



Canada Health Infoway

# Hhealth Application Lightweight Protocol (HALO)

*An Approach for Simplifying Primary and  
Community Care Access to Digital Health  
Services*

HALO Working Group Kick Off  
June 4, 2025

# Introductions

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## Results from meeting polls

# Can you please introduce yourselves (Organization/Role)?





Can you please introduce yourselves? (Organization/Role)

Wordcloud Poll  35 responses  35 participants



# Where are you joining from? (province/state)

 Where are you joining from? (province/state)  
Wordcloud Poll  41 responses  41 participants



# Are you familiar with HALO?

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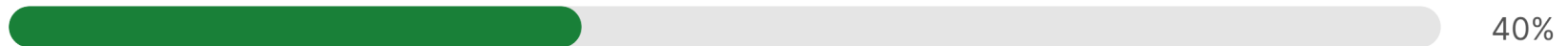
## Are you familiar with HALO?

Multiple Choice Poll 42 votes 42 participants

yes - 25 votes



no - 17 votes

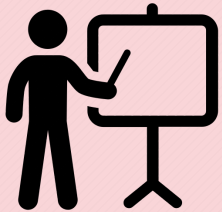


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# Introductions

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## Presenters



Alex Reis | Director, Digital Health Interoperability, Canada Health Infoway

Silas Ng | Product Director, Interoperability Solutions, Canada Health Infoway

Colin Kent-Shepherd | Software Architect, Hamilton Health Sciences

# Agenda

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Welcome & Announcements

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# Welcome and Announcements

- HALO Working Group Membership – Please ensure you have signed up as a member on InfoCentral and have subscribed to Notifications. This will ensure you receive notifications about upcoming meetings, forum conversations and shared documents.
- <https://infocentral.infoway-inforoute.ca>

The screenshot displays the HALO Working Group page on the InfoCentral platform. At the top, there is a navigation bar with links for 'InfoCentral Home', 'Infoway Website', 'FAQ', 'Contact Us', and 'Français'. The main header includes the 'Canada Health Infoway | InfoCentral' logo and a search bar. Below the header, a navigation menu contains 'Communities', 'Standards Centre', 'Tools', 'Resources', and 'News & Events'. The breadcrumb trail reads 'Home > Communities > Working Groups > HALO'. A 'Share this page' section includes social media icons for Twitter, LinkedIn, and Facebook, along with 'Print' and 'Email' options. The main content area features the title 'HALO Working Group' and a description: 'Dedicated to HALO that aims to simplify access to services for community-based providers by allowing EMRs to launch approved web-based applications—such as an eReferral tool or a patient data viewer linked to jurisdictional systems.' A 'Hide Group Menu' button is present. Below this, a navigation menu includes 'Activity', 'Events', 'Forum', 'Documents', 'Video', 'Members', and 'Invites'. An activity feed shows a notification: 'Peter Sztur joined a group about 21 hours ago'. On the right side, a sidebar displays group statistics: 'Members: 71', 'Contact: Stephen Matyasfalvi', and 'Admins: Alex Reis, Silas Ng, Sadrina Peltt'. It also indicates 'Type: Open' and 'Access: Public'. At the bottom of the sidebar, there are links for 'Edit About' and 'Notifications', with the latter being highlighted by a green box.

# HALO Overview and Benefits

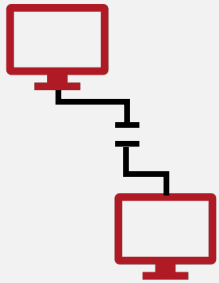
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# The Challenge

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## Siloed and Disconnected



Physicians and other health providers in the community **work in digital silos, not well connected** to the resources and processes they need to deliver care. This contributes to significant dysfunction:

- Physicians report tremendous **administrative burden**, leading to practice **inefficiency, burnout** and health human resource challenges
- There is **limited ability to share community-generated data**
- There are patient safety issues and patients “falling through the cracks” due to poor, manual processes

## Barriers to Improvements



One major barrier to improving physician and community provider digital health environments is **multiple, non-standard EMRs with few connected care options**, which are a hindrance to implementing coherent regional e-services

# Approach for Simplifying Primary & Community Care Access to Digital Health Services

HALO: A Scalable Solution with Shorter-term to Market

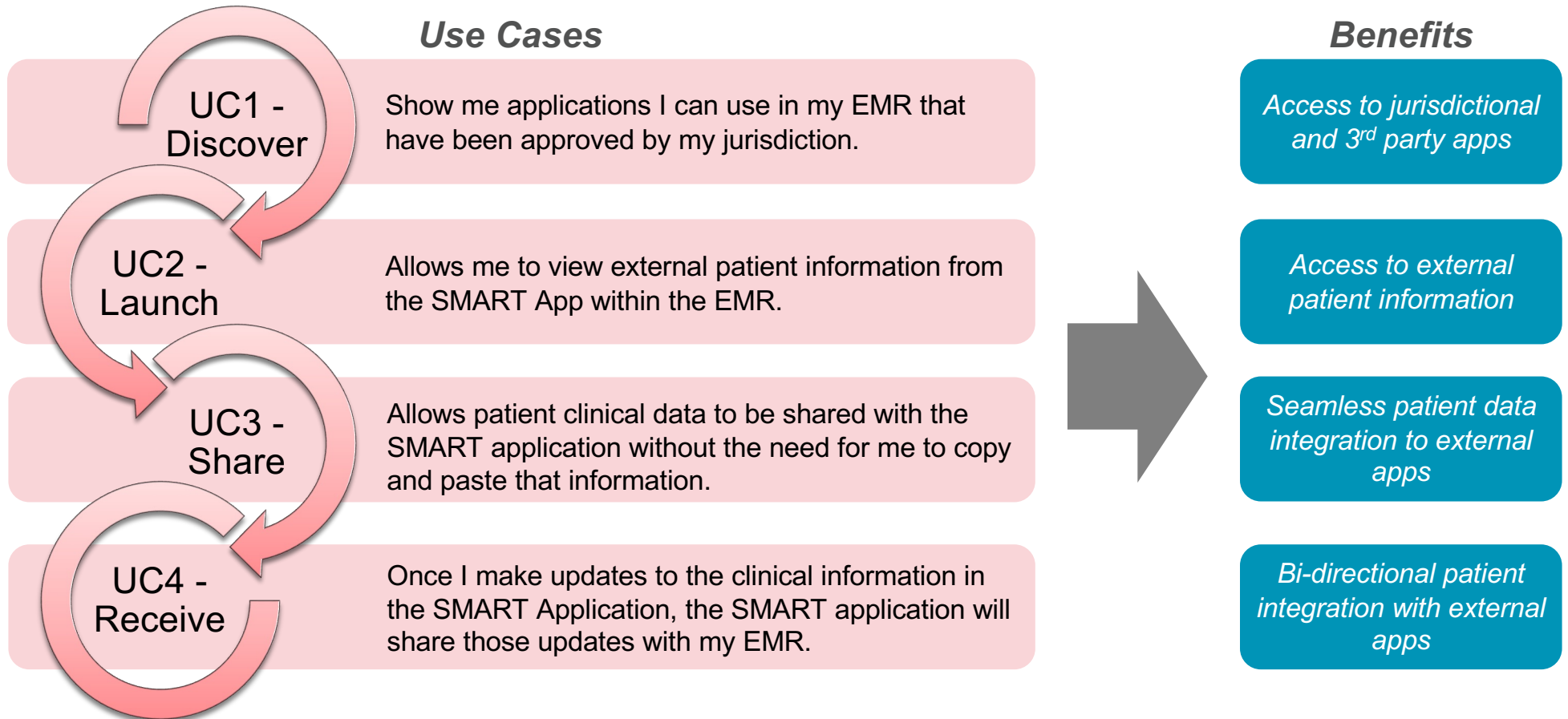


Infoway, working with key partners, developed a **“visual interactive framework”** based on existing standards that would enable **web applications to plug into community EMRs and point of care (POC) solutions** more easily and simplify access to services for community-based providers.

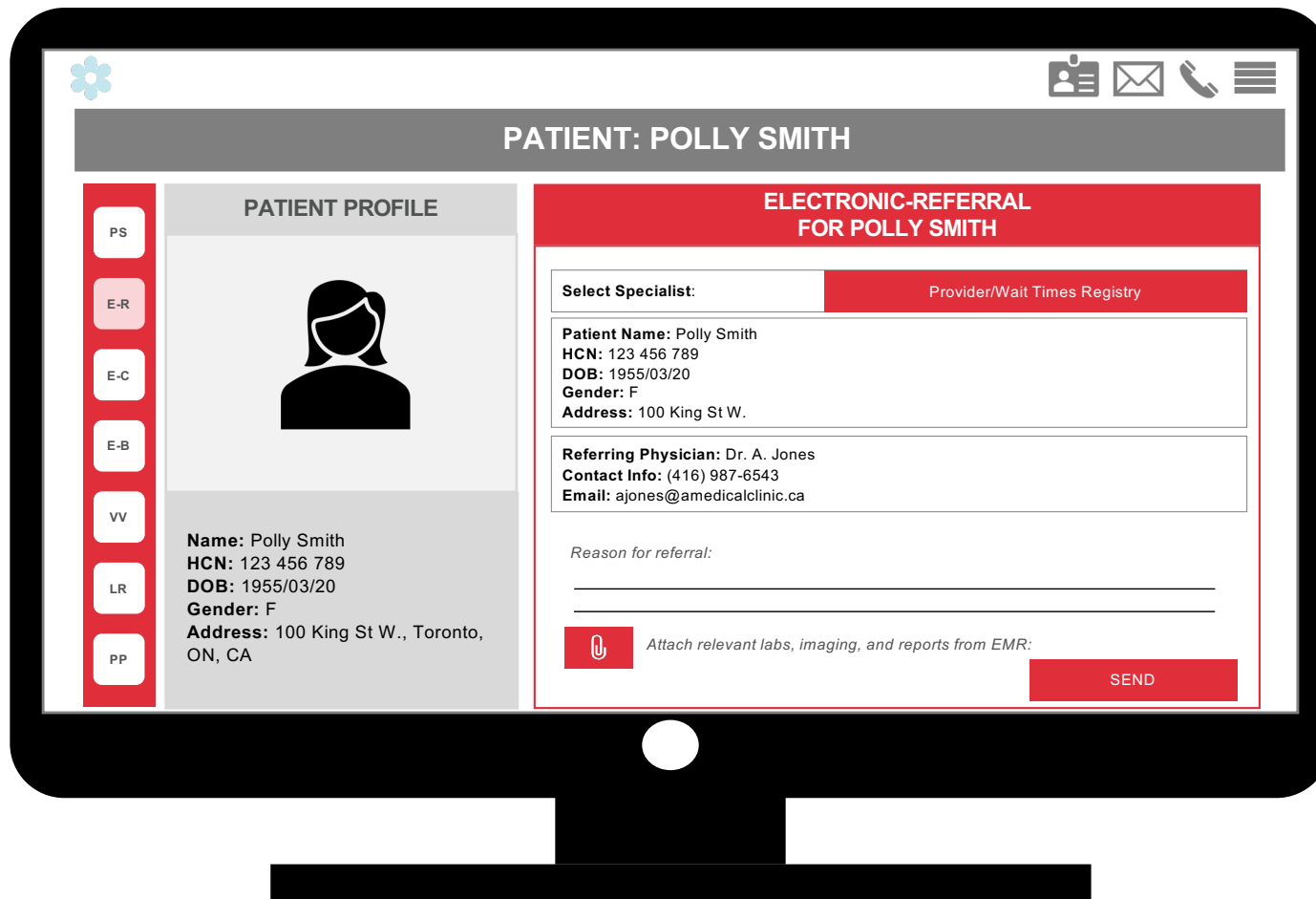


*HALO will enable EMRs to launch different approved ‘Apps’, such as an eReferral, or an App that enables viewing data about a patient from a jurisdictional system. Apps are web-based and would minimize multiple sign ins by the physician and reduce data entry required by physicians by passing along patient and provider context.*

# HALO v1 covers the following use cases



# What HALO could look like for providers? (Illustrative example)



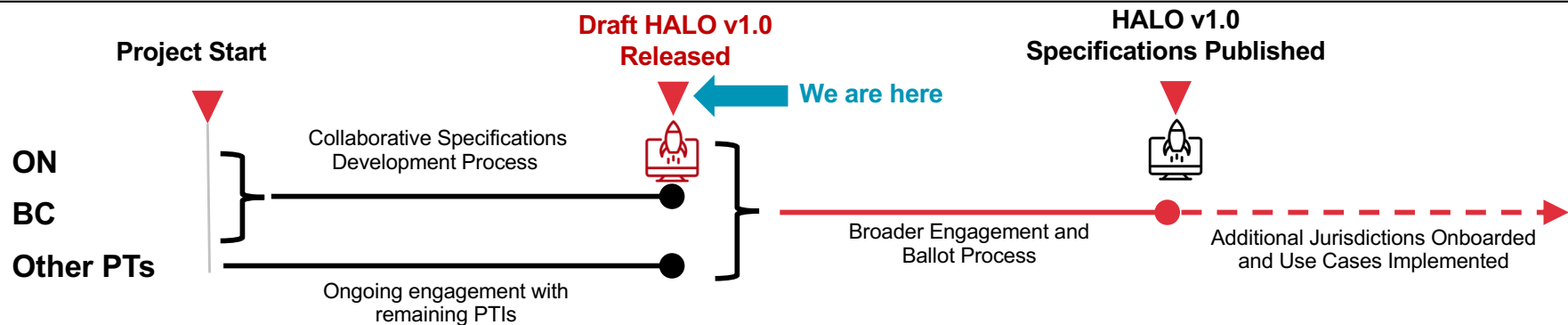
# Where We Are Today

HALO v1.0.0 Draft Published

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# A Pan-Canadian Specification to Accelerate Adoption



HALO v1.0 specifications has been authored with co-developing PTIs, facilitated by Infoway and using Infoway's Collaborative Specifications Development Process via an initial project and associated governance.

- The initial project team consisted of the Early Partners (currently Infoway, BC, ON).
- Broader engagement with additional jurisdictions and market participants is underway, providing feedback during broader engagement (working group) and ballot process and informing future scope.

**Goal: a Pan-Canadian specification that can be built once by vendors and leveraged multiple times across Canada**

## Working Group Objective:

**Collaborate** on the various aspects of the draft HALO v1.0.0 framework resulting in a **pan-Canadian specification** that can be implemented across the country.

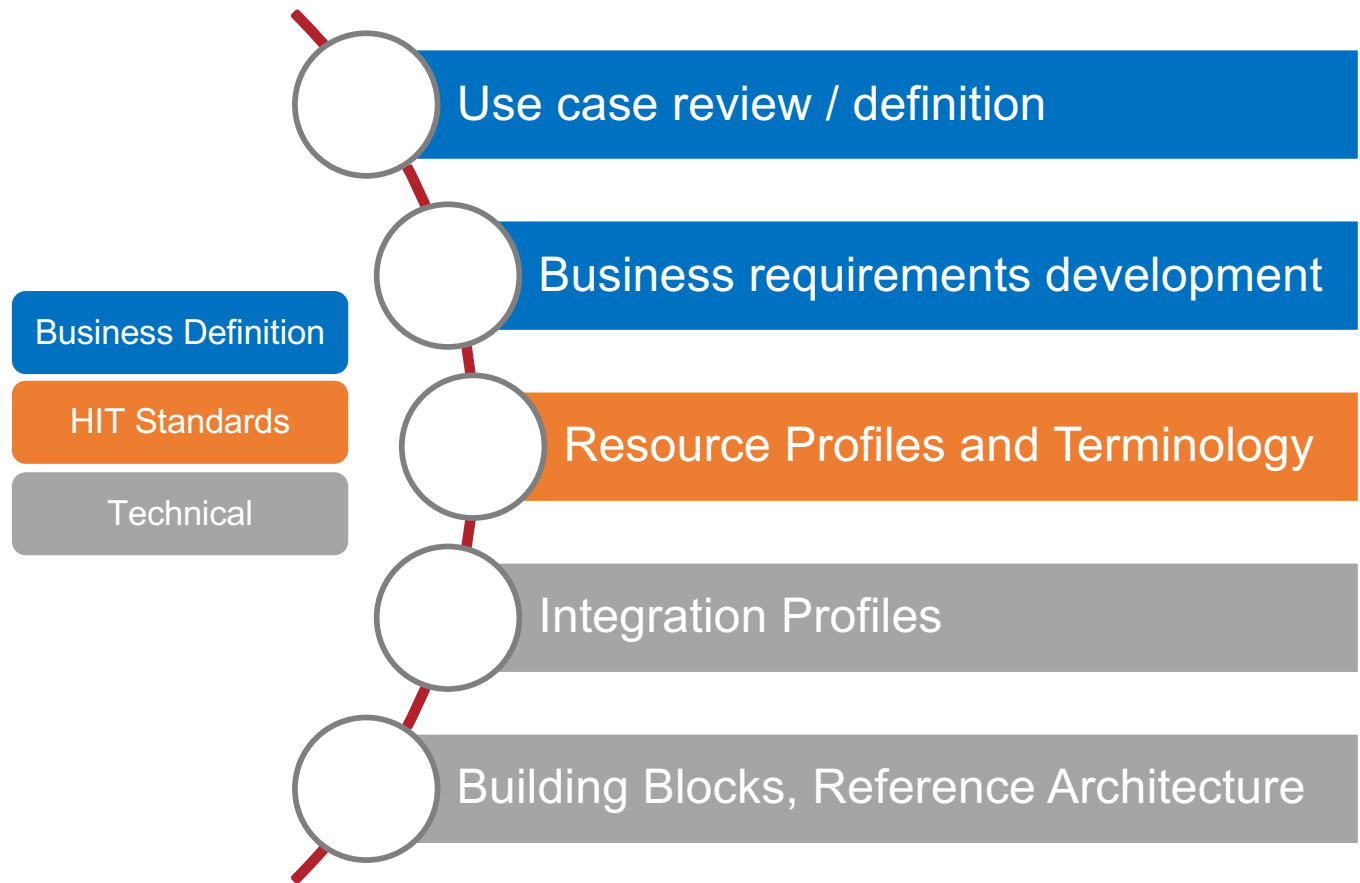


The immediate goal of the working group will be to review HALO v1.0.0 draft specification for implementation readiness and address immediate feedback for a **September release**.



# Working Group Structure

- Designed to be functional and multidisciplinary, formed by a variety of subject matter experts ranging in expertise
- Time limited and working toward a product/deliverable
- Documentation is stored on InfoCentral (shared documents, meeting notes, recordings, etc)
- Communications are conducted through InfoCentral (e.g., forum posts, announcements, meetings)



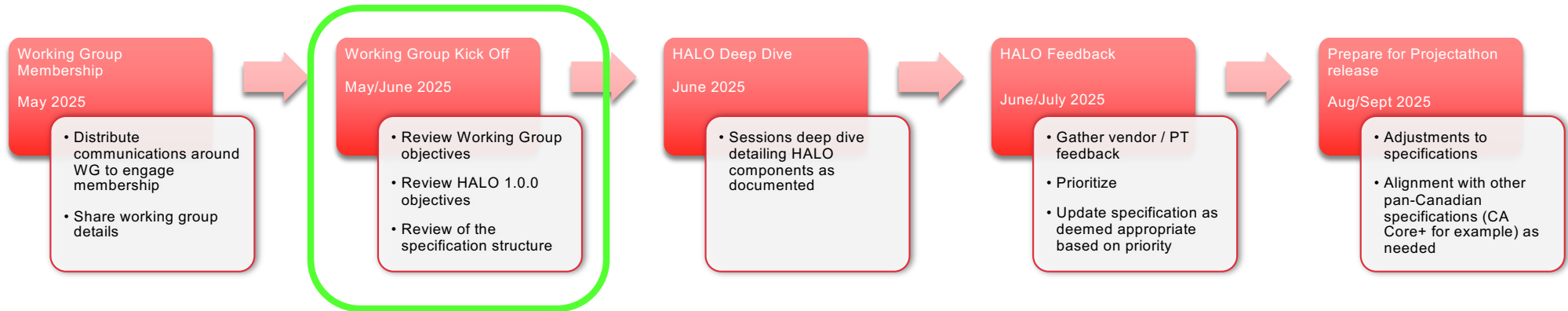
## How you can participate – key activities

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- Attend WG meetings and participate in the content discussions
  - Agenda items will be prepared by the WG chair who will share the agenda in advance of each meeting via the WG forum
- Validate the scope of work for respective specification releases
- Provide guidance/input (e.g., knowledge exchange, lessons learned, etc.) toward the discussion (e.g., use cases, potential change requests to the specifications, etc.)
  - If topics arise that cross initiatives (e.g., architectural decisions), the chair will triage item(s) to the supporting SMEs/working group(s)
- Participate in balloting cycle (this includes reviewing the feedback and voting on the decisions)
- Be a champion within your organization to encourage participation in providing feedback into the public review cycles

# HALO Working Group: Sequence of events

*Breakdown is tentative and may evolve as we progress*



## How you can participate – structure of the working group

Topic	Proposal	Notes
Working Group Cadence	Weekly	First 3-4 weeks will be dedicated to deep dives (directly in the spec)
Day of the week for meetings	Monday afternoon	
Collaboration Approach:		
• Implementation Guide	Simplifier	
• Working Group communication	InfoCentral	
• Release Details	InfoScribe	
• Content Review Submission	Review Spreadsheet / JIRA	(JIRA account required)
Working Group chairs / co-chairs	Alex Reis / Silas Ng / ?	Ideally, community volunteers in partnership with Infoway

Simplifier – HALO v1.0.0 preBallot - <https://simplifier.net/guide/halo?version=1.0.0-DFT-preBallot>

InfoCentral – HALO Working Group - <https://infocentral.infoway-inforoute.ca/en/collaboration/wg/halo>

InfoScribe - <https://infoscribe.infoway-inforoute.ca/pages/viewpage.action?pageId=270895452>

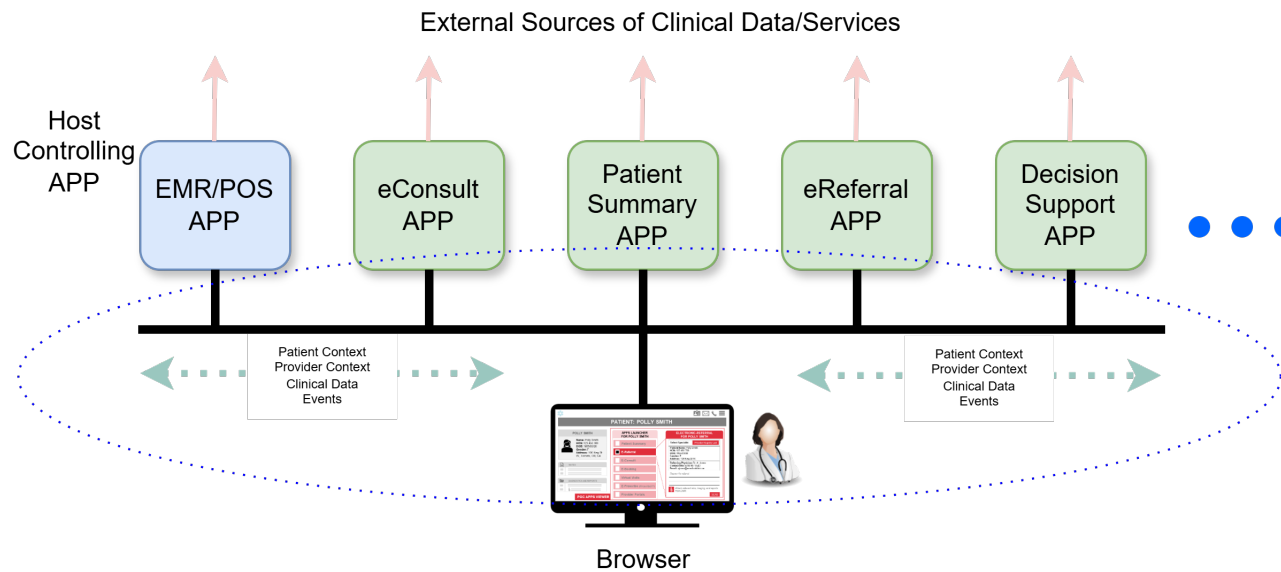
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# Technical Overview

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# A Visually Interactive Approach to Interoperability



- ✓ Enables faster deployment of clinical applications
- ✓ Promotes the use of existing standards
- ✓ Reduces integration complexities

- HALO allows the launch and coordination of one or more clinical web applications through standard technologies
- HALO is integrated at the visual interactive level, empowering the clinical web applications (SMART App) to do the majority of the work integrating with external services

# HALO Objectives

- Combines established specifications to simplify interoperability for Point-of-Care (PoC) vendors.

*It doesn't reinvent the wheel!*

- Defines a Pan-Canadian framework for standardizing and expanding the SMART App Launch.
- Provides a deployable framework for vendors who are SoF ready and a bridge for those on working towards SoF with introduction of SMART on FHIR Accelerator (SoFA)

*SoFA helps PoC vendors without existing FHIR server capabilities to rapidly enable SMART on FHIR features to enable data sharing sooner.*

<a href="#">FHIR R4</a>
<a href="#">SMART App Launch v2.1</a>
<a href="#">OAuth v2.0 / OIDC</a>
<a href="#">FHIR Subscriptions R5B</a>
<a href="#">HALO Framework DFT v0.1.0</a>



# HALO At-a-Glance

## App Catalog

- Provides access to approved healthcare applications
- Defines data structure and endpoints/APIs

## IDP / AS

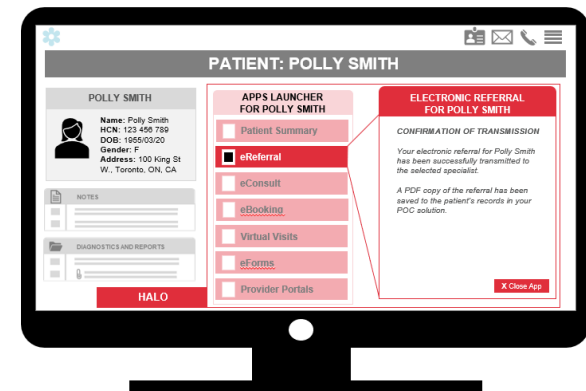
- Enables identity management and authentication
- Authorization and token management
- Trust Model

## SMART Apps

- Provides specialized capabilities
- Enables two-way data sharing
- Is able to access EMR and / or jurisdictional assets

## SoFA and Supporting Services

- Facilitates FHIR and non-FHIR access to jurisdictional assets
- Enables context / event management and subscription



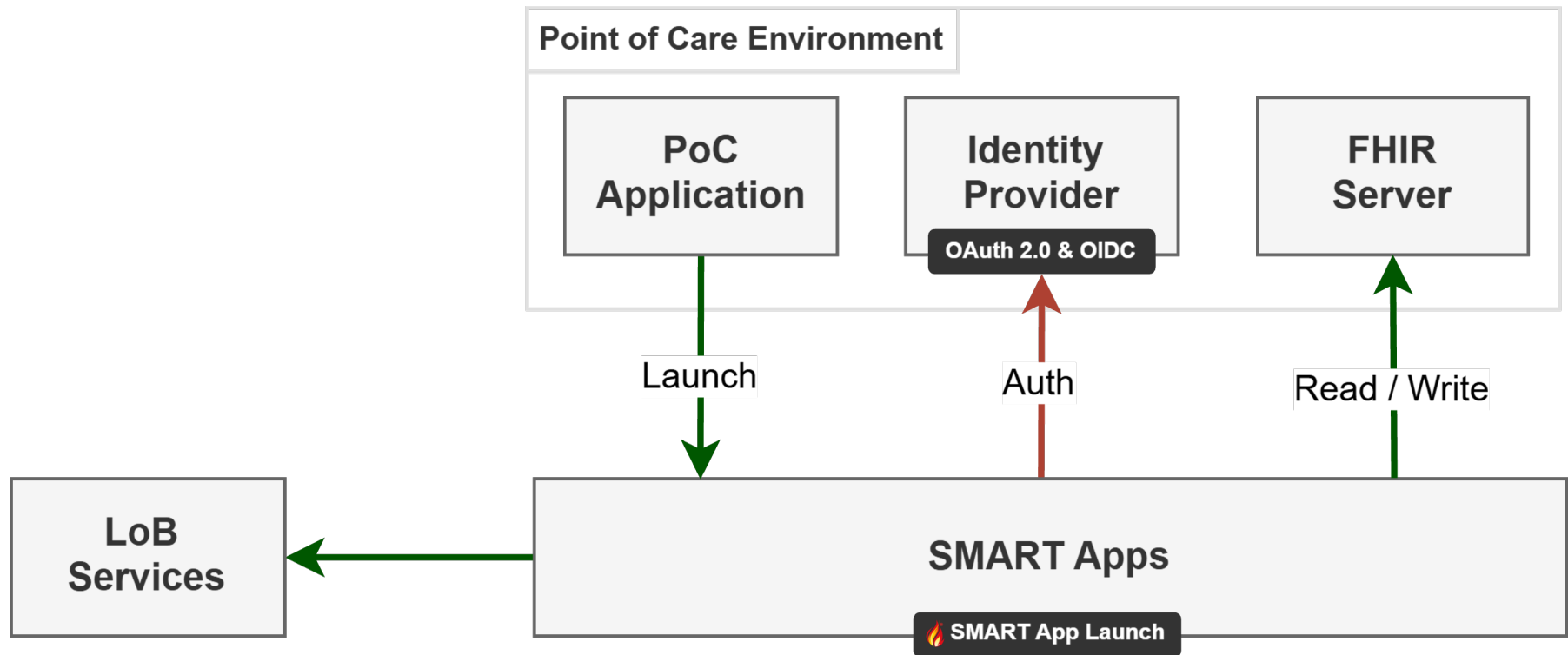
- Builds accessible links to external apps
- Launches the apps
- Exchanges FHIR data with app (via FHIR Server, SoFA interface)

Point of Care  
e.g. EMR

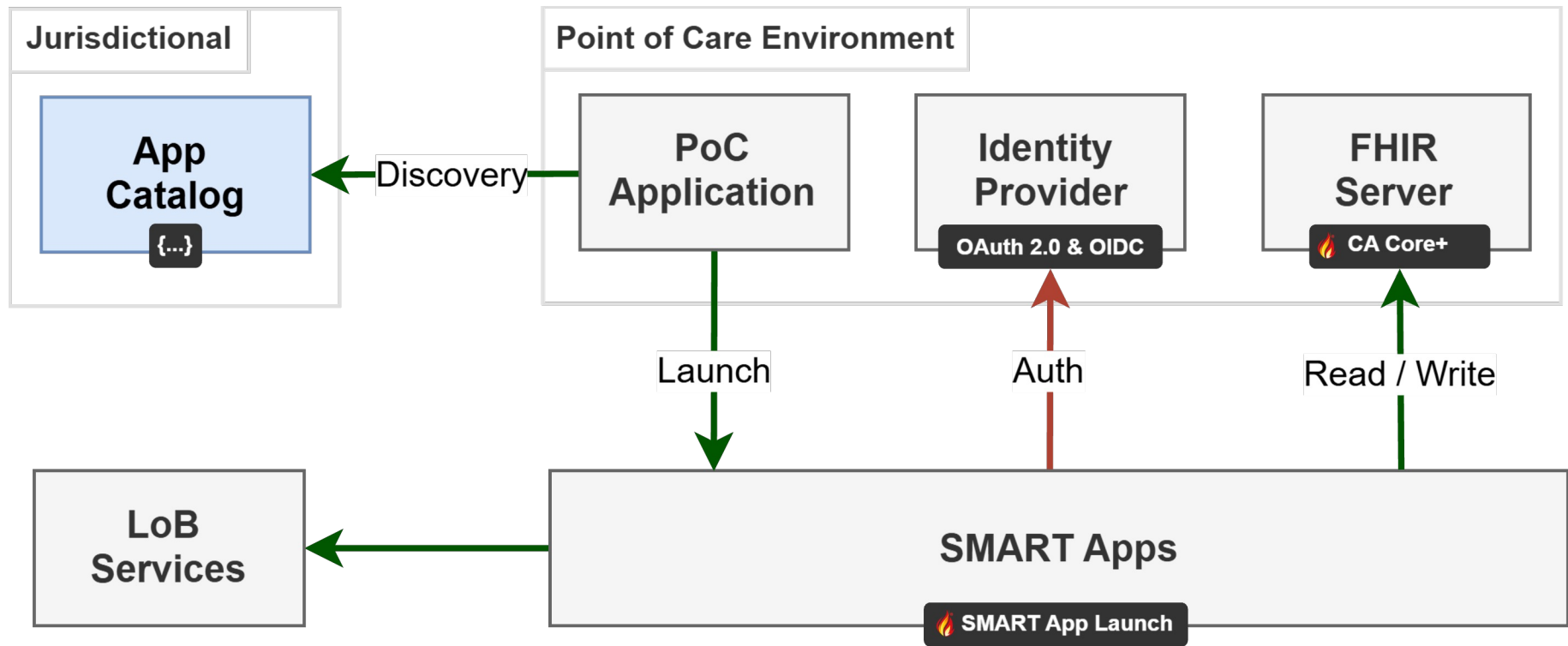
# High Level Component View and Interactions



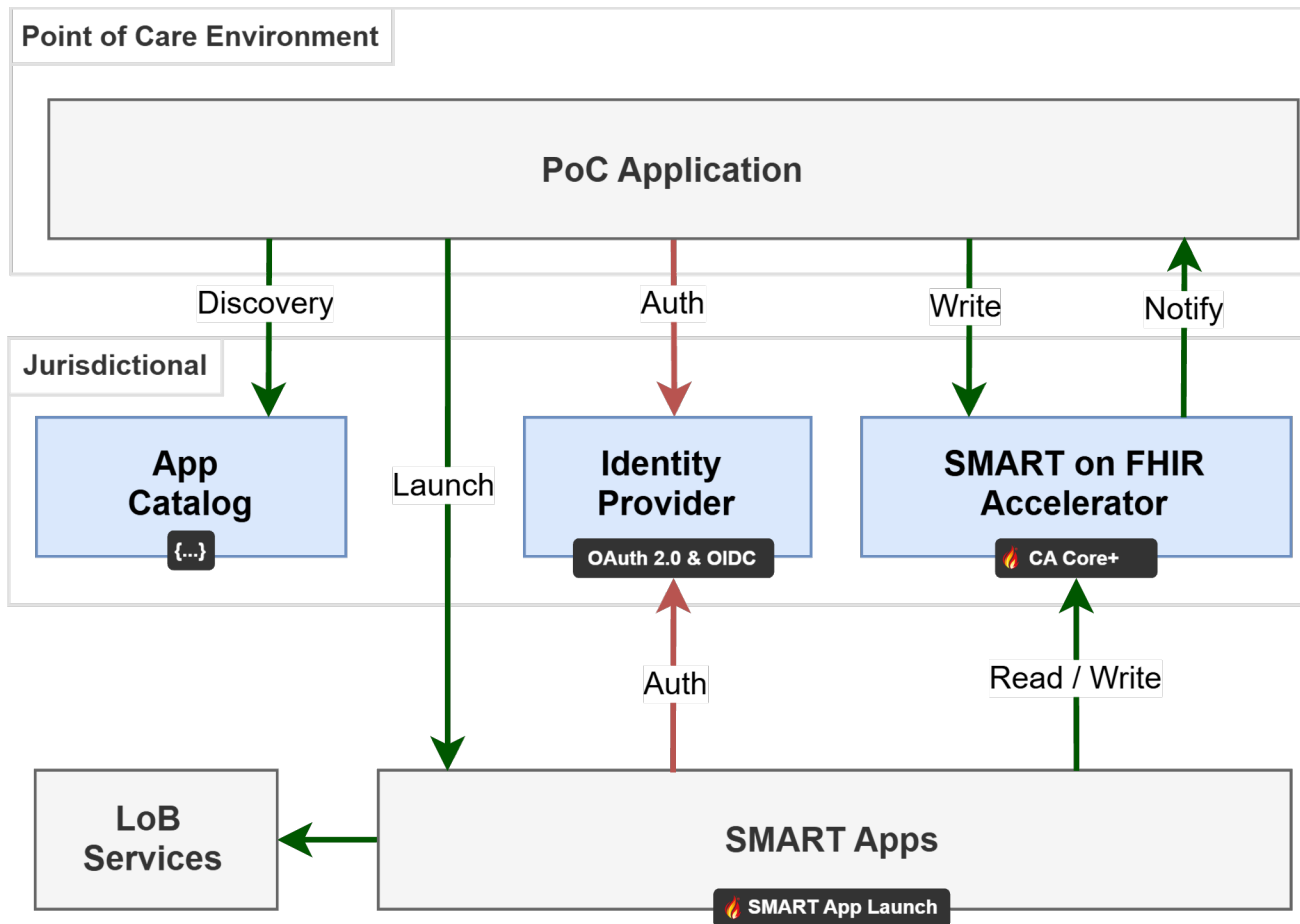
# Base SMART on FHIR Components



# Base SMART on FHIR Components *in HALO*



# SMART on FHIR Accelerator (SoFA) Components

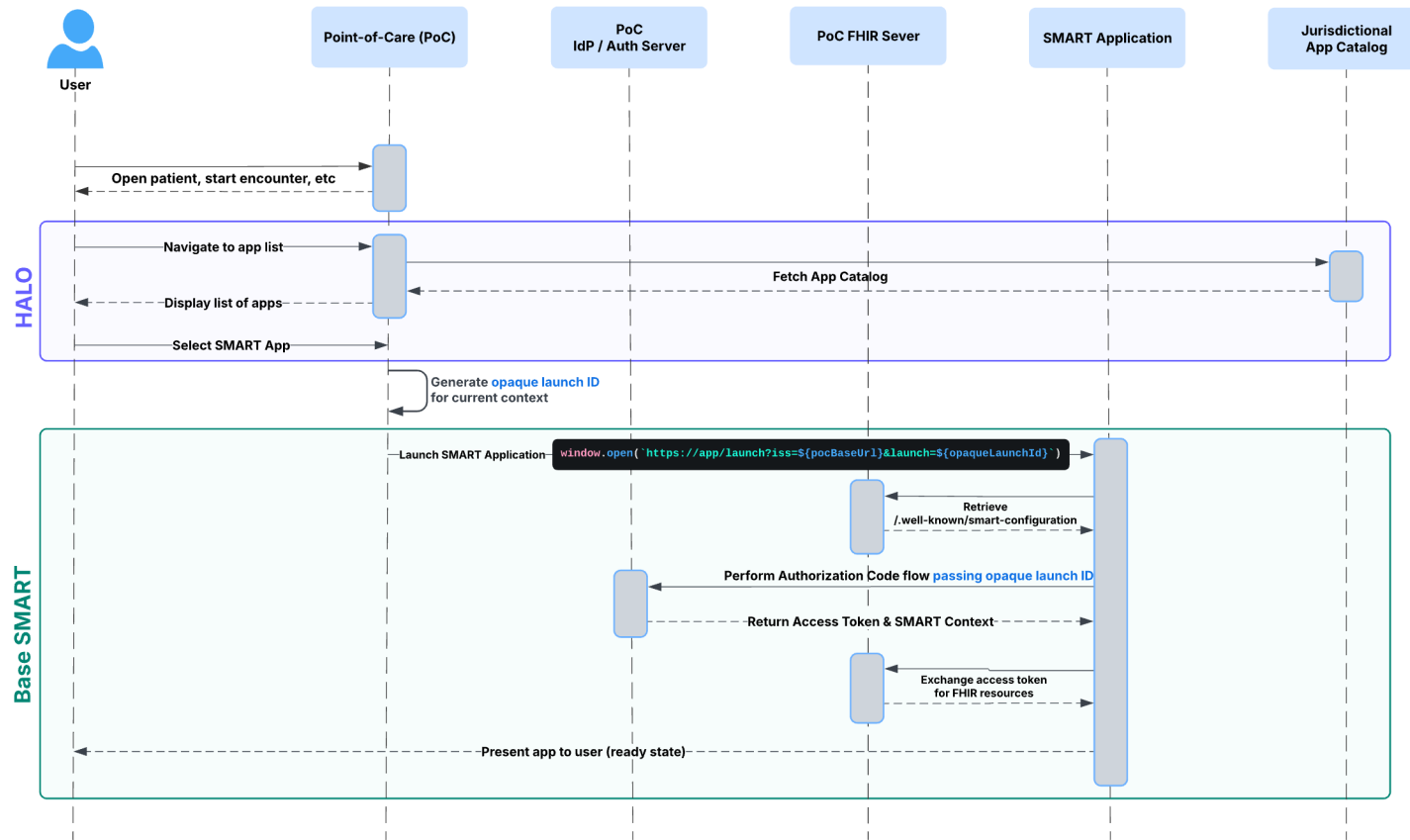


# The App Launch Sequence

SMART ON FHIR  
VS. SMART ON FHIR ACCELERATOR

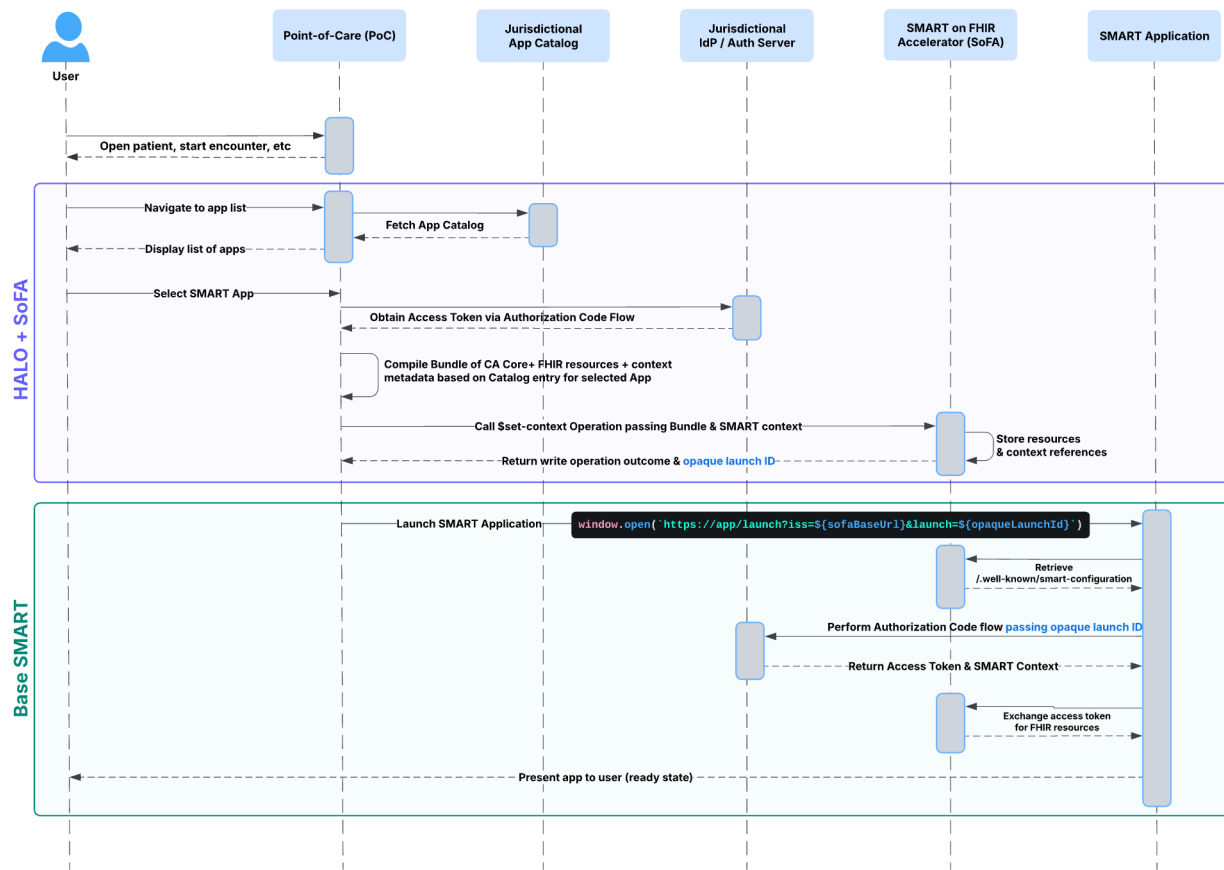


# Launch Sequence: Base SMART on FHIR *in HALO*



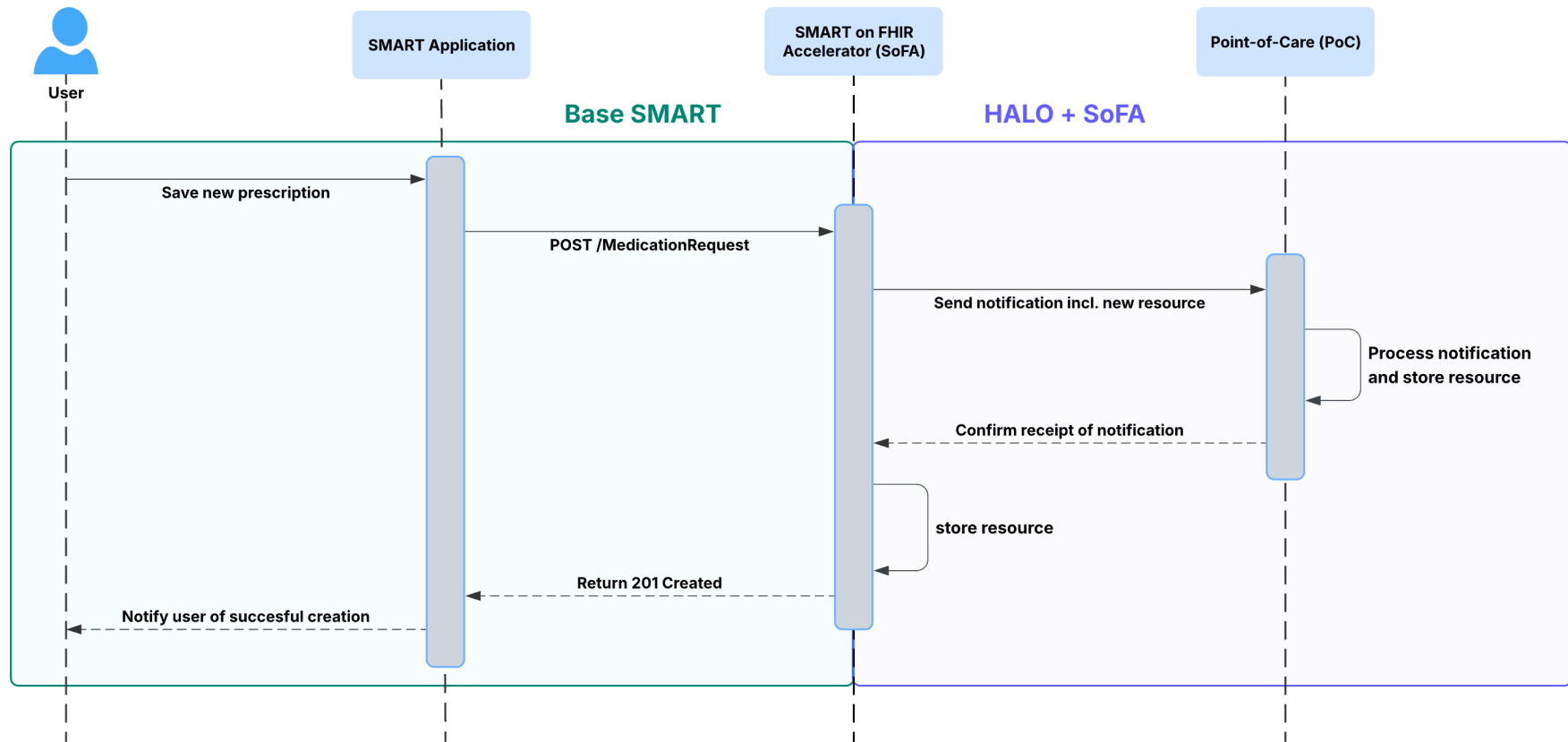
*Note: Various steps within this diagram have been condensed for brevity*

# Launch Sequence: SMART on FHIR Accelerator



*Note: Various steps within this diagram have been condensed for brevity*

# SoFA Notification Flow (Simplified)



*Note: Various steps within this diagram have been condensed for brevity*

## Question and Next Steps

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### Questions and Discussion



### Setup working group deep dive sessions:

- App Catalog
- Launch Sequence
- SoFA



**Canada Health Infoway**

# Thank You!

HALO questions or feedback? Please reach out to us via the following channels:

HALO working group Forum

- <https://infocentral.infoway-inforoute.ca/en/collaboration/wg/halo>

Interoperability email:

- [interoperability@infoway-inforoute.ca](mailto:interoperability@infoway-inforoute.ca)

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