

Models as First Class Citizens in the Enterprise



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## **Model Centric**



#### **Model Centric**

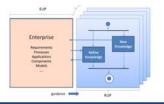
UBS introduced a new process framework that covers the different activities to realize high quality software products.

The aim is the alignment with market standards to be a competitive player on the market. A major goal of the initiative is the description of requirements and their analysis and design as formal models unlike the widely-used informal prose description.

The models must be a first class citizen in our enterprise.

A **Model** captures a view of something specific. It is an **abstraction**, with a **certain purpose**. Thus the model completely describes those aspects that are relevant to the purpose of the model, at the appropriate level of detail.



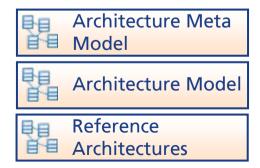


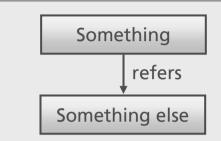
#### **Model Centric**

- Enterprise Disciplines
  - **Enterprise Business** Modeling



**Enterprise Architecture** 





- Everything can be modeled ...
- Model
  - with a purpose
  - has a syntax (grammar)
  - has semantic (meaning)
  - simple as possible
  - syntactical correctness

- Project Disciplines
  - **Business Modeling**



Requirements

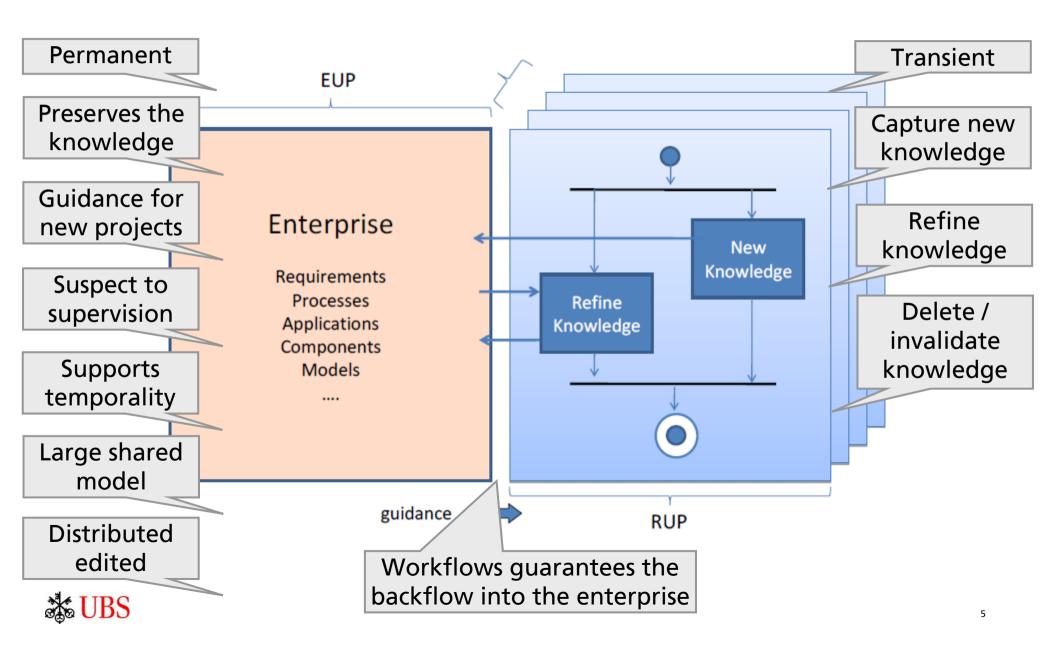


Analysis and Design



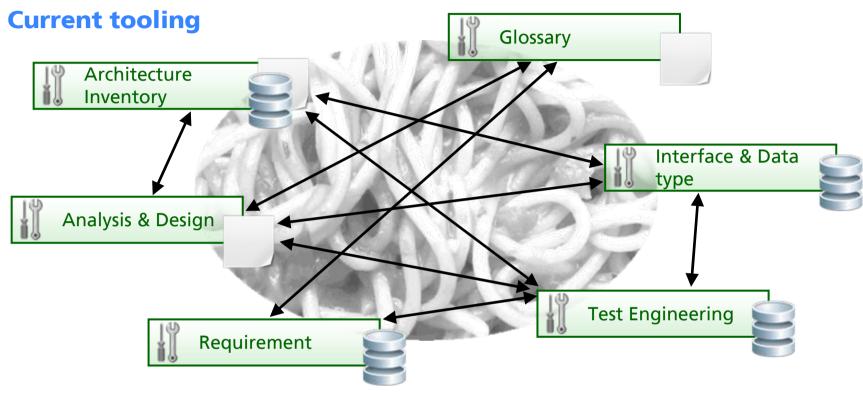


#### **Model Centric - Enterprise vs. Project**



# **Current Tooling**





- Point to point integration
- Data redundancy and inconsistency
- Outdated data
- No online accessibility (private storages like shared drives, local drives)
- Lots of unstructured content (Word, Visio, PowerPoint)
- Lack of semantic
- Traceability hard to achieve



## **Vision SDLC Modeling Platform**



#### **Vision SDLC Modeling Platform**

- Platform supporting Modeling & Engineering disciplines of our Software Development Process
  - Model Centric
  - Scalable & Collaborative
  - Forward Engineering (for new project)
  - Reverse Engineering (understand the current implementation, enable transparency)
  - Integration trough repositories
  - Role specific tooling support
  - Consistence knowledge base
  - Enable Software Factory approach for specific areas
  - → Demo Proof of concept SDLC Modeling Platform
  - CDO
  - EMF
  - Zest
  - Eclipse Forms
  - → Proof of concept motivation
  - Evaluate possible technology candidate for the EMP
  - Prioritize EMP requirements

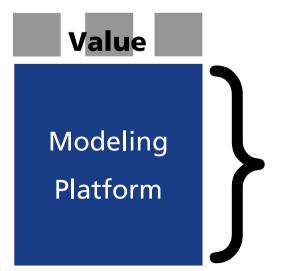


**Eclipse Modeling Platform** 



#### **Eclipse Modeling Platform**

- Share and sound vision with other companies
- Alignment of eclipse technology for enterprise usage
- Additional Capabilities needed (findings from POC)
  - Meta Model Evolution (Migration of Model Instances)
  - Generic Traceability Support
  - Generic Workflow (Processes) Support
  - General Purpose Modeling Language Support
  - Graphical Editing (Graphiti)



#### **UBS** Vision

Base tooling support on an open platform stack.

Participation to establish the vision.



# **Appendix**



#### **Tooling principles (1/2)**

- Developer workplace is centered around the Eclipse IDE
  - For modeling and implementation
  - Fast navigation in model and code and roundtrip between model and code
- Use technologies and tools based on open standards
  - Avoid vendor lock-ins
  - Prefer 'use' over 'buy' over 'build'
  - Support different sourcing strategies
- Follow 'separation of concerns' ('low integration')
  - Separate editor, model and generator
  - Model and technology aspects
  - Abstraction levels
  - Integration through repositories



#### **Tooling principles (2/2)**

- Modeling Principles
  - Early validation / testing
  - Guidance, wizards and content assistance
  - Keep it as simple as possible, prefer ease of use
  - Model with a purpose
  - Prefer content over representation
  - Prefer convention over configuration
  - Enable collaborative work
  - Embrace change
- Sounding / Expertise
  - Sounding against internal and external experts



#### **Eclipse Modeling Platform – UBS Top 5 Requirements**

- Prio 1 A1 Managing versions on various model granularity, meta-model and instances
  - 1.1 a)+E-Config-1 Versioning of metamodels and instances
  - 1.2 a) -Support of muli-user and distributed development teams
- Prio 2 A6 Migration
  - 6 a) Support for automatic application of metamodel changes to model instances
- Prio 3 A5 Traceability
  - 5.1 a) Creation of realtionships between model elements that are independent of their metamodel(s)
  - 5.1 b) Visualization of these relationships and traceability between model elements
- Prio 4 A3 CompareMerge
  - 3.1 a) + E-Comp-1 Parallel work on different parts of a model and merge of resulting changes into a common model
- Prio 5 A2 ChangeTracking



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