



Integrating
the Healthcare
Enterprise



Interoperability in Europe

IHE-Europe Perspective

HL7 Deutschland und IHE Deutschland Jahrestagung

Dr. Andreas Klingler, Siemens Healthineers
Vendor Co-Chair

Mission

Guide clinicians, health authorities, industry, and users
in order to reach healthcare interoperability in Europe

Strategic Goals

Promote the knowledge and use of the IHE methodology through which IHE
transforms international standards into testable specifications for which both
tooling and related services are available from the IHE ecosystem.

Help national and European stakeholders and policymakers in adopting and
promoting the use of the IHE methodology to foster interoperability.

National IHE Deployment Committees

- Austria
- Belgium
- Czech Republic
- Finland
- France
- Germany
- Italy
- Luxembourg
- Netherlands
- Switzerland
- United Kingdom

User Associations

- Entscheiderfabrik (GUIG)
- European Association of Hospital Managers (EAHM)
- European Association of Hospital Pharmacists (EAHP)
- GS1 Netherlands
- Nictiz
- Société Française de Radiologie (SFR)

13 Vendor Members

Benefactors

- COCIR
- European Society of Radiology (ESR)

Strong IHE Proof Points in Europe

National / Regional Health Information Exchanges build foundation for Digital Transformation in Health Care

HIE



Austria: ELGA



Denmark: MedCom



Finland: Kanta



France: Segur Numérique

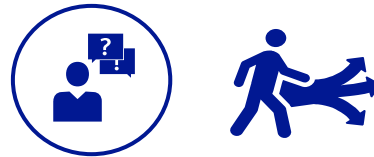


Norway: Helsenorge



Switzerland: EPD

Different HIE generations
Different adoption levels



National legacy standards
Mature standards (e.g., CDA)
New standards (e.g., FHIR)

Clear guidance on the best practices and optimal adoption of standards will contribute in protecting EU-wide investments!



Selected National/Regional IHE - Adopters



MyHealth@EU

Electronic cross-border health services in the EU



HealthData@EU

Cross-border use of health data for secondary purposes

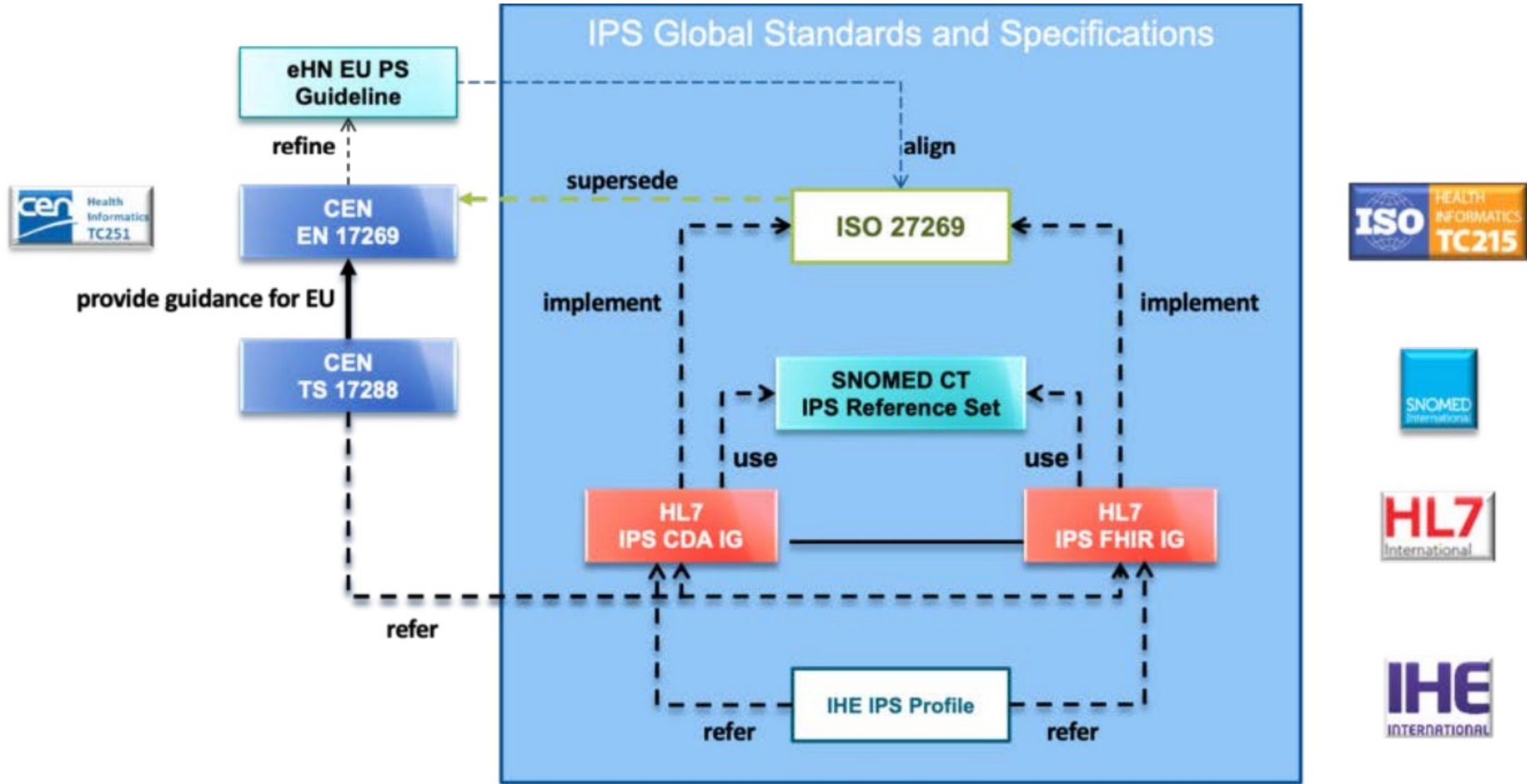


EUR 5.5 billion over 10 years for better access and exchange of health data in healthcare

EUR 5.4 billion over 10 years for better use of health data in research, innovation and policy making



IHE & (I)PS



IHE is and remains to be a key enabler of digital health interoperability in Europe

by

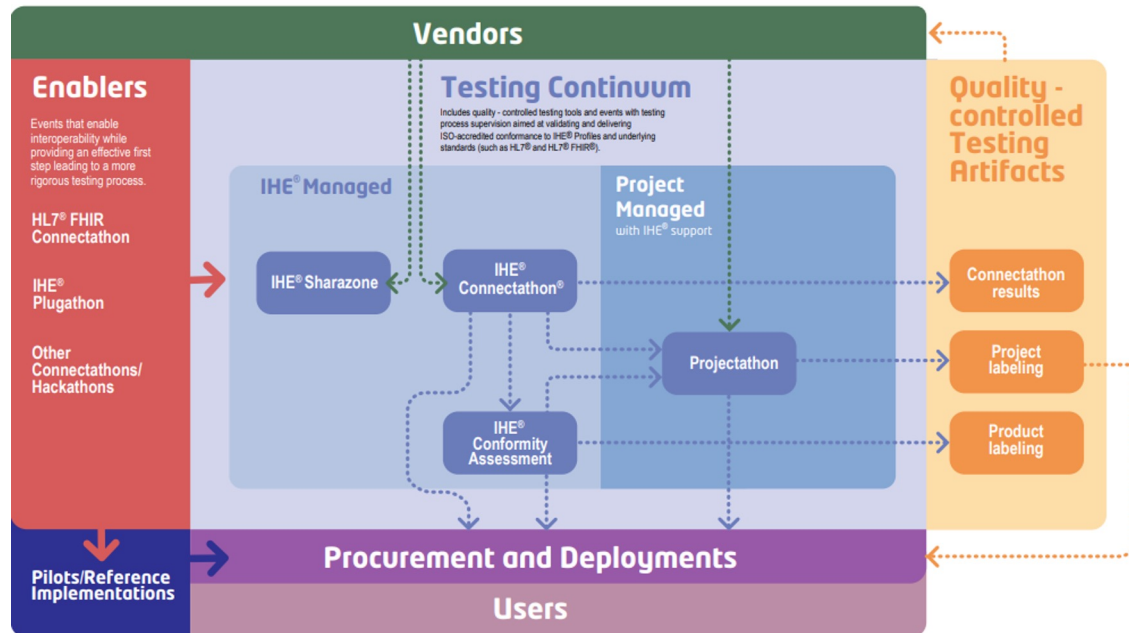
providing the foundation for many products and regional / EU level projects

supplying projects with knowledge

facilitating implementation through testing

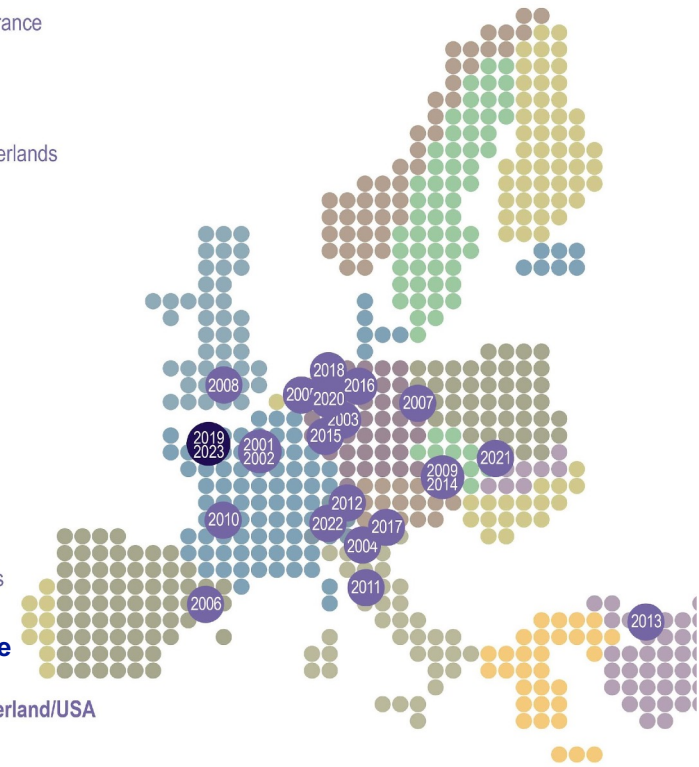
based on internationally proven concepts

Testing Ecosystem



Connectathons in Europe

- 2001: Charenton-le-pont Paris, France
- 2002: Villejuif in Paris, France
- 2003: Aachen, Germany
- 2004: Padova, Italy
- 2005: Noordwijkerhout, The Netherlands
- 2006: Barcelona, Spain
- 2007: Berlin, Germany
- 2008: Oxford, UK
- 2009: Vienna, Austria
- 2010: Bordeaux, France
- 2011: Pisa, Italy
- 2012: Bern, Switzerland
- 2013: Istanbul, Turkey
- 2014: Vienna, Austria
- 2015: Luxembourg
- 2016: Bochum, Germany
- 2017: Venice, Italy
- 2018: The Hague, The Netherlands
- 2019: Rennes, France
- 2020: Brussels, Belgium **Online**
- 2021: **Online**
- 2022: Joint Connectathon, Switzerland/USA
- 2023: Rennes, France



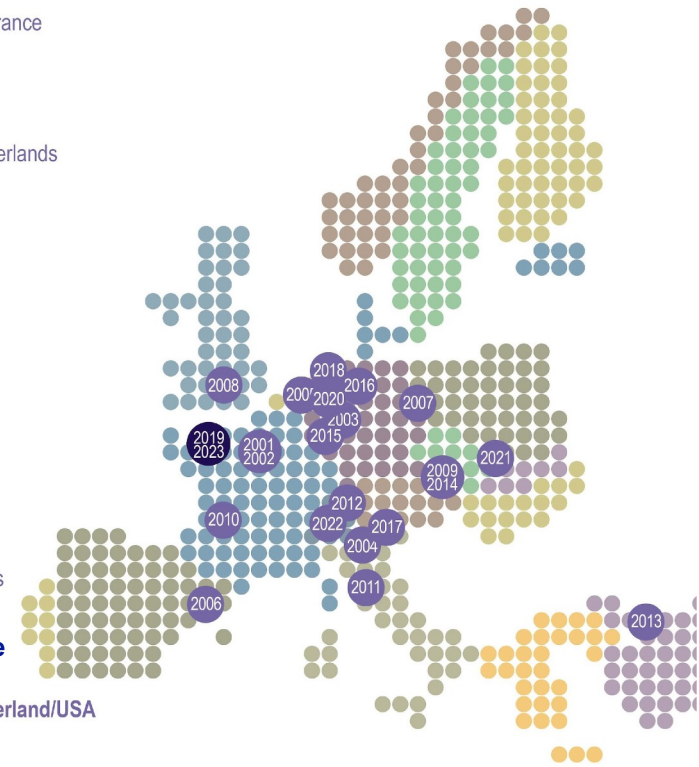
Connectathon 2023, Rennes

- 52 organizations from 18 countries
- 66 systems under test
- 208 participants
- 47 monitors from 13 countries
- 85 tested IHE Profiles
- 1876 tests executed



Connectathons in Europe

- 2001: Charenton-le-pont Paris, France
- 2002: Villejuif in Paris, France
- 2003: Aachen, Germany
- 2004: Padova, Italy
- 2005: Noordwijkerhout, The Netherlands
- 2006: Barcelona, Spain
- 2007: Berlin, Germany
- 2008: Oxford, UK
- 2009: Vienna, Austria
- 2010: Bordeaux, France
- 2011: Pisa, Italy
- 2012: Bern, Switzerland
- 2013: Istanbul, Turkey
- 2014: Vienna, Austria
- 2015: Luxembourg
- 2016: Bochum, Germany
- 2017: Venice, Italy
- 2018: The Hague, The Netherlands
- 2019: Rennes, France
- 2020: Brussels, Belgium **Online**
- 2021: **Online**
- 2022: Joint Connectathon, Switzerland/USA
- 2023: Rennes, France



Connectathon 2023, Rennes

- 52 organizations from 18 countries
- 66 systems under test
- 208 participants
- 41 monitors from 13 countries
- 57 tested IHE Profiles
- 1876 tests executed



Top 10 Tested IHE Profiles*

- XDS.b – Cross-Enterprise Document Sharing
- ATNA – Audit Trail and Node Authentication
- CT – Consistent Time
- SWF.b – Scheduled Workflow
- MHD – Mobile access to Health Documents
- RMD – Remove Metadata and Documents
- XDS-I.b – Cross-Enterprise Document Sharing for imaging
- WIA – Web-based Image Access
- PAM – Patient Administration Management
- XUA – Cross-Enterprise User Authentication

* In the number of tested actors



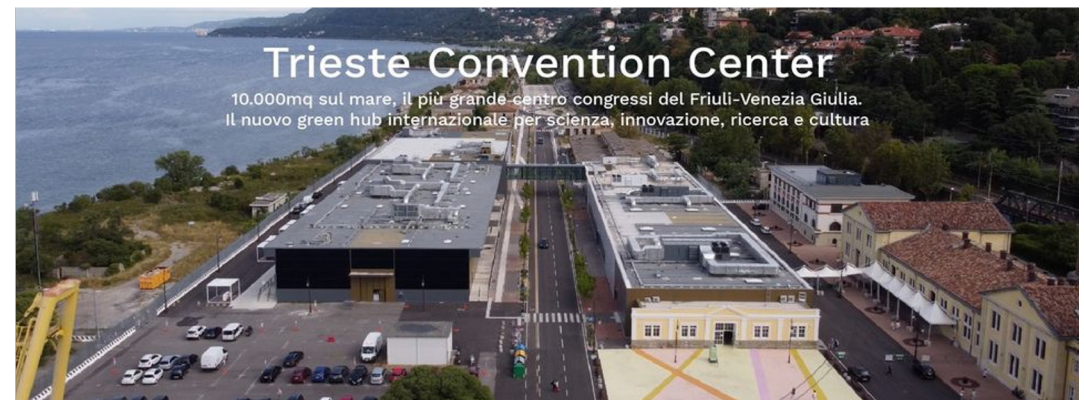
- Driving the development of Gazelle
- Projectathons
- Outsourcing of Connectathon operations in Europe to Catalyst
- Consulting



- Driving the development of Gazelle
- Projectathons
- Outsourcing of Connectathon operations in Europe to Catalyst
- Consulting

Connectathon 2024

- Together with IHE Italy in Trieste
- June 3-7 (the week after HIMSS Europe in Rome)
- Parallel „Experience Days“ conference



IHE SHARAZONE

- 24/7 platform to access vendor's DICOM objects for testing and report back test results to the vendor
- Similar legal trust framework as the Connectathon

Since November 2021

- 13 vendors as members
- 34 creator systems registered
- 21 consumer systems registered
- over 100 test reports received for creator systems
- regular SHARAZONE community meetings

IHE Experience Days

- 2 packed days
- more than 30 speakers
- more than 80 participants



Certified Professional Programme

- Professional certification, supporting individuals in demonstrating their IHE knowledge
- 26 passed the IHE CPP exam during the Connecathon in Rennes (22 last year)

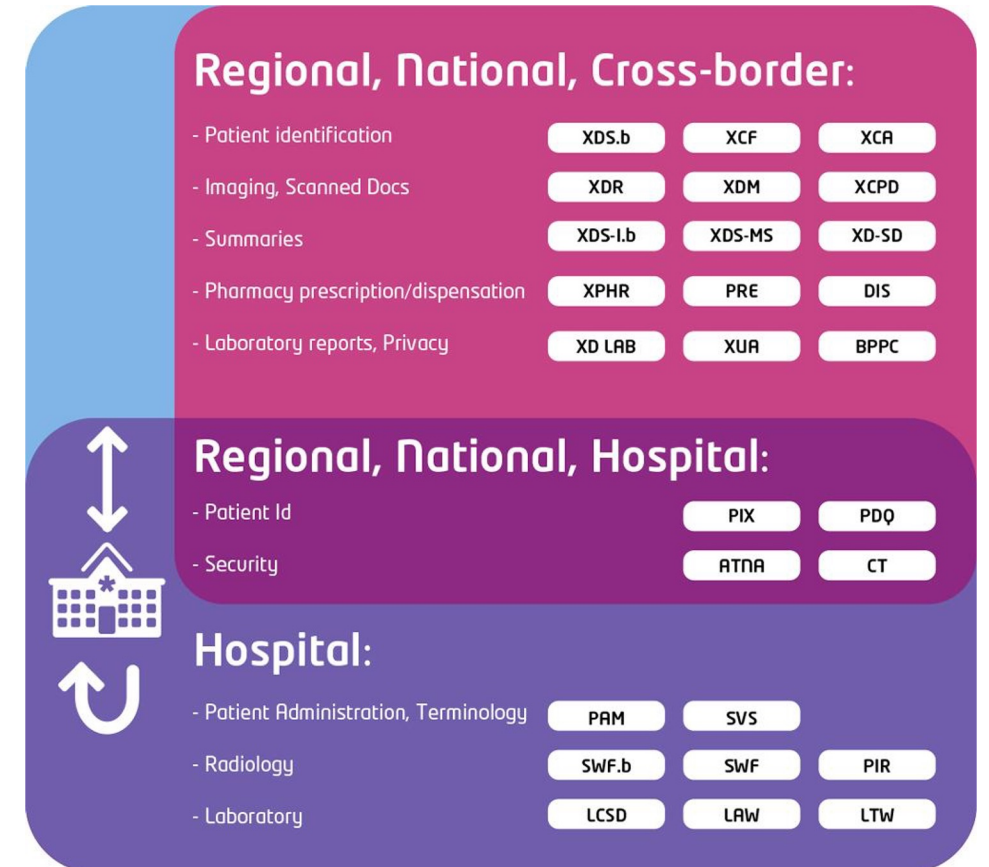
AI Interest Group for Imaging

- Educate AI start-ups on IHE
- Identify and define workflows for the use of AI in imaging
- Request additional Profile development or extensions as necessary

Multi-country Working Group on Image Information Sharing

- Exchange experiences among active national deployments and seek increased consistency
- Request additional Profile development or extensions as necessary

- The European Affairs Committee of IHE-Europe liaises with the Commission and its Directorates to bring IHE's expertise on standards-based interoperability specifications, testing strategies and testing methods as well as evaluation processes to the table.



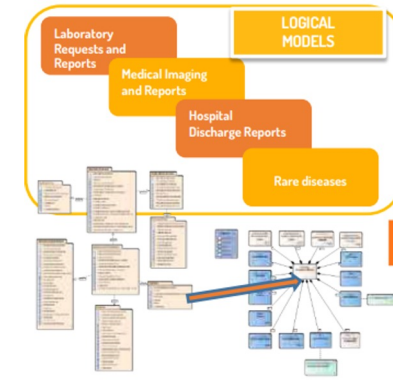
IHE Profiles recommended by the European Commission in 2015

IHE-Europe engagement:

- Support the extension of the eHDSI specifications on the Electronic Health Record exchange Format **EEHRxF** beyond PS; eP/eD to medical images and reports, laboratory results (other extensions: discharge letters and rare diseases)
- Support specification with the **Art Decor** tool and test tools

Accelerating IHE aspects:

- Bring IHE Methodology for the testing of the EEHRxF specifications
- Use of IHE Profiles for transport services:
 - Imaging report: XDS, XDS-I, XDR, XDR-I, XDM, XCA, XCA-I, MHD
 - Laboratory result report: XCA, XDR
 - Patient Summary: MHD, XDS/b, MHD(S), XCA
 - Hospital discharge report: XDS, XCA, MHD(S)
- XDS Metadata
- Integration of CDA testing tools into **Gazelle** platform for all project specifications



**IHE is recognized
as Key Innovator
by the EC for its
contribution to X-
eHealth**

<https://innovation-radar.ec.europa.eu/innovator/998727133>

IHE-Europe engagement:

- Support the implementation of IDMP (Identification of Medicinal Products) in the EHDS by
 - contributing to the test strategy
 - coordinating the test activities between the work packages
 - providing test tools

Accelerating IHE aspects:

- IHE is bringing methodology and rigor to be applied to the UNICOM Test Lab Use Cases (Patients Facing Apps, NCA to NCPeH, Submission of variation, Update to MPD (Medicinal Product Dictionary), Submission in eDispensation)
- Integration of CDA testing tools into **Gazelle** platform with IDMP constraints for eP, eD and Patient Summary

IHE-Europe engagement:

- Creating a network to co-create the EEHRxF:
 - Defining a member state readiness model
 - Education of industry

Accelerating IHE aspects:

- IHE methodology brought to build a Readiness Model to assess member states readiness to the adoption of the EEHRxF
- IHE is bringing the Industry ecosystem to the project XpanDH by:
 - Making the industry world aware of the XpanDH project (Webinars. Presentation during the Connectathon 2023)
 - Bringing together the vendor community that will integrate the EEHRxF in their future solutions

Planned IHE involvement:

- Contribute to the test concept
- Project Kick Off - January 2024 during the Athens Digital Health Week

Accelerating IHE aspects:

- Integration of CDA testing tools into Gazelle platform
- Expertise in organizing projectathons
- Expertise in setting up a certification program

How can IHE improve?

1 Education and Best Practice Sharing

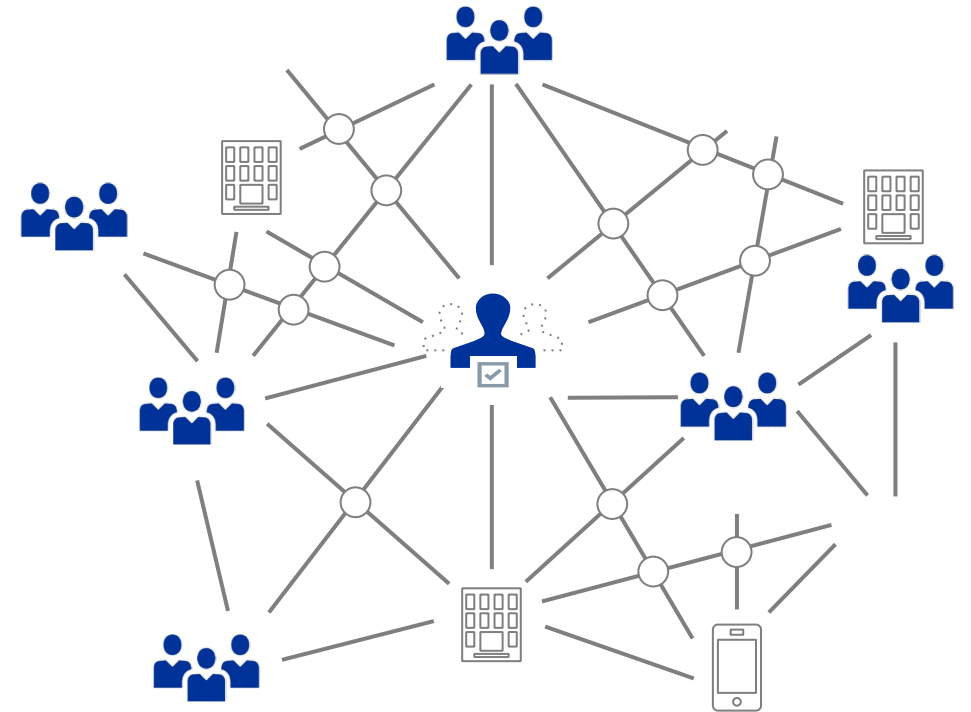
- Education Programs
- Certification Programs
- Best Practice Sharing

2 Foster Profile Development

- Assignment of Profiles to real-world use cases
- Availability of (reference) implementations for new Profiles
- Retirement of Profiles with no uptake/outdated

3 IHE as accelerator, also for FHIR

- Present value of IHE in supporting FHIR based workflows
- Present value of IHE in extending workflows beyond FHIR
- Improve handling of FHIR release in Profiles





Thank you for your attention