

# AMAS: Athlete Monitoring & Assessment System

Technical Introduction

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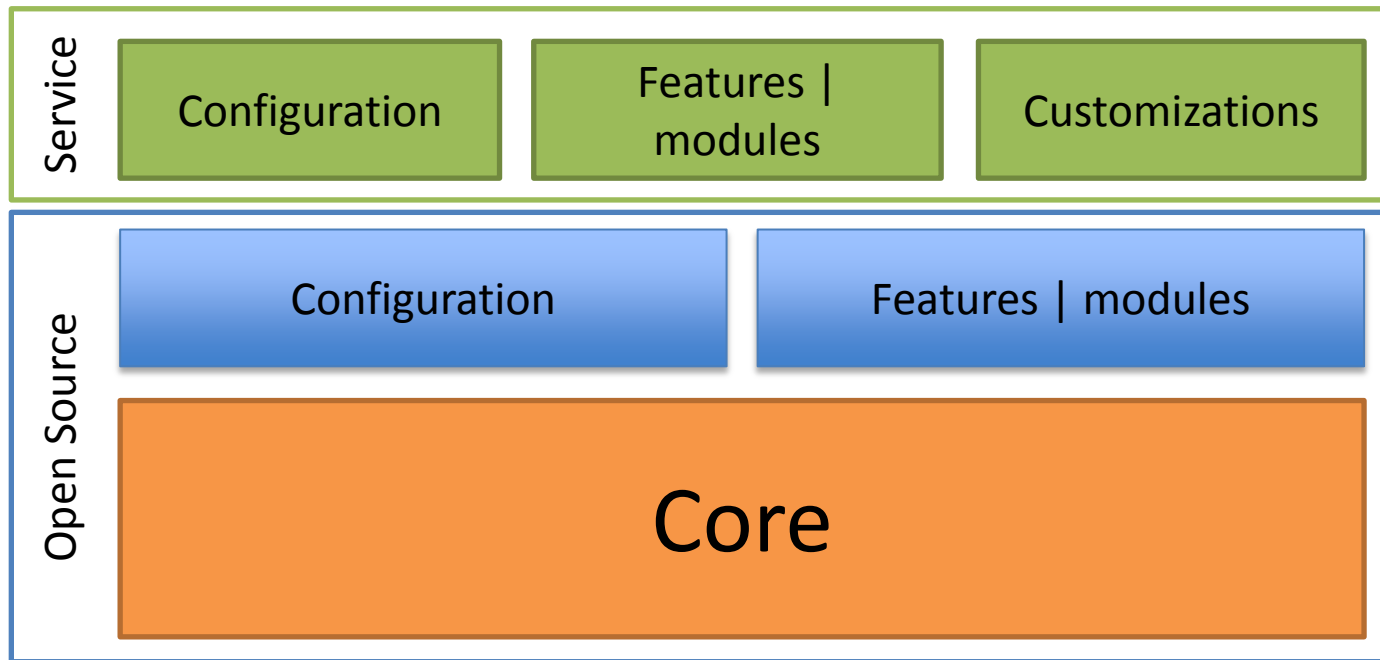
# AMAS Build Overview

- Built on Open Source Technologies
  - Java, MySQL, Tomcat, OpenMRS
- Core Tool (OpenMRS) well proven and seen as a leading Open Source Medical Record System world wide
- Large community supporting technologies
  - Limits risk of “non-support” of base technologies



# Open Source in the Solution

- A mix between Open Source and service solution.



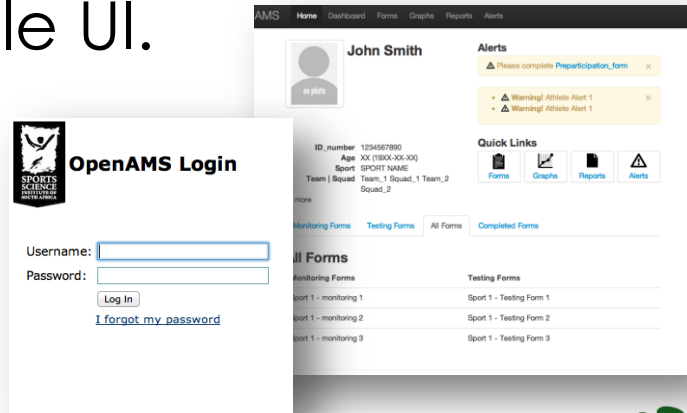
# AMAS Configuration

- Designed to change and configure
- Developed to allow “dynamic” feature addition through:
  - Custom data capture sources
  - Custom reporting
  - Modular extension of functionality
- Aim is to reduce “downtime” to affect change as much as possible.
- Customizable UI.

Ability to Develop new UI to interact with data sets

Customizable Data Capture and Reporting

Custom Generic Sports Data Model



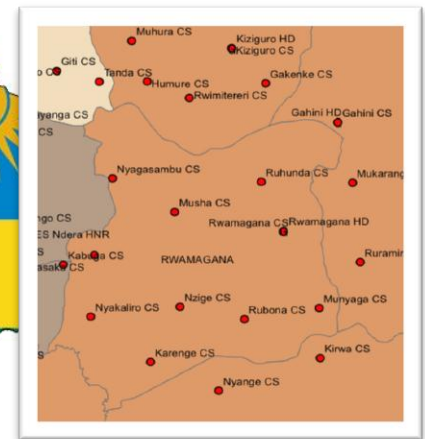
# Scalability & Availability

- Base System designed for low resource settings
- Experience in implementing solutions in resource poor & constrained environment
- System design to integrate into a larger scalable architecture as well as handle 100'000s persons and 1'000'000 data points
- Designed to function in a peer to peer to central model



# Case Study: Rwanda HIE

- Rwanda
  - Approx. 9-10 million people
  - Limited connectivity (mostly mobile)
  - Power profile similar to most resource poor settings
- Objective and Software requirements:
  - Provide care for mothers at rural clinics using IT systems.
  - Integration of multiple sites and mobile phones to allow referral and data access.
- Challenges
  - Limited Connectivity
  - Challenges in IT Literacy
  - Need for National System



# Rwanda HIE

Patient Registry

Provider / DR  
Registry

Facility Registry

National Shared Health Record

Interoperability Layer (ESB)

**INTERNET**

Clinic  
Systems

Clinic  
Systems

• • • • •

Clinic  
Systems

Clinic  
Systems

Mobile  
Users



# Features | Design | Outcomes

- Ability for patients to be tracked over entire system
- Sharing of Data between sites
- Central system for national data mining
- Limited requirement for connectivity (asynchronous design)
- Highly extendable
- Standards Compliant





# From Health to Sport

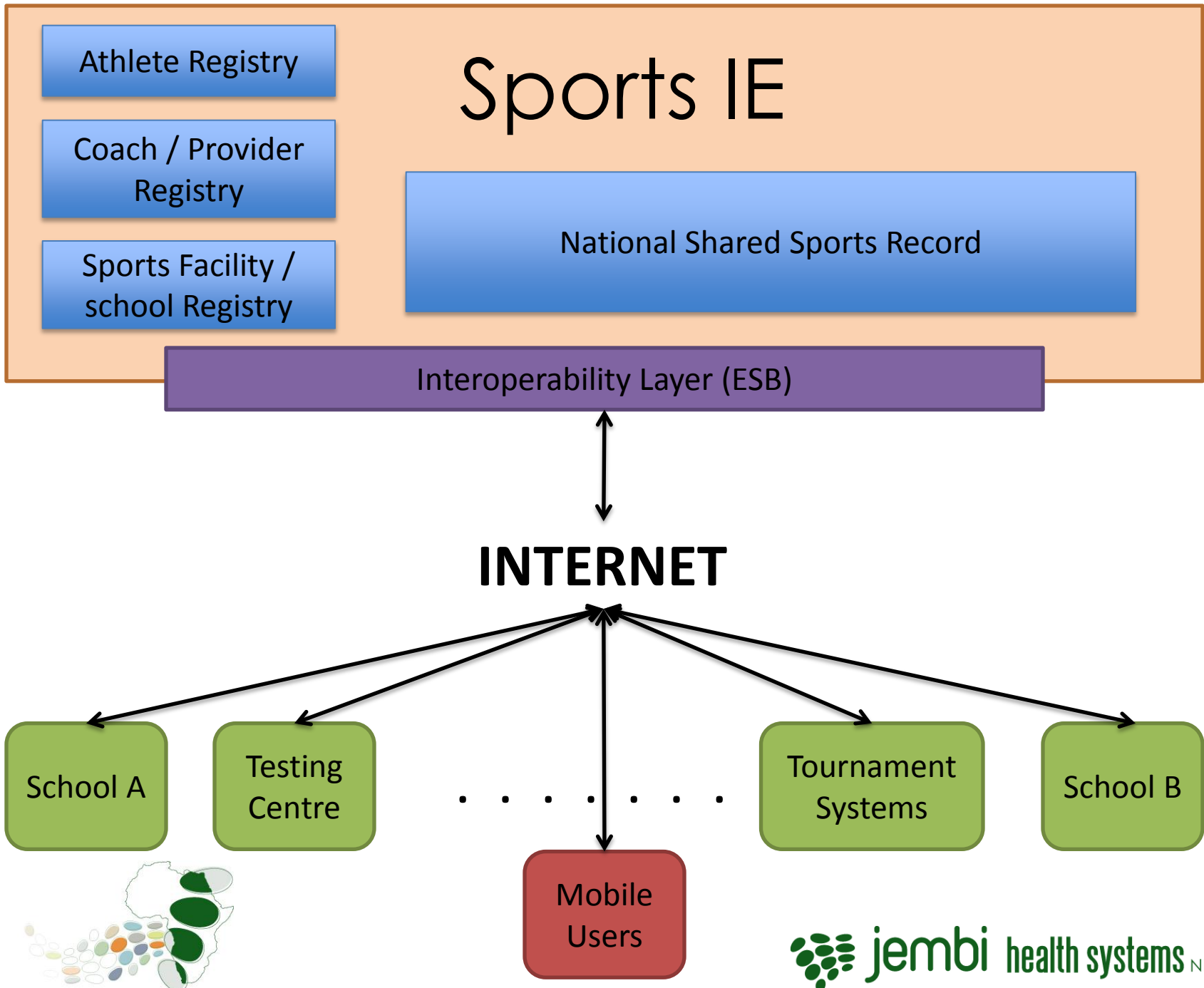
- Similar need for longitudinal record
- Monitoring is proving to be key to better development
- Mobile and changing user (Patient | Athlete) base
- Similar challenges
  - Tracking Athletes | scholars
  - Extending Data profiles
  - Need for availability in a range of areas (urban to rural)



# Example Case: School Sport

- Tracking young athletes from schools through the system and over time (age groups and participation)
  - Need to uniquely identify athlete
  - Monitor development and training
  - Track and trace between school moves
- Example Solution
  - Leverages the Rwanda implementation model





# Outcomes

- Ability to track athletes over large areas (country)
- Data from range of sources to support full athlete profile
- Limited reliance on 100% connectivity for use of system (designed to work in offline mode)



# Thank you



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