

## **Minutes of the**

### **SET-Plan Implementation Working Group 4 2<sup>nd</sup> Symposium on Interoperability + Data Spaces**

**6<sup>th</sup> June 2024, 09:00 – 16:30 CET, TCC Trieste Convention Center, Trieste**

#### **Session on strategic aspects of interoperability testing and data spaces**

*The symposium is designed for experts and policy makers to share experiences across sectoral boundaries. Learn about the importance of interoperability in general and for the current development of data spaces in different sectors in Europe.*

**Moderation:** Helena Lindquist, Lightswitch and Angela Berger, CETPartnership

#### **Welcome**

- Keynote to the vision of digitalisation, Alexander Markowetz
- Activities on the European Level, Stavros Stamatoukos, DG Energy
- Introduction of activities in the energy sector
  - CETPartnership: Angela Berger, Leading expert Integrated Regional Energy Systems
  - HE project int:net: Ludwig Karg, B.A.U.M. Consult

#### **Data Space development and interoperability in the different sectors**

- **Healthcare**  
Cross-border MyHealth@EU Services, Marcello Melgara, Università Cattolica del Sacro Cuore
- **Agriculture**  
Data-driven agrifood systems - interoperability through standards, Johannes Lehmann, DIN
- **Energy**
  - Project EDDIE: Georg Hartner, Technical Coordinator Project EDDIE
  - Project ENERSHARE: The Energy DataSpace as a techno-economic digital ecosystem to manage the energy transition, Massimo Bertoncini, Energy Group
  - Project OMEGA-X: Semantic interoperability for Energy Data Spaces, Bruno Traverson, EDF
- **Transportation**  
DeployEMDS, pushing the boundaries of mobility data exchange in Europe, Laure de Cock, IMEC
- **Public Services**  
X-Road® 8 "Spaceship": Transforming Existing Data Ecosystems into Data Spaces, Petteri Kivimäki, NIIS)

#### **Behind the scenes tour (IHE) Connectathon test floor**

- VIP Tour on IHE Connectathon test floor and Energy projectathon test floor

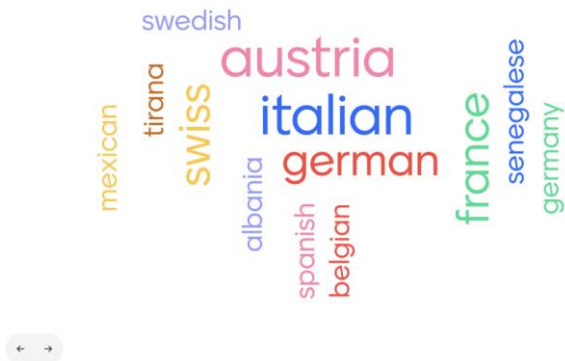
#### **Interactive Session on practical views to interoperability testing**

- Testing in the healthcare sector, Alexander Berler, IHE Calatyst
- Int:Net – Interoperability testing in energy, Mathias Uslar, Offis
- experience of interoperability testing of the different sectors
  - Gerald Franzl, University for Continuing Education Krems
  - Massimiliano Masi, Autostrade per L'Italia Spa
  - Petteri Kivimäki, Nordic Institute for Interoperability Solutions (NIIS)

## Check in for the participants

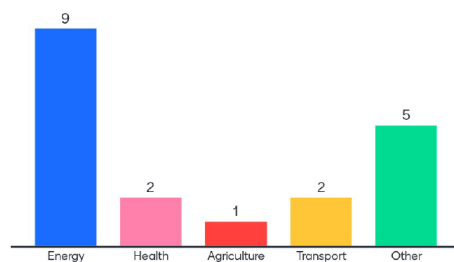
### What is your nationality?

20 responses



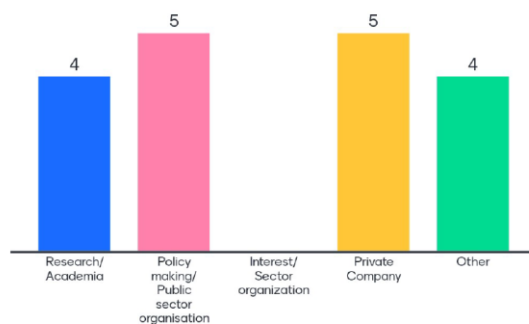
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### What sectors are represented here today?



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### What is your affiliation/perspective?



## Welcome

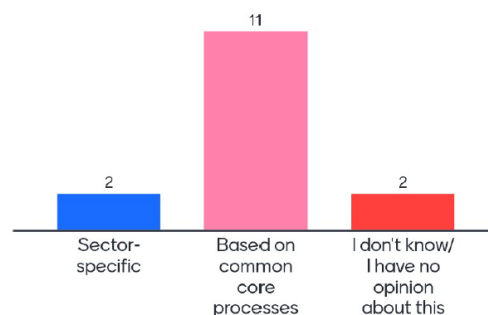
- Keynote to the vision of digitalisation, Alexander Markowetz
- Activities on the European Level, Stavros Stamatoukos, DG Energy
- Introduction of activities in the energy sector:  
CETPartnership, HE project int:net

Slides can be found in Presentations\_Session1.pdf

Menti questions to participants:

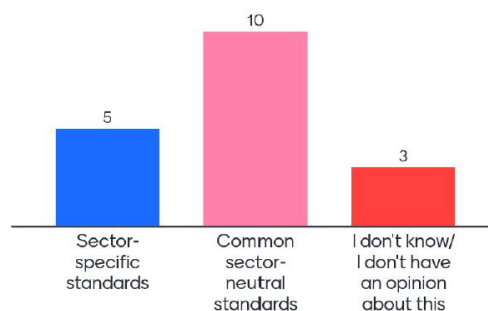
 Mentimeter

Requirements (e.g. governance, architecture, technical aspects) for an individual data space should be...



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Standards are a basic requirement for interoperable data communication. What should this be based on?



## Data Space development and interoperability in the different sectors – Part 1

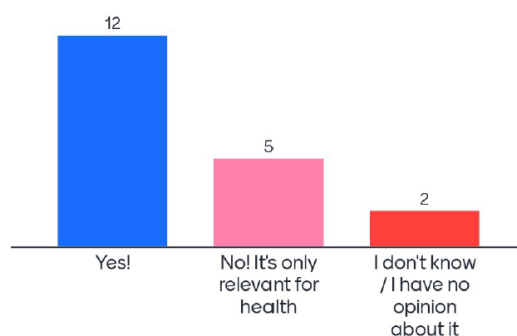
- **Healthcare:** Cross-border MyHealth@EU Services
- **Agriculture:** interoperability through standards

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Menti questions to participants:

 Mentimeter

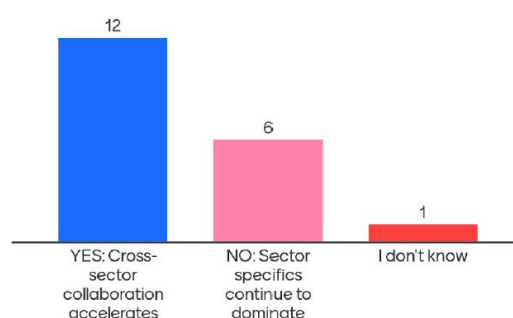
The Health Data Space is part of the EU Data Strategy. Do you think the EHDS can serve as a blueprint for other sectors?



 2  19

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Agriculture builds on the experience of IHE. Could this cross-sector collaboration also accelerate standardisation as a prerequisite for digitisation?



 2  19

## Data Space development and interoperability in the different sectors – Part 2

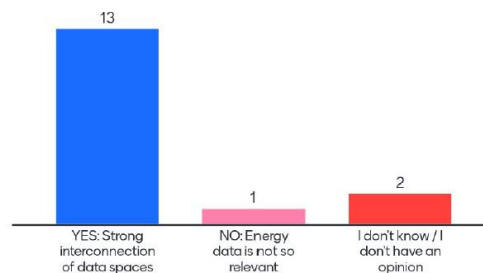
- **Energy:** Project EDDIE, Project ENERSHARE, Project OMEGA-X
- **Transportation:** Project DeployEMDS
- **Public Services:** X-Road® 8 "Spaceship"

Slides can be found in Presentations\_Session2.pdf

Menti question to participants:

 Mentimeter

Energy plays a critical role in every sector. Do you expect to see a stronger link between the data spaces of your sector and those of energy?



## Interactive Session on practical views to interoperability testing

- Testing in the healthcare sector, Alexander Berler, IHE Calatyst
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- experience of interoperability testing of the different sectors
  - Gerald Franzl, University for Continuing Education Krems
  - Massimiliano Masi, Autostrade per L'Italia Spa
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Slides can be found in Presentations\_Session2.pdf

Menti question to participants:

 Mentimeter

## What QUESTIONS do you have about INTEROPERABILITY TESTING?

How can you test whether an interface used integrates with the processes of the systems that the interface is supposed to connect?	Is Gazelle will be adopted for energy interoperability testing ?	Are you testing some aspects of the health data space during the connectathon (or planning to in the future)?	Are you aware of similar initiatives like the Connectathon in other domains?
Can the Gazelle system also be used to test interoperability between data spaces? We would need a profile to enable those tests, who would make these profiles?	Does Gazelle test the implementation of algorithms etc.?	Is Linux For Energy knows about Gazelle ? Same for ENTSO-E ? (which is organizing IEC cim CGMES profile in july 2024) ?	Ecosystem



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## What are your take-aways from the Symposium? Please share any thoughts, comments, wishes for next steps...

First time I heard about a 'Connectathon', it is a great initiative!	There are many use cases with data spaces and smart energy appliances and services that need interoperability that should be tested :-)	Collaboration is the key and interoperability is essential	Great session. Looking forward to have semantic interoperability tests (through int:net) associated to energy data spaces and may be using Gazelle...
Interoperability is here to stay	Interoperability		



## Check out for the participants

 Mentimeter

### Check out with one word!

8 responses

interoperability is here  
challenging regulation  
profiles applause  
inspiring testing  
interoperability





## Speakers of the Symposium

### Angela Berger, ERA Net Smart Energy Systems & CETPartnership



Angela Berger studied electrical engineering at the Vienna University of Technology. She has worked in various business areas at Siemens. Since 2008, Ms Berger has been involved in the development of smart grids and the Technology Platform Smart Grids Austria, where she was Managing Director until 2022. In addition, she was also Managing Director of the Association of the Railway Industry in Austria. Since 2023, she has been working for the CETPartnership as a leading expert for integrated regional energy systems and for digitalization issues relating to interoperability. She is the driver of the activities for the cross-sector knowledge transfer for interoperability processes in Austria and on European Level.

### Massimo Bertoncini, R&D Opportunities Manager, Energy Group



born in 1967, is currently R&D Program Manager – Digital Energy at Engineering Ingegneria Informatica (<http://www.eng.it>). He got his University Degree in Management Engineering in 1992 and gained his Ph.D. in Soft Artificial Intelligence for Production Engineering on 1995, at the University of Palermo. Since May 2001, he has been working in the R&D Laboratory of Engineering S.p.A, where he was involved as coordinator in many FP5, FP6, FP7 Smart Energy grids projects such as GAMES, GEYSER, INGRID, and H2020 projects such as, CATALYST, NRG-5, DEFENDER and eDREAM, H2020 BD4NRG, HE DEDALUS. At the moment he is the coordinator of the HE 2020 ENERSHARE (European Common Energy Data Space Framework Enabling Data Sharing-Driven Across- and Beyond- Energy Services). Main research competences concern soft artificial intelligence (Fuzzy Systems, Genetic algorithms, Neural Networks), advanced decentralized computing technologies (e.g. DLT/Blockchain/smart contracts, edge computing) and artificial intelligence (federated learning) tailored to support secure tamper-proof data sharing and optimised energy management at different levels (smart home, smart buildings, smart districts, smart grids). He has been serving the European Commission as Scientific Expert since 2007 in the Smart City & Sustainability Unit. He is member of the WG4 on Digital Energy of the European Platform on Smart Grids (ETIP SNET). Moreover he is member of Data Management WG of the EC BRIDGE cluster grouping all the Smart Grids European R&D projects.

### Laure De Cock, IMEC



Laure is a geographer with a rich background in smart technology, holding a PhD in indoor navigation from Ghent University and a postdoc in smart crowd management. Currently at imec, she leverages her expertise in the mobility domain, focusing on innovation projects that bridge the gap between cutting-edge technologies and their practical implementation in society. Laure's work is instrumental in enhancing innovations such as data spaces and AI modelling, ensuring they are not only technologically advanced but also accessible and beneficial to users. Her dedication to translating theoretical research into tangible societal benefits marks her as a key player in several mobility projects, such as deployEMDS and Citcom.ai.



### **Gerald Franzl, University for Continuing Education Krems**



Gerald Franzl received the academic degree Dr. techn. (eq. PhD) and Dipl.-Ing. (eq. M.Sc.) in Electrical Engineering from the Vienna University of Technology (TUW), Austria, in 2015 and 2002, respectively. From 2016 till 2019 he contributed to the national funded project IES Austria, on establishing a cooperation scheme that fosters vendor agnostic interoperable solutions for smart energy systems and services based on jointly specified, use-case specific integration profiles. From February 2020 to March 2023 he was employed at TU Wien and Danube University Krems, contributing to the R&D projects SONDER and cFlex respectively, on establishing and operating regional and local energy communities. Since April 2023 he is full time engaged at University for Continuing Education Krems (formerly Danube University Krems) contributing to the national R&D projects eAlloc, EnergyDec, and DiPS4EV@work, leading latter. His research interests concentrate in the area of smart systems, energy management, traffic engineering, quality of service, performance evaluation via queueing models and simulation studies.

### **Georg Hartner, Technical Coordinator Project EDDIE - European Distributed Data Infrastructure for Energy | FH Upper Austria | Austrian Energy Association | Entarc.eu**



Georg is a key contributor to the European Data Interoperability Implementing Acts following Article 24 of Directive (EU) 2019/944. He is also vice-chair of EU DSO Entity's EG Data Interoperability and member of the Development Team for the SO Proposal for a new Network Code on Demand Response nominated by EG Distributed Flexibility. He contributes to continuously improving energy data exchange in Austria in co-operation with EDA GmbH. Accompanying these work streams, Georg is the initiator of Horizon Europe – funded “Project EDDIE – European Distributed Data Infrastructure for Energy”, which will make available European retail energy data easily available through a de-centralised uniform interface. Based on this foundation, Georg contributed to the design of INSIEME – an initiative to establish a holistic and standardized data exchange infrastructure for individual consumer activation and energy communities, to free their digital platforms from their national nutshell and let them grow and scale at a European level. Apart from these activities, Georg is leading Task Force 1 for Implementation of European Reference Models within the Joint Working Group Data Interoperability between EU DSO Entity and ENTSO-E.

### **Ludwig Karg, B.A.U.M. Consult**



Ludwig Karg graduated with a master (Dipl. Inf. univ.) in Computer Sciences at the Technical University of Munich (1981). He gained practical experience in software engineering and held German and international positions in Intel Corp. for multimedia and network products. He is co-owner and member of the board of directors of B.A.U.M. Consult GmbH München/Berlin. He has been responsible for sustainability processes in enterprises, municipalities and regions. He led and leads German and international RDI projects on sustainability and energy transition. He is heading the Support Team and Knowledge Community of JPP ERA-Net SES and the Clean Energy Transition Partnership.

### **Petteri Kivimäki, Nordic Institute for Interoperability Solutions (NIIS)**



Petteri Kivimäki is one of Europe's leading technical experts in digital government and interoperability solutions. His career spans from software development to crafting complex cloud and technology architectures for both companies and public administrations. Petteri has worked as the technical lead responsible for implementing the X-Road data exchange layer as the national interoperability solution in Finland. He also coordinated the joint open-source software development of X-Road between Finland and Estonia. Before joining the Nordic Institute for Interoperability Solutions (NIIS) as its Chief Technology Officer in 2018, Petteri worked as a technology architect in a leading global consultancy.

### **Johannes Lehmann, DIN**



Johannes Lehmann verantwortet beim Deutschen Institut für Normung (DIN) den Bereich Smart Farming. Sein Ziel ist es, die Wertschöpfung in Landwirtschaft und Ernährung ganzheitlicher, nachhaltiger und effizienter zu gestalten. Dabei setzt er auf zwei Dinge: einerseits auf neueste Informationstechnologien und die Standardisierung von Daten, Prozessen, Schnittstellen und Infrastruktur. Damit Lösungen miteinander kompatibel sind und der Gesellschaft Nutzen bringen. Zweitens geht es ihm darum, alle Beteiligten einzubeziehen. Partnerschaften, Kooperationen und Konsensbildung sind für ihn die wichtigsten Eckpfeiler zur Verwirklichung seiner Vision.

Eckdaten: Aufgewachsen auf einem Landwirtschaftlichen Betrieb südlich von Berlin, Studium Agrarwissenschaften (B.Sc.) – Humboldtuniversität zu Berlin, Studium Agrarökonomie (M.Sc.) - Humboldtuniversität zu Berlin, bei unterschiedlichen Landmaschinenherstellern tätig gewesen, zuletzt bei AGCO, Seit Juni 2020 bei DIN – Deutsches Institut für Normung

### **Helena Lindquist, Director LightSwitch**



Helena Lindquist is the Director and Founder of LightSwitch, a Swedish consultancy dedicated to catalyzing and facilitating international knowledge sharing and co-creation in the fields of renewable energy, energy efficiency, and strategic sustainability. She specializes in designing, leading, and facilitating international partnerships to accelerate the energy transition and has 15 years of experience in multilateral collaboration projects involving energy stakeholders from the public sector, research community, and industry. Since 2016, Helena has been working as the National Expert for Sweden in the International Smart Grid Action Network (ISGAN), and she currently leads the ISGAN Lighthouse Project on Long-term Planning and Implementation of Smart Distribution Grids. She is also involved in the European Collaboration Network for Interoperability Testing. Helena has a background in international relations and European affairs and holds a Master's Degree in Contemporary European Studies from the University of Bath, UK.

### **Alexander Markowetz, Chief Visionary Digitalisation, Germany**



Alexander Markowetz is a renowned computer scientist and entrepreneur, who deals intensively with the topics of interoperability and standardised interfaces. He is also the co-founder of a start-up specialising in smartphone sensing technologies. Markowetz has worked extensively as a consultant on interoperability and standardisation and has shown how these concepts can promote ordoliberal economic structures in digital spaces. In particular he has worked with various associations and developed the interoperability position paper for the agricultural engineering companies in the VDMA (German Engineering Federation). His

academic career includes positions as a junior professor at the University of Bonn and as a visiting professor at the Philipps University of Marburg. In his lectures and publications, he frequently deals with the economic policy implications of interoperability and the importance of standardised interfaces for the creation of efficient and fair economic processes. In addition to his research and teaching, Markowetz is a sought-after keynote speaker and author. His work has led him to numerous projects that deal with digital global history and the optimisation of business processes through technical coordination. He remains a thought leader in the field of the digital economy and interoperability.

### **Massimiliano Masi, Head of Cybersecurity Architecture&Engineering, Autostrade per L'Italia Spa**



Massimiliano Masi received his M.Sc. in Computer Science, and his Ph.D. from the University of Florence in the field of Formal Methods. He is working in Cybersecurity for Critical Infrastructures since 2007. Dr. Masi participated in large EU research projects involving 30+ organisations (public & private), and in the development of the Cybersecurity specifications for the EU Cross-Border delivery of Patient Summaries and ePrescriptions, the Austrian ELGA, and the Electronic Health Record program in South Africa, to name a few. He has been authoring international eHealth standards for IHE.net (by working on the XUA, ATNA, IUA, SeR profiles). He has been working as expert for the ENISA, for the EU commission under the CEF program, and for the Austrian Ministry of Health. Massimiliano's recent interests are in the Cybersecurity aspects of Blockchain, Enterprise Architectures, Smart Grids, and the technology supporting the establishment of Cooperative Intelligent Transport Systems (C-ITS). Dr. Masi is a Java developer.

### **Marcello Melgara, Università Cattolica del Sacro Cuore**



Marcello has 31 year experience on set up, definition, coordination and management of European and National research projects sizing between 5 and 37 million € on cross border eHealth interoperability, semantic interoperability, mHealth, hospital and territorial health care processes & services, telecom services, telecom components and equipment management. He also has 20 year experience of Business Process Improvement, successfully applied to clinical and managerial hospital processes, health care risk management, definition & development of innovative health care services, procurement process optimisation in health care and telco, Quality (ISO 9000) and Environmental Impact (ISO 14000). He also has 20 year experience on human resource management, as Delivery Unit Manager, with the direct responsibility on training and management of the persons belonging to the Research or Delivery Unit (about 20 persons) and functional responsibility of project team coordination.

### **Stavros Stamatoukos, DG Energy**



Stavros has studied electrical engineering at the National Technical University of Athens and received his master in energy management from the University of Amsterdam.

He currently works at the Digitalisation, Competitiveness, Research and Innovation Unit of DG Energy at the European Commission. He is leading the work of 2 areas of the digitalisation of energy action plan: the EU data sharing framework and the energy consumption of the ICT sector. He is also responsible for the application of artificial intelligence in the energy sector.

Prior to joining DG Energy, Stavros worked for 6 years in the EU Agencies (EASME and CINEA) in the implementation of research and innovation agenda (H2020 and Horizon Europe) in the areas of smart buildings and smart grids.

Prior to joining the Commission, Stavros worked for 15 years in the private sector and as a freelancer energy engineer in the design and deployment of energy efficiency and digital projects.

### **Bruno Traverson, EDF**



Bruno Traverson is a research engineer at EDF R&D (French utility).

His current research activities take place in the domains of smart buildings and electromobility.

He contributes to the OMEGA-X project on semantic interoperability.

### **Mathias Uslar, OFFIS**



Mathias Uslar has studied computer science with a minor in legal informatics at the University of Oldenburg, Germany from 1999 till 2004. In October 2004, he started working as a scientific assistant at OFFIS - Institute for Information Systems in Oldenburg, later on working there as project leader and now as Group manager in the Energy branch of the institute. He is leading OFFIS' national and international work with the scope of standardization and interoperability. He is member of German GI, IEEE, ACM and IEC German mirror committee member DKE K 952, 952.0.10, 952.0.17 and international member of IEC TC 57 WG 14 and 16.