Lessons learnt from Swiss Interopability Test Events

Annatina Foppa, ad interim Head of eHealth Suisse

Health care: Regional responsibility with mostly private care providers
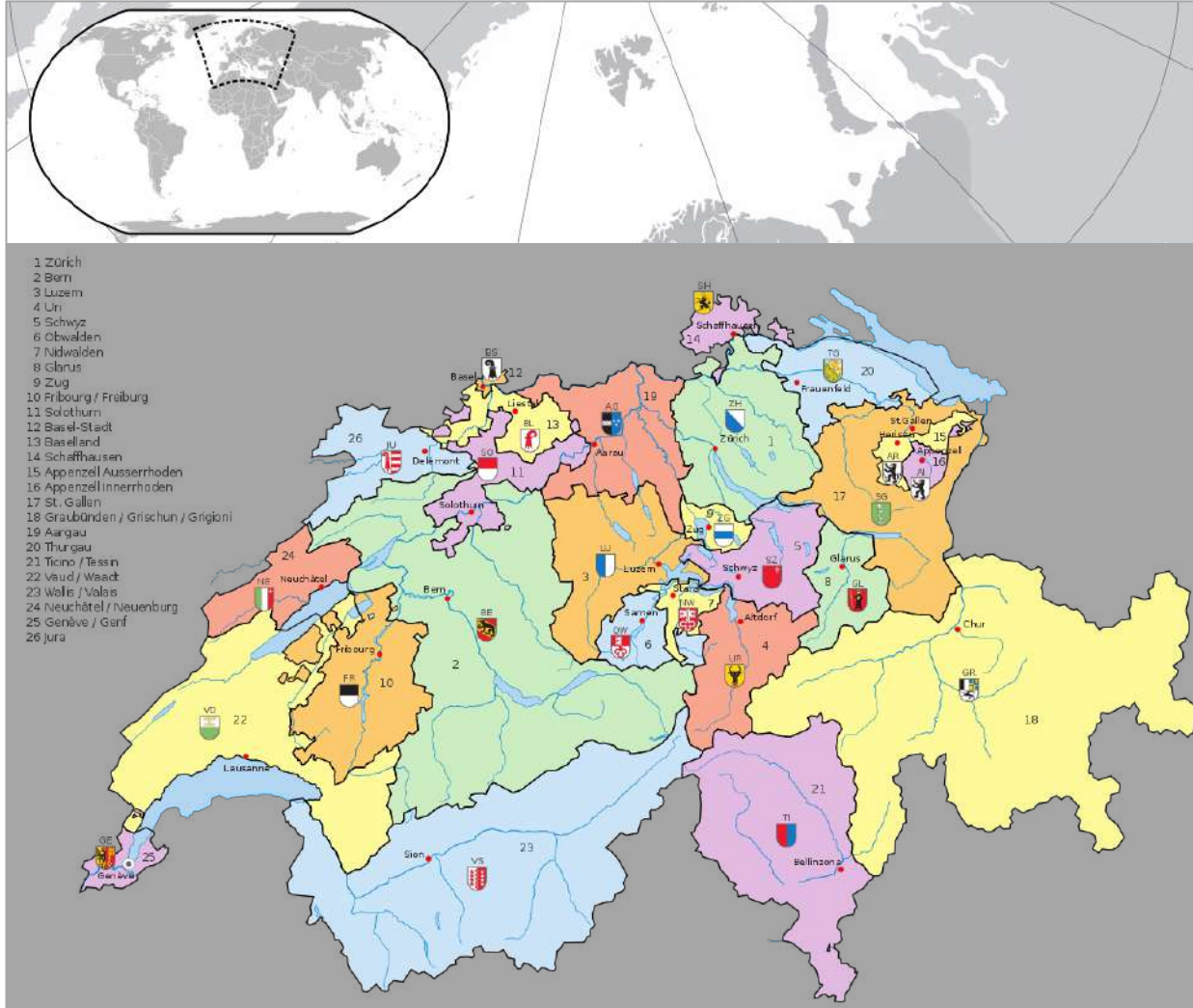
- ✓ Area: 41'000 km2

- ✓ Population: 8,6 Million

- ✓ 26 Health Systems (regional responsibility → "Cantons")

- ✓ Thousands of mainly private care providers
  - ➢ hospitals (300)
  - ➢ doctors cabinets (18'000)
  - ➢ home care entities (2000)
  - ➢ nursing homes (1500)
  - ➢ pharmacies (1800)

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Study: Digital transformation succeeds…

- ✓ First: An **effective strategy** based on objectives shared by the main actors.

- ✓ Second: **political leadership** through clear objectives.

- ✓ Third: **coordinating bodies** in the form of national, politically anchored digital health agencies, especially for the critical area of standardization.

Strategie eHealth Schweiz 2.0 2018–2022

Ziele und Massnahmen von Bund und Kantonen zur Verbreitung des elektronischen Patienten-dossiers sowie zur Koordination der Digitalisierung rund um das elektronische Patientendossier
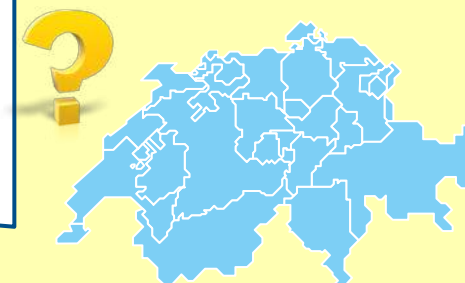
27 Health systems and many private actors

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BertelsmannStiftung

Digitalisierungsstrategien im internationalen Vergleich

POL	DEU	FRA	CHE	BEL	ITA	AUS	AUT	NLD	PRT	SWE	GBR	ESP	ISR	DNK	CAN	EST
28.5	30	31.6	40.6	54.7	55.8	57.3	59.8	66.1	67.2	68.3	70	71.4	72.4	72.5	74.7	81.9

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eHealth Strategy 2.0 (2018-2022)

Goals of the strategy:

- **Introduction and dissemination of the EPR**: The "Swiss eHealth Strategy 2.0" aims to introduce and disseminate the Electronic Patient Record EPR.

- **Coordination of digitization**: It should also help to improve the coordination and harmonisation of digitization in the health sector.

- **Not an overall strategy**: It is therefore not a global strategy designed to support the digital transformation of the health system.
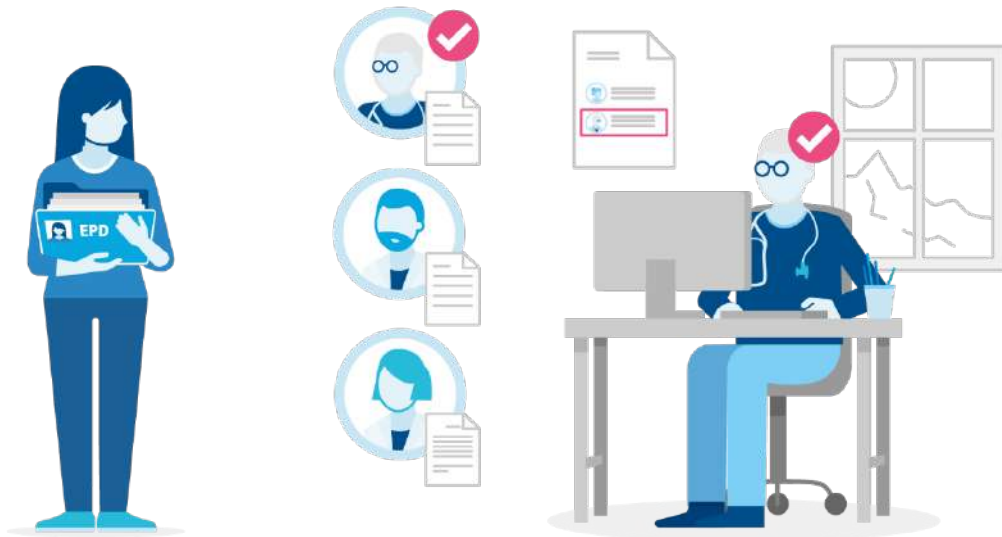
The National Patient Record EPR – the user's perspective

✓ Patients decide for an EPR (Opt-in)

✓ Patients can see and access their health data

✓ Patients give access rights

✓ Patients can see the access log

✓ Patients can add their own data to the patient record

✓ Patients can nominate a proxy with the same rights

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The EPR – connecting decentralized regional projects
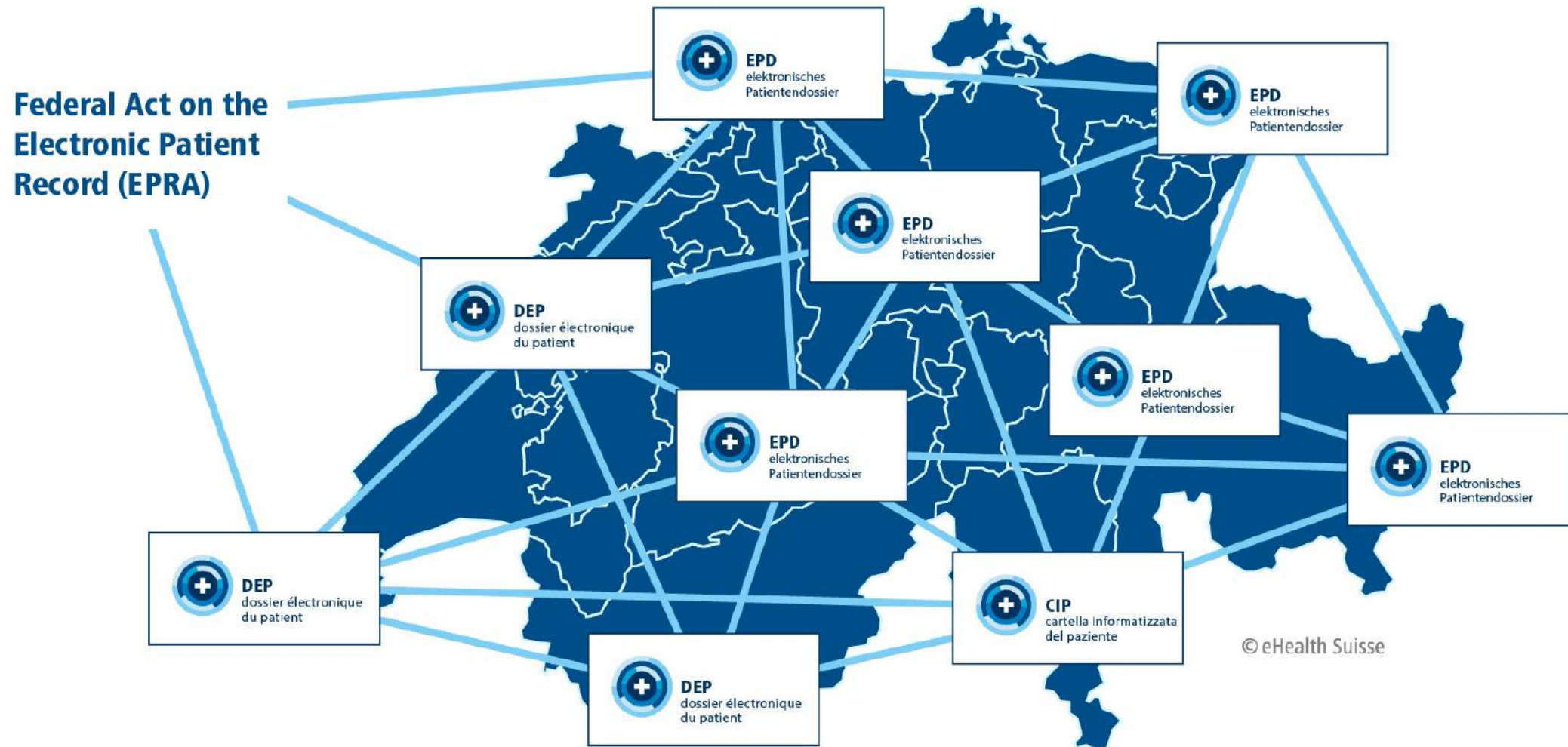
National Electronic Patient Record (EPR): international standards

Technical cross-linking

IHE | Integrating the Healthcare Enterprise
SUISSE

Structure of the content
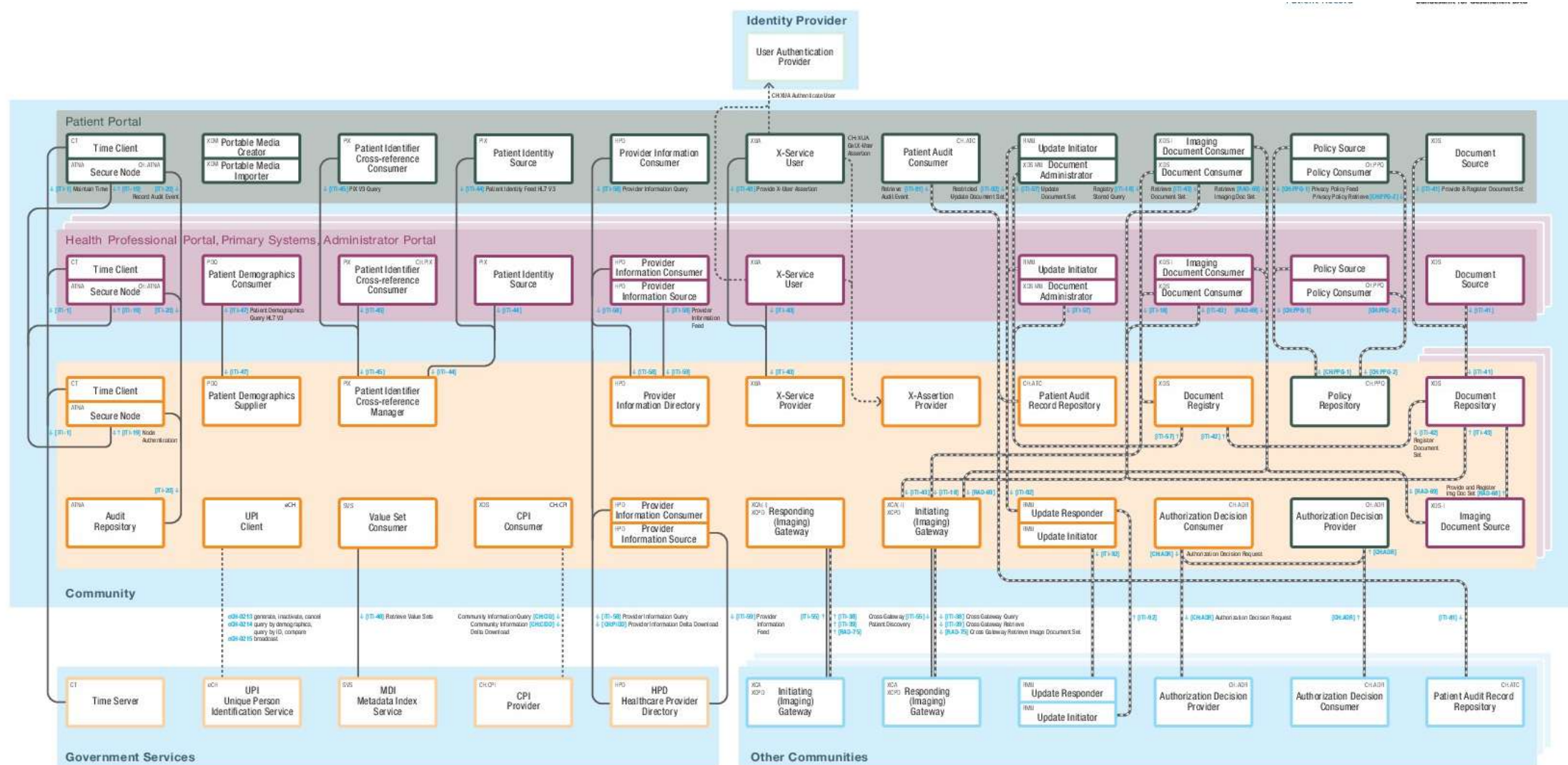
CdA
Clinical Document Architecture

HL7 FHIR

Filling gaps in coding

SNOMED CT
The global language of healthcare

EPR

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EPR Basic Design: Actors and Transactions

Profiles in use: IHE ITI Profiles

IHE Profiles (Annex 5), CH:Extension (Annex 5, Amendment 1)

ATNA	Audit Trail and Node Authentication
CT	Consistent Time (basic functionality)
HPD	Health Provider Directory
PDQV3	Patient Demographics Query HL7 V3
PIXV3	Patient Identifier Cross-referencing HL7 V3
RMU	Restricted Metadata Update
SVS	Sharing Value Sets
XCA	Cross-Community Access
XCA-I	Cross-Community Access for Imaging
XCPD	Cross-Community Patient Discovery
XDM	Cross-Enterprise Document Media Interchange
XDS	Cross-Enterprise Document Sharing
XDS-I	Cross-Enterprise Document Sharing for Imaging
XDS MU	Document Metadata Update
XUA	Cross-Enterprise User Assertion

- When possible IHE ITI Profiles (e.g., Cross Community Access XCA) are used and adapted to Swiss specific requirements in a national extension
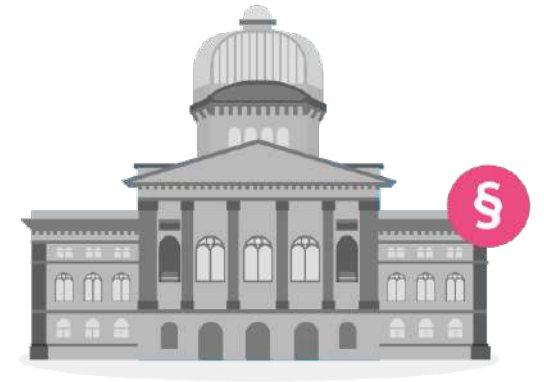
- Mandatory by EPR law

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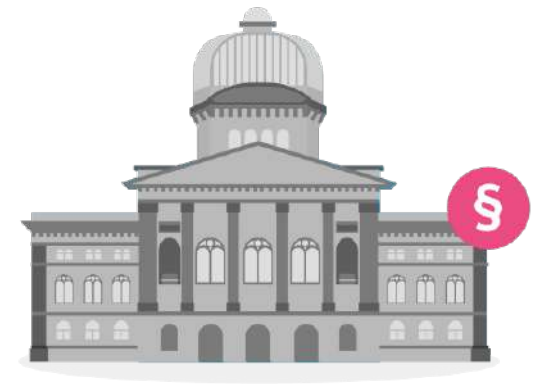
Profiles in use: National Integration Profiles

National Integration Profiles (Annex 5, Amendment 2)

CH:ADR	Authorization Decision Request
CH:ATC	Audit Trail Consumption
CH:CPI	Community Portal Index

- If no IHE Profile applies, a Swiss national profile was specified using the IHE ITI as a template.

- Specify the use of international and national standards (e.g. FHIR, SAML 2.0, eCH).

- Mandatory by EPR law

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Future Profiles: mHealth

mHealth (Annex x)
SMART on FHIR
IUA
CH:PIXm
MHD
RESTFul ATNA

- Is tested currently at the EPR Projectathon

- Not yet mandatory by EPR law, planned for future revision

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Lessons learnt from the use of IHE ITI Profiles

- The decision to "learn from others" and use the IHE ITI profiles is **an overall success**. Vendor independency and the testability of the profiles **accelerated the design** of the Swiss EPR.

- The Swiss national extension exceeds what was expected by the IHE community. The **effort to maintain** the national profiles and national extension is significant but manageable.

- **Monthly meetings with the vendors helped us to increase the quality** of the national extensions, national profiles and changes.

- Currently the IHE Profiles have limited support for authentication and authorization **which requires national profiles**. We work for adaption of international profiles **to be applicable for Swiss EPR**.

- We engage in the infrastructure technical committee of IHE International to **pass back the best practices and national profiles to the community**.

Lessons learnt from Swiss Interopability Test Events

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National Interoperability Test Events since 2017 (EPR Projectathon)

- **Six national on-site EPR Projectathons**, regularly in September
- **Two Swiss EPR testing corners** at Connectathon Den Haag Rennes (2018, 2019)
- **One online Projectathon** dedicated to eMedication (2021)
- In **general good vendors participation**: 15-20 firms, 50-80 vendors participants

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National Interoperability Test Events since 2017 (EPR Projectathon)

- Contract **with IHE Services Europe** since 2017 (WTO contract)
- Tool suite of the EPR reference environment **based on Gazelle**
- **All EPR profiles testable**, including planned ones
- **«Group tests» for defined use cases** (e.g. «Patient uploads document»)

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Differences between Projectathon and Connectathon

- **Results are not public**: eHealth Suisse just publishes a general final report. Companys are free to publish their own results. Projectathon should be a learning event

- **Monitors don't have to be vendor independent:** The only requirement is knowledge on the Swiss EPR profiles

- **Attendance fee**: 350 CHF, covers expenses for catering

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Lessons learnt from Interoperability testing

- **Win-win-win effect:** Vendors, reference environment, basic specs

- Participation **of EPR platform providers** as testing partner is crucial, attracts other systems

- Testing takes time: You need **in average three testing events for mature specs** (and tools and products)

- Different velocity of technical and political process: EPR is taking off only slowly. **Difficult to keep the initial spirit alive** and motivate vendors to test, most of all so-called primary systems.

- Projectathon testing is no guarantee for a fine working national EPR system (**real life complexity**)

- **Builds up a community,** makes interoperability visible

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Many thanks for your attention!

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