

**Genome**Canada

# **GeMPaW: Community Coordination and Collaboration Hub (C3 Hub) Introductory Webinar**

An overview of Genome Canada's new \$3 million funding opportunity

June 1, 2023



# Land acknowledgment

Genome Canada is located on the unceded traditional land of the Anishinaabe Algonquin People. As a national organization, we support activities located on the traditional territories of many First Nations, Inuit and Métis Peoples. We acknowledge the traditional guardians of these territories and honor their courageous leaders, past, present and future. We also acknowledge that truth, reconciliation and engagement with First Nations, Inuit and Métis Peoples are essential to redressing the historical inequities of our society. We acknowledge our responsibility to advance genomics in a manner that respects the traditional lands on which we work and to incorporate Indigenous knowledge systems in the research and innovation ecosystem.



# Agenda

## Welcome!

- Overview of the strategic initiative
- Breakout room discussions
- Summary and next steps
- Adjournment



**Sapna Mahajan**  
Knowledge mobilization & impact



**Daryl Waggott**  
Technical requirements



**Koko Bate Agborsangaya**  
C3 Hub eligibility



**Karen Dewar**  
Knowledge mobilization and impact



# Genome Canada – Our mission

## Canada's genomics ecosystem leader

Genome Canada is a national not-for-profit organization addressing Canada's greatest challenges and opportunities through research and innovation in genomics and associated biosciences. With a 22+ year track record of impact across sectors, a pan-Canadian network of six regional Genome Centres, and strong partnerships across the public, private, non-profit and academic sectors at home and internationally, we translate research into real-world impact in health, climate action and food security.



# Our vision

We envision Canada...  
as a world leader in the  
application of genomics-based  
biosciences for human health,  
the environment and across  
the bioeconomy.







# CanCOGeN



# Why water monitoring?

## Opportunities

- Rapid
- Economical
- Early detection
- Promotes One Health
- Community-based

## Challenges

- Coordination/standardization
- Accessibility/equity
- Integration with other screening methods
- Fragmented/siloed approach

**While there is significant potential for water-based genomic surveillance, Canada faces big challenges in harnessing it.**

**Success** = **eliminating silos** preventing pan-Canadian coordination to detect and report pathogens, and **implementing uniform standards, harmonization and sharing** of the data generated.





# Genome Canada's strategic initiative

## What it will do:

- **ADDRESS** emerging pathogens (EPs): detectable in water and prioritized by PHAC.
- **ADDRESS** antimicrobial resistance (AMR), including antibiotic resistant bacteria and antibiotic resistant genes.
- **ADVANCE** genomic monitoring of antibiotic resistant genes with a focus on those prioritized by the WHO, including the six "ESKAPE" pathogens.
- **ADVANCE** understanding of OneHealth pathogen genomic monitoring.
- **INCREASE** the value of pathogen monitoring data through national data-sharing, data standards, data analysis and data visualization.
- **DEVELOP** knowledge mobilization strategies to support the utilization of genomic data and associated metadata in public health and policy decisions.





# GeMPaW

\$10 million

3 funding opportunities

**Regional EP and  
AMR teams**

**\$1 million/Center  
Launch: Winter 2024**

*Implementing regional  
monitoring programs for  
water-based pathogens  
and AMR.*

**1:1 co-funding  
\$6 million total**

**Community Coordination and  
Collaboration Hub (C3 Hub)**

**\$3 million**

**Registration now open!**

*Ensuring that water-based pathogen  
and AMR genomic monitoring data  
informs public policy decisions.*

**1:1 co-funding**

**Indigenous-led  
surveillance in  
northern, remote &  
isolated Indigenous  
communities**

**\$1 million  
2024**

*Responding to community  
priorities.*



# The C3 Hub funding opportunity (\$3M)

Supports a single multidisciplinary team that will develop, coordinate and implement a portfolio-level strategic implementation plan for the initiative.

The approach:

- **ENGAGE** key partners, communities, and rightsholders to drive uptake of genomic data.
- **COORDINATE** data-related activities across the other two funding opportunities.
- **SYSTEMATIZE** the sharing, analyzing and visualizing of genomic monitoring data.
- **SUPPORT** public policy planning, decision-making and response.
- **PARTNER** locally, nationally and internationally to create 'best-in-class' approaches to the capture, sharing, analysis and use of genomic water surveillance data.



# The C3 Hub funding opportunity

## Key requirements

### Community Coordination and Collaboration Hub (C3 Hub) **\$3 million**

*Ensuring that water-based pathogen  
and AMR genomic monitoring data  
informs public policy decisions.*

**Term: 4 years**

- 1 Pan-Canadian team will be funded
  - Substantive role(s) for Indigenous researcher(s), knowledge holder(s) or community representative(s)
- 1:1 Co-funding (50% secured at project approval stage)
- 5 key competencies within team
  - Expertise leading multidisciplinary teams
  - Knowledge of:
    - Data
    - Genomic monitoring
    - Emerging pathogen & AMR monitoring
    - Knowledge mobilization and transfer
    - Indigenous data governance





Regional EP  
and  
AMR teams  
\$1 million per  
regional  
center  
Launch:  
Winter 2024

Indigenous-  
led  
surveillance  
in NRI  
Indigenous  
communities  
\$1 million  
2024

- **Develop** best practices for a high-quality test for genomic monitoring of water detectable emerging pathogens and AMR.
- **Harmonize** data standards, including analytic tools and visualization.
- **Share** project outputs, including data, best practices and protocols, to encourage adoption beyond the project and to maximize portfolio impact.
- **Foster** collaboration between academics, public health labs and government agencies.

*The C3 Hub will provide **guidance, structure and a framework** to ensure the regional monitoring projects achieve desired impact.*

**Advance** genomic monitoring approaches that use water sources—including sewage, wastewater treatment plants, saltwater, freshwater, groundwater, well water or drinkable water—to respond to the needs and priorities of Indigenous communities.

**Advance** genomic monitoring capacity-building and knowledge mobilization in Indigenous communities.

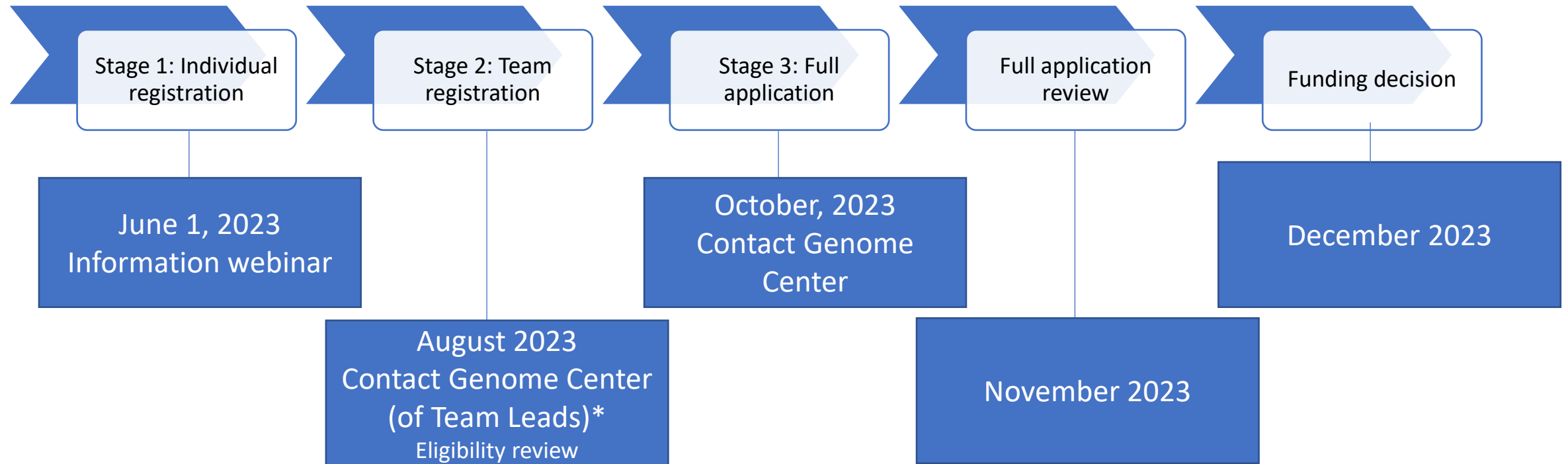
**Prioritize** pathogens that are detectable in water of particular importance to Indigenous communities.

**Support** Indigenous data sovereignty and information governance as they relate to Indigenous-led genomics monitoring.

*The C3 Hub will **center Indigenous data governance principles** and co-create mechanisms to support coordination of Indigenous-led pathogen surveillance.*



# C3 Hub process





# C3 Hub discussion: Breakout rooms

## **Breakout room 1: C3 HUB vision**

Koko Bate Agborsangaya / Mary-Anne Siouti

## **Breakout room 2: Knowledge mobilization and impact**

Karen Dewar & Sapna Mahajan / Jessica Li

## **Breakout room 3: Technical requirements**

Daryl Waggott / Diana Hoyt





# Room 1: C3 Hub vision

Lead: Koko Bate Agborsangaya

Notetaker: Mary-Anne Siouti

# Role of the C3 Hub

- **Develop, coordinate and implement** a portfolio operation plan, with the plan including aspects of administration, data, and knowledge mobilization, translation and policy.
- **CONNECT** all the funding opportunities, including regional genomic monitoring projects and Indigenous-led monitoring projects.
- **DEVELOP** the administrative structures to coordinate and co-create data-related activities across regional and Indigenous community-led AMR/EP monitoring projects in northern, remote or isolated regions.
- **ENGAGE** with research, community and public sector users to promote adoption beyond GeMPaW and create evidence-driven policy to support future pandemic responses.



# Discussion

## From an overall C3 Hub perspective

1. What are some key considerations/partnerships/alignment that you think GC needs to be aware of?
2. Do you have any suggestions for Genome Canada to promote meaningful engagement & facilitate team formation (especially if new to ecosystem).
3. Where is further clarification required to support proper understanding and integration of your research components within the team application?





A photograph of a man holding a young girl in a field. The man is wearing a dark vest over a light-colored shirt and is looking at the girl with a smile. The girl is wearing a denim jacket and is also smiling. In the background, a cow is grazing in a field. The entire image is overlaid with a semi-transparent blue filter.

# Room 2: Knowledge mobilization and impact

Lead: Karen Dewar / Sapna Mahajan

Notetaker: Jessica Li

# Knowledge mobilization

## The C3 Hub will:

- Assess implementation barriers and policy opportunities to ensure successful and inclusive uptake of the regional AMR/EP monitoring projects.
- Investigate critical questions at the intersection of genomics and society to inform our understanding, while supporting responsible, ethical, equitable and effective development, uptake and implementation of GeMPaW.
- Identify key partners and develop mechanisms for ongoing engagement and outreach to drive inclusive and equitable uptake and enhance the overall impact of the portfolio of regional AMR/EP monitoring projects.
- Utilize the concept of One Health to link and standardize data and coordinate policy to bridge systemic gaps across the animal, human and environment continuum.



# Discussion

1. Where is further clarification required to support proper understanding and integration of these key concepts?
2. What supports could be helpful to you to submit the application and join a team?
3. What are some key considerations/partnerships/alignment that you think GC needs to be aware of?



# Room 3: Technical Requirements

Lead: Daryl Waggott

Notetaker: Diana Hoyt





# Data & Technical Requirements

## The C3 Hub will:

- **Standards.** Identify the technical standards, metadata, ontologies, and metrics for a Canadian high-quality pathogen surveillance genomic test. Standards will be based on established international best practices.
- **Infrastructure.** Implement a single point of entry to portfolio outputs, including data generation, data analytics/visualization and relevant data protocols. Any data portal infrastructure will leverage existing academic and/or private solutions.
- **Harmonization.** Co-develop interoperable data processes and harmonized data resources across regions and relevant public health stakeholders.
- **OCAP.** Address the under-representation of First Nations, Métis and Inuit Peoples in Canada's genomics landscape, data sets and governance to strengthen community-led approaches and uphold principles of Indigenous data sovereignty.







# Discussion

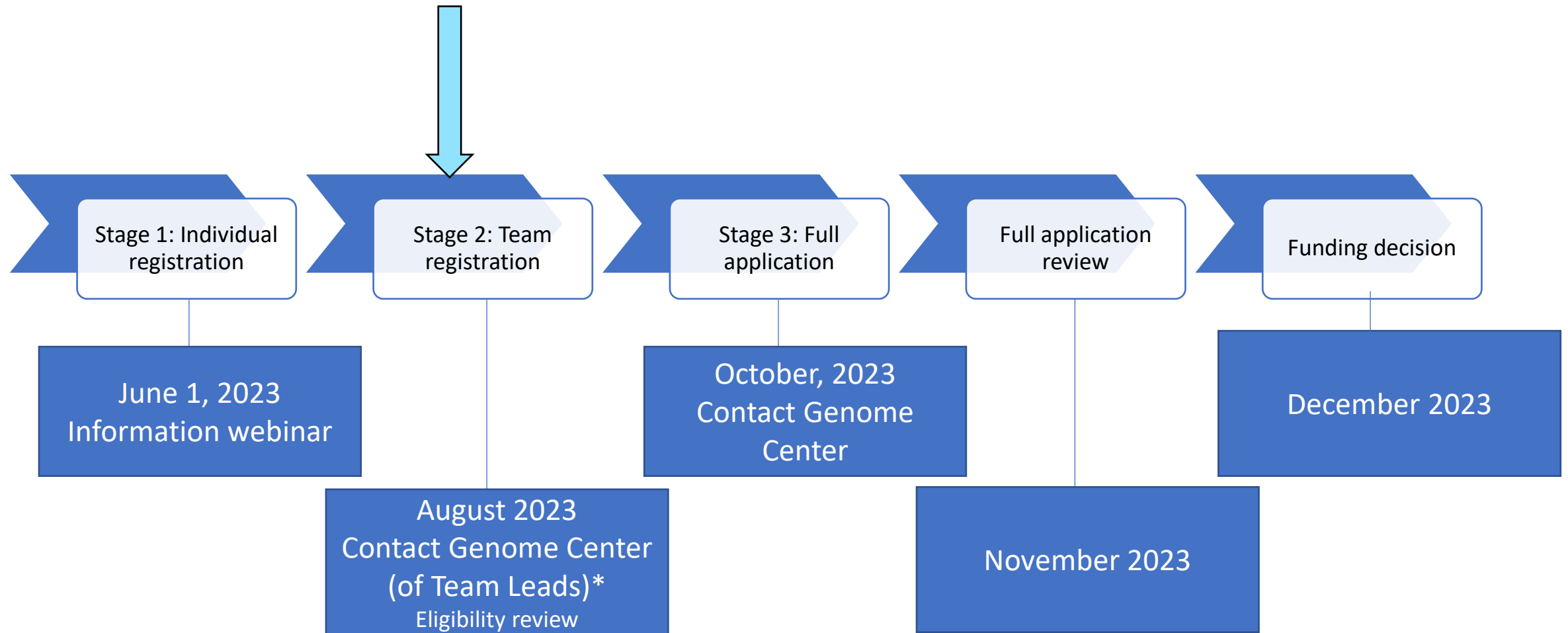
1. Where is further **clarification** required to support proper understanding and integration of these concepts?
2. What administrative **support** could be helpful to submit the application and join a team?
3. What key **considerations and partnerships** does GC need to be aware of?



A photograph of a female doctor with curly hair and a stethoscope around her neck, holding a tablet. She is looking at the tablet and talking to a man who is holding a baby. The man is also looking at the tablet. The scene is set in a clinical or hospital environment. The entire image has a light blue overlay.

# What we heard

# Next steps



# Genome Centre contacts

## Regional Genome Centre representatives

| Centre                  | Contact   |
|-------------------------|---|
| Genome British Columbia | Alison Dendoff<br><a href="mailto:adendoff@genomebc.ca">adendoff@genomebc.ca</a>                |
| Genome Alberta          | Tom Finn<br><a href="mailto:tfinn@genomealberta.ca">tfinn@genomealberta.ca</a>                  |
| Genome Prairie          | Lester Young<br><a href="mailto:lyoung@genomeprairie.ca">lyoung@genomeprairie.ca</a>            |
| Ontario Genomics        | Laura Riley<br><a href="mailto:lriley@ontariogenomics.ca">lriley@ontariogenomics.ca</a>         |
| Génomique Québec        | Caroline Telekawa<br><a href="mailto:ctelekawa@genomequebec.com">ctelekawa@genomequebec.com</a> |
| Genome Atlantic         | Kristin Tweel<br><a href="mailto:ktweel@genomeatlantic.ca">ktweel@genomeatlantic.ca</a>         |



# Q&A

Please send any further questions which have not yet been addressed to your Genome Centre or to our dedicated email:

[gempaw@genomecanada.ca](mailto:gempaw@genomecanada.ca)

