



Geneva Region & Swiss e-health projects

Stéphane Spahni, PhD
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Switzerland is divided in 26 cantons / regions...

☐ 27 ministers of health

- Federal: legislative competence → federal laws
- Cantonal: implementation competence + cantonal laws
- Inter-cantonal coordination

☐ Shared funding of health sector shared (federal, cantonal, public insurances, private insurances)

☐ Legal: federal and cantonal legislations

☐ eHealth Strategy

- National level: Regulation & interoperability oriented
- Regional level: Service provision & implementation oriented



Geneva – a Pioneer in Medical Informatics

- ❑ 1977: Main public hospital's patient administrative management system in production
- ❑ 1998: Political mandate for the design and implementation of a regional Health Information Exchange (HIE) platform
- ❑ 2002: Model, first costs figures
- ❑ 2008: Cantonal law establishing the regional HIE
- ❑ 2009: Public-Private Partnership (PPP)
- ❑ 2010: First patient on MonDossierMedical.ch platform
- ❑ EPRs: 1'400 (03/2014) → 4'700 (03/2015) → 27'000 (09/2017)



Challenges... and solutions!

- ❑ Scepticism / lack of adherence & awareness
 - Implication of all stakeholders
- ❑ Funding
 - No funding for the initial version → Public/Private Partnership
- ❑ Standards
 - IHE
 - International collaborations (Synex, Alias, epSOS, ...)
 - National eHealth Strategy – reference model
- ❑ Data protection & security
 - Regional law
 - Distributed infrastructure, no single data repository
- ❑ Patients and HPs authentication
 - Smart cards, mTan, tokens, ...



Primary systems related challenges

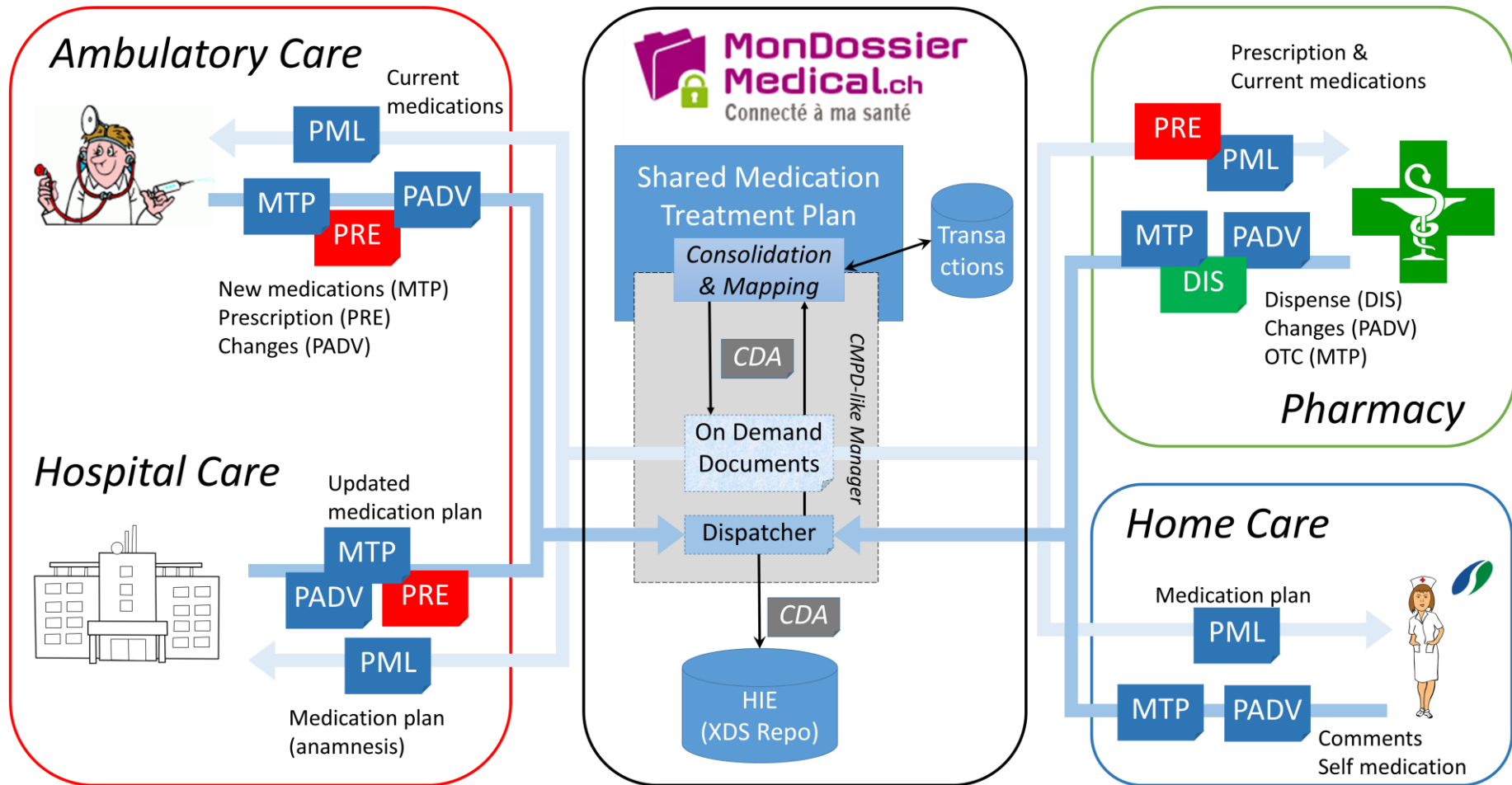
- ❑ Lack of structured information in primary systems
 - Publish as PDF documents (CDA Level 1)
 - Promote standard structured data formats (IHE content profiles)
 - Work on “most useful use cases” basis for evolution

- ❑ Systems integration: Avoid duplication of data entry
 - Information has to be captured only at 1 place and be visible everywhere

KEY FOR ACCEPTANCE: STRONG INTEGRATION!



Example of strong integration: eMedication



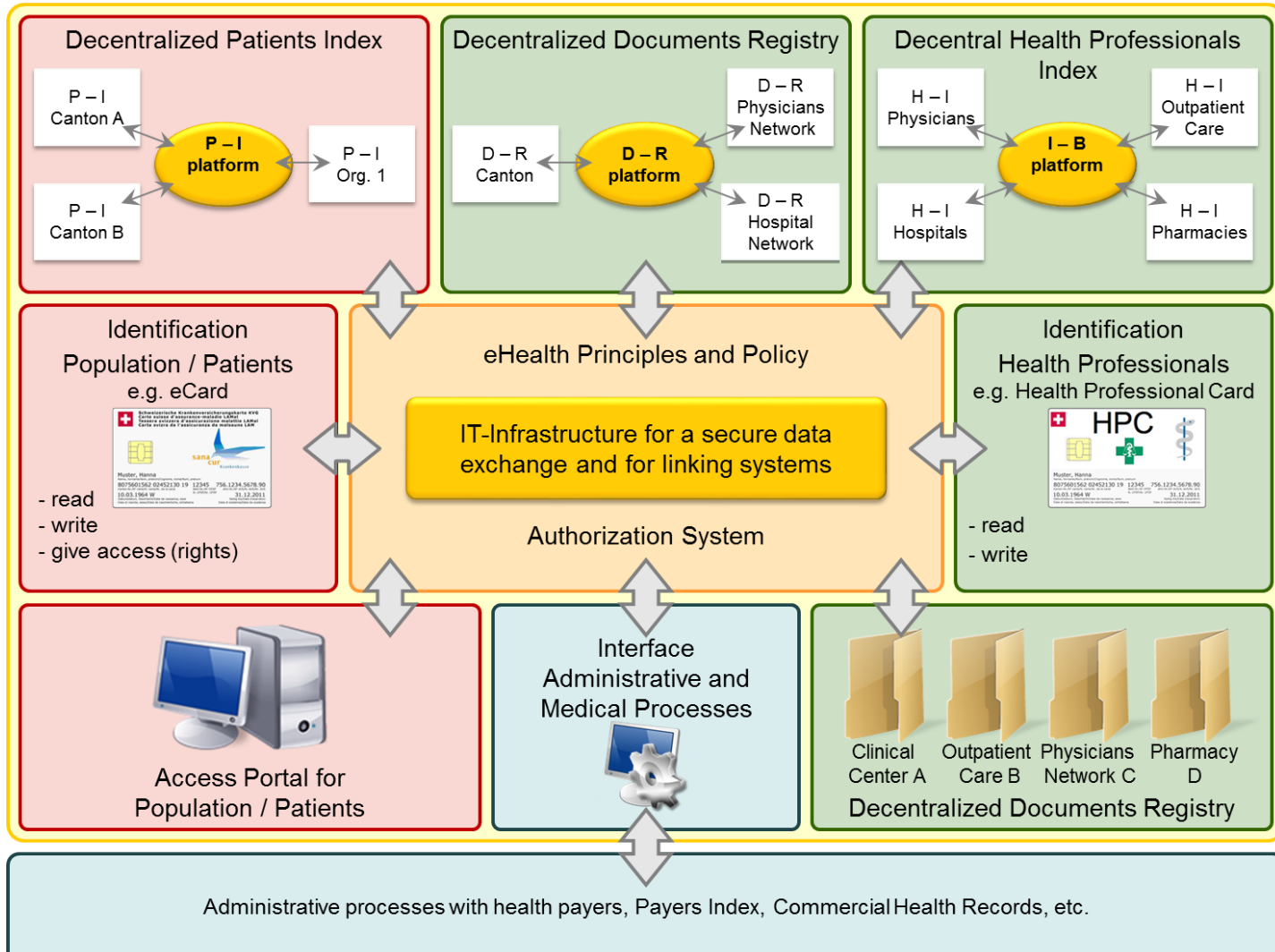
National: eHealth Strategy

- National eHealth Strategy published on the 27th of June 2007
 - Guidelines for the coming years

- eHealth-Suisse: operational entity linked to Federal Ministry of Health
 - Implementation of the national strategy goals
 - Coordination between cantons and state
 - Close collaboration with all stakeholders – in Switzerland and abroad
 - Several activity domains
 - Norms and architecture (metadata, content profiles, ...)
 - Implementation (strategy, incentives, achievement level labelling)
 - Legal basis and funding
 - On-line services
 - Research and education



Reference Architecture



Framework: June 2015, First application laws: April 2017

- Definition of the “Electronic Patient Record”
- Notion of “Communities” (with / without patient’s portal)
- Access rules to the EPR
- Certification criteria for the communities
- Unique National Health ID
- National contact point for X-border exchanges



Key Milestones

Objective	Expected	Effective
Pending legal aspects solved	2008	2017
Insurance Card for every patient	2009	2009-2014
Pilot projects with insurance card	2009	Geneva: 2011
Strong authentication & qualified signature for every HP	2010	2012 / ? (cost)
Secure authentication for every citizen (+optional digital signature)	2012	? (cost)
Exchange of structured data between all hospitals and >50% of private physicians	2012	> 2020
Electronic patient record for all citizens	2015	2020 ?
Common standards for the EPR	2008	2008 - ...

➤ Cultural, social, technical change → IT TAKES (more) TIME!



Where are we now?

□ Cantonal level

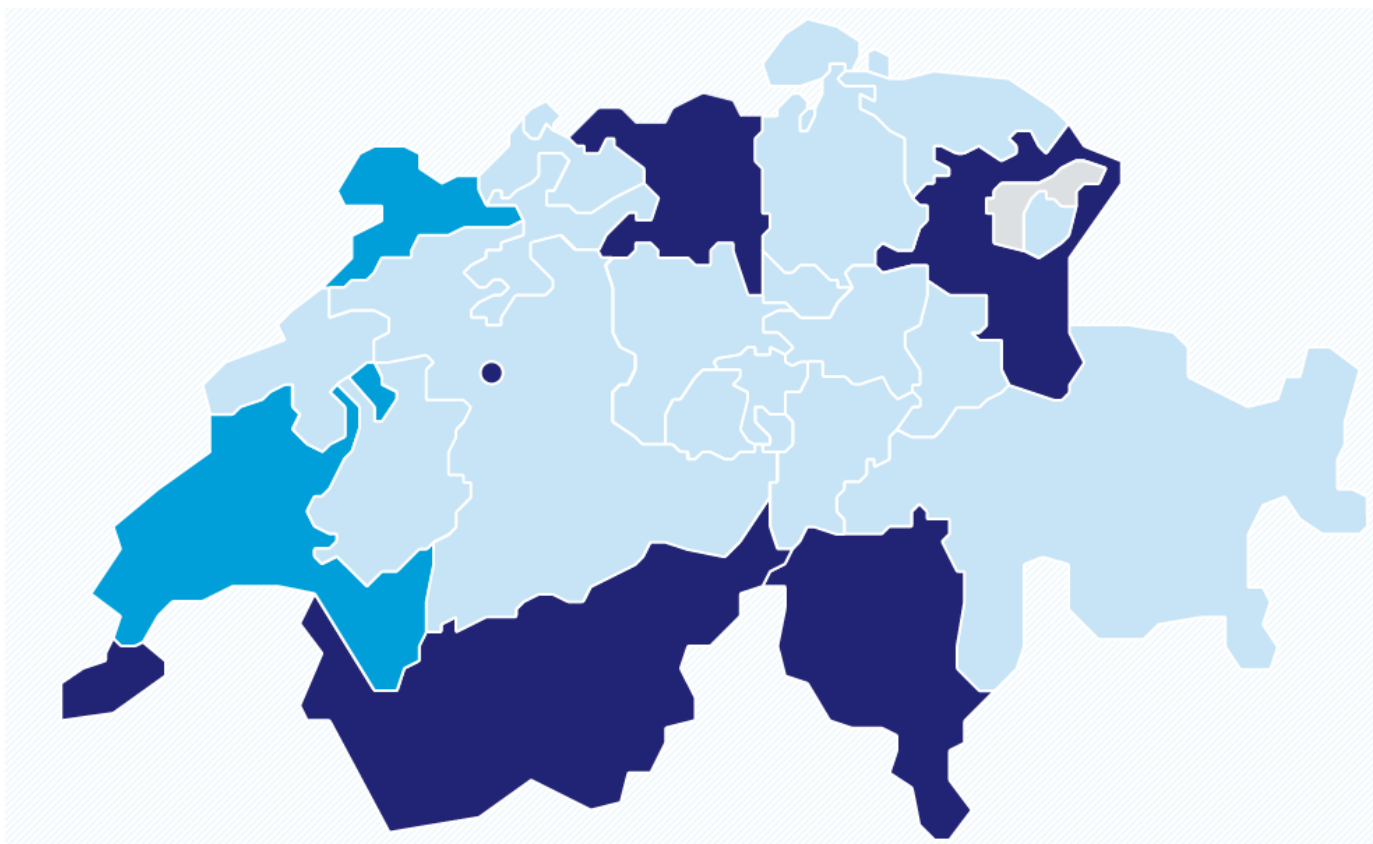
- ✓ Platform running since 6 years
- ✓ EPR well established
- ✓ Development of value-added services: shared medication treatment plan (since 2012), shared care plan (since 2017)
 - Adding more structured data (especially laboratories) & images
 - Extension to other regions (synergies to help sustainability)

□ Federal level

- ✓ Application laws in force
- ✓ Several vendors, some communities running
 - Cross-community interfaces defined, although not complete
 - 1st national Projectathon in September 2017



Status in the different regions (April 2017)



■ Label assessing strategy and implementation level (region)

■ Region with some eHealth activities

■ Label assessing strategy (region)

■ No eHealth activity at regional level



Key success factors - Regional

- ✓ Strong implication of all stakeholders from the beginning
- ✓ Cantonal law establishing the foundation of the HIE (principle, roles, confidentiality, access rules, ...)
- ✓ Strong interactions with the developer / provider of the service
- ✓ Open & distributed model from the beginning (IHE based)
- ✓ Step by step: basic functionality, then progressively new functionalities / services
- ✓ Strong State support
- ✓ High implication of the main hospital
- ✓ Optional (opt-in) for patients and healthcare providers



Key success factors – National level

- ✓ Strong collaboration with all stakeholders for the definition of key concepts
 - ✓ Gather experience from pilot projects (e.g. Geneva)
 - ✓ Reference architecture (IHE based)
 - ✓ Mandatory interfaces between communities
 - ✓ Common semantic rules
 - ✓ Common structured document content
 - ✓ Step by step
 - ✓ Optional (opt-in) for patients and private physicians
- Success level to be assessed in the a few years...





Thank you for your attention!

stephane.spahni@hcuge.ch

