

Tutorial SemTalk 4.4

BPMN Edition for Business Process Analysis



Contents

1.	About Business Process Modeling Notation (BPMN).....	3
2.	Starting SemTalk BPMN Edition	4
3.	Editing a Process.....	7
3.1.	Adding Process Elements.....	7
3.2.	Using Swimlanes	9
3.4.	Consistency checking	14
3.5.	Object-oriented process modeling	15
3.6.	Editing process elements.....	17
3.6.1	Task Dialog.....	19
3.6.2	Task: “Hum. Resource” Tab.....	19
3.6.3	Task “Measures” Tab.....	21
3.6.4	Sequence Flow Dialog	21
4	Org Charts.....	24
5	Class Diagrams and Mastershapes	26
6	Systems.....	31
7	Refinements (Sub-Process)	33
7.1	Attachments and Visio Hyperlinks.....	35
8	Customizing Colors	36
9	Simulation.....	37
10	XPDL Export / Import.....	38
11	Figures	40

1. About Business Process Modeling Notation (BPMN)

The Business Process Modeling Notation (BPMN) specification provides a graphical notation for expressing business processes. This notation has been proposed by the Business Process Management Initiative (www.bpmi.org).

Standard specification can be found at <http://www.bpmn.org>

The objective of BPMN is to support business process management by both technical users and business users by providing a notation that is intuitive to business users yet able to represent complex process semantics. The main focus of BPMN is on interacting systems that interrupt one another, especially where there are many deeply nested independent, but coordinated, interacting execution threads.

This tutorial ¹is intended to be used for Business Process Analysis, rather than the design and orchestration of web services. Please refer to our other documentation if you are interested in generating BPEL Code.

¹ All screenshots in this tutorial are taken with Windows7 and Visio 2013. Other OS such as XP and Visio versions (2003 or 2007) may look slightly different

2. Starting SemTalk BPMN Edition

There are two ways to use SemTalk. You can either use a version which embeds Visio into a SemTalk User Interface or SemTalk can be used as a Visio 2013 Addin. The second approach is recommended if SemTalk is used together with SharePoint. Please make sure that you have installed the “SemTalk Addin for Visio 2013”.

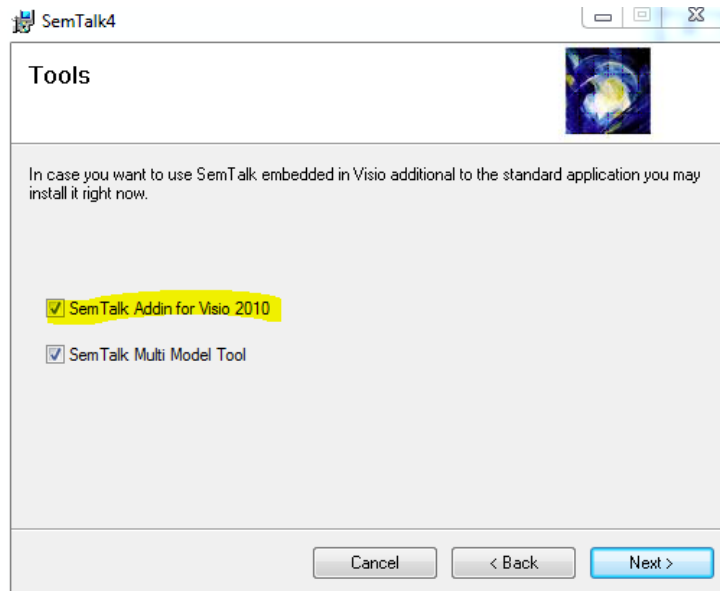


Figure 1 SemTalk Addin for Visio 2010

In order to start SemTalk simply open Visio. The “New SemTalk” menu presents an overview of preinstalled templates. Please select “BPMN20 for Visio2010” if you have Visio 2010 installed.

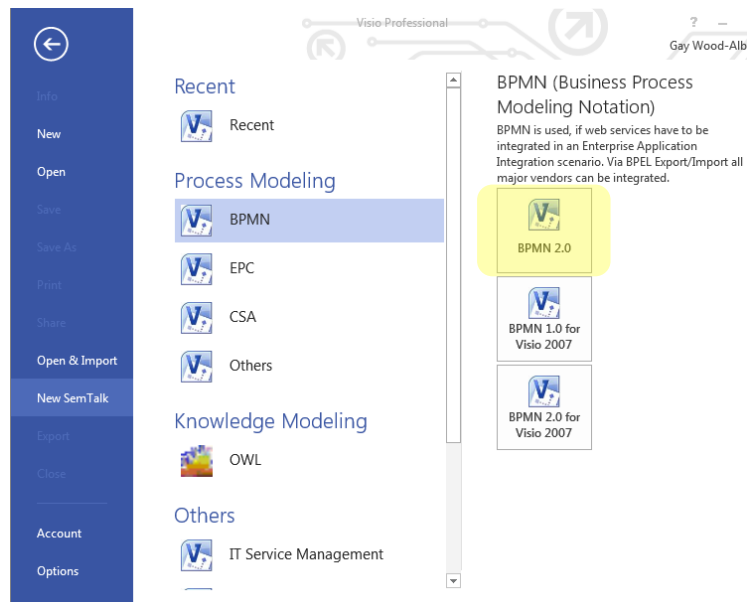
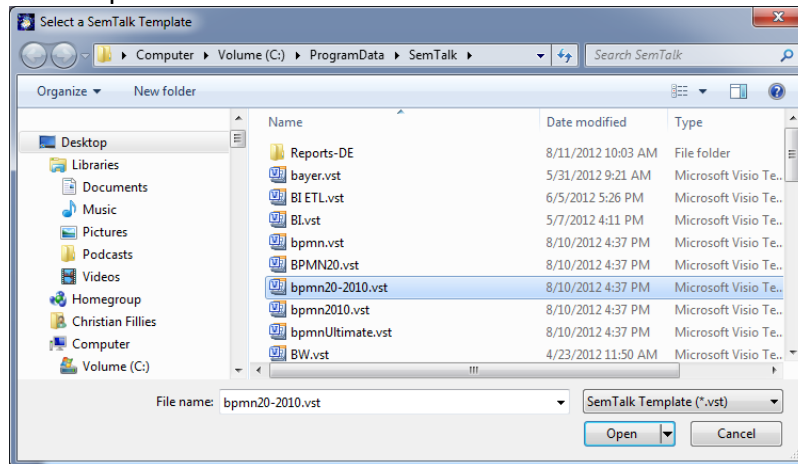


Figure 2: Selection of BPMN 2.0

If you do not have Visio 2013 or Visio 2016 and need to use Visio 2010 or 2007 you will use “Start->Programs->SemTalk->SemTalk4” with a slightly different user interface. Use File->New to select the template:



Visio SemTalk appears as follows:

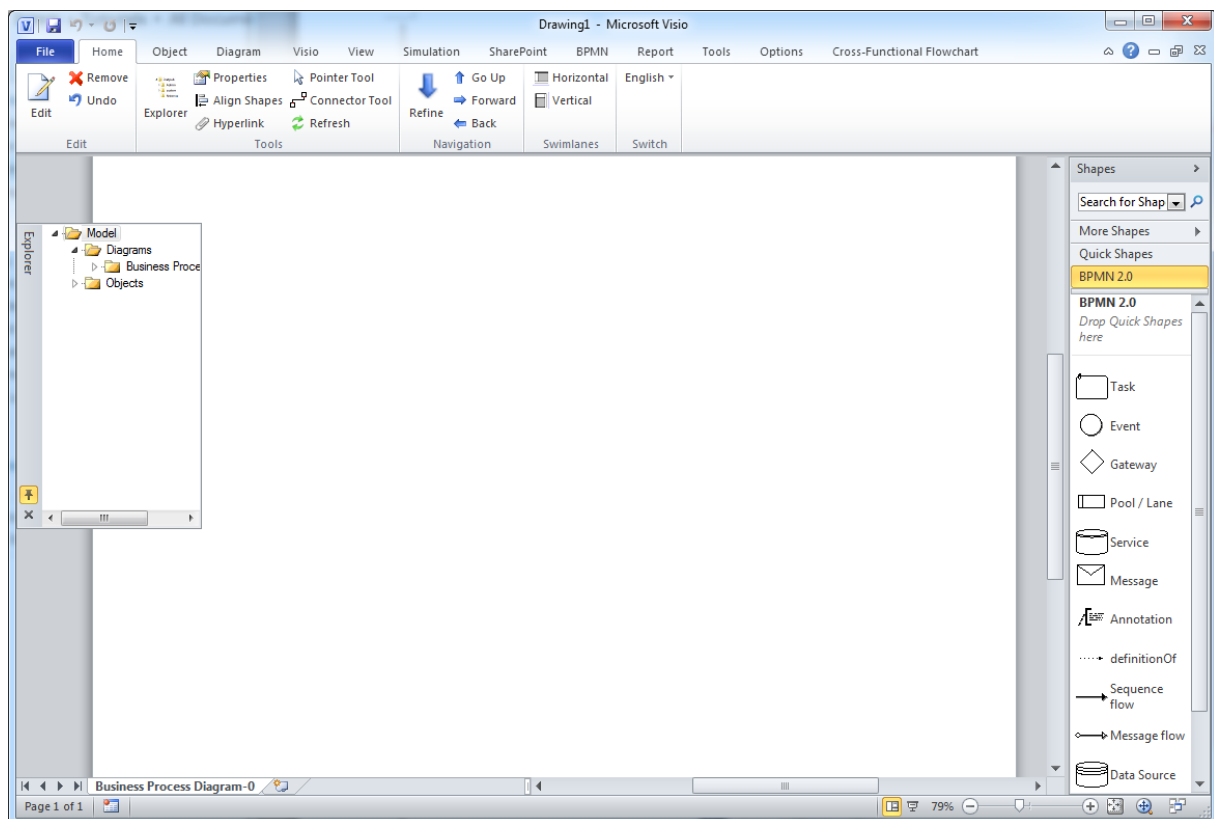
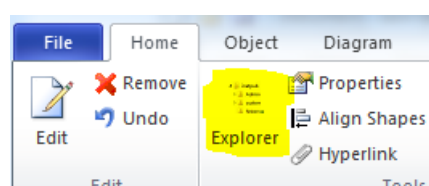


Figure 3: Starting SemTalk BPMN Edition

You can open the SemTalk Explorer by pressing the Explorer Button found on the Home Tab:



The Explorer gives you structured access to objects contained in your model.

For this tutorial please make sure that you are not using BPMN 2.0 in the Expert Mode which is only needed when generating BPEL.

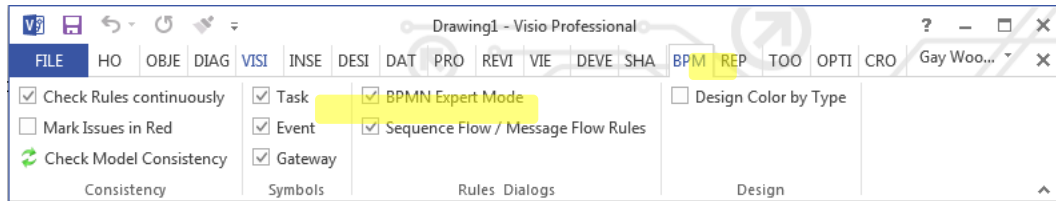
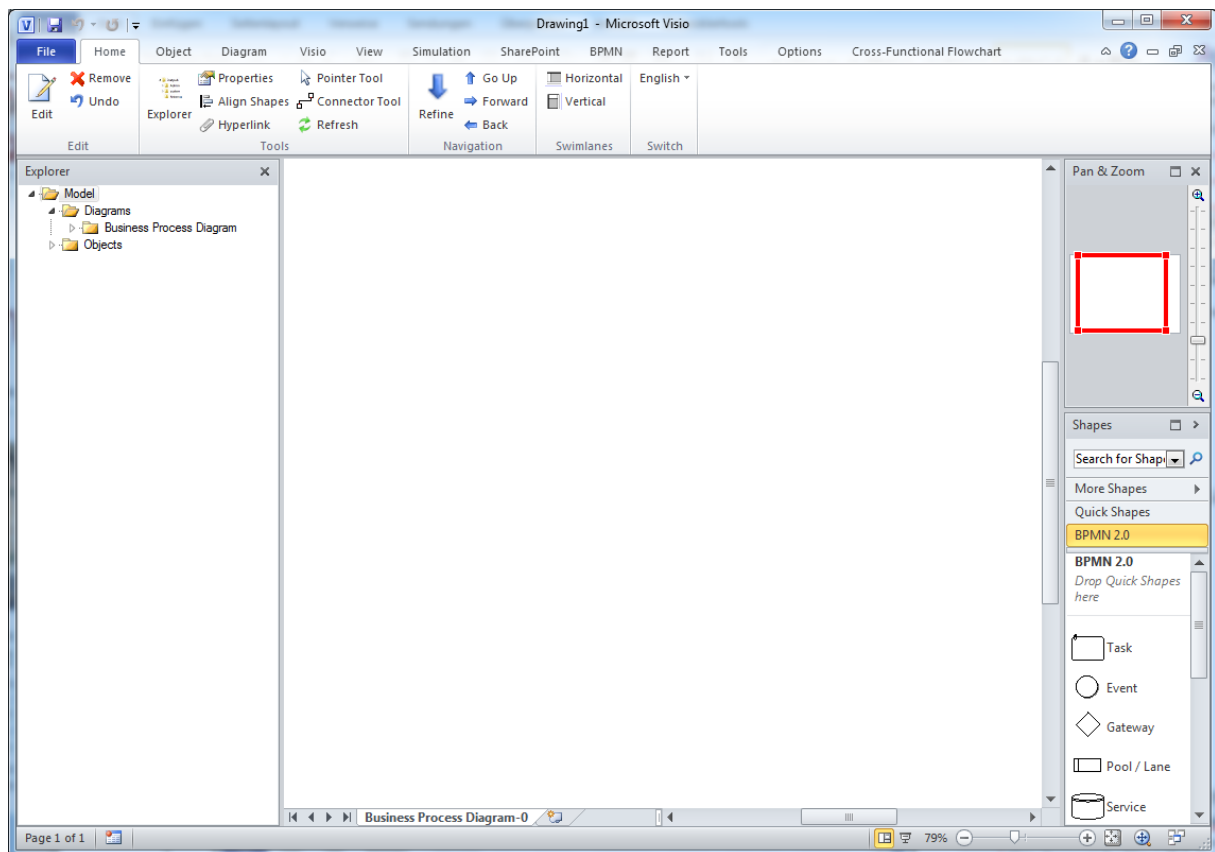


Figure 4: BPMN Settings

Visio's Pan & Zoom Window located in the lower right corner:



The Explorer, the Stencil Windows and the Pan & Zoom Window can be “docked” to the Borders of the Visio pane with or without the auto-hide mode.




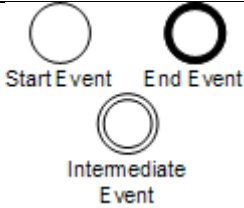
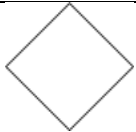
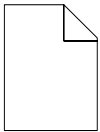
One of the major advantages of using the SemTalk Addin for Visio is that you can customize the ribbon to match your needs.

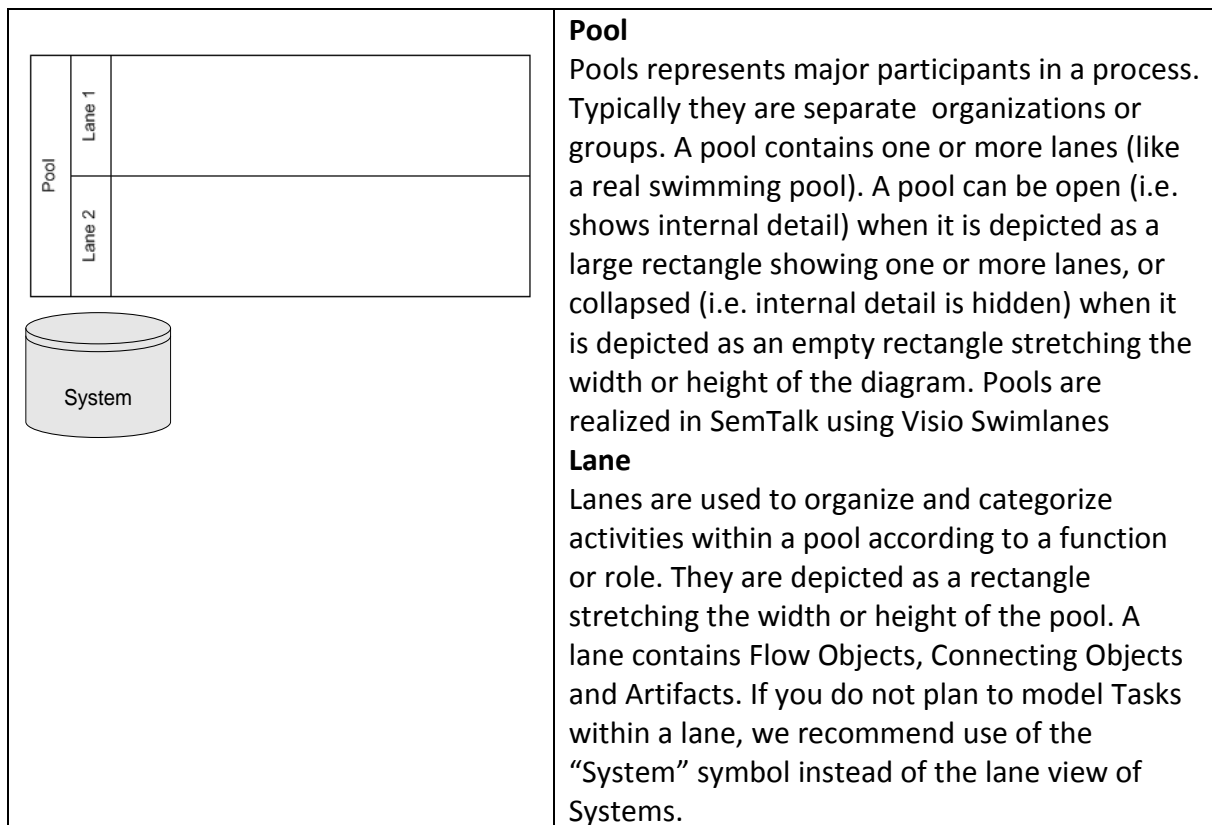
3. Editing a Process

3.1. Adding Process Elements

Please add elements to the existing process by dragging them from the stencil to your diagram (or “Process”). Objects can be renamed by double-clicking on the object and entering the new name.

A process is a sequence of process steps (*Tasks*). It has well defined interfaces. These are *Start Event* and *End Event*. Between those two elements is the Sequence flow.

	A Task is an atomic activity that occurs within a Process. A Task is used when the work in the Process is not broken down into a finer level of Process detail. Generally, an end-user and/or an application are used to perform the Task when it is executed
	An Event is something that “happens” during the course of a business process. These Events affect the flow of the Process and usually have a cause or an impact. BPMN has restricted the use of events to include only those types of events that will affect the sequence or timing of activities of a process. Start and most Intermediate Events have “Triggers” that define the cause for the event. End Events may define a “Result” that is a consequence of a Sequence Flow ending.
	Gateways are modeling elements that are used to control how Sequence Flows interact as they converge and diverge within a Process. It implies that there is a gating mechanism that either allows or disallows passage through the Gateway. As Tokens arrive at a Gateway, they can be merged together and/or split apart on as Gateway mechanisms are invoked.
	Data objects do not have any direct effect on the Sequence Flow or Message Flow of the process but they do provide information about what the Process does. They describe how documents, data, and other objects are used and updated during the Process. While the name “Data Object” may imply an electronic document, they can be used to represent many different types of objects, both electronic and physical.



Adding connectors is quite simple. Drop the “Sequence flow” shape somewhere on your diagram. If you hover over the end of the sequence flow object, you can move the sequence flow to connect the source object with the target object over an object’s “connections point” you are notified by a colored square that you can glue the relation to that object. Select an ending point and glue your relation to the objects of your choice.

After adding some elements and connecting them with the “Sequence flow” connector your diagram looks like this one:

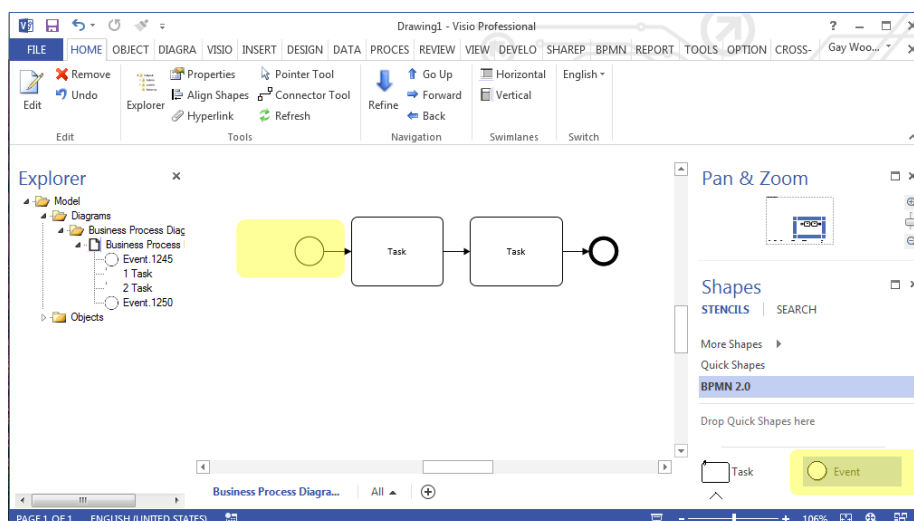



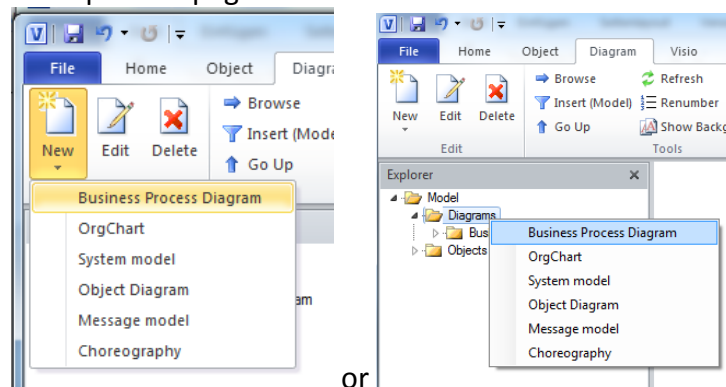
Figure 5: Adding Process Elements

Quick shapes and the connector tool are very useful ways to speed up the creation of diagrams. The connector tool is also available on the Home-toolbar .

BPMN does not display human resources graphically as nodes in a process (even if it could be easily customized to do so). In order to add human resources, you must use the Edit Dialog and assign a resource on the “Performers” tab. This will be explained in later chapters. Let us first begin with Swimlanes.

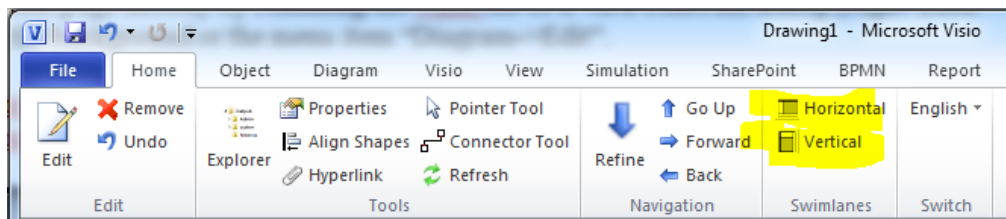
3.2. Using Swimlanes

Let us first create a new process page:

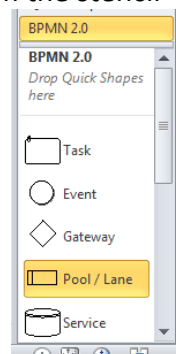


This will create a new diagram class Visio Page titled “Business Process Diagram”. You may rename that page directly by renaming the Visio tab or via a SemTalk dialog (Right Click-> Edit on the background or the menu item “Diagram->Edit”).

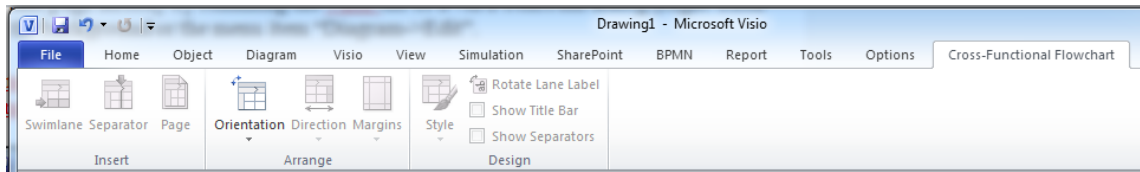
Swimlanes are a component of Visio’s Flowcharting stencil. They can be used via the command buttons on SemTalk’s “Home” tab.



Or just drag the Pool / Lane master from the stencil



More options can be found on Visio's "Cross-Functional Flowchart" tab.



After dropping functional lanes on your drawing, select the pool area of the Swimlane and simply type in the label name, or, alternatively, you can select existing Roles or Org. Units via the right-click menu "Select".

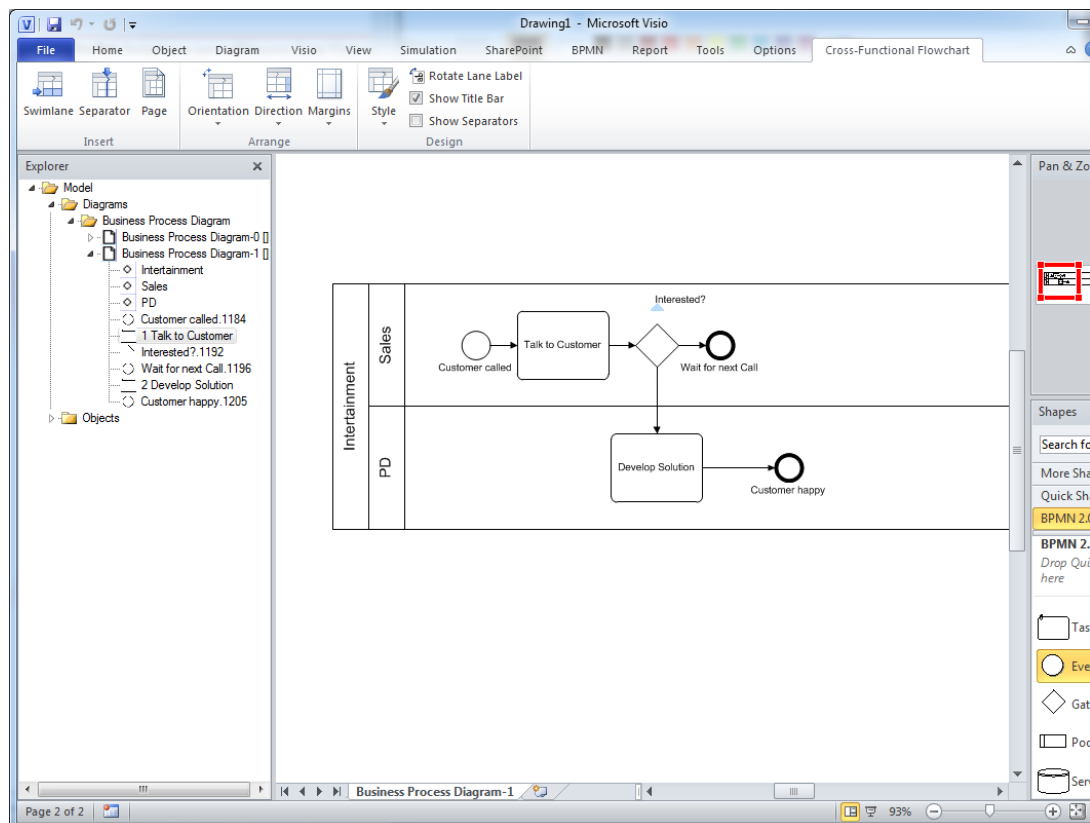


Figure 6: Process with Swimlanes

If you move a Task to a Swimlane this is detected by SemTalk and the Task is automatically assigned the role specified by the Swimlane. If you select the head of a swimlane, you can create new Roles just by renaming the Swimlane. Via the right-click menu on the Swimlane you can select existing Roles and edit objects. Between Tasks located in different pools, a special link ("Message flow") must be used. You may not relate a gateway on one pool with a task on another pool.

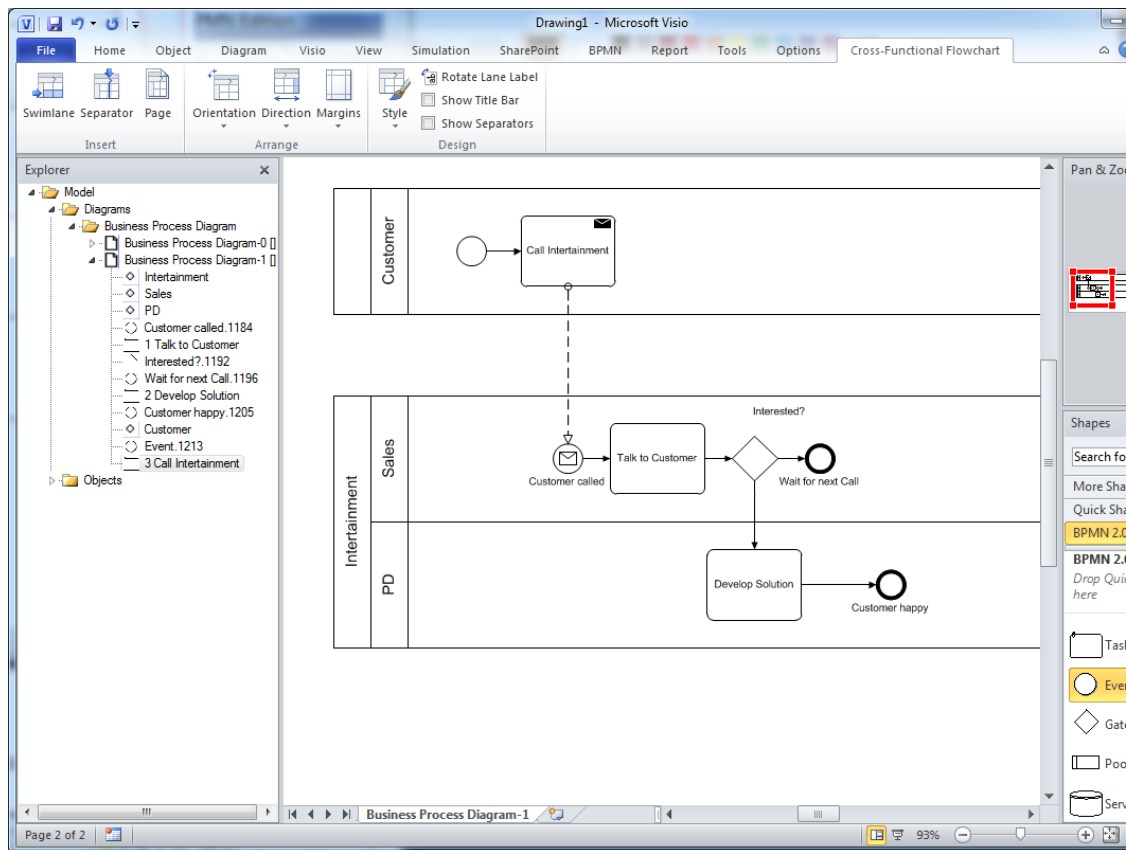


Figure 6: Message flow

Inputs and outputs of task are specified as data objects. A process with data objects might look like:

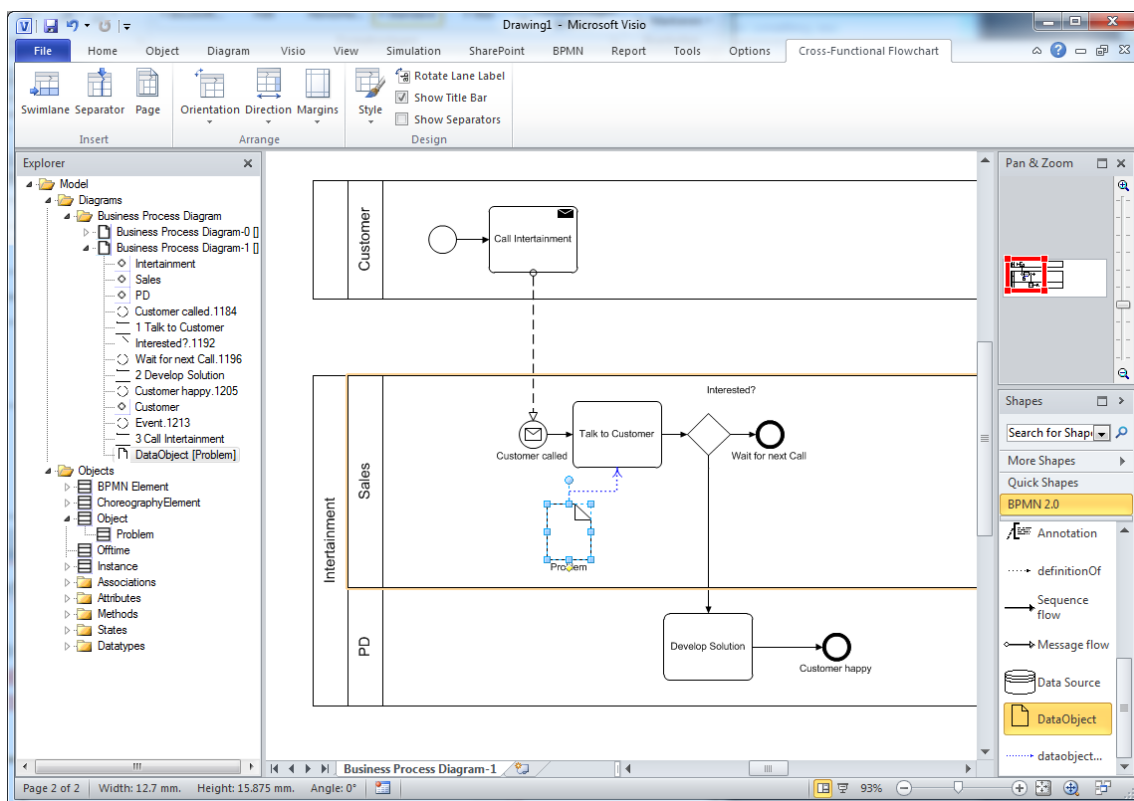


Figure 7: Process with Swimlanes and data objects

In BPMN you can attach Events to a Task to express that something happened while the Task was executed. The Event shape must be added to the task shape. You might need to move it a bit until it is recognized and shows the double lined border.

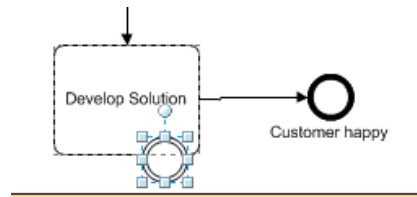
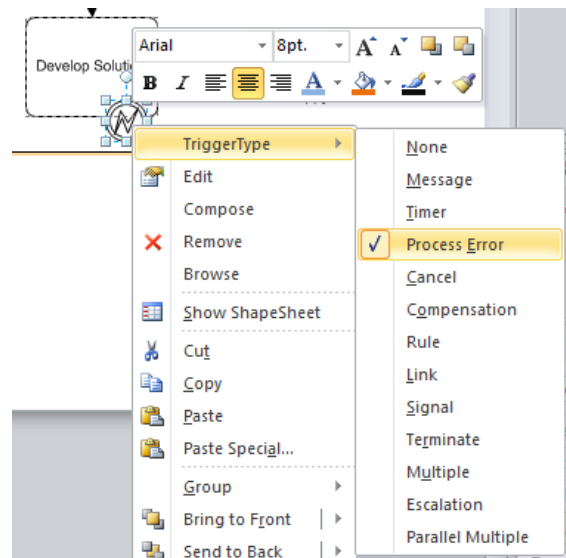
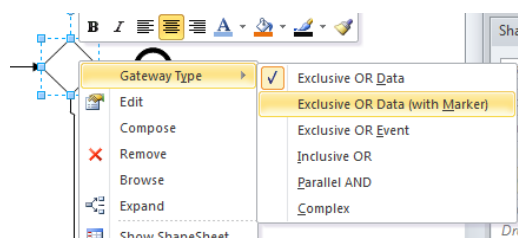


Figure 7: Attaching an Event

Double-click on the Event and in the pull-down menu next to name and change the trigger type to “Process Error”:



Similar to the trigger type of an event you can change the type of a Gateway:



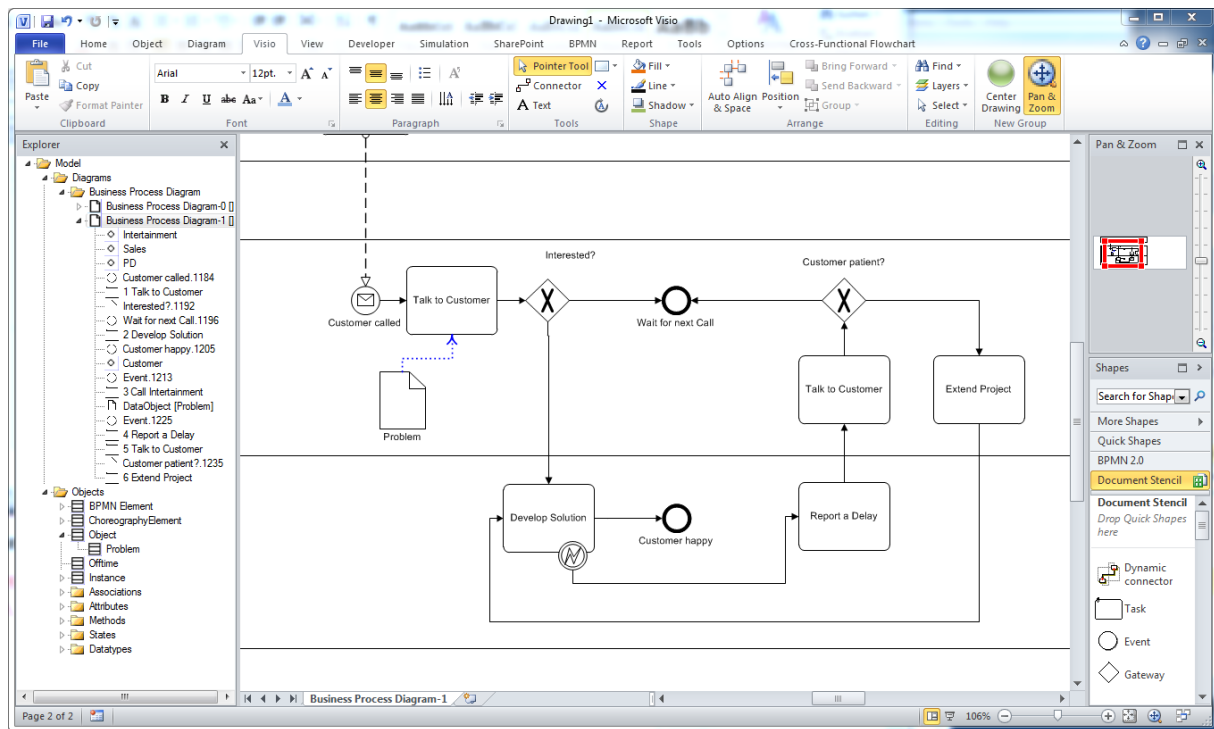
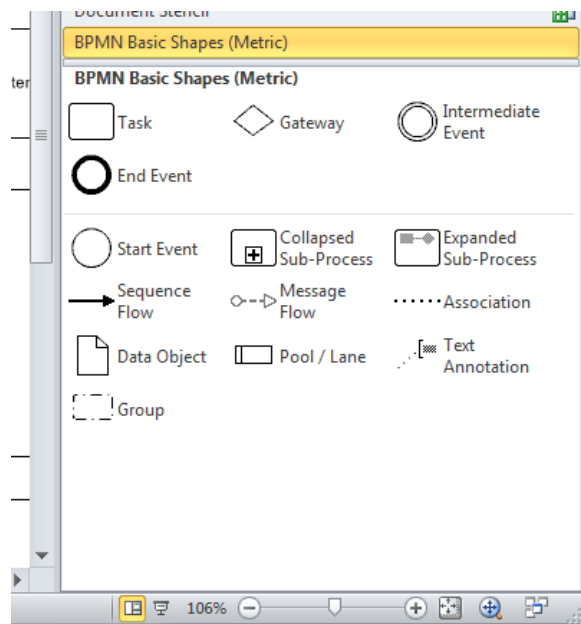


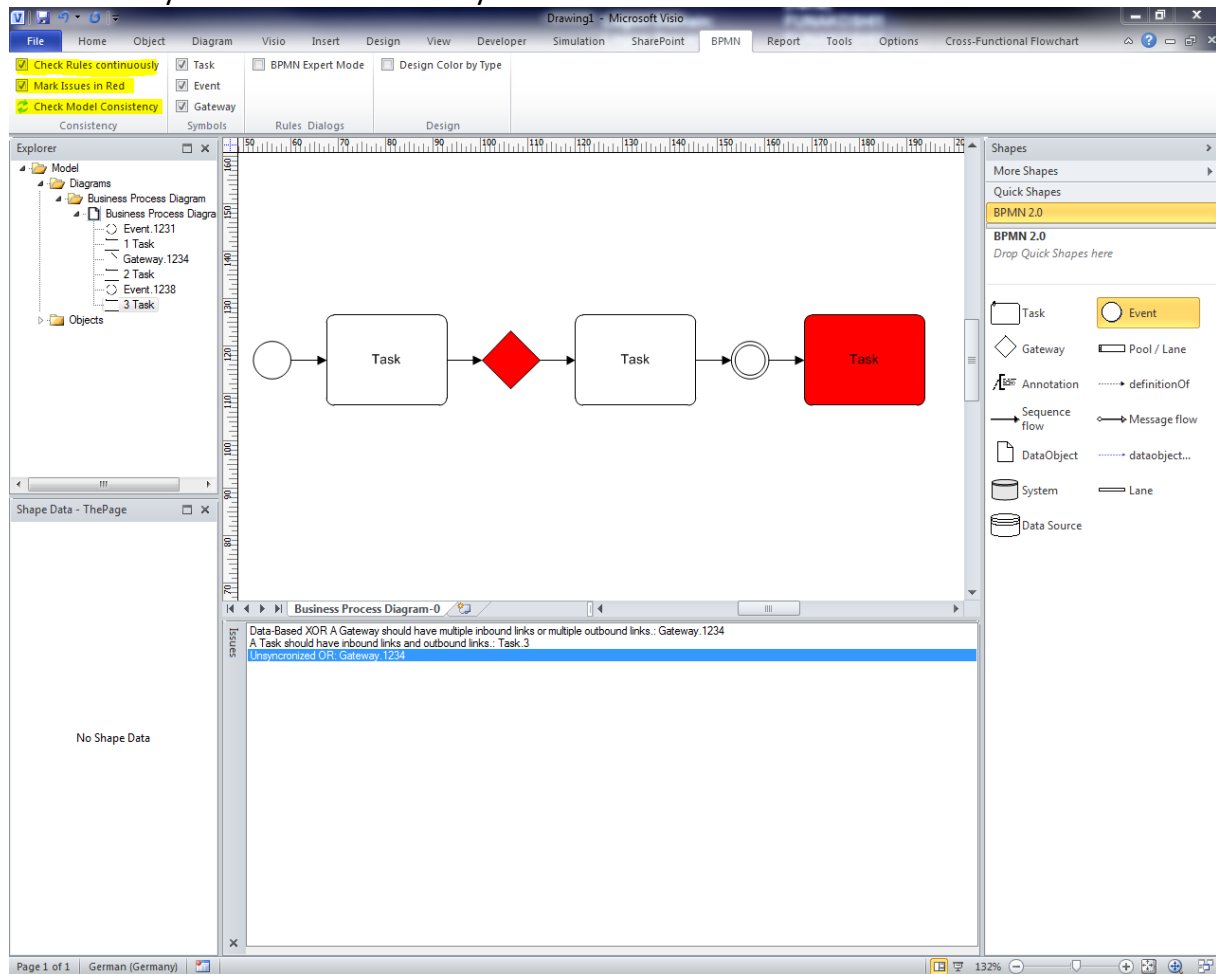
Figure 8: Intermediate Event and Error handling

Note for owners of Visio 2010 Premium Edition: You can use all Visio BPMN Shapes including lanes & pools.



3.4 Consistency checking

SemTalk 4.3 has a consistency checking feature. Go to the BPMN tab and select Check Rules continuously and hit the Consistency Check refresh button.



Issue descriptions will be visible when you hover your mouse over those objects where an issue was found. Continuous error checking will search for issues each time any object in the model is edited. You may specify to keep all elements with issues marked in red until the issue is resolved. "Check Model Consistency" will open the issue window and recheck all elements. If you double-click on an issue found in the issues window, you will navigate to the place in the model where the object has an issue.

3.5. Object-oriented process modeling

If you select the menu item „Object->Compose“ or right click compose, you have the option to specify tasks and events in an object-oriented way.

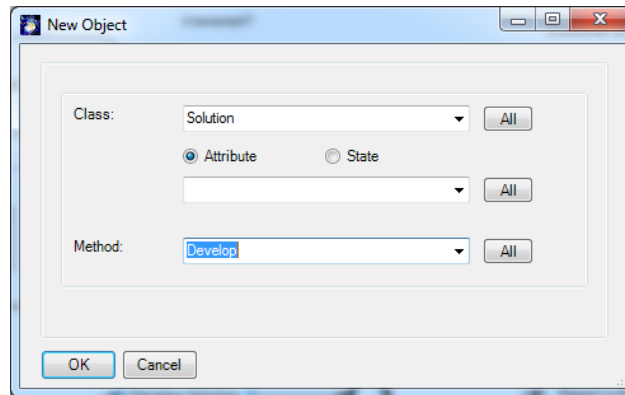


Figure 9: Composing object-oriented tasks

Class is the super-class (parent) object of the selected task. You can reuse existing classes or create new classes in a bottom-up manner e.g. “Bid” is the Class at “make Bid”

The options **State** and **Attribute** allow you to specify which of these feature will be used to create the activity name. In BPMN methodology only methods are relevant for Tasks.

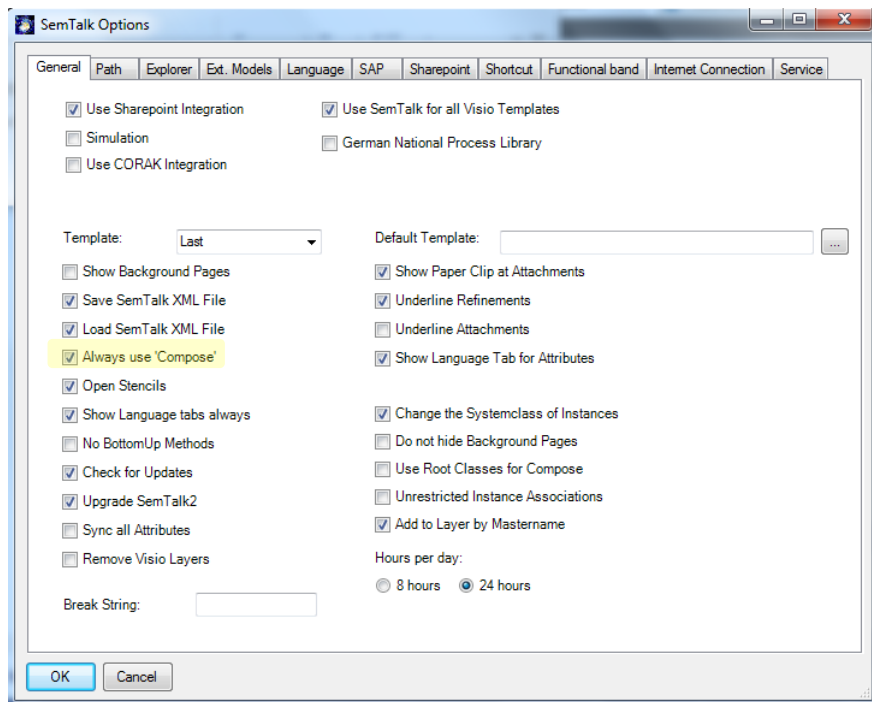
In the combo box **Method** the name of the method (or verb) can be created newly or it can be selected from previously defined methods of the class

SemTalk automatically creates the class and method if they do not already exist in the database. In our example a class named “order” with the method “enter” will be created.

The idea behind compose is to generate the Task name by combining the name of the “class” combined with the name of the “method”. If classes or methods are being renamed, the name of the activity is updated. Note that method (as well as attributes and state) can be inherited from super classes.

The order of terms generated is often language specific („Order Enter” or “Enter Order”). You can change language order in general settings in the SemTalk options dialog. For example, the English language generally uses the order “Method Object”.

SemTalk Options (on the tab “Options”) allows you to specify if you want to use “Compose” when creating new Tasks.



Here is a newly created Process with object-oriented components.

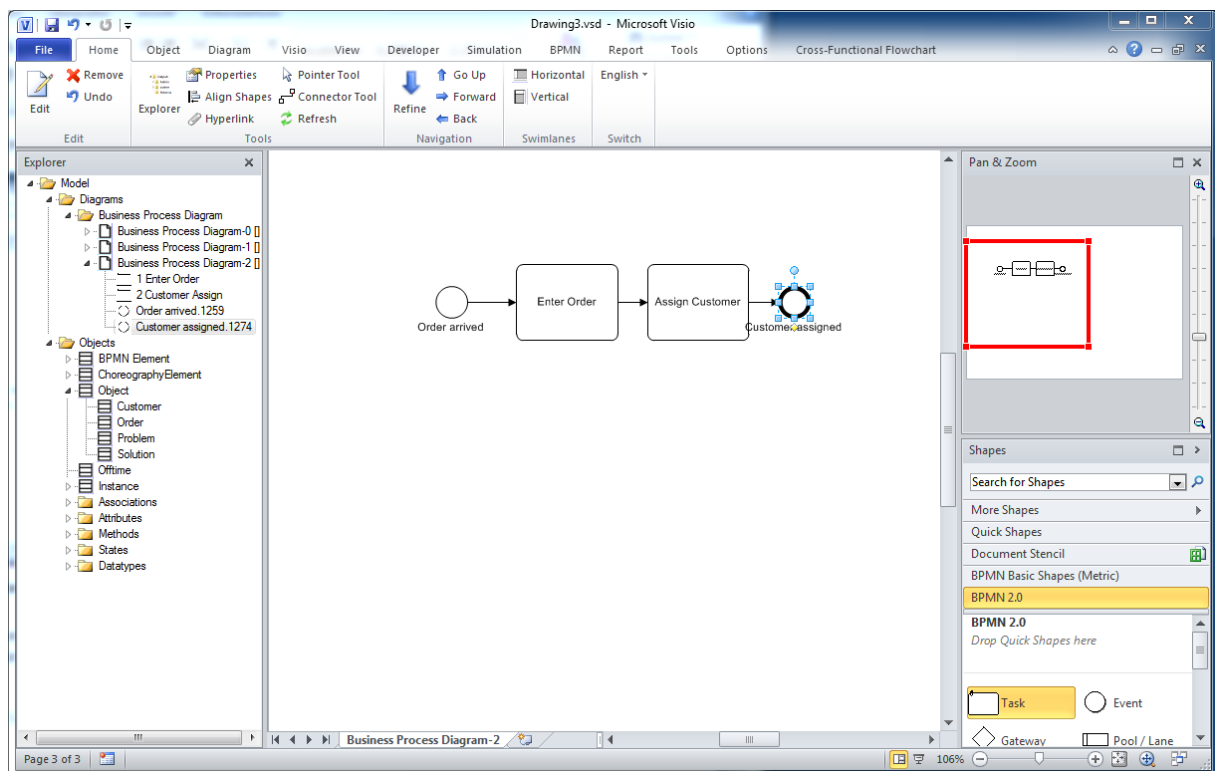


Figure 10: An object-oriented Process

The objects "Order" and "Customer" are created by SemTalk in the background. A diagram of these types of class objects looks like this:

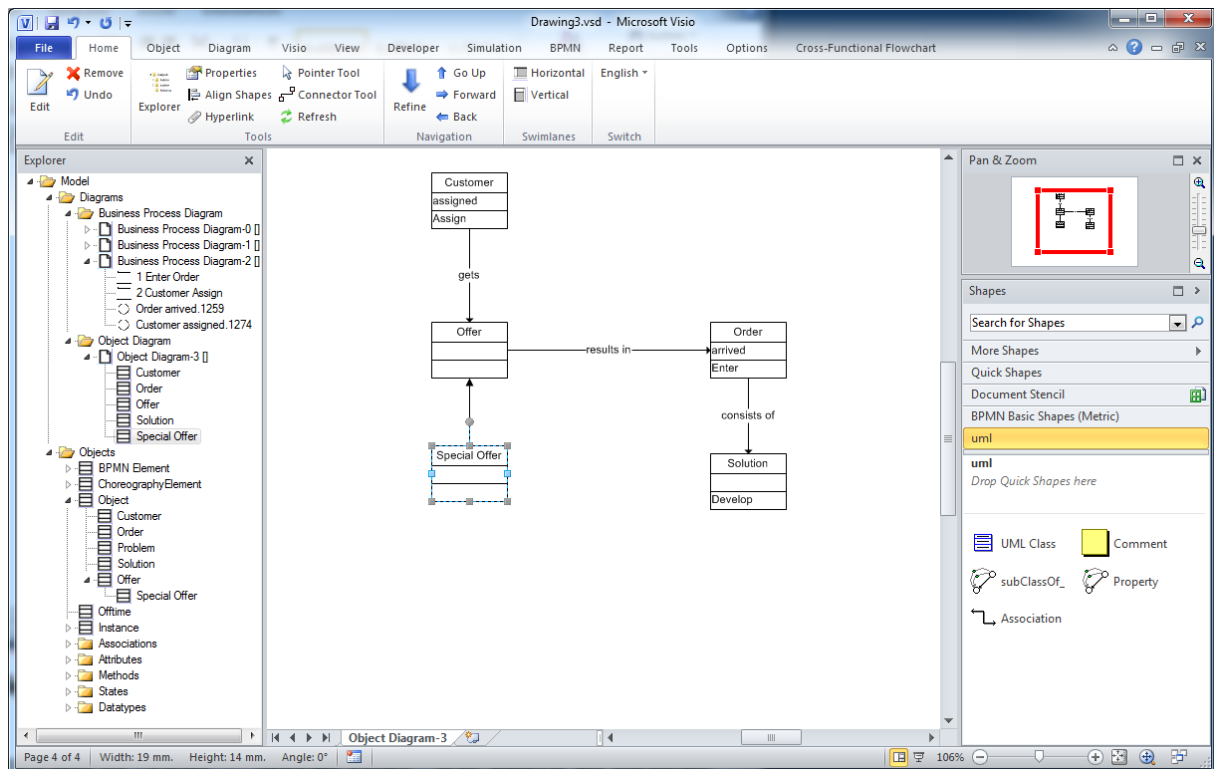


Figure 11: Object Diagram

If you make „Special Offer“ a subclass of „Offer“, „Special Offer“ will inherit all methods from „Offer“. In the compose dialog those inherited methods will be shown in the method combo box.

SemTalk ensures the consistency between object models and process models. If you rename a class or method all objects that use these classes will be automatically updated.

We recommend object-oriented process modeling especially for large projects. First create most important business objects and build a catalog of methods (verbs). This catalog will act as the basis for consistent process models.

If you are going to use the same business objects in multiple projects we recommend to store object libraries in separated files and publish them on intranet or extranet.

3.6 Editing process elements

Once objects are created, you can edit the objects in your diagram:

1. By double-clicking or
2. Right-click „Edit“ or
3. Select & Menu „Object->Edit“ or
4. Find it in the explorer as a child of „Diagrams->Process->Process-6“ or
5. Find it in the explorer as a child of „Objects->“.

If you want to rename an object, just select it and type in the new name.

You can also use the Properties Window to review and edit values directly. (Home->Properties)

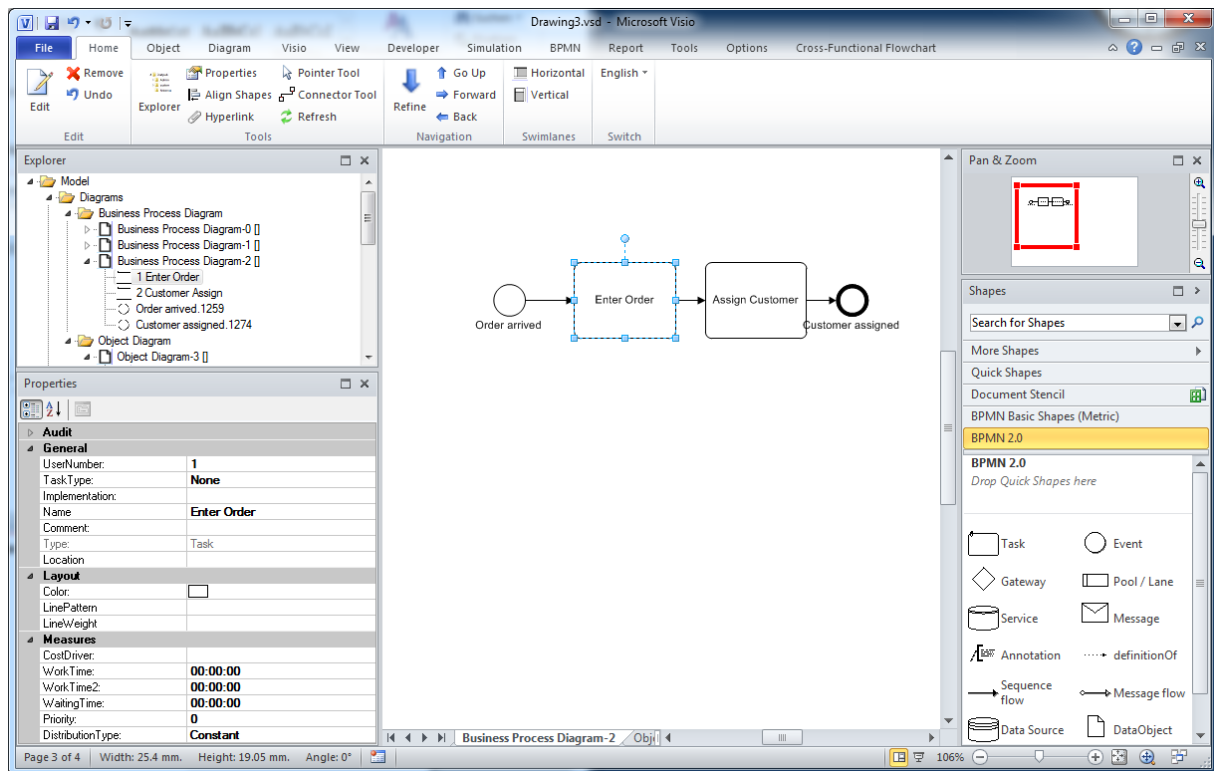
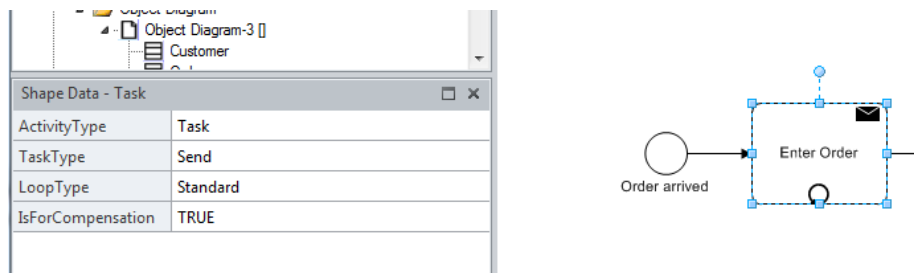


Figure 12: Properties Window

BPMN 2.0 Visio's Shape Data window is also useful:



3.6.1 Task Dialog

The task dialog looks like this:

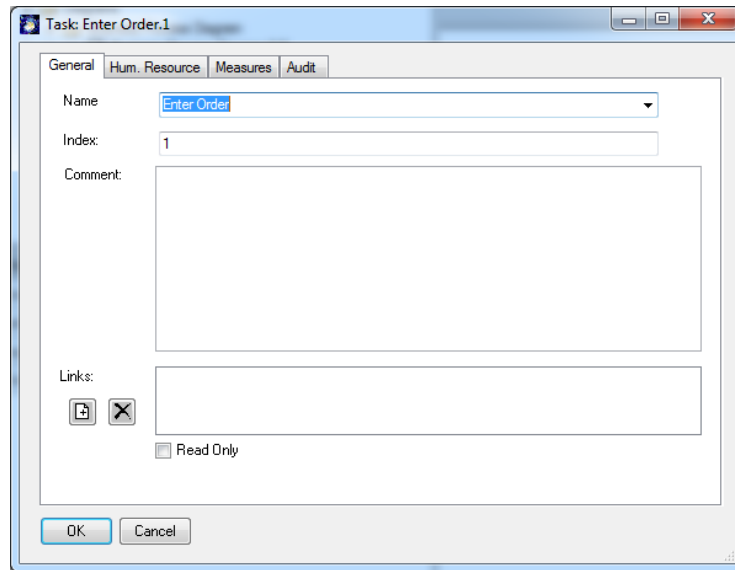


Figure 13: Task Dialog

Links (hyperlinks, attachments & documents) are added using the right-click menu “New” (“+” button) and deleted by the right-click menu “Remove” (“-” button) on the background of the links list. Double clicking the link in the listbox opens that document with the (for windows) associated application. Activities with links have a marker in the upper left corner of the object.

NOTE: In order to change all occurrences of a task, you must edit the base class using “Object->Edit Class”.

NOTE: The “General” tab is a generic SemTalk tab and not one specific to BPMN.

3.6.2 Task: “Hum. Resource” Tab

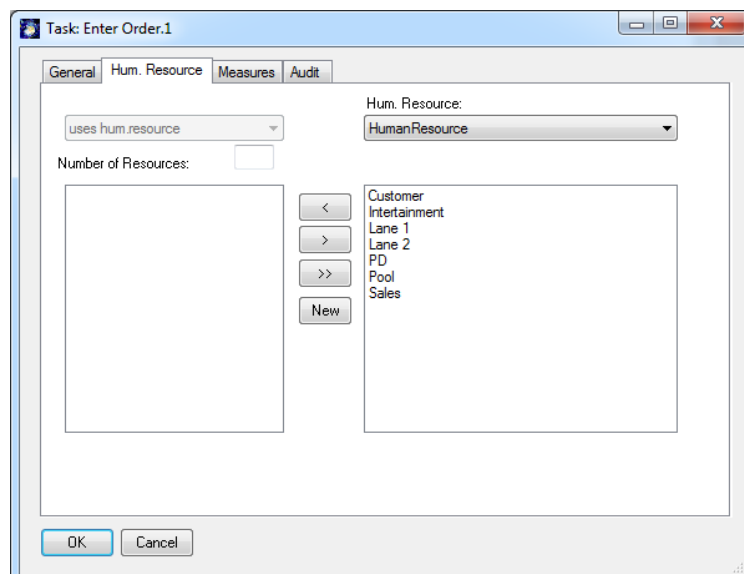


Figure 14: Task: Hum. Resource

Using the “Hum. Resource” tab you can assign “Participants” to a task. These are the people, roles or organizational units which actually execute the task. The left hand list box shows the currently assigned resources and the right hand list box shows a list of all available human resources.

Use the arrow buttons to add / remove resources. Double-clicking in the list boxes will edit the resource.

The right combo box “Human Resource” selection allows you to filter resources by class.

The left combo box “uses hum.resource” allows” you to specify certain types of execution such as “controlled by” or “supervised by”.²

The “New” button adds new “Human Resources” and new “Human Resource” classes.

The new instance will automatically be assigned the class which is selected in the combo box.

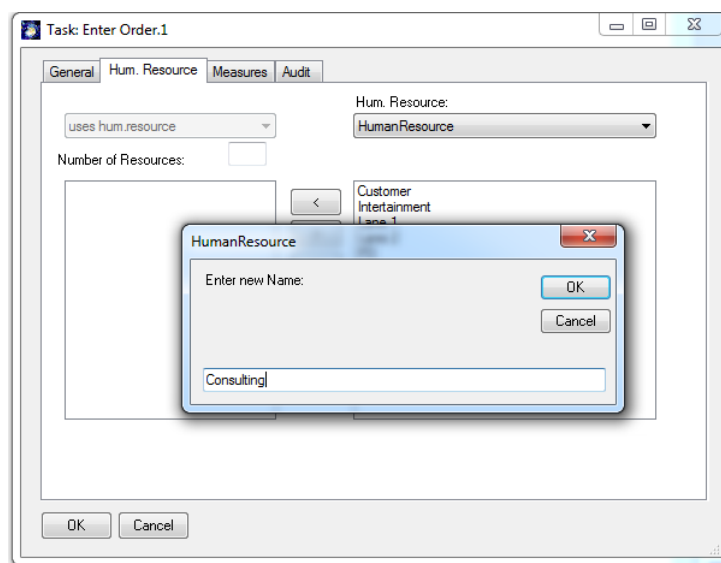


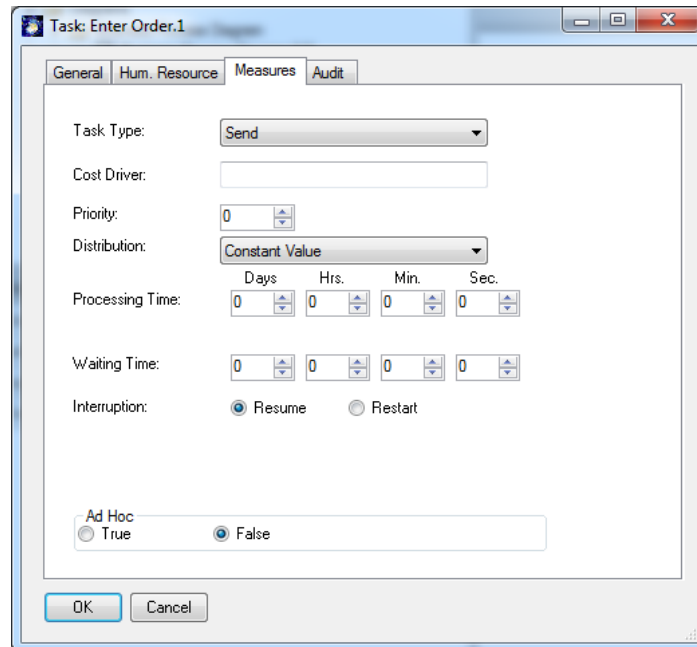
Figure 15: Adding new Human Resources

You can view and Edit all existing Resources that are child nodes of “Human Resource” in the Explorer.

² These could be defined as subclasses of the relation “executes”

3.6.3 Task “Measures” Tab

The “Measures” tab allows Processing Times, Fixed Cost, Variable Cost and Probabilities. Some of these attributes are used in reports and in the MS Project export.



The screenshot shows a dialog box titled "Task: Enter Order.1" with four tabs: General, Hum. Resource, Measures, and Audit. The Measures tab is active. It contains the following fields and controls:

- Task Type: A dropdown menu set to "Send".
- Cost Driver: An empty text input field.
- Priority: A numeric input field set to "0".
- Distribution: A dropdown menu set to "Constant Value".
- Processing Time: Four numeric input fields for Days, Hrs., Min., and Sec., all set to "0".
- Waiting Time: Four numeric input fields for Days, Hrs., Min., and Sec., all set to "0".
- Interruption: Two radio buttons, "Resume" (selected) and "Restart".
- Ad Hoc: Two radio buttons, "True" and "False" (selected).
- Buttons: "OK" and "Cancel" at the bottom.

Figure 16: Task: Measures

Relevant for simulation are the Work Plan Report, MS-Project and especially “Processing Time”. For all others please see the Simulation Tutorial.

Specific for BPMN is the Task type which can be selected on then BPMN tab. The Task type can also be changed using the menu or Property window.

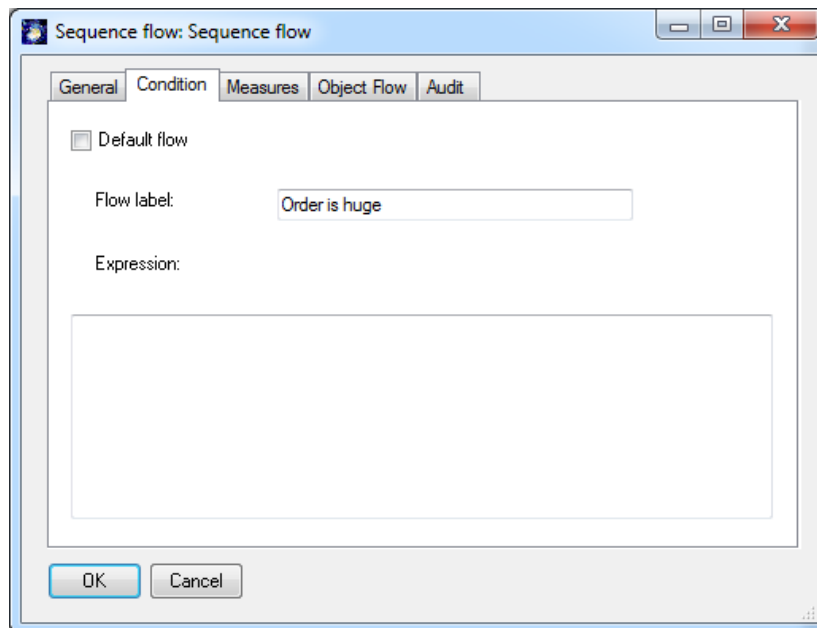
3.6.4 Sequence Flow Dialog

Note on BPMN Methodology:

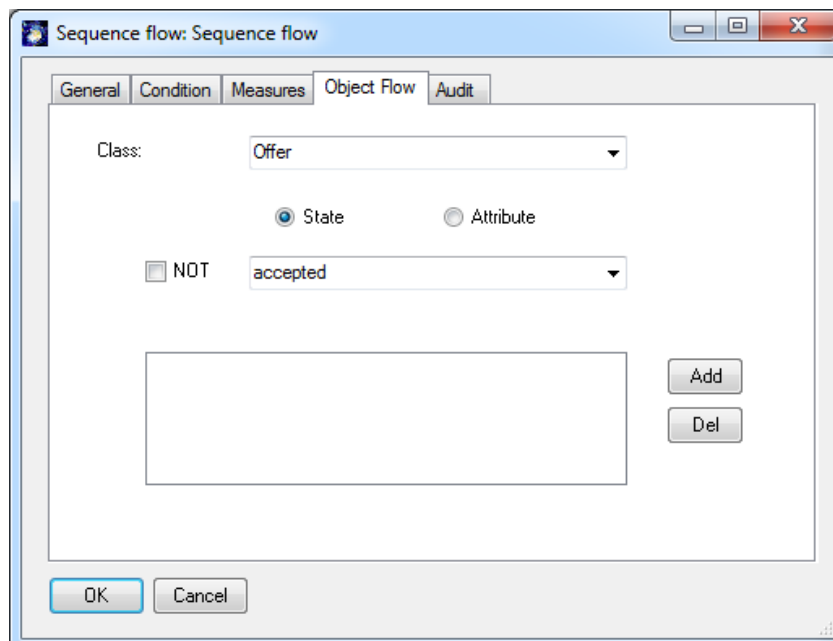
A Sequence Flow is used to show the order that activities will be performed in a Process. Sequence flows can be associated with conditions. To add a condition please select the sequence flow shape and type in the Condition text.



Conditions can also be changed using the following dialog:



The "Object Flow" tab specifies which Data object, is "flowing" between the two connected tasks.



You can select existing objects from the combo boxes. If you select an existing object, or enter a new one, you must push the "Add" button in order to add it to the list of flow objects.

Object composition is similar to "Compose" for Tasks.

Class is the object. You can reuse existing classes or create new classes in a bottom up style.

State (and Attribute) is the state of the object which is being sent e.g. "Order entered".

You can remove an object from the list by double-clicking on it or by using the “Del” button.

Object flow on sequence flows can also be specified using data objects. Editing the data object itself, will open the Sequence flow dialog.

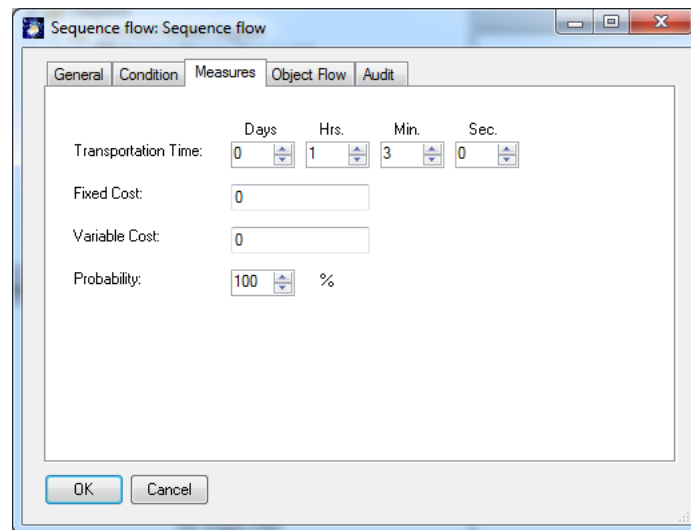
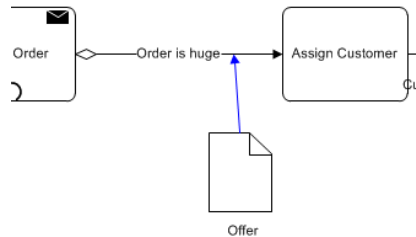


Figure 17: Sequence Flow: Measures

The “Measures” tab allows the specification of Transportation Times, Fixed Costs, Variable Costs and Probabilities.

NOTE: You can glue relations to any point on the object if you select the Visio option “Glue to geometry” (View -> Visual Aids)

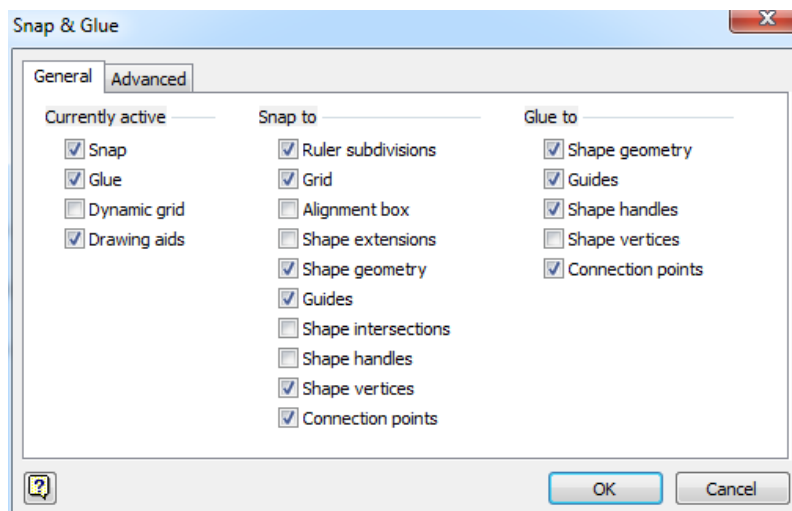


Figure 18: Visio: Snap & Glue Options

4 Org Charts

Org Charts are used to graphically describe the organizational structure of your company. New elements are added using shapes for Org Unit and Position that are then connected by the “superior of” connector.

Using Diagram->Insert (Model) you can add the existing org units “Sales” and “PD” to the org chart.

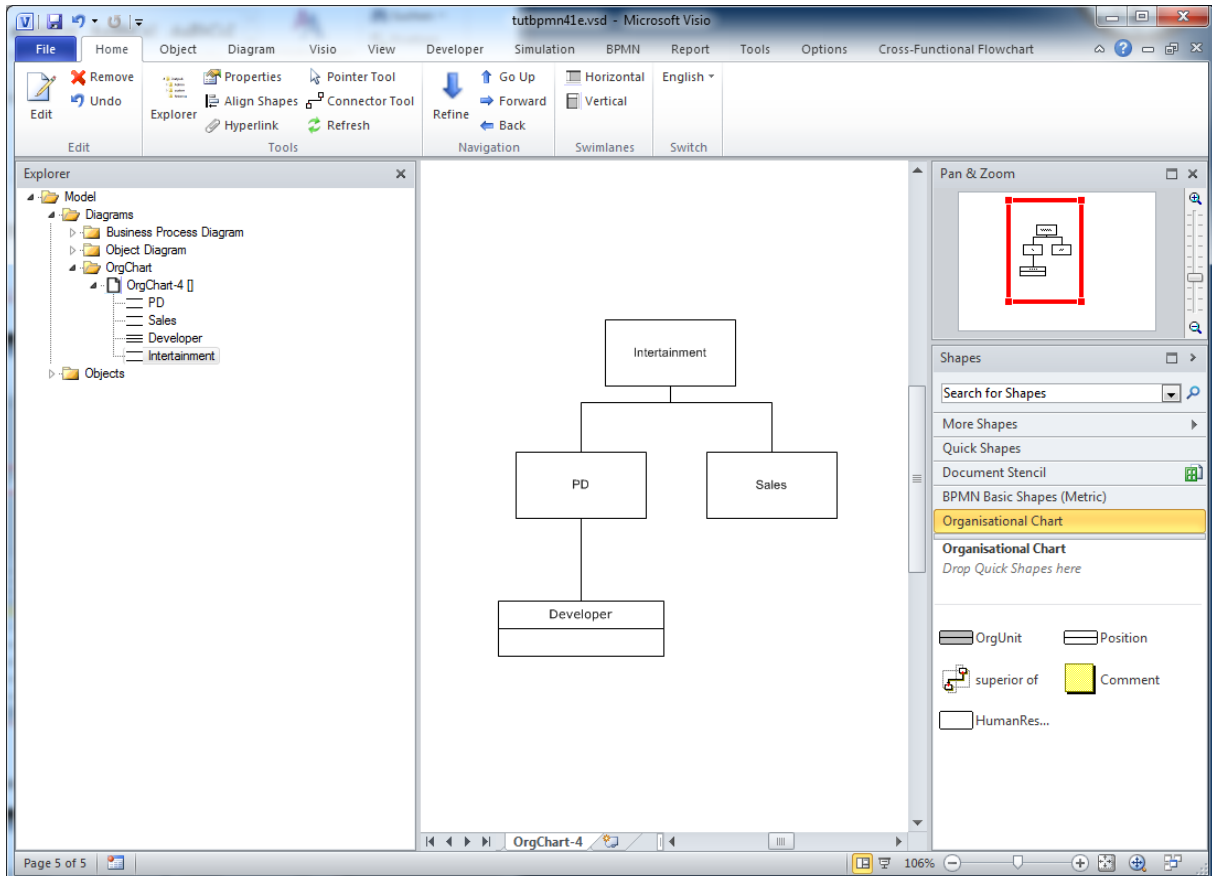


Figure 19: Org Chart

If you change the “Class” of PD and Sales to “OrgUnit” using the Edit dialog, you also change their shape in the OrgUnit Master (Object->Change Master).

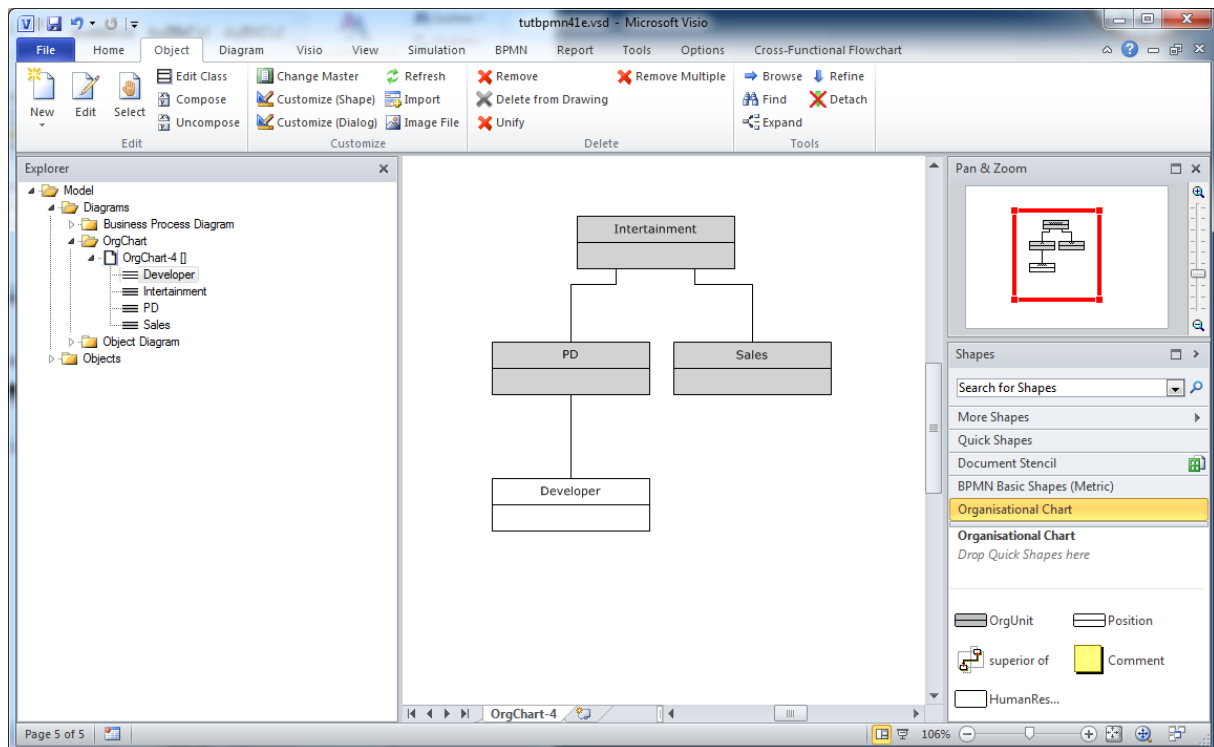


Figure 20: Org Chart

When you edit an Org Unit or Position, you can also add persons to the object.

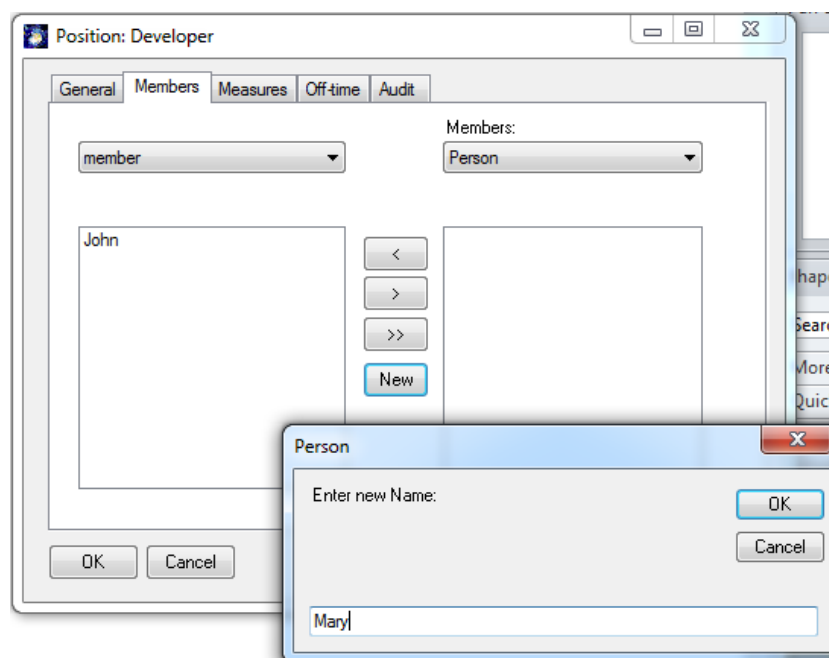


Figure 21: Adding Persons

The person can be edited directly by double-clicking in the list. Organizational units are resources with measures such as Fixed Costs, Variable Costs and Capacities.

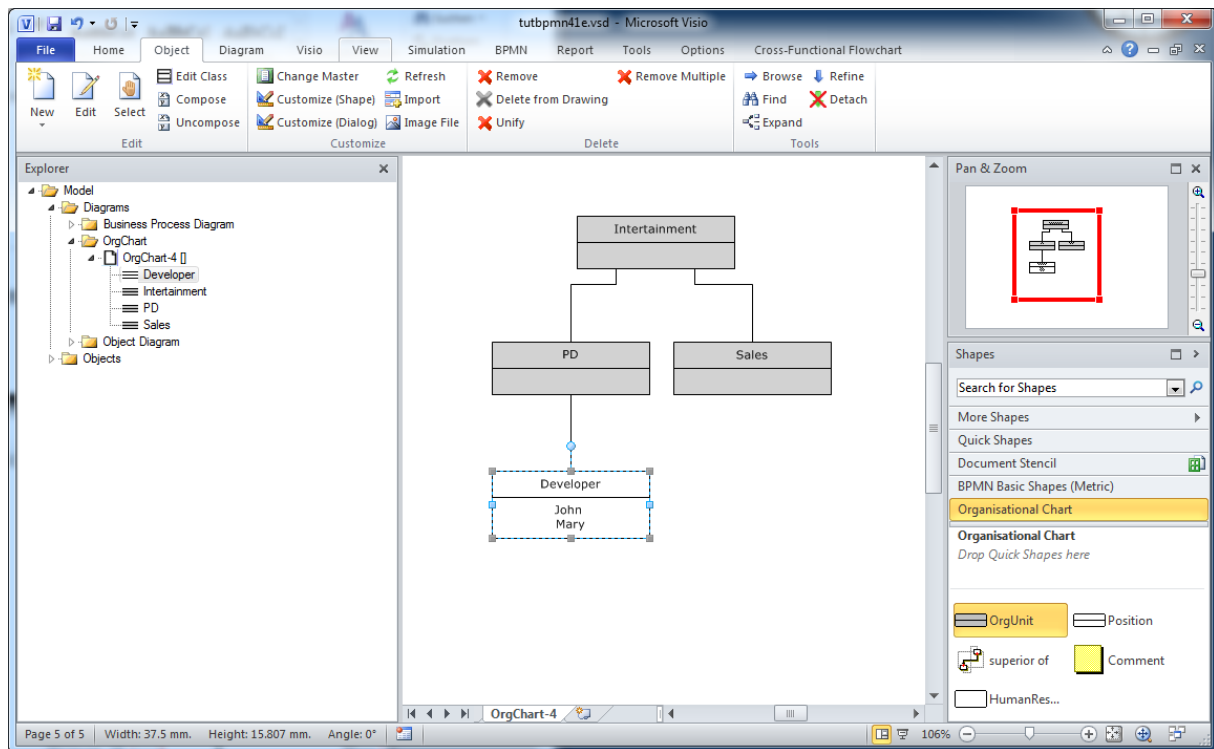


Figure 22: Org Chart with Persons

5 Class Diagrams and Mastershapes

Open a Visio Stencil using More Shapes.. Please open the Visio Stencil „Enterprise Application“ (ENTAPP_M.VSS, ENTAPP_U.VSS) for additional Visio Masters. You will find the stencil for Visio 2007 at „C:\Program Files\Microsoft Office\1031“ or for Visio 2003 at „C:\Program Files\Microsoft Office\VISIO11\1031“.

For Visio 2010 & 2013 users it is found under “More Shapes->Software and Databases->Software-> Enterprise Application”

It is important to use the above instructions for accessing Visio shapes because if you drag an arbitrary Visio master onto your process sheet, SemTalk does not recognize the shape in the context of the current modeling method. A dialog is shown, which allows users to select the appropriate modeling construct. For example, you could make a Laptop an alternative symbol for System. If you “Ignore” a warning when using normal Visio shapes, Semtalk just accepts it as a Visio shape and does not add it to the SemTalk database.

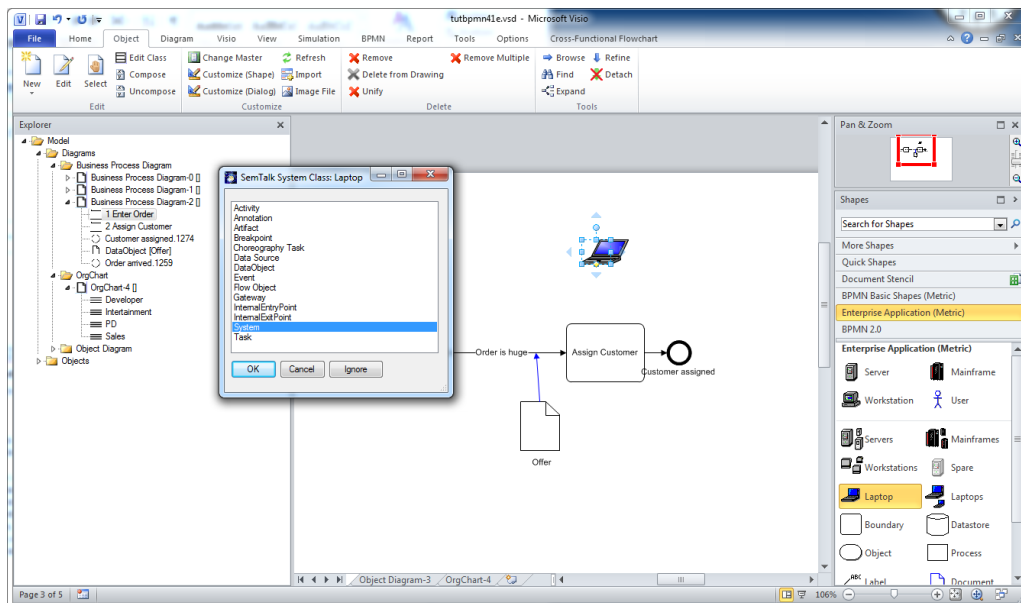


Figure 23: Adding an arbitrary Visio Shape to a process

Once you have used a Visio master as alternative Visio master, you will no longer be able to use that master for new classes.

Instead of this bottom-up approach we can also define new classes of systems top-down on class pages. Create a new diagram of type "System Model" and drop some shapes there again. In the new diagram you can create classes and subclasses with attributes and associations. To add a new class, please use the "UML Class" shape. A "subClassOf" relation between two classes is created with the "subClassOf" connector. Associations are made with the "Property" connector. It is a special behavior of class diagrams, that every class is automatically a subclass of their root class, which is in this case they are all "subClassOf" the class System.

You can also add new classes by opening a Visio stencil or by searching for a shape. Drop the shapes onto a System Model. Now you can create further subclasses and superclasses.

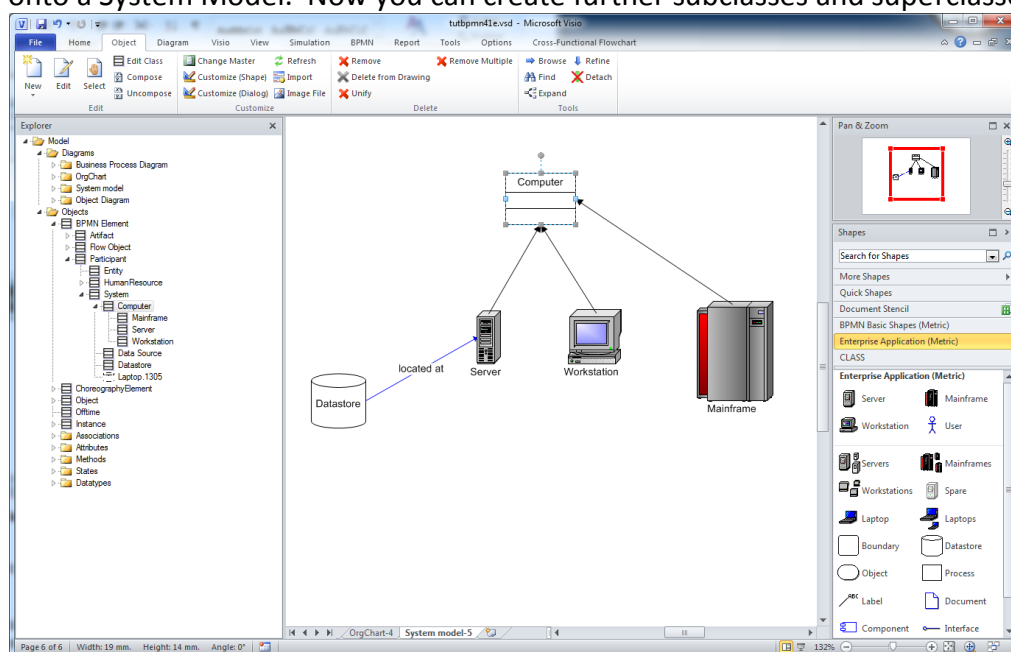


Figure 24: Classes of Systems

In the above example we have used the Visio shapes for Data store, Server etc.³ Computer using the UML Class master.

The properties of the Visio master now have the attributes of the class. In the following picture you can see the attributes coming from Visio such as “Serial Number” and “Asset Number” and the inherited attributes coming from the root class “Participant” marked with a “*”.

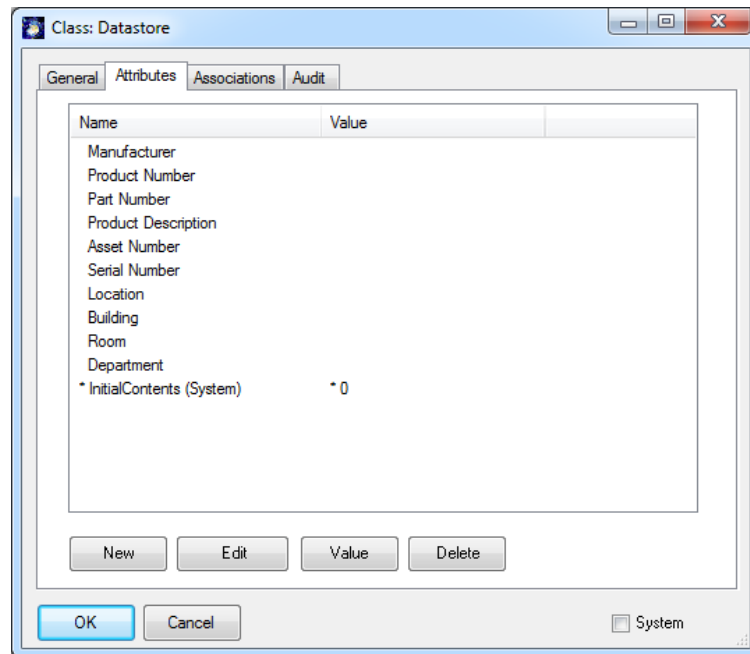


Figure 25: Attributes imported from Visio Masters

Now let us assume we need a class named CRM System. Simply define it as a subclass of Data Store.

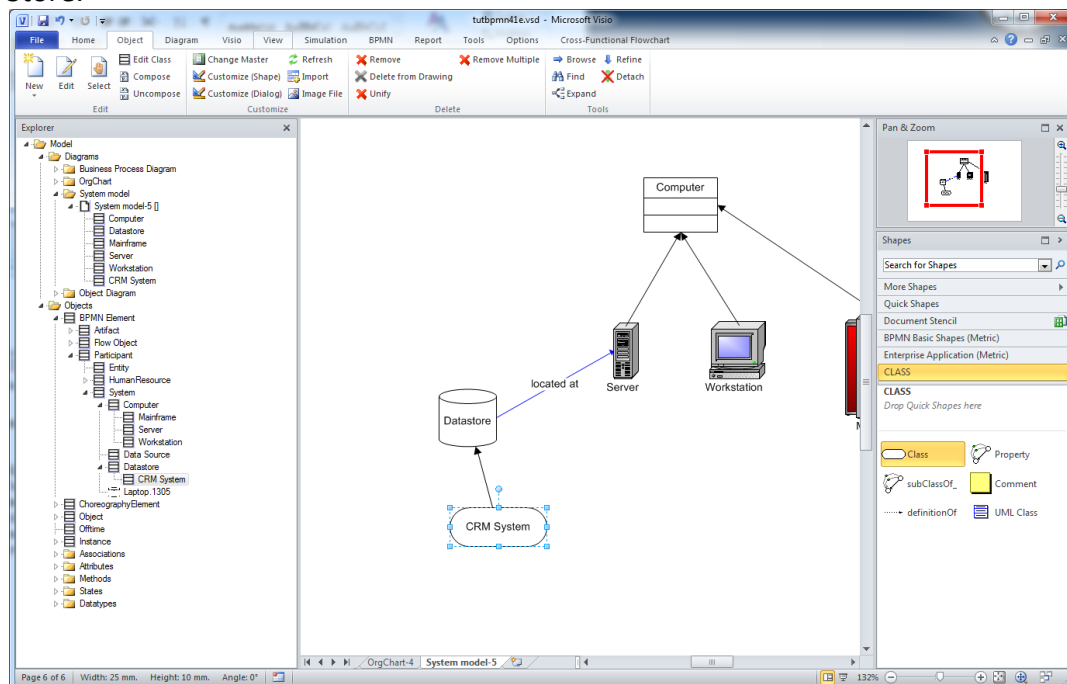


Figure 26: CRM System Class

³ These shapes are much easier to use if you turn of “Snap to Member”

Since CRM System is a subclass of Data Store, SemTalk will use the Data Store shape for CRM Systems.

Visio does not contain a specific master for CRM System, but we can easily create a new master shape in Visio or reuse another Visio master for our purpose. The document stencil (Shapes -> More Shapes -> Show Document Stencil) contains copies of used Visio masters. Copy the Database master (Shapes -> More Shapes -> Network -> Active Directory Sites and Services) to the document stencil. Using right click master properties on the master you can rename the master to a class name of your choice. Please make a copy of "Database" and rename it "CRM System".

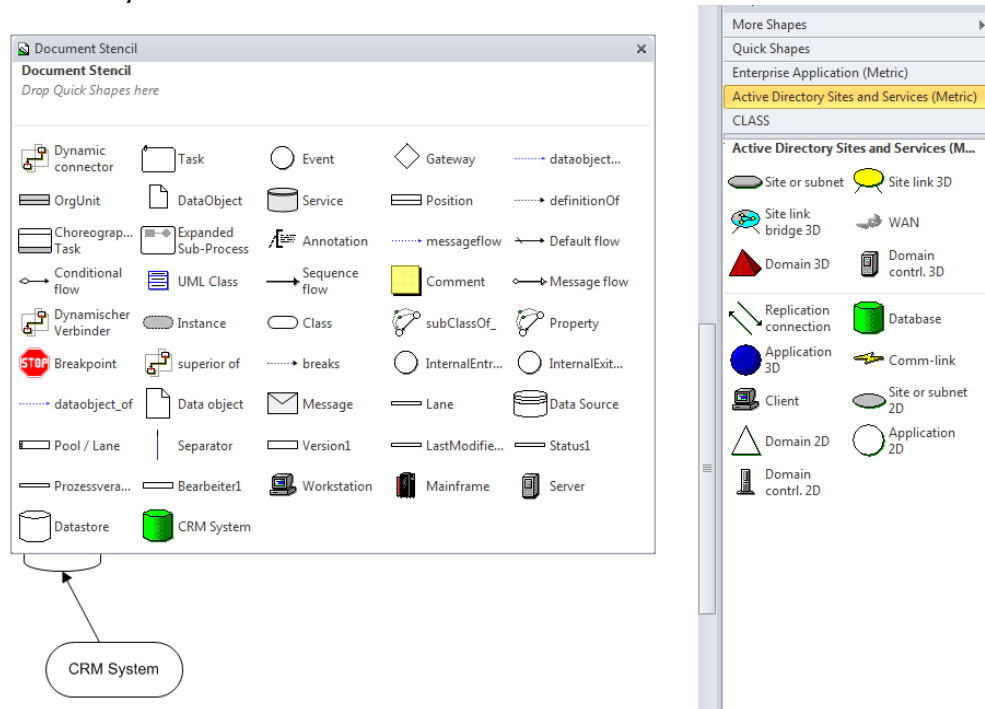


Figure 27: Shapes for resources in the Document Stencil

The CRM System master can now be used in the process model.

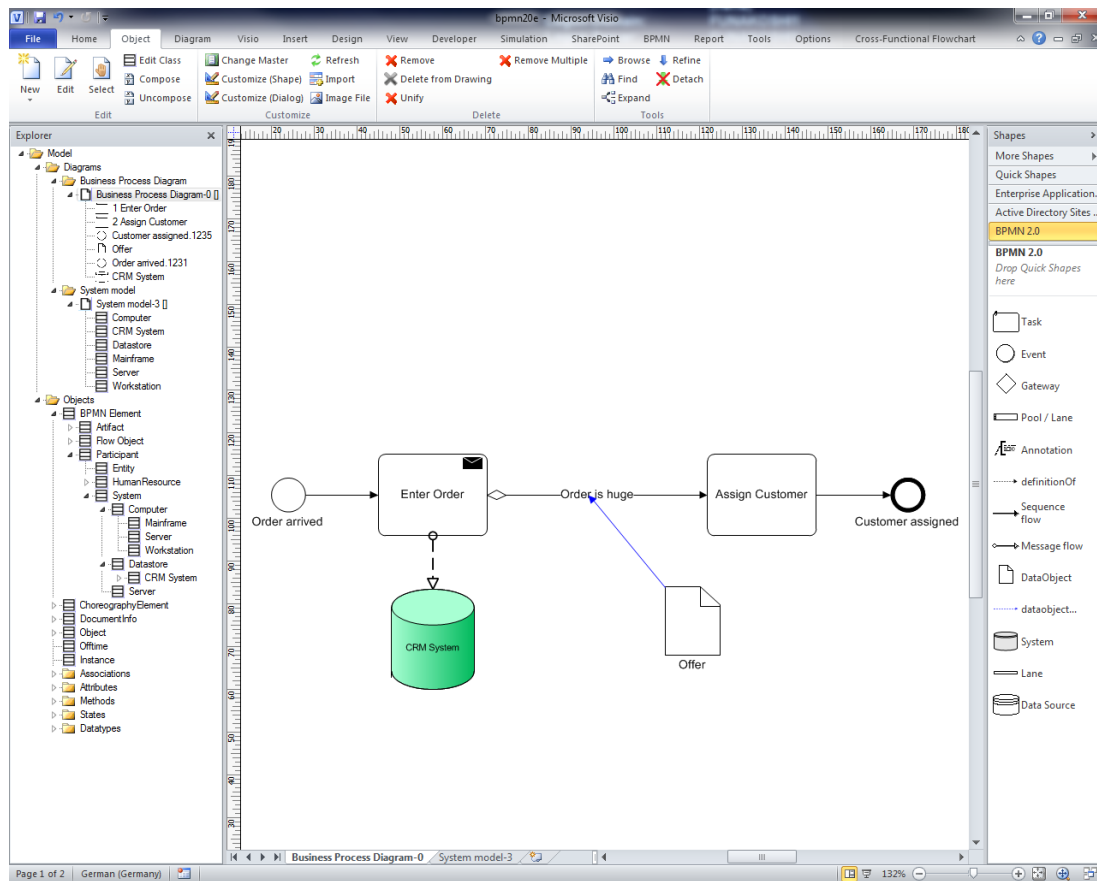


Figure 28: Renamed Visio Master

NOTE: A good object-oriented model defines attributes on a common superclass rather than using classes created from Visio masters.

If your new CRM does not have a text, you must customize the appearance of CRM Systems. Select "CRM System" in the Explorer and use Object->Customize (Shape).

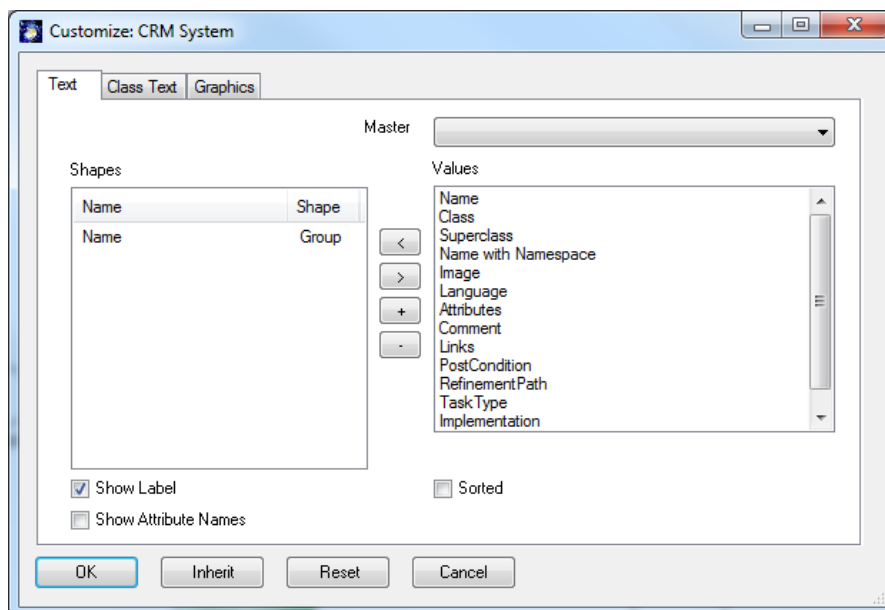


Figure 29: A System with a Visio Shape in a Process

6 Systems

Please add a System to the process. For example, a CRM System or simply a “Service” if you skipped the preceding chapter and did not create a CRM System.

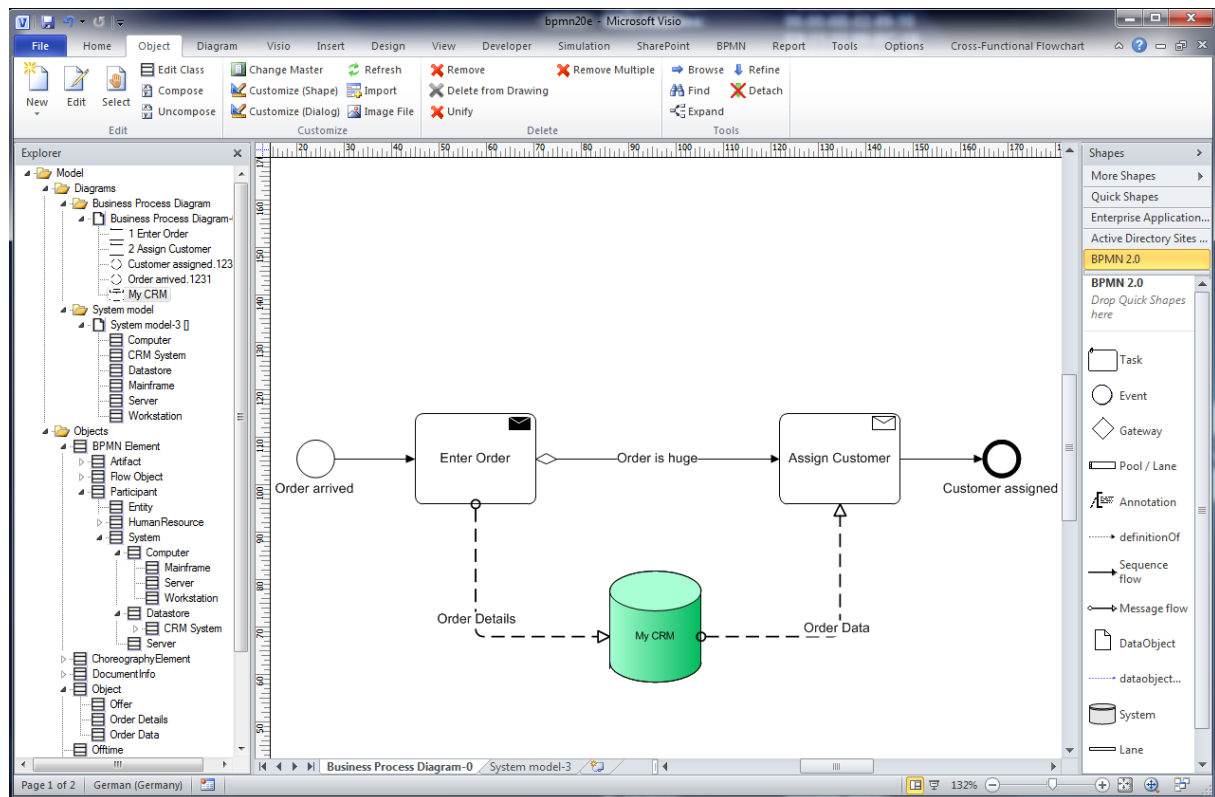


Figure 30: A System with a Visio Shape in a Process

Connect it to “Assign Customer” with a “Message flow” connector. These relations describe whether you store information to the system or whether you read information from the system.

NOTE: You may insert the same System more than once into a process by using the right-click menu “Show Existing” and insert the desired system into your model. You may not insert an identical Task (same name, same ID number) more than once, but you can execute multiple instances of a Tasks. They will have the same name but different ID numbers.

A System is a Storage Device for Information or in general for objects. Objects can be stored in a system and afterwards be read from that system. Typical systems are the inbox of a mail client or a database. A system has a dedicated type.

When you edit the system, you can specify which type of information is stored in the system. The general tab is identical to other dialogs.

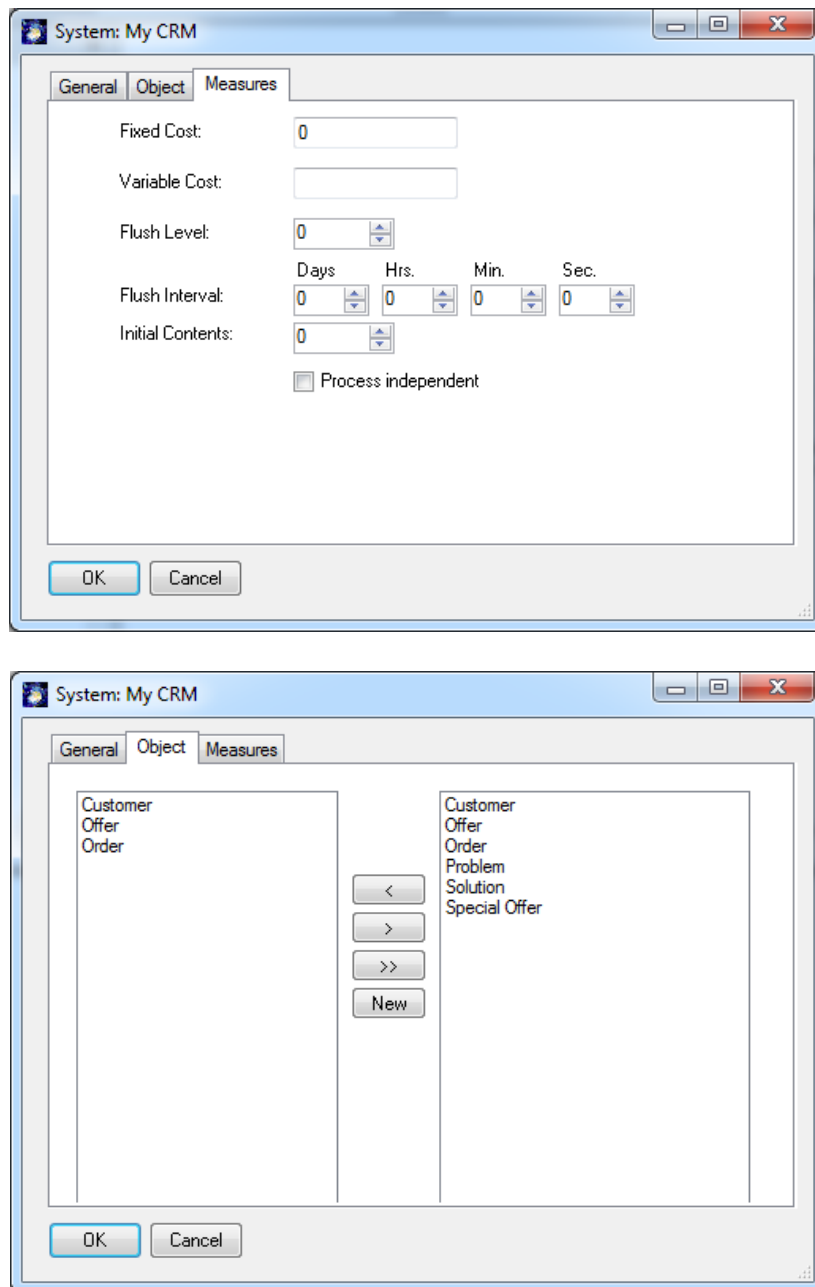


Figure 31: System: Measures

Fixed Cost is used to assign a cost to each information object stored in the system. Capacity settings set limits for the amount of information objects that are able to be stored in the system. Flush level and flush number are used to specify how information is sent through and outbound "Message flows" and times when the buffer should be flushed.

In the "Message flow" relation you can select the type of information which is accessed or stored.

Note: You can also edit the label of "Message flow" connectors directly to specify the information that is transferred.

As an alternative presentation to the “Service” master or customized master such as “CRM System” you can use the “System Lane” master shape and drop process elements onto this lane.

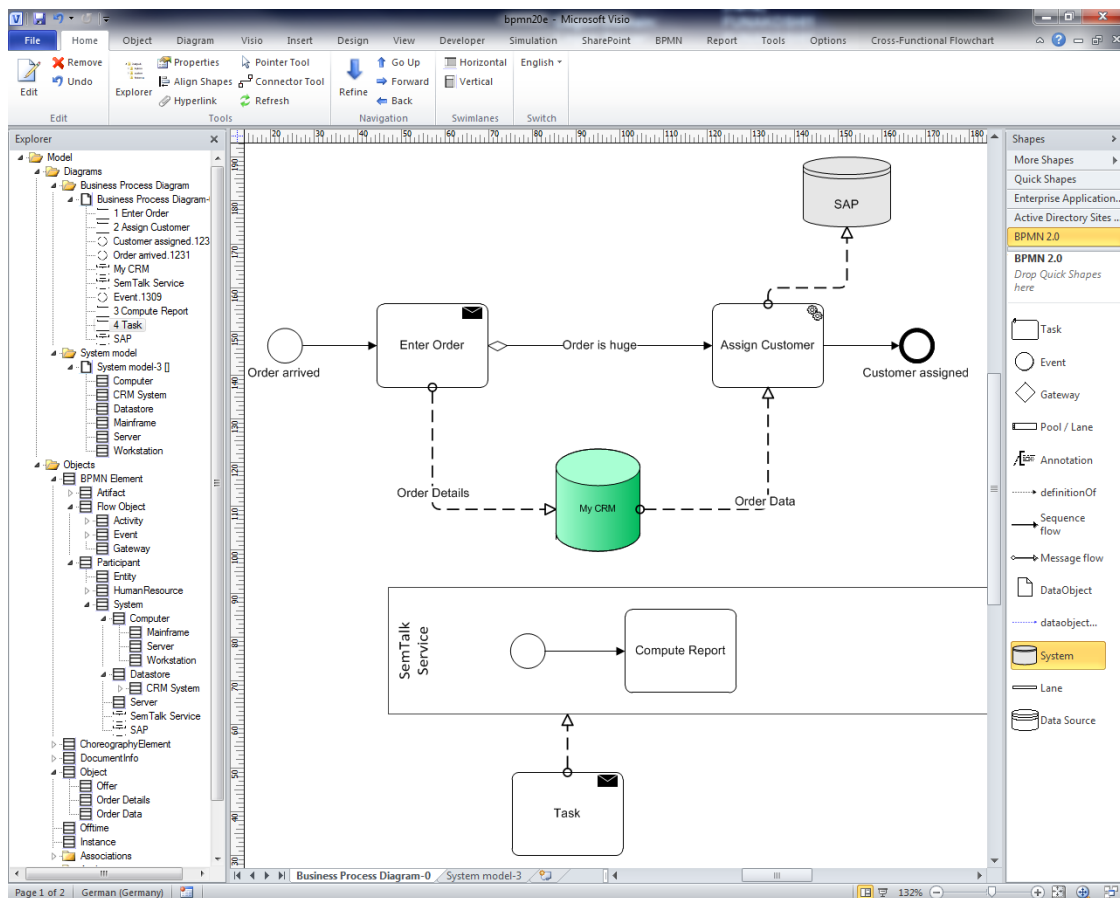


Figure 32: Service Masters

7 Refinements (Sub-Process)

Note: BPMN Methodology

Breaking down a task into more detailed sub-tasks is expressed in the BPMN with multiple shapes such as “Sub-Process”. In SemTalk a refinement is more dynamic. A (sub-) process for the detailed tasks can be attached to any task. For every inbound sequence flow link an (internal) entry point is added to the refined process. For outbound Sequence flows an (internal) exit point is added.

Right Click on “Assign Customer” and select “Refine”. A dialog pops up asking for the name of the sub-process:

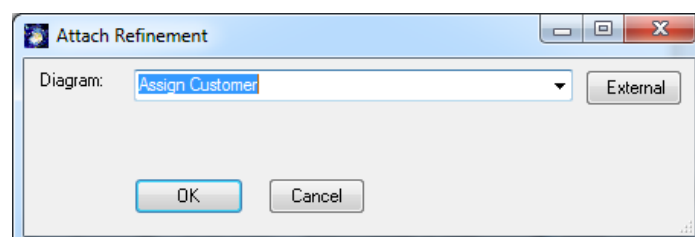


Figure 33: Creating a Refinement

A new empty process with entry and exit point is generated:

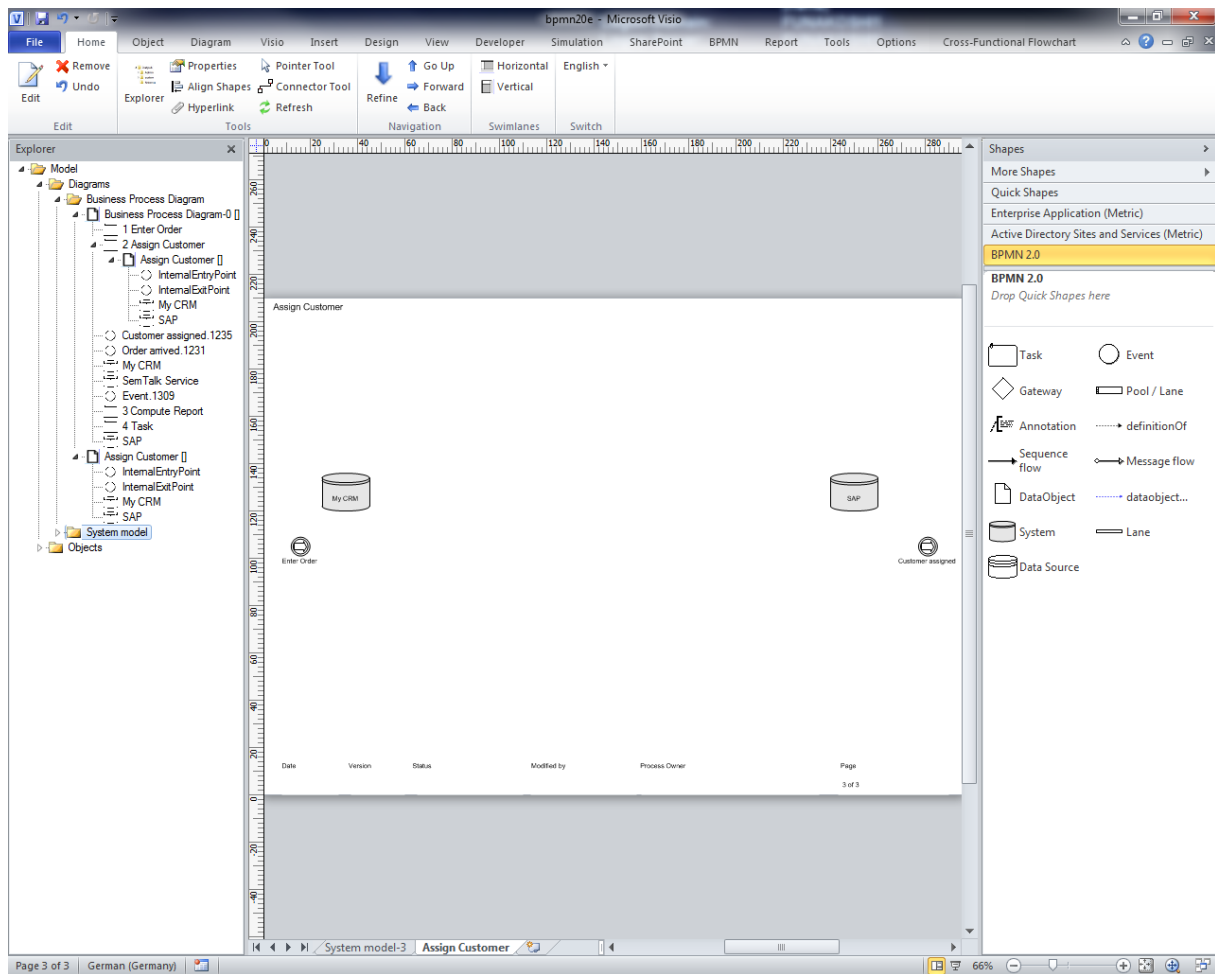
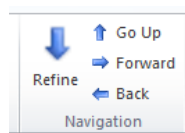


Figure 34: A new Refinement

You can see in the Explorer the new process as a child node of “Business Process Diagram-0”. In Business Process Diagram-0 “Assign Customer” is now marked with a “+” to inform you that it has a refinement. Any time you select “Refine” you open the refinement. Navigation is available on the “Home” tab. It allows to go from the refinement to the refined process.



Refinements may have incoming and outgoing message flows. The events for those flows will use the message symbol instead of the link symbol.

NOTE: If you use the option “External” you can assign a process in a different model as the refinement. In this case the refinement works like a hyperlink to the other model. But if this is done, there will not be any connected Entry or Exit points.

7.1 Attachments and Visio Hyperlinks

Refinements are used for a unique structured decomposition of processes. Attachments are used to assign unstructured information such as documents, hyperlinks or arbitrary Visio pages to an object. In order to add an attachment please use the edit dialog or “Home->Hyperlink”.

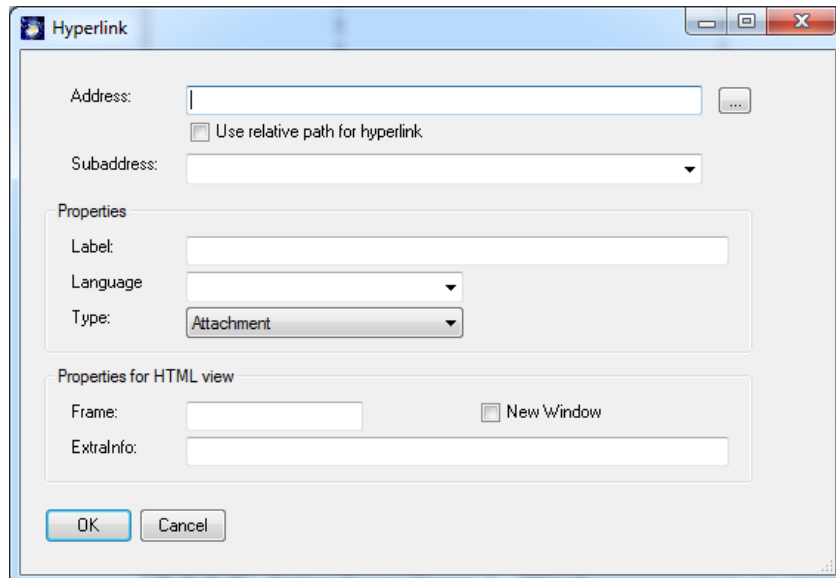


Figure 35: Editing Hyperlinks

Use **Sub address** to attach other Visio pages to your model. **Address** will be used to attach documents or Hyperlinks. **Language** marks the document for a certain model language. If you select external documents you can decide to use a **relative path**. You may attach as many documents as you need. Please visit the general tutorial for further information.

Navigation in the document and its HTML representation is realized via Visio-Hyperlinks:

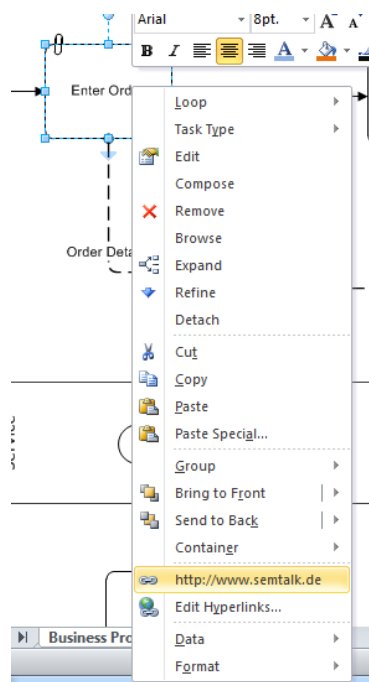
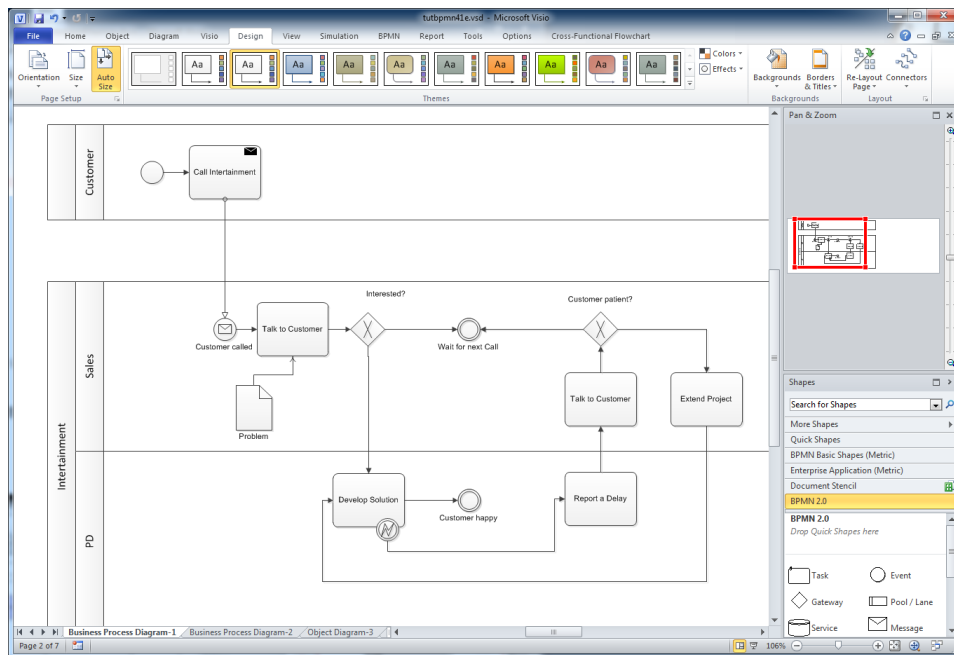


Figure 36: Navigation with Hyperlinks

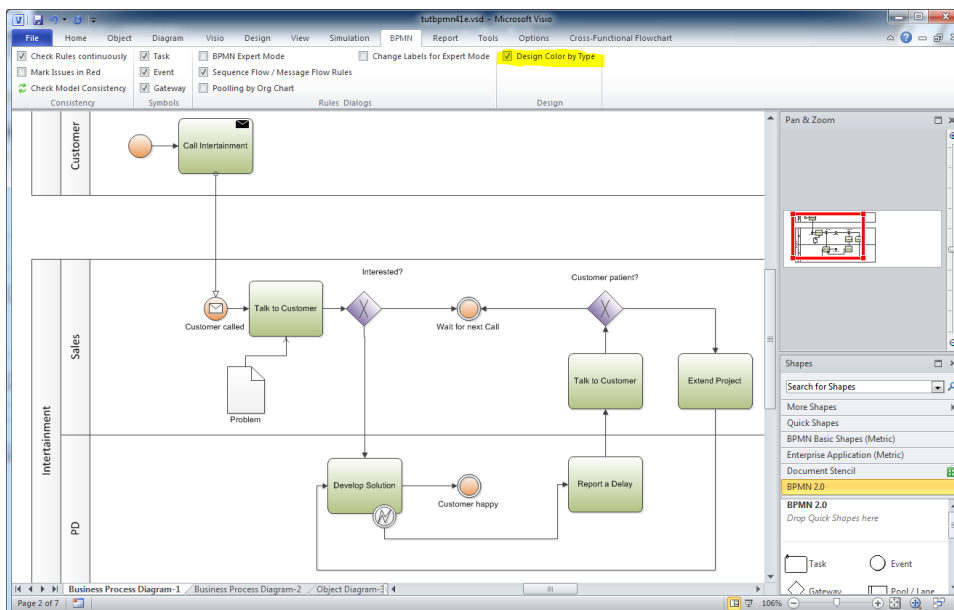
On Visio shapes which are not SemTalk objects (e.g. Visio->Drawing->Rectangle) you can use standard Visio Hyperlinks.

8 Customizing Colors

In Visio you can assign design to your diagrams. Each design is a combination of a colorset and different effects. By applying a standard to a drawing all shapes will follow the same design.



SemTalk has the option to assign colors by type (on the BPMN tab). After selection of this option Activities, Events and Gateways will get a specific color.



In order to change the colors for each type you can pick from existing colorset, modify a colorset or create new colorsets.

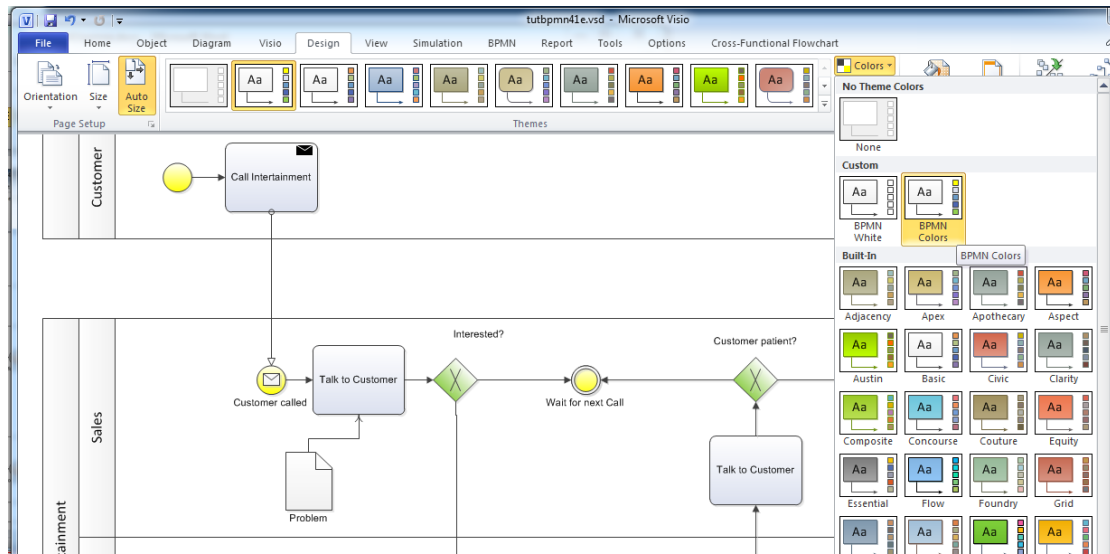


Figure 37: Colored Process

We have added 2 colorsets named “BPMN White” and “BPMN Colors” to the template.

9 Simulation

Simulation is available for SemTalk BPMN Edition. This allows testing the logical behavior of your process. Using colored Petri-Nets you can investigate your process in a dynamic environment with multiple inputs with Tasks that are processed in parallel so you can find out where bottlenecks will occur.

Please refer to our Simulation Tutorial for details.

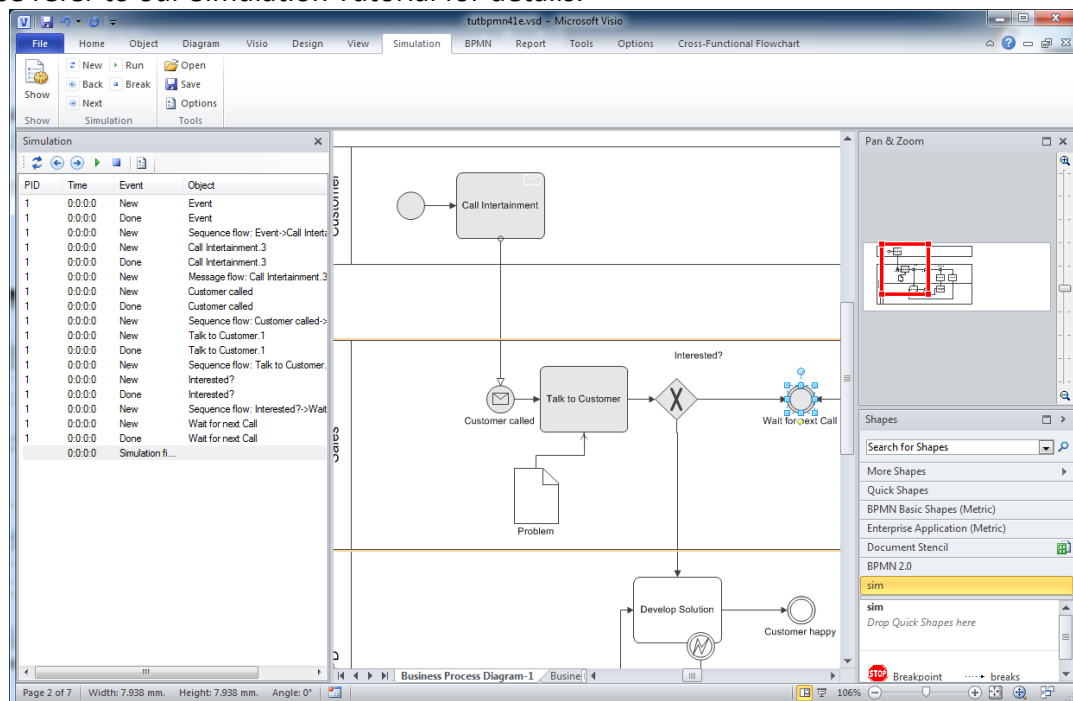


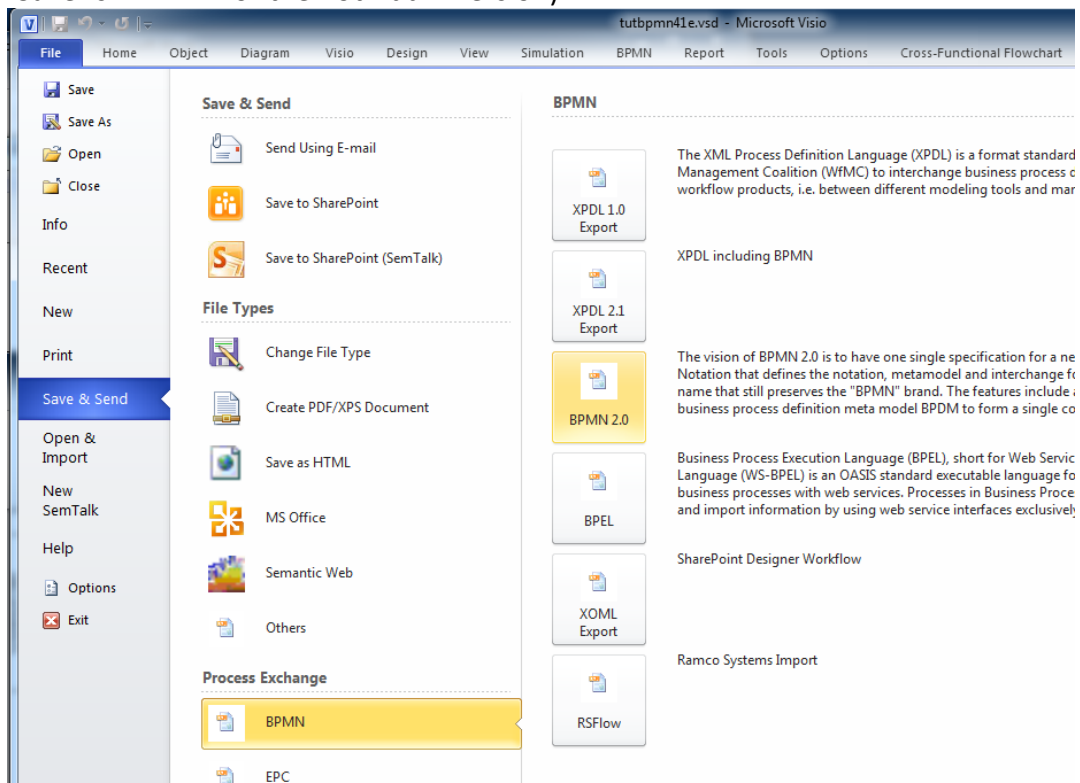
Figure 38: Simulation

10 XPD Export / Import

The XML Process Definition Language (XPD) has its origin in the text-based workflow exchange format of the Workflow Management Coalition (WfMC Interface 1)

- Allow tools to exchange process models
- Format to exchange Process Definitions between
 - Components within Workflow/BPM Products
 - Different BPM/Workflow Products
 - Process Modelling/ Simulation tools and BPM/Workflow Products

In SemTalk you'll find XPD Export at File->Save & Send->BPMN-> XPD Export (File->SaveAs->BPMN for the not Addin version).



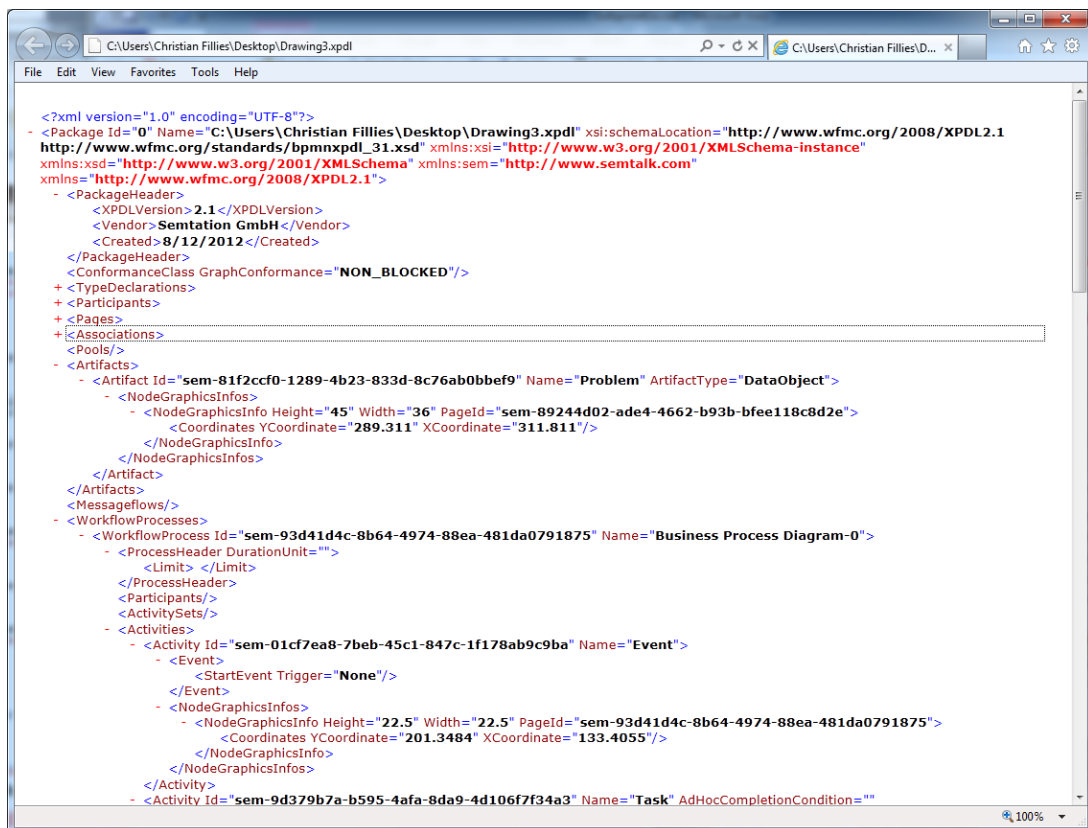
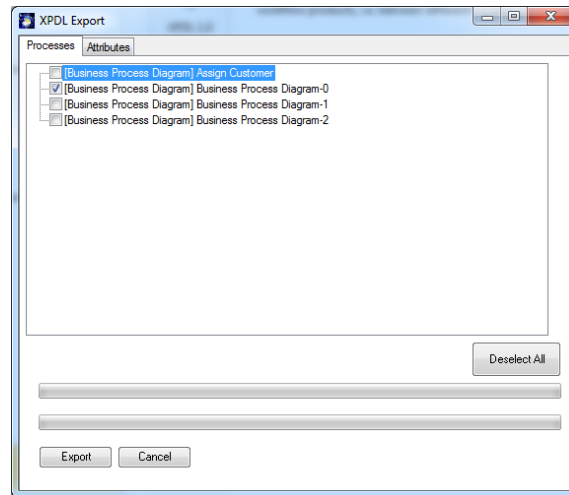


Figure 39: XPDL Export

A similar XML based export format is specific for BPMN 2.0.

11 Figures

Figure 1 SemTalk Addin for Visio 2010.....	4
Figure 2: Selection of BPMN 2.0.....	4
Figure 3: Starting SemTalk BPMN Edition	5
Figure 4: BPMN Settings.....	6
Figure 5: Adding Process Elements	8
Figure 6: Process with Swimlanes	10
Figure 7: Attaching an Event	12
Figure 8: Intermediate Event and Error handling	13
Figure 9: Composing object-oriented tasks	15
Figure 10: An object-oriented Process	16
Figure 11: Object Diagram.....	17
Figure 12: Properties Window	18
Figure 13: Task Dialog.....	19
Figure 14: Task: Hum. Resource	19
Figure 15: Adding new Human Resources	20
Figure 16: Task: Measures.....	21
Figure 17: Sequence Flow: Measures.....	23
Figure 18: Visio: Snap & Glue Options	23
Figure 19: Org Chart	24
Figure 20: Org Chart	25
Figure 21: Adding Persons.....	25
Figure 22: Org Chart with Persons	26
Figure 23: Adding an arbitrary Visio Shape to a process	27
Figure 24: Classes of Systems.....	27
Figure 25: Attributes imported from Visio Masters.....	28
Figure 26: CRM System Class	28
Figure 27: Shapes for resources in the Document Stencil	29
Figure 28: Renamed Visio Master	30
Figure 29: A System with a Visio Shape in a Process	30
Figure 30: A System with a Visio Shape in a Process	31
Figure 31: System: Measures	32
Figure 32: Service Masters	33
Figure 33: Creating a Refinement	33
Figure 34: A new Refinement.....	34
Figure 35: Editing Hyperlinks.....	35
Figure 36: Navigation with Hyperlinks	35
Figure 37: Colored Process.....	37
Figure 38: Simulation.....	37
Figure 39: XPDL Export	39

ⁱ If you are using Visio Shapes frequently, it makes sense to change file path for stencils (2003) or “My Shapes” (2007) using Visio’s options dialog.