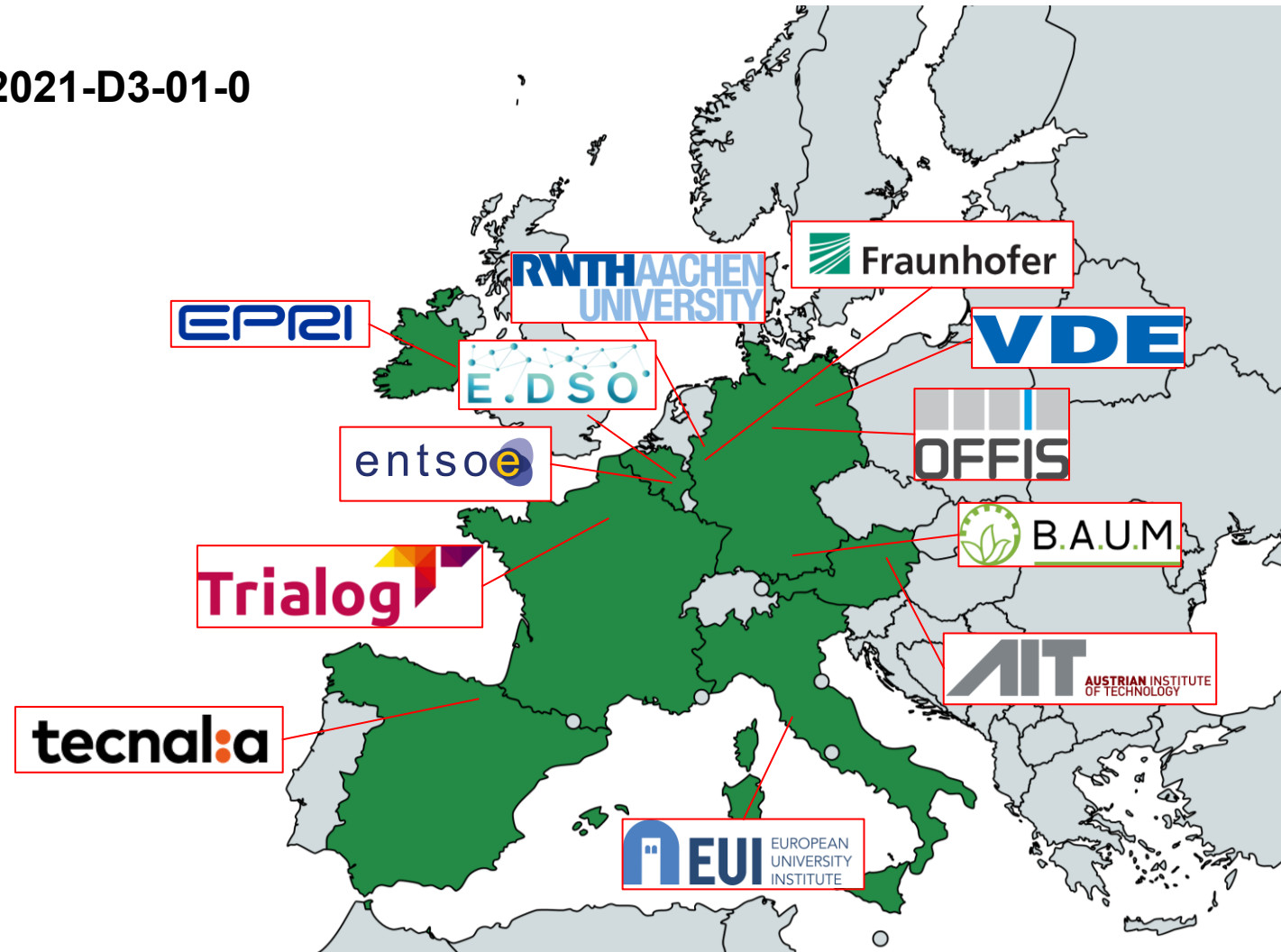
- **Runtime: 01.05.2022 – 30.04.2025**

- **Consortium: 12 Partners**

- 7 Countries

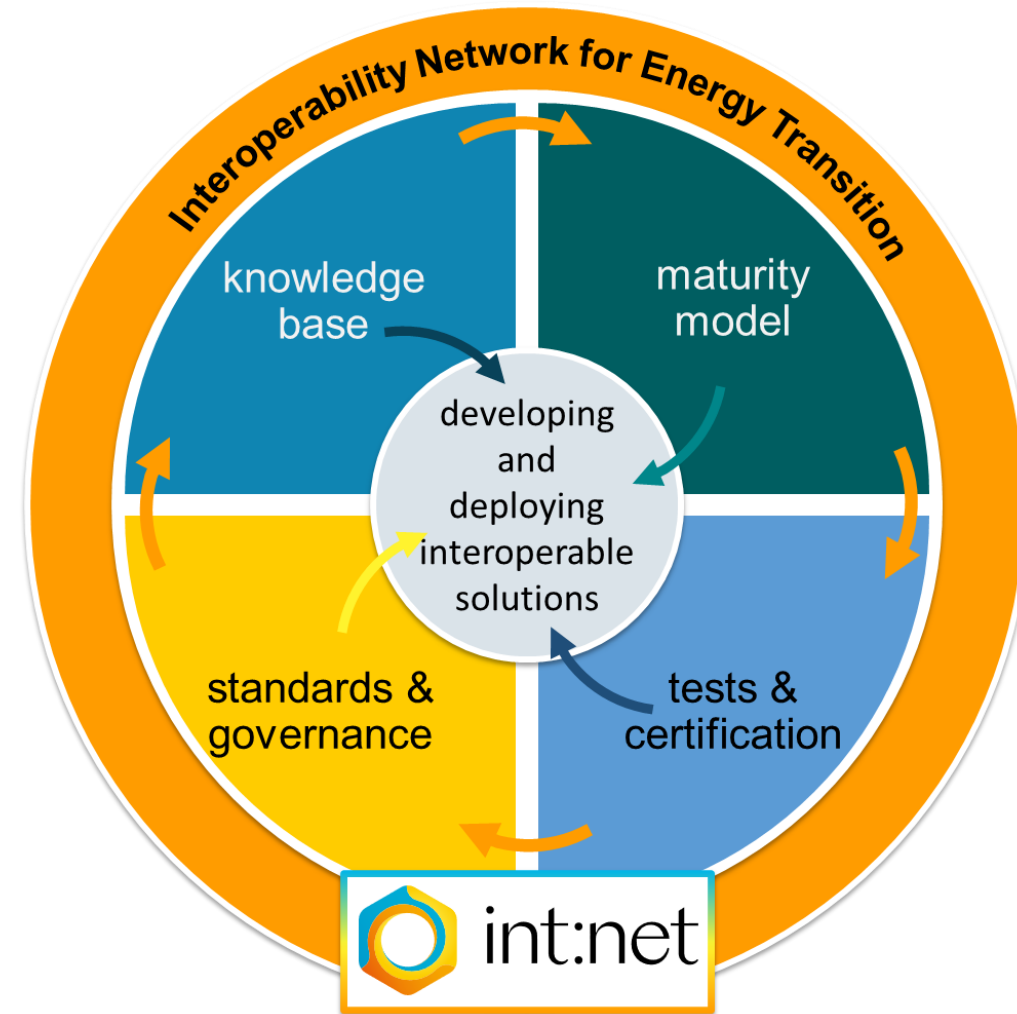
- 1 Associated Partner

- **Budget: 5 M€**



## Project objectives

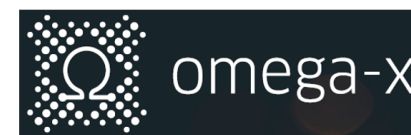
- Consolidating a common knowledge base for interoperability activities on energy services in Europe
- Developing a comprehensive and accepted Interoperability Maturity Model (IMM)
- Deploying a framework for interoperability testing in a network of interoperability testing facilities
- Fostering a community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

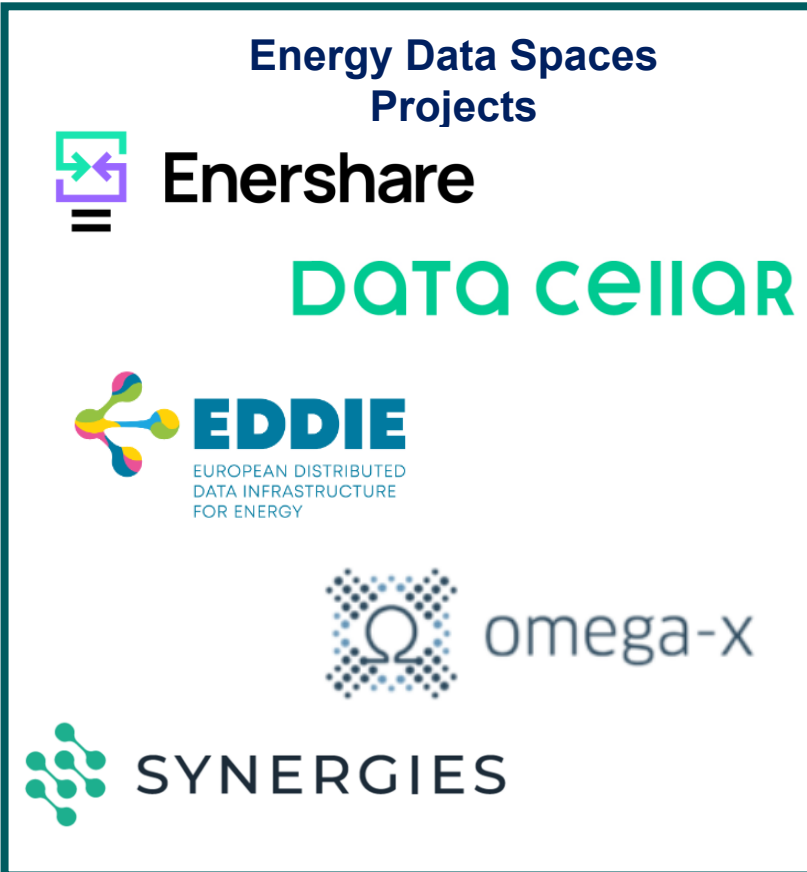


DATA CELLAR



# Energy data spaces projects cluster & ecosystem

**Energy Data Spaces Projects**



**Enershare**

**DATA CELLAR**

**EDDIE**  
EUROPEAN DISTRIBUTED DATA INFRASTRUCTURE FOR ENERGY

**omega-x**

**SYNERGIES**

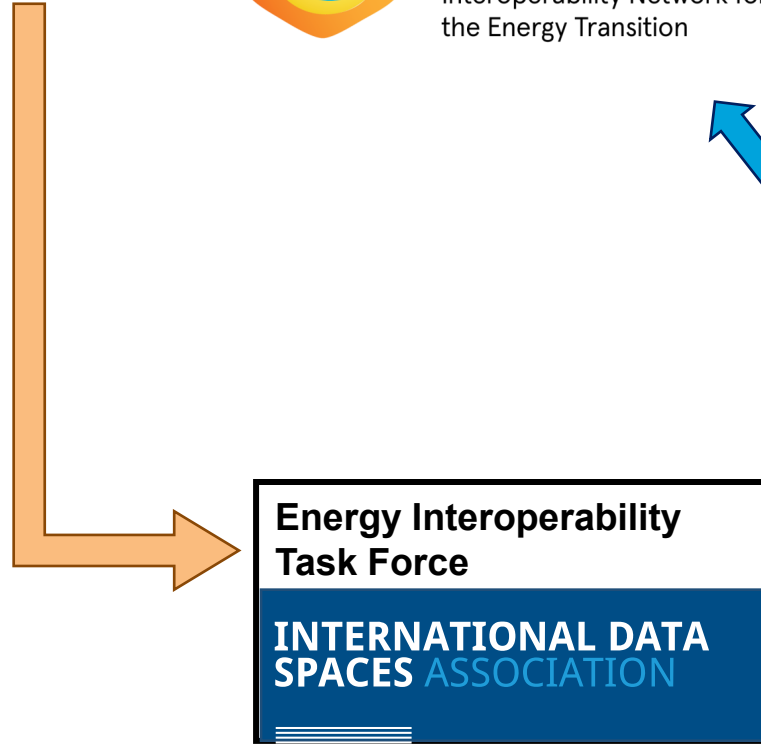


And other CSAs:



**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

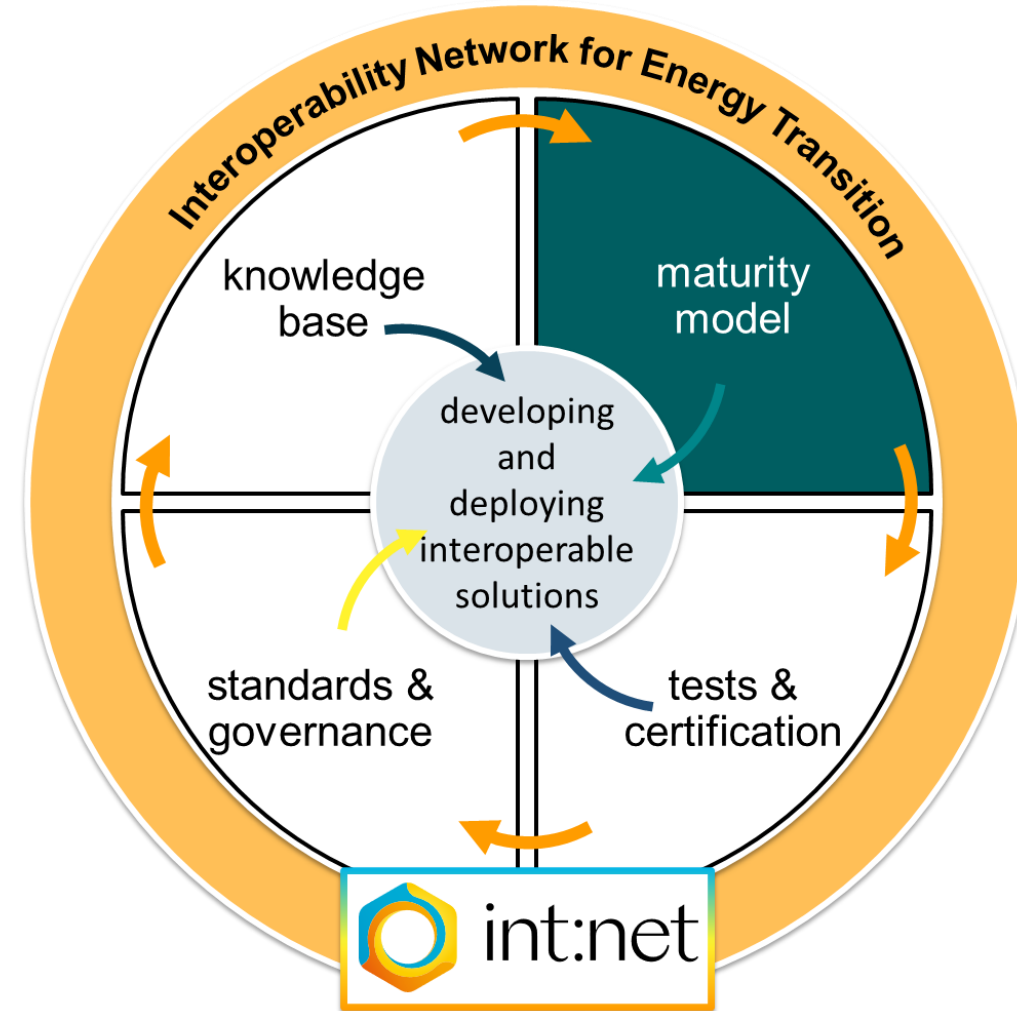


Enershare

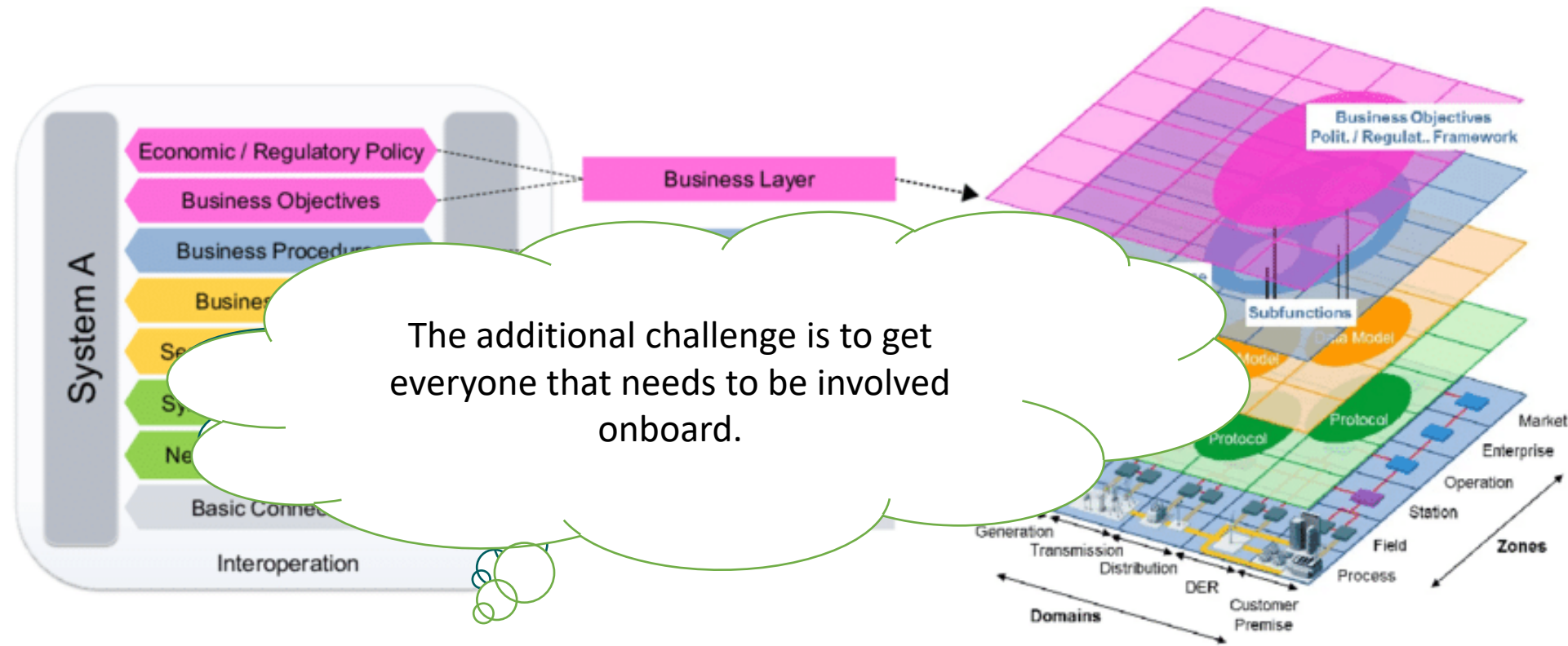
DATA CELLAR

## 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

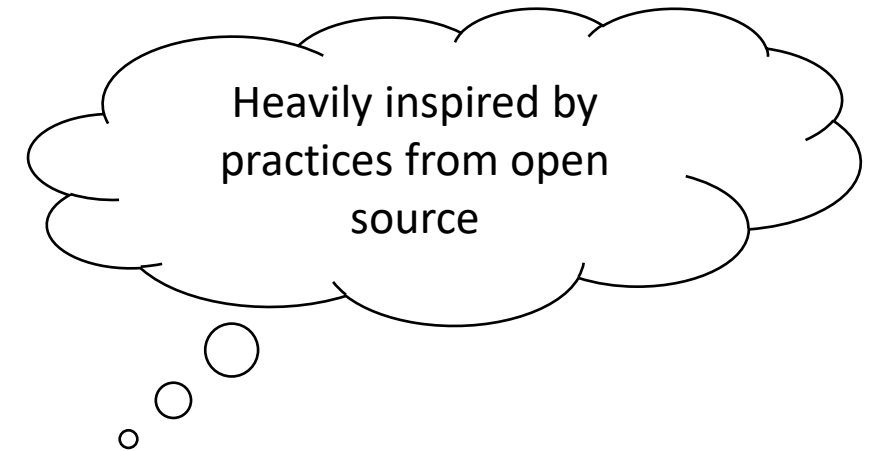
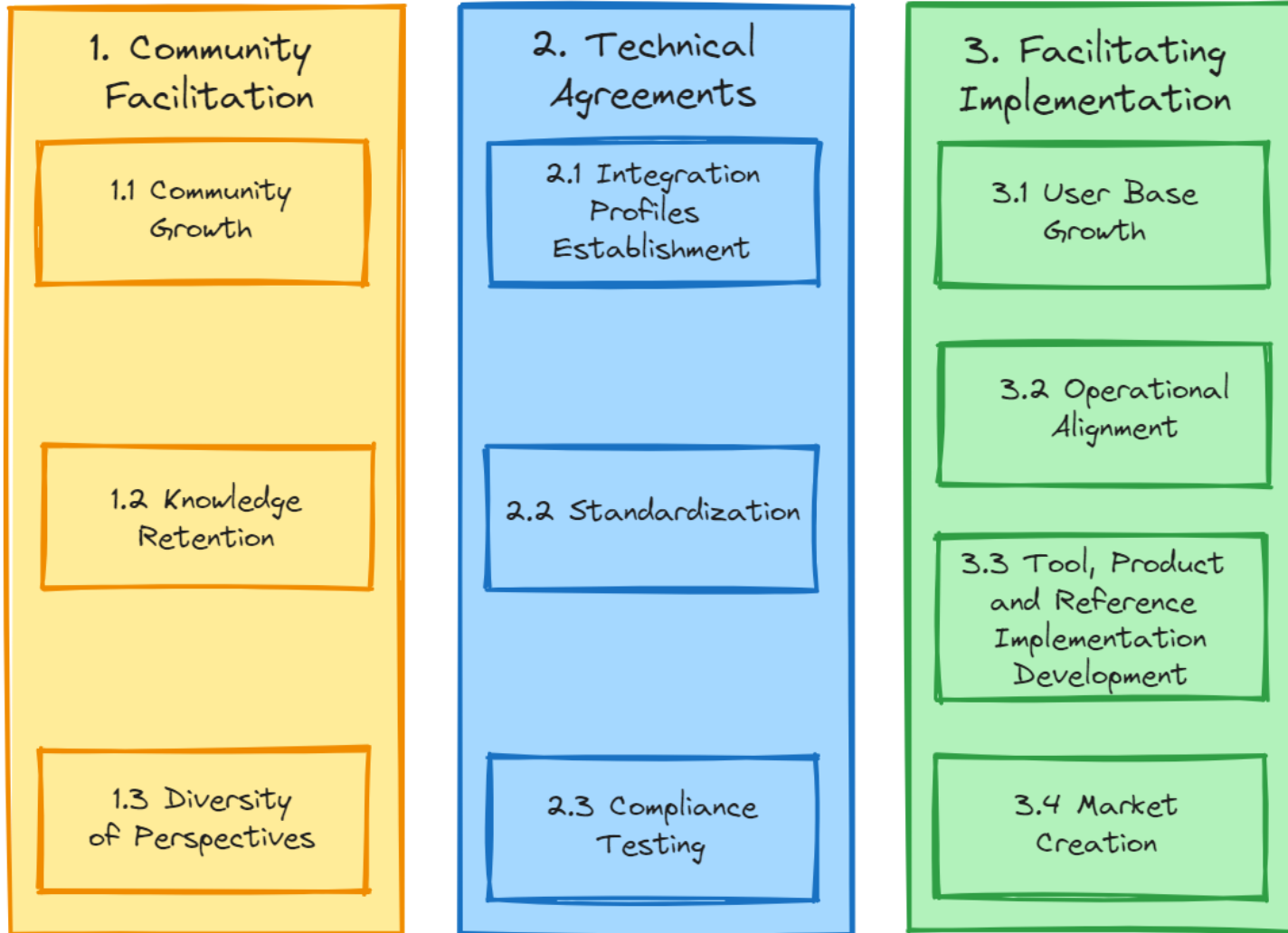


# Interoperability, from the ivory tower to the trenches



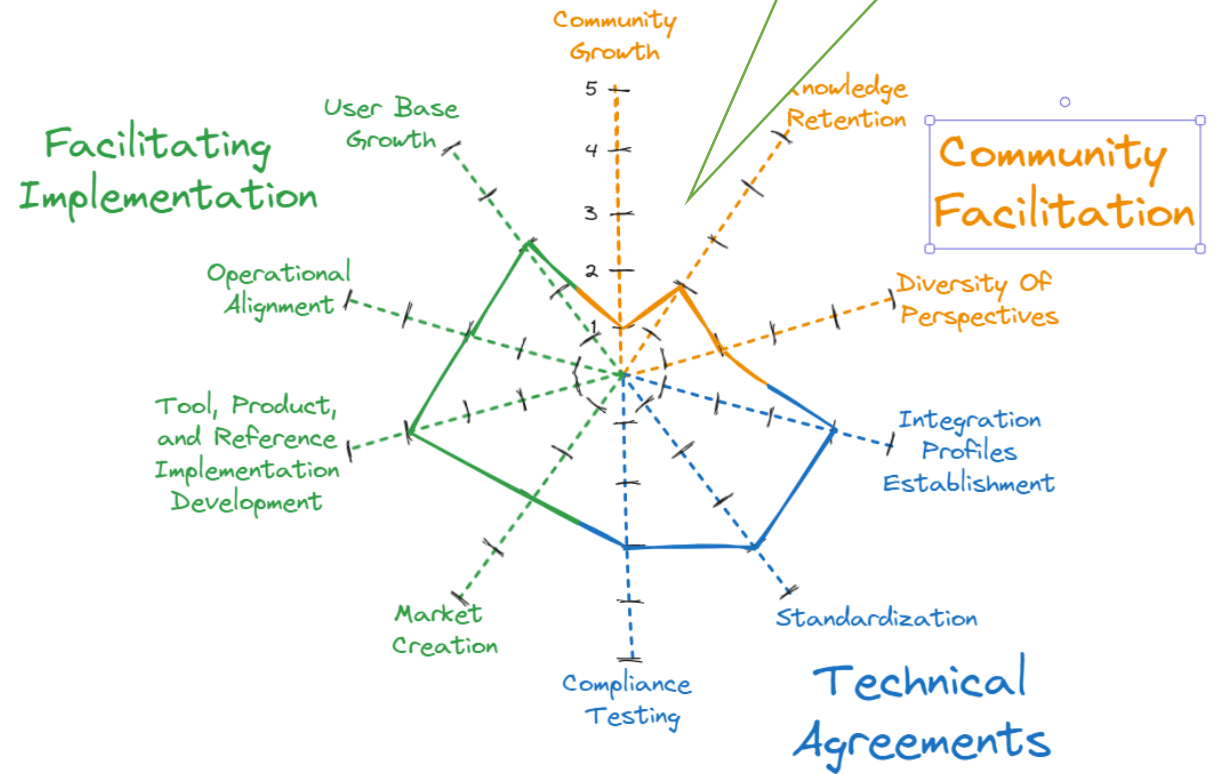
Hanna, Sebastian. (2020). Ein Prozess zur Unterstützung im System of Systems Engineering. 10.13140/RG.2.2.14515.66080.

# 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!  
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[mmcgranaghan@epri.com](mailto:mmcgranaghan@epri.com)  
[jvanguenuchten@epri.com](mailto:jvanguenuchten@epri.com) )



# int:net

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## Additional info



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



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



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Questions?

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