Follow-up
Health Data Commons project

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PharmAccess FOUNDATION

Health Insurance Fund

MEDICAL CREDIT FUND AFRICA

SafeCare HEALTHCARE STANDARDS

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RECAP PREVIOUS SESSION

HOW: "Health Data Commons"
framework for standards-based
implementation of demonstrators
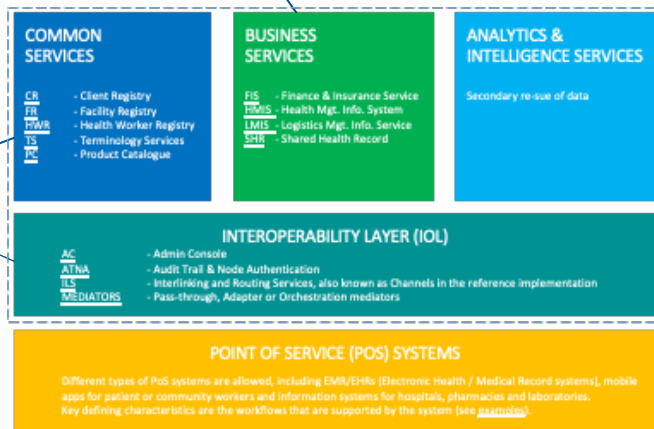
WHAT: Results MomCare Tanzania

DISCUSSION FOR TODAY

- Update on latest results

- Discuss projects on horizon

HOW: Health Data Commons framework and its ecosystem

- **Aim to achieve interoperability with existing programmes** such as DHIS2, openIMIS
- **Partners such as Infospective** can help demonstrate new care models
- Opportunities for collaboration with **insurance companies**

- **Universities**, for example, Strathmore, **as custodians for governing secondary data re-use**
- **Possible role for VODAN Africa** to implement findability and data catalog services

- Pharma industry, e.g. IQVIA, seeking real-world evidence
- **Possible funders for kick-starting data commons?**

- **Local authorities** are key stakeholders
- Our aim is to help and accelerate the implementation of the interoperability layer and common services

COMMON SERVICES

CR	- Client Registry
FR	- Facility Registry
HWR	- Health Worker Registry
TS	- Terminology Services
PC	- Product Catalogue

BUSINESS SERVICES

FIS	- Finance & Insurance Service
HMIS	- Health Mgt. Info. System
LMIS	- Logistics Mgt. Info. Service
SHR	- Shared Health Record

ANALYTICS & INTELLIGENCE SERVICES

Secondary re-use of data

INTEROPERABILITY LAYER (IOL)

AC	- Admin Console
ATNA	- Audit Trail & Node Authentication
ILS	- Interlinking and Routing Services, also known as Channels in the reference implementation
MEDIATORS	- Pass-through, Adapter or Orchestration mediators

POINT OF SERVICE (POS) SYSTEMS

Different types of PoS systems are allowed, including EMR/EHRs (Electronic Health / Medical Record systems), mobile apps for patient or community workers and information systems for hospitals, pharmacies and laboratories. Key defining characteristics are the workflows that are supported by the system (see examples).
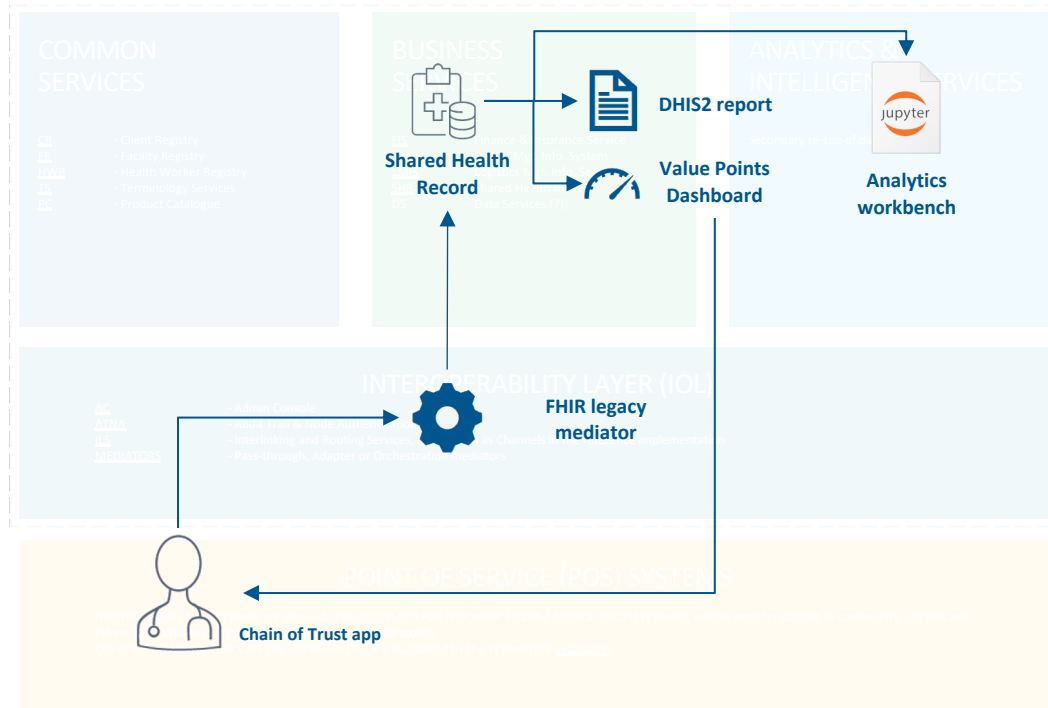
Suppliers of PoS systems at the COMMUNITY level
e.g., Medtronic Spice, remote diagnostics

Suppliers of PoS systems at FACILITY level
e.g., AfyaRecod, Elephant, bahmni
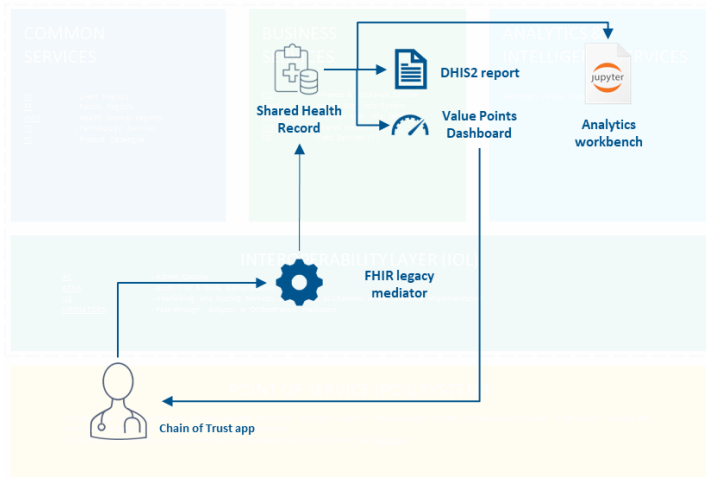
Suppliers of PoS systems for PHARMACIES

**Suppliers of PoS systems for LABORATORIES**

- **PoS**:
  Chain of Trust app functions as electronic medical record for MomCare programme

- **Interoperability:**
  Demonstrator for FHIR translation to create 'data station' of shared health record for re-use

- **Business Services:**
  - Automation of DHIS2 reporting based on shared health records
  - Implementation of Value Points Dashboard based on shared health records
  - Capability for plug-&-play publishing of dashboards into existing mobile web that is resilient to intermittent Internet connections

- **Analytics Services:**
  - Configured analytics workbench (in-the-clear)
  - Pilot multi-party computation (MPC, in-the-blind)
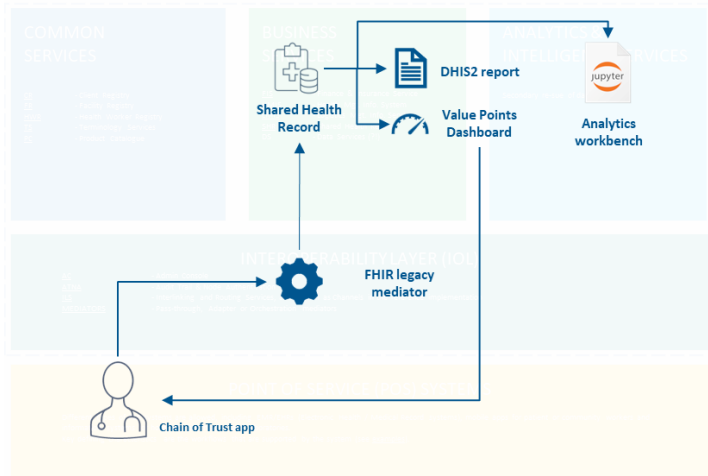
Insights DHIS2 report

- Better overview and structure how DHIS2 metrics are calculated per clinic using mapping tables
- Functionality being built allow district officer to view data across all clinics
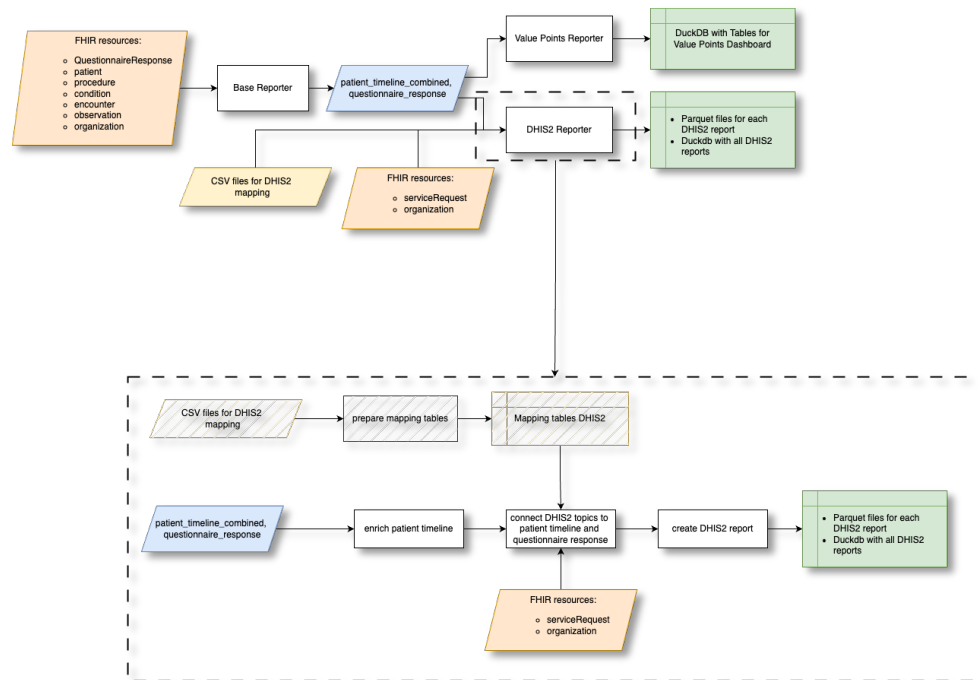
WHAT: results demonstrators with MomCare Tanzania
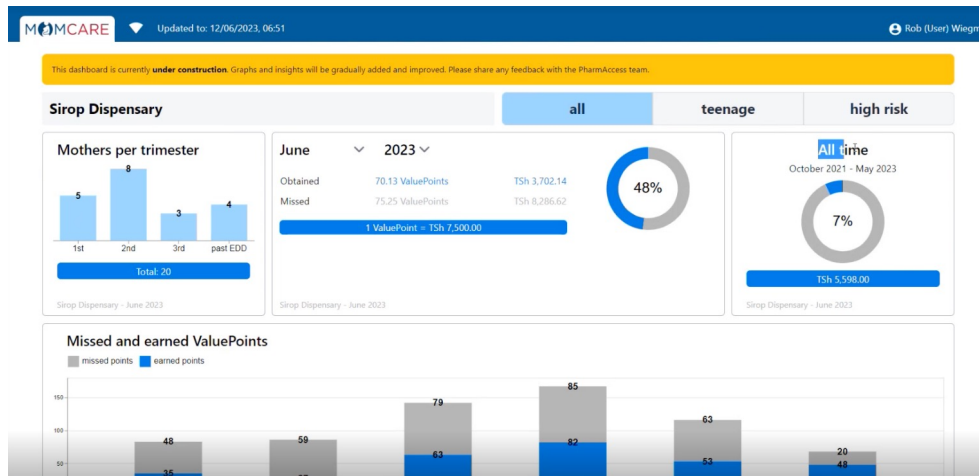
- screenshot from test server with dummy data
- data is refreshed daily, so clinics have up-to-date info to act upon

Outlook Explore work in Innovative Care Models & Health Data Commons

EXPLORE (done)

- Implement ICM demonstrators at sufficient scale for selected patient groups
  - MomCare Value-Points Dashboard and DHIS2 reports in production in Tanzania
  - Analytics workbench ready for service

- Design and specify standards-based Health Data Commons framework
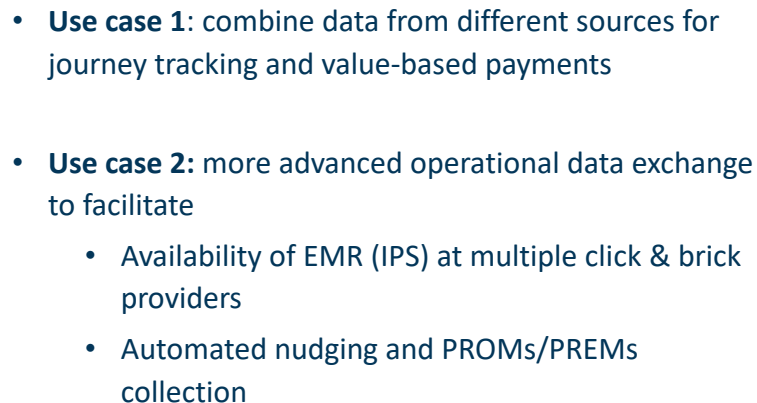 - Technical documentation ready for internal publication (intranet PAF)

EXPLORE (to-do)

- Implement ICM demonstrators at a sufficient scale for selected patient groups
  - District officer reports in production coming month
  - Wrap-up MomCare Tanzania, incl. feedback from clinics
  - Start development activities JMF Kenia

- Design and specify standards-based Health Data Commons framework
  - Presentation at the upcoming strategy session
  - On-boarding IntelliSOFT as a local implementation partner
  - More knowledge sharing sessions for using the framework and its components (e.g., analytics workbench)

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High-level design
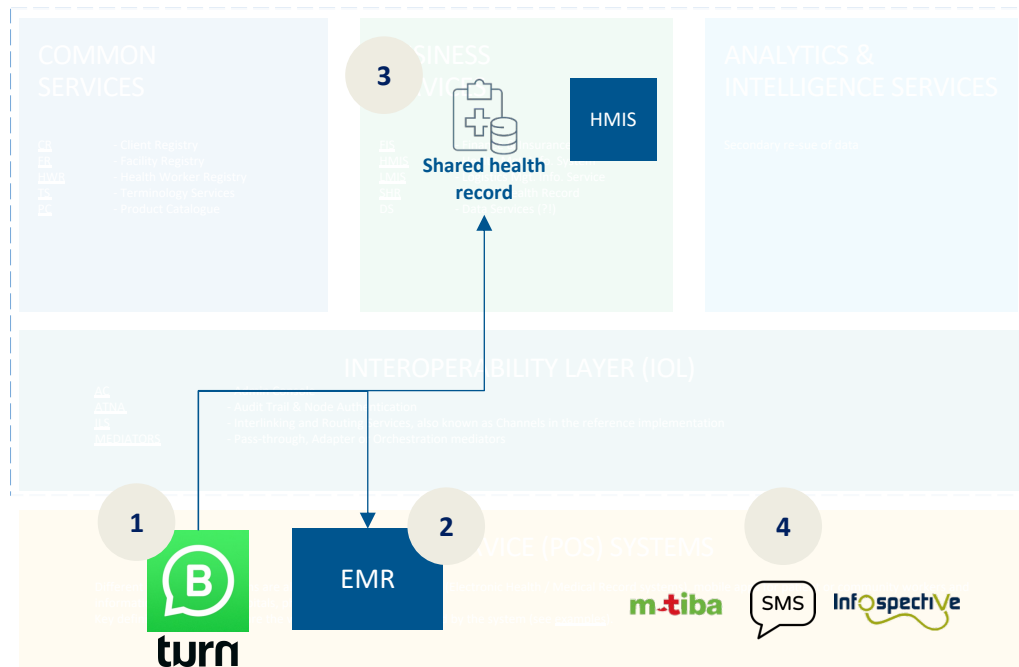
1. Solution by **turn.io** using WhatsApp Business as PoS for collecting questionnaire data at enrollment

2. Questionnaire data is pushed to EMR using the interoperability layer

3. Questionnaire data is included in Shared Health Record for reporting purposes in HMIS

4. Integration of other data in a later phase of the project

   - M-TIBA: claims data

   - SMS and Infospective: PROMs & PREMs

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- **Use case 1**: combine data from different sources for journey tracking and value-based payments

- **Use case 2:** more advanced operational data exchange to facilitate
    - Availability of EMR (IPS) at multiple click & brick providers
    - Automated nudging and PROMs/PREMs collection

Aligning our work for the coming academic year

EXPLORE

- Implement ICM demonstrators at a sufficient scale for selected patient groups

- Design and specify standards-based Health Data Commons framework

INSPIRE

Research, communication, advocacy …

SUSTAIN

Scale-up, operations, …

High-level budget estimates for Health Data Commons project

Work package	Content	Duration	Budget estimate	Notes
Consultancy	• Second opinion on architecture and design • Engage local partners • Embed project in local context, e.g. government initiatives	6 months	• USD 40k –70k	• Intended long-term partnership with Steven Wanyee / IntelliSOFT
Implementation: base infrastructure	• Configure and deploy OpenHIM als interoperability layer • Configure and deploy Shared Health Record server • Technical documentation	6 months	• Initial setup: USD 50k – 150k • Running cost: USD 1k - 2k per month	• Same base infrastructure can be re-used for all countries
Implemementation: per ICM use-case	• Development of Point-of-Service systems • Development of mappings/translations • Development of reports • Technical documentation and implementation guide	tbd	• Initial setup: USD 150k – 350k • Running cost: USD 2k – 4k per month	• Running cost mainly technical support and change management