eHealth in Switzerland

Political, legal and organisational issues

Adrian Schmid

Head of eHealth Suisse

Swiss Coordination Office for eHealth

30 years of uncoordinated IT development

eHealth Suisse – national coordination since 2008
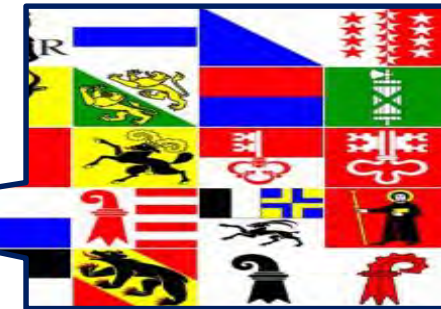
- ✓ Joint target orientation of all actors
- ✓ Coordination between regional projects
- ✓ Definition of an architecture and of standards
- ✓ Communication and promotion of acceptance

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- ✓ **Overall framework**

- ✓ Swiss federalism and limited competence at the national level

- ✓ The Swiss Health Strategy I

- ✓ Milestones of the past years

- ✓ The Swiss EPR law, certification approach

- ✓ The Swiss Health Strategy II

- ✓ Leadship issues

- ✓ Collaborative stakeholder inclusion

- ✓ Strengths and risks

- ✓ Conclusion, discussion

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eHealth European Interoperability Framework

Legal → Legal and regulatory

Organisational → Policy

Organisational → Care Process

Semantic → Information

Technical → Applications

Technical → IT Infrastructure

Security, Governance

Standards and Profiles, Certification

architects, business analysts

professionals

Information analysts, coders

System engineers

System architects

Interoperability
=
the ability of information systems to work together seamlessly without the need for separate agreements.

https://ec.europa.eu/health/sites/health/files/ehealth/docs/ev_20151123_co03_en.pdf

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April 2020
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The four main dimensions of interoperability

Overall layer

- Social acceptance (population, professionals)

- Education

- eHealth literacy

- Communication

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No common ethnic or linguistic identity

- ➤ 4 regions
- ➤ 4 cultures
- ➤ 4 languages

German

French

Rumantsch

Rumantsch

Italian

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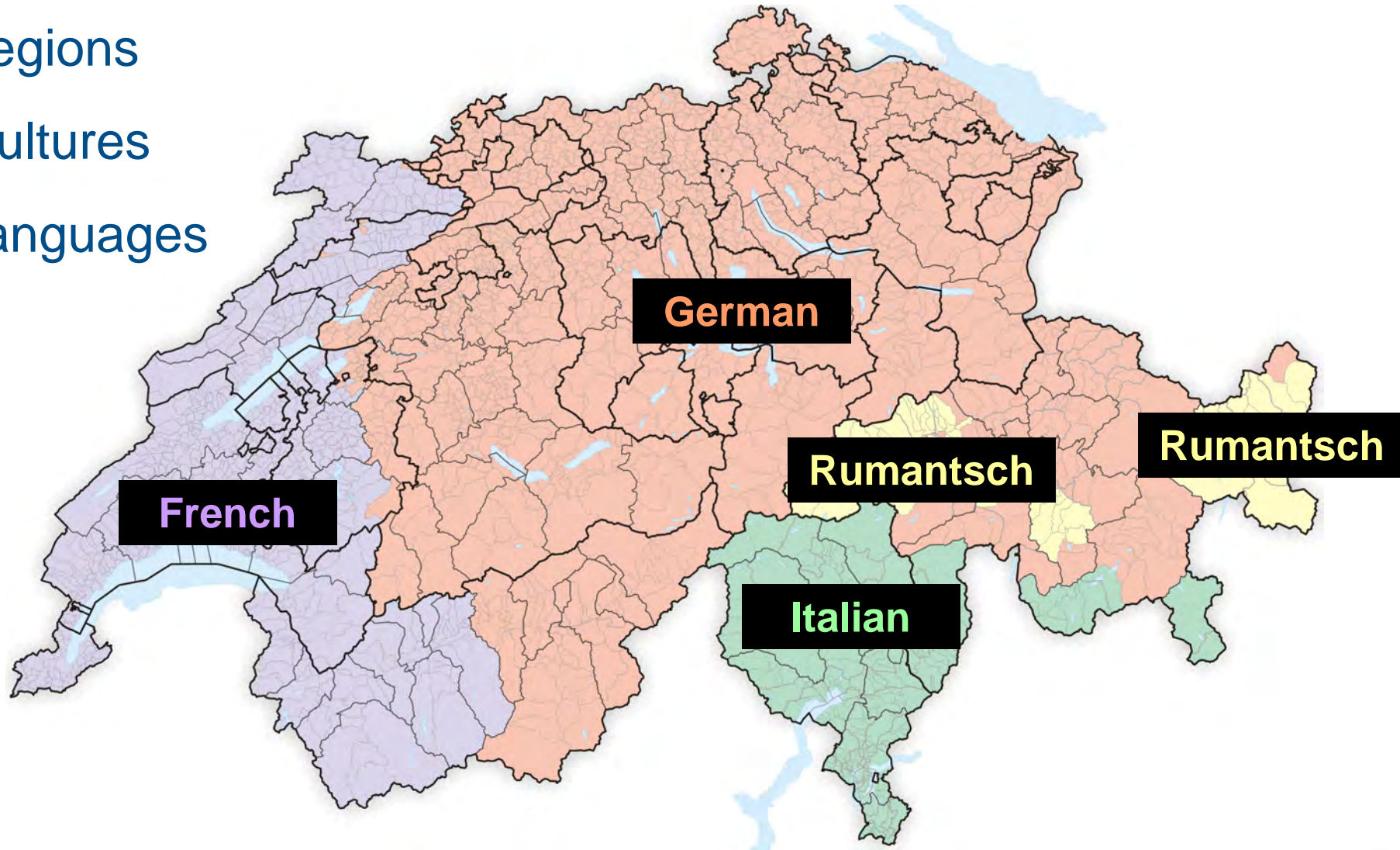
Health care: Small country with responsibility in 26 Regions ("Cantons")

1 Zürich
2 Bern
3 Luzern
4 Uri
5 Schwyz
6 Obwalden
7 Nidwalden
8 Glarus
9 Zug
10 Fribourg / Freiburg
11 Solothurn
12 Basel-Stadt
13 Baselland
14 Schaffhausen
15 Appenzell Ausserrhoden
16 Appenzell Innerrhoden
17 St. Gallen
18 Graubünden / Grischun / Grigioni
19 Aargau
20 Thurgau
21 Ticino / Tessin
22 Vaud / Waadt
23 Wallis / Valais
24 Neuchâtel / Neuenburg
25 Genève / Genf
26 Jura

✓ Area: 41'000 km2

✓ Population: 8,5 Million

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

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

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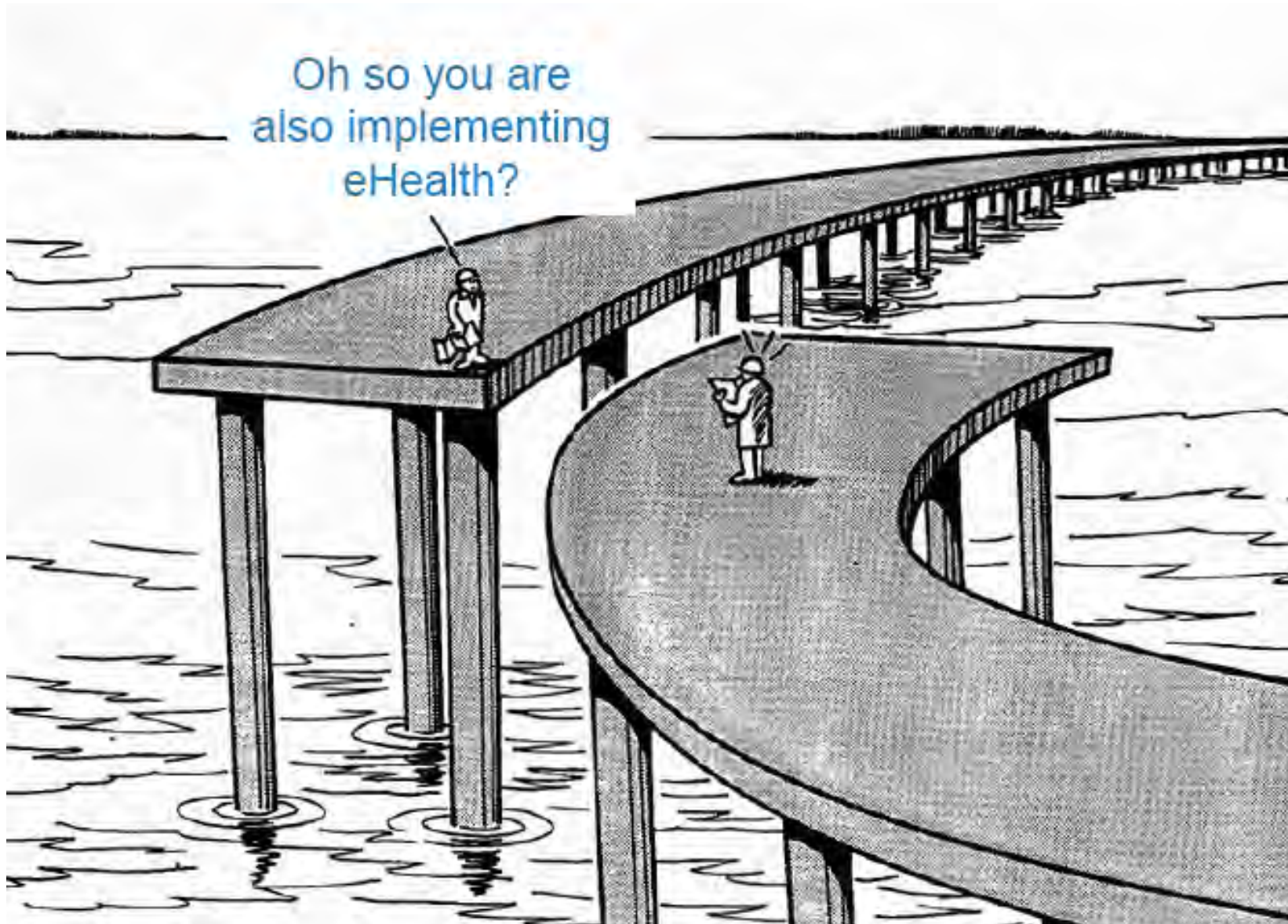# Health Care on federal and cantonal level

Federal Level

- 1 minister of health with limited responsibilities

  - Health insurance

  - Health protection

Cantonal Level
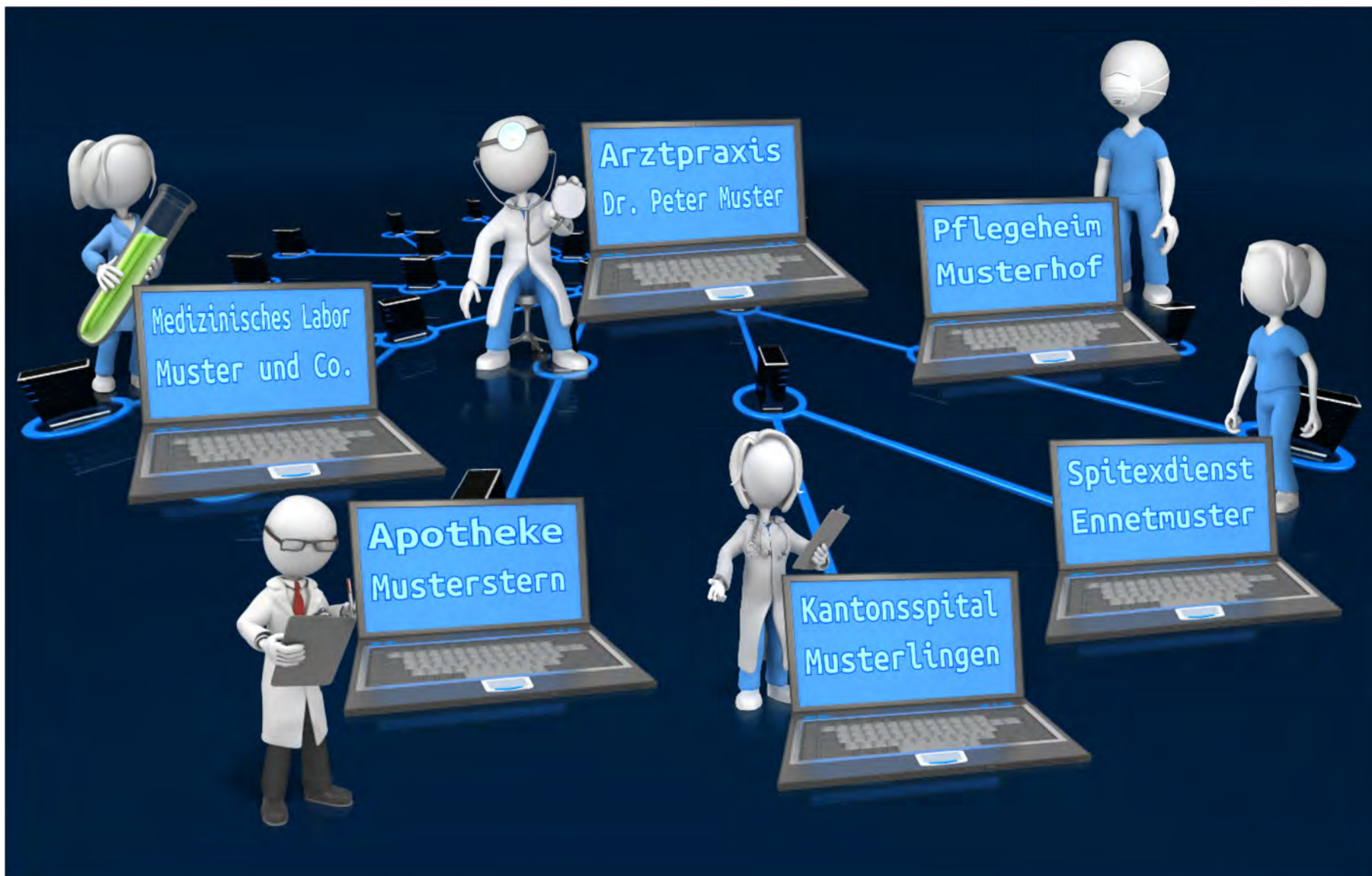
- 26 healthcare systems

- 26 ministers of health

- 26 health laws
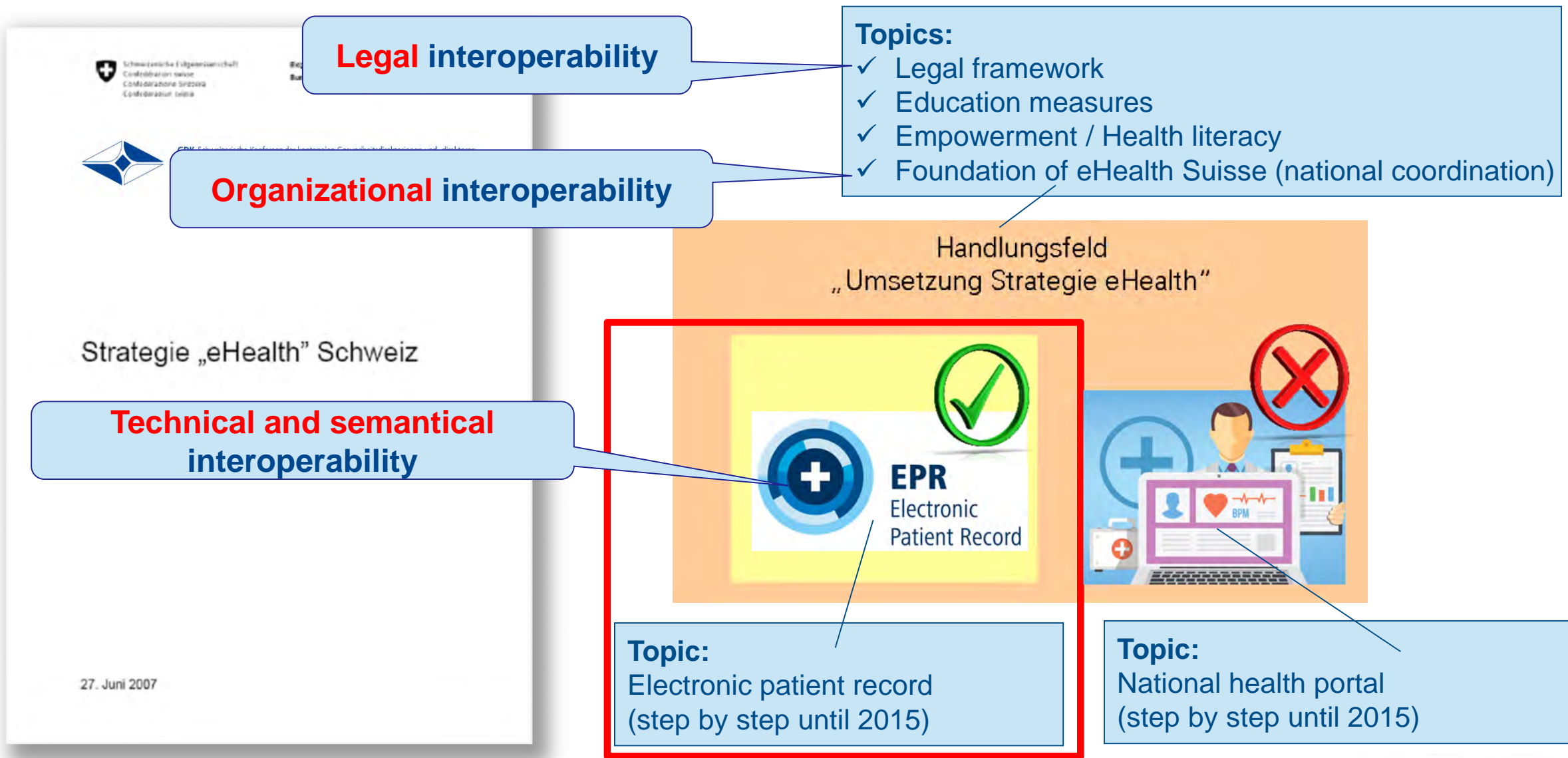
  - Organize healthcare (including **eHealth**)

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Goal of the Confederation and the Cantons

2007: Common strategy of of the Confederation and the Cantons

Legal interoperability

Organizational interoperability

Technical and semantical interoperability

Strategie „eHealth" Schweiz

27. Juni 2007

Topics:
- ✓ Legal framework
- ✓ Education measures
- ✓ Empowerment / Health literacy
- ✓ Foundation of eHealth Suisse (national coordination)

Handlungsfeld
„Umsetzung Strategie eHealth"

EPR
Electronic
Patient Record

Topic:
Electronic patient record
(step by step until 2015)

Topic:
National health portal
(step by step until 2015)

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"eHealth phases" in Switzerland

➢ 2007: Common strategy of the Confederation and the cantons

   ➢ 2009: Design principles

      ➢ 2010-2013: Governance

         ➢ 2013-2015: Defining the legal framework (content of the national EPD-law)

            ➢ 2015-2017: Technical and semantical specifications for use cases

               ➢ Since 2017: Testing and validation through EPR-Projecathons

                  ➢ Since 2019: Certification of projects based on legal framework

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✓ Overall framework

✓ Swiss federalism and limited competence at the national level

✓ The Swiss Health Strategy I

✓ Milestones of the past years

✓ **The Swiss EPR law, certification approach**

✓ The Swiss Health Strategy II

✓ Leadship issues

✓ Collaborative stakeholder inclusion

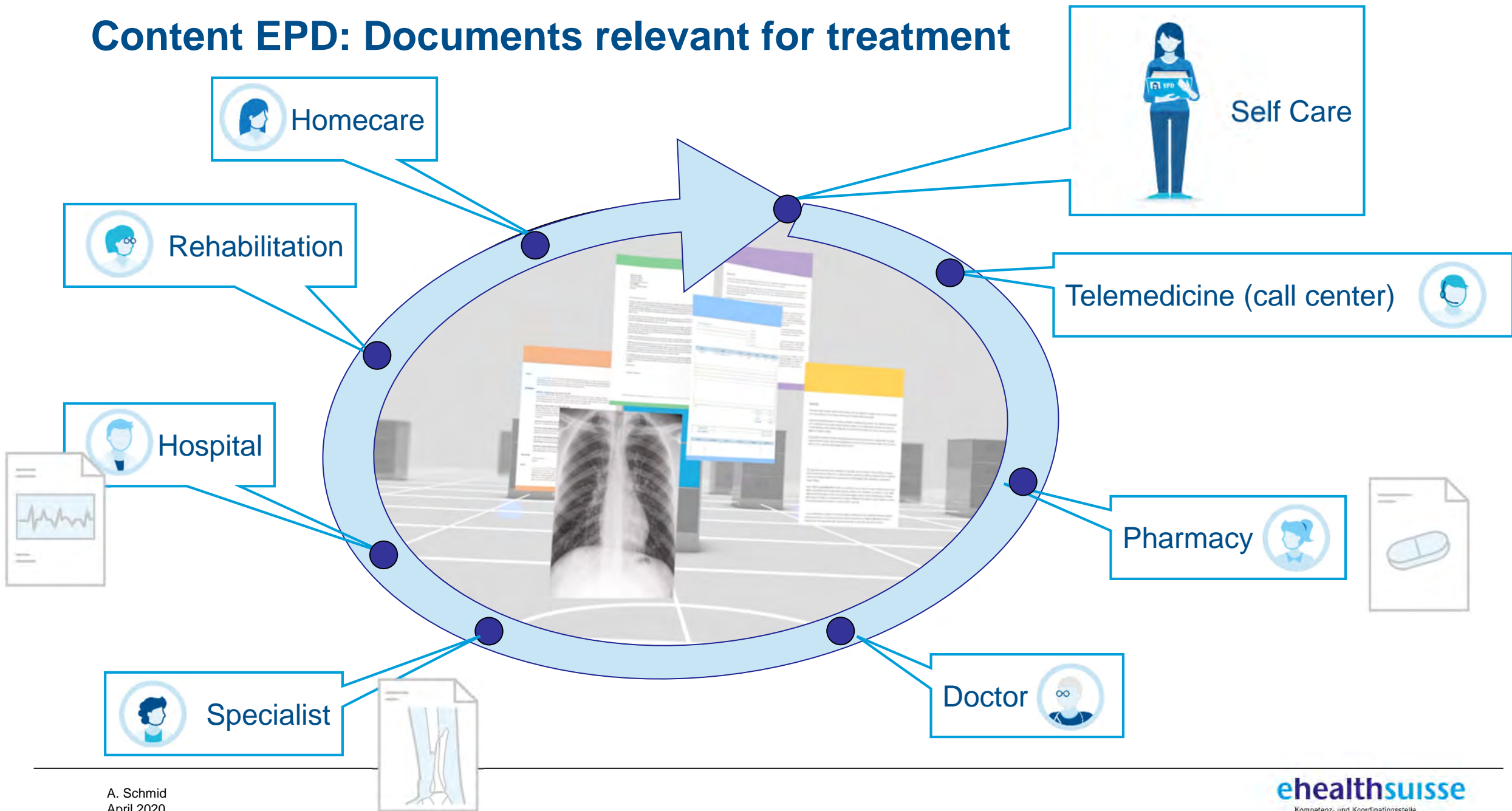✓ Strengths and risks

✓ Conclusion, discussion
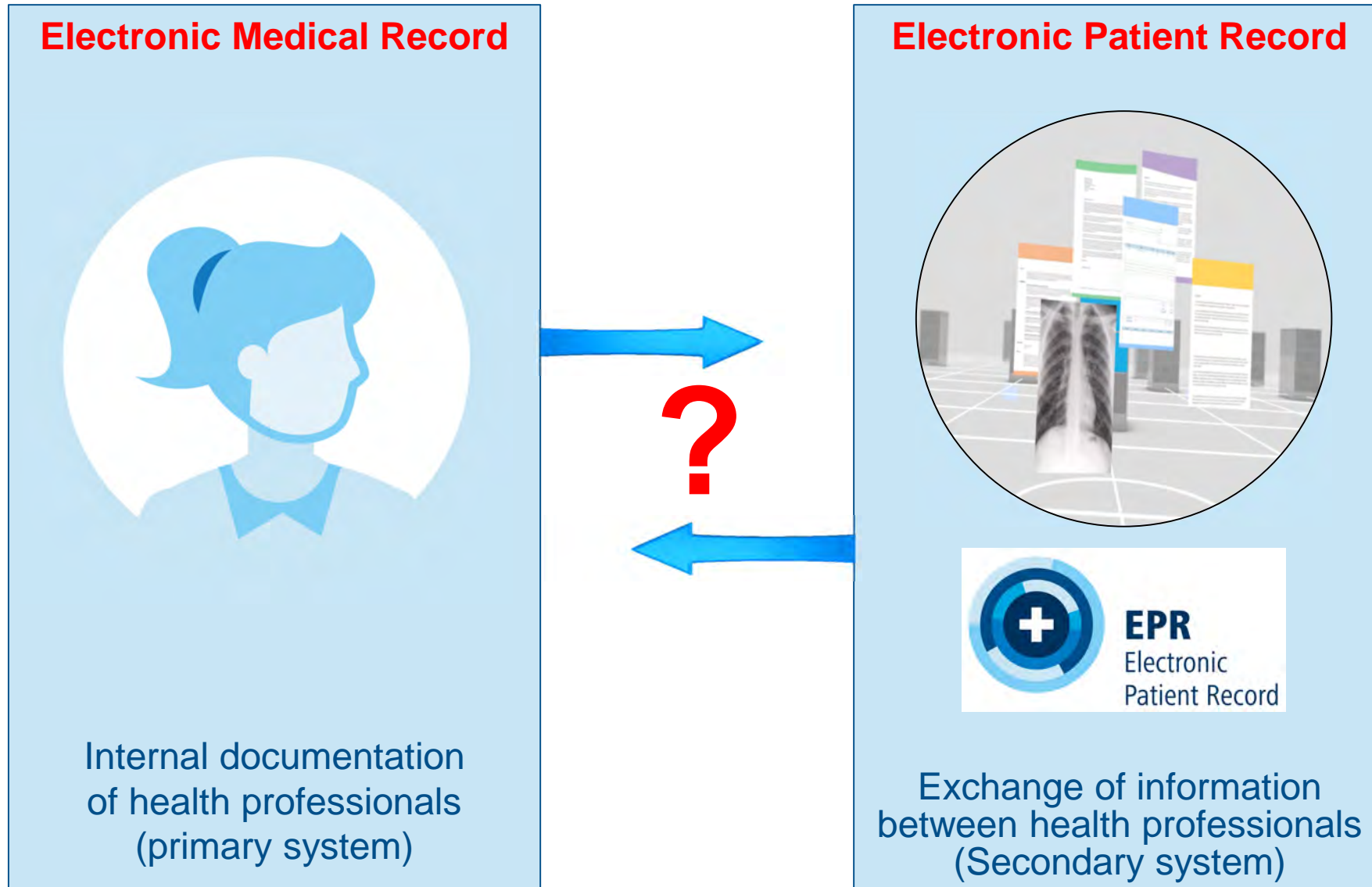
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National Electronic Patient Record (EPR): Strategic goal since 2007

Content EPD: Documents relevant for treatment

Self Care

Homecare

Rehabilitation

Telemedicine (call center)

Hospital

Pharmacy

Specialist

Doctor

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National Electronic Patient Record (EPR): Strategic goal since 2007

Electronic Medical Record

Internal documentation
of health professionals
(primary system)

Electronic Patient Record

EPR
Electronic
Patient Record

Exchange of information
between health professionals
(Secondary system)

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2009 (Design principles): National or decentralized

or ?

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Standards und Architektur
Erste Empfehlungen

Verabschiedet vom Steuerungsausschuss
Bern, 19. März 2009

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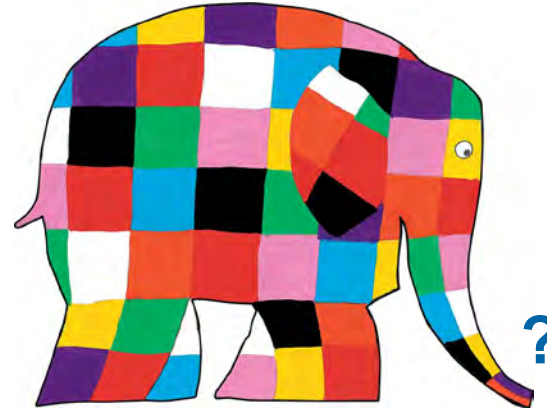
2010 - 2013 (Governance): Elememts of the architecture

Regional „Communities"

National coordinated components

Distributed patient indexes
- P – I Canton A
- P – I
- P – I Org. 1
- P – I Canton B

Distributed patient registries
- R – D Canton
- R – D
- R – D GPs
- R – D Hospitals

Distributed care provider registries
- I – B Physicians
- I – B
- I – B Ambulatory
- I – B Hospitals
- I – B Pharmacies

Identification
Citizens / Patients
e.g. Insurance Card

eHealth framework
Secured and trusted infrastructure
Role-based access management

Identification
e.g. Health Professional Card
HPC

Citizens and patients portal

Bridge to administrative and clinical processes

Distributed document repositories
- Hospital A
- Ambulatory B
- GPs C
- Pharmacy D

Administrative processes, such as billing, clinical processes
Clinical processes such as clinical information systems

2010 - 2013 (Governance): More recommentations

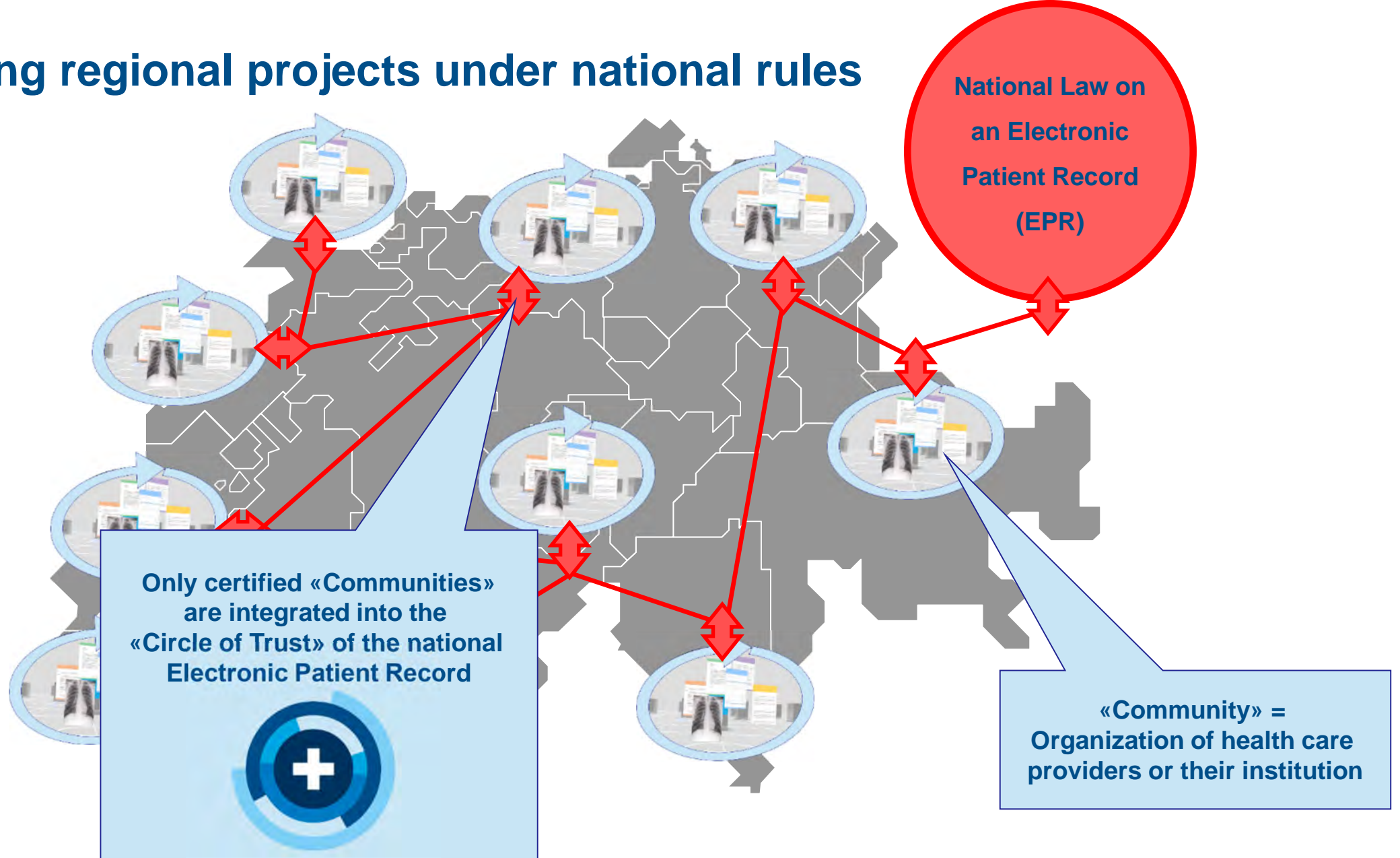

Personal identification and authorization system

Communication between communities / Access portal

Rules for controlling access rights

Linking regional projects under national rules

National Law on an Electronic Patient Record (EPR)

Only certified «Communities» are integrated into the «Circle of Trust» of the national Electronic Patient Record

«Community» = Organization of health care providers or their institution

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Who has to? Who may? And until when?

Deadlines for health care organizations
to connect to a certified "EPD-community":

- Hospitals: April 2020

- Nursing homes: April 2022

- Outpatient health care professionals: Voluntary

- Population / patients: Voluntary

Current situation: «Communities» in the process of certification

cara.

Kantone
FR, GE, JU, VD, VS

Stammgemeinschaft
Cara

Mon DOSSIER SANTÉ

Kanton
NE

Stammgemeinschaft
Dossier électronique du
patient Neuchâtel

xsana

Kantone
BE, BL, BS, LU, NW, OW, SG, SH, SO,
SZ, TG, UR, ZG, ZH

Stammgemeinschaft
XAD Stammgemeinschaft

emedo

Kanton
AG

Stammgemeinschaft
eHealth Aargau

e-Health Ticino

Kanton
Ti

Stammgemeinschaft
e-Health Ticino

eHealth Südost

Kantone
AI, GL, GR, SG

Stammgemeinschaft
eHealth Südost

abilis

Kantone
national tätig

Stammgemeinschaft
Abilis AG

Stammgemeinschaften Schweiz AG

Kantone
Region Ost: AI, AR, GL, GR, SG, TG
Region Zentral: LU, NW, OW, SZ, UR

Stammgemeinschaft
Stammgemeinschaft Region Ost
Stammgemeinschaft Region Zentral

National tätige Gemeinschaft nur
für Gesundheitsfachpersonen

ADSwiss

- Certification has begun in all "EPR-Communities"

- But: The process is taking longer than expected

- High demands → "quality" comes before "speed"

- No nationwide launch possible in April 2020

- Gradual introduction expected until autumn 2020

- ✓ **Overall framework**
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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**

Bern, 14. Dezember 2018

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von Bund und Kantonen
Centre de compétences et de coordination
de la Confédération et des cantons
Centro di competenze e di coordinamento
di Confederazione e Cantoni

Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
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Fields of action of the Swiss eHealth Strategy 2.0

Filed of Action 1:

Promoting digitalisation

"Digital applications in the healthcare system, especially the Electronic Patient Record, are established."
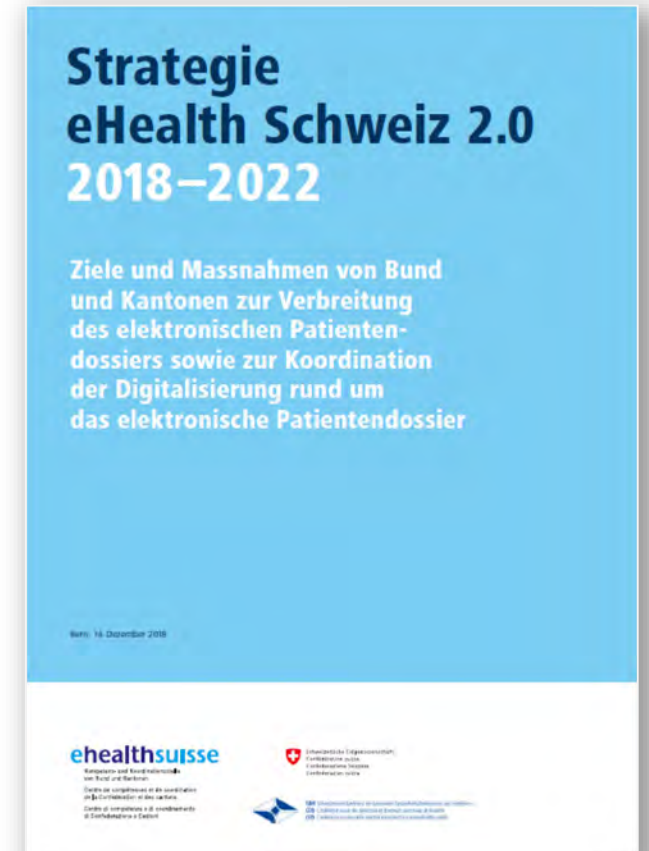
Field of Action 2:

Coordinate digitalisation

"Digitalisation in the health care system is coordinated and enables multiple use of data and infrastructures."
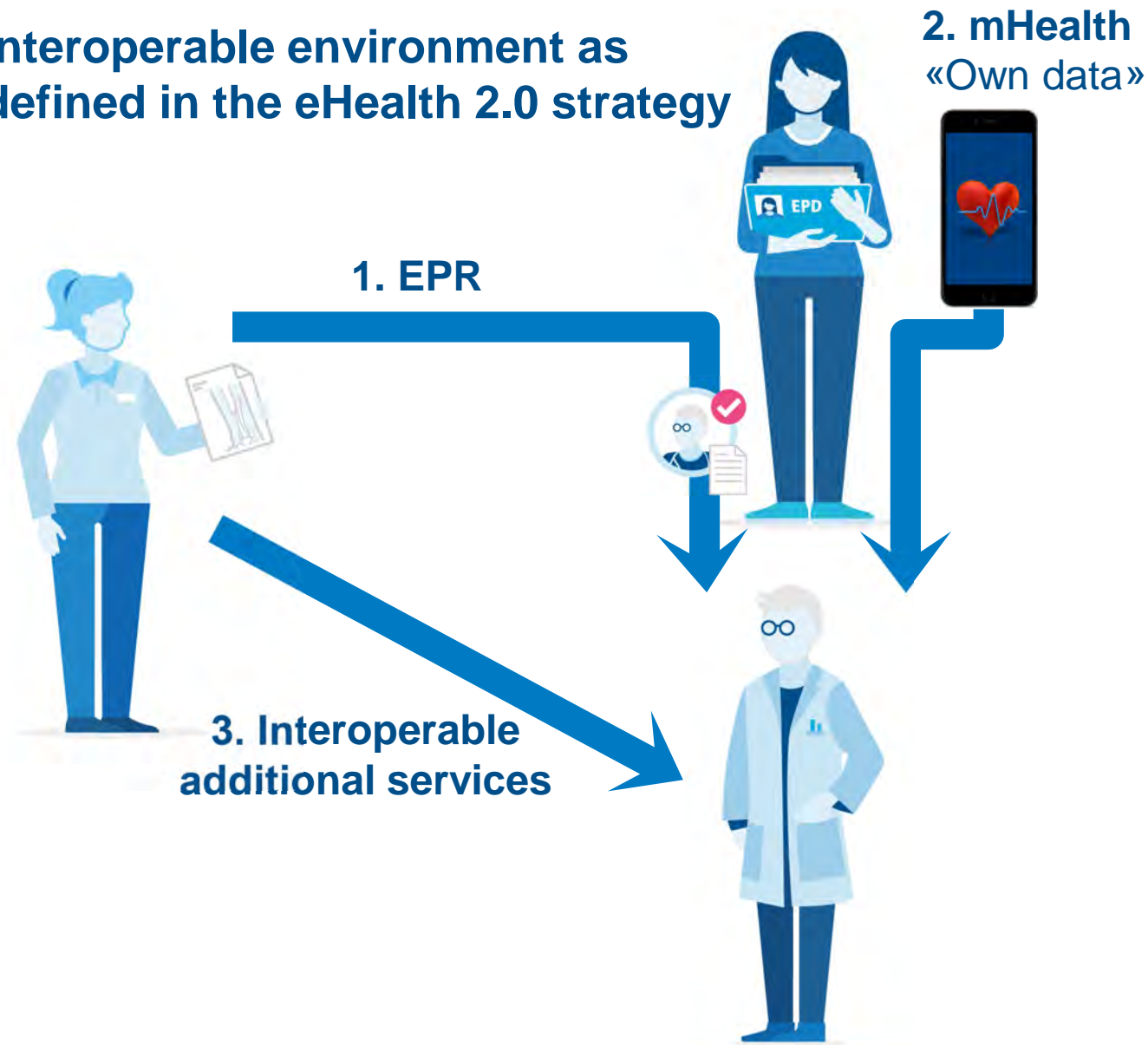
Field of Action 3:

Enable for digitalisation

"People in Switzerland are digitally competent and can handle digital health data in a responsible and risk-aware manner."

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

Interoperable environment as defined in the eHealth 2.0 strategy

2. mHealth
«Own data»

1. EPR

3. Interoperable additional services

1. **EPR**
   Health professionals store documents in the EPR, patients give access rights.

2. **mHealth**
   Patients store information from a mobile application (mHealth) as "Own data" in the EPR.

3. **Interoperable additional services of «EPR-Communities»**
   Interoperable information exchange between health professionals throughout Switzerland (e.g. direct transmission)

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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.
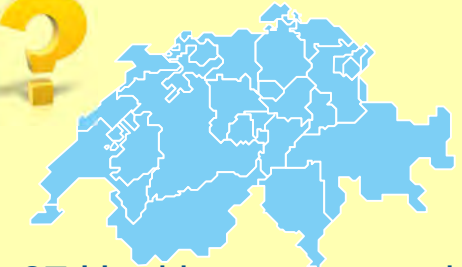
Strategie eHealth Schweiz 2.0 2018–2022

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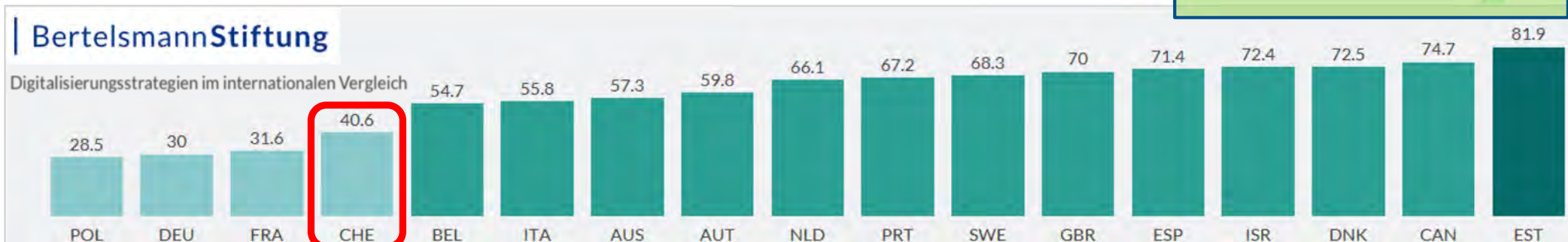
27 Health systems and many private actors

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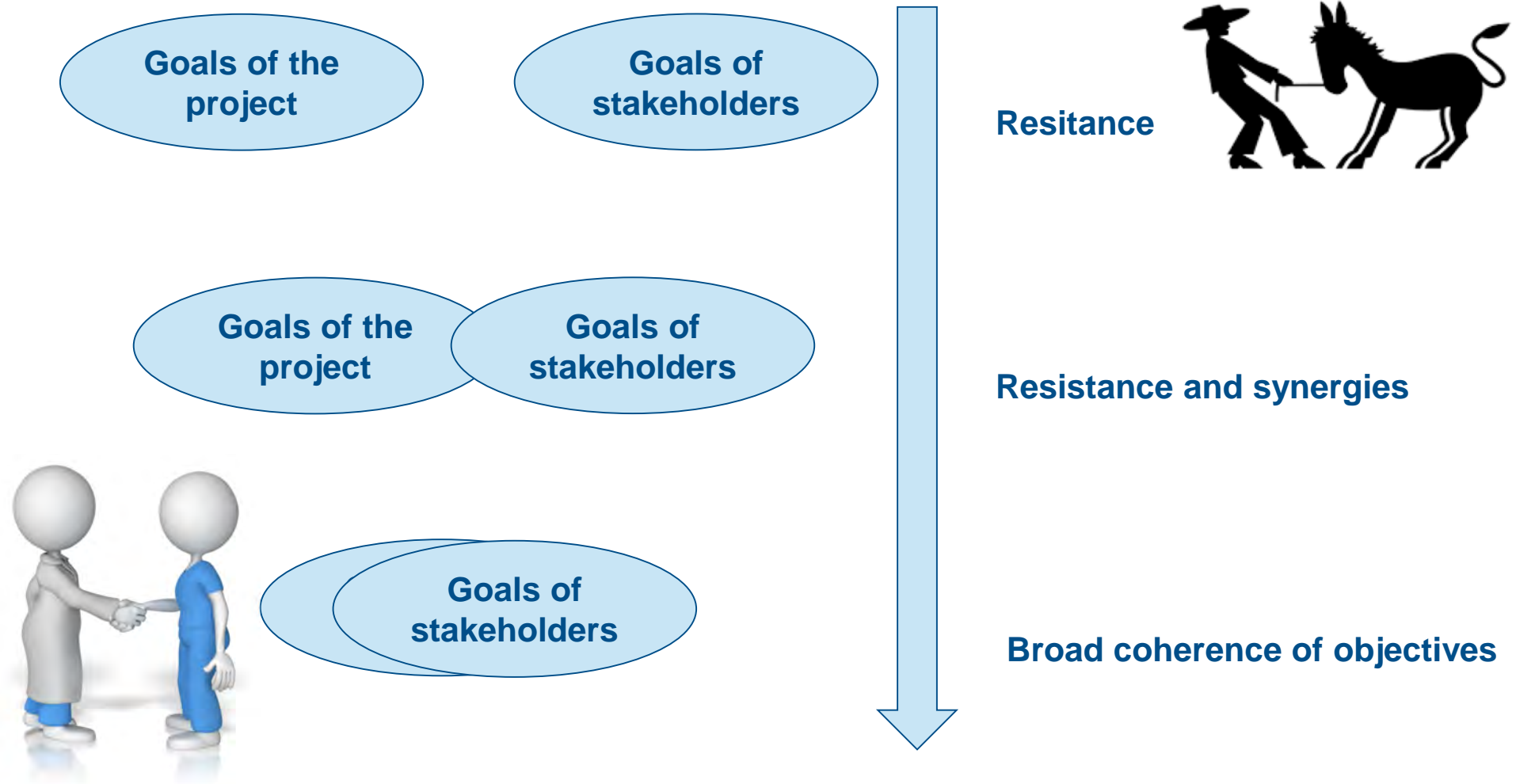| BertelsmannStiftung																
Digitalisierungsstrategien im internationalen Vergleich																
28.5	30	31.6	40.6	54.7	55.8	57.3	59.8	66.1	67.2	68.3	70	71.4	72.4	72.5	74.7	81.9
POL	DEU	FRA	CHE	BEL	ITA	AUS	AUT	NLD	PRT	SWE	GBR	ESP	ISR	DNK	CAN	EST

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Initial situation in 2007

Strategie „eHealth" Schweiz

27. Juni 2007
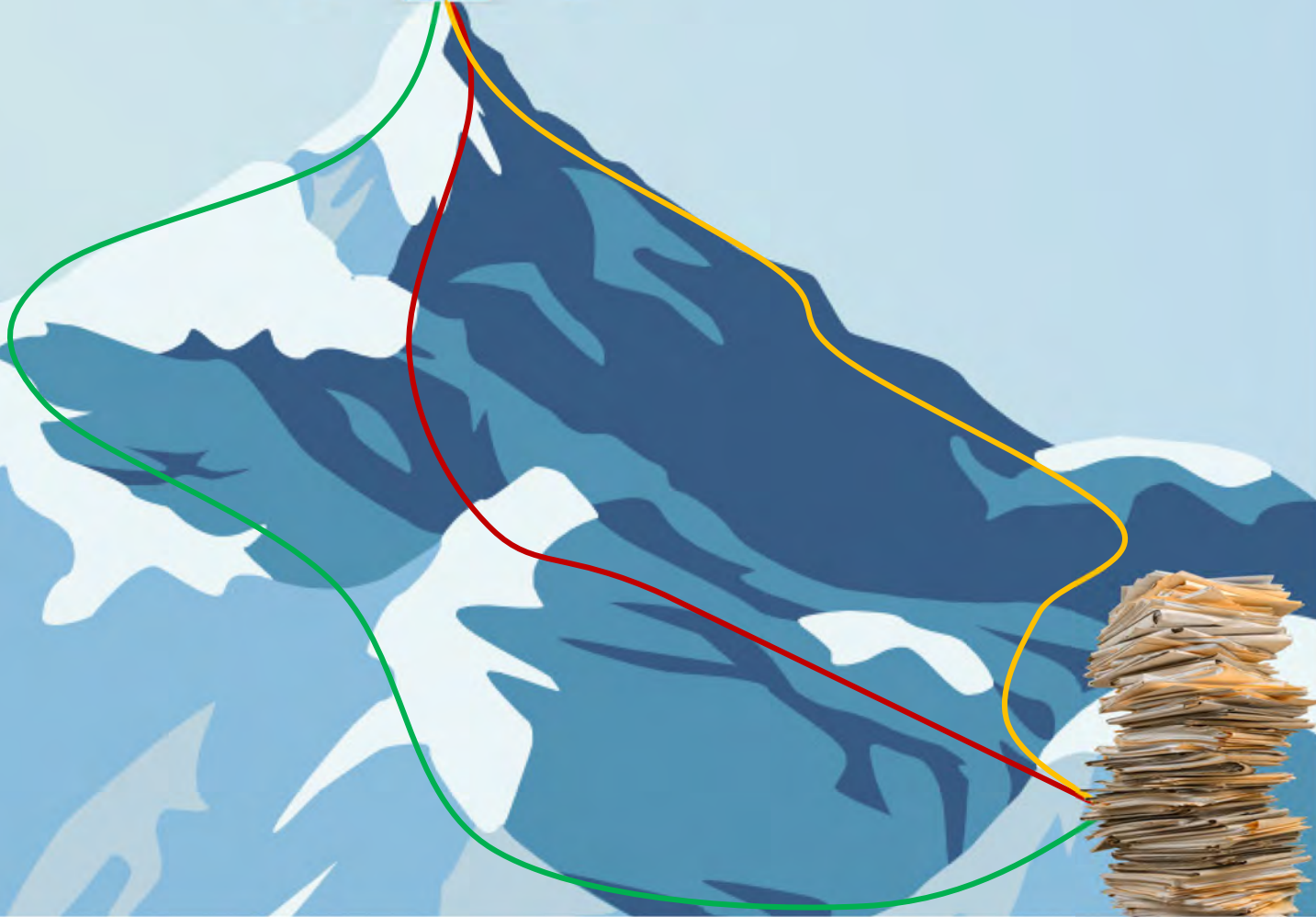
"Turn those affected into participants"

Goals of the project

Goals of stakeholders

Resitance

Goals of the project

Goals of stakeholders

Resistance and synergies

Goals of stakeholders

Broad coherence of objectives

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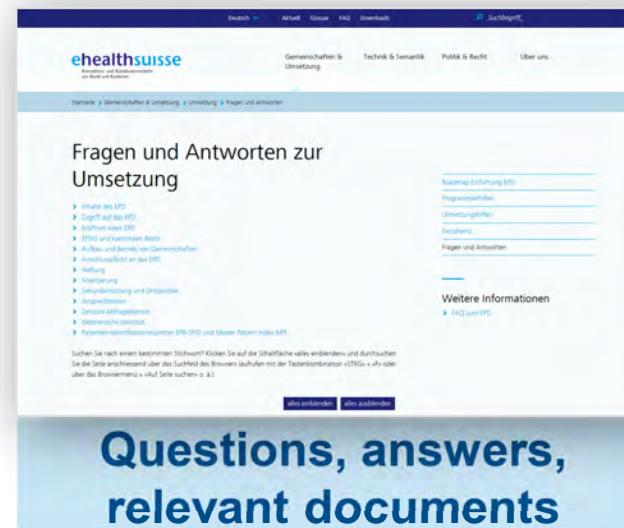von Bund und Kantonen

Offensive involvement of the key players (before the law project)
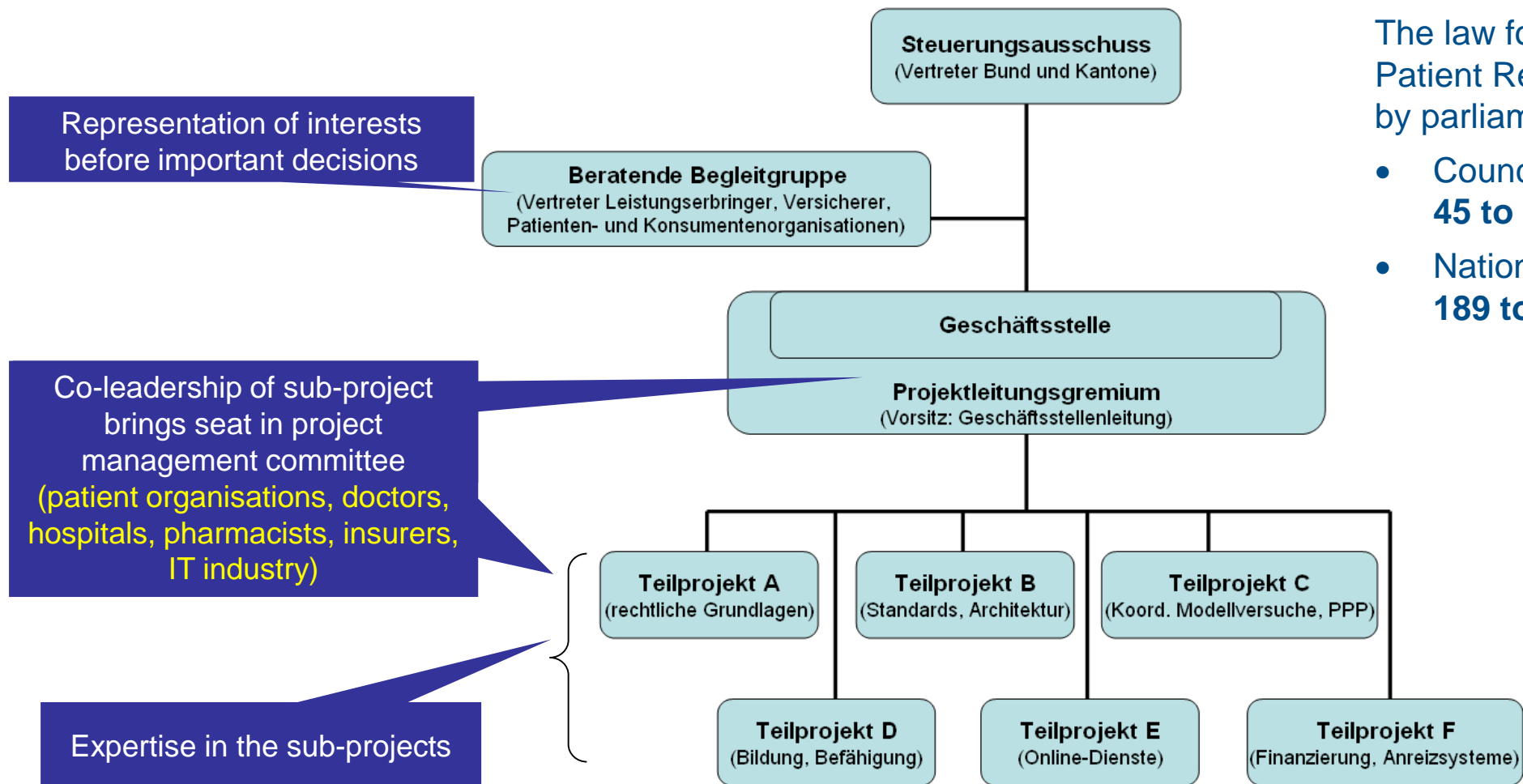
The law for a nationwide Electronic Patient Record (EPR) was adopted by parliament in June 2015:

- Council of States (Ständerat): **45 to 0 votes**
- National Council (Nationalrat): **189 to 5 votes**

Representation of interests before important decisions

Co-leadership of sub-project brings seat in project management committee (patient organisations, doctors, hospitals, pharmacists, insurers, IT industry)

Expertise in the sub-projects

Steuerungsausschuss (Vertreter Bund und Kantone)

Beratende Begleitgruppe (Vertreter Leistungserbringer, Versicherer, Patienten- und Konsumentenorganisationen)

Geschäftsstelle

Projektleitungsgremium (Vorsitz: Geschäftsstellenleitung)

Teilprojekt A (rechtliche Grundlagen)

Teilprojekt B (Standards, Architektur)

Teilprojekt C (Koord. Modellversuche, PPP)

Teilprojekt D (Bildung, Befähigung)

Teilprojekt E (Online-Dienste)

Teilprojekt F (Finanzierung, Anreizsysteme)

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Transparency and proactive communication

Website

Questions, answers, relevant documents

Newsletter

Information events

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The pros and cons of federated eHealth

Advantages

✓ Regional autonomy, integration and identification (eHealth is a cultural project)

✓ Regional start before national readiness

✓ Regions can implement additional services

✓ No huge national project with excessive risks

Disadvantages

✓ The national consensus is slow

✓ Use cases are complex

✓ Infrastructure is expensive

✓ Regional goals may differ - considerable effort to coordinate the objectives

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My health information. In the right place at the right time.

EPR
Electronic
Patient Record

Health information. In the right place at the right time.

EPR
Electronic
Patient Record