

HL7 Italy and HL7 Europe Overview

Giorgio Cangioli

Technical Lead, Board Member - HL7 Europe

Vice-Chair, Board Member - HL7 Italy

TSC, CDA MG, AEC, Board Member - HL7 International

HL7 Switzerland WGM – 2023/03/30



Disclaimer



Any views or opinions expressed in this presentation are those of the author and do not necessarily represent official policy or position of the organizations mentioned.



It doesn't pretend to be exhaustive ... just an overview..

Agenda

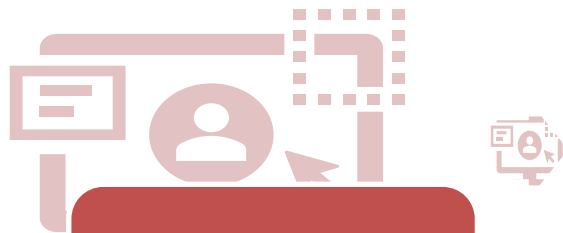


HL7 Italy

Overview



Agenda



The
context



Who
we are



What
we do

THE CONTEXT



Italy: a complex landscape



20 Regions

2 Autonomous Provinces

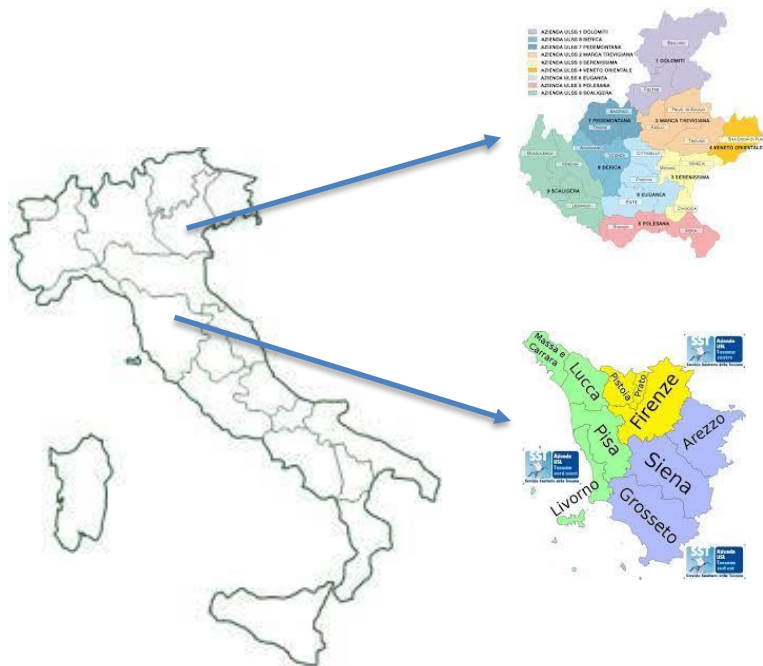
21 “Regional” Health Systems

Nationally coordinated and funded

- **Minimal Level of Assistance**
- ...

Health is Public, but providers might be public or private (the balance between public and private providers depends on the regions)

Italy: a complex landscape



9 (+1) “Aziende” and 3 Hospitals

Each Region is organized in autonomous “companies” (“Aziende”)

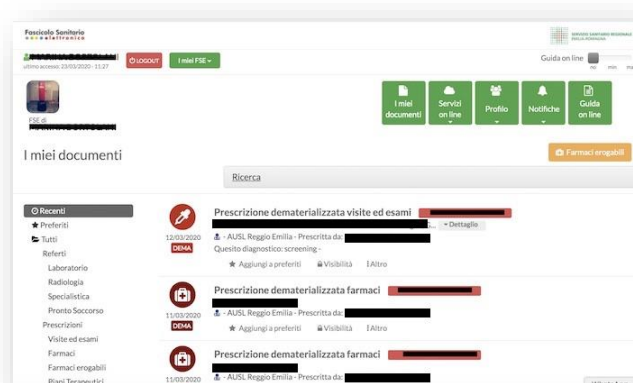
- Territorial orgs + some autonomous Hospitals
- Number and name change

3 “Aziende” and 4 Hospitals

Italy: a complex landscape



Sanità**km**zero
Fascicolo



The Fascicolo Sanitario Elettronico today



- Each Region has its own EHR-S (FSE Regionale)
- The National EHR-S (Fascicolo Sanitario Elettronico) allows the sharing of a defined set of document among regions (Lab report; Imaging report; Emergency Dept. Report;...)
- Documents are HL7 CDA R2

Fascicolo Sanitario Elettronico

National Infrastructure
for Interoperability (INI)

National FSE Portal

Interoperability Services for
Regional «Fascicoli Sanitari»

National Consent
Registry

Regional FSE

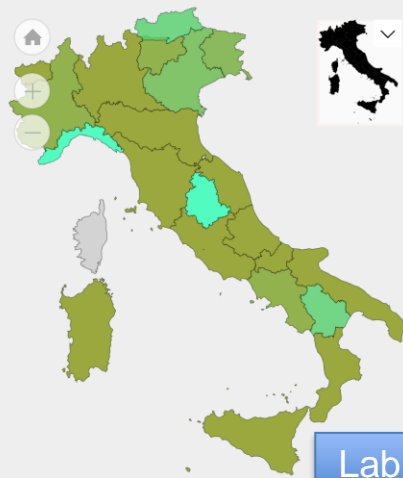
Regional FSE Portal

Local Repository

Regional Registry

The Fascicolo

Monitoraggio e Cruscotto FSE



Regioni attive

21

Regioni in regime di
sussidiarietà ⓘ

4

Referti digitalizzati

415.156.677

174.039.089

Active
records

FSE attivi

58.576.641



Documents

Standard HL7 Italia adottati dal FSE

Submitted by G.Cangioli on Thu, 07/07/2022 - 19:15

Specifiche e Guide di HL7 Italia

Implementation Guide CDA R2

Nome	Descrizione	Vers.	Livello
Profilo Sanitario Sintetico (PSS)	Il documento è la localizzazione italiana delle specifiche per l'implementazione del documento clinico "Profilo Sanitario Sintetico" (<i>Patient Summary</i>) secondo lo standard HL7 CDA2. Lo standard è conforme al DPCM Attuativo FSE (DPCM n°178/2015).	1.4 2022	Normativo
Referto di Medicina di Laboratorio (LAB)	Il documento è la localizzazione italiana delle specifiche per l'implementazione del documento clinico "Referto di Medicina di Laboratorio" secondo lo standard HL7 CDA2 al fine di facilitare lo scambio d'informazioni cliniche tra i vari attori che concorrono all'erogazione dei servizi sanitari (es. MMG, Specialisti, etc.). Lo standard è conforme al DPCM Attuativo FSE (DPCM n°178/2015).	1.3 2022	Normativo
Lettera di Dimissione Ospedaliera (LDO)	L'obiettivo del documento è quello di definire, secondo lo standard HL7 CDA2, una guida all'implementazione della Lettera di dimissione Ospedaliera valida nel contesto Italiano. Il documento rientra tra i documenti clinici ritenuti strategici all'interoperabilità dei Fascicoli Sanitari Elettronici regionali dal Tavolo Tecnico coordinato da AgID ed MdS.	1.2 2022	Normativo
Vaccinazioni (VAC)	Il documento è la localizzazione italiana delle specifiche per l'implementazione del della scheda della singola Vaccinazione e del Certificato Vaccinale secondo lo standard HL7 CDA 2. Le vaccinazioni fanno parte dei dati e documenti integrativi del FSE (ai sensi dell'art.2 del DPCM 178/2015), necessari per supportare al meglio i processi di prevenzione, diagnosi, cura e riabilitazione con l'ausilio del Fascicolo Sanitario Elettronico.	1.1 2022	Normativo

Monitoraggio e Cruscotto FSE



Referto di Radiologia (RAD)	L'obiettivo del presente documento è definire, secondo lo standard HL7 CDA Rel 2.0, una guida all'implementazione per il CDA per i Referti di Radiologia che sia valida nel contesto Italiano. Il documento rientra tra i documenti clinici ritenuti strategici all'interoperabilità dei Fascicoli Sanitari Elettronici regionali dal Tavolo Tecnico coordinato da AgID ed MdS.	1.1 2022	Normativo
Referto di Specialistica Ambulatoriale (RSA)	L'obiettivo del documento è quello di definire, secondo lo standard HL7 CDA2, una guida all'implementazione del Referto di Specialistica Ambulatoriale valida nel contesto Italiano che non ricadano nella sfera della medicina di laboratorio, della radiologia ed imaging, dell'anatomia patologica. Il documento rientra tra i documenti clinici ritenuti strategici all'interoperabilità dei Fascicoli Sanitari Elettronici regionali dal Tavolo Tecnico coordinato da AgID ed MdS.	1.1 2022	Normativo
Verbale di Pronto Soccorso (VPS)	L'obiettivo del documento è quello di definire, secondo lo standard HL7 CDA2, una guida all'implementazione del Verbale di Pronto Soccorso valida nel contesto Italiano. Il documento rientra tra i documenti clinici ritenuti strategici all'interoperabilità dei Fascicoli Sanitari Elettronici regionali dal Tavolo Tecnico coordinato da AgID ed MdS.	1.1.1 2022	Normativo

Regioni in regime di
Regioni attive sussidiarietà

Documento Generico (DocGen)	L'obiettivo del documento è quello di definire, secondo lo standard HL7 CDA2, una guida implementativa in ART DECOR del Documento Generico valida nel contesto Italiano. Il documento rientra tra i documenti clinici ritenuti strategici all'interoperabilità dei Fascicoli Sanitari Elettronici regionali dal Tavolo Tecnico coordinato da DTD ed MdS.	1.0 2023	Normativo
Prescrizione Farmaceutica (PrF)	L'obiettivo del documento è quello di definire, secondo lo standard HL7 CDA2, una guida implementativa in ART DECOR della Prescrizione Farmaceutica valida nel contesto Italiano ed Europeo. Il documento rientra tra i documenti clinici ritenuti strategici all'interoperabilità dei Fascicoli Sanitari Elettronici regionali dal Tavolo Tecnico coordinato da DTD ed MdS.	2.1 2023	Normativo
Prescrizione Specialistica (PrS)	L'obiettivo del documento è quello di definire, secondo lo standard HL7 CDA2, una guida implementativa in ART DECOR della Prescrizione Specialistica valida nel contesto Italiano. Il documento rientra tra i documenti clinici ritenuti strategici all'interoperabilità dei Fascicoli Sanitari Elettronici regionali dal Tavolo Tecnico coordinato da DTD ed MdS.	2.1 2023	Normativo

Documents

Standard HL7 Italia adottati dal FSE

Submitted by G.Cangioli on Thu, 07/07/2022 - 19:15

Specifiche e Guide di HL7 Italia

Implementation Guide CDA R2

Nome	Descrizione	Vers.	Livello
Profilo Sintetico (PSS)	Referto di Radiologia (RAD)	1.1	Normativo
Referto di Laboratorio (LAB)	Documento Generico (DocGen)	1.0	
Lettera di Ospedale (LDO)	Referto di Specialistica Ambulatoriale (RSA)		
Vaccinazioni (VPS)	Prescrizione Farmaceutica (PrF)		
	Verbale di Pronto Soccorso (VPS)		
	Prescrizione Specialistica (PrS)		



Template CDA ClinicalDocument (with nonXMLBody)

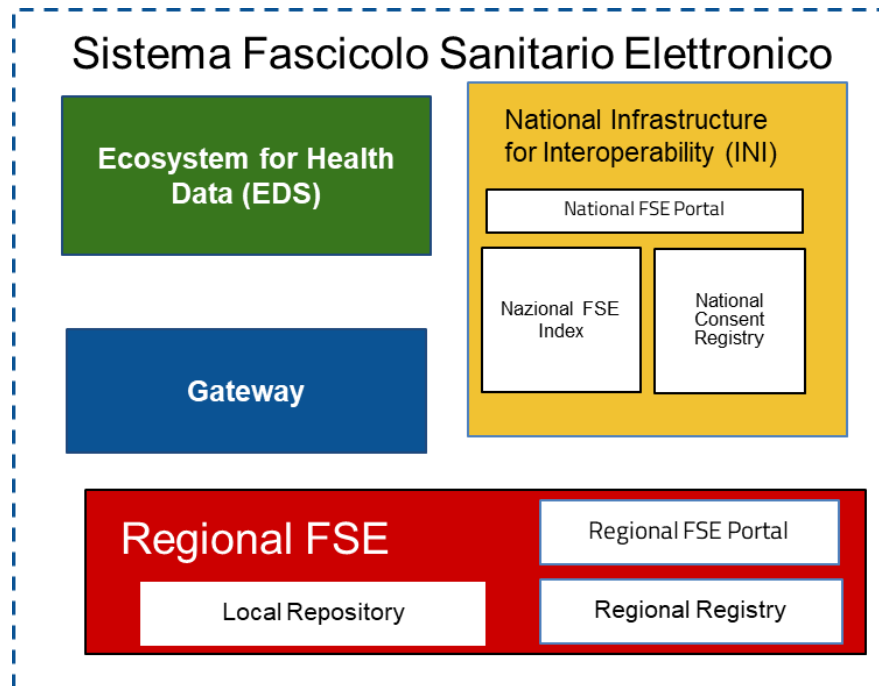
Id	2.16.840.1.113883.2.9.10.1.12.1
Status	Draft
Name	CDAClinicalDocumentnonXMLBody
Description	Template CDA ClinicalDocument (prototype, contains ClinicalDocument.component)
Context	Pathname /
Label	CDAClinicalDocumentnonXMLBody
Classification	CDA Document Level Template
Open/Closed	Open (other than defined elements are allowed)
Used by / Uses	Used by 1 transaction and 0 templates, Uses 12 templates
Relationship	Specialization: template 2.16.840.1.113883.10.12.3 CDA ClinicalDocument (with nonXMLBody)
Example	Example

There are open issues with this item:

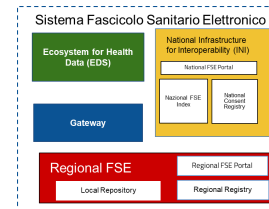
<https://developers.italia.it/it/fse/>

The Fascicolo Sanitario Elettronico 2.0

- **Not only documents !**
- EDS is a HL7 FHIR based repository
- For the time being supposed to be fed by using the HL7 CDA R2 documents



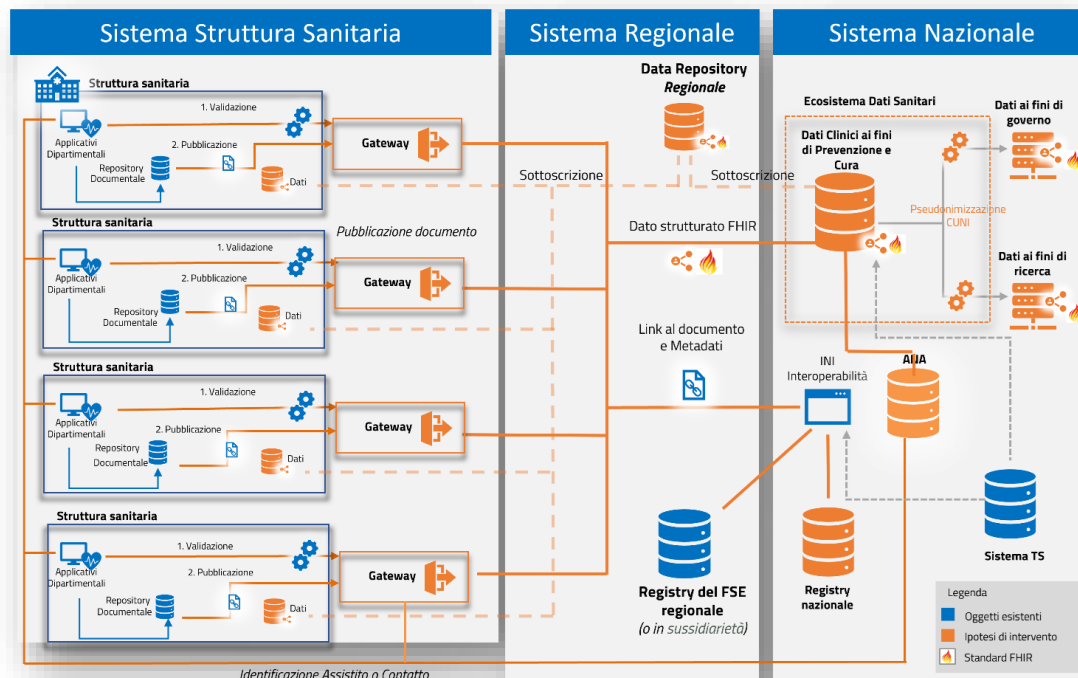
The Fascicolo Sanitario Elettronico 2.0



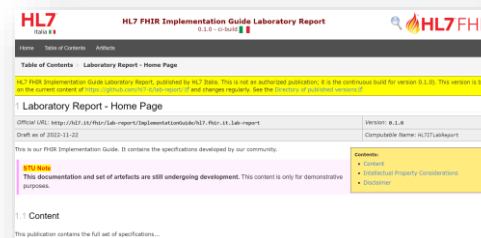
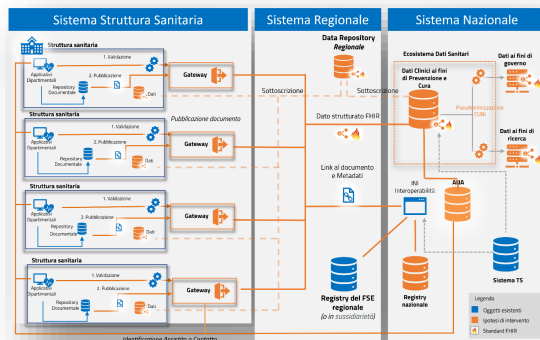
Sub-regional

Regional

National

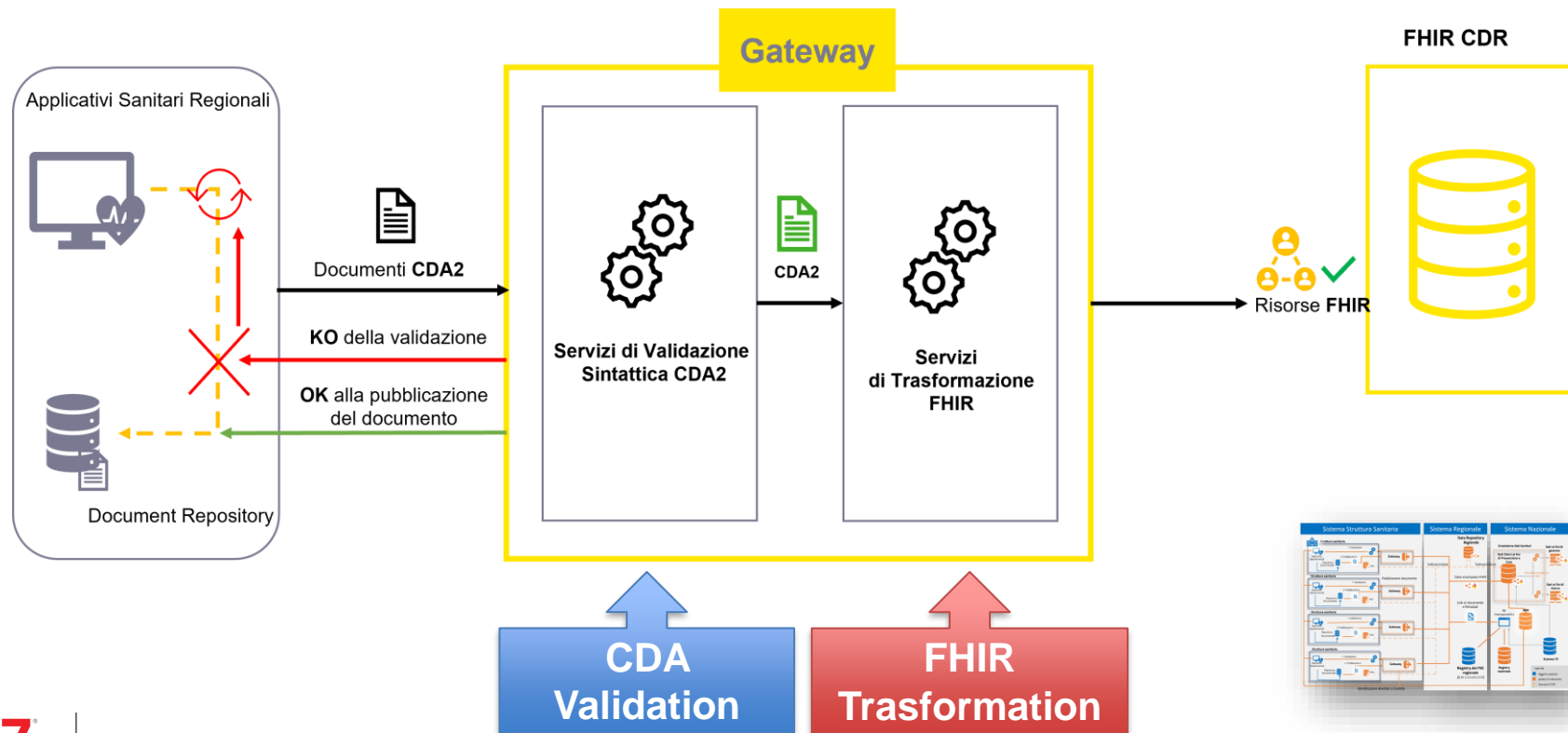


The Fascicolo Sanitario Elettronico 2.0



Note: The Lab report IG is not there yet..

FSE 2.0: the gateway



WHO WE ARE

HL7[®]

Italia 

- Established in **2003**
- Membership (2022)
 - 9 individuals + 45 organizations (Vendor; Gov Agencies; Academic and Research; Consultants)
- Education
 - HL7 Fundamentals Course, 33 attenders; FHIR Fundamentals Course, 41 attenders.
- Next WGM: **Firenze** end of May



20 years !



WHAT WE DO



PDF Publications



- HL7/ISO EHR-S FM (Electronic Health Record-System Functional Model) R2 Profiles (2014-16)
- Implementation Guide CDA R2 (2022-23)
- Messaging V2 (2008-13)
- Messaging V3 (2008)

Standard HL7 Italia adottati dal FSE

Submitted by G.Cangioli on Thu, 07/07/2022 - 19:15

Specifiche e Guide di HL7 Italia

Implementation Guide CDA R2

http://www.hl7italia.it/hl7italia_D7/hl7it_publications

Documents

Standard HL7 Italia adottati dal FSE

Submitted by G.Cangioli on Thu, 07/07/2022 - 19:15

Specifiche e Guide di HL7 Italia

Implementation Guide CDA R2

Nome	Descrizione	Vers.	Livello
Profilo Sanitario Sintetico (PSS)	Il documento è la localizzazione italiana delle specifiche per l'implementazione del documento clinico "Profilo Sanitario Sintetico" (<i>Patient Summary</i>) secondo lo standard HL7 CDA2. Lo standard è conforme al DPCM Attuativo FSE (DPCM n°178/2015).	1.4 2022	Normativo
Referto di Medicina di Laboratorio (LAB)	Il documento è la localizzazione italiana delle specifiche per l'implementazione del documento clinico "Referto di Medicina di Laboratorio" secondo lo standard HL7 CDA2 al fine di facilitare lo scambio d'informazioni cliniche tra i vari attori che concorrono all'erogazione dei servizi sanitari (es. MMG, Specialisti, etc.). Lo standard è conforme al DPCM Attuativo FSE (DPCM n°178/2015).	1.3 2022	Normativo
Lettera di Dimissione Ospedaliera (LDO)	L'obiettivo del documento è quello di definire, secondo lo standard HL7 CDA2, una guida all'implementazione della Lettera di dimissione Ospedaliera valida nel contesto Italiano. Il documento rientra tra i documenti clinici ritenuti strategici all'interoperabilità dei Fascicoli Sanitari Elettronici regionali dal Tavolo Tecnico coordinato da AgID ed MdS.	1.2 2022	Normativo
Vaccinazioni (VAC)	Il documento è la localizzazione italiana delle specifiche per l'implementazione del della scheda della singola Vaccinazione e del Certificato Vaccinale secondo lo standard HL7 CDA 2. Le vaccinazioni fanno parte dei dati e documenti integrativi del FSE (ai sensi dell'art.2 del DPCM 178/2015), necessari per supportare al meglio i processi di prevenzione, diagnosi, cura e riabilitazione con l'ausilio del Fascicolo Sanitario Elettronico.	1.1 2022	Normativo

Referto di Radiologia (RAD)	L'obiettivo del presente documento è definire, secondo lo standard HL7 CDA Rel 2.0, una guida all'implementazione per il CDA per i Referti di Radiologia che sia valida nel contesto Italiano. Il documento rientra tra i documenti clinici ritenuti strategici all'interoperabilità dei Fascicoli Sanitari Elettronici regionali dal Tavolo Tecnico coordinato da AgID ed MdS.	1.1 2022	Normativo
Referto di Specialistica Ambulatoriale (RSA)	L'obiettivo del documento è quello di definire, secondo lo standard HL7 CDA2, una guida all'implementazione del Referto di Specialistica Ambulatoriale valida nel contesto Italiano che non ricadano nella sfera della medicina di laboratorio, della radiologia ed imaging, dell'anatomia patologica. Il documento rientra tra i documenti clinici ritenuti strategici all'interoperabilità dei Fascicoli Sanitari Elettronici regionali dal Tavolo Tecnico coordinato da AgID ed MdS.	1.1 2022	Normativo
Verbale di Pronto Soccorso (VPS)	L'obiettivo del documento è quello di definire, secondo lo standard HL7 CDA2, una guida all'implementazione del Verbale di Pronto Soccorso valida nel contesto Italiano. Il documento rientra tra i documenti clinici ritenuti strategici all'interoperabilità dei Fascicoli Sanitari Elettronici regionali dal Tavolo Tecnico coordinato da AgID ed MdS.	1.1.1 2022	Normativo

Documento Generico (DocGen)	L'obiettivo del documento è quello di definire, secondo lo standard HL7 CDA2, una guida implementativa in ART DECOR del Documento Generico valida nel contesto Italiano. Il documento rientra tra i documenti clinici ritenuti strategici all'interoperabilità dei Fascicoli Sanitari Elettronici regionali dal Tavolo Tecnico coordinato da DTD ed MdS.	1.0 2023	Normativo
Prescrizione Farmaceutica (PrF)	L'obiettivo del documento è quello di definire, secondo lo standard HL7 CDA2, una guida implementativa in ART DECOR della Prescrizione Farmaceutica valida nel contesto Italiano ed Europeo. Il documento rientra tra i documenti clinici ritenuti strategici all'interoperabilità dei Fascicoli Sanitari Elettronici regionali dal Tavolo Tecnico coordinato da DTD ed MdS.	2.1 2023	Normativo
Prescrizione Specialistica (PrS)	L'obiettivo del documento è quello di definire, secondo lo standard HL7 CDA2, una guida implementativa in ART DECOR della Prescrizione Specialistica valida nel contesto Italiano. Il documento rientra tra i documenti clinici ritenuti strategici all'interoperabilità dei Fascicoli Sanitari Elettronici regionali dal Tavolo Tecnico coordinato da DTD ed MdS.	2.1 2023	Normativo

Art Decor based Publications



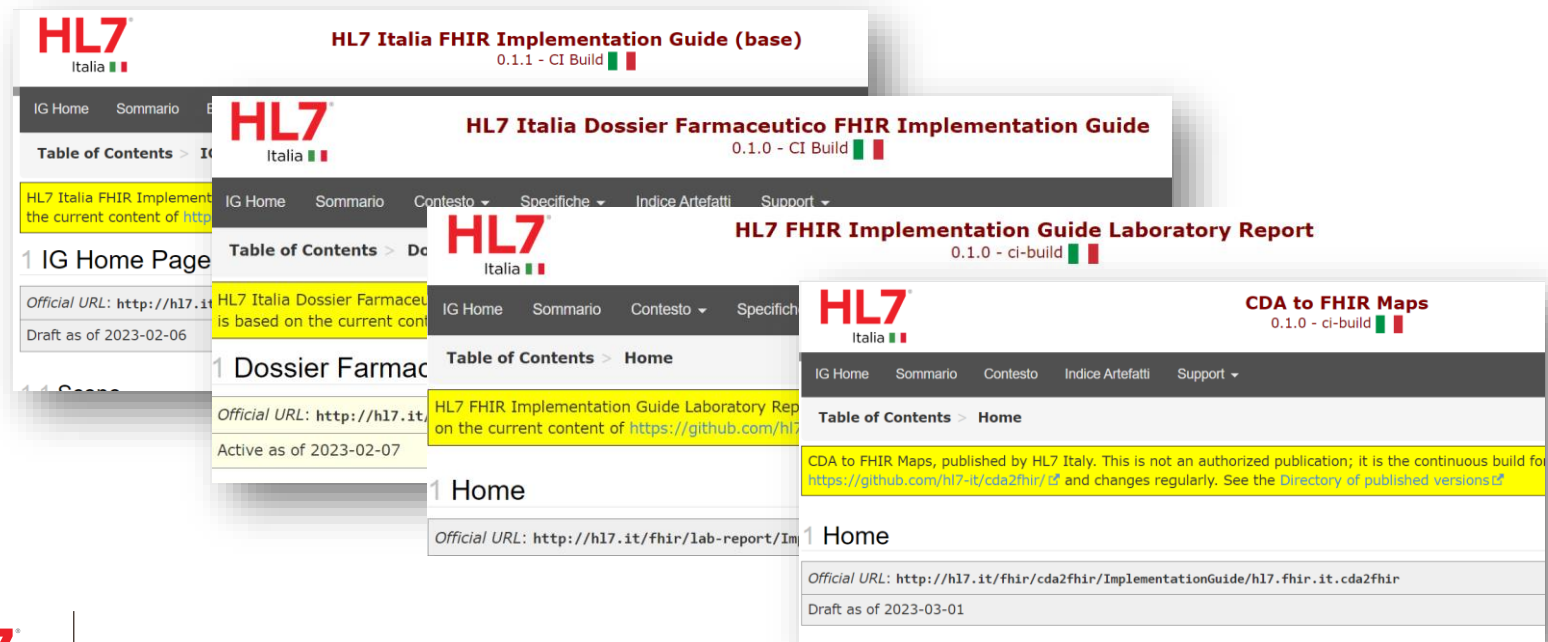
Current					
Date	Status	HTML	Schematron	XML	Comment
Prescrizione_farmaceutica					
20-03-2023 19:33	under pre-publication review	→ ⚠	⚠	not available yet	V2.2
Verbale di Pronto Soccorso					
21-12-2023 14:42	under pre-publication review	→ ⚠	⚠	not available	Bozza V1.3
docgen					
02-01-2023 12:21	under pre-publication review	→ ⚠	⚠	not available	V1.0
Referto_Anatomia_Patologica					
31-01-2023 14:26	under pre-publication review	→ ⚠	⚠	not available	V1.3 Ballot
Prescrizione_specialistica					
20-03-2023 19:32	under pre-publication review	→ ⚠	⚠	not available	V2.2

<https://hl7itig.art-decor.pub/>

What about HL7[®] FHIR[®] ?



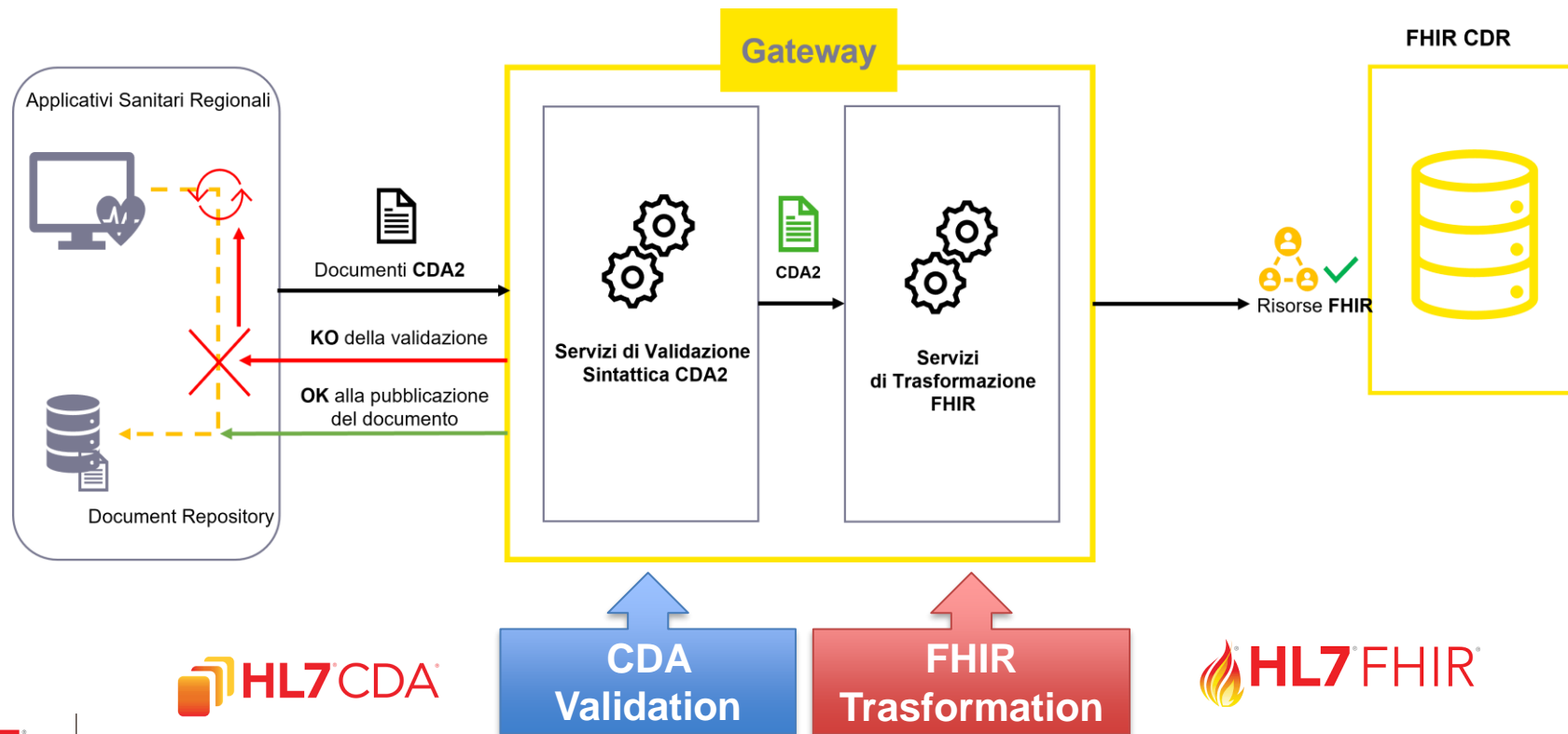
- Some guides under development <https://github.com/hl7-it>



CDA TO FHIR MAPPING



FSE 2.0: the gateway



Short history...

- HL7 Italy organized a workshop, with “hands-on” , lead by Oliver introducing the usage of the FHIR mapping language to government and regional representatives
- The Department commissioned the MoF in-house company to develop such a maps and transformation libraries.
- Maps have been made publicly available as part of an HL7 Italy Implementation Guide

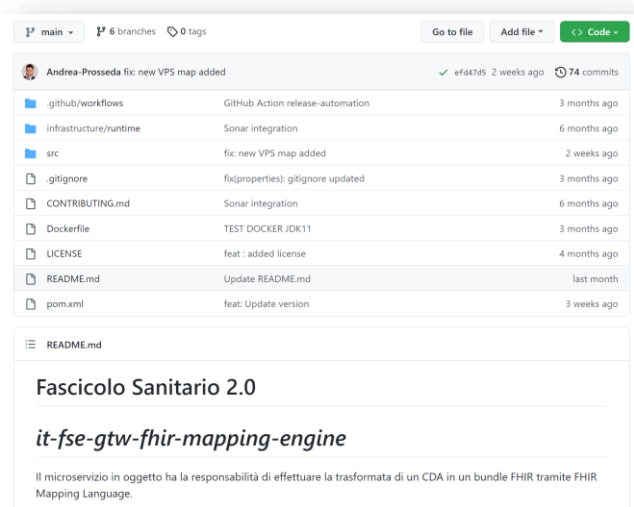
CDA to FHIR mapping

- Choice
 - HL7 FHIR Mapping Language and associated transformation tools
- Implementation
 - First maps and transformation library developed by the Minister of Finance in-house company (SOGEI) for the Department of Digital Transformation.

Open Source java library

Based on the Oliver Egger work:
matchbox

Optimized for run-time execution in the
“gateway”



<https://github.com/ministero-salute/it-fse-gtw-fhir-mapping-engine>

- Based on the HL7 Switzerland work (Oliver Egger).
- Collected in the HL7 Italy cda2fhir FHIR IG



WHAT'S NEXT ?



What's next ?

- Continue the porting (and revision) of the CDA specifications in Art Décor
 - Next in line Prescription; dispensation
- New CDA specifications in Art Decor
 - Next in line Anatomic Pathology Report
- Continue the work with HL7 FHIR specifications
 - Laboratory Report

What's next ?



- Looking for European collaboration for
 - HL7 FHIR Laboratory Report
 - HL7 Europe project started
 - CDA to FHIR mapping
 - Workshop the next April 28th (AT, EE and IT)
 - Terminology Services



HL7 Europe

Overview



Agenda



HL7 EU in
a nutshell



HL7 EU
overview



European
projects



HL7 EU
TNT



Hospitals
on FHIR



HL7[®]



Europe

IN A NUTSHELL



HL7 Europe



- Formally, HL7 Europe is a not-for-profit legal entity based in Belgium (official name HL7 Europe Foundation) ... *but it is much more than this...*
- ...HL7 Europe has no “paying” members, nevertheless ...

HL7 Europe is a community

built on the EU HL7 Affiliate members

HL7 Europe

- **Established in 2010**
- **Scope:** WHO Europe Region (including Turkey and Israel)
- **# of HL7 Affiliates:** 22 + Slovakia (on-going) + Estonia (to be submitted)





HL7 Europe: a continuous growth

- Visibility and **Recognition** at the European Level
- Active EU funded projects (1 in 2012 , 9 in 2023)
- Initiatives (HoF) and events (Workshops, -athons)
- Liaisons established (JIC, CEN, EFMI,...)
- Team members
- Structure maturity (internal organization, procedures)
- Contributions to HL7 standards (FHIR4FAIR, IPS, ePI, Pharmacy Template)
- First HL7 EU REALM project has been started !

HL7 EUROPE OVERVIEW

HL7 Mission and Vision

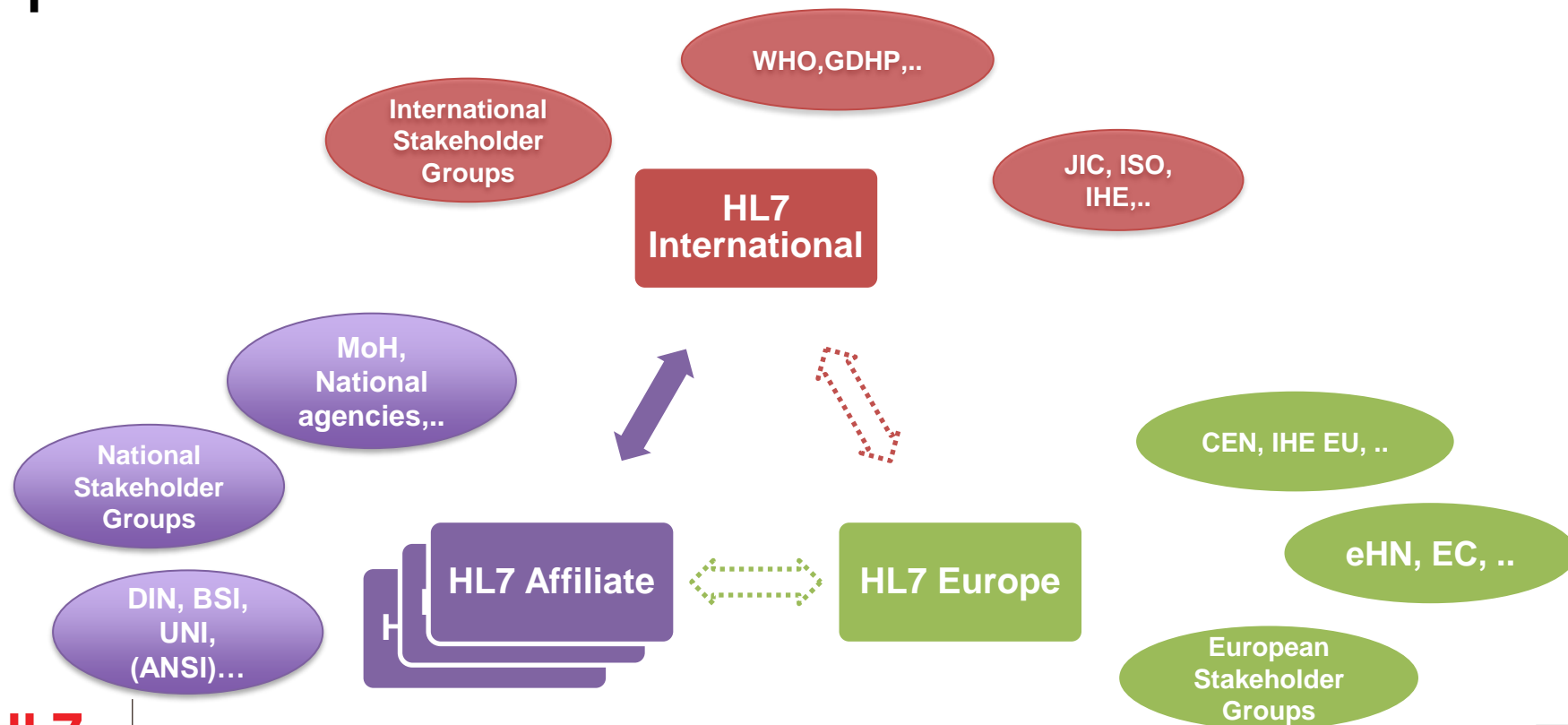
HL7 Vision: A world in which **everyone can securely access and use the right health data when and where they need it.**

HL7 Mission: The mission of HL7 is to **provide standards for interoperability** that improve care delivery, optimize workflow, reduce ambiguity, and enhance knowledge transfer among all stakeholders.

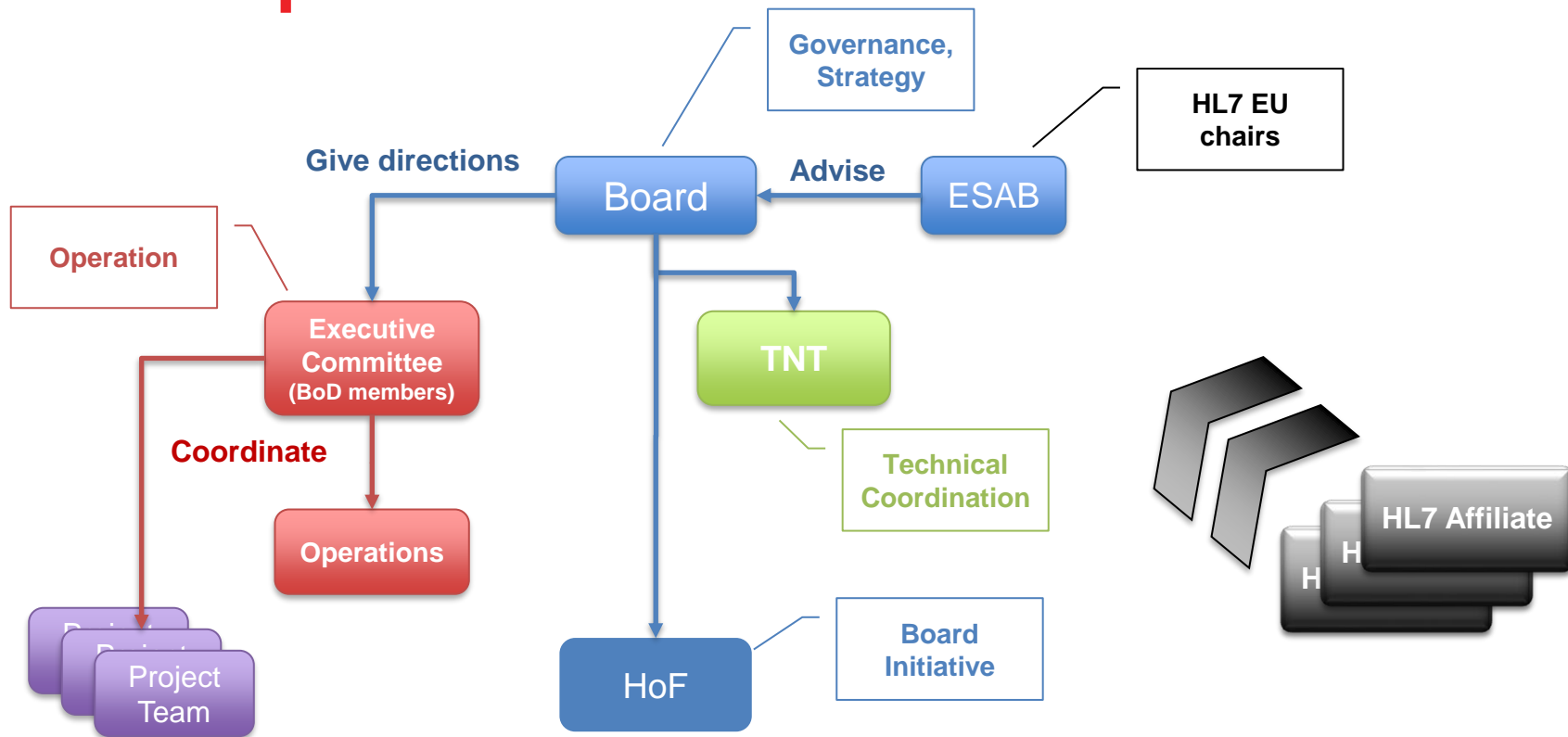
HL7 Europe serves its mission to

- Promote HL7 Standards
- Collect European wide standards requirements
- Collaborate with European entities to advance digital health

The collaboration model



HL7 Europe Structure



HL7 Europe Foundation Board of Directors 2023-2024

HL7 Int. Appointed



Ed Hammond



Andy Trescott



Julia Skapik



Anne Moen

HL7 Int. ex-officio



Mark McDougall



Charles Jaffee



Jens Christian Villadsen



Line Andreassen Sæle



Roeland Luykx



ESAB Elected



Henrique Martins



Robert Stegwee

HL7 EU Appointed



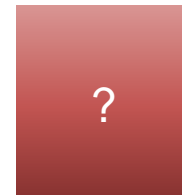
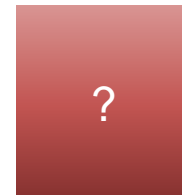
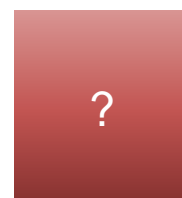
Catherine Chronaki



Giorgio Cangilioli

HL7 EU ex-officio

HL7 Europe Team in 2023



Relation with European Organizations

- eHealth Stakeholders group
- European Federation for Medical Informatics
- CEN
- JIC
- Act in Advisory Capacity to Projects
 - PharmaLedger
 - NFDI4Health
 - InterOpEHRate
 - mSEG Architecture Group



THE EUROPEAN PROJECT

Overview



2023 Active Projects

Oct. 2019 – Dec 2023
Platform for integrated
digital solution



Sep 2022 – Aug 2026
Data Space for rare
cancers



Jan 2023 – Dec 2024
Accelerate interoperability
based on E-EHRxF



FLUTE

May. 2023 – Mar 2027
Federated AIs for
diagnosis of prostate
cancer



Dec. 2019 – May 2024
Identification of Medicinal
Products (IDMP)



Mar 2021 – Feb 2025
Passport for childhood
cancer survivors



Nov 2019 – Oct 2025
Tailored Electronic
Product information



Jan 2023 - Dec 2026
Environmental
Surveillance System

EU Projects and HL7 FHIR



Oct. 2019 – Dec 2023
Platform for integrated
digital solution



Sep 2022 – Aug 2026
Data Space for rare
cancers



Jan 2023 – Dec 2024
Accelerate interoperability
based on E-EHRxF



May 2023 – Mar 2027
Federated AIs for
diagnosis of prostate
cancer

FLUTE



Dec. 2019 – May 2024
Identification of Medicinal
Products (IDMP)



Mar 2021 – Feb 2025
Passport for childhood
cancer survivors



Nov 2019 – Oct 2025
Tailored Electronic
Product information

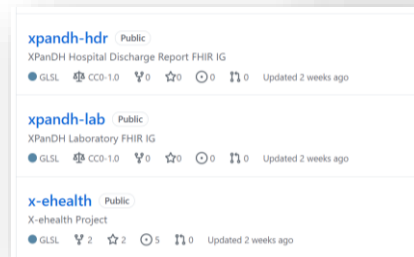
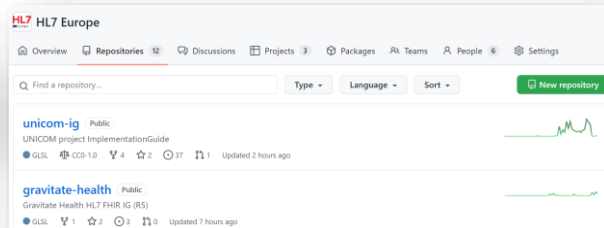


Jan 2023 - Dec 2026
Environmental
Surveillance System

2023 Active Projects



<https://github.com/hl7-eu>



FLUTE

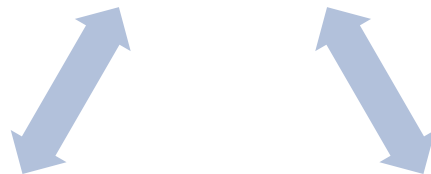


The PanCareSurPass FHIR IG



HL7 FHIR Logical
Models

What are the data managed by the
PanCareSurPass Platform for
generating recommendations and
passport

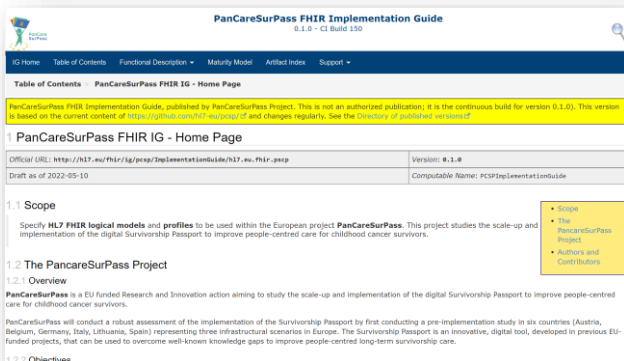


Help piloting centers
in mapping their data
in the PCSP profiles

Models to Profiles
Mapping

HL7 FHIR Profiles

How PCSP data
are represented
with HL7 FHIR



Name	Flags	Card.	Type	Description & Constraints
Chemotherapy		1..1	Element	This is an abstract profile Chemotherapy
relatedDiagnosis		1..1	Identifier	Related Diagnosis
startDate		1..1	dateTime	Start date
endDate		1..1	dateTime	End date
institutionOfTreatment		0..1	BackboneElement	Institution of treatment
description		0..1	string	Institution description
name		0..1	string	Institution name
address		0..1	BackboneElement	Institution address
name		0..1	string	Institution city
country		0..1	string	Institution country
productAdministration		0..1	BackboneElement	Product(s) administration data
agent		0..1	BackboneElement	Antineoplastic and immunostimulating agents
dose		0..1	BackboneElement	Dose (NOT in PCSP DB)
cumulativeDose		0..1	BackboneElement	Cumulative Dose

HL7 FHIR Logical Models

8.1.6 Logical Model: Chemotherapy - Mappings

Draft as of 2022-05-10

Mappings for the Chemotherapy logical model.

8.1.6.1 Mappings for FHIR (hl7.org/fhir/r4)

Chemotherapy	
Chemotherapy	MedicationAdministration.conformsTo('http://hl7.org/fhir/ig/pcsp/StructureDefinition/MedicationAdministration')
relatedDiagnosis	.reasonReference
startDate	.effectivePeriod.start
endDate	.effectivePeriod.end
institutionOfTreatment	.extension('http://hl7.org/fhir/ig/pcsp/StructureDefinition/ActLocation-eu-pcsp').conformsTo('http://hl7.org/fhir/ig/pcsp/StructureDefinition/Location-eu-pcsp')
description	Location.description
name	Location.name
address	Location.address.city
country	Location.address.country
productAdministration	.medication[x]
agent	.medicationCodeableConcept
dose	.dosage.dose
cumulativeDose	.extension('http://hl7.org/fhir/ig/pcsp/StructureDefinition/ResourceRelatedInfo-eu-pcsp').conformsTo('http://hl7.org/fhir/ig/pcsp/StructureDefinition/Observation-cumulativeDoseChemo-eu-pcsp')

Models to Profiles Mapping

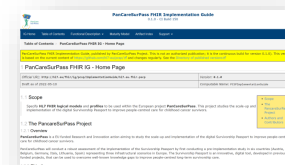
Text Summary	Differential Table	Snapshot Table	Snapshot Table (Must Support)	All
This structure is derived from MedicationAdministration				
Name	Flags	Card.	Type	Description & Constraints
MedicationAdministration		0..*	MedicationAdministration	Administration of medication to a patient
extension		0..*	Extension	Extension
resource-relatedInfo		0..1	Reference(Resource)	Slice: Unordered, Open by value:url Resource related information URL: http://hl7.org/fhir/ig/pcsp/StructureDefinition/resource-relatedInfo
event-location		0..1	Reference(Location)	Act Location URL: http://hl7.org/fhir/ig/pcsp/StructureDefinition/event-location
valueReference		0..1	Reference(Location PCSP)	Value of extension
workflow-supportingInfo		0..*	Reference(Resource)	Other information that may be relevant to this event. URL: http://hl7.org/fhir/ig/pcsp/StructureDefinition/workflow-supportingInfo
valueReference		1..1	Reference(DocumentReference)	Value of extension
status		1..1	code	In-progress not-done on-hold completed entered-in-error stopped unknown
medicationCodeableConcept		1..1	CodeableConcept	What was administered Binding: Antineoplastic and immunostimulating agents (extensible)
subject		1..1	Reference(Patient PCSP)	Who received medication
effectivePeriod		0..1	Period	Start and end time of administration
resourceReference		1..1	Reference(Patient PCSP)	Condition or observation that supports why the medication was administered

HL7 FHIR Profiles

Contribution to Standards



Contribution to Standards



Contribution to Standards



CDAR2_IC_PHARM_TEMPLATES_R1_D3_2023APR



HL7 CDA® R2 Implementation Guide:
Pharmacy Templates
Edition 1 (Universal Realm)
Ballot 3



Home Getting Started Documentation Data Types Resource Types Terminologies Artifacts Implementation Guides

Medication Definition

This is the Continuous Integration Build of FHIR (will be incorrect/inconsistent at times).
See the [Directory of published versions](#)

Work Group [Biomedical Research and Regulation](#) Standards Status: Info

15.0 Medication Definition Module

15.0.1 Introduction

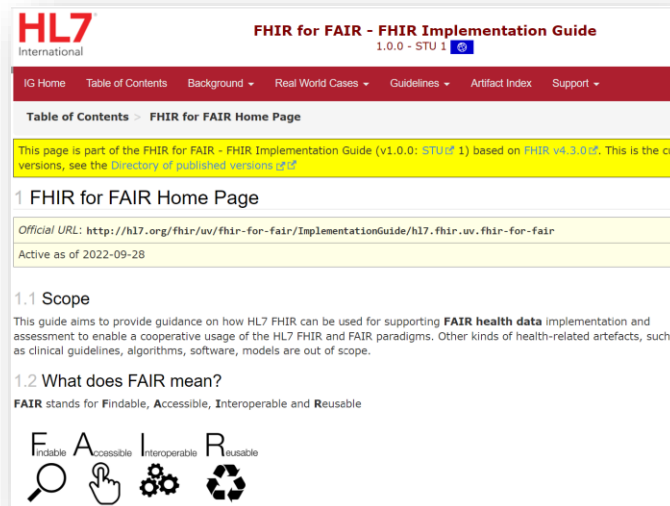
This module is concerned with resources and functionality in areas such as:

- The regulation and manufacturing of drugs, medicinal products and other medically-related substances or co-packaged devices.
- Detailed description of these same items, typically for regulators but also for any context where this level of detail is necessary, such as for clinical decision support.
- Indications and contra-indications for medications.
- The details of the chemical substances that may be ingredients for medications.

These resources are not typically used in direct patient care or day-to-day prescribing functionality (for which see the [Medications Module](#)).

Contribution to Standards

UNCOM



Contribution to Standards



First HL7 EU IG project

THE TECHNICAL COORDINATION TEAM

The background

HL7 Europe Goals 2021



Nurture the European HL7 community

Leverage on the existing EU initiatives (e.g., X-eHealth, eHDSI, eHAction)

Create a core EU technical coordination team



Collaboration among affiliates and experts

Capacity building

European artefacts

Goals



Facilitate the
Technical
collaboration among
affiliates and experts

Promote the
Capacity building

Develop European
Artefacts



What the EU Technical CoordiNation Team (TNT) is...



- TNT aims to support the HL7 EU goals (technical perspective)
- TNT are voluntary-based activities
- **TNT activities are not supposed to overlap or conflict with any existing HL7 groups or activities at the affiliate and international levels.**

The initial team



Giorgio Cangilioli
HL7 Italy



Jens Villadsen
HL7 Denmark



Francois Maçary
HL7 France



Christof Gessner
HL7 Germany



Rik Smithies
HL7 United Kingdom



Jose Costa-Teixeira
HL7 Belgium



Roman Radomski
HL7 Poland

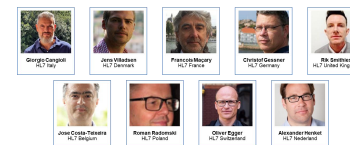















Oliver Egger
HL7 Switzerland



Alexander Henket
HL7 Nederland

The team today



Giorgio Cangili HL7 Europe 	Jens Villadsen HL7 Denmark 	Francois Maçary HL7 France 	Nicolas Riss HL7 France 	Christof Gessner HL7 Germany 
Kai Heitmann HL7 Germany 	Gabriel Kleinoscheg HL7 Austria 	Alexander Berler HL7 Greece 	Alexander Mense HL7 Austria 	Kružík Hynek HL7 Czech Republic 
Rik Smithies HL7 United Kingdom 	Leonardo Alcaro HL7 Italy 	Jose Costa-Teixeira HL7 Belgium 	Sebastian Bojanowski HL7 Poland 	Øyvind Aassve HL7 Norway 
João Almeida HL7 Portugal 	Oliver Egger HL7 Switzerland 	Alexander Henket HL7 Nederland 	Daniel Karlsson HL7 Sweden 	

Confluence

The screenshot shows the Confluence interface for the 'HL7 Europe' space. The sidebar on the left contains a 'Pagine' (Pages) section with a list of pages. A red box highlights the 'European Strategic Advisory board (ESAB)' and 'European Technical Coordination Team (TNT)' entries. The main content area displays the 'HL7 Europe' dashboard, including a large 'HL7' logo and a list of pages. A 'Members' section on the right shows a grid of team members with their names and country flags.

HL7 Europe

Dashboard 641 views

Creto da Joshua Prociuous, ultima modifica di Giorgio Cangili il feb 12, 2021

HL7

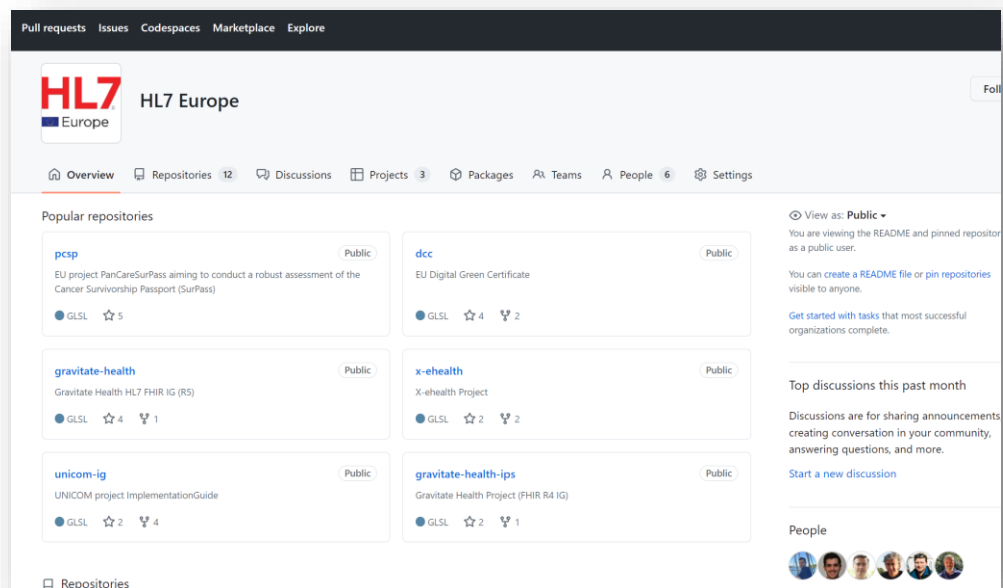
European

Members

Giorgio Cangili HL7 Europe	Jens Villadsen HL7 Denmark	Francois Maçary HL7 France
Kai Heitmann HL7 Germany	Gabriel Kleinoscheg HL7 Austria	Alexander Berler HL7 Greece
Rik Smithies HL7 United Kingdom	Leonardo Alcaro HL7 Italy	Jose Costa-Teixeira HL7 Belgium

<https://confluence.hl7.org/display/HEU/HL7+Europe>

<https://github.com/hl7-eu>



Calendar, public mailing list and chat

<https://chat.fhir.org/#narrow/stream/242580-europe>

March 2023 Overview of all conference calls

Sun	Mon	Tue	Wed	Thu	Fri	Sat
Feb 26	Feb 27	Feb 28	1	2	3	4
	25 Calls	22 Calls	29 Calls	21 Calls	12 Calls	
	Click for details	Click for details	Click for details	Click for details	Click for details	
5	6	7	8	9	10	11
	26 Calls	22 Calls	24 Calls	19 Calls	10 Calls	
	Click for details	Click for details	Click for details	Click for details	Click for details	
12	13	14	15	16	17	18
	25 Calls	22 Calls	24 Calls	20 Calls	12 Calls	
	Click for details	Click for details	Click for details	Click for details	Click for details	
19	20	21	22	23	24	25
	26 Calls	23 Calls	24 Calls	21 Calls	11 Calls	
	Click for details	Click for details	Click for details	Click for details	Click for details	
26	27	28	29	30	31	Apr 1

24/3/2023 Close

- Early Friday Bi-weekly v2MG call (for V2 Management Group) - Early Friday Bi-weekly v2MG call**
Mar 24, 2023, 9:00 AM ET (GMT -5) Duration: 1 Hour
Phone: +1 770-657-9272, Participant Code: 273963
Call Details | Edit | Cancel | Delete | Add to Calendar
- HL7 Europe Technical Coordination Team (for HL7 Europe) - HL7 Europe Technical Coordination Team**
Mar 24, 2023, 9:30 AM ET (GMT -5) Duration: 1 Hour
Phone: +1 770-657-9170, Participant Code: 676766
Call Details | Edit | Cancel | Delete | Add to Calendar
- Order Logical Model for FHIR (for Orders and Observations) - Order Logical Model for FHIR**
Mar 24, 2023, 10:00 AM ET (GMT -5) Duration: 1 Hour
Phone: +1 929-436-2666, Participant Code: 510 046 7805
Call Details | Edit | Cancel | Delete | Add to Calendar

Europe

New mailing list for HL7 Europe

EU Laboratory Report FHIR IG

stream events

EuroVulcan Event

✓ affiliate legal text

more topics

- Europe/TNT
- FAIR
- IPS
- Italy
- JIRA/Confluence
- svc
- Vulcan/ePI
- committees/notification

Active

- analytics on FHIR
- Announcements
- argonaut
- austria tc

1407

123

39

85

Europe

New mailing list for HL7 Europe

YESTERDAY

Bart Decuyper

@Giorgio Cangilioli I sent a mail to the hl7_europe@lists.hl7.org address, but I did not receive any answer. How can I subscribe to this list?

Giorgio Cangilioli

usually with [hl7.org](http://www.hl7.org) => Resources => listservs. (<http://www.hl7.org/myhl7/managerlistservs.cfm?ref=nav>),

Bart Decuyper

Rik Smithies

down for me at the moment, not sure if temporary, or if it perhaps moved with the new website

It's working now, all good

Giorgio Cangilioli

Rik Smithies said:

It's working now, all good

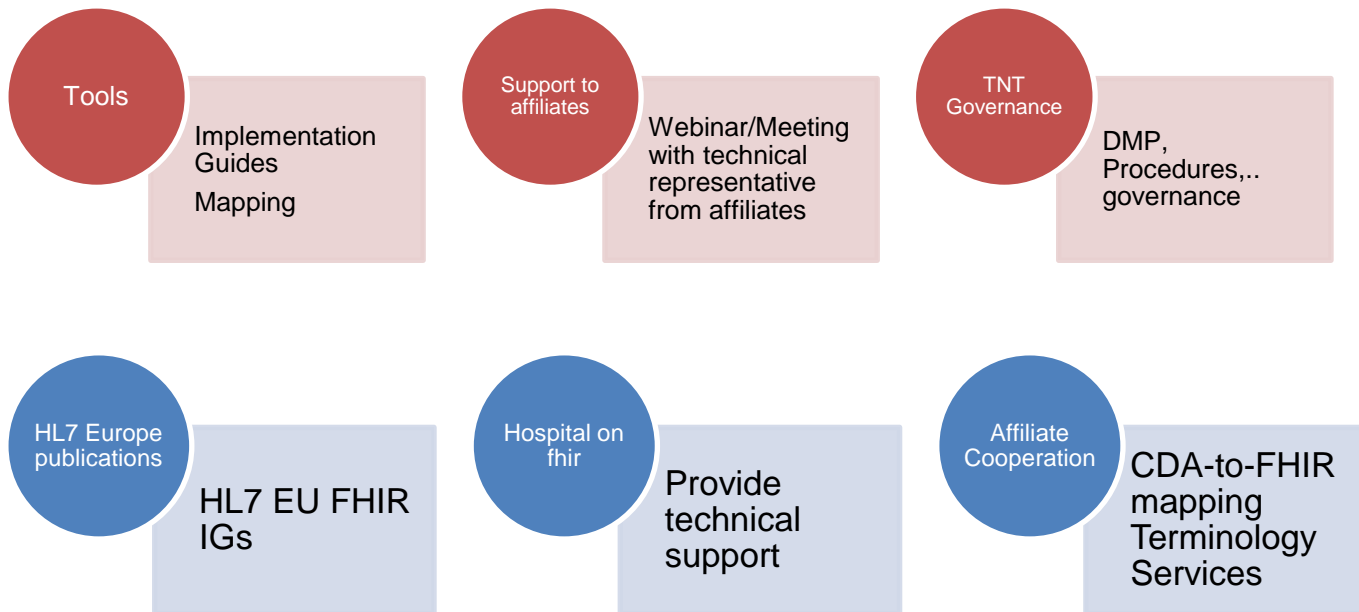
good to know :-)

HL7EU

EDIT hl7_europe (Primary List)

hl7_europe@lists.hl7.org

Topics



Topics

Tools

Implementation
Guides
Mapping

Support to
affiliates

Webinar/Meeting
with technical
representative
from affiliates

TNT
Governance

DMP,
Procedures,..
governance

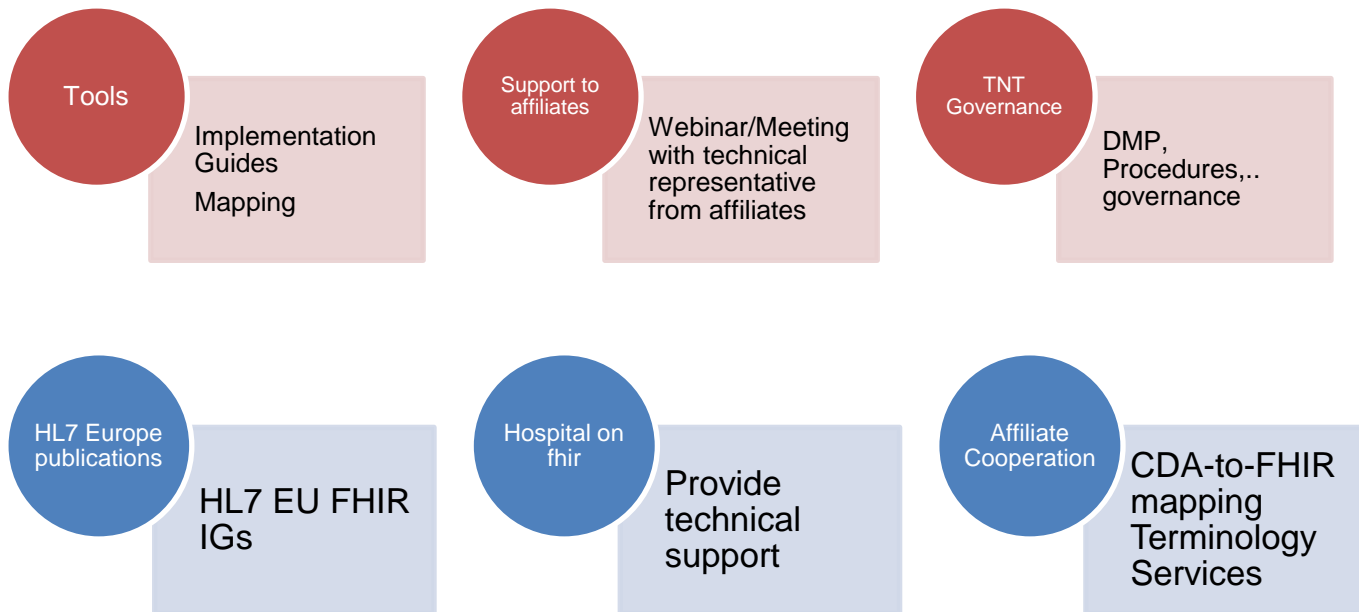
To be further
elaborated



Virtual Workshop
April 28th



Areas of interest



Areas of interest

HL7 Europe
publications

HL7 EU FHIR
IGs

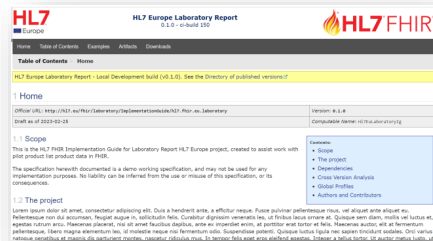
Hospital on
fhir

Provide
technical
support

Affiliate
Cooperation

CDA-to-FHIR
mapping
Terminology
Services

To be further elaborated



Kick-off of the
Laboratory Report FHIR
IG project Friday March
31st

European
EHRxF



Medical Imaging
and reports



Laboratory Results



Hospital Discharge
report

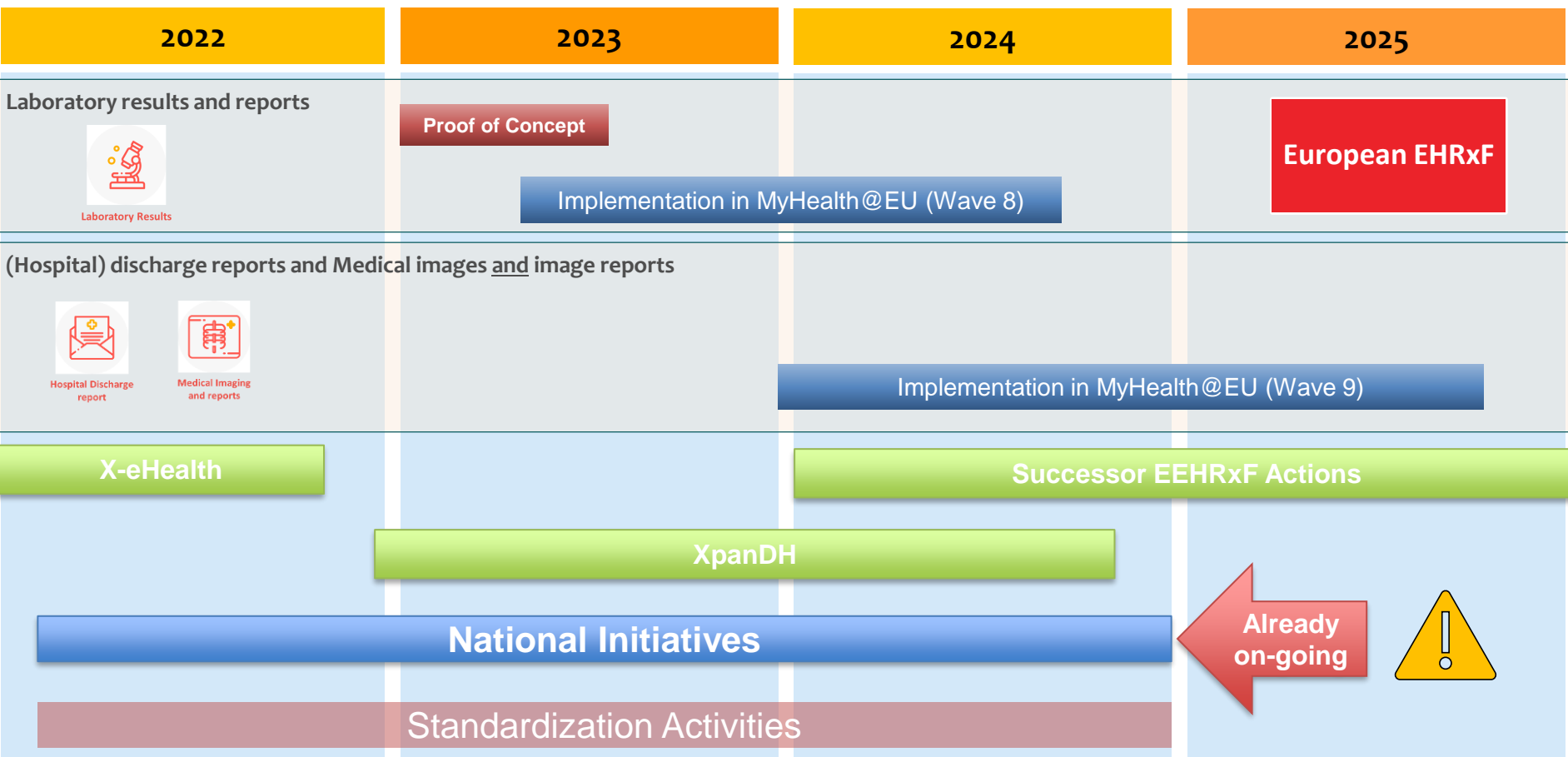


Patient Summary

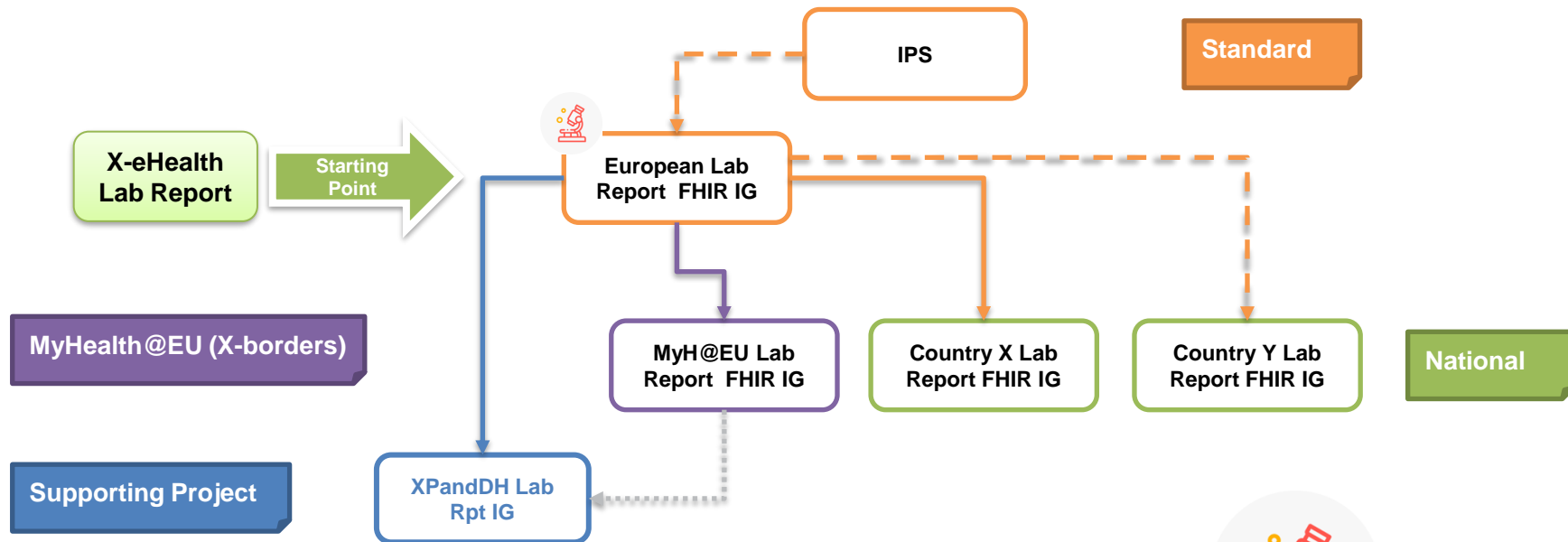


ePrescription

EHDS - Art 5 Priorities



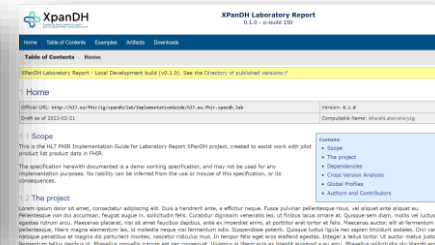
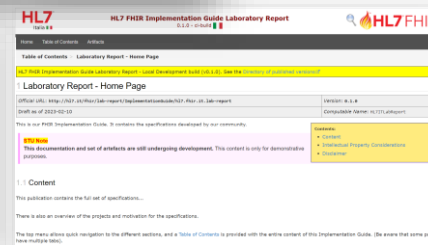
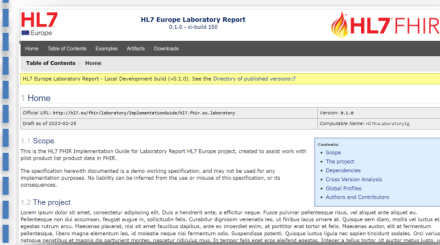
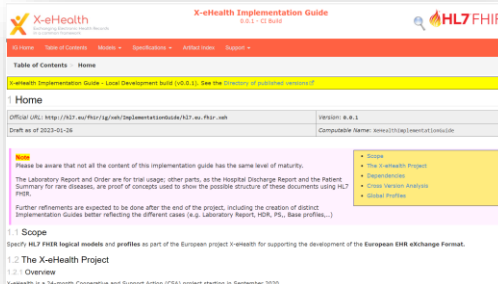
Lab Report (EHRxF)



Lab Report (EHRxF)



X-eHealth Lab Report



European Lab
Report FHIR IG

MyH@EU Lab
Report FHIR IG

Country X Lab
Report FHIR IG

XPandDH Lab
Rpt IG

Lab Report (EHRxF)

HL7 Europe Laboratory Report
0.0.0 - v-build 100

Home Table of Contents Examples Articles Downloads

Table of Contents Home

HL7 Europe Laboratory Report - Local Development build (v0.0.0). See the Directory of published versions?

Home

Official URL: <http://hl7.org/HL7Europe/LaboratoryReport/LocalDevelopmentBuild/0.0.0-rc100>
Draft as of 2023-02-01

Version: 0.0.0
Comparable Name: HL7Europe.LaboratoryReport

1.1 Scope
This is the HL7 FHIR Implementation Guide for Laboratory Report HL7 Europe project, created to assist work with this project for product use in FHIR.
The specification herewith documented is a demo working specification, and may not be used for any implementation purposes. No liability can be inferred from the use or misuse of this specification, or its consequences.

1.2 The project
Latest version date: 2023-02-01. Considered adjusting all. Due a hard-coded date, a full-time effort is required. The specification herewith documented is a demo working specification, and may not be used for any implementation purposes. No liability can be inferred from the use or misuse of this specification, or its consequences.

Contents

- Scope
- The project
- Dependencies
- Cross Version Analysis
- Global Profiles
- Authors and Contributors

MyHealthEU Laboratory Report
0.0.0 - v-build 100

Home Table of Contents Examples Articles Downloads

Table of Contents Home

MyHealthEU Laboratory Report - Local Development build (v0.0.0). See the Directory of published versions?

Home

Official URL: <http://hl7.org/HL7Europe/LaboratoryReport/LocalDevelopmentBuild/0.0.0-rc100>
Draft as of 2023-02-01

Version: 0.0.0
Comparable Name: HL7Europe.LaboratoryReport

1.1 Scope
This is the HL7 FHIR Implementation Guide for Laboratory Report MyHealthEU project, created to assist work with this project for product use in FHIR.
The specification herewith documented is a demo working specification, and may not be used for any implementation purposes. No liability can be inferred from the use or misuse of this specification, or its consequences.

1.2 The project
Latest version date: 2023-02-01. Considered adjusting all. Due a hard-coded date, a full-time effort is required. The specification herewith documented is a demo working specification, and may not be used for any implementation purposes. No liability can be inferred from the use or misuse of this specification, or its consequences.

Contents

- Scope
- The project
- Dependencies
- Cross Version Analysis
- Global Profiles
- Authors and Contributors

On hold

Not started

XpandH Laboratory Report
0.0.0 - v-build 100

Home Table of Contents Examples Articles Downloads

Table of Contents Home

XpandH Laboratory Report - Local Development build (v0.0.0). See the Directory of published versions?

Home

Official URL: <http://hl7.org/HL7Europe/LaboratoryReport/LocalDevelopmentBuild/0.0.0-rc100>
Draft as of 2023-02-01

Version: 0.0.0
Comparable Name: HL7Europe.LaboratoryReport

1.1 Scope
This is the HL7 FHIR Implementation Guide for Laboratory Report XpandH project, created to assist work with this project for product use in FHIR.
The specification herewith documented is a demo working specification, and may not be used for any implementation purposes. No liability can be inferred from the use or misuse of this specification, or its consequences.

1.2 The project
Latest version date: 2023-02-01. Considered adjusting all. Due a hard-coded date, a full-time effort is required. The specification herewith documented is a demo working specification, and may not be used for any implementation purposes. No liability can be inferred from the use or misuse of this specification, or its consequences.

Contents

- Scope
- The project
- Dependencies
- Cross Version Analysis
- Global Profiles
- Authors and Contributors

On hold

HL7 FHIR Implementation Guide Laboratory Report
0.0.0 - v-build 100

Home Table of Contents Examples Articles Downloads

Table of Contents Home

HL7 FHIR Implementation Guide Laboratory Report - Local Development build (v0.0.0). See the Directory of published versions?

Home

Official URL: <http://hl7.org/HL7Europe/LaboratoryReport/LocalDevelopmentBuild/0.0.0-rc100>
Draft as of 2023-02-01

Version: 0.0.0
Comparable Name: HL7Europe.LaboratoryReport

1.1 Scope
This is the HL7 FHIR Implementation Guide for Laboratory Report HL7 FHIR project, created to assist work with this project for product use in FHIR.
The specification herewith documented is a demo working specification, and may not be used for any implementation purposes. No liability can be inferred from the use or misuse of this specification, or its consequences.

1.2 The project
Latest version date: 2023-02-01. Considered adjusting all. Due a hard-coded date, a full-time effort is required. The specification herewith documented is a demo working specification, and may not be used for any implementation purposes. No liability can be inferred from the use or misuse of this specification, or its consequences.

Contents

- Scope
- The project
- Dependencies
- Cross Version Analysis
- Global Profiles
- Authors and Contributors

HL7 FHIR Implementation Guide Laboratory Report
0.0.0 - v-build 100

Home Table of Contents Examples Articles Downloads

Table of Contents Home

HL7 FHIR Implementation Guide Laboratory Report - Local Development build (v0.0.0). See the Directory of published versions?

Laboratory Report - Home Page

Official URL: <http://hl7.org/HL7Europe/LaboratoryReport/LocalDevelopmentBuild/0.0.0-rc100>
Draft as of 2023-02-01

Version: 0.0.0
Comparable Name: HL7Europe.LaboratoryReport

1.1 Scope
This is the HL7 FHIR Implementation Guide for Laboratory Report HL7 FHIR project, created to assist work with this project for product use in FHIR.
The specification herewith documented is a demo working specification, and may not be used for any implementation purposes. No liability can be inferred from the use or misuse of this specification, or its consequences.

1.2 The project
Latest version date: 2023-02-01. Considered adjusting all. Due a hard-coded date, a full-time effort is required. The specification herewith documented is a demo working specification, and may not be used for any implementation purposes. No liability can be inferred from the use or misuse of this specification, or its consequences.

Contents

- Scope
- The project
- Dependencies
- Cross Version Analysis
- Global Profiles
- Authors and Contributors

On-going

Areas of interest

HL7 Europe
publications

HL7 EU FHIR
IGs

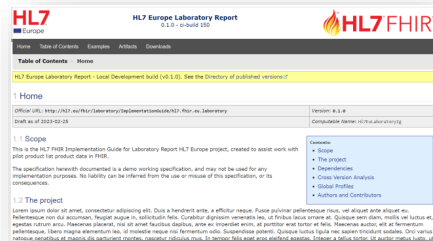
Hospital on
fhir

Provide
technical
support

Affiliate
Cooperation

CDA-to-FHIR
mapping
Terminology
Services

To be further elaborated



**Kick-off of the
Laboratory Report FHIR
IG project Friday March
31st**

**European
EHRxF**



Medical Imaging
and reports



Laboratory Results



Hospital Discharge
report



Patient Summary



ePrescription

EHDS - Art 5 Priorities

EHRxF: supporting artefacts

Affiliate
Cooperation

CDA-to-FHIR
mapping
Terminology
Services



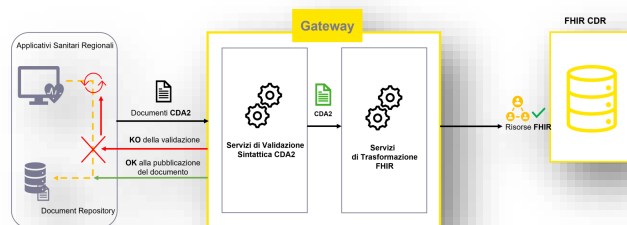
Data definitions
Data categories
Data groups
Data fields
Cardinalities
Data types
Code systems
Value sets

Technology
Base content representation standard or specification
Specific content representation profiles
Base message transfer standard or specification
Specific message transfer profiles
Additional technical specifications

Business requirements and workflows
Use case and workflow descriptions
Requirements catalogue
Infrastructure architecture
Licenses or legal agreements

Development and testing
Release management processes
Stakeholder involvement processes and tools
Publication platform
Testing procedures and tools

Supporting elements
General principles and instructions
Examples
Conversion instructions and tools
Data models
Certification procedures and tools



```

cda.recordTarget as recordTarget then
  recordTarget.patientRole as patient then
    patient.id as id -> patient.identifier as identifier then (
      id.root as r -> identifier.system translate(r, "http://hl7.org/fhir/ConceptMap/special-ids2url", "url") "root13"
      id.extension as ext1 -> identifier.value as ext1 "value"
      id.assigningAuthorityName as a -> identifier.assigner as a, a.display as s;
    ) "id13"
    patient.id as id where (root13="2.16.840.1.113883.2.9.4.3.2") or (root13="2.16.840.1.113883.2.9.4.3.7")
    or (root13="2.16.840.1.113883.2.9.4.3.3") or (root13="2.16.840.1.113883.2.9.4.3.17") or
    (root13="2.16.840.1.113883.2.9.4.3.15") then (
      id.extension as ext -> requestPAT.url + append("Patient?identifier=" + ext) "UID"
    ) "ext1"
  ) "record"
  } "patient"
  
```



Conversion engines

THE HOSPITALS-ON-FHIR INITIATIVE

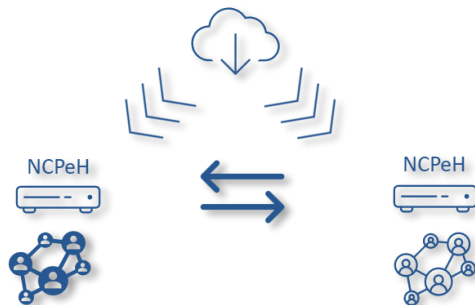


European EHRxF: engagement



*HL7 Europe launched network of hospitals and other healthcare provider organizations to **foster** the **adoption** of HL7 FHIR-based interoperability.*

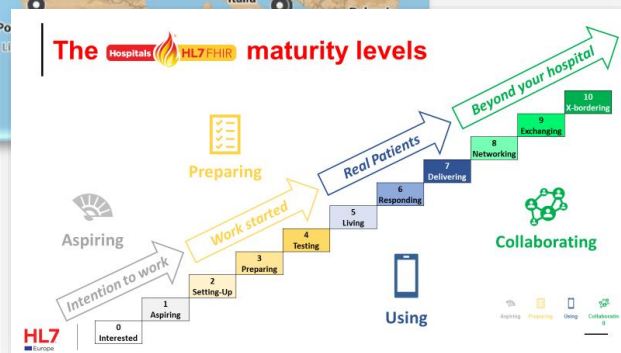
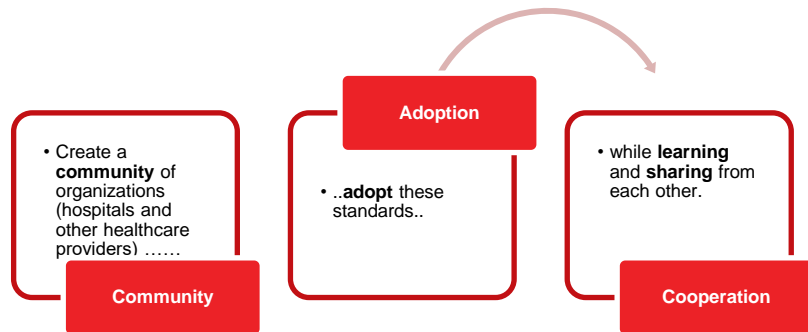
**No
interoperability
without data**



**Enable and
support standard
adoption**

**Not only country-to-country
but cooperation among hospitals**

Standards and European EHRxF



Put your hospital on the map



<https://www.hospitalsonfhir.eu>

Put Your Hospital On the HL7 FHIR Map

FHIR registration Form

*Campo obbligatorio

Compila modulo

Moduli Google

Questo modulo è stato creato all'interno di hl7europe.org.

More information, joining Hospitals-on-FHIR, or suggestions – email us info@hospitalsonfhir.eu



Thank you!

