Canada Health Infoway

The IHE Methodology

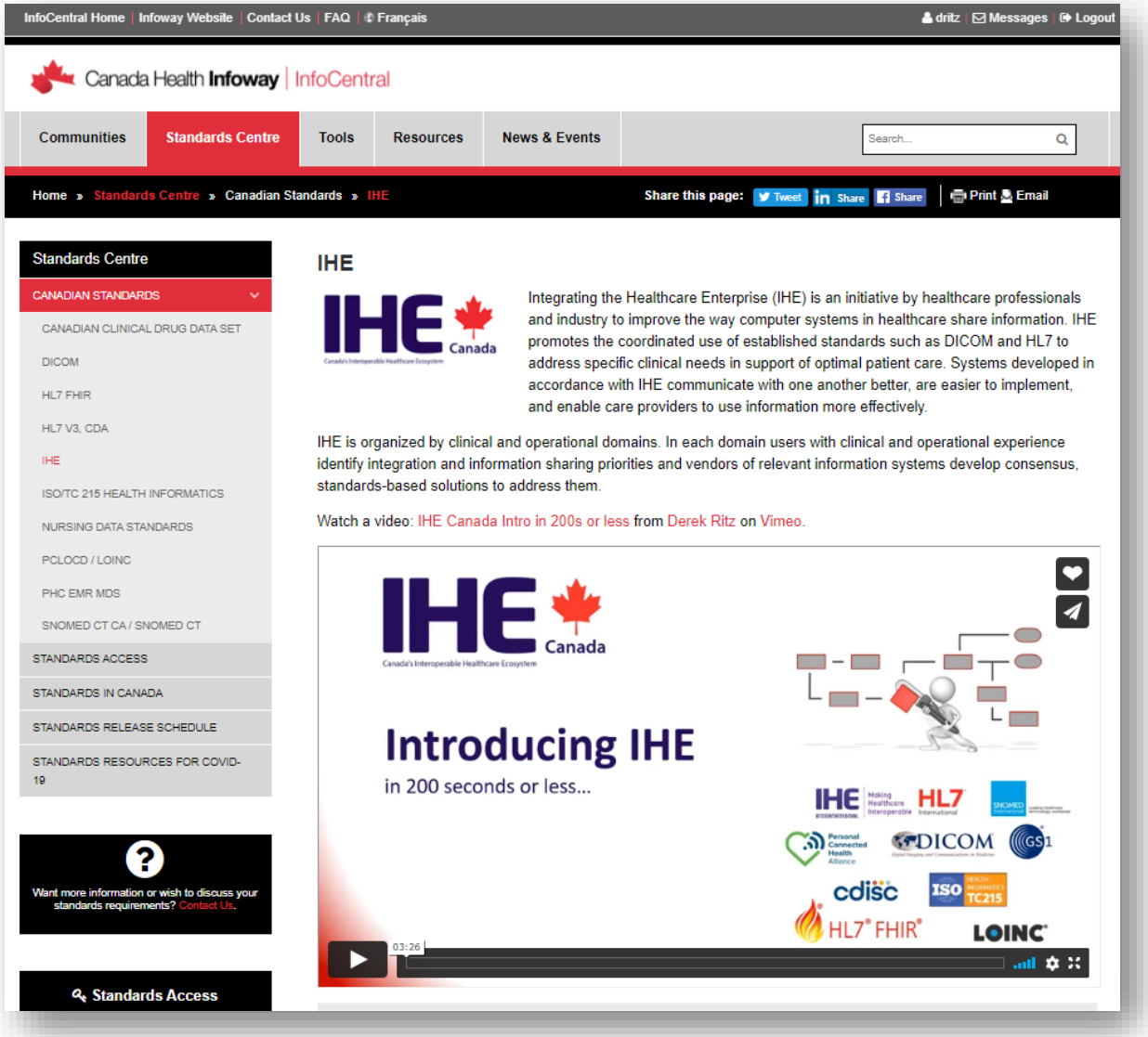
Adapting a successful, proven, process to our Canadian context.

28 July 2021

Overview

- What is IHE and how does it work?
- How can we adapt the IHE process as a recipe for success in Canada?
- What will be the pathway for Canadian vendors to take their digital health solutions global?
- Charting our immediate next steps…

What is IHE and how does it work?



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IHE INTERNATIONAL | Making Healthcare Interoperable

IHE is an initiative by healthcare professionals and industry to improve the way computer systems in healthcare share information. IHE promotes the coordinated use of established standards such as DICOM and HL7 to address specific clinical needs in support of optimal patient care. Systems developed in accordance with IHE communicate with one another better, are easier to implement, and enable care providers to use information more effectively.

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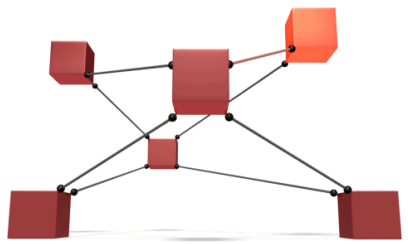

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- IHE is a collaborative non-profit organization that develops **global public goods**.
- IHE creates profiles on *collections* of existing standards and publishes **interoperability specifications** that address care workflows.
- IHE is focused on ***operationalizing*** **interoperability at <u>scale</u>**.

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Making Healthcare Interoperable

Domain Committees

Deployment Committees

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Making Healthcare Interoperable

Domain Committees

Radiology
IT Infrastructure
Pharmacy
Quality, Research & Public Health
Patient Care Coordination
Cardiology
Devices
Eye Care
Dental
Pathology and Laboratory Medicine
Radiation Oncology

Deployment Committees

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Create engineering artefacts.

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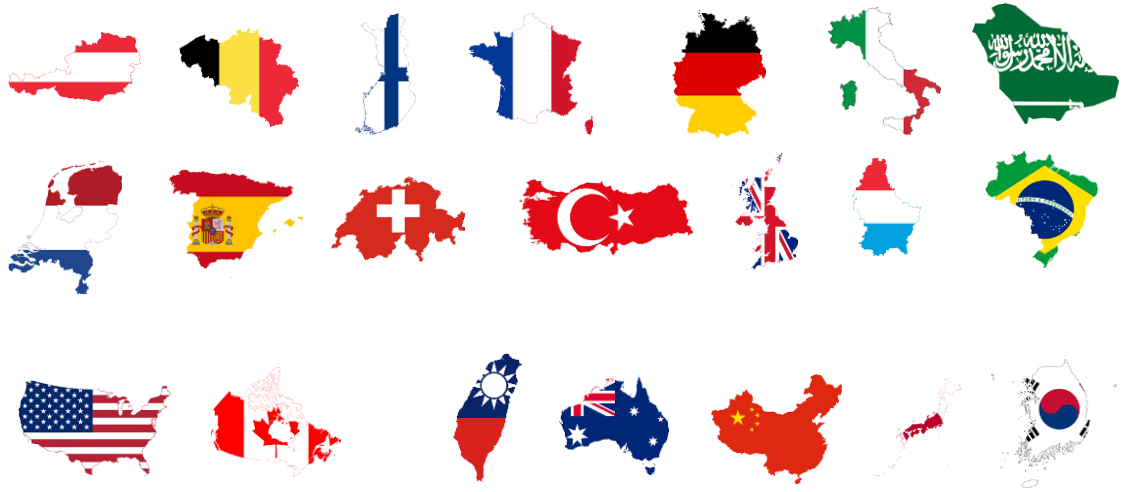

Create engineering artefacts.

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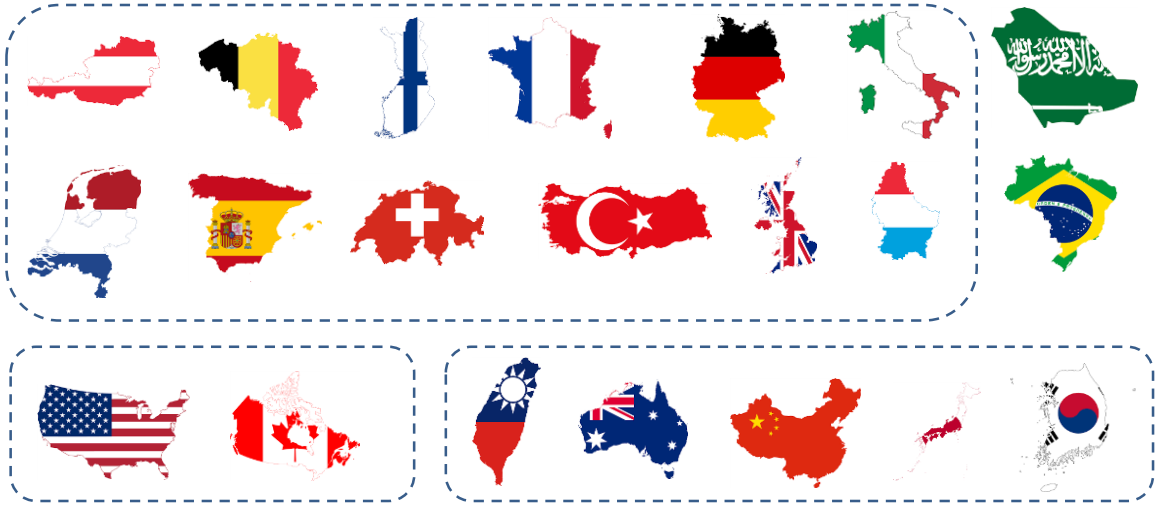

Nationalize artefacts.
Conformance-test.
Exert governance.

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How do we make it “go”?

HL7 INTERNATIONAL

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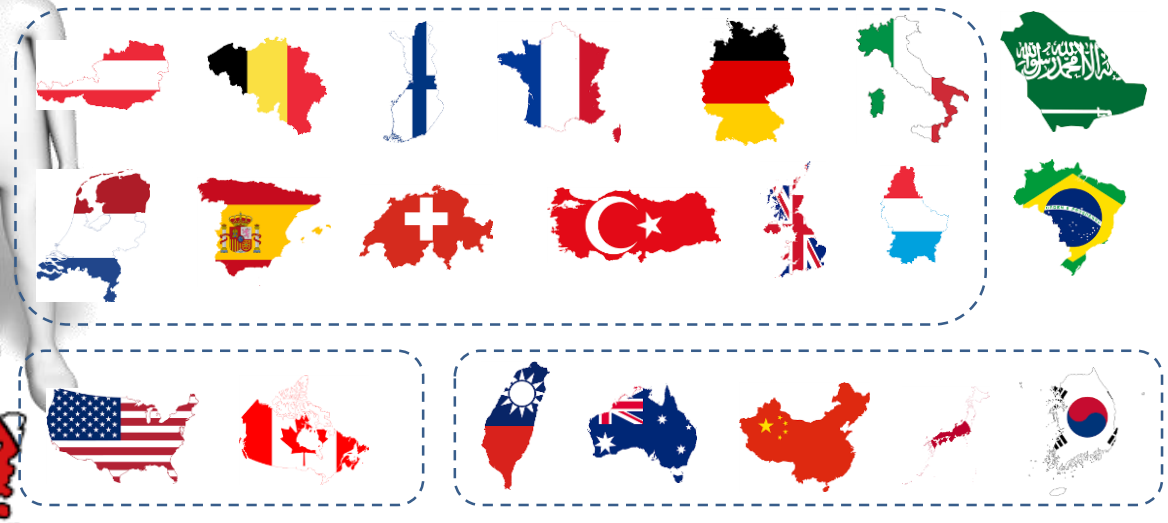

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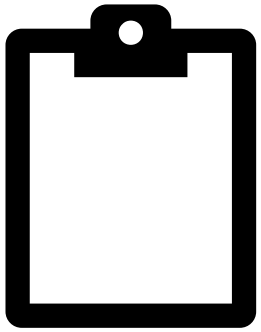
1

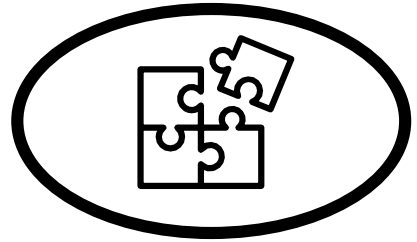
Phase 1 Clinical/Business Definition



Phase 1
Clinical/Business
Definition

2

Phase 2 Workflow Components



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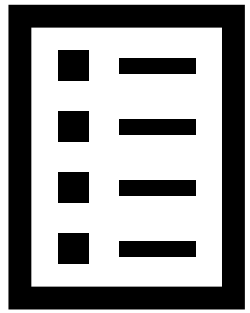
Phase 3 Interoperability Standards



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Phase 1
Clinical/Business
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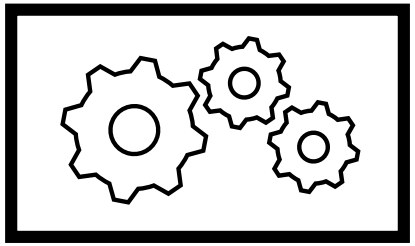
Phase 3
Interoperability
Standards

4

Phase 4 Implementable Architecture



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Phase 1
Clinical/Business
Definition

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Workflow
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Phase 3
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Phase 4
Implementable
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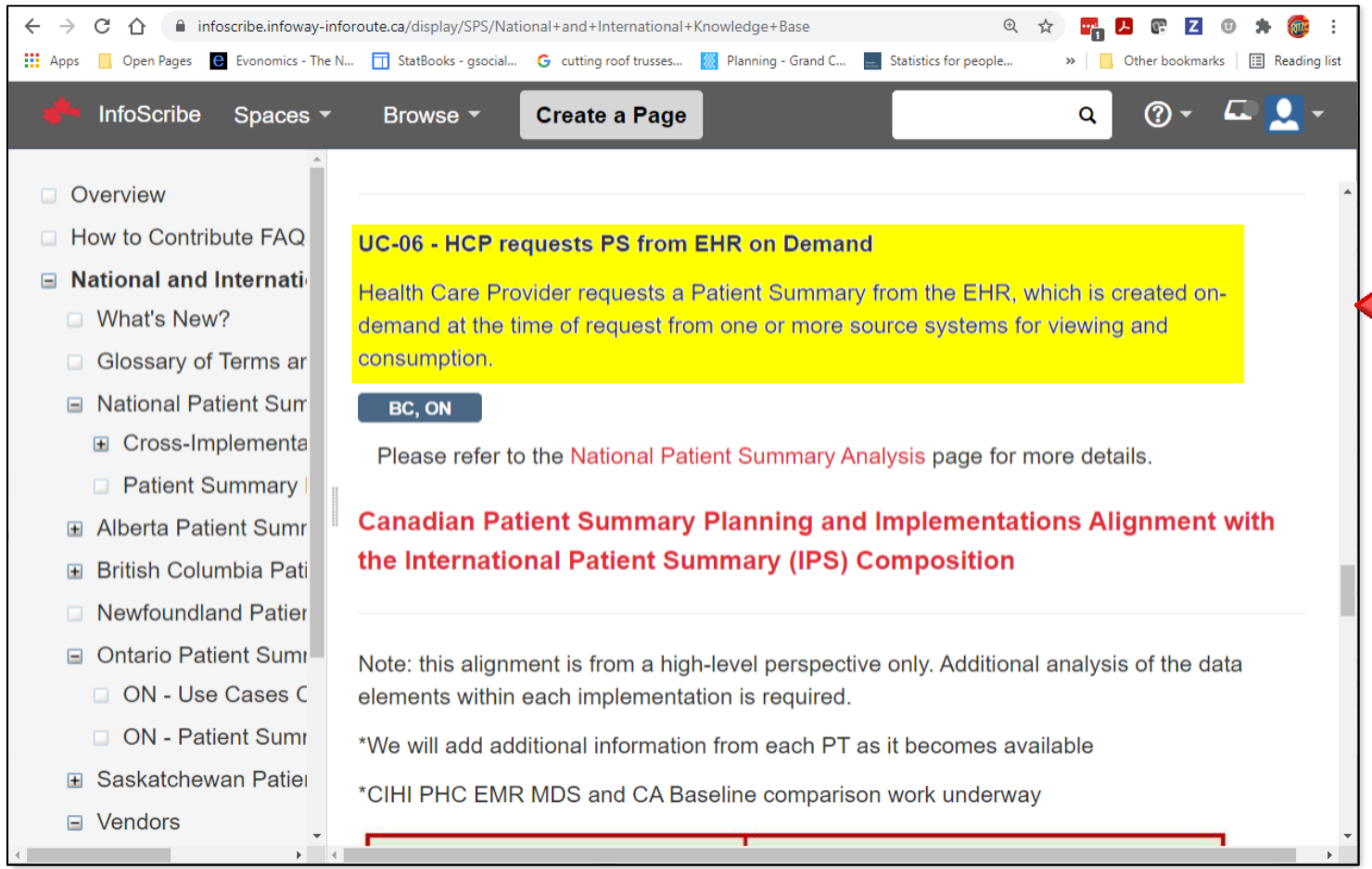
Let’s illustrate this with an example…

Phase 1
Clinical/Business Definition

Phase 2
Workflow Components

Phase 3
Interoperability Standards

Phase 4
Implementable Architecture



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An on-demand **Patient Summary Builder** would need to be able to…

Unambiguously identify the patient (get the enterprise ID)

Get permission to access data sources holding this patient's data

Use this permission to fetch data from all the pertinent sources

Assemble the retrieved data into a well-formed patient summary

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Deployment Committees

Create engineering artefacts.

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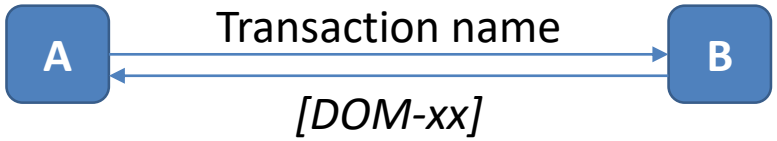
At the heart of IHE's engineering artefacts is the notion of re-usable building blocks: the **actor-transaction pair**.



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Patient Demographics Consumer

Patient Identity Registry

Mobile patient demographics query [ITI-78]

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Incorporate access token
[ITI-72]

Authorization Client

Resource Server

Document Consumer

Document Responder

Find document references
[ITI-67]
Retrieve document
[ITI-68]

- ☑ Unambiguously identify the patient (get the enterprise ID)
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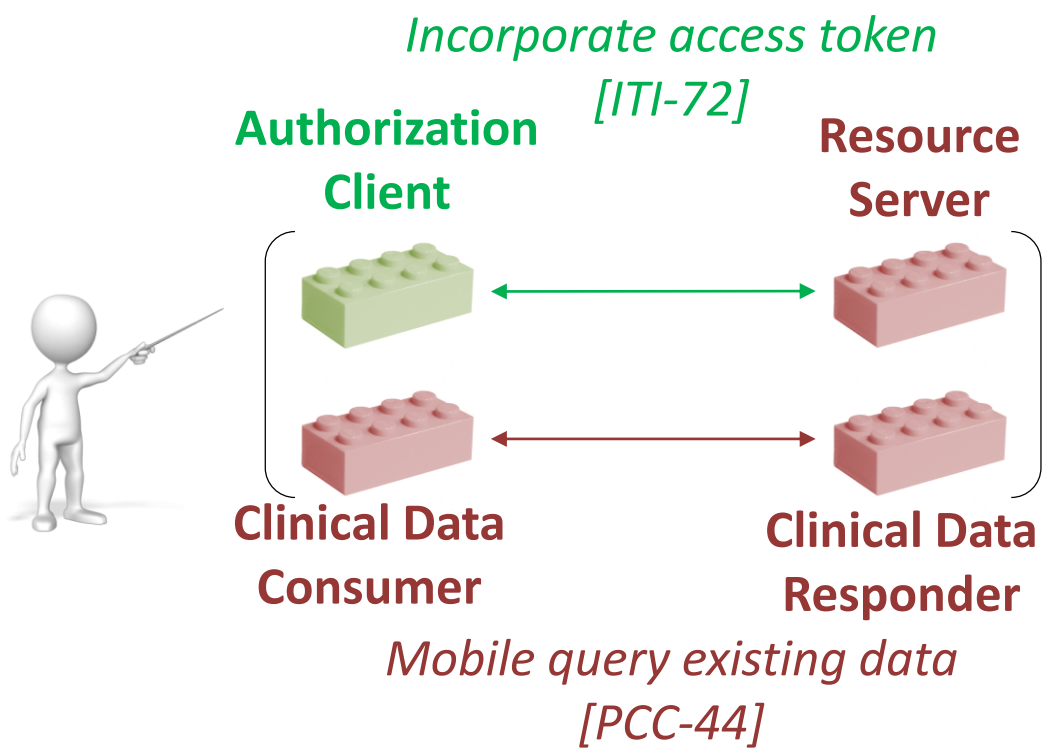

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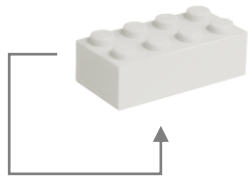
Patient Summary Builder



Assemble patient summary [CAN-01]

- ☑ Unambiguously identify the patient (get the enterprise ID)
- ☑ Get permission to access data sources holding this patient's data
- ☑ Use this permission to fetch data from all the pertinent sources
- ✖ **Assemble the retrieved data into a well-formed patient summary**

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We need to “assemble” the characteristics of our new **Patient Summary Builder** actor from the already-existing building blocks, *plus* define the normative properties of a new “**Assemble patient summary**” transaction.

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Patient Summary Builder

[CAN-01]

We nee[illegible]semble" the characteristics of our new Patient Summary Assembler actor from the available building blocks, plus define the normative properties of a new "Assemble patient summary" transaction.

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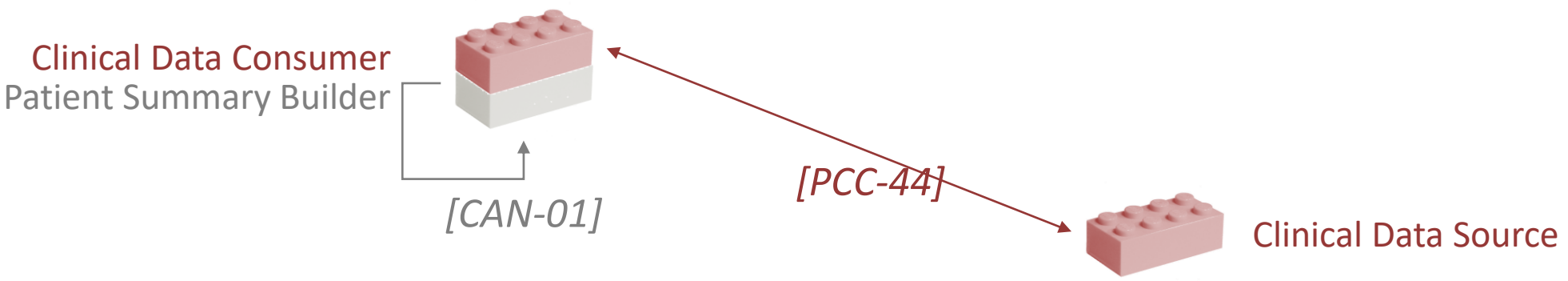

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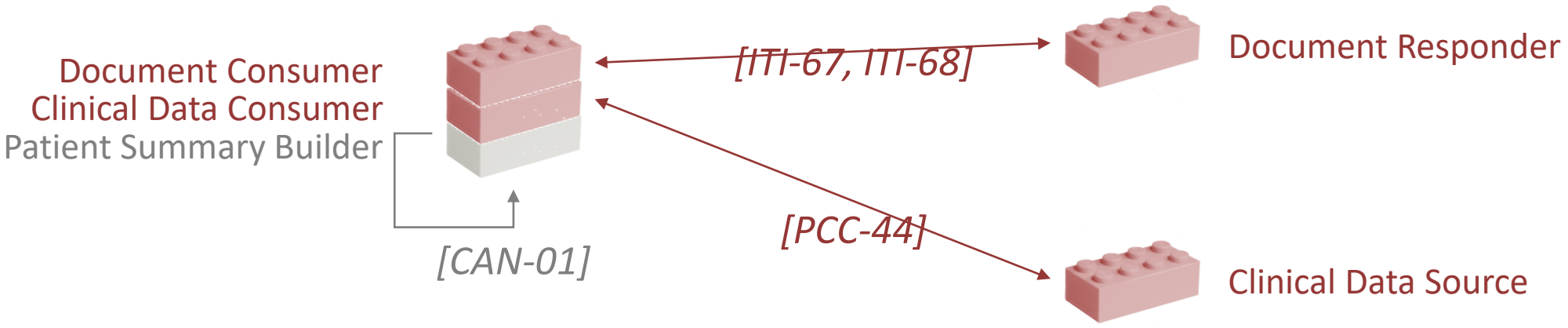

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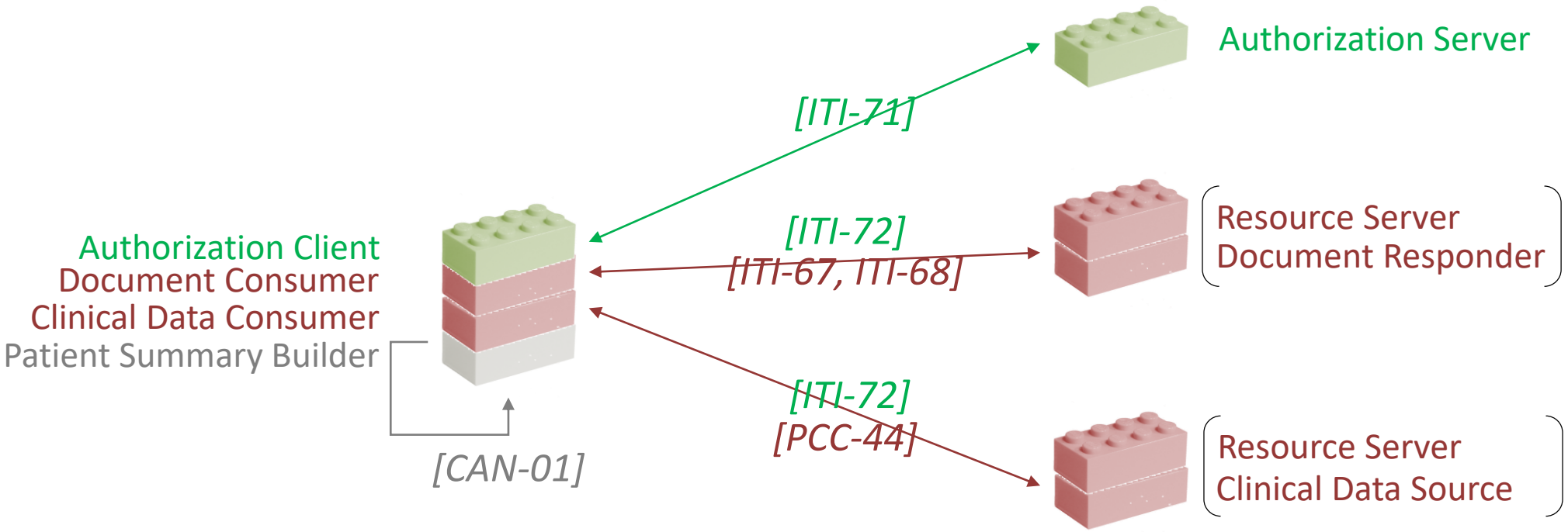

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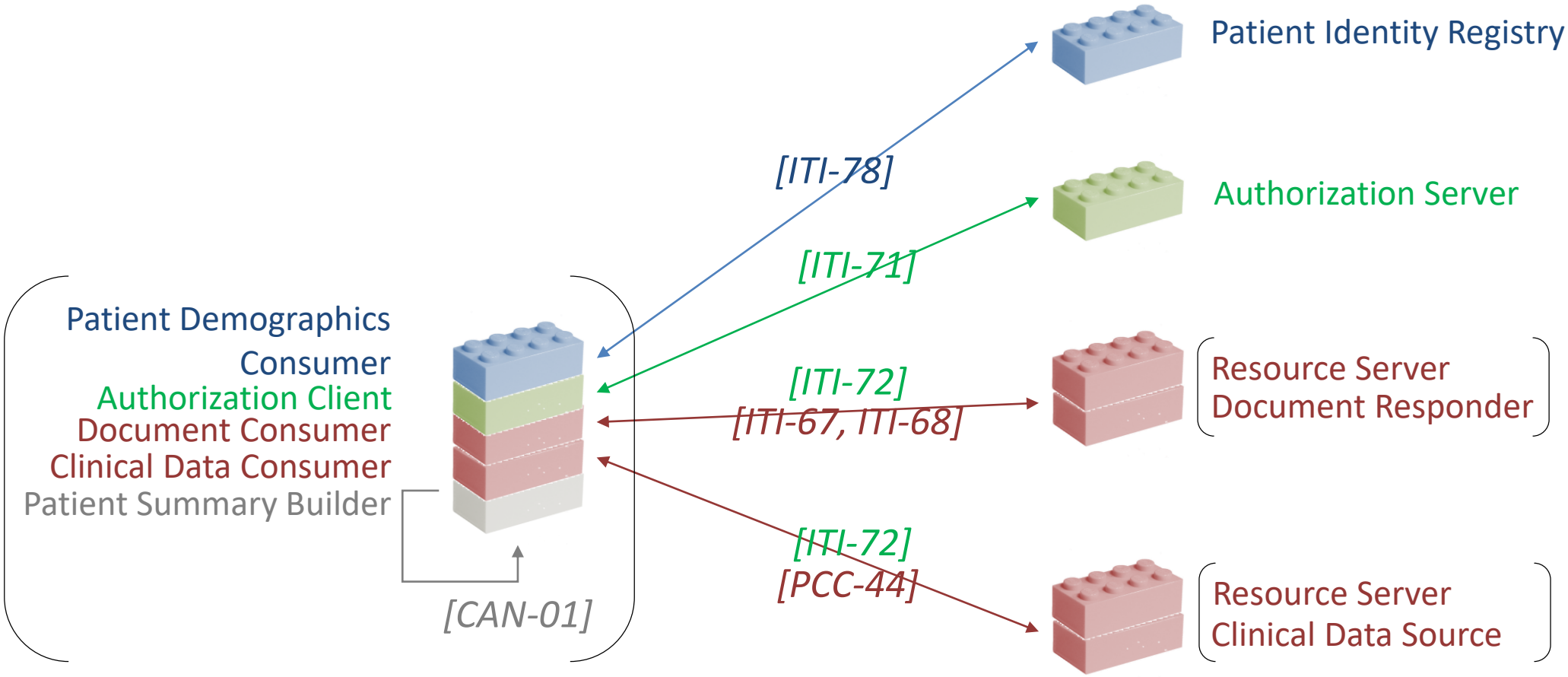

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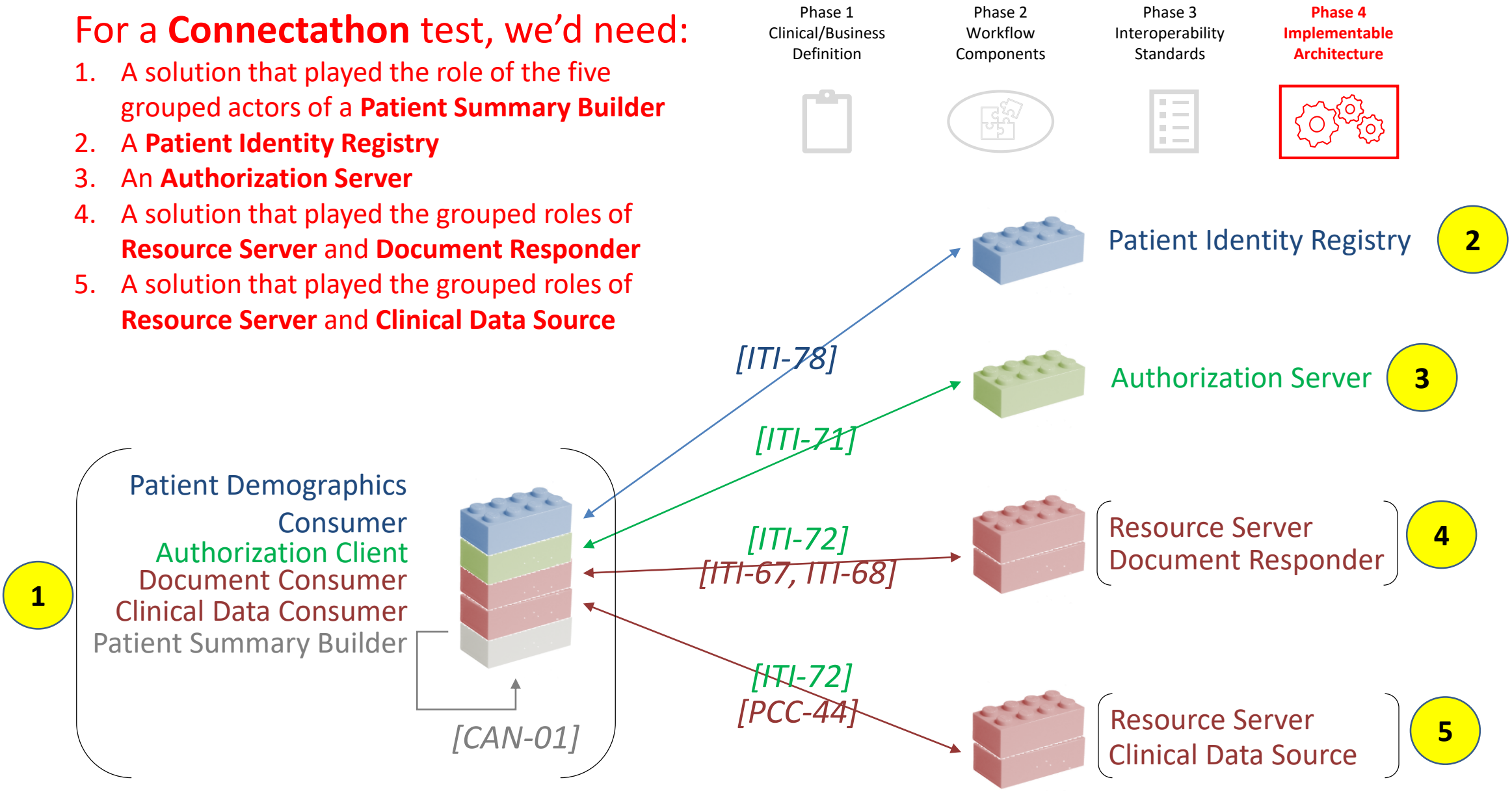
For a **Connectathon** test, we'd need:

1. A solution that played the role of the five grouped actors of a **Patient Summary Builder**
2. A **Patient Identity Registry**
3. An **Authorization Server**
4. A solution that played the grouped roles of **Resource Server** and **Document Responder**
5. A solution that played the grouped roles of **Resource Server** and **Clinical Data Source**



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What is the opportunity, here,

for Canadian vendors?

We will leverage IHE's documentation conventions for our domestic work and test using our own Gazelle instance.

IHE | GAZELLE
eHealth test framework for interoperability

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We will leverage IHE's documentation conventions for our domestic work and test using our own Gazelle instance.

IHE GAZELLE eHealth test framework for interoperability

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We will bring our artefacts to the Domain **technical committees** of IHE International for balloting as global specs.

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Canadian vendors can certify at **USA** and **EU** and **Asian** Connectathons.

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Where should we go from here?