Canada Health Infoway

Pan-Canadian Projectathon

Business VIP Tour

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Agenda

Projectathons in Canada	15 min
Projectathons & Connectathons: International Lens	8 min
Projectathon 2023	12 min
Testing, Compliance and Conformance Infrastructure	10 min
Q & A	15 min

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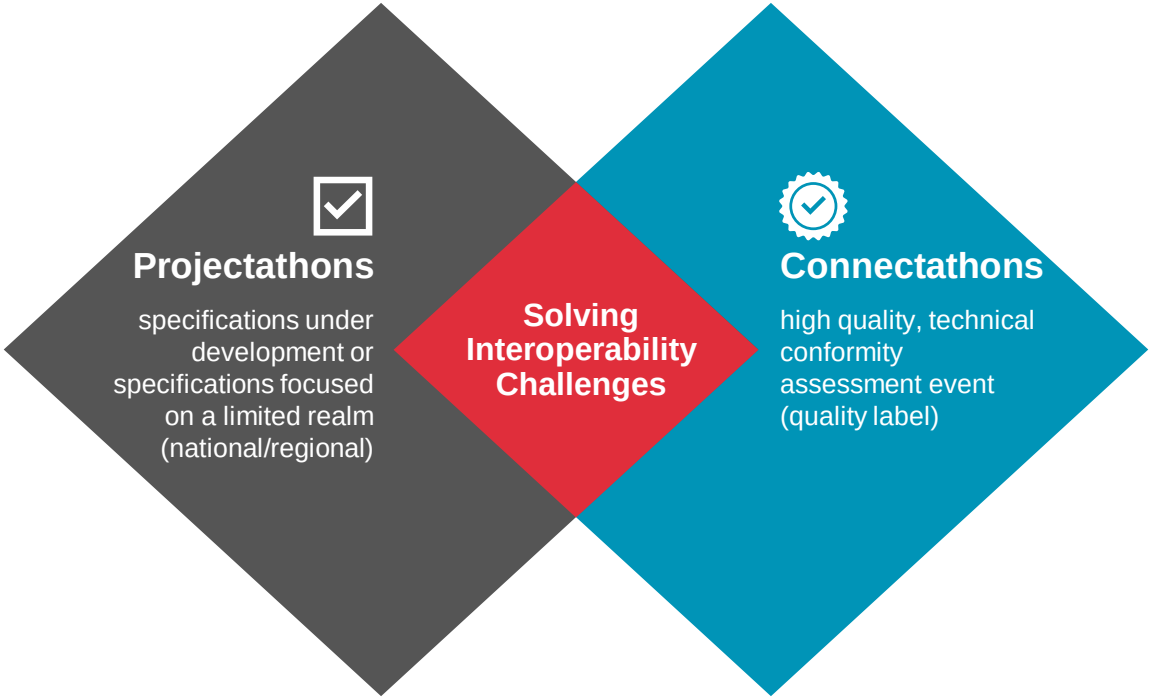
Solving Interoperability Challenges



To learn more about Projectathons & Connectathons click here

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Solving Interoperability in Canada

- Solving for the **first** Interoperability Challenge: Patient Summary

Solving Interoperability Challenges - Core Concepts

IHE International has developed a process that **brings together clinicians, jurisdictions, vendors and, developers** of healthcare information technology (HIT) in an annually recurring four-step process.

Clinical, technical and jurisdictional experts **define critical use cases and business requirements** for solving a problem (e.g., Sharing Patient Summaries).

Technical experts **create detailed specifications** to address the use cases, selecting/optimizing established standards.

Industry implements these standard specifications called Integration Profiles in various HIT systems and solutions.

Allows vendors to **demonstrate interoperability and conformance.**

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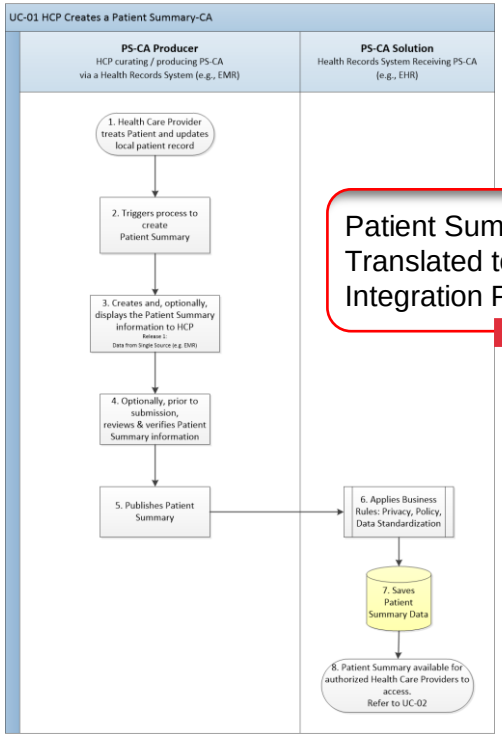
Use Cases & Requirements Translated to Solve a Problem



Patient Summary Use Case Translated to Integration Profiles

PS-CA USE CASE 1: HCP Creates PS-CA			MAPPING TO SECTIONS FROM THIS AND REFERENCED INTEROPERABILITY SPECIFICATIONS		
USE CASE ACTOR	SERVICE SUPPORTED	OPT	TECHNICAL ACTOR	OPT	PROFILE / STANDARD
PS-CA Producer	Authenticate User	O	Client (e.g., EMR)	O	Internet User Authorization (IUA)
	Identify Patient	O	Client (e.g., EMR)	O	Use Existing Standards Employed by the Clinical System
		O	Patient Demographic Consumer	O	PDQm
	Retrieve clinical data from local data sources (Patient Identifier)	R	Client (e.g., EMR)	R	Use Existing Standards Employed by the Clinical System
	Assemble and review Patient Summary	R	Client (e.g., EMR)	R	Use Existing Standards Employed by the Clinical System
	Update Current Valuesets and ConceptMaps	O	Client (e.g., EMR)	O	SVCM
	Omit or Mask Data based on Jurisdictional Policy	O	Client (e.g., EMR)	O	Jurisdictional Requirement
	Save PS-CA to Document Repository	R	Client (e.g., EMR)	R	Use Existing Standards Employed by the Clinical System
		R	Data Source	R	CA:FeX
Document Repository (Central)*	Save PS-CA to Document Repository	R	Data Recipient	R	CA:FeX
Central Infrastructure	Identify Patient	O	Patient Identity Registry	O	PMIR

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Creating Specifications with Established Standards

MAPPING TO SECTIONS FROM THIS AND REFERENCED INTEROPERABILITY SPECIFICATIONS		
TECHNICAL ACTOR	OPT	PROFILE / STANDARD
Client (e.g., EMR)	O	Internet User Authorization (IUA)
Client (e.g., EMR)	O	Use Existing Standards Employed by the Clinical System
Patient Demographic Consumer	O	PDQm
Client (e.g., EMR)	R	Use Existing Standards Employed by the Clinical System
Client (e.g., EMR)	R	Use Existing Standards Employed by the Clinical System
Client (e.g., EMR)	O	SVCM
Client (e.g., EMR)	O	Jurisdictional Requirement
Client (e.g., EMR)	R	Use Existing Standards Employed by the Clinical System
Data Source	R	CA:FeX
Data Recipient	R	CA:FeX
Patient Identity Registry	O	PMIR

Existing, internationally-developed solution for **User Authorization** (IUA)

Existing, international profile, developed to solve for **consistent patient demographics** query (PDQm)

CA:FeX: Canadian developed integration profile to solve for a **standardized way to exchange FHIR documents** (e.g., Patient Summary)

Optimizing the development process with modular technology!

These Profiles can implement very different protocols and technologies

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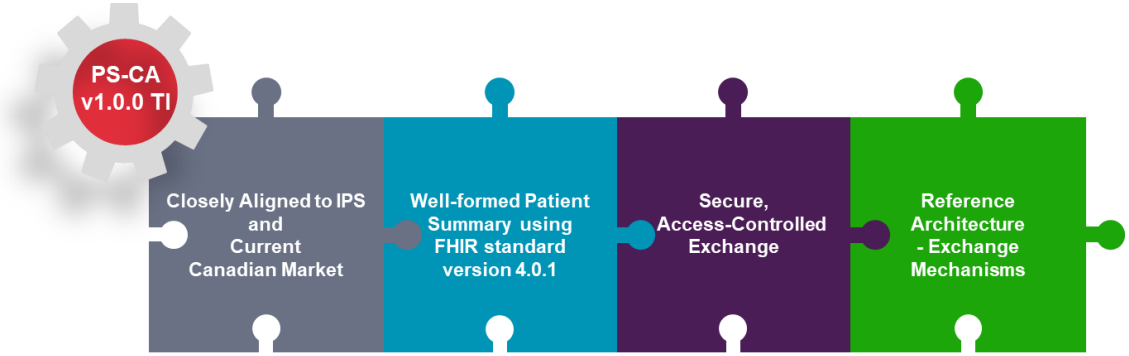
Implementing the Standards into Clinical Systems



Vendors build in the **existing, standardized, modular components,** as defined in the specifications

Clinical Systems (e.g., EMR, HIS, etc.)

Vendor systems **can compete on everything they choose** to, except for the interoperability profiles they claim to support

User Authorization (IUA)	**Secure Application** CA:Sec (ATNA)	**Data Sharing Standard** (CA:FeX)

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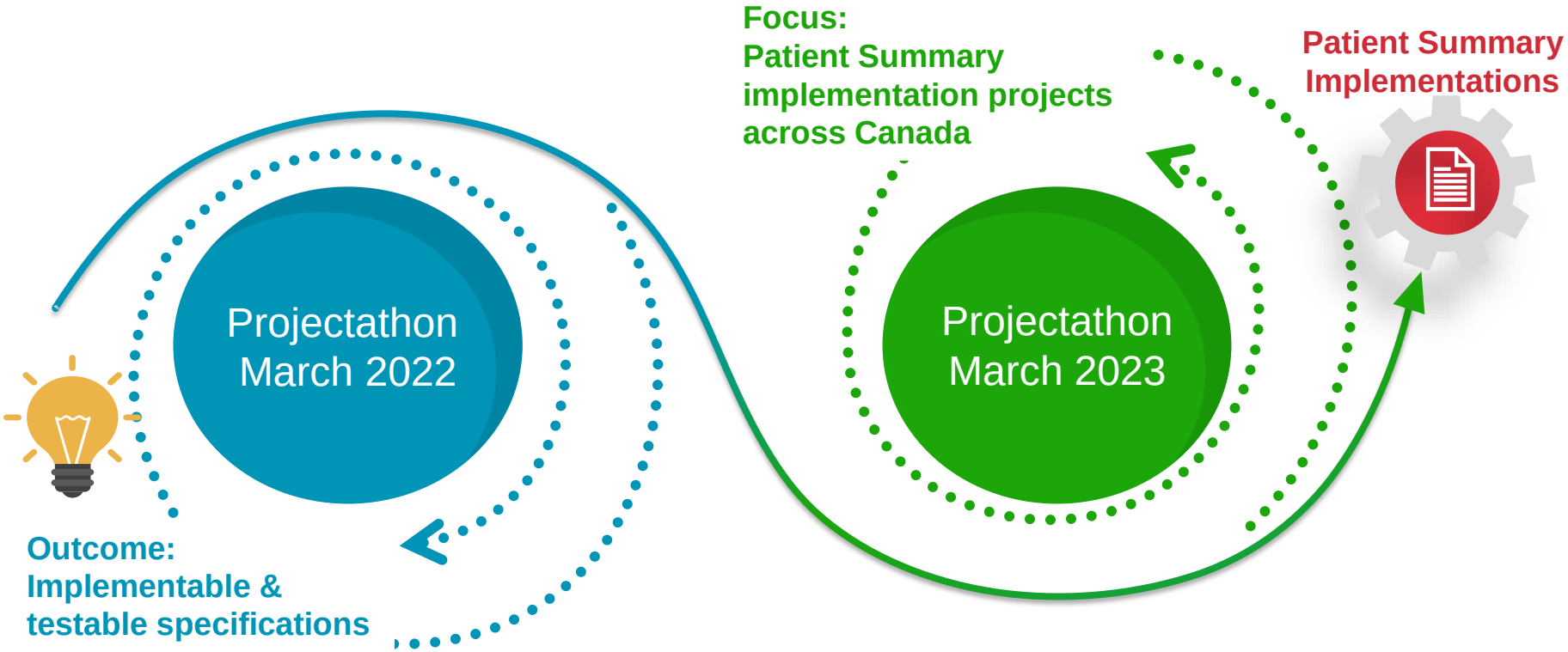
Demonstrating Interoperability: Projectathon 2022/23



Vendors demonstrate interoperability and conformance to the specification for the Patient Summary by testing their systems

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Projectathons & Connectathons: International Lens

IHE Connectathon – Testing Interoperability

- IHE Connectathon is part of the IHE technical framework development process:

  Provides a unique opportunity for vendors to test the interoperability of their products in a structured environment with peer vendors.

  Author can receive quick feedback on their specifications

- Participants test against multiple vendors using real-world clinical scenarios following specifications from IHE Profiles.
- Tests are overseen by a **neutral** team of volunteers: the monitors
- Results are published by IHE International

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What is a Projectathon?

- A Projectathon is a peer-to-peer testing event that is organized as a Connectathon® where the interoperability specifications that are tested are those of a national, regional or other project.
- Those specifications are localizations of IHE integration profiles that take into account also additional local specifications and constraints
- Projectathons usually incorporate multi-actors and multi-transactions sequences that map real life health information exchange
- Projectathons use the same tools as those used in Connectathons®
- In Europe, these events are integrated into the national governance where vendors pay to participate and need to pre-qualify during the pre-Projectathon phase

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Connectathon® - Projectathon Differences

	Connectathon®	Projectathon
Governance	Under the supervision of IHE regional/national deployment.	Under the supervision of the project (the lead organisation).
Rules for passing	IHE test methods are used. Criteria are developed in the IHE Test Plan.	Test methods are customized to fit the project specifications. Criteria are developed by the project.
Publication of the results	IHE Connectathon® Results.	Published by the project (the lead organisation).

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Why do Projectathons?

- Enable co-creation of interoperability specifications at a national, regional or project level
  - ✓ country level examples: Switzerland, Ireland, Greece, France, Canada
  - ✓ regional level example: Abrumet, Veneto, Friuli Venezia Giulia
  - ✓ project level example: epSOS, UNICOM, eHDSI, WHO DDCC
- Test and refine the quality of interoperability specifications
- Create a reference implementation before production or certification
- Establish Digital health ecosystems and communities of practice

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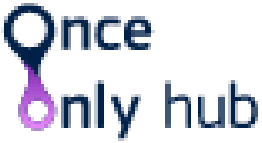
Examples of Projectathons



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Gazelle Instances (2022)

Used by 2 international organizations, 11 national & 3 regional ehealth programs, 5 vendors internal labs, 5 IHE instances.

1. Arsenal.IT (Italy Venice Region)
2. Abrumet-Brussels eHealth (Belgium)
3. Insiel SPA (Italy)
4. Canada Health Infoway
5. GE
6. Agfa
7. InteropLAB (NL)
8. Technikum Wien (Austria)
9. IHE USA
10. IHE-Europe
11. IHE China
12. IHE Japan
13. Agence eSanté-Luxembourg
14. InterAMC France
15. eHealth Finland
16. eHealthSuisse & Federal MoH
17. EU DG Santé-European Cross Border
18. Sequoia-USA
19. EFS-French Blood Transfusion-France
20. Saudi Arabia eHealth: SHC-KSA
21. Ireland eHealth (HSE)
22. French ehealth (ANS)
23. Gabon MoH
24. Greece MoH
25. WHO Clearinghouse
26. CENS-IDB

Projectathon 2023

9 Vendors Participating in the 2023 Projectathon!

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What is being tested at the 2023 Projectathon?

Vendors will be testing the Patient Summary in two key areas:

- **Testing for Document Format and Content** - testing using a combination of test data and validation tooling for the PS-CA and PS-ON specifications.
- **Testing Secure, Exchange Transactions** - testing for differing implementation patterns:
  - Test cases that test individual actor capabilities in isolation
  - Complex test cases that group individual actor capabilities with other relevant actor capabilities to simulate real-world scenarios.

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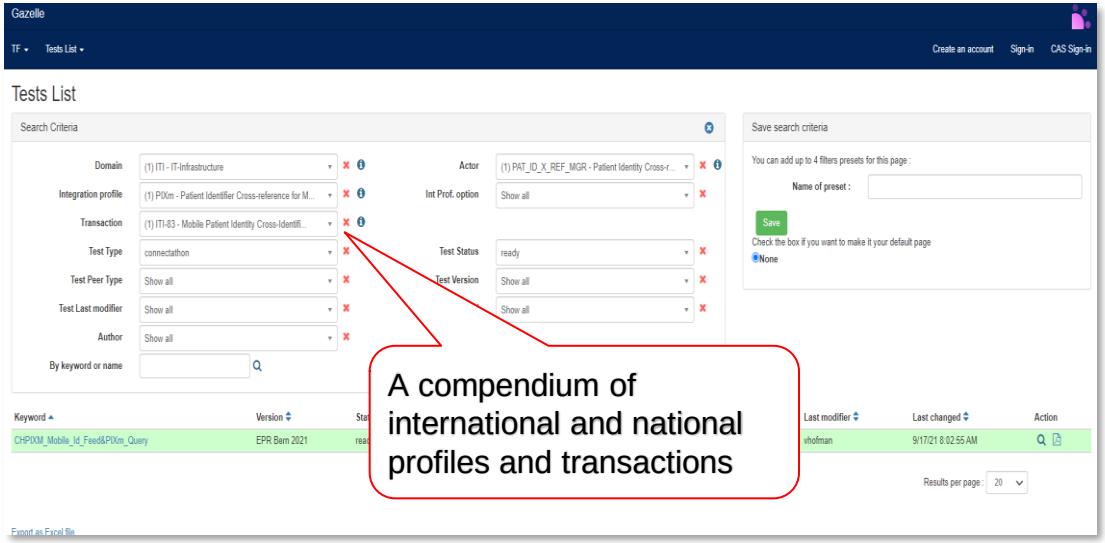
To learn more about Projectathon 2023 testing, click here.

How is the Testing Performed?

IHE | GAZELLE
eHealth test framework
for interoperability



Gazelle is a suite of tools developed by IHE International and other collaborators to bring Integration Profiles to life.

It provides users an opportunity to validate the role they will be playing in the ecosystem and ensure they are able to satisfy the interoperability requirements.

Gazelle offers several self-serve, self-test and conformance assessment opportunities for jurisdictions and vendors to test alignment to Integration Profiles

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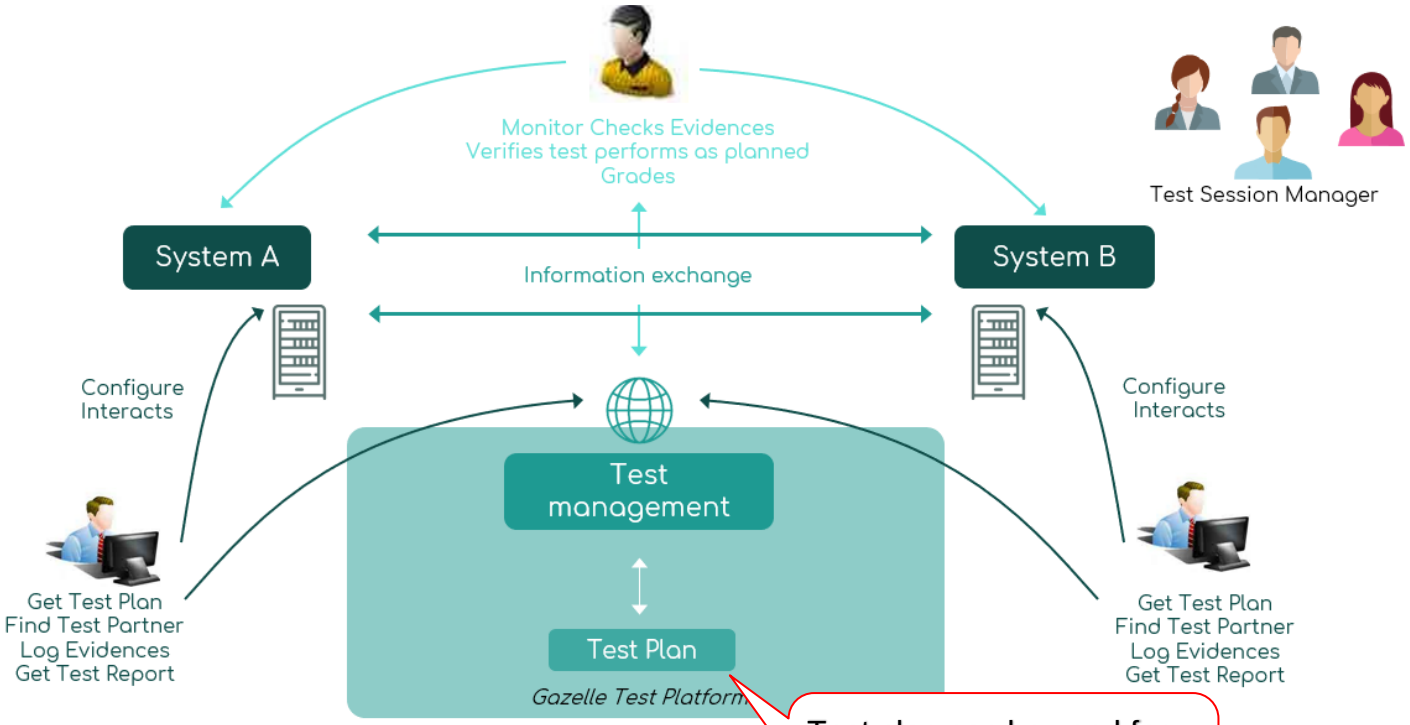
Conceptual Model of a Testing Event



Test plan can be used for development support or certification purposes

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Gazelle Test Management

- Support the testing events from the modeling of the interoperability specifications to the evaluation of the systems based on their test results.

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Dashboard to monitor the ongoing session

Registration
Until 12 April 2021

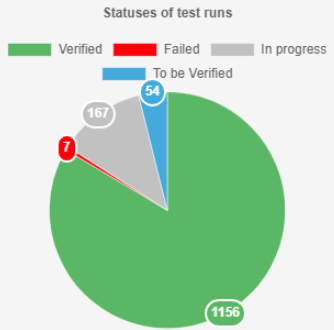
Preparation
Before 2 January 2023

Testing
2 January 2023 To 2 June 2023

Evaluation
After 2 June 2023

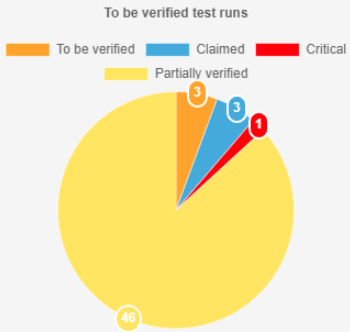
Overall

There is a total of 1384 test runs



Remaining amount of work

There is a total of 54 test runs to be reviewed by a monitor



Left over

7 test runs have been awaiting a review for more than 24 hours

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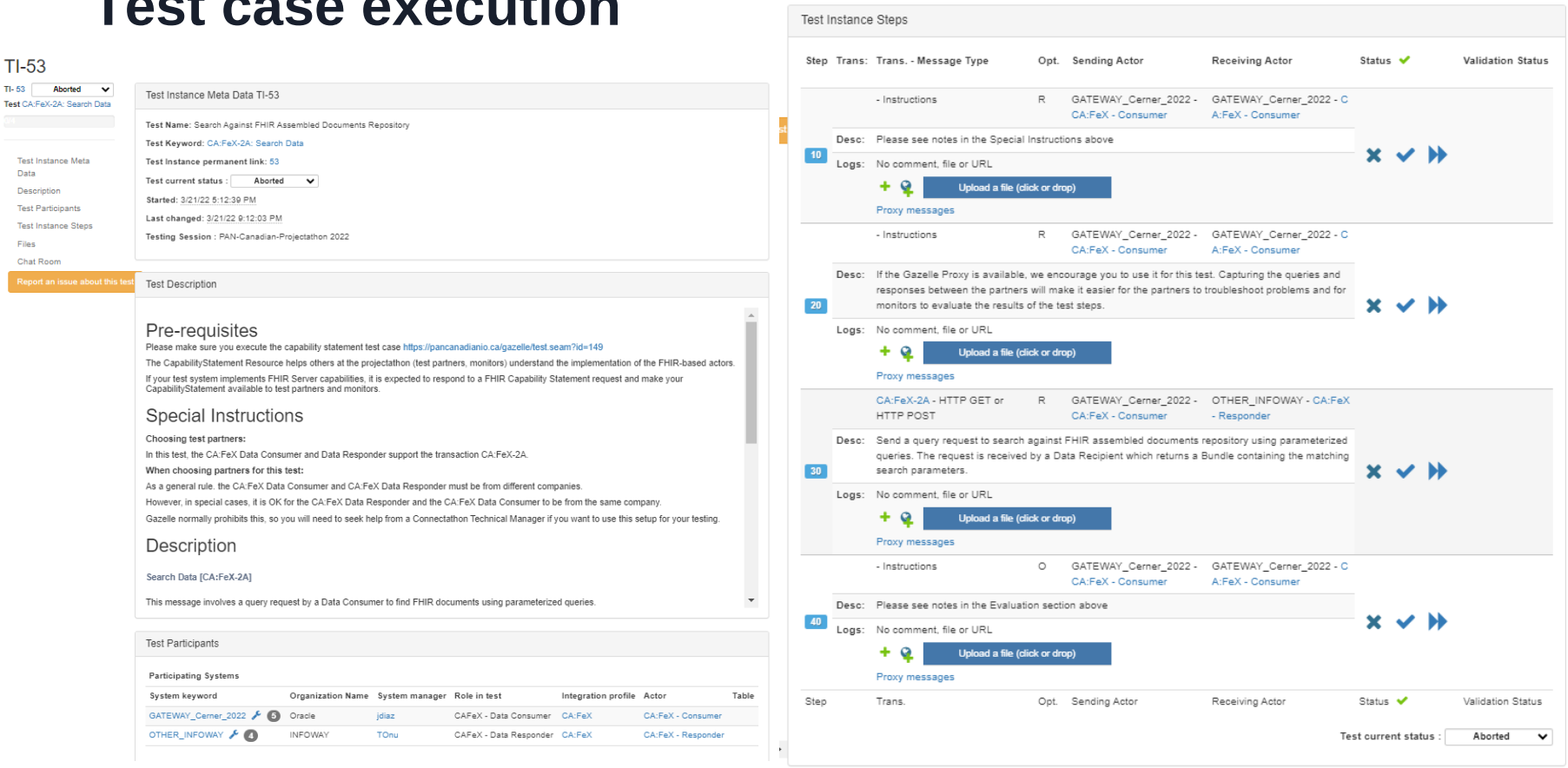
Test case execution



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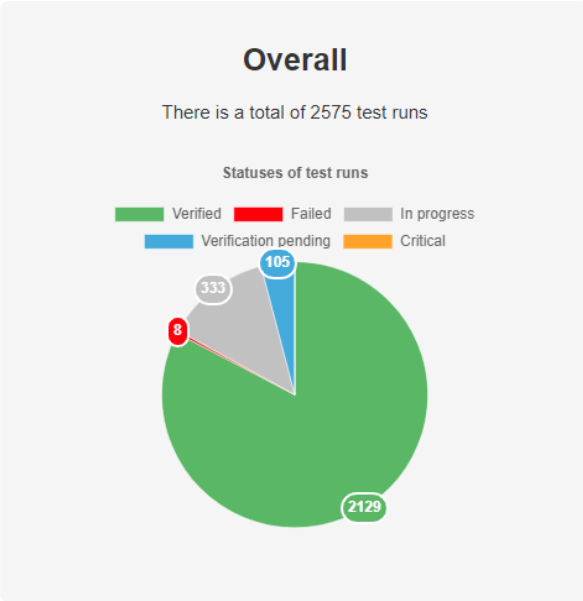
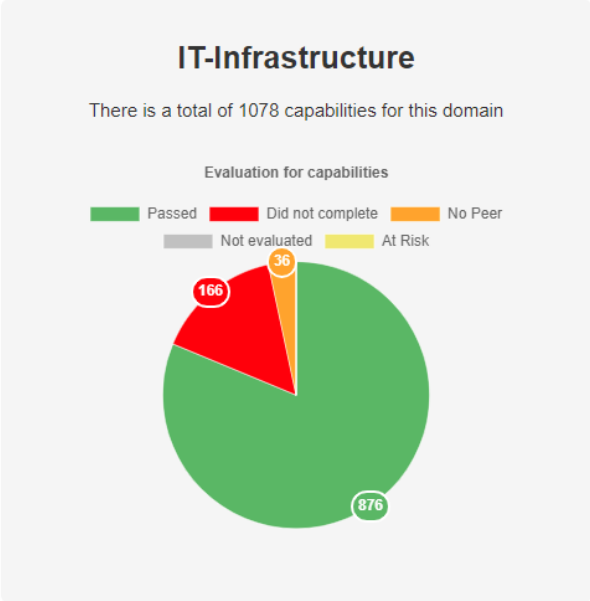
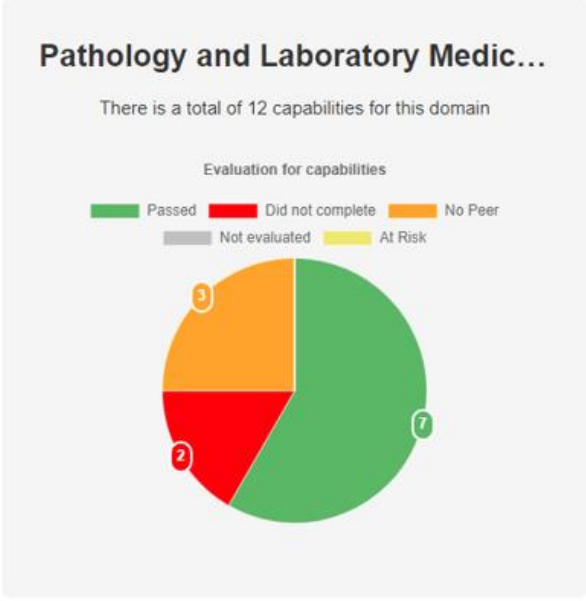
Overview of the outcome of the session for managers







This information is fed into a report for each vendor to reflect their results.

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IHE Connectathon in practice

SmartHealth serie on Euronews:

How is the EU healthcare sector preparing for the digital revolution?

IHE-Europe Connectathon in Switzerland, September 2022

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Summary

Our Journey – In Summary

Infoway has worked alongside provinces, territories, and other key stakeholders to lay the foundation for a connected system.

Extensive consultations with jurisdictions, clinicians, patients and industry identified patient summaries as an interoperability priority area.

Embarked on a mission, along with 5 provinces, to develop a pan-Canadian Patient Summary Specification (PS-CA) that would help solve several key health care challenges.

Tested the PS-CA at prototyping events called Projectathons - an international practice used for testing data standardization and interoperability.

Create a world class interoperable system that Canadians deserve: one which puts them in control of how they receive care and empowers them to access and use their health record as they deem appropriate

WE ARE HERE

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pan-Canadian Interoperability Strategy & Shared Roadmap

1 **PRIMARY CARE DATA PORTABILITY**

2 **PATIENT SUMMARY**

3 **PATIENT ACCESS TO ELECTRONIC HEALTH DATA**

4 **E-REFERRAL & E-CONSULT**

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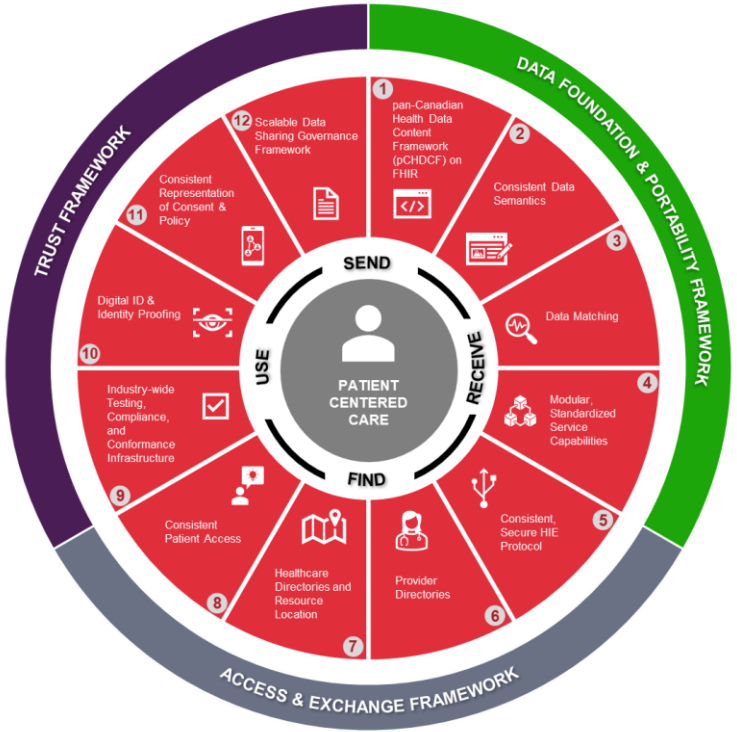
Supporting a World-Class Interoperable System

Interoperability Roadmap Building Blocks

4 MODULAR, STANDARDIZED SERVICE CAPABILITIES

+

9 INDUSTRY-WIDE TESTING, COMPLIANCE, AND CONFORMANCE



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Call to Action

Please Join Us!

Collaborate, **Participate** and **Adopt**

Modular-Standardized Service Capabilities,

leading to readiness for certification programs

conducted through

Industry-wide Testing, Compliance, and Conformance.

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Questions & Answers

To learn more, join us on March 23 for the Projectathon Symposia Day!

Four sessions:

1) International Interoperability Experience: Switzerland
2) Primer to the pan-Canadian Interoperability Strategy & Shared Roadmap
3) Canadian FHIR Exchange (CA:FeX) 2.0
4) Clinician Session: Achieving pan-Canadian alignment on data elements

For meeting invites, email: interoperability@infoway-inforoute.ca

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Thank you!

For questions please contact:

Interoperability@infoway-inforoute.ca

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