

XiA in Motion: The XiA Project

Henrique Martins,
MD, PhD, MLaw, FIAHSI

8th ZIMAM DIGITAL HEALTH FORUM

ADVANCING TALENT-CENTRIC
DIGITAL HEALTH INNOVATIONS



4-8 NOV
2025



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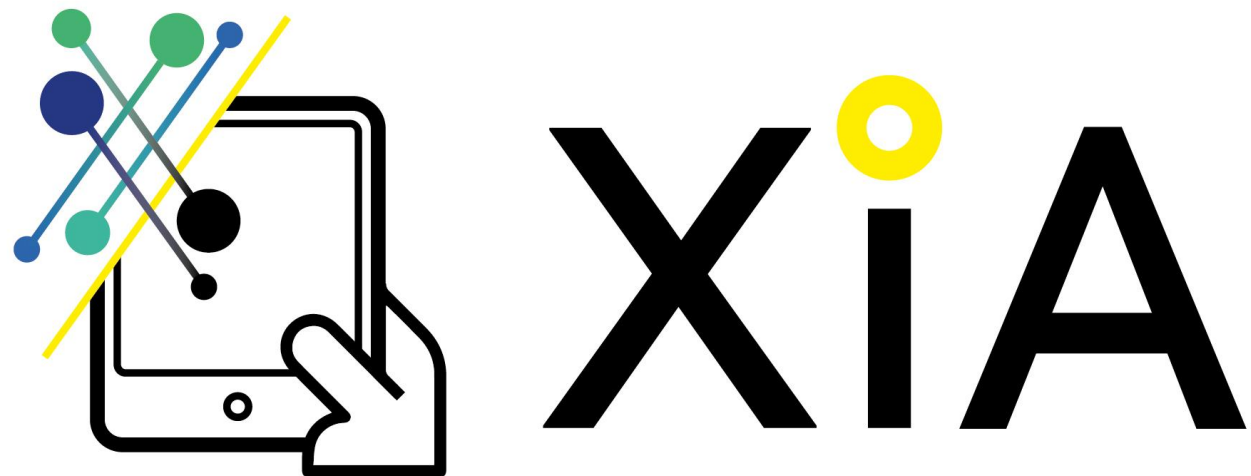
XiA in Motion: Connecting Competency, Collaboration, and Workforce Skills



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Professor with 20+ years of experience in teaching and researching in Digital Health, Leadership and Management education for Medical Students and Health Professionals. He is past president of Portugal's Digital Health Agency (7 years), and former Member States co-chair of the EU eHealth Network, the highest policy body on eHealth in the Union. Currently he works as an Academic, on individual consulting projects in Digital Health. He is the Director of BRU-DHI at Iscte University and coordinator of the recently-ended XpanDH and recently-started XiA and i2X projects, among other initiatives such as the General-Secretariat for iH10 initiative (collaborating under Samsung Medical Center)



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XiA in Motion: Connecting Competency, Collaboration, and Workforce Skills



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<https://brudhi.iscte-iul.pt/>

Our hub of expertise dedicated to advancing digital health innovation and research.

Our interdisciplinary team comprises global leaders with proven track records in **policy-making, project coordination, and academic research** across Europe and beyond, with individual backgrounds stemming from Portugal, Brazil, France, Germany, Italy, Pakistan, USA, and Ethiopia.

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Health International



Coordinating  **XiA**
Xpanding innovative Alliance

Partner of  **Share**  **CNDLE** 
EHR Xchange Format

XiA project: from EHDS to high-quality courses about Key Advanced Interoperability Standards

Coordinator: Prof. Henrique Martins (ISCTE)

Project Manager: Simo Lewerenz (ISCTE)

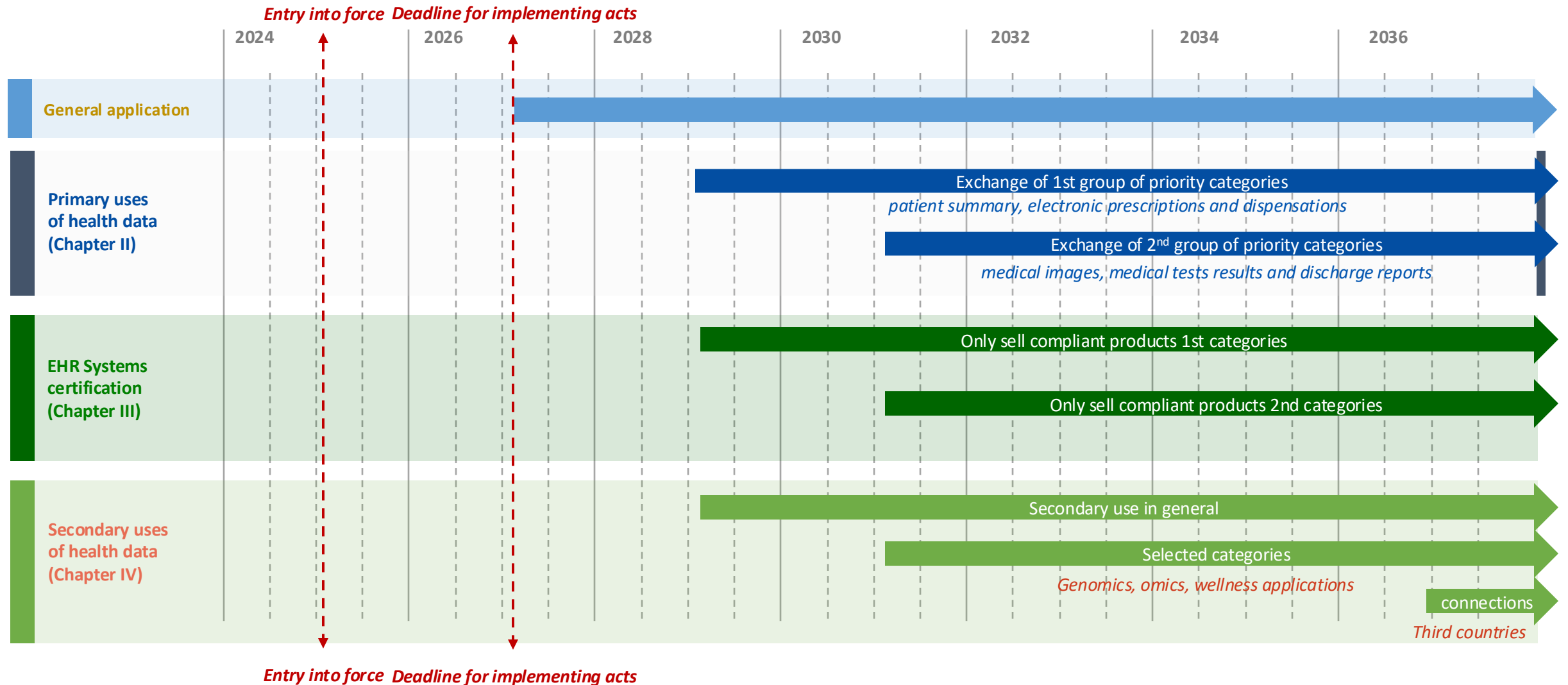
Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Education and Culture Executive Agency (EACEA). Neither the European Union nor EACEA can be held responsible for them.

Why Interoperability Education Matters Now

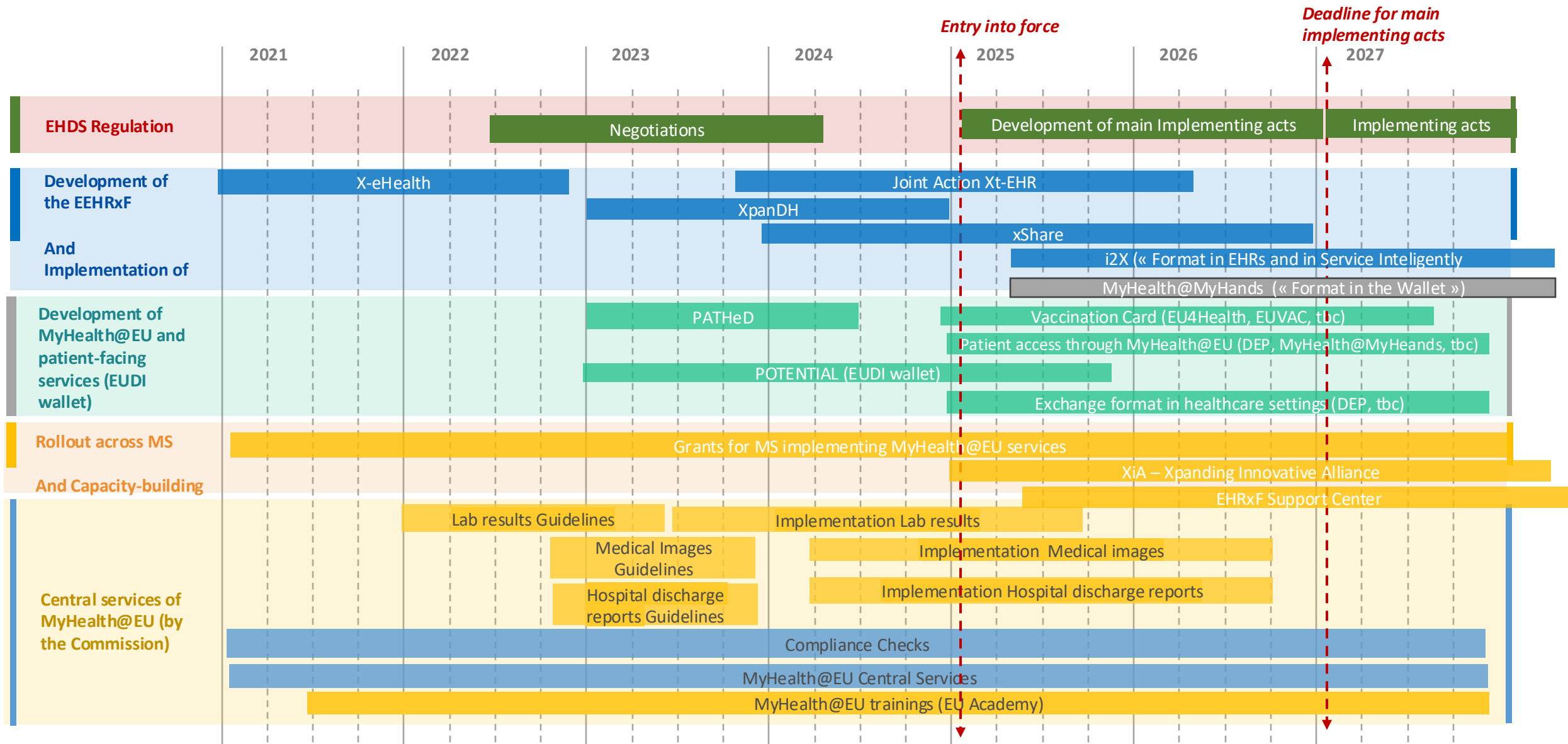
POLICY	CHALLENGE	XiA EDUCATIONAL RESPONSE
EHDS Regulation • <i>EIF March 2025</i> • <i>Implementing Acts 2027</i>	Interoperability required across borders	Equips graduate and active workforce across Europe with key competencies
EEHRxF Implementation • <i>Art. 15</i>	Lack of training for real-world application	Builds on hands-on demonstrator and implementer projects (e.g., XpanDH, xShare, i2X, MyHealth@MyHands)
EHR systems components harmonisation • <i>Art. 25</i> • <i>Section 3</i> • <i>Annex II</i>	Requirement of: • Interoperability component (import/export) • Logging component (access logs)	Addresses health data standards (e.g., HL7 FHIR, SNOMED CT, LOINC) and researches immutable logging technologies (c.f. workshop 577)

Implementation of the EHDS Regulation

Timelines are indicative.



Primary use of health data: Implementation (adapted from EC)



XiA and the EEHRxF/EHDS landscape



Project overview

<https://xia-project.iscte-iul.pt/>

General Objectives

- Enhancing **Digital Health Interoperability Skills**
- Developing **Future-Oriented Education** on the **EEHRxF**
- Building an **Educated Pan-European Digital Health Ecosystem**

Specific Objectives

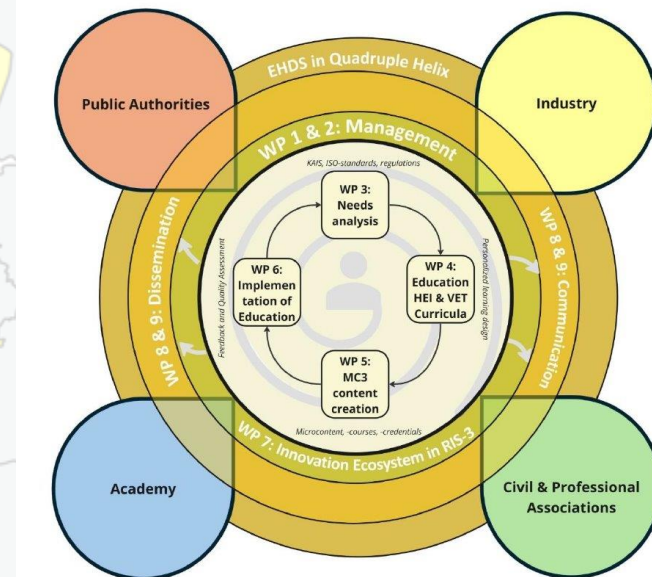
- Digital Health **Needs Analysis**
- Skill and **Curriculum Development**
- **Micro-Content** Mapping, Creation and Delivery
- Community Building and Sustainability
- Certification and Quality Assurance
- Outreach and Impact

40+ Partners:

- **17** Beneficiaries – COO: Iscte (PT)
- **18** Countries
- **6 [+7(+9)] = 22** Associated Partners
- ...and growing

Main Expected Impacts

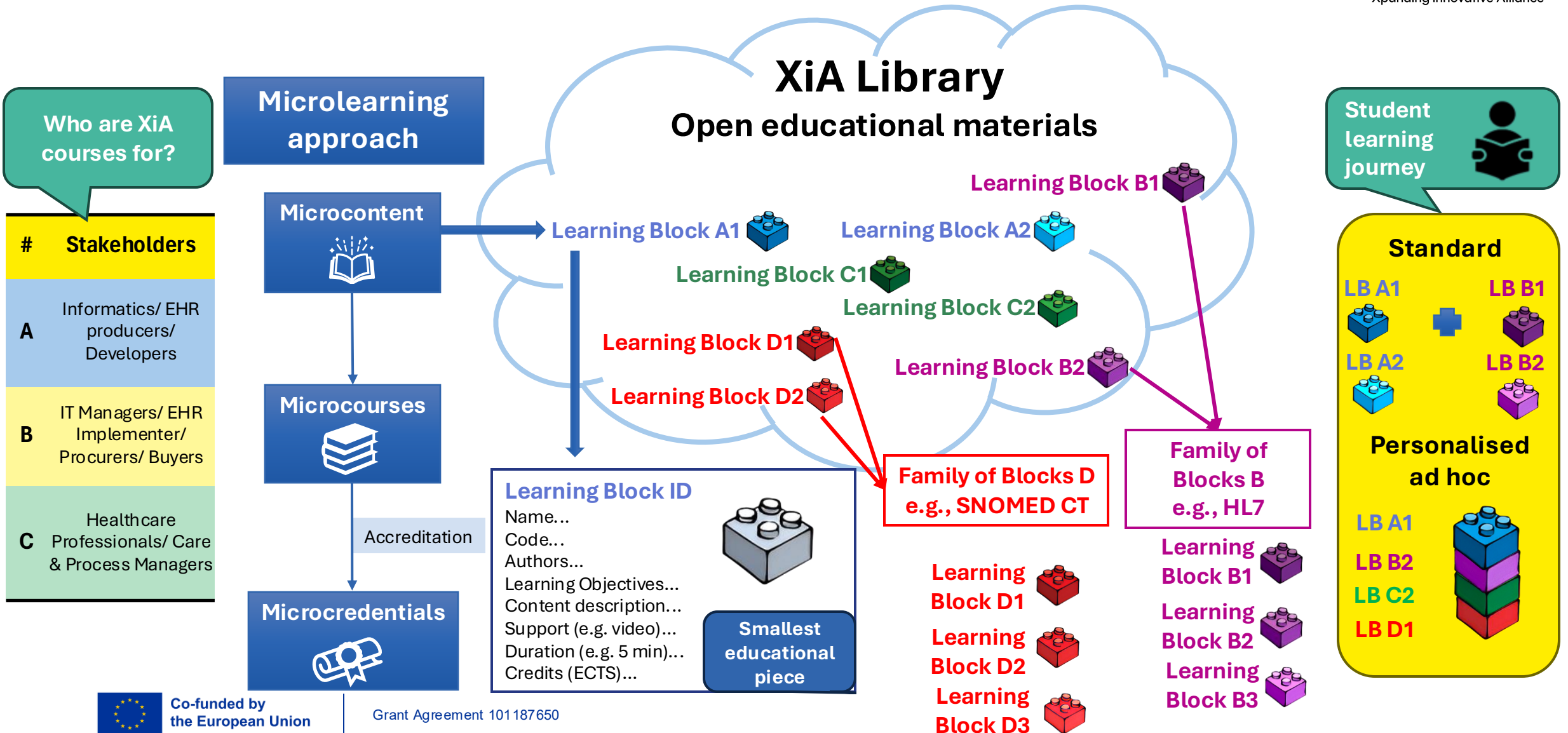
- Enhanced Learning Opportunities
- Curriculum Integration
- Knowledge Production and Analysis
- Credentialing System
- Supporting the EEHRxF's broad implementation



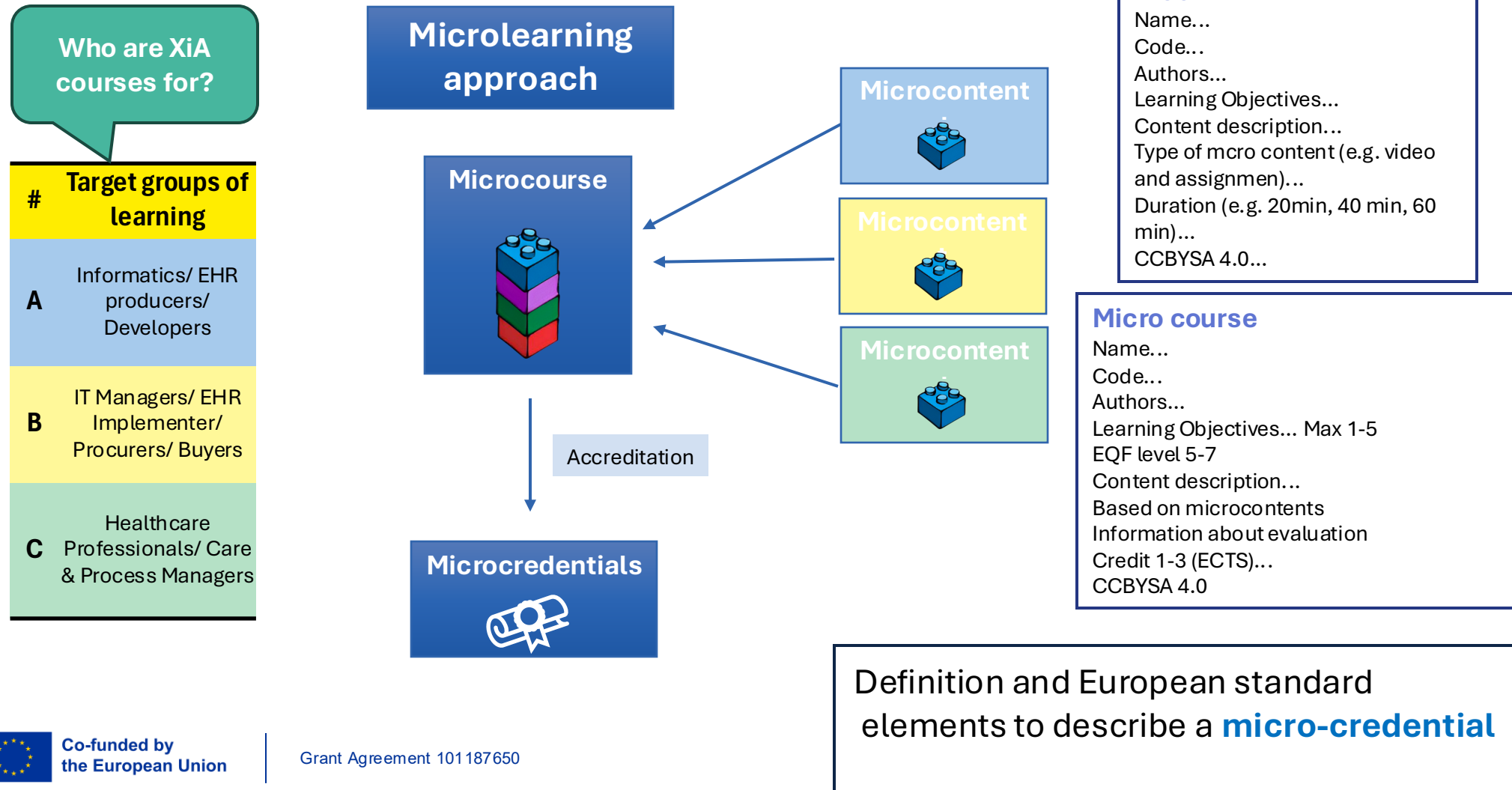
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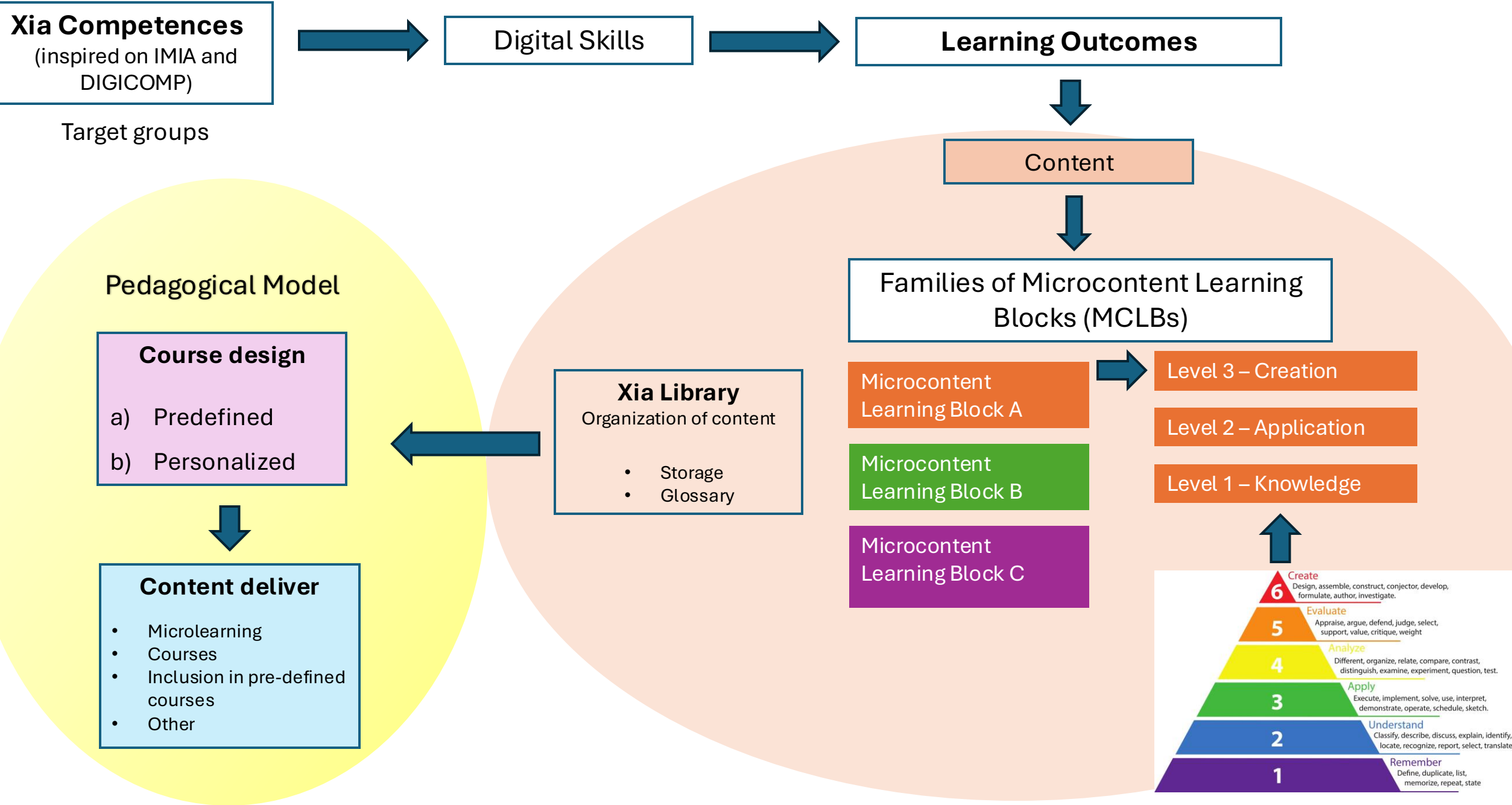
https://linktr.ee/xia_project

How will XiA support the EEHRxF implementation?



How XiA will support the EEHRxF implementation?





26 hours = 1 ECTS

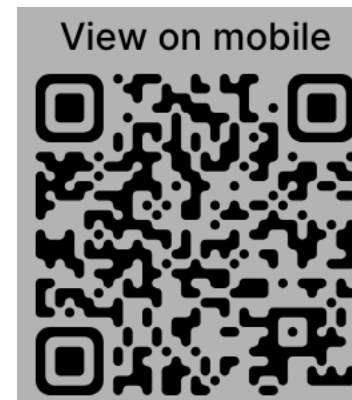
MCLB Type 1		MCLB Type 2
=		=
1 hour duration		2 hours duration
20 mins teaching		20 + 20 + 20 minutes teaching
+		+
40 minutes self learning		1 hour self learning
26 x Type 1 MCLB = 1 ECTS		13 x Type 2 MCLB = 1 ECTS
	or combinations	

(ad hoc)

XiA Needs Analysis

3 Developed surveys

- **Skills gap analysis** – Characterizes the AS-IS situation and supports the gap analysis between AS-IS and TO-BE in terms of skills competencies (opportunity to identify professional needs in terms of skills)
- **Training resources** – Allows for mapping existing training resources (hands-on exercises, labs, data sets) to fill the gap (opportunity to identify training resources needs)
- **Degree curricula content** – Mapping existing degree education curricula and define main content of curricula



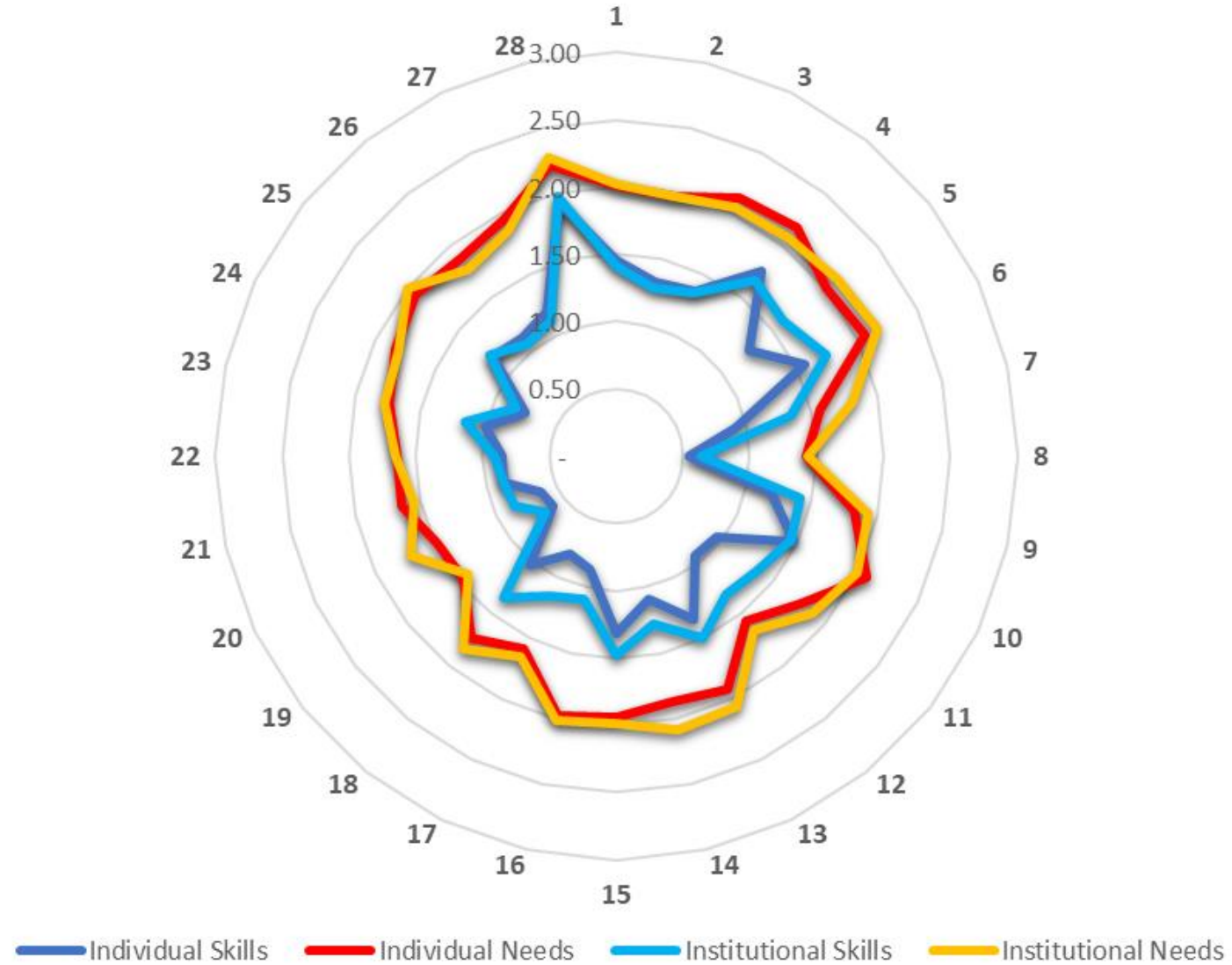
Surveys Overview

Target professionals

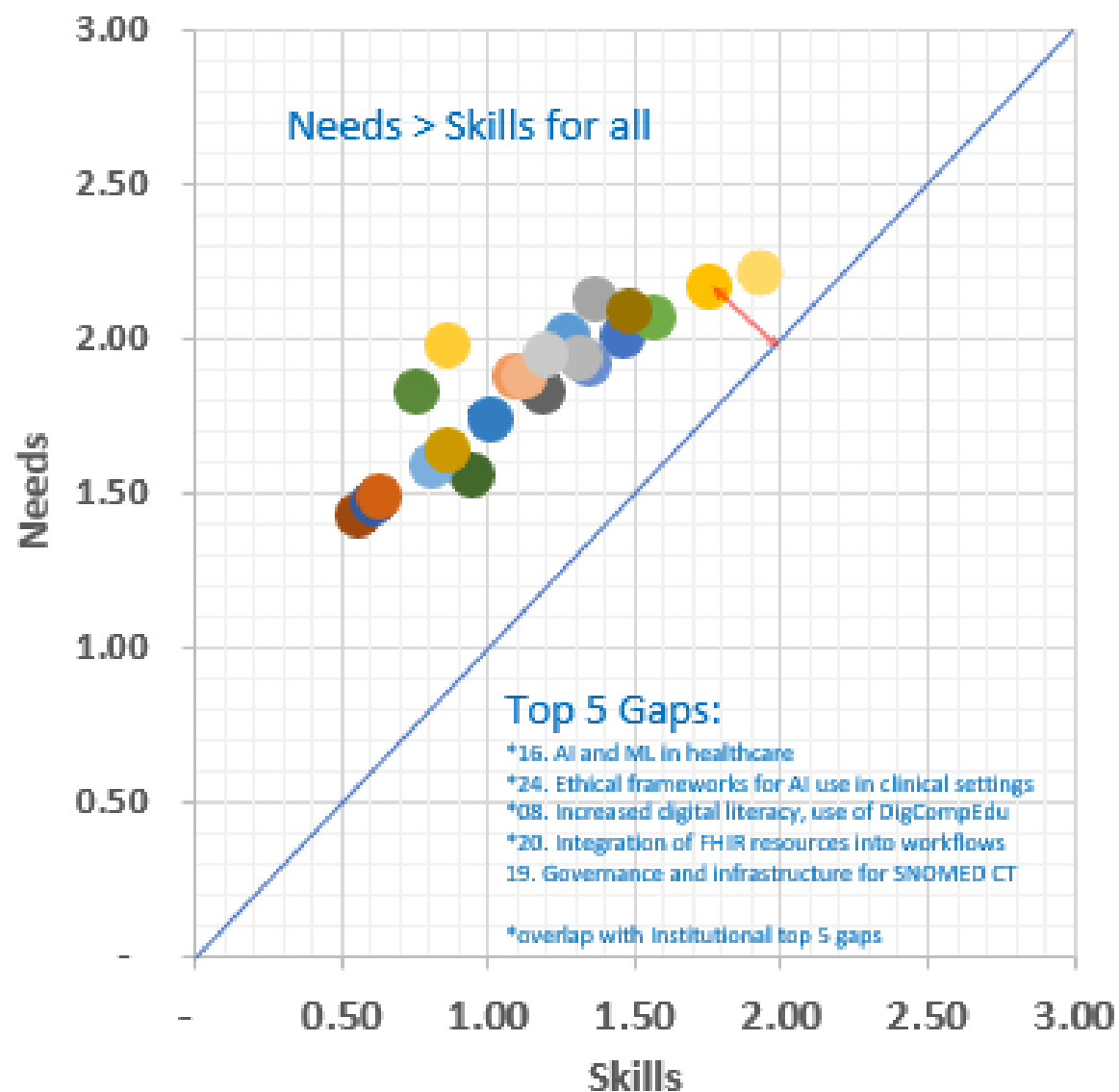
Survey	Target	Professionals Category				# of Responses (03 Oct)
		IT Professionals	Health Professionals	Managers	Educators / Researchers	
Survey 1	Skill and Competencies	X	X	X		322
Survey 3	Training Resources				X	56
Survey 4	Curricula Content				X	45

Comparison of Digital Health Skills and Needs

- Individuals
- Institutions



Greater Individual Skills Associated with Greater Training Need



1. Proficiency in EHR systems
2. Proficiency in telehealth / digital platforms
3. Proficiency with e-health data standards
4. Proficiency in clinical terminologies
5. Proficiency in security
6. Proficiency in digital communication tools
7. Proficiency in system architecture and integration
8. Increased digital literacy, use of DigCompEdu framework
9. Standards and interoperability, usability
10. Understanding of health terminologies (interface, reference, classification)
11. Skills in data anonymisation and secure storage
12. Storage
13. Skills in data collection, and organization
14. Data-driven organizational improvement/learning
15. Electronic data exchange
16. AI and ML in healthcare
17. Ensuring interoperability across HIS platforms
18. Management of Healthcare Information systems
19. Governance and Infrastructure for SNOMED CT management
20. Integration of FHIR resources into clinical workflows
21. Interoperability and clinical acceptance challenges
22. Interoperability challenges with national regulation
23. Knowledge of HIPAA and GDPR regulations for data protection
24. Ethical frameworks for AI use in clinical settings
25. Privacy and security concerns for transparency
26. Awareness of legal issues related to privacy
27. Validation and acceptance by clinicians and patients
28. Computer use and information technology skills

The more you know, the more you know you need better skills.



How to get involved with XiA?

- XiA Research club



- Collaborate on cutting-edge research projects in digital health
- Co-author papers and submissions for conferences and journals
- Network with experts and peers at top digital health events



- Associated partners (APs)

- XiA periodic calls to include new APs.



All links on:

https://linktr.ee/xia_project

A background image of a bright, modern classroom. Several students are seated at wooden desks. In the foreground, a young man with short brown hair, wearing a red and white striped shirt, is smiling and looking at a laptop. Other students are visible in the background, some looking at papers and others at their devices. The room has large windows letting in natural light.

Join the XiA Educathon!

BERLIN, OCTOBER 8-9

**Learn and co-create
interoperability**



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XiA

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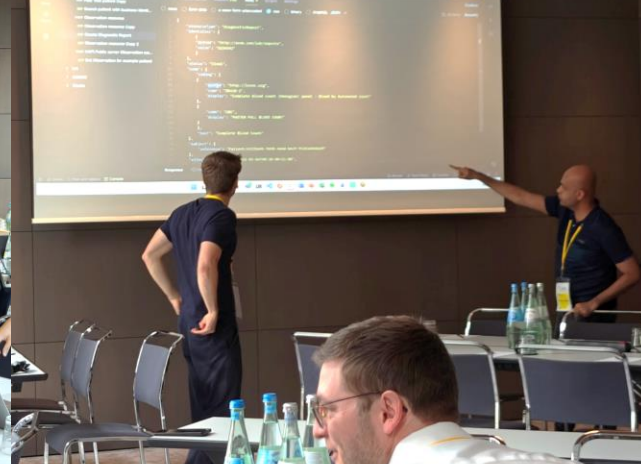
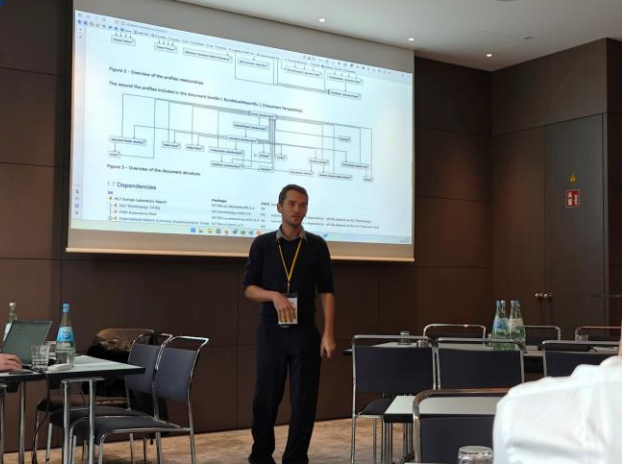
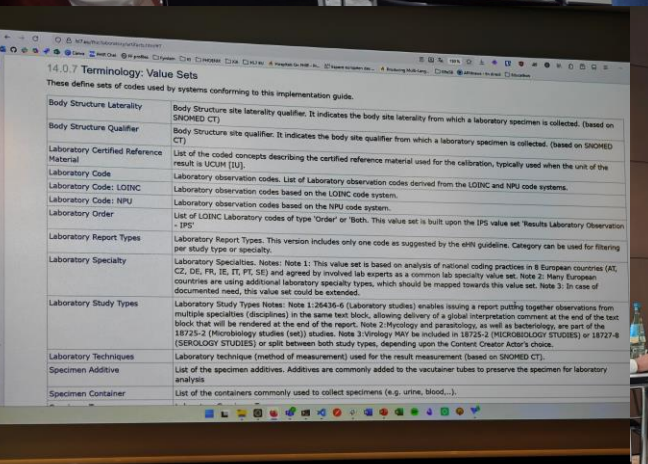
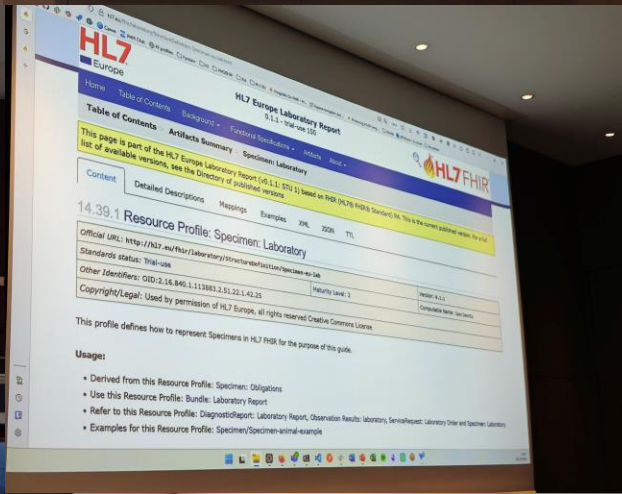
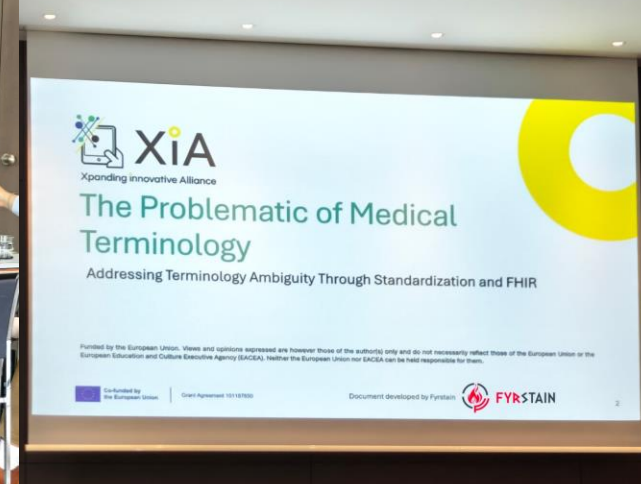
XiA Educathon: First edition (FHIR)

Objectives

- Pilot the *Educathon* format — a two-day, learner-centred event blending **theory** and **hands-on** practice.
- Teach and exchange knowledge on **FHIR** and the **European Health Data Space (EHDS)**.
- (Instance) Enable **two-way learning**: collect participant feedback on learning preferences and event design.

Attendees

- ~15 participants from mixed backgrounds:
 - Learners: MBA students, pharma data professionals, insurers, hospital and industry representatives.
 - Experts: Fyrstain (XiA partner), HL7 Poland, German and Italian hospital group, interoperability consultants.
- **Quadruple-helix mix** of academia, industry, health professionals, and policy perspectives.



XiA Educathon: Contents

Day 1 – Theory & Exploration

- **Topic 1:** *FHIR Basics* → why FHIR is key for federated EHDS data exchange.
- **Topic 2:** *Implementation Guides (IGs)* → quality, discoverability, and reuse challenges.
- **Topic 3:** *FHIR & Terminology* → bridging technical and clinical vocabularies.
- Bonus: hands-on review of an EHDS-ready Lab Report IG.

Day 2 – Practice & Experimentation

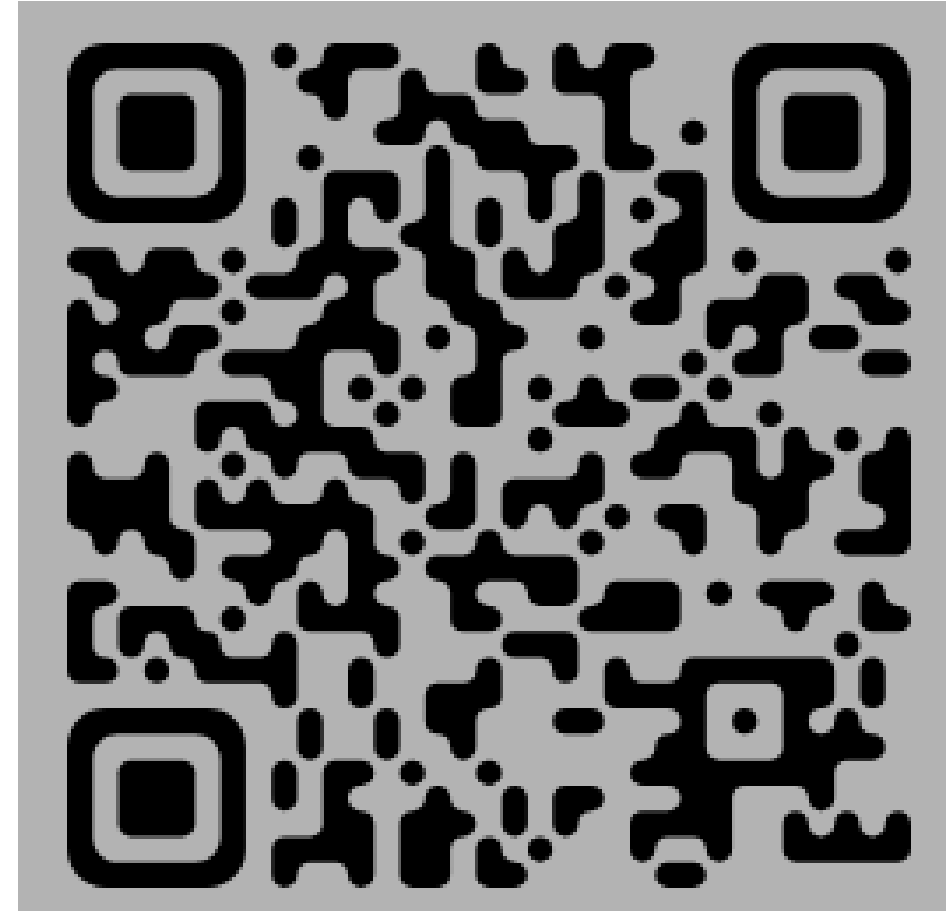
- Used a real-world **blood-panel use case** (LOINC in FHIR Observation + Lab Report).
- Created and tested **FHIR resources** using *Claude AI* and *HAPI servers*.
- Practised resource exchange with **Postman**, exploring ‘id’ vs. ‘identifiers’.
- Discussed hospital-level adoption logic: value of FHIR for research automation and external data exchange.

Join the Next XiA Educathon (2026)

- 💡 Bring learners – students or professionals keen to upskill in EHDS & interoperability.
- 🧩 Bring a real-world problem – your organisation's data-sharing or FHIR challenge can become a case for hands-on learning.

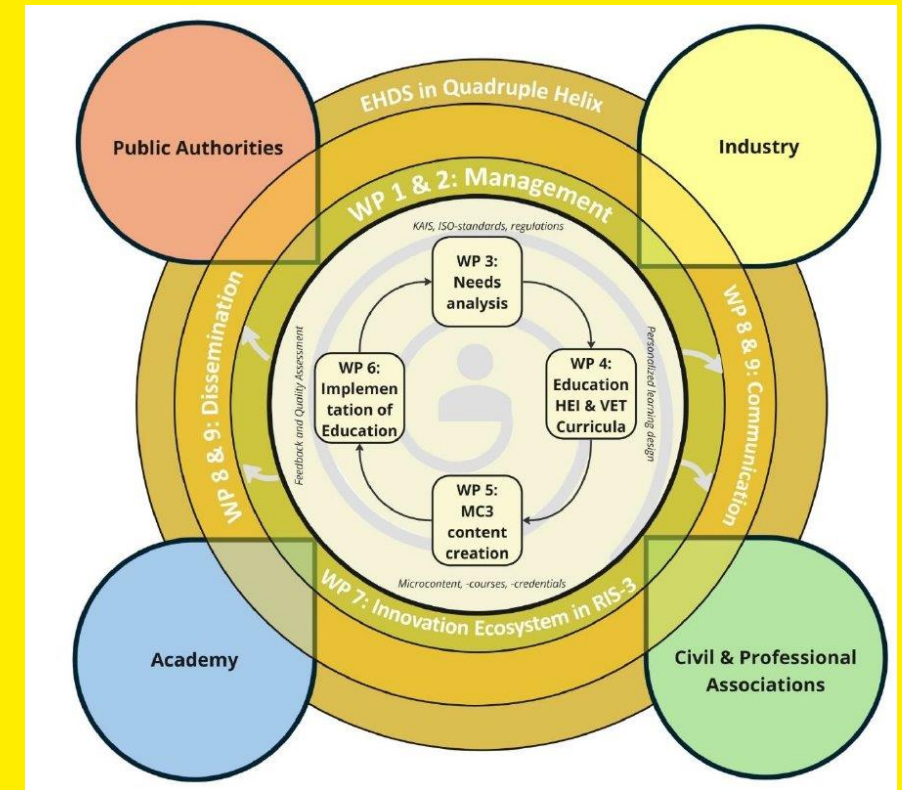
A unique space for **co-creation, peer teaching and networking** across Europe.

👉 Stay tuned



How could we stimulate the Global Digital Ecosystem to engage with XiA?

- Healthcare Providers/
- Companies
- Should/could we think about a G-XiA (global XiA movement/ "EU" project, etc)



<https://xia-project.iscte-iul.pt/>

Contact

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Thank you!

Obrigado – Gracias – Ευχαριστώ – Tak – Hvala – Dank u – Děkuji – Danke – Takk –
Kiitos – Köszönöm – Go raibh maith agat – Ďakujem – Köszönöm – Dziękuję – Grazie
– Mulțumesc – Благодаря – Grazzi – Aitäh – Paldies – Ačiū – Merci – Tack