

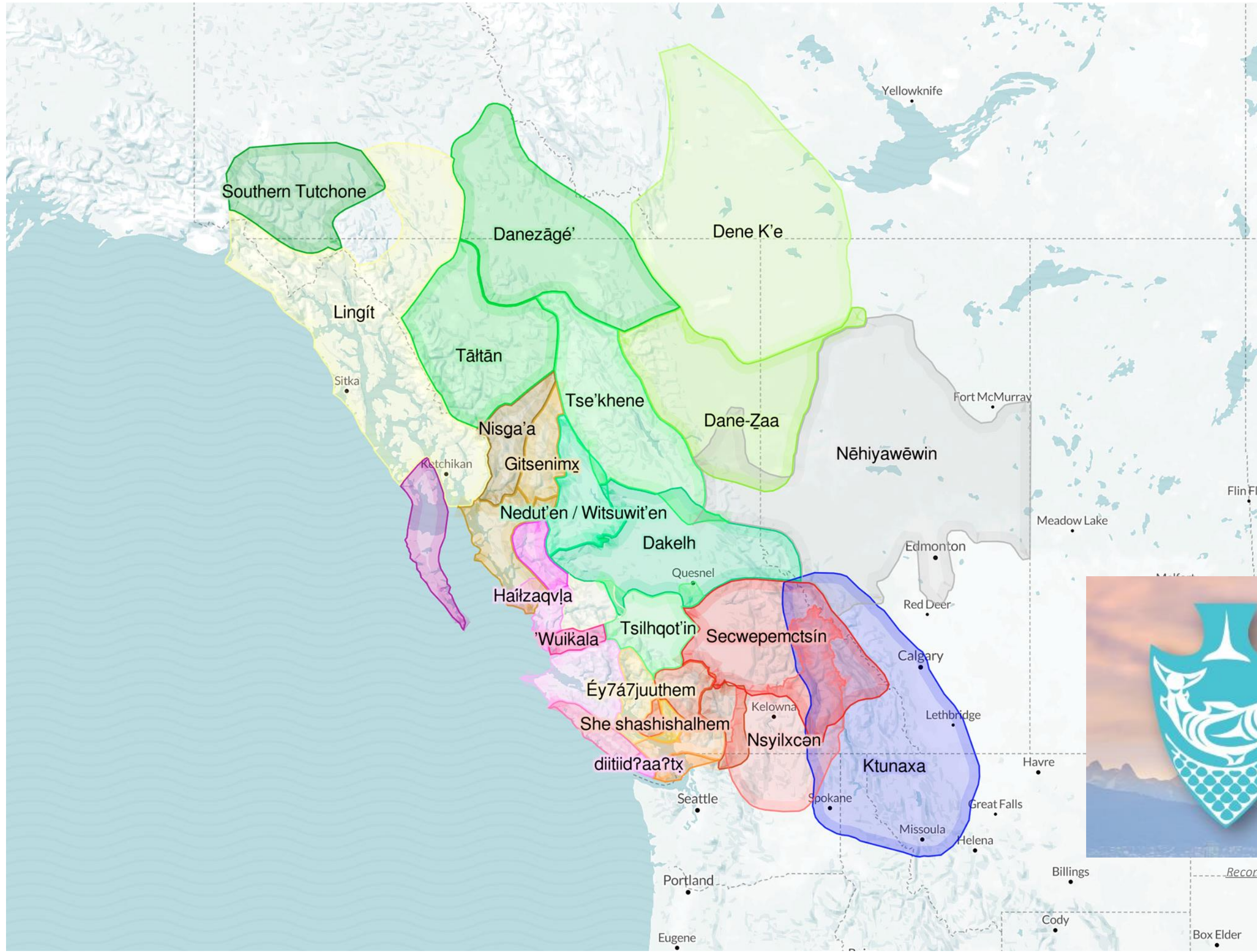
From Pilot to Scale: Understanding and Informing Sustainability and Health System Fit for Digital STBBI Testing Interventions Using a Decade of Implementation Data

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CIHR Pan-Canadian
Network for HIV and STBBI
Clinical Trials Research

Réseau pancanadien
pour des essais cliniques
sur le VIH et autres ITSS



<https://fpcc.ca/stories/first-peoples-map/>



Reconciliation in Action: Annual Address with Musqueam, Squamish and Tsleil-Waututh Nations (boardoftrade.com)

Conflicts of interest

- None declared
- Fellowship jointly funded through CTN+, CIHR Health Systems Impact Fellowship and Michael Smith Health Research BC Trainee Award

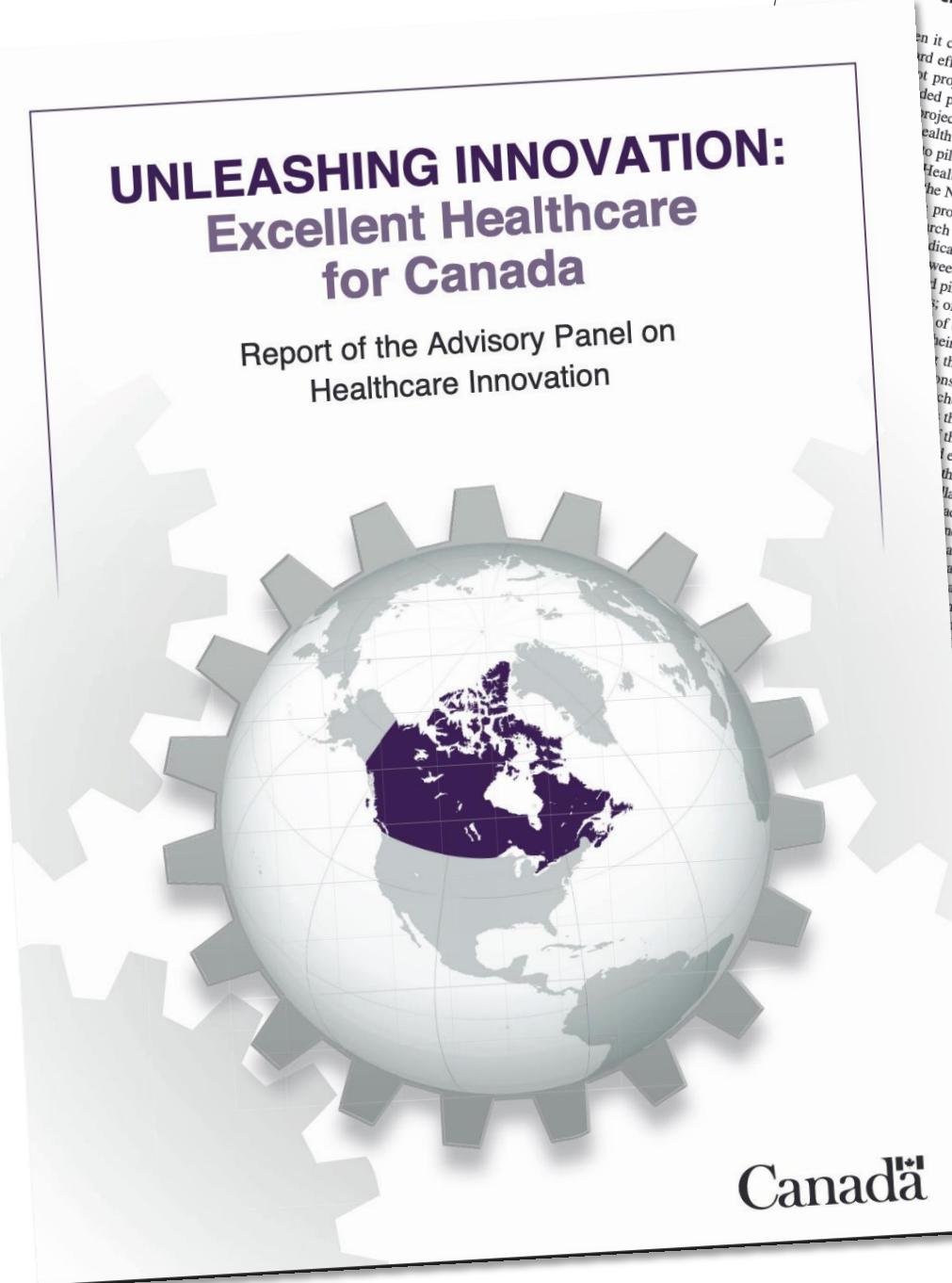
The problem

Limited evidence guiding efforts to sustain digital interventions for STBBI testing once effectiveness has been established

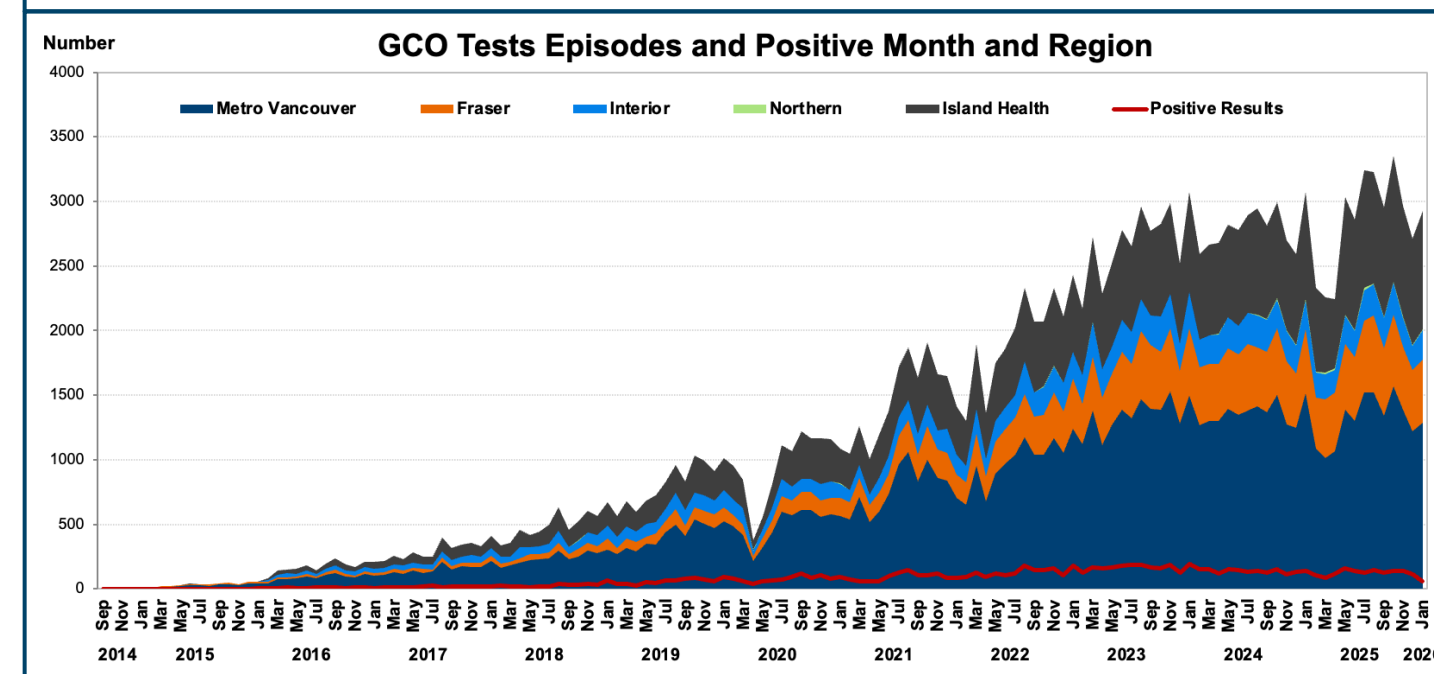
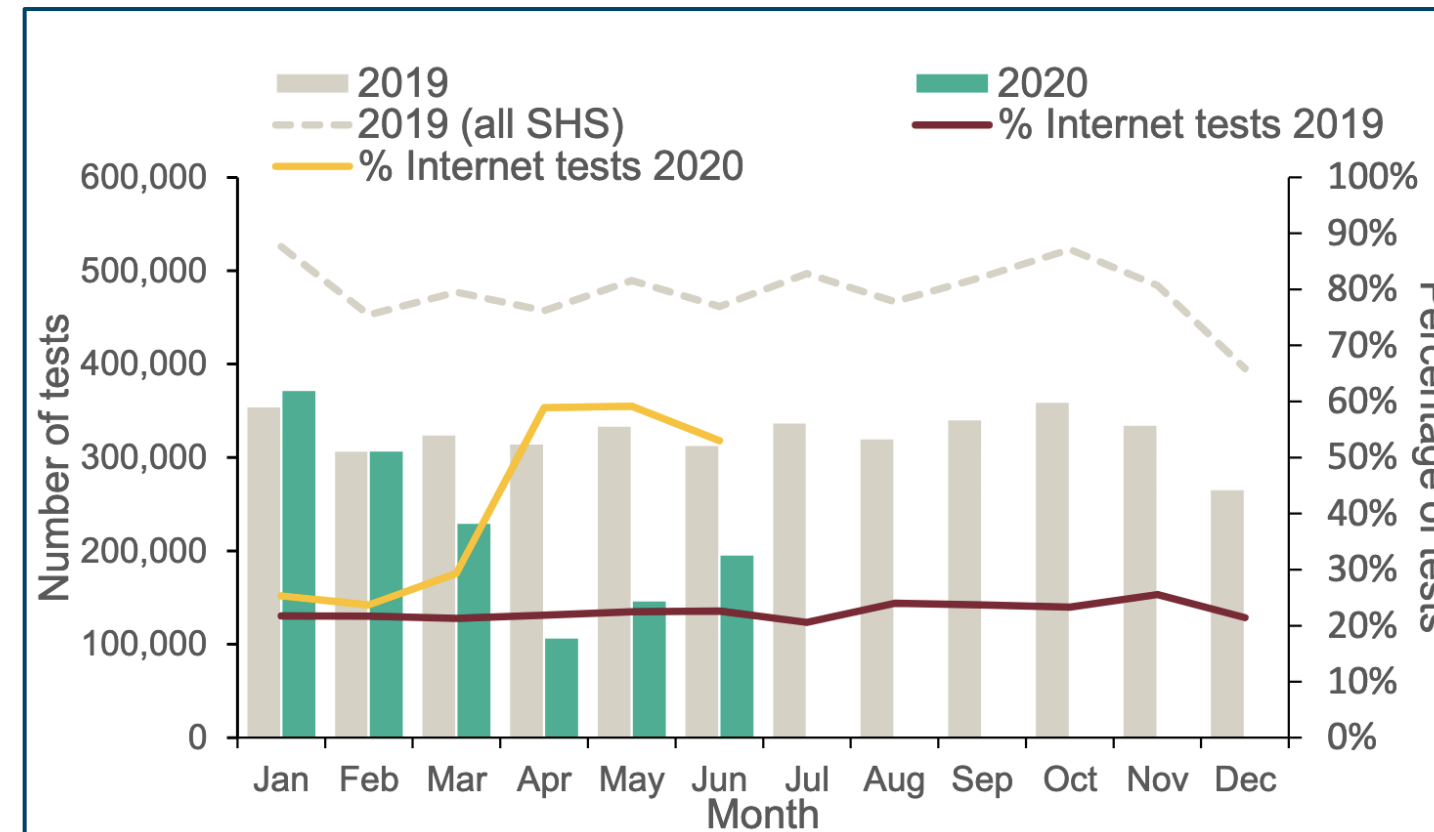


Canada as a country of perpetual pilots

- Canada is strong at generating health innovations
- Transitioning pilots into sustained, system-wide practice remains weak
- Digital interventions often benefit from techno-optimistic implementation without equivalent sustainability planning



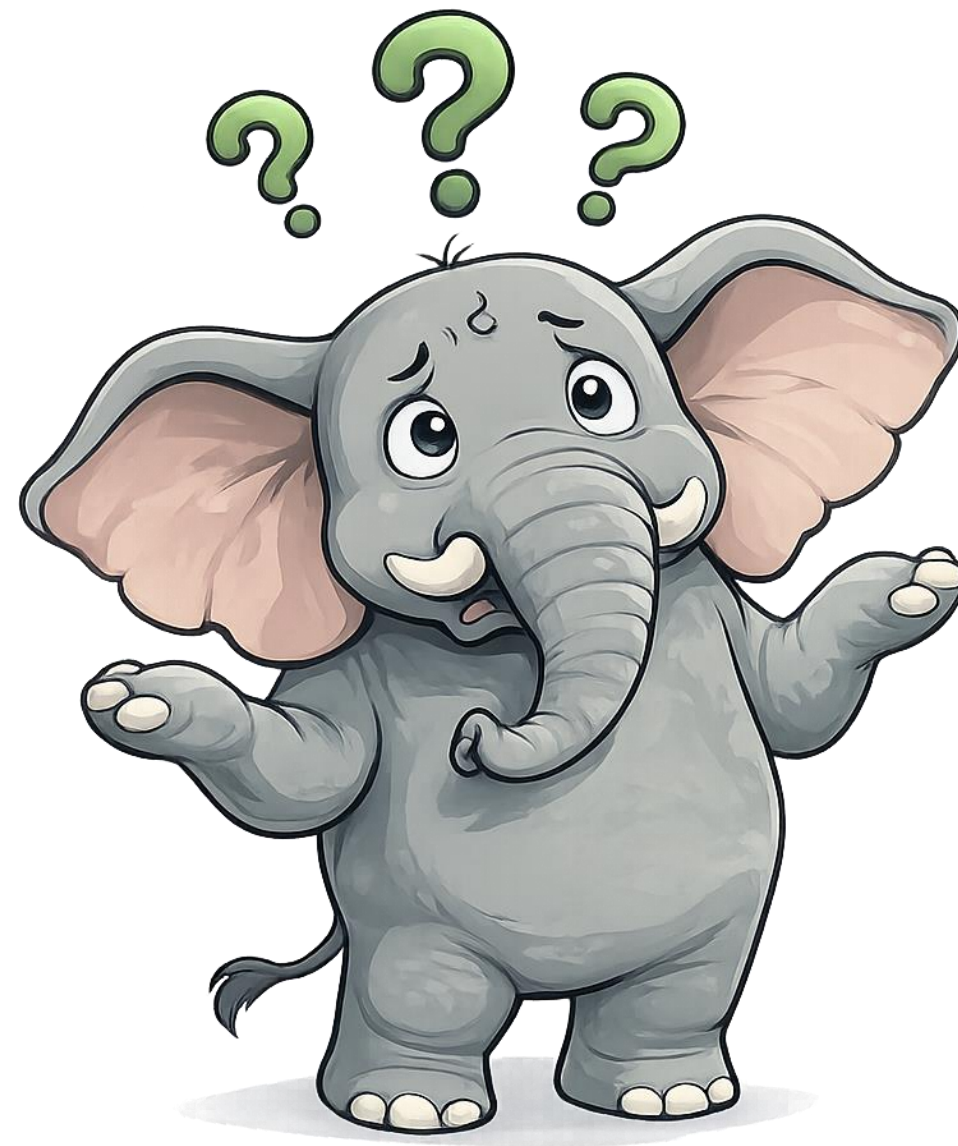
Rapid growth of digital STBBI testing since COVID-19



- Increased digital STBBI testing among people 40 years or older, GBMSM, Racialized minority populations, First-time ever testers and first-time online testers
- Concerns about demand induction (over-recommendation).



How do we sustain these programs in current context?



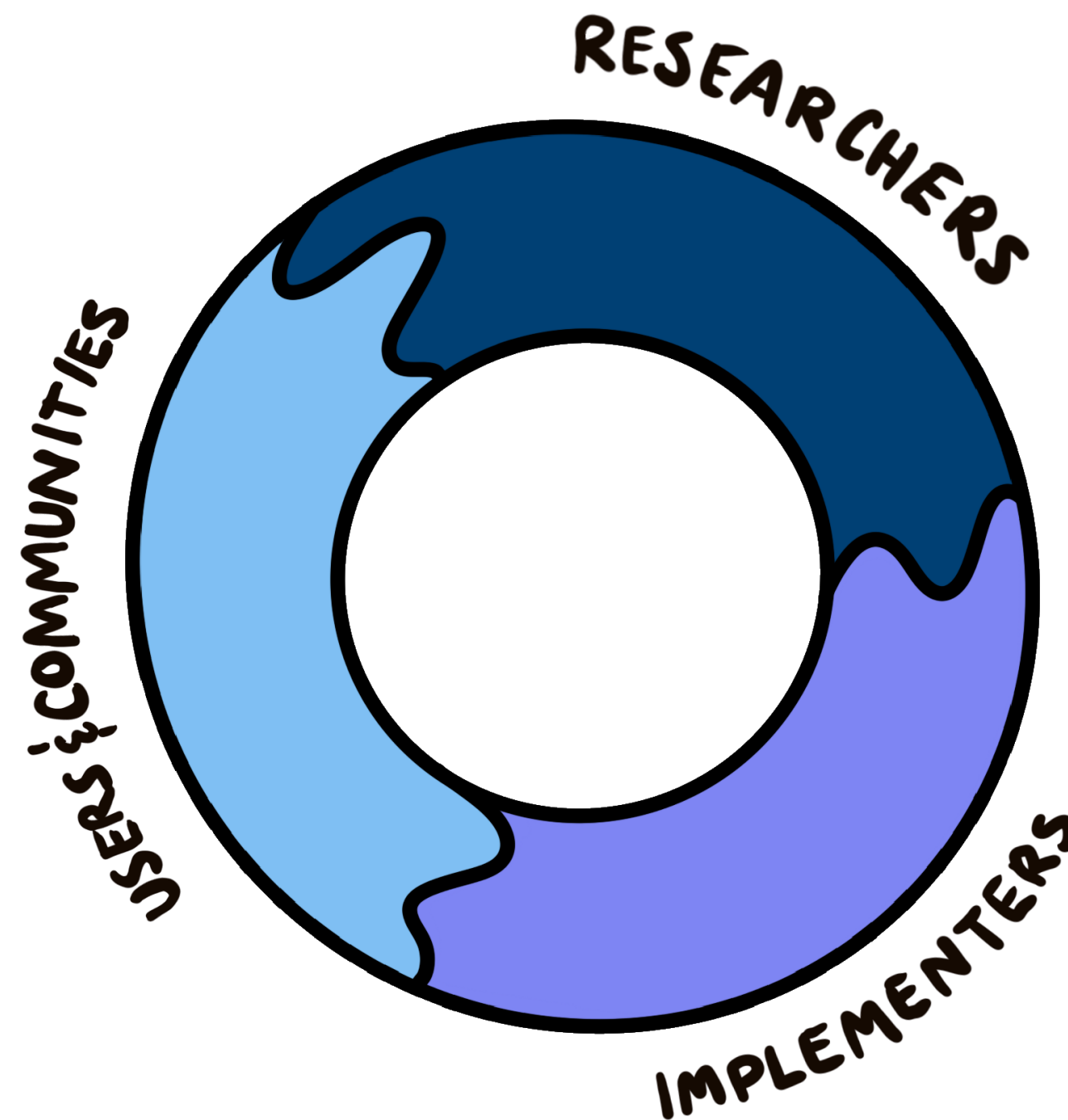
- Current health systems constraints especially in BC and broad goals to cut healthcare costs have implications for digital STBBI testing interventions
- The central challenge is no longer effectiveness, but system fit and sustainability

Understanding and informing sustainability

Research program at a glance



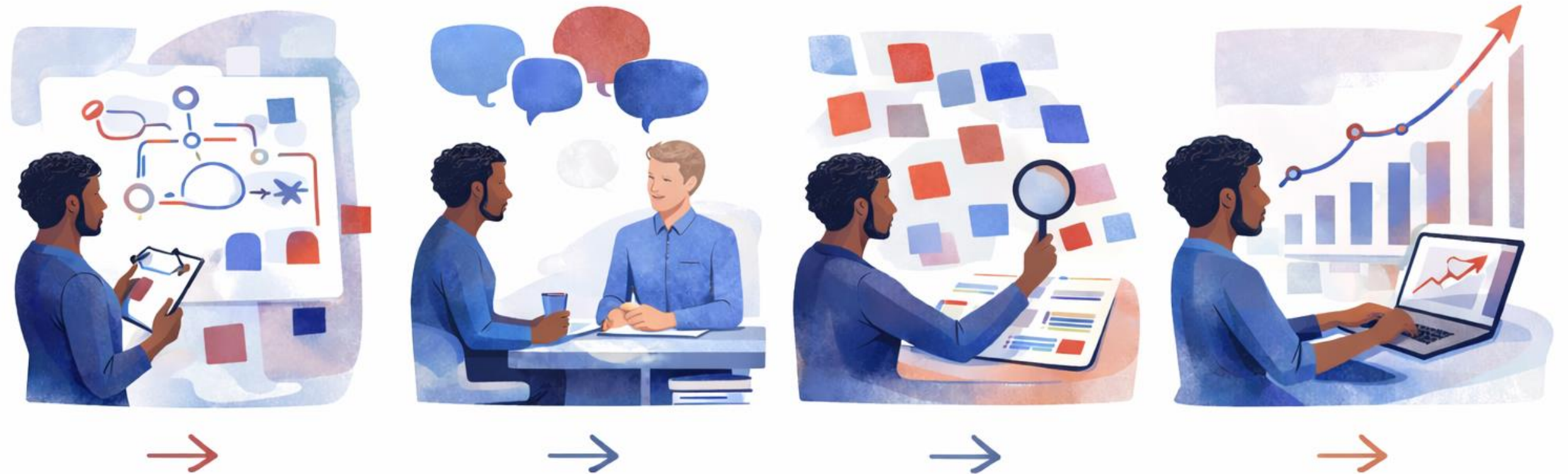
Study Context



- Embedded with the BCCDC and the GetCheckedOnline sustainment working group
- To inform ongoing decisions, actionable evidence for sustaining a digital STBBI service like GetCheckedOnline was needed
- Requires moving beyond barriers/facilitators framing to understand system dynamics over time.

Research objectives

- To identify how sustainability challenges emerge as digital STBBI testing interventions scale within real health systems
- To generate actionable, system-embedded evidence to inform long-term integration and planning beyond initial pilot and scale-up phases for GetCheckedOnline



Describing GetCheckedOnline as a complex intervention

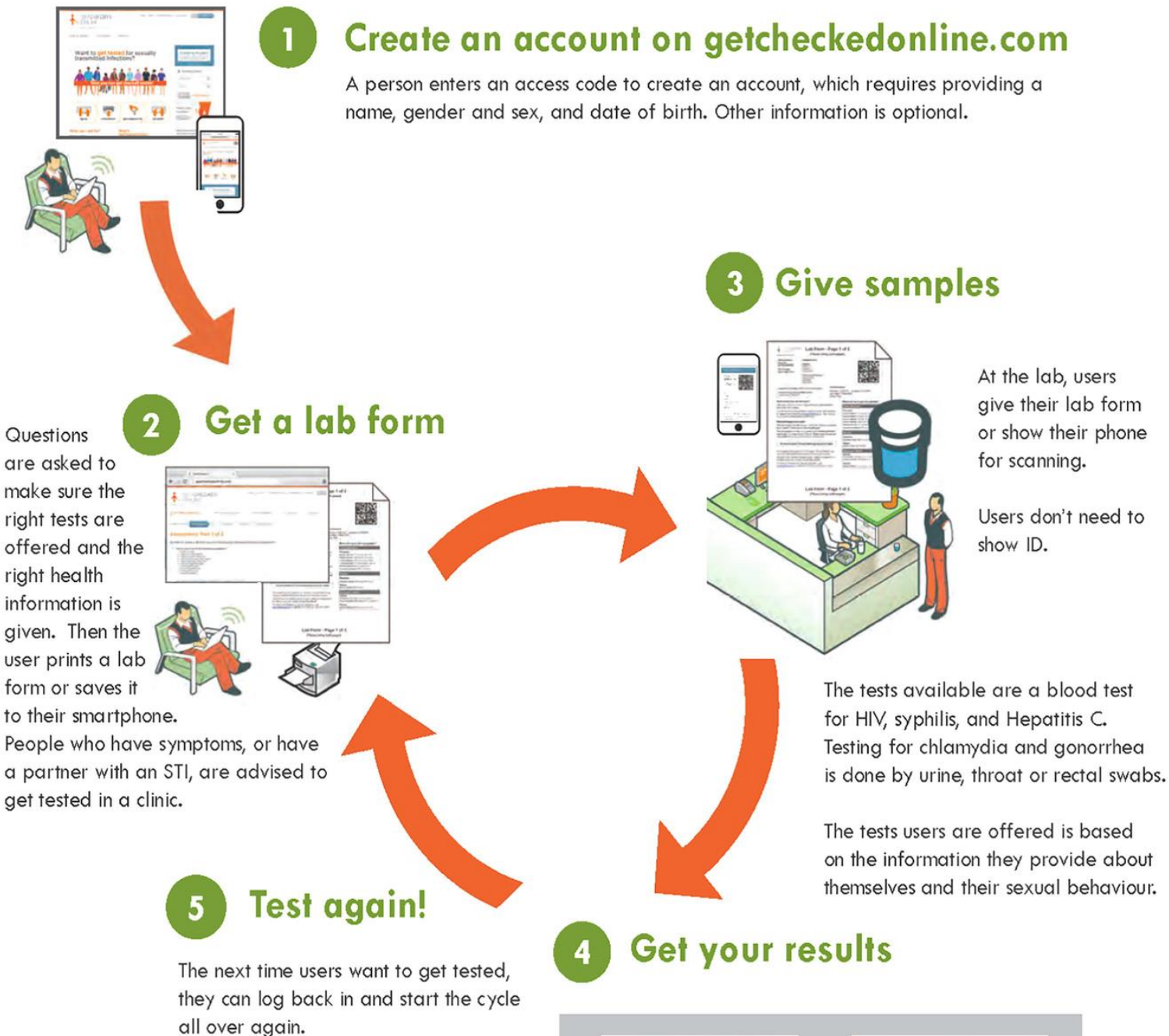
Laying the foundation for sustainability-
informed program adaptation





A solution for overcoming barriers to access STBBI testing

How does GETCHECKED ONLINE work?



Get Checked Online is a service of the BC Centre for Disease Control, in partnership with the BC Public Health Laboratory and Regional Health Authorities.



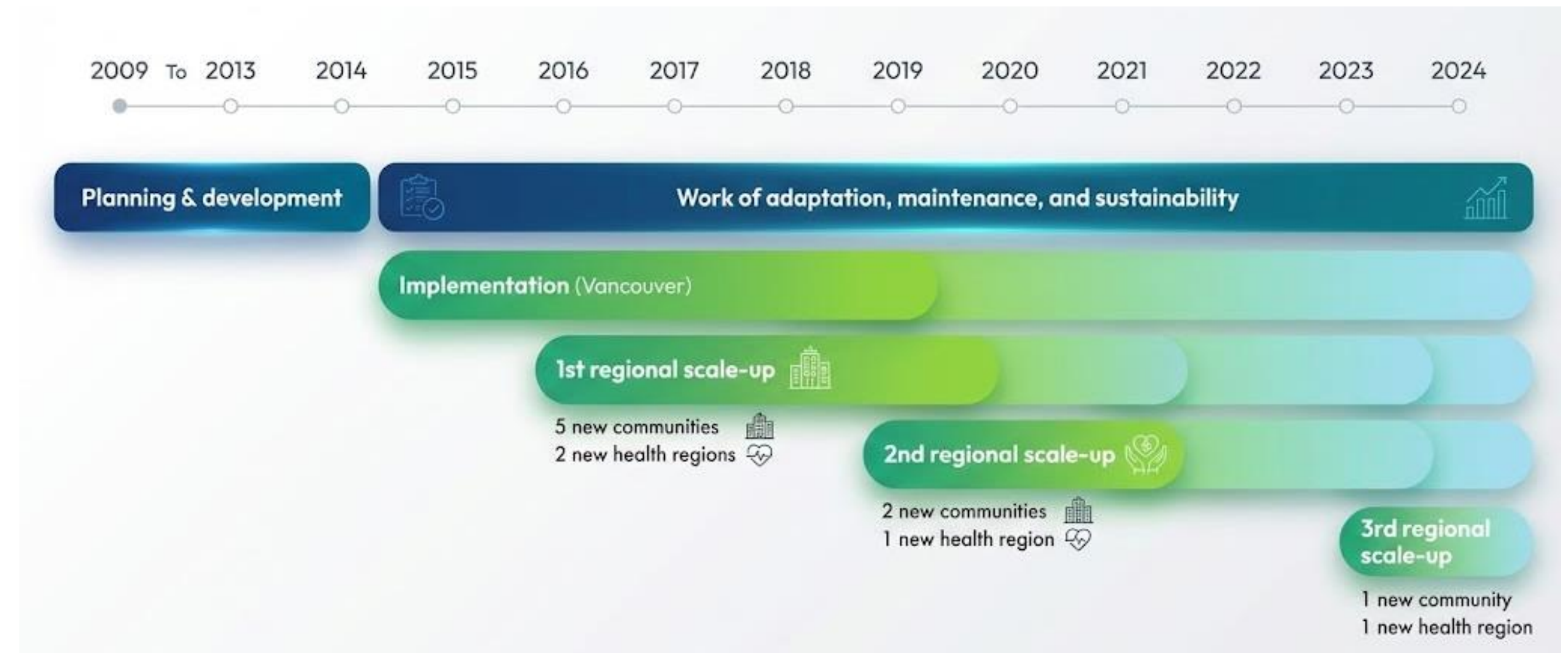
If you have any questions or comments, please email us at getcheckedonline@bccdc.ca

BC Centre for Disease Control
AN AGENCY OF THE PROVINCIAL HEALTH SERVICES AUTHORITY



Users get an email when your results are ready. If all tests are negative, users can see them online. Otherwise, users are asked to call the STI clinic to speak with a nurse about your test results.

GetCheckedOnline: Evolving through Implementation Phases

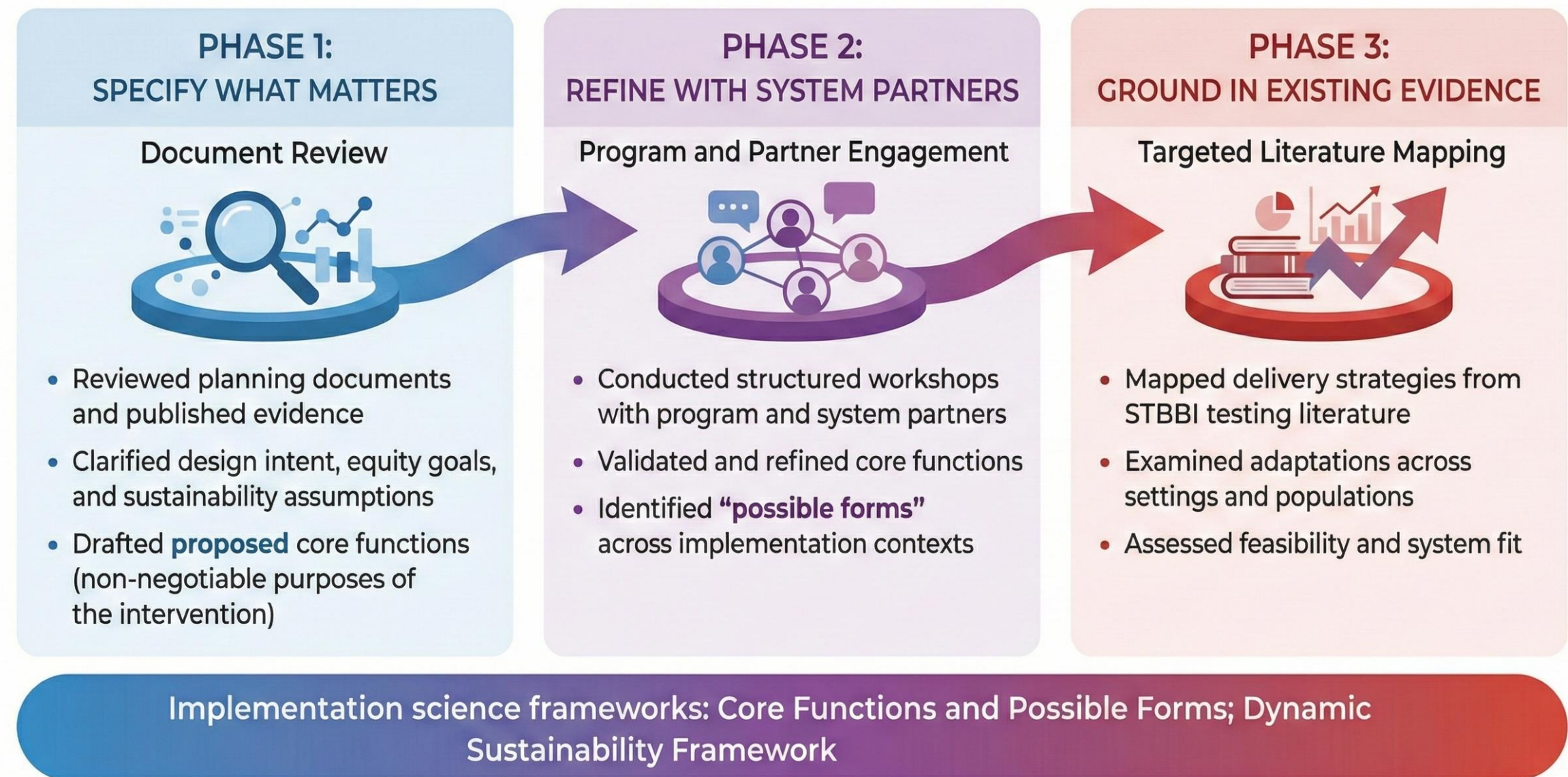


Gómez-Ramírez O, Gilbert M, Grace D. Beyond initial implementation: Barriers and facilitators to the scale-up, adaptation, maintenance, and sustainability of GetCheckedOnline. DiSHI Research; 2021.



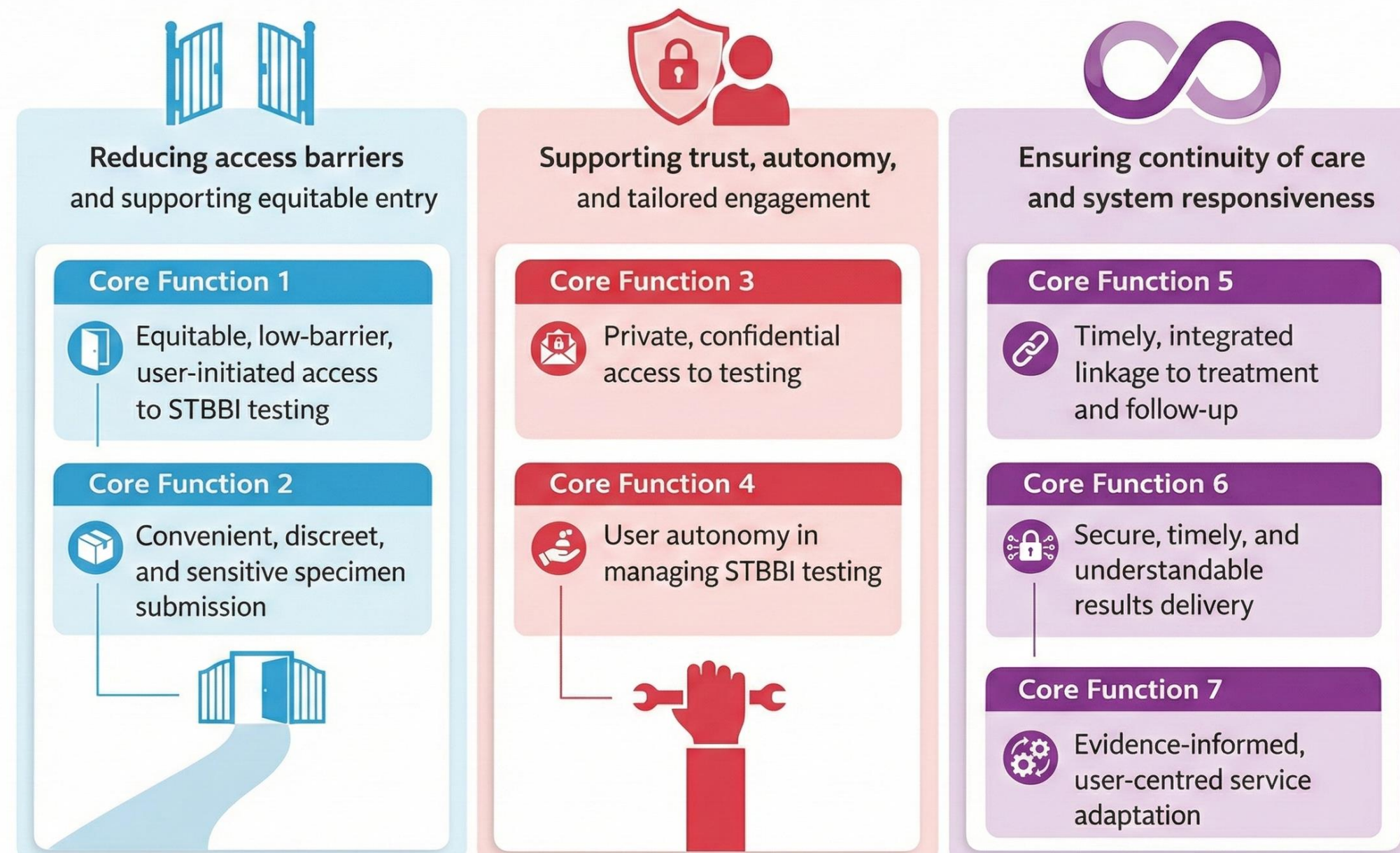
Study rationale and approach

To support sustainability, we applied complex intervention guidance to distinguish GetCheckedOnline's core functions from delivery forms that can adapt over time and across contexts without undermining fidelity.



Core functions and possible forms of GetCheckedOnline

Core functions of *GetCheckedOnline* across three domains



Core functions represent non-negotiable purposes; delivery forms may adapt across contexts to preserve fidelity.

By distinguishing core functions from adaptable delivery forms, this study made sustainability actionable, clarifying what must be preserved and what can change as GetCheckedOnline adapts and scales without undermining equity or fidelity.



Exploring partner perspectives on sustainability and system fit

Using the DSF as a diagnostic tool



Study rationale and approach

Building on the specification of GetCheckedOnline's core functions, this study used the Dynamic Sustainability Framework to examine how partner perspectives reflect evolving fit and misalignment between the intervention, practice setting, and the broader health system.



An instrumental case study drawing on DSF. Conducted interviews and focus groups with purposively sampled partners



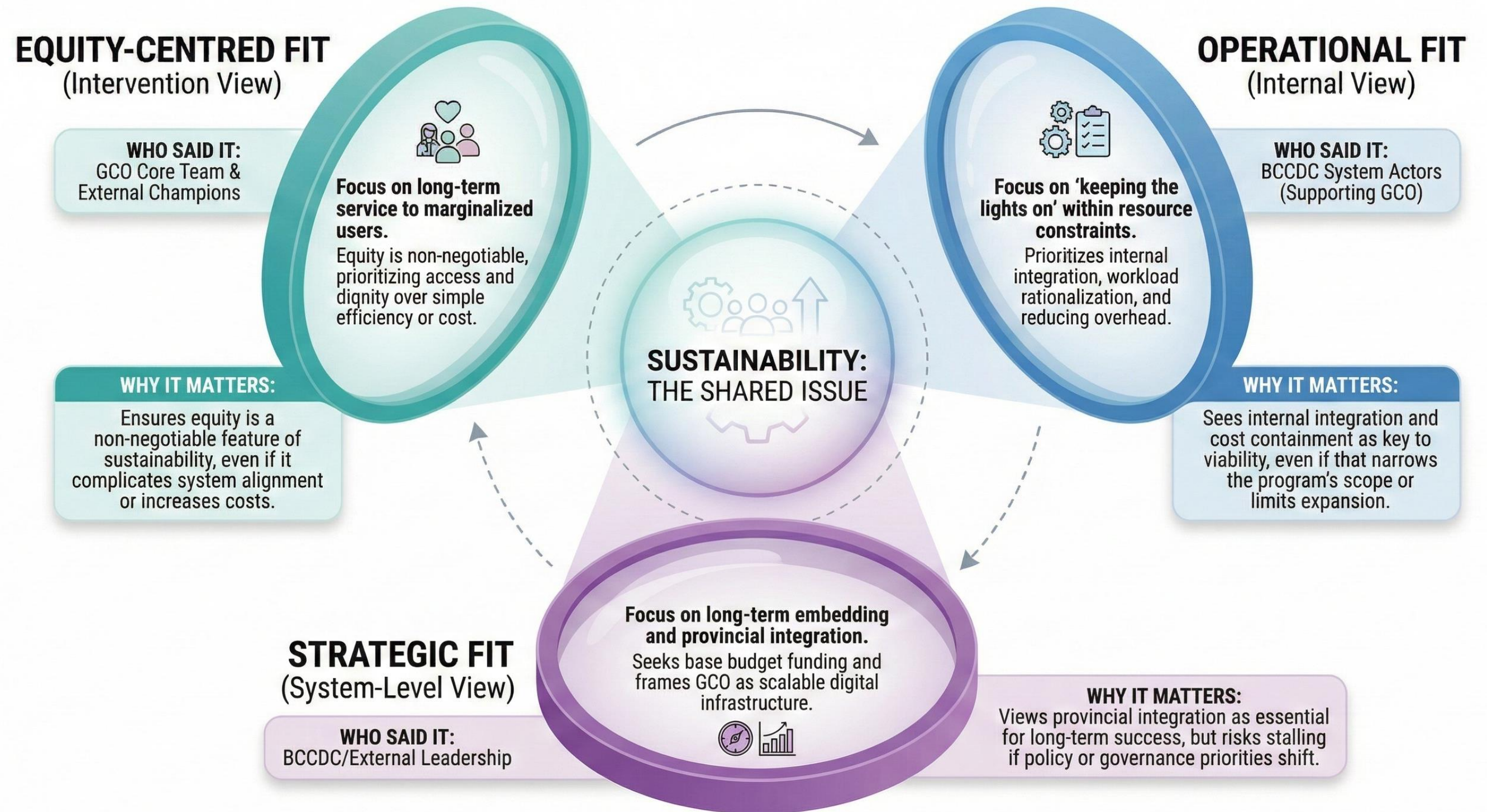
Used framework analysis to map partner perspectives, identify persistent tensions (fit misalignments) and explore potential solutions

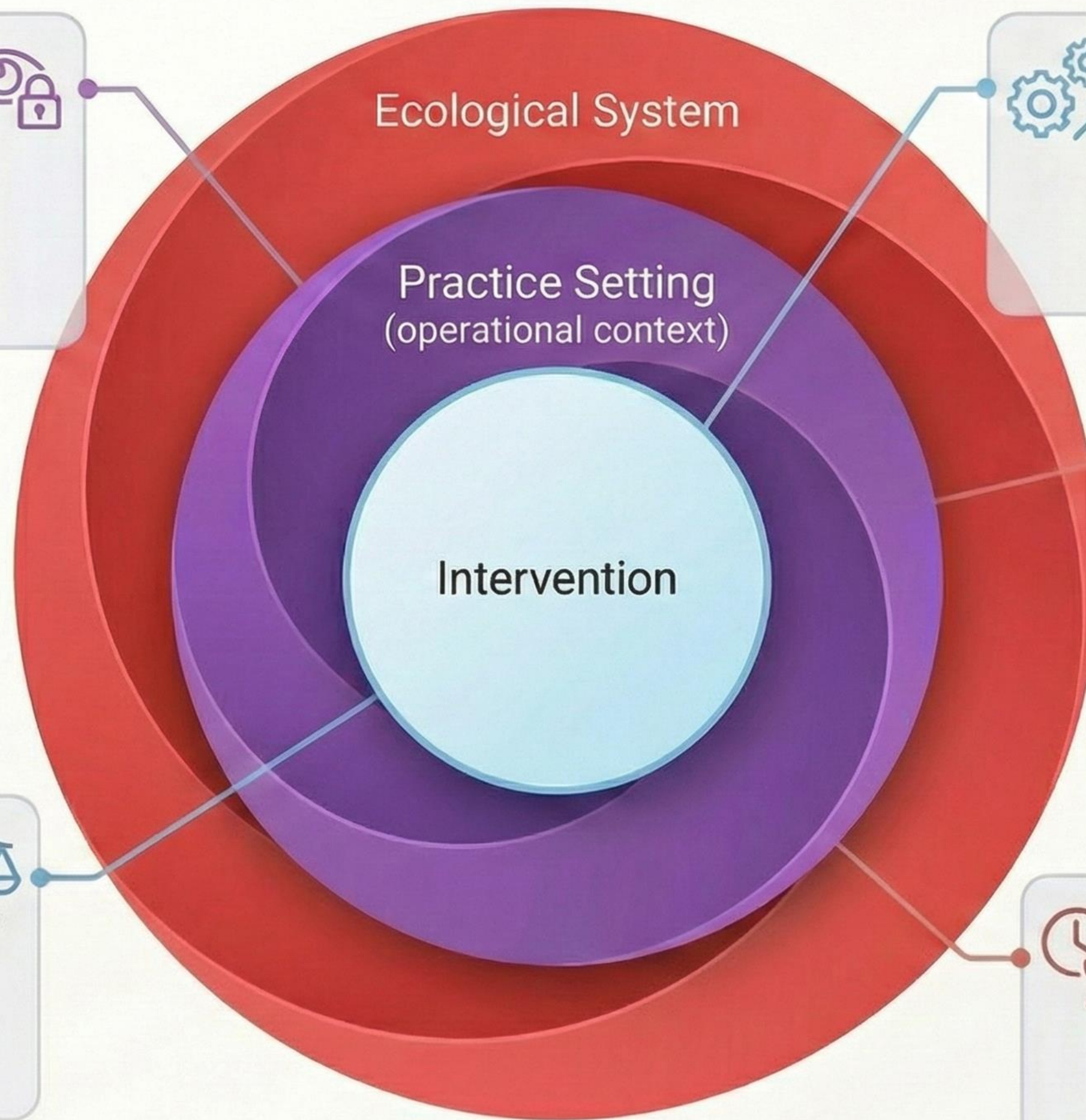


Translated findings into non-mutually exclusive strategic packages in response to identified tensions













Varied views on Sustainability





How do we ensure health system fit? Strategic packages

↑ STRATEGIC PACKAGES	✔ WHAT THIS MEANS IN PRACTICE
 TARGETED EQUITY & ROLE CLARITY	Refocus on populations unlikely to test without GCO (e.g., non-nominal, rural, remote). 
 INNOVATION AS A SYSTEMS LEVER	Use GCO to pilot low-barrier STI innovations (e.g., DBS, self-collection). 
 ADAPTIVE FUNDING & TIMING	Secure bridge funding and align with provincial policy shifts. 
 SYSTEM FIT & TECHNICAL INTEGRATION	Integrate GCO as a complementary low-barrier service across the system. 
 LEGITIMACY & ADVOCACY	Strengthen policy recognition and shared accountability using cost-effectiveness evidence. 

Why this matters

- Sustainability challenges arise from misalignment between equity-driven design, capacity, and system structures, not lack of support or effectiveness.
- Findings are informing Ministry- and BCCDC-led planning and RHA consultations, highlighting the value of embedded research for sustaining digital STBBI services.

Strategic Options for Sustaining GetCheckedOnline in the Long-Term

Insights from a System-Level Analysis of Partner Perspectives

 Provincial Health Services Authority

 BC Centre for Disease Control
Provincial Health Services Authority

Taking GetCheckedOnline from pilot to scale

Using a decade of digital STBBI
implementation to understand
sustainability over time



Study rationale and approach

Limited evidence explains how sustainability challenges evolve as digital programs move beyond pilots. This study examined GetCheckedOnline to generate transferable insights about sustaining equity-focused digital interventions as they transition into routine health system operations.



Conducted a secondary, analysis of system partner perspectives across the implementation lifecycle



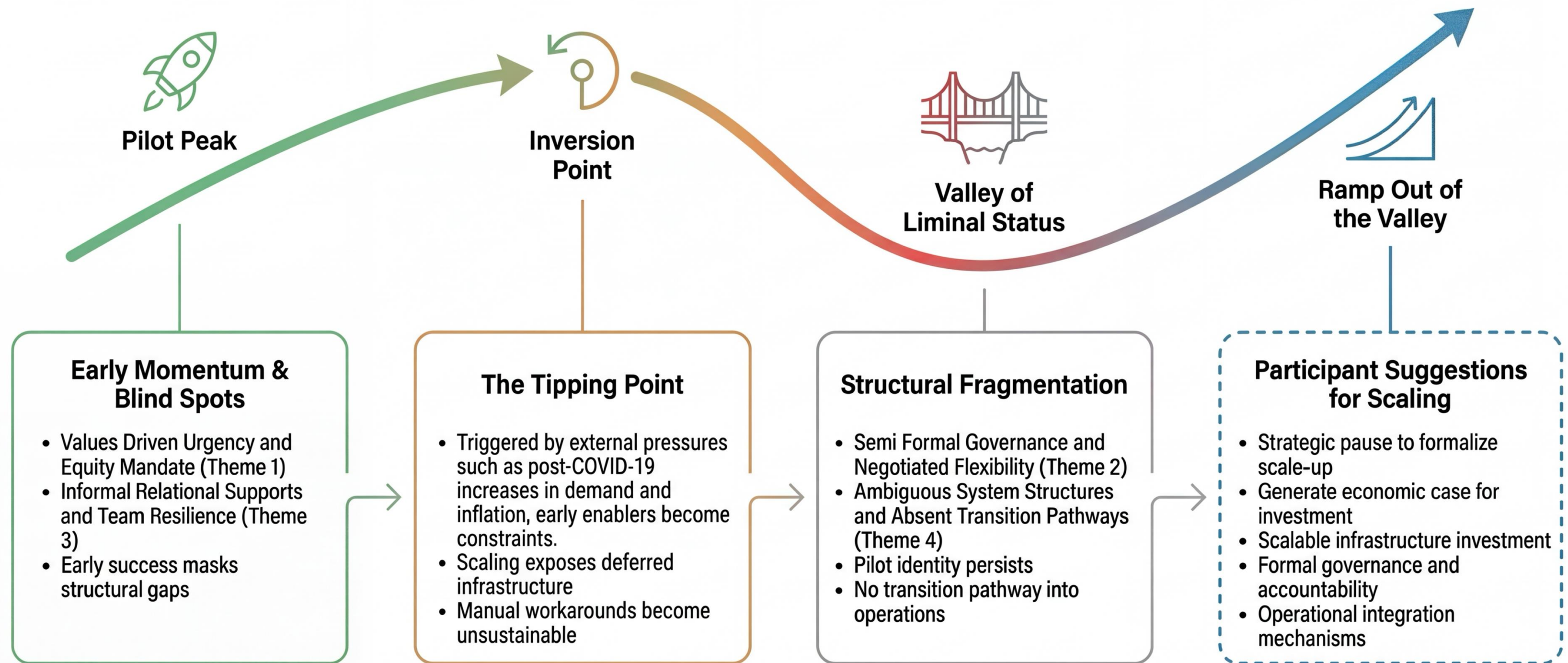
Used reflexive thematic analyses to examine how sustainability challenges evolved from early piloting through regional scale-up



Identified cross-cutting themes to inform broader conversations about sustainability, system fit, and long-term planning

Temporal Inversion in Digital Scale-Up: Early Enablers as Structural Constraints

Empirically illustrated through the GetCheckedOnline case.



This study shows that pilot-stage enabling conditions can become liabilities at scale and highlights the need for a strategic pause points where programs can be re-aligned with system structures, reduce reliance on informal workarounds, and establish clear accountability for growth.

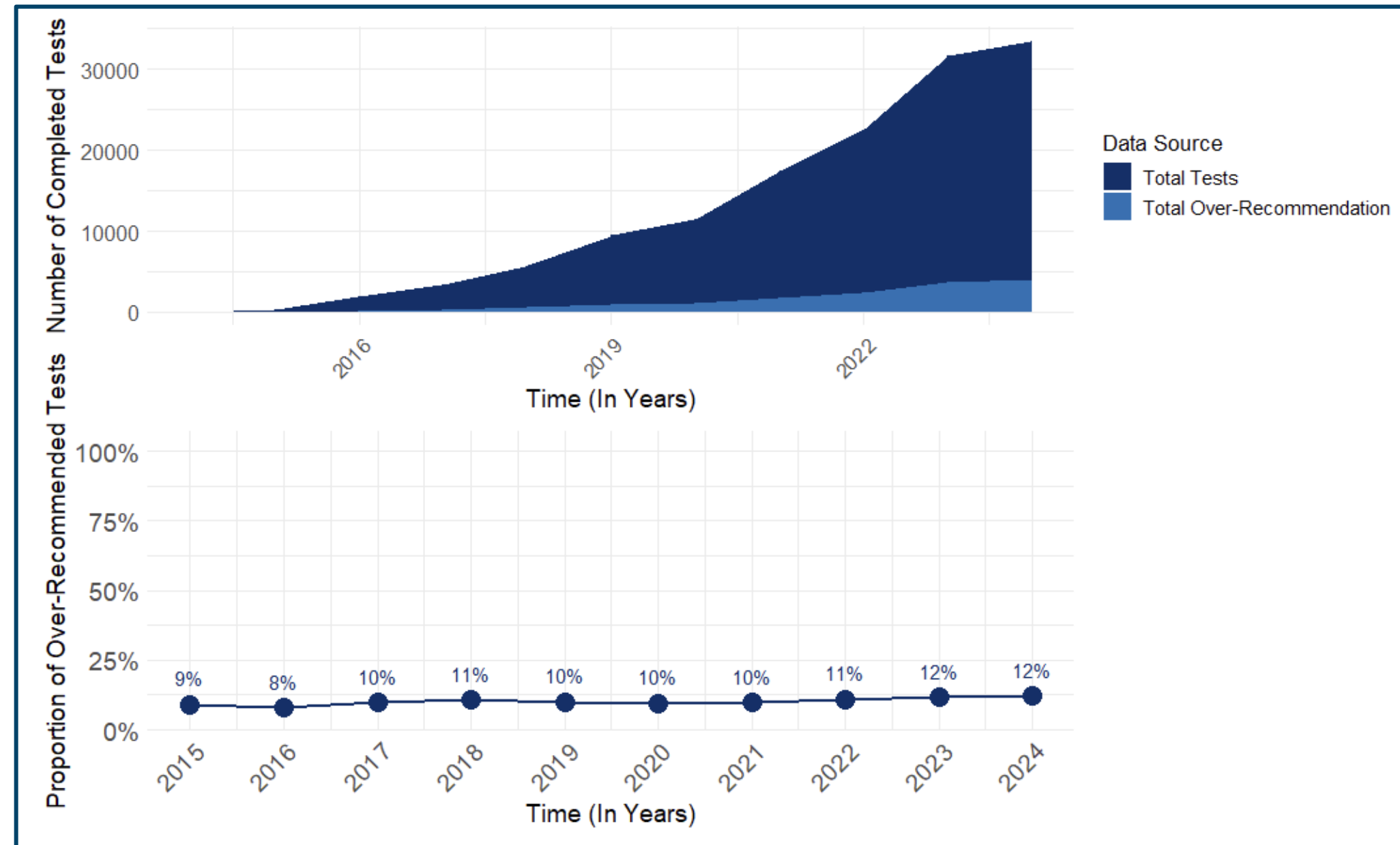


GetCheckedOnline user trajectories (preliminary)

Implications for sustainability and scale



Study rationale



Concerns about “demand induction” and convenience testing with digital interventions for STBBI testing and their impact on program costs.

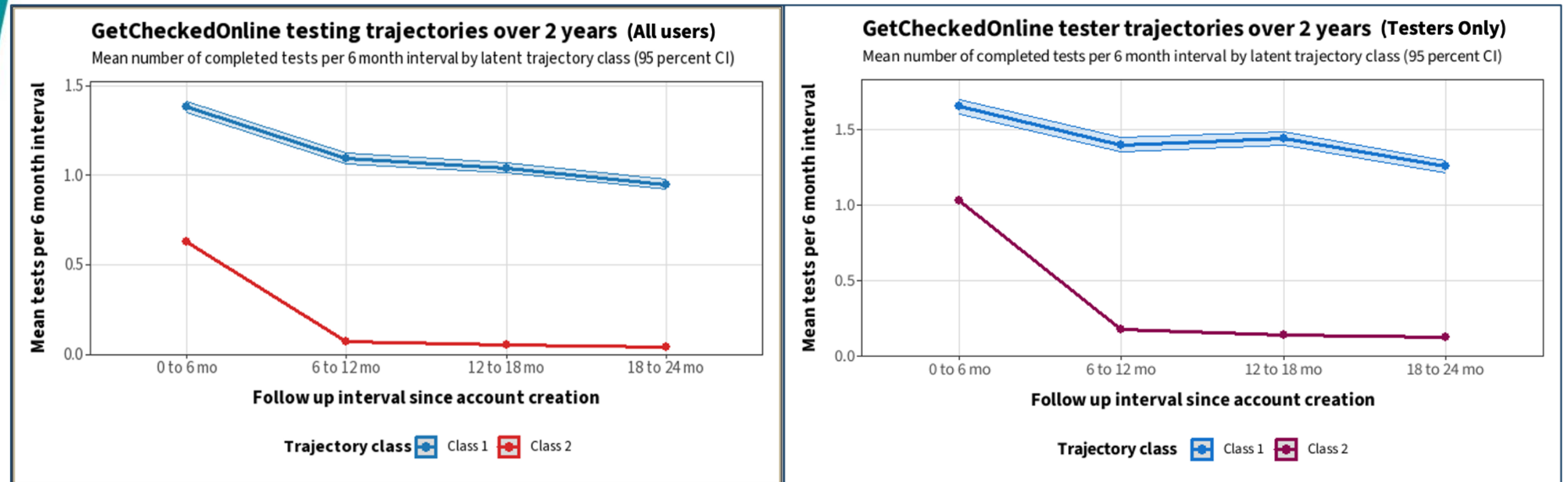
Approach

To identify longitudinal patterns of GetCheckedOnline testing and assess how user trajectories are associated with individual-, health system-, and community-level (structural) factors, with implications for sustainability planning, we:

- Constructed a retrospective cohort of users creating accounts between April 2020–Nov 2022 with two years of follow-up
- Identified distinct testing patterns using group-based trajectory modeling with Poisson mixture models
- Examined associations between trajectory membership and contextual factors using multilevel logistic regression



Testing patterns are structured, not indiscriminate



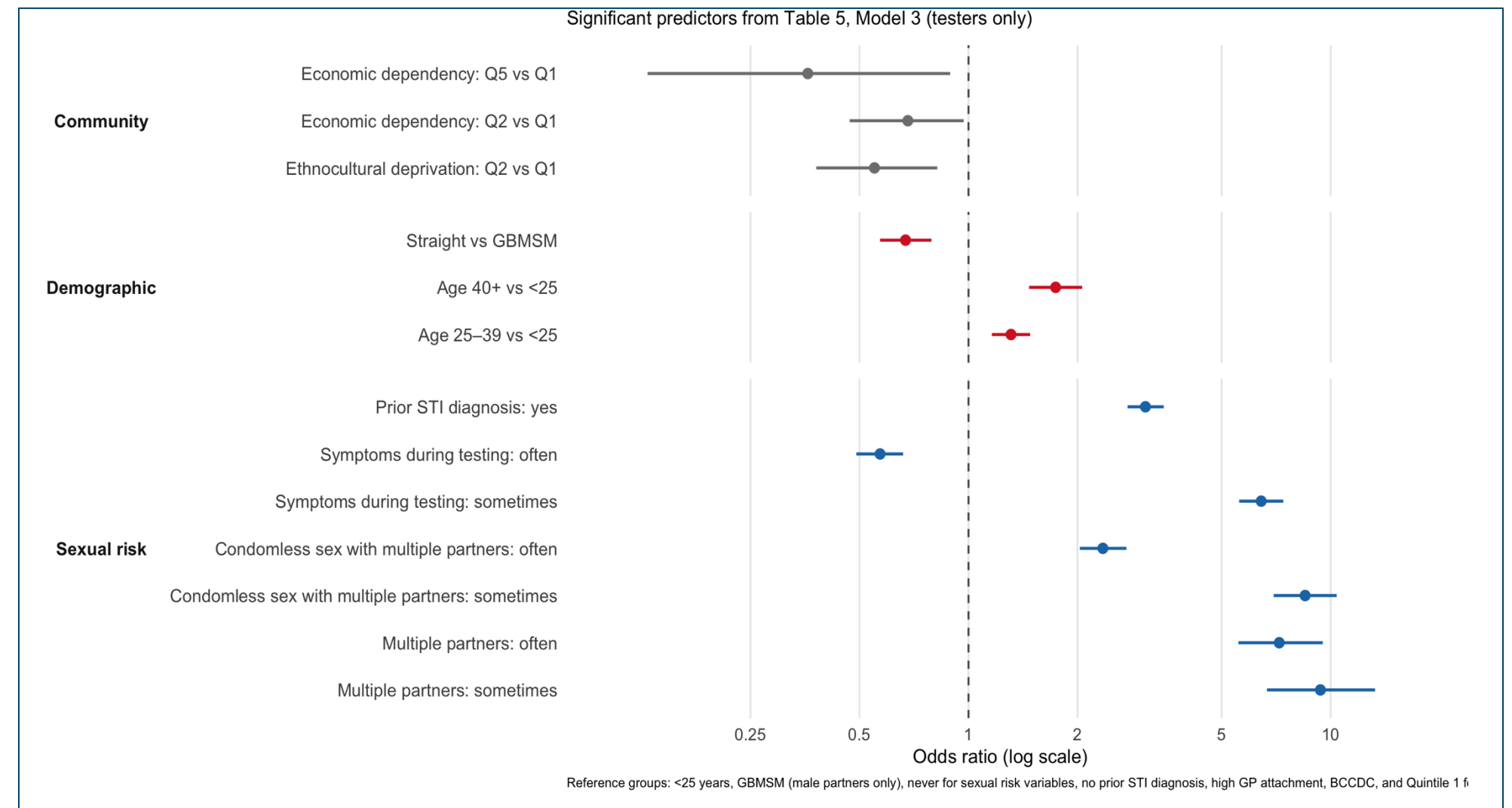
All users (including non-testers)

Among users who completed ≥ 1 test

- Two distinct testing trajectories identified among users and testers
- ~10–12% of users account for sustained high-frequency testing
- High-frequency testing persists over time

What drives sustained-high frequency testing?

- High-frequency testing is primarily behaviour-driven, with limited evidence of system-driven overuse
- GBMSM and people with higher-risk sexual behavior represent high-frequency users
- Equity gaps persist → Patterns suggest suboptimal access in deprived communities rather than overuse overall



High-frequency testing reflects risk-aligned behaviour with some access gaps, supporting targeted, equity-oriented scale rather than restriction.



What does all this mean for the sustainability of digital STBBI testing interventions?

Considering sustainability as a dynamic fit



Limitations

- System perspectives focused primarily at the provincial level, engagement with Regional Health Authorities is currently being planned
- Trajectories describe use patterns but do not capture motivations or appropriateness of testing
- Some structural and system factors were inferred using proxy measures rather than directly observed (ecological fallacy)
- Findings reflect an embedded evaluation within a single long-running intervention and provincial context
- Trajectory analyses span the COVID-19 period, which may have influenced testing behavior and service availability

Cross-cutting sustainability implications of study findings

- Sustainability requires system alignment, not just effective interventions
- High-frequency use is structured and risk-aligned, not indiscriminate
- Digital services expose system-level equity–efficiency tensions
- Differentiated service pathways are needed, rather than blanket restriction
- Sustainability planning must be deliberate and anticipatory

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- Sexual Health Advisory Group
- GCO Sustainment Working Group
- ...and many more!



Thank You

 Questions? Email ihoghosa.iyamu@bccdc.ca



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