

**Rwanda Health Enterprise**  
**Architecture: Current Content**

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# This Presentation

- **Architecture components**
- **A diagram style called “Archimate”**
- **What I have today**
- **Next steps**

- **Architecture Descriptions:**
  - are formal descriptions of an information system
  - define its components (building blocks)
  - provide a plan from which products can be procured and applications developed
  - enable you to manage investment in information technology

# Creating an Architecture

- **The architecture is:**
  - a plan: it shows the layout of your significant things.
  - A plan: it describes how to get from here to there
- **When we build it, it has to include current function, and to leave room for expansion**
- **It will:**
  - Show what the new components are and where they fit in.
  - Define data structures to fit current needs, and to support anticipated ones.
  - Show how technology and resource constraints dictate both what is feasible and the path to go forward.

# Using an Architecture

- **Tool for design**
- **Tool for communications**

# So Far I have:

- **Reproduced a high level vision of the entire RHEA project.**
- **Modeled the projects we worked on in 2010-2011**
  - The primary components
  - Relationships between them
- **Defined (as I saw them) general information structures for some of our components:**
  - Facility Registry
  - Data Warehouse

# What is ArchiMate

- **A language for representing architectures.**
- **It looks like UML, but is a bit simpler.**
- **Its developers feel it is more intuitive than other modeling styles.**
- **Chris suggested it, and I have converted previous diagrams to use it.**
- **Service Oriented Architecture (SOA) notions are baked into its structures**

# What I used from Archimate: I

## ARCHIMATE THINGS



"An organizational entity capable of performing behavior."



"A specific behavior of a business actor participating in a particular context."

I have used this for high level functionality which we could assign to a system.



"A business interface declares how a business role can interact with its environment"

Any time information moves between systems or organizations, you will see an interface assigned to a service and used by a role.



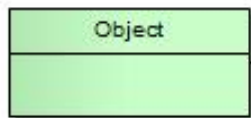
"The externally visible functionality, which is meaningful to the environment and is realized by business behavior."

So far, in these diagrams, a way of providing functionality that will be realized through an interface.



"A modular, deployable, and replaceable part of a system that encapsulates its contents and exposes its functionality through a set of interfaces."

In these diagrams, an application whose interaction with the National Registry Services needs to be defined, or which is used by a function.



AKA Business Object, Data Object. "A unit of information that has relevance from a business perspective." "A coherent, self-contained piece of information suitable for automated processing."

In these diagrams, the content of a transaction, or a structure carried as a component of a transaction.



"Something that happens (either externally or internally) and influences behavior."

In these diagrams, a transaction received or time point which triggers activity.

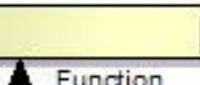
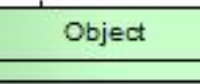
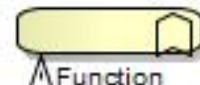
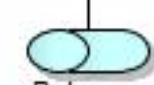


# What I used from Archimate: II

## ARCHIMATE ASSOCIATIONS



Interface



Function

Assignment: "The assignment relationship links active elements with units of behavior that are performed by them, or business roles that are fulfilled by them."<sup>1</sup>

A role can be assigned to an actor. A function can be assigned to a role. A function can be assigned to a component. An interface can be assigned to a function. An interface can be assigned to a service.

Used by: "The used by relationship models the use of services by processes, functions, or interactions and the access to interfaces by roles, components, or collaborations."<sup>2</sup>

An interface can be used by a role.  
A component can be used by a function.

Access: "The access relationship models the access of behavioral concepts to business or data objects"<sup>3</sup>  
Here it shows which data objects are inputs to or outputs from a function.

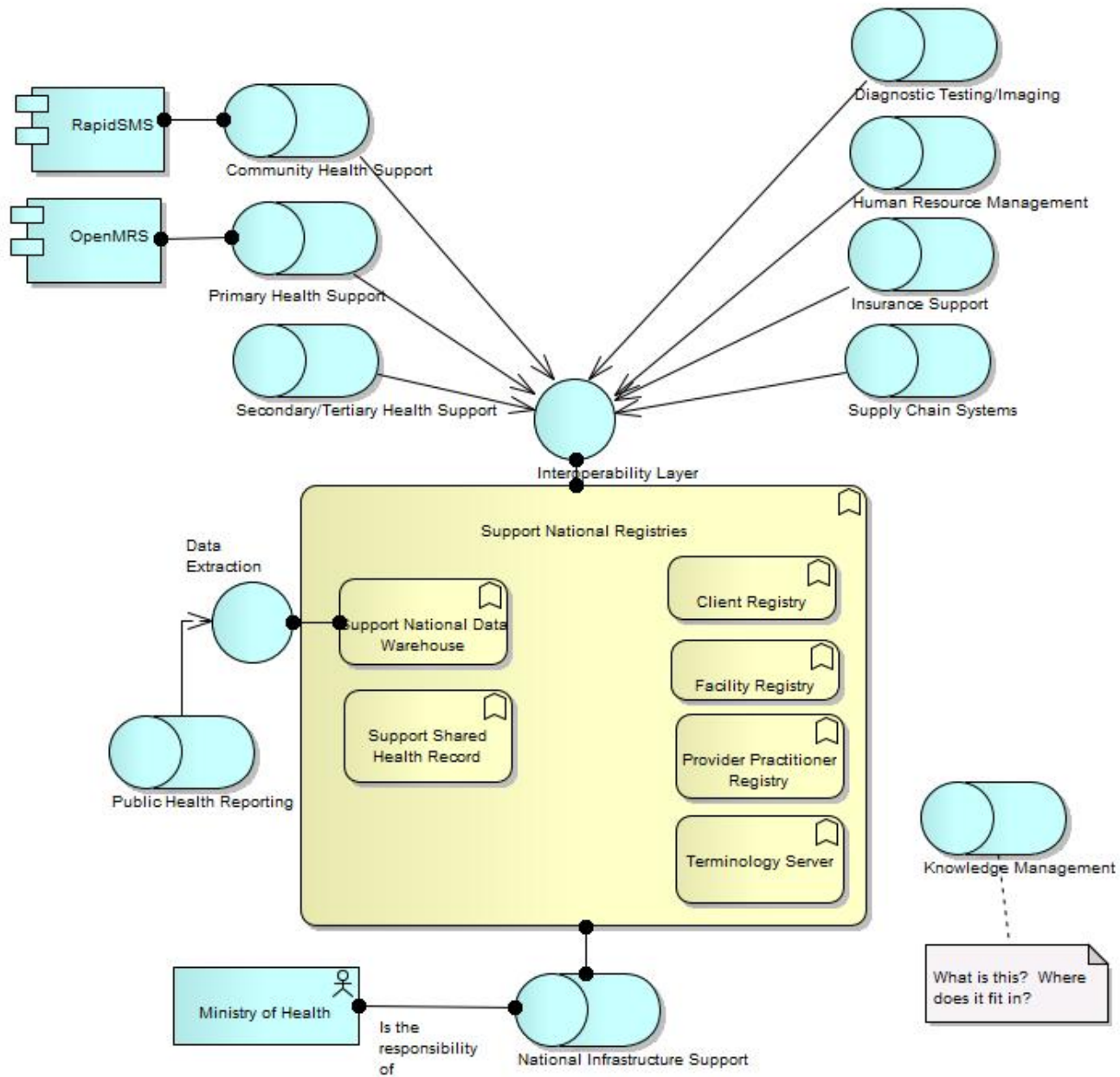
A function may access an object.

Triggering: "The triggering relationship describes the temporal or causal relations between processes, functions, interactions, and events."<sup>4</sup>

An event may trigger a function. A function may trigger a function.

# RHEA Business Architecture

arch RHEA Business Architecture



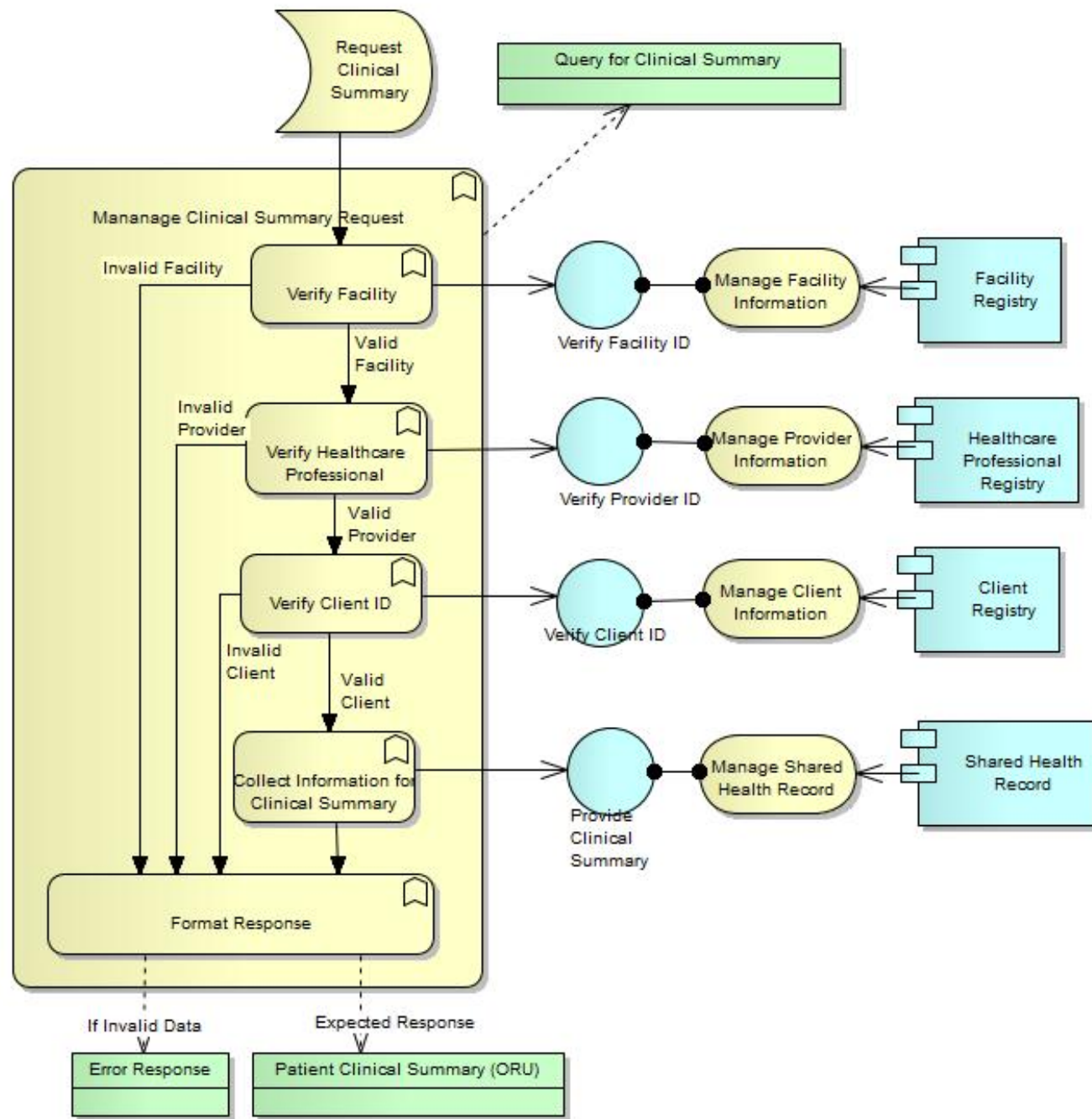
- **Provider/Practitioner Registry**

A site/server/capability that is capable of managing the identity and related information for health care providers (aka practitioners). The information managed will include their specialties and associated capabilities.

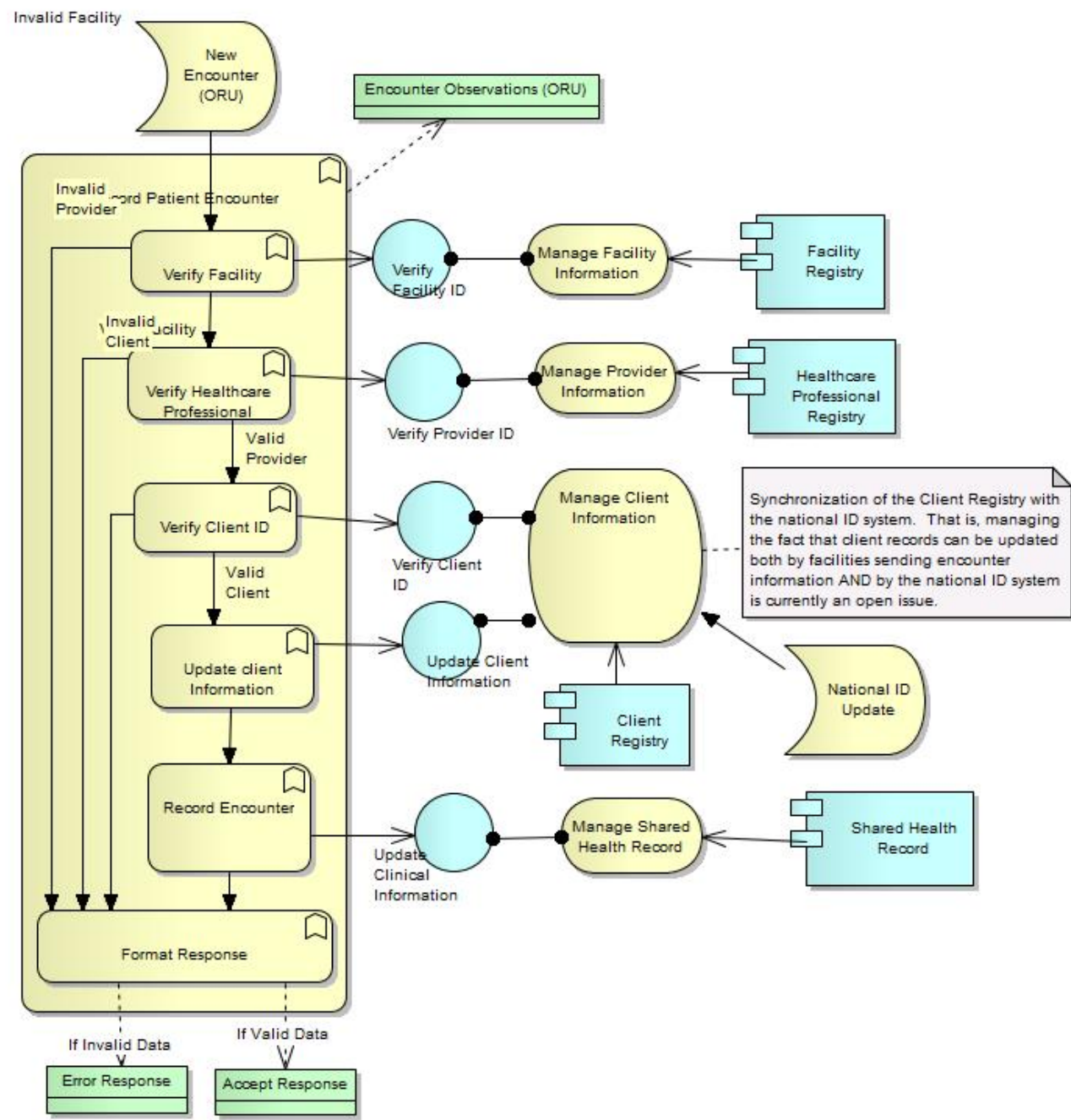
Such a system can be used as a reference file to validate the identity of a provider or practitioner and to associate them with a facility or facilities. An additional set of capabilities would be to support resource referrals, and resource scheduling.

- **Maternal & Child Health Support**
  - Request Clinical Summary
  - Manage New Encounter
  - Alert/Reminder Management
- **Facility Registry Support**
- **Provider Registry Support (placeholder)**

# Maternal & Child: Request Summary

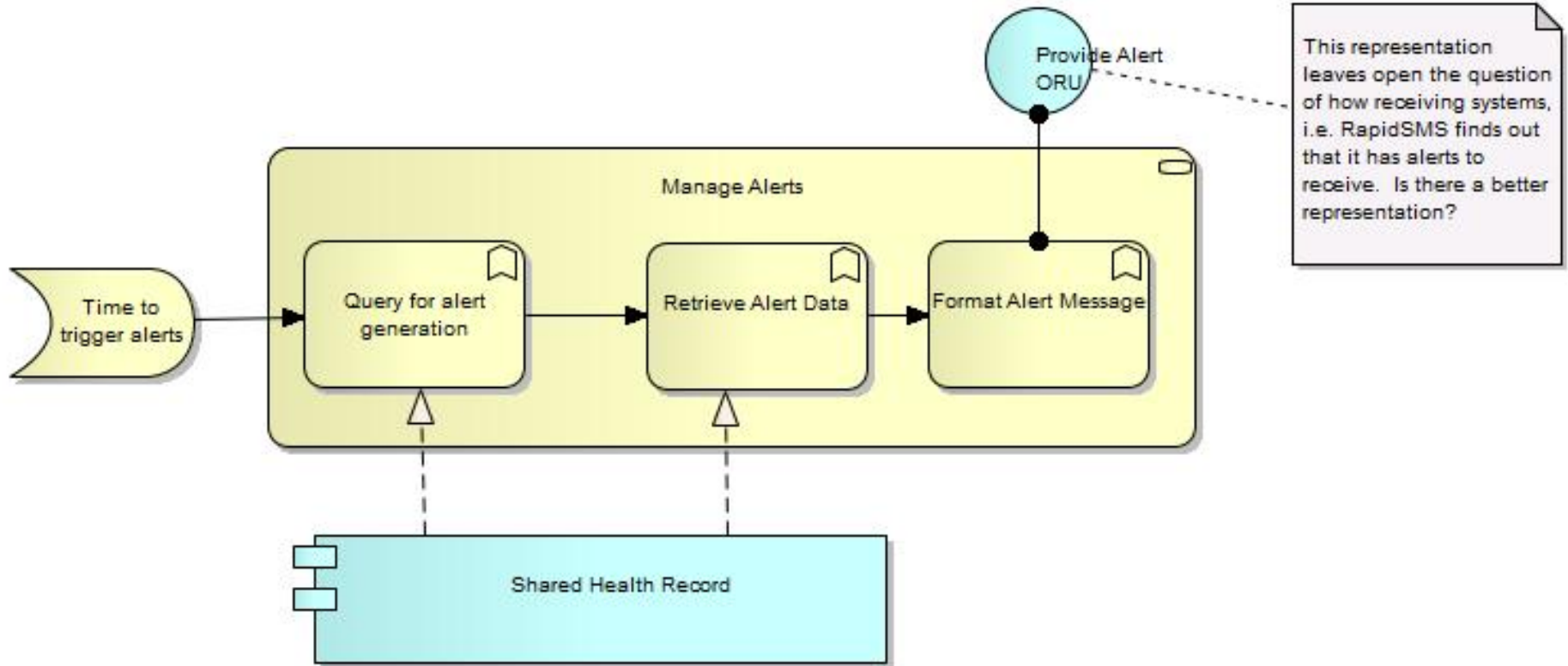


# Maternal & Child: Record Encounter



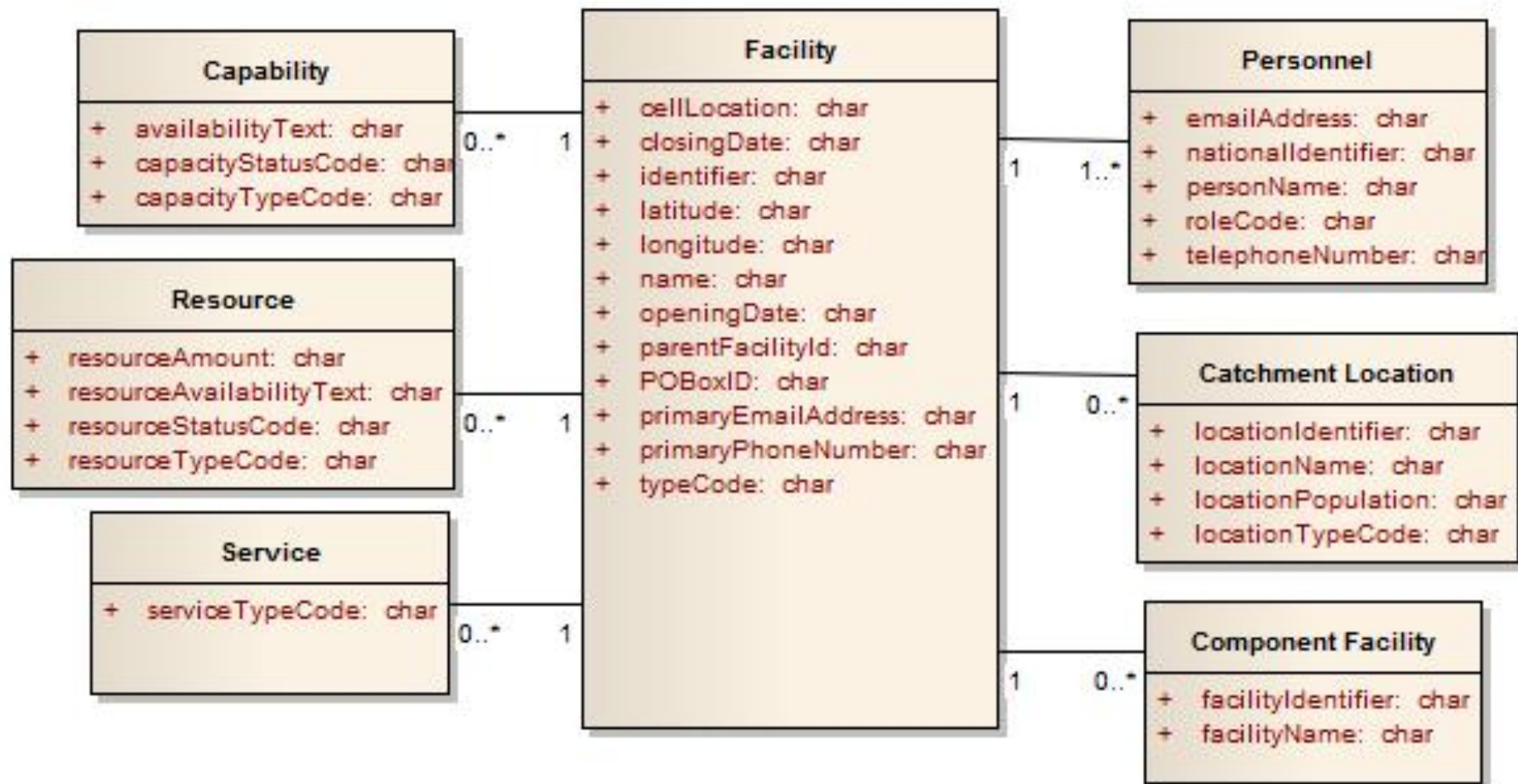
# Maternal & Child: Alerts/Reminders

arch Maternal & Child Health Alert Management



# Facility Registry: Logical Design?

class Facility Registry Conceptual Model





# What has been left out

- **A full set of Registry Data Models:**
  - Client Registry
  - Professional/Practitioner Registry
  - Shared Health Record
  - Terminology Server
- **What about a “RHEA Logical Model”?**

**Thank You – Are there any questions?**

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