



# HIRA – Healthcare Interoperability Reference Architecture

(former HSRA Healthcare Service Reference Architecture)

## Project Update

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# HIRA MODEL STATUS

# HIRA Status

- The Service Inventory is substantially complete
- The Service Inventory will be balloted (for comment) in the May Ballot Cycle
- Remaining work for ballot:
  - Finalize model
  - Generate document

# HIRA MODEL RECAP

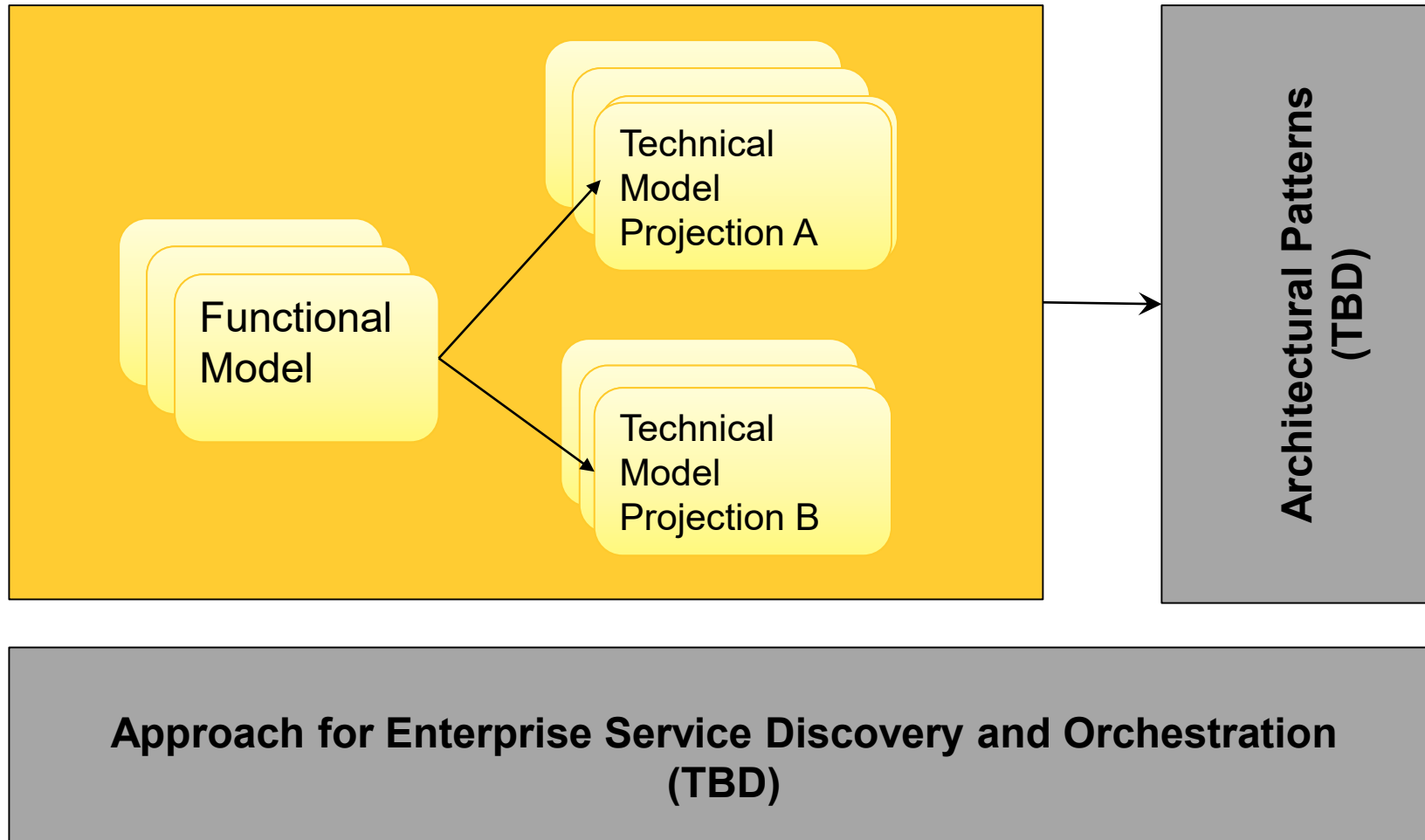
# Healthcare Interoperability Reference Architecture

- The objective of the HL7 Healthcare Service Reference Architecture (HL7-HIRA) is to support the design of medium/large scale eHealth architectures based on HL7 services and standards.
- The project organizes adopted HL7 Service Functional Models, Functional Profiles and Domain Models as a basis for:
  - a formalized Enterprise Service Inventory (Normative)
  - an Architectural Patterns Catalog (Normative)
  - guidelines for enterprise Service Discovery and Orchestration (Informative)

# HIRA as a tool

- HIRA represent a tool for architects and CIOs
- The Reference Architecture it's useful to navigate and select Health Standards and can be used also in combination with an Enterprise Architecture Frameworks (e.g. TOGAF and NAF 4.0)
- HIRA is centered on standard business capabilities and shown how these capabilities are realized with different technical standards (Technical Model Projections).

# Functional models and technical projections



# Modeling language for HIRA

- The Modeling language used for HIRA is the OMG UAF (Unified Architecture Framework).
- UAF is a modeling language based on UML/SysML and also integrated with BPMN2 and SoaML.
- The UAF scope is the representation of complex Architectures



# UAF - Unified Architecture Framework



- The Unified Architecture Framework (UAF <https://www.omg.org/uaf/>) defines how representing an enterprise architecture that enables stakeholders to focus on specific areas of interest in the enterprise while retaining sight of the big picture.
- UAF meets the specific business, operational and systems-of-systems integration needs of commercial and industrial enterprises as well as the U.S. Department of Defense (DoD), the UK Ministry of Defence (MOD), the North Atlantic Treaty Organization (NATO) and other defense organizations.
- UAF requirements were derived from military frameworks however these requirements were combined with requirements from the business sector (because 90% of concepts and themes captured in the military frameworks are equally applicable in the commercial domains).
- So UAF, as a framework, supports the needs of the commercial sector as well as the military.

# A single artifact approach

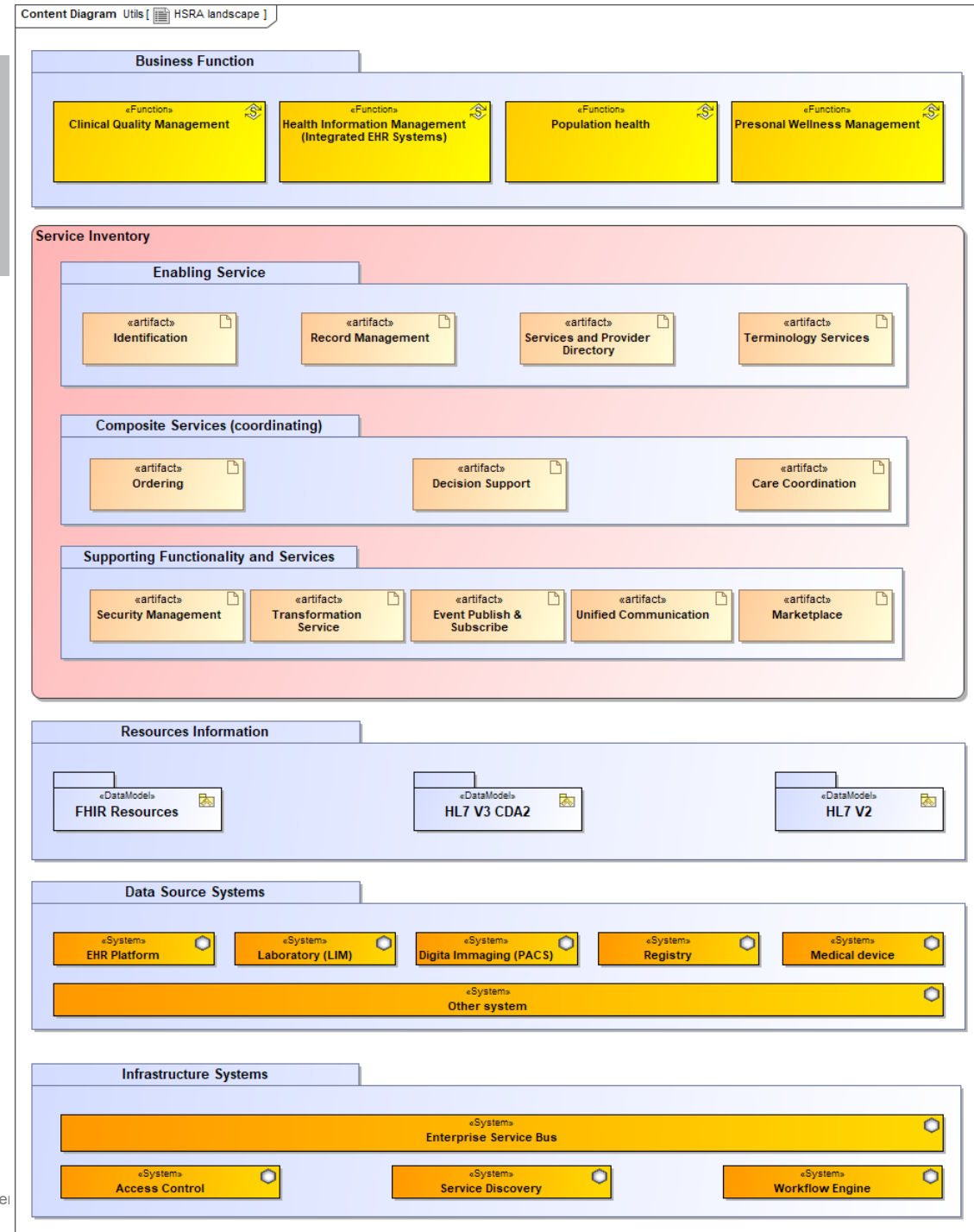
- We use of a specific modeling language, as UAF, to support a “single artifact” approach with the objective to support the maintainability and the navigability of HSRA
- We’ll have a single artifact (the model) that can be easily published as a web site with linked standard documents, or in a traditional document.
- *The UAF editor used is MagicDraw because the HL7/Sparx EA license agreement do not include UAF plugin.*

# HIRA MODEL UPDATE

# UAF

The big picture of the model include 8 components:

1. High level Business Functions
2. The Service Inventory that include:
  - a) Composite services (that include Service Functional Model and Service Technical Model)
  - b) Enabling Services (that include Service Functional Model and Service Technical Model)
  - c) Supporting Functionality
3. Resources Information
4. Data Source Systems
5. Infrastructure Systems



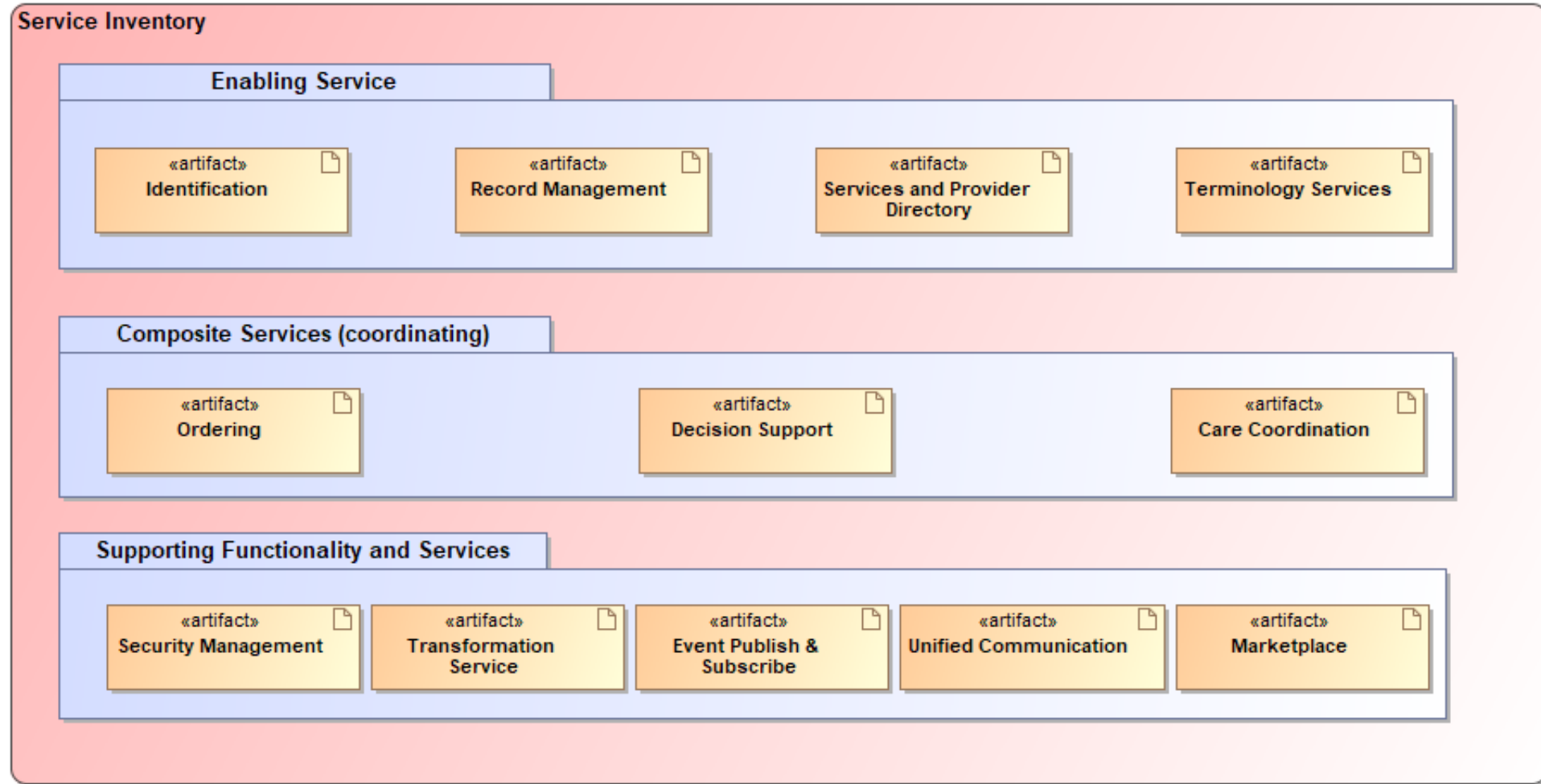
# Reference

- OMG, Unified Architecture Framework (<https://www.omg.org/spec/UAF>)
- OpenGroup, TOGAF (<https://www.opengroup.org/togaf>)
- NATO Architecture Framework, Version 4 ([https://www.nato.int/cps/en/natohq/topics\\_157575.htm?](https://www.nato.int/cps/en/natohq/topics_157575.htm?))
- Thomas Erl, *SOA with REST: Principles, Patterns & Constraints for Building Enterprise Solutions with REST*, Prentice Hall, 2012

Model

# HIRA model navigation

# Service Inventory







# Q&A

Thank  
You

**HIRA HL7 Confluence Page:**

<https://confluence.hl7.org/x/Ag0hAg>