

openIMIS

Gumzo ya Mwezi 03/02/2020



# Agenda

- Bluesquare:
  - who we are
  - our engagement towards openIMIS community
  - our methodology
- Achieved
  - what we delivered this month
- Roadmap
  - what we will deliver and what are our dependencies





**BLUESQUARE**

[www.bluesquarehub.com](http://www.bluesquarehub.com)

Delivering  
innovative  
technology for  
better lives.

Fall 2018 —

# what we do

## COUNTRY LEVEL DATA SYSTEMS

## 24 COUNTRIES

We build technologies that enhance governmental health data systems with a focus on three markets:

### **HEALTH FINANCING DATA SYSTEMS**

- Data systems for purchasers, health insurance, Ministries of Health
- Example: Develop a Pay for Performance data system in Kyrgyz hospitals

### **GOVERNMENT HEALTH DATA WAREHOUSES**

- Example: The health data warehouse in Morocco

### **DISEASE OR THEMATIC DATA SYSTEMS**

- Diabetes
- HIV
- Tuberculosis
- Malaria
- Immunization systems
- Vector Borne eradication systems (i.e. sleeping sickness)
- Family Planning
- Emergency Obstetric Care

Bluesquare develops these data systems based on a suite of in-house software products connected to DHIS2 a popular open source data management platform used by over 40 governments.

# How we do IT products and data services

We deliver technologies and services that strengthen governmental health data systems, mainly:

## **Hesabu (aka ORBF)**

- An open sourced rule engine that allows complex calculations in DHIS2, a popular open source data management platform. This is particularly useful for health financing data systems.

## **Data Viz**

- A public web dashboard that allows showcasing results.

## **Modeling and data science**

- Statistical analysis, Data cleaning, Modeling & machine learning and analysis automation to help customers bring value out of their health data.

Bluesquare suite of in-house software products and services allow collecting, computing, analyzing and visualizing data in a intelligent and friendly manner.

A world map with a light blue background. Twenty-four countries are highlighted in white, including the United States, Canada, Mexico, the United Kingdom, France, Germany, Italy, Spain, Portugal, Greece, Turkey, India, China, Japan, South Korea, North Korea, and several countries in Africa and South America. The text '24 COUNTRIES' is overlaid on the map.

24

COUNTRIES

## **Bluesquare:** our engagement towards openIMIS community

We believe that health insurance will be at the heart of the UHC agenda in many countries.

openIMIS modular transformation is an opportunity to develop code that can be used at scale to help provide health services “for the global good” (i.e. exact DNA of Bluesquare).

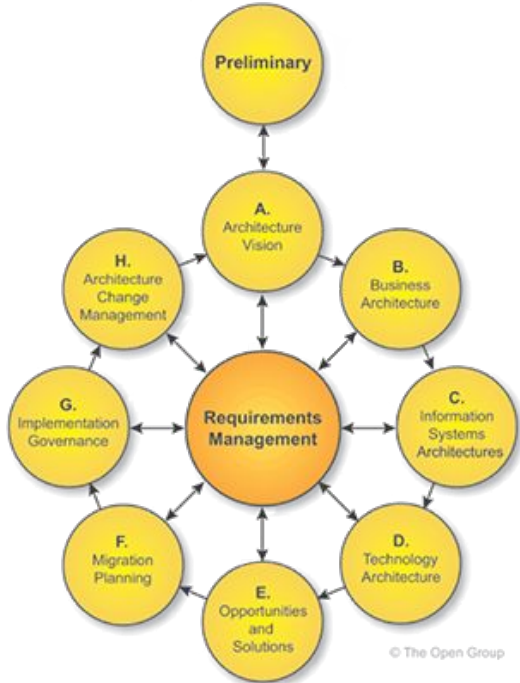
Creating synergies with our existing and future health-financing portfolio, promoting the tool in the countries where we operate.



# Bluesquare: our methodology

Our approach to deliver the openMIS modules borrows several concepts from TOGAF, most important one being the ADM (Architecture Development Method):

- Iterative, ensuring pragmatism and responsiveness in delivered solution
- We strive to keep things simple: we aim to use the TOGAF framework as a guide not a rule book. Where we feel it will serve this project we will make use of it. However, our proposed approach is much lighter than a traditional TOGAF implementation effort.
- It helps any community member to find/contribute to the appropriate part of the system.





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# Achieved (Iteration 3): Claim Module

90 (initial estimate)



## Iteration 3:

04/2019 : Claim module scope document (draft)	2 m/d
05/2019 : Mapping attempt to JLN business processes	0.5 m/d
06/2019 : Claim main screen mockups	4,5 m/d

OMT-122

Claim fixes - release - 2020-04

Joindre Créer un ticket dans Jopic Associer un ticket

Description

Ajouter une description...

Tickets dans cette épic

Progression: 55%

OMT-122	UX issue in Search Claim form	↑	IN PROGRESS
OMT-01	Claim Batch processing StoredProc to PY	↑	IN REVIEW
OP-128	Not possible to select a product just created if the enrollment date is before the product creation date but ...	↑	IN REVIEW
OMT-88	Browser compatibility	↑	IN REVIEW
OMT-98	not possible to print just saved claim	↓	TERMINÉ
OMT-101	Interface issues	↑	IN REVIEW
OMT-102	CHF ID field behaves like a search field	↑	IN REVIEW
OP-127	HF Claim - not possible to remove batch claim filter	↓	IN REVIEW
OMT-023	Once the claim review is delivered, one can bypass the review or 'not select' it	↓	TERMINÉ
OMT-016	In Review screen Variance doesn't work as it should	↑	TERMINÉ
OMT-018	Not possible to save a review without submitting (TBC)	↑	TERMINÉ
OMT-014	Adjustment text field in claim review page should be editable	↑	TERMINÉ
OMT-014	Wrong label in feedback	↑	TERMINÉ
OMT-024	frontend - HF's & Locations: Losing Journal	↑	TERMINÉ
OMT-020	Ensure the front boot, even when sent module configuration is not a valid json	↑	TERMINÉ
OMT-120	Adjustement not saved with claim review	↑	IN REVIEW
OMT-021	Frontend not booting when fi language pack installed	↑	TERMINÉ
OMT-022	SQL Error when saving claim items/services explanation	↑	TERMINÉ

Amic Rest > (GraphQL) 4 m/d

- 07/2019: 12 m/d (scope, design & Enquiry)
- 08/2019: 34 m/d (Claim implementation)
- 09/2019: 29 m/d (Claim refinement)
- 10/2019: 22,5 m/d (Nepali cust., Install & debug)
- 11/2019: 12 m/d (Addis Abeba, bug fixes, deploy)
- 12/2019: -
- 01/2020: 1 m/d (restarted batch processing to python)
- 02/2020: 10,5 m/d

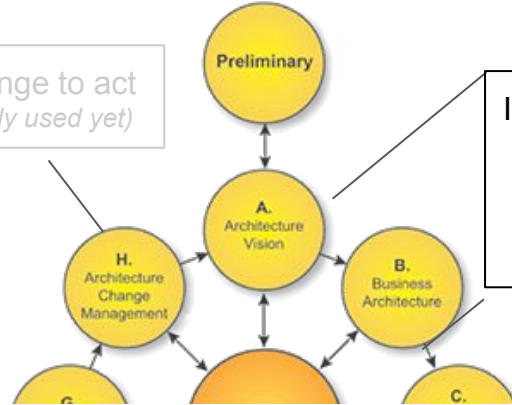
- 6 m/d - completed batch processing stored proc rewriting
- 4,5 m/d - fixed known issues (cfr. [OMT-122](#))

**CLOSING ITERATION**, with **42 m/d** over budget  
(remaining work moved to 'closing project activities')

# Iteration 4: Locations & Health Facilities Module

No architecture change to act  
*(but deliverable not really used yet)*

Iteration 4 scope:  
[Locations & HF Administration](#)



- 10/2019: 1,5 m/d (scope & 'analysis')
- 11/2019: 5 m/d Initial version Locations
- 12/2019: 9 m/d Initial version HF's management
- 01/2020: -
- 02/2020: - (no ticket in [OMT-77](#))

Projets / openMIS Modular Transformation / OMT-77

## Locations and Health Facilities module initial version

- Joindre
- Créer un ticket dans l'epic
- Associer un ticket
- Associer une page

### Description

Ajouter une description...

### Tickets dans cette epic

Aucun ticket dans cette epic

**CLOSING ITERATION**, with 15,5 m/d total iteration budget  
(remaining work moved to 'closing project activities')



# Project extensions and closing activities


## Allocated budget:

I1: **56.5** m/d + I2: **18.5** m/d + I3: **132** m/d + I4: **15,5** m/d = **222,5** m/d (on **240** m/d)

>> Closing activities have a budget of **18,5** m/d left

01/2020: 3,5 m/d (Release, support to other teams, project management,...)

## **02/2020: 3 m/d**

- Nepali team support
  - Help configuring test server
  - [openimis-fe-claim\\_ne](#): Claim filter customization  --> one **BIG** question (for which I don't have the answer...)
- Project management
- FHIR module fine-grained security (just started)

## **TODO Bluesquare (12 m/d remaining)**

- FHIR module fine-grained security (...we just started, still 6-9 m/d estimated to complete)
- **Closing reports**: are there templates, who/when should I send ?
- Latest bug fixes (Népal tests,...)
- Other teams support

# openimis-fe-claim\_ne

openIMIS 1.0.0 Insurees and Policies Claims

@openimis/fe-core@1.0.6, @openimis/fe-home@1.0.3,  
@openimis/fe-location@1.0.4, @openimis/fe-insuree@1.0.5,  
@openimis/fe-medical@1.0.4, @openimis/fe-  
medical\_pricelist@1.0.3, @openimis/fe-product@1.0.3,  
@openimis/fe-policy@1.0.4, @openimis/fe-claim@1.0.6,  
**@openimis/fe-claim\_ne@1.0.0**, @openimis/fe-  
claim\_batch@1.1.4, @openimis/fe-admin@1.0.3, @openimis/fe-  
tools@1.0.3, @openimis/fe-profile@1.0.3

The `openimis-fe-claim_ne` module  
contributes to `ClaimFilter`

```
4 const DEFAULT_CONFIG = {  
5   "translations": [{ key: "en", messages: messages_en }],  
6   "claim.Filter": [ClaimFilterByInsureeGender],  
7 }  
8
```

...and adds a filtering on insuree gender

openIMIS 1.0.0 Insurees and Policies Claims Administration Tools Profile

Search Criteria

Region: Any District: Any Health Facility: Claim Administrator: Batch Run: Any

Claim Status: Entered Feedback Status: Any Review Status: Claim No.: Insuree No.: Claimed More Than \$: Claimed Less Than \$

Visit Date From: Visit Date To: Claimed From: Claimed To: Main Diagnosis: Visit Type: Any

Gender: Female

4 Claims Found

Claim No.	Health Facility	Insuree	Claimed Date	Feedback Status	Review Status	Claimed	Approved	Status	Attachments
XXEE	JMH0001 Jembero District Hospi...	Ilina Doni (105000002)	2/10/2020	Idle	Idle	\$ 21000	\$ 0	Entered	
CI000001	VHC0001 Viru Dispensary	Ilina Doni (105000002)	2/3/2019	Idle	Idle	\$ 1670	\$ 0	Entered	
CI000001	VHC0001 Vida District Hospital	Ilina Ethu (105000001)	1/24/2019	Idle	Idle	\$ 2870	\$ 0	Entered	
CI000001	VHC0001 Julisa Health Centre	Ilina Doni (105000002)	1/22/2019	Idle	Idle	\$ 1000	\$ 0	Entered	

Rows Per Page: 10 1-4 of 4

# Customizations **BIG** question...

Reference product can have **options** that can be configured via db:

[https://github.com/openimis/openimis-fe-claim\\_js](https://github.com/openimis/openimis-fe-claim_js)

## Configurations Options

- `debounceTime` : debounce time (ms) before triggering search in ClaimFilter (Default: 800)
- `newClaim.visitType` : default (pre-selected) visit type when creating a claim (Default: 'O' - Other)
- `claim.CreateClaim.feedbackStatus` : value set to feedback status when creating a claim (Default: 1)
- `claim.CreateClaim.reviewStatus` value set to review status when creating a claim (Default: 1)
- `claimFilter.rowsPerPageOptions` : pagination page size options in Claim Searcher component (Default: [10, 20, 50, 100] )
- `claimFilter.defaultPageSize` , pagination pre-selected page size options in Claim Searcher component (Default: 10 )
- `claimFilter.highlightAmount` , amount triggering the primary highlight (default bold) for claims in claim searcher result. Default: 0 , meaning no highlight threshold
- `claimFilter.highlightAltInsurees` , boolean to trigger the secondary highlight (default italic) for claims of the same insuree. Default: true
- `claimForm.fixedPricesAtEnter` , boolean to prevent user to adapt prices at claim entry (fixed to price list). Default: false (user can change the price)
- `claimForm.fixedPricesAtReview` , boolean to prevent user to adapt prices at claim review (fixed to price list). Default: false (user can change the price)
- `claimForm.showJustificationAtEnter` , boolean to display justification field(s) for items and services at claim entry. Default false;
- `claimForm.showAdjustmentAtEnter` , boolean to display adjustment field at claim entry. Default false;
- `claimAttachments` , boolean to enable/disable claim attachments. Default true;

# Customizations **BIG** question...

Reference product can themselves build their own UI via 'own default contributions' (which can be activated/deactivated via db configuration):

[https://github.com/openimis/openimis-fe-insuree\\_js](https://github.com/openimis/openimis-fe-insuree_js)

## Other Contributions

- `core.AppBar` : [Enquiry] , registering the enquiry search input (and related dialog) to the AppBar
- `insuree.InsureeSummaryAvatar` : [InsureeAvatar] , contributing to own contribution point and register the default Avatar loading component to InsureeSummary
- `insuree.InsureeSummaryExt` : [InsureeFirstServicePoint] , contributing to own contribution point and register the default the First Service Point as insuree summary extension
- `core.Router` : registering the `insuree/create` , `insuree/families` , `insuree/insurees` , `insuree/cappedItemService` and `insuree/profile` routes in openIMIS client-side router

070707070

Joseph Macintyre  
7/12/1950 (69 Years)  
Male

First Service Point not registered.

### Family Policies

Code	Name	Expiry Date	Status	Deduction	Hospital Deduction	Non Hospital Deduction	Ceiling	Hospital Ceiling	Non Hospital Ceiling	Balance
BCUL0001	Basic Cover Ultra	8/19/2020	2							0

Service Eligibility

Item Eligibility

CLOSE

# Customizations **BIG** question...

In the same way, **backend modules** can be configured to react (or not) to django events, customize mapping,...

## **When/how should we integrate ‘features’ in the ‘reference’ product?**

... procedure and “evaluation committee” to assess

- the functional (is it useful for others) ?
- AND technical (is it implemented according to guidelines)?