

Interoperability in South Africa

Evolving a national interoperability framework

Thomas Fogwill



About me

- Principal Architect and Research Group Leader at the CSIR
 - science council doing directed and multidisciplinary research, technological innovation and industrial and scientific development to improve the quality of life of the country's people.
- Technical background (software and data), interested in
 - building complex software systems
 - open architecture, open source, interoperability and standards

South African Health System

- Stats:
 - Population of 54m¹
 - Life expectancy: 59.1 (male) and 63.1 (female)¹
 - Infant mortality rate of 34.4/1000¹
 - ~50% of national healthcare spend is private, which serves only 16.2% of population²
- Thus, despite relatively high spend on health (8.5% of GDP vs WHO recommendation of 5% for middle income countries), health outcomes are relatively poor²

1. Statistics South Africa, "Mid-year population estimates: 2014"

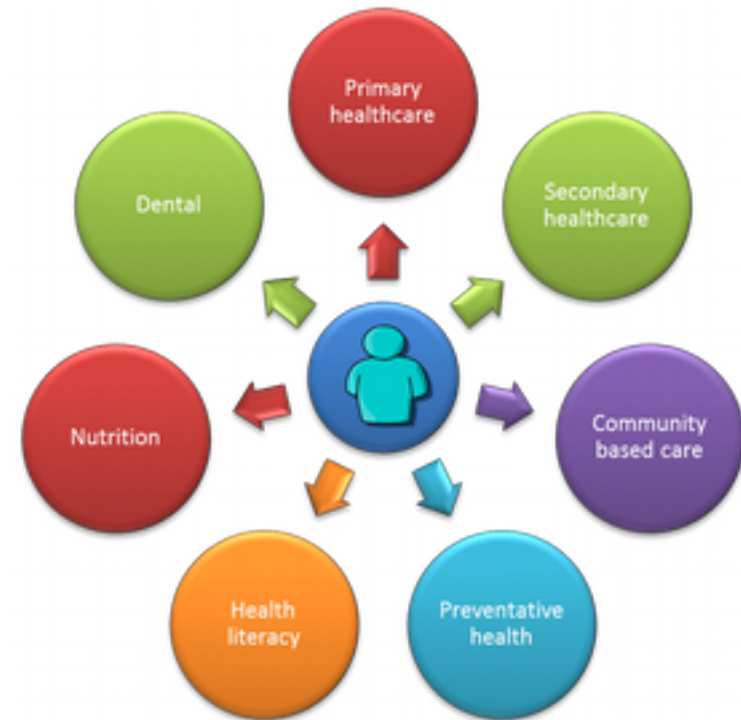
2. RSA National Department of Health, "National Health Insurance in South Africa: policy (green) paper"

South African Health System

- Reform of health system
 - Extension of primary care through community outreach teams
 - Greater focus on prevention
 - National health insurance
 - Improved planning and efficiencies

The dream : integrated care

- Integrated care = coordinated care = seamless care
→ continuity of care
- Patient has 1 view of the health system
- Patient is “known by” the health system
- Clinician has up-to-date view of patient
- Care is coordinated
- Incorporate non-clinical elements: social services, preventative care, lifestyle management



Integrated care

- Improve healthcare services
 - Access
 - Quality
 - User satisfaction
 - Efficiency
- Response to fragmented nature of historical healthcare delivery

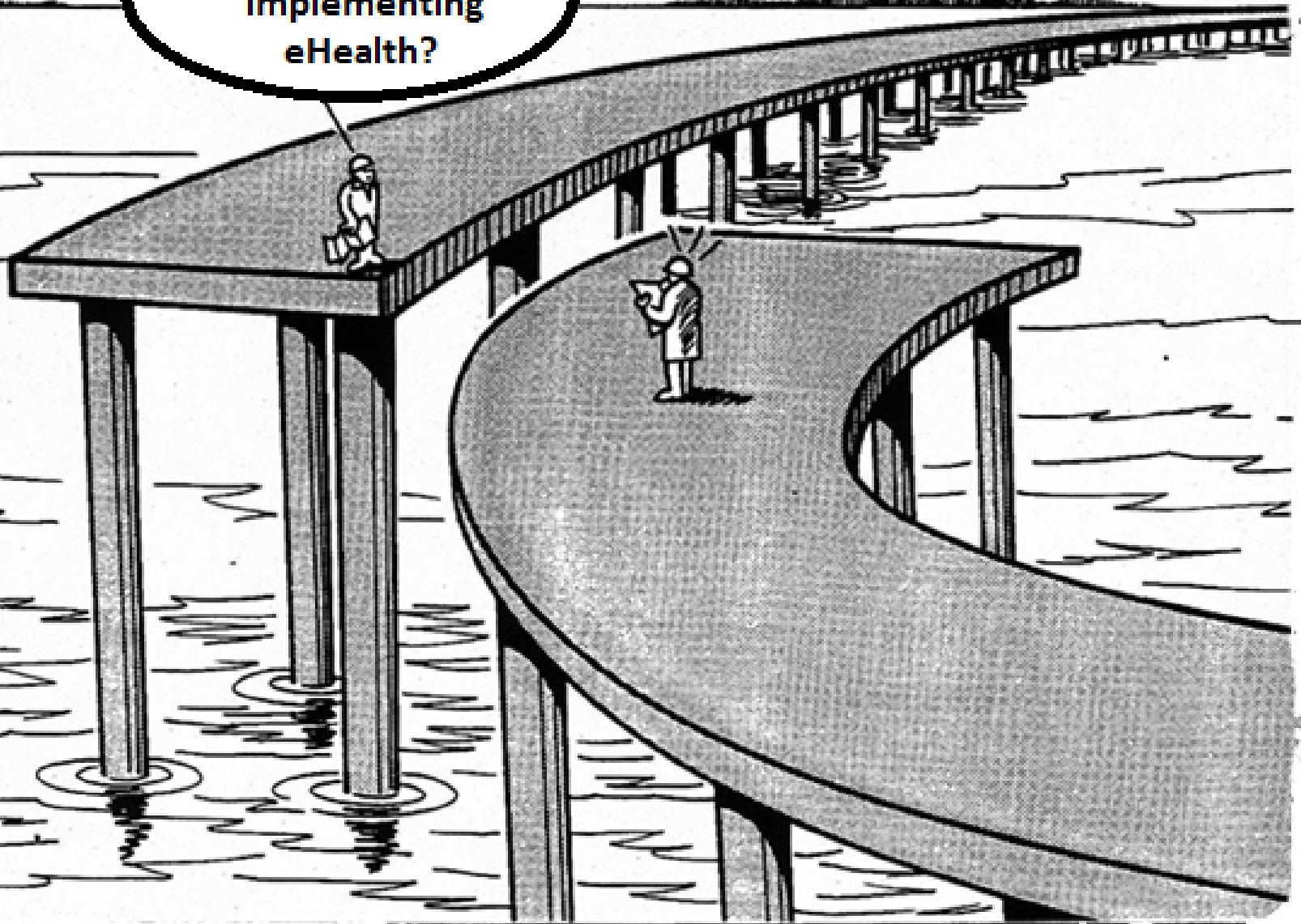
Integrated care

- According to WHO¹, it is enabled by:
 - Coordination across primary, secondary and tertiary levels of care
 - Continuity of information → shared records
 - Provider continuity

Case for interoperability

- Integrated care requires the sharing of health records
- Non-interoperability is a leading cause of Health IT failure
- Required for NHI
- Enable exchange of information:
 - Reduce inefficiencies (e.g. duplication, waiting times)
 - Improve effectiveness (e.g. integrated care, continuity of care)
 - Support better public health monitoring and planning

oh, so you are also
implementing
eHealth?



South African eHealth



“Historically, health information systems in South Africa have been characterised by **fragmentation** and lack of coordination, prevalence of **manual systems** and **lack of automation**, and where automation existed, there was a **lack of interoperability** between different systems.”

*Minister of Health
Dr Aaron Motsoaledi
eHealth Strategy South Africa (2012)*

South Africa: 10 strategic priorities



eHealth Strategy South Africa (2012)

Priority 3: Standards & Interoperability

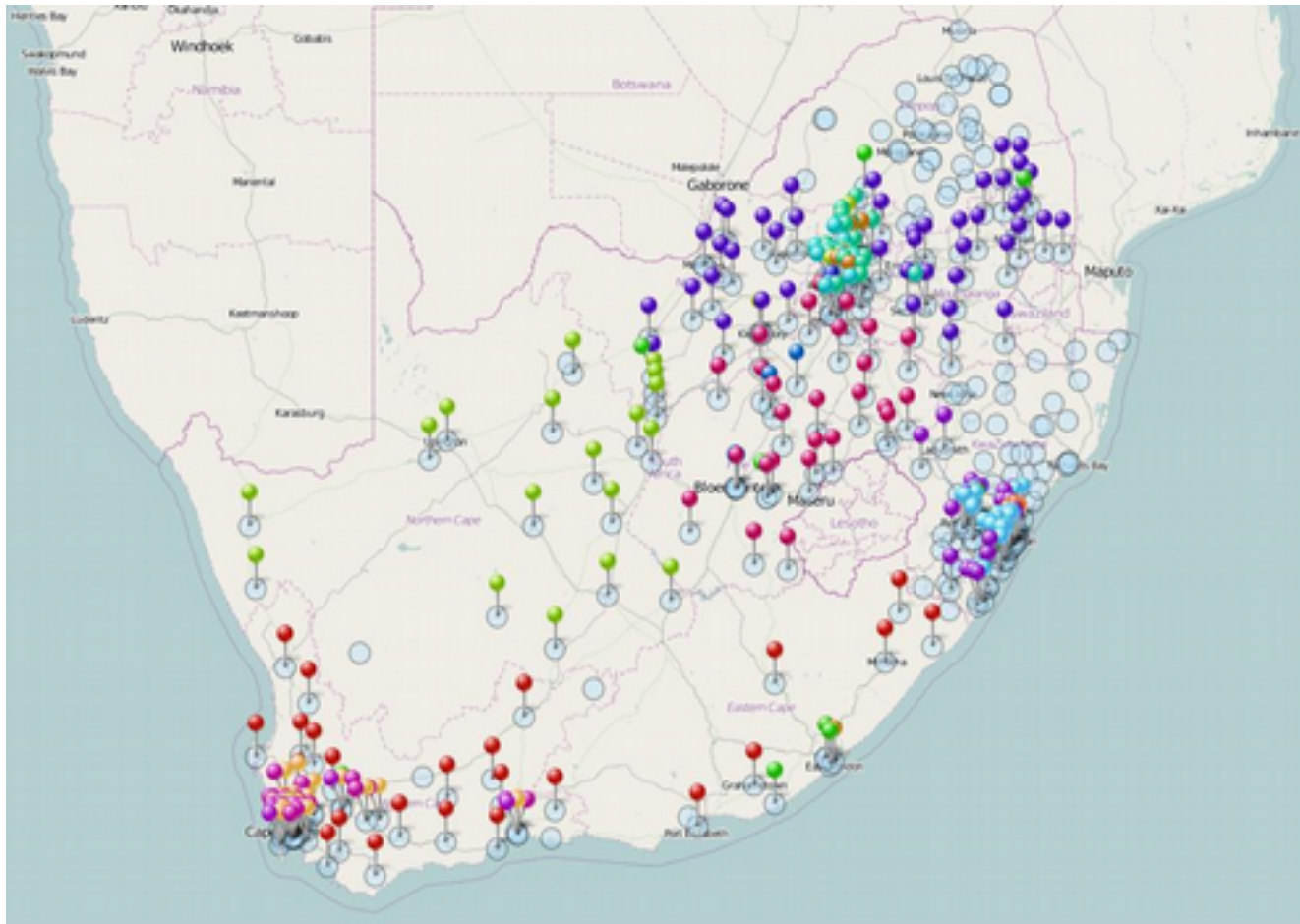
- Standards for interoperability
- Authority to maintain standards
- Mechanism for testing and accreditation

HNSF

- Normative Standards Framework for eHealth in South Africa (HNSF)
- Purpose:
 - set the foundational basis for interoperability at a national level
 - limited to eHealth services sharing person-centric health information
 - not prescriptive regarding infrastructure or technology stack that a HIS employs

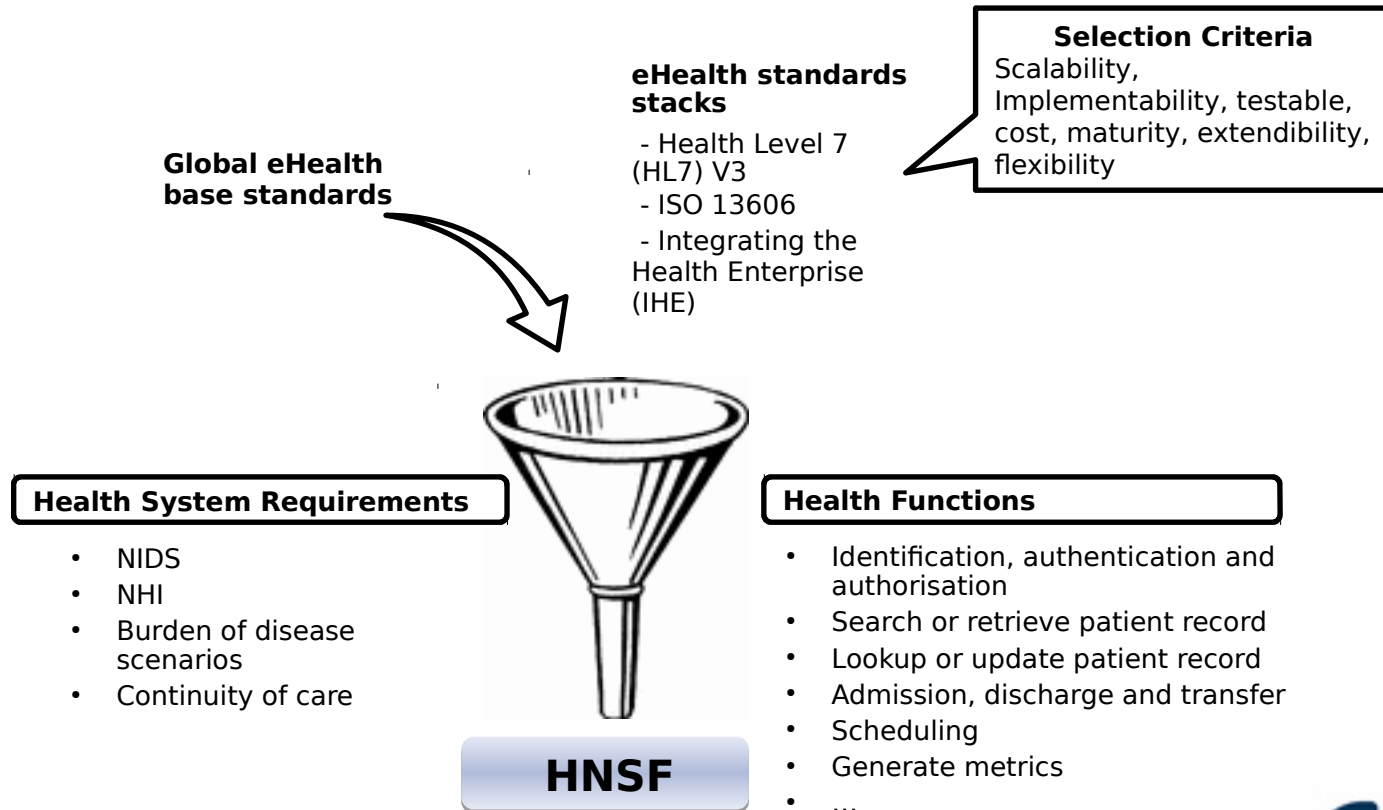
HNSF: approach

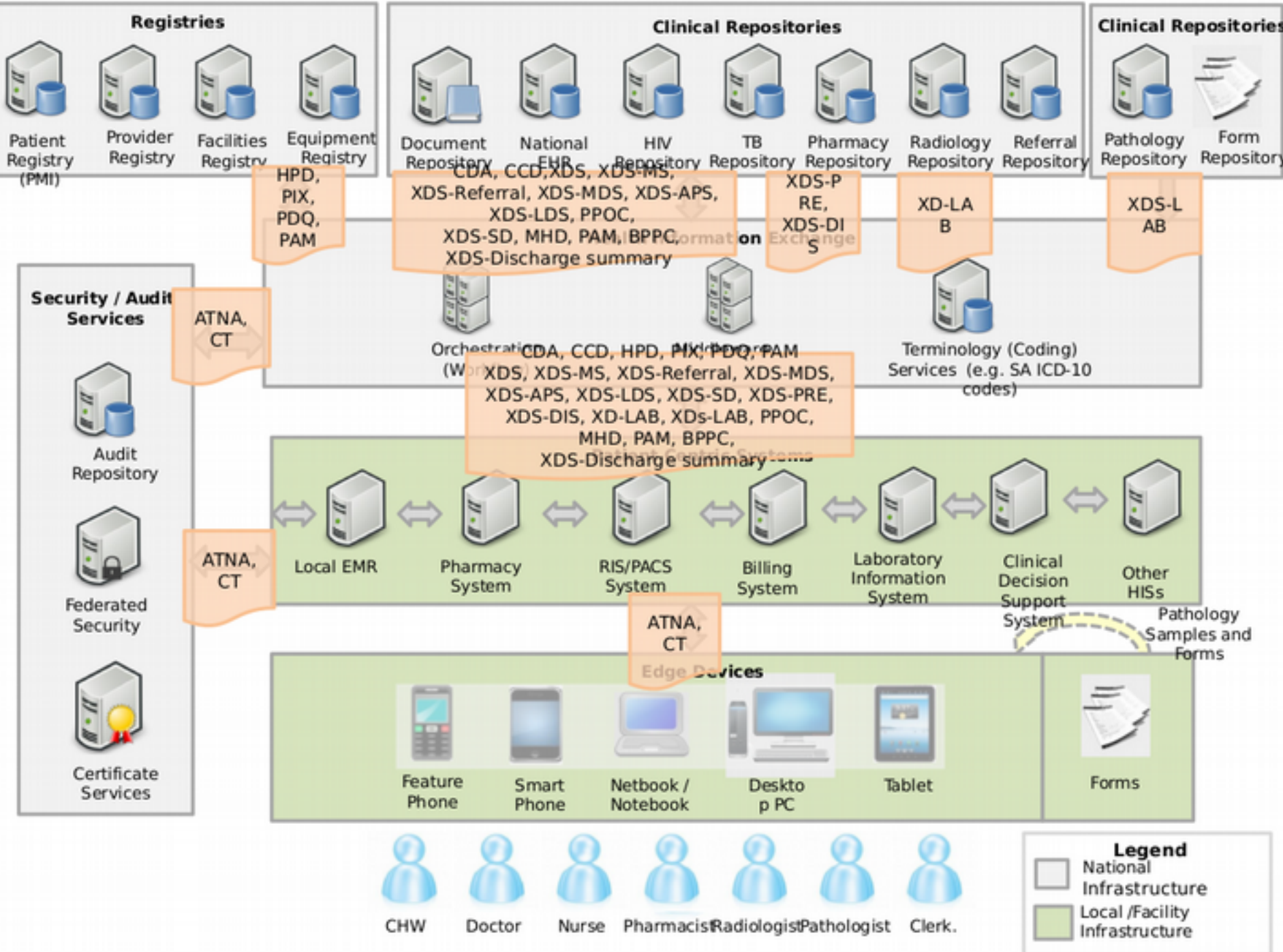
- Landscape analysis of existing HIS



HNSF: approach

- Focus on exchange of data for specific use cases
- Selection of existing standards – largely based on IHE





HNSF: what else is required?

- Ongoing maintenance and refreshing of the framework
- Support for implementation:
 - Foundational infrastructure and registries
 - Interoperability specifications (detail and localisation)
 - Architectural guidance for interfacing at national scale
- Procurement guidelines
- Compliance testing facility
- Governance and regulatory framework

Thank you

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