

# Complex Information Management Using a Framework Supported by ECA Rules in XML

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# Over View

- Introduction
- Problem of Managing Complex Information
- An Approach for Modelling the Complex Information
- SEM Framework for Managing Complex Information
- The Role of ECA Rule Paradigm and XML
- Conceptual Architecture for A Complex Information Management System
- Summary

# Introduction

- My Project is the second stage of an on-going research
- My Project Objectives:
  - Generalizing and enhancing the concepts and management framework done in the first stage;
  - Developing a high-level language for facilitating the management of the generalized framework;
  - Developing intermediate models for implementing the language using the available technologies, such as XML and DBMS;
  - Developing a proof-of-concept system;
  - Evaluating the work done in the second stage

# Problem of Managing Complex Information

- Examples
- Research Focus
- Not the Research Focus

Generalizing  
The Work Done

## First Stage

Clinical  
Guidelines

Formalization  
And Modelling  
Language



**Main  
Research  
Focus**

Medical  
Patient Plan

Execution and  
Manipulation



Healthcare  
Record

## Second Stage

Stock Exchange  
Regulation

**Enriching these  
Functionalities**



Customer  
Order

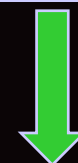
**-Modelling Language  
-Maintenance Support**



Stock  
Items

**Enriching these  
Functionalities**

Best  
Practice



**Complex  
Information**



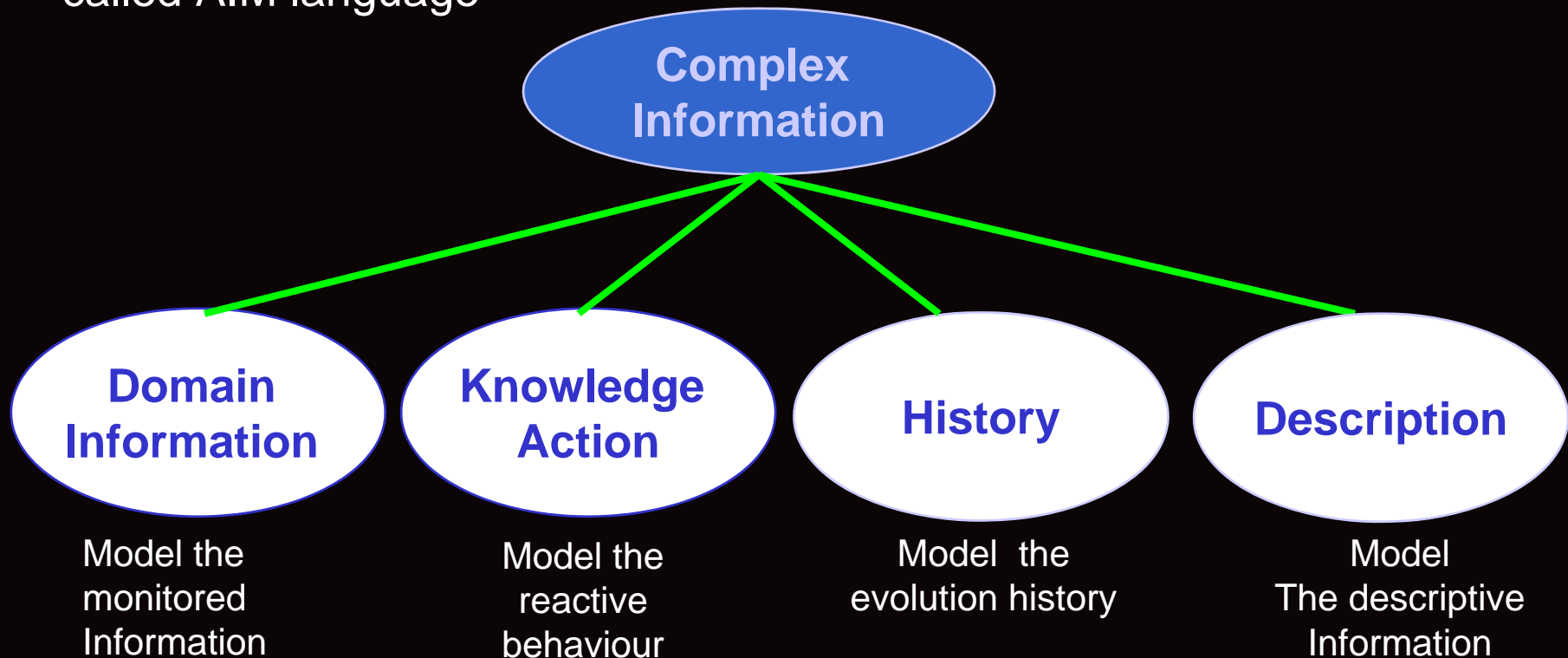
Domain  
Information

# Problem of Managing Complex Information

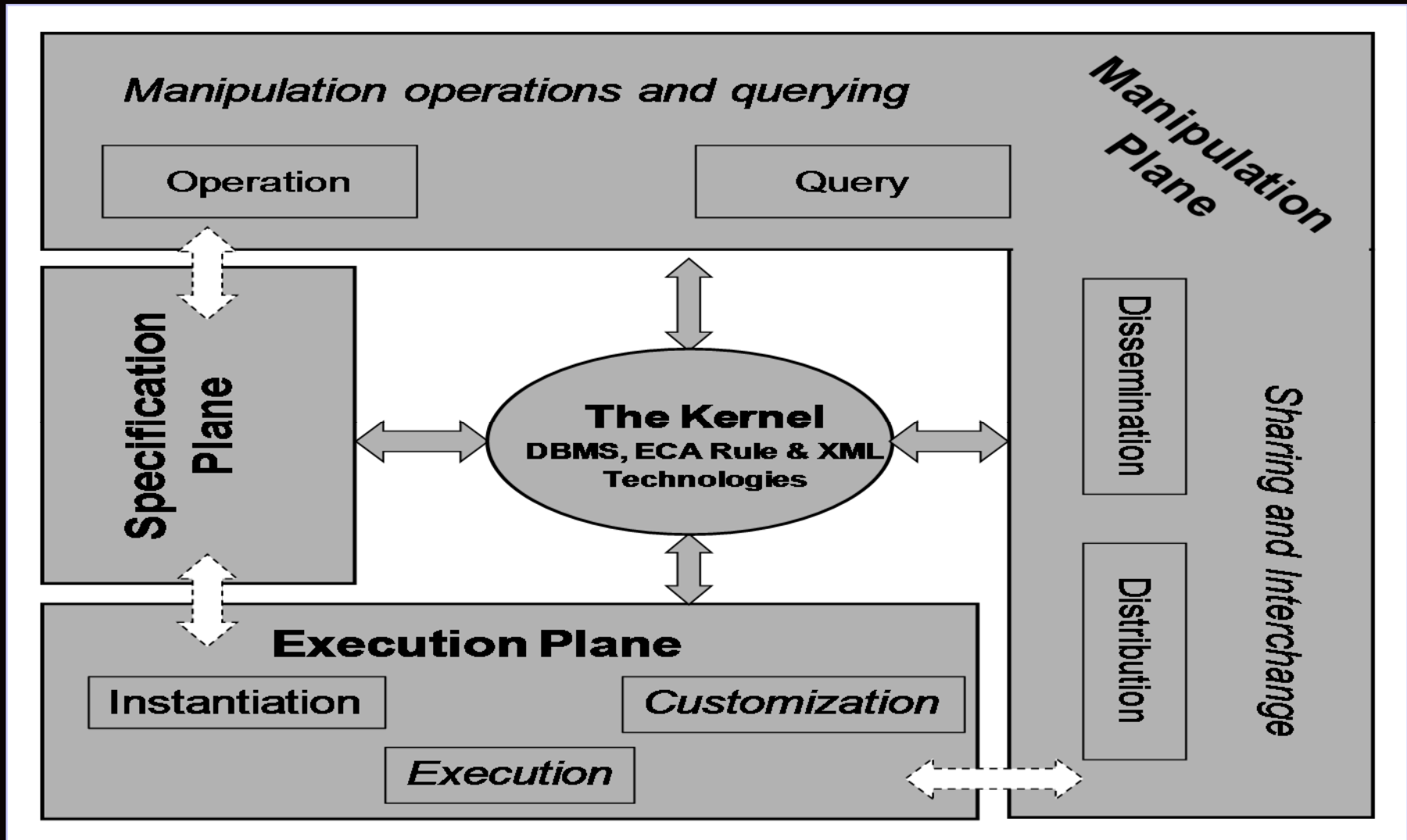
- The Complex Information is produced by incorporating the best practices into the daily management.
- The medical plans and customer orders are examples for Complex Information produced by incorporating clinical guidelines and stock regulation into the disease and order management, respectively.
- Managing Complex Information
- Integrating the Complex Information Management into DBMSs, which are utilized to manage the domain information

# An Approach for Modelling Complex Information

- Main Components of the Complex Information
- The Complex Information is managed as one distinct entity
- The management is supported by a high level declarative language, called AIM language



# SEM: Framework for Managing Complex Information

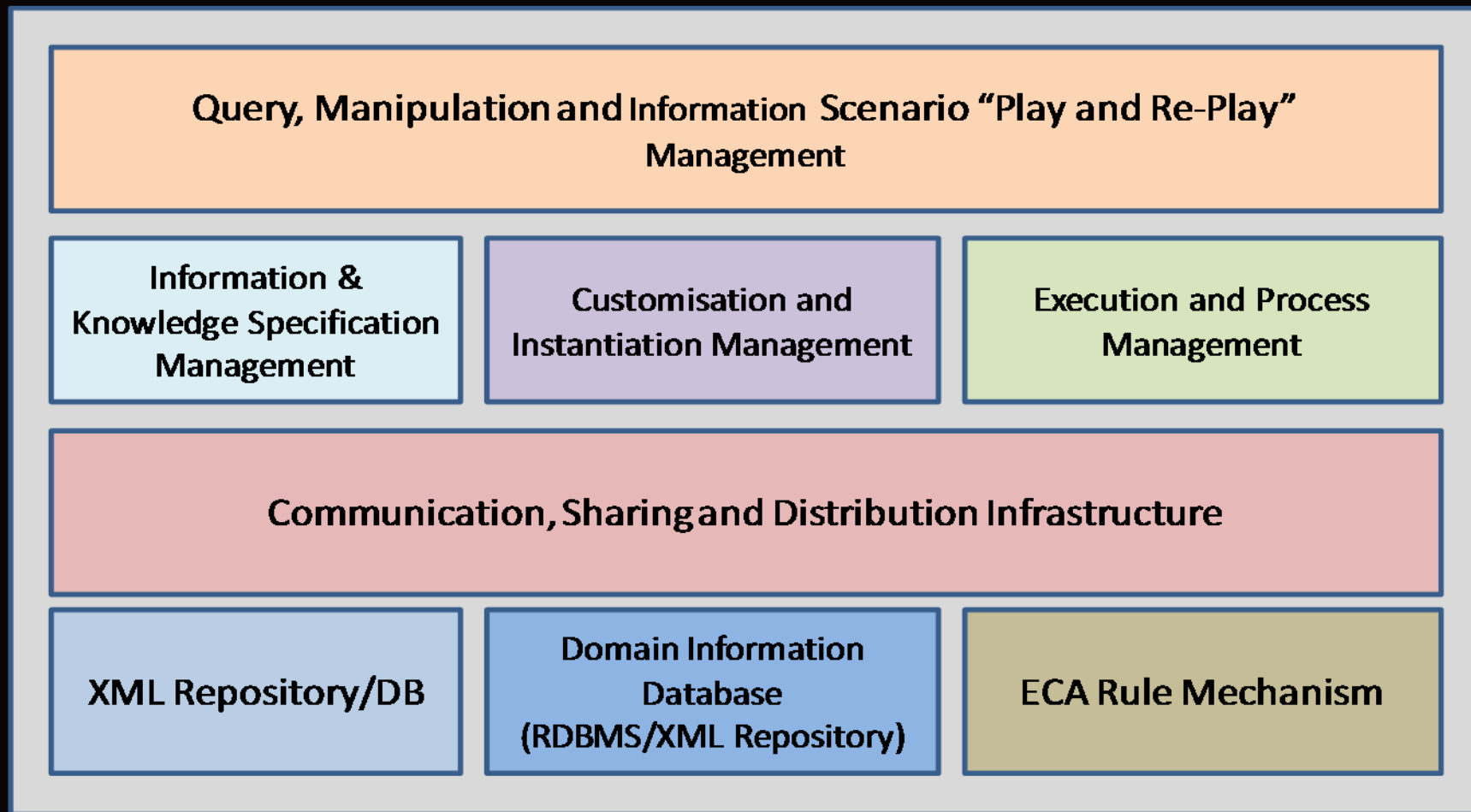


# The Role of ECA Rule Paradigm and XML

- Realizing the functionality of SEM Framework requires:
  - Seamlessly integrated and easily incorporated technologies
  - Support the monitoring process and distributed management
- Utilizing the ECA Rule Paradigm and XML provides a flexible environment for the management functions provided by SEM.
- These technologies provide support for the main components of AIM language.



# Conceptual Architecture for A Complex Information Management System



## Summary

- The requirements for managing the complex information
- A Management Support Framework for the Complex Information
- The Technologies supporting the Complex Information
- Complex Information Management System

Thank You