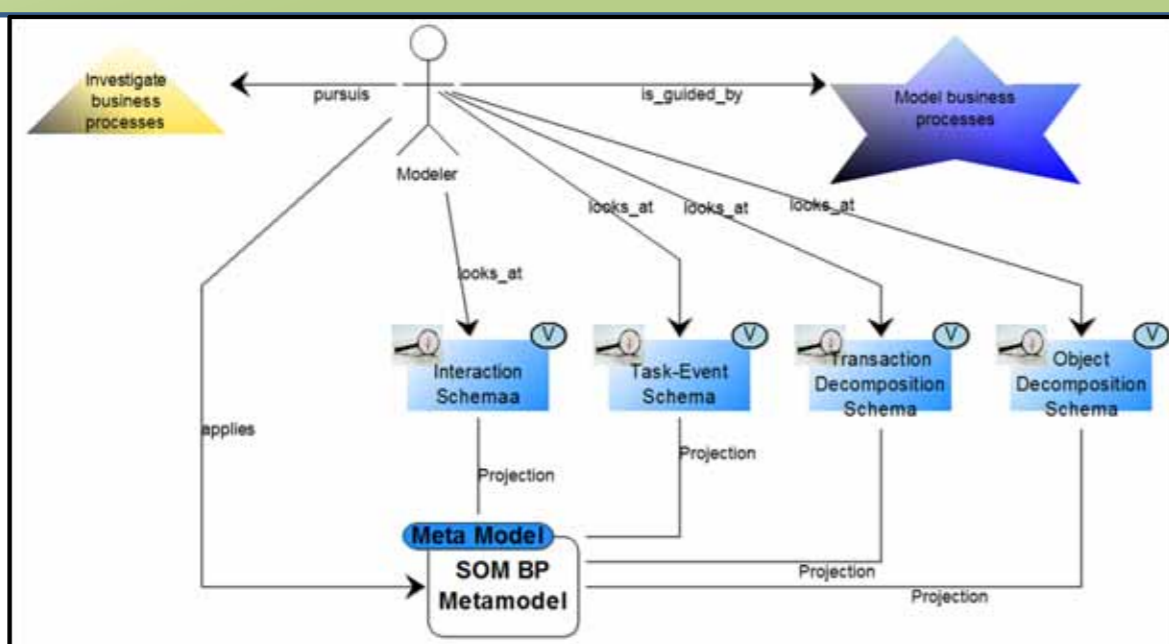


Effectiveness of comprehensive modeling methods considerably benefits by the availability of appropriate tool support. Multi-view modeling methods enable the analysis of complex systems by separating the model into several, interrelated views. The combination of the views gives the whole model of the system. However, there is a significant semantic gap between a multi-view modelling method and the design of a corresponding modelling tool.

The MuViEMoT approach contributes to bridge that gap by means of explicitly focusing the early steps in the design process of a multi-view modeling tool. MuViEMoT itself comprises four steps: The definition of a *Modeling Scenario*, the specification of meta models and view models, the identification of *multi-view modeling use cases*, and the condensation of all gathered information into a comprehensive *Conceptual Design* for multi-view modeling tools.

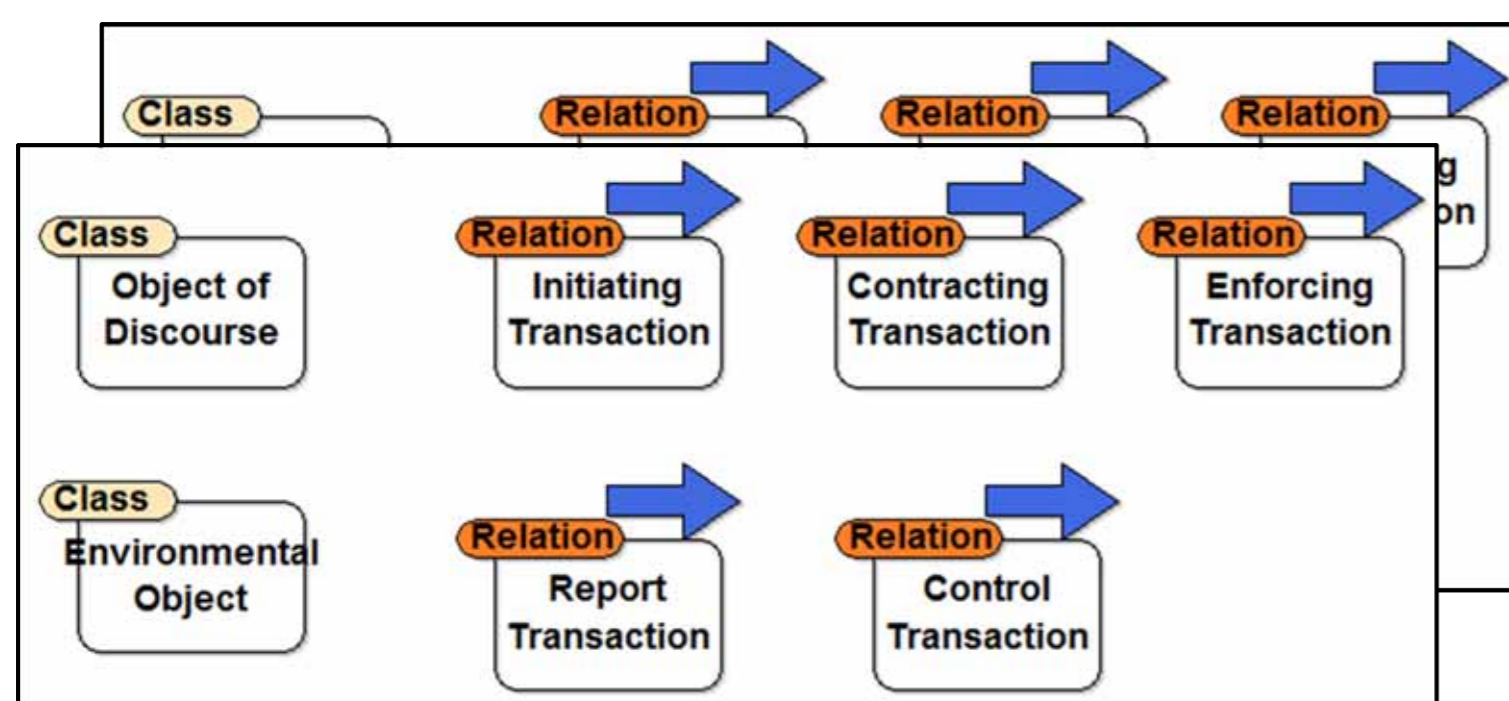
1. Define the Modeling Scenario

The Modeling Scenario is used to define the central elements of a multi-view modeling method, i.e., the *meta models*, the *view models*, the *metaphor*, the stakeholders served, and the *goals* pursued.



Modeling Scenario Model

Meta Model / View Model



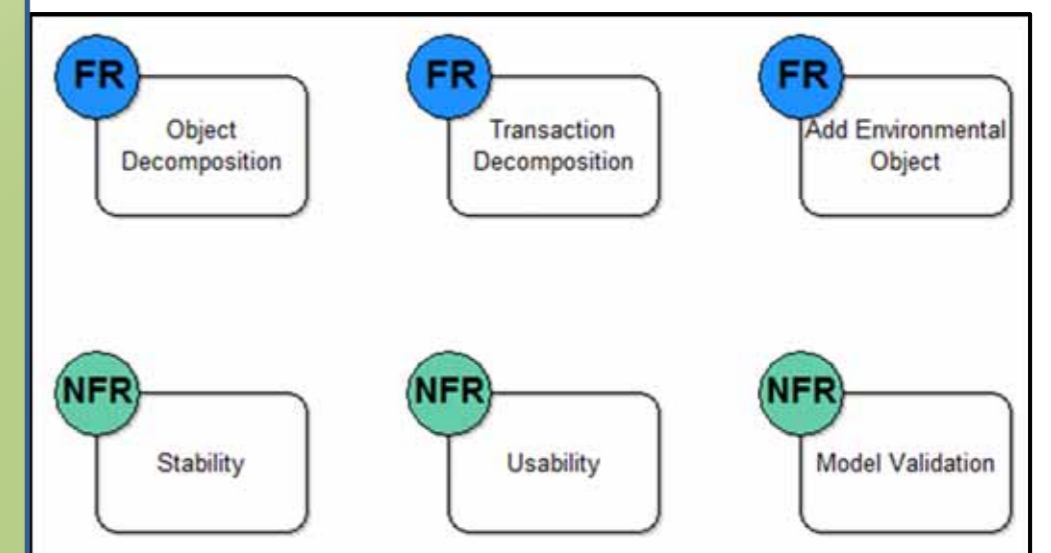
The second step concentrates on the meta models and the constituents of each view of the multi-view modeling method. Both are specified by referring to the ADOxx concepts *Modeling Class* and *Relation Class*. Views can be defined from the underlying meta models by applying a *projection* or *selection* operator.

2. Specify Meta Models and View Models

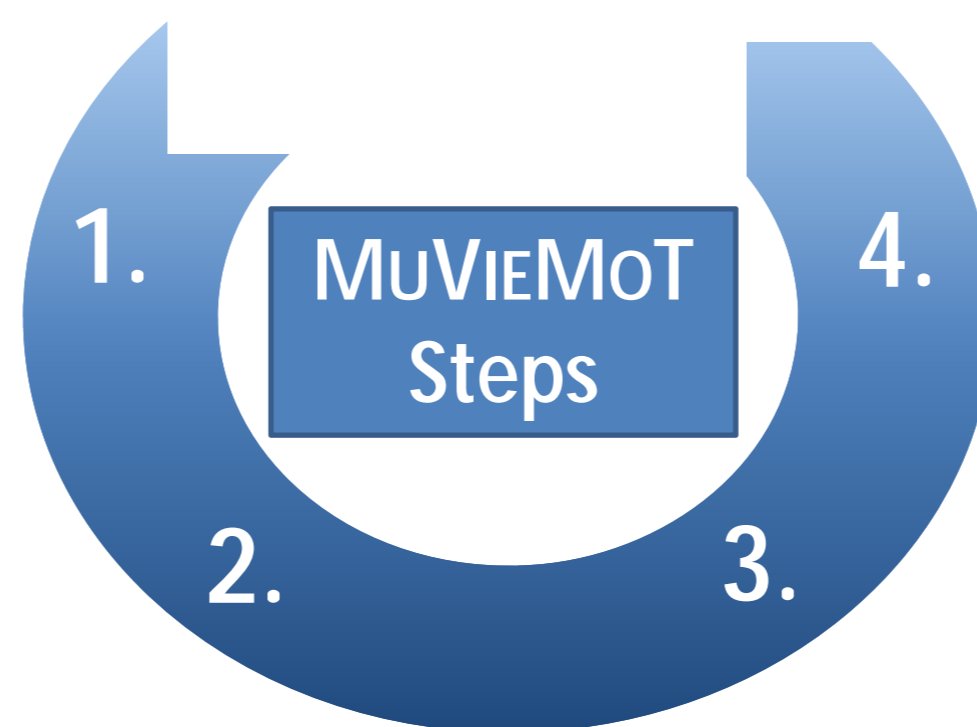
4. Condense the Conceptual Design

Finally, the conceptual design of a multi-view modeling tool is condensed of the information gathered in the former steps, enriched with consistency-specific considerations.

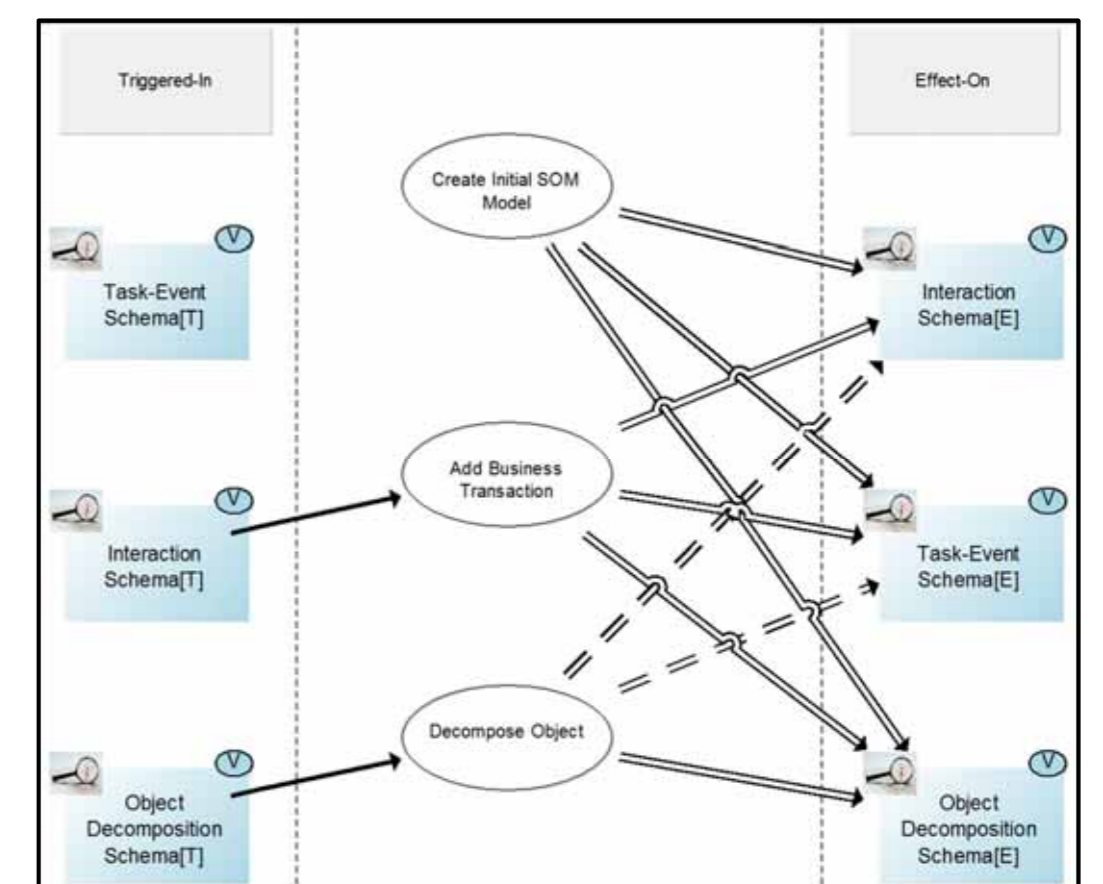
Functional and *Non-Functional Requirements* are specified with an emphasis on the multi-view nature of the underlying modeling method.



Conceptual Design Model



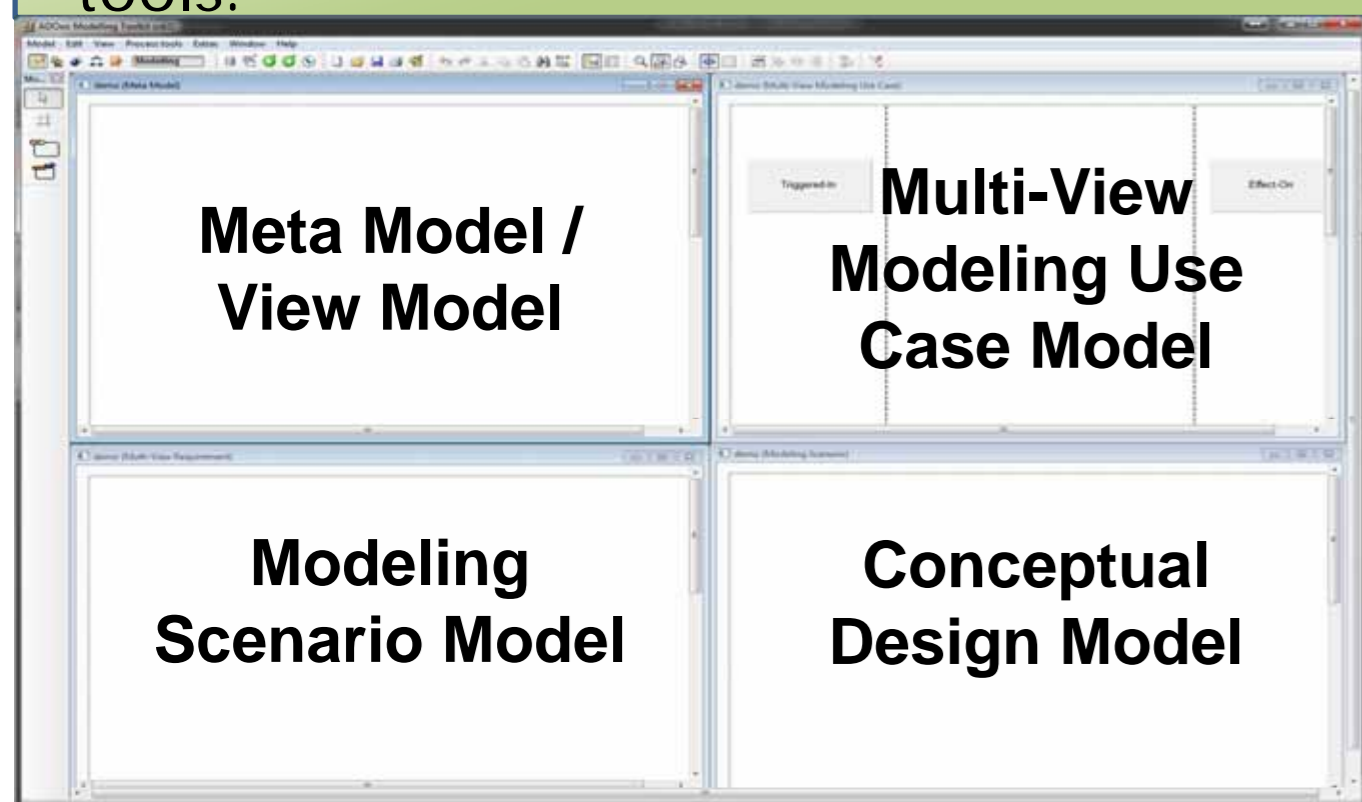
Multi-View Modeling Use Case Model



In the third step, the procedure of creating models is defined by introducing *multi-view modeling use cases* and relating them to the views defined in the former steps. Views can be related to use cases by *Triggered-In*, *Effect-On*, and *Conditionally Effect-On* relationships.

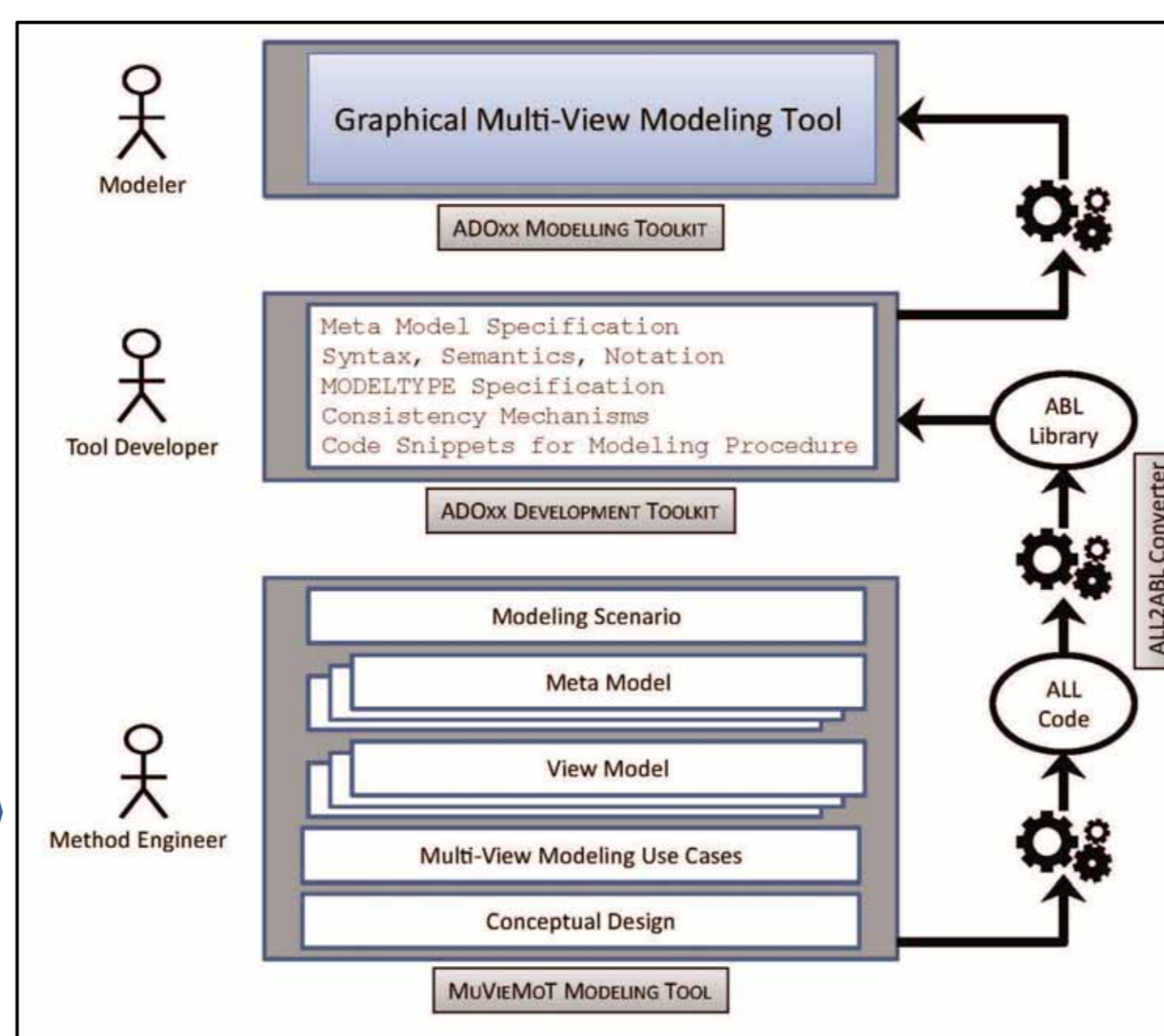
3. Define the Modeling Procedure

The ADOxx Implementation of MuViEMoT enables the model-driven specification of multi-view modeling tools.

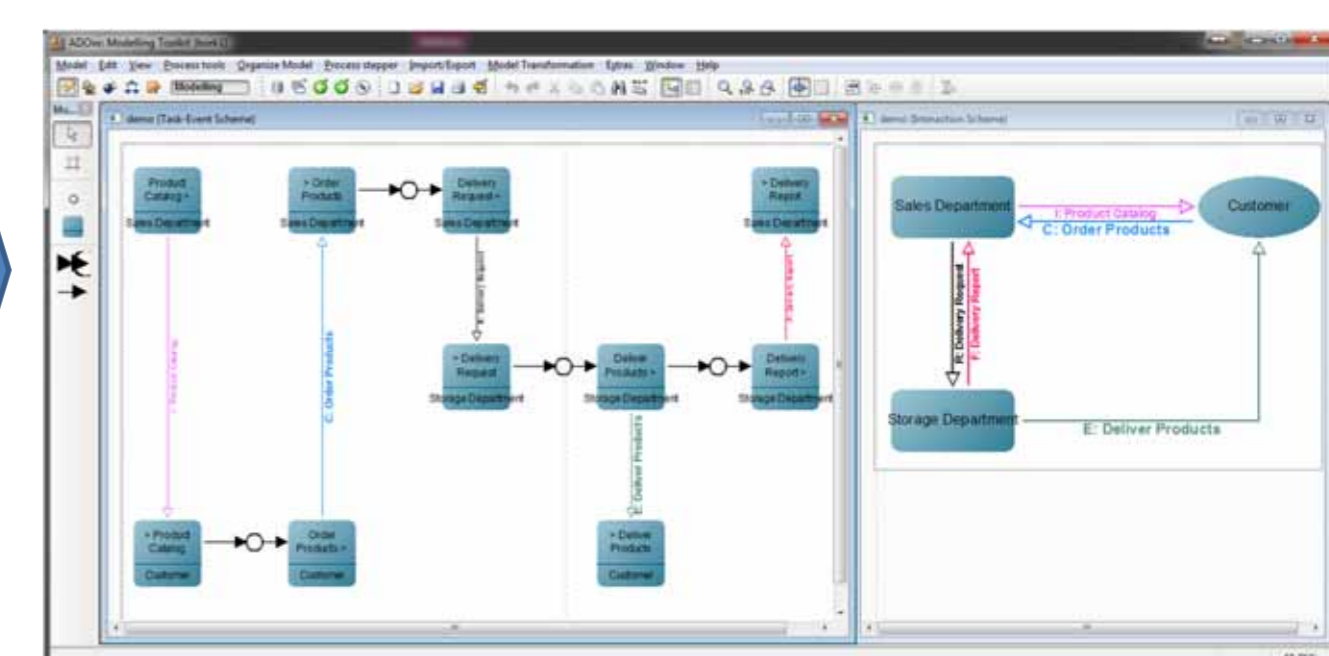


ADOxx[®] Implementation of MuViEMoT

Model-driven Tool Development



Demo: SOM Multi-View Modeling Tool



Download the MuViEMoT tool:
www.omilab.org/web/muviemot

The created models can be transformed into an initial implementation of the modeling tool with ADOxx.