mHealth + ***e***Health = ***me***Health

Supporting person-centric care in low and middle income countries (LMIC) using an open source health information exchange: **OpenHIE**

Co-presenters:

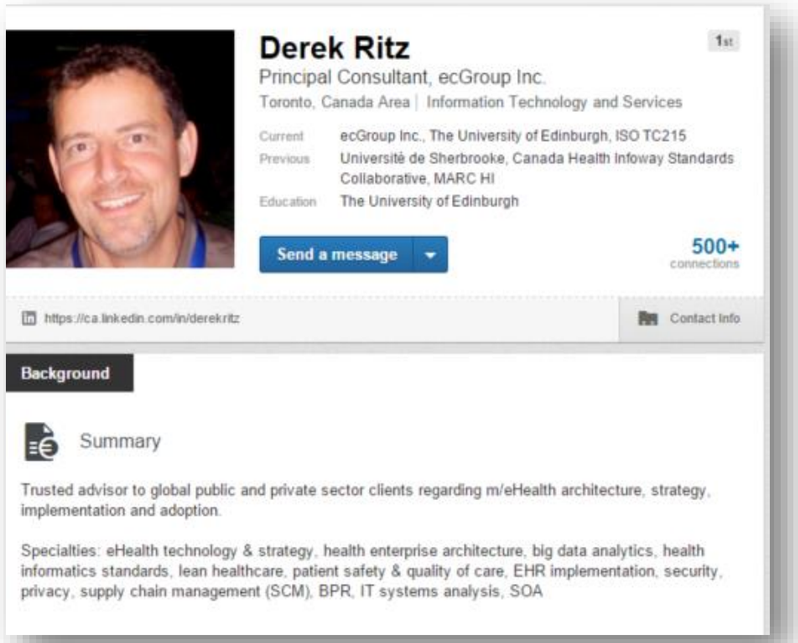
Derek Ritz & Justin Fyfe

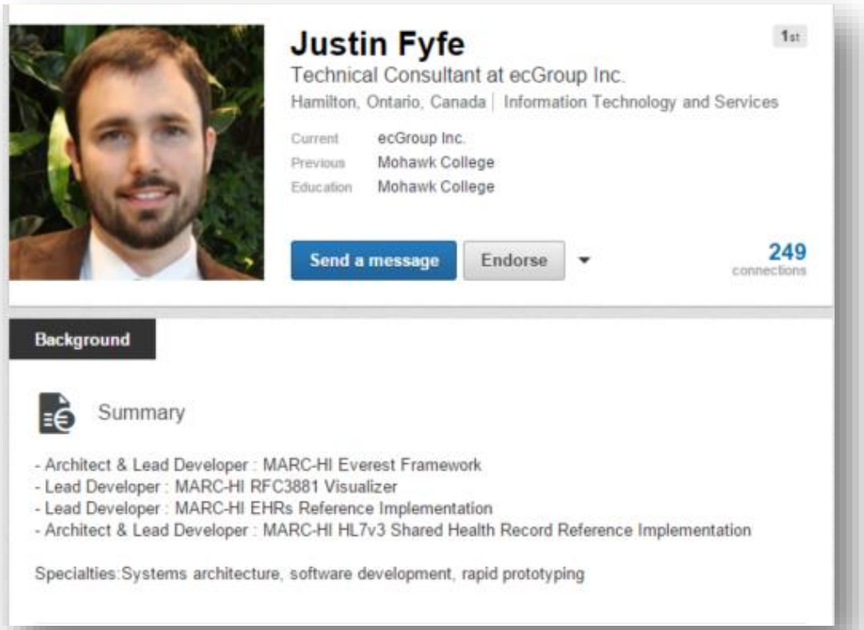
ecGroup Inc.

Overview

- Introductions
- The arc of the OpenHIE story
- An implementation example: the TZ “BID” project
- What’s next for OpenHIE?

Your co-presenters





OpenHIE

Joint Learning Network For Universal Health Coverage

The World Bank

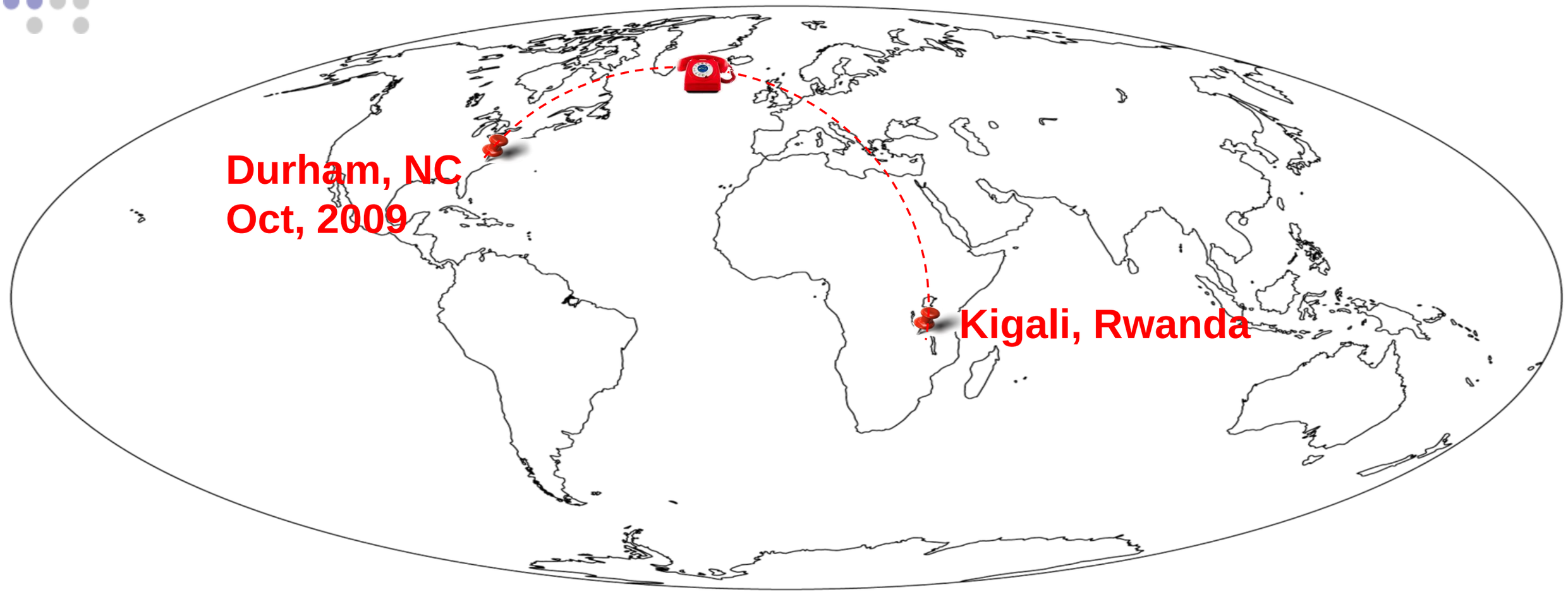
Canada Health Infoway

Inforoute Santé du Canada

ISO HL7 IHE

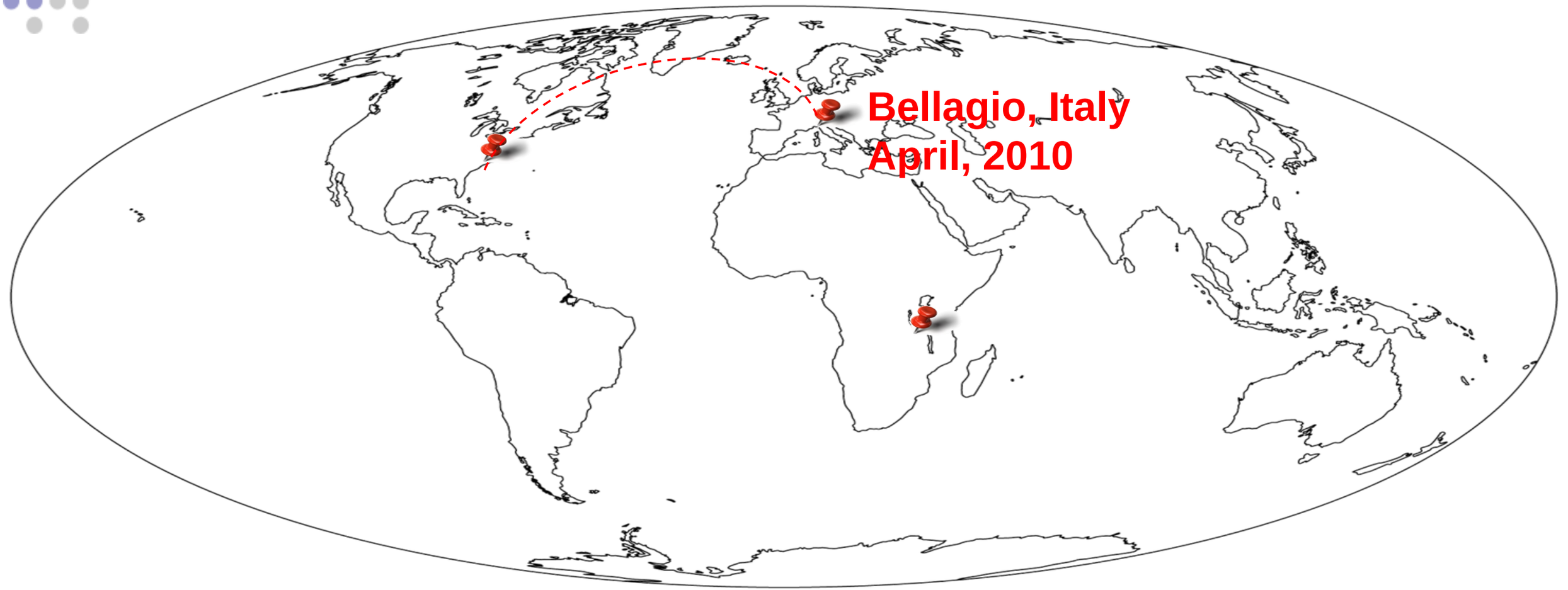
This story is about Mosa…

Durham, NC
Oct, 2009



Canada Health Infoway | Inforoute Santé du Canada

marc|hi
Mohawk Applied Research Centre in Health Informatics



Canada Health Infoway | Inforoute Santé du Canada

marc|hi Mohawk Applied Research Centre in Health Informatics

jembi

IDRC CRDI

Vancouver, BC
May, 2010

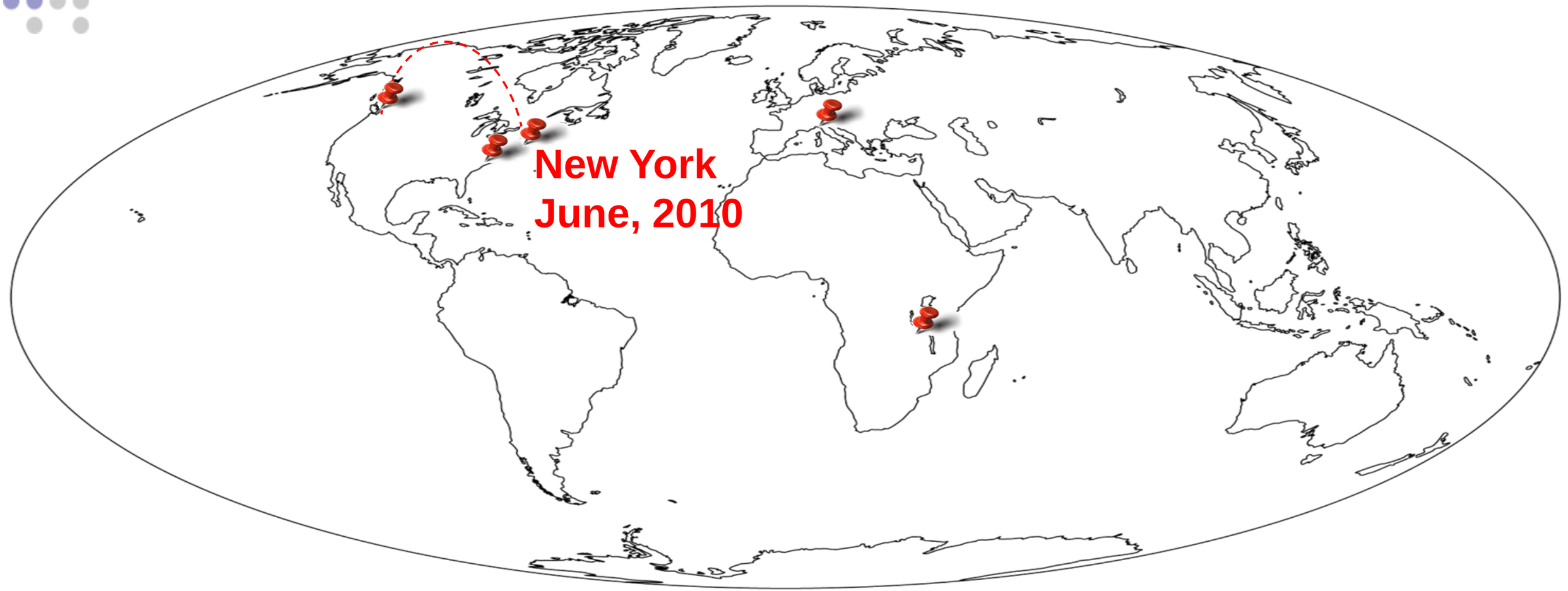
Zilics

Canada Health Infoway / Inforoute Santé du Canada

marc|hi Mohawk Applied Research Centre in Health Informatics

jembi

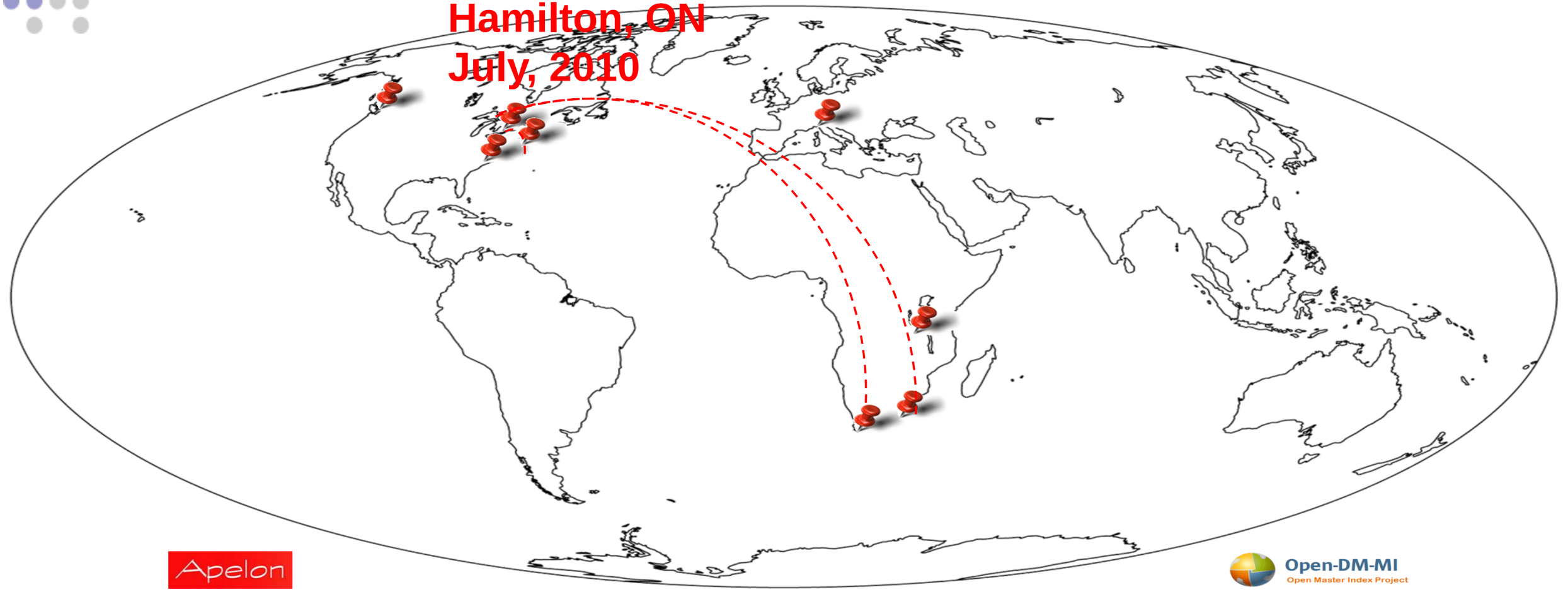
IDRC CRDI



ChildCount+ empowering communities to improve child & maternal health
Partners In Health
cZilics
Canada Health Infoway / Inforoute Santé du Canada
marc|hi Mohawk Applied Research Centre in Health Informatics
jembi
Millennium Villages
OpenMRS

IDRC CRDI

Hamilton, ON
July, 2010



Apelon

Open-DM-MI
Open Master Index Project

ChildCount+
empowering communities to improve child & maternal health

Partners In Health

cZilics

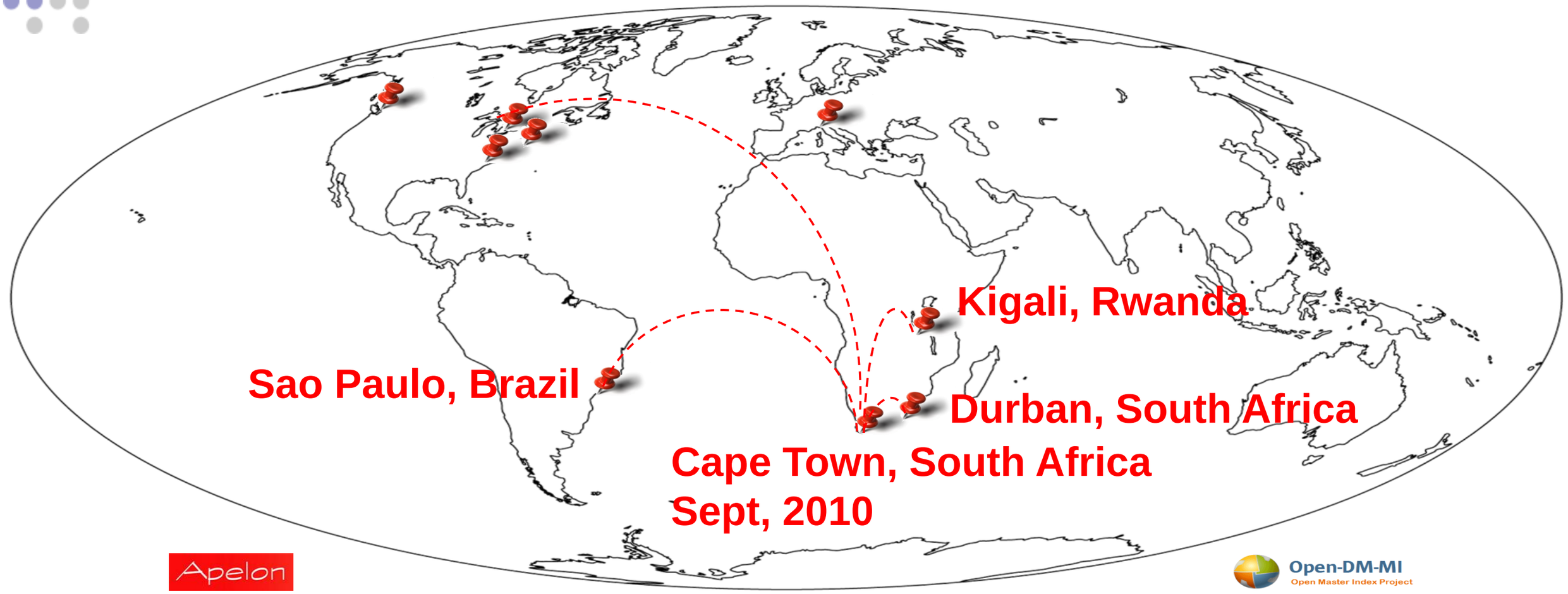
Canada Health Infoway / Inforoute Santé du Canada

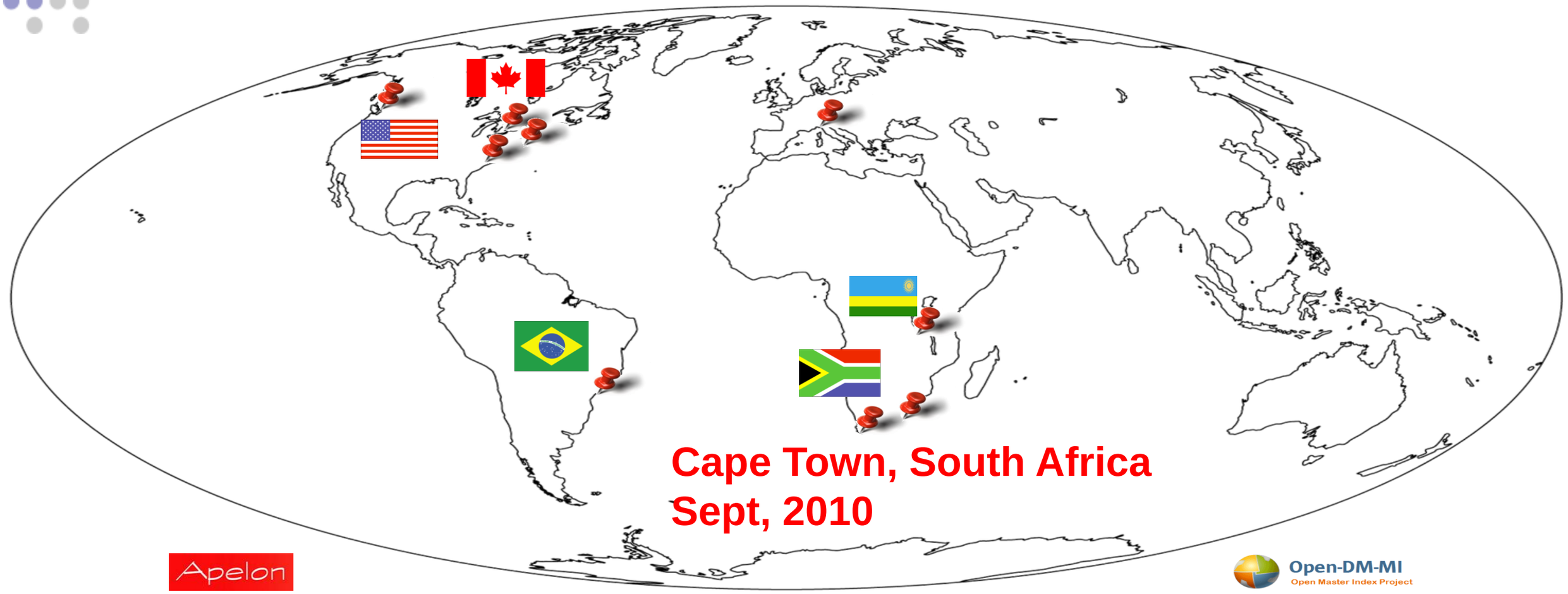
marc|hi
Mohawk Applied Research Centre in Health Informatics

jembi

Millennium Villages

OpenMRS

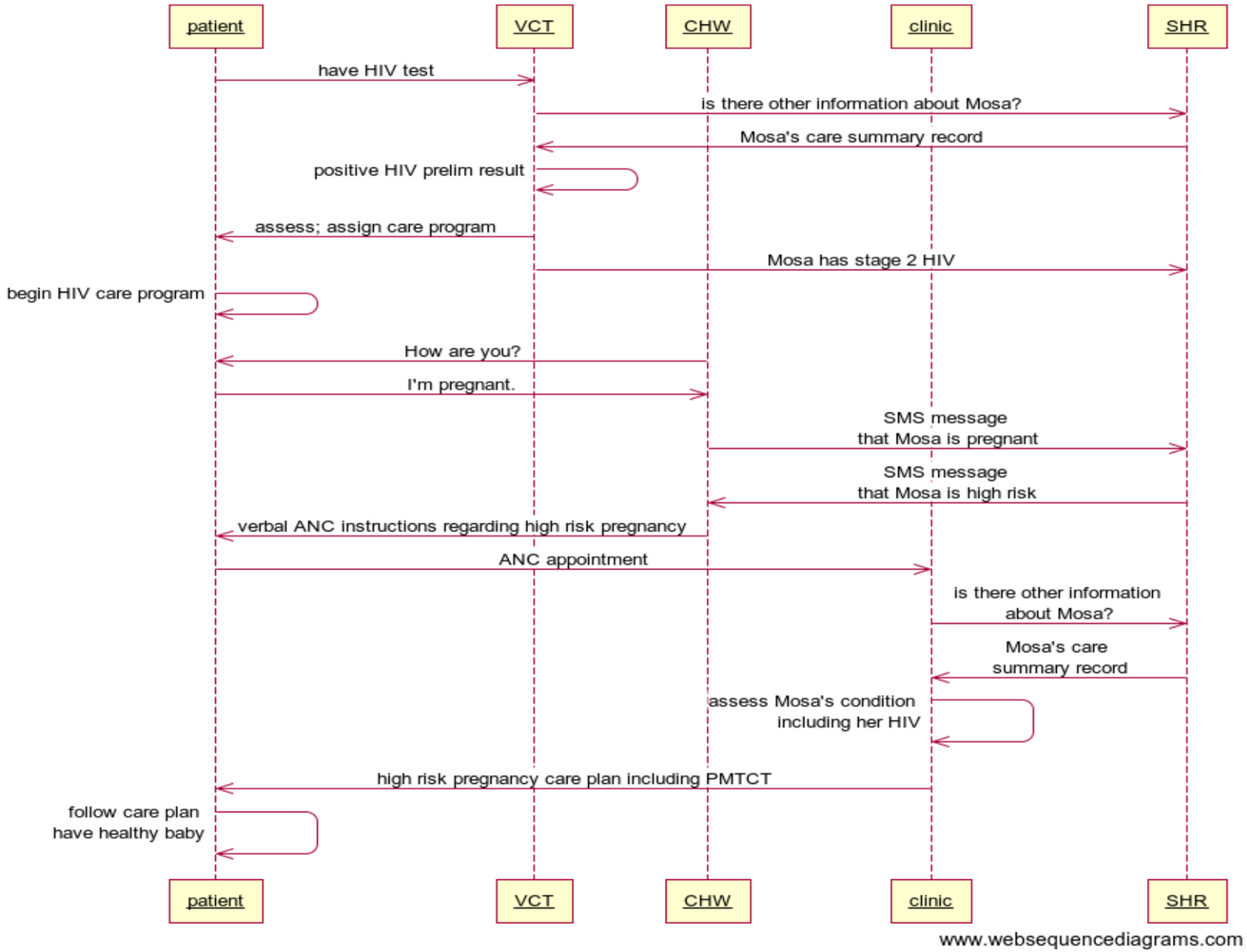

Kigali, Rwanda
Sao Paulo, Brazil
Durban, South Africa
Cape Town, South Africa
Sept, 2010



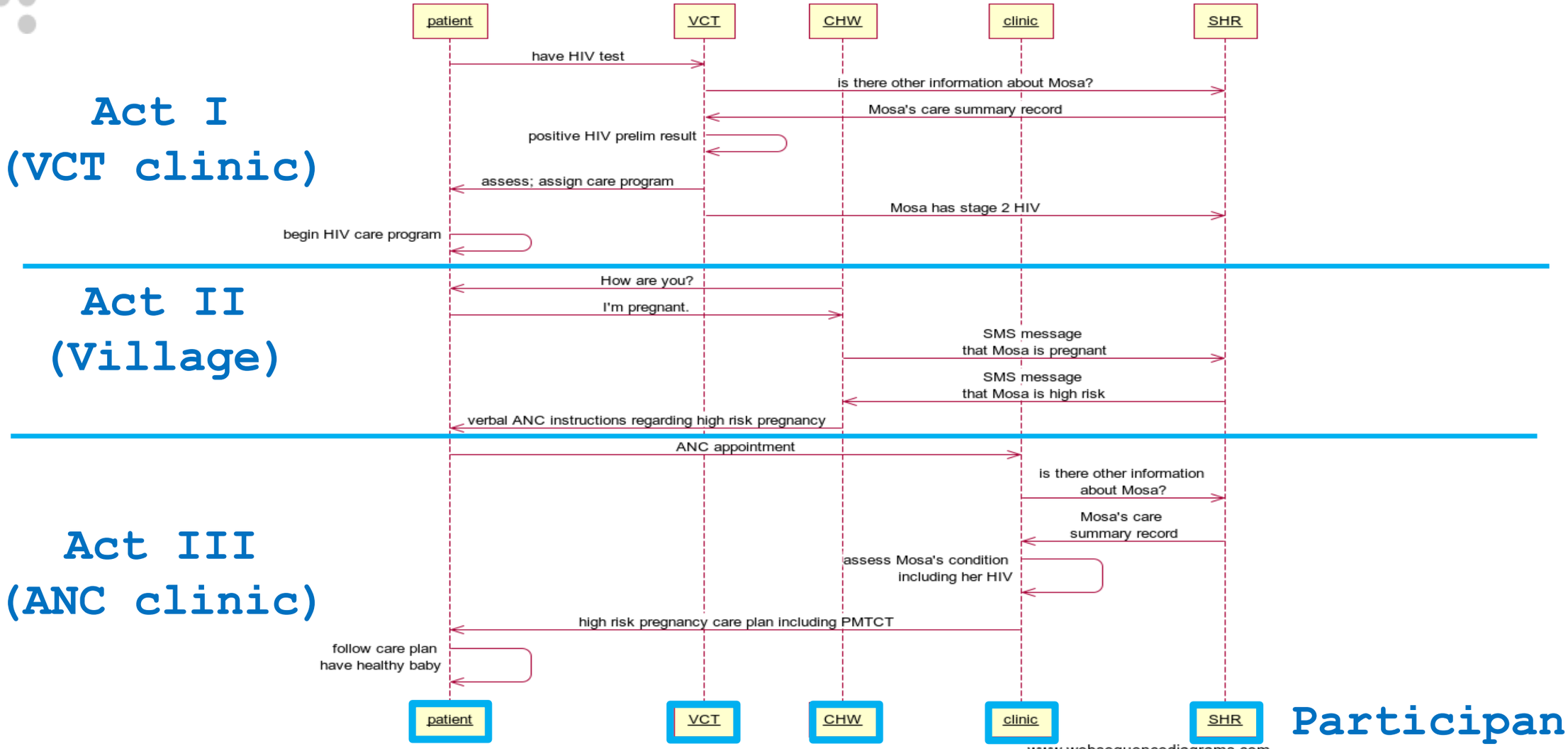
Cape Town, South Africa
Sept, 2010

At the 2010 Medinfo Conference in Cape Town, we demonstrated how meHealth architecture could impact the life of Mosa and her baby.

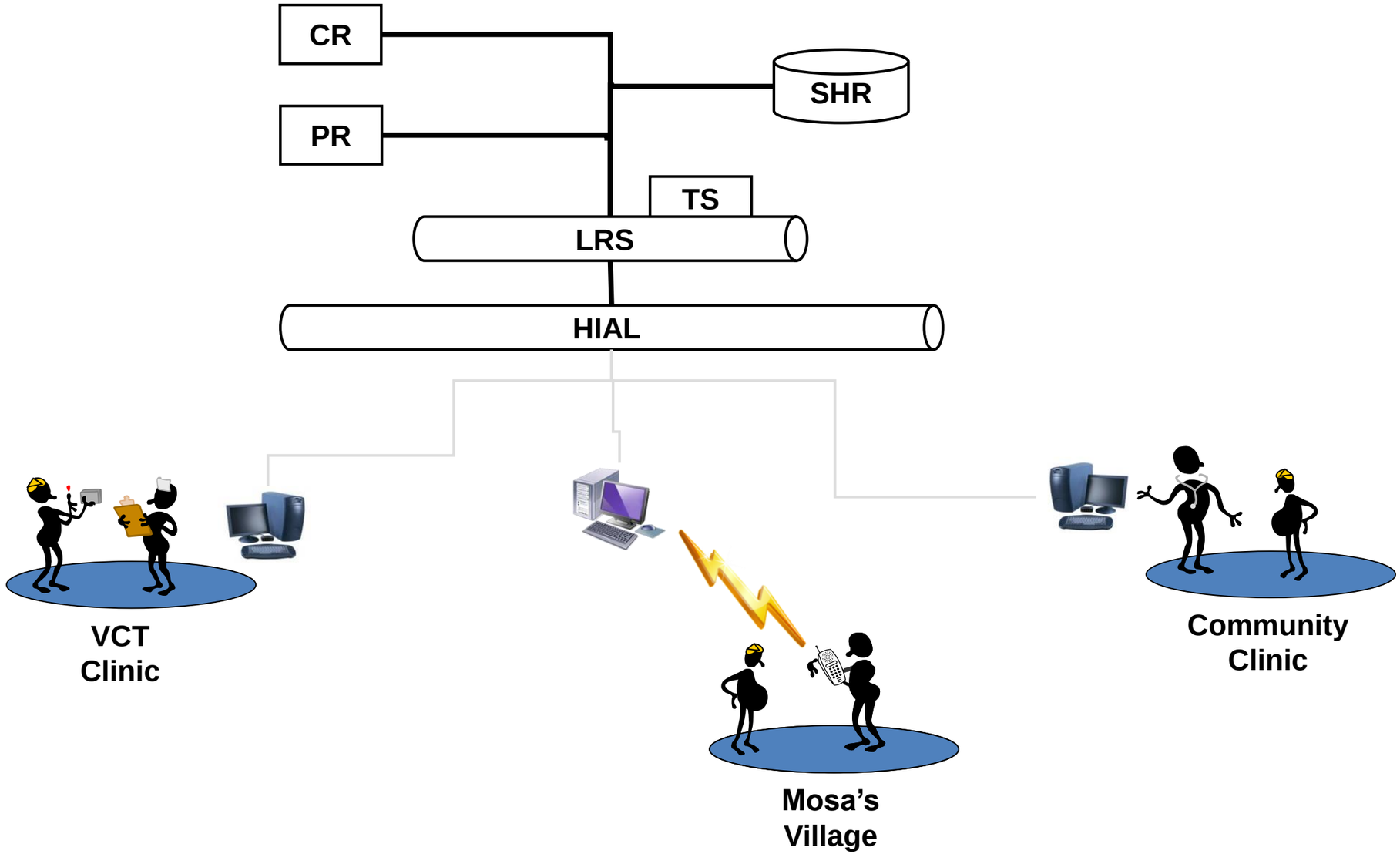
Workflow for Mosa's Story



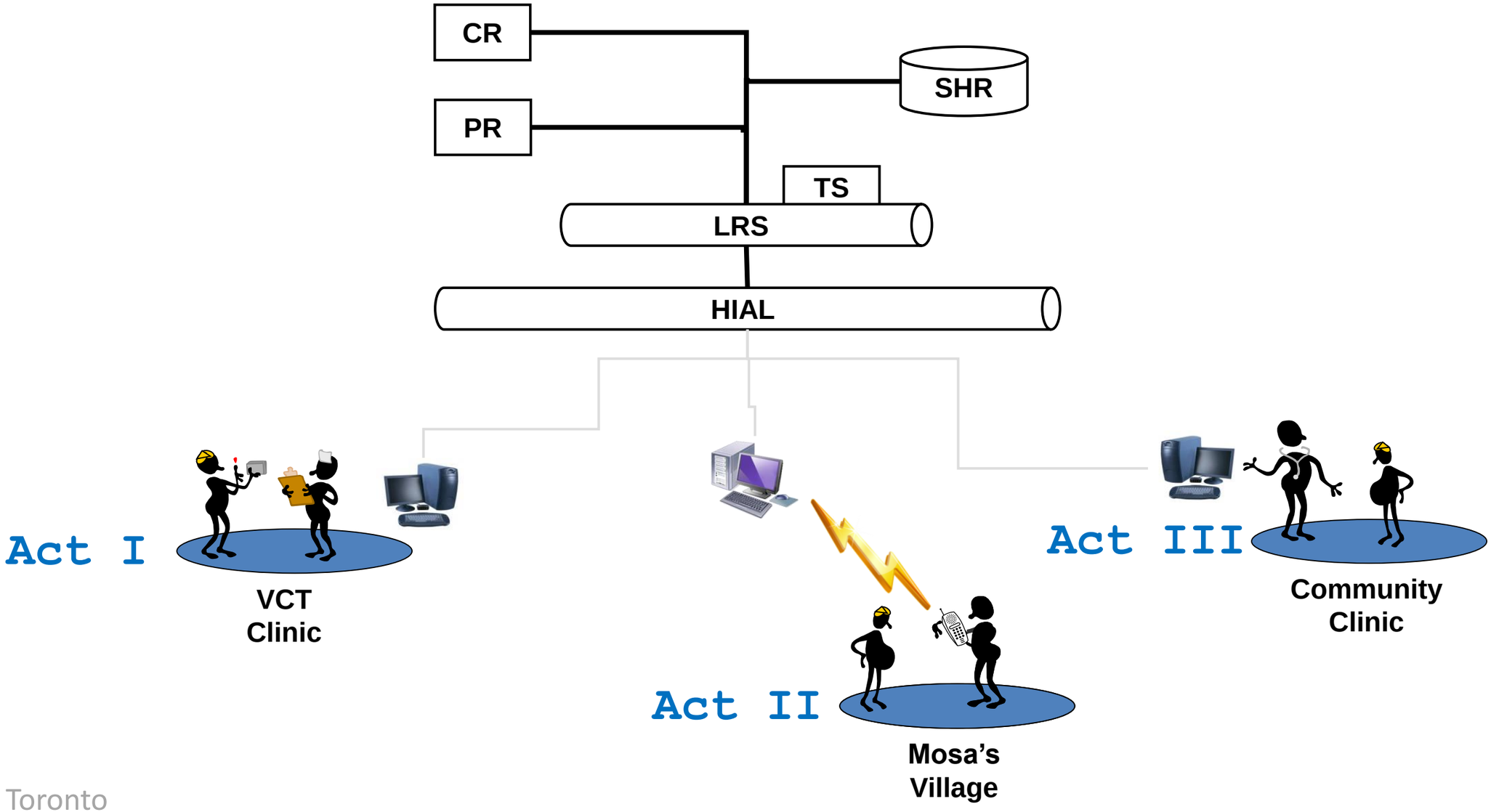
Workflow for Mosa's Story



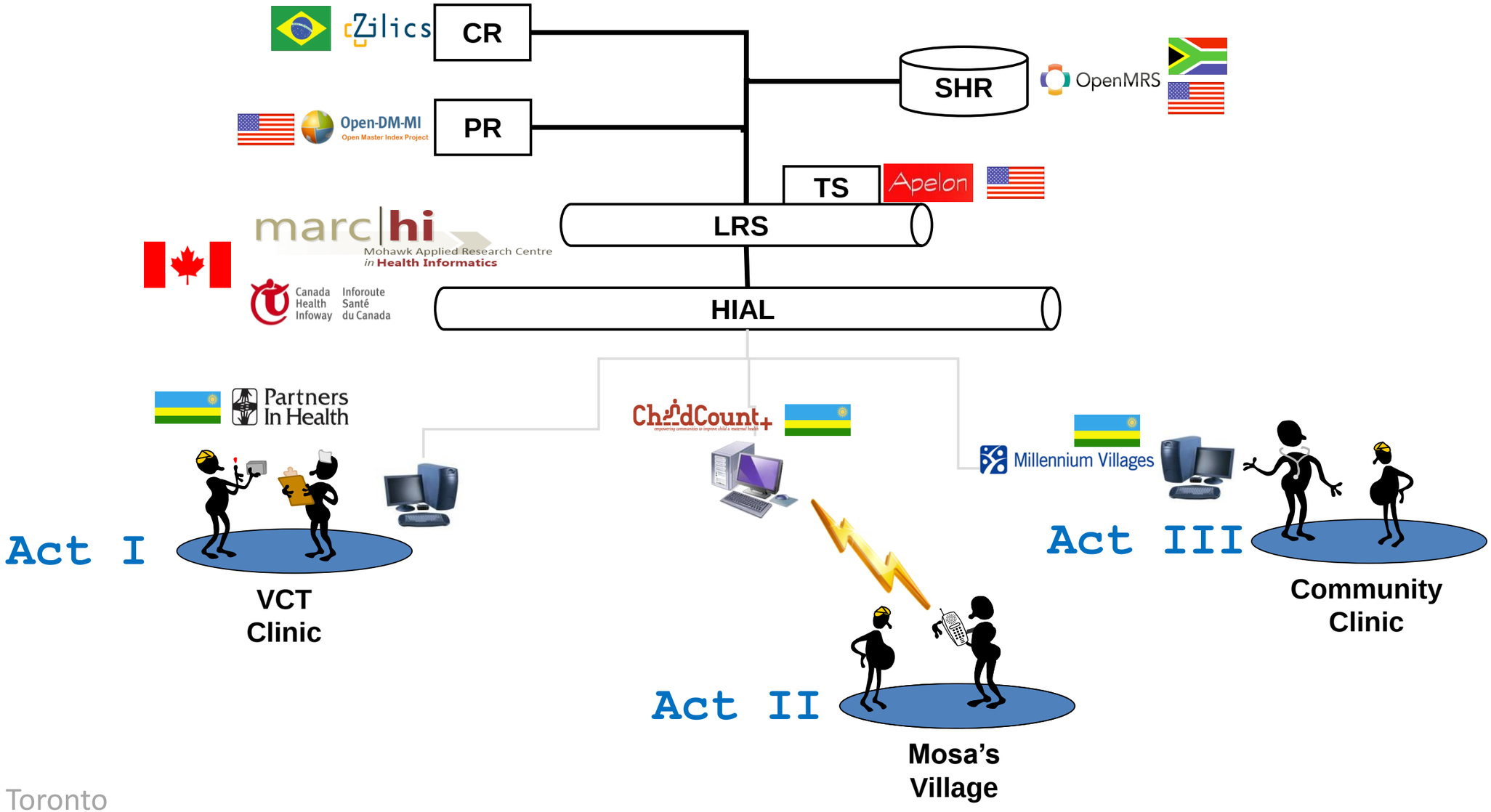
Architectural components



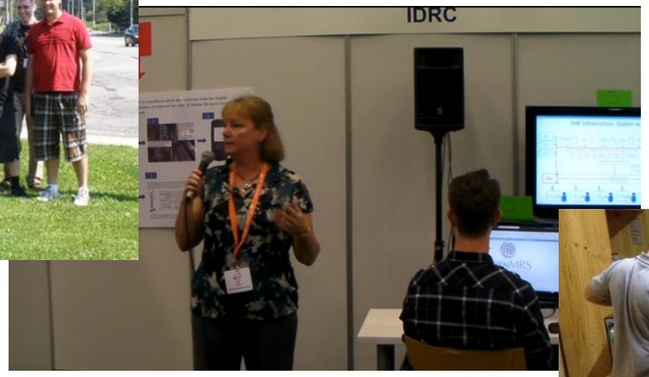
Architectural components

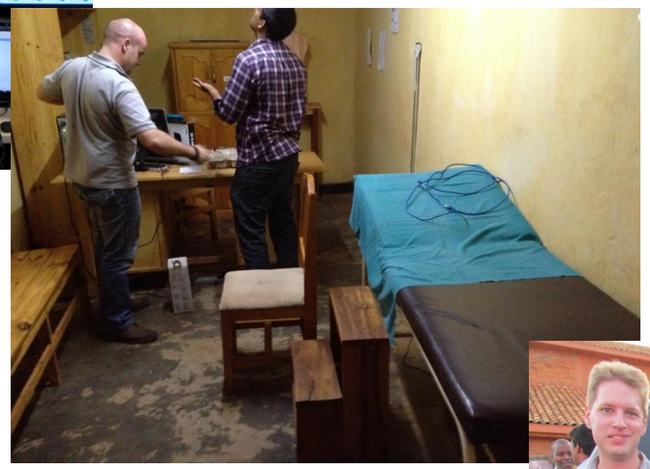


Technologies



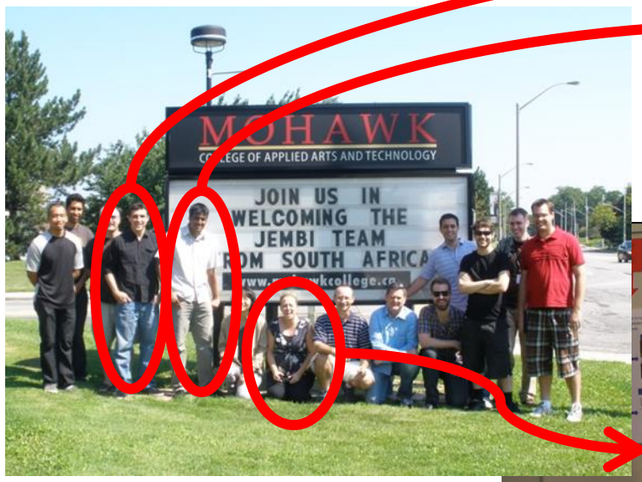
MOHAWK
COLLEGE OF APPLIED ARTS AND TECHNOLOGY
JOIN US IN
WELCOMING THE
JEMBI TEAM
ROM SOUTH AFRICA
www.mohawkcollege.ca


IDRC



jembi
health systems

2010

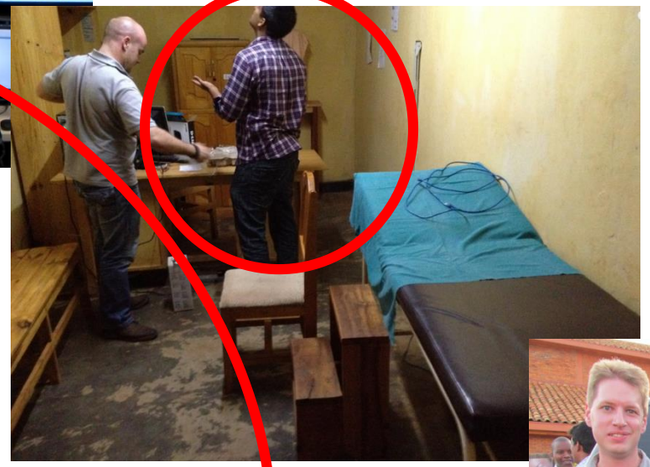


REACH

2011

HeAL
HEALTH ARCHITECTURE LABORATORY
UNIVERSITY OF KWAZULU-NATAL

jembi

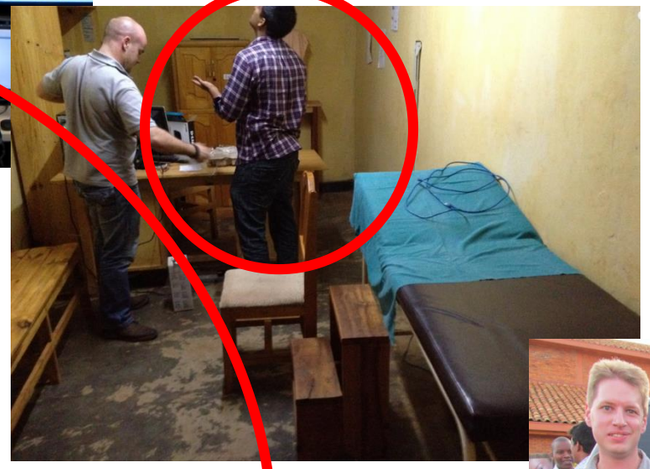


2012

RHIE

2010

REACH



2011

HeAL
HEALTH ARCHITECTURE LABORATORY
UNIVERSITY OF KWAZULU-NATAL

jembi

RHIE

2012

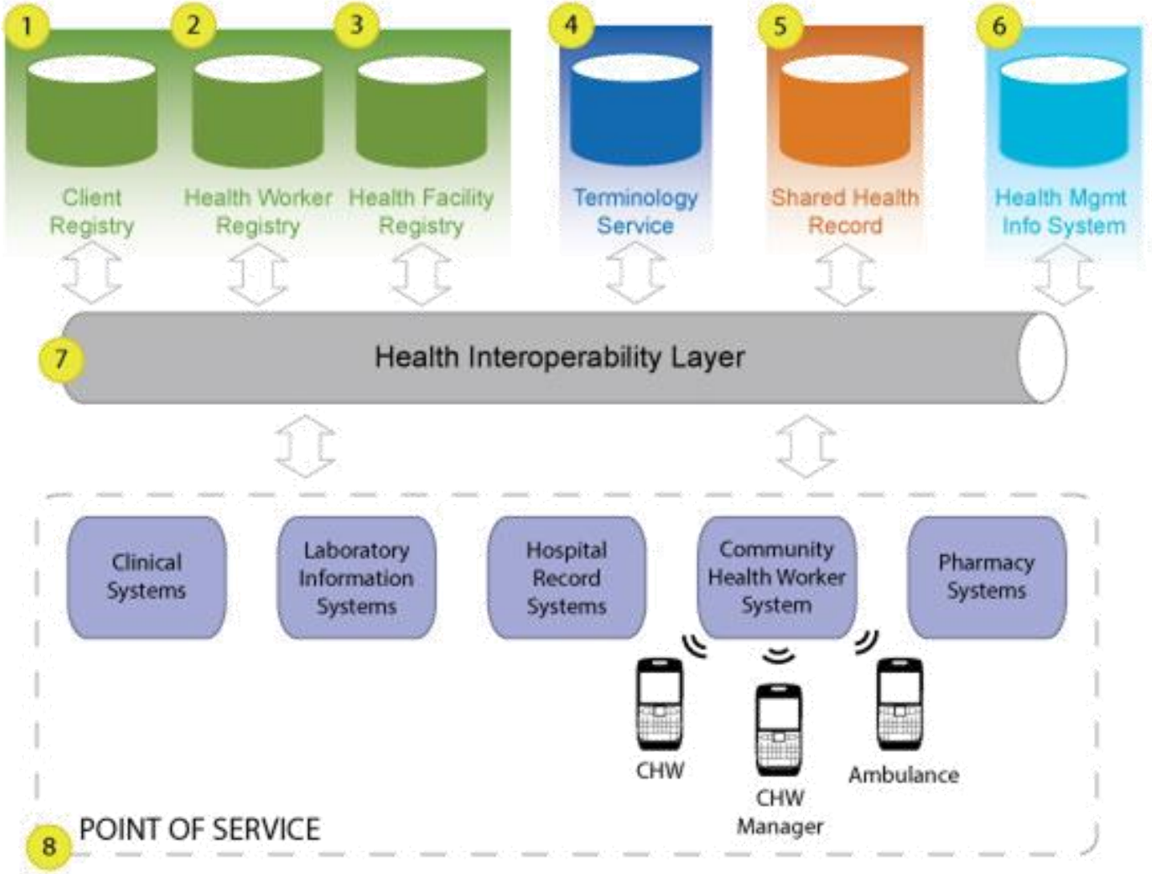
OpenHIE!

- In September, 2012 the OpenHIE initiative was launched in Kigali, Rwanda
- OpenHIE leveraged RHIE as a *running start*
- 2013 was OpenHIE's "year of engineering" as standards-based eHealth profiles were selected (or developed)
- 2014 was the "year of construction" as open source reference implementations were built

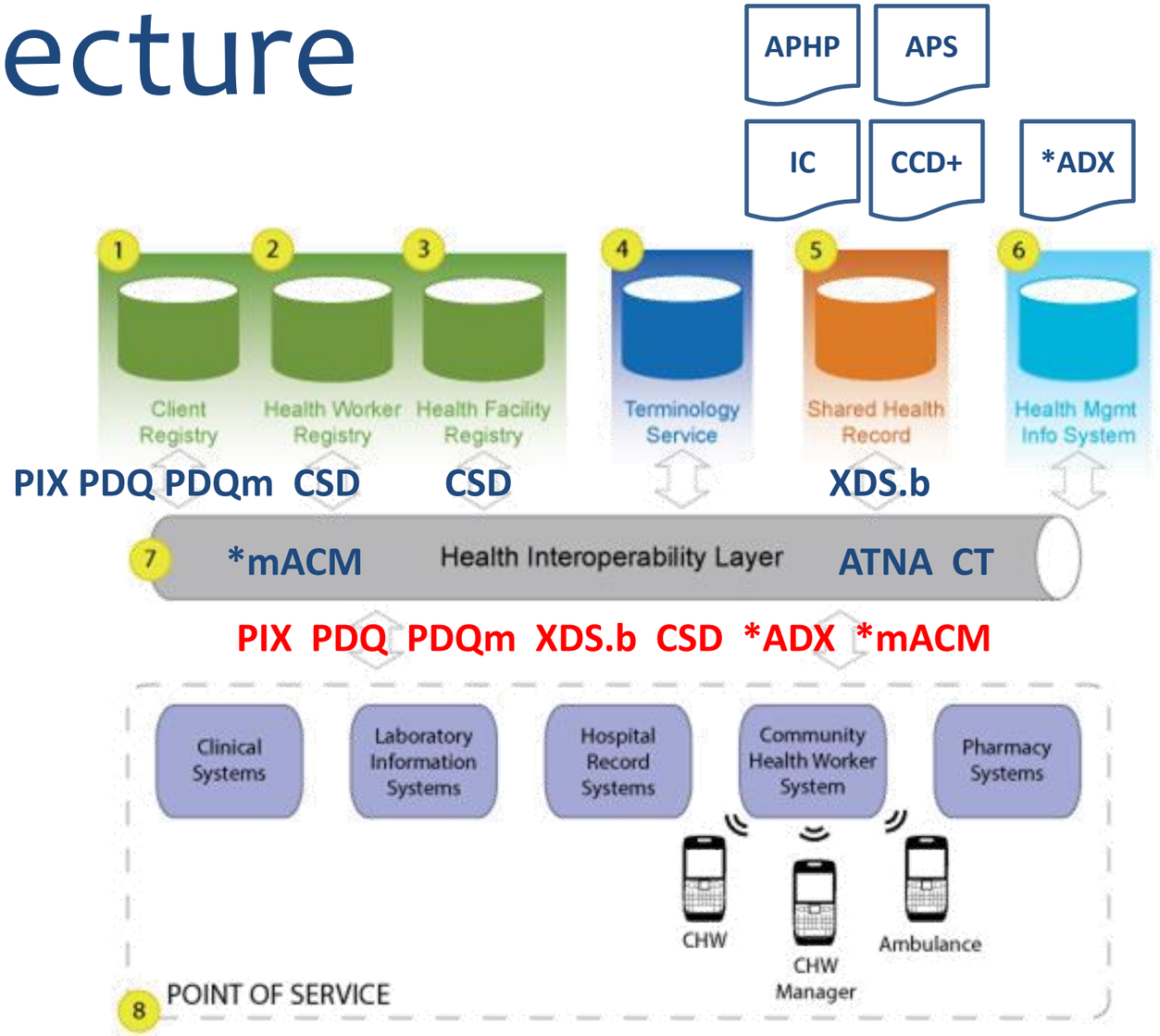
OpenHIE and IHE Integrating the Healthcare Enterprise

- OpenHIE leverages IHE profiles for all eHealth system interactions
- Community members are active in IHE profile development:
  - Care Services Discovery (**CSD**)
  - Patient Demographic Query for Mobile (**PDQm**)
  - Aggregate Data Exchange (***ADX**)
  - mobile Alert Communication Management (***mACM**)

Architecture



Architecture



2015 marks OpenHIE's first "year of implementation".

OpenHIE

OpenHIE is a Global Mission-Driven Community of Practice

Dedicated to improve the health of the underserved through open and collaborative, development and support of country driven, large scale health information sharing architectures.

- Enabling large scale health information interoperability
- Offering freely available standards-based approaches and reference technologies
- Supporting each other's needs through peer technical assistance communities

www.ohie.org

OpenHIE

OpenHIE is a Global Mission-Driven Community of Practice

Dedicated to improve the health of the underserved through open and collaborative, development and support of country driven, large scale health information sharing architectures.

- Enabling large scale health information interoperability
- Offering freely available standards-based approaches and reference technologies
- Supporting each other's needs through peer technical assistance communities

www.ohie.org

Better Immunization Data (BID)

BETTER IMMUNIZATION DATA
INITIATIVE

Led by PATH and funded by the Bill & Melinda Gates Foundation, the Better Immunization Data (BID) Initiative is grounded in the belief that **better data**, plus **better decisions**, will lead to **better health outcomes**.

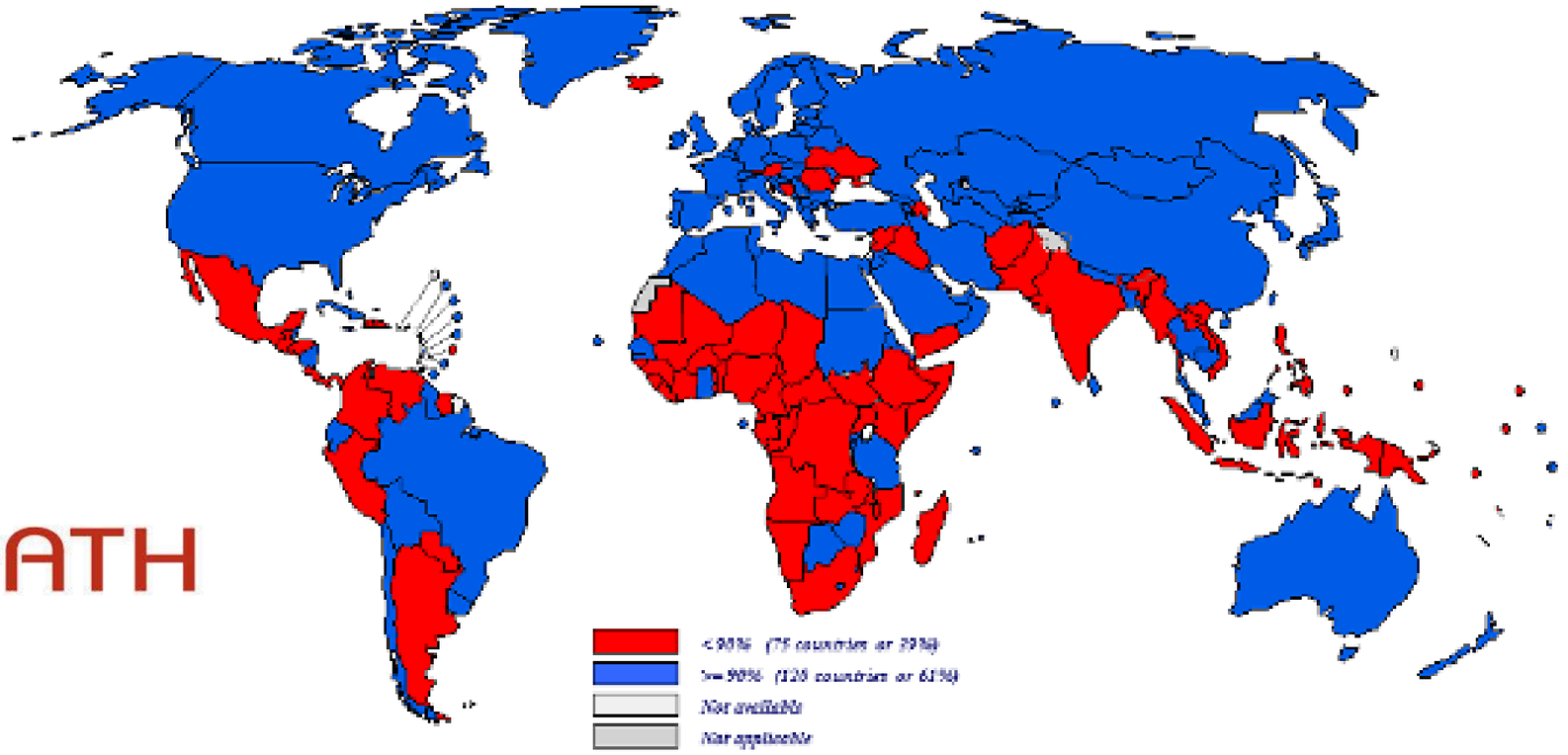
Its vision is to empower countries to enhance immunization and overall health service delivery through improved data collection, quality, and use.

BILL & MELINDA GATES foundation

PATH

Better Immunization Data (BID)

BETTER IMMUNIZATION DATA
INITIATIVE



BILL & MELINDA GATES foundation

PATH

Better Immunization Data (BID)

BETTER IMMUNIZATION DATA
INITIATIVE

Tanzanian National Immunization Registry

BILL & MELINDA GATES foundation

PATH

IntraHealth INTERNATIONAL
Because Health Workers Save Lives.

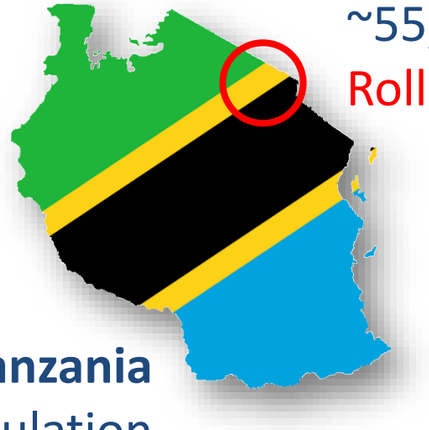
ADROIT SOLUTIONS

mohawk COLLEGE

ecGroup Inc.
eHealth Consulting | www.ecgroupinc.com

Better Immunization Data (BID)

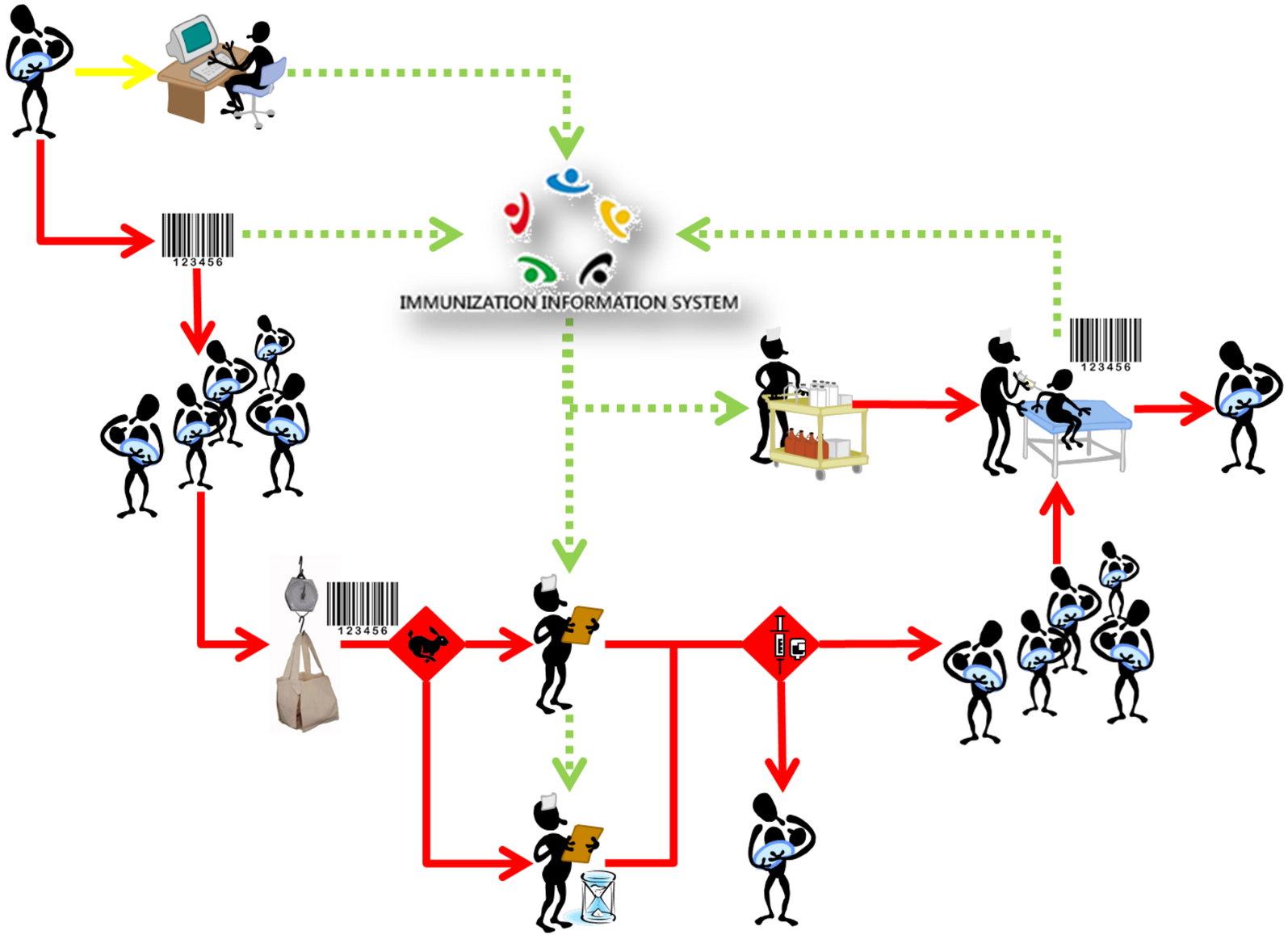
Arusha Region
1.7M population
~260 immunization clinics
~55,000 babies born annually
Rollout started beginning of May!

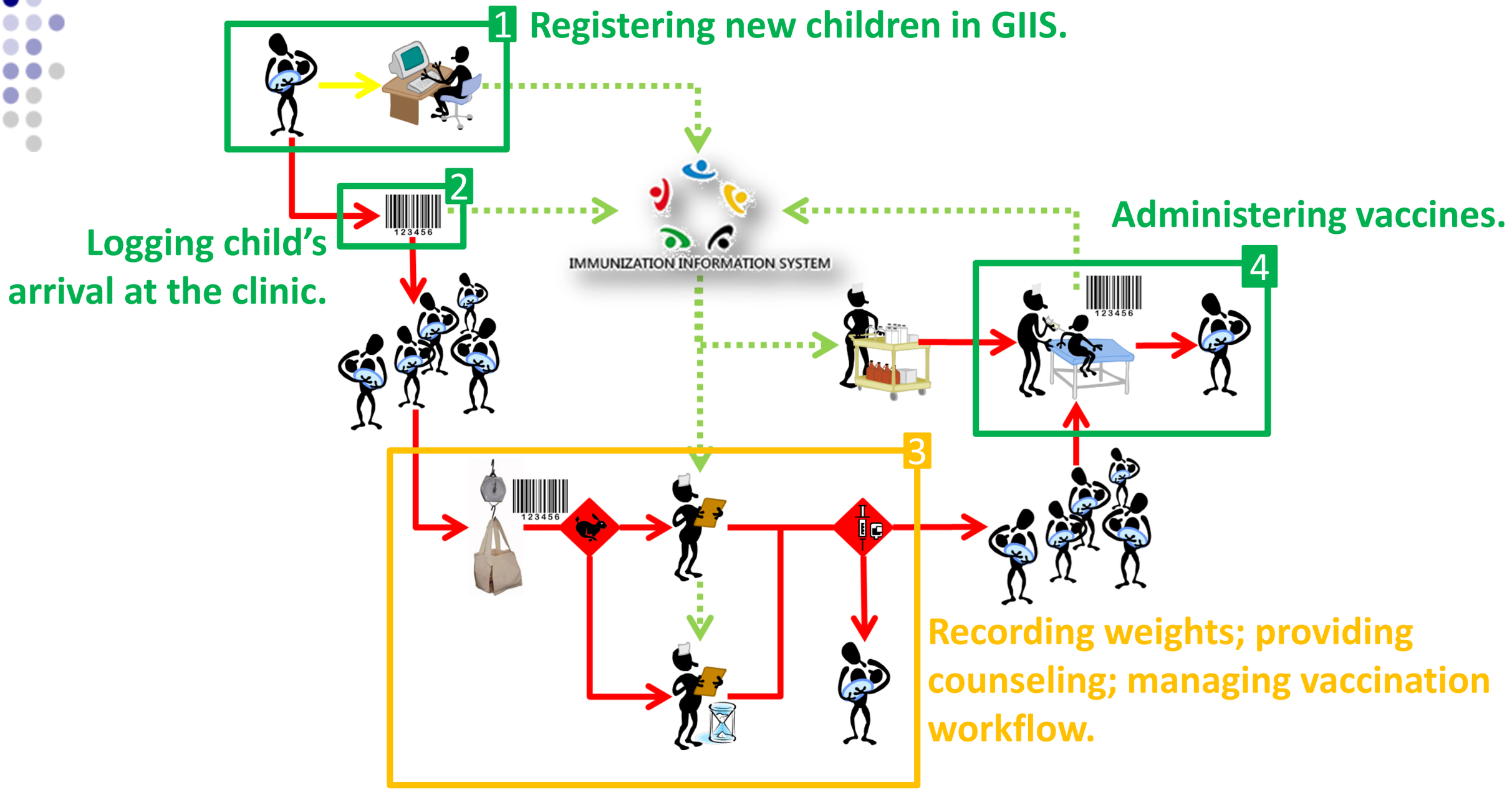


Tanzania
57M population
~6600 immunization clinics
~2M babies born annually
Nationwide rollout 2016+

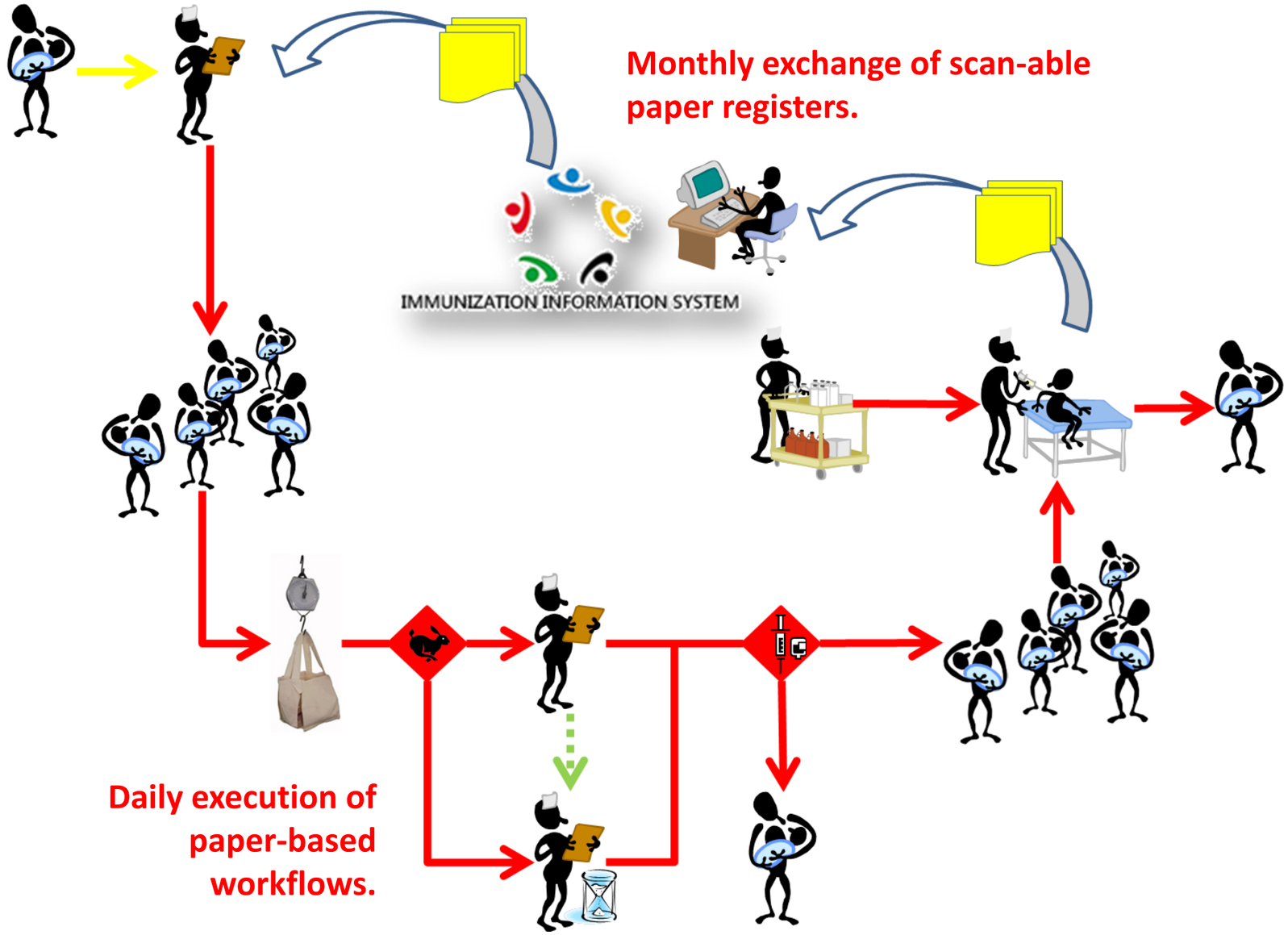
What is BID's core workflow?

~10% of clinics, ~50% of immunizations



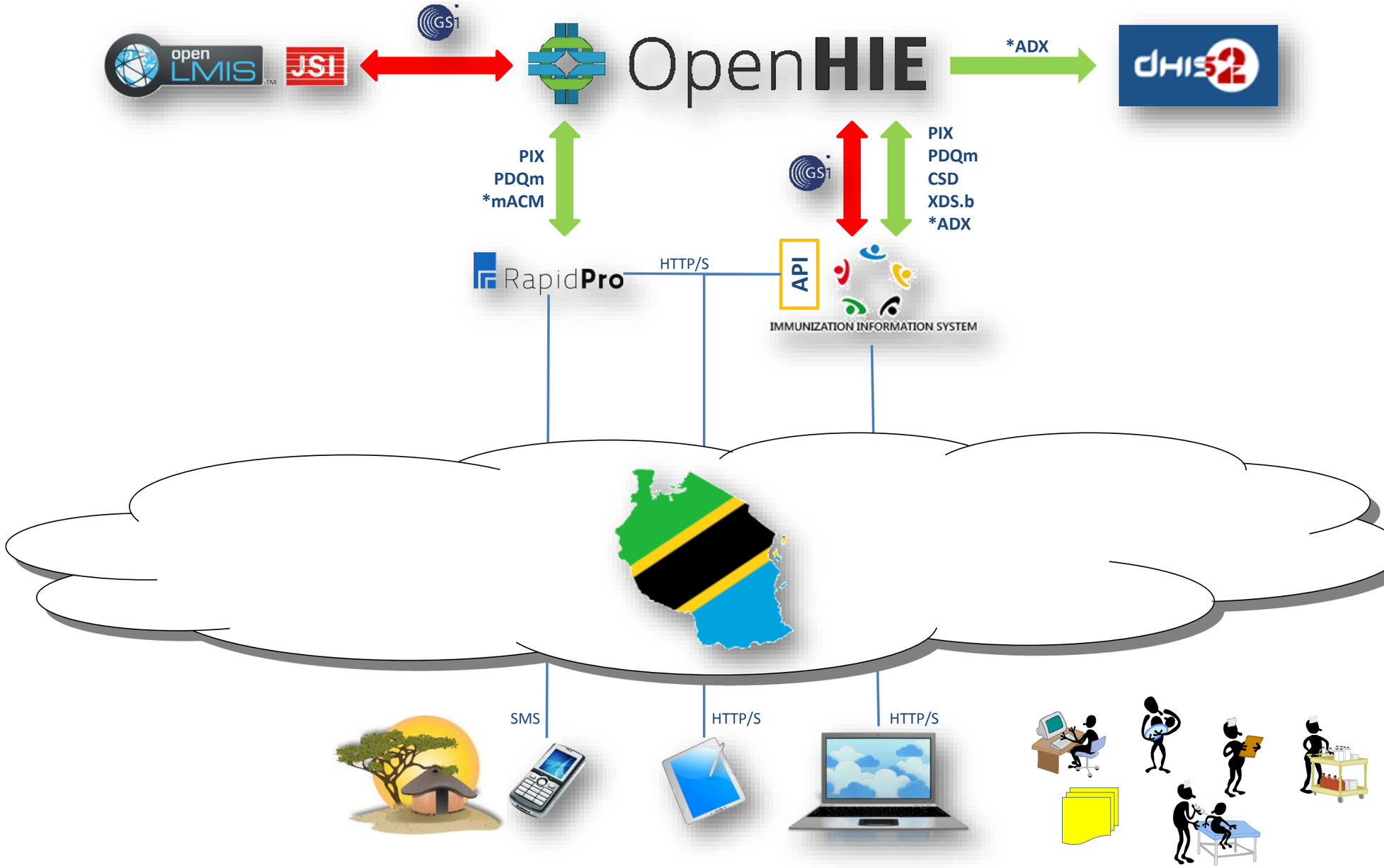

1
Registering new children in GIIS.
2
Logging child's arrival at the clinic.
IMMUNIZATION INFORMATION SYSTEM
Administering vaccines.
4
3
Recording weights; providing counseling; managing vaccination workflow.

~90% of clinics, ~50% of immunizations



What is the ICT architecture for BID TZ?

RapidPro
HTTP/S
API
IMMUNIZATION INFORMATION SYSTEM
SMS
HTTP/S
HTTP/S


OpenHIE
*ADX
PIX
PDQm
*mACM
PIX
PDQm
CSD
XDS.b
*ADX
RapidPro
HTTP/S
API
IMMUNIZATION INFORMATION SYSTEM
SMS
HTTP/S
HTTP/S

What's next for BID?

- Over the course of 2015, roll out to 260+ clinics in Arusha Region and update to v2 of TIIS software
- Evolve the immunization software functionality; roll out nationally in 2016+ (6600 clinics)
- Opportunistically leverage OpenHIE to support other care workflows (e.g. HIV, MNCH, IMCI, strengthened primary care…)

What's next for OpenHIE?

- Adopt the new IHE profiles: ADX & mACM
- Leverage results from a collaborative research with CDC regarding integrated care pathways (ICPs)
- Operationalize lessons from the field regarding implementation science and system maintenance
- Implement in 51 PEPFAR countries (DATIM project)
- Align with global UHC initiatives

This story is about Mosa…

This story is about Mosa… and her children…

This story is about Mosa… and her children… and her village… and her country…

This story is about Mosa… and her children… and her village… and her country… and how what we do can make a difference in their lives.

Thank You!