Accelerating the Model Driven Enterprise

No Magic, Inc.

Emerging Technology Subcommittee (ETS) Workshop - 30 November 2010

Agenda

- Company Overview
  - Clarence Moreland, COO
    - Cameo Suite
    - Cameo Team Server
    - Cameo Simulation Toolkit
    - Cameo eCompliance
    - MagicDraw UML – Gateway to Architecture™
- UPDM Product Demo
  - Daniel Brookshier, Chief Architect
- Simulation Toolkit Product Demo
  - Gary Duncanson, President and CEO
- Conclusion
  - The Truth is in the Models™

Company Overview

No Magic Inc.

- Founded in 1995
  - Privately held
  - Veteran Owned
- Revenue by geographic region
  - North America: 45%
  - Europe: 45%
  - Other: 10%
- Cameo Suite
  - Plus
  - Cameo Requirements Cameo Team Server
- Cameo eCompliance Server
- **OMG® standards compliant products for**
  - UML 2
  - Teamwork Collaboration
  - Enterprise Architecture
  - Systems Engineering
  - Parametrics
  - Simulation
  - SOA
  - Ontology
  - BPMN 2.0
  - Data Modeling
  - Requirements Management
  - Model Driven Development
  - Reverse Engineering
  - Interoperability
  - Storyboarding
  - And many other 3rd party and open source

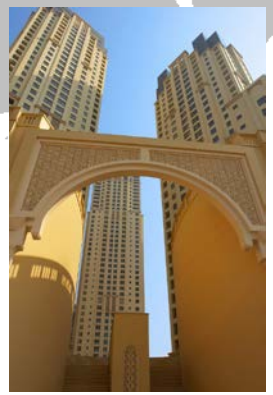
No Magic Worldwide

North American headquarters & operations located in Plano/Dallas, TX
European operations located in Kaunas, Lithuania
Asian operations located in Bangkok, Thailand
Middle East operations to be located in Dubai, UAE in 2011

Kaunas, Lithuania

Plano,TX

Dubai, UAE



Bangkok, Thailand

No Magic Solutions

Products	Custom Software Development
Training	Consulting

Modeling, Simulation & Analysis

Products: MagicDraw & Cameo Suite*
Custom Software Development: U.S., Europe, Asia
Consulting: On site and online consulting offered globally
Training: On site, online and classroom training delivered globally

*Products include: UPDM Plugin, SysML Plugin, ParaMagic Plugin, Cameo SOA+, Teamwork Server, Cameo Requirements+, Cameo Team Server, Cameo DataHub, Cameo eCompliance, Cameo Simulation Toolkit, Cameo Inter-Op, M2Code, M2pring, M2Flex and coming soon - Cameo Ontology

No Magic Product Differentiators

- Standards compliance
- Vendor presence & vision
- 'Thought-leader' in standards and techniques
- Exceptional productivity, usability & ease of use
- Interoperability "Industry wide" – NOW!
- Open API and many 3rd party integrations
- Platform independence
- Top notch customer support
- No vendor lock-in-Products that cover operations from inception to production and maintenance

No Magic Customers (partial list)

Aerospace / Automotive	Consumer goods / Entertainment	Government	Healthcare, Pharmaceuticals
Boeing DaimlerChrysler Lockheed Martin LTU Lufttransport Unternehmen Rolls Royce Porche/VW GM Ford NASA Bombardier Inc.	COPA ITELLIUM Systems & Services NuSkin Macy's Chick Fil-A ESPN Sony Disney Johnson & Johnson Ubisoft Electronic Arts Google Red Hat	Australian Securities & Invest SITA (State Information Technology Agency) State of New Jersey, Office of IT NSA Department of Energy Sandia Labs JPL NIST GSA U.S Forest Services CSE, Government of Canada	Bear Creek Corporation Electronic Healthcare Systems LION bioscience AG VSA GmbH Boston Scientific GE Healthcare Canada Health Infoway
IT / Consulting		**Education**	**Oil / Energy**
BEA Systems IBM Multi-Support Saguaro Technology Sun Microsystems Trigent Software VERMEG Siemens Mitre Corp Google ORACLE Deloitte Consulting Wipro	CSC SAP EMC Red Hat Fix Protocol Tibco Microsoft Accenture Capgemini SAIC PricewaterhouseCoopers Gartner	MIT UC Berkley Yale University Purdue University British Columbia University Indiana University U.S. Military Academy The University of Texas Johns Hopkins Univ Georgia Tech University of Waterloo (Ontario) UC San Diego	DynMcDermott Petroleum Shell Canada Limited Duke Energy Shell Europe Oil Products British Petroleum AESO,Canada

No Magic Customers (partial list – cont.)

Defense

Department of Defense
Canada National Defense
U.S Army
Coast Guard
U.S Navy
U.S Military Academy at West Point
USN Post Graduate School
USAF

BAE Systems
Northrop Grumman
Rockwell Collins
SPARTA/Cobham
Raytheon
General Dynamics
L3 Communications
B&W Pantex
ITT
NEWTEC

Manufacturing & Electronics

Apple
Honeywell
XEROX
Nikon
John Deere
General Electric
Hewlett-Packard
TRANE

Siemens AG
Mitsubishi Electric
Samsung Electronics Research Institute
Research In Motion
Convergys
ABB

Financial Services

ACORD
Bancoval
Banque COVEFI
Barclays Global Investors
Bloomberg
Citigroup
CitiMortgage
Generali
Lincoln Financial
HSBC

Credit Suisse
Ford Credit
GMAC BANK
Nykredit Data
Prima-solutions
Textron Financial Corp
Thompson Financial
Fidelity Investments
Pay Chex
Prudential
SWIFT

Telecommunications, Transport, Logistics

Avaya
Covad Communications
DHL
DNA Finland Oy
Eurotel Praha
Nokia
NEC
Nortel

Expeditors
Maersk Data Defence
Port Infolink B.V.
Salomon Automation
Teligent AB
Verizon Wireless
Reuters
ATX Group

Specializing in Your Domain

Cameo Suite

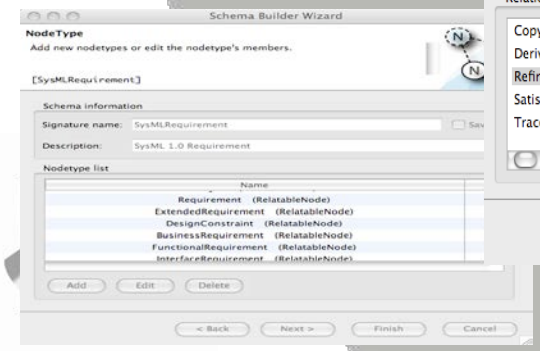
Cameo™ Suite, with MagicDraw as it's core, provides an Integrated Tool Chain (ITC) to support the entire enterprise system development lifecycle

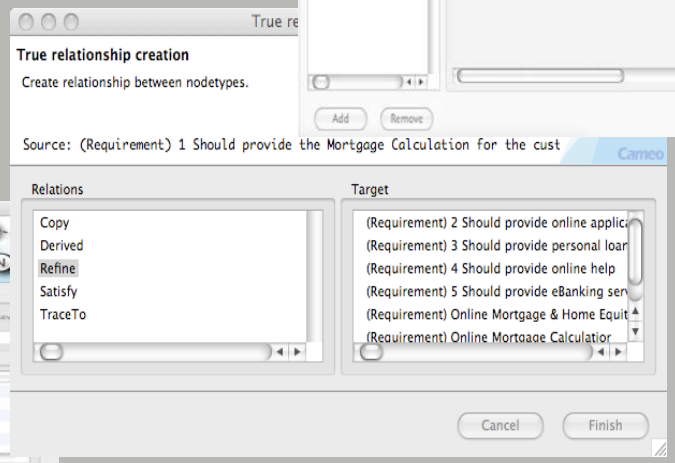
Open Traceability

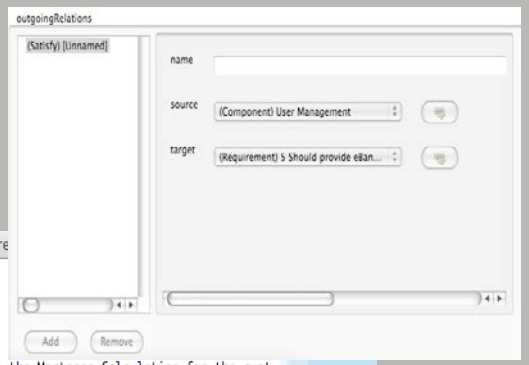
Build your own domain specific relationship

Define a relationship attribute for your domain needs

Trace all elements with confidence





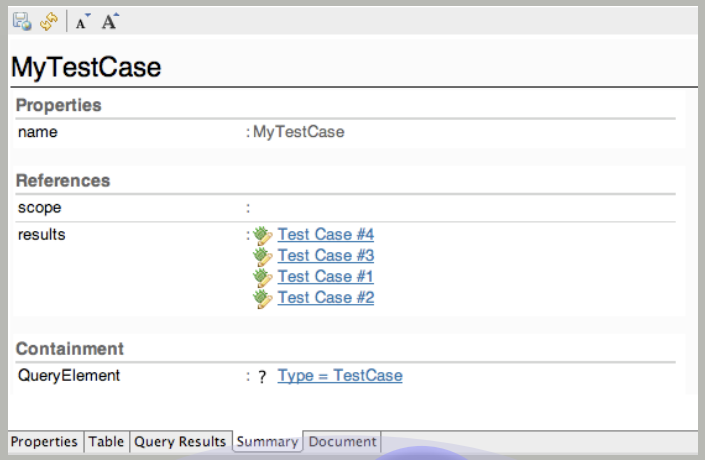


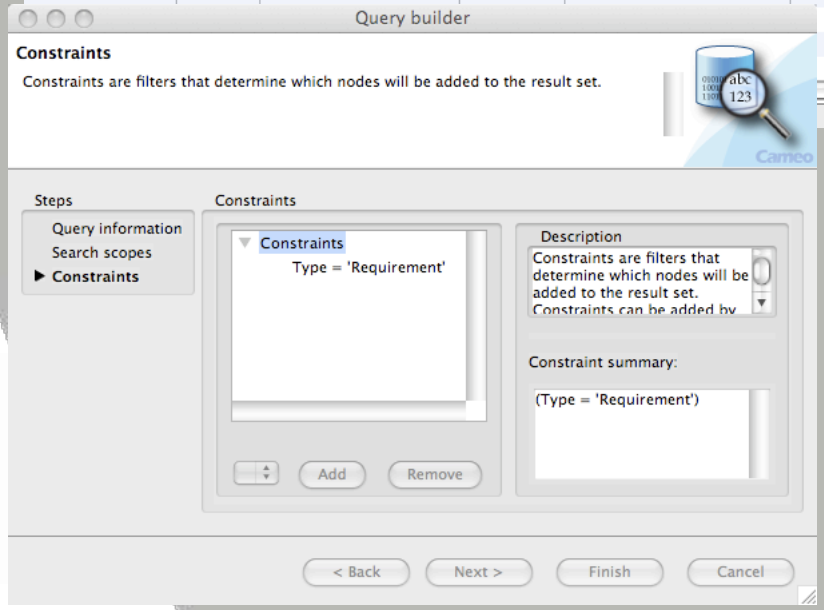
- Only 4th generation requirements tool on the market
- Completely customizable
- Create, build, and define your own relationships
- Connect requirements with other business drivers or development artifacts in any way desired
- New Requirements Interchange Format (RIF) currently supported through Cameo Inter-Op. (Native support in 2011)

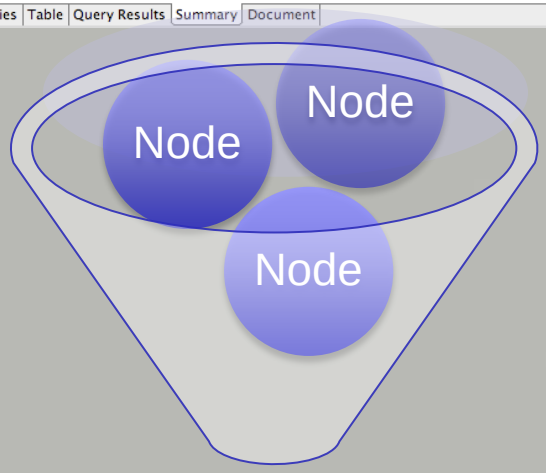
Query Builder

- Does not limit how you search
- Specify any constraints and criteria
- Results in table and html
- Generate & reuse test cases
- Generate requirements in MagicDraw from Cameo Requirements+

Item Type	number	name	description	type	priority
Requirement	2	Should provide online appl		Business Requirement	
Requirement	5	Should provide eBanking s		Business Requirement	
Requirement	3	Should provide personal lo		Business Requirement	
Requirement		Online Mortgage Calculatio		User Requirement	
Requirement	1	Should provide the Mortga		Business Requirement	
Requirement		Online Mortgage & Home E		User Requirement	
Requirement		Bank merger		User Requirement	
Requirement	4	Should provide online help		Business Requirement	

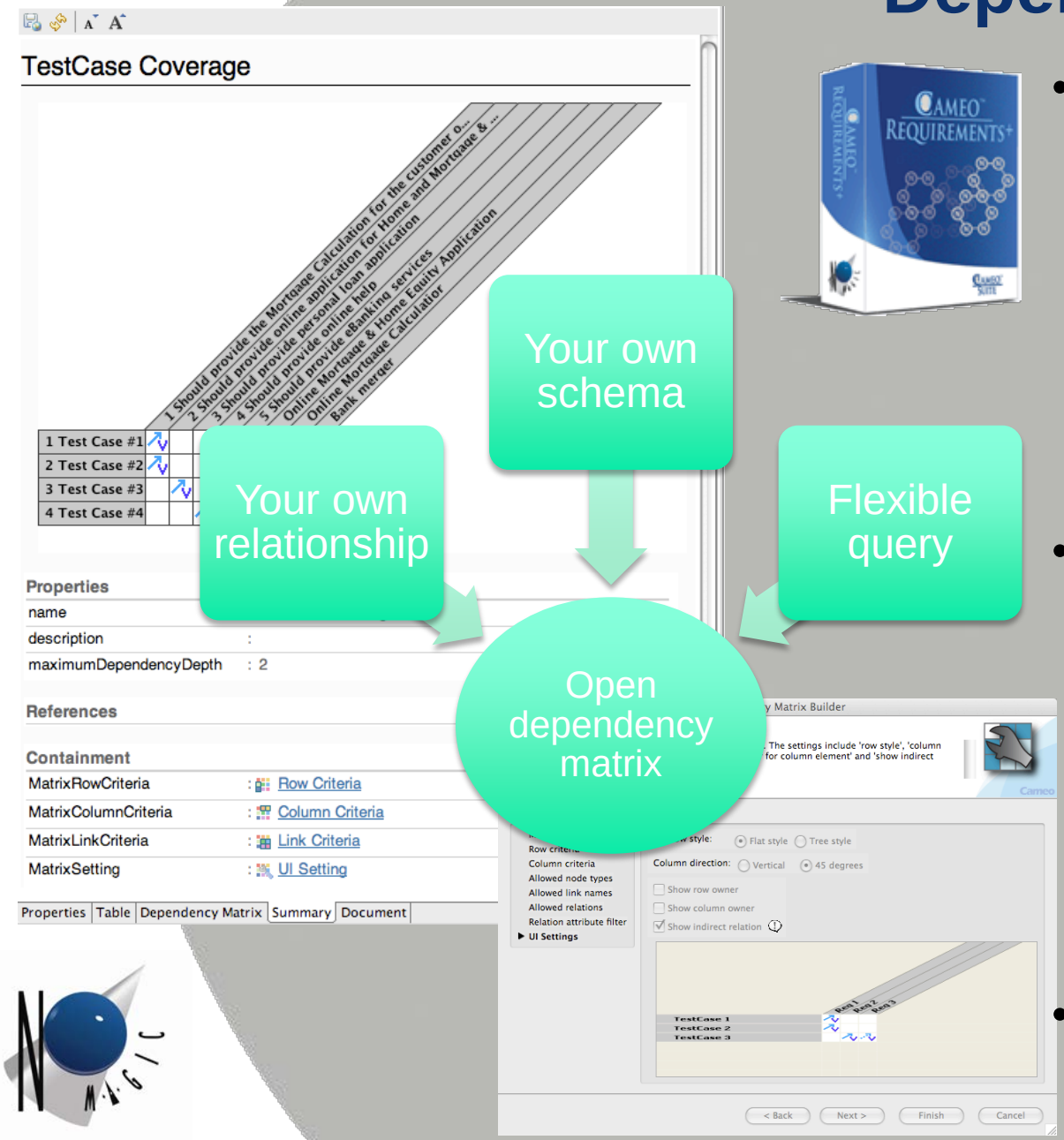






Query result

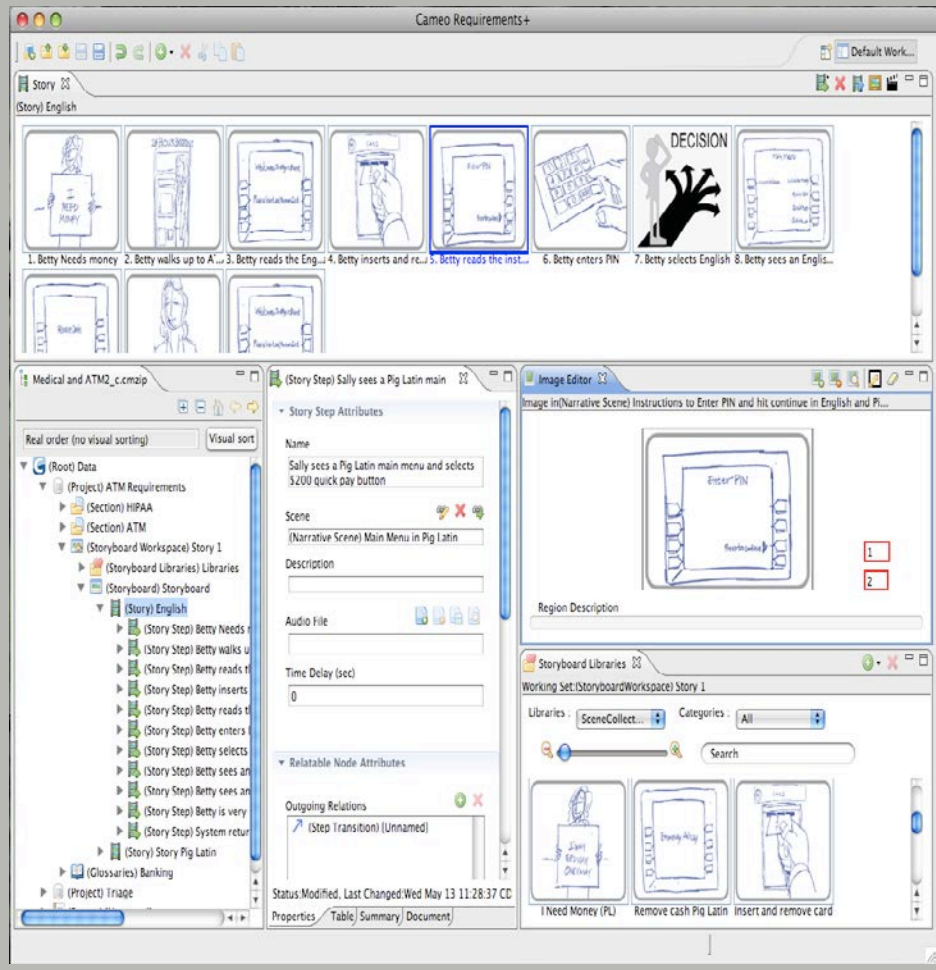
Dependency Matrix



- Cameo Requirements+ dependency matrix (in MagicDraw) helps analyze impacts, relationships, dependencies, gaps, test case coverage, and more
- No matter what relationship you have, the dependency matrix can show any relationship including: traceability, coverage, impact analysis and any others
- Interface with Excel

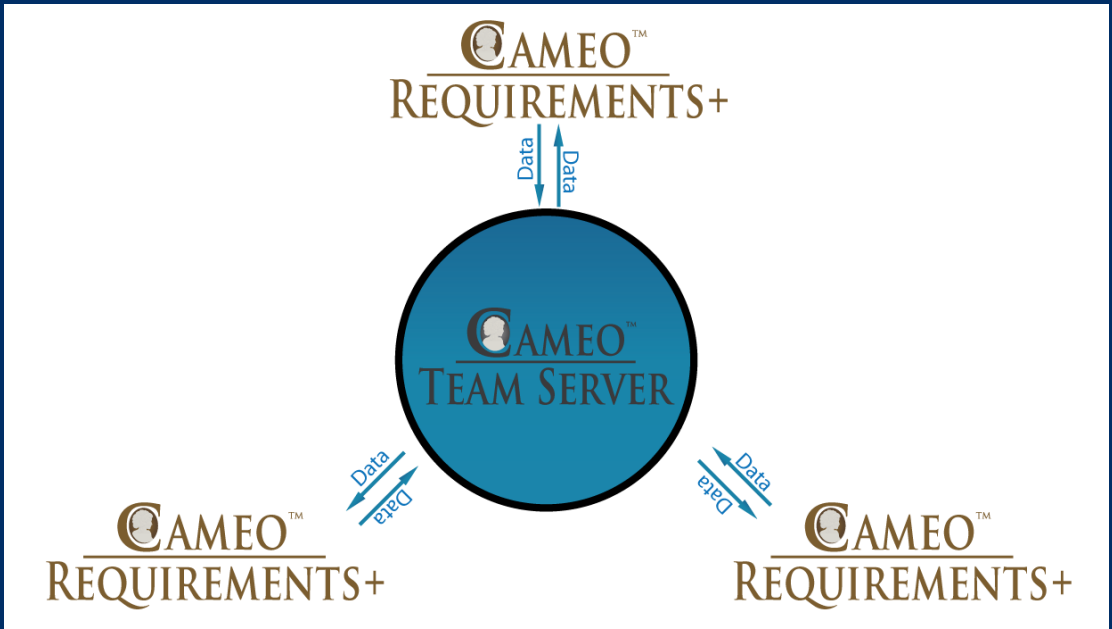
Storyboard

- Helps you capture user scenarios
- Automatically combine all stories and generate business process to validate correctness
- Preserve corporate memory
- Automate training
- Import and attach any multi-media to any requirement node (audio, video, Flash, new technology)
- Automatically publish to web or documents
- Supports Multiple Glossaries or Lexicons



Cameo Team Server

Server-Based Collaborative Requirements Management



Cameo Team Server

- Share requirements projects across the enterprise
- Work concurrently
- Track changes
- Work transparently with local and shared projects
- Web-based and MagicDraw access –

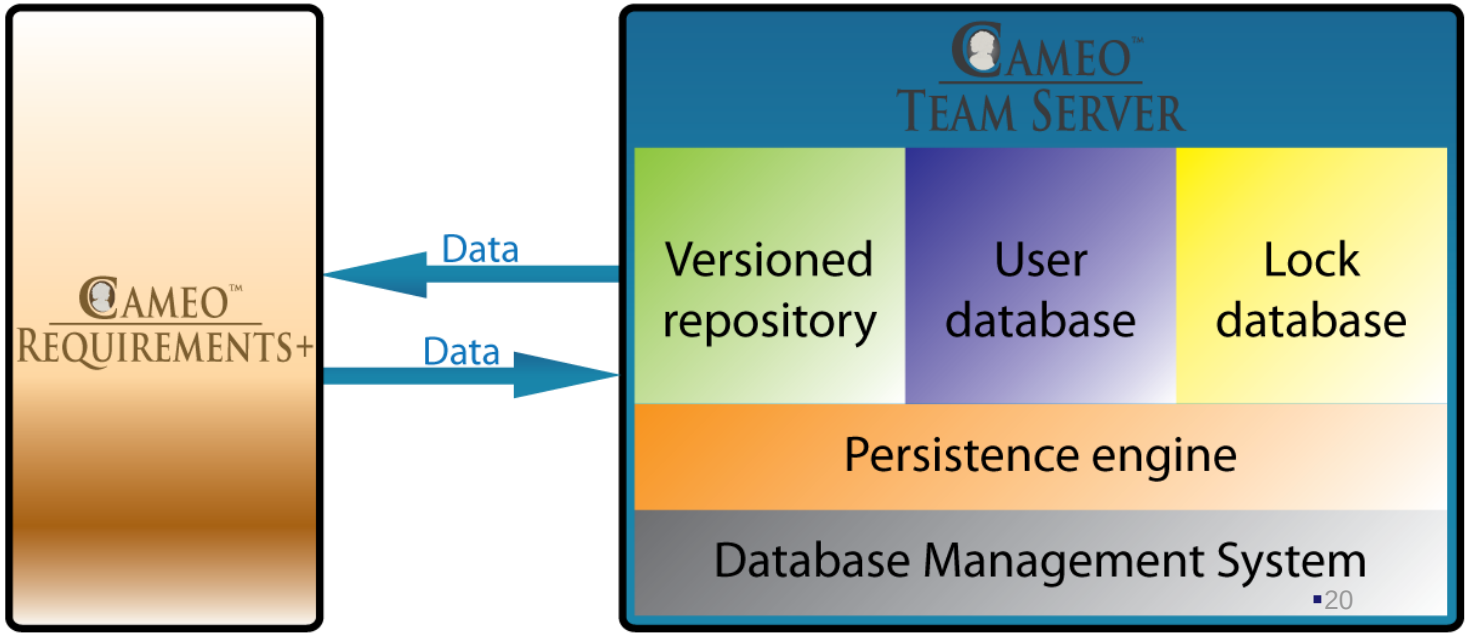
  (summer 2011 release) built on object oriented database for infinite speed and scalability – making this solution the fastest and most scalable on the market

Benefits of Cameo Team Server

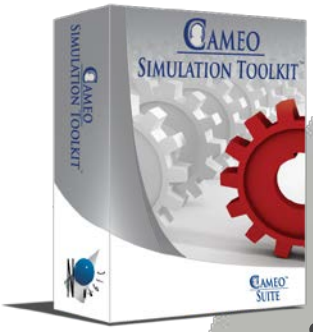
- Collaboration for Cameo Requirements+
- Future of MagicDraw Collaboration
- Based on flexible user-defined data
- Create your own or use our templates
- Rules are enforced! Flexible ’and’ Correct!
- Mix requirements with other data or multi-media
- Collaboration in a single repository
- Open API for custom interoperability
- Direct access to object-oriented database

Ready For Large Projects

- Easily scale to large projects.
- Project data is stored in OODBMS (Cameo 4.5)
- Server is infinitely scalable and federated
- Stores any complex data, video, audio, files, etc.
- Lightening-fast data storage and retrieval
- Less than $1K per user



Cameo Simulation Toolkit



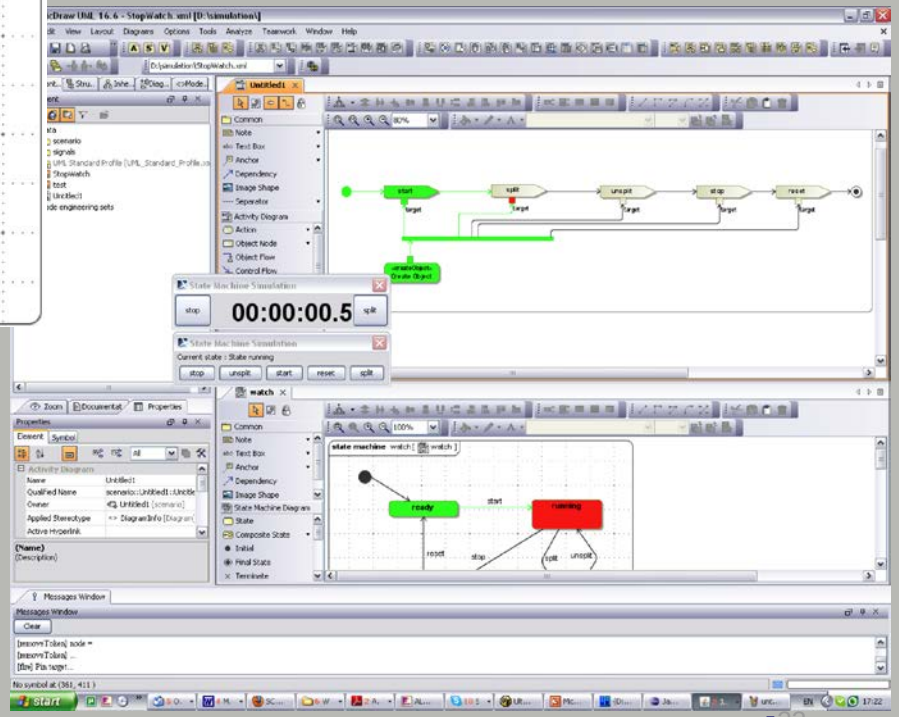
Cameo Simulation Toolkit

GA Release December 20, 2010

- Allows integrated execution and experimentation of multiple models simultaneously between 1 to N real or simulated systems.
- Drop in any open source or proprietary execution engine.
- Has flexible open API architecture allowing multiple engine collaboration and events interchange as well as diagram animation capabilities
- Based on OMG and international standards
- Semantics come from industry's best newly adopted standards: FUML and W3C's SCXML
- 2011 direct model to executable deployment on any application server
- Supports any execution engine
- Integrates with all types of modeling: BPMN, UML, SysML, UPDM, DoDAF/MODAF, Ontology

Cameo Simulation Toolkit

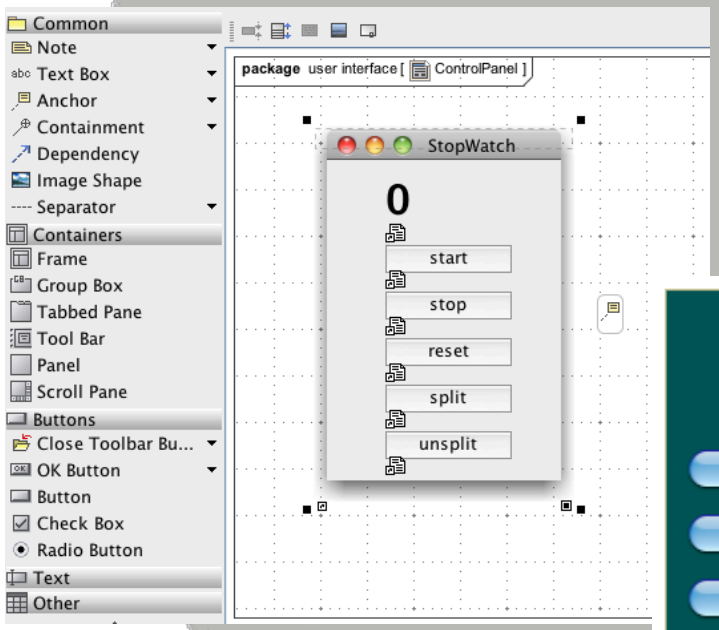
State Machine Simulation Screen

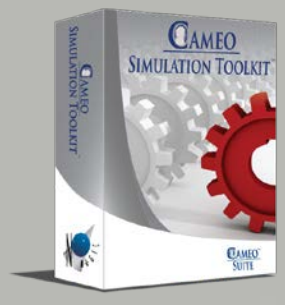


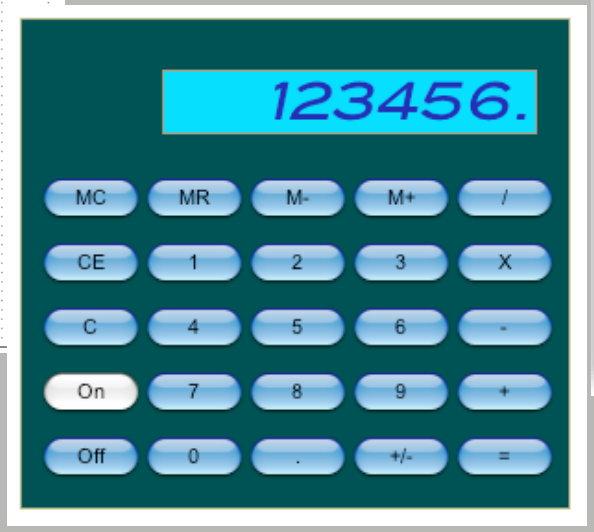
Combined State Machine and Activities Screen

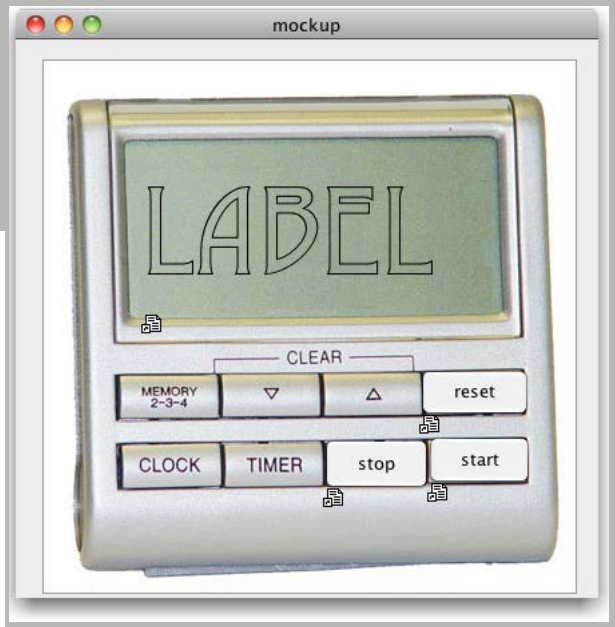
User Interface diagram allows creating mockups in seconds:

- Drop signal on “Button” to assign name and trigger
- Drop property on “Label” to be monitored
- Drop images from disk or web browser
- …and Run









SysML simulation capabilities

- Cameo Simulation Toolkit
  - Executable UML implementation

- ParaMagic plugin
  - SysML parametrics execution

- Cofluent plugin
  - Simulation of real-time embedded applications

- Cameo Workbench
  - SysML – Simulink transformation

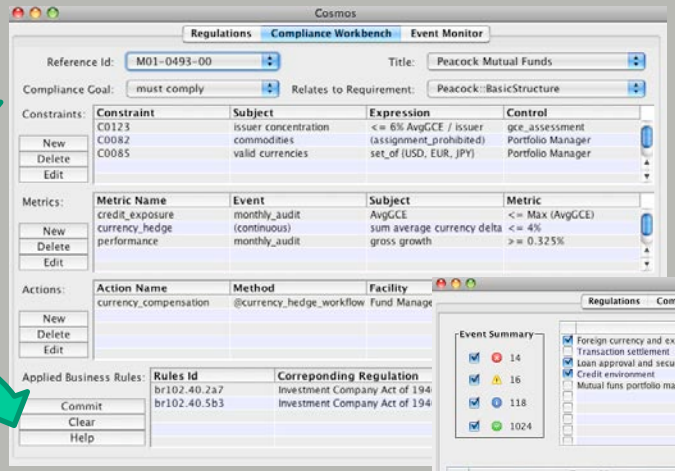
Cameo eCompliance

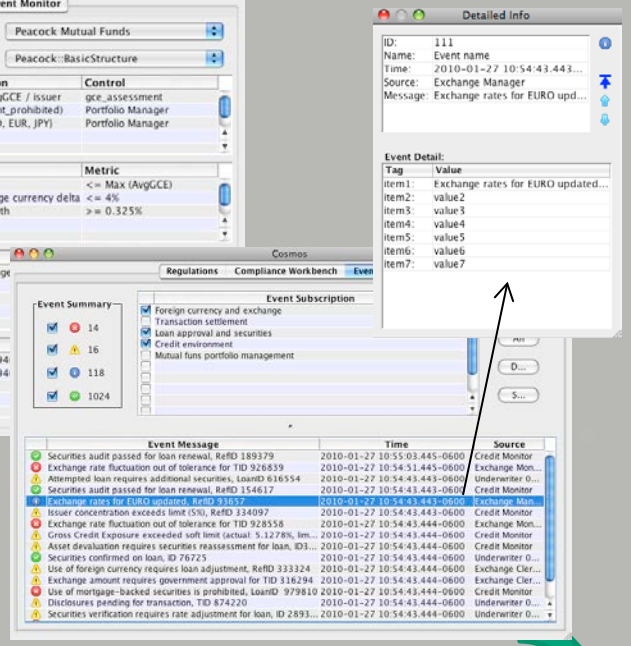
eCompliance Key Features

- Provides confidence due to transparency between the Regulated, the Regulators and the Public
- An Artificial Intelligence based learning environment that keeps learning new cause and effect paradigms so that the regulatory system can become smarter and increasingly accurate over time
- Removes Opacity and reduces Systemic Risks by leveraging Model Based validation and Artificial Intelligence Engine
- Disambiguates Regulations
  - Converts ambiguous English (or any other natural language) regulations to precise natural language regulations that can be used for automation
  - Supports Semantic Business Vocabulary and Rules (SBVR)
- Provides cost savings automated assessments
  - Lowers the cost of assessments much more than off-shoring does
- Provides traceability for real-time analysis and post event audits

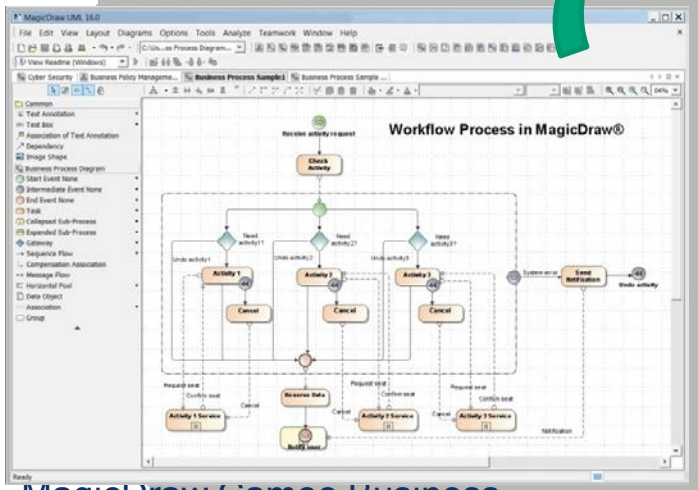
Cameo eCompliance Suite

Hardcopy Document

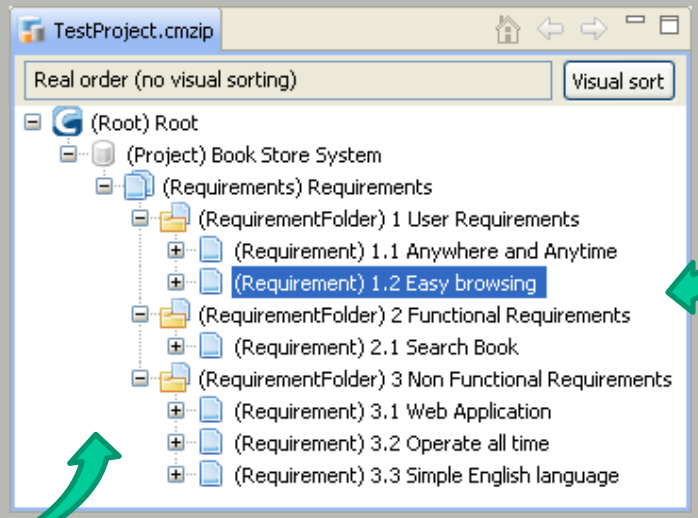


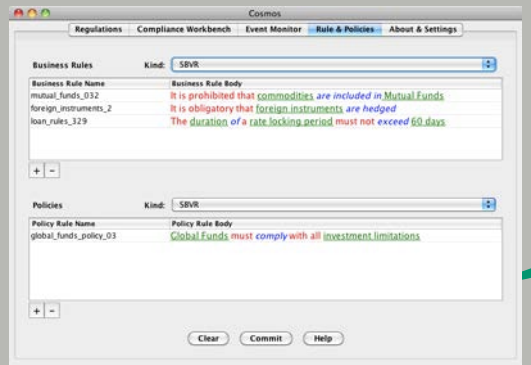


Cameo eCompliance Cosmos Dashboard



MagicDraw Cameo Business Modeler





Cameo Requirements+ with SBVR

eCompliance Key Attributes:

- Generic Governance Framework
- Minimally invasive solution
  - Does not require any additional systems integration based programming
  - Leverages existing investments within banks and regulatory agencies
- Makes the organizations future proof by allowing automated transfers to standard message formats including ISO 20022
- Solution is based on Model Driven Architecture
- Supported by US Federal Reserve Board
- Same solution is leveraged by Payment Hubs such as Dovetail

Accelerating the Model Driven Enterprise

Cameo Inter-Op

The Gateway to True Interoperability

Cameo Inter-Op

- Data Migration & Interoperability
  - DoDAF 1.x to DoDAF 2.x via UPDM 1&2
  - Legacy (non-standard) schemas to UPDM
    - IBM Systems Architect (SA) to UPDM
    - Sparx Enterprise Architect (EA) to UPDM
    - Digital Assets (DA): e.g. Excel, Visio, PowerPoint, CADM
  - Schematize and Normalize any data format for migration or interoperability

Accelerating the Model Driven Enterprise

MagicDraw UML
The Gateway to Architecture

MagicDraw UML

- Focus on usability, usefulness, and standards
- More than half a million users
- Open API (Java and scripting)
- Scripting (Ruby, JavaScript, others)
- Template-based reporting documents, presentations, spreadsheets
- Latest standards
  - UML, XMI, UPDM, DoDAF/MODAF, SysML, BPMN, SoaML, Ontology

Basic Features

- Support for the standard UML diagrams
- Flexible pallets and diagrams
- Domain Specific Configurations/Languages (DSL)
- Smart Manipulators turbo-charge creation of frequently created element types
- Process Helper to guide process
- Highly customizable look and feel or diagrams
- Name completion -- Many search and categorization features
- Spellchecker
- Enforces proper use of UML
- Free form diagram support (Visio-like)
- **IDEF Support**

MagicDraw Basics

- Multiplatform Java
- Support for 32 and 64 bit Java
- Read/write XMI and Eclipse EML files
- Import / Export Competitor Formats*
  - Sparx Enterprise Architect (import only)
  - Rational Rose
  - Rational System Architect/Modeler
  - Rhapsody and System Architect
  - Excel, MATLAB/Simulink, Vitech CORE, Statemate, RIF, Visio, PowerPoint
- Cameo Workbench for customization of mappings

* Some importers are sold separately

Advanced Features

- Round trip code engineering for C++, Java, C#, DDL, Schema, WSDL, CORBA, ERWIN, any database
- Automatic diagram generation from models
- Model metrics
- Model sharing and reuse
- Template-based reporting

Metrics

Filter All

System Metrics	NA	NC	NO	RFC	WMC	DIT	NOC	A	CBC	R	S
com	14	↑ 37 (34)	25	3	43	↑ 7 (2)	7	↓ 0.20 (...	10	↑ 0.75 (0.49)	↓ 13.50 (1...
nomagic	14	↑ 37 (34)	25	3	43	↑ 7 (2)	7	↓ 0.20 (...	10	↑ 0.75 (0.49)	↓ 13.50 (1...
magiclibrary	14	↑ 37 (34)	25	3	43	↑ 7 (2)	7	↓ 0.20 (...	10	↑ 0.75 (0.49)	↓ 13.50 (1...
client	0	0	0	0	0	0	0	0.00	0	0.00	0.00
db	0	0	0	0	0	0	0	0.00	0	0.00	0.00
domain	14	↑ 33 (30)	25	11	43	↑ 7 (2)	7	↓ 0.20 (...	10	↑ 0.75 (0.49)	↓ 13.50 (1...
jsp	0	4	8	2	7	1	0	0.00	0	0.00	0.00

Hundreds of Features

- We listen to our users!
- Most features are from user requests
- Many different domains/users supported
- Built to be extended by the Business Analyst, using our powerful DSL engine
- Partners and customers love our open API and standards
- Multiple standards and specific capabilities
- No Vendor Lock In
- Re-use your existing tool investments to build your own best of breed solution or tool chain
- We reduce complexity too!

Collaboration/Publishing

- Customizable template-based reporting for Word, Open Office, HTML, and others
- HTML viewer with publish to server
  - Minor edit capability
- Teamwork Server Collaboration
  - Lock for edit very granular to element level
  - Branch/Merge
  - Visual Differencing
- View and navigate your models on your iPad or mobile device
- Read-only viewer
  - Works with Teamwork Server
  - Free!

Visual Model Difference

Ground breaking visual differencing adds graphics so that changes to models are no longer a mystery

See differences in the model tree or in your diagrams. Changes include both elements and diagram contents

Usability

- Perspectives
  - Tool reconfigures to a specific user or task
  - Change features, views, interface
  - User configurable
- Domain Specific Language (DSL) features
  - Customize view of extended UML
  - Rules to ensure correctness
  - Custom diagrams and component pallets
  - No programming needed

MagicDraw Editions

- Reader – Free read-only edition
- Personal – Entry level UML
- Standard – Adds additional diagrams and features
- Professional – Full round trip for developers
  - Select Java, C++ or C#
- Architect – For MDA/MDD – for professional architects and analysts
- Enterprise – Includes all features of other editions
- Special Bundles for Enterprise Architects or Systems Engineers
- FLEXlm license management

Commercial Additions

- Enterprise Architecture (UPDM)
  - Advanced enterprise architecture
  - Configure for DoDAF or MODAF
- System Engineering (SysML)
  - Parametric solutions (via ParaMagic)
  - Advanced features for engineers
- Business Modeler (BPMN 2.0)
- Data Modeler (ER Diagramming)
  - Support for ERWIN
- Ontology (coming soon)
- Cameo Simulation Tool Kit

More Capabilities

- Automated diagram generation
  - Quick analysis of reversed code
- Traceability
  - Advanced traceability navigation
  - Traceability reporting
  - Matrix views for tracing across domain, levels of abstraction, etc.
- Cost estimation from Use Cases
- Training projects
- Context sensitive help
- Find and display related elements on diagram
- ACE 2 Profile for hardware, software, support and responsibility management
- Free SBVR Plugin

MagicDraw MDA* Integrations

Blu Age - M2Spring

Blu Age - M2Flex

AndroMDA (open source)

OpenArchitectureWare (oAW)

Interactive Objects Software ArcStyler

(GUI based)

Acceleo

E2E

JeeWiz

SysGen

Insitech XTT

Mia Software

Adaptive repository

ProActivity

CaliberRM 6.0, 6.5

DOORS

Requitite Pro

IRqA

XHolon

Trinity Millennium Group TMGi-eUML

Tassc:Estimator

E2E

Model Pro

Compuware OptimalJ

*Model Driven Architecture

Product Demonstrations

Conclusion:
Best-in-Class Solutions
for all your issues and needs

No Magic Professional Services

- Consultants – TS/SCI Cleared
- Training
  - On line
    - **Free UML Course**
  - On Site / Off Site
- No time to make customizations?
  - We offer a wide range of customization services
    - New diagram types, profiles.
    - Interoperability Customizations
    - Patterns, transformation, metrics.
    - New types of modeling facilities to meet your requirements.
    - Create new document templates.
    - Other plug-ins for transforms, analysis and integrations

Veritatum Modulus™

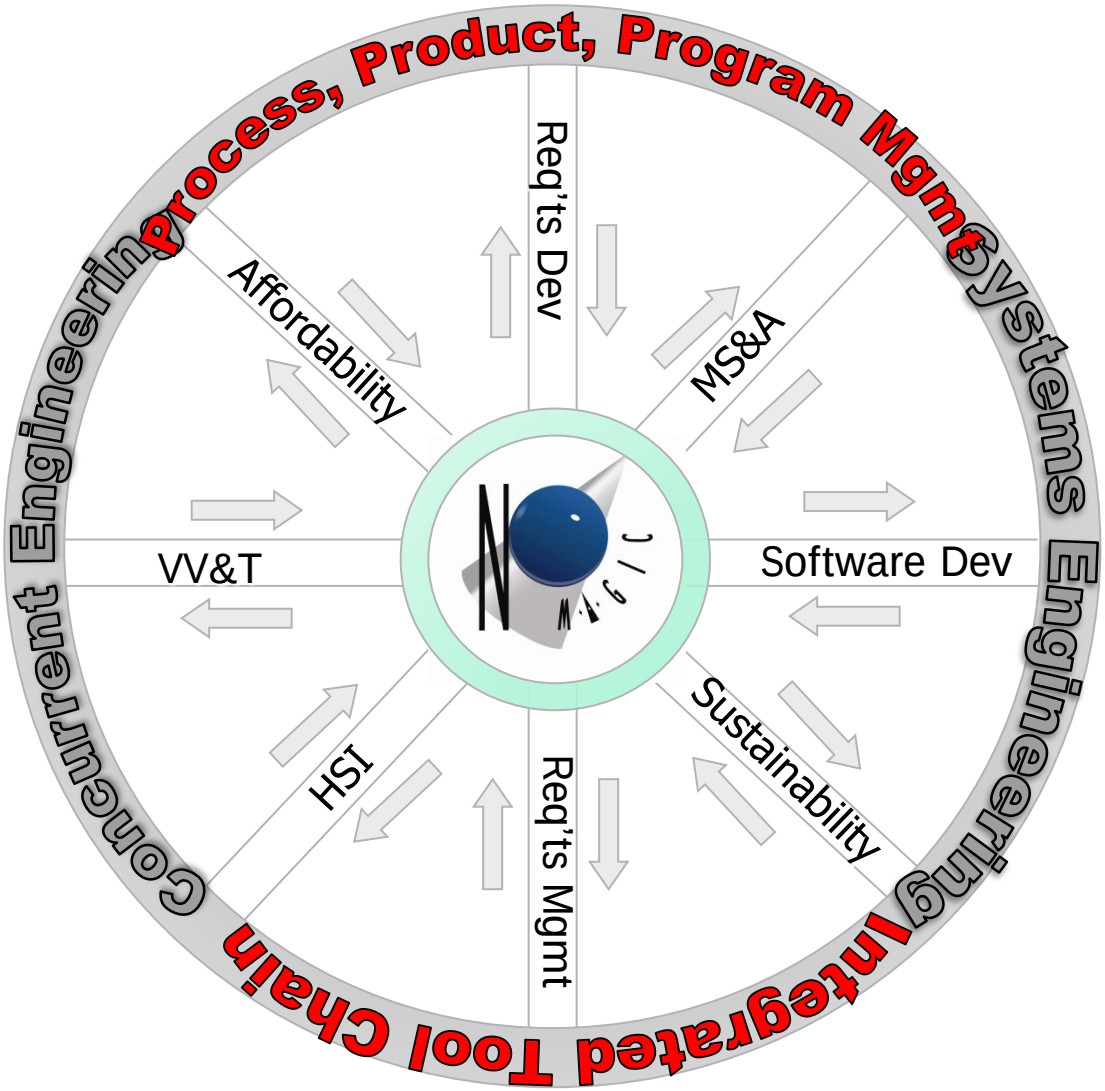
Monolithic Single-Vendor Tool Suites Tie You Down

- MagicDraw sets you free to use a world of best-of-breed tools to create a custom suite that meets ‘your’ needs!
- No vendor lock in
- All products based on open industry standards

No Magic: Just Good Ideas & Solutions

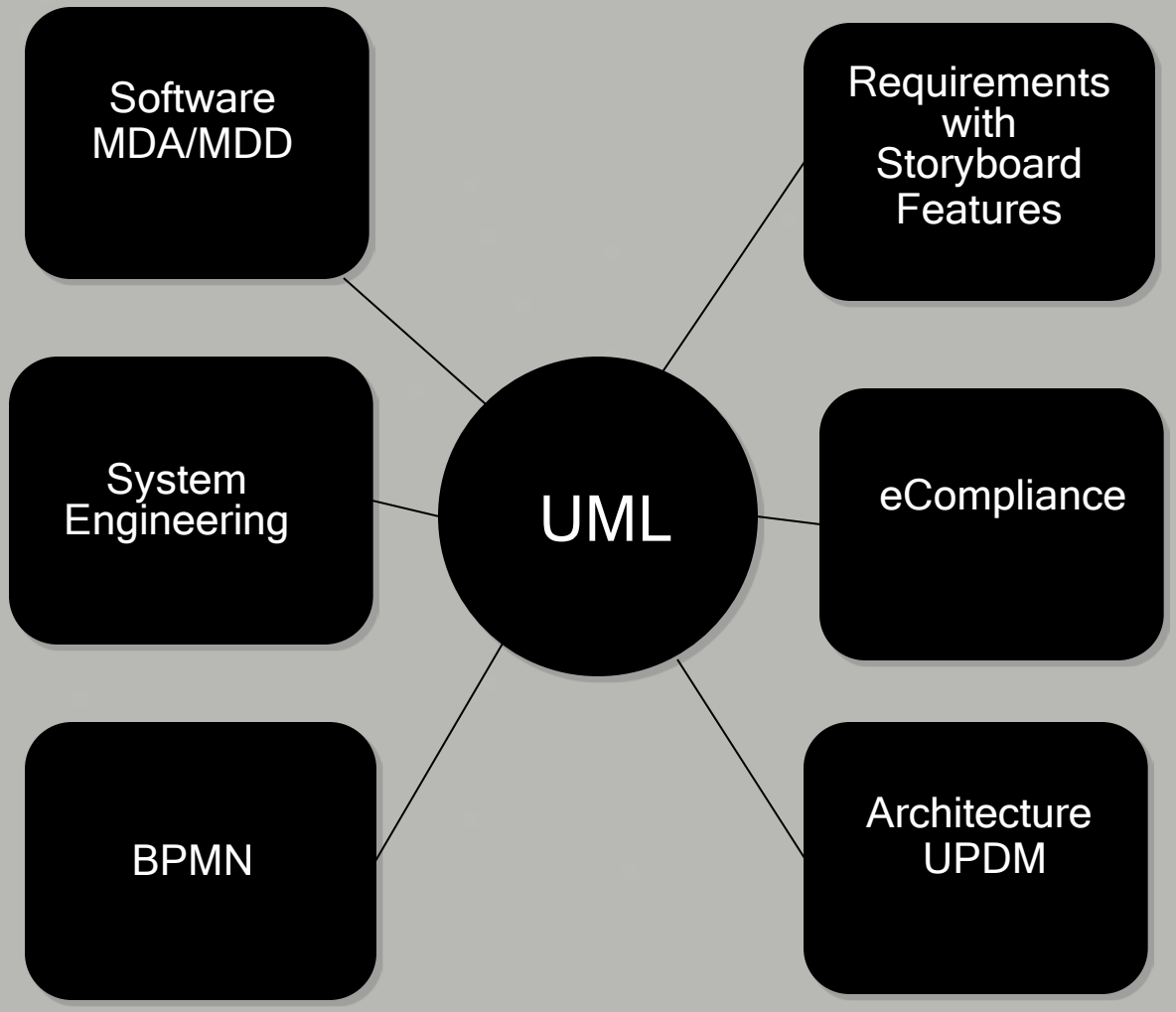
- Coming Soon
  - Cameo Ontology

Veritatum Models™

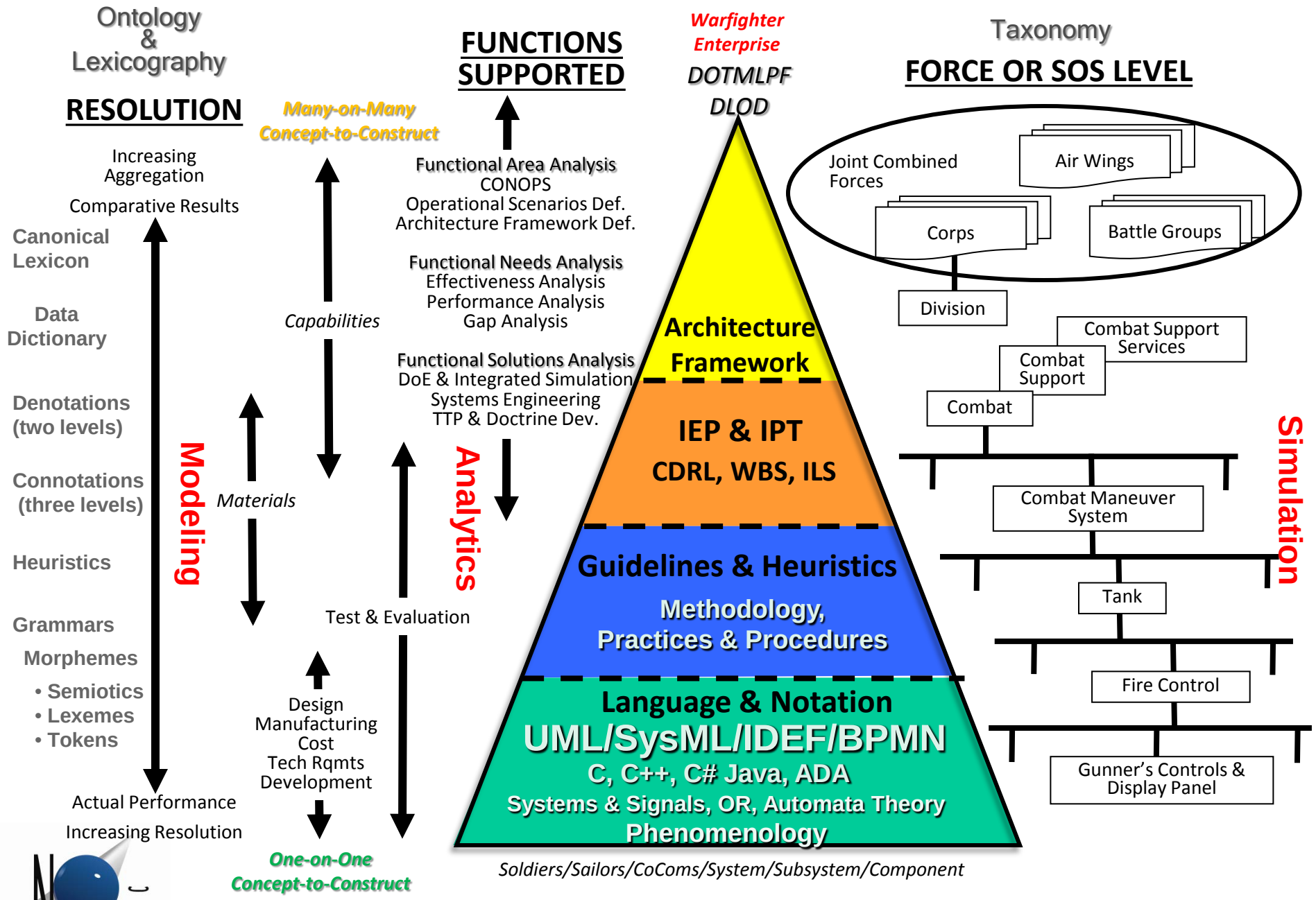


"THE TRUTH IS IN THE MODELS™"

UML Infrastructure



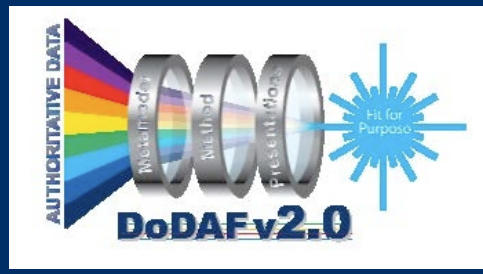
Gateway to Architecture™



Full JCIDS MS&A Lifecycle Support

UPDM Plugin

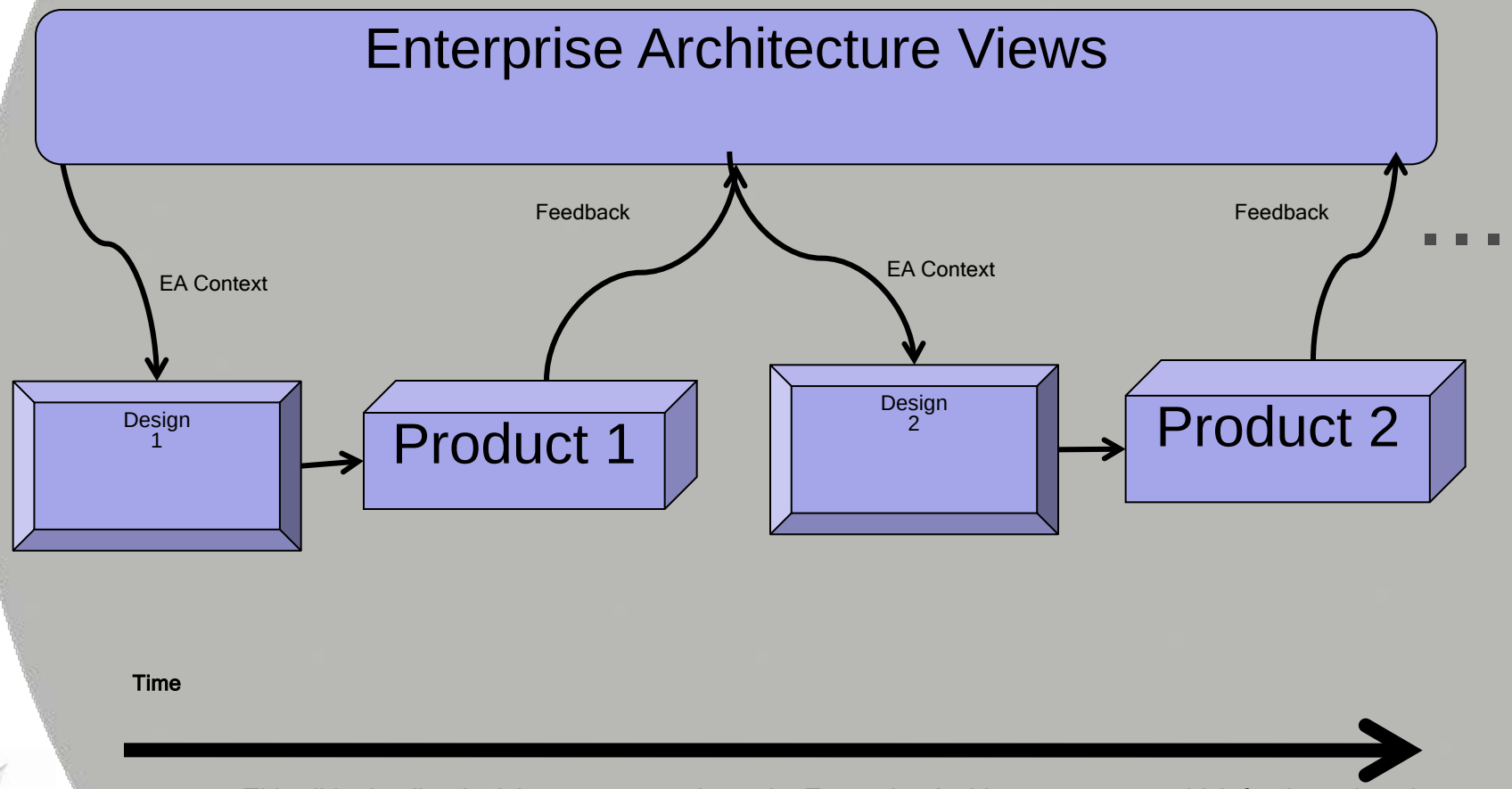
Accelerating the Model Driven Enterprise



UPDM/DoDAF/MODAF

UPDM: Unified Profile for DoDAF and MODAF, the only official UML implementation of DoDAF/MODAF
DoDAF: Department of Defense Architecture Framework
MODAF: British Ministry of Defense Architectural Framework

Enterprise Architecture Context



This slide details why it is necessary to have the Enterprise Architecture context which feeds each task or acquisition. Any changes go back into Enterprise Architecture to feed the next iteration. The value of this approach is a more agile product development strategy because the context already exists and does not have to be recreated for each project.

Enterprise Architectural Levels with MagicDraw

Level	Scope	Detail	Impact	Audience
Enterprise Architecture	Agency/ Organization	Low	Strategic Outcomes	All Stakeholders
Segment Architecture	Line of Business	Medium	Business Outcomes	Business Owners
Solution Architecture	Function/ Process	High	Operational Outcomes	Users and Developers

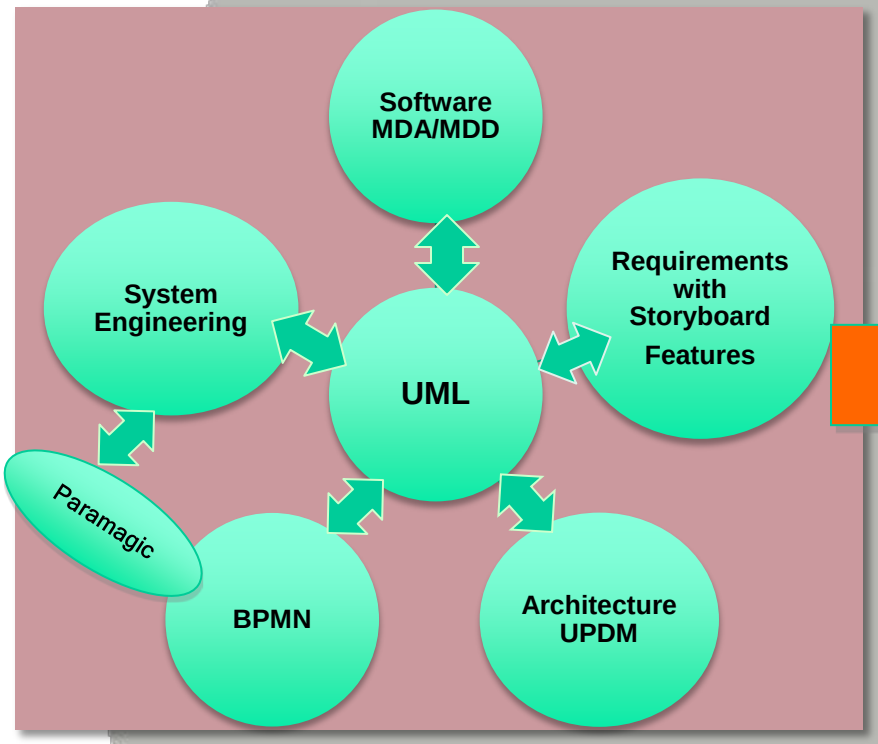
UPDM

UML, SoaML, SysML, Other Profiles

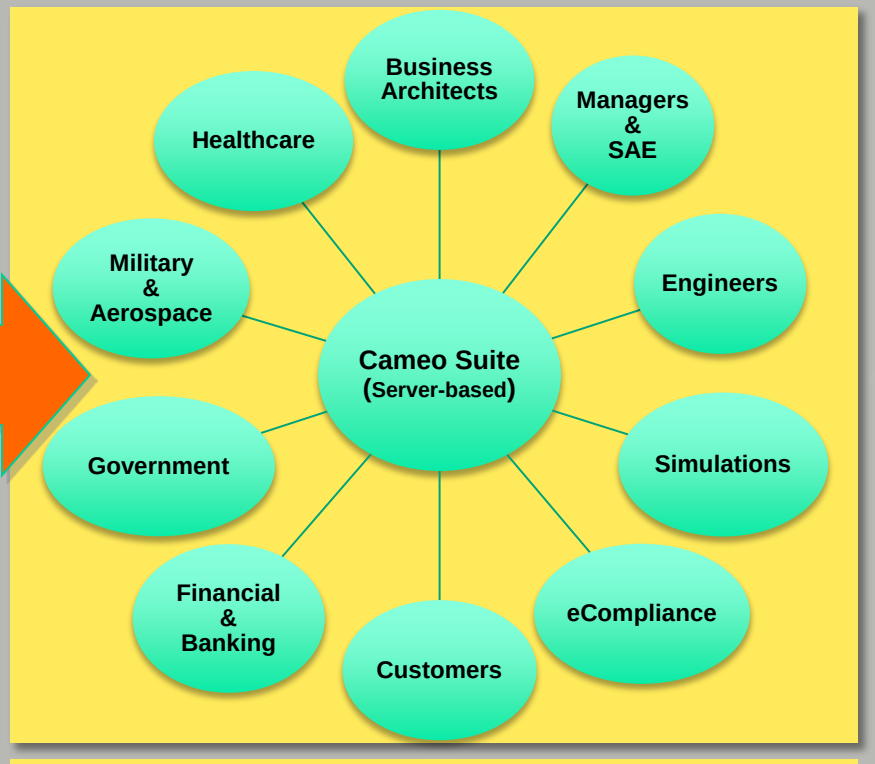
With UPDM, and the tools indicated here, there is a single repository with integrated parts;
This forms the “corporate memory” that survives across all projects, from high-level architecture to detailed implementation.

No Magic: Moving Forward

Previous State



Current and Future State



Current and Future State

- Strong Enterprise focus
- Broadening target audience
- Reduced cost & risk to DoD
- Robust integration story
- Improved collaboration
- Vertical industry focus
- Compliance
- Focus on Usability
- Federated & Scalable

No Magic, Inc.

Backup Slides

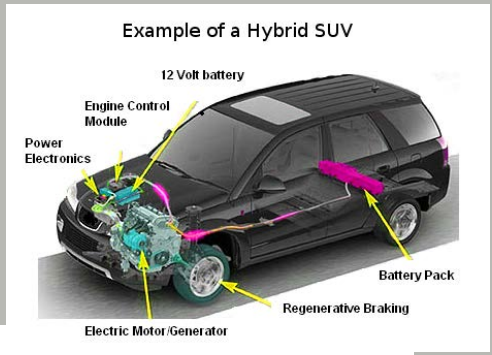
SysML Plugin

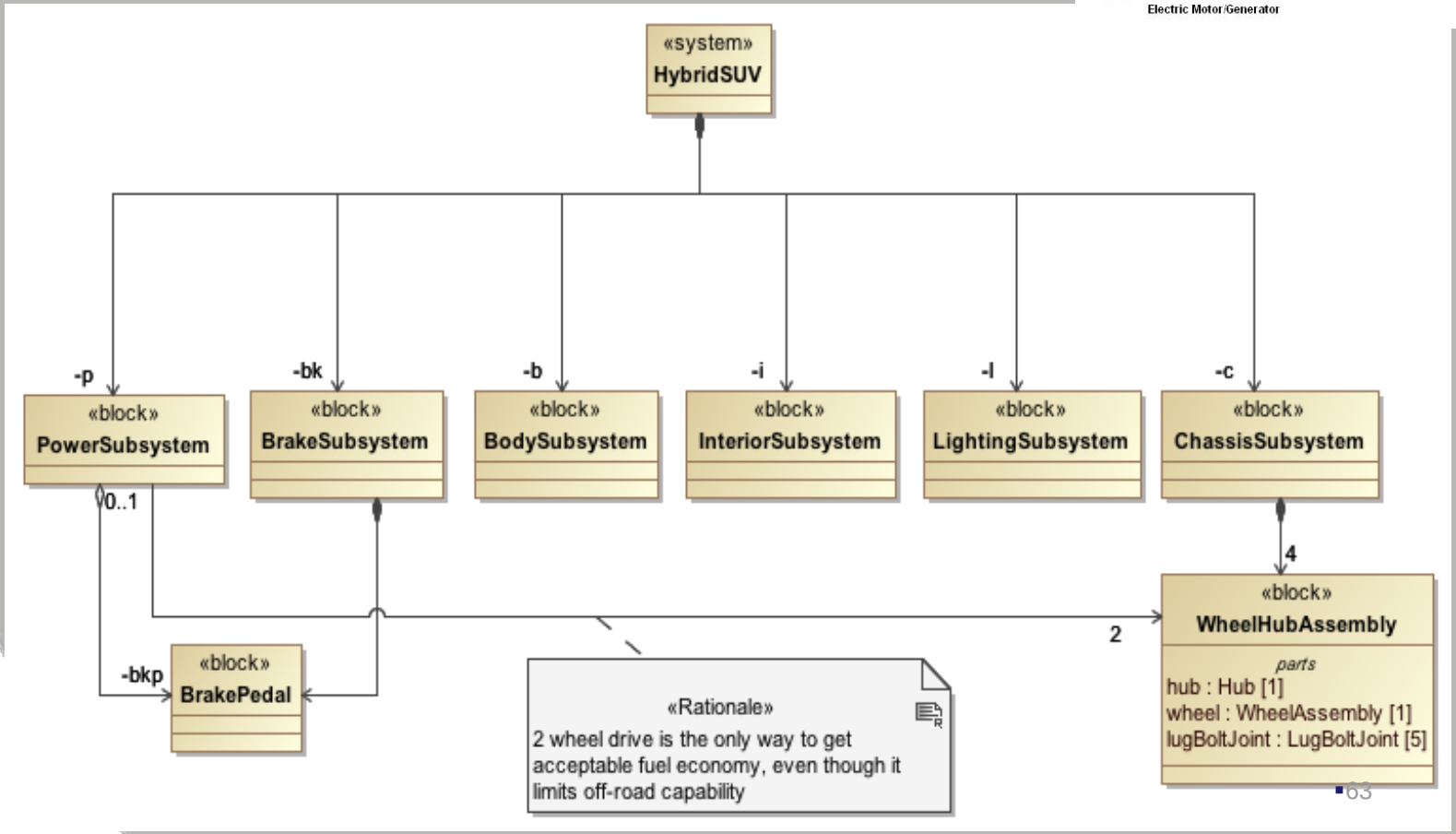
Systems Modeling

- Latest standards compliant SysML plugin
- For systems engineering and requirements modeling of integrated hardware and software
  - Structure
  - Behavior
  - Parametrics (mathematical model)
  - Requirements
  - Use Cases
- More rigorous than just UML
- Also integrated with UPDM
- Simulation tool integrates with: Excel, MATLAB/Simulink, Mathematica

Block Definition Diagram

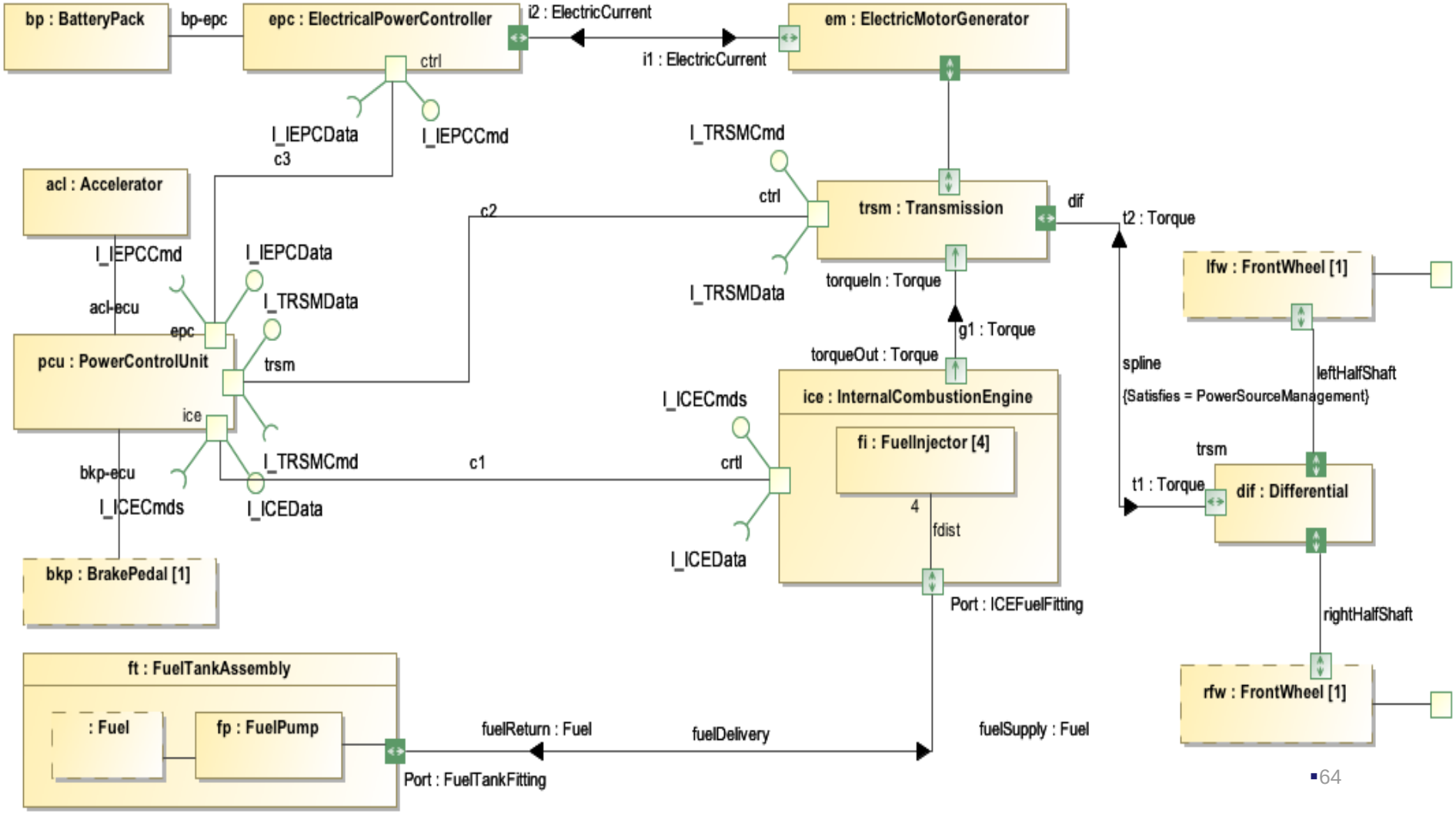
- Extended from class diagram
- Adds additional compartments and rules





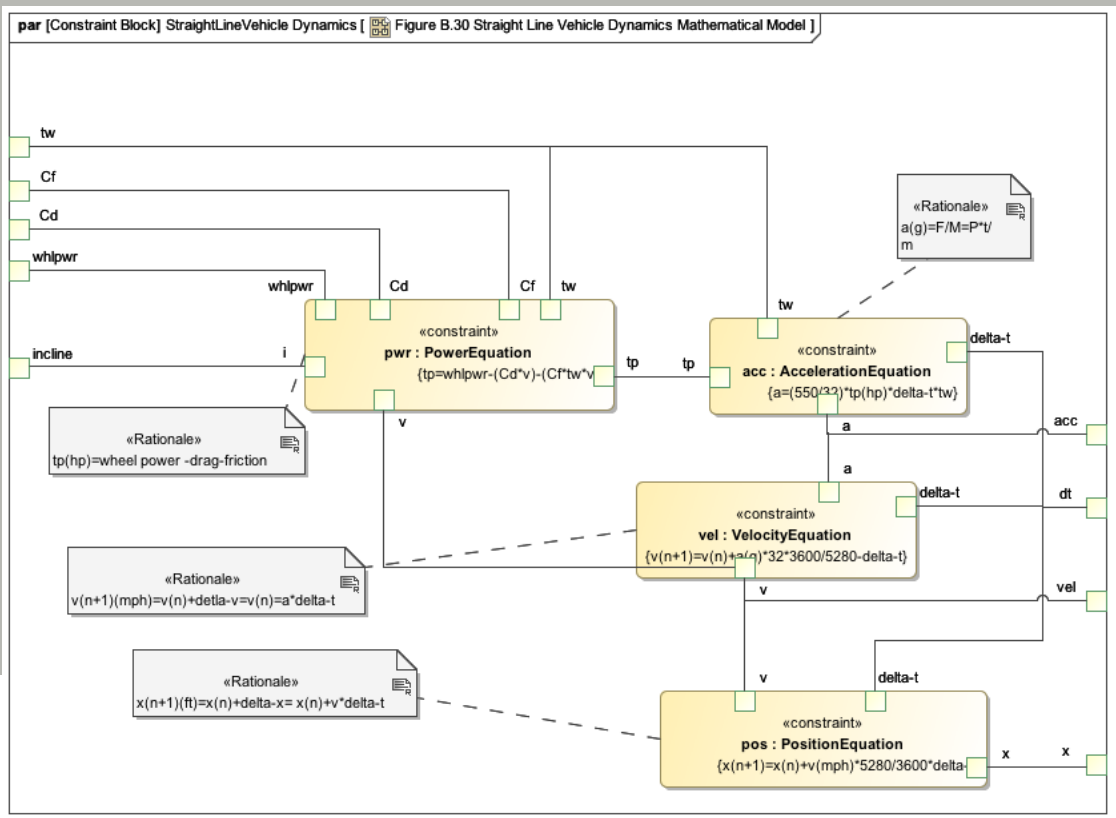
Internal Block Diagram

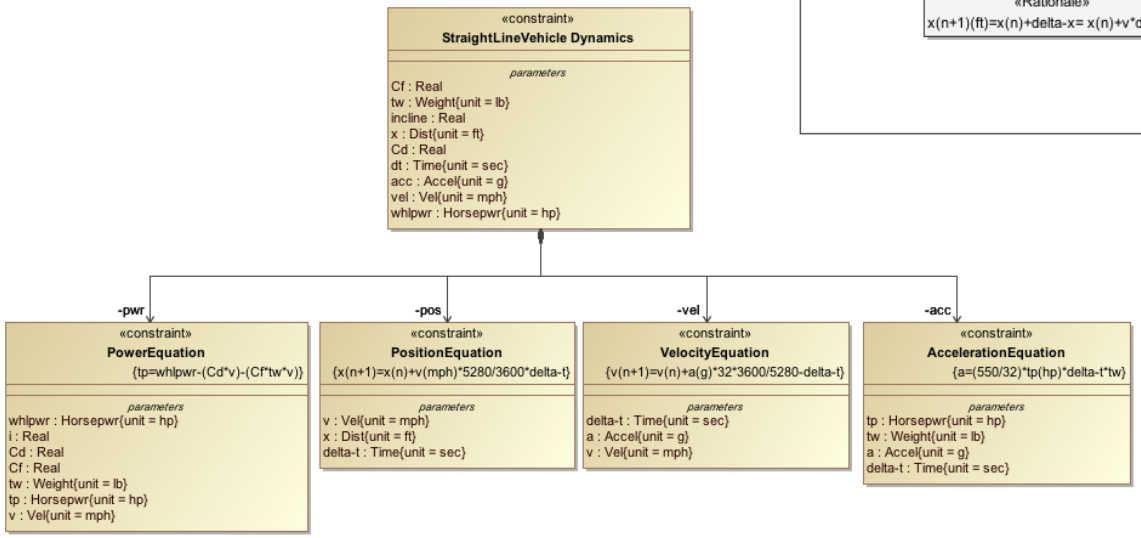
- Shows internal component structure, interfaces, connections, flows



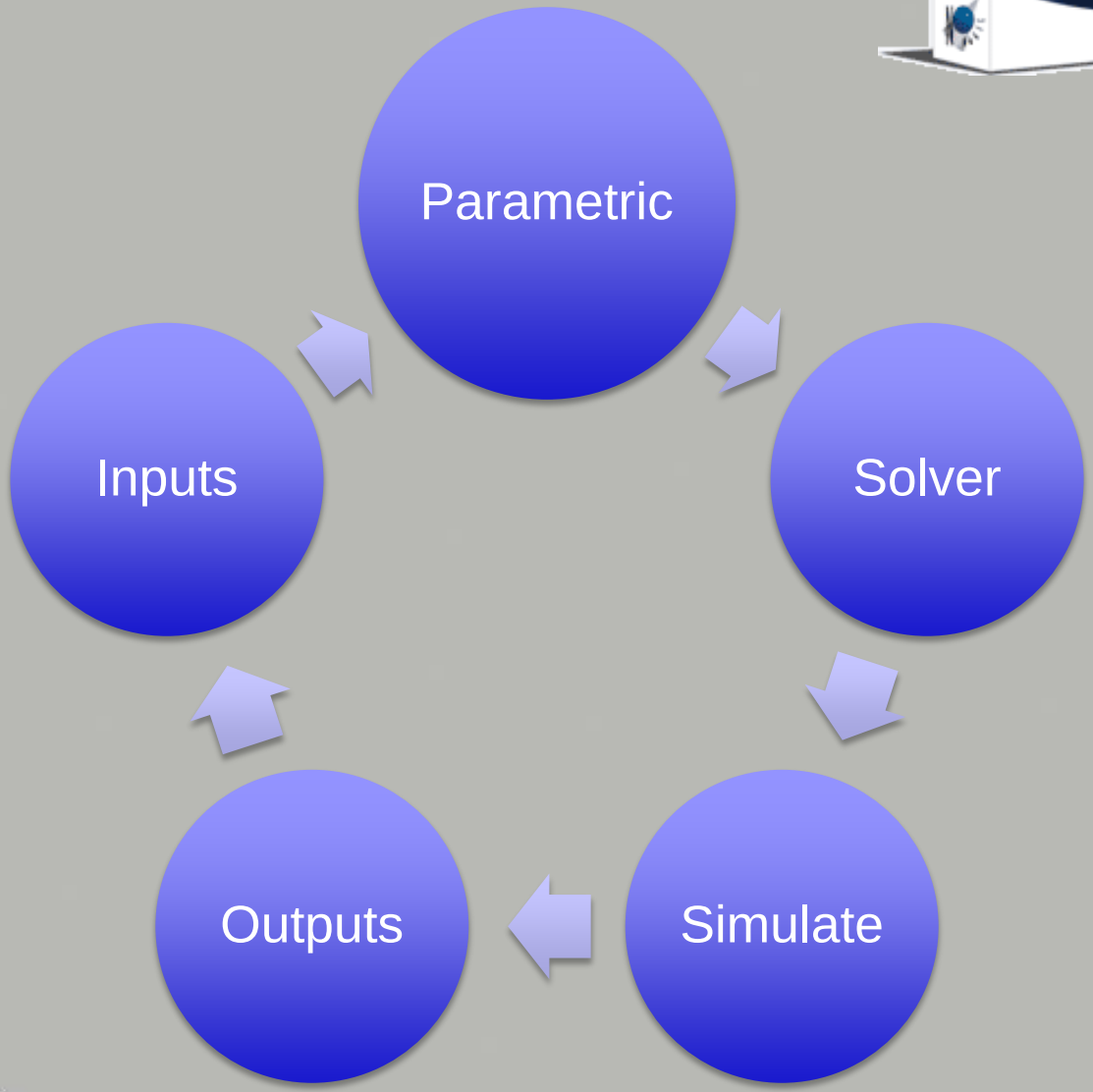
Parametrics

- Defines the mathematical representation of systems

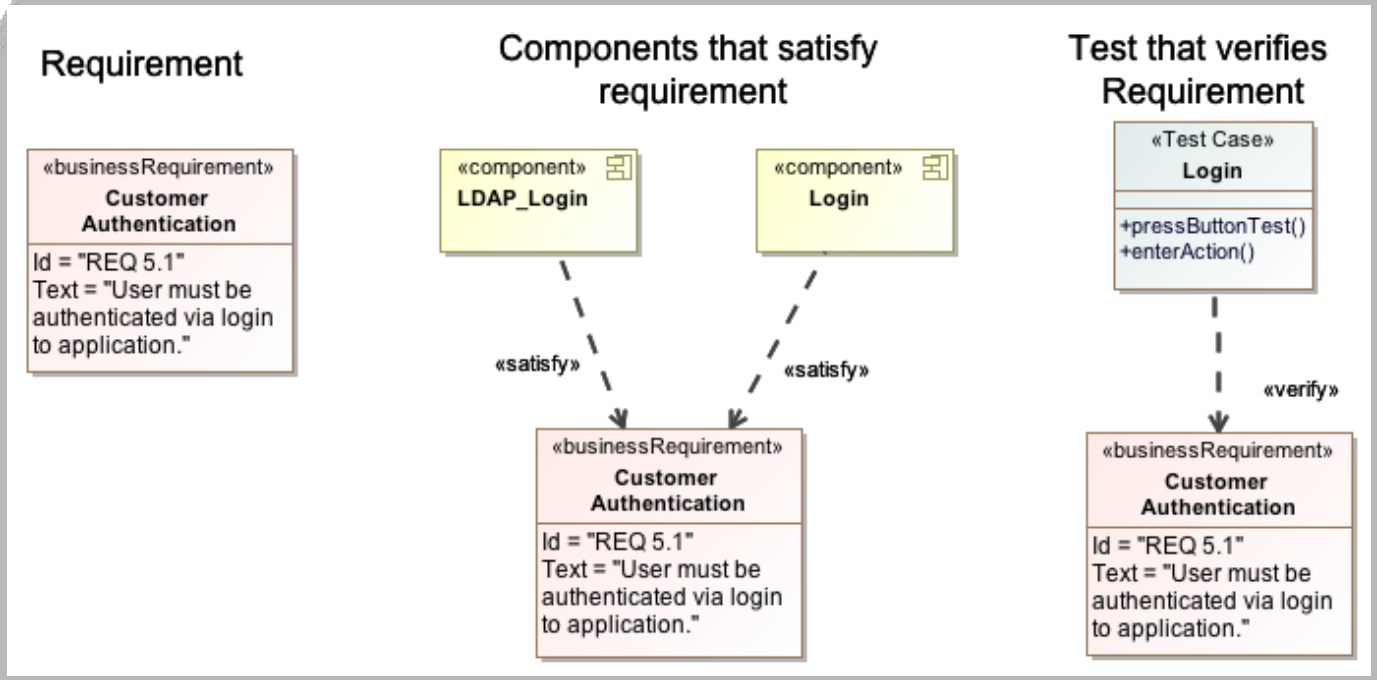


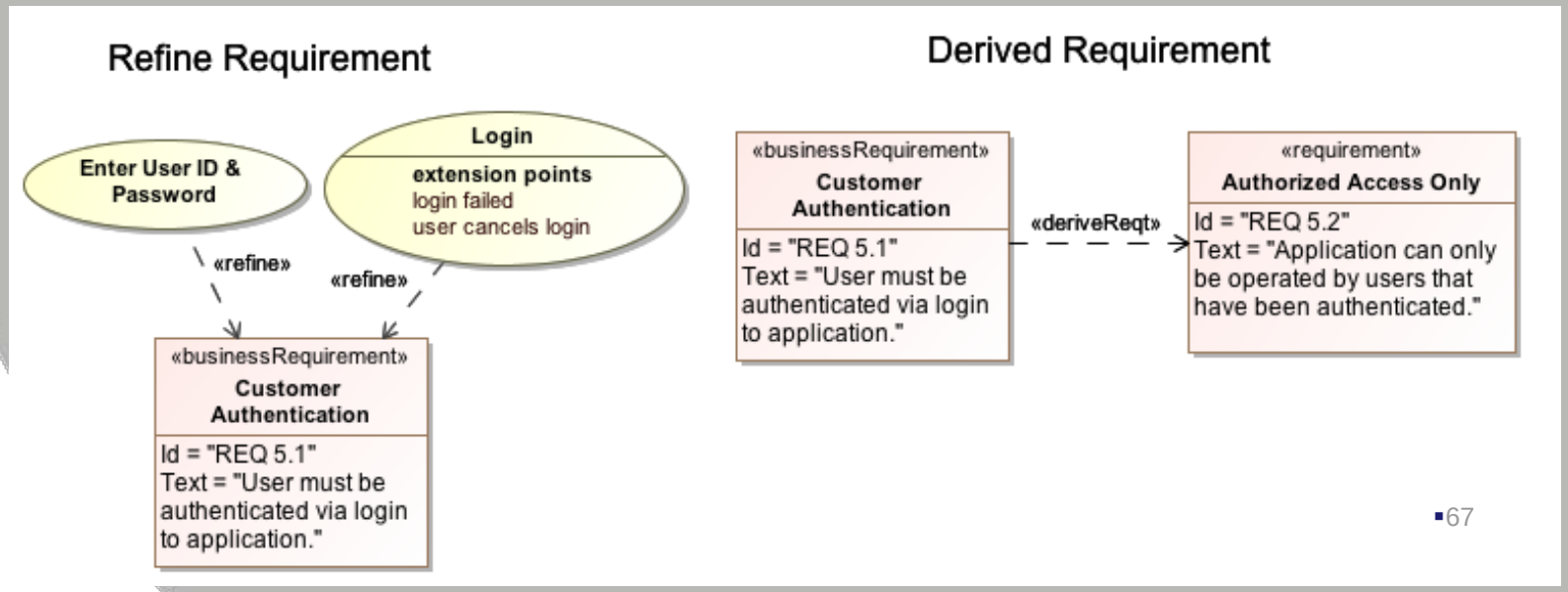


Parametrics Solving/Simulation



SysML Requirements





Tracing Satisfy/Verify

	Authenticati...	Credentials [...	+showError()...	LDAP Login [...	Login [design]	LoginDialog [...	+authenticat...	+cancel() [de...	+enterAction...
requirements	1	1	1	1	1	1	1	1	1
My Application Require...	1	1	1	1	1	1	1		1
Customer Login [req...				↙	↙	↙			
Customer Login [req...	1	1	1				1		1
Authenticate via L...	↙	↙					↙		
Default Action: R...									↙
Error if invalid lo...			↙						
Corporate Requiremen...								1	
General Usability [re...								1	
Data Entry Dialog...								1	
Cancel action [...								↙	

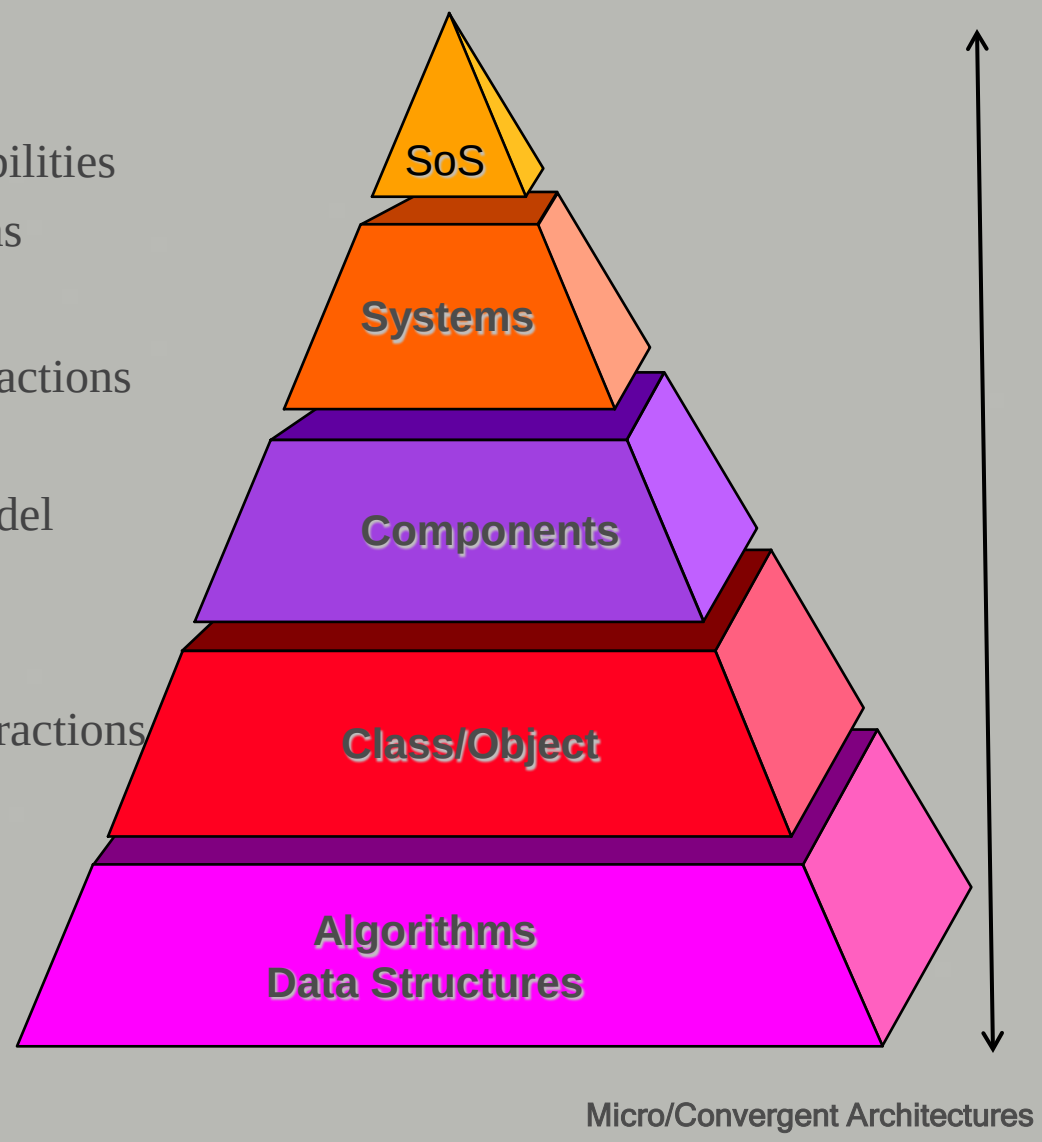
	Cancel Login...	Login [tests]	Login Failure...	Test LDAP Lo...
requirements	1	2	1	1
My Application Require...		2	1	1
Customer Login [req...		↙		
Customer Login [req...		1	1	1
Authenticate via L...				↙
Default Action: R...		↙		
Error if invalid lo...			↙	
Corporate Requiremen...	1			
General Usability [re...	1			
Data Entry Dialog...	1			
Cancel action [...	↙			

Refined Requirements

	Cancel Login...	Close Applic...	Enter User ID...	Login [use ca...	Show Login E...
requirements	2	1	1	3	1
My Application Require...	1	1	1	3	1
Customer Login [req...			✓	✓	
Customer Login [req...	1	1		2	1
Authenticate via L...				✓	
Default Action: R...				✓	
Error if invalid lo...					✓
Login Cancel [req...	✓	✓			
Corporate Requiremen...	1				
General Usability [re...	1				
Data Entry Dialog...	1				
Cancel action [...	✓				

Levels of Abstraction

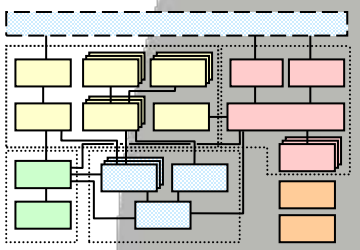
- System of Systems Level
  - All Systems & Emergent Capabilities
  - Collaborating ystem Interactions
- System Level
  - Collaborating Component Interactions
    - Client / Server Model
    - Coordinator / Delegate Model
- Component Level
  - Encapsulation
    - Collaborating member interactions
- Class/Object Level
  - Finer grained encapsulations
    - Data structures
    - Algorithms



All have an 'Architecture'

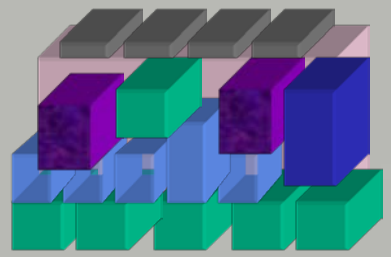
Architectures are More than Composites They're Amalgams[1]

Foundation Architecture



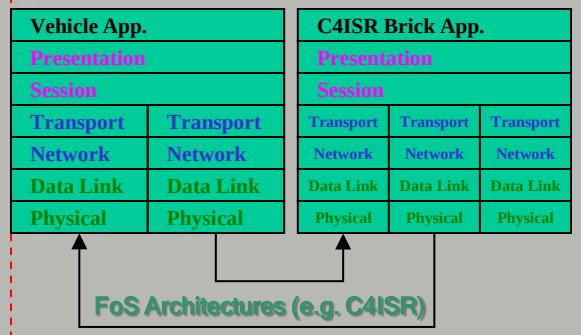
TOGAF/ZAF/DoDAF/UPDM

Common Systems Architectures



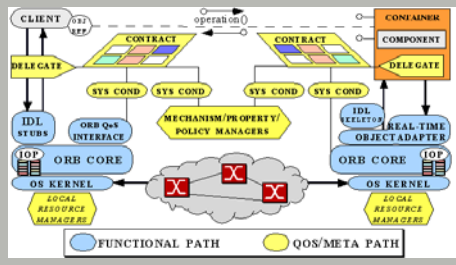
SoS Architectures (e.g. NCOW-RM)

Domain Specific Architectures



FoS Architectures (e.g. C4ISR)

Product Line Architectures



e.g. SDR (EPLRS, JTRS)

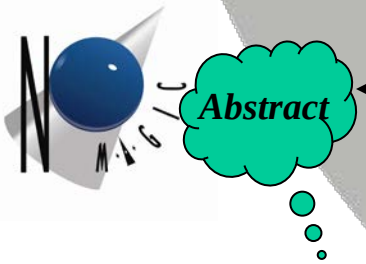
Genericity ← **Architectural Continuum** → **Specificity**

An Architecture of Principles and functions That support all **Common Systems Architectures**, and therefore, the complete SoS computing environment

Guides the selection and integration of Specific services from the **Foundation Architecture** To create reusable building Blocks useful across a wide Variety of relevant **Domains**

Guides the integration of **Common System Components** w/ **Domain Specific Component** To create vertically relevant Architectural Frameworks

Describes & guides the Development of reusable Components across Families of Systems. Creates horizontally relevant capabilities.



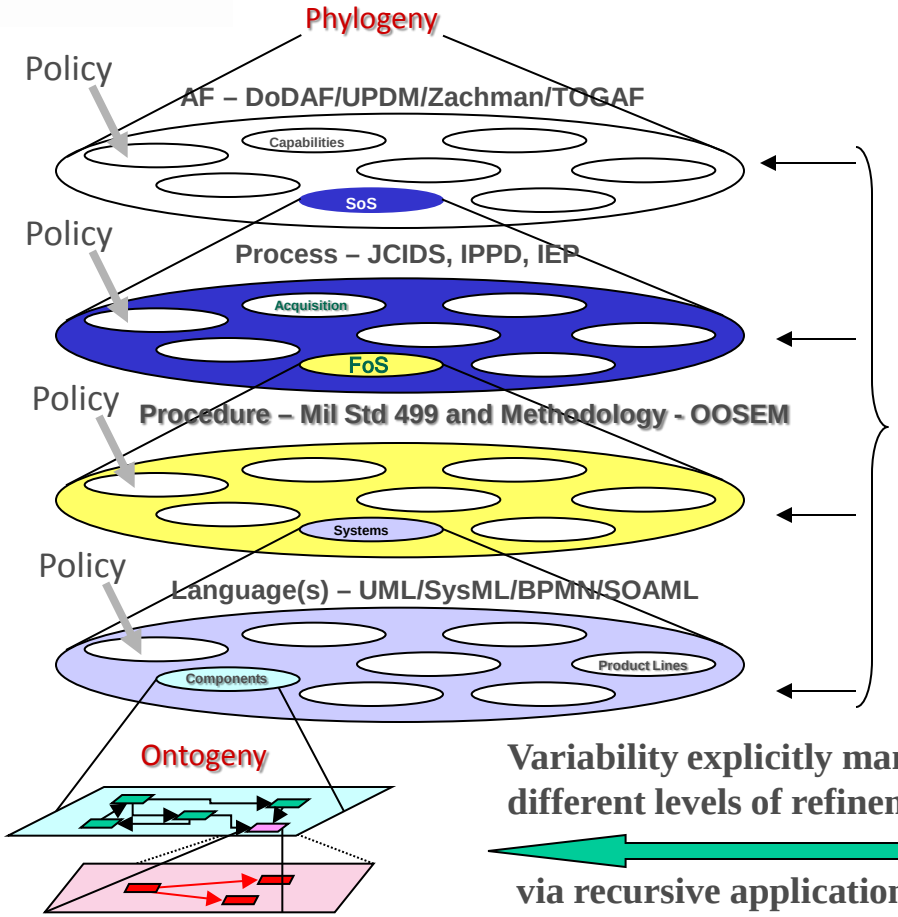
Conceptualization ← → Realization

Problem Space — Solution Space

Concrete

[1]They have "Provenance & Pedigree"

Systems are Amalgamated Architectures
Systems of Systems are Emergent Architectures

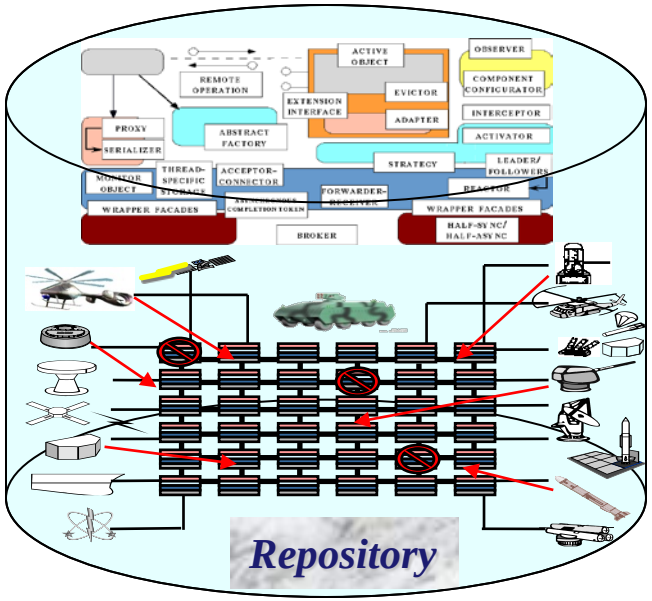


Verified Architectural Principles affirmed at one level are Captured, Codified & Reified at lower levels via the *Profiles, Patterns, Policies Institutionalized within the Repository's Data Dictionary*.

At each level of hierarchy a consistent set of policies & Profiles are applied

Variability explicitly managed at different levels of refinement/abstraction

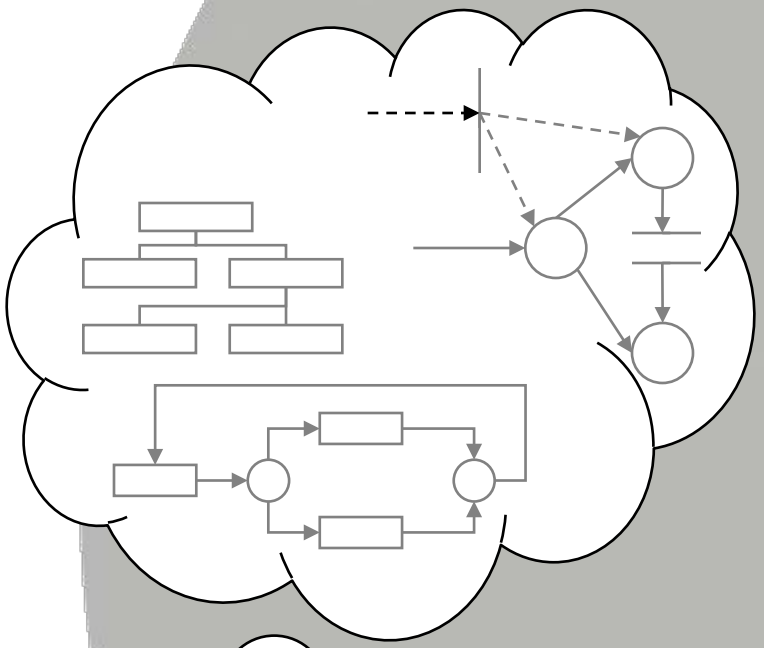
via recursive application of Standards, Policies, Principles, Patterns and Idioms.

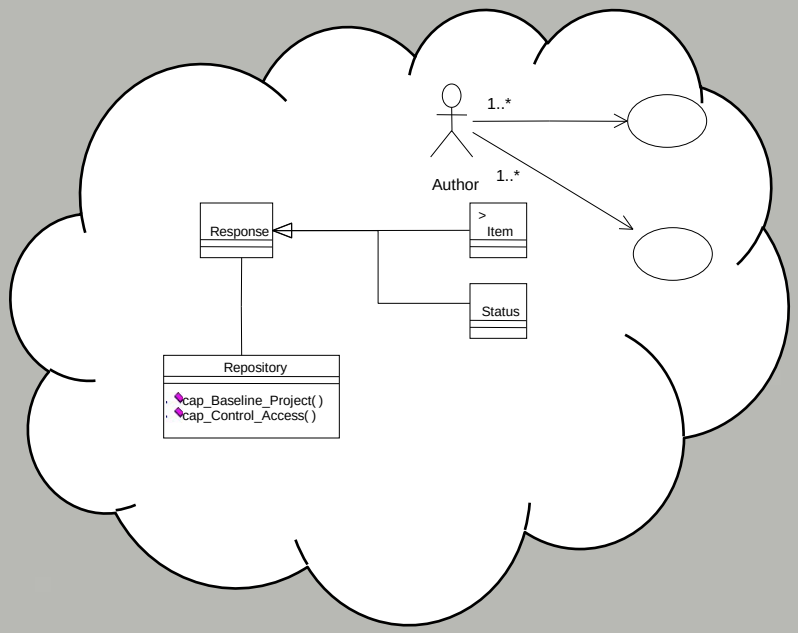


- Information Hiding
  - Higher levels defined w/o knowledge of lower level implementation
- Separation of Concerns
  - Policy separated from mechanism
  - Lower levels only recognize context imposed by contract with higher level

Recursive Structures Enables Commonality and Consistency

Miscommunication & Conceptual Barriers





Conceptual Barrier

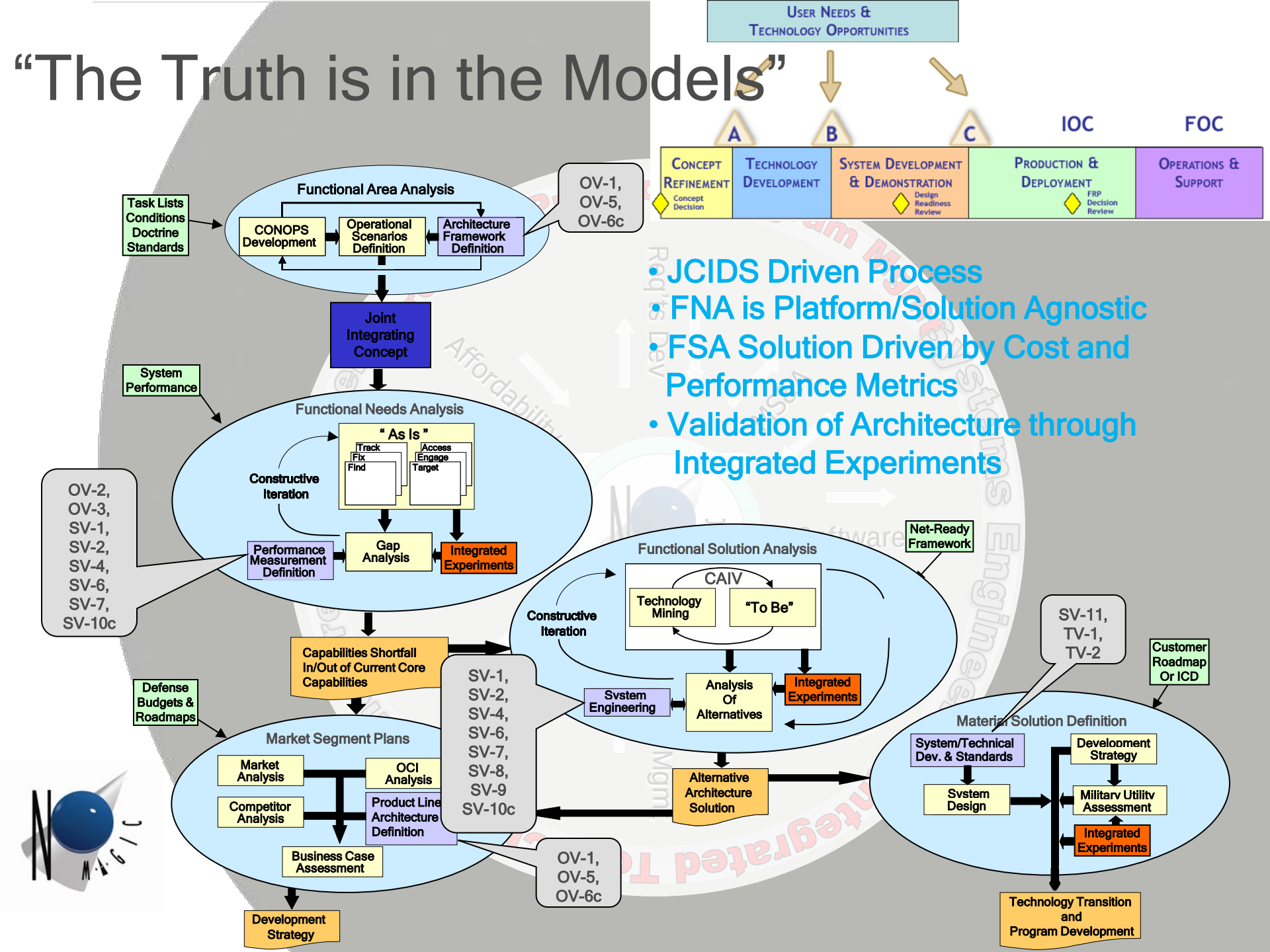
SE

SWE
HWE
HFE

~~Some communication is blocked.~~

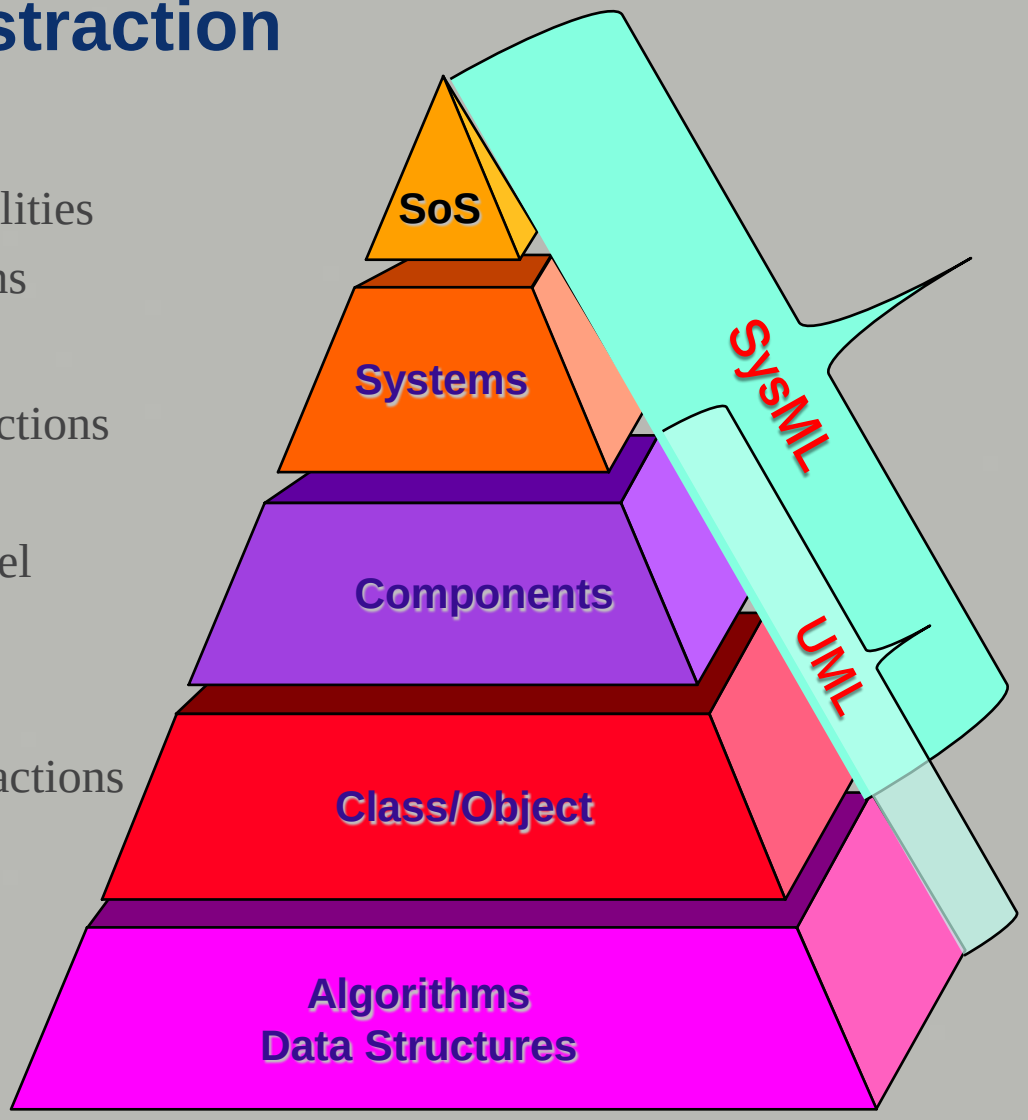
Other information is distorted.

"The Truth is in the Models"



Specification Language Levels of Abstraction

- System of Systems Level
  - All Systems & Emergent Capabilities
  - Collaborating System Interactions
- System Level
  - Collaborating Component Interactions
    - Client / Server Model
    - Coordinator / Delegate Model
- Component Level
  - Encapsulation
    - Collaborating member interactions
- Class/Object Level
  - Finer grained encapsulations
    - Data Access
    - Functions/Algorithms



All have an 'Architecture'

SysML Impacts

Processes, Methods, Procedures, Workflow

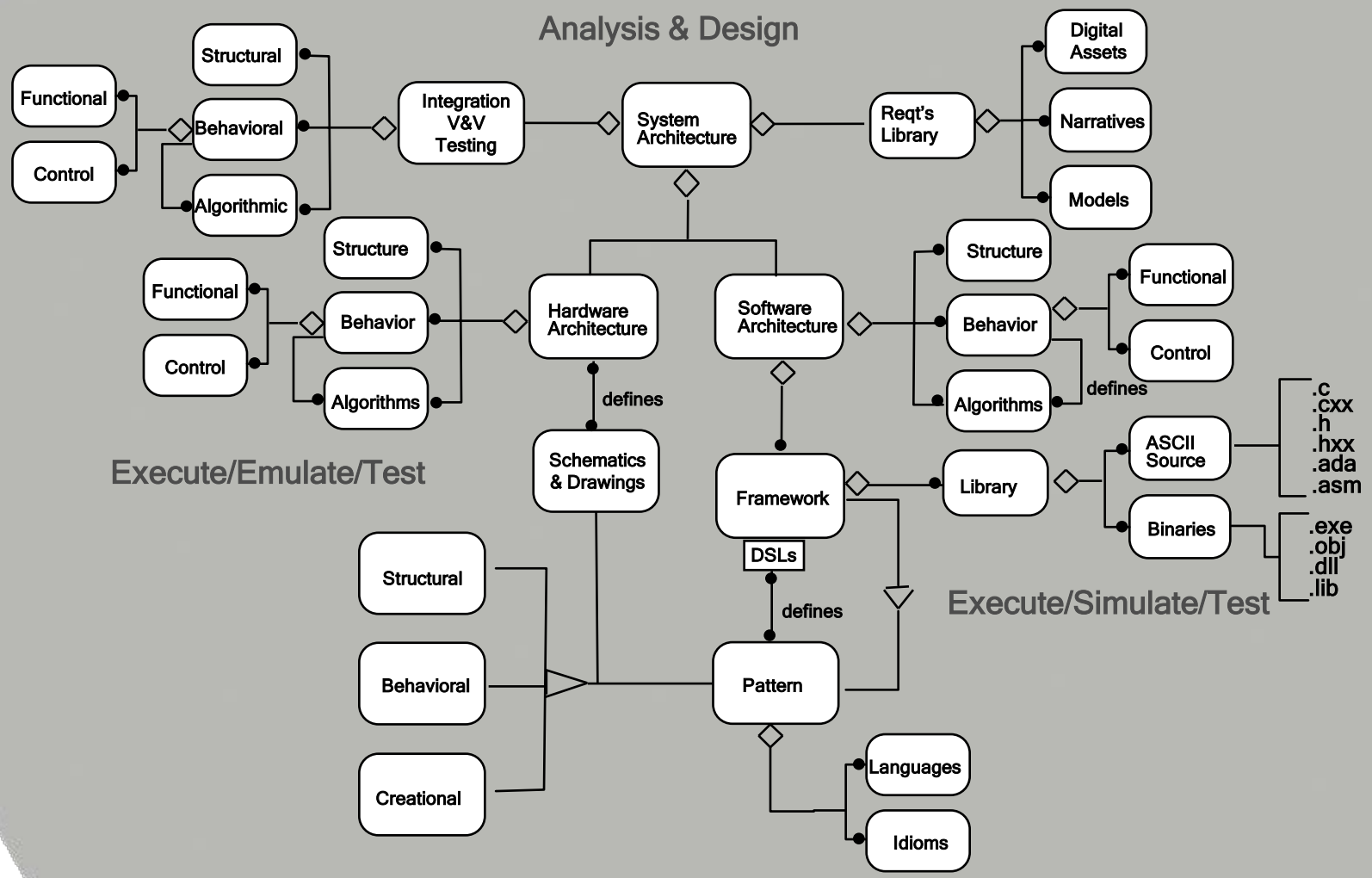
Planning

REUSE

Manage

Implement

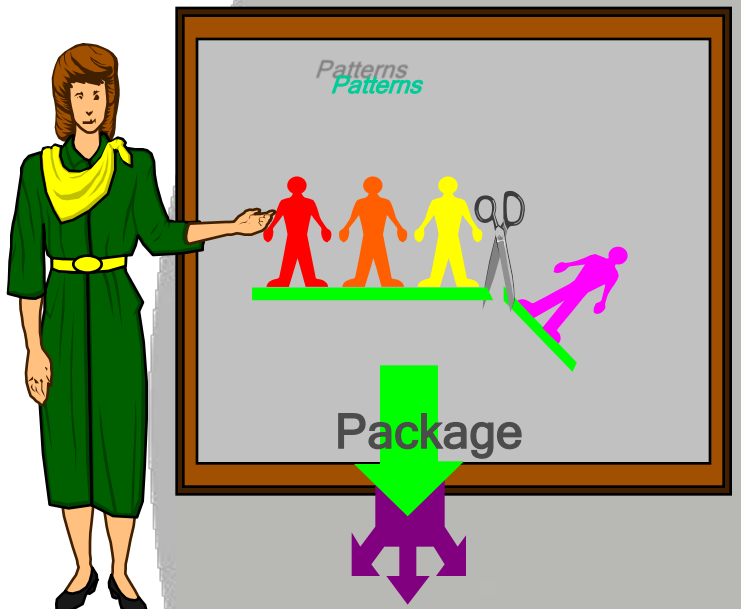
- BOM
- SOW
- WBS
- CDRL
- IPT

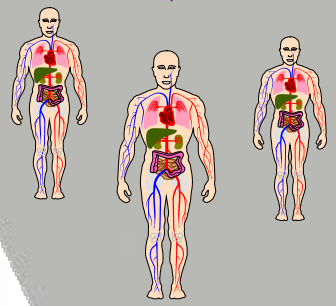


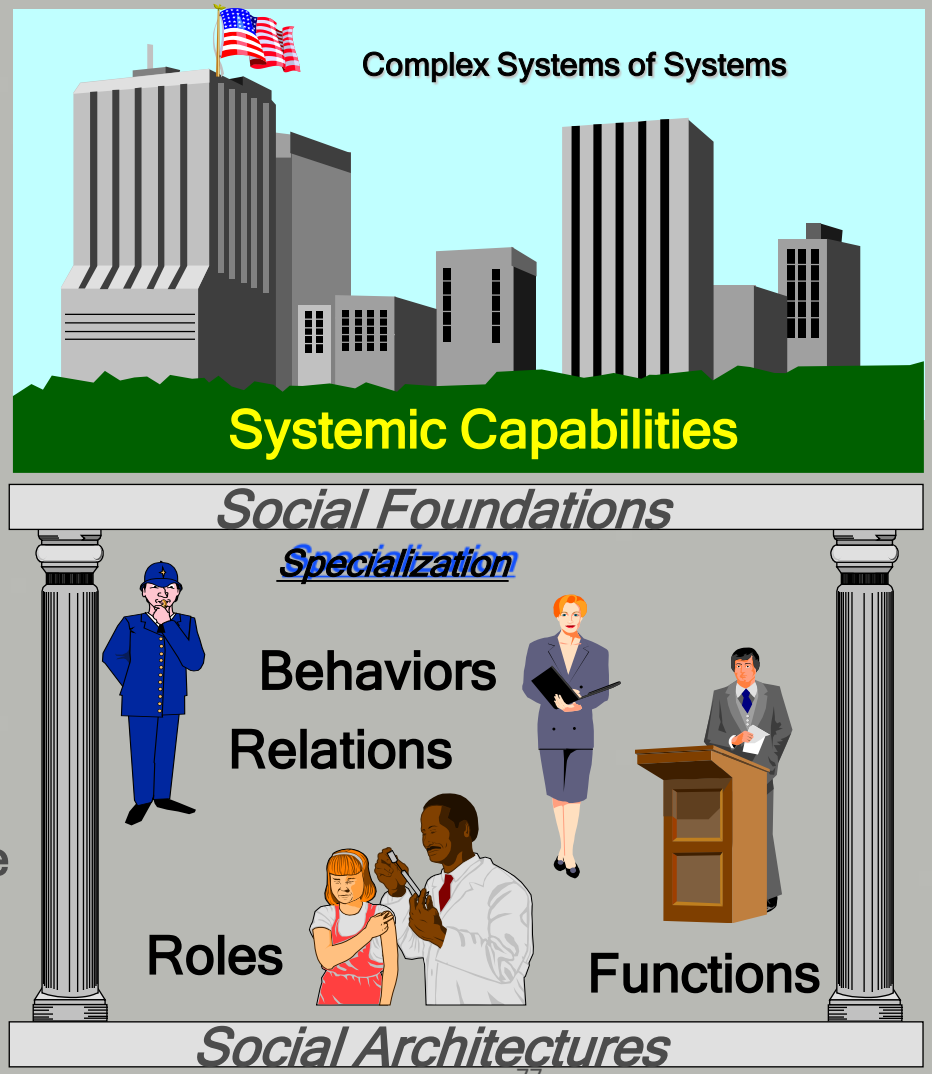
Measurement - Parametrics – Stochastics - Specification

Analogies

Patterns, Frameworks & Architectures







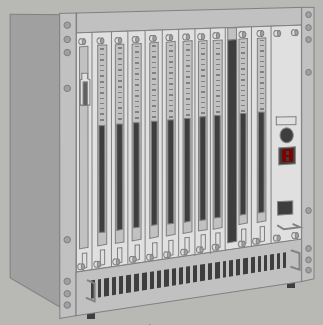
Frameworks

(Templates & Supertypes)

Analogies (cont.)

Layer 3 - Architectures & P.C.s

- combination of Frameworks or PC boards
- user configurable
- extensible
- reusable

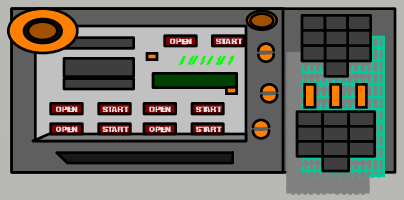


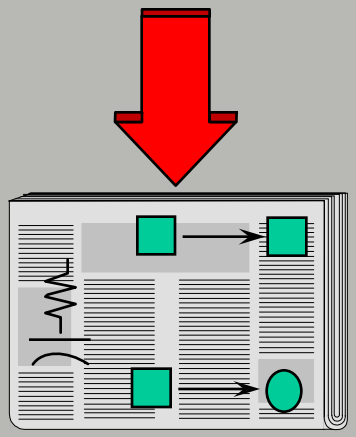
Layer 0 - Patterns , Idioms & Schemas

- standard notations
- customizable
- extensible
- reusable

Layer 2 - Frameworks & PC boards

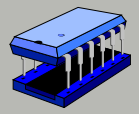
- combination of libraries or chips
- performs a standard function sets
- extensible
- reusable





Layer 1 - Libraries & I.C.s

- standard atomic component
- reusable



Interoperable Standards

- Without a dictionary, I can’t tell a story
- Without a standard, I have no standard of practice
- Without interoperable standards, there is no process (process silos)
- Without extensible standards there is no innovation capabilities

Key Capabilities

MagicDraw Teamwork Server

- Collaboration for MagicDraw models
- Fast and efficient version control
- Fine-grained element locking for edit
- Branch and merge development paths
- Compare changes between project versions
- Built-in access control
- Version visual differencing (diagrams or table output)

User Interface Design

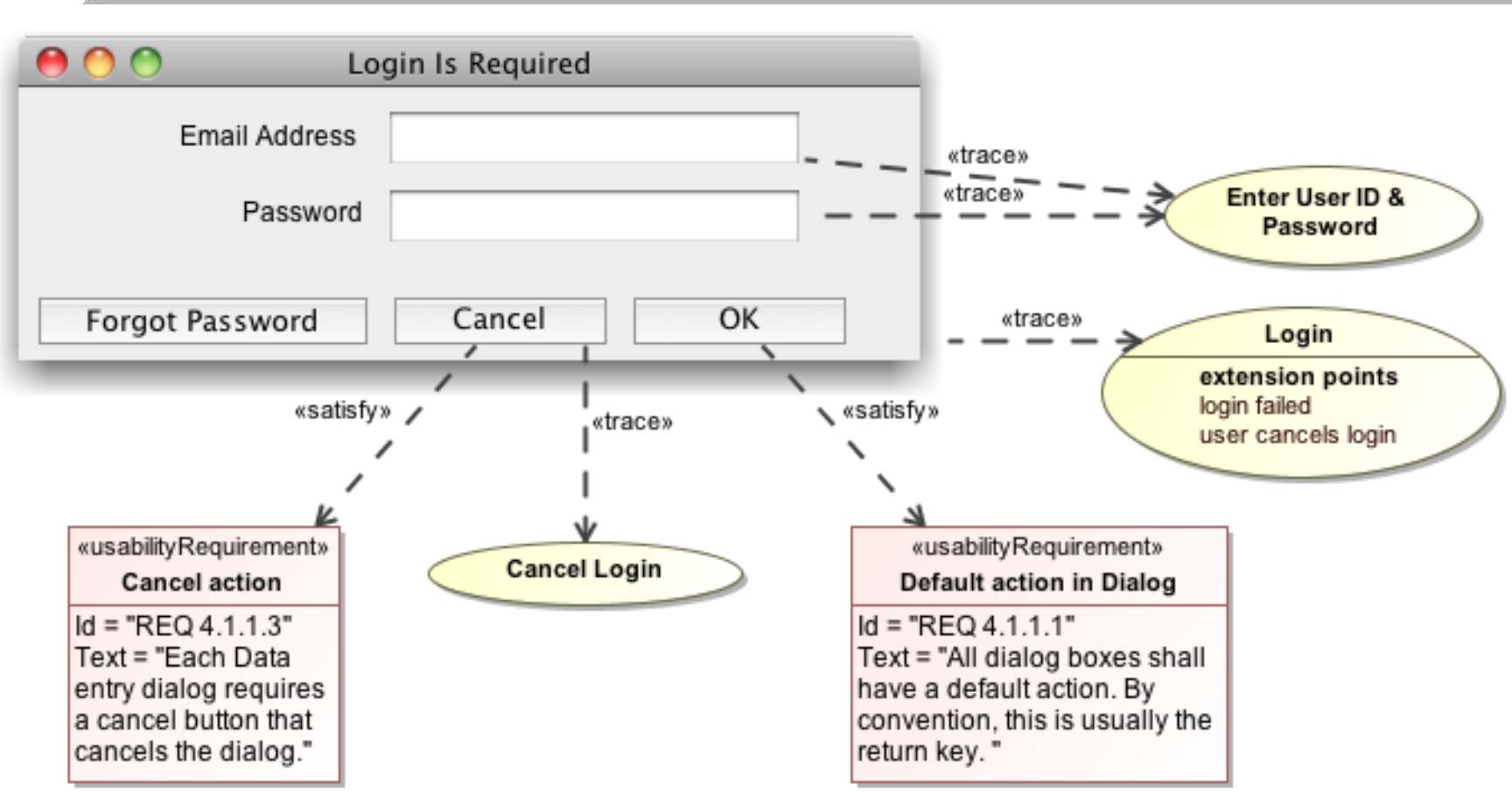
Making Your Job Easier

- Advanced techniques to model faster
- Integrated collaboration/versioning
- You can model anything!
  - Requirements
  - User Interfaces
  - Matrix views!
- Integrated views
  - Trace requirements to GUI, code, BPMN
  - Flexible drag and drop

GUI Designer

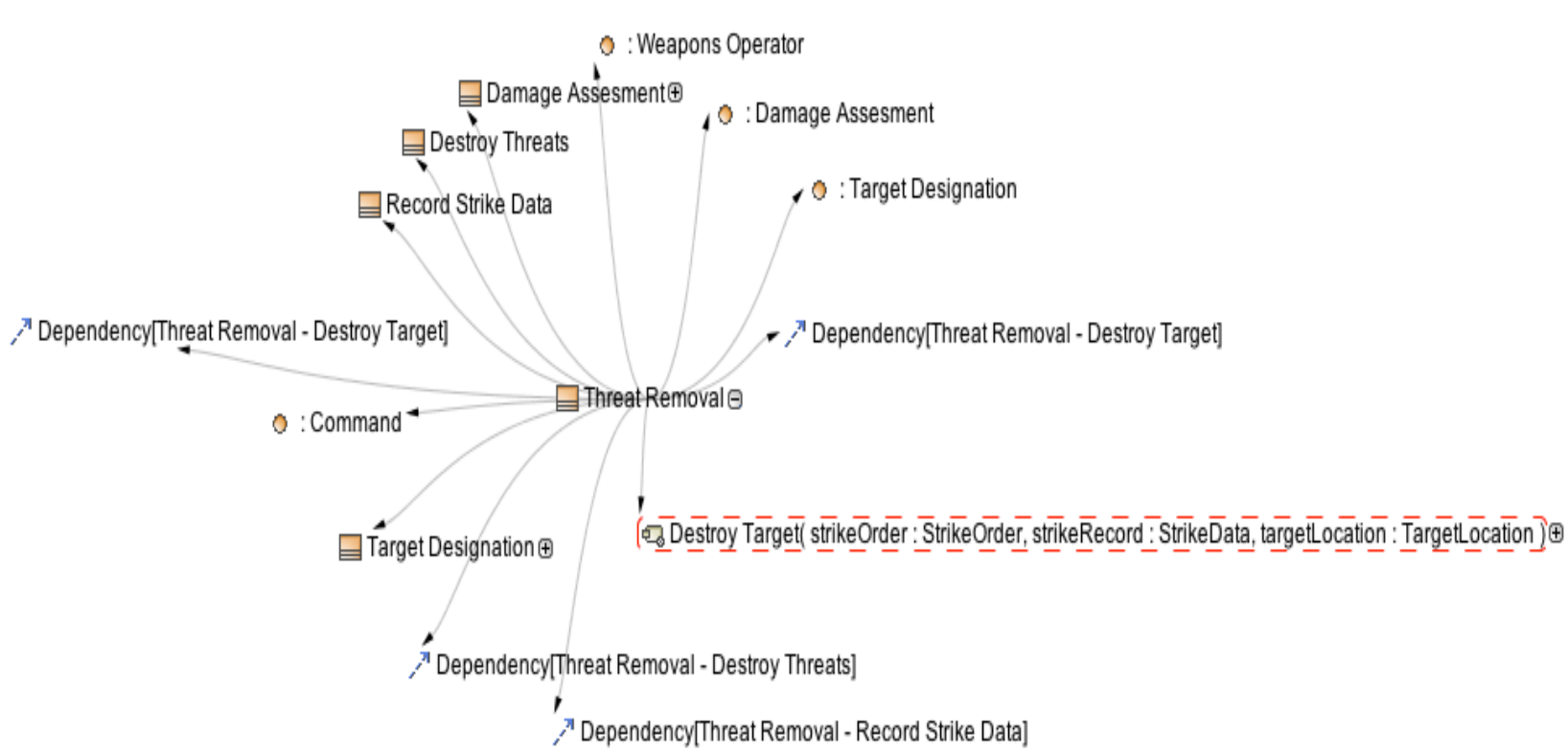
- Standard UML extension
- Adds user interface to design
- Elements can be used for traceability
- Can generate code and documentation via templates.

Trace From GUI



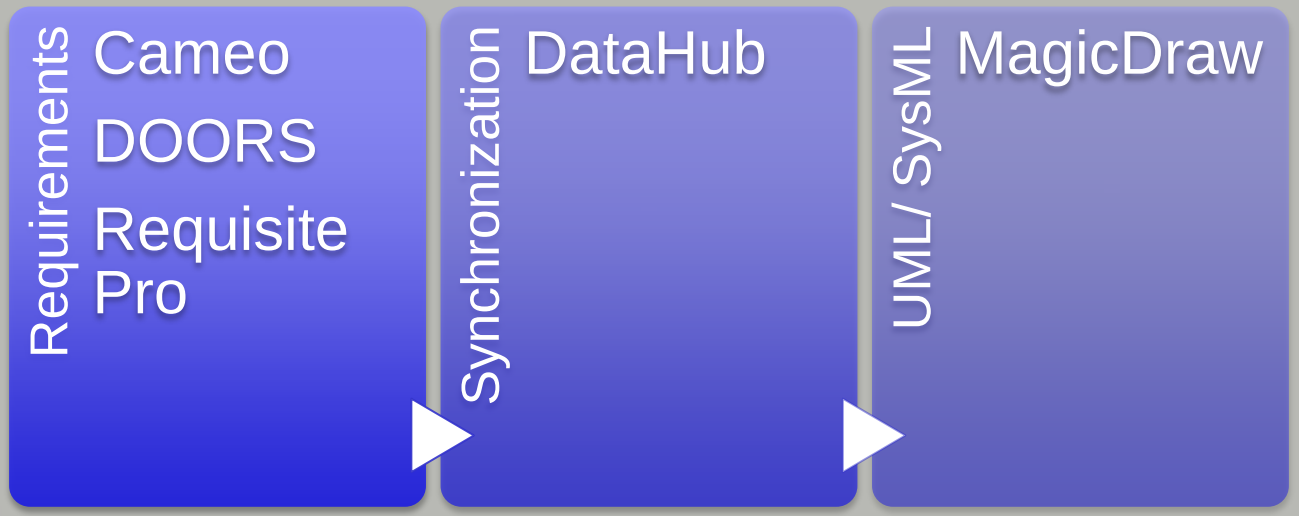
Relationship Map

- Dynamic view of all relationships



Cameo DataHub

- Synchronize Requirements and other data
- Synchronize MagicDraw and Cameo Requirement+
- Connectors for: DOORS, Requisite Pro
- Two-way sync (automatic or on demand)
- CSV for legacy interoperability



Goals (No Magic)

- Understanding advantage of usability
- Expertise/pedigree (domain experts)
- Capabilities of tools
  - Modeling
  - UPDM 1 -> UPDM 2
  - Data migration (bidirectional)
  - Information sharing and collaboration (standards, tools, reporting)
  - Multiple domain standards (architecture, business, engineering, software)
  - Simulation and parametrics
- Capabilities of No Magic
  - Standards stewardship
  - Training
  - Consulting
  - Experience
  - Broad military, aerospace, and commercial use US/Global (to be provided)
  - Cleared expert personnel
- Driving adoption of Enterprise Architecture and Engineering standards
- Involved in standards/process changes for UPDM usage

DoDAF 2.0 DM2 Capability

- Co-chair UPDM 1.0 and UPDM 2.0 standards at OMG
- Gary Duncanson, Boar member of OMG