

Canadian Comments on “A Roadmap Towards Semantic Interoperability”

SemanticHEALTH Workshop
MIE 2008 - Göteborg

Canada Health Infoway

- Created in 2001
- \$1.6 billion in federal funding
- Independent, not-for-profit corporation
- Accountable to 14 federal/provincial/territorial governments
- Goal by 2010
 - Every Canadian will benefit from modern health information systems; and, 50 per cent of Canadians will have an electronic health record accessible by authorized health care providers.

Infoway mission

To foster and accelerate the development and adoption of electronic health information systems with compatible standards and communications technologies on a pan-Canadian basis, with tangible benefits to Canadians.



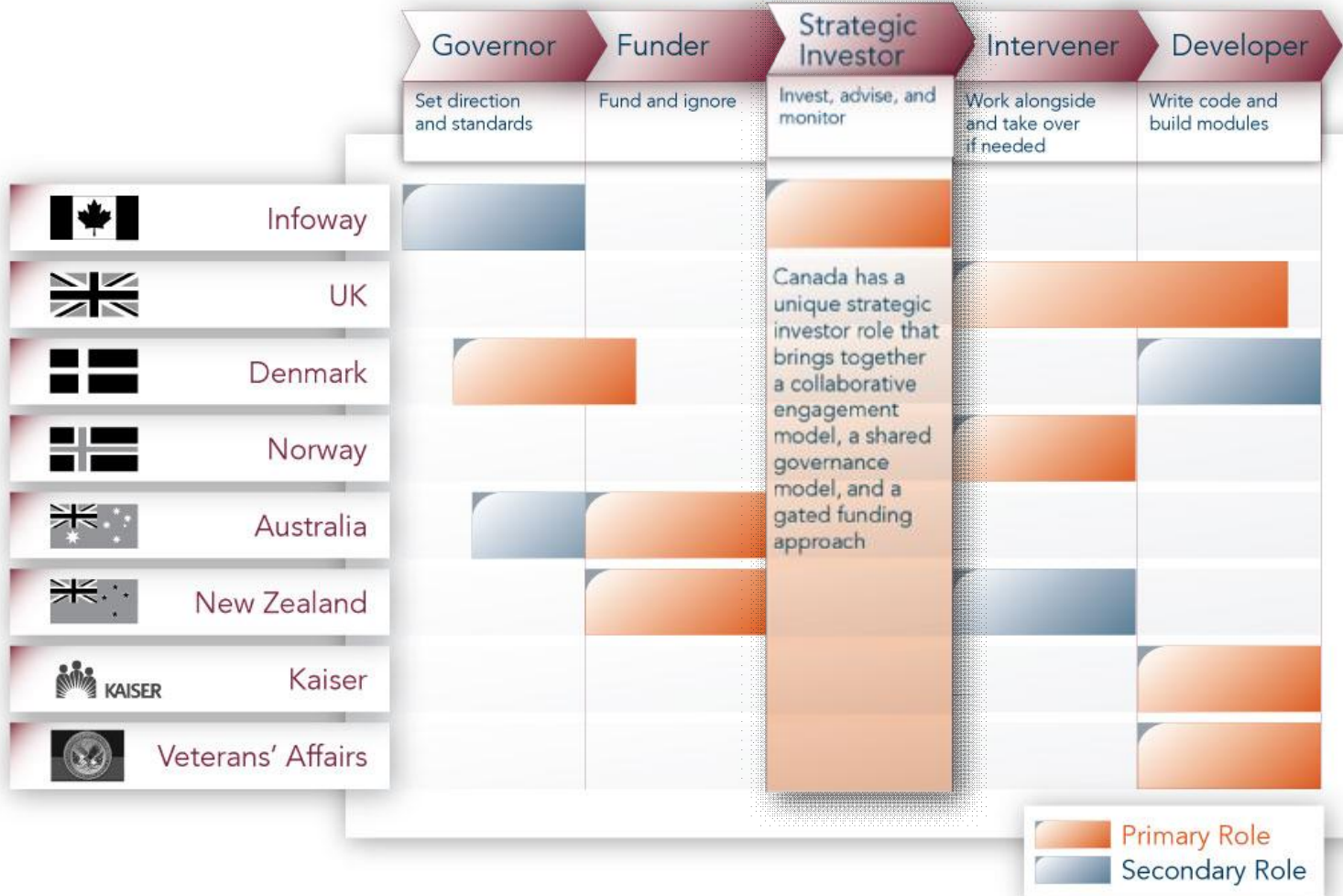
Infoway business strategies

- Participate in health care renewal
- Collaborate with our partners
- Target the investments
- Support solution deployment
- Promote solution adoption and benefits realization



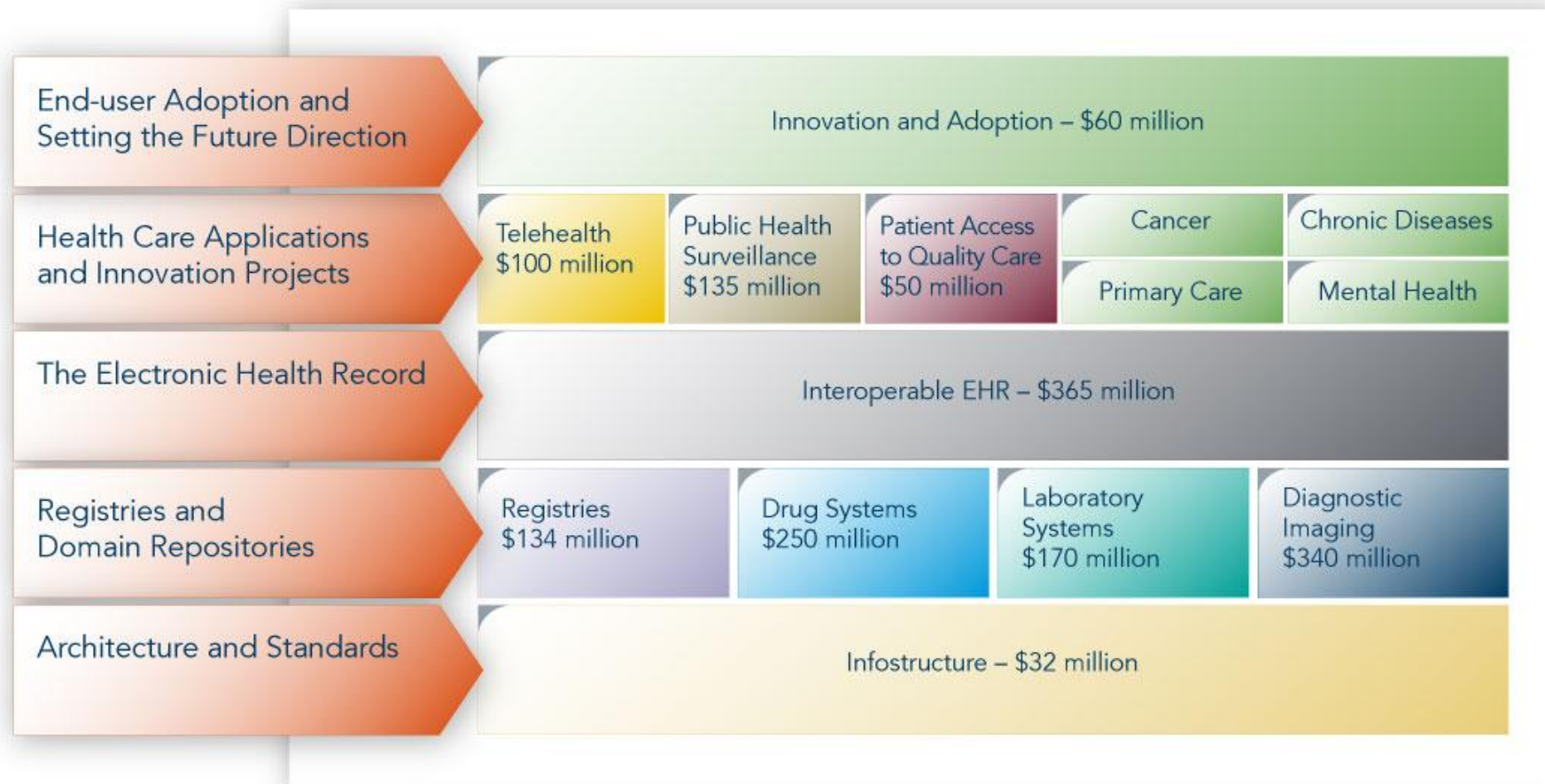
Unique strategic investor role

Overview of investment models



Infoway programs

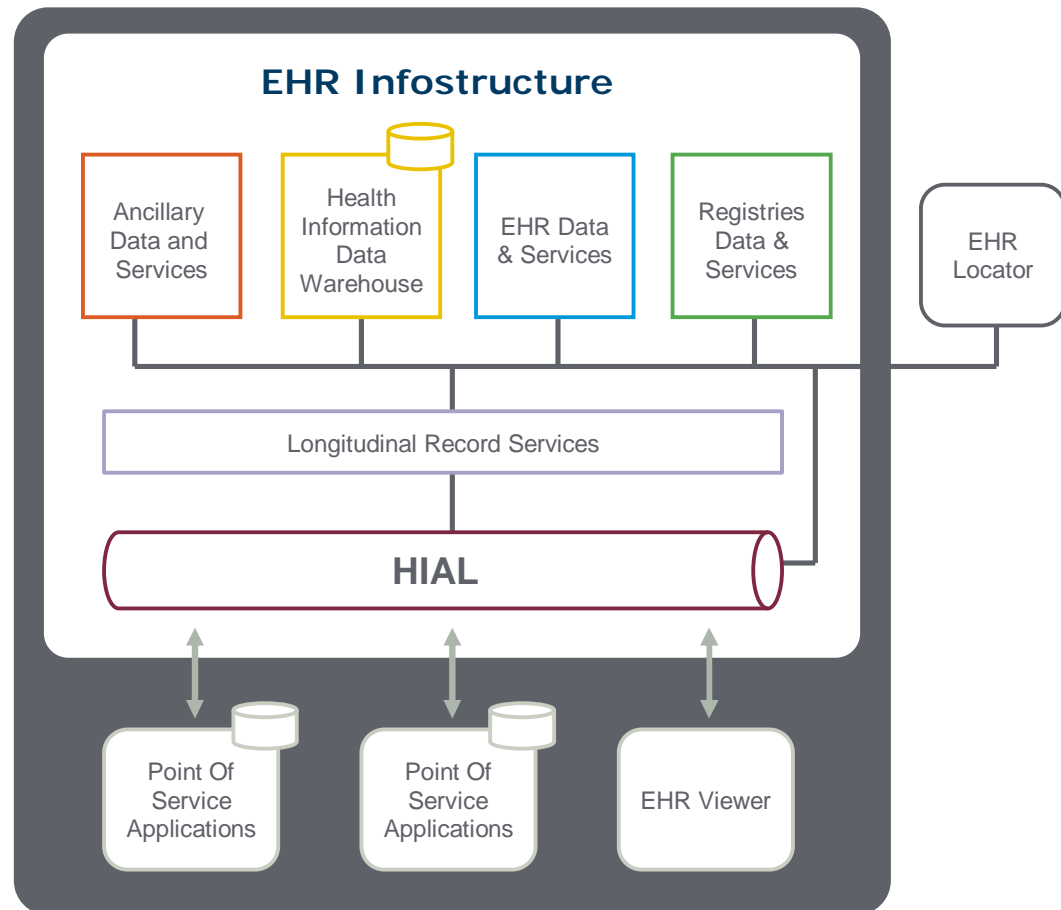
Ten investment programs totalling \$1.6 billion



Focus on standards and interoperability

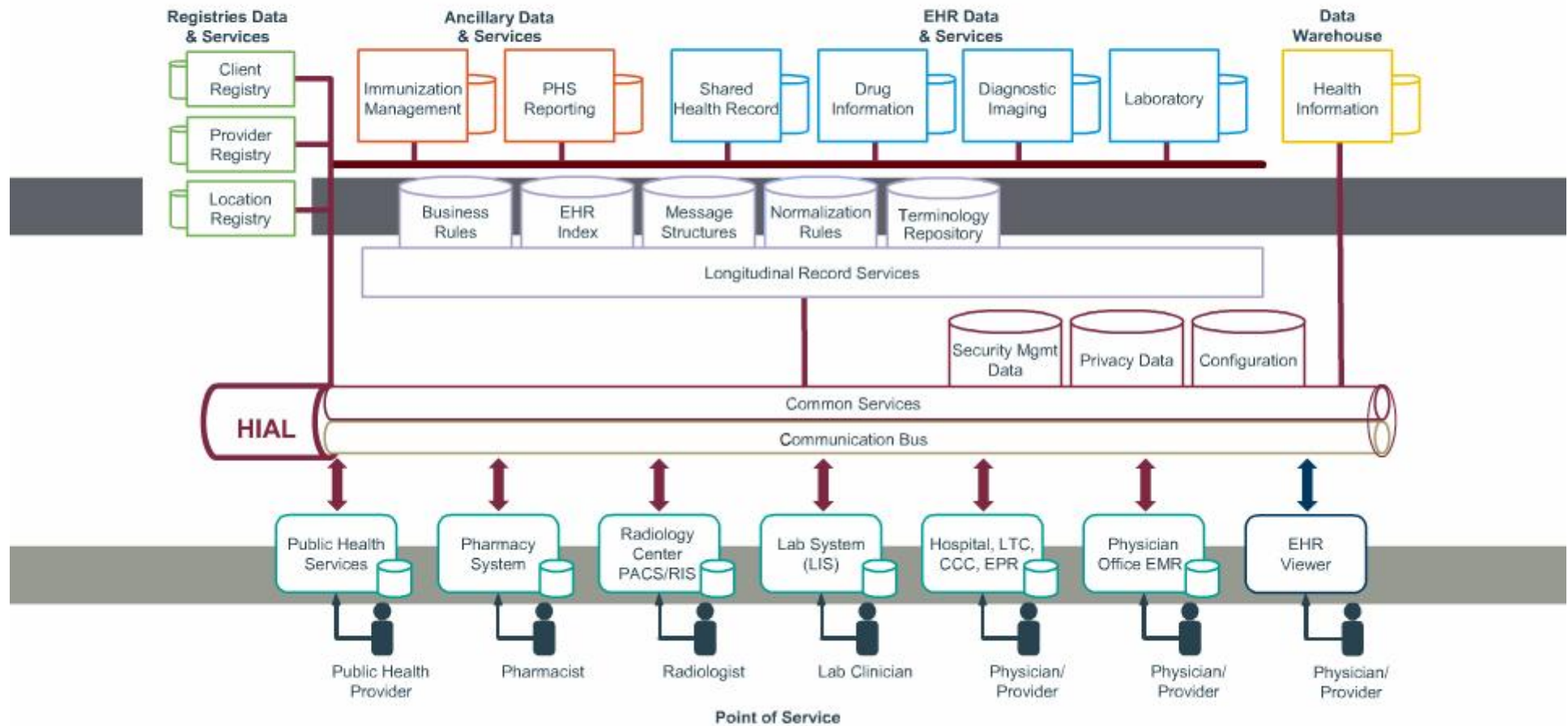
- Common architecture accepted and in use by jurisdictions
- Updated architecture includes privacy and security requirements
- New *Infoway* Standards Collaborative
- Extensive standards development and implementation underway
- Architecture and standards are freely available

EHR Solution



EHR Architecture

Jurisdictional Infostructure

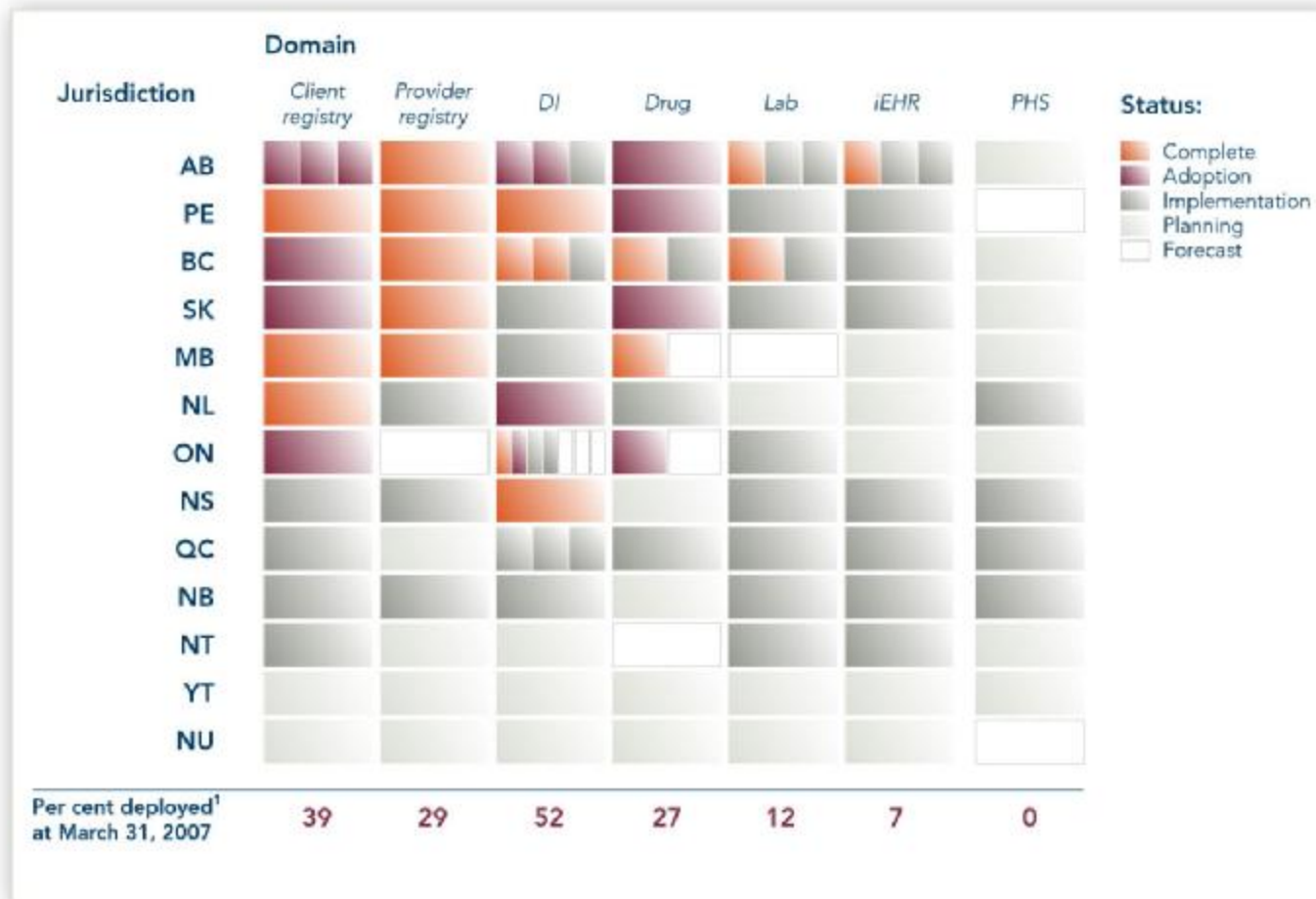


SHOW:



Forecasted jurisdictional progress to March 31, 2008

Progress across Canada



Note:

1. "Per cent deployed" is the per cent of the Canadian population covered by the solution. To depict both full and partial progress "Per cent deployed" is calculated as 100% of the jurisdiction population if the project is complete and 50% of the jurisdiction population if the project is in the adoption phase.

Comments

The goal is the sharing of clinically relevant information between disciplines and care settings

The challenge is twofold:

1. To enable interoperability
 - Human interoperability (level 2 according to Dipak)
 - Computable interoperability (level 3)
2. To support healthcare renewal / transformation – this cannot be a pre-requisite to 1, however is fundamental to it's sustainability

We need to differentiate between the enabling of sharing of comparable information (patient safety is a primary driver)

Recognize the difference between standardizing on the representation of information and the standardization of clinical practice

Use Cases

Canada has not attempted to model all clinical / process aspects of healthcare

- Focus on establishing necessary components for interoperability
- Established through a small set of representative and illustrative use cases
- Use Cases decomposition
 - Storyboard –> Service Events –> Event Step -> PoS Action -> EHRi Action -> EHR Interoperability Profiles -> Messages
- Mapped against a role / setting / interaction matrix to assess coverage of “types” of interaction (95%)
- Resulting in 19 Interoperability Profiles that represent the majority of EHR information sharing “patterns”

An “Infostructure” Approach

- Defines the mechanics of interoperability
- Based on a shared repository model with peer-to-peer infostructures
- Combined with structured vocabularies supports both human and computable interoperability
- Does NOT attempt to define clinical practice behaviours
- Both a strength and a weakness
 - Allows infostructure to be developed in a flexible way
 - Supports both human and computable semantic interoperability
 - Does not solve the problem of modeling clinical content within the broad array of care settings and disciplines

Incremental Approach

- Identify basic low-level interactions and trigger events
 - Appropriate granularity is critically important
- Initial goal is for human readability
 - Mix of structured and un/semi-structured information
 - Presumption that clinical systems will take time to “standardize” on structured vocabularies and clinical representations
- Intermediate goal is a transition to the concept of “templates”
 - Same trigger events
 - Clinical content rendered as registered templates (not just using CDA)
- Ultimate goal is fully computable semantic interoperability based on structured data with structured vocabularies / terminologies

The Canadian vs EU Context

In the EU environment, the “common currency” is clinically relevant information about the patient

In the Canadian model this is dealt with in a particular way:

- NOT through enabling direct software-to-software interaction at the point of care
- Rather establishing a shared infostructure and repository for this information
 - In the “currency” metaphor this is a shared “bank” within each jurisdiction
 - Each infostructure defined by governance / accountability boundaries (provincial / national)
 - Providing for the managed transfer of information between infostructures as peers, based on the same interoperability patterns and trigger events

All of us need some expression of what the future state looks and feels like from the perspectives of providers and consumers of the health services



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Thank you

Presented by

Observations on ESO_eHealth_INTEROP_V0025

1. Page 12 – “other business functions”. I think reduction of Wait Times is integral to the concept of eHealth and this requires some work in the area of resource management and enterprise scheduling (where the “enterprise” is healthcare in a particular jurisdiction)
- 2.5.1 very good section however there are abbreviations used not defined earlier in the document
- 3.5.3.6.3 Is there a perception that IHE Technical Frameworks substitute, or are the proxy for, architecture by the consumer of the framework?
- 4.7.2 4 steps... need to discuss what 3 means.. Conformance and certification requires some “proof environments”. I suspect 4 means “broad deployment”
- 5.8.1 In Canada we differentiate between use of EHR for health service provision and health system management