Product Dashboard: OpenMRS Product Vision, Strategy, & Roadmap

Vision & Top 3 Strategic Directions

We work together in a global fight to improve health care. Tech is one tool we use to bring better care to patients, the providers who care for them, and the organizations who steward health resources. This means the tech we develop together must have **Great Tooling + Great Documentation** to unlock scale to ensure patients get the right, timely, and appropriate care; provide health workers with timely, accurate, and complete information; and, give organizations data to improve the efficiency and quality of care delivery.

Our top 3 Strategic Directions guide us now and in the future 5 years to achieve our Vision. We call these strategies our "3 C's":

- **Care**: Pt Care & User Experience (via O3 - better data quality through better Point-of-Care UX)
- **Config & Deployment**: Faster Deployment through tools that get us closer to enabling non-developers to set up and maintain the EMR, e.g. OCL, Initializer, Docker, and more.
- **Communication**: Data Exchange

...and of course, Ongoing Platform/Core Maintenance, including library upgrades and security patches.

Top Priorities in 2023

- **Out of the Box Outpatient EMR** completed and being leveraged in the real world.
- **Release O3 apps often and with confidence**. A regular cadence with clear release notes and stable versions #’s will help O3 implementers to rapidly benefit from bug-fixes & new features. Part of achieving this requires extensive test automation baked-in to both our PR and release pipelines. (O3, or "OpenMRS 3", is our next-generation version of OpenMRS.)

- **Product Roadmap**

  This Product Dashboard is a *dynamic, changing space* that is open to feedback. The intent is a **home-base** where anyone, especially day-to-day Implementers interested in the OMRS roadmap, can see at a glance some key initiatives going on around the OpenMRS community: what’s happening, who’s putting resources in, what needs more support, and where there are specific opportunities to contribute support/investment.

  **Short Link to this page:** [om.rs/productdashboard](http://om.rs/productdashboard)

  We are working on a clearer process for this. For now: project contributors are encouraged to update this page, though responsibility for ensuring this is a fair, up-to-date reflection of current community work rests with the OMRS Director of Product. Reach out to **Grace Potma**; we’d love to hear from you and better understand your initiative so we can broadcast your amazing work! We also regularly review this page in the OMRS Technical Action and Strategy & Operations Committees, to help everyone be on a similar page about key work moving our community forward closer to our strategic priorities.

- **Vision & Top 3 Strategic Directions**
- **Product Roadmap**
  - CARE: Pt Care & User Experience (via O3 - better data quality through better Point-of-Care UX)
  - CONFIGURATION (& Deployment):
  - COMMUNICATION: Data Exchange
  - Maintenance & Core Support
**Product Roadmap**

All of these items are:

- being conducted in a **public community process**, with involvement & investment from 2+ Organizations
- being shared with /omrs/5 facilitators, and are receiving some degree of **dedicated support from OpenMRS Inc**
- likely to provide wide community value (i.e. fit under the definition of "Shared Assets" for community)

To suggest an item for the Community Product Roadmap, simply contact Director of Product **Grace Potma** (grace@openmrs.org) - we'd love to hear about your priorities and current focus areas.

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**Recent Work Completed**

<table>
<thead>
<tr>
<th>CARE: Pt Care &amp; User Experience (via O3 - better data quality through better Point-of-Care UX)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>3.x Performance Enhancements</strong></td>
</tr>
<tr>
<td>OMRS INC</td>
</tr>
<tr>
<td>Improvements merged; Migration guide for Implementers <a href="#">here</a>.</td>
</tr>
<tr>
<td>Status: ROLLING OUT</td>
</tr>
<tr>
<td><strong>Implement Patient Flags</strong></td>
</tr>
<tr>
<td>OMRS INC</td>
</tr>
<tr>
<td>Initial designs here; we would like to get these done. First legos to support decision support.</td>
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<tr>
<td><strong>Queues &amp; Clinic Dashboards</strong></td>
</tr>
<tr>
<td>PALLADIUM</td>
</tr>
<tr>
<td>QUES</td>
</tr>
<tr>
<td>Status: IN PILOT</td>
</tr>
<tr>
<td><strong>Print</strong></td>
</tr>
<tr>
<td>GSOC '22</td>
</tr>
<tr>
<td>Ability to print things from the EMR, e.g. HIV Clinical Summary</td>
</tr>
<tr>
<td><strong>ANC SMART Guidelines: Decision Support UI and Engine for O3</strong></td>
</tr>
<tr>
<td>FELLOWS</td>
</tr>
<tr>
<td>MEKOM</td>
</tr>
<tr>
<td><strong>Appointment Management MVP</strong></td>
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<tr>
<td>PALLADIUM</td>
</tr>
<tr>
<td>For Facilities: Configure what appointments are provided, and how they can schedule pts. stats, lists.</td>
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<tr>
<td>Status: IN PILOT</td>
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**What We’re Working on Today (Active Design or Development)**

<table>
<thead>
<tr>
<th>Registration App Re-Do</th>
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<tbody>
<tr>
<td>Orgs: BROWN</td>
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<tr>
<td>Reg page is one of first apps new users/devs look at, and wasn’t meeting requirements or code expectations. This refactor makes it easier for implementers to adjust the Registration feature to add/change things as needed. eg handle site- or org-specific field requirements, accept mini-apps like address hierarchy</td>
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<tr>
<td>Status: IN DESIGN</td>
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**Emerging Community Priorities**

<table>
<thead>
<tr>
<th>Content Templates &amp; Toolkits: Packaging and Ingestion Method</th>
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<tr>
<td>TO DO</td>
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<tr>
<td>Angular Engine maintenance Roadmap <a href="#">here</a></td>
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<tr>
<td>Orgs: OMRS INC</td>
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<tr>
<td>O3 Docs Harmonization</td>
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<tr>
<td>Interested: OMRS INC</td>
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<tr>
<td>Implement Tasks (to be driven by CDS)</td>
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<tr>
<td>Interested: OMRS INC</td>
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<tr>
<td>IPD Requirements Gathering</td>
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<tr>
<td>Interested: UW DIGI</td>
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<tr>
<td>Offline EMR Use (No Internet/Power Loss)</td>
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<tr>
<td>Status: DESIGN DONE</td>
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<tr>
<td>In-form Appointment Date Checker</td>
</tr>
<tr>
<td>Endpoint convention in OMRS to connect (e.g. &quot;on this day, how many appointments already booked?&quot;)</td>
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<tr>
<td>Status: OPEN</td>
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<tr>
<td>Project Description</td>
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<tr>
<td>---------------------</td>
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<tr>
<td><strong>O3 Design Patterns Project</strong></td>
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<tr>
<td><strong>IFrame the O3 EMR</strong></td>
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<tr>
<td><strong>O3 Release &amp; Dockerization Improvements</strong></td>
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<tr>
<td><strong>Drug Orders / e-Prescribing</strong></td>
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<tr>
<td><strong>React Form Engine feature parity with existing O3 Engine</strong></td>
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<td><strong>Medication Dispensing</strong></td>
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<tr>
<td><strong>Interactive Forms: Embedding Orders, Conditions...</strong></td>
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<td><strong>Embedding Allergies/Conditions etc in Form Workflows</strong></td>
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<tr>
<td><strong>Rules Engine</strong></td>
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<tr>
<td><strong>Autosave a Form Draft</strong></td>
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<tr>
<td>Feature</td>
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<td>----------------------------------------------</td>
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<tr>
<td><strong>Group Sessions / Group Visit Management</strong></td>
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<tr>
<td>Offline Mode for CHWs/Outreach</td>
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<tr>
<td>Configurable Lab Results table view</td>
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<tr>
<td>First Form-Embeddable Widget: Conditions, Address Hierarchy</td>
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<tr>
<td>Basic HTML Form Entry (HFE) Form Support in 3.x</td>
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<tr>
<td>3.x Address Hierarchy Component</td>
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<tr>
<td>Clinical Views</td>
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<tr>
<td>i18n Date Picker: Ethiopian Calendar + more</td>
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<tr>
<td><strong>Patient Lists: Automated (Cohort Builder)</strong></td>
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<tr>
<td>Offline Mode for CHWs/Outreach</td>
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<tr>
<td><strong>Referrals</strong></td>
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<td><strong>Bed Management</strong></td>
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<td><strong>OpenMRS Reporting UI</strong></td>
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<tr>
<td>Pt Lookup on Registration Page</td>
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Field Discovery: UX and Product field research
In-person shadowing and interviewing end-users at large to small sites, including ecosystem of lab/pharm/billing where relevant

<table>
<thead>
<tr>
<th>Point of Care:</th>
<th>AMPATH (6 sites)</th>
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<tbody>
<tr>
<td>Retrospective Data Entry:</td>
<td>PALLADIUM (2 sites)</td>
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</table>

**Point of Care:**
- **AMPATH** (6 sites)

**Retrospective Data Entry:**
- PALLADIUM (2 sites)

**Ampath 3.x Pilot (Kenya):** 3.0 Go-Live with Clinician Workflows at large HIV Outpatient Clinic (Started Feb 2022)

**Theming 3.x!**
- PIH
- AMPATH

(Some input from UCSF)

**Status:** DONE

**Ampath 3.x Live Test (Kenya):** End to End Testing with Outpatient HIV Clinicians

**Status:** DONE

**Generic Encounter Widget**
Reuseable version of a common widget, powered by config that's easily editable (e.g., if you want to change columns & data shown in a table)

**Status:** DONE

"Prevent Pt Duplicates" app in Registration Page
Include merging pts?

**Status:** NOT STARTED

Merging the O3 Monorepos for better DevX

**Status:** OPEN
3.0.0 Demo Launch

Q3 Goal = end to end outpatient workflow launched online for public use & experimentation. Includes:

- Offline Mode for Mobile /Community Health Workers: view patient charts offline
- Lab Results with charts & interactive viewing
- Drug Ordering
- Patient Lists (create lists and add patients to lists)
- Full featured outpatient chart (e.g. Medication History, Immunizations, past Visit Notes view, and more)

AMPATH  MEKOM  
PIH  BROWN

Status: DONE

Adopted Carbon Design

Updated 3.x Frontend to use 3rd party design system. Result: Faster design & development outputs.

AMPATH  MEKOM

Share Frontend Widgets with Plug-and-Play Architecture

Microfrontend framework completed; enables implementers to re-use others’ frontend features.

AMPATH  MEKOM

3.x Guide for Developers

Step by step guide to the new Design System & Microfrontend architecture. Will help Devs implement 3.x for their org, or contribute to Squad.

PIH

NCD Use Cases & Design Research

User Research, Designs, & Testing to validate and prepare EMR for NCD care context. E.g. NCD-specific widgets and sections of Patient Chart, NCD Peer Support.

AMPATH  (input from PIH)

Status: IN DESIGN

Legend

- ✔ Done  Recent Work Completed
- ☀️ Now  What We’re Working on Today (Active Design or Development)
- ⚡️ Next  Emerging Community Priorities
### Reactify & Carbonize O3 Form Builder

GUI tool now available in the O3 RefApp admin tools!

**Actions**: OMRS INC, GSOC, UCSF-TAP

### O3 Form Builder GUI

Ongoing fixes and improvements to the new O3 Form Builder GUI. Epic here.

**Actions**: OMRS INC

### UI Feature Improvements to Form Builder GUI

**Actions**: PILOT

### OCL Module: Automated tests for different data types

**Actions**: Fellows, Brown

### OCL Module: Multi-language support

Updating translations for concept updates or new subscriptions that have many languages.

**Actions**: Fellows, Brown

### OCL OpenMRS Import feature

An answer to "How do I get my legacy metadata into OCL?"

**Actions**: Fellows, Brown

### Iniz support for OCL & Dictionary Manager work

Using OCL/Dictionary Manager to manage all UgandaEMR concepts

**Actions**: Fellows, Brown, Iniz

### Copy & Customize a CIEL Concept

Able to re-use a CIEL (or other curated) concept instead of re-creating it manually: copy it and make the non-breaking changes you needed (e.g. change answers, add translations, etc).

**Actions**: Fellows, Brown

### OCL Module: Automating tests for different data types

**Actions**: Fellows, Brown, Iniz

### Iniz support for Reports

Interested: PIH

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**CONFIGURATION (& Deployment): Faster Deployment**

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**EMR Packages: Tech Definition & Schema**

A way to add content (forms, concepts, custom widgets etc) to easily add new program areas to your EMR (e.g. Maternity Package)

**Actions**: Fellows, Brown, PIH, OHRI/UCSF, ICRC

**Input from**: UCSF, MSF

### Dictionary Manager webapp (aka OCL for OpenMRS)

MVP live for production use. See: Intro video; and demo video.

**Actions**: Fellows, Brown, Iniz, MSF, REGENSTRIEF

### OCL Module: Diff Check workflow

"Here's what will change" UX/UI when subscribing.

**Actions**: PIH, Iniz

### 3.x Form Builder: UgandaEMR pilot

Easier way of generating forms, via UI. Provide label names + connect pre-defined concepts → generates JSON file. Finding way to deploy JSON file (Hx of using XML).

**Actions**: Fellows, Brown, Iniz

### 3.x OpenMRS Forms: Form Management for Non-Tech folks

A new Form Builder & Form Engine for OpenMRS, using open source code used by OpenMRS implementer for 5+ years. Allow non-coders to set up clinical forms.

**Actions**: Fellows, Brown, Iniz, MEKOM, AMPATH, PALLADIUM

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**SEPARATE CONTENT VERSIONING**

Separate RefApp software releases from Content releases means demo data will need to be bundled separately, available like an Add On, and versioned.

**Interested**: Mekom, Brown

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**UI Feature Improvements to Form Builder GUI**

**Actions**: PILOT

**Status**: FINAL UAT

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**OCL Module: Automating tests for different data types**

**Actions**: Fellows, Brown

**Status**: IN DEV

---

**OCL Module: Multi-language support**

**Actions**: Fellows, Brown

**Input from**: UCSF, MSF

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**Dictionary Manager webapp (aka OCL for OpenMRS)**

MVP live for production use. See: Intro video; and demo video.

**Actions**: Fellows, Brown, Iniz, MSF, REGENSTRIEF

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**OCL OpenMRS Import feature**

An answer to "How do I get my legacy metadata into OCL?"

**Actions**: Fellows, Brown

**Status**: IN DEV

---

**Iniz support for Reports**

Interested: PIH
### Lighter Deployment
Simpler deployment packaging (3.x RefApp will use a much lighter-weight set of modules)

**MEKOM**  **BROWN**

### OCL Module Improvements
- Bug fixes related to error messages

**INTELLISOFT**  **FELLOWS**  **BROWN**

### Designs for Implementer Tool: EMR Setup UI for Non-Tech folks

**AMPATH**  **PH**

### Use mappings in a form instead of the concept UUIDs
Goal: Demo a form that’s defined and rendered through mappings (not UUIDs). Eg if a country maps to OHRI concepts Need ability to map

**UCSF-TAP**

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### Legend
- **Done**: Recent Work Completed
- **Now**: What We’re Working on Today (Active Design or Development)
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### COMMUNICATION: Data Exchange

#### Shared Basic Lab Dictionary with OpenELIS
Collaborated with OpenELIS to establish a shared Basic Lab dictionary collection in OCL, with CIEL codes mapped to LOINC. [Public here.](#)

**OPENMRS INC**  **ITECH / OELIS**  **CIEL**

#### Advocacy with other Global Goods to adopt OCL to decrease Implementer dictionary maintenance headaches
Significant progress in 2023: large presentations and 1:1 demos at: OpenHIE in Malawi (May), GGIS Summit in Tanzania (June). Result: 2 Global Goods newly working to adopt OCL; 2 others actively considering.

**OPENMRS INC**  **REGENSTRIEF**

#### Mapping OpenMRS Order statuses to FHIR
Send a case report from OMRS system to a central repo.

**UCSF**  **REGENSTRIEF**  **BROWN**

#### FHIR 101 Documentation Improvement
Clarify OMRS’ strategy and tooling for FHIR, how to find supported resources, and what to do to add more. [Public here.](#)

**OPENMRS INC**  **BROWN**

#### Send data to Central Repository for Case Based Surveillance
Send a case report from OMRS system to a central repo.

**UCSF**  **(Jembi for mediators)**

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## FHIR Gaps Review
Using 3.x RefApp, check for areas where REST API is being used where FHIR either could be used or needs support (Done, Doc Here)

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## FHIR Module Upgrade
Added support for Immunizations. Note: The FHIR Module already enables the export of OpenMRS data into FHIR format, to help integrate with other systems using FHIR.

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<tr>
<th>BROWN</th>
<th>UW ITECH</th>
<th>MEKOM</th>
<th>ICRC</th>
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</table>

## DHIS2 Connector Module
Posts aggregate data from OpenMRS to DHIS2, and gives implementers a User Interface for an easier-to-set-up OMRS to DHIS2 pipeline, that doesn’t need manual code fixes every time there’s a change to reporting indicators. Fixed so this can work in production systems, added automatic data sending, and added support for custom period types.

<table>
<thead>
<tr>
<th>GSOC</th>
<th>MOSS</th>
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## Scale-ready ETL Pipeline to FHIR-based tools: Ampath pilot of Analytics Engine.

<table>
<thead>
<tr>
<th>GOOGLE</th>
<th>AMPATH</th>
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## Lab Viral Load Data Exchange
Based off of FHIR IG. Proof of concept completed. More to be done for full data exchange of lab request and case report.

<table>
<thead>
<tr>
<th>UCSF</th>
<th>(Jembi for mediators)</th>
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## FHIR Implementation Guide (IG) - Supporting OHIE Facility Registry IG
Goal: Finish & genericize the ITECH FHIR IGs built for Labs, Lab Workflows, and Facility Registries

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<tr>
<th>BROWN</th>
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<tr>
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<td>IN DEV</td>
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## Identity & Facility Management
Get iSantePlus Client Registry & Facility Registry workflows set up with FHIR in iSantePlus working in OMRS-core (using FHIR-based workflows)

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## Lab Exchange
Get iSantePlus lab exchange module to work in OMRS-core (connects to id & facility mgmt to i.d. right pt and right facility) (using FHIR-based workflows)

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## DB Sync

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<td>ICRC</td>
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<td>IN DEV</td>
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## Medic Mobile / CHT Reference Integration
A sample integration, both flow and tech, that implementers can easily re-use. Working ad-hoc with CHT Lead Architect on this.

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<tr>
<th>OPENMRS INC</th>
<th>CHT</th>
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## FHIR API Support for Terminology Services
Currently dependent on REST API for all things concept or terminology related

| OPEN (Interested: Brown, UW ITECH) |

## Support for OpenMRS Attributes
Support things we don’t currently support in OMRS data model - e.g. pt phone numbers (current support is fragile)

| OPEN (Interested: Brown, UW ITECH) |

## Odoo integration for Physical Rehabilitation
e.g. Creation of prosthesis and financial / patient billing

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## Odoo for Pharmacy

| MEKOM |

## Odoo integration for Billing

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## Odoo integration for Bed Management

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**Legend**
- **Done**: Recent Work Completed
- **Now**: What We’re Working on Today (Active Design or Development)
- **Next**: Emerging Community Priorities
## Platform 2.6 Release

- Fixes related to Cross-Site Request Forgery (CSRF).
- Medication Dispense data model update (needed by new dispensing esm).

### API to get obs for Concept Trees

E.g. for Lab Filters/hierarchies. Method to get set of obs based on a concept tree.

*Active*ly being used in the new Lab Tree feature!

### Data Model to support Service Delivery Queues

Support for dynamic vs static lists of patients.

## Platform 2.5 Release

- Support for Tomcat 7-9.
- Make Orders, Allergies, Diagnoses, and PatientState form recordable and encounter-able.
- Administration via REST.
- User settings: store larger strings in DB.
- Groundwork for future ReferralOrders support.

## Dockerizing development and deployment of OpenMRS

Best practices for OMRS development and deployment. Key to enabling Packages vision and CI.

## Support Referral Orders

Currently the DD Module causes slow startup times because of how patients are being created & data loaded. Idea: Generate the data once in it’s own docker container instead of generating every time we start an instance.

## Improve Demo Data Module performance implications

Event bus so that when things happen, they trigger a new process (es) to start. (e.g. patient finishes visit, needs to be moved from one Service Delivery Queue to another) - see OHRI example outlined here re Patient State vs Workflow State

Interested: Ampath, UCSF?

## Access Control List support

- Support for Tomcat 7-9.
- Make Orders, Allergies, Diagnoses, and PatientState form recordable and encounter-able.
- Administration via REST.
- User settings: store larger strings in DB.
- Groundwork for future ReferralOrders support.

## Audit Log for Views & Updates

We have no auditing around views. Updates: if a form is filled out multiple times, we'd only have information on the first time and the most recent update. Large project. (eg auditlog work stagnant) There are workarounds, eg Statistics Module, or by configuring the server to log URLs requests (Tomcat or the entry proxy)

### Status:

- NOT STARTED

### Orgs:

- SEEKING
### RefApp 2.12 Release

38 of 42 modules updated. Includes the SPA module that unlocks Microfrontend capability.

### Order Templates

**Order Template Modelling**
- E.g. Common Rx's
  - REGENSTrief
  - OHRI/UCSF
- Interested: Ampath

### Order Sets

Support for Sets of anything that's order-able (e.g. COVID assessment set can contain Meds, Labs, Referrals...)
- REGENSTrief
- AMPATH
- 3.X NEED

### Additional Security Automated Test Coverage

- UW ITech
- Fellows
- Volunteers
- Open

### Horizontal Scaling Bottlenecks

- Seeking
- Open

### Java Changes

Major breaking changes happening in Java community.

Timeline estimates (e.g. Q1/Q2/H1/H2 etc) are subject to dynamically changing resources in our opensource community. They refer to 2021, and the calendar year timeline, with Q1 ending when April begins.