

# Descriptions, Ontologies, Collaboration, and Governance

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# HR EIW

- Goal – Build a next generation information management capability
  - Enable reporting across all DoD HR systems (there are many)
  - Enable discovery of HR information and processes
- Funded By: United States Department of Defense (DoD)
  - Business Transformation Agency (BTA)
  - Army CIO
- Tools used:
  - Knoodl – web-based collaborative ontology development
  - M3O – web-based business process management and analytics
- Developed By:
  - Revelytix Inc – Software (Knoodl) and Services
  - Spry Enterprises – Services
  - Vitria Technology – Software (M3O)

# Description

- Discovery, reuse, interoperation, and integration all depend on description
  - If we do not *know* what something is we cannot possibly know how to integrate it with other things or even know how it should be used
- If we describe everything, we are in a position to have a knowledge-based web
  - answer any question
  - integrate and interoperate
- RDF & OWL are the technology used to describe things
  - both machines and people can understand the descriptions

# Ontologies

- Ontologies define the (machine-readable) language used to describe things
  - The more reuse of ontologies, the better
  - The more mappings between ontologies, the better
- Domain Vocabulary
  - Ontology for describing the information of a domain
  - Used to describe all information needs
  - Shared across descriptions of many kinds of things
- Process Ontology, Data Source Ontology, Web Service Ontology, etc.
  - Ontologies needed to describe particular kinds of things
  - Enables description of what a thing does and how it does it

# Collaboration

- As many people as possible should be involved in the development of ontologies
  - Collaboration on the Domain Vocabulary is most important because it is shared by the most stakeholders
  - Consensus on the meaning of terms used within and across domains is paramount
- Collaboration can not be successful without governance

# Governance

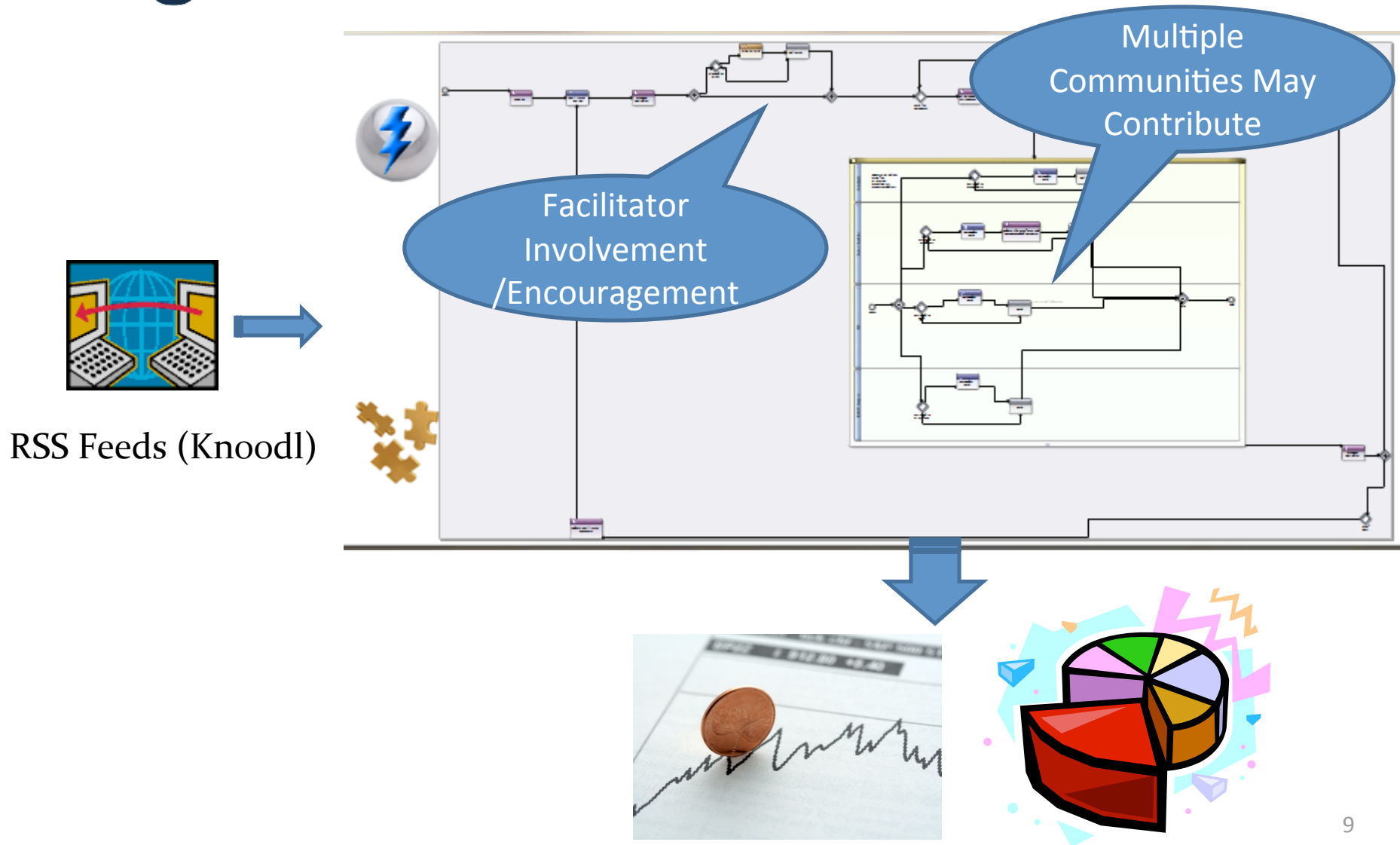
- Give oversight into ontology development activities
  - Provide for accountability
  - Capture metrics to understand and encourage community participation
  - Ensure that everything is described to the degree that is necessary for discovery and interoperability
  - ROI is not obvious to individual stakeholders therefore they lack an incentive
- Ensure that the right people are contributing to the development of an ontology
  - Again, ROI is not obvious to individual stakeholders therefore they lack an incentive
- Ensure that high-quality ontologies are being built
  - Ontologies are highly-structured artifacts and steps must be taken to ensure that they will function effectively when they are deployed

# HR EIW Current Status

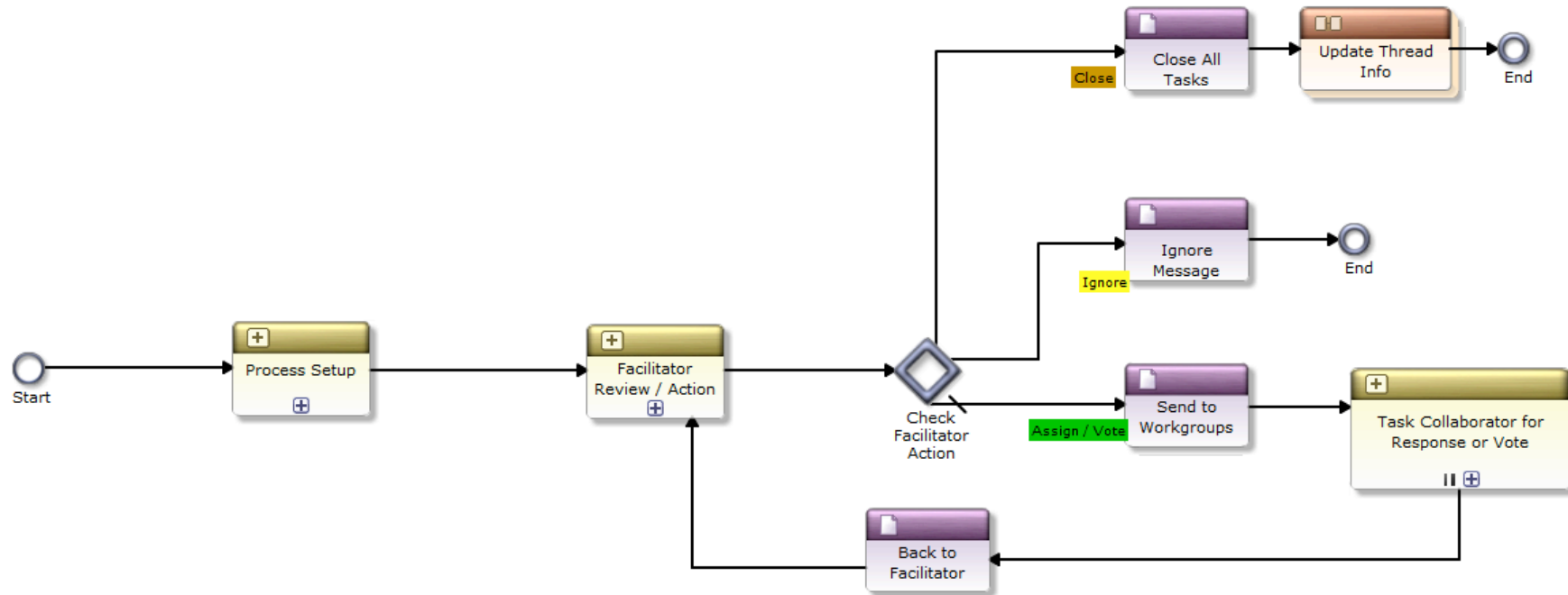
- Domain Vocabulary
  - Core Human Resource Information Standards (CHRIS)
  - Heavy collaboration
- Mapping to Data Sources
  - D2RQ Mapping Language
  - Defense Integrated Military Human Resource System (DIMHRS) Data Model
  - Heavy collaboration
- Business Process Ontology
  - Based on BPMN
  - Business Process Summary Documents
  - DIMHRS Workflow
  - Heavy collaboration
- Rules Ontology
  - Based on RIF

Demo

# High-Level Process



# Process Overview



# Facilitator Action

**Facilitator - Collaborator Response**

[Link to Original Discussion](#)

Summary

Sub-Domain

Due Date

Priority

At Risk

Risk Reason

Email Body Contents  
 Dear Sir or Ma'am:  
 The HR EIW team requests you respond to the discussion topic: <SUMMARY/TOPIC GOES HERE>  
 You may respond by logging into <insert link to M3O workflow page> and selecting the item entitled

Voting Instructions

Action

Assign

Put to Vote

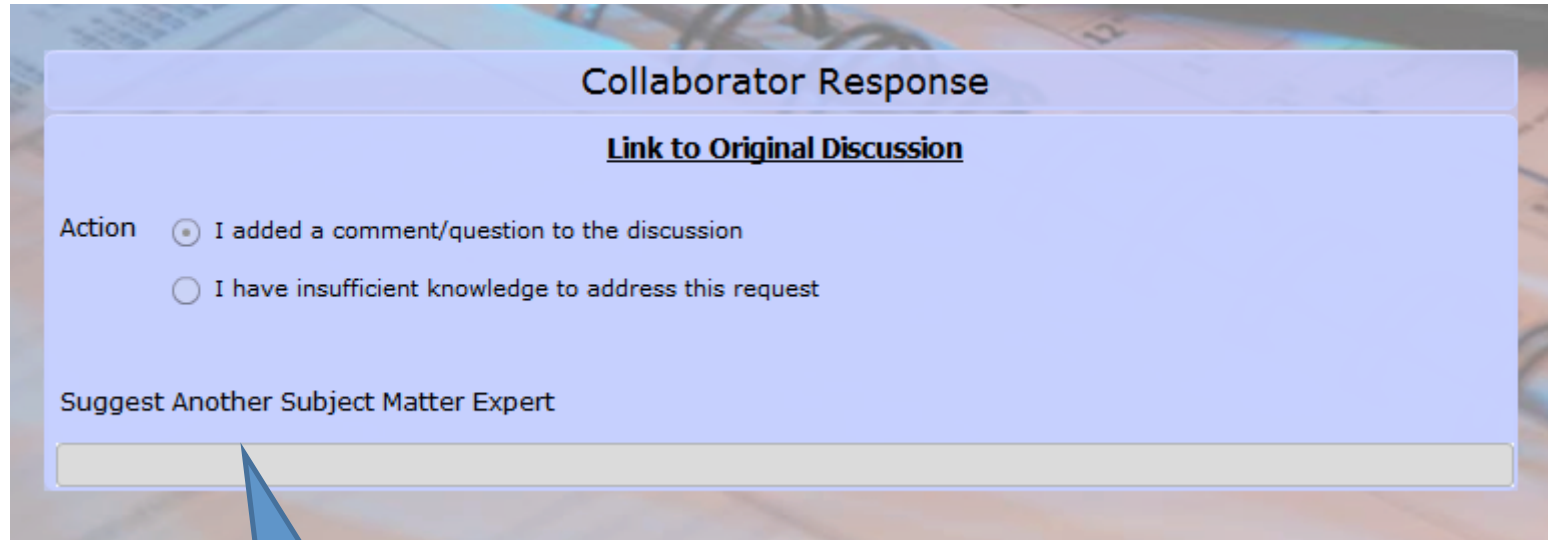
Close

Ignore

Assignment

Selected	Organization	Selected	Resource
No	DIMHRS-PMO	No	mlang
No	OSR-PR-IM-MilitaryPersonnel	No	mlofquist
No	Transition-IPT	No	jlemmon
No	OSR-PR-IM-MilitaryCommunity-FamilyPi	No	asunderland

# Response – General Collaboration



Collaborator Response

[Link to Original Discussion](#)

Action  I added a comment/question to the discussion

I have insufficient knowledge to address this request

Suggest Another Subject Matter Expert

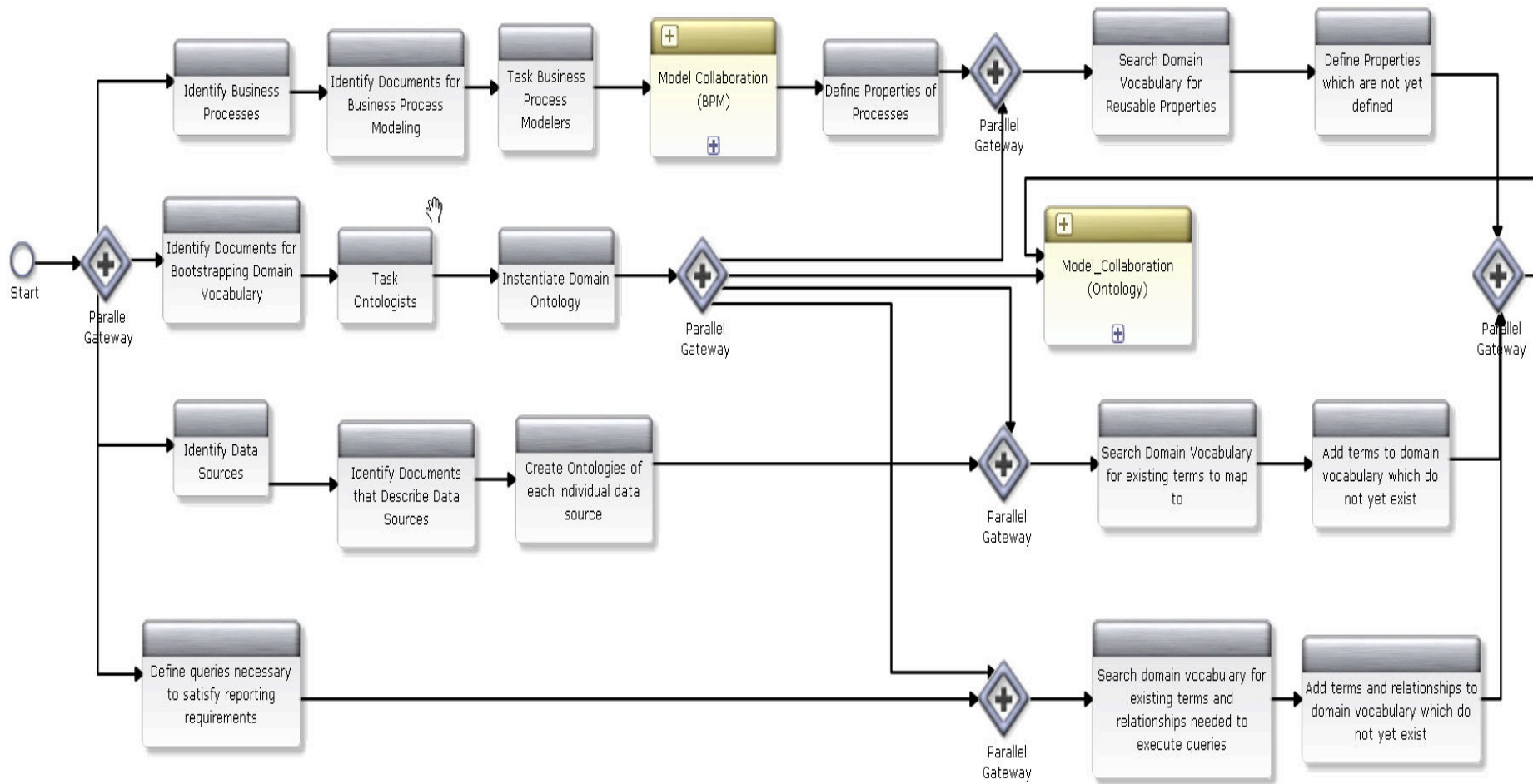
Always have the ability to suggest others

# Response - Voting

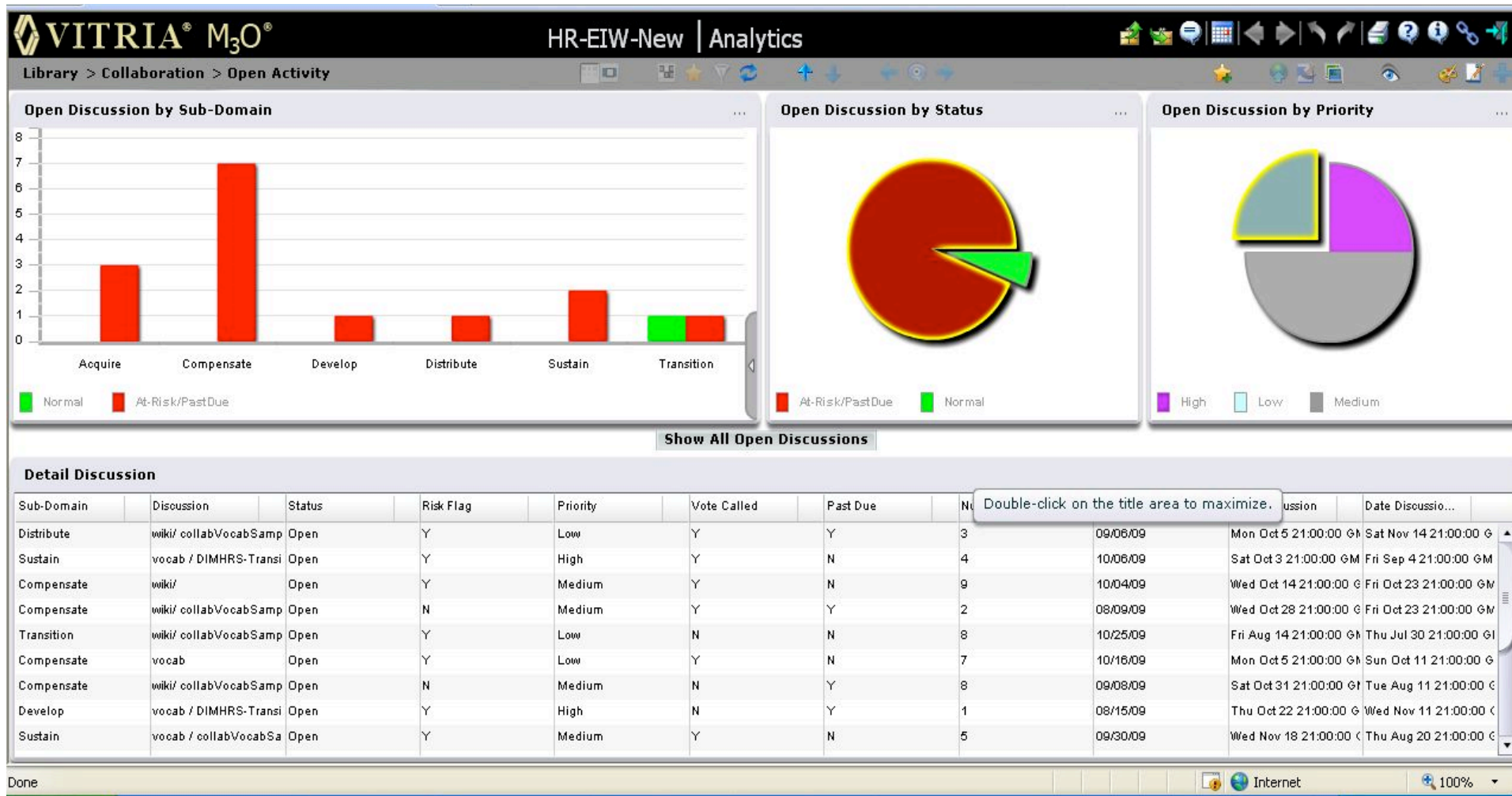
Collaborator Voting	
<a href="#"><u>Link to Original Discussion</u></a>	
Voting Instructions	Please choose whether to use "Member" as the descriptor for a servicemember.
Action	<input type="radio"/> Agree <input type="radio"/> Disagree <input type="radio"/> No Comment
Justification	



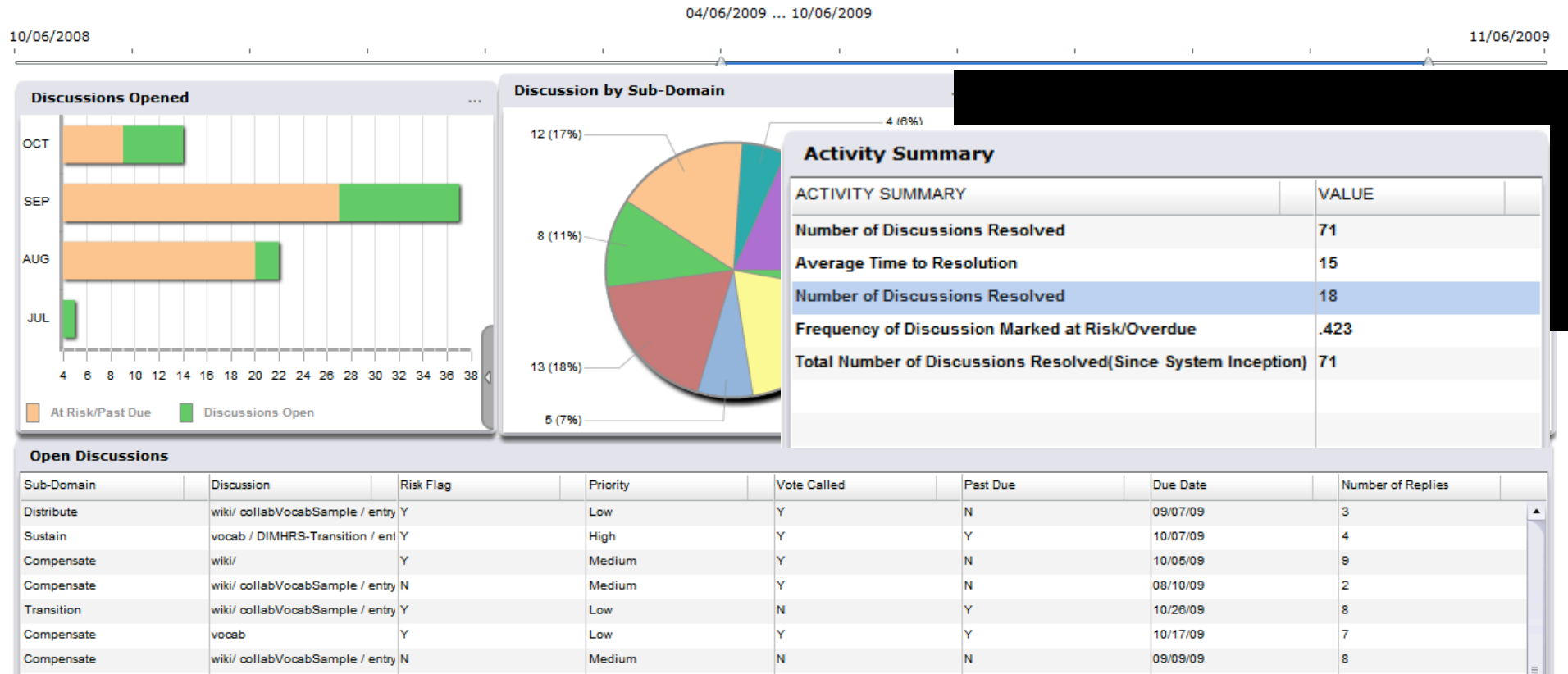
# Full COI Governance Process



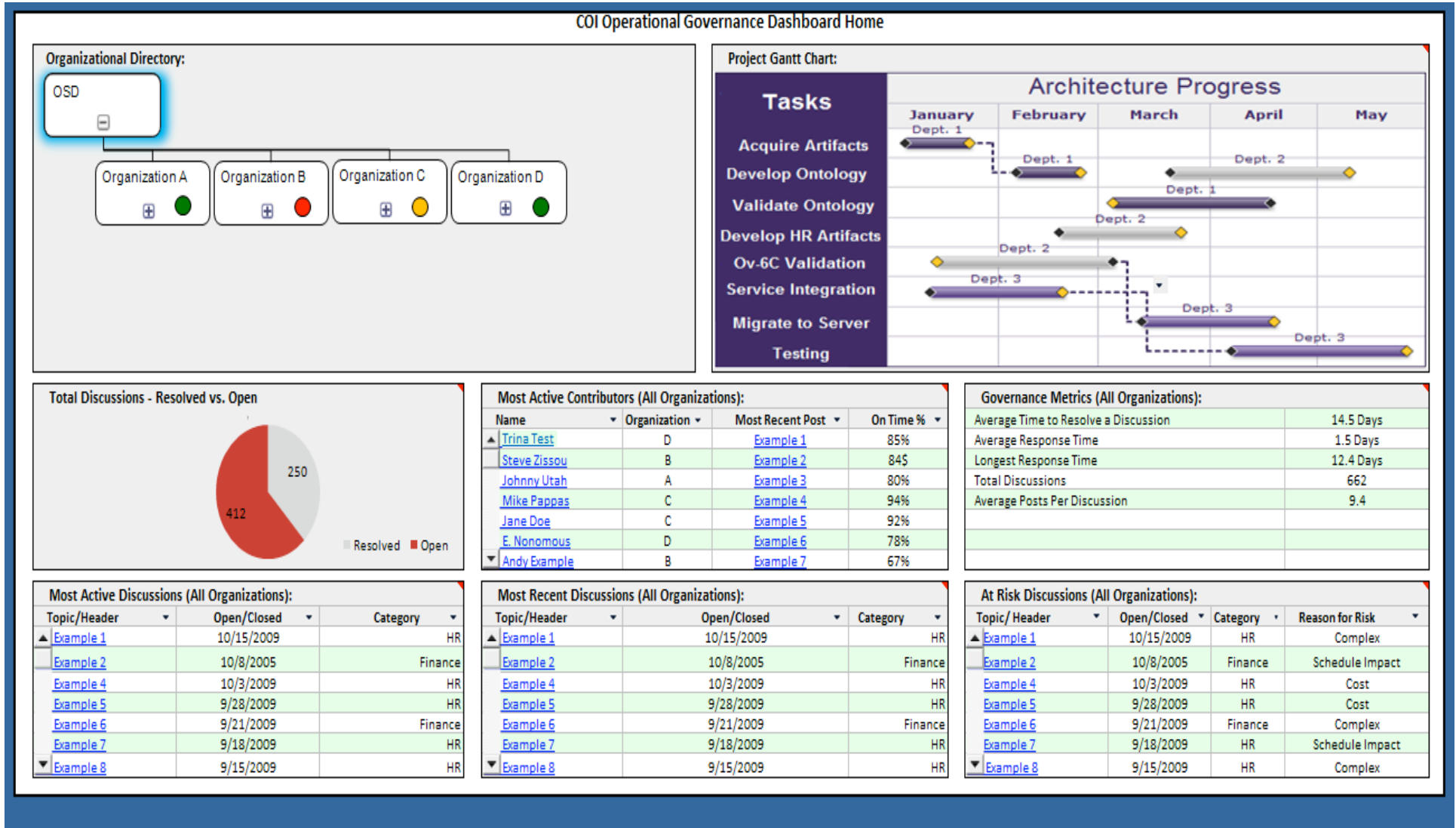
# Current Activity Dashboard



# Historical Activity Dashboard



# COI Project Management Dashboard



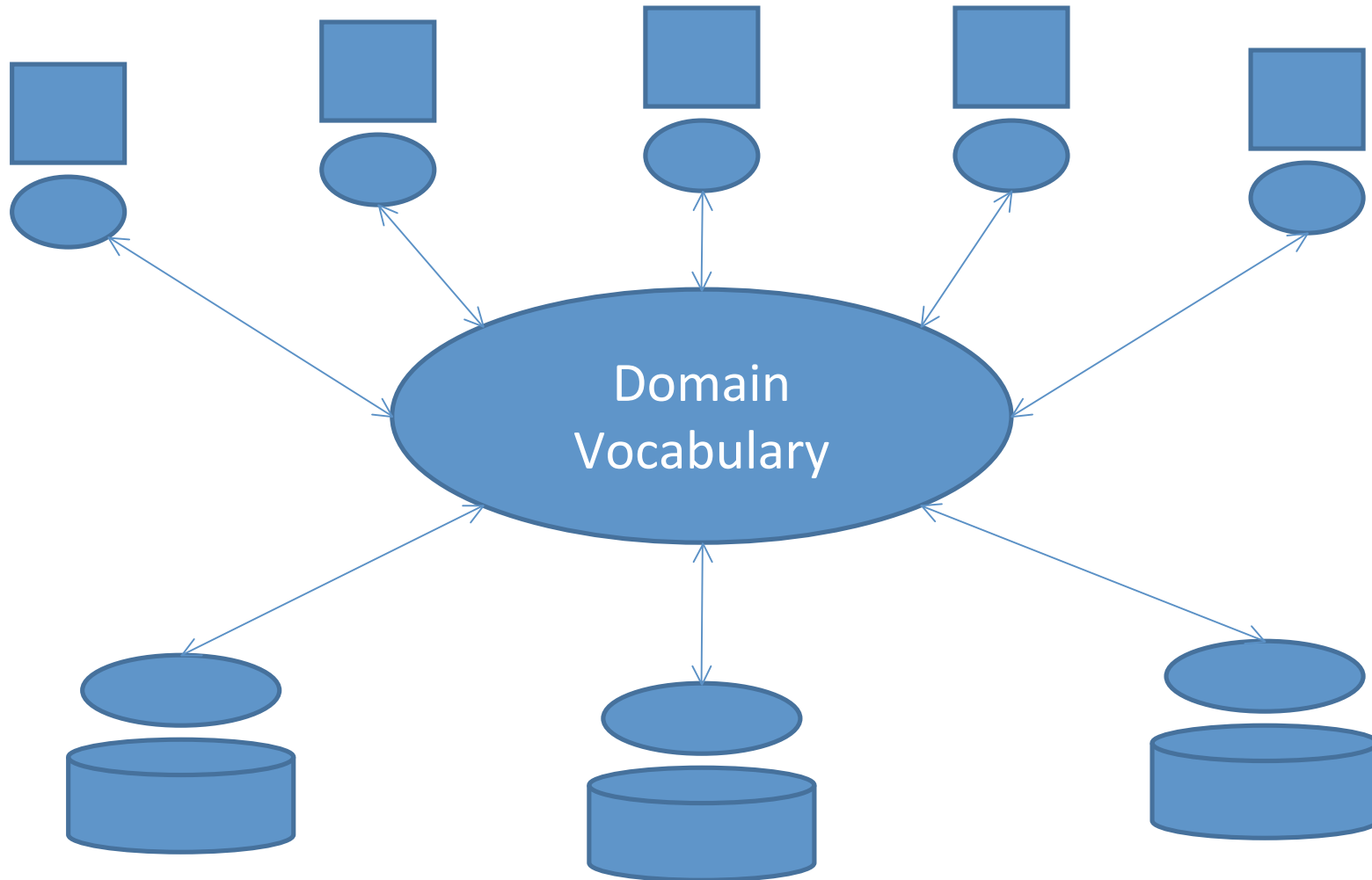
[www.revelytix.com](http://www.revelytix.com)

[info@revelytix.com](mailto:info@revelytix.com)

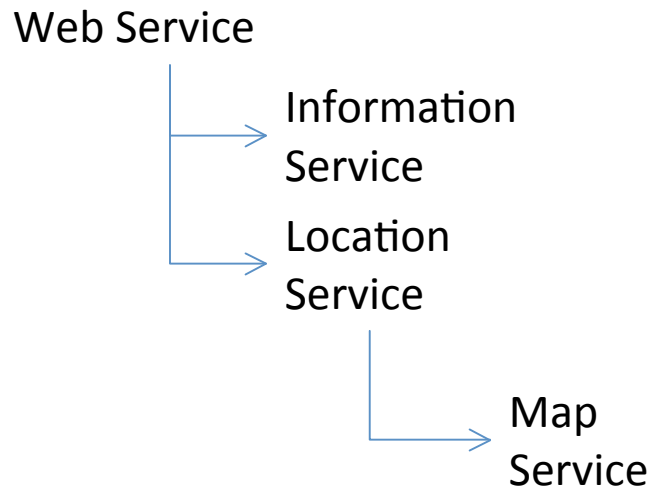
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Backup

# Information Federation



# Discovery



## **Taxonomy:** *Way beyond XML*

- class hierarchy is only a small portion of semantic description of terms
- when you find look for a “map service” you know you will find *all* chat services and *only* chat services

**Query:** Find the exact service you are looking for by specifying the values for properties

- Properties based on definition of ontology
- Information flows into and out of service defined in terms of common vocabulary

Property	Value
Data-In Format	KML
Data-Out Format	JPEG
Min Resolution	800x600
Max Resolution	1920x1080
Access Protocol	http

# Domain Vocabulary

- The Domain Vocabulary is the common language of the information systems of your enterprise
- When systems need to communicate, this is the language they will use
- Bottom-up
  - Build your Domain Vocabulary to meet a use case
  - Extend when needed
  - Map to other Domain Vocabularies when needed
- Collaboration
  - As many people as possible must be involved in the development of Domain Vocabularies and in the description of things
- Governance
  - All things must be described
  - All people must contribute to collaboration