



# openIMIS – Adaptability and interoperability

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## Overview

- Scope of application of openIMIS
- Requirements of adaptability and interoperability
- Adaptability to changing business rules
- Landscape for interoperability of openIMIS
- Available standards-HL7 FHIR



## Scope of application of openIMIS

The area of deployment of openIMIS:

- health insurance especially social health insurance
- related insurance schemes
  - employment injury insurance
  - sickness insurance
  - maternity insurance
  - etc.



## What are requirements for adaptability and interoperability in practice ?

- A new business rule has to be implemented in the business logic layer.
- openMIS should co-operate with an external IT system or an external IT system should co-operate with openMIS .
- openMIS should import data from an external IT system or openMIS should export data to an external IT system.



## **Business rules for activation/deactivation of policies**

- When a policy is activated?
  - When contributions should be paid?
  - What amount of contributions should be paid?
- When a policy is deactivated?
- Under which conditions a policy can be modified?



## **Business rules for processing of claims and payment of health care**

- Under which conditions a claim is accepted or rejected?
- Under which conditions a unit of provided health care is accepted or rejected?
- How a unit of provided health care is valued?
- How a claim is valued ?
- How health care provided by a health facility is valued?



## Approaches to adaptability of openMIS relating to the business logic

- *Currently used approach*
  - Implementation of a choice of business logic features and selected by a user parametrization
  - Implementation of specialized operational reports
- *Future options*
  - Implementation of elementary building stones of the business logic and its combination (at user or sub-user level) by an internal workflow tool
  - Other ?

*However, delivery of an empty envelope where a country has to implement major part of the business logic on its own should be avoided*



## Communication between openMIS and a peer IT system

- If a standard is used, both parties have to use this standard or a conversion tool has to be developed
- Off-line (batch) communication – based on export/import of data in an agreed(standard) format of data
- On-line communication – based on API functions (e.g. RESTful API services)
  - peer to peer communication with stateless API functions- there has to be a mediator which cares for a protocol of the communication





## Available standards

- *(HL7 FHIR)-Fast Healthcare Interoperability Resources* is predominantly a standard for exchange of clinical documentation
- One so called resource of the FHIR standard *Claim* relates to data exchange with payers and providers of health care- this is relevant to openMIS

The Claim resource is intended to support:

- Claims - where the provision of goods and services is **complete** and reimbursement is sought.
  - Pre-Authorization - where the provision of goods and services is **proposed** and either authorization and/or the reservation of funds is desired.
  - Pre-Determination - where the provision of goods and services is **explored** to determine what services may be covered and to what amount. Essentially a 'what if' claim.
- However, the resource is not intended for providing a feedback to a health care provider on its claims
  - Are there any standards beside HL7 FHIR applicable to the scope of health insurance systems?

## Options of implementing HL7 FHIR ( Claim resource)

Observation: openMIS supports only a subset of the data model of the Claim resource. The rest is not supported in its presentation/ business logic/data layer.



### Options

- Disregard non-openMIS data
- Enrich openMIS data model to a full scope and eliminate not needed data at the presentation level (through conversion mechanism used for the Master Version)
- Allow user level enrichment of the openMIS data model



Thank you for your attention!