

# Information Exchange Framework (IEF)

September 2010

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Co-chair OMG C4I Domain Task Force



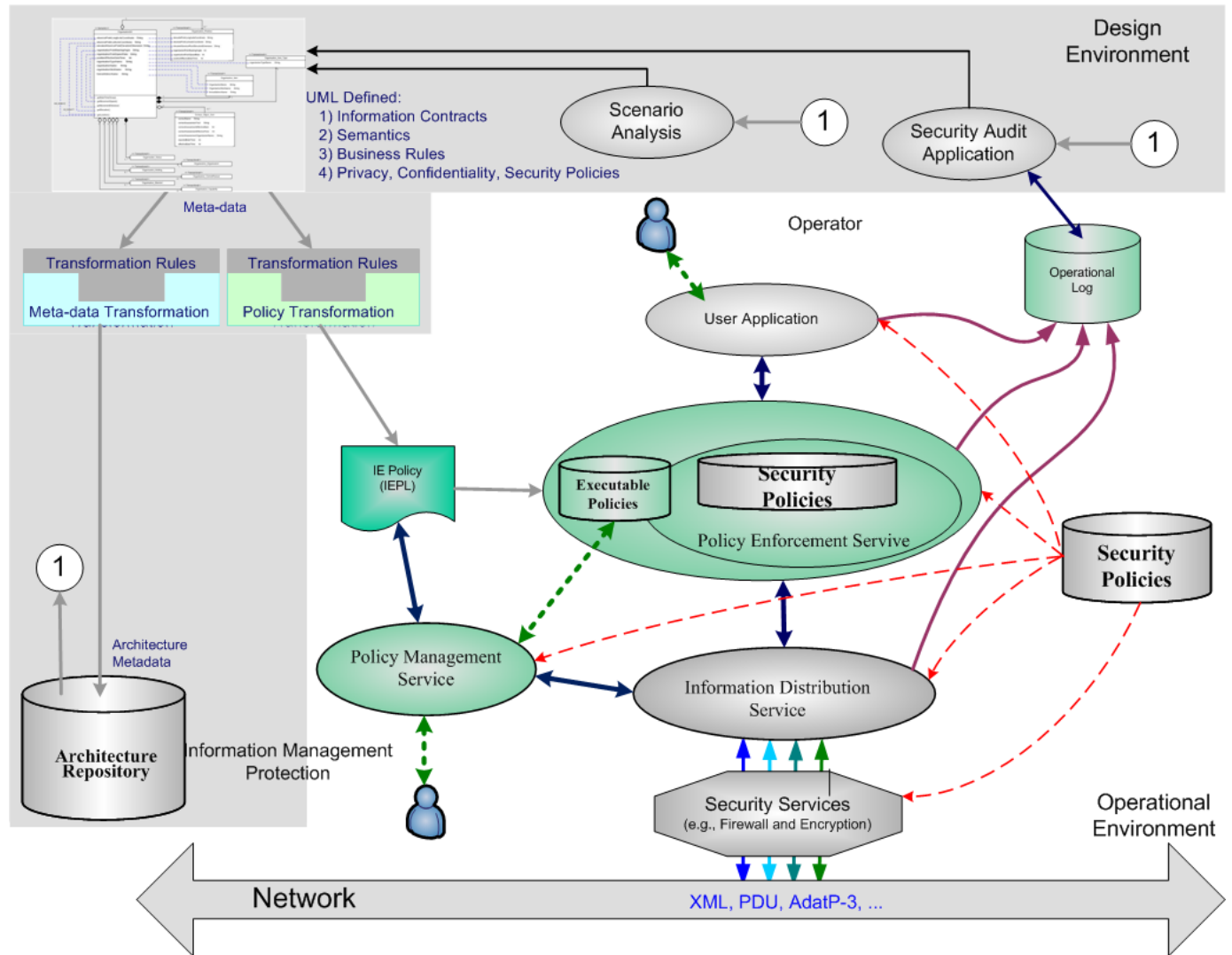
**ASMG**  
ADVANCED SYSTEMS  
MANAGEMENT GROUP

# IEF History

- Information Exchange Framework (IEF) absorbed two RFPs from the C4I SOPES Initiative in 2006-2007
- Joint effort between MARS/C4I/ECMEM

SOPES	IEF
<b>c4i/04-06-01: SOPES Information Exchange Mechanism (IEM) DRAFT RFP</b>	<p>mars/2010-08-03 IEF Policy Language (IEPL) RFP Ver 2</p> <p>mars/2010-08-04 IEF Information Exchange Policy Reinforcement Services (IEPES) RFP Ver 2</p>
<b>c4i/05-06-19: SOPES Information Exchange Policy &amp; Rules Management Services (P&amp;RMS) DRAFT RFP</b>	<p>mars/2010-08-05 IEF Policy Management Services (IEPMS) RFP Ver 2</p>
mars/2010-08-03 IEF Diagrams	

# IEF/SOPES Conceptual Architecture (Current Approach)



# IEF/SOPES Conceptual Architecture (Design to Audit; circa 2003/04)

**Information Exchange Model:**

- Aggregation Rules
- Marshalling Rules
- Transformations
- Dynamic and Fixed Filters
- Semantic Guards

**Storage of Architecture Models**

**Generation of Executable Rules**

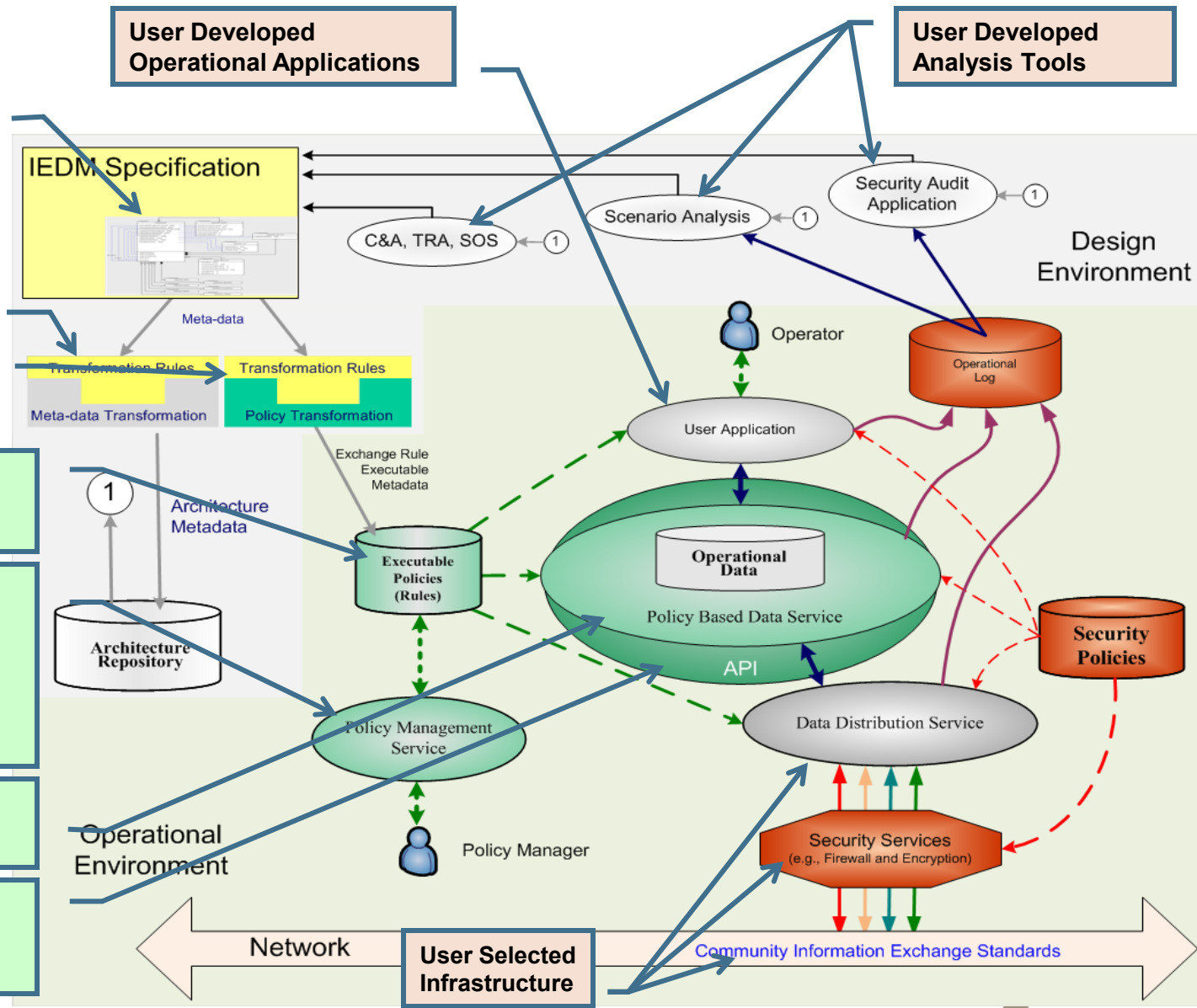
**Executable Version of Operational Information Exchange Rules**

**Runtime Control over Information Sharing:**

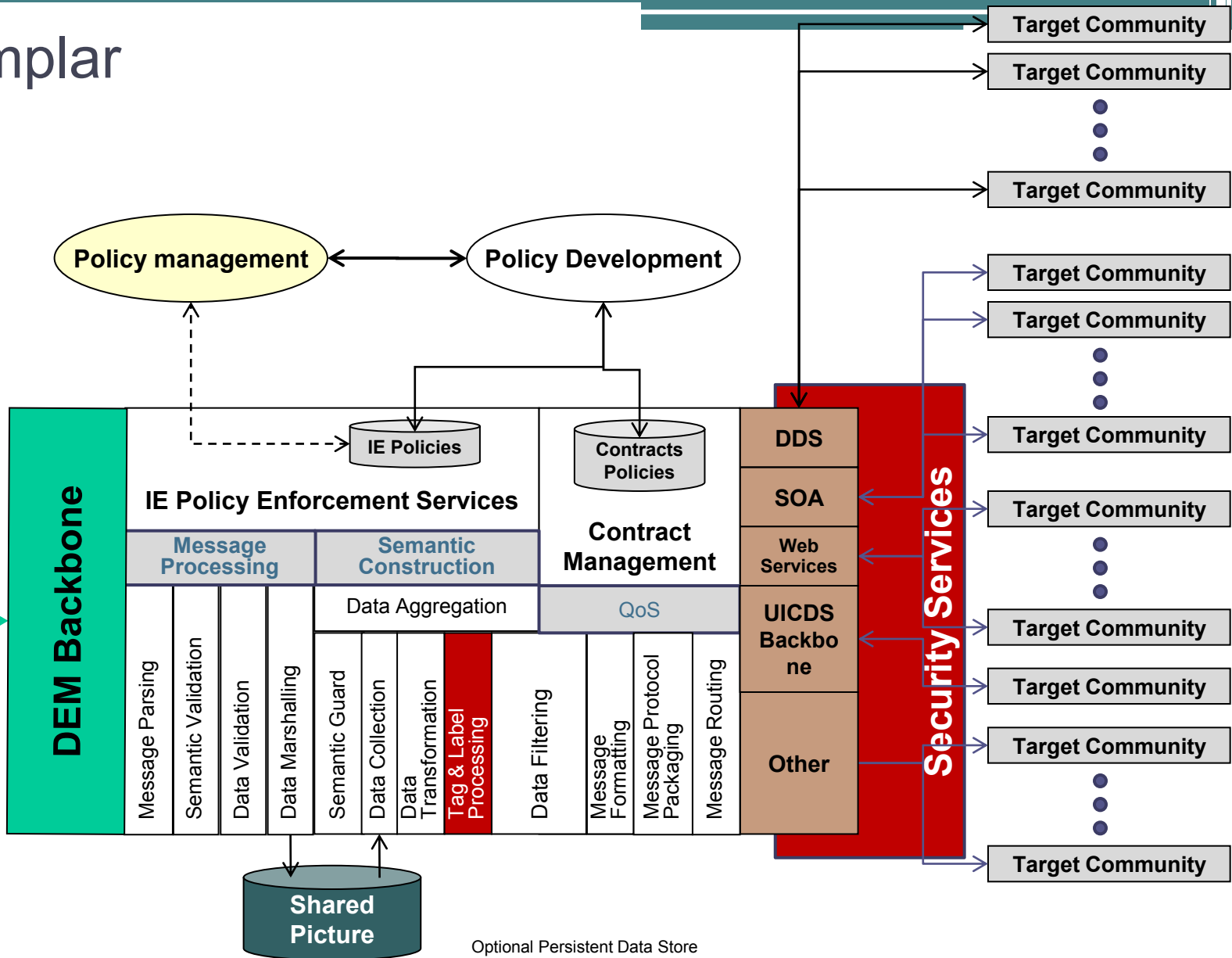
- COI Configuration
- Information Release Control
- Policy/Rule Assignment
- Policy Activation / Deactivation

**Policy / Rule Enforcement Services / Trusted Data Service**

**Application Programme Interface (API) to the Data Service**



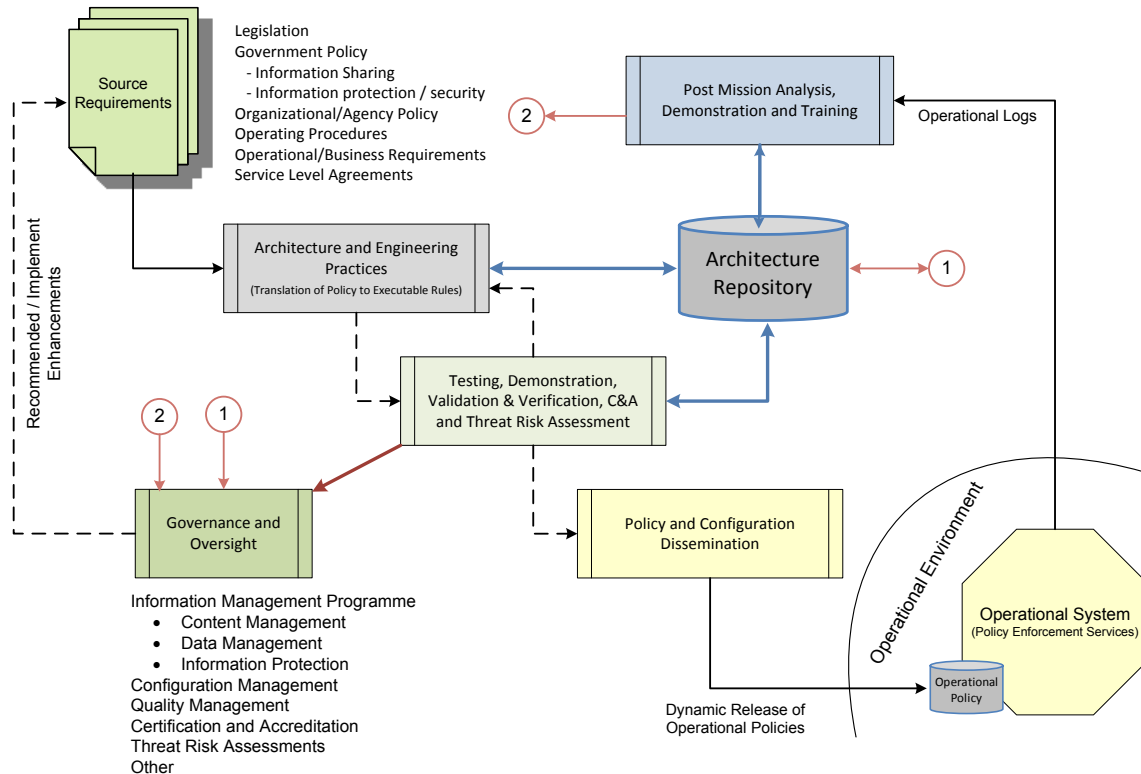
# IEF Exemplar



Optional Persistent Data Store

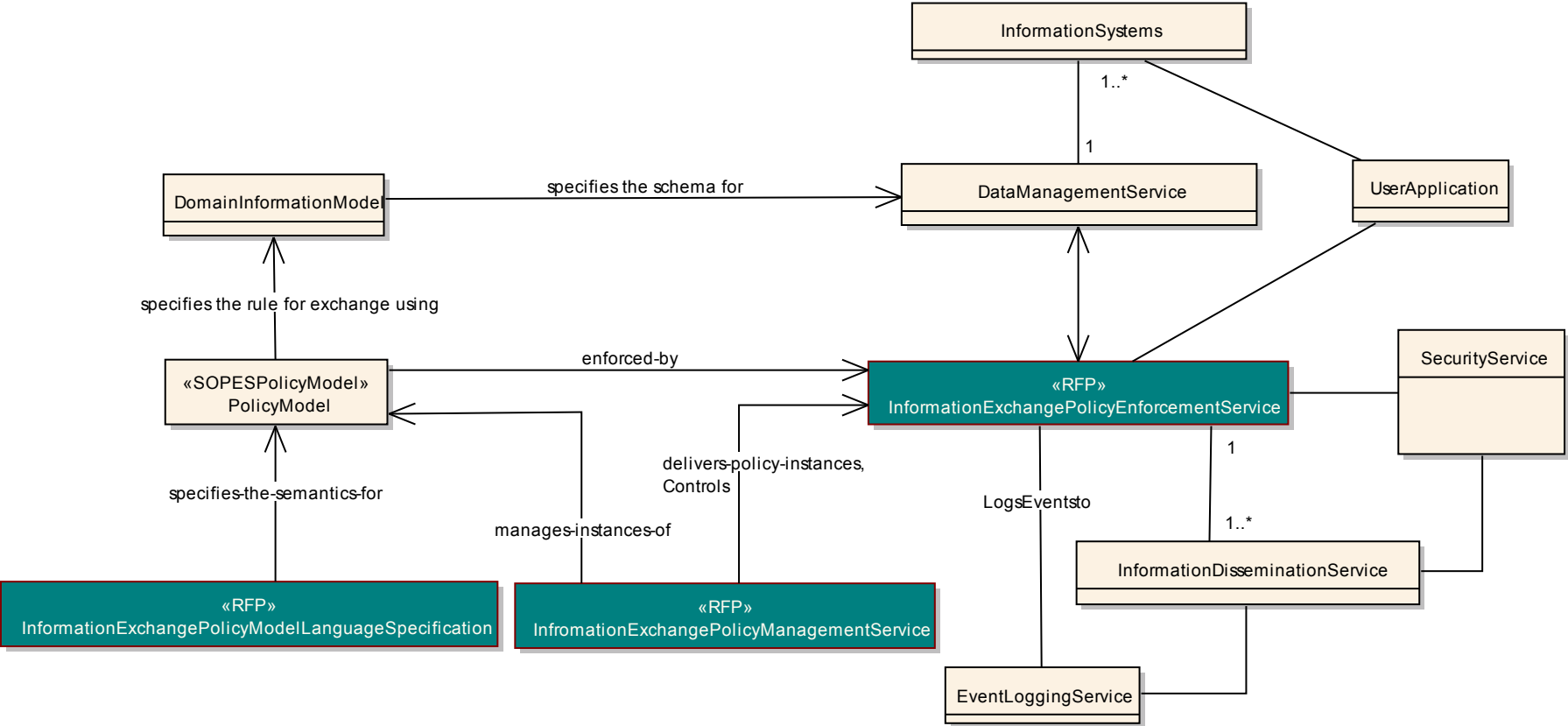
# IA Policy Life-cycle

- Traceability to legislative, regulatory, policy, ... requirements
- Derived from operational models
- Separation of operational rules from the enforcement applications
- Automated transformation of models into executable rules
- Aligned to standards architecture, modelling, development, etc ... best practices
- Architecture / Metadata Driven

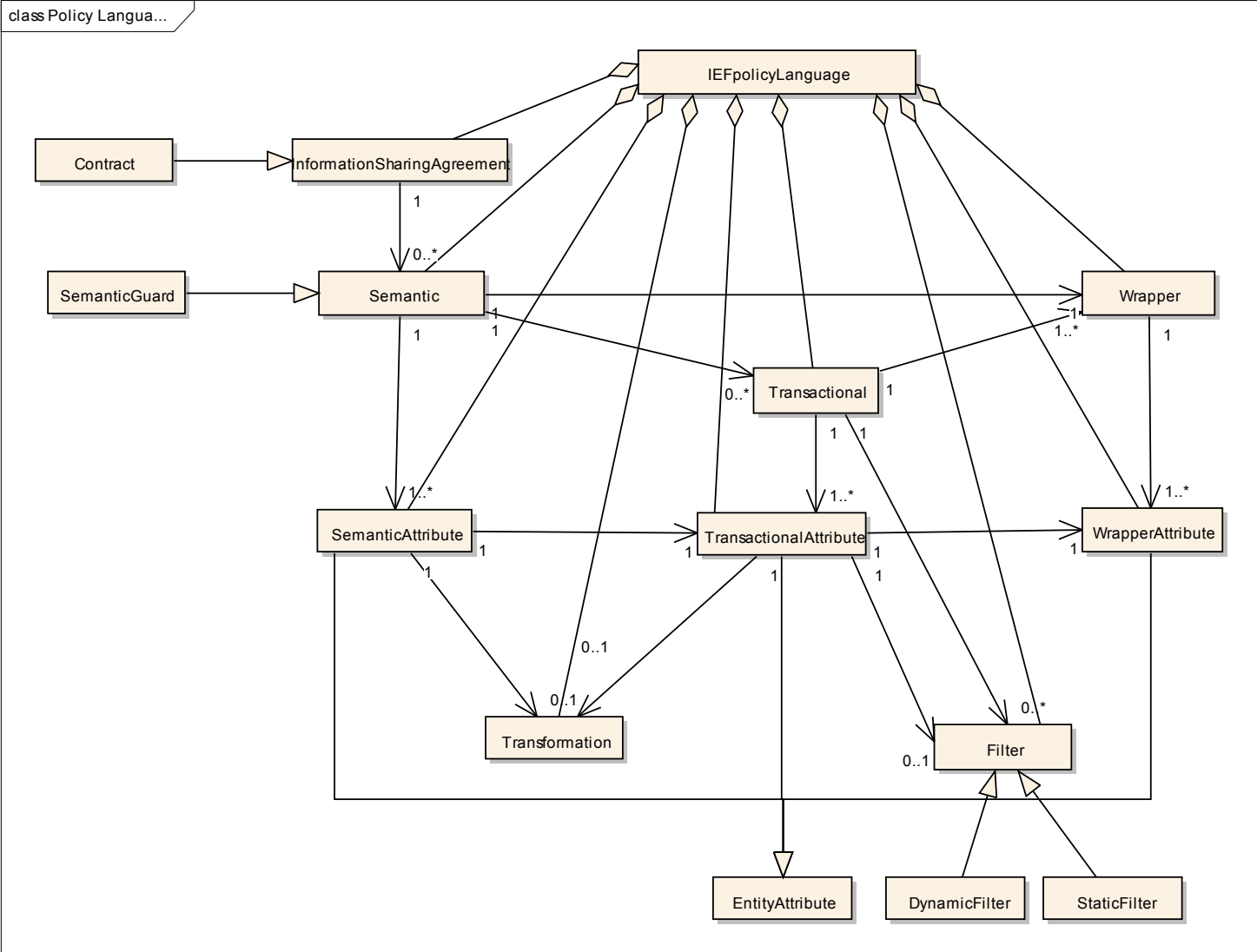


# IEF Overview

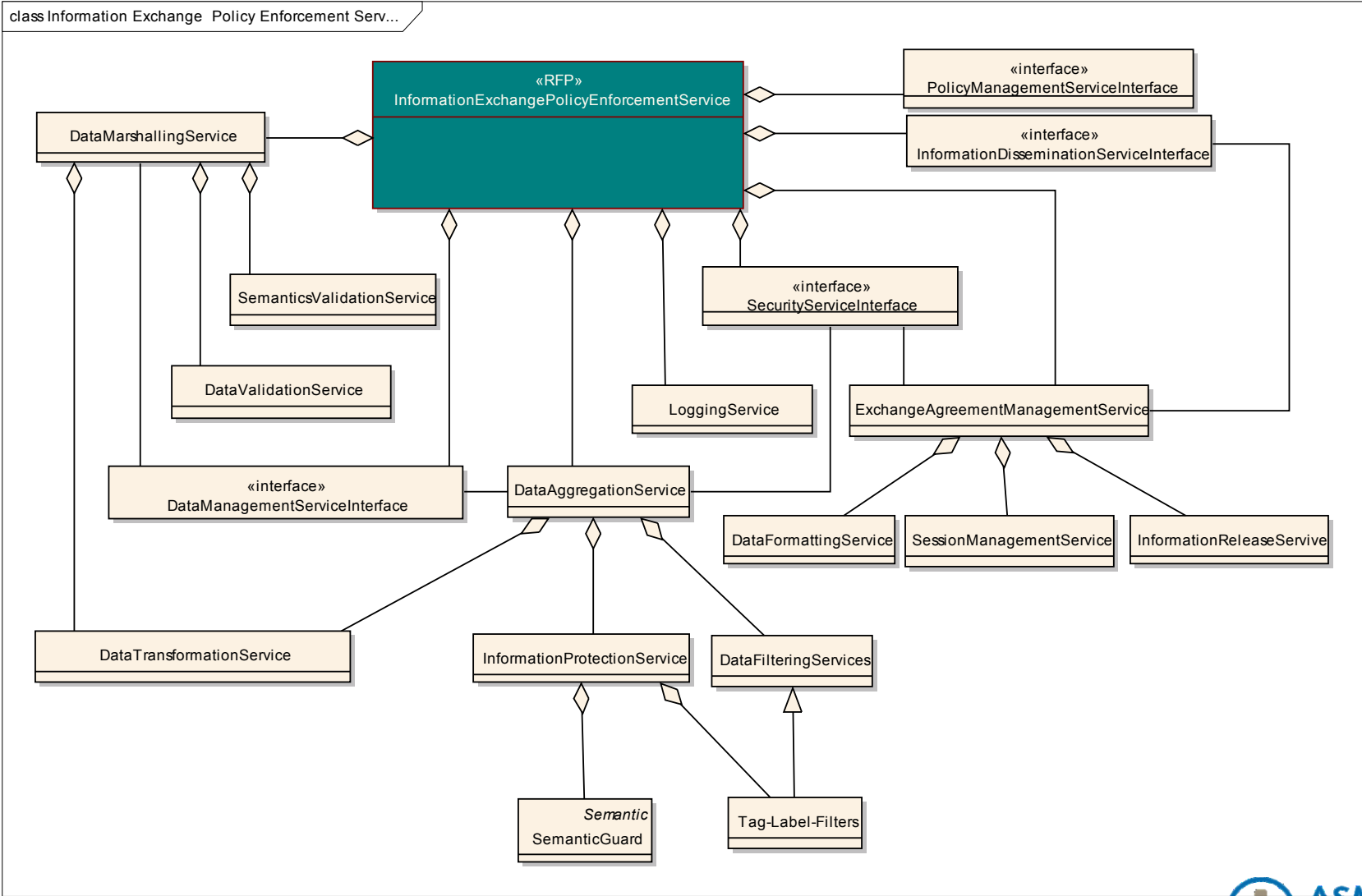
class IEF Context



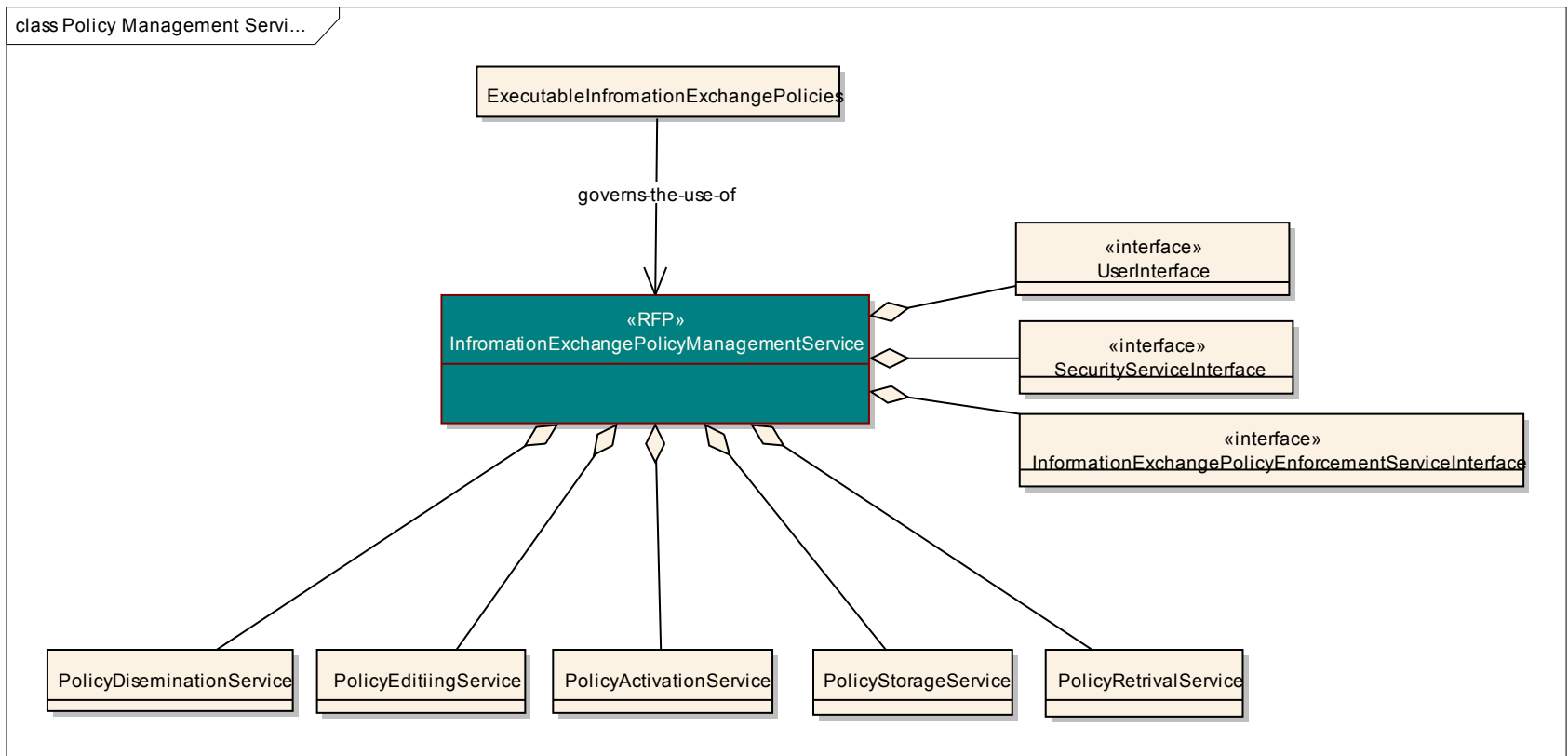
# Elaborating on IE Policy Language



# IE Policy Enforcement Service(s)



# IE Policy Management Service(s)



# WorkPlan

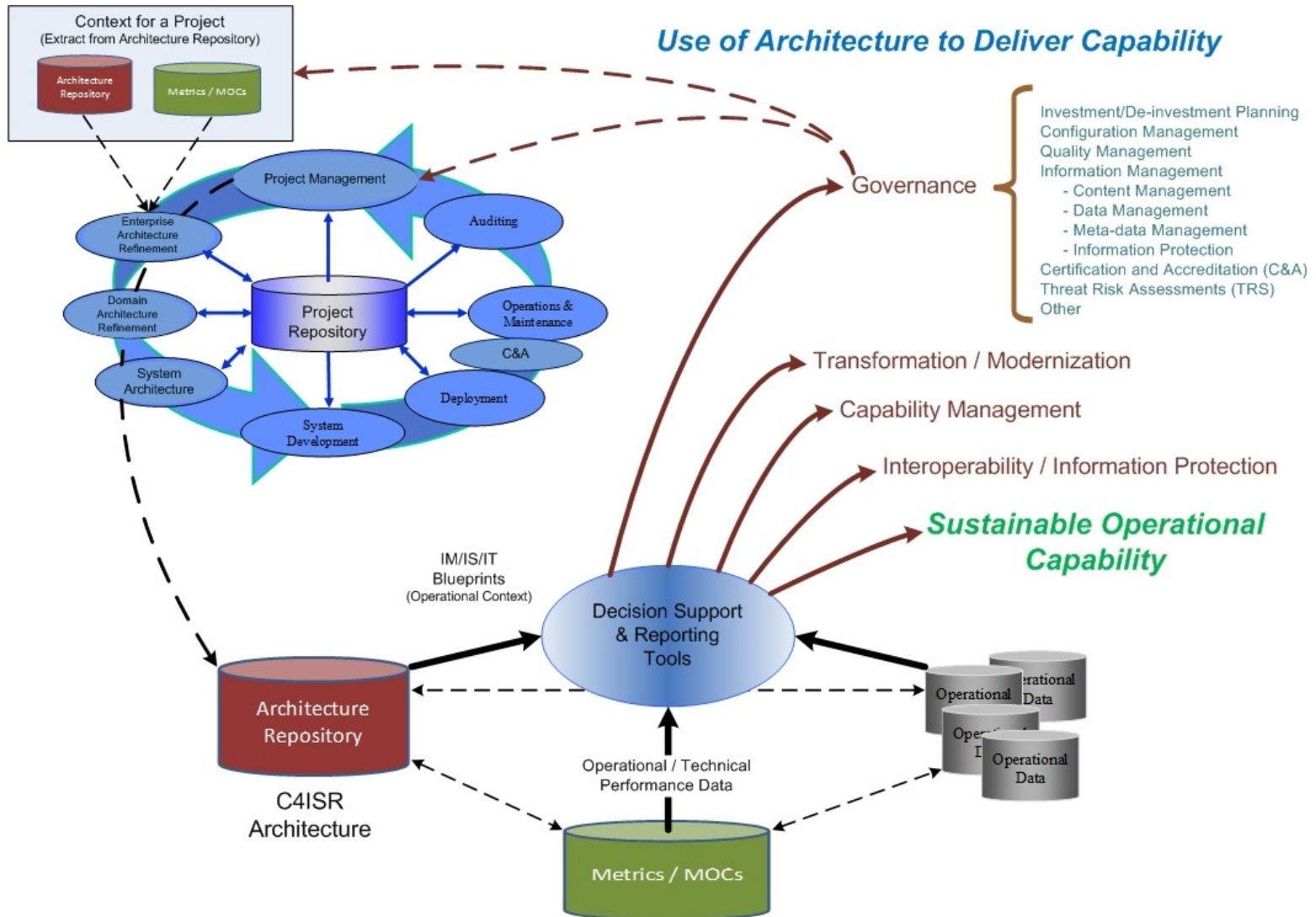
- **Drafted RPFs available for comments:**
  1. mars/2010-08-03 ( <http://www.omg.org/cgi-bin/doc?mars/2010-08-03> )  
IEF Policy Language (IEPL) RFP Ver 2 -- an IN-PROGRESS DRAFT based on revised Information Exchange Framework (IEF) model produced during the IEF WG meeting in Minneapolis, June 2010.
  2. mars/2010-08-04 ( <http://www.omg.org/cgi-bin/doc?mars/2010-08-04> )  
IEF Information Exchange Policy Enforcement Services (IEPES) RFP Ver 2 --an IN-PROGRESS DRAFT based on revised Information Exchange Framework (IEF) model produced during the IEF WG meeting in Minneapolis, June 2010.
  3. mars/2010-08-05 ( <http://www.omg.org/cgi-bin/doc?mars/2010-08-05> )  
IEF Policy Management Services (IEPMS) RFP Ver 2 - --an IN-PROGRESS DRAFT based on revised Information Exchange Framework (IEF) model produced during the IEF WG meeting in Minneapolis, June 2010.
  4. mars/2010-08-03 ( <http://www.omg.org/cgi-bin/doc?mars/2010-08-06> )  
IEF Diagrams -- a set of supporting UML diagrams used in the 3 Draft (V2) IEF RFPs.
- **Comments on RFP**
  - This meeting and the next (December 6-10, 2010 - Santa Clara)
- **Release RFP**
  - IEPL December 2010
  - IEPES March 2011
  - IEPMS June 2011
- **Detailed Discussion of RFPs in the IEF WG (Tuesday 1:00 – 3:30)**

# Questions and Answers

## **Any Questions Contact**

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# Application of Architecture



# SOPES/DDS /JC3IEDM

