



Bizagi Process Modeler

User Guide

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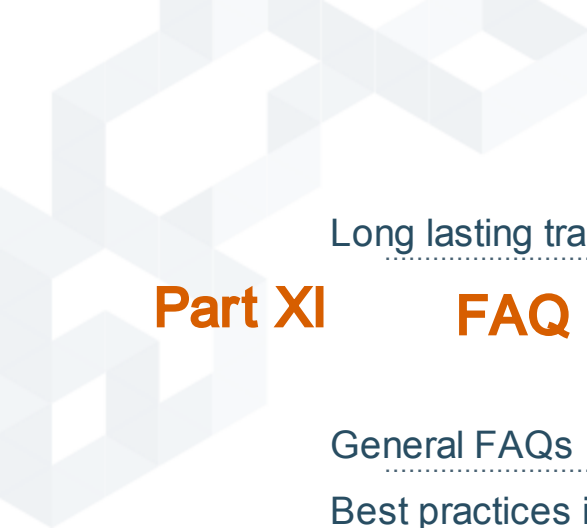
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Part I

Welcome to Bizagi
Modeler

Welcome to Bizagi Modeler

Please refer to the topics on the left or search, to find what you are looking for.

Overview

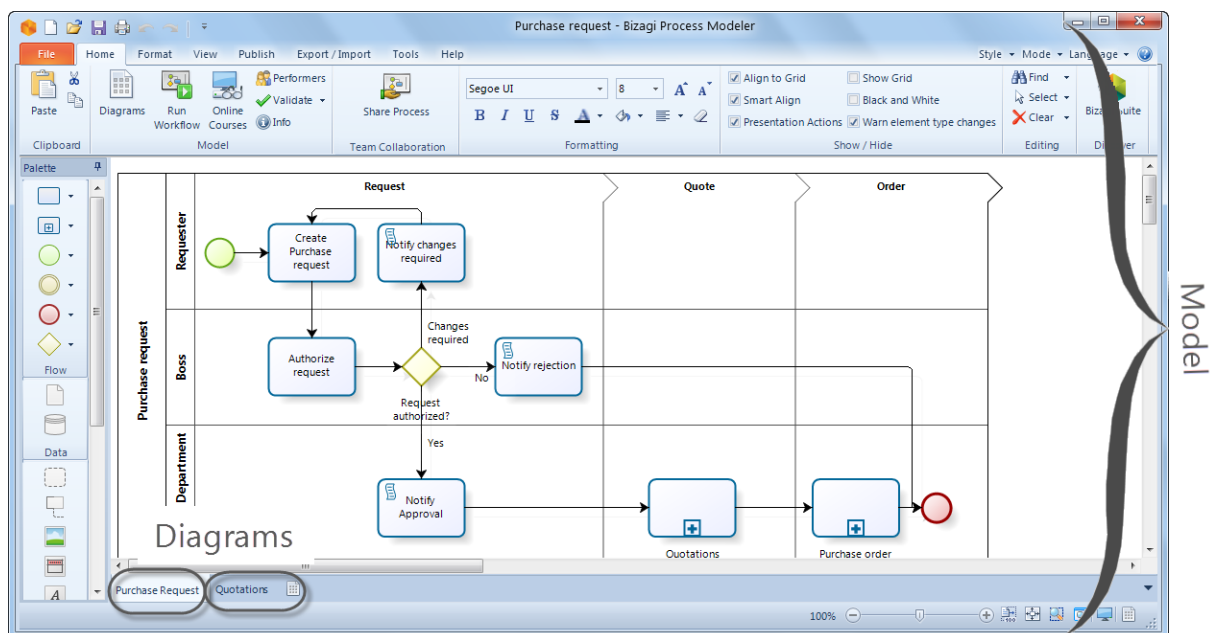
About Bizagi Modeler

Bizagi Modeler is a business process modeling and documentation tool. The Modeler enables you to visually diagram, model and document business processes in industry-standard BPMN (Business Process Model Notation). BPMN is a worldwide accepted format for process modeling.

You are able to publish high quality documentation in Word, PDF, Sharepoint or Wiki. Processes can be easily imported from and exported to Visio or XML, and other tools. The Modeler's Intellisense (smart code completion) coupled with its unique look and feel allows you to quickly and easily map and document, without the delay of validation routines.

All processes are saved with a **.bpm** file extension. Each file is referred to as a model and may contain one or more diagrams.

A model can refer to a whole organization, a department or a specific process depending on your needs. Multiple diagrams are positioned as individual sheets (tabs) within your model. You are able to navigate between diagrams in your model by selecting the associated sheet tab located at the bottom of the model.



About Process Modeling

Process modeling is a method to analyze, design and diagram a business process flow. Modeling a process in an iterative, clear, transparent and straightforward way will enable you to understand, analyze and make a positive change to the business process.

Standards support

Support for BPMN 2.0

Business Process Model and Notation, or BPMN, is a graphical notation created to provide a unified language of worldwide acceptance. It is used to specify business processes, defined by the Object Management Group (OMG).

Since joining the group in 2007, Bizagi continues to be an active member of the group within the OMG that is in charge of defining the BPMN standard.

Bizagi Modeler supports the current version, BPMN 2.0.

For more information, see <http://www.omg.org/spec/BPMN/2.0>

Support for XPD L 2.2

The XML Process Definition Language, or XPD L, is a standard format to interchange business process definitions between different workflow products.

XPD L provides a file format that supports every aspect of the BPMN process definition notation, including graphical descriptions of the diagram, as well as executable properties used at run time. This format is standardized by the Workflow Management Coalition (WfMC).

Bizagi Modeler supports the current version, XPD L 2.2.

For more information, see <http://www.wfmc.org/xpd l.html>

Multilanguage support

Bizagi Modeler is multilingual, and the user interface supports the following languages:

- English
- Spanish
- German
- French
- Portuguese
- Russian
- Chinese (simplified)
- Dutch
- Italian
- Japanese

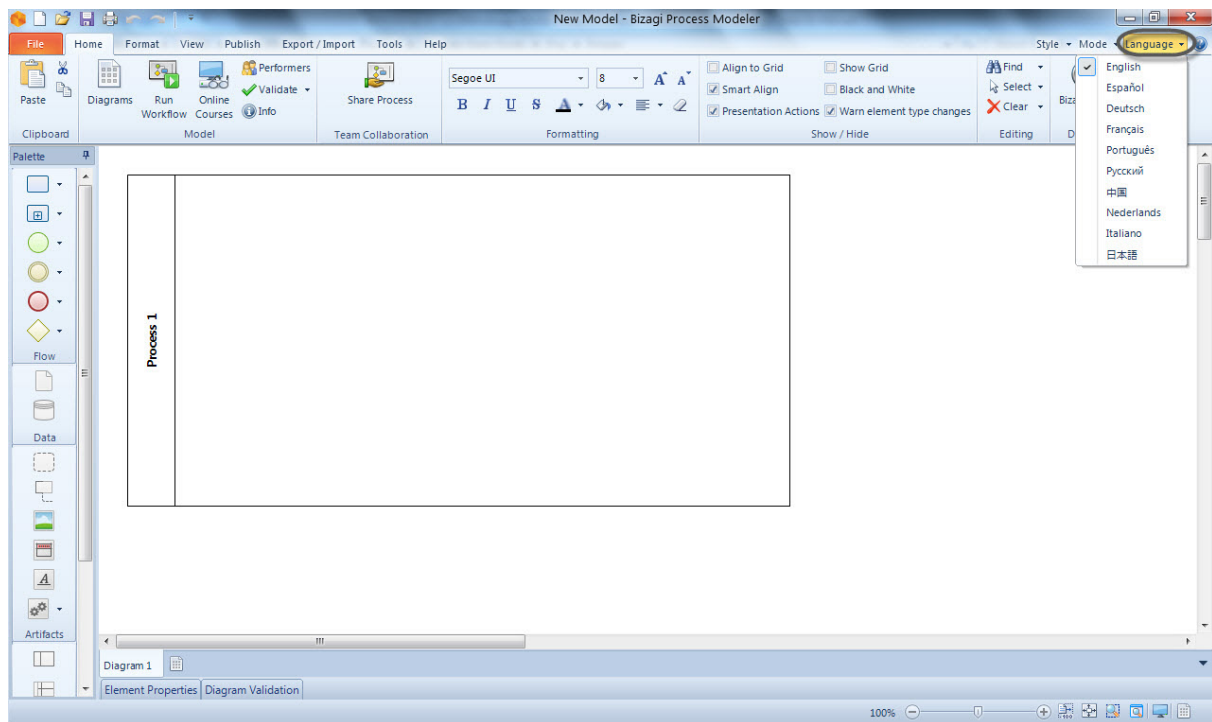
Install Bizagi Modeler in your preferred language

At the start of the Bizagi Modeler installation, you will be prompted to select the language of your preference. Once selected, all text will be displayed in the chosen language throughout installation and use of the product.



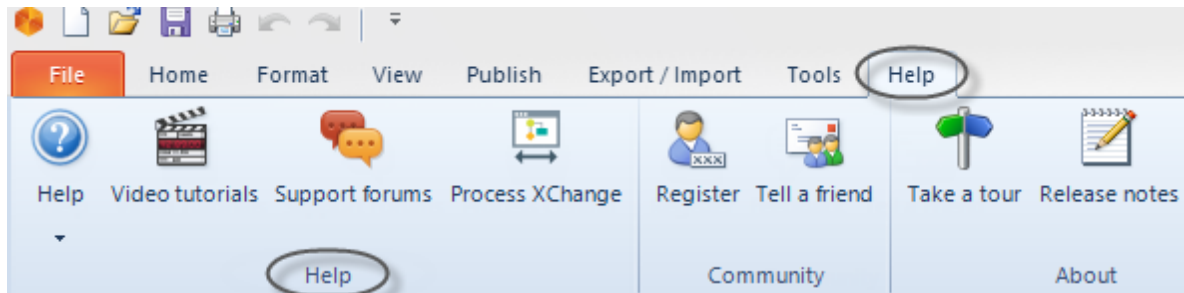
You can change the language at any time

Once Bizagi Modeler is installed you are able to change the displayed language at any time. Select a language from the Language drop-down list, located in the upper right corner of the Modeler. For the change to take effect, please restart Bizagi Modeler.



Training and support

Bizagi Modeler offers several types of support to help you with process modeling and documentation. These are located on the Help tab.



Video Tutorials

Learn how to use Bizagi Modeler through short and explanatory videos and discover new features. [Please refer to our Video Tutorials site](#)

Online training and support

Discover how to capture and transform a process to benefit your business. We offer self-paced training courses online free of charge.

[Please refer to our e-learning web site](#)

Support Forums

We offer free support forms where your questions are answered promptly. Also, opinions and ideas can be shared with our community that is growing by the day. To access our support forums you will need to register.

[Please refer to our Forums site](#)

Free Process Central

Access, download and use our collection of templates containing the best practices of many common processes used within organizations.

Bizagi process templates are ready to use and executable processes that you can use to boost performance in your organization. Feel free to customize them to your particular needs.

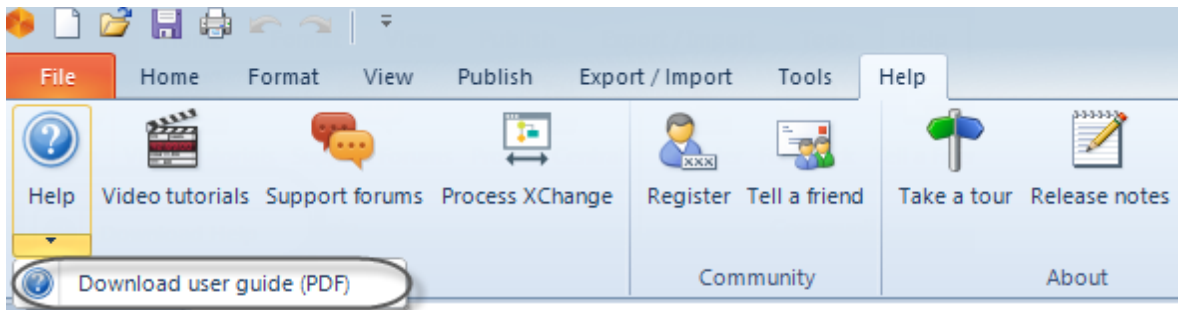
Again, we welcome your opinion and suggestions, which can be made, once registered.

[Please refer to our Process Central](#)

Help

Online help contains the knowledge you will need to diagram, document and produce your processes. Feel free to browse through all the documentation. We welcome any of your comments via the Feedback option.

The user guide can also be downloaded, for offline use, by selecting the Download Help option which saves the file as a PDF document.



Related Products

Bizagi BPM Suite is composed by three products: **Bizagi Modeler**, **Bizagi Studio** and **Bizagi Engine**

Once you are finished modeling your processes with Bizagi Modeler, Bizagi Studio and Bizagi Engine will provide you the necessary to automate your processes and transform them into an executable system.

Bizagi Studio allows you to enter all the necessary information for process execution: standard time, costs, user interfaces, business rules, etc. This information is stored as a model in a database and used at runtime by Bizagi Engine for process execution through a work portal for end users.

With the **Bizagi Modeler**, **Bizagi Studio** and **Bizagi Engine**, you have complementary products that make up the **Bizagi BPM Suite Solution**:



[Please click for more information about our BPM Suite](#)



Part II

Getting Started

Getting Started

The following chapters will get you started with your Model.

Install Bizagi Modeler

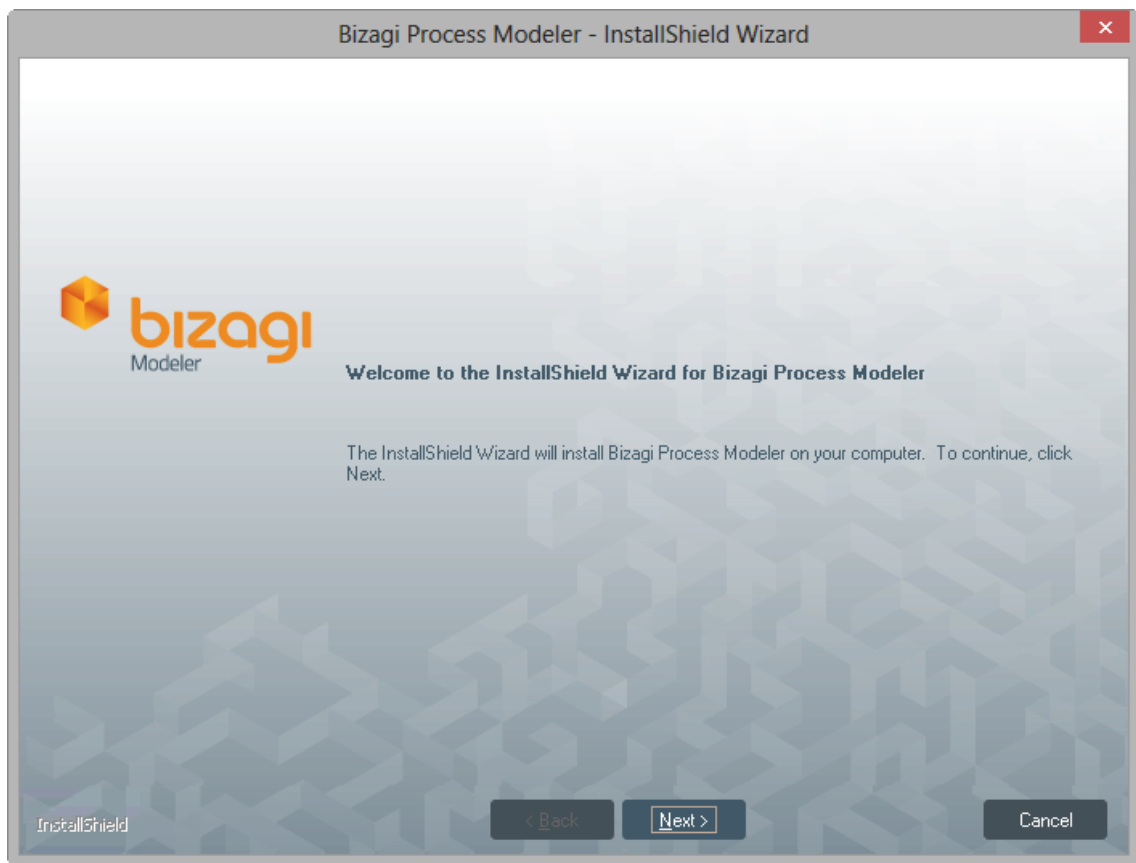
Bizagi Modeler is a **freeware application** that you can download from the internet and use in a desktop or portable computer.

To install Bizagi Modeler run the installer, located on our web portal in Downloads under the Products menu.

Once loaded, select the language for installation from the drop-down list.



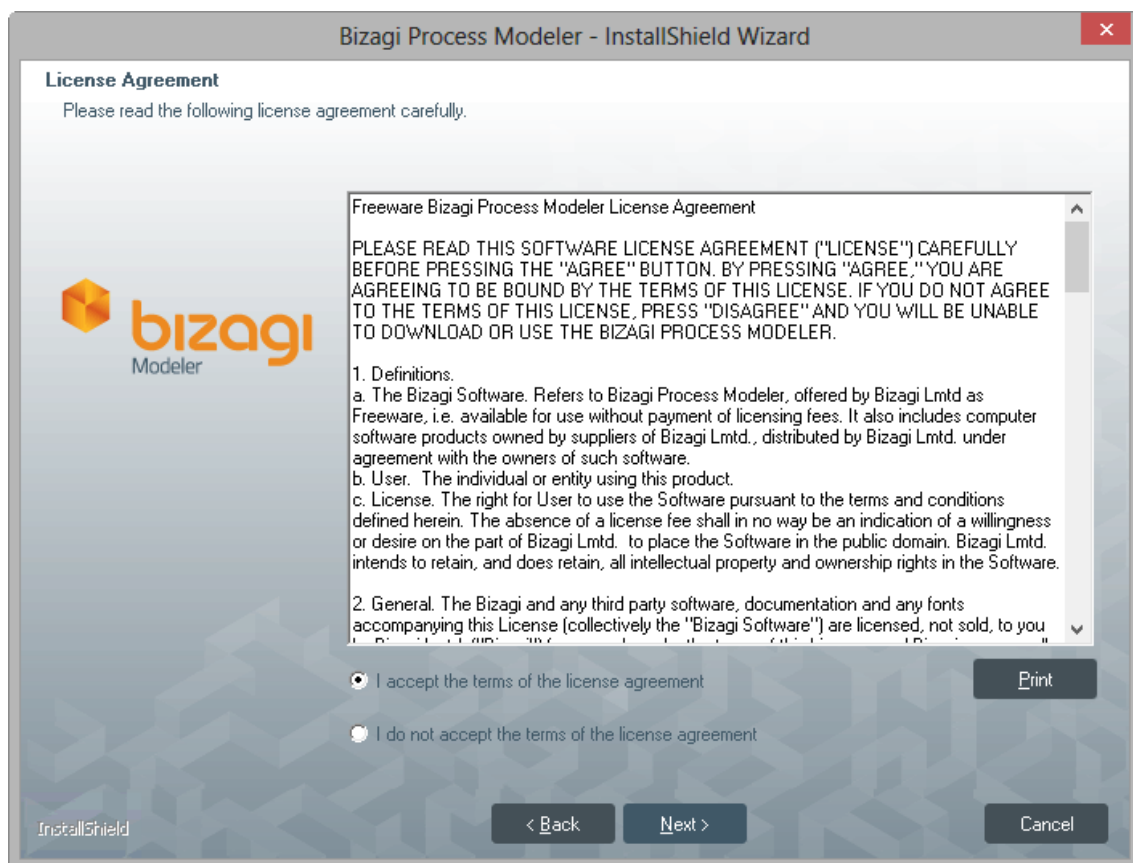
Click the Next button to allow the installation wizard to guide you through the process.



To continue, you will need to read the terms of the license agreement.

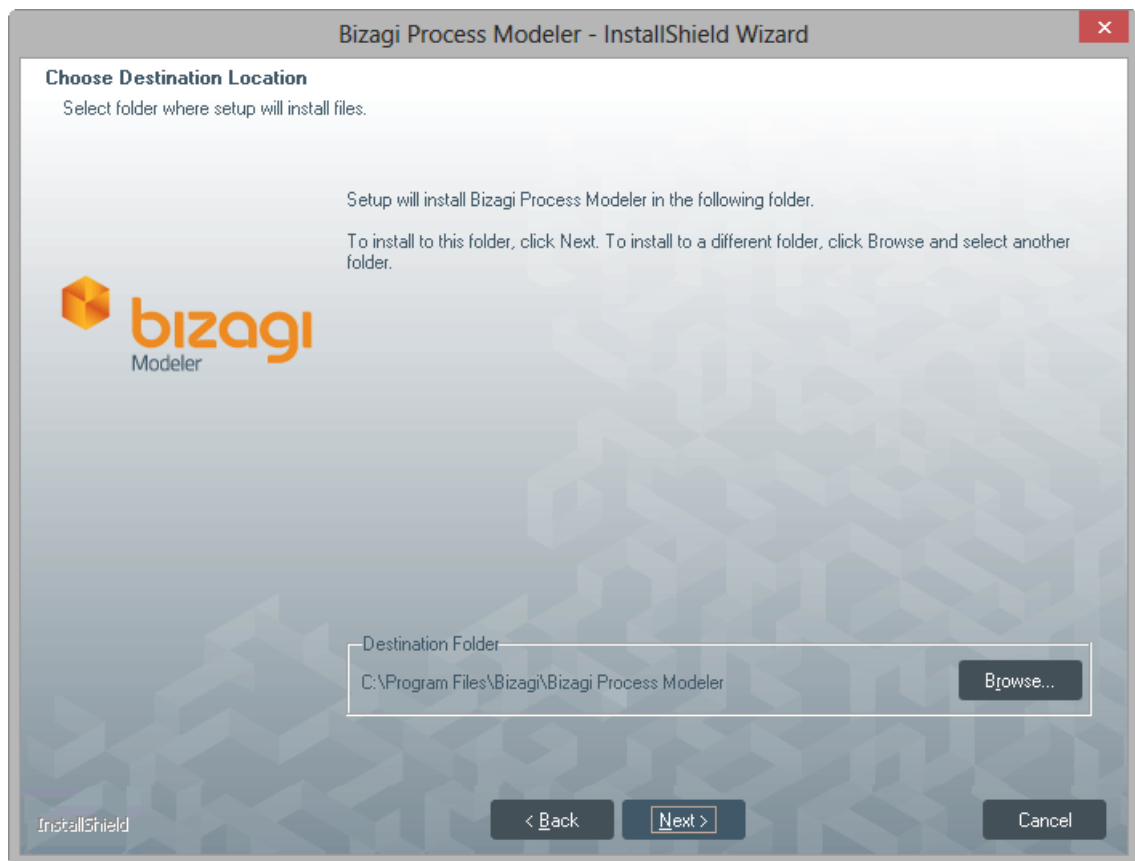
If you accept the terms, select the I accept the term of the license agreement option and click the Next button to continue the installation.

Otherwise, select the I do not accept the terms of the agreement option and click the Next button, and the tool will not install.

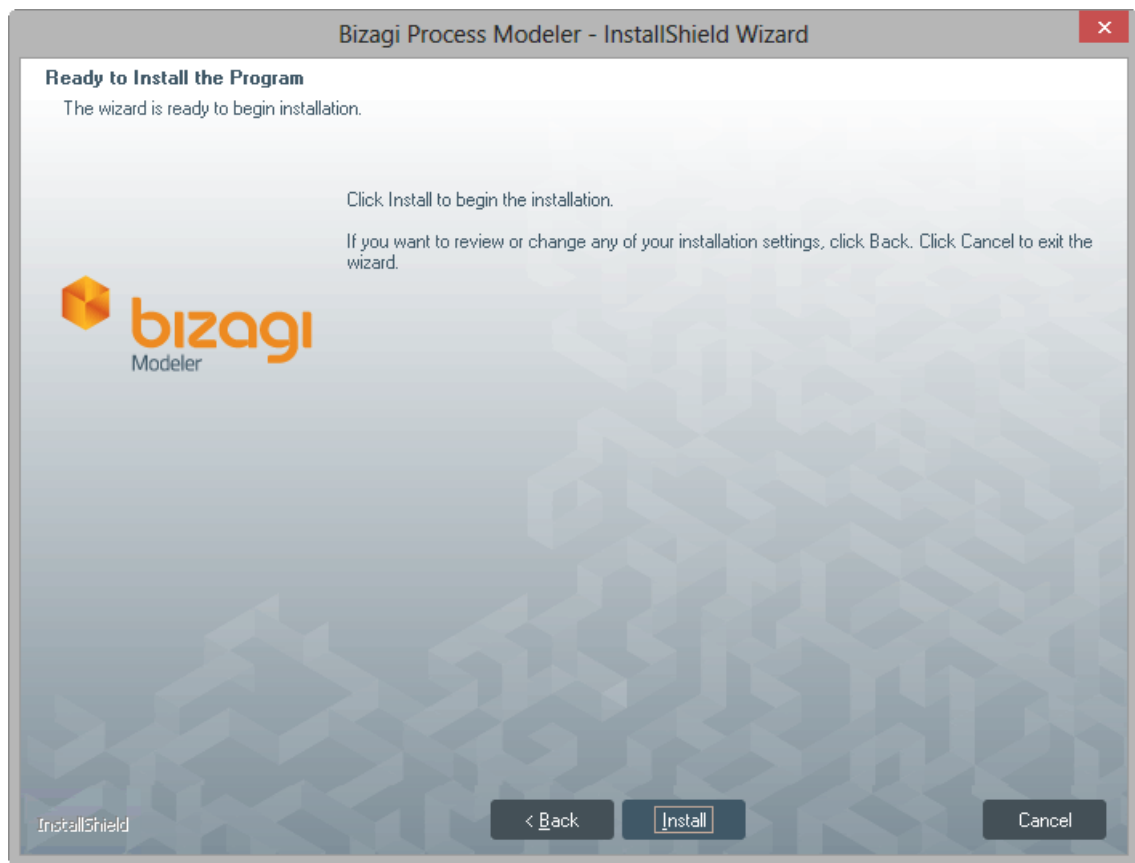


Select the folder where Bizagi Modeler will be installed.

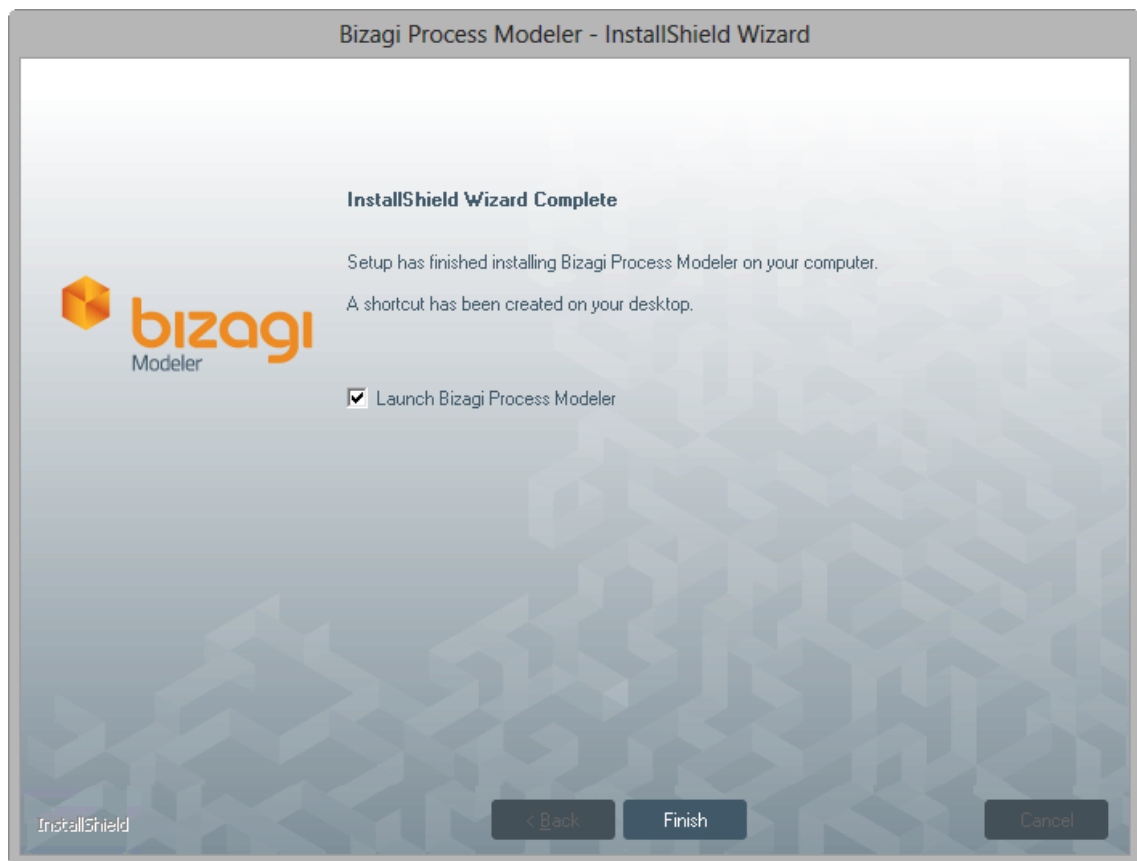
The default folder shown can be changed by clicking the Browse icon, selecting a new folder, and then clicking the Next button.



Click the **Install** button to start the installation process.



When the installation process is finished, click the **Finish** button.
A shortcut will be created on your desktop to allow easy access to the application.



System Requirements

The following are the minimum requirements to install Bizagi Modeler

Operating System

- Windows 8.1 / Windows 8
- Windows 7
- Windows Vista
- Windows Server 2012
- Windows Server 2008 R2 / 2008
- Windows Server 2003

Note

Windows XP Professional SP3 is supported.
However, consider that support for Windows XP ends on April 8th of 2014 (as Microsoft has officially announced support for this operating system ends on this date).

Software

- Microsoft .NET Framework 4.0 full [Click to download](#)
- Internet Explorer (8 or higher)

Hardware

- Processor: 1 gigahertz (GHz). 32-bit (x86) or 64-bit (x64)
- Memory: 1 gigabyte (GB) RAM (32-bit) or 2 GB RAM (64-bit)
- Hard drive: 50 MB available hard disk space
- Display: 800 x 600 or higher resolution

To view documentation

- Internet Explorer (8, 9, 10), Chrome or Mozilla Firefox.
- Microsoft Word 2013, 2010, 2007, 2003
- Microsoft Visio 2010, 2007, 2003
- Microsoft Office Sharepoint Server 2010/2007 and Sharepoint Services 3.0
- MediaWiki 1.14 to 1.22 [Please see further Wiki requirements](#)

Register to join the community

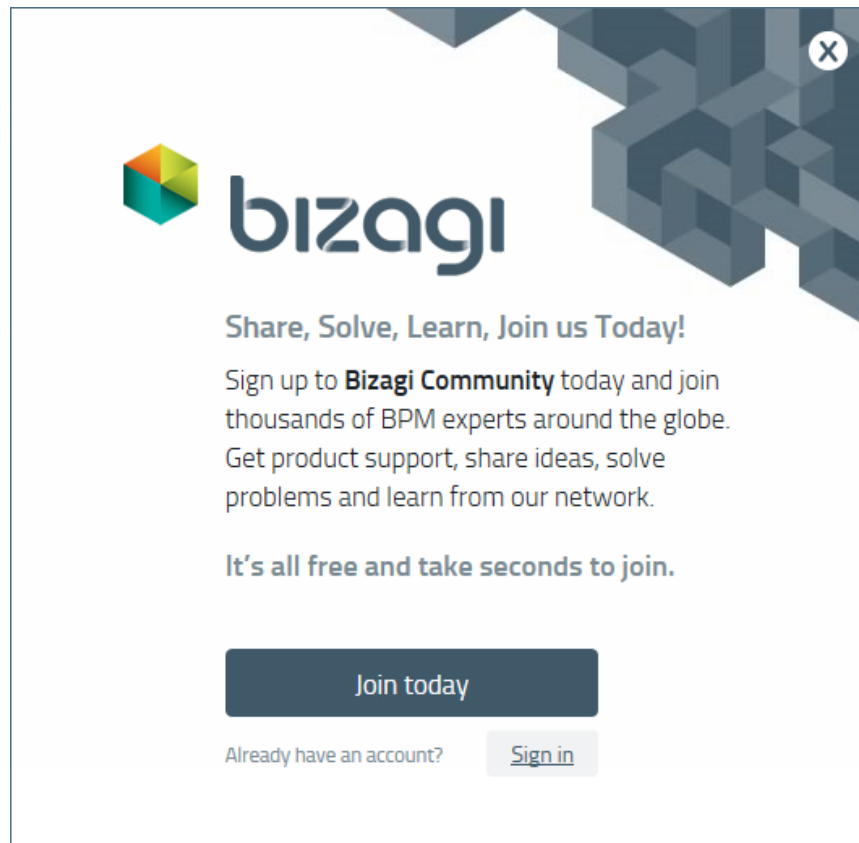
Bizagi Modeler will prompt you a window to allow you to join our community and be able to access all our free online resources and help you in your BPM journey.

Although optional, we highly recommend you register in order to obtain the following benefits:

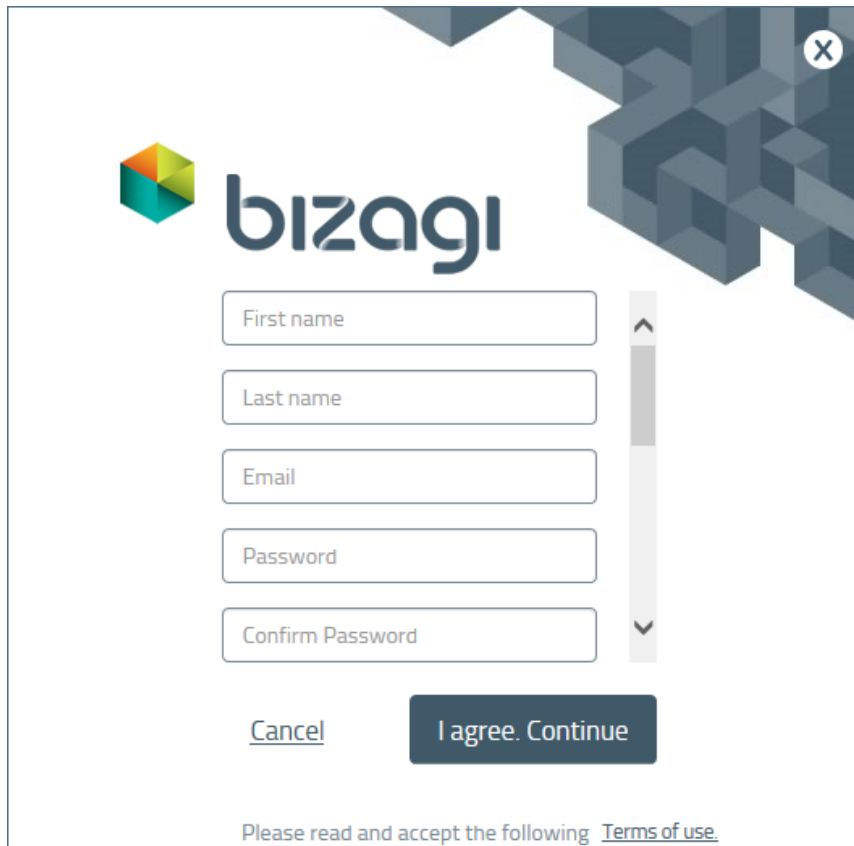
- Free Online support
- Expert advice
- Free documentation
- Video tutorials

New members

If you are not a member, click the *Join today* button.

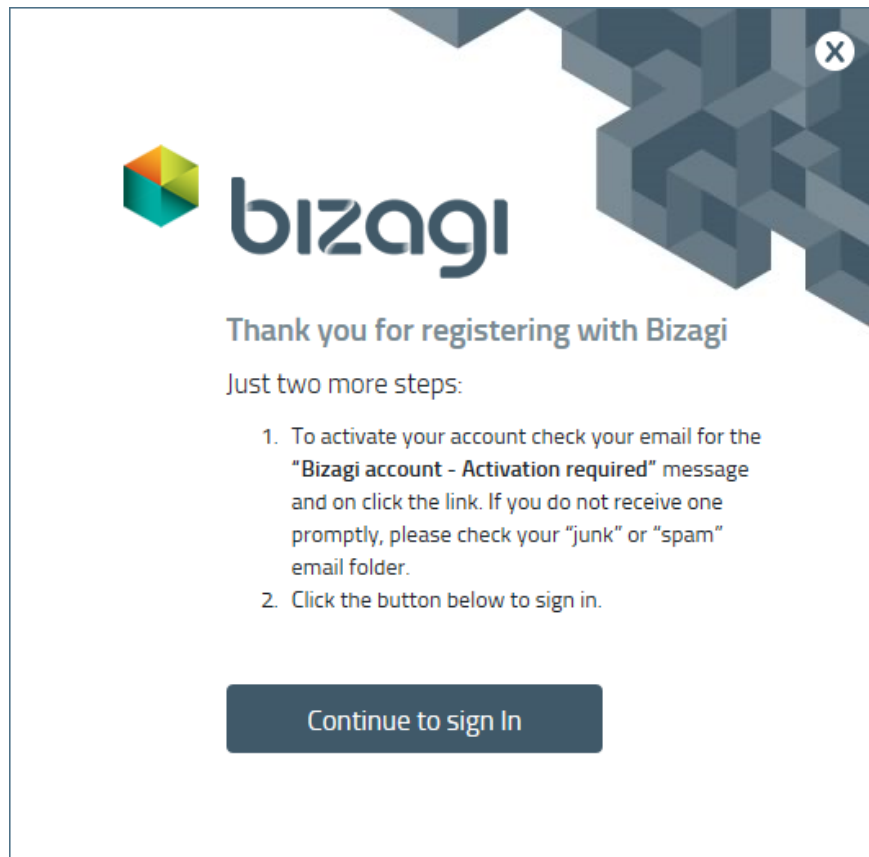


The registration form will display where you can enter some basic information.

A screenshot of the Bizagi registration form. The form is displayed in a modal window with a close button (X) in the top right corner. The Bizagi logo is at the top left. The form contains five input fields: "First name", "Last name", "Email", "Password", and "Confirm Password". To the right of these fields is a vertical scrollbar. Below the input fields are two buttons: "Cancel" (a text link) and "I agree. Continue" (a dark blue button). At the bottom of the form, there is a text prompt: "Please read and accept the following [Terms of use](#)." data-bbox="267 151 791 552"/>

After you enter the information and agree to our Terms of use, you will receive an email to the address provided by you.

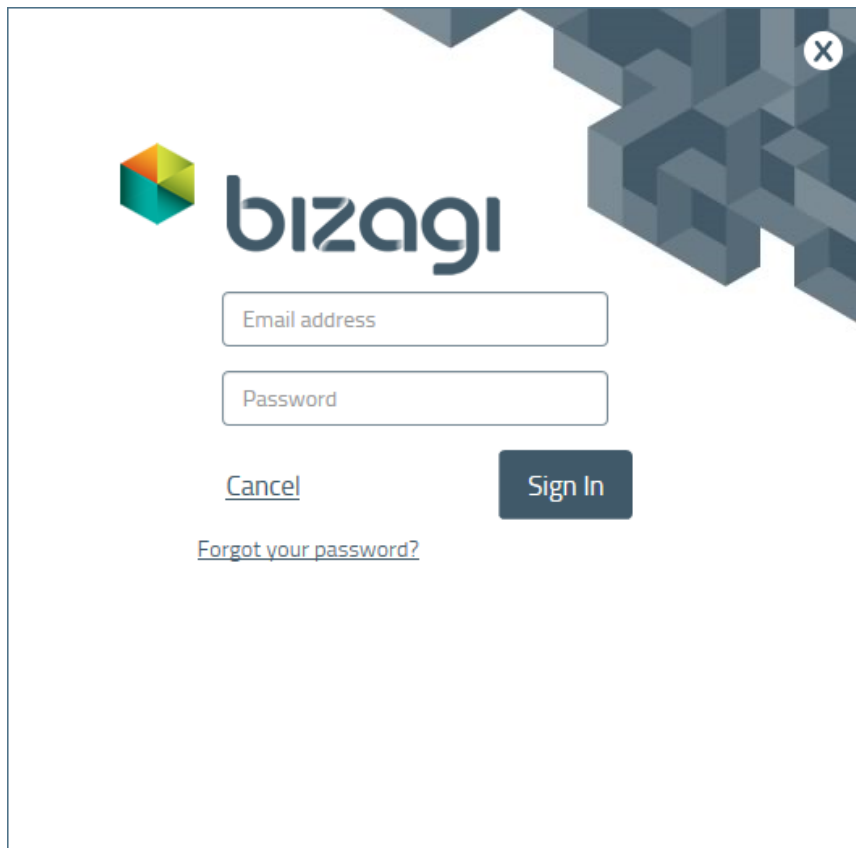
The email contains a link where your account will be activated. Click the *Continue to sign in* button and enter your email and password.



Already a member

If you are already a member click the Sign in link on the first image.

Enter your email and password to log in. Once your credentials are verified, the window will no longer be displayed, and you will be able to enjoy all our resources.



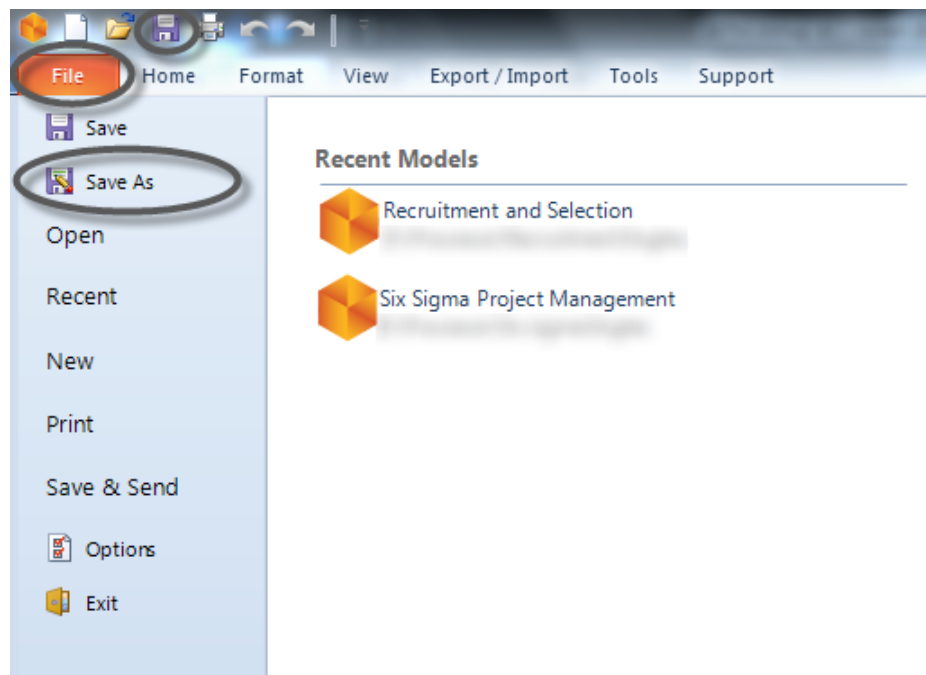
We respect your privacy. [Please review our Privacy policy](#)

Bizagi Modeler file types

Bizagi Modeler has two main file types, differentiated by the file extension:

- **.bpm**, the file format used to save a Bizagi Modeler file.
- **.bpmc**, the file format used to save diagrams for Team Collaboration Mode.
Team Collaboration allows for collaborative process improvement and execution. Teams can participate simultaneously in the definition of a process, thereby enhancing business performance.
Click this link [Team Collaboration](#) for further information.

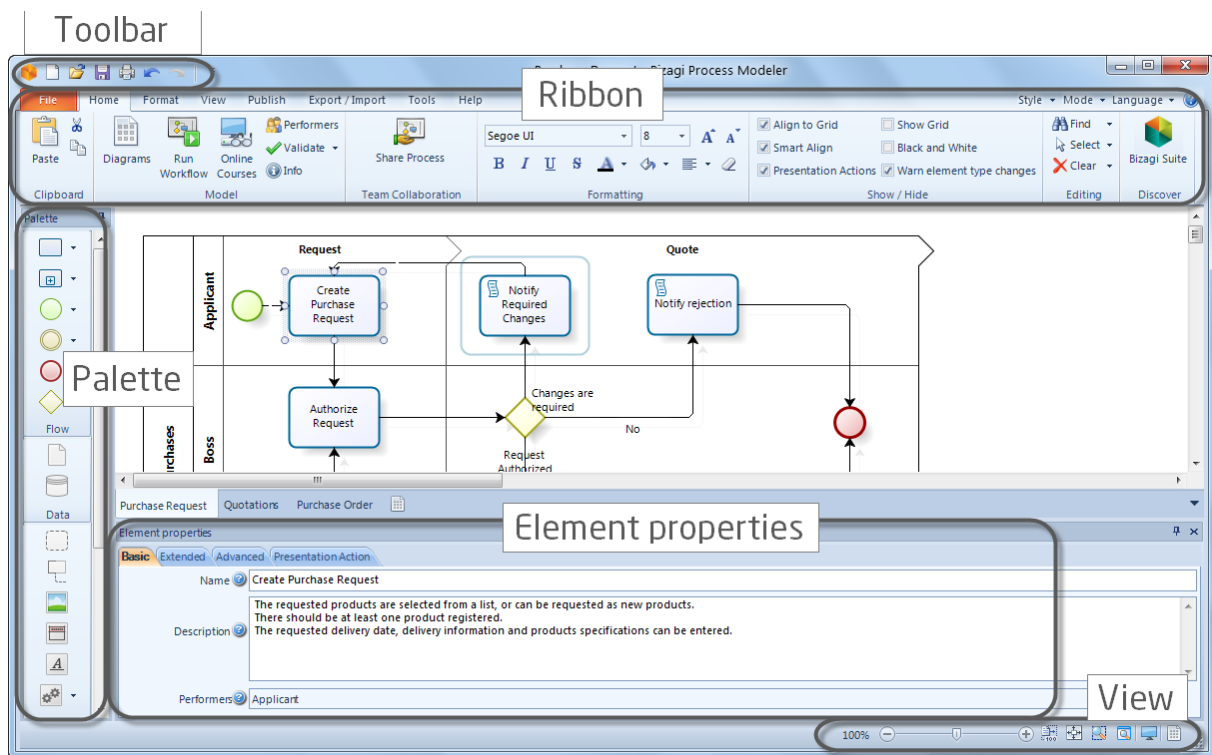
To save a model click **Save** or **Save As** on the **File** tab in the upper left corner or click the disk image on the Toolbar.



User Interface explained

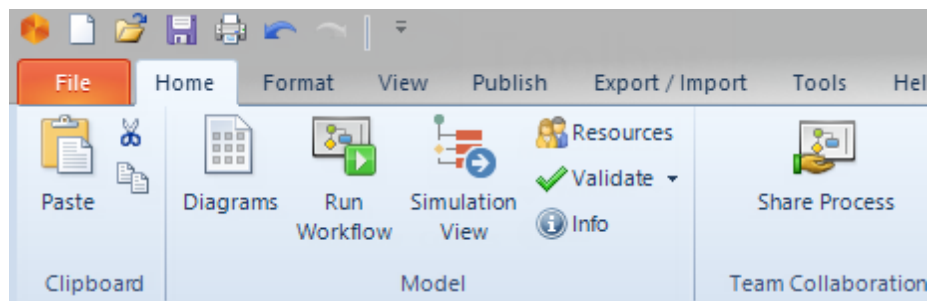
Bizagi Modeler has a very simple, easy and intuitive interface.

It has five main elements; namely, Toolbar, Ribbon, Palette, Element Properties and View.

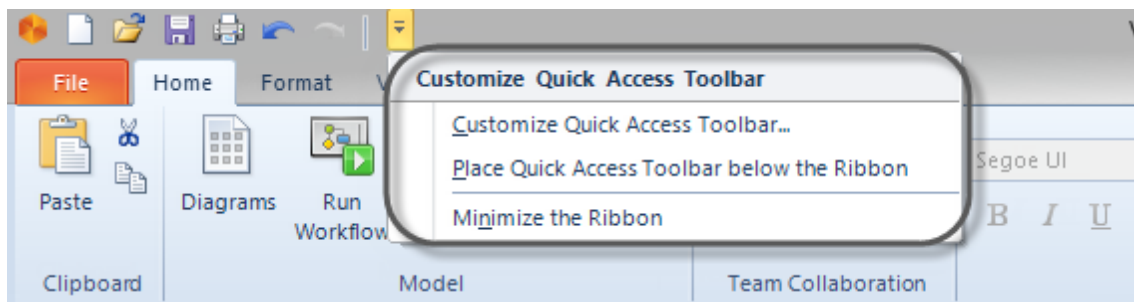


Toolbar

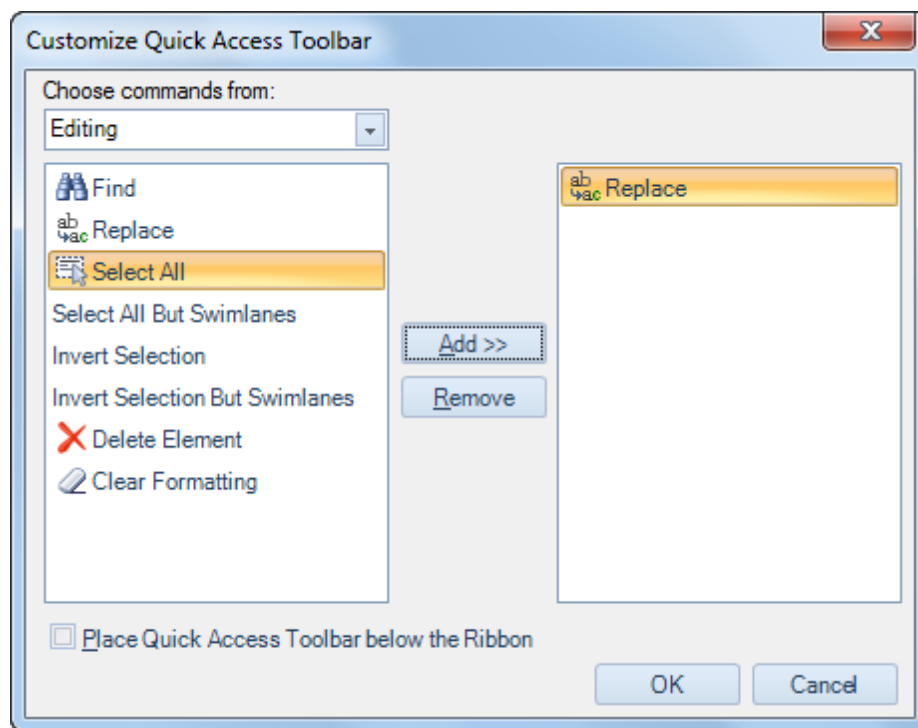
The Toolbar contains quick access commands to a subset of any menu within Bizagi Modeler. The default commands can be customized at anytime.



To adjust the Toolbar click on the drop-down list on the right and select **Customize Quick Access Toolbar** which will allow you to add or remove any item.



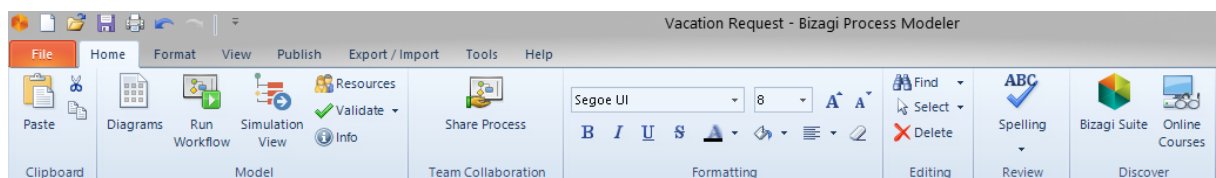
Select a menu option from the drop-down menu and click the **Add** or **Remove** buttons to alter to your preference.



Ribbon

The Ribbon contains the main controls to manage each Process Model. These are organized into different tabs, and are described below.

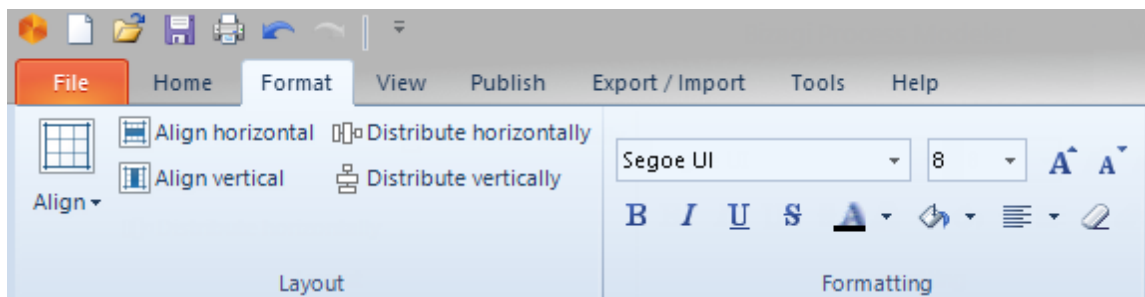
Home tab



| MENU OPTION | SUB OPTION | DESCRIPTION |
|--------------------|------------------|---|
| Clipboard | Paste | Insert the current contents of the clipboard into the diagram. |
| | Cut | Remove the selection from the diagram and put it on the clipboard. |
| | Copy | Copy the selection from the diagram and put it on the clipboard. |
| Model | Diagrams | Open the diagram browser. |
| | Run Workflow | Turn your Process into a running applications. Visit www.bizagi.com |
| | Simulation View | Bizagi Modeler allows simulation your business processes under the BPSim (Business Process Simulation) to support decision making and boost their continuous improvement. |
| | Resources | Add, edit or remove resources. These are the roles, systems or people that execute activities. |
| | Validate | Check for modeling errors on the active diagram. |
| | Info | Show the diagram information. |
| Team Collaboration | Share Process | Share the model, allowing users to collaborate on the Process. |
| Formatting | Font | Change the font face. |
| | Font Size | Change the font size. |
| | Grow Font | Increase the font size. |
| | Shrink Font | Decrease the font size. |
| | Bold | Make the selected text bold. |
| | Italic | Italicize the selected text. |
| | Underline | Underline the selected text. |
| | Strikethrough | Draw a line through the middle of the selected text. |
| | Font Color | Change the color of the text. |
| | Shading | Color the background behind the selected text. |
| | Text alignment | Change the color of the text. |
| | Clear Formatting | Remove custom formatting, leaving only the plain text. |
| Editing | Find | Find text in the model. |

| MENU OPTION | SUB OPTION | DESCRIPTION |
|-------------|----------------|---|
| | Select | Select elements in the diagram. |
| | Clear | Clear formatting from selected elements or delete selected elements |
| Review | Spelling | Open the spell-check feature to proof text entered in the process and documentation. View more information about the Spelling review option. |
| Discover | Bizagi Suite | Learn more about Bizagi's BPM Suite |
| | Online Courses | Provide access to E-Learning sites. |

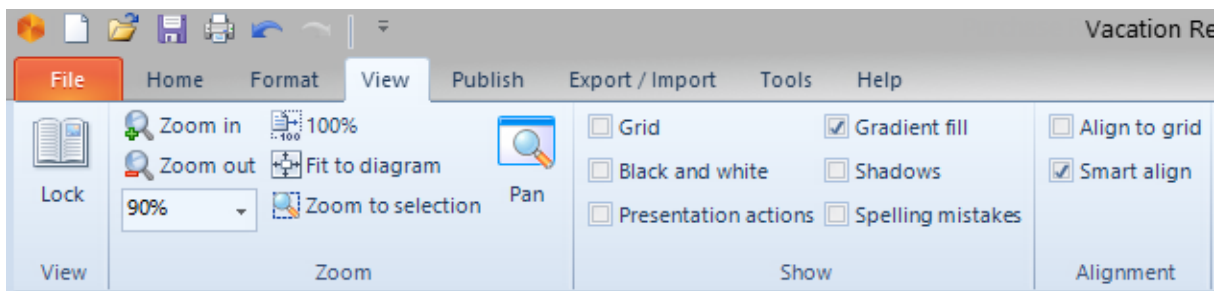
Format tab



| MENU OPTION | SUB OPTION | SUB OPTION |
|-------------|-------------------------|--|
| Layout | Align | Align selected elements. It is possible to align them to the top, bottom, left and right of the diagram. |
| | Align Horizontal | Align the selected items horizontally. |
| | Align Vertical | Align the selected items vertically. |
| | Distribute horizontally | Distributes selected elements with even horizontal spaces between them. |
| | Distribute vertically | Distributes selected elements with even vertical spaces between them. |
| Formatting | Font | Change the font face. |
| | Font Size | Change the font size. |
| | Grow Font | Increase the font size. |
| | Shrink Font | Decrease the font size. |
| | Bold | Make the selected text bold. |

| | | |
|--|------------------|--|
| | Italic | Italicize the selected text. |
| | Underline | Underline the selected text. |
| | Strikethrough | Draw a line through the middle of the selected text. |
| | Font Color | Change the color of the text. |
| | Shading | Color the background behind the selected text. |
| | Text alignment | Align text: center, left and right. |
| | Clear Formatting | Remove custom formatting, leaving only the plain text. |

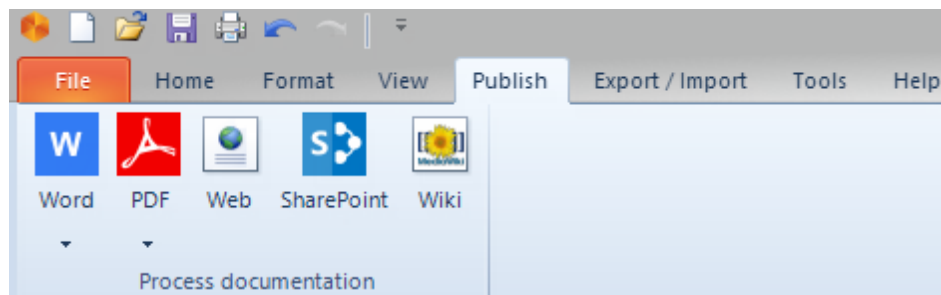
View Tab



| MENU OPTION | SUB OPTION | DESCRIPTION |
|-------------|-------------------|---|
| View | Lock | Locks/ unlocks the diagram for editing (read-only). |
| Zoom | Zoom In | Enlarge the view of the model. |
| | Zoom Out | Reduce the view of the model. |
| | Scale | Apply a preset zoom level for quick enlargement or reduction of the diagram (100% default). |
| | 100% | Show the model at at actual size. |
| | Fit to Diagram | Scale the page so that the entire diagram fills the viewing area. |
| | Zoom to selection | Scale the page so that only the selected elements of the diagram fill the viewing area. |
| | Pan | Display a view of the page at a smaller magnification in order to browse through the diagram. |
| Show/Hide | Grid | Display grid lines for visual reference to aid alignment of |

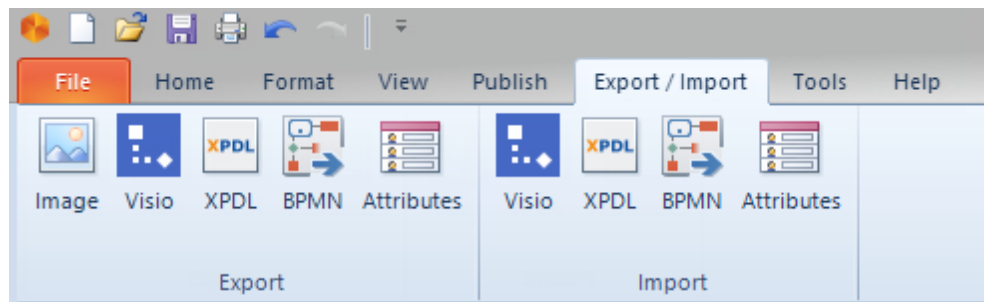
| | | |
|-----------|----------------------|---|
| | | a diagram's elements. |
| | Black and white | Change the color mode of the diagram to black and white. |
| | Presentation actions | Highlight the diagram elements that contain actions in presentation mode. |
| | Gradient fill | Fill elements with a background color that gradually changes from one color to another across the surface of the element. |
| | Shadows | Attach a drop shadow to the element. Shadows are attached to the bottom-right corner of the element. |
| | Spelling mistakes | Highlight the spelling mistakes found in text. |
| Alignment | Align to grid | Automatically aligns an element to the nearest intersection of lines in the grid. |
| | Smart align | Automatically aligns diagram elements to the grid in relation to one another. |

Publish Tab



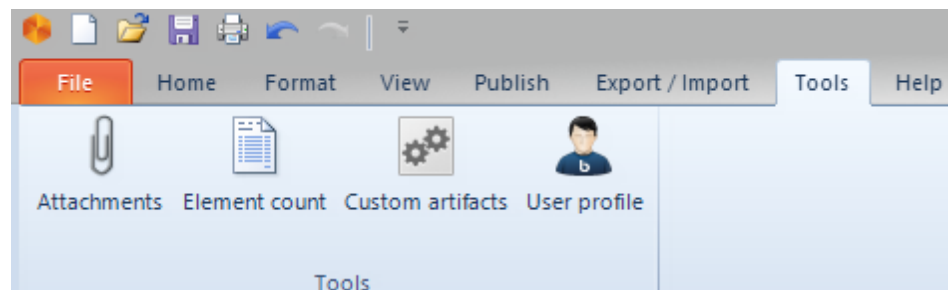
| MENU OPTION | SUB OPTION | DESCRIPTION |
|-------------|----------------------------|--|
| Publish | Word | Generate a Word file of the model and all its documentation. |
| | PDF | Generate a PDF file of the model and all its documentation. |
| | Web | Generate a Web file of the model and all its documentation for web browsing. |
| | SharePoint | Export and publishes the model to SharePoint. |
| | Wiki | Export and publishes the model to Wiki. |

Export / Import Tab



| MENU OPTION | SUB OPTION | DESCRIPTION |
|-------------|----------------------------|---|
| Export | Image | Export the active diagrams as an image. |
| | Visio | Export the model as a Visio file. |
| | XPDL | Export the model as a XPDL file. |
| | Attributes | Save the extended attributes as a XML file. |
| | BPMN | Export the model as a BPMN file. |
| Import | Visio | Create a new diagram based on a Visio file. |
| | XPDL | Create a new diagram based on a XPDL file. |
| | Attributes | Import extended attributes from a XML file. |
| | BPMN | Create a new diagram based on a BPMN file. |

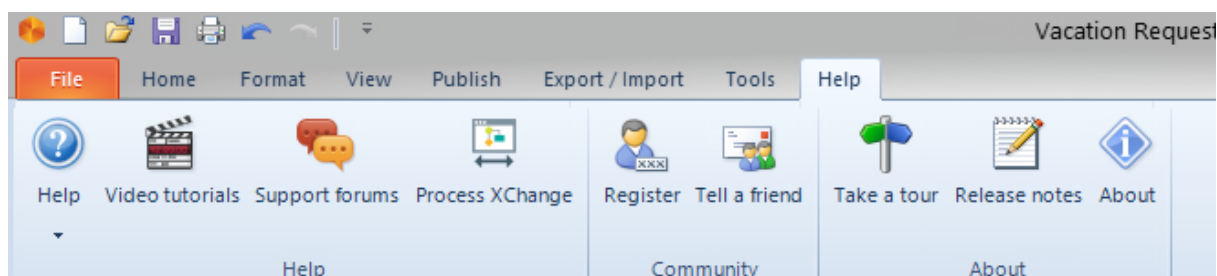
Tools tab



| MENU OPTION | SUB OPTION | DESCRIPTION |
|-------------|-------------|---|
| Tools | Attachments | Show all the attachments in the model: the element to which the attachment relates and the corresponding file name. |

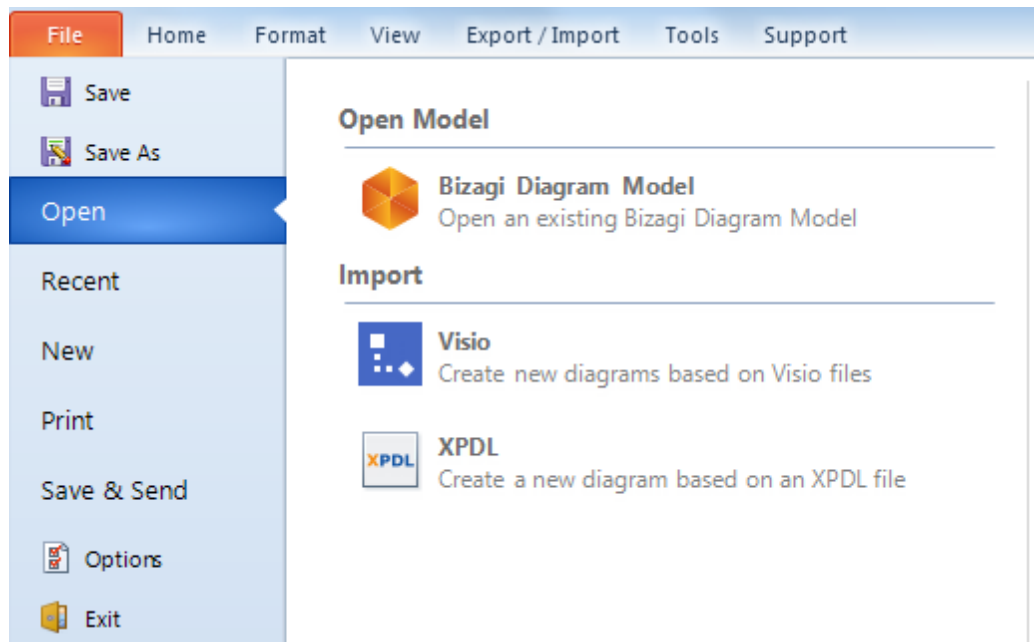
| | | |
|--|----------------------------------|--|
| | Element Count | Show the count of diagram elements by type. The table displays a list of Processes by name, and the number of Events, Gateways, Sub-processes and Tasks. |
| | Custom Artifacts | Show the Custom Artifacts Types Manager to create, edit, delete, export and import custom artifacts. |
| | User Profile | Define a user profile by which to identify a team member within a collaborative working model. |

Help tab



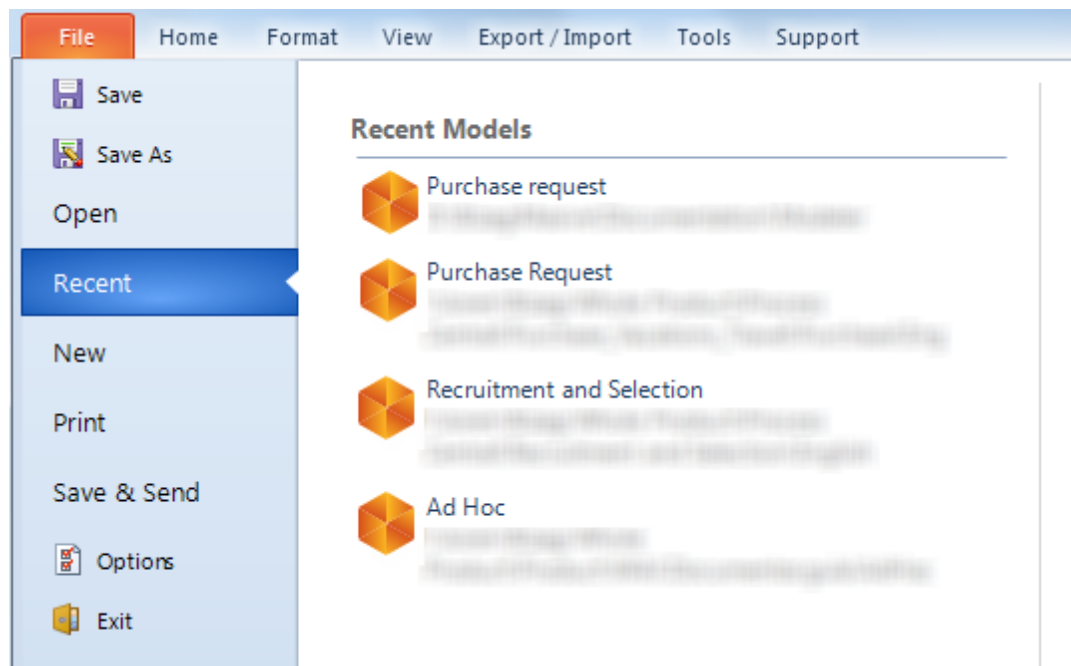
| MENU OPTION | SUB OPTION | DESCRIPTION |
|-------------|--------------------------|---|
| Help | Help | Displays this User Guide. |
| | Video Tutorials Register | Guides you to Bizagi's video tutorials. |
| | Support Forums | Access to the online support forums. |
| | Process Central | Access to the Bizagi's Process Central process templates and discussion forums. |
| Community | Register | Bizagi Modeler community registration. |
| | Feedback | Directs you to the Feedback & Questions page to convey comments, questions, suggestions, and ideas for improvements. |
| | Tell a Friend | A link that enables you to share Bizagi Modeler with clients, colleagues and friends. |
| About | Take a tour | Takes you to a short tour through the main features of Bizagi. |
| | Release Notes | Information on the current release. |
| | About | Information about Bizagi Modeler. |

File - Open



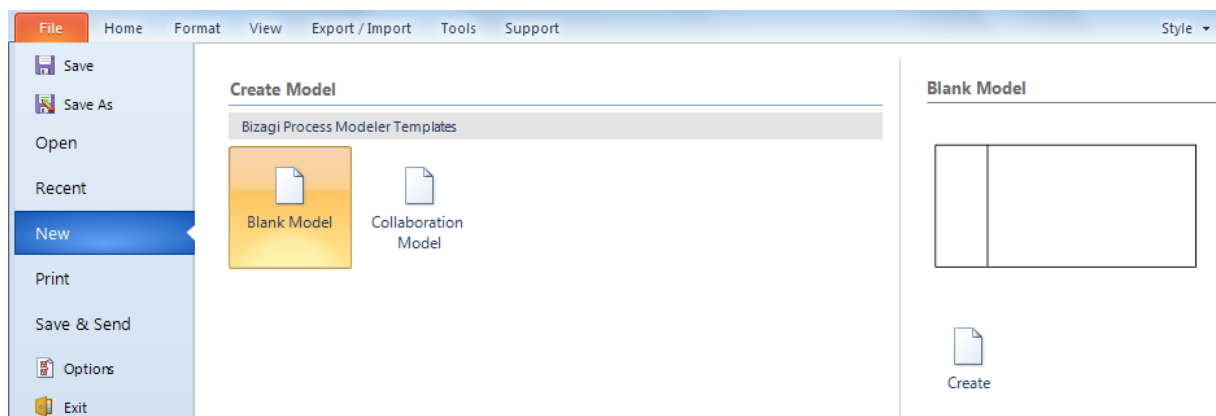
| MENU OPTION | SUB OPTION | DESCRIPTION |
|-------------|--------------|---|
| Open | Open Model | Opens an existing Bizagi Diagram Model. |
| Import | <u>Visio</u> | Creates new diagrams based on a Visio file. |
| | <u>XPDL</u> | Creates new diagrams based on an XPDL file. |

File - Recent



| MENU OPTION | SUB OPTION | DESCRIPTION |
|-------------|---------------|---|
| Recent | Recent Models | Quick access to the latest Bizagi Diagram Models that have been used. |

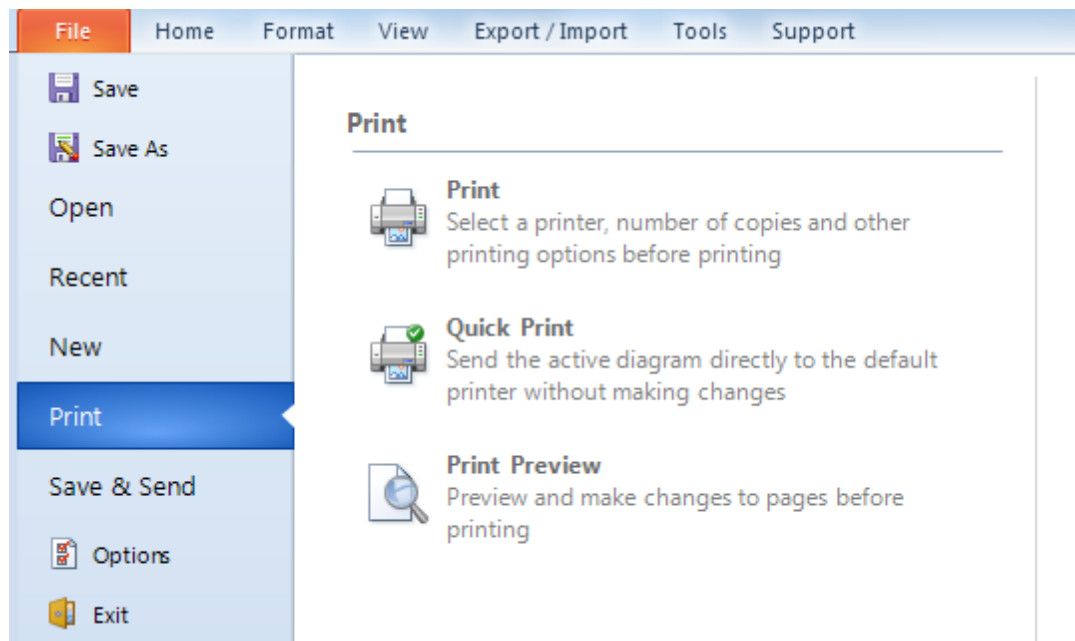
File - New



| MENU OPTION | SUB OPTION | DESCRIPTION |
|--------------|---------------------|---|
| Create Model | Blank Model | Creates a new blank model. |
| | Collaboration Model | Creates a new blank model in Collaboration Mode. This |

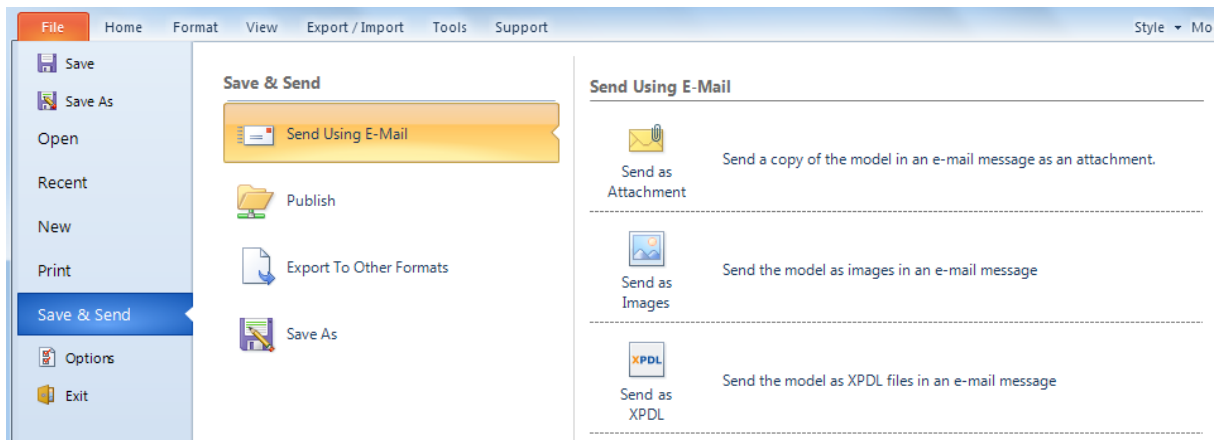
mode allows multiple team members to contribute together to the definition, design and documentation of a model.

File - Print



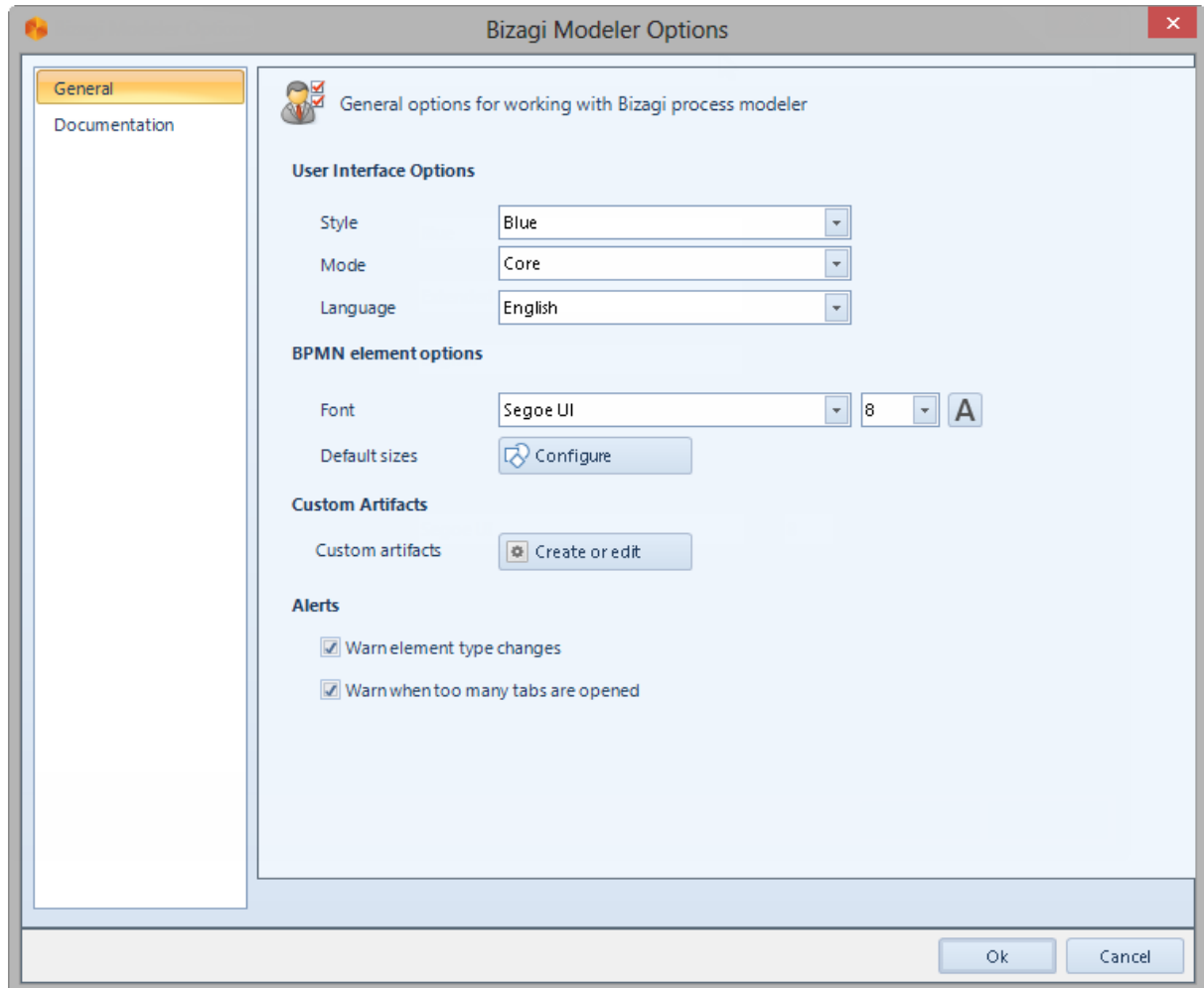
| MENU OPTION | SUB OPTION | DESCRIPTION |
|-------------|----------------------|--|
| Print | Print | Selects a printer, number of copies and other printing options in order to print your diagram. |
| | Quick Print | Immediately prints the active diagram to the default printer. |
| | <u>Print Preview</u> | Onscreen preview of the diagram in print layout mode, allowing layout modifications prior to printing. |

File - Save & Send



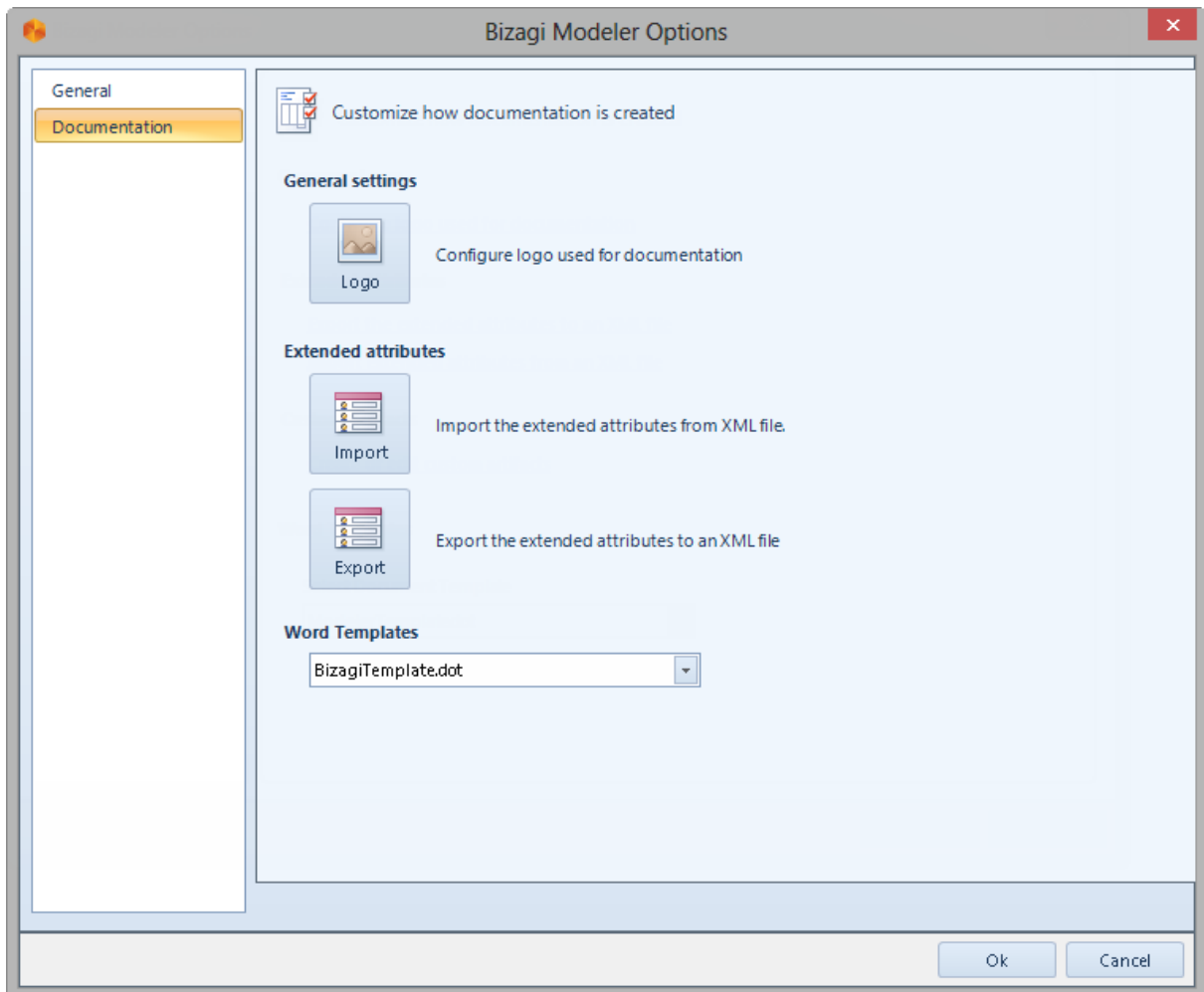
| MENU OPTION | SUB OPTION | DESCRIPTION |
|--------------------------|--|--|
| Send Using E-Mail | Send as Attachment | Send a copy of the model as an attachment in an e-mail message |
| | Send as Image | Send the model as images in an e-mail message. |
| | Send as XPDL | Send the model as an XPDL file in an e-mail message. |
| Publish | Word | Generate a Word file of the model and all its documentation. |
| | PDF | Generate a PDF file of the model and all its documentation. |
| | Web | Generate a Web file of the model and all its documentation for web browsing. |
| | SharePoint | Export and publish the model to SharePoint. |
| | Wiki | Export and publish the model to Wiki. |
| Export to others formats | Image | Export the active diagrams as an image. |
| | Visio | Export the model as a Visio file. |
| | XPDL | Export the model as an XPDL file. |
| | Attributes | Save the extended attributes as an XML file. |
| Save as | Model File | Save the model as a Bizagi Diagram Model file (.bpm). |
| | Team Collaboration | Save the model as a Bizagi Collaboration Model to a shared location. |
| | Other Versions (Model v 1.6) | Export the model to the 1.6 version of Bizagi Modeler (.bpm). |

File - Options



| MENU OPTION | SUB OPTION | DESCRIPTION |
|----------------------|--------------------------------|--|
| General | Style | Customizes the background color of Bizagi Modeler. |
| | Mode | Hide or show elements on the drawing palette. Core will enable only the most common BPMN elements. Extended will enable all BPMN elements. |
| | <u>Language</u> | Change the Bizagi Modeler language. |
| BPMN element options | Font | Define the default font for all diagram elements. |
| | <u>Configure default sizes</u> | Launch the wizard that sets the element's default sizes |
| Custom Artifacts | <u>Custom Artifacts</u> | Opens the Custom artifacts management window |

| | | |
|--------|--|---|
| Alerts | Warn element type changes | Displays a warning message when an element changes type. Unintentional change of type may result in data loss. |
| | Warn when too many tabs are opened | Displays a warning message when the model (the .bpm file) has more than 10 diagrams (tabs) opened. When there are more than 10 diagrams opened the performance of the Modeler might get affected. |



| MENU OPTION | SUB OPTION | DESCRIPTION |
|---------------|-------------------------------------|---|
| Documentation | Company Logo | Allow customization of a user-defined logo, once the model's documentation is ready for generation. |
| | Extended attributes | Import and export the extended attributes. |
| | Custom Artifacts | Create or edit custom artifacts. |

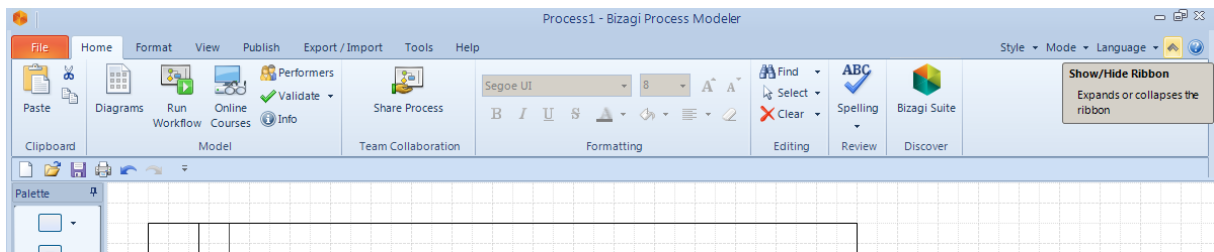
Word Templates

Select a Word template (.dot file) to generate Word documentation.

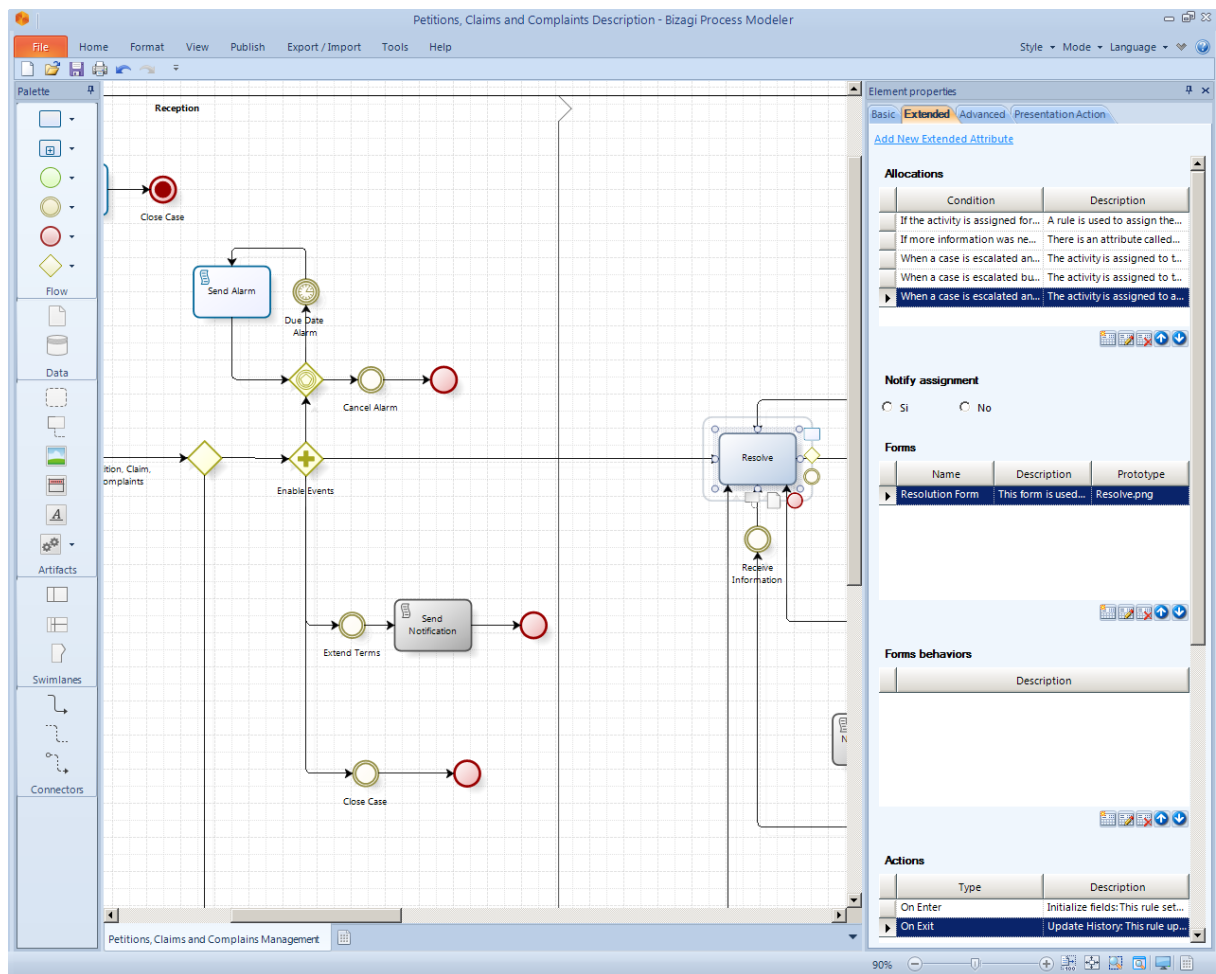
Maximizing the workspace

Bizagi allows the Ribbon to be shown or hidden from view.

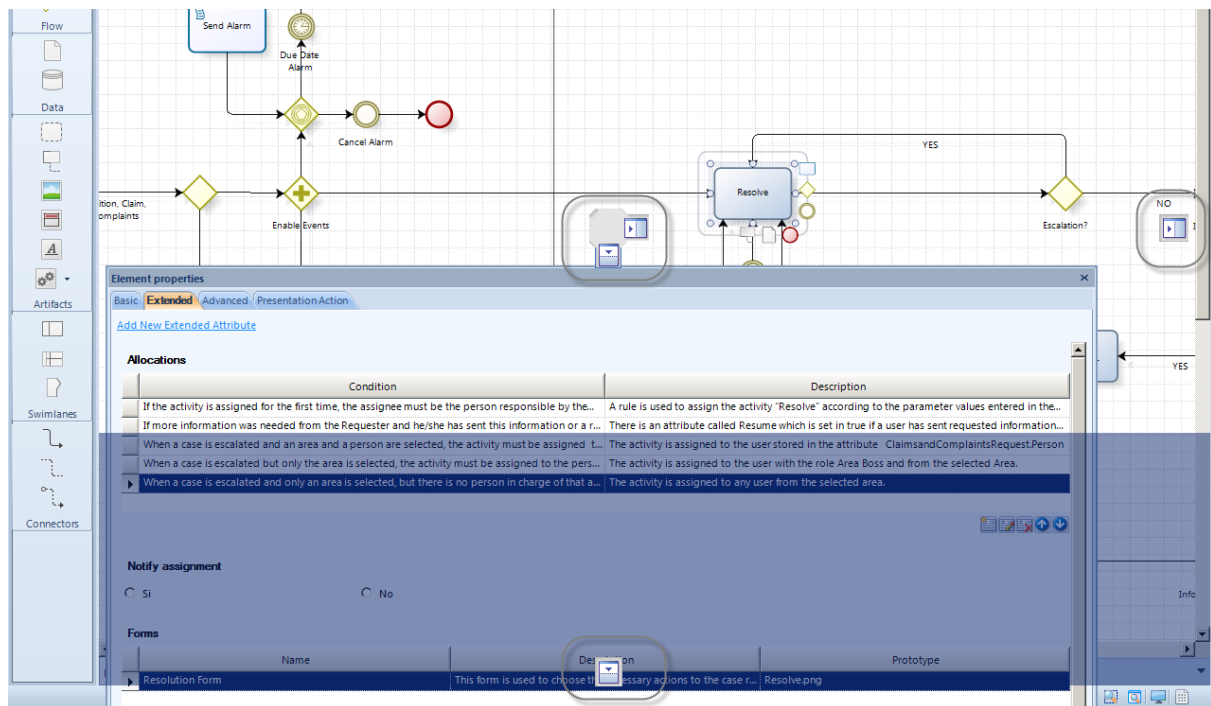
If you need more room to work, collapse the Ribbon to maximize your workspace and allow the diagram to fill a larger area of canvas.



For diagrams having a large vertical size (i.e., diagrams containing more than one Pool or many Lanes), you may choose to rather dock the properties window to the right of the screen (as opposed to the default location at the bottom of the screen).



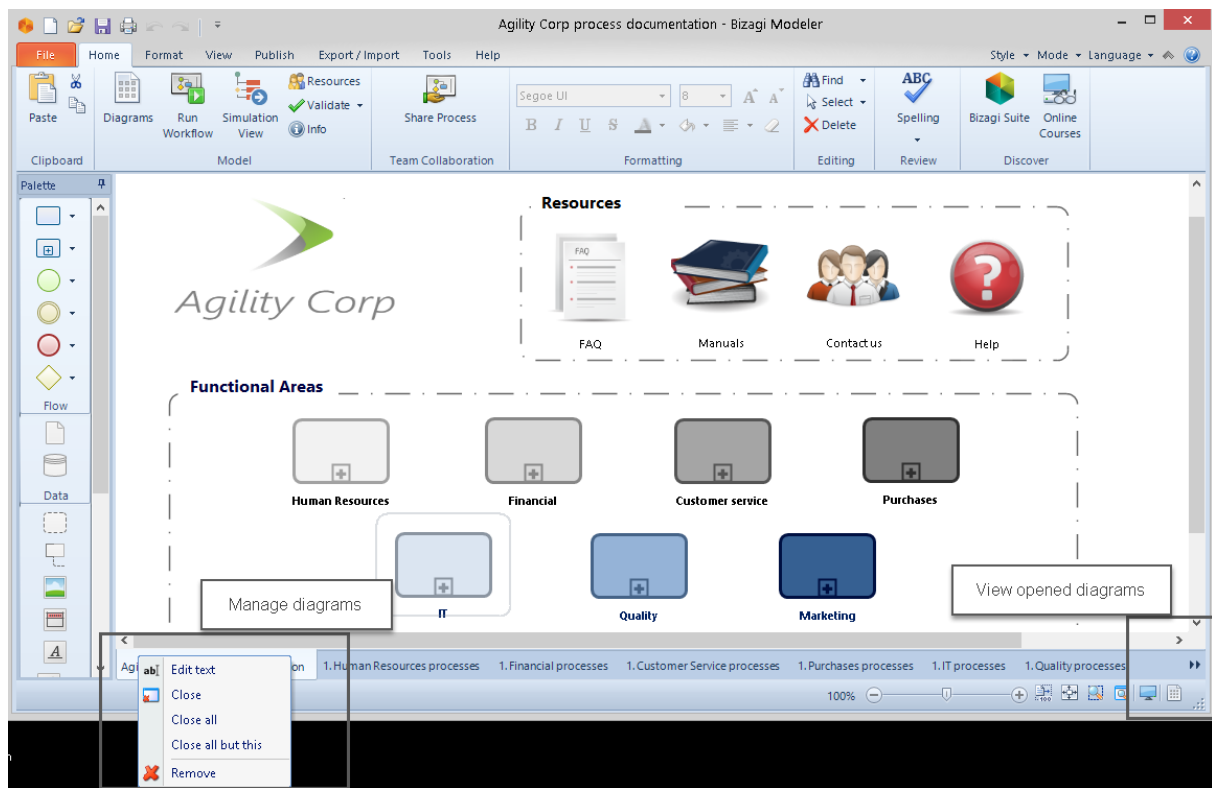
To relocate and dock the Element properties window, drag and drop it to the desired position. The location icon highlights to indicate that the window may be dropped in the target position:



To improve the performance of the Modeler keep less than 10 diagrams (tabs) opened in a Model. The diagrams opened are displayed on the bottom, and can be accessed through the small arrows on the right.

To close opened diagrams, right-click on any of them and select Close, or Close All. This will not erase them from the file, this will close them.

You can delete a diagram by selecting Remove.



Palette

The Palette contains the BPMN graphical elements used to define a process model. These BPMN graphical elements are described in the following sections:

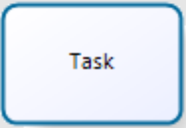

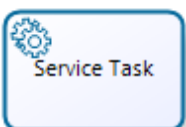
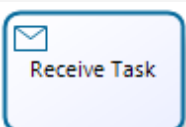

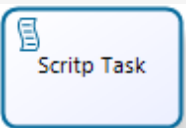
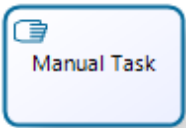
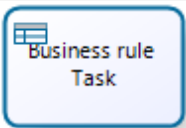
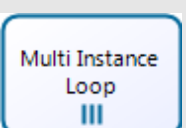
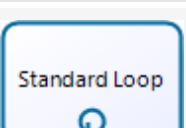
- [Activities](#)
- [Events](#)
- [Gateways](#)
- [Data](#)
- [Artifacts](#)
- [Swimlanes](#)
- [Connectors](#)

Activities

Activities represent work or tasks carried out by members of the organization. They stand for manual or automatic tasks performed by an external system or user. Activities can be atomic or non-atomic (compound) and they are classified into tasks and sub-processes.

Tasks

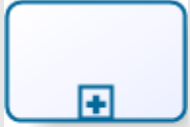






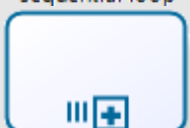
| ELEMENT | DESCRIPTION | NOTATION |
|---------|-------------|----------|
|---------|-------------|----------|

| | | |
|---------------------|--|---|
| Task | Is an atomic Activity within a Process flow. It is used when the work in the Process cannot be broken down to a finer level of detail. |  |
| User Task | Is a typical workflow Task where a person performs the Task with the assistance of a software application. |  |
| Service Task | Is a Task that uses some sort of service that could be a Web service or an automated application. |  |
| Receive Task | Is a Task designed to wait for a message to arrive from an external participant (relative to the Process). |  |
| Send Task | Is a Task designed to send a message to an external participant (relative to the Process). |  |
| Script Task | Is a Task that is executed by a Business Process Engine. The Modeler defines a script in a language that the engine can interpret. |  |
| Manual Task | Is a Task that is expected to be performed without the aid of any business process execution or any application. |  |
| Business Rule Task | Offers a mechanism for the Process to provide input to a Business Rule Engine and get the output of calculations that the engine might provide. |  |
| Multi-Instance Loop | Tasks may be repeated sequentially, behaving like a loop. The Multi-instance Loop iterates a predetermined number of times. The iterations occur sequentially or in parallel (simultaneously). |  |
| Standard Loop | Tasks may be repeated sequentially, behaving like a loop. This feature defines a looping behavior based on a boolean condition. The Activity will loop as long as the boolean condition is true. |  |

Sub-process

A sub-process is a compound Activity that is included within a Process. Compound means that it can be

broken down into lower levels, that is, it includes shapes and elements within it.



| ELEMENT | DESCRIPTION | NOTATION |
|----------------------|--|---|
| Sub-process | Is an Activity which internal details have been modeled using activities, gateways, Events, and sequence flows. The elements has a thin border. |  Subprocess |
| Reusable Sub-process | Identifies a point in the Process where a predefined Process is used. A reusable Sub-process is called a Call Activity in BPMN. The element has a thick border. |  Reusable Subprocess |
| Event Sub-process | A Sub-process is defined as an Event Sub-process when it is triggered by an Event. An Event Sub-Process is not part of the normal flow of its parent Process - there are no incoming or outgoing Sequence Flows. |  Event Subprocess |
| Transaction | Is a Sub-process whose behavior is controlled through a transaction protocol. It includes the three basic outcomes of a transaction: Successful Completion, Failed Completion and Cancel Intermediate Event. |  Transaction |
| Ad-Hoc Sub-process | Is a group of activities that has no REQUIRED sequence relationships. A set of activities can be defined, but the sequence and number of performances for the activities is determined by the resources of the activities. |  Ad-Hoc Sub-Process |
| Standard loop | Sub-processes may be repeated sequentially, behaving like a loop. This feature defines a looping behavior based on a boolean condition. The activity will loop as long as the boolean condition is true. |  Standard loop |
| Multi-Instance loop | Sub-processes may be repeated sequentially, behaving like a loop. The Multi-instance Loop iterates a predetermined number of times. The iterations occur sequentially or in parallel (simultaneously). |  Multi-Instance sequential loop |
| | |  Multi-Instance parallel loop |

Events


An Event is something that happens during the course of the Process, affecting the Process flow and normally has a trigger or result.

To make an event a throw or a catch event, right click on it and select *Is Throw*. This option will enable or disable its behavior (applies for certain events described below) .






Start Events

| ELEMENT | DESCRIPTION | NOTATION |
|-------------------------------|--|--|
| Start Event | Indicates where a particular Process starts. It does not have any particular behavior. |  Start Event |
| Message Start Event | Is used when a message arrives from a participant and triggers the start of the Process. |  Message |
| Timer Start Event | Is used when the start of a Process occurs on a specific date or cycle time (e.g., every Friday) |  Timer |
| Conditional Start Event | This type of Event triggers the start of a Process when a condition becomes true. |  Conditional |
| Signal Start Event | The start of the Process is triggered by the arrival of a signal that has been broadcast from another Process. Note that the signal is not a message; messages have specific targets, signals do not. |  Signal |
| Parallel Multiple Start Event | Indicates that there are multiple triggers required to start the Process. ALL triggers must be triggered before the Process is instantiated. |  Parallel Multiple |
| Multiple Start Event | This means that there are multiple ways of triggering the Process. Only one of them is required. |  Multiple |





Intermediate events

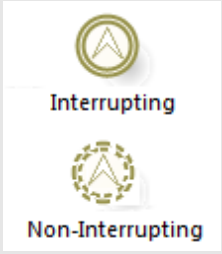
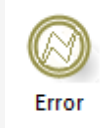

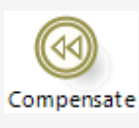
| ELEMENT | DESCRIPTION | NOTATION |
|--------------------|---|---|
| Intermediate Event | Indicates where something happens somewhere between the start and end of a Process. It will affect the flow of the Process, but will not start or (directly) terminate the Process. |  Intermediate Event |









| | | |
|--------------------|--|--|
| Message Event | <p>Indicates that a message can be sent or received.</p> <p>If a Process is waiting for a message and it is caught the Process will continue its flow.</p> <p>A catch Message Event waits for a message to arrive and once the message has been received, the Process will continue. The Event marker in this instance will be filled.</p> <p>A throw Message Event sends a message to an external participant. The unfilled Event marker is allocated to the throw message.</p> |  Message Throw  Message Catch |
| Timer Event | <p>Indicates a delay within the Process. This type of Event can be used within the sequential flow indicating a waiting time between activities.</p> |  Timer |
| Escalation Event | <p>The Event indicates an escalation through the Process.</p> |  Escalation |
| Compensation Event | <p>Enables the handling of compensations. When used within the sequential flow of a Process they indicate that compensation is necessary.</p> |  Compensate |
| Conditional Event | <p>This Event is triggered when a condition becomes true.</p> |  Conditional |
| Link Event | <p>This Event is used to connect two sections of the Process.</p> <p>Link Events can be used to create looping situations or to avoid long Sequence Flow lines.</p> <p>If there are two link events on a process (one catch and one throw) the Modeler will understand they are linked together. If there is one catch and two throw, the Modeler will understand both throws are received by the catch. If there are several catch and throw events the name of the 'pairs' must match for the Modeler to understand which throw belongs to which catch.</p> |  Link Throw  Link Catch |

| | | |
|-------------------------|---|--|
| Signal Event | <p>These Events are used to send or receive signals within or across the Process. A signal is similar to a signal flare that is shot into the sky for anyone who might be interested to notice and then react.</p> <p>If the Event is used to catch the signal, the signal Event marker will be filled. Alternatively, the unfilled Event marker is allocated to the throw message.</p> |  Signal Throw  Signal Catch |
| Multiple Event | <p>This means that there are multiple triggers assigned to the Event.</p> <p>When used to catch the trigger, only one of the assigned triggers is required and the Event marker will be unfilled.</p> |  Multiple Throw  Multiple Catch |
| Parallel multiple Event | <p>This means that there are multiple triggers assigned to the Event. Unlike the normal Multiple Intermediate Event, ALL of the assigned triggers are required for the Event to be triggered.</p> |  Parallel Multiple |



Intermediate Events Attached to an Activity Boundary








| ELEMENT | DESCRIPTION | NOTATION |
|---------------|--|--|
| Message Event | <p>If a message Event is attached to the boundary of an activity, it will change the normal flow into an exception flow when a message is received.</p> <p>If the Event interrupts the activity to which it is attached, the boundary of the Event is solid, if not it is dashed.</p> |  Interrupting  Non Interrupting |
| Timer Event | <p>If a Timer Event is attached to the boundary of an activity, it will change the normal flow into an exception flow when a cycle time is completed or a specific time-date is reached.</p> <p>If the Event interrupts the Activity to which it is attached, the boundary of the Event is solid, if not it is dashed.</p> |  Interrupting  Non-Interrupting |

| | | |
|--------------------|--|---|
| Escalation Event | <p>If attached to the boundary of an Activity, the Intermediate Event catches an Escalation.</p> <p>If the Event interrupts the Activity to which it is attached, the boundary of the Event is solid, if not it is dashed.</p> |  <p>Interrupting</p> <p>Non-Interrupting</p> |
| Error Event | <p>A catch Intermediate Error Event can only be attached to the boundary of an Activity.</p> <p>It reacts to (catches) a named Error, or to any Error if a name is not specified.</p> <p>An Error Event always interrupts the Activity to which it is attached, i.e., there is not a non-interrupting version of this Event. Thus the boundary of the Event is always solid.</p> |  <p>Error</p> |
| Cancel Event | <p>This Event is used within a Transaction Sub-Process and must be attached to the boundary of one.</p> <p>It shall be triggered if a Cancel End Event is reached within the Transaction Sub-Process. It also shall be triggered if a Transaction Protocol Cancel Message has been received while the transaction is being performed.</p> <p>A Cancel Event always interrupts the Activity to which it is attached, i.e., there is not a non-interrupting version of this Event. Thus the boundary of the Event is always solid.</p> |  <p>Cancel</p> |
| Compensation Event | <p>When attached to the boundary of an Activity, this Event is used to catch the Compensation Event. When it occurs, the compensation activity will be performed.</p> <p>Interrupting a non-interrupting aspect of other Events does not apply in the case of a Compensation Event, thus the boundary of the Event is always solid.</p> |  <p>Compensate</p> |
| Conditional Event | <p>If a Conditional Event is attached to the boundary of an Activity, it will change the normal flow into an exception flow when a business condition is fulfilled.</p> <p>If the Event interrupts the Activity to which it is attached, the boundary of the Event is solid, if not it is dashed.</p> | |

| | | |
|-------------------------|---|--|
| | |  Interrupting  Non-Interrupting |
| Signal Event | <p>If a Signal Event is attached to the boundary of an Activity, it will change the normal flow into an exception flow when a signal is received.</p> <p>If the Event interrupts the Activity to which it is attached, the boundary of the Event is solid, if not it is dashed.</p> |  Interrupting  Non-Interrupting |
| Multiple Event | <p>When attached to the boundary of an Activity, it will change the normal flow into an exception flow when one of the assigned triggers is caught.</p> <p>If the Event interrupts the Activity to which it is attached, the boundary of the Event is solid, if not it is dashed.</p> |  Interrupting  Non-Interrupting |
| Parallel multiple Event | <p>Unlike the Multiple Event, when attached to the boundary of an Activity, it will change the normal flow into an exception flow when ALL of the assigned triggers are caught.</p> <p>If the Event interrupts the Activity to which it is attached, the boundary of the Event is solid, if not it is dashed.</p> |  Interrupting  Non-Interrupting |


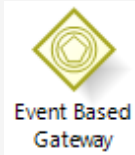
End Events

| ELEMENT | DESCRIPTION | NOTATION |
|-------------|---|---|
| End Event | Indicates when the Process ends. |  End |
| Message End | Indicates that a message is sent when the flow has ended. |  Message |

| | | |
|------------------|---|---|
| Escalation End | Indicates that an Escalation is necessary when the flow ends. |  Escalation |
| Error End | Indicates that a named Error should be generated. All currently active threads of the Process are terminated. The Error will be caught by a Catch Error Intermediate Event. |  Error |
| Cancel End | Is used within a Transaction Sub-Process. It indicates that the Transaction should be canceled and an alternative flow can be performed. |  Cancel |
| Compensation End | Handles compensations. If an activity is identified, and it was successfully completed, the activity will be compensated. |  Compensation |
| Signal End | Indicates that a signal is sent when the flow has ended. |  Signal |
| Multiple End | This means that there are multiple consequences of ending the flow. All of them will occur. |  Multiple |
| Terminate End | Ends the Process and all its activities immediately. |  Terminate |


Gateways


Gateways are used to control the divergence and convergence of sequence flows. They determine ramifications, bifurcations, combinations and merges in the Process. The term “Gateway” implies that there is a gating mechanism that either allows or disallows passage through the Gateway.

| ELEMENT | DESCRIPTION | NOTATION |
|---------------------|--|---|
| Exclusive Gateway | <p>As Divergence: It is used to create alternative paths within the Process, but only one is chosen.</p> <p>As Convergence: It is used to merge alternative paths.</p> |  |
| Event Based Gateway | <p>Represents a branching point in the Process where the alternative paths that follow the Gateway are based on Events that occur.</p> <p>When the first Event is triggered, the path that follows that Event will be used. All the remaining paths will</p> |  |

| | | |
|-------------------------------|--|--|
| | no longer be valid. | |
| Exclusive Event Based Gateway | Is a variation of the Event based gateway and it is only used to instantiate Processes. One of the Events of the Gateway configuration must be triggered in order to create a Process instance. It must have NO incoming transitions. |  Exclusive Event Based Gateway |
| Parallel Event Based Gateway | Unlike the the exclusive Event based Gateway, ALL the Events of the Gateway configuration must be triggered in order to create a Process instance. It must have NO incoming transitions. |  Parallel Event Based Gateway |
| Parallel Gateway | <p>As Divergence: is used to create alternative paths without checking any conditions.</p> <p>As Convergence: is used to merge alternative paths, the gateways waits for all incoming flows before it continues.</p> |  Parallel Gateway |
| Complex Gateway | <p>As Divergence: is used to control complex decision points in the Process. It creates alternative paths within the Process using expressions.</p> <p>As Convergence: Allow continuing to the next point of the Process when a business condition becomes true.</p> |  Complex Gateway |
| Inclusive Gateway | <p>As Divergence: represents a branching point where alternatives are based on conditional expressions. The TRUE evaluation of one condition does not exclude the evaluation of the other conditions. All evaluations of a TRUE condition will be traversed by a token.</p> <p>As Convergence: is used to merge a combination of alternative and parallel paths.</p> |  Inclusive Gateway |







Data

| ELEMENT | DESCRIPTION | NOTATION |
|--------------|---|---|
| Data Objects | Provides information about how documents, data and other objects are used and updated during the Process. |  |



| | | |
|------------|---|---|
| Data Store | Provides a mechanism for activities to retrieve or update stored information that will exist beyond the scope of the Process. |  |
|------------|---|---|


Artifacts

[Please click for further information about Artifacts](#)

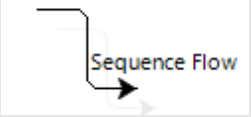

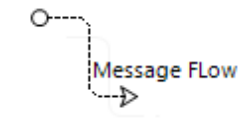
| ELEMENT | DESCRIPTION | NOTATION |
|------------------|--|---|
| Group | Is an Artifact that provides a visual mechanism to group elements of a diagram informally. |  |
| Annotation | Is a mechanism for a modeler to provide additional information for the reader of a BPMN Diagram. |  |
| Image | Enables an image stored on your computer to be inserted into the diagram. |  |
| Header | Displays the diagram properties (author, version, description), and it is updated automatically with the information contained in those properties. To edit its information, it is only needed to edit the diagram's properties. |  |
| Formatted Text | This Artifact enables rich text to be inserted into the diagram to provide additional information. |  |
| Custom Artifacts | Helps to define and use your own Artifacts. Artifacts provide the capability of showing additional information about the Process that is not directly related to the flow. |  |

Swimlanes

| ELEMENT | DESCRIPTION | NOTATION |
|---------|--|---|
| Pool | A Pool is a container of a single Process (contains the sequence flows between activities). A Process is fully contained within the Pool. There is always at least one Pool. |  |
| Lane | Is a sub-partition within the Process. Lanes are used to differentiate elements as internal roles, position, department, etc. They represent functional areas that may be responsible for tasks. |  |


















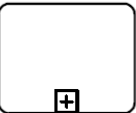














| | | |
|-----------|---|---|
| | | |
| Milestone | Is a sub-partition within the Process. It can indicate different stages during the Process. |  |

Connectors

| ELEMENT | DESCRIPTION | NOTATION |
|---------------|---|--|
| Sequence Flow | A Sequence Flow is used to show the order that Activities will be performed in the Process. |  |
| Association | Its used to associate information and Artifacts with Flow Objects. It also shows the activities used to compensate for an activity. |  |
| Message Flow | Is used to show the flow of messages between two entities that are prepared to send and receive them. |  |

The following is a table that reflects all the possible connections using Message flow. The arrow pointing upwards shows what CAN be connected. Anything else outside the table should not be connected using a Message flow.

Table 7.4 – Message Flow Connection Rules

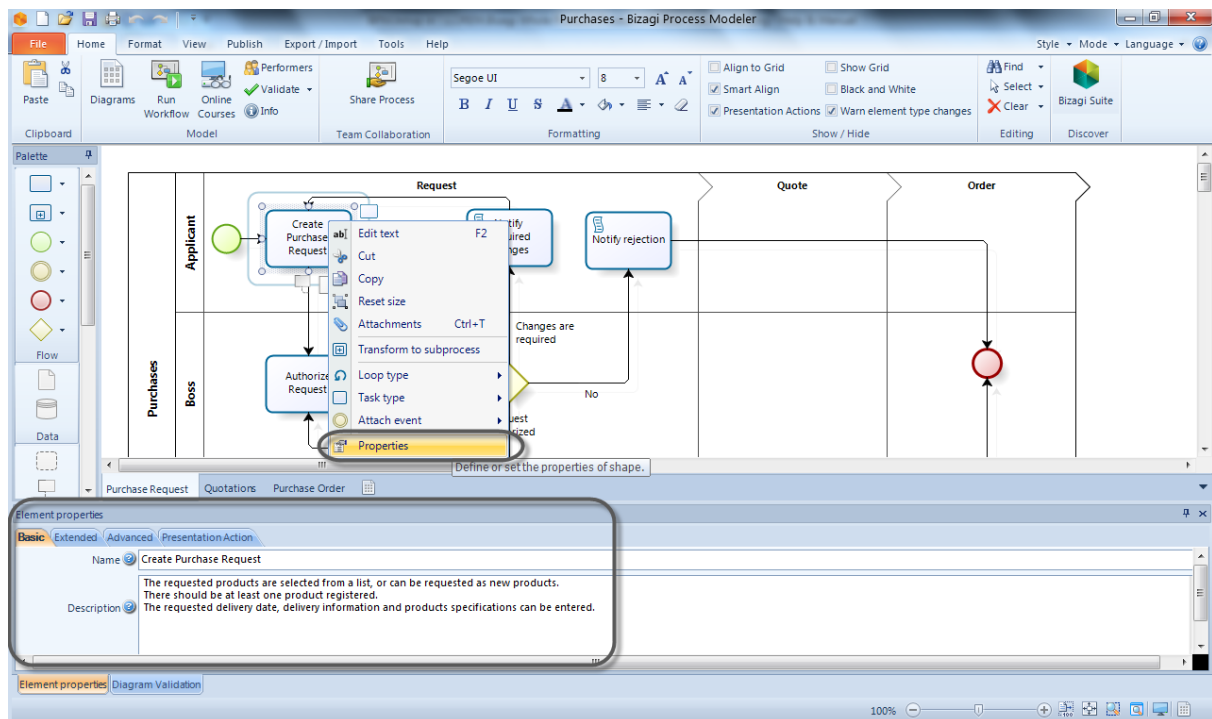
| From\To |  |  |  |  |  |  |
|---|---|---|---|---|---|---|
|  | | | | | | |
|  | ^ |  |  |  |  | |
|  | ^ |  |  |  |  | |
|  | ^ |  |  |  |  | |
|  | ^ |  |  |  |  | |
|  | ^ |  |  |  |  | |

Element properties

Element Properties are used to document the process. Each element has its own properties and depending on the type of element, tabs are displayed with additional information and functionality.

The four available tabs are:

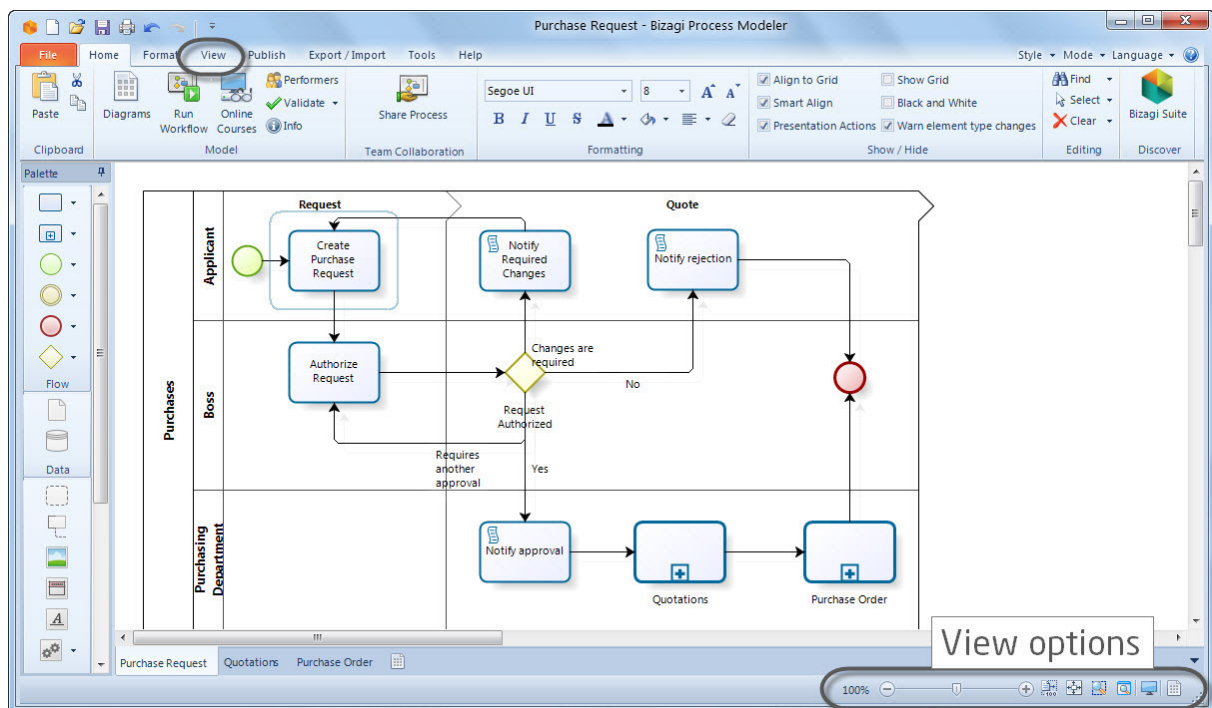
- Basic: contains the basic information including the name, description and important BPMN information.
- Extended: creates as many elements as required to provide all necessary information to provide for comprehensive documentation. For further information, refer to [Extended Attributes](#)
- Advanced: applies specific BPMN attributes to each shape.
- Presentation Action: defines what will be displayed in Presentation Mode. For further information refer to [Presentation Actions](#)



View options

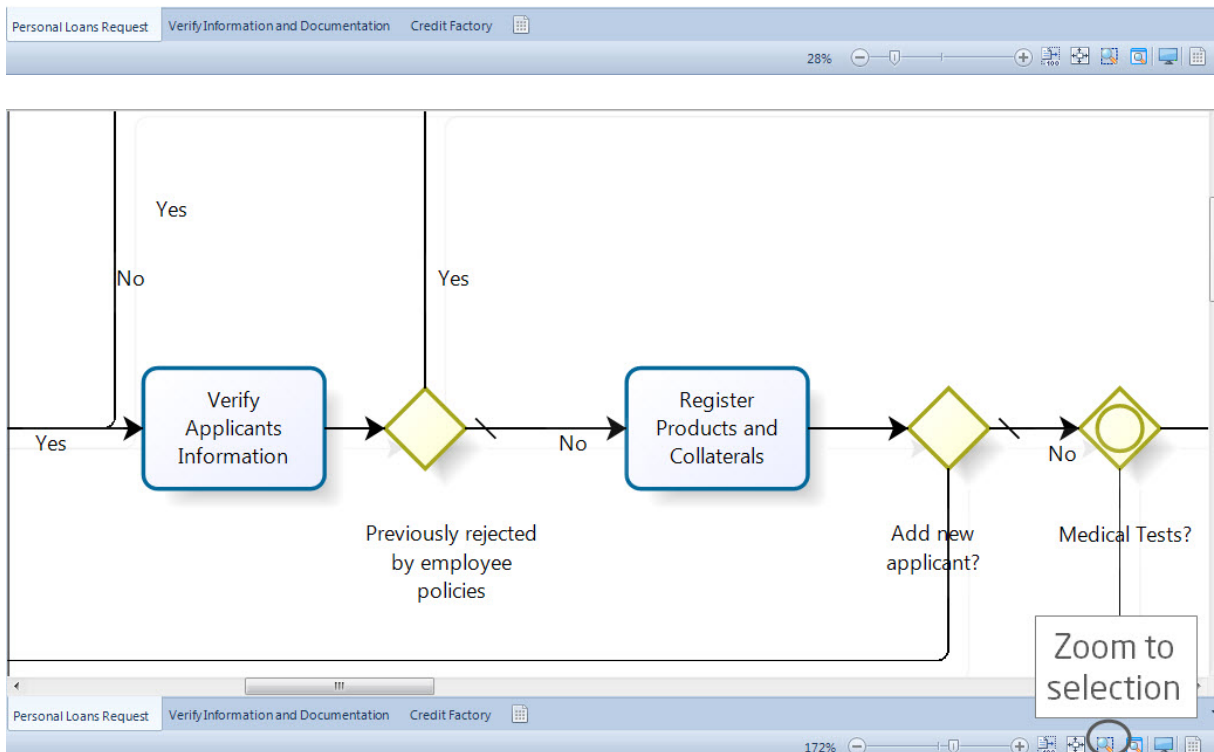
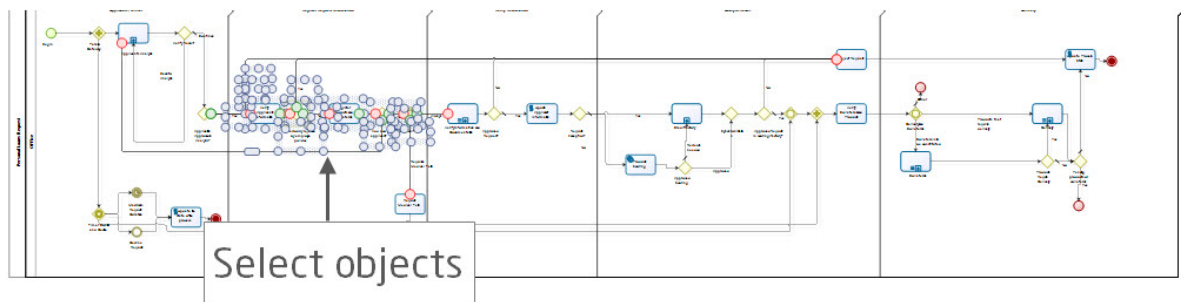
On the bottom right corner of Bizagi Modeler are view options that help you to navigate through your process as is shown in the image below.

This menu can be also found on the **View** tab of the Ribbon.



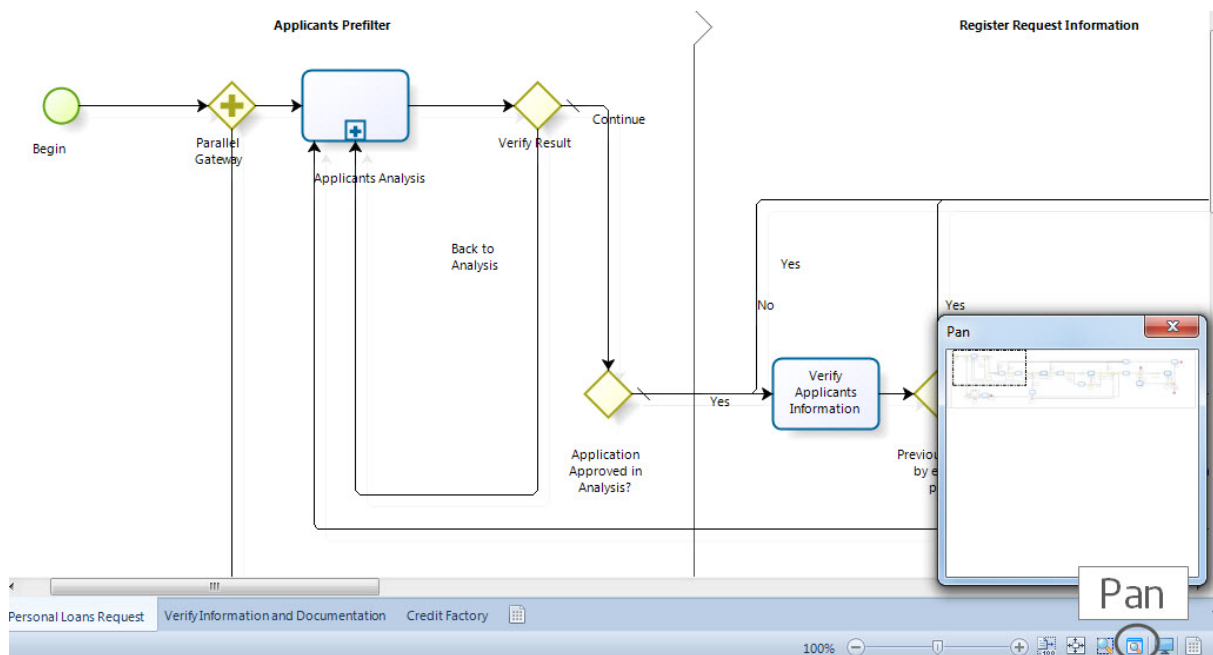
Zooms the model to normal size (100%).





Pan

Shows the pan window which can be used to navigate through the diagram.

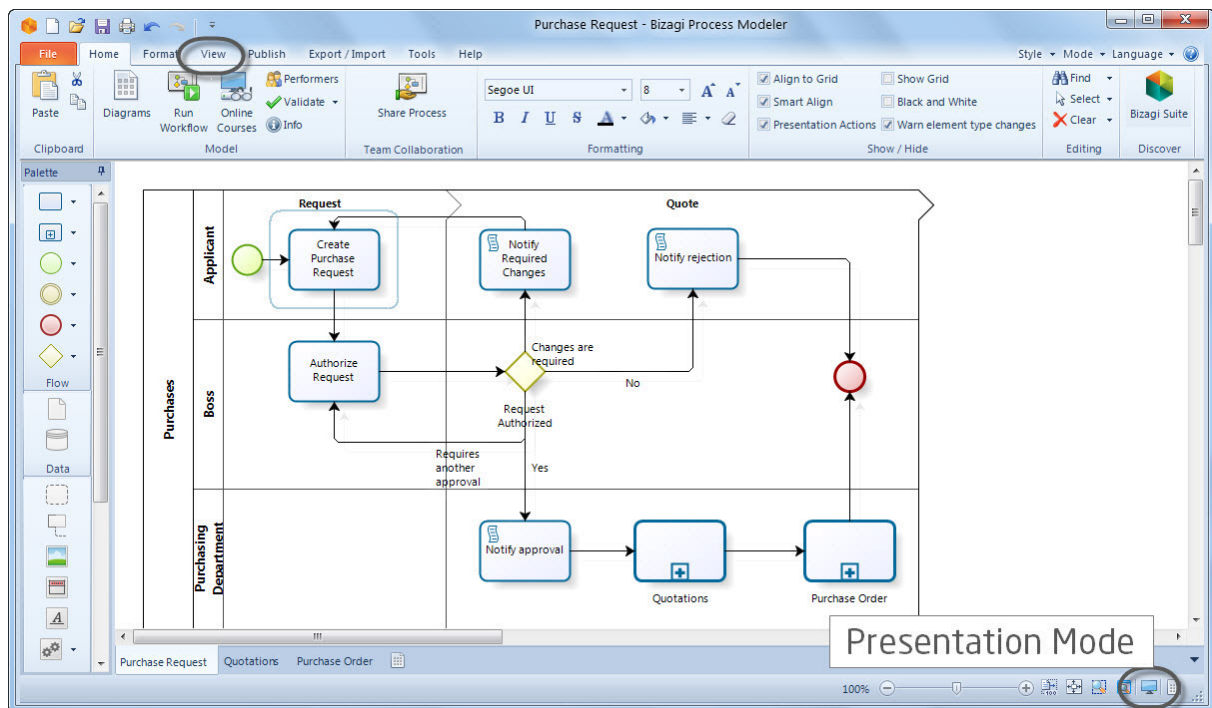


Presentation mode and Presentation actions

Bizagi allows you to demonstrate your models through the Presentation Mode where a full display view, in read-only mode is used, similar to the Full screen view in Microsoft products.

In Presentation Mode you can access the main characteristics of your processes, all the documentation you have included and also add Presentation Actions.

Presentation actions are on-click behaviors that can be defined for each diagram element. Behaviors are additional information that you can add to each element in order to make the process presentation more complete, for example you can open a URL, a file, an image or display text.



Presentation Mode and Presentation Actions example

To illustrate the Presentation mode and actions, our example presumes that we have finished our Purchase Request Process and now have to present it to the Purchase Department Manager. Apart from showing him the process flow and its content we also wish to show the following items in the presentation:

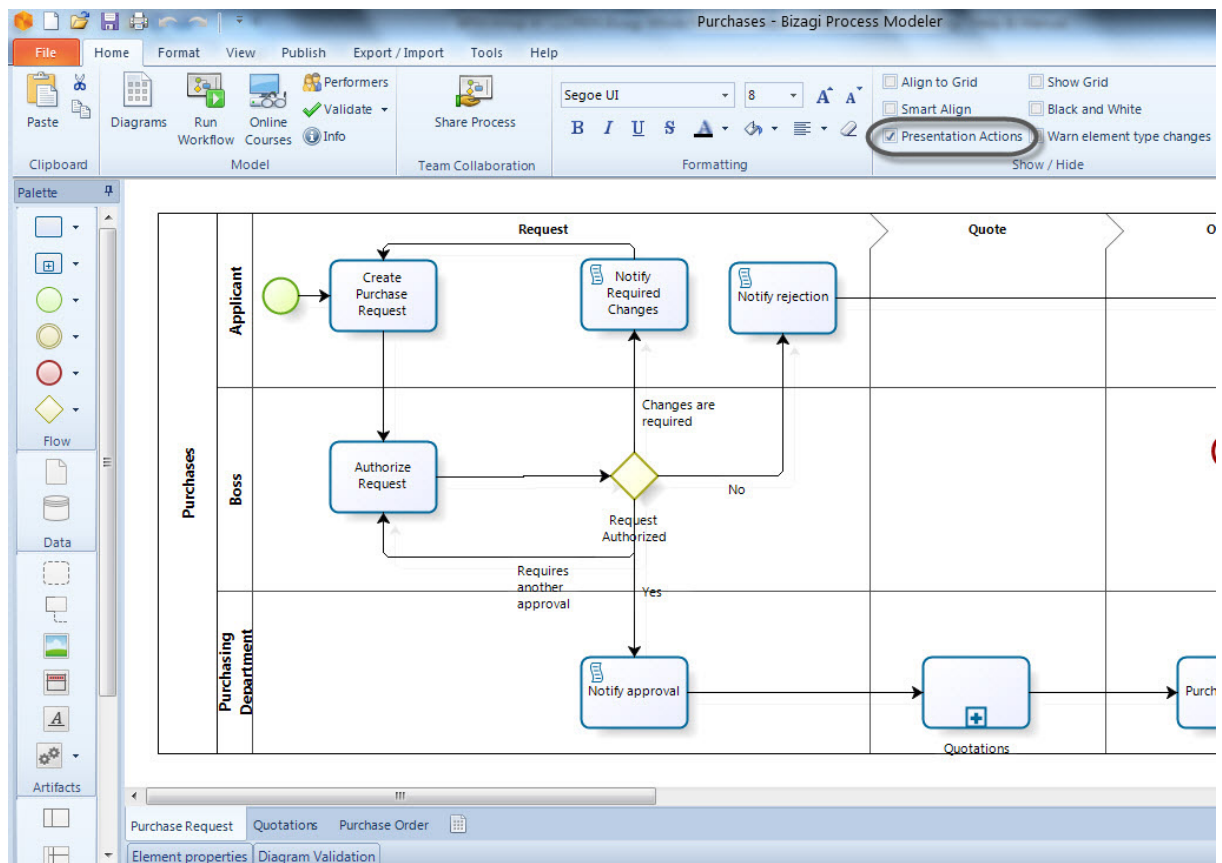
- An associated image of a Purchase Request creation
- The Policies for requesting and evaluating quotations
- The text contained in the Rejection notification by clicking on the Notify Rejection element.

The following steps illustrate how we created of Presentation actions and the Presentation Actions Mode.

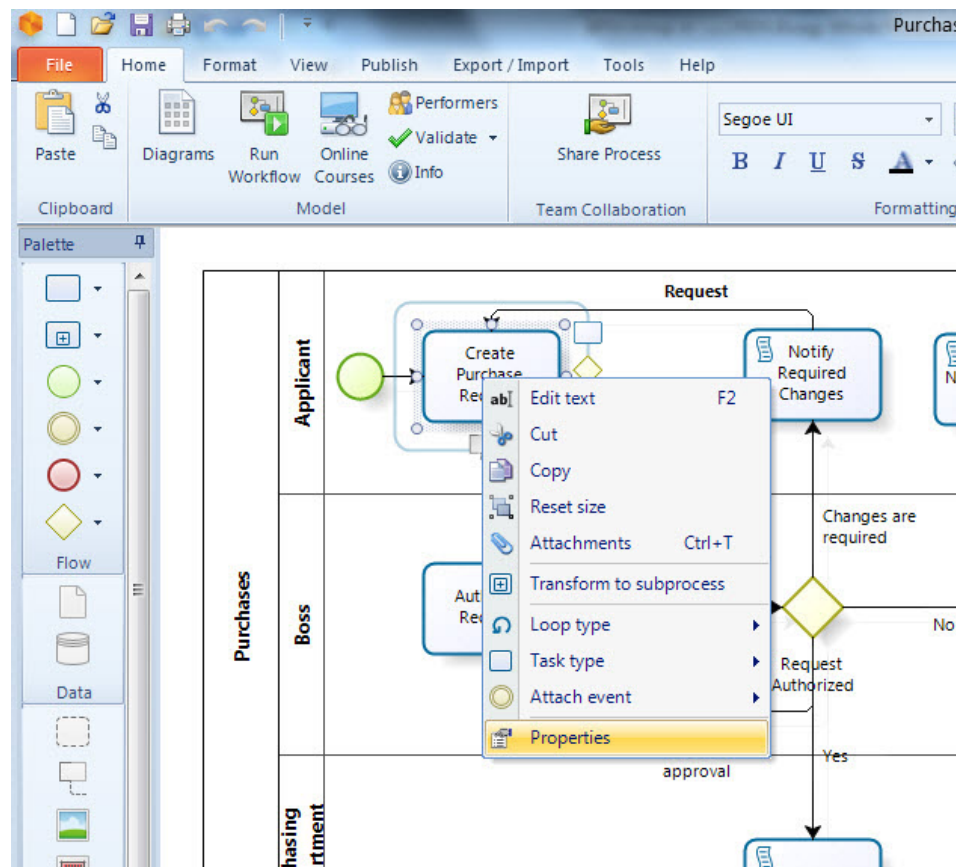
Include Presentation Actions

1. We need to activate the presentation actions in order to have them displayed in the Presentation Mode.

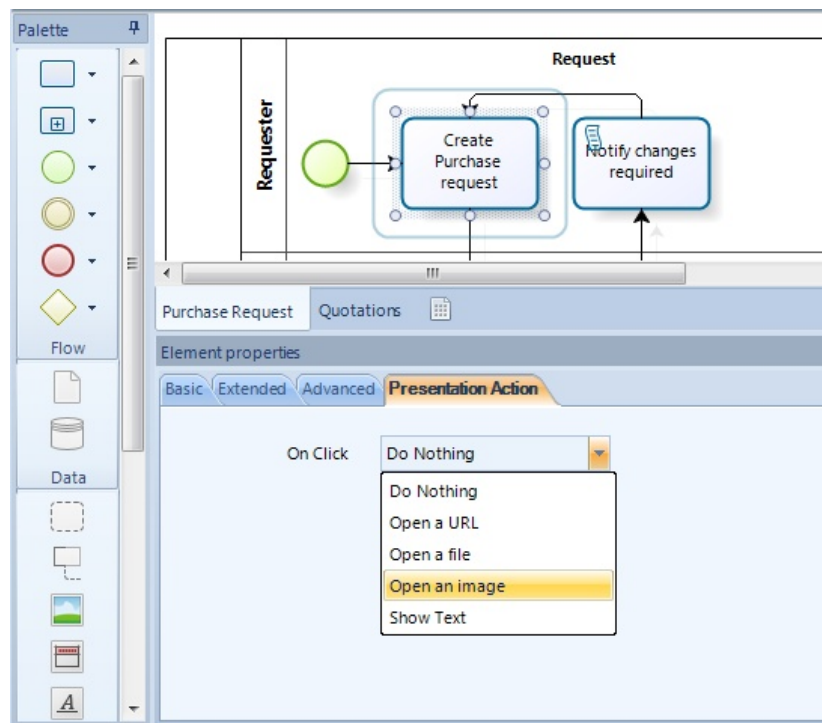
On the **Home** tab, in the **Show/Hide** group, we select the **Presentation Actions** checkbox.



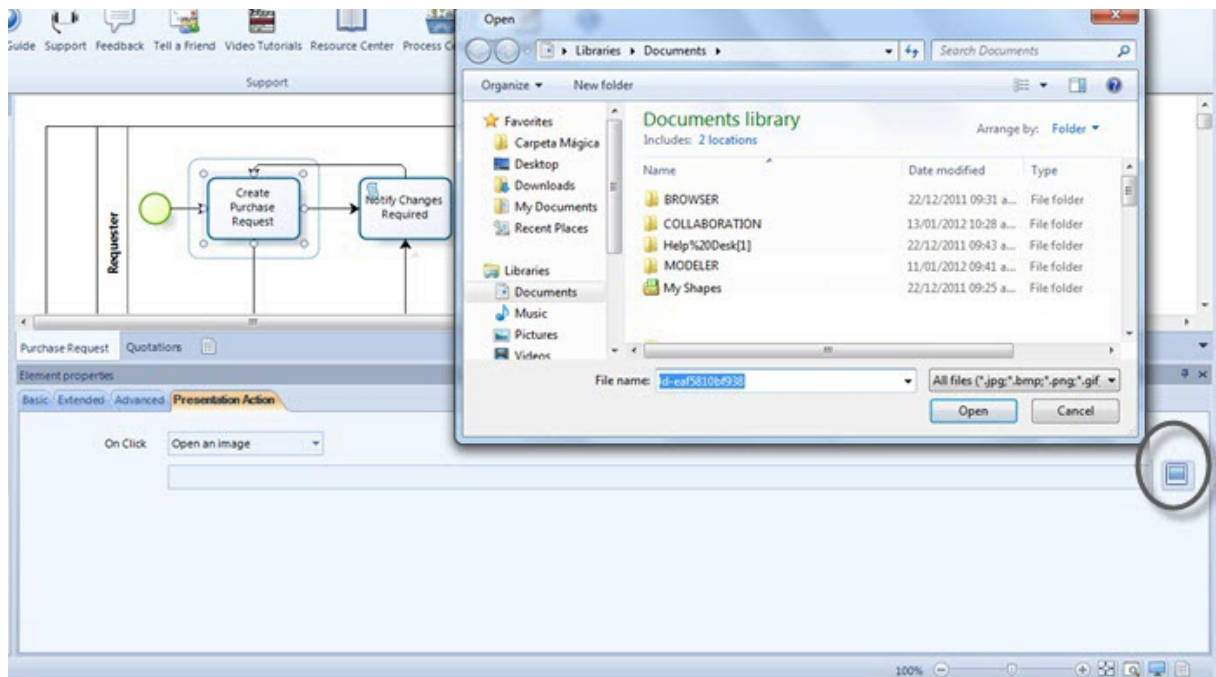
2. To include Presentation actions, we need to select the required diagram element. We right-click on the Create Purchase Request activity and select **Properties** from the display menu.



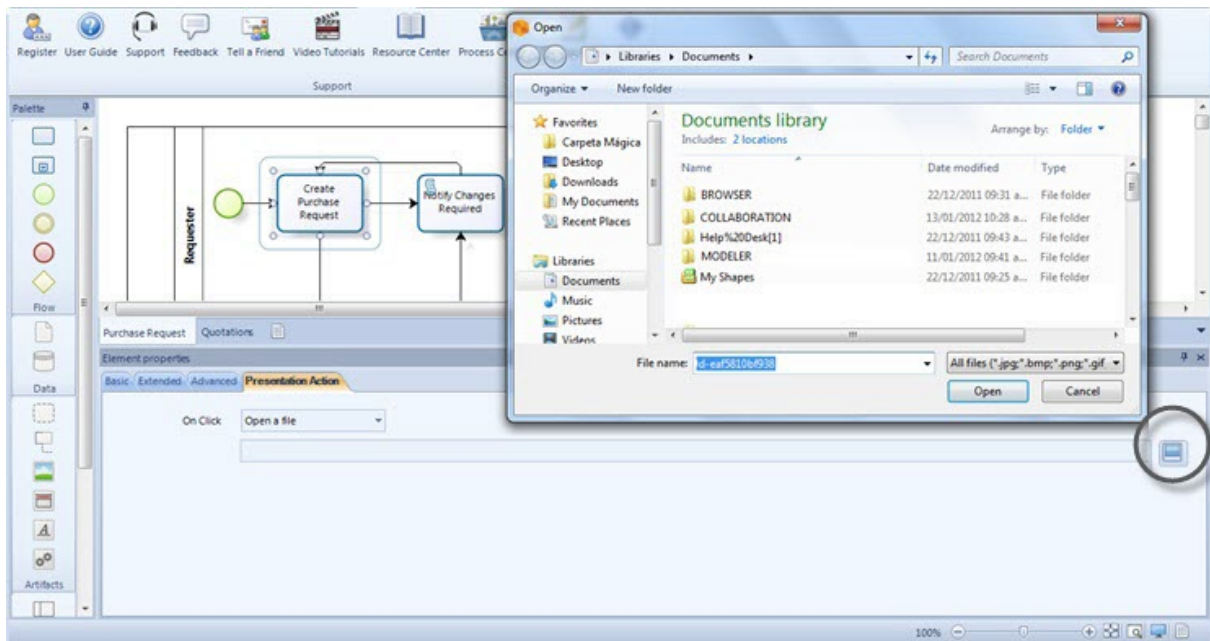
3. On the *Presentation Action* tab we select *Open an image* from *On Click* drop-down list.



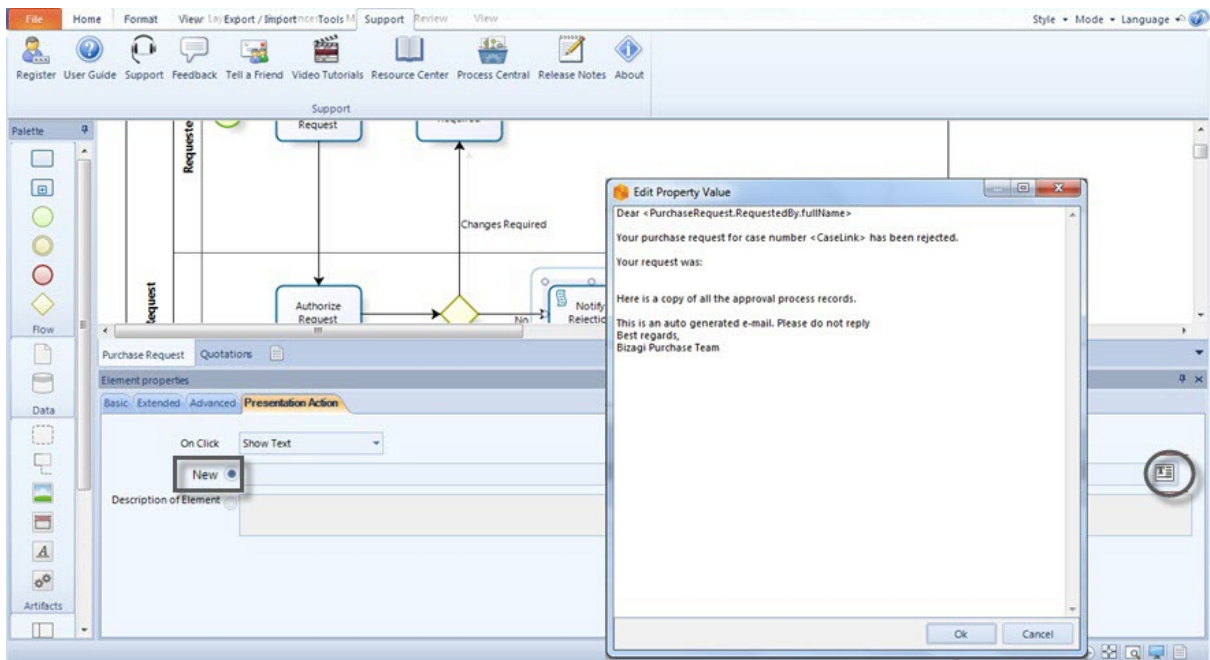
4. We click the icon located on the right hand side and upload the Create Purchase Request image.



5. Thereafter we follow the same steps to add the Policies file on the Quotations diagram element. But instead of selecting *Open image*, we select *Open a file*.

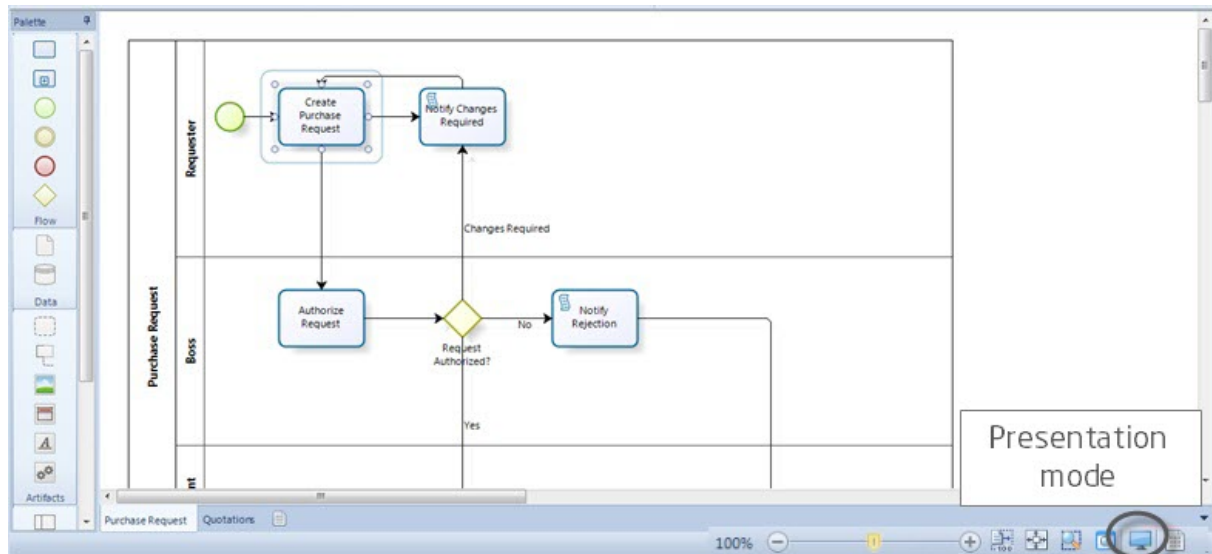


6. Finally, we add a *Show text* action for the last item. For this action we type the text needed to be displayed.

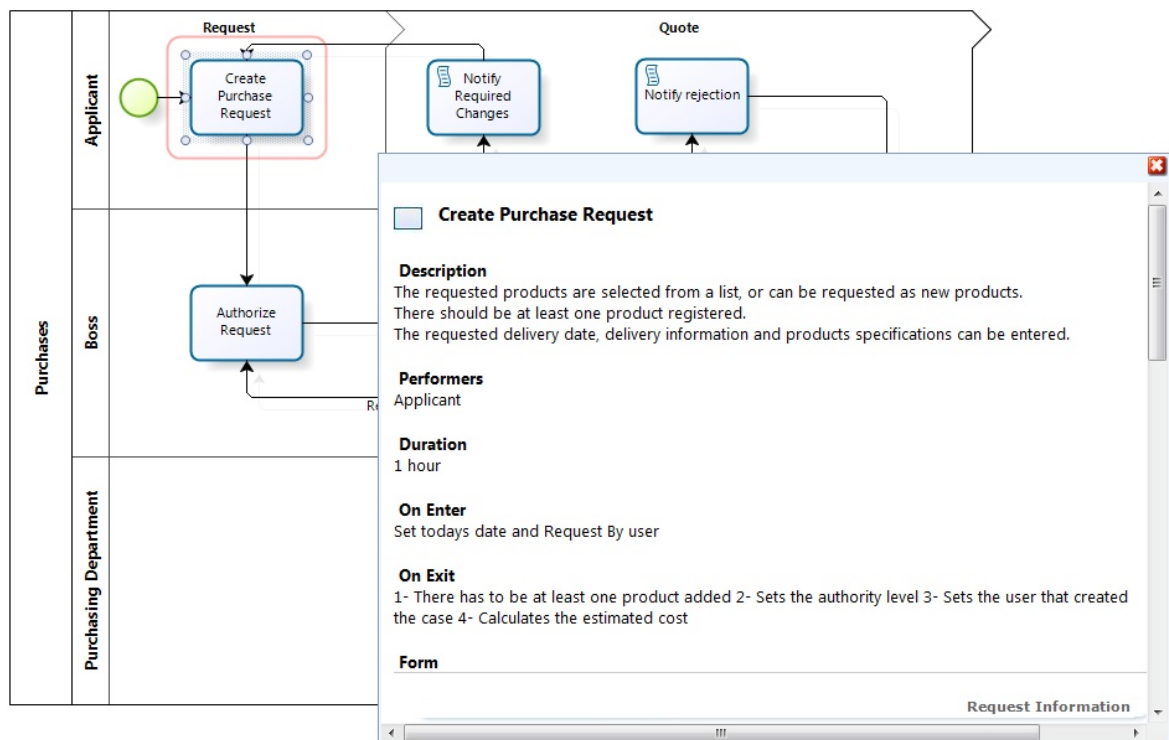


Use Presentation Mode

1. We then click the **Presentation Mode** button located in the bottom right hand corner of the screen.

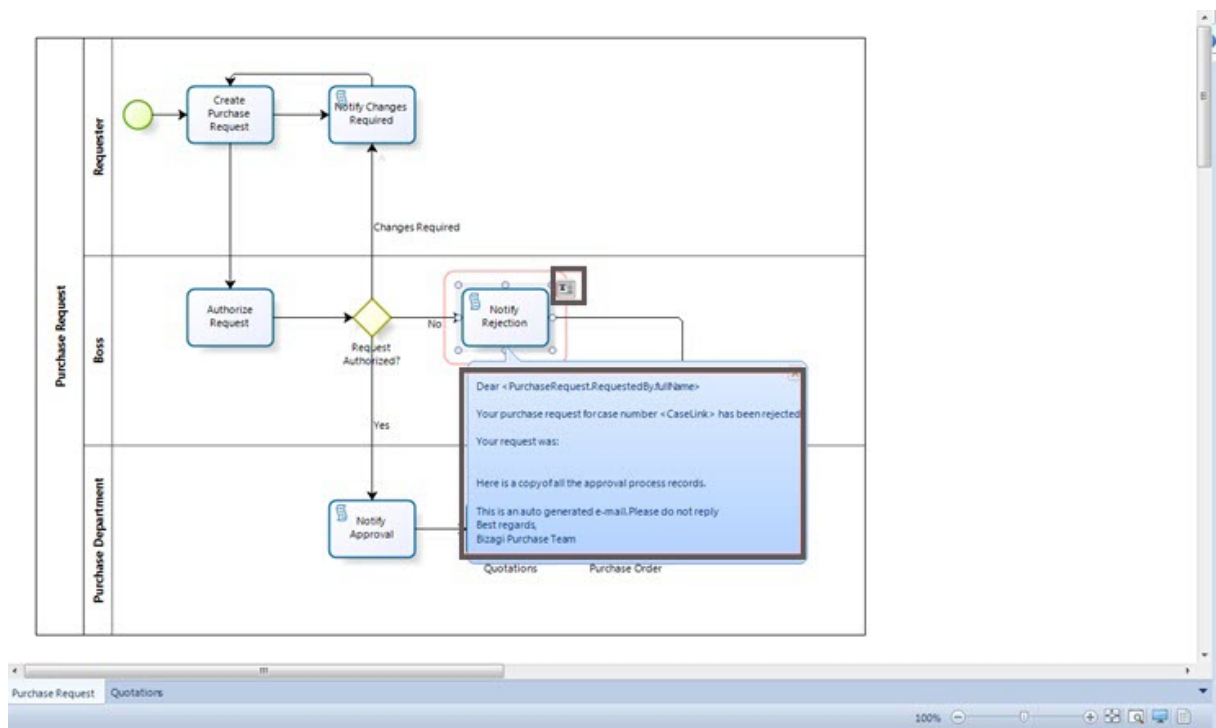
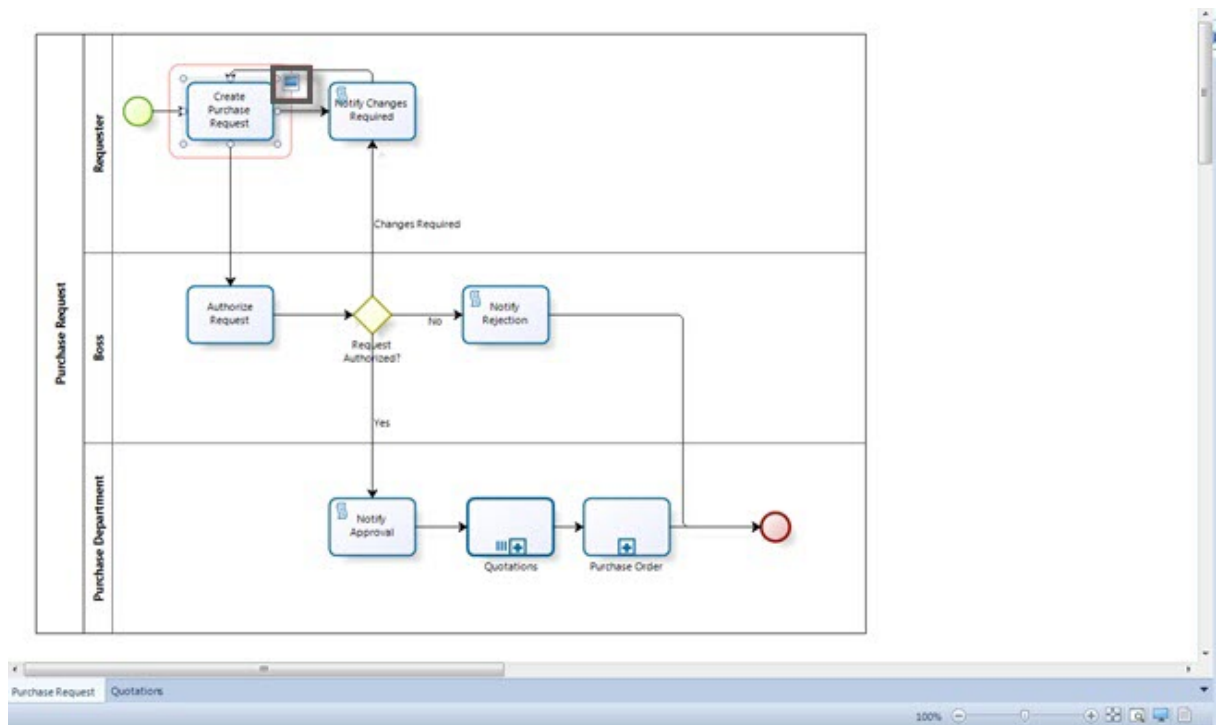


Presentation Mode opens a new window, where all processes are read-only. We can browse through all the documentation including the presentation actions.



2. The presentation actions included are displayed as small icons on the side of the element.

Click on an element to display the associated action.



The Pie Menu

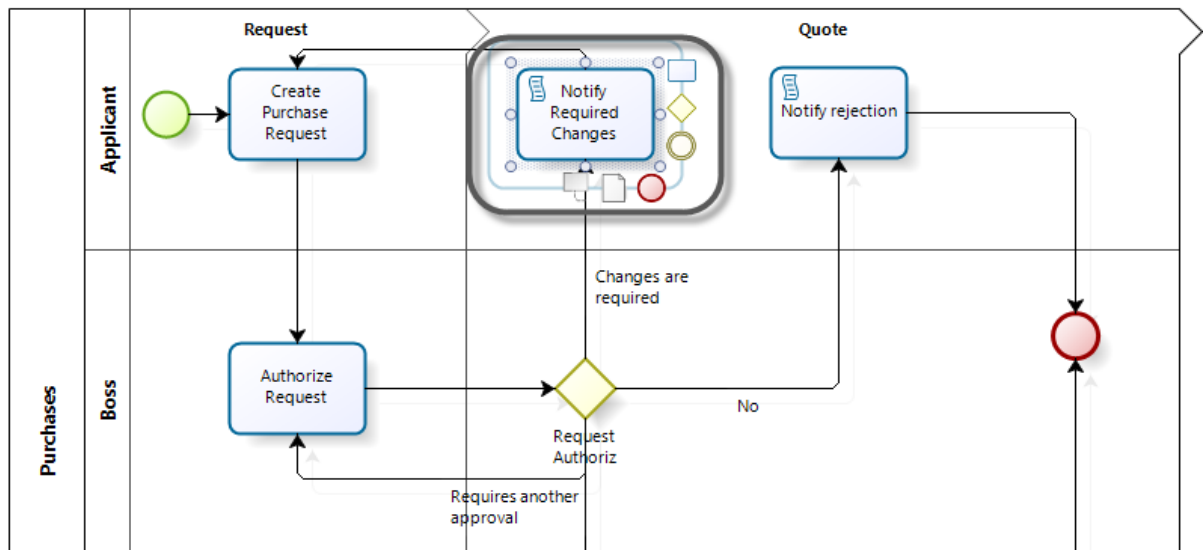
Bizagi Modeler has a drag-and-drop feature that allows you to easily diagram your processes. The Pie Menu will display as soon as you click on a diagram element that is already in the Process.

Click on the element and drag it to the desired position.

You can drag a shape from the Pie Menu and drop it to another figure already included in the diagram, to create a connection between the two. You can choose any figure from the Pie Menu and drag it, not necessarily the one you are going to connect to; they are just an aid.

If the figure with which you want to connect is highlighted, then it means that you can connect both of them. If it doesn't highlight it is because the BPMN standard does not allow the connection between the two selected shapes (i.e. between two signals).

For further information refer to [Creating a process](#)





Part III

Modeling a Process

Modeling a Process

Modeling a Process is an iterative and straightforward task to represent business conditions in a flow diagram, using symbols and shapes.

Creating a process

You can find the contents of this article in the video: [Creating a Process](#)

To explain how you can easily diagram your processes, we will use a Purchase Request Process.

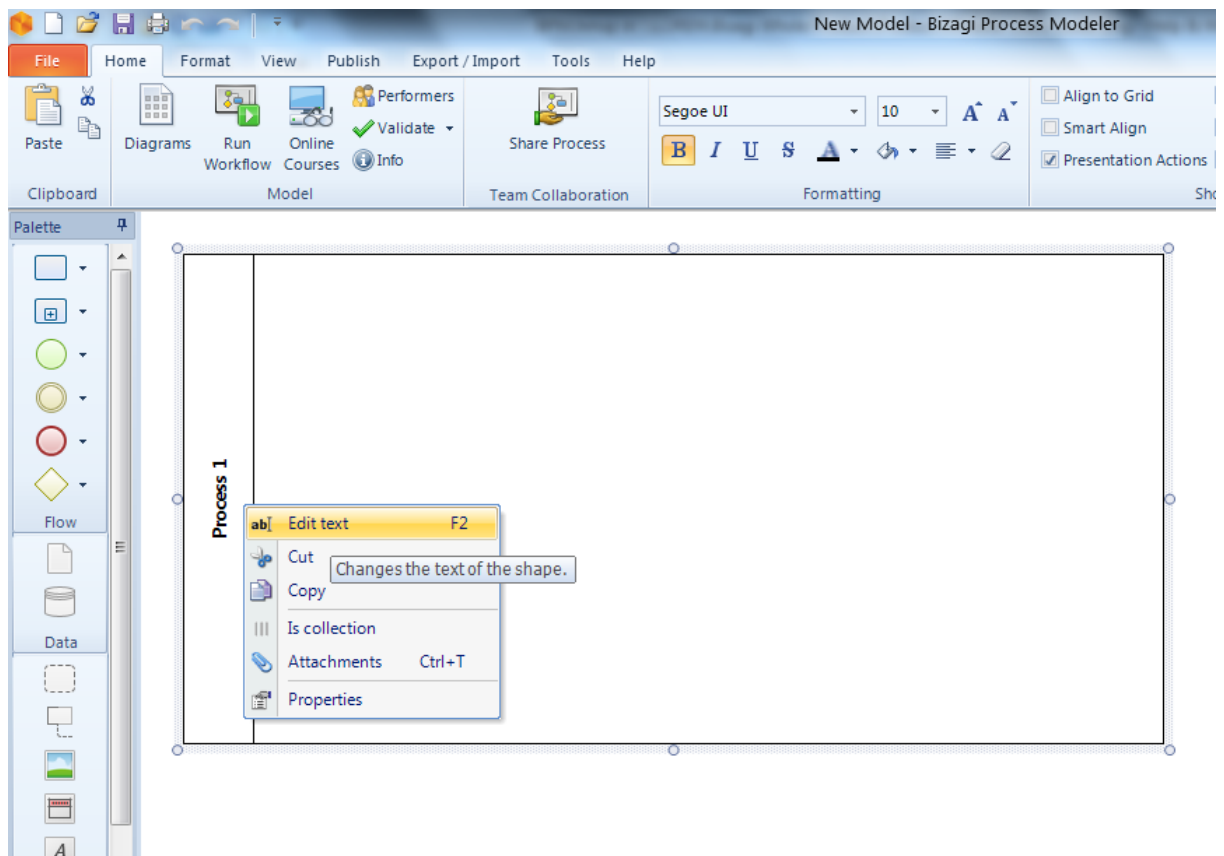
The following are the steps to be carried out in the Process:

- A Purchase Request is created
- The employee's Immediate Supervisor (Boss) approves, rejects or changes the request
- Quotations are obtained in order to select a Supplier
- A Purchase Order is created
- The Administrative Manager approves, rejects or modifies the Order
- The Purchase Order is sent to the Supplier
- The Purchase Order is created in the ERP

As soon as you open the Modeler a Pool will be ready for you to start diagramming.

1. Name your pool. It is usually the name of the process you are about to diagram.

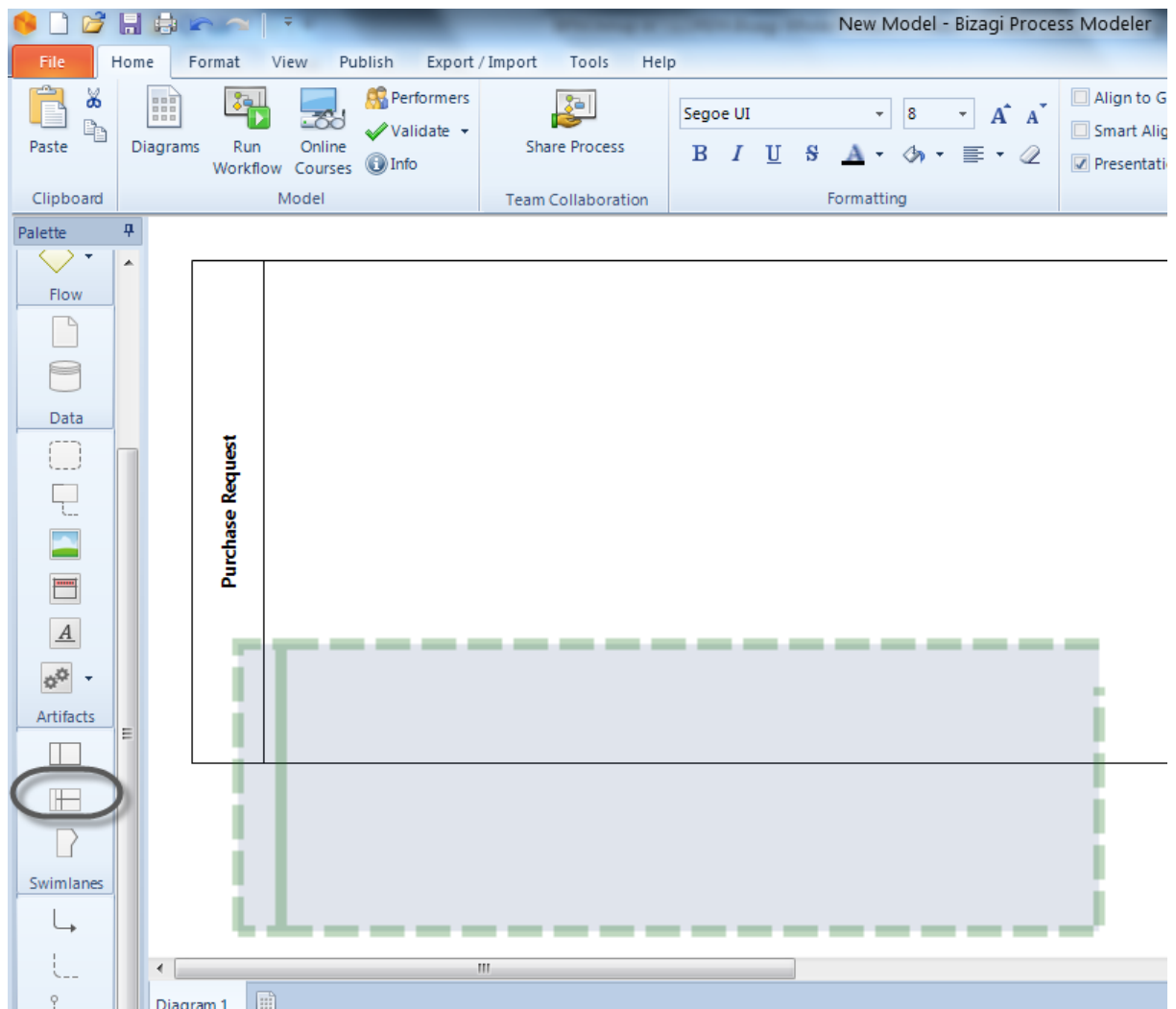
To change the name of the Pool double-click on it, press F2, or right-click on it, and then select **Edit text** from the display menu.



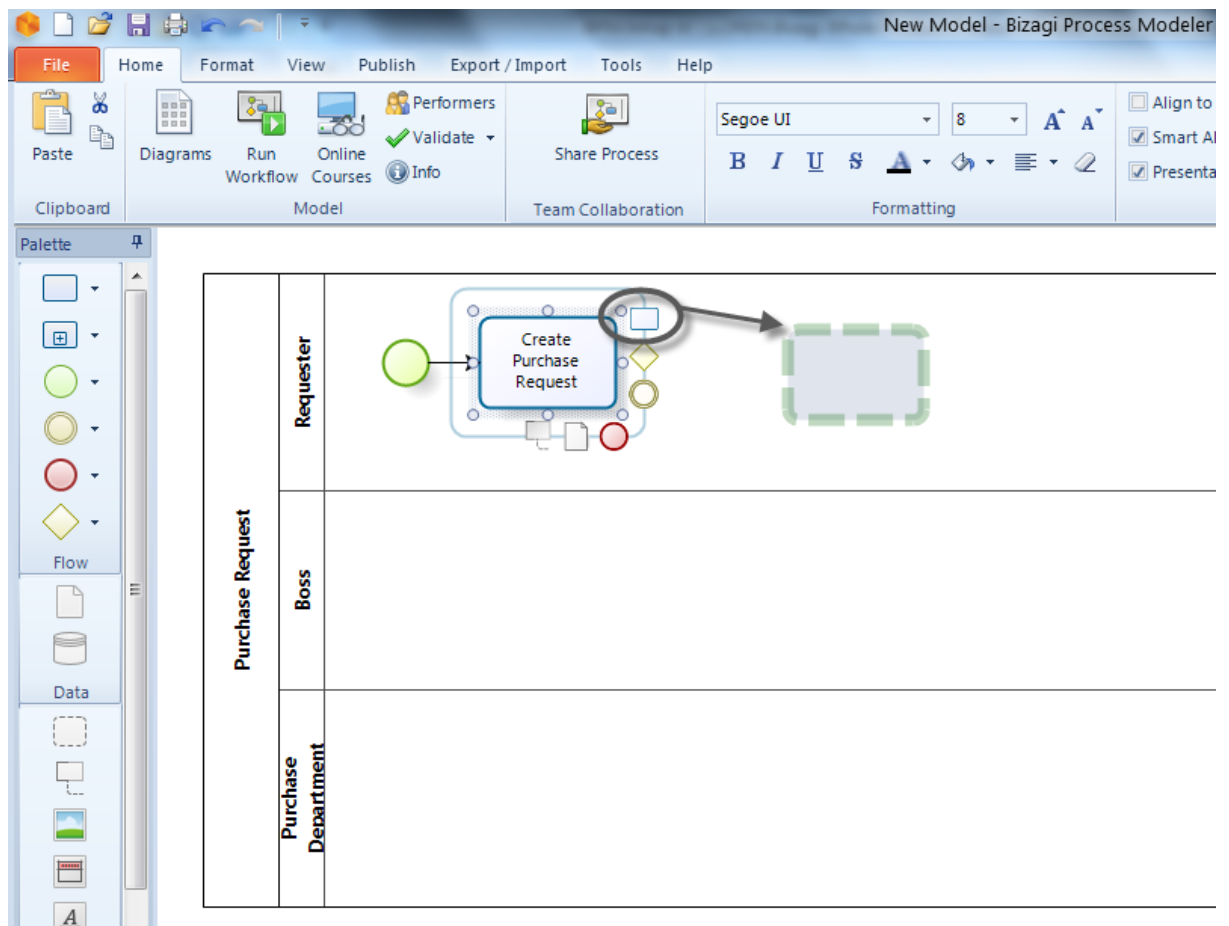
2. Add a Lane to include participants in your process.

Drag and drop a lane, for each participant, from the Palette.

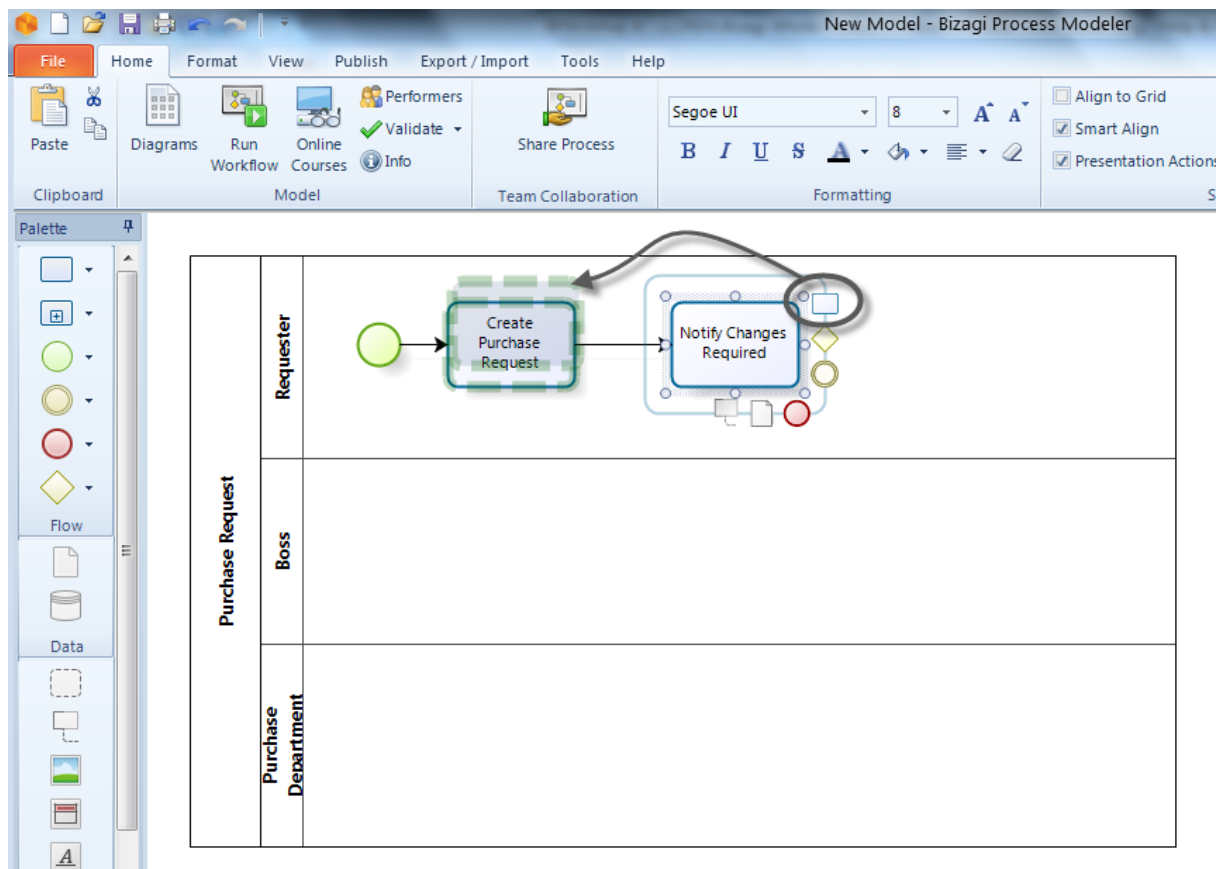
In our example, we will select three lanes: One for the Immediate Supervisor (Boss), one for the Requester and one for the Purchase Department.



3. Include a start point in your process.
Drag and drop a *Start event* from the Palette



5. In order to connect two diagram elements in a sequence flow, select an object from the Pie Menu and drag it to the second diagram element. They will automatically connected.

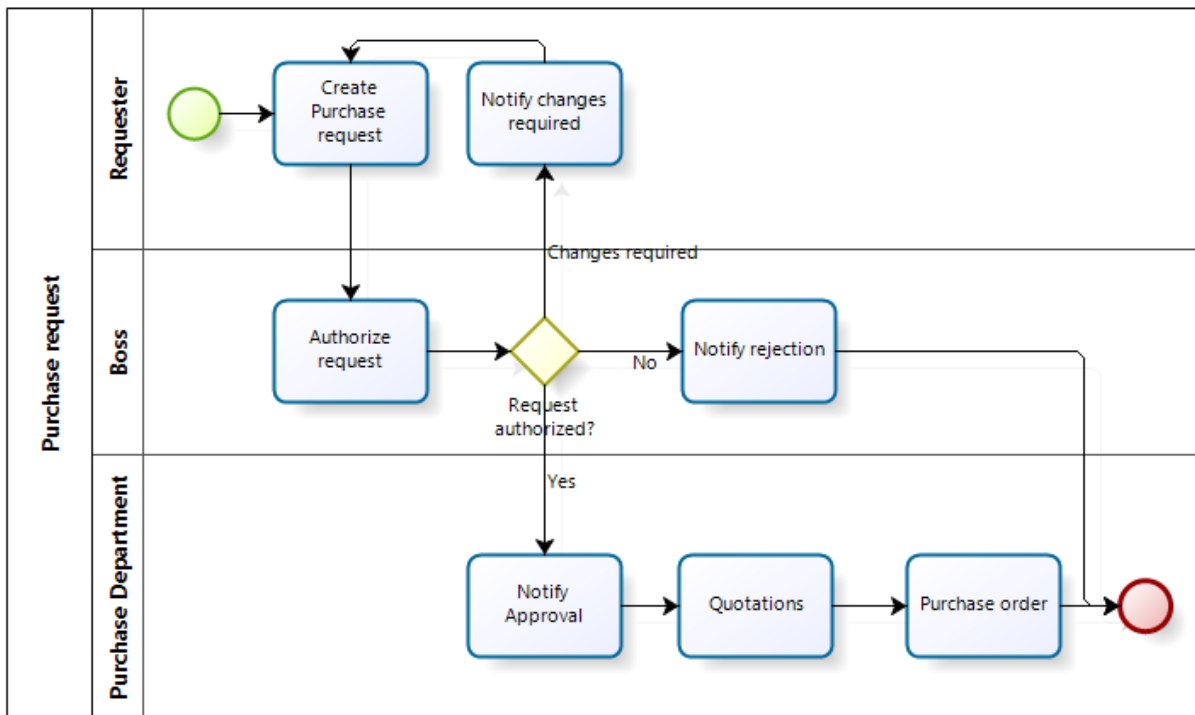


6. Continue selecting the required shapes until your diagram is complete.

7. To resize the pool, select and drag the appropriate corner of the border.

The following image displays the basic diagram of the Purchase Request process.

This first exercise is meant to show you how to diagram with the drag-and-drop functionality. However, to better describe the process and meet the required standard, some diagram elements need to be changed. Please refer to the section [Editing a process](#) to continue with this exercise.



Video example: Creating a process

[This video shows how to create a process in Bizagi Modeler](#)

Editing a process

Once you have diagrammed your process, you may need to change diagram elements, add additional connections or add more elements to improve and complete it.

We will continue using the Purchase Request Process example, mentioned in the previous section, to show you how to make these changes easily.

Moving elements

If you need to move a diagram element from one place to another click on it and drag it to the new position.

Deleting elements

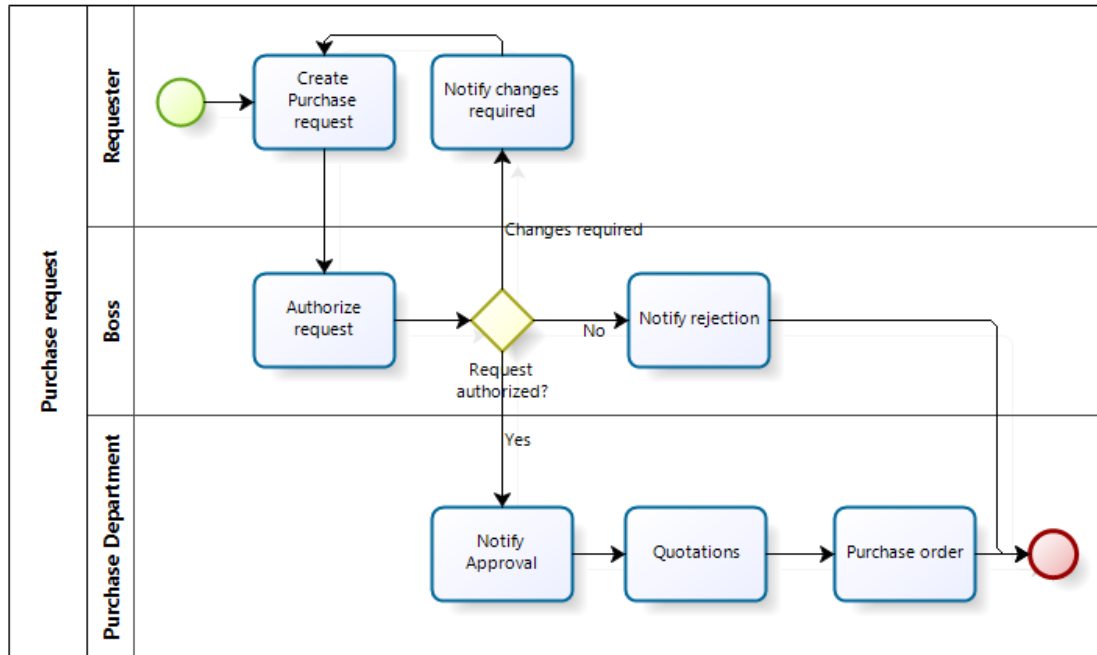
If you need to delete a diagram element click on it and press the **Delete** button.

Change/ Transform elements

The following image shows the initial Purchase Request process we designed. However, we need to make some adjustments.

- Change the Notification Tasks to Script Tasks, since they are emails automatically sent based on a decision by the Immediate Supervisor (Boss).
- The Quotation Task is actually a Sub-process where several activities take place in order to be able to select a supplier.

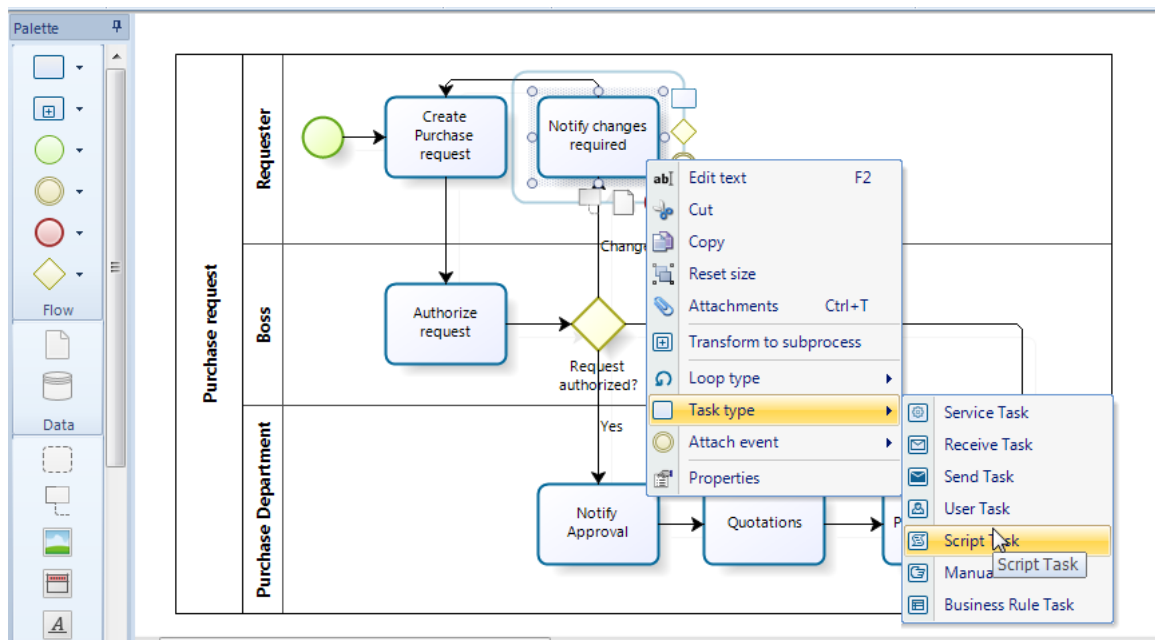
- The Purchase order Task is also a Sub-process where the Purchase Order is sent to the Supplier and created in the ERP system.



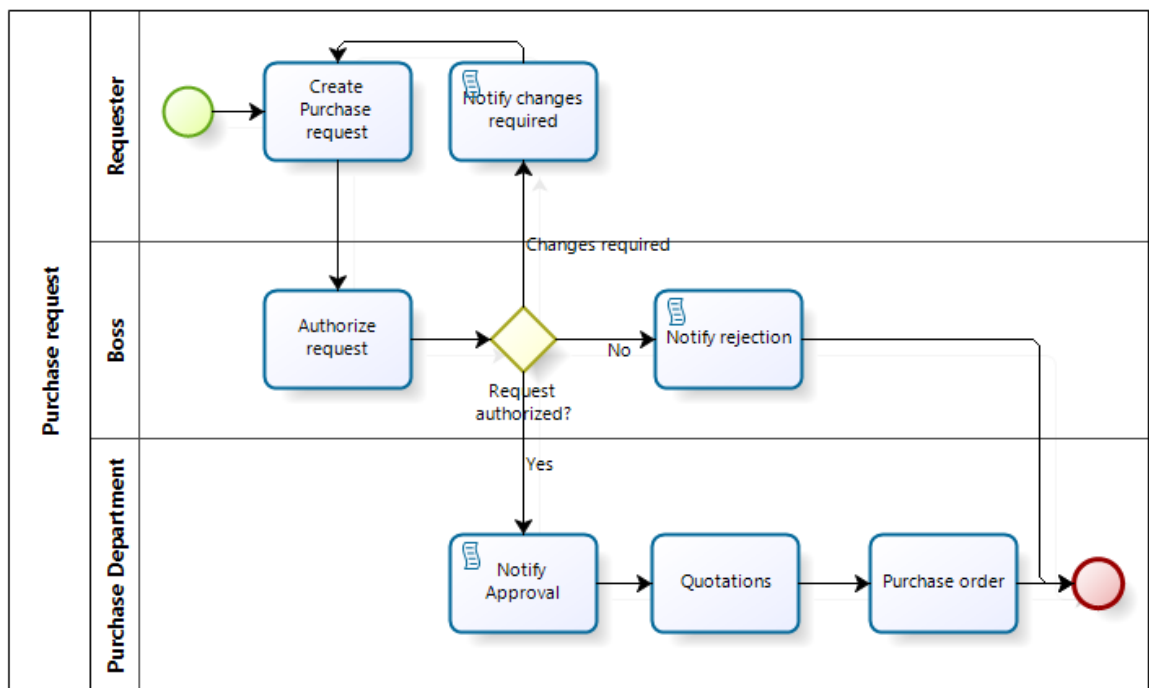
Bizagi Modeler allows you to change elements within the same category. You do not need to introduce another element to the Process, but merely change the existing element.

1. To change the Notification Task to a Script Task, right-click on the diagram element and select **Task Type** from the display menu.

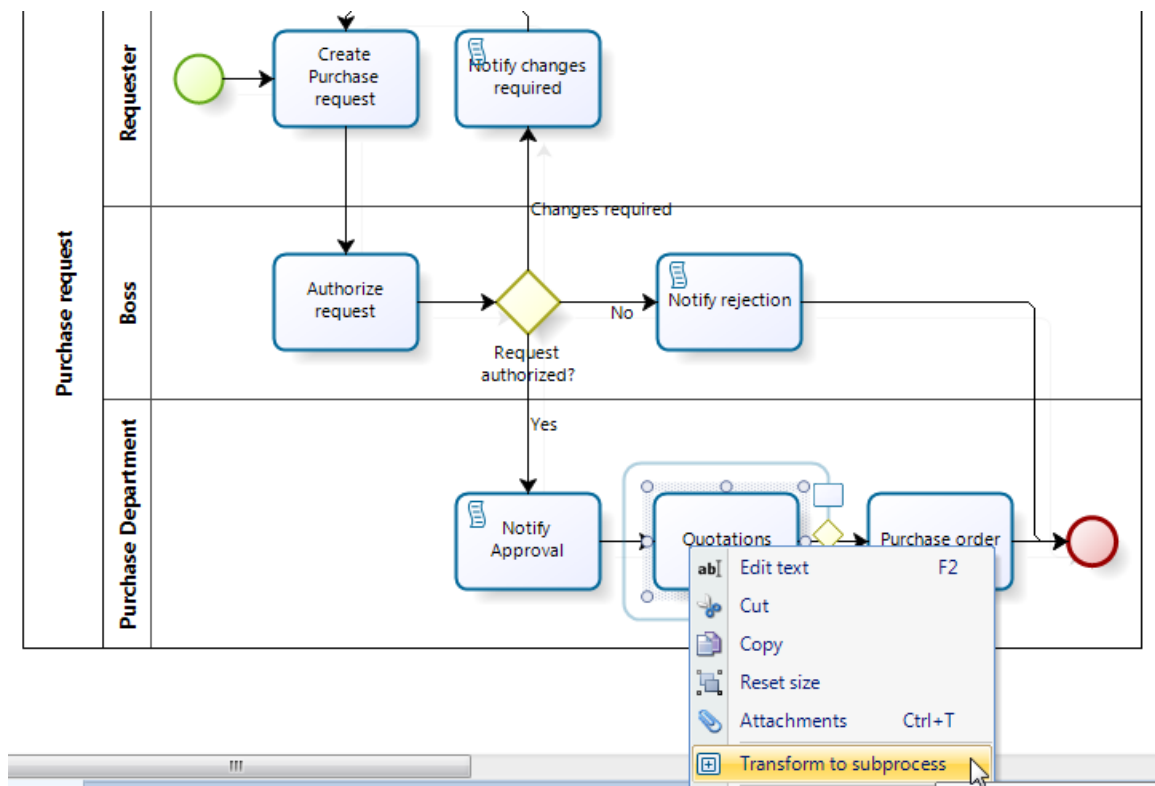
Choose the appropriate Task type from the drop-down list, note that once you change the task type **you will lose any information, entered into extended attributes, that has not been shared.** You will only receive a warning message if you select the **Warn element type changes** checkbox (located in the Show/ Hide group under the View tab).



2. Follow the same procedure for the other two Notifications Tasks. The following image shows your progress up to this point.



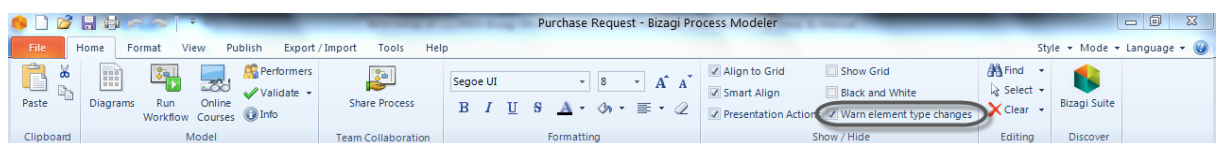
3. To transform the Quotations Task to a Sub-process, right-click on the Task and select **Transform to sub process** from the display menu. Do the same for the Purchase Order Task.



When you change an element type, any extended attributes information entered will be lost if it hasn't been shared.

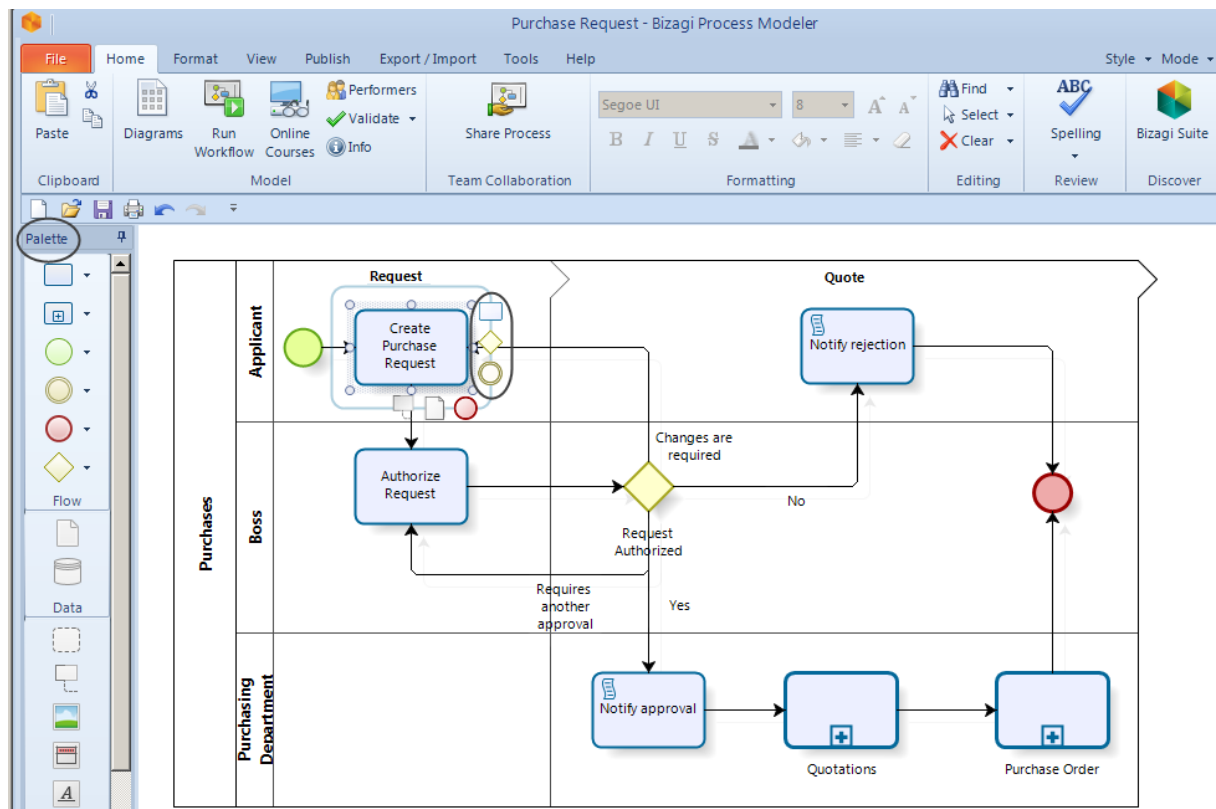
To avoid this, select the **Warn element type changes** to be alerted before changing an element to a different type, as shown in the image below.

[Please click for further information about sharing extended attributes](#)



Adding elements

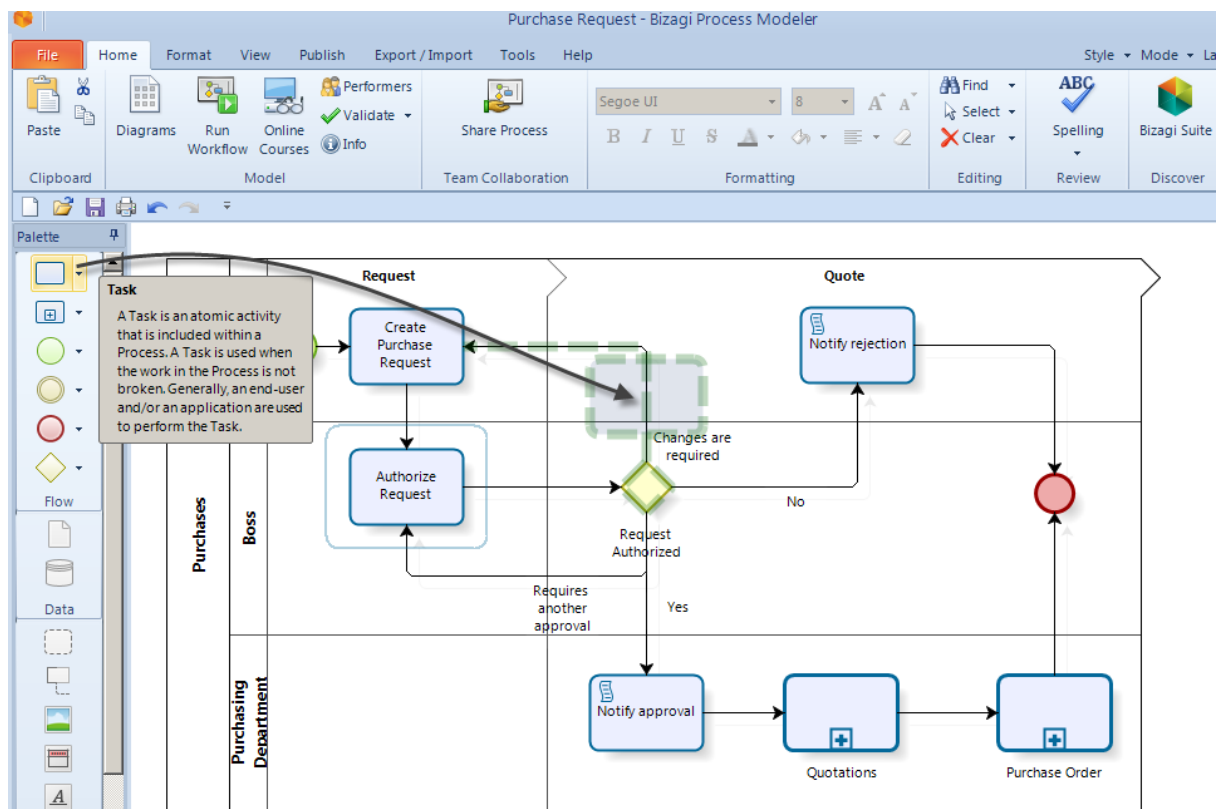
If you need to include a new element, keep in mind you may at anytime use: either the pie menu, or the Palette elements found at the left hand.



In case you want to include a new element in between of 2 existing ones (which are already connected), Bizagi will provide an option for modeling agility so that just include the new element and avoid the need to add further connectors or to delete existing ones.

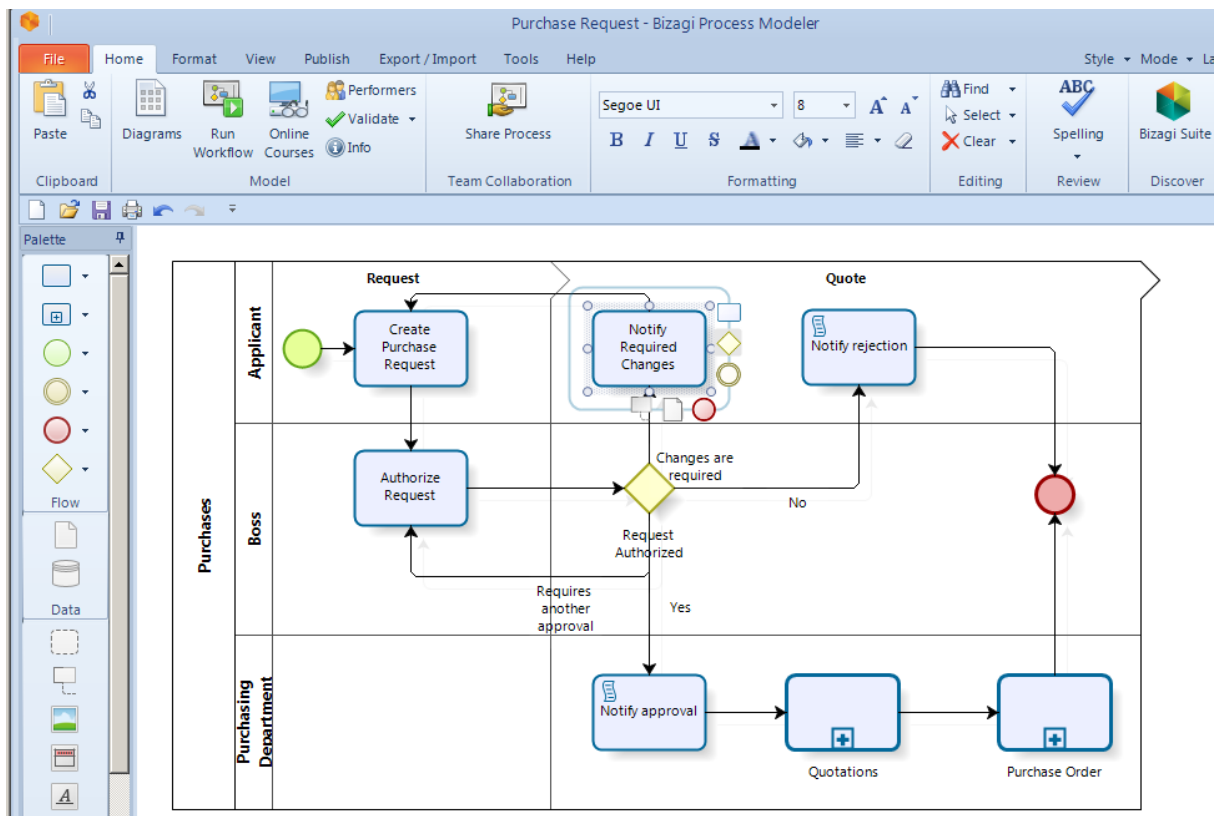
1. To include a new element between 2 existing ones, drag it from the Palette and into the connector itself.

Note that the connector will highlight to indicate where the new element can be dropped for Bizagi to attach it automatically.



2. Finally, name your element.

Notice that it will be automatically connected, and it will also create the additional connector to the other element.

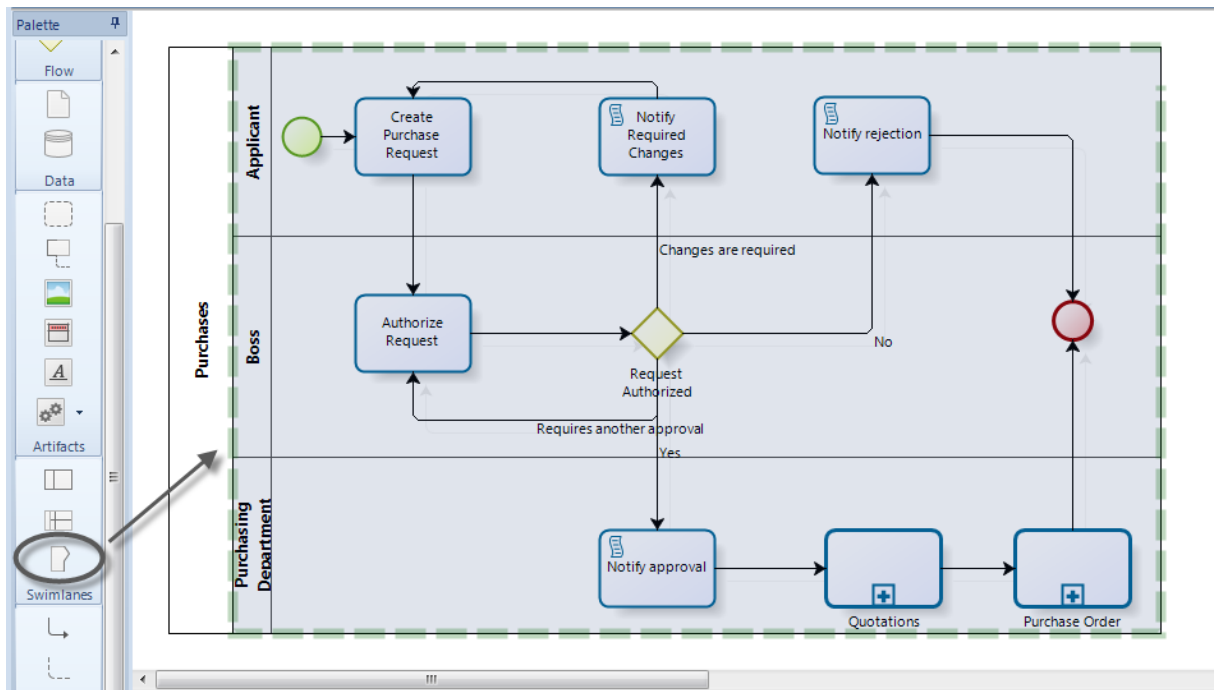


Adding Milestones

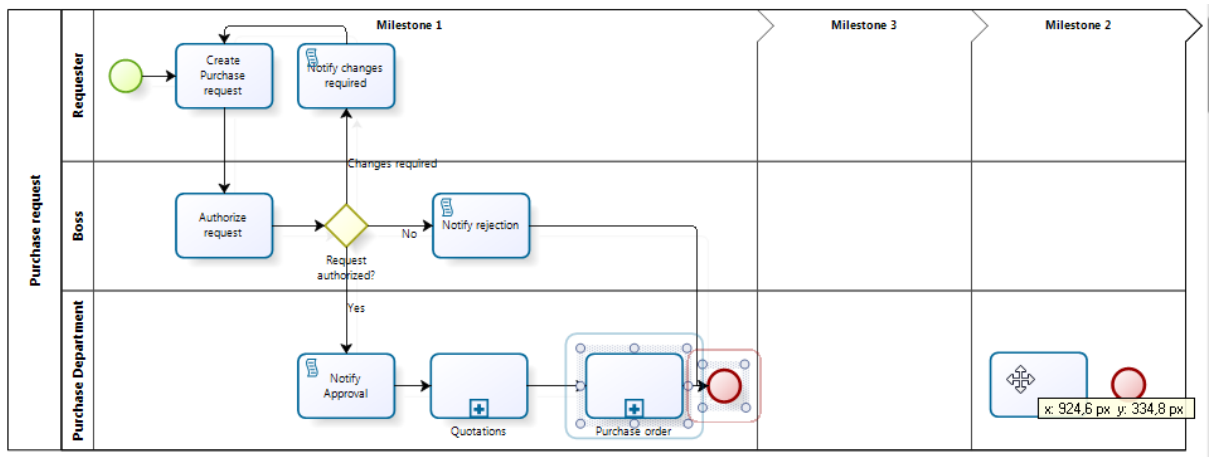
Milestones are Sub-partitions of a Process used as reference points. They help the readers understand the different stages that make up the Process.

We will include three Milestones to determine the state of each activity within the Process.

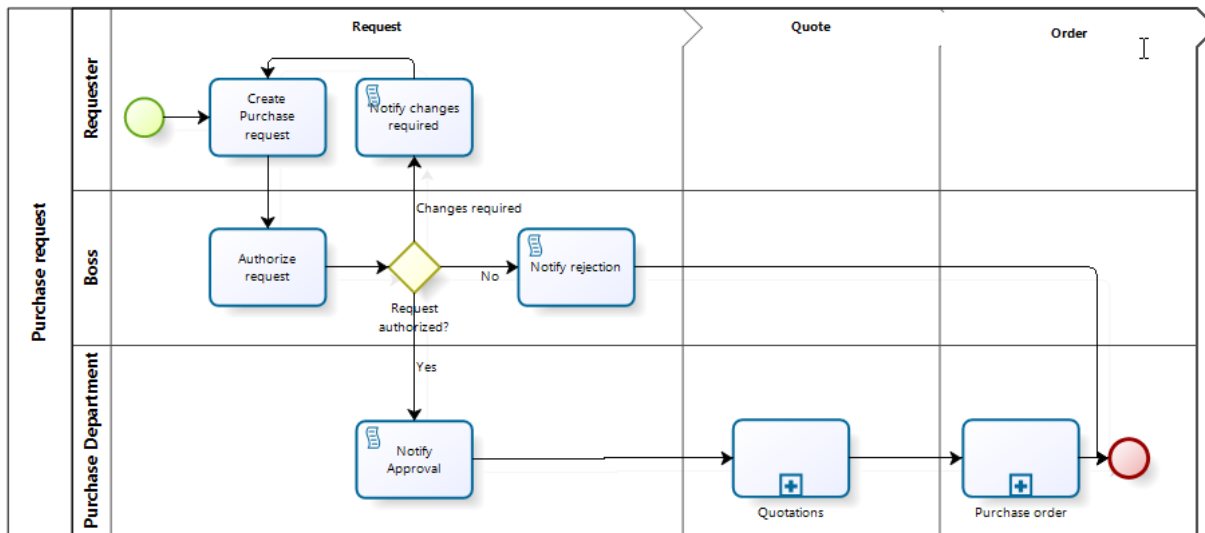
1. To include a Milestone drag it from the Palette and place it in the Process. Drag and drop two more Milestones.



2. Drag and drop the diagram elements that belong to the Milestone.



3. Finally rename each Milestone by clicking on it, pressing the F2 key, and entering a name.

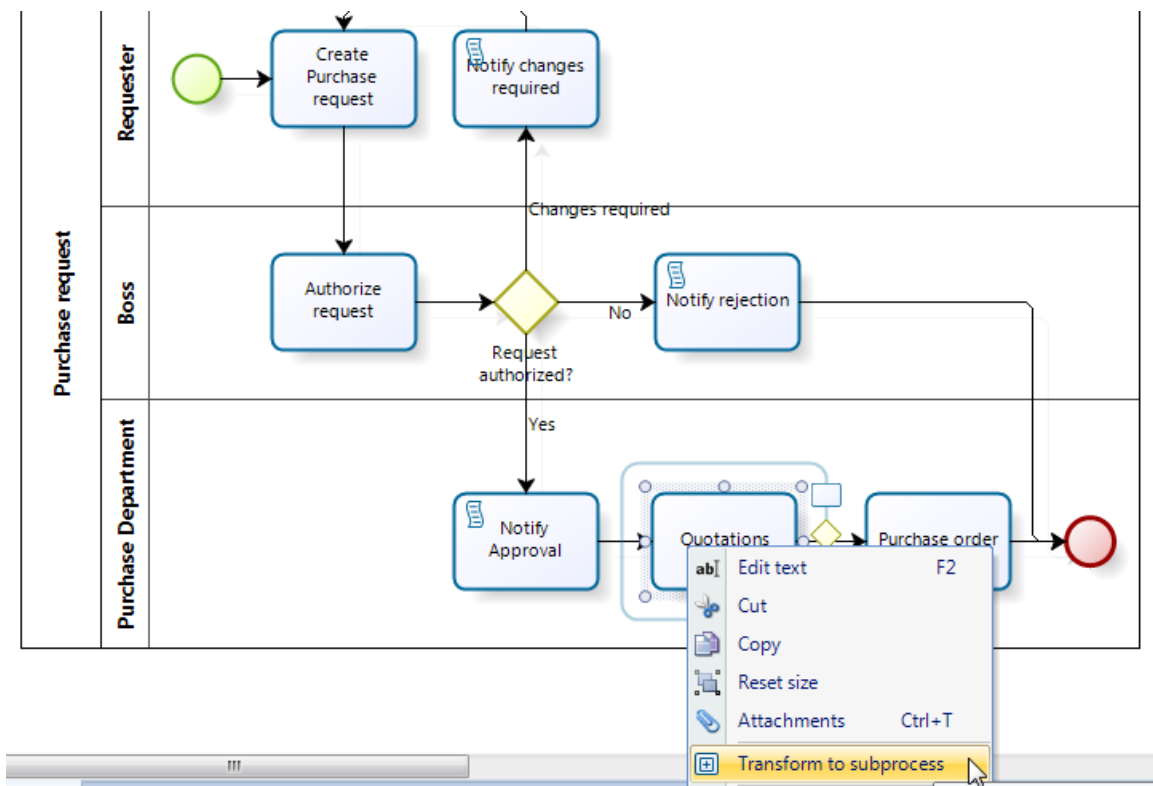


Sub-processes

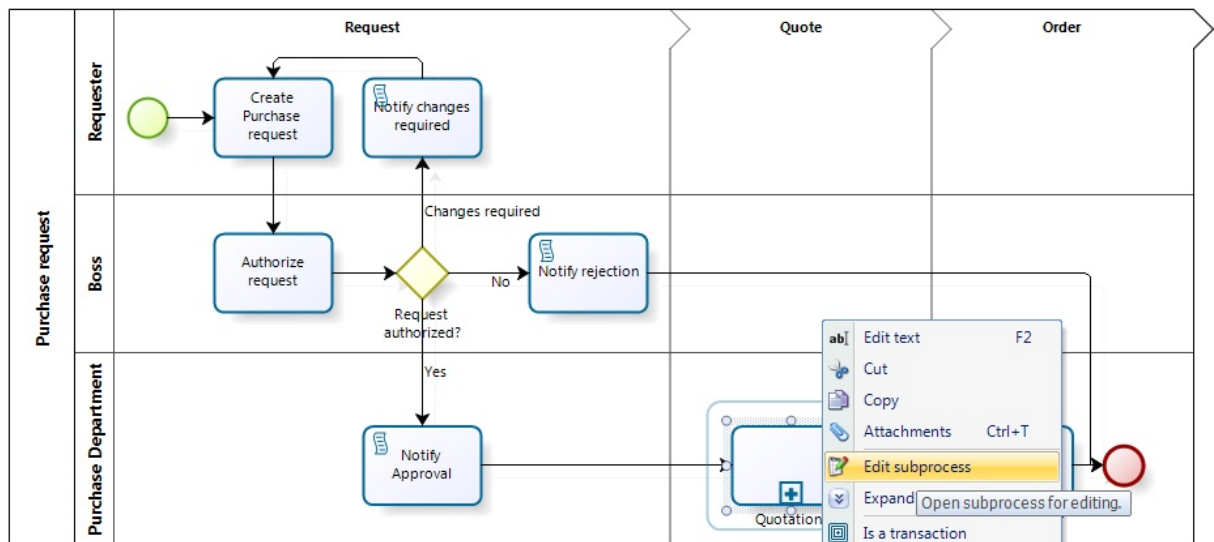
A sub-process is a compound activity that is included within a process. Compound means that it can be broken down into lower levels, that is each level includes shapes and elements within it.

In the previous section we defined a task called “Quotations”, if you have not already created it as a sub-process (as we now realize that this task contains many activities) we need to transform the diagram element and define the sub-process flow.

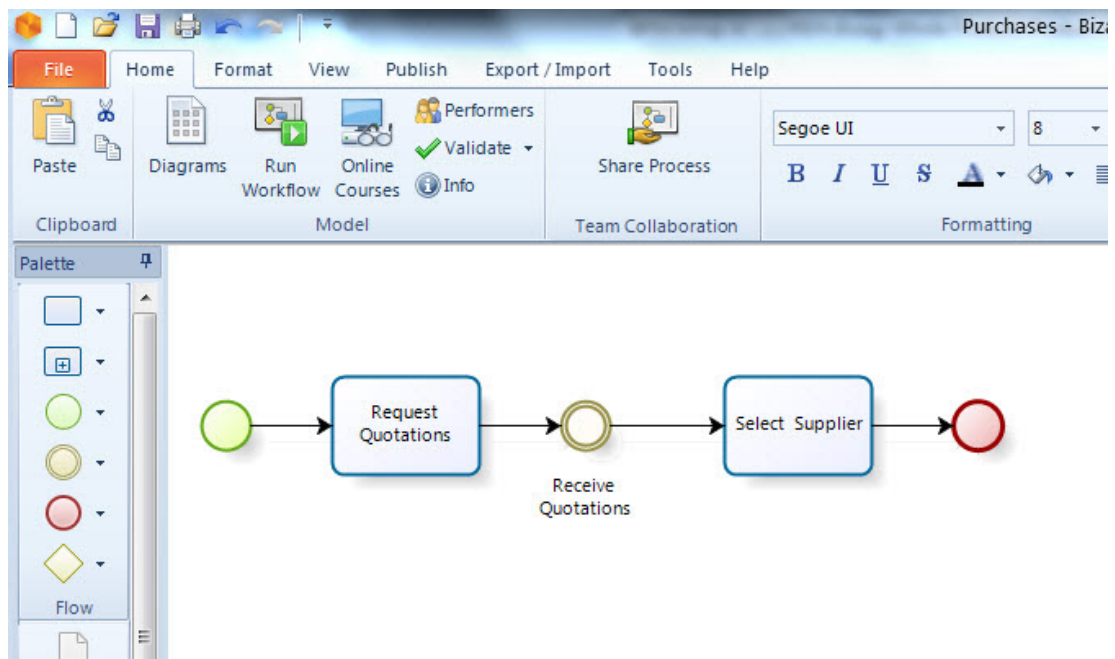
1. To transform the Task, (in this case Quotations), to a sub-process element, right-click on it and select *Transform to sub-process* from the display menu.



2. Once the Task has been converted to a sub-process it is necessary to define its related diagram. Right-click on the sub process element and select the *Edit subprocess* from the display menu.



3. This will automatically open a new diagram page to include the sub process information. On this page you can diagram the associated sub-process, just the way we diagrammed the first process. Just drag and drop the elements as needed and place them where appropriate.

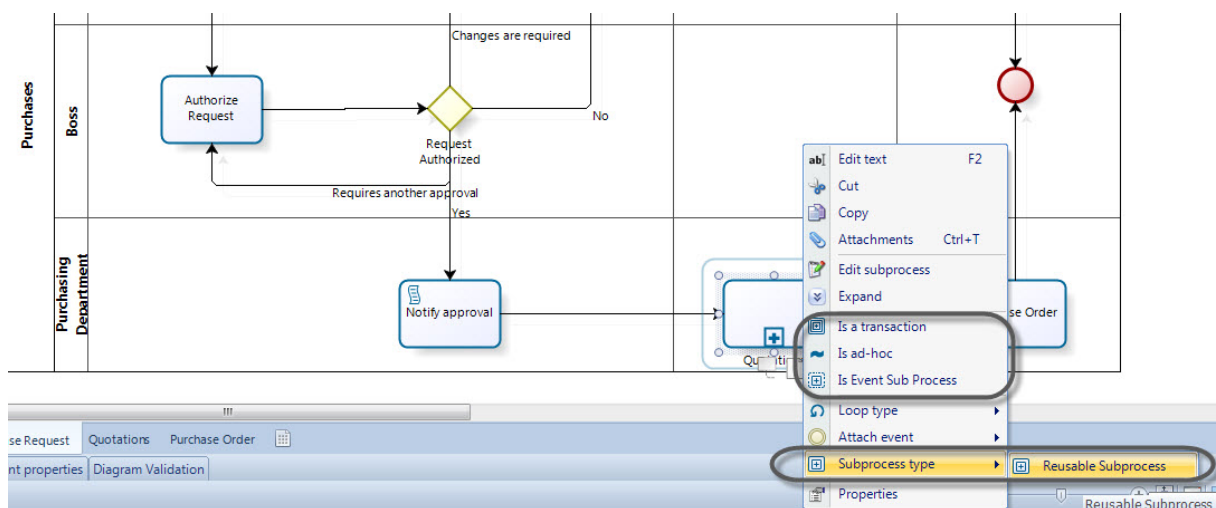


Change the sub-process type

BPMN defines several types of sub-process that respond to particular business needs. By default sub-processes are created as embedded but you can change the sub-process type anytime.

Once you have created a sub-process element in the diagram right-click on the element and select one of the following options:

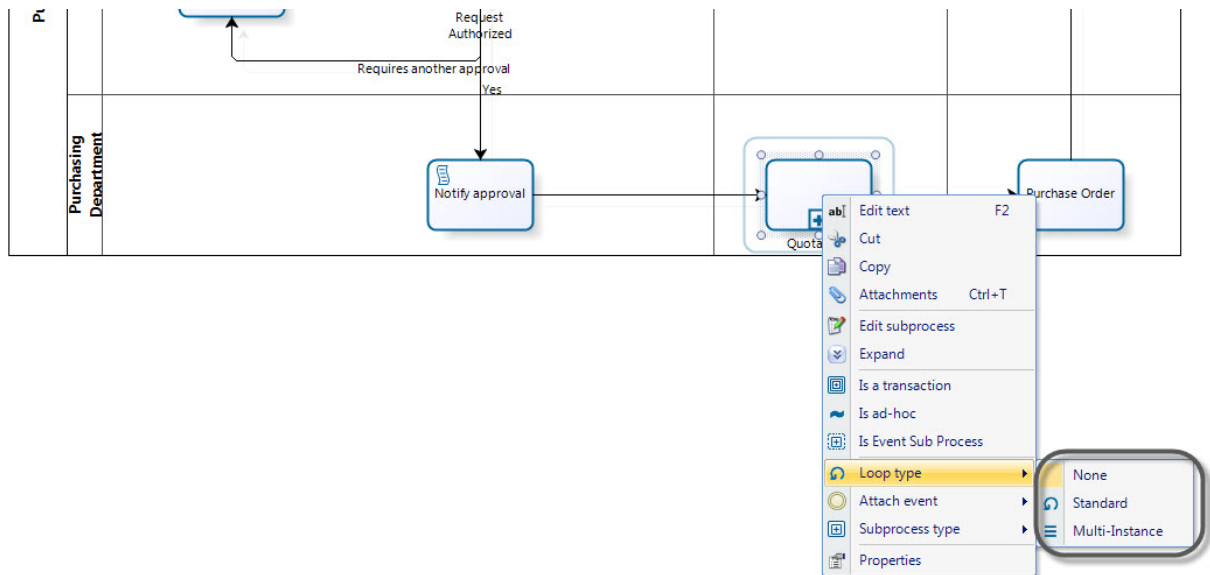
- Is transaction
- Is ad-hoc
- Is Event sub-process
- Sub process type -> Reusable sub process



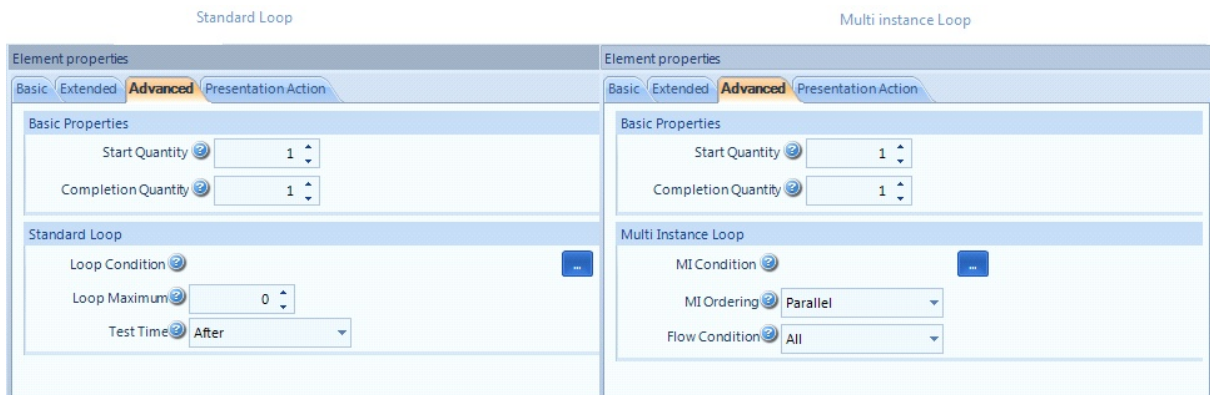
Additionally you can define the **Loop Type** of your process from these three options:

- None

- Multi-instance, the multi-instance attribute of sub processes allows the creation of a desired number of activity instances.
- Standard, this feature defines a looping behavior based on a boolean condition. The sub-process will loop as long as the boolean condition is true.



For each loop type there are specific advanced options to configure the process's behavior. Advanced properties are located in the Advanced tab from the shapes *Properties*.



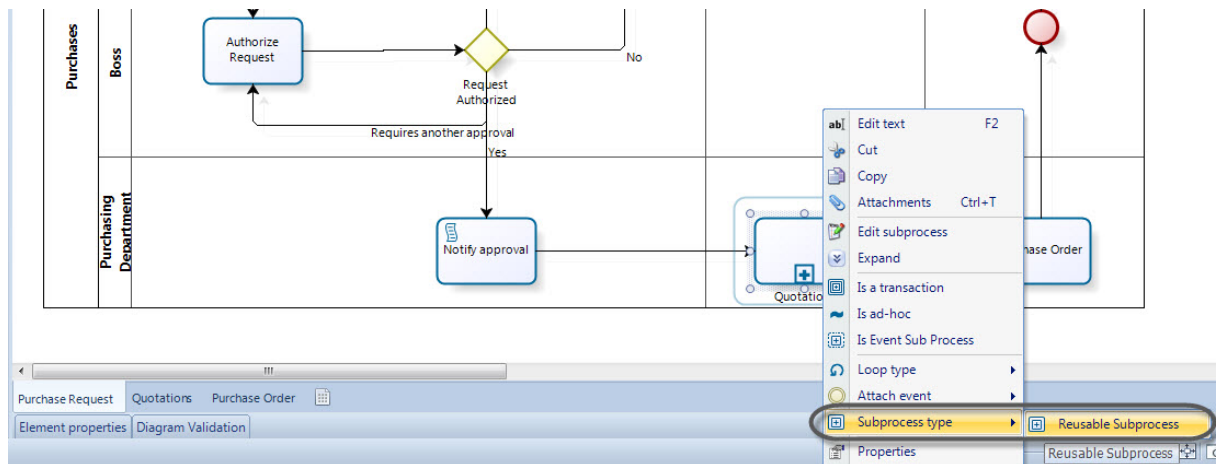
By default sub-processes are created as embedded. In BPMN this type of sub-processes have no pools or lanes. **Embedded** sub-processes do not allow you to add any pools or lanes to ensure conformity with the BPMN standard.

If you need to include pools and lanes you can use **Reusable** sub-processes that according to the BPMN standard can include pools and lanes. These type of sub-processes are predefined activities. That is, they are independent and thus are created individually. Then, they can be related to the sub-process shape. In BPMN this type of sub-process is called a "Call Activity", in Bizagi Modeler we call them Reusable.

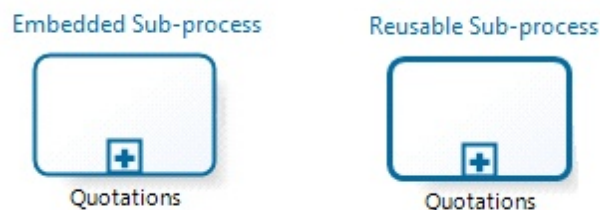
Converting to reusable sub-process

You can convert a default sub-process to a Reusable Sub-process, or Call Activity (in BPMN).

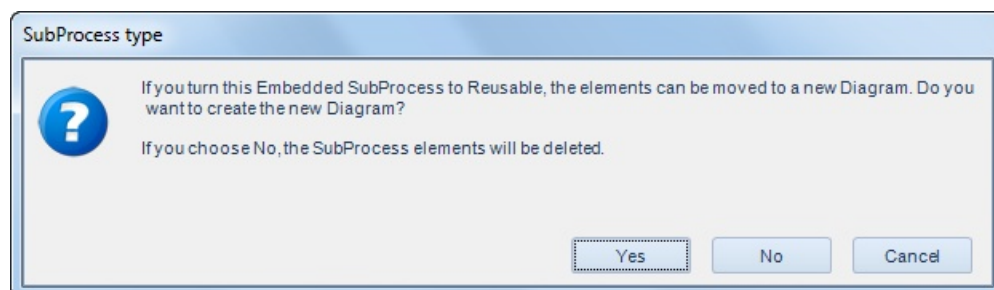
1. Right-click on the Sub-process to convert, choose the **Sub-process type** option and then click on **Reusable process**.



The diagram element's border will change to indicate it is now a reusable Sub-process.



If you have already diagrammed the Sub-process you will receive a message alerting to this fact. Click the **Yes** button to convert it and keep all the lower level diagram elements.

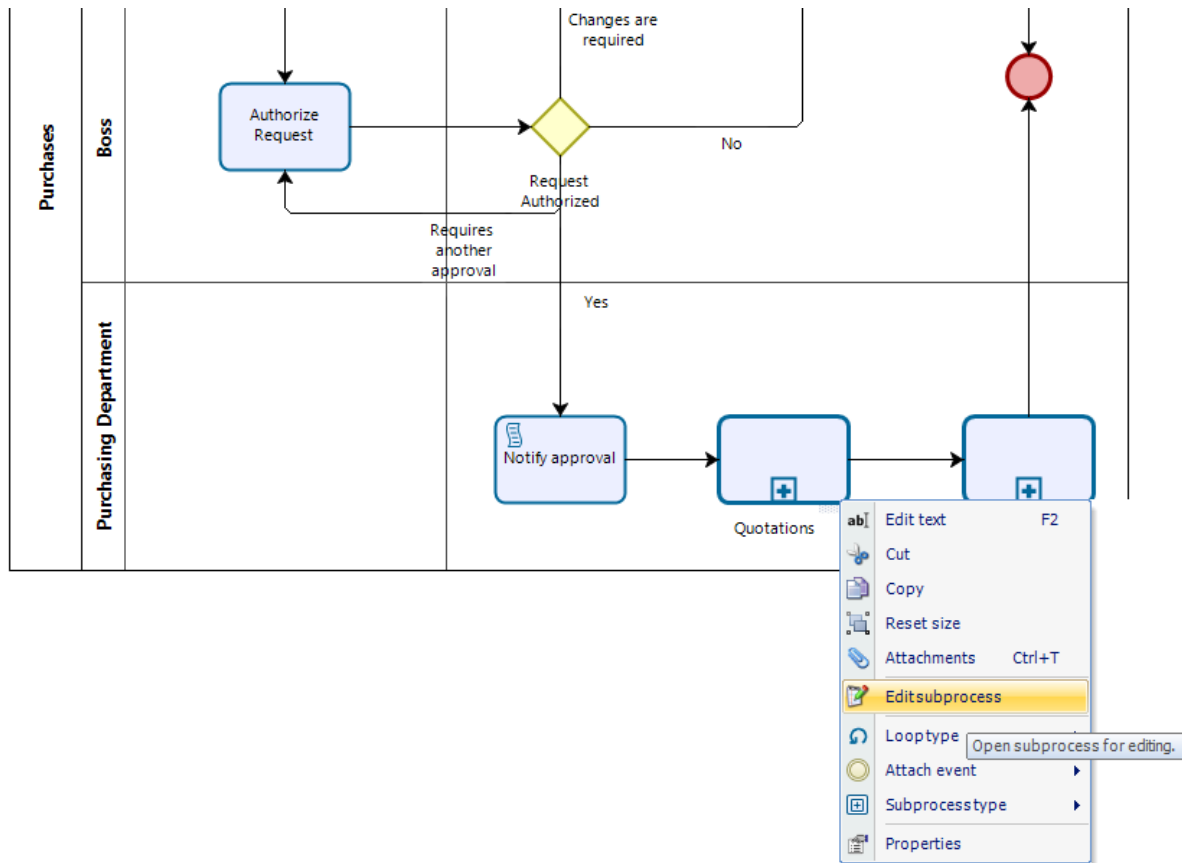


Note: It is important to clarify that a reusable Sub-process calls a separately modeled process.

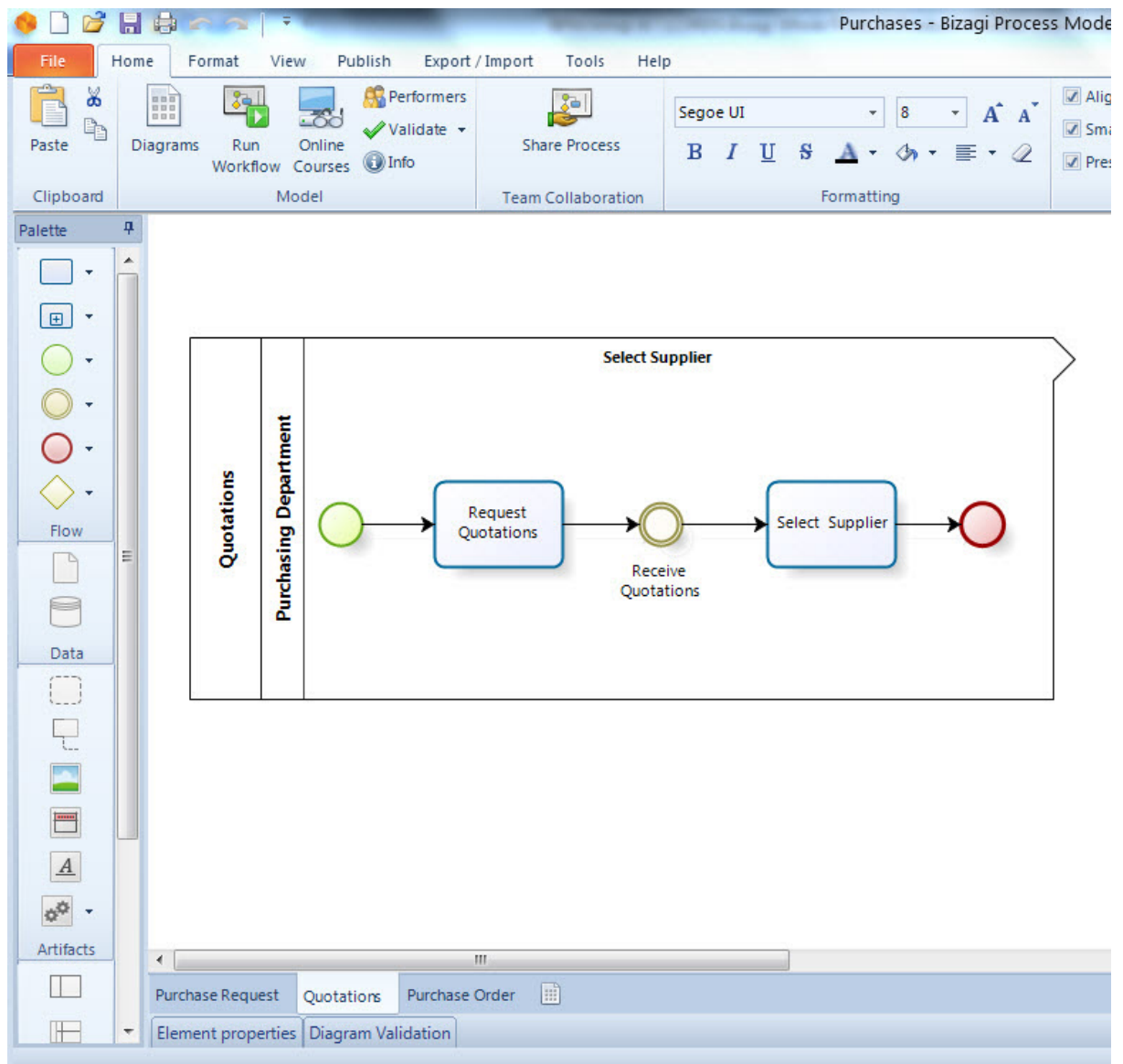
There are two different ways of creating a call to a reusable sub-process. The **Edit Sub-process** option opens an empty diagram workspace and relates it to the shape. Alternatively, you can manually relate

the shape to a predefined diagram.

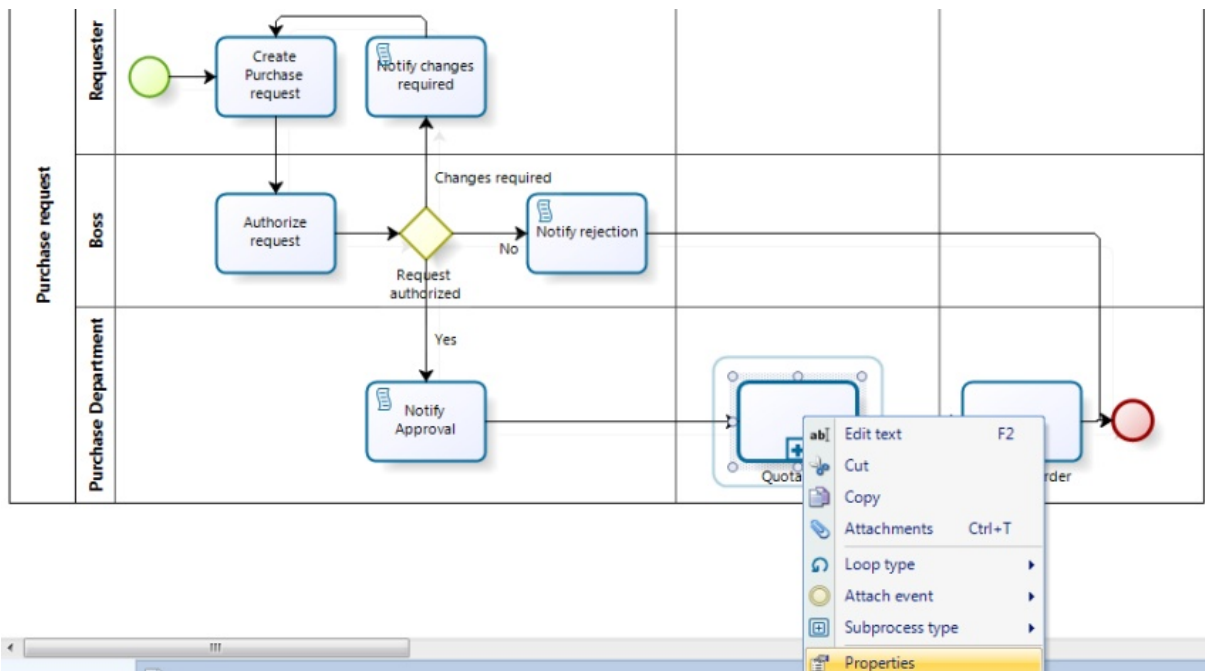
Let us assume that the Quotations Sub-process is reusable and has not yet been diagrammed . To create a call for the Sub-process not yet model (i.e., create the detail in a new diagram), use the **Edit Sub-process** option by right-clicking the shape:



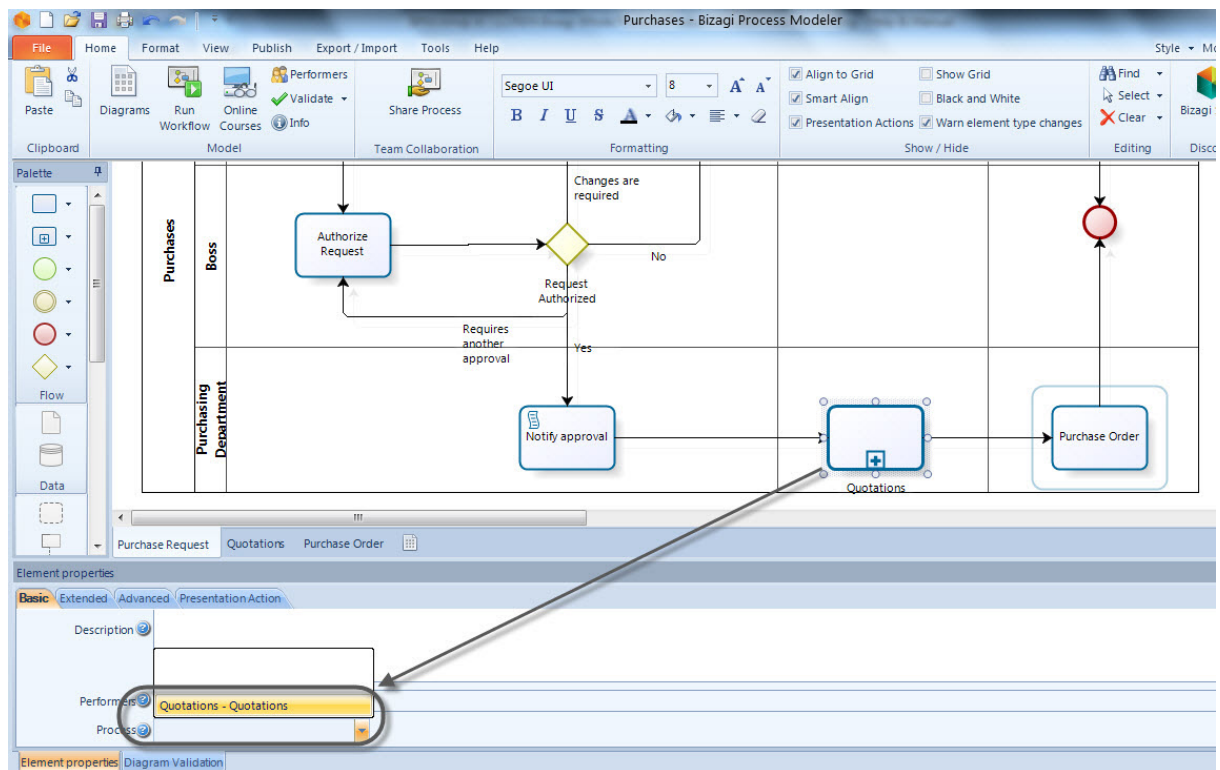
2. To reference an existing diagram (assuming Quotations detail was created in the previous step), relate the diagram in the Sub-process properties.






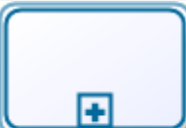




To do this, right-click on the **Request Quotations** reusable Sub-process element and select **Properties** from the display menu.



3. The Element Properties add-on window will display. On the **Basic** tab, in the **Process** drop-down list, select the predefined created Diagram.



Sub-process types

| ELEMENT | DESCRIPTION | NOTATION |
|----------------------|---|---|
| Sub-process | Is an activity whose internal details have been modeled using activities, gateways, events and sequence flows. The element has a thin border. |  Subprocess |
| Reusable Sub-process | Identifies a point in the process where a pre-defined process is used. A reusable sub process is called a Call Activity in BPMN. The element has a thick border. |  Reusable Subprocess |
| Event Sub-process | A Sub-process is defined as an Event Sub-process when it is triggered by an event. An Event Sub-Process is not part of the normal flow of its parent Process—there are no incoming or outgoing Sequence Flows. |  Event Subprocess |
| Transaction | Is a Sub-process whose behavior is controlled through a transaction protocol. It includes the three basic outcomes of a transaction: Successful Completion, Failed Completion and Cancel Intermediate Event. |  Transaction |
| Ad-Hoc sub-process | Is a group of activities that has no <i>REQUIRED</i> sequence relationships. A set of activities can be defined, but the sequence and number of performances for the activities is determined by the resources of the activities. |  Ad-Hoc Sub-Process |
| Standard loop | Sub-processes may be repeated sequentially, behaving like a loop. This feature defines a looping behavior based on a boolean condition. The activity will loop as long as the boolean condition is true. |  Standard loop |
| Multi-Instance loop | Sub-processes may be repeated sequentially, behaving like a loop. The Multi-instance Loop iterates a predetermined number of times. The iterations occur sequentially or in parallel (simultaneously). |  Multi-Instance sequential loop |
| | |  Multi-Instance parallel loop |

Improving look and feel

This article presents tips and tricks that will aid in improving the look and feel of your diagrams.

Diagramming and naming recommendations

It is important that Processes are uniformly described, for the sake of being more easily understood by users.

Therefore, special care must be taken in the naming and layout of all diagram elements.

The following are best practice recommendations that will make processes more readable and organized.

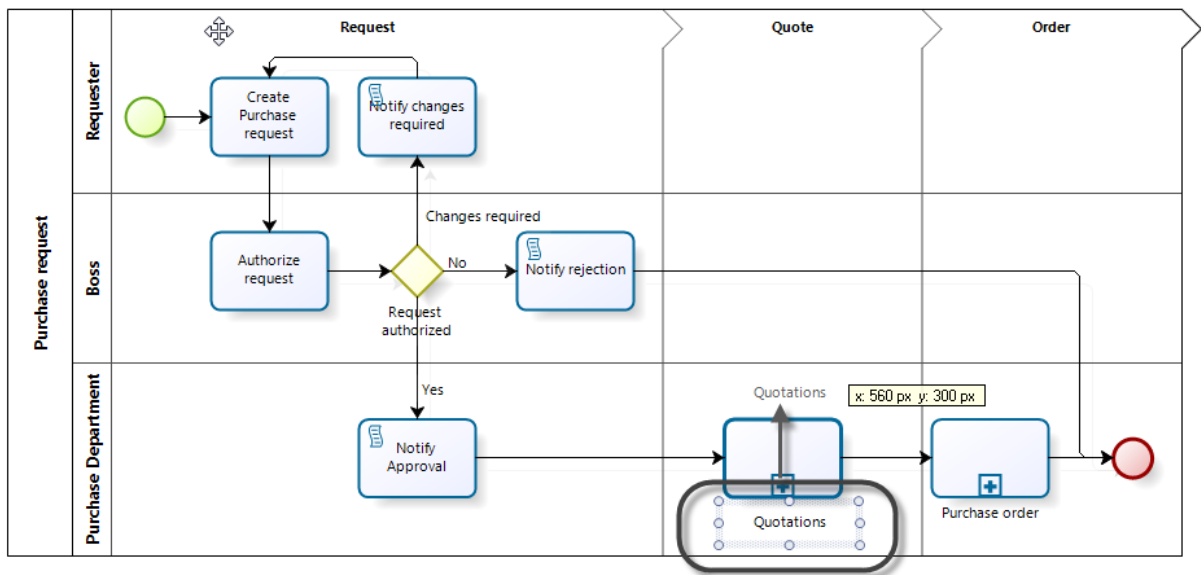
- All words should be capitalized to aid readability.
- Always name Tasks using an infinitive verb, to denote an action being executed e.g.: Create request, Authorize request, Deliver package.
- Name Processes and Sub-processes indicating their main purpose.
- Always attempt to lay out the Process model in a left to right direction, as it is an intuitive design choice for left-to-right readers.
- Name Sequence Flows that follow after a decision Gateway. For example, if a gateway is called "Request authorized?" then the sequence flows are named "Yes" and "No" respectively.
- Name non-decision Gateways as well. For example, a Process that contains three parallel Gateways can be named "Parallel1", "Parallel2", "Parallel3" respectively. This will allow you to easily distinguish one from another in generated documents.

Move and resize text

You can move and resize text in the following elements: Sequence Flows, Events, Sub-processes and Gateways.

To move any of the mentioned text, select and drag-and-drop it where you desire.

To resize the text, select the text and drag the border of the frame.

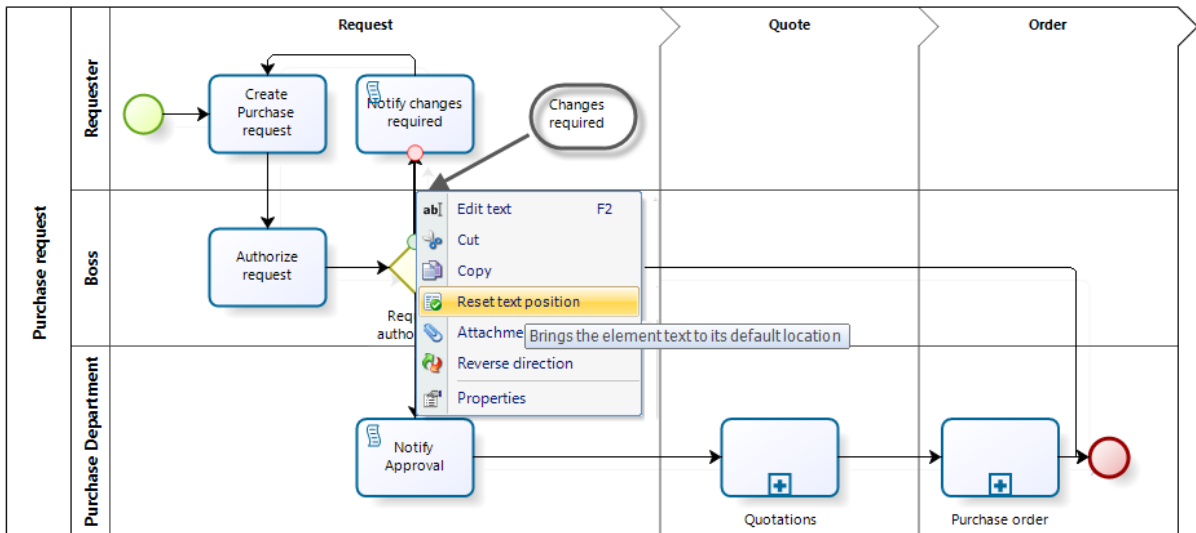


Reset text position

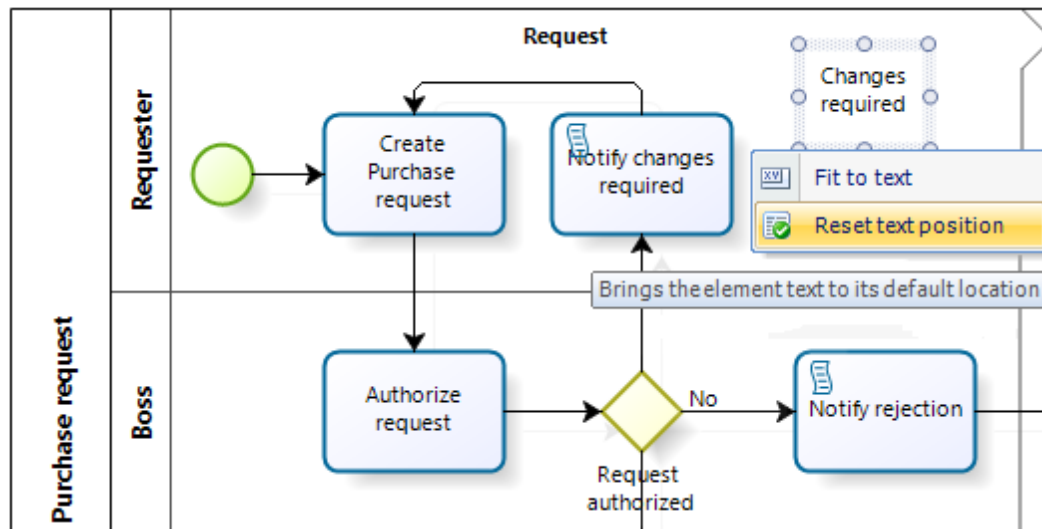
When the text of an element has been repositioned, you can revert it back to its original position by selecting the **Reset text position** option on either the element, or the text itself.

In the following image the *Changes required* caption was moved too far away from the Sequence Flow it references.

To revert to its original position, right-click the Sequence Flow and select **Reset text position**.



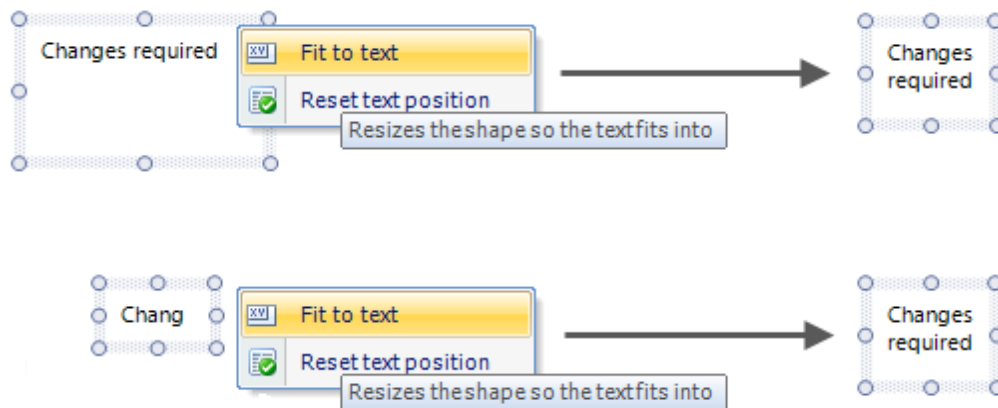
Note that this option is available at the text (caption) as well:



Fit to text

In the course of modeling your diagrams, you may come across a situation where the element is much bigger than the text within it and you need to make it fit the text. A similar situation may arise where the horizontal space of the element is smaller than the text within it, causing the text outside the object boundary to be cut off. You can manually drag one of the element's corners to size or make use of Bizagi's **Fit to text** design shortcut.

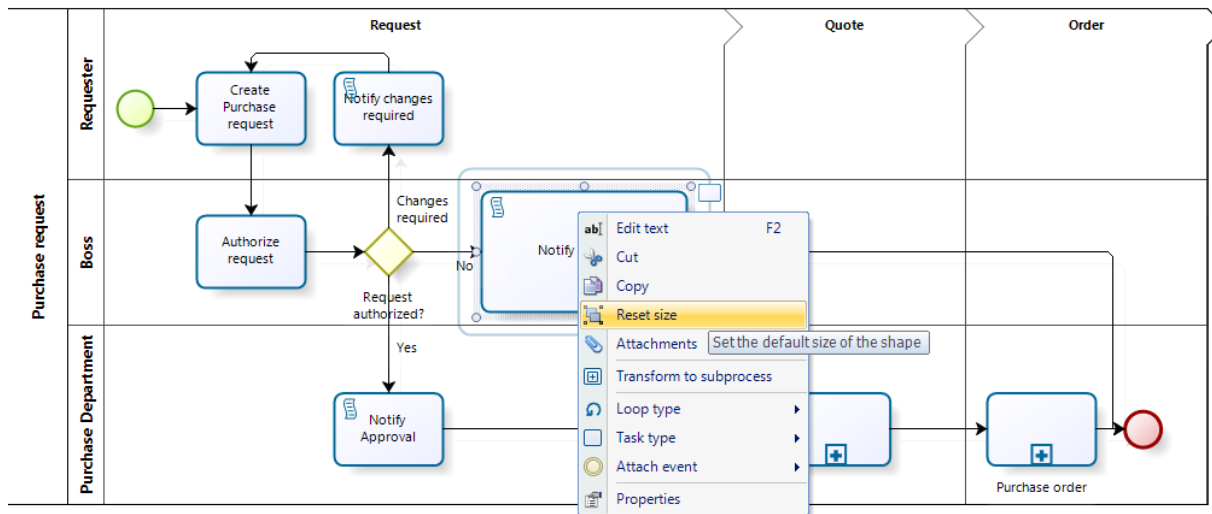
To automatically resize the object to fit the text, use the **Fit to text** option.



Reset to original size

When the size of an element has been changed (either enlarged or shrunk), it can be reverted to its original size by selecting the **Reset size** option on the element.

In the following image, the *Notify Rejection* element was enlarged. To revert to its original size, right-click the element and select **Reset size**.

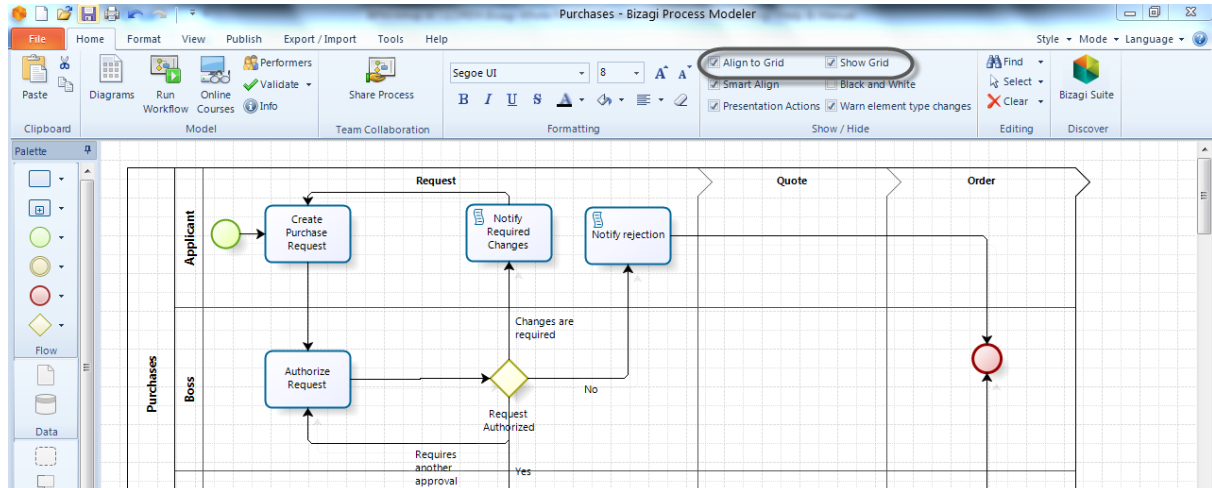


Using the grid

We recommend always showing the grid to facilitate the alignment of elements.

If you select the *Align to Grid* option, the Modeler will auto-align elements to the grid. Essentially, once the element is dropped, it snaps to the nearest intersection of lines in the grid.

To utilize this option, in the **Show/Hide** group of the **Home** or **View** tab, check both the **Show Grid** and **Align to Grid** boxes.

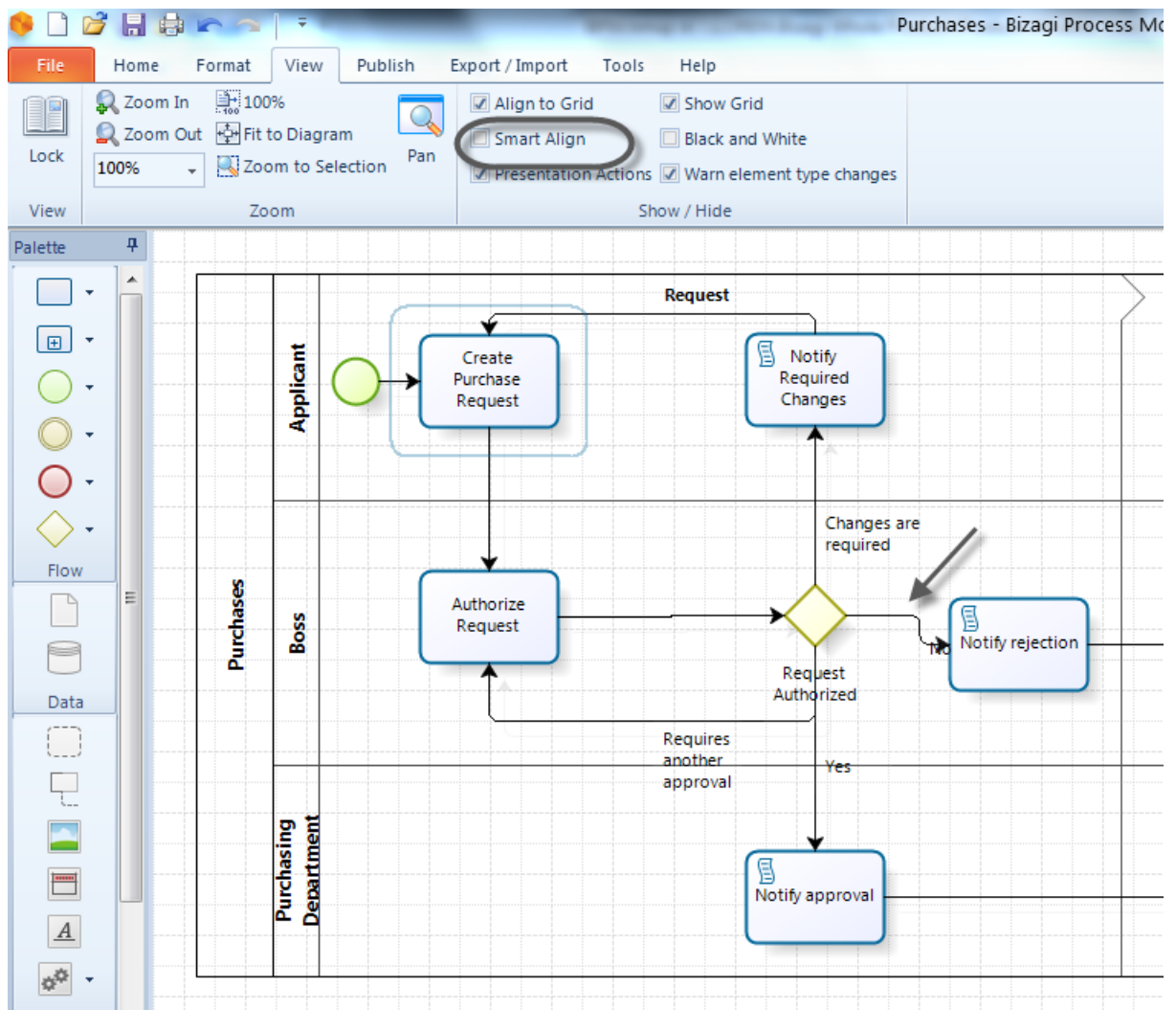


Aligning elements

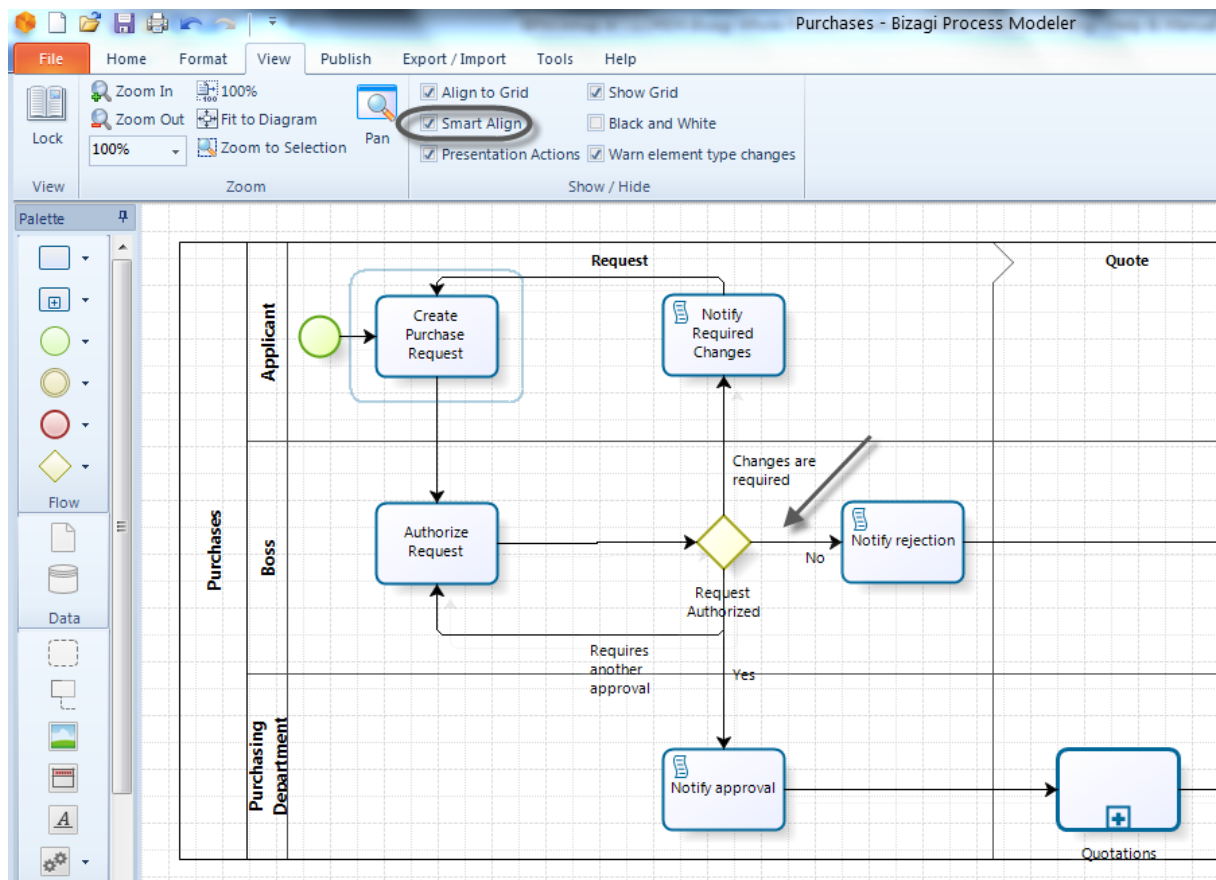
Align all elements both vertically and horizontally, to present a structured layout of your Process.

Bizagi offers a functionality called **Smart Align** whereby the sequence flows will be automatically aligned to each other. To utilize this functionality select **Smart Align** in the **Show/Hide** group on the **View** tab.

The following image shows the process **without** Smart Align selected.



The following image shows the process **with** Smart Align selected.



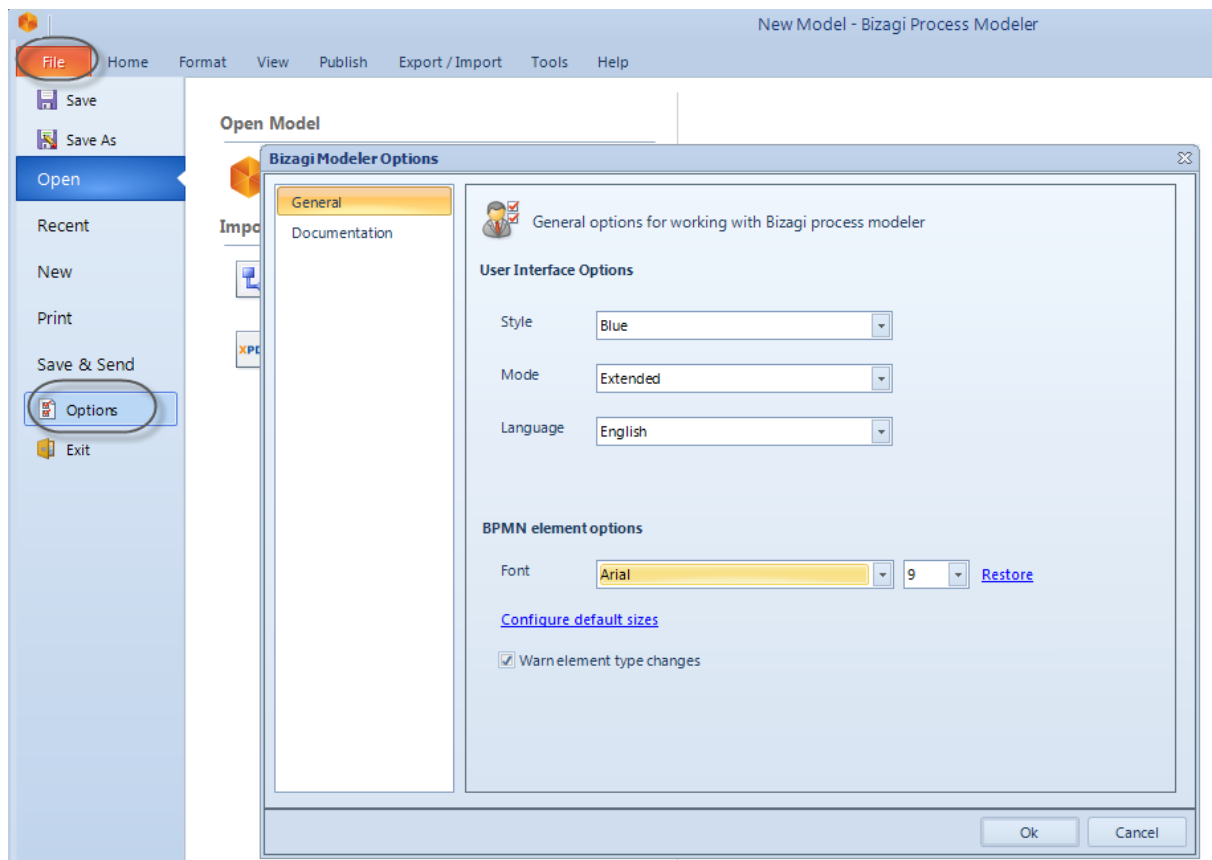
Rather than align all Sequence Flows of a diagram, you can also align selected diagram elements to each other.

Click each elements for alignment while holding down the **Shift** key. In the **Layout** group of the **Format** tab, click **Align Horizontal** or **Align Vertical** according to your design requirement.

- Width by Height must not be over 36.000 pixels.
- The maximum width size is 10.000 pixels.

Set default settings

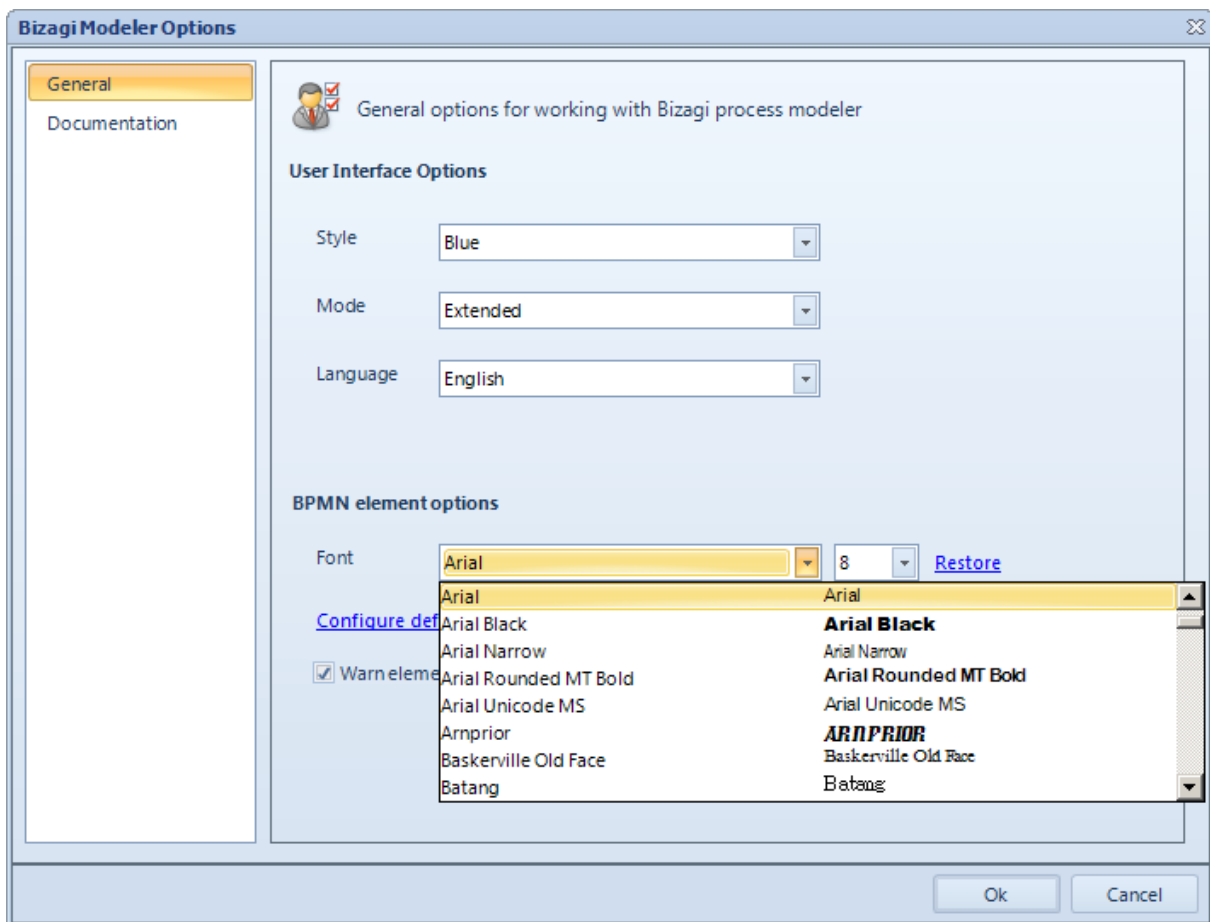
To define the font and color options you want to use by default (for new elements), go to the Main Options found in the **File** Tab.



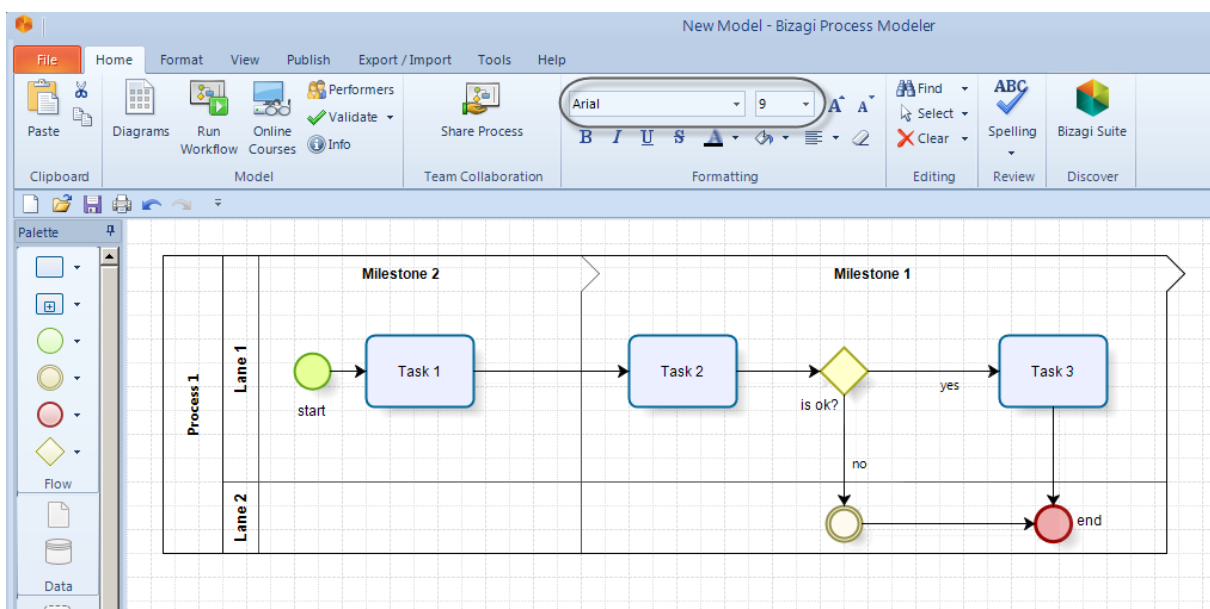
Set default Font and Font size

In the **File** Tab, select **Options**.

In the **BPMN element options** section of the new window, select the default font face and size from the drop-down lists.



Click **Ok** to save the settings and return to the diagram.
Element captions created from this point onwards will use the default font and size.

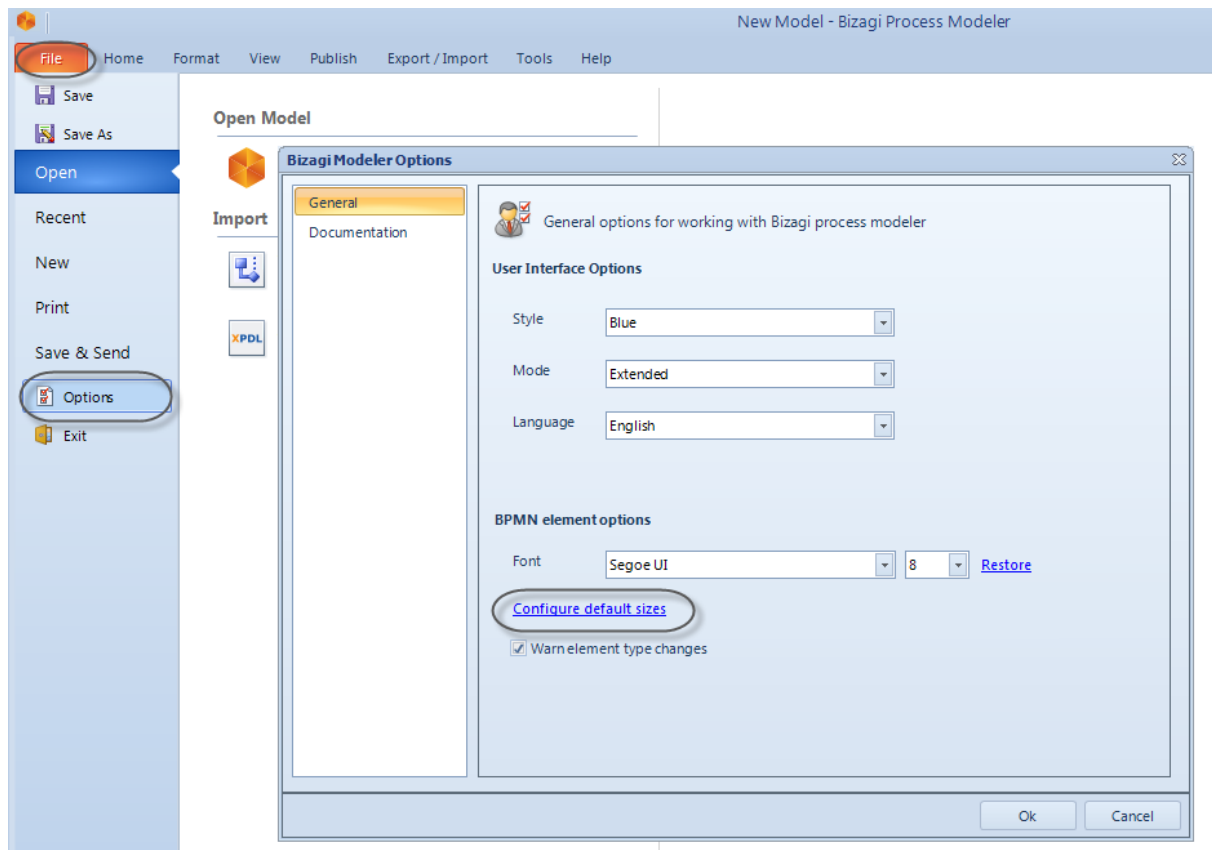


Note that you may also restore this setting to Bizagi's default text style and size (Segoe UI, size 8) by clicking on the **Restore** option.

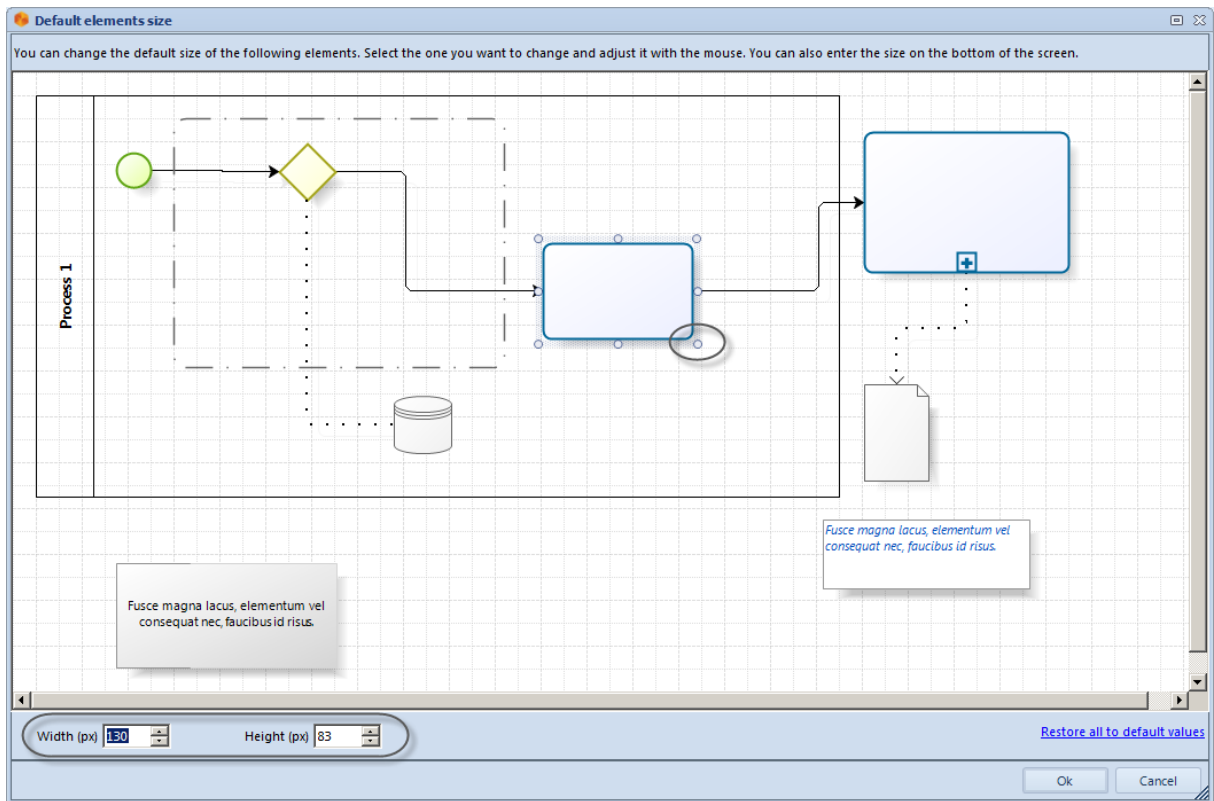
Set default size for elements

In the **File** Tab, select **Options**.

In the new window, click **Configure default sizes**.



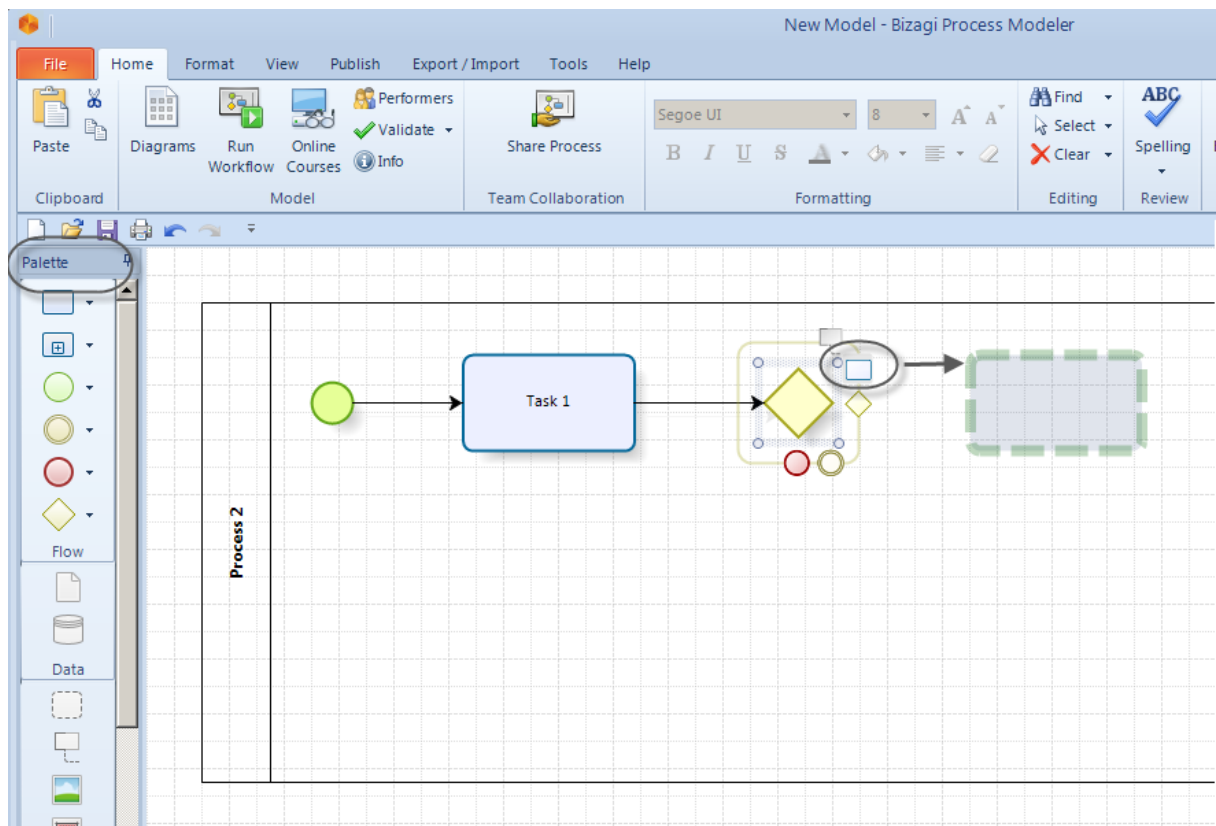
To alter the size of an element, you can either do so with the mouse (drag one of the element's corners to size), or directly enter the pixels dimensions in the **Width** and **Height** fields at the bottom left of the screen.



Click **Ok** to return to the diagram.

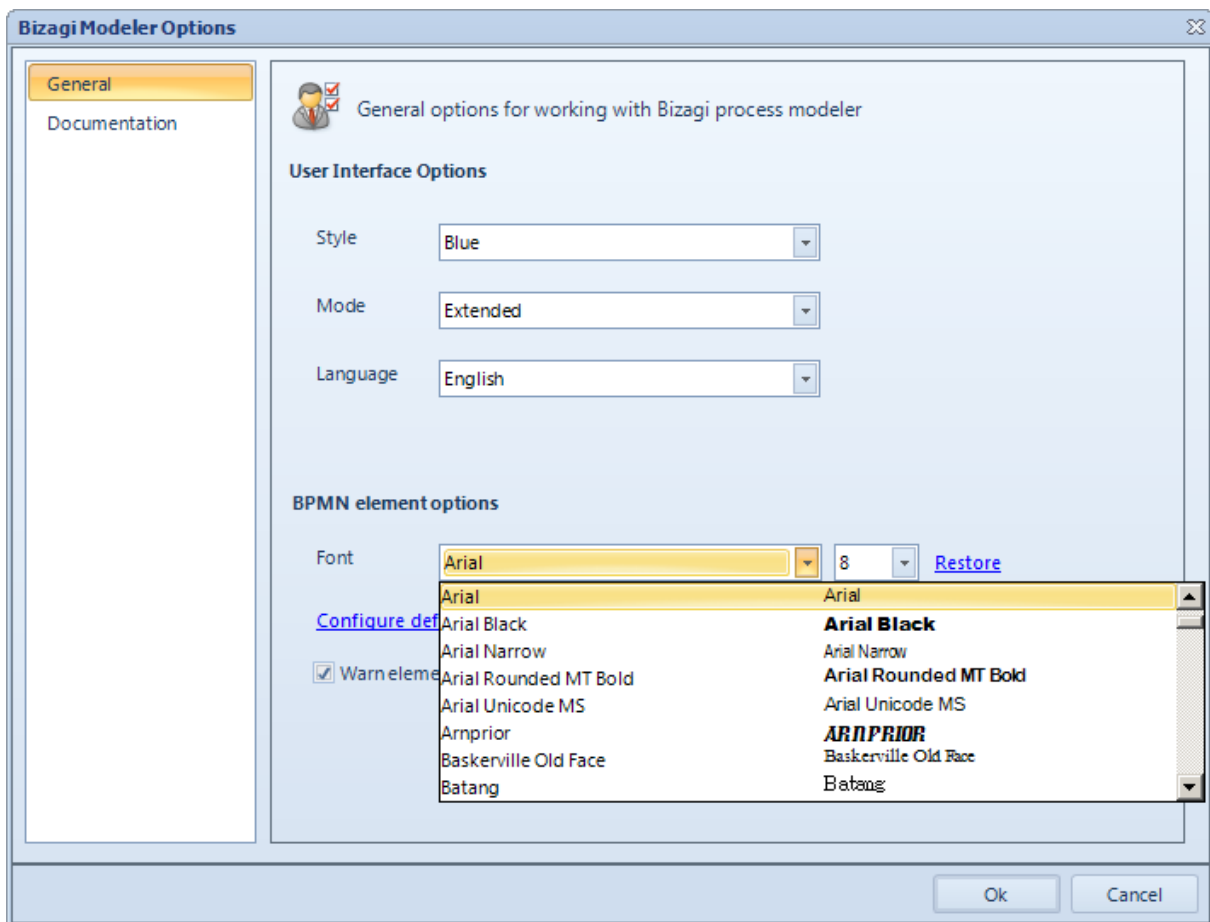
Elements, from this point onwards, will be created with the default size

The default setting will apply to both the Palette and Pie Menu components.

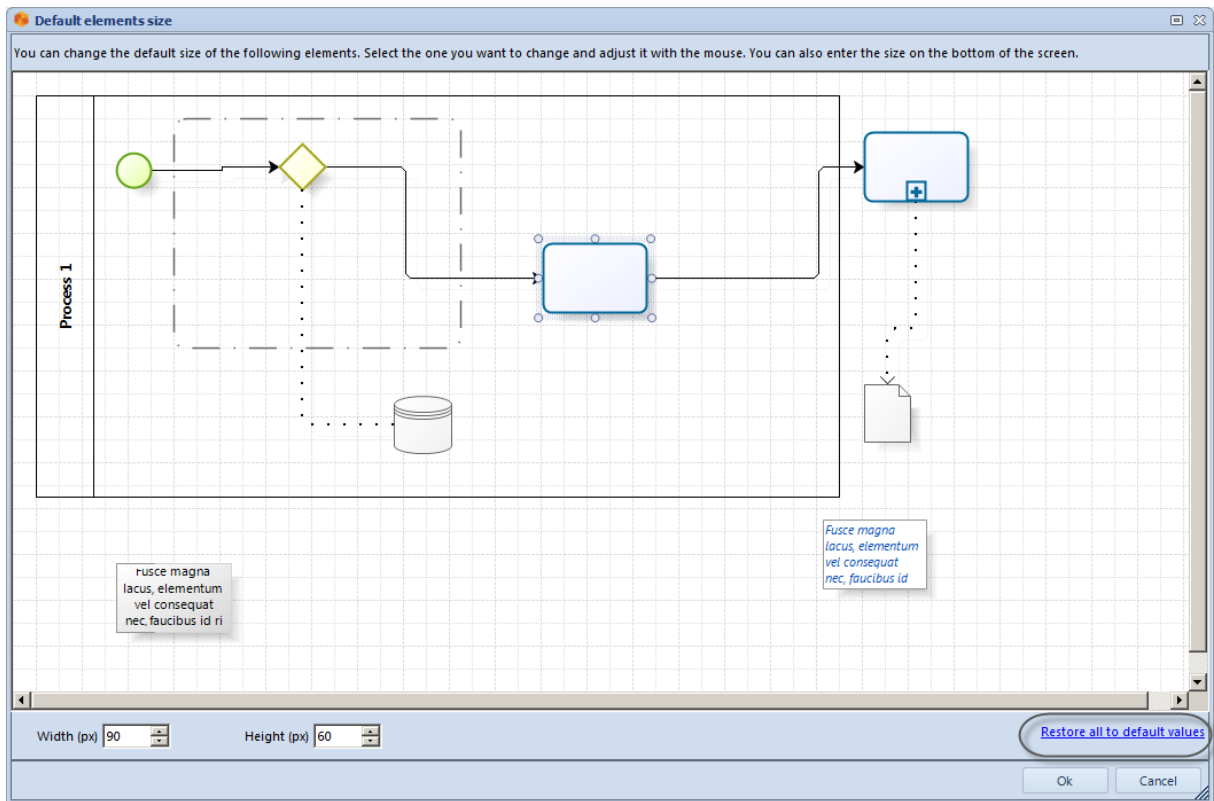


Restore to defaults

To restore the altered font size (revert to Bizagi Modeler's default, namely Segoe UI, size 8), use the **Restore** option in the Options window.

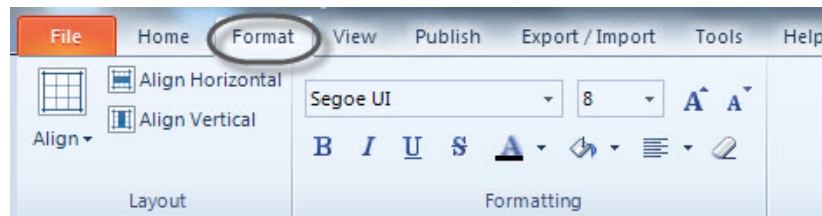
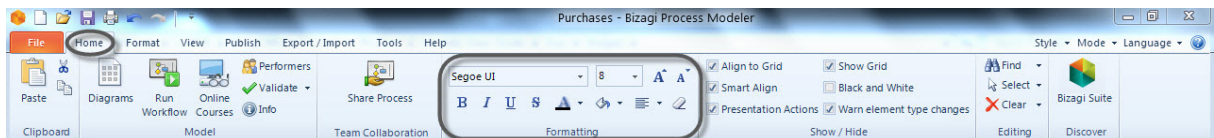


Similarly, to restore the element's size to Bizagi Modeler's default, use **Restore all to default values** option.



Customize existing diagrams

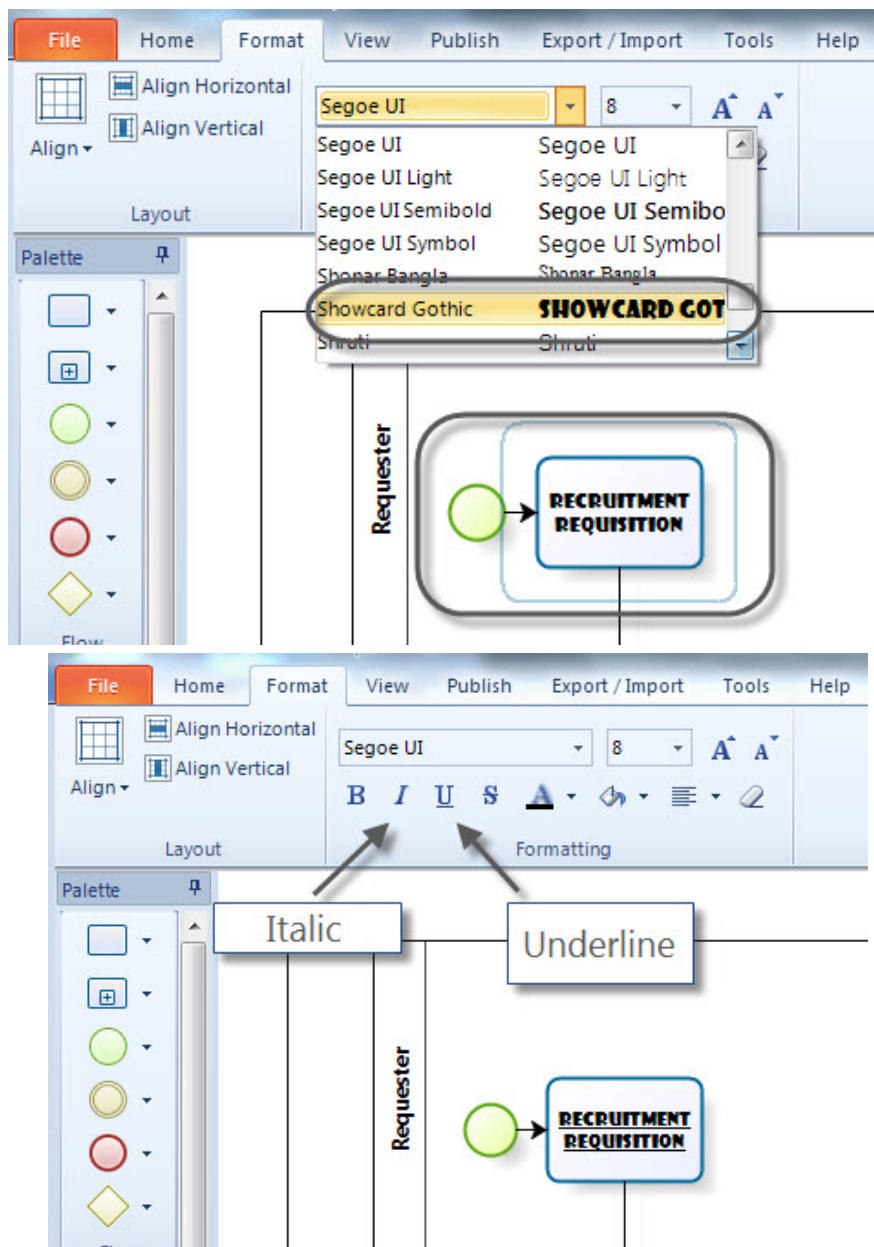
To customize a diagram, select the desired format in the **Formatting** group of the **Home** or **Format** tab.



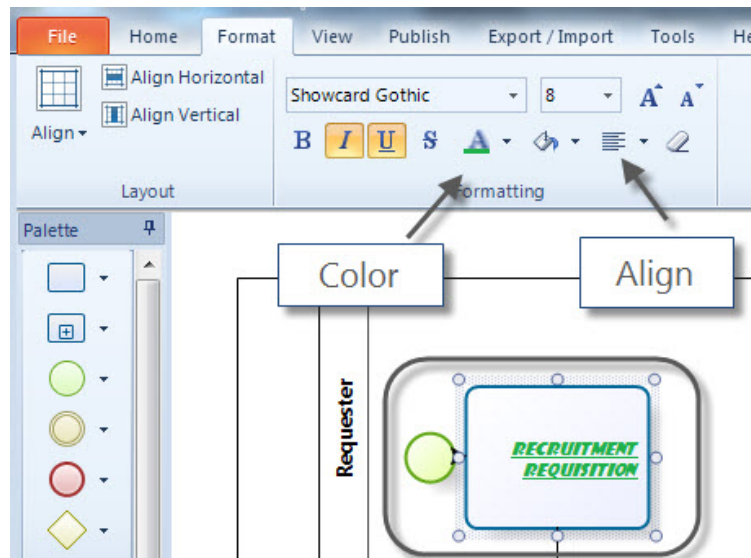
Text formatting

Select the diagram element, then choose the desired format from the **Formatting** group. The examples below show how to change the font style, italicize text and make the text bold.

To change the font face, click the arrow next to the Font combobox, then select the style from the drop-down list. Click the **Italic** or **Underline** icon to italicize and bold text respectively.



To change the font color, expand the Font Color drop-down list and select the color of your choice. For alignment, expand the Align drop-down list and select from Left, Center or Right align.

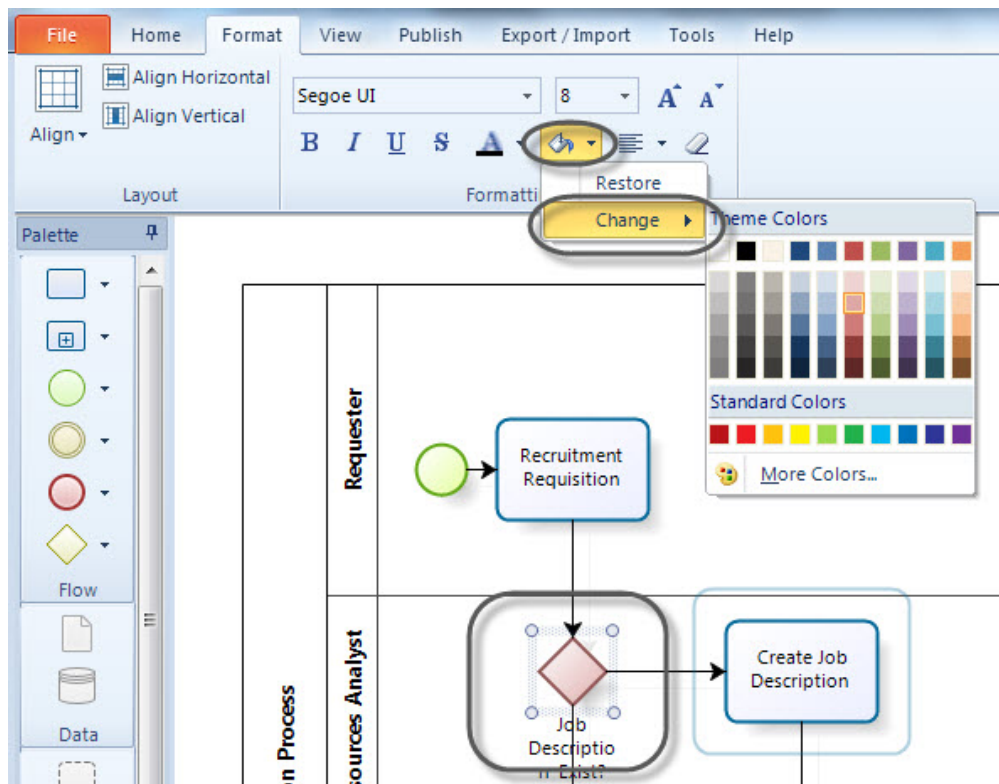


Shading of elements

It is possible to change the background color of your diagram, as well as for all elements (this includes shapes, connectors, Pools, Lanes, or Milestones).

To do this, select the element you wish to customize.

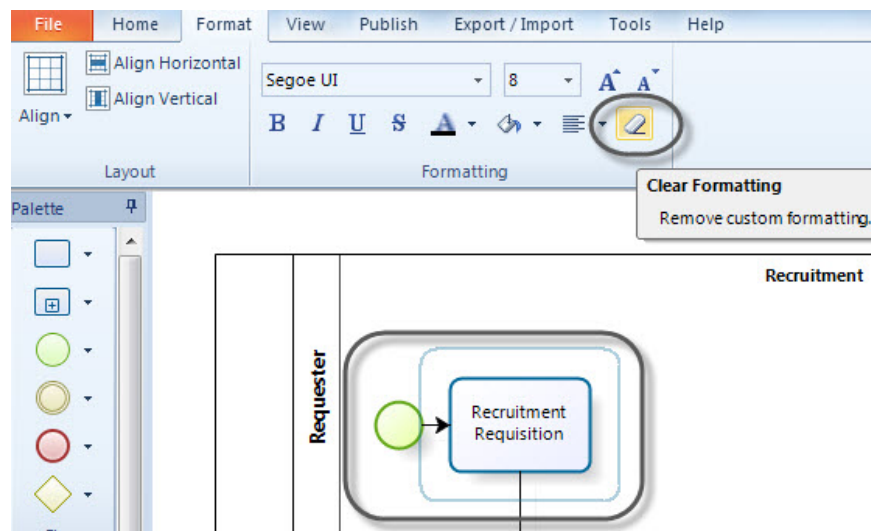
Click the arrow next to **Shading** to select the **Change** option. Expand the **Change** drop-down and select the appropriate color from the background color palette.



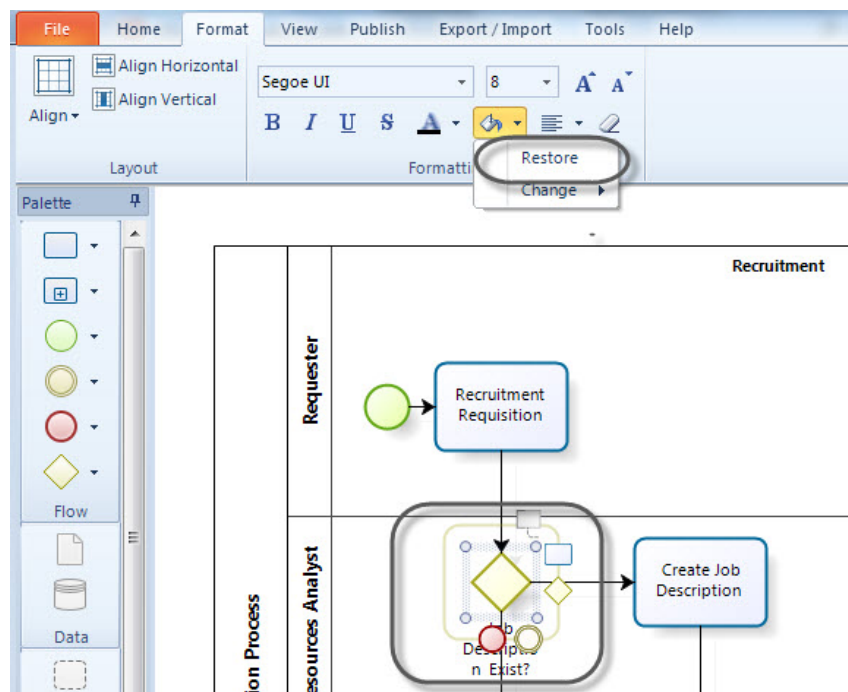
Bizagi uses gradient fill by default for these background colors, however you may alter this setting. For more information about disabling the gradient fill, refer to the sections below.

Restore to default settings

To clear all formatting and revert to the default style, select the diagram you want to restore and click on the **Clear Formatting** icon.



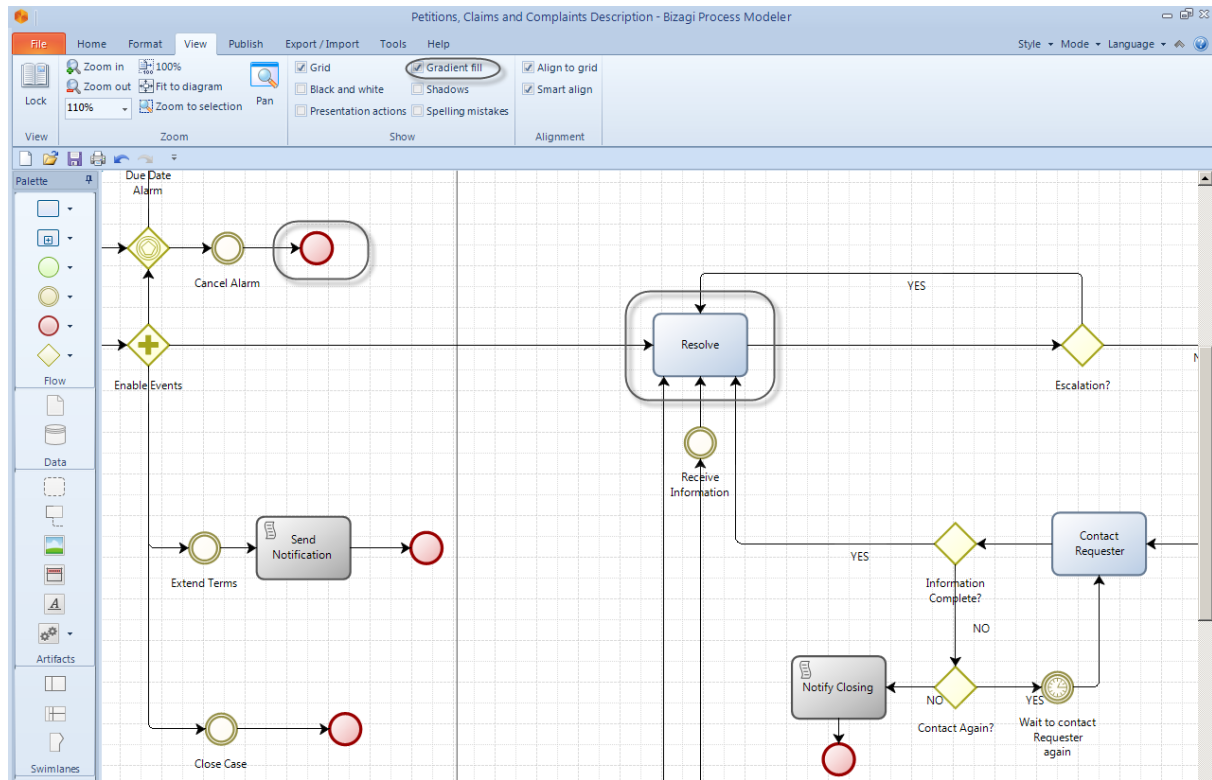
Click on the arrow next to **Shading** and select the **Restore** option to revert to the original color.

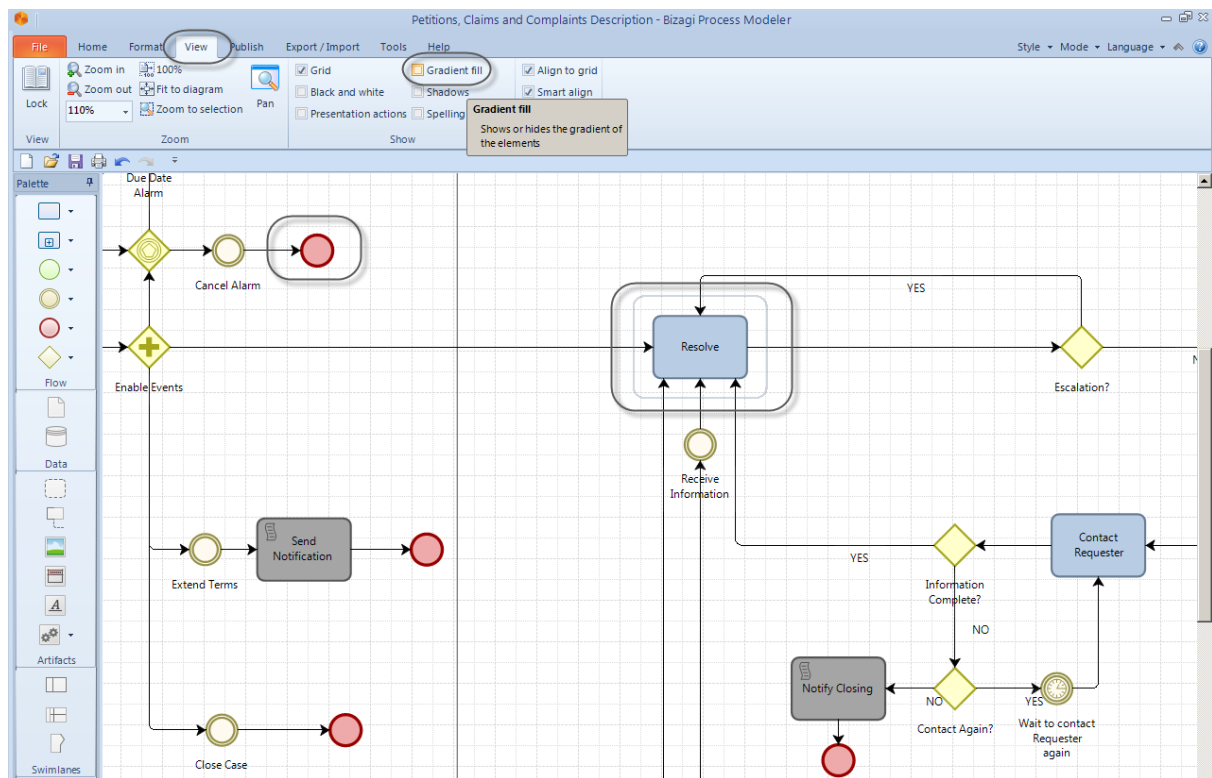


Disabling Gradient-fill

To disable gradient fill in element colors, go to the **View** tab and locate the **Show** group.

In this group, you may disable or enable the Gradient option so that the color of the elements (i.e., Gateways, Tasks, Events and Sub-processes) are not shown/published/printed with a gradient fill.

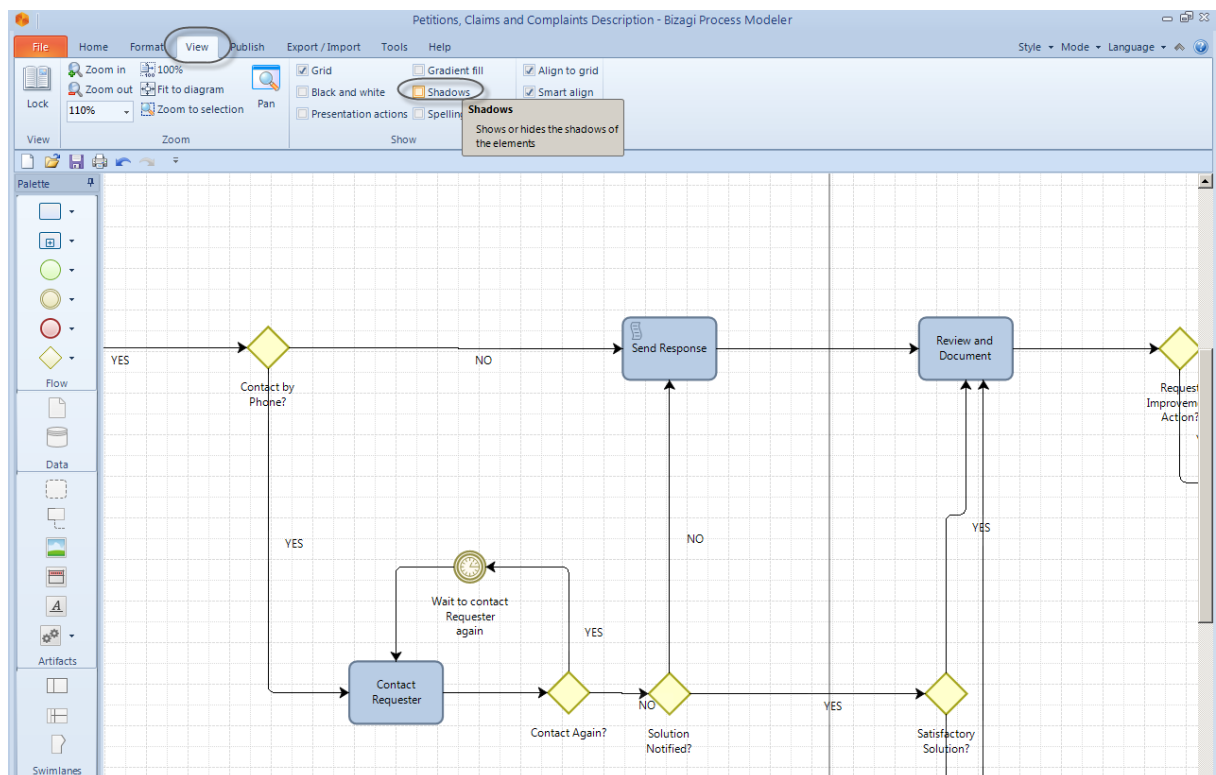
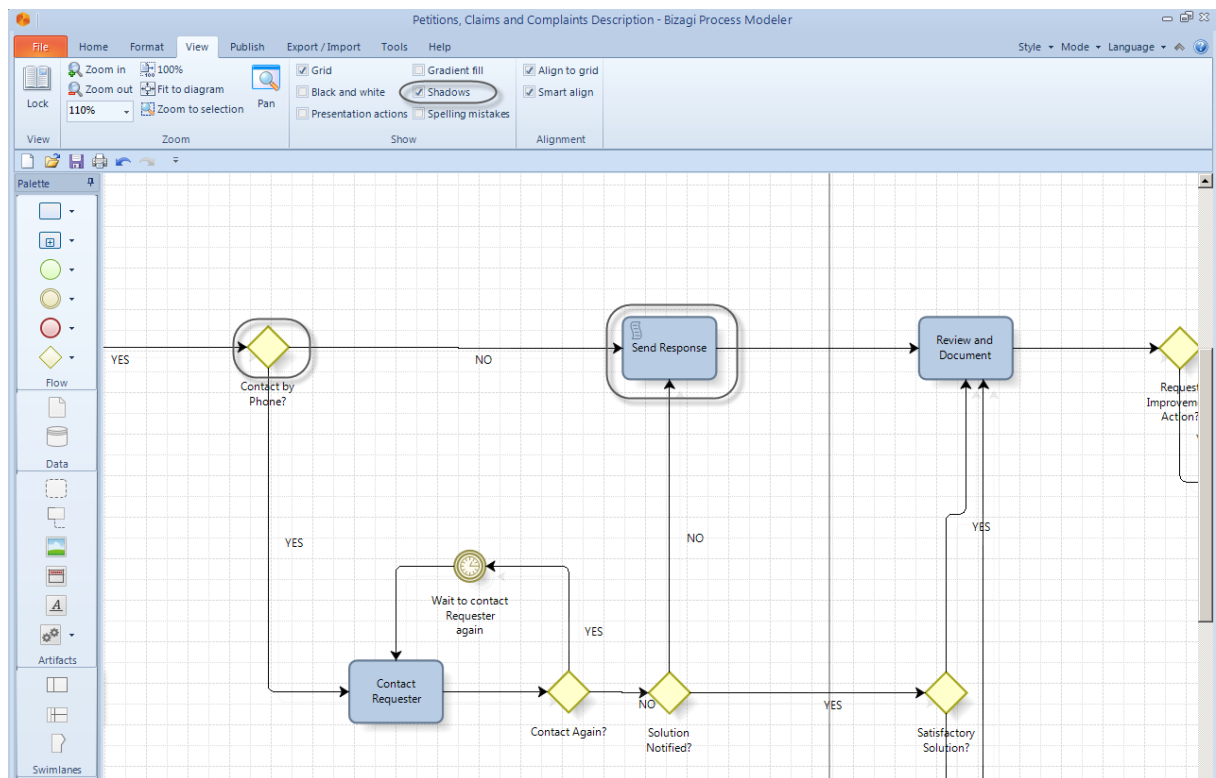




Disabling Shadows

To disable shadows-styled elements, go to the **View** tab and locate the **Show** group.

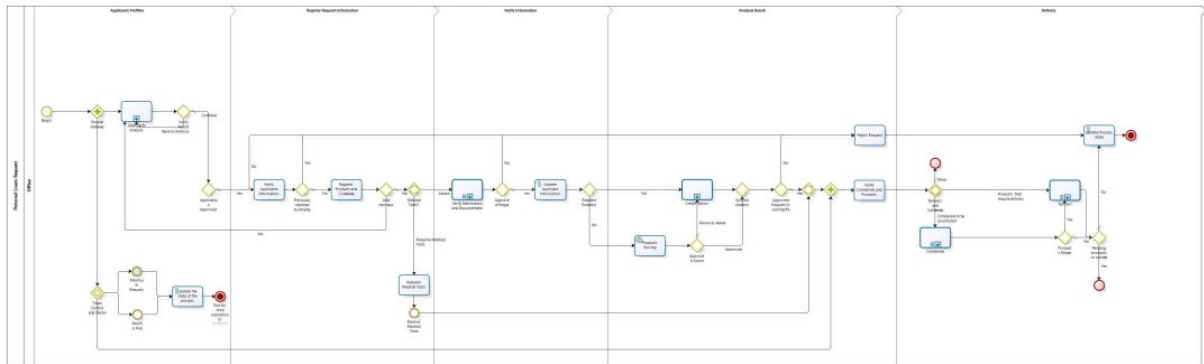
Under this group, you may disable or enable the **Shadows** option so that elements such as Gateways, Tasks, Events and Sub-processes do not show/publish/print the drop shadows.



Printing large diagrams

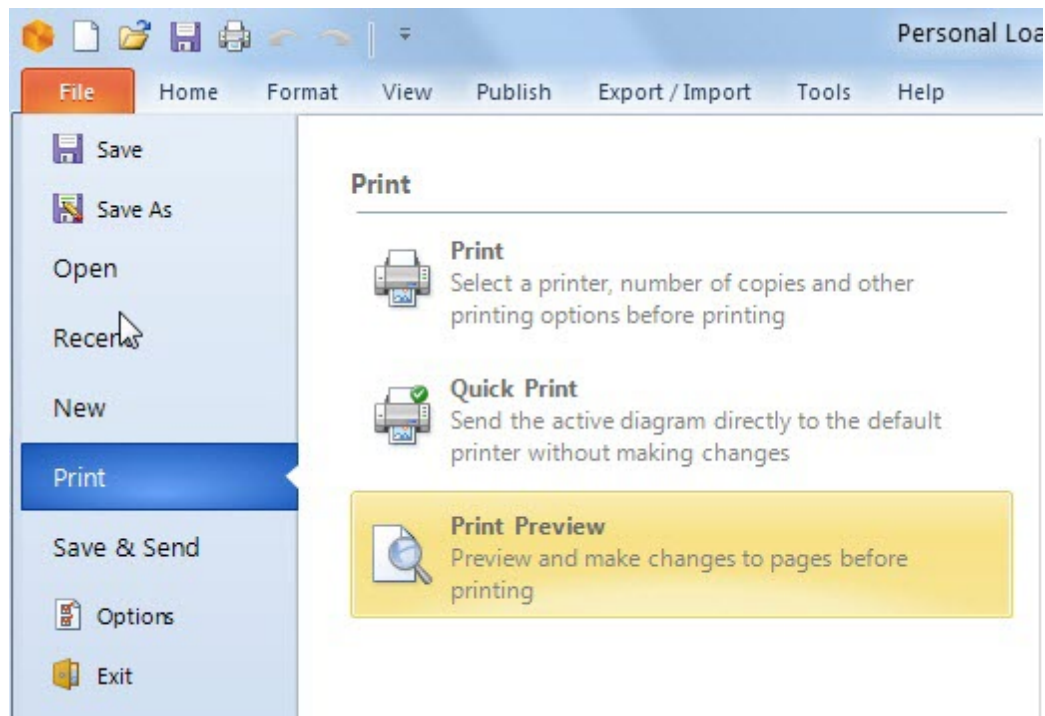
You can print large diagrams by customizing the print settings of the diagram. You can set the paper size, scales, margins, number of pages, among other things.

To illustrate how to print large diagrams we will use the [Personal Loans Request](#) process that you can find in our **free** Process Central. This is a complex process where the length makes it a perfect example for using customized print settings.

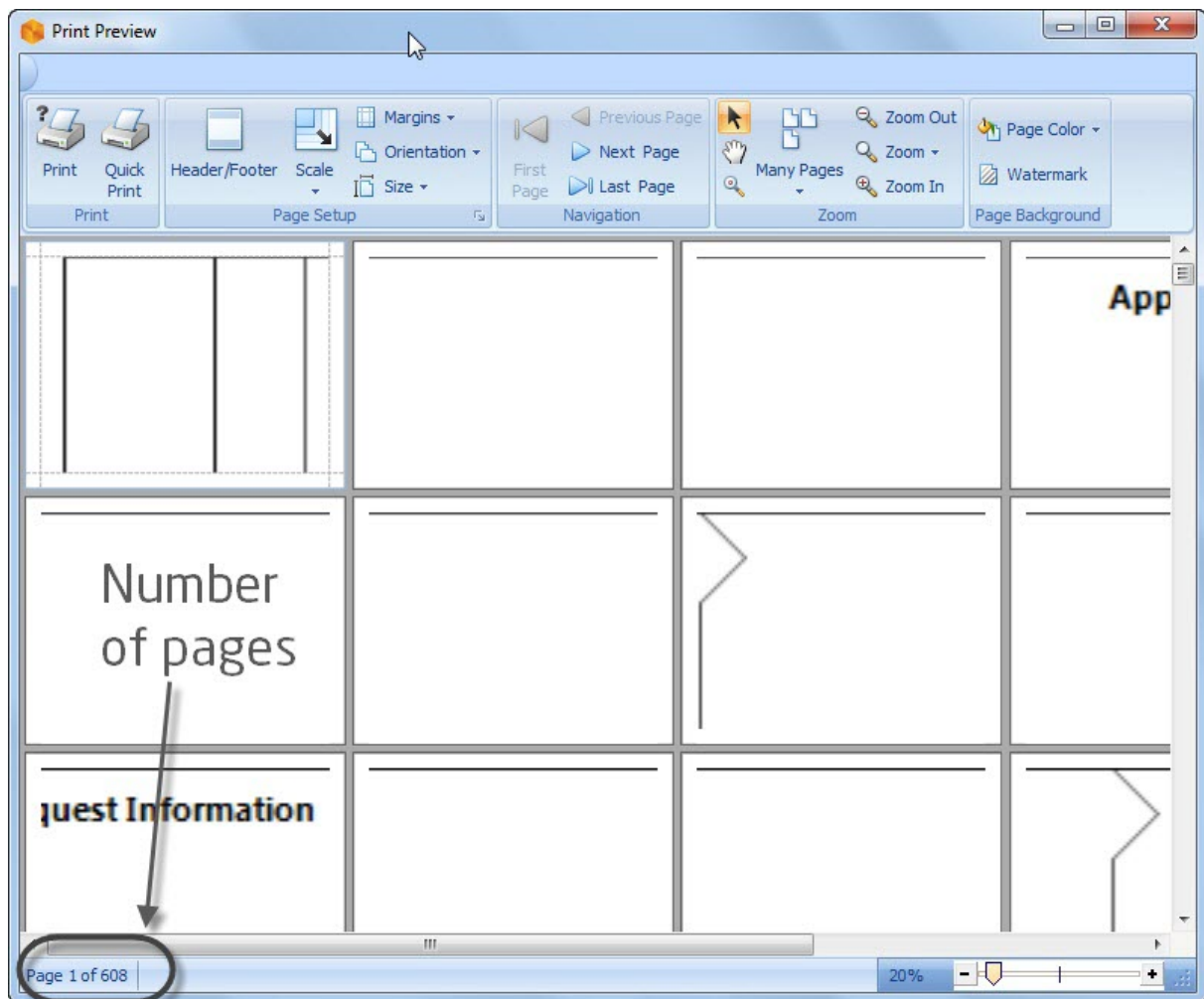


It is necessary to change the Printing default settings by following the steps described below.

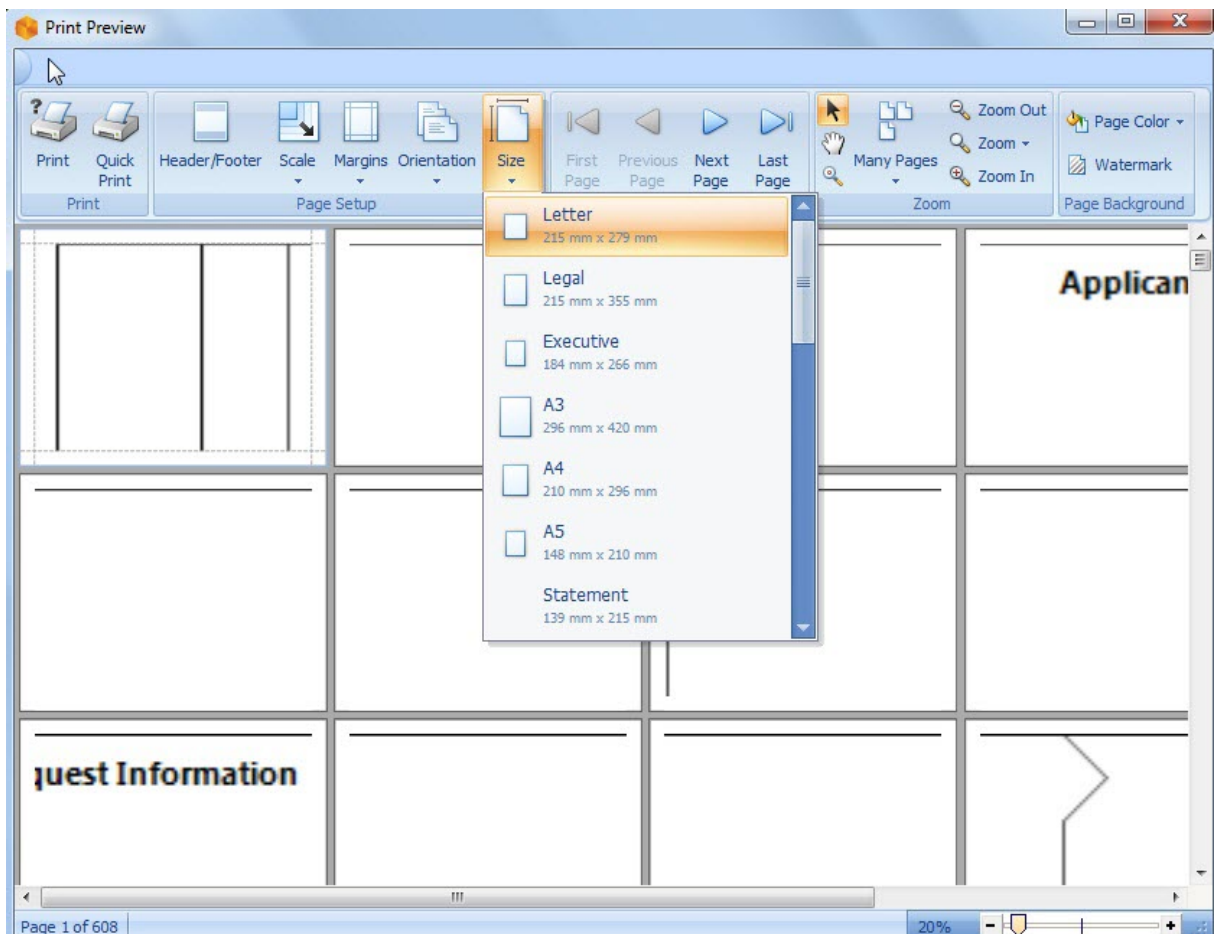
1. On the **File** tab, in the **Print** option, select **Print Preview**.
Alternatively you can use the **Ctrl+p** shortcut.



The diagram is displayed over several pages. Thus the default settings are not suitable for immediate printing.

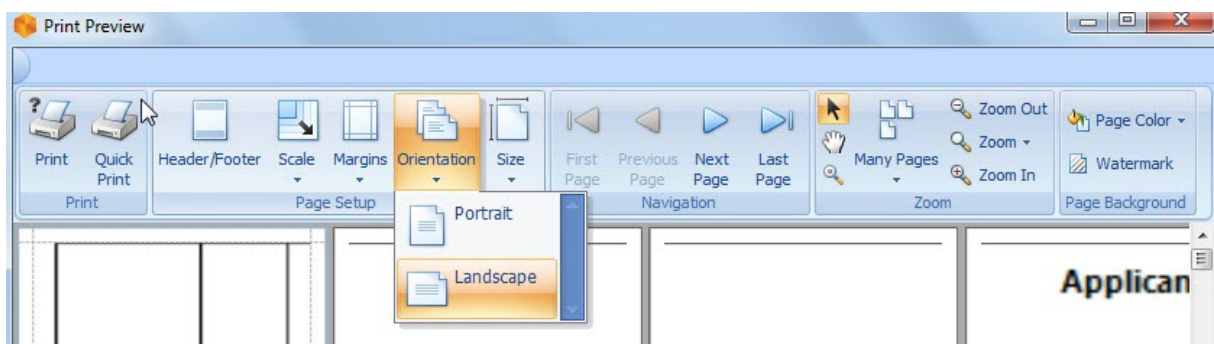


2. In the **Page Setup** group, click the arrow below **Size** and select the desired size option. Choose the paper size, which you will use to print the diagram on, from the list of available sizes.

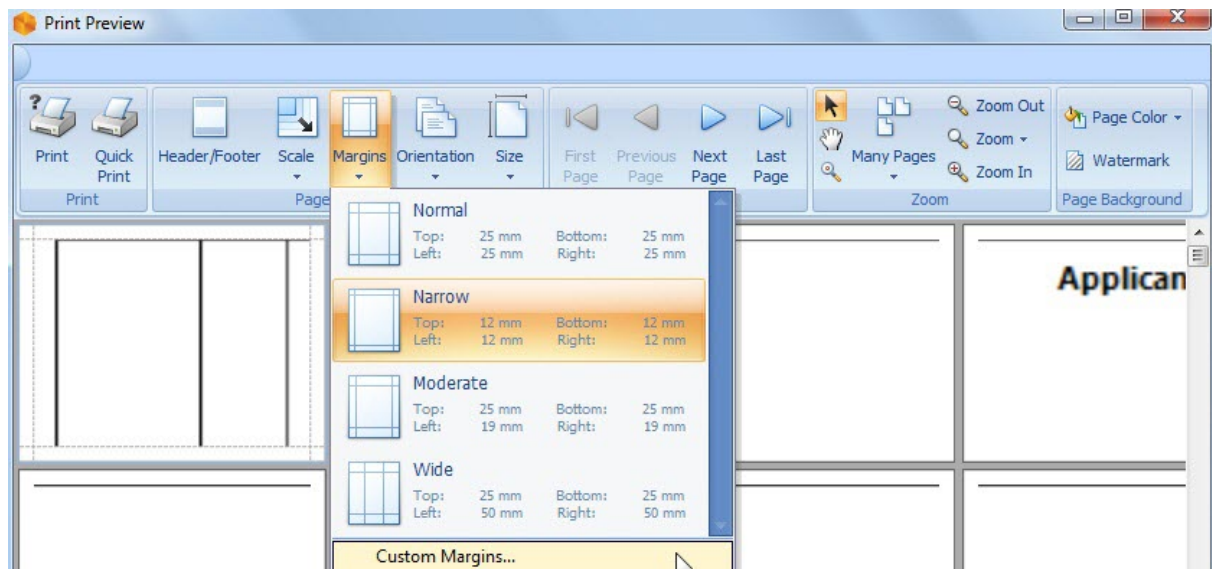


3. In the **Page Setup** group, click the arrow below **Orientation** and select either **Portrait** (vertical) or **Landscape** (horizontal).

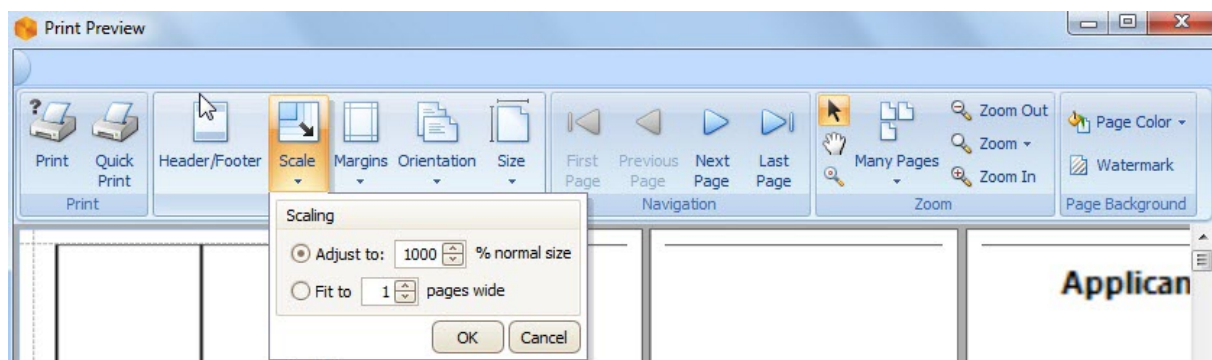
In this case, since the diagram is long but not too wide we opt for the landscape orientation.



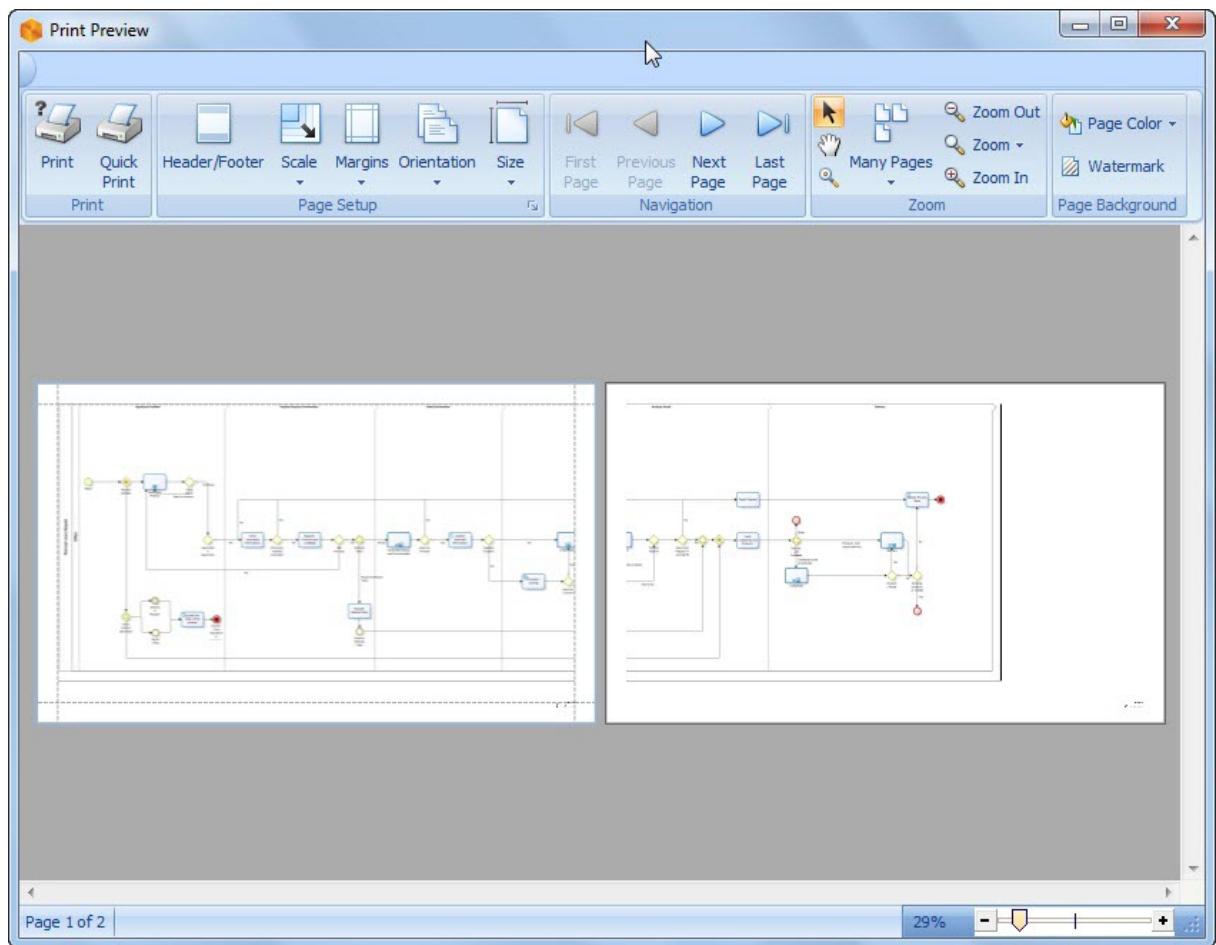
4. On the **Page Setup** tab, click the arrow below **Margins** and select the desired Margin from the drop-down list. We select **Narrow** margins, in this case, to give the process as much space in each sheet as possible. You may choose your own customized margins.



5. On the **Page Setup** tab, click the arrow below **Scale** and change the diagram scale. The top option sets a percentage of the normal size of the diagram. Choose the percentage that best fits your diagram. **At the bottom, select the number of pages to fit your diagram on.**



As you change the print settings, the diagram will be adjusted and the print preview displayed.





Part IV

Documenting a process

Documenting a process

Bizagi Modeler allows you to document in addition to modeling your processes. You can include information at process level as well as detailed information at an element (element) level in your diagram. We recommend the inclusion of all relevant information to make the document readable and easily understood.

Once your process diagram and documentation is complete, you can publish the documentation in your preferred format.

For further information please refer to [Publish or Export process documentation](#).

Documenting each element

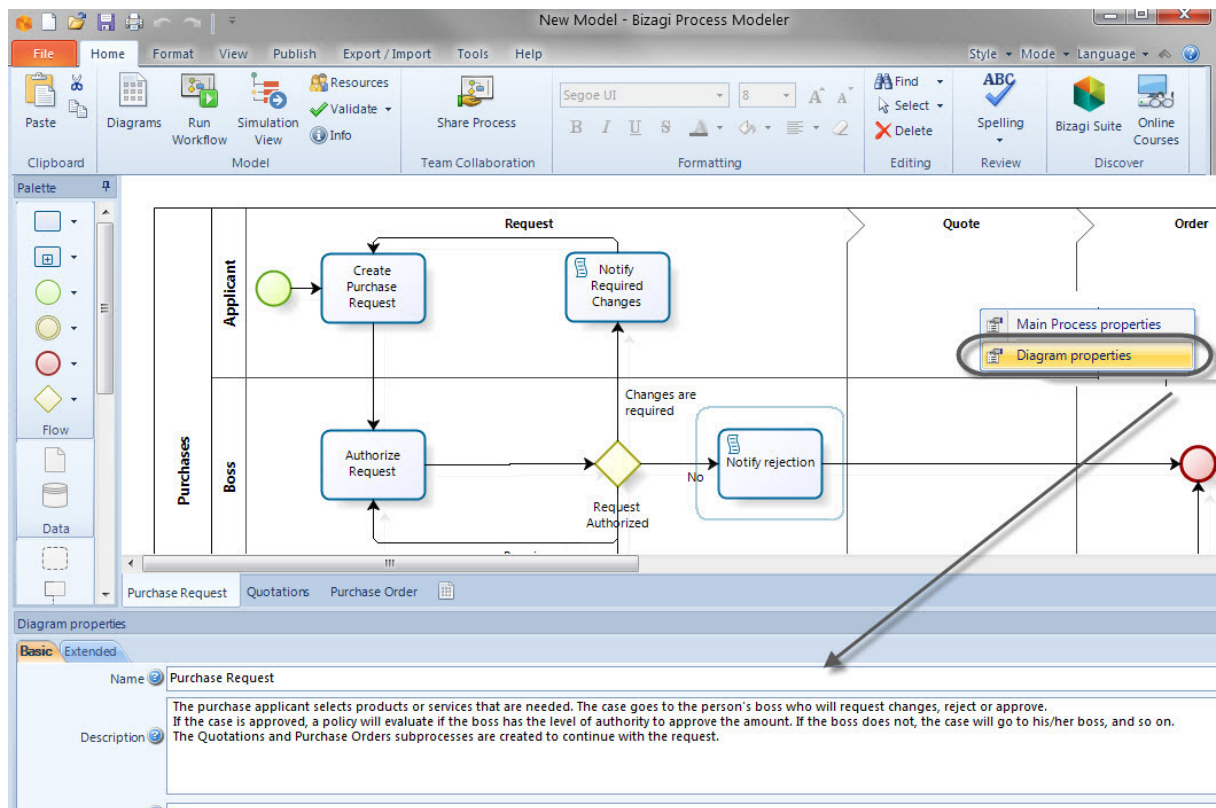
Document at process level

The information included at process level describes the overall process.

By default you can include the following information: Name of the process, description, the version and the author.

Right-click outside of the boundaries of the pool and select **Diagram Properties**.

This will enable the **Diagram properties** add-on window at the bottom of the screen, where you can include the relevant information.



We recommend to include extended information such as the scope, goal, process owner, important definitions and any annex. To learn how to include additional information please refer to [Extending your](#)

[documentation](#).

Such information may be included with rich-text formatting.

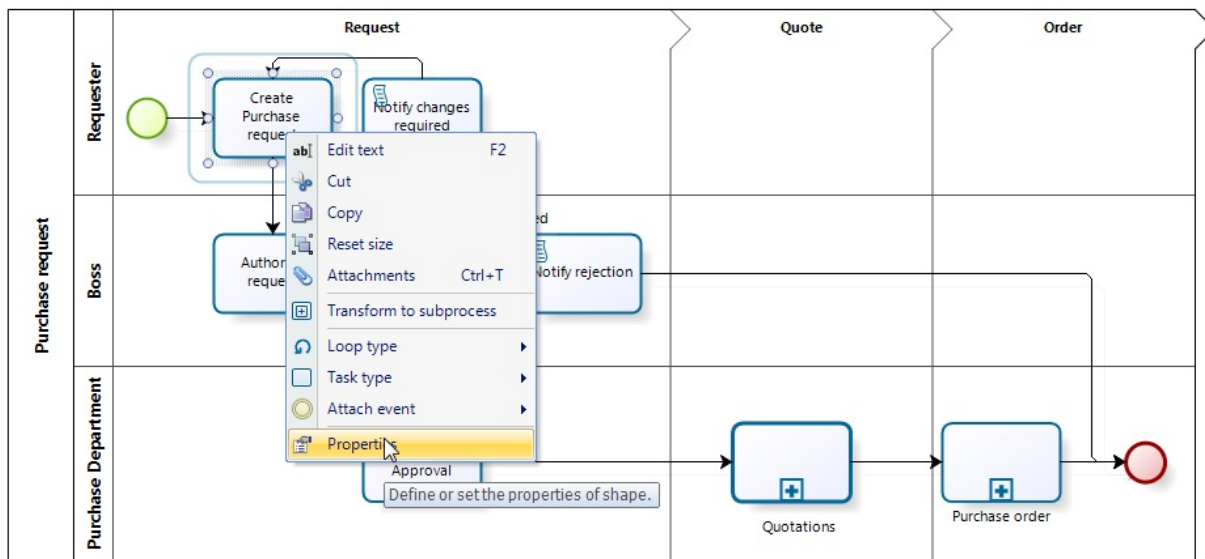
To learn more about this option, refer to [Using rich-text formatting](#).

Document activities and elements

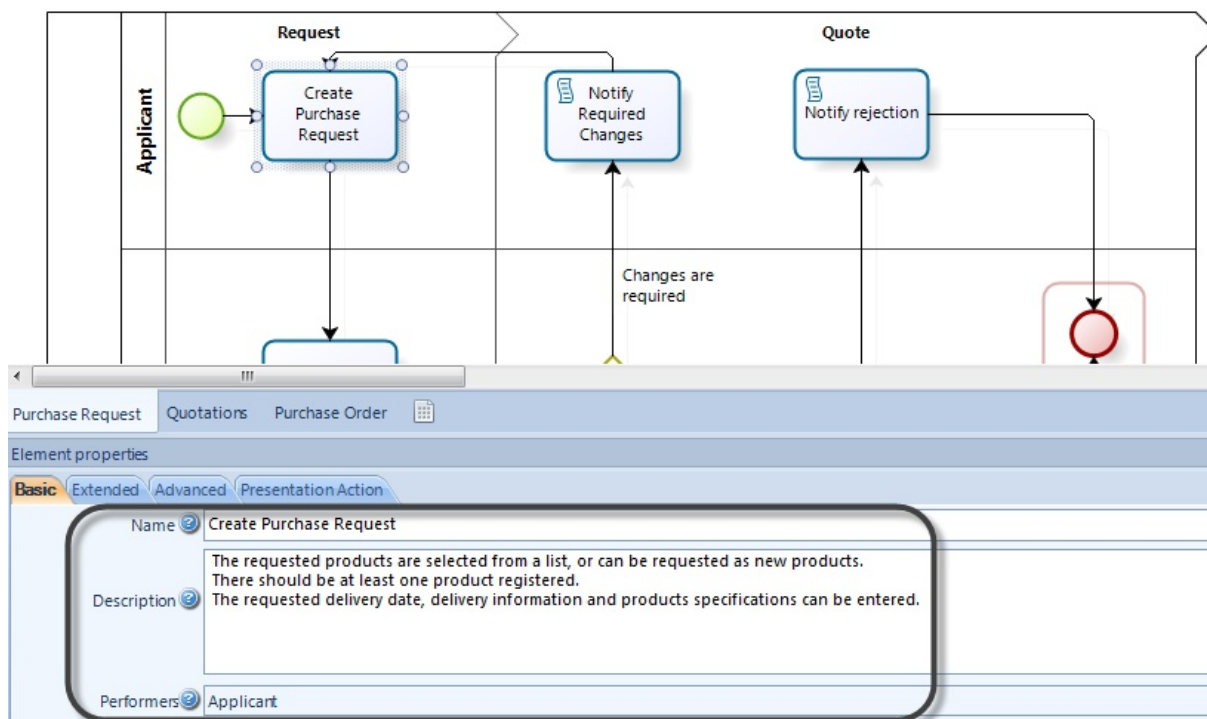
The information included in each element gives you the possibility to enter detailed information about each step of your flow.

By default you can include the Name of the element and a complete description. In Activities you can also include Resources.

1. Right-click on the element you wish to document and select **Properties** from the display menu.



2. This will enable the **Element properties** add-on window at the bottom of the screen, where you can include the relevant information.



Insert all relevant information focusing on being as clear, thorough and informative as possible. This is essential to ensure the document is readable and the process easily understood for successful execution.

We also advise to include the supplementary information for Activities and Intermediate Events, such as duration, business rules that resources must comply with and any documentation or forms that are used.

If you are automating your process we recommend to include the forms that will be displayed to performers.

- To learn how to include additional information please refer to [Extending your documentation](#).
- To learn more about process automation please refer to [Process Execution](#).

Using Rich Text Format

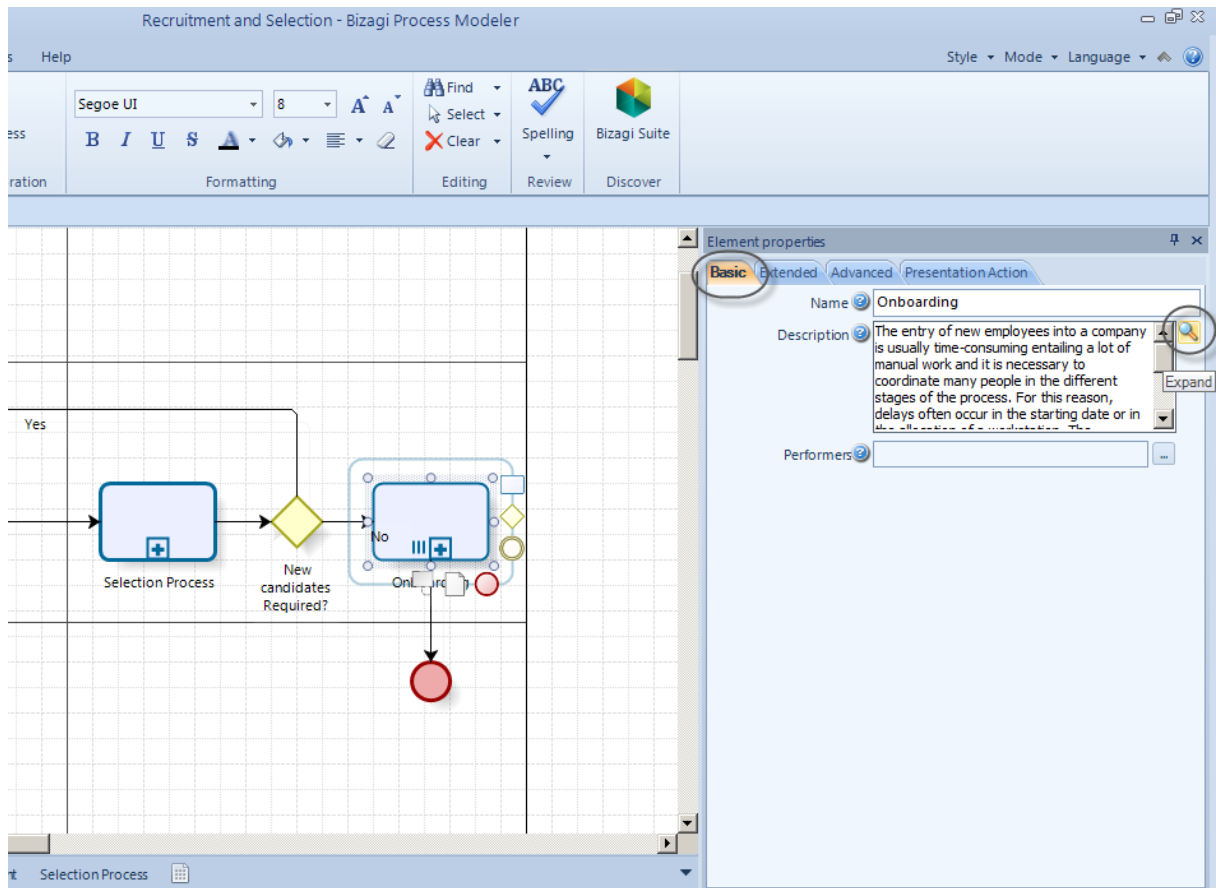
While documenting your processes, you may use rich format for the entered text in both descriptions and extended documentation.

This is, the possibility of having your texts use different font colors, color shading, and styles such as: bold, italic, underlined, as well as other formatting possibilities such as: indentation and bullets, use of tables, links and images, amongst others.

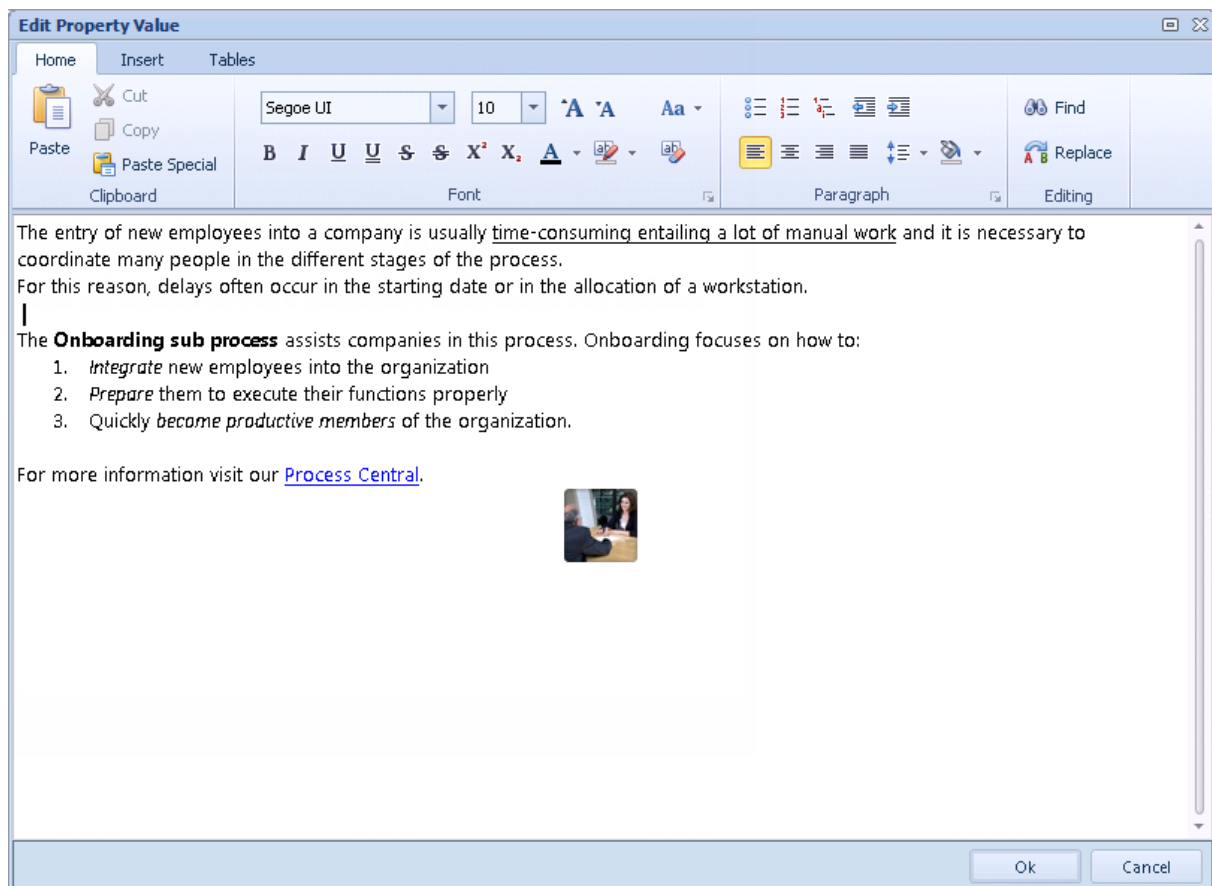
This applies for the information contained in descriptions and extended attributes such as Textareas and Textboxes.

Rich format in descriptions

To define rich text formatting for your elements descriptions, use the **Expand** icon located at the right hand.



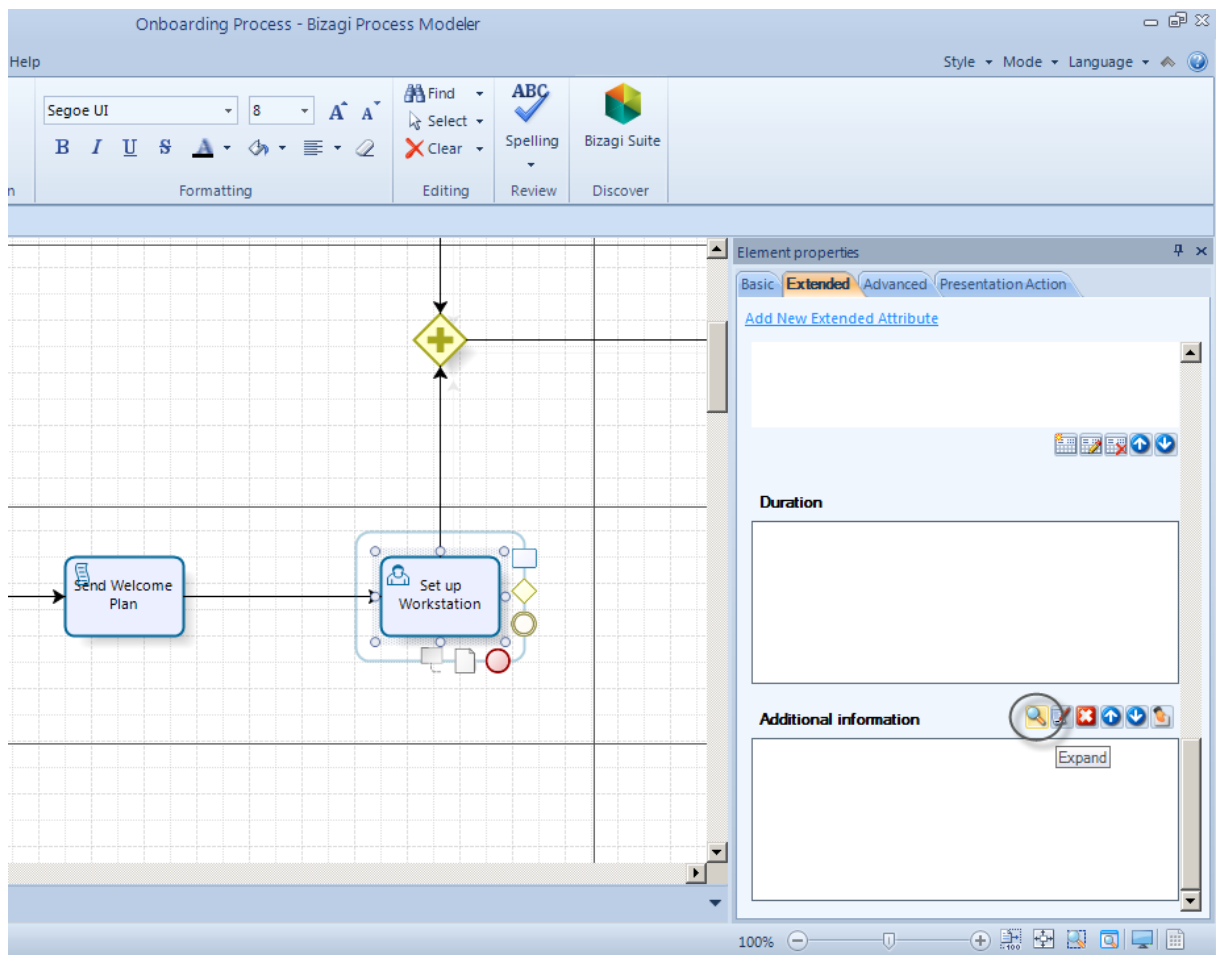
This option will open an edition-mode window, in which you may make full use of the rich formatting options:



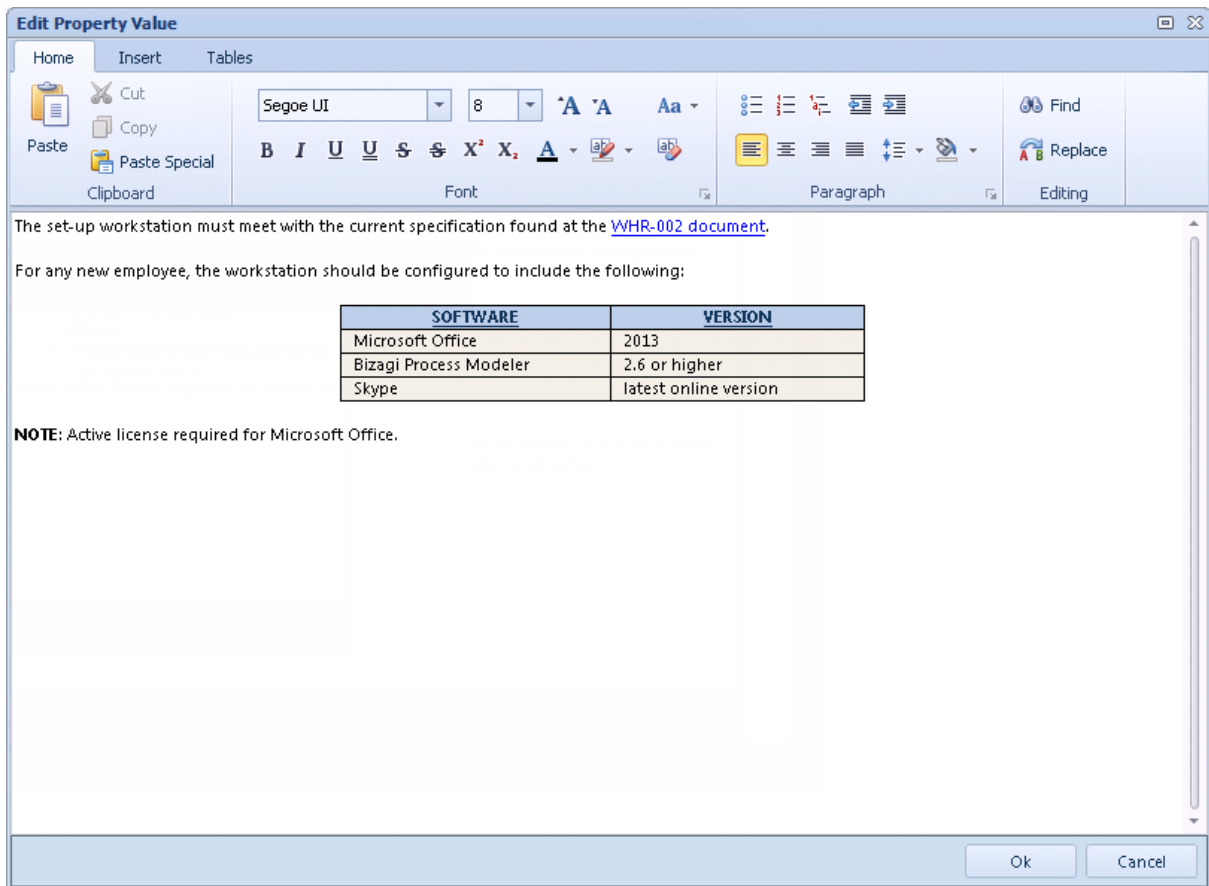
Rich format in extended documentation

To define rich text formatting for your detail in extended attributes (Textareas, Textboxes), use the **Expand** icon.

This icon appears right above the information, when hovering over the extended attribute name.



When clicking on this option, Bizagi will show an edition-mode window, in which you may make full use of the rich formatting options:



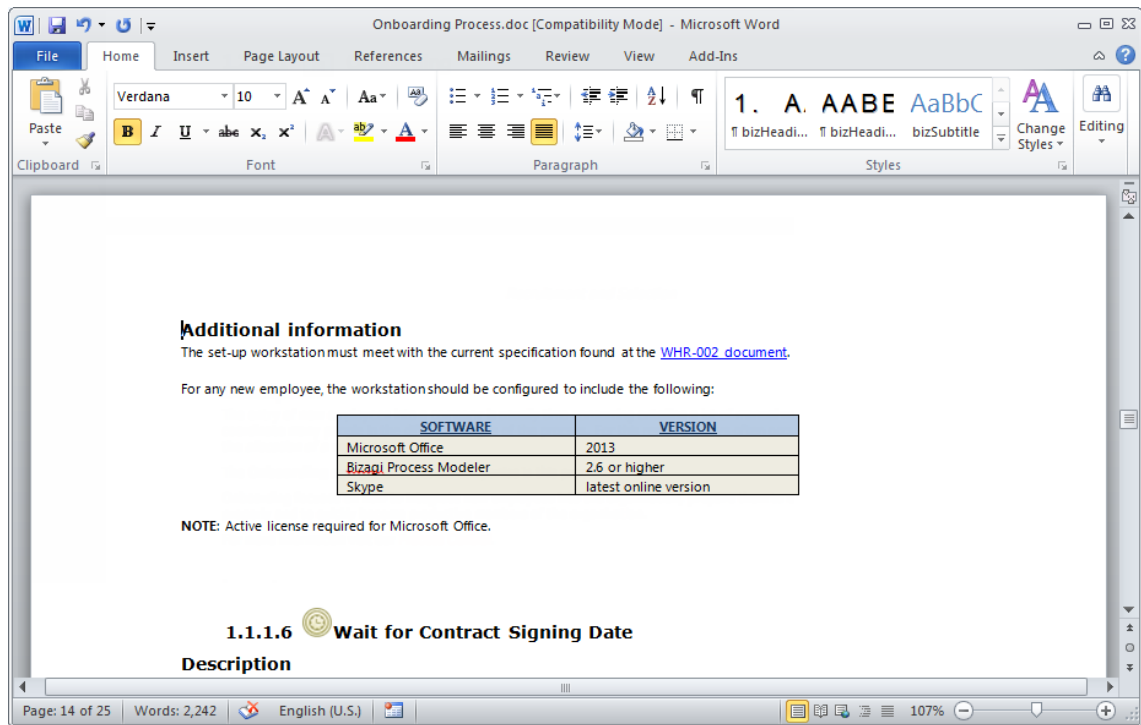
Rich formatting

You may include rich text format to your documentation using the following options:

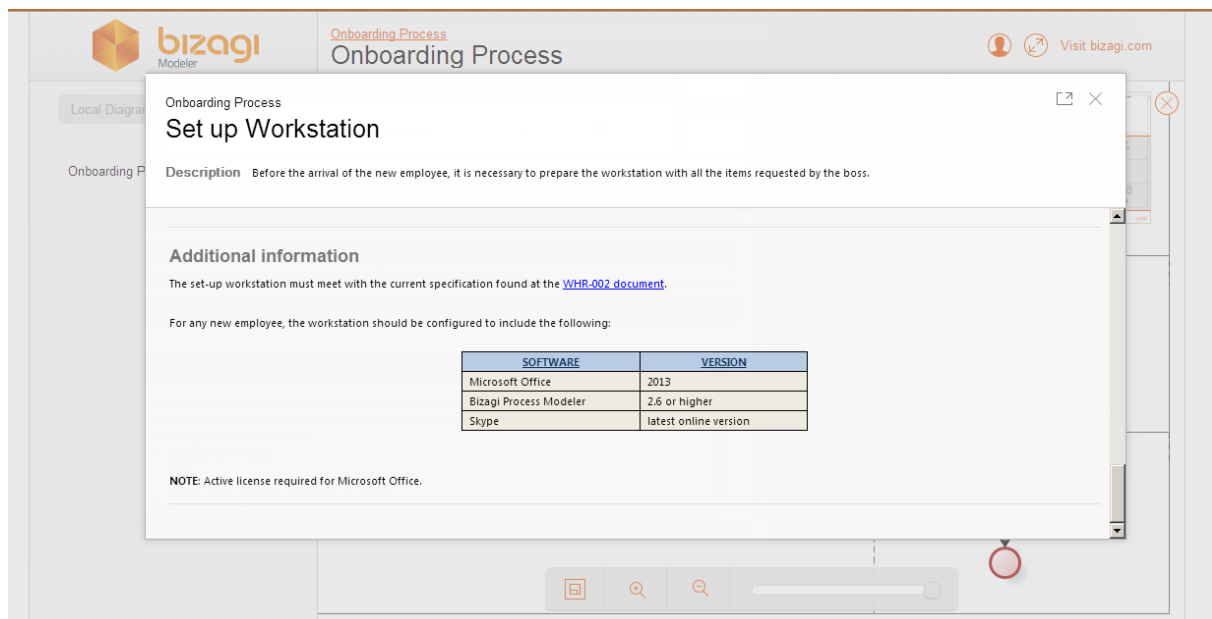
| TAB / GROUP | DESCRIPTION |
|------------------------|--|
| Home / Clipboard | Handle content by using standard clipboard possibilities: Copy, Cut, Paste and Paste special |
| Home / Font | Modify: fonts, font size, emphasis (bold, italic, underlined, strikethrough, etc) and other formatting options such as upper or lower case, and shading color. |
| Home / Paragraph | Define: alignment, indentation, bullets and numbering, spacing and color fill options. |
| Home / Editing | Use: Find and replace options to quickly locate your texts. |
| Insert / Illustrations | Include pictures. |
| Insert / Links | Include hyperlinks to Web pages, or to other places in the content. |
| Insert / Symbol | Include symbols from the standard set of characters. |
| Tables / Table | Allows: creating a table with the desired number of rows and columns, giving quick format, borders and shading to the table, and its rows and columns. |

| | |
|---------------------------|--|
| Tables / Rows and columns | Handle table modifications by inserting or deleting rows and columns. |
| Tables / Merge | Quickly use powerful options to merge or split cells, or split a table into two of them. |
| Tables / Cell size | Define the cell size and property for specific cells. |
| Tables / Alignment | Define alignment and margins involved in cells. |

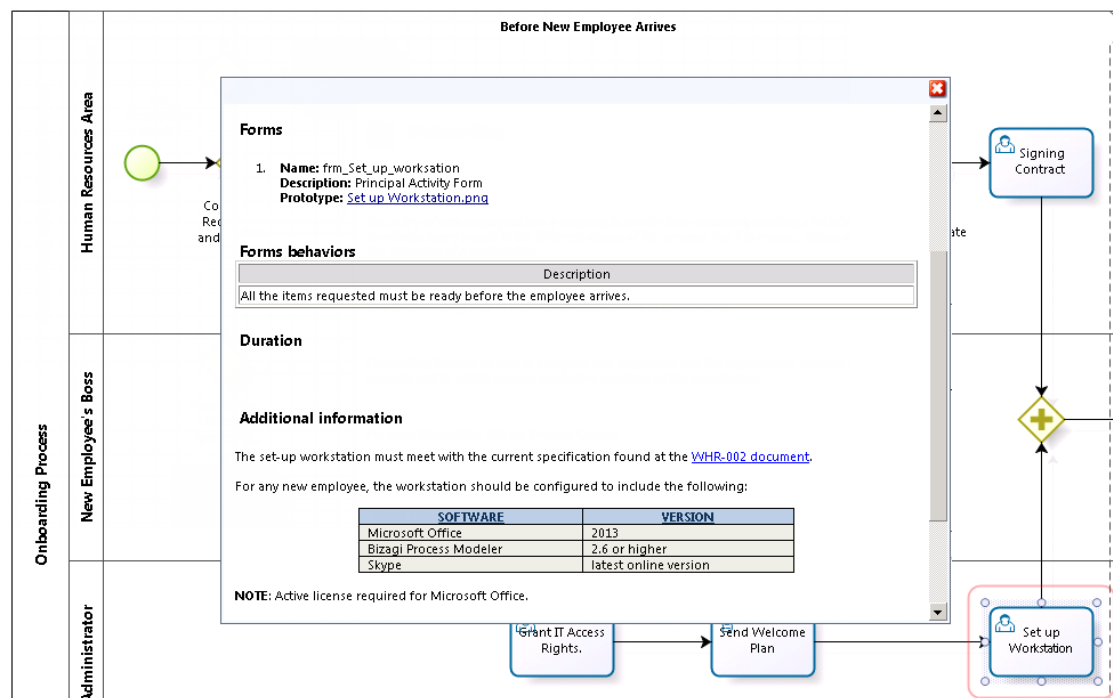
Information with rich text format is published in the generated PDF or Word document:



Information with rich text format published in Web:



Information with rich text format shown in Presentation mode:



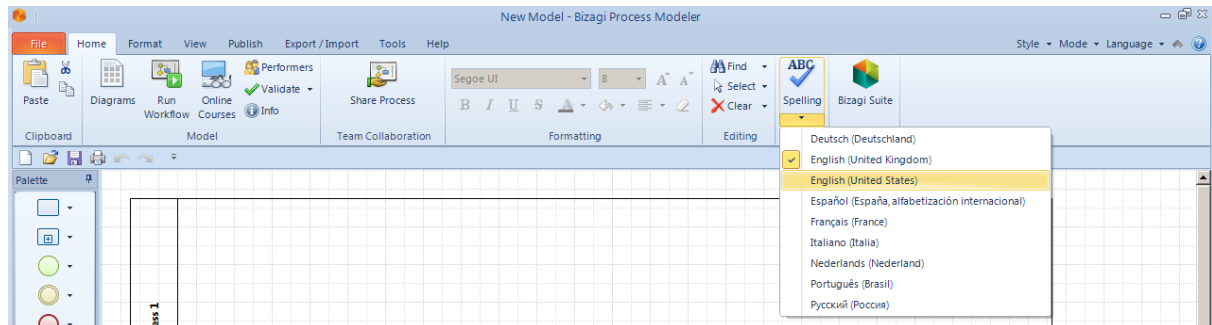
For more information about the generated Web, PDF or Word, and Web documentation, refer to [Generating Documentation](#).

Spelling review

Bizagi offers a proofing option to check for spelling mistakes while documenting the processes.

To use this feature, ensure that the checkbox **Spelling mistakes** at the **View** tab is enabled, then locate the **Spelling** option in the ribbon, at the **Home** tab.

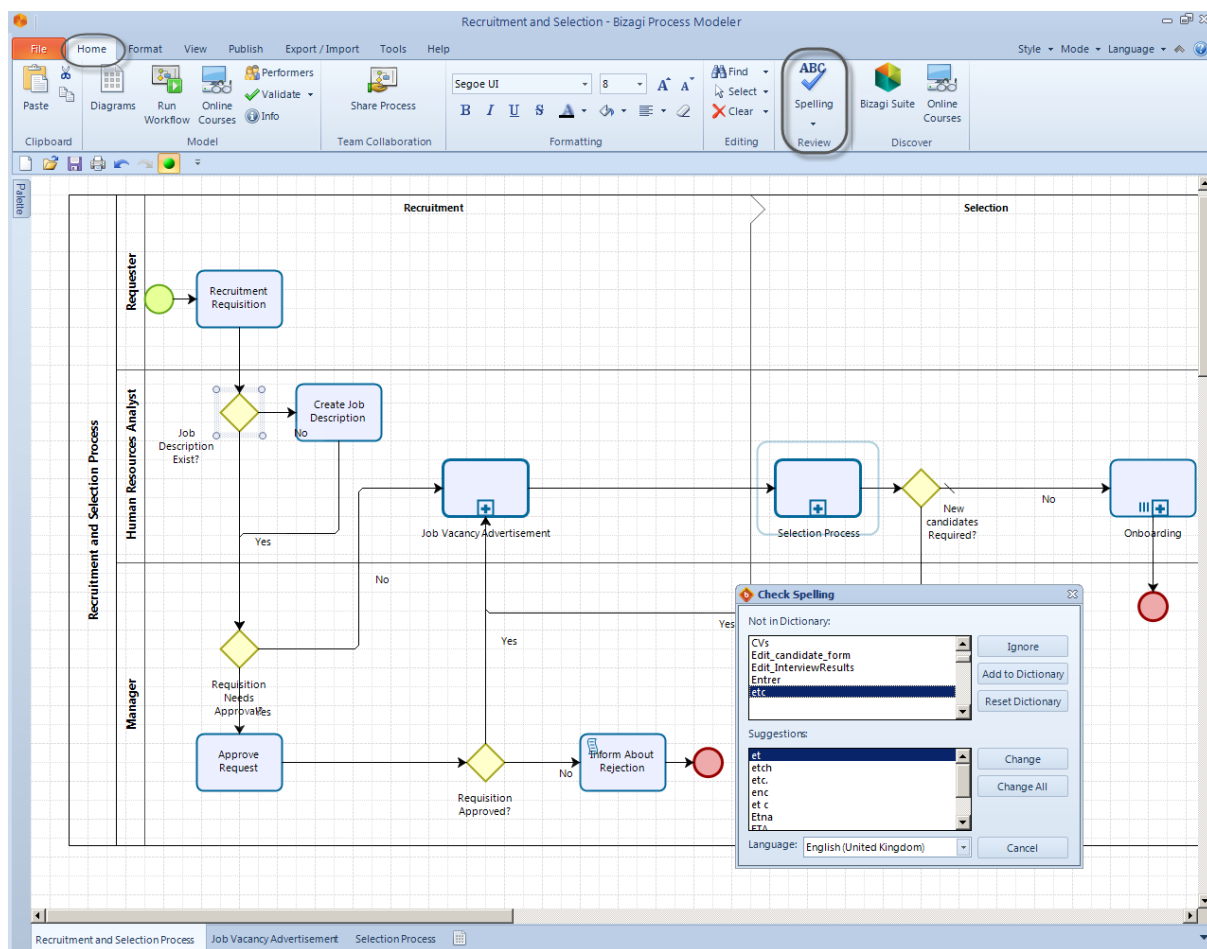
You may choose a predefined language to be used as the default spelling dictionary directly from its drop-down options:



Available language dictionaries are:

- German (Germany)
- English (UK)
- English (USA)
- Spanish (Spain)
- French (France)
- Italian (Italy)
- Dutch (Netherlands).
- Portuguese (Brazil)
- Russian (Russia)

To launch the spelling review, click directly on the **Spelling** option



Proofing options are described in the table below.

| SPELLING REVIEW OPTION | DESCRIPTION |
|------------------------|---|
| Ignore | Ignores the current word and continues proofing the rest of the information. |
| Add to Dictionary | Adds the current word as a valid word to the given Dictionary. In this way, the spelling review will not prompt again to correct these entries. |
| Reset Dictionary | Resets the Dictionary (deletes added entries). |
| Change | Changes the current word for the chosen suggestion. |
| Change All | Changes all occurrences of the current word for the chosen suggestion. |

Defining Gateway conditions

Gateways represent a branching point in the Process, from which more than one path will be possible

(divergence).

When alternative paths are available from a Gateways (especially for Exclusive or Inclusive types), documentation is included as conditional expressions for each decision branch representing a path.

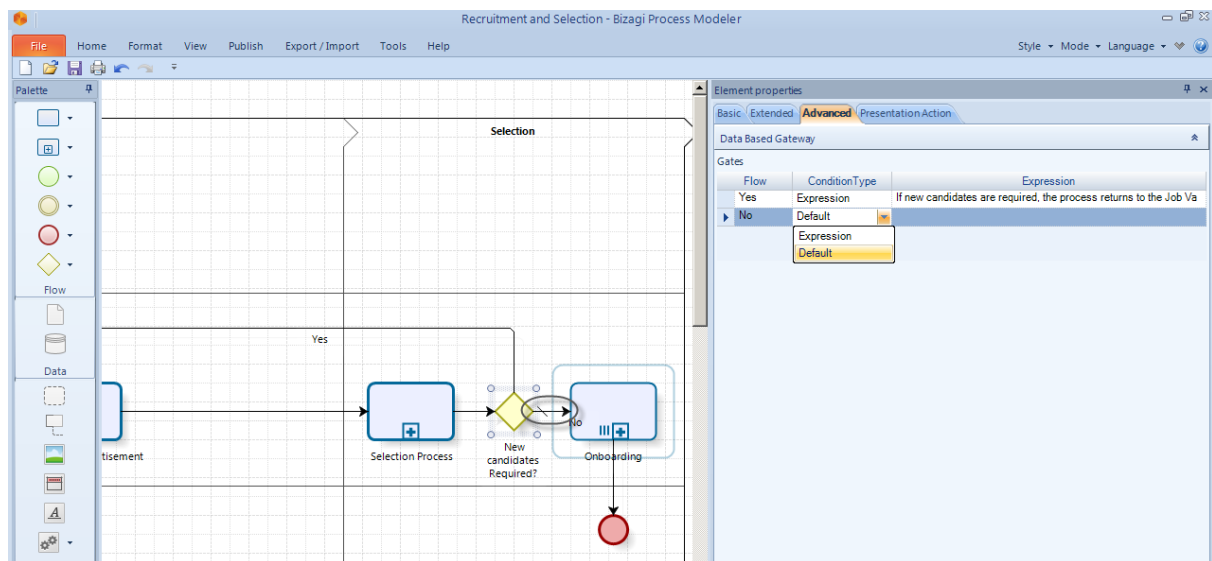
In Bizagi, you may define the condition for the path either in the Gateway itself, or in each of its decision branches (or sequence flow).

Defining conditions in the gateway

To define the conditions to be met for the given path, open the Gateway properties and locate the **Advanced** tab.

For each of the outbound paths at the Gateway (i.e. each decision branch), you will find a corresponding row in the **Gates** table, identified by the branch name (caption).

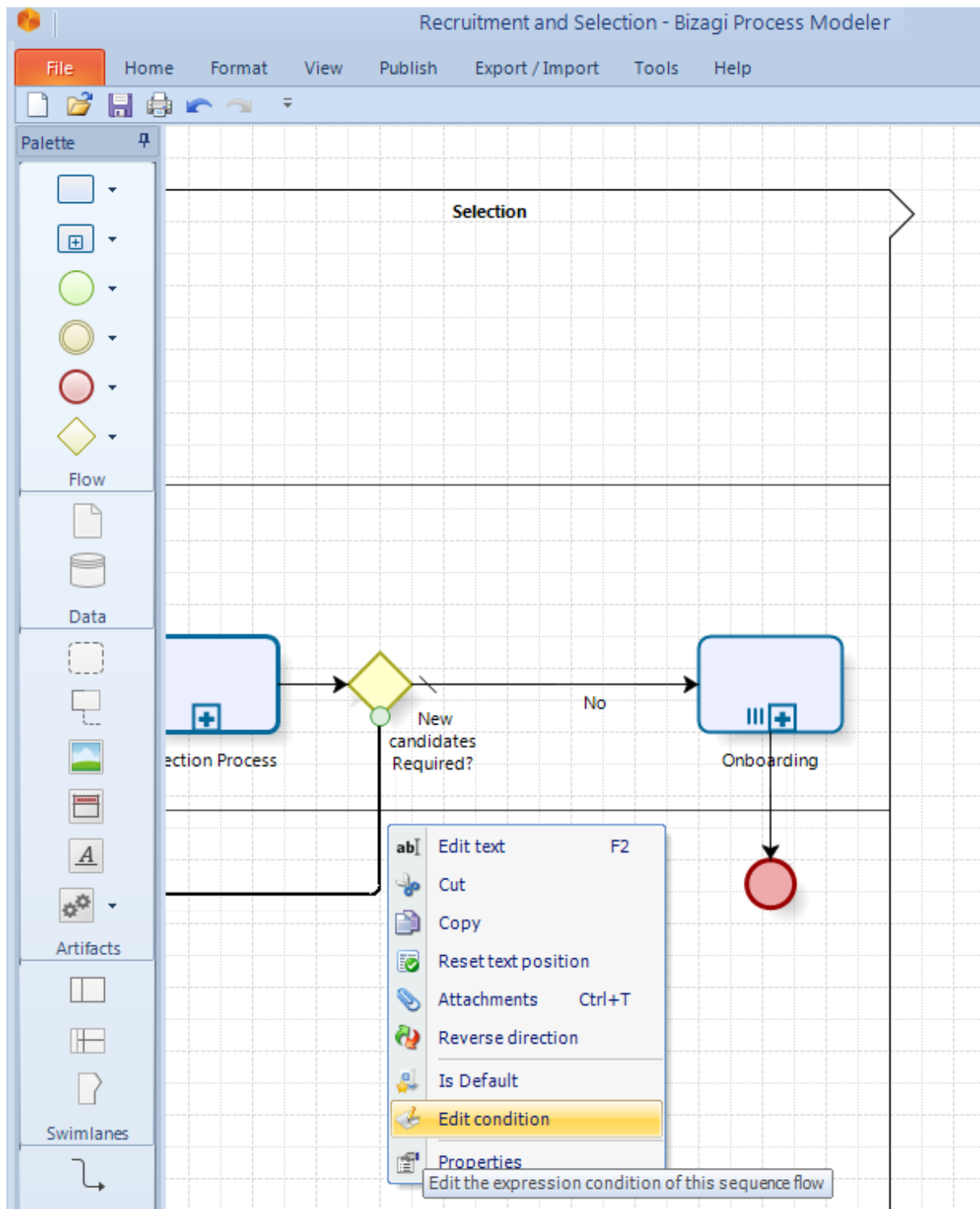
You may either define a conditional expression for the selected path, or designate it as the **Default** path.



Note the visual representation of a default path is a small oblique line crossing the decision branch.

Defining conditions for each sequence flow

To define the conditions which must be met for each path in a Gateway, right-click on the sequence flow representing the path.



In the options displayed you may easily set that this sequence flow is to be taken as the default path by clicking on **Is Default** (marking this property)

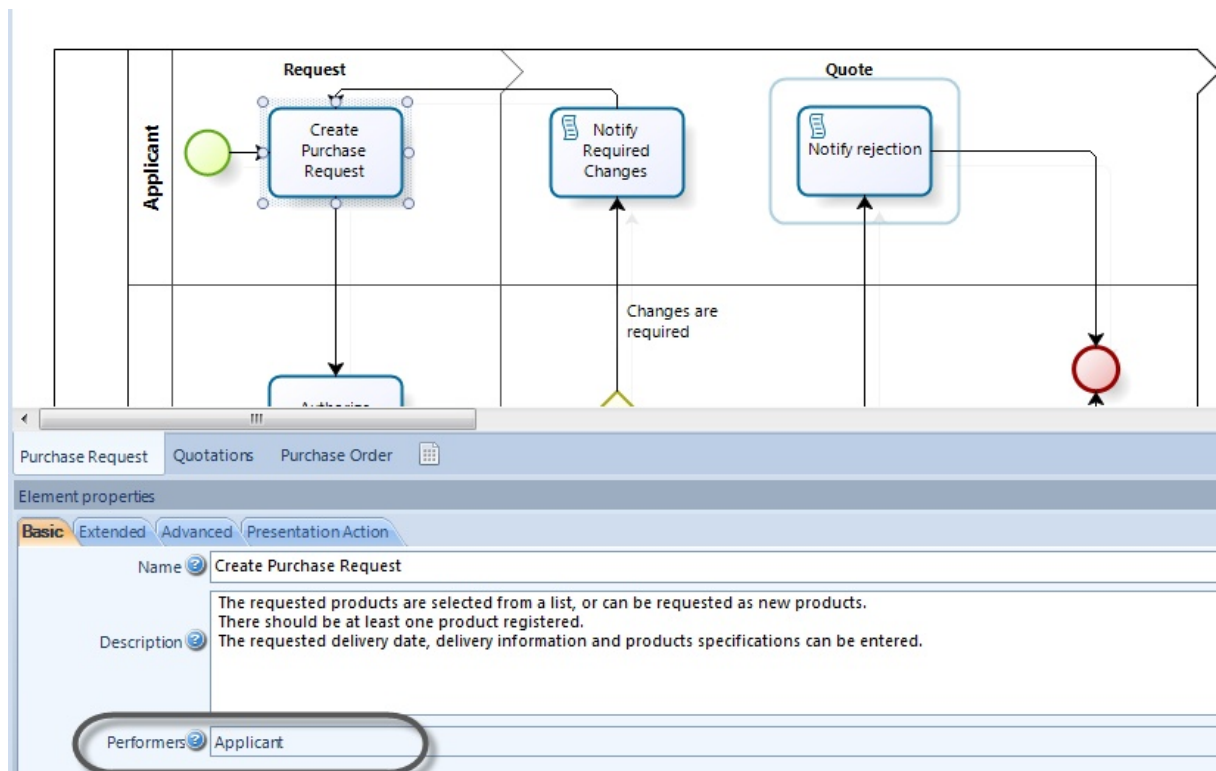
The **Edit condition** option provides quick access to the expression editor to create a condition for this

path.

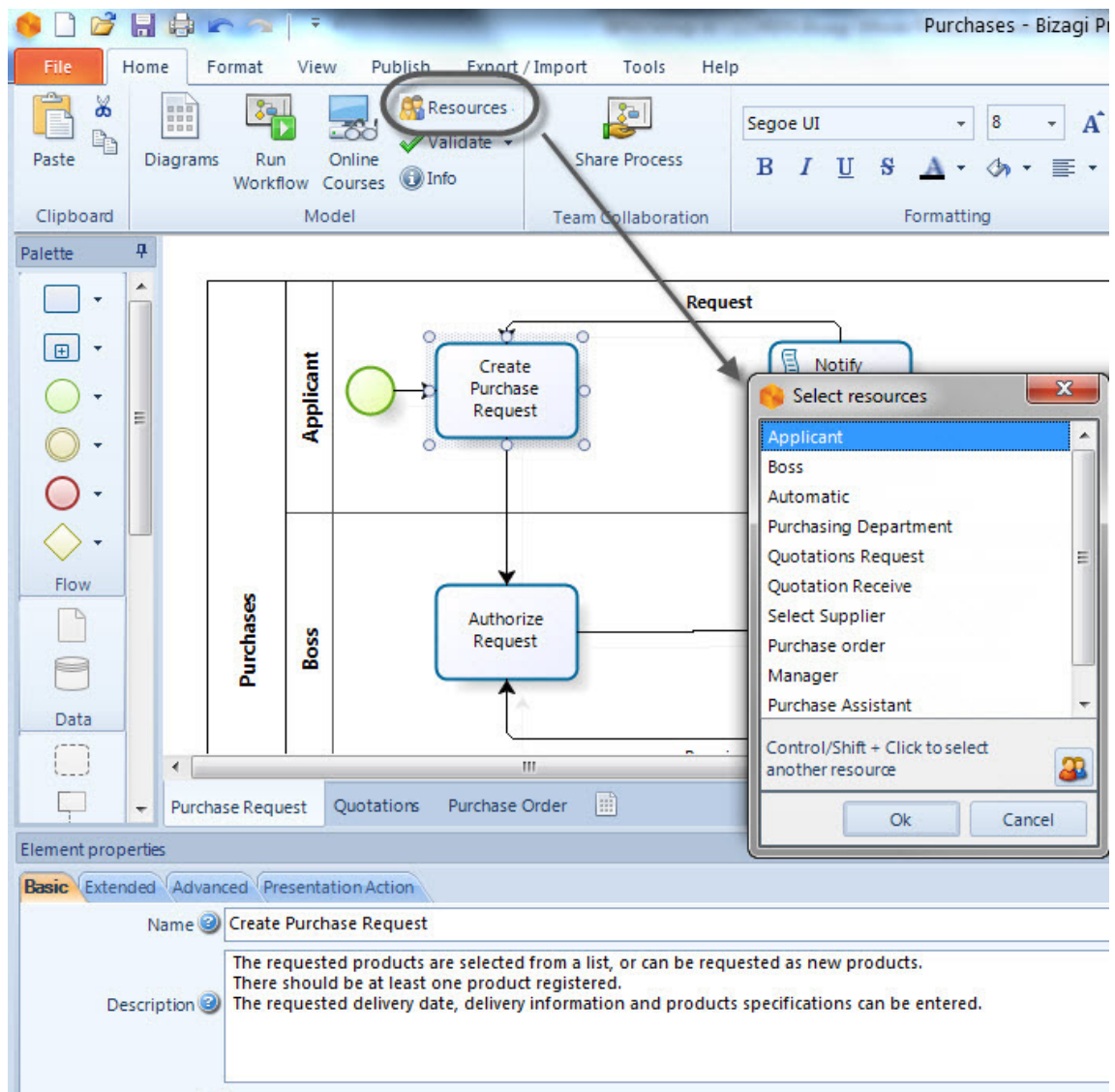
Defining Resources

A Resource is a Business Entity (e.g. a company, company division, a customer) or a Business Role (e.g. a buyer, a seller, a credit analyst), which controls or is responsible for a business process or a business activity.

Resources are part of the basic Element properties provided by default. In each shape they are identified as *Performers*, since they are the ones that actually perform the task. They can be defined for the whole Pool and for each Activity (Task or Sub-process).



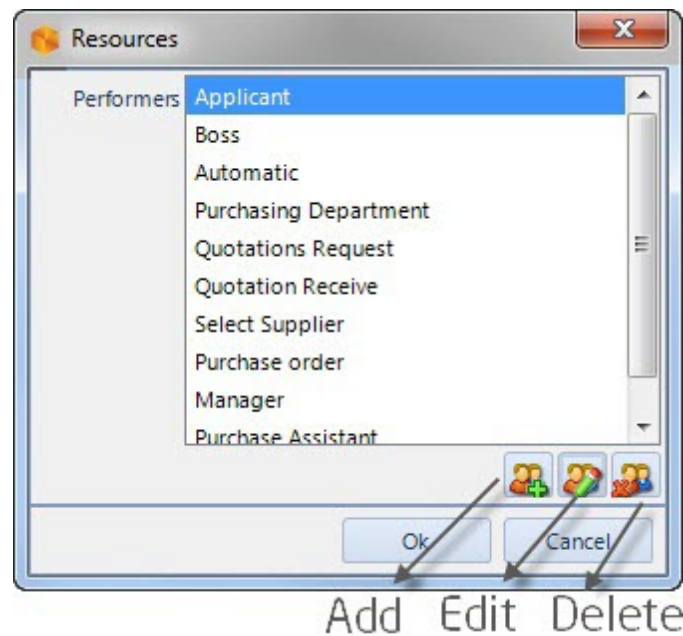
To define, edit or remove Process Performers click on the **Performers** icon located on the **Home** tab. This will display the **Performers** pop-up window.



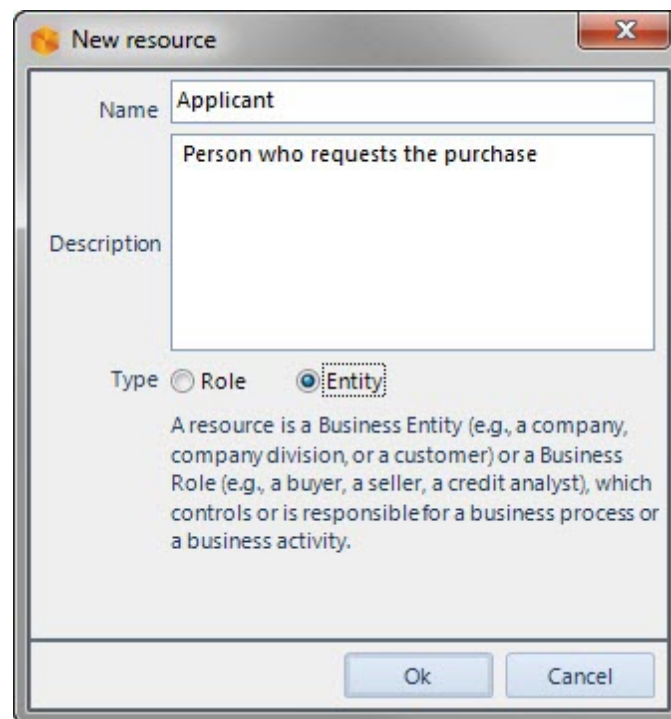
Click the Add button to create a new Resource.

Click the **Edit** button to edit.

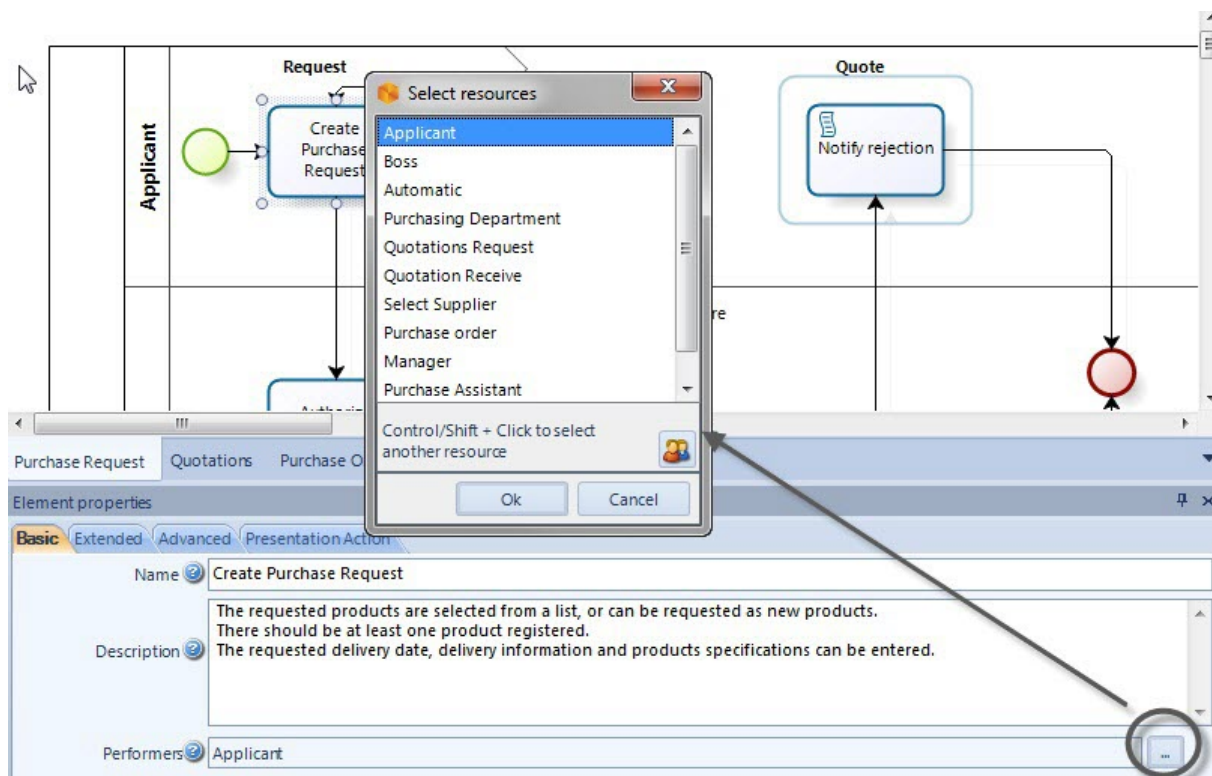
Click the **Delete** button to delete.



Enter the name, description and type (Role or Entity) of the Resource.



Once a Resource has been created, you will be able to select it on any activity.



Extending your documentation

With Bizagi Modeler you can extend your documentation to include any type of information that you find relevant for your processes, through **extended attributes**.

Extended attributes are used to customize your documentation by adding to the basic attributes which is the default option.

You can include extended attributes in each element of the process.
Once you have created an extended attribute, it will be available for all elements of the same type.

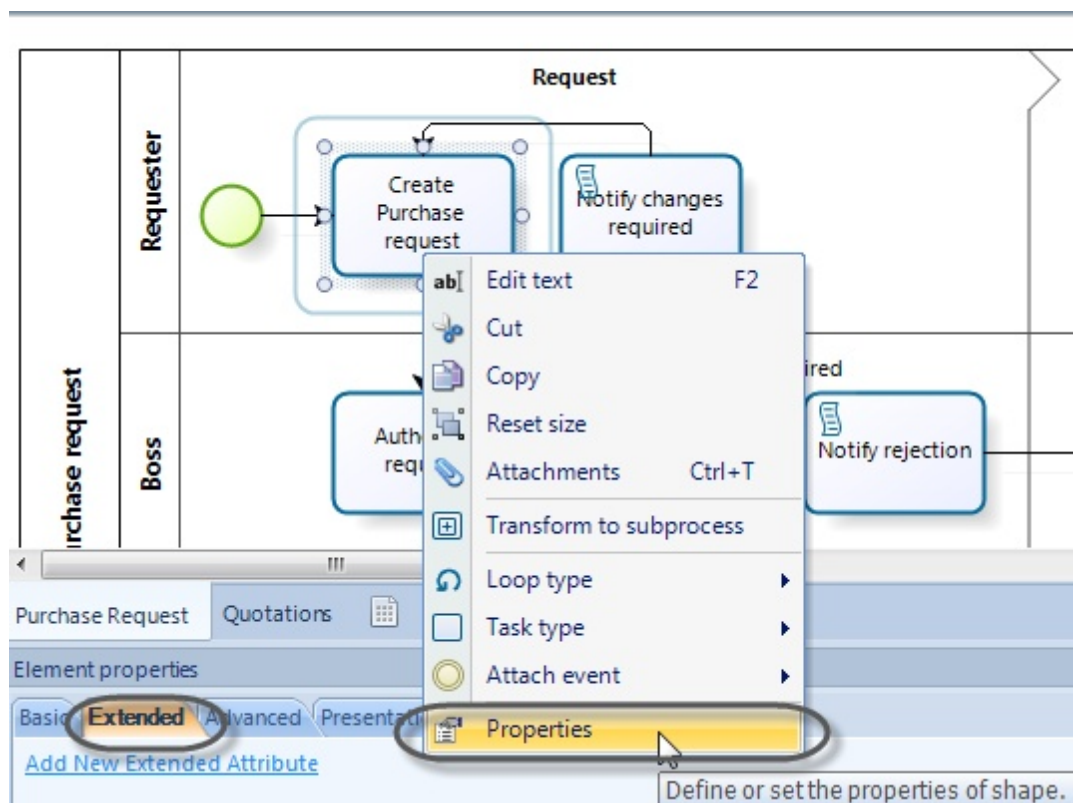
Include Extended Attributes

In order to better explain how you can easily include extended attributes, we will add a Duration attribute to all Tasks in our Purchase Request process.

As Duration is an integer numeric data type, we will use a Number attribute.

1. Select and right-click on the Task where you want to create the extended attribute, then select **Properties** from the display menu.

Select the **Extended Attributes** tab on the **Element properties** in the newly displayed add-on window.



2. Click the **Add New Extended Attribute** link. Provide a name and description, then select **Number** as the attribute's Type.

3. Some types have special information that you can add. For Number-type extended attributes you can

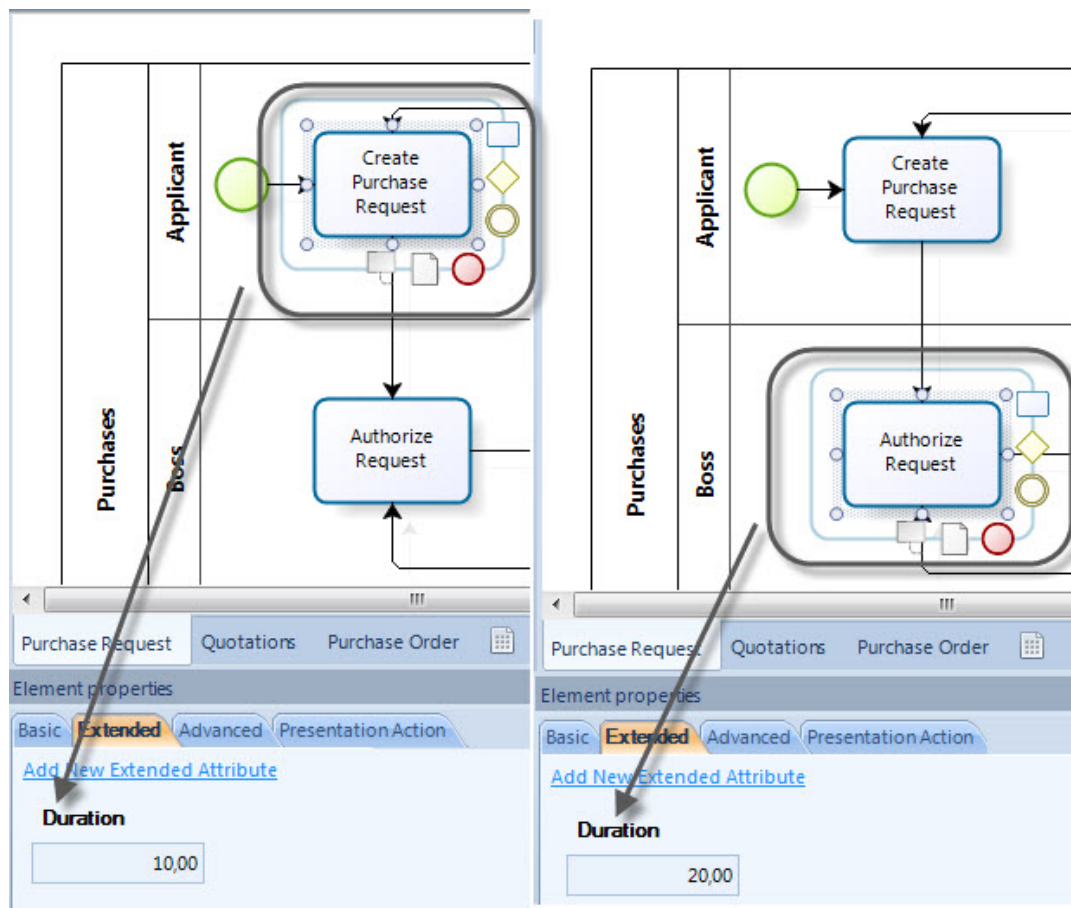
add a valid range. In this case we define a duration range of 0 to 500 minutes.

Notice this is the creation of the Extended Attribute only. We have defined a name, its description and a range. Now, we are able to enter the Duration for each Task.

Use Extended Attributes

Once you have created one Extended Attribute it will be available for all the elements of the same type in the Model.

On the **Extended** tab of the Element properties add-on window, enter the information for each element of the same type as shown in the image below.



Extended Attributes type

Bizagi offers a wide variety of Extended Attribute types. Select and create as many attributes as required from the following list:

- **Text Area:** stores approximately 32,000 characters, and is used to display long texts with line breaks.
- **Text Box:** stores approximately 32,000 characters, and is used to display short texts, without line

breaks.

- **Number:** stores numbers.
You must define a minimum and maximum range.
- **Date:** stores dates.
- **Image:** stores images with the following extensions: JPG, bmp, PNG and GIF
- **Single Selection Options (Combo):** allows you to define several options to choose from, but only allows selection of one entry from the drop-down list.
You must define the desired options for selection.
- **Single Selection Options (Radio):** allows you to define several options to choose from, but you can only check one radio button at any one time.
You must define the desired options for selection.
- **Multiple Selection Options:** allows you to define several options to choose from, and allows selection of one or more of the check boxes displayed.
You must define the desired options for selection.
- **Embedded File:** allows the modeler to attach a file to be available within the Model. The file is copied to the model's folder.
When published this file type and the Linked file will be displayed in the same way.
- **Linked File:** allows you to include a link or path to a file. The model stores a link to the file, not the file itself.
When including this extended attribute the user must select check/uncheck for the option **Relative path**.
Relative path option allows you to include your link either as a relative or absolute path.

Relative paths change depending upon what page the links are located on.

For example, if the file is stored in your computer you would share: C:\MyDesktop\PurchaseRequest\FileUplodadedInThisExample

If you check on Relative path, then the url will be stored as: PurchaseRequest\FileUplodadedInThisExample.

This way you can share your folder and the file can be opened anywhere.

An *absolute path* refers to a fixed location including the domain name. You typically use absolute paths to linked to elements that have a fixed reference location no matter by which means you access them.

We recommend absolute paths (Relative Path not checked) when the files are on your network.

For example: \\Mynetwork\SharedModels\PurchaseRequest\FileUplodadedInThisExample

- **URL:** stores a URL to link an internet resource.
- **Table:** allows you to build a table, including any of the attributes mentioned above.
[Click here for an example of a Table Extended Attribute](#)

Example: Add a Table Extended Attribute

We are going to include an Extended Attribute where we can document the Performers of each task, subject to certain conditions.

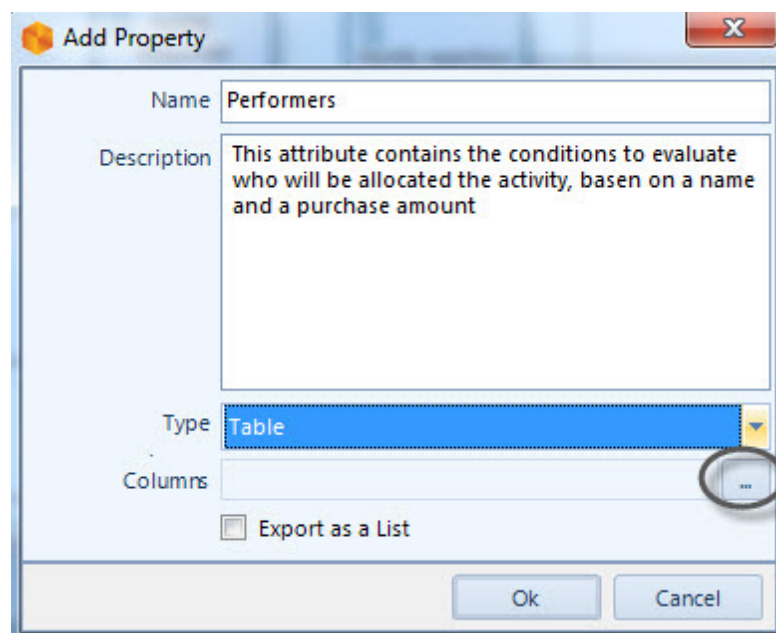
The performers of the Purchase Request Process are allocated according to purchase amount. This means that given a certain amount, the purchase will have to be approved and managed differently. For example the process is different when buying 50 computers to that of purchasing some office supplies like paper, pens and pencils.

To document this we will use a Table extended attribute where we can define the description of the performer (name) and a column that will define the amount.

1. Right-click on any Task, select **Properties** from the display menu and select the **Extended Attributes** tab.


Click on the **Add New Extended Attribute** link.

2. Enter a name and description and select **Table** as the type

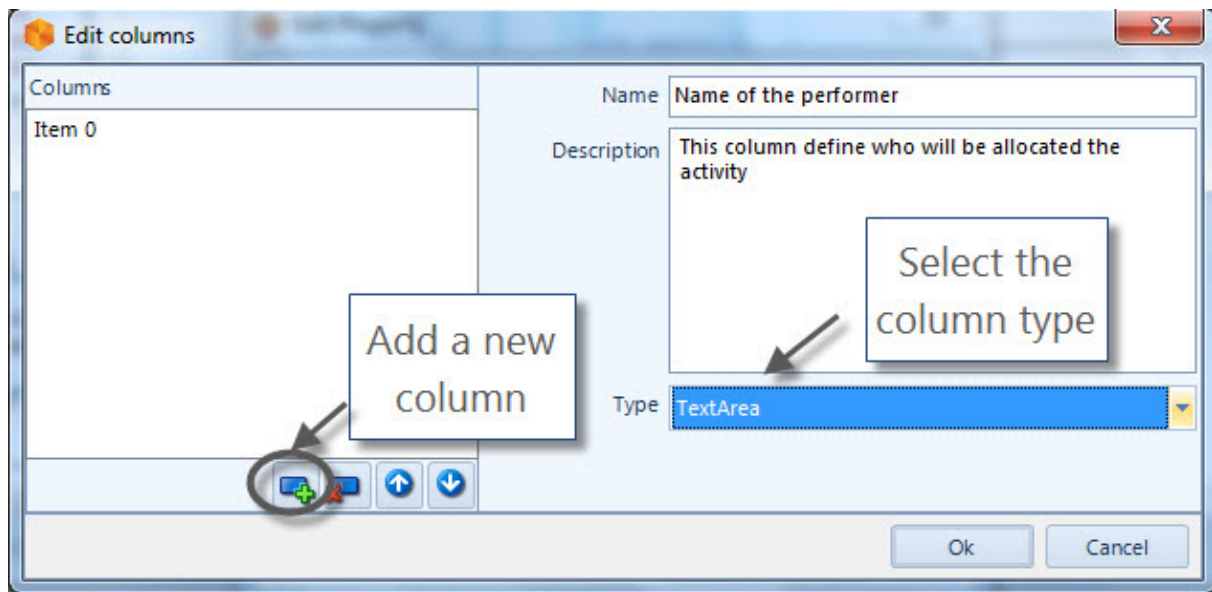


3. Include the columns of the table for the extended attribute.

For this example we will need two columns: the position of the performer and a description.

To add a column use the  button.

On the right side of the window enter the name of the column, give a description and select the type. Since the first column of the table is the name of the performer, we have to define the type of the attribute as a text box.

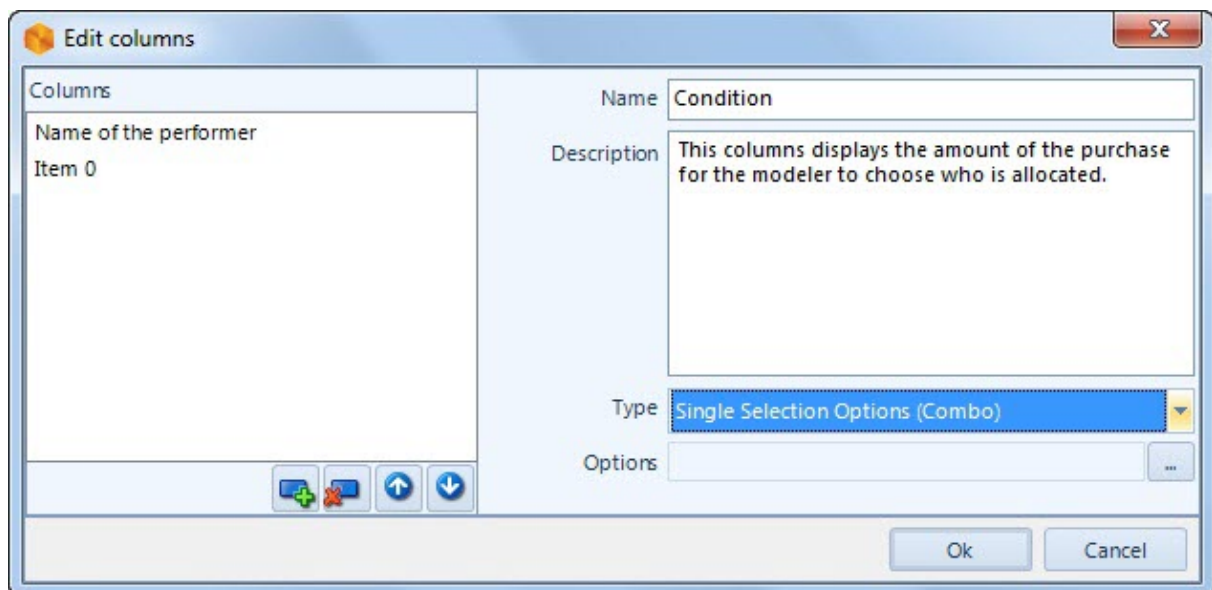


4. The second column is the condition to be evaluated, which is the amount of the purchase. We are going to consider only three options:

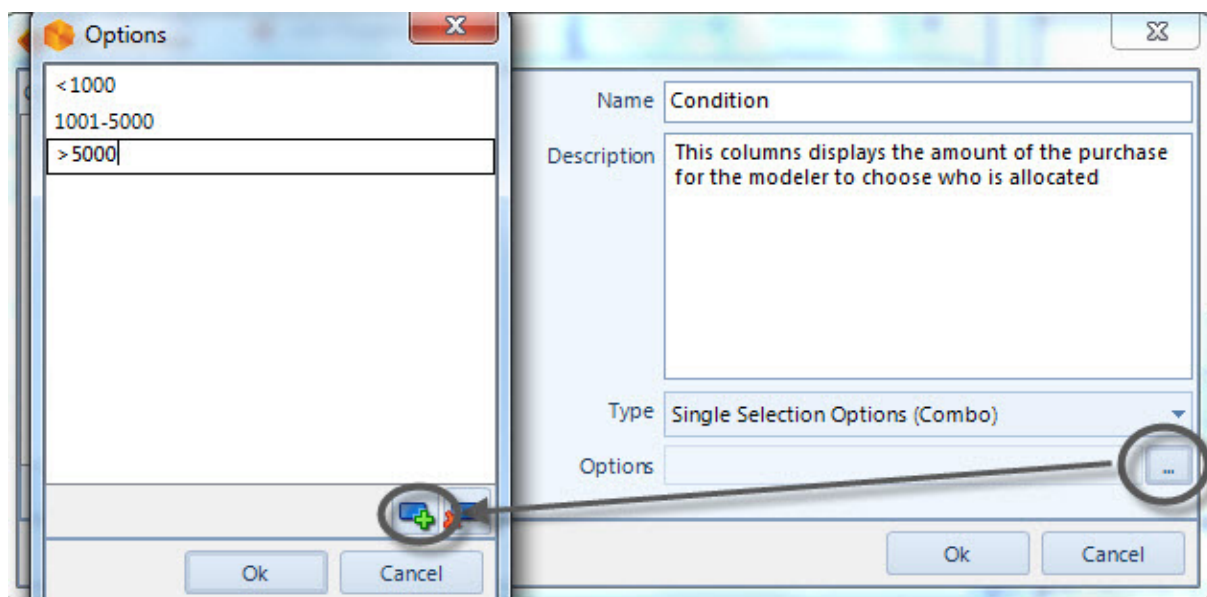
- Under 1,000 dollars
- Between 1,001 and 5,000 dollars
- Above 5,001 dollars

Thus this attribute can be defined as a *Single Selection Option (combo)*, this way the Modeler will allow you to choose from one of the above options.

Create the new attribute by clicking on the Add  button and select the Single Option (Combo) type.

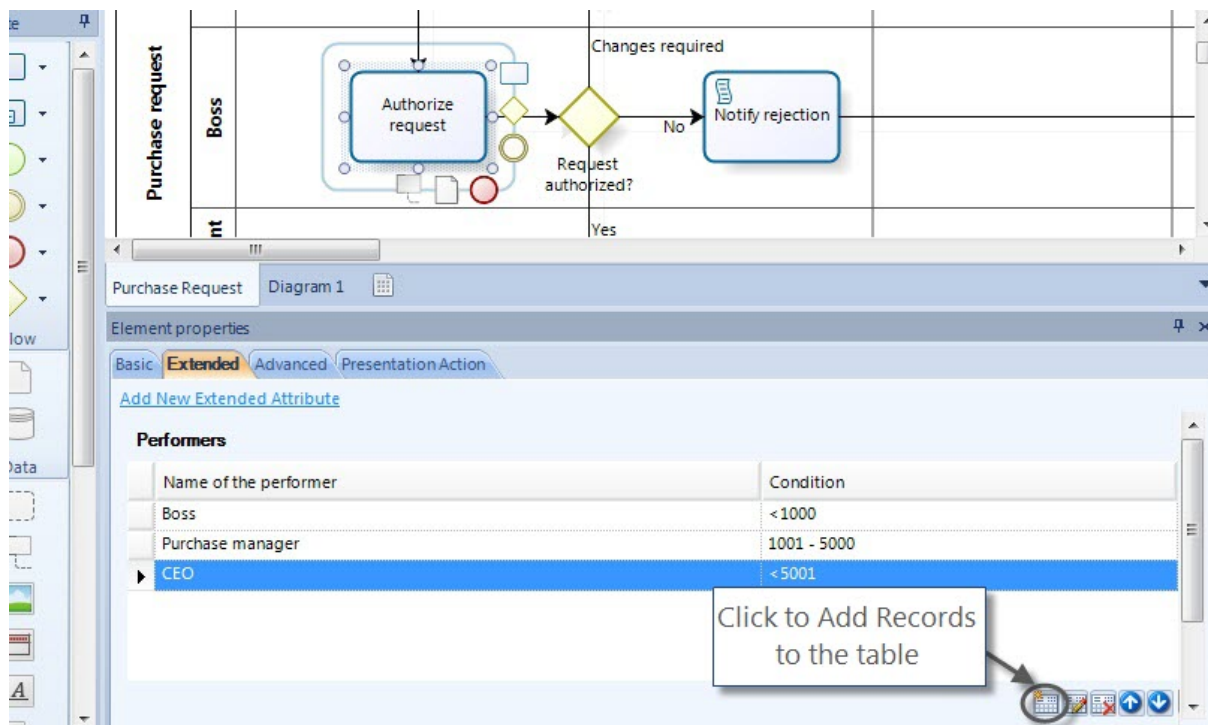


5. Add the multiple conditions for the modeler to choose from, then click the OK button.



Once you have created this attribute it will be available for all the elements of the same type in the Model.

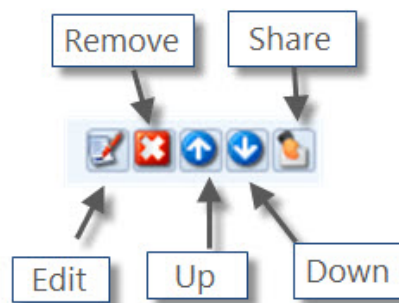
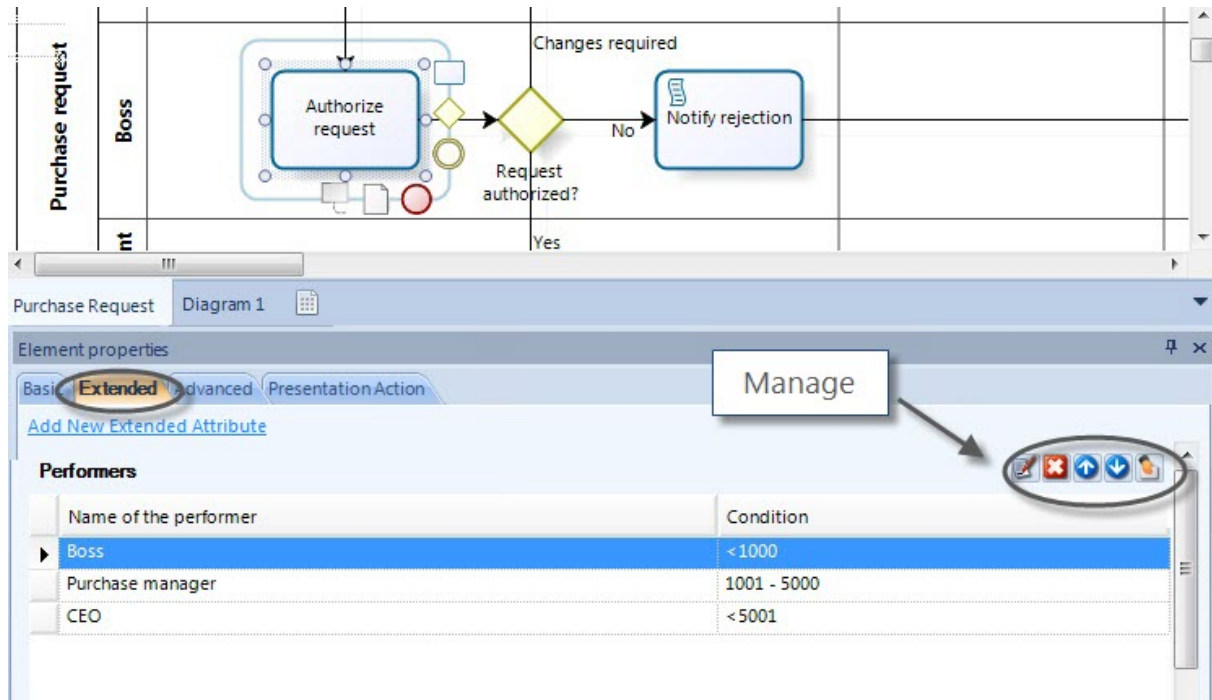
Click the Add button located on the bottom of the Element properties window to add records to the task.



Managing Extended Attributes

You can edit, remove or change the position of your Extended Attributes.

To manage Extended Attributes, select it in the **Performers** list. A menu will be displayed on the right.



- The **Edit** button allows you to change the type, name and description of your attribute.
- The **Remove** button deletes the attribute. Note, once deleted you can not undo the action.
- The **Up** and **Down** buttons change the position of the attribute. This defines the order in which they are generated in your documentation.

The **Share** button allows you to share the attributes with elements that have different shapes.


Sharing Extended Attributes between elements

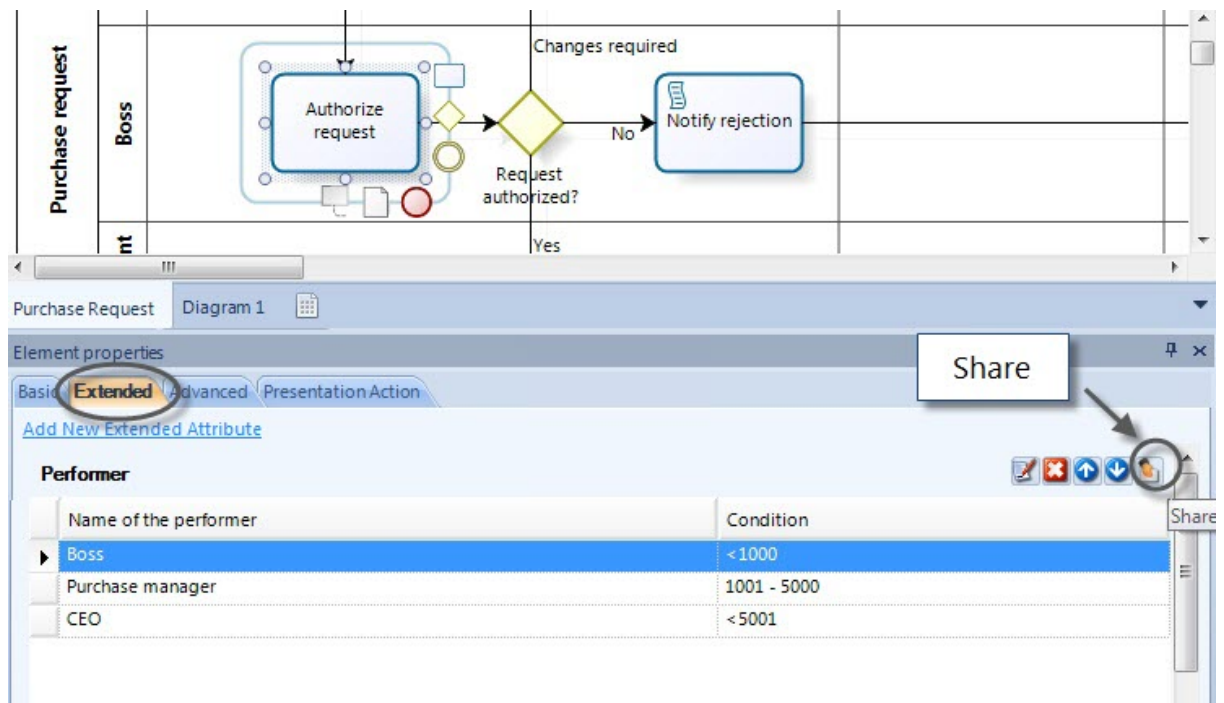
Once you have created an Extended Attribute it will be available for all the elements of the same type in the Model.

It is very common to need an Extended Attribute on several elements of different types.

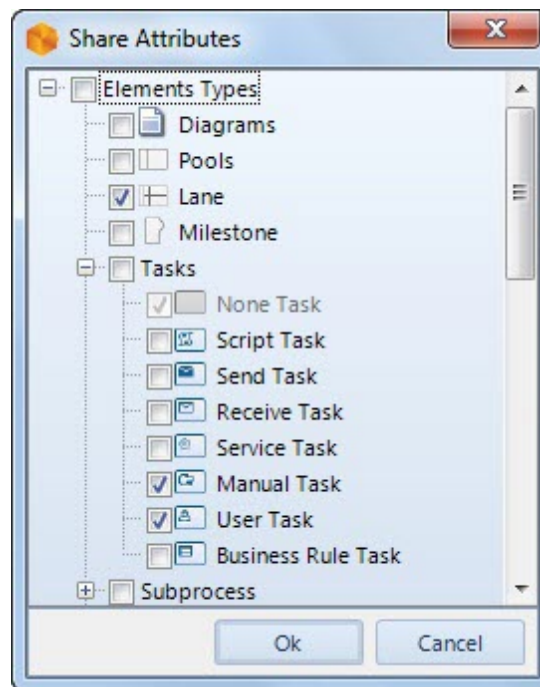
You can share Attributes following the instructions below.

1. Select the diagram element, where the Extended Attribute was previously created, to open its properties, and select the **Extended** tab.

Click on the name of the Attribute that you want to share, and click on the share button .



2. Select the structures, among which, you wish to share the Extended Attribute with. In this case we will share the Performers attribute with the Lane, Manual Task and User Task. After selection, click the OK button.



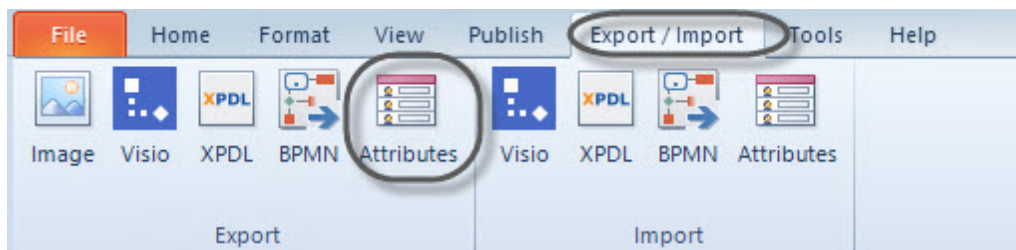
Exporting and Importing Attributes between Models

It is possible to share the Extended Attributes that you created in one model and use then in other models. This allows you to maintain a uniform standard in your documented processes by always utilizing the information in the same manner.

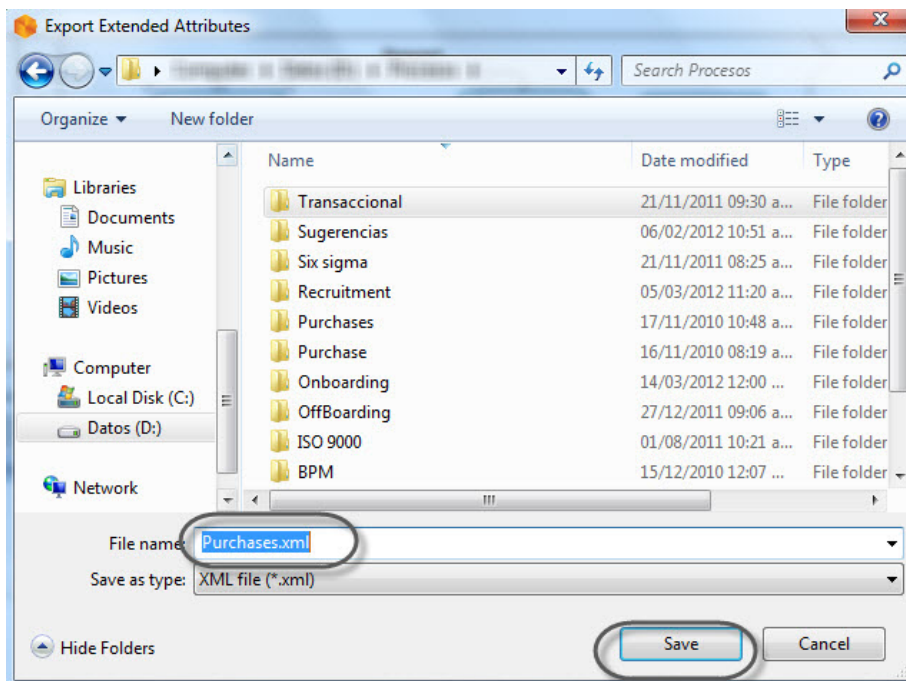
To do this you will need to export a file from Bizagi Modeler to a chosen folder, where the extended attributes will be saved. Then import the file to the model where you want those attributes to be used.

Export Extended Attributes

In the Model where you have defined and created the Extended Attributes you want to reuse, on the Export/Import tab, in the Export group, select **Export Attributes**.



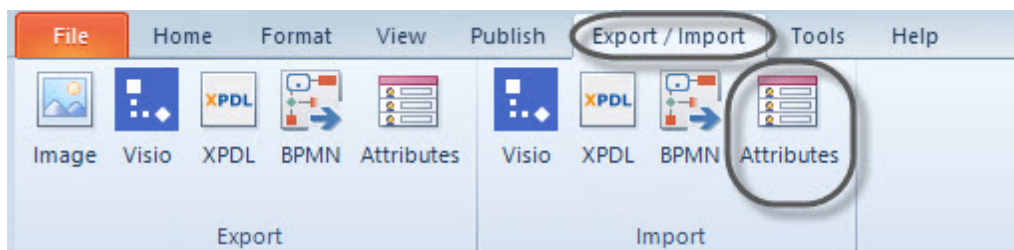
Specify the folder where the file will be saved. This folder must have have read and write permissions. Give your file a valid name and click the **Save** button.



Import Extended Attributes

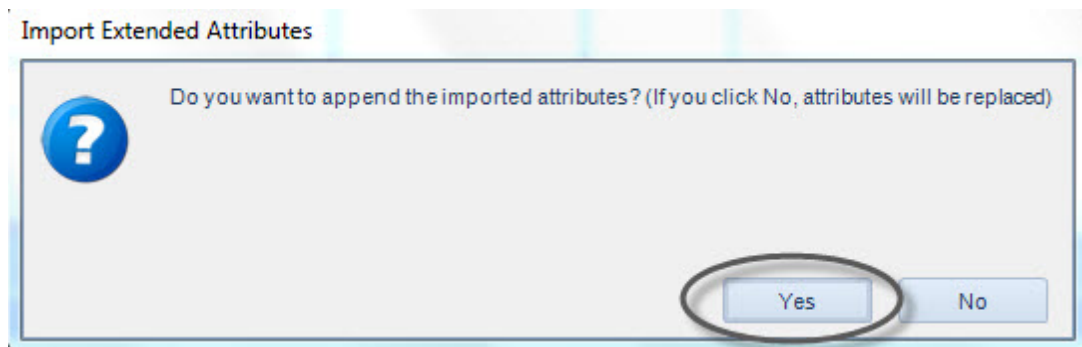
Once you have saved the Extended Attributes in a file, you can import it to any Model.

On the **Export/Import** tab, in the **Import** group, select **Export Attributes**.



Select the newly created Extended Attributes file. A message will display that you need to read carefully.

If you have some Extended Attributes in the Model into where you are importing, and **YOU DON'T WANT TO OVERWRITE THEM**, then click the **YES** button. Doing so will append the imported Extended Attributes to the existing Extended Attributes. If you click the **NO** button, **ALL YOUR PREVIOUS EXTENDED ATTRIBUTES WILL BE REPLACED**.



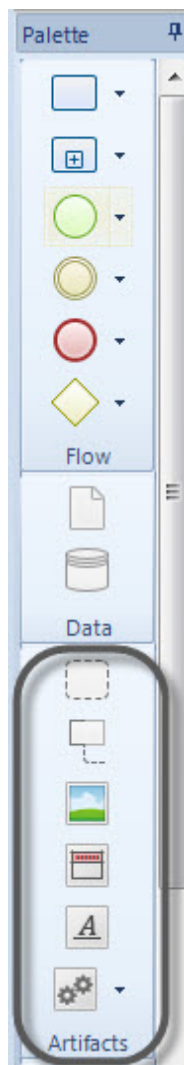
Video example: Documenting your process






[This video shows how to document your processes with Bizagi Modeler](#)

Using Artifacts

Artifacts provide modelers with the capability of showing additional information about the process that is not directly related to the flow.

Artifacts are found in the Palette. There are five types provided by default, and a user-defined Custom Artifact.



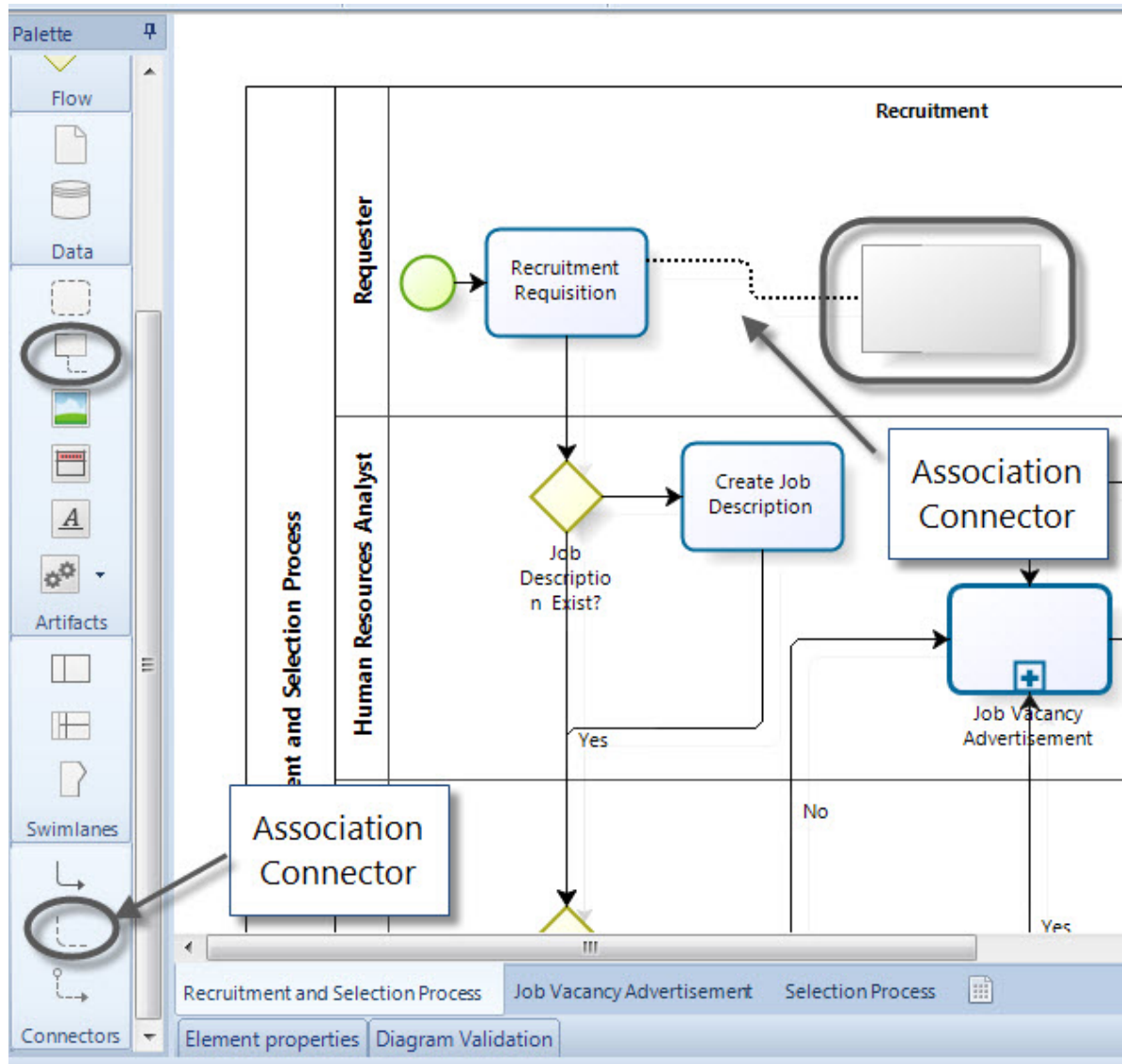
| ELEMENT | DESCRIPTION | NOTATION |
|----------------|---|---|
| Group | An artifact that provides a visual mechanism to group elements of a diagram informally. The Group can be used for documentation or analysis purposes, without impacting process flow. |  |
| Annotation | Is a mechanism for a modeler to provide additional information for the reader of a BPMN Diagram. To include line breaks in the text use CTRL+ENTER |  |
| Image | Enables images stored on your computer to be inserted in the diagram. |  |
| Header | Shows the diagram's properties. |  |
| Formatted Text | This artifact enables you to insert a rich text area into the diagram to provide additional information. |  |

Custom Artifact

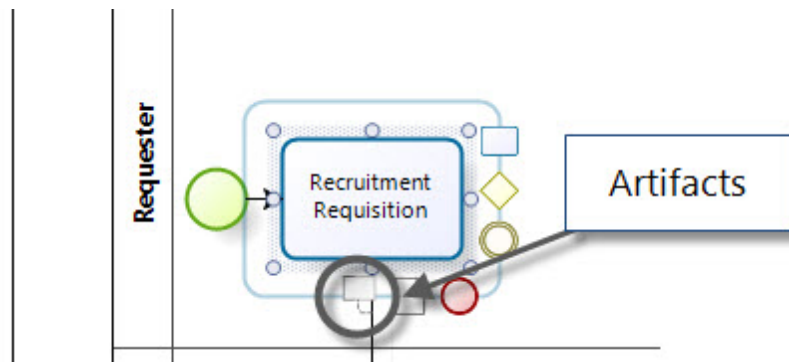
A user defined artifact. Artifacts provide the capability of showing additional information about the process that is not directly related to the flow.



To include an Artifact select it from the Palette and drag and drop it onto the diagram.
To connect an artifact with an element use the **Association Connector**.



Some artifacts can be placed on the diagrams using the Pie Menu as shown in the image below. Click on the element, select the Artifact and then drag and drop it appropriately.



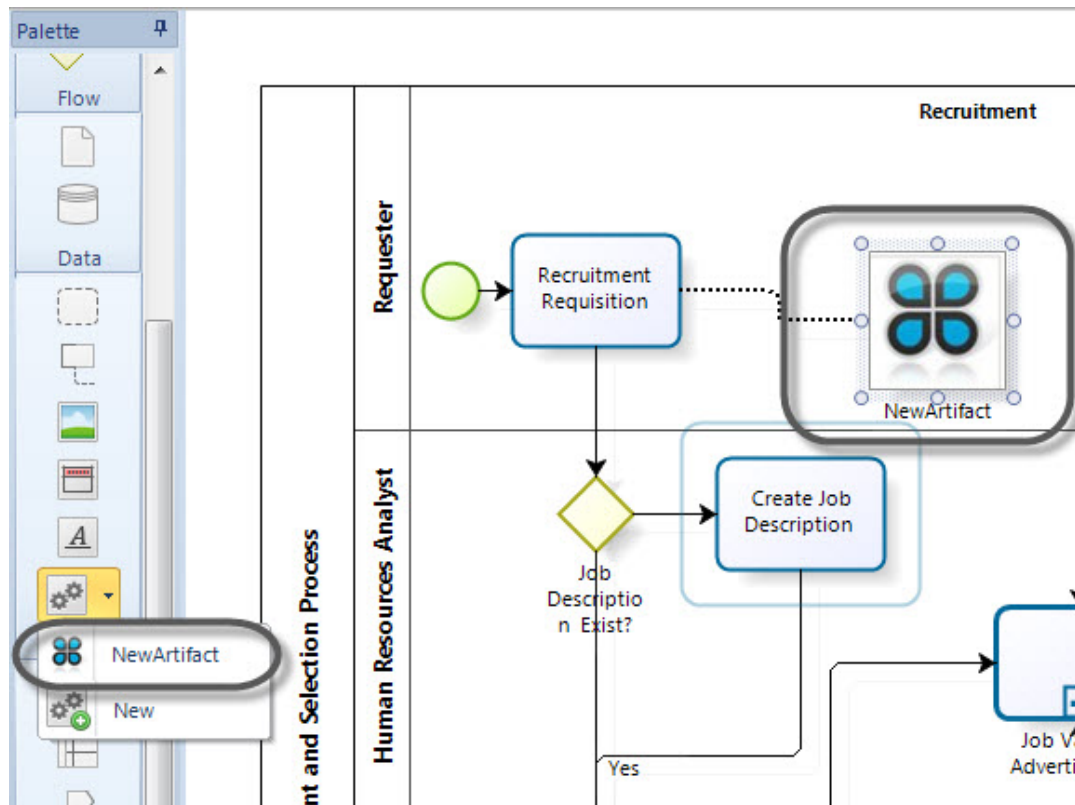
Custom Artifacts

You can create your own Artifacts using the Custom Artifact  button found in the Palette.

You can attached any stored image onto a Custom Artifact. Browse and select the desired image and name it. Click the **OK** button .

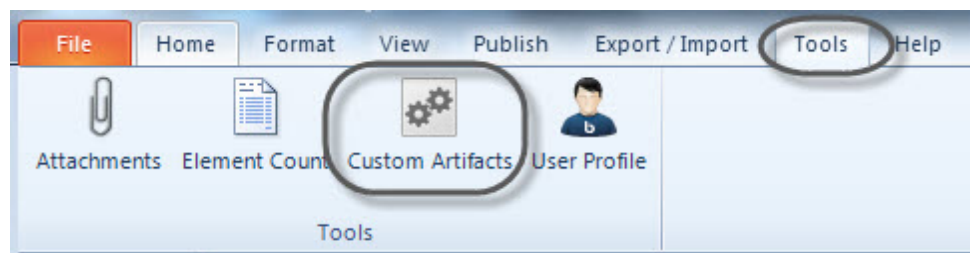
The screenshot shows a dialog box titled 'Custom Artifact Type Definition'. It has a close button (X) in the top right corner. Inside the dialog, there are two input fields: 'Image' and 'Name'. The 'Image' field has a small '...' button to its right for browsing files. Below these fields is a large area labeled 'Preview'. At the bottom of the dialog are 'Ok' and 'Cancel' buttons.

Your newly created Custom Artifact will now display in the Custom Artifact group on the Palette. To include your new Artifact in the diagram, drag and drop the Custom Artifact from the Palette.



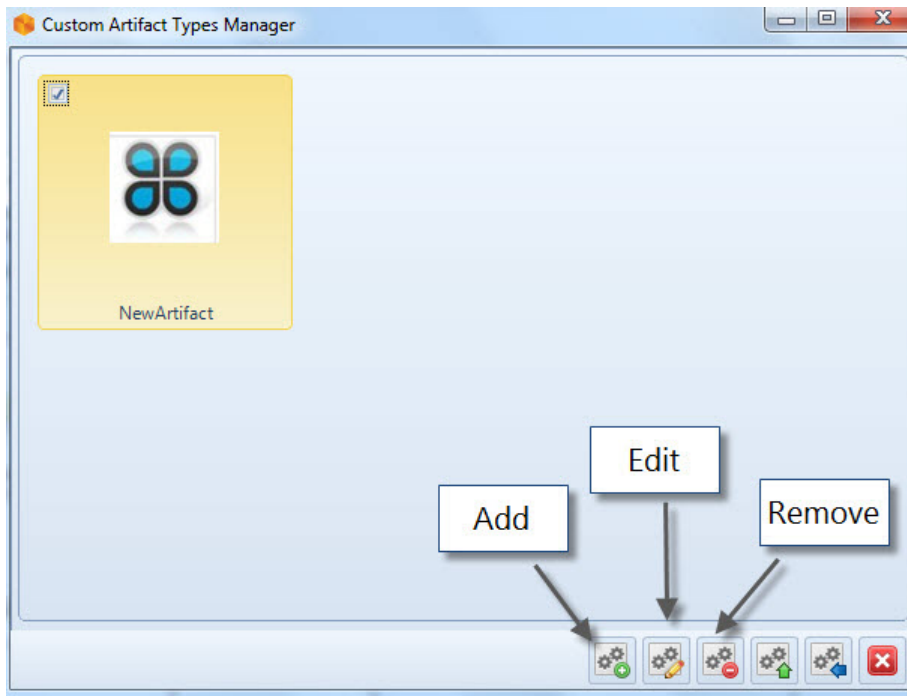
Manage Custom Artifacts

To add, edit or delete Custom Artifacts select **Custom Artifacts**, located in the **Tools** group on the **Tools** tab.



A new window containing all Custom Artifacts will display for the current Model.

The command buttons located at the bottom of the screen will allow you to manage your Artifacts. The command buttons are **New**, **Edit**, **Delete**, **Export** and **Import**.

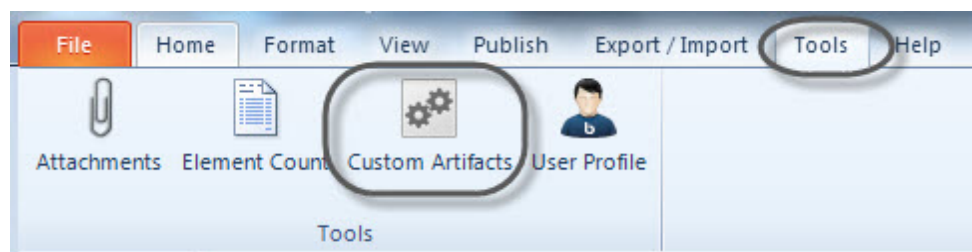


Exporting and Importing Artifacts between Models

You can share the Custom Artifacts you have created to use them in other models. First you need to export a file (.bca file extension) to a folder of your choice. Thereafter import the file to the model where you wish to use the artifacts.

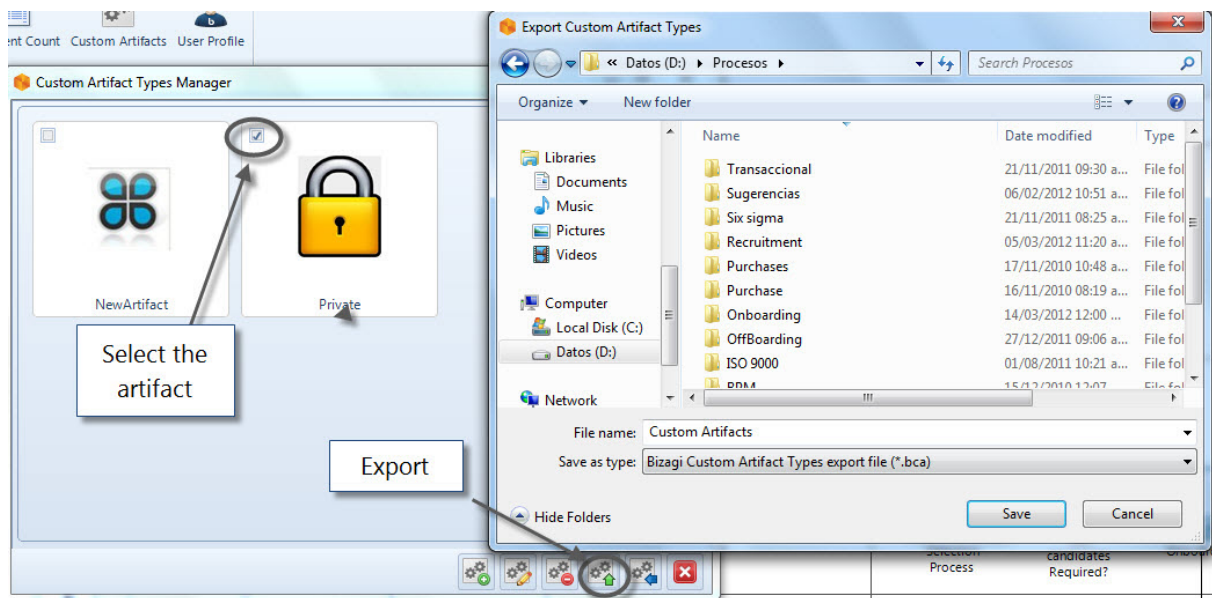
Export Custom Artifacts

In the Model where you have created the Custom Artifact, select **Custom Artifacts**, located in the **Tools** group on the **Tools** tab.



Select the Artifact that you wish to share and click the **Export** button .

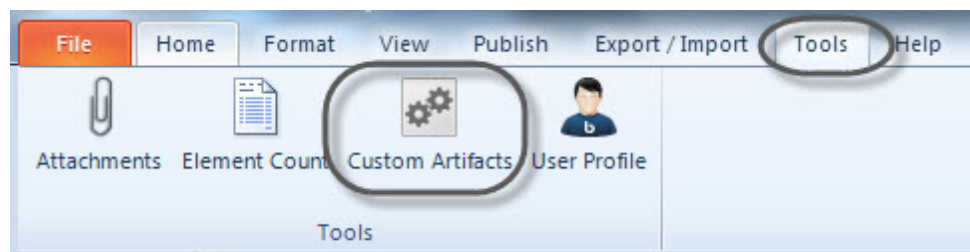
Choose the a folder where the file is to reside, name your file and click the **Save** button. Ensure the export folder has read and write permissions.



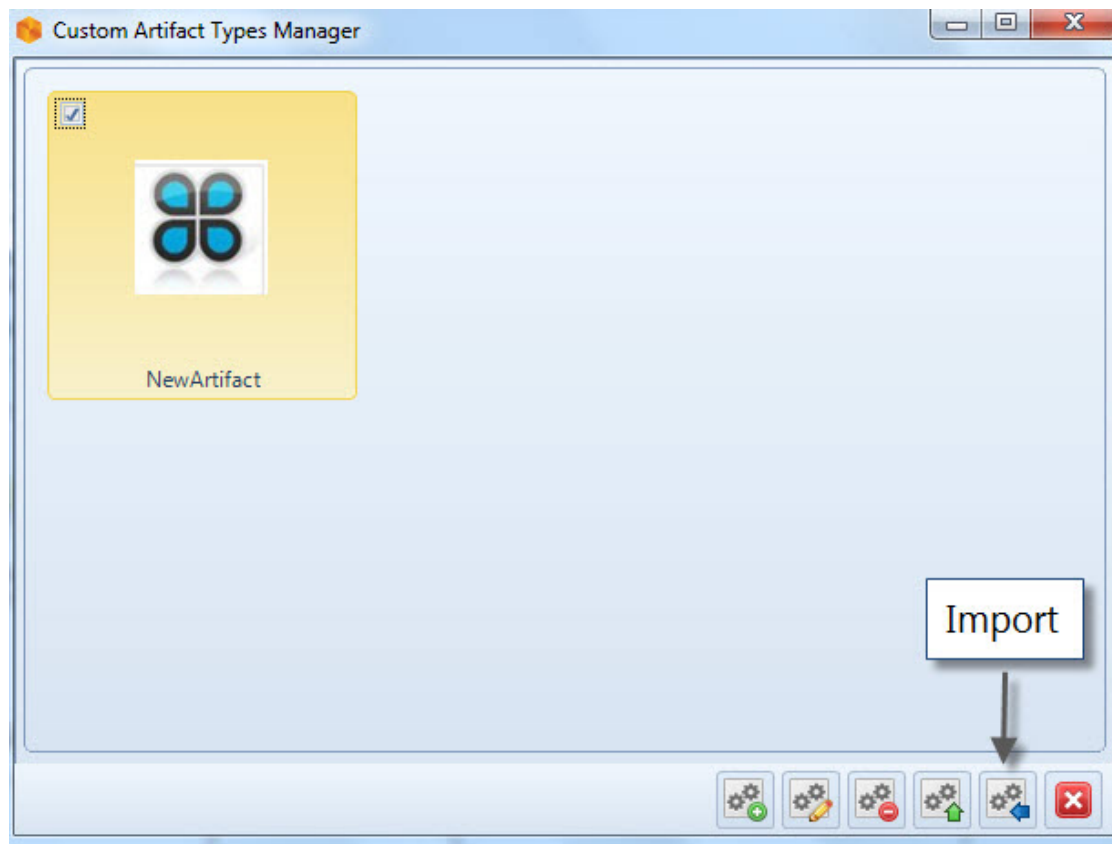
Import Custom Artifacts

Once you have saved the artifact in a file, you can import it to any Model.

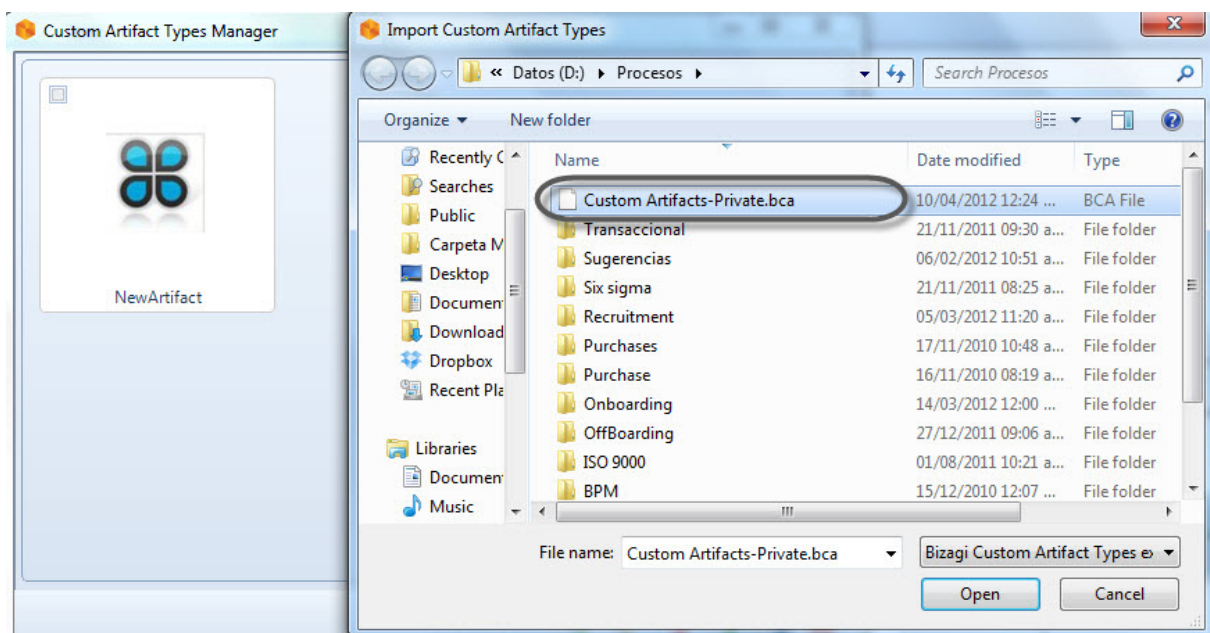
Open the Model where you wish to import the Artifact and select **Custom Artifacts**, located in the **Tools** group on the **Tools** tab.



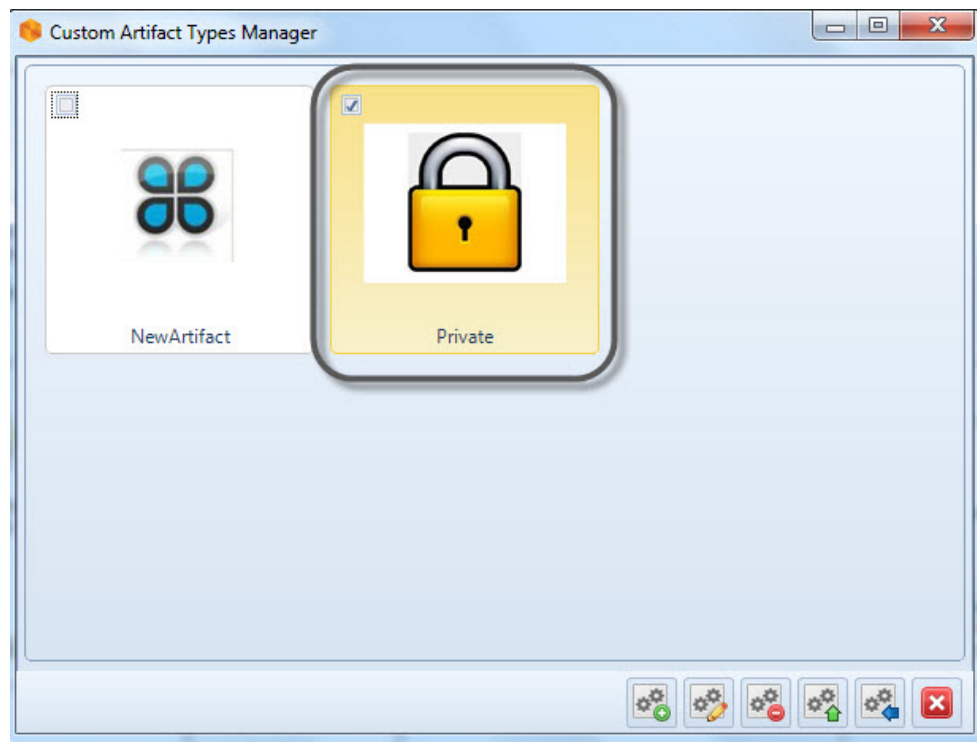
Click the **Import** button.



Select the exported file name and click the **Open** button.



Now your attribute is available to use in the diagram.



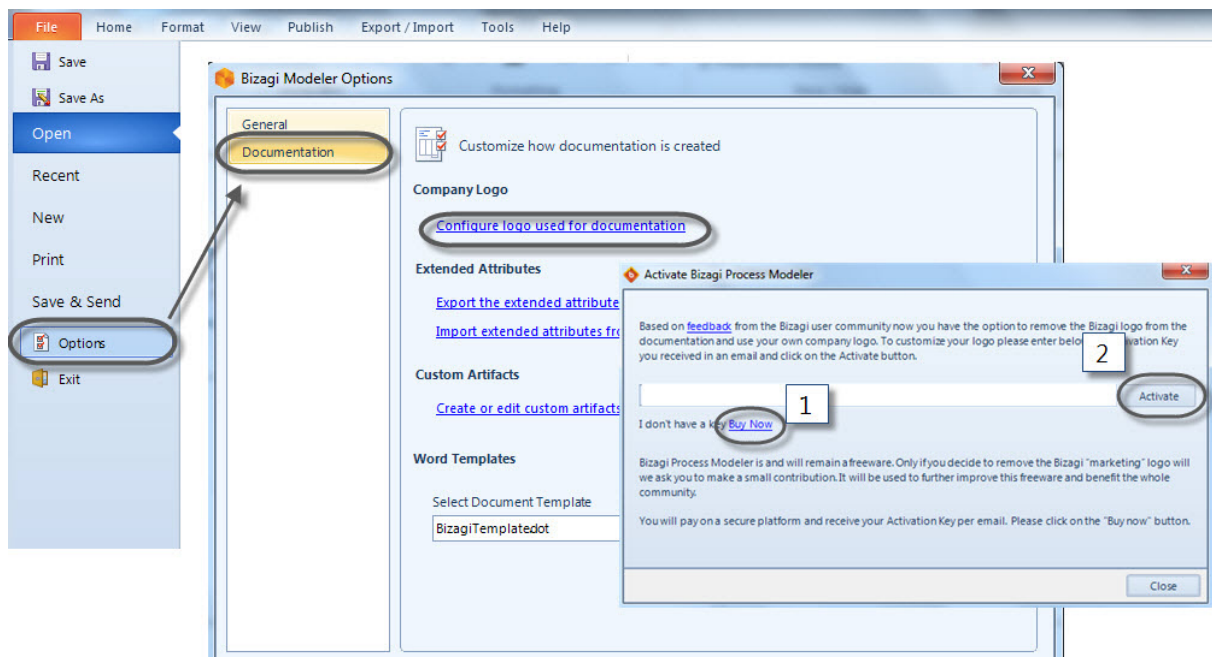
Company logo

Based on feedback from the Bizagi user community there is now an option to remove the Bizagi logo from the documentation and use your own company logo.

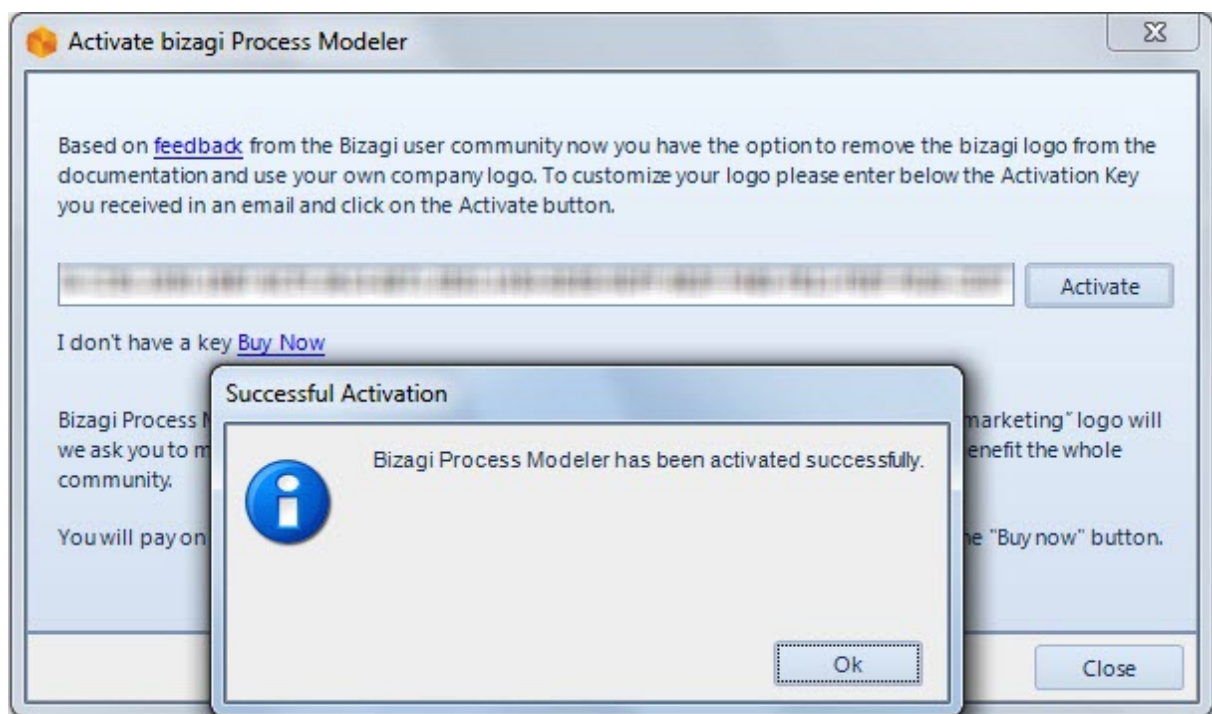
Bizagi Modeler, with its full functionality, is and will stay **freeware**. If you must remove our Bizagi logo and thus, remove our marketing mechanism, you will be asked for a small contribution that will be used to further improve this freeware and benefit the whole community.

To remove the Bizagi logo from your documentation please follow these simple steps:

1. Download the latest Bizagi Modeler version (http://www.bizagi.com/index.php?option=com_content&view=article&id=95&Itemid=107)
2. On the File Tab, select Options and then choose the Documentation option.
3. Click the Configure logo used for documentation link.
4. Click the Buy Now link to purchase the activation KEY. This will take you to the secure Bizagi Online Shop.



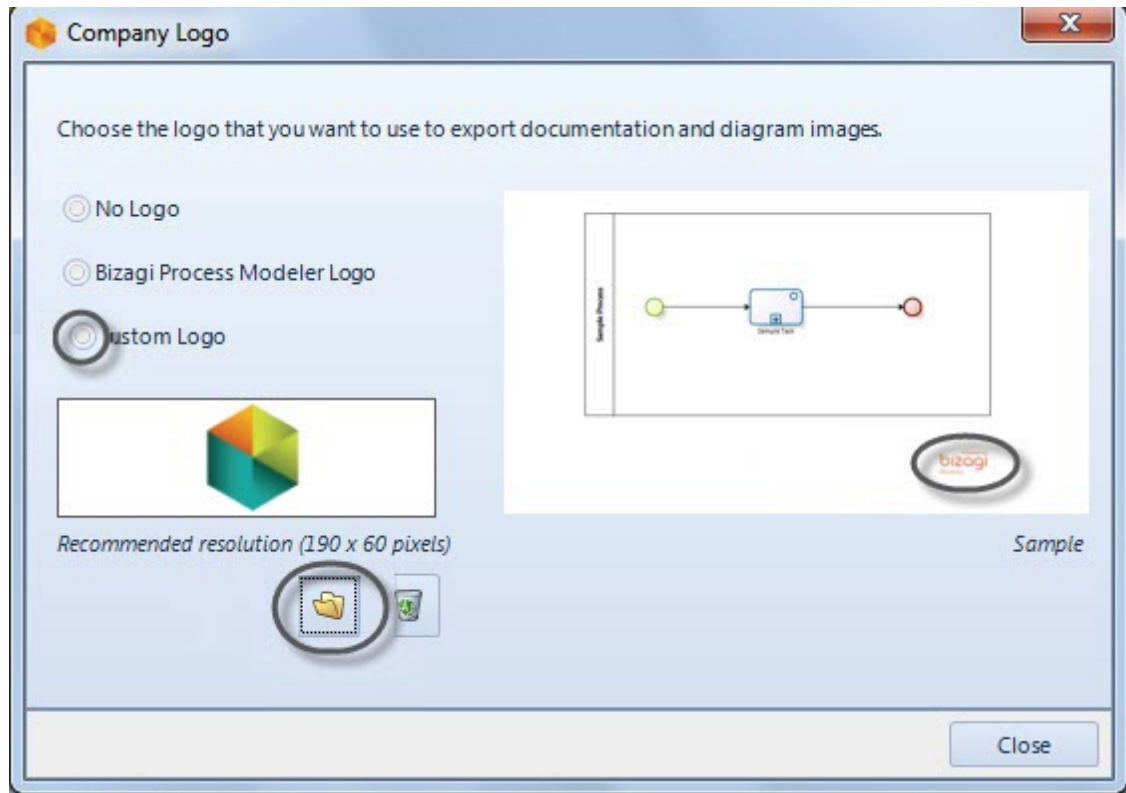
5. You will receive a **confirmation** email with the activation KEY, once your purchase is finalized.
6. Enter the key in the same link window and click the **Activate** button.
7. A message will display informing of successful validation. Click the **OK** button.



8. In the last window you will be able to determine the logo you wish to use:

- No logo
- Keep the Bizagi Modeler logo
- Use a customized logo

For the customized logo, select **Custom Logo** and open the folder image to browse and select your user-defined logo.



9. Click the **Close** button to finish your configuration.

Important information



You need to buy an Activation Key for each installation (computer) of Bizagi Modeler. For example, if you have Bizagi Modeler installed in 5 PCs, and you need to activate the logo configuration option in all PCs, then you need to buy 5 Activation Keys. Just modify the quantity in the shopping cart. You will receive a single Activation Key, which is valid for the 5 PCs.



The contribution is a one-off payment. The Activation Key will not expire and the logo configuration option will remain enabled, even if you make updates or upgrades to a new version of Bizagi Modeler.



You will pay on a secure online platform and will receive your Activation Key via email.



Part V

Generating Documentation

Generating Documentation

You can publish your complete documentation in any of the following formats and share with your organization.

- Microsoft Word
- PDF
- Mediawiki
- Web file (opened through a browser)
- Microsoft Sharepoint

You can export your process diagrams to other Modeling tools or export your customized attributes and reuse them in other Bizagi Process Models.

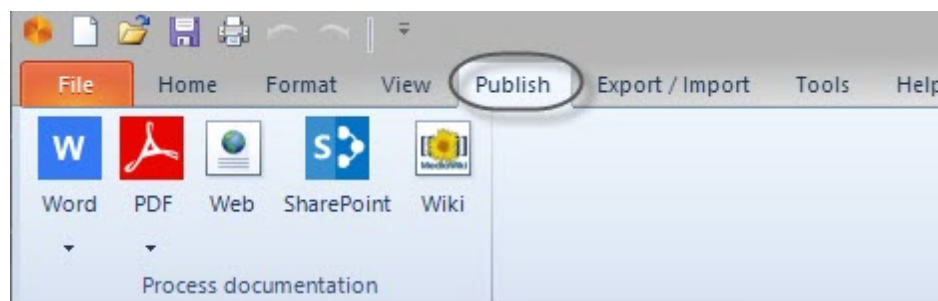
- Microsoft Visio: export your diagrams to Visio 2003, 2007 and 2010
- Image files: export your diagrams to png, bpm, svg or jpg format
- XPDL: export your diagram to XPDL 2.1
- BPMN: export your diagram to BPMN 2.0 xml format
- Attributes: export your customized Extended Attributes and use them in other Bizagi Process Models, to maintain a standard in your documented processes.

Publish or Export

Publish your complete documentation

You can publish your complete documentation in any of the following formats and share with your organization.

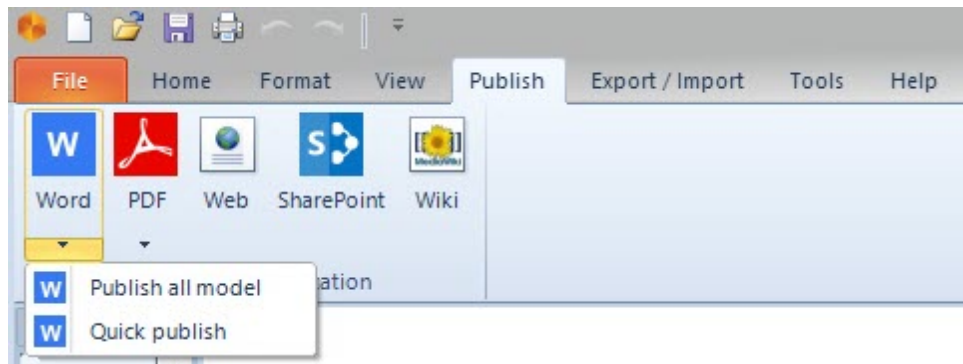
- Microsoft Word
- PDF
- Mediawiki
- Web file (opened through a browser)
- Microsoft Sharepoint



Publish All Model and Quick publish

For Word and PDF publishing you can publish all your documentation with just one click.

- *Publish All Model* publishes all the elements in your Model (including all diagrams) with all the documentation you have defined for each one.
- *Quick Publish* remembers the last time you published and will generate your documentation without going through the publish wizard. If you have not published before, you will need to go through all the steps of the publish wizard.

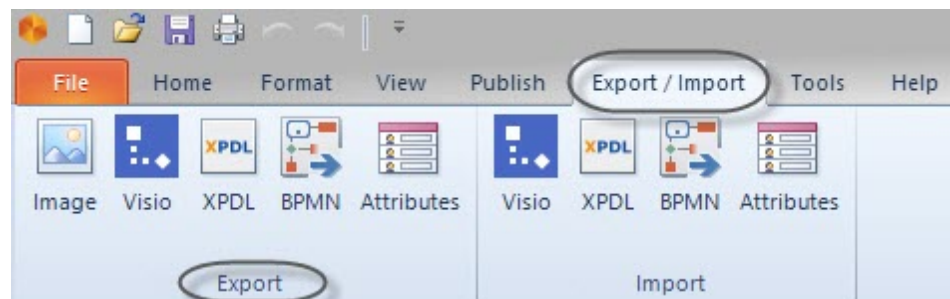


Export your diagrams

Use this option to export your process diagrams to other Modeling tools or to export your customized attributes and reuse them in other Bizagi Process Models.

- Microsoft Visio: export your diagrams to Visio 2003, 2007 and 2010
- Image files: export your diagrams to png, bpm, svg or jpg format
- XPDL: export your diagram to XPDL 2.1
- Attributes: export your customized Extended Attributes and use them in other Bizagi Process Models, to maintain a standard in your documented processes.

[Click here for more information about Exporting Extended Attributes](#)

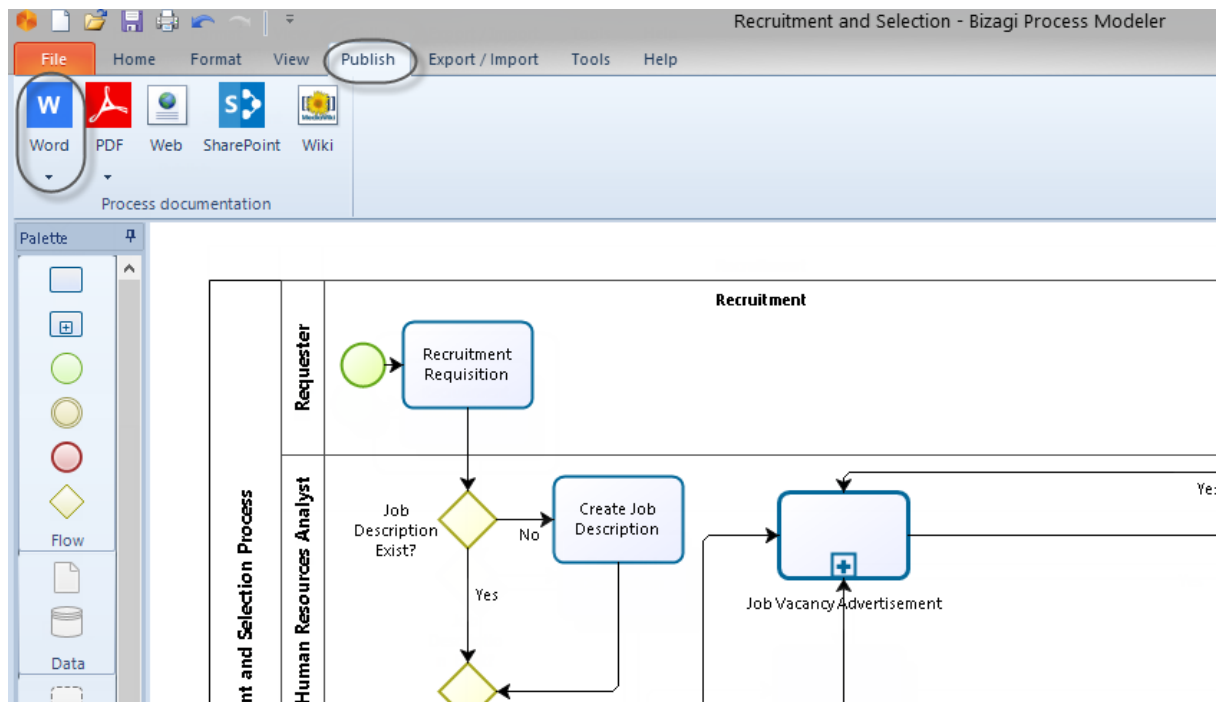


Publishing in Word


You can publish your completed documentation and share it with your organization in Word format. Customize the output information for inclusion in your document by selecting the diagrams and the elements to be included.


Bizagi provides an intuitive wizard to help you through the steps to generate your documentation.

1. On the **Publish** tab, in the **Publish** group, click **Word**.

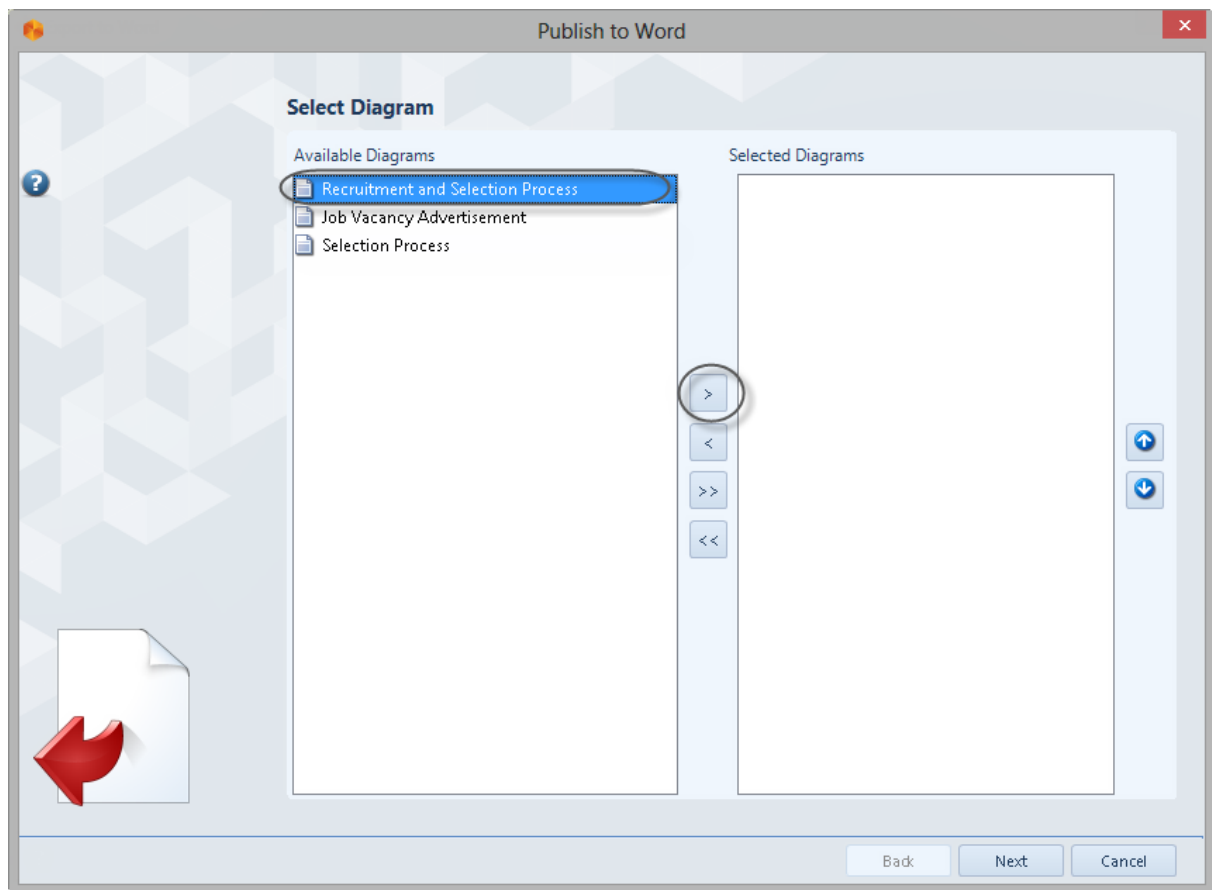


2. Select the diagrams that you wish to publish.

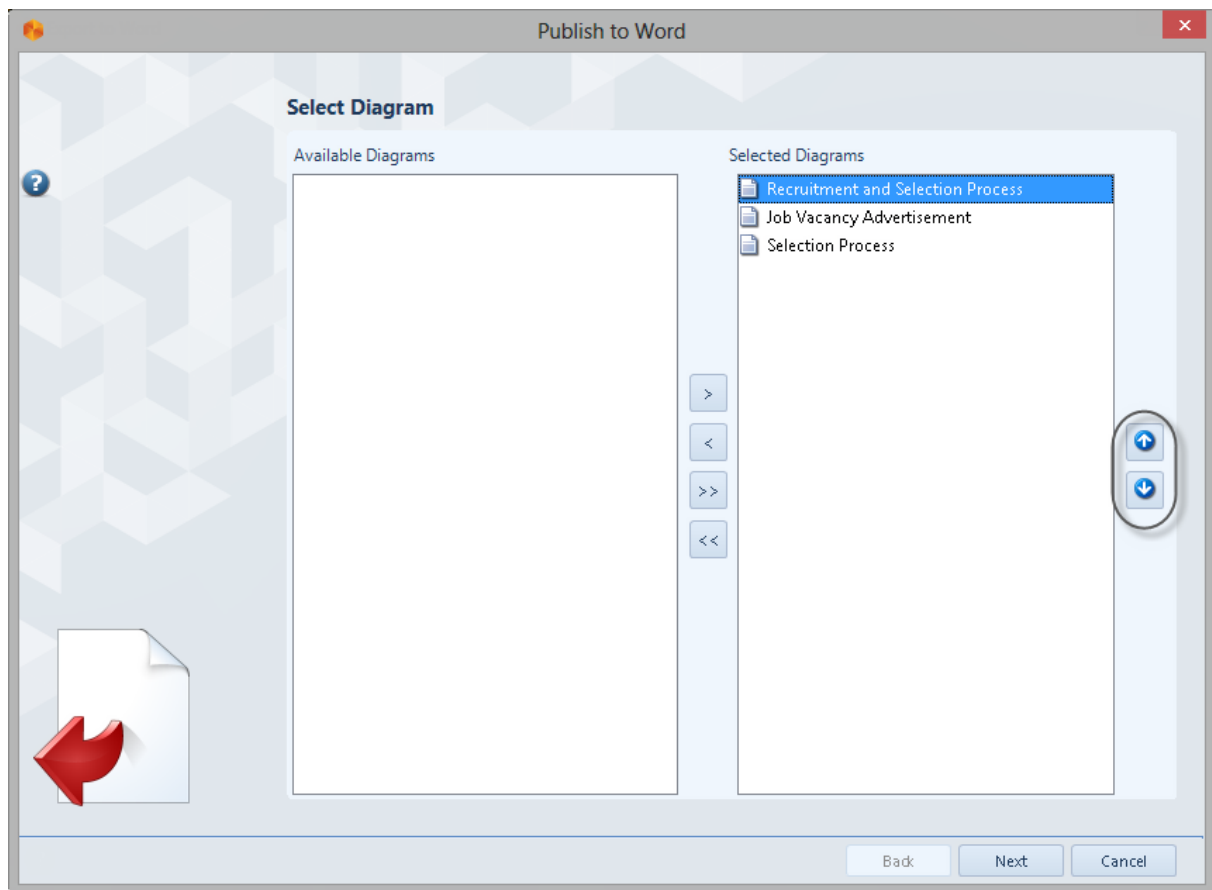
Select individually by using the  button or by double clicking them.

Select all by using the  button.


When all the diagrams you wish to publish are selected, click the **Next** button.

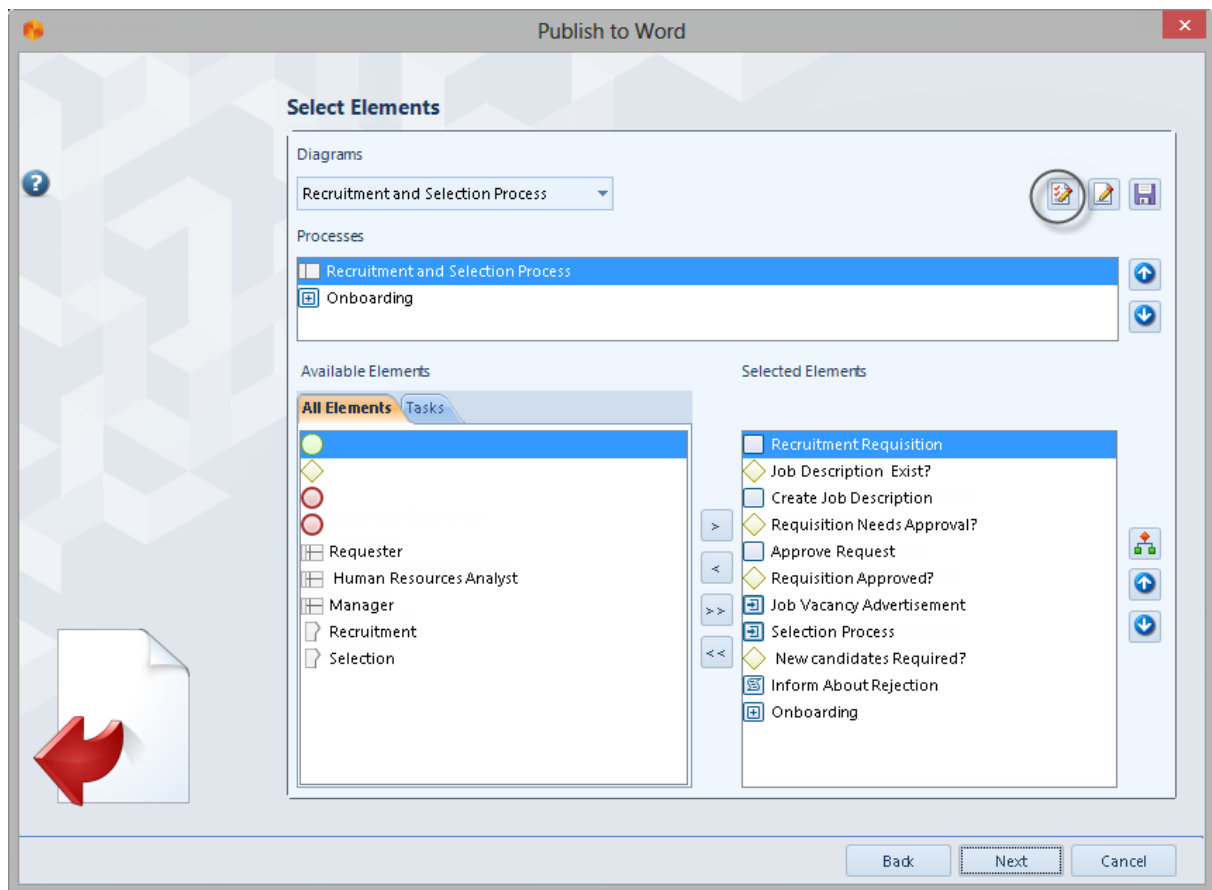



3. Choose the order in which you wish to publish your diagrams by using the buttons on the right hand side. Once finished, click the **Next** button.

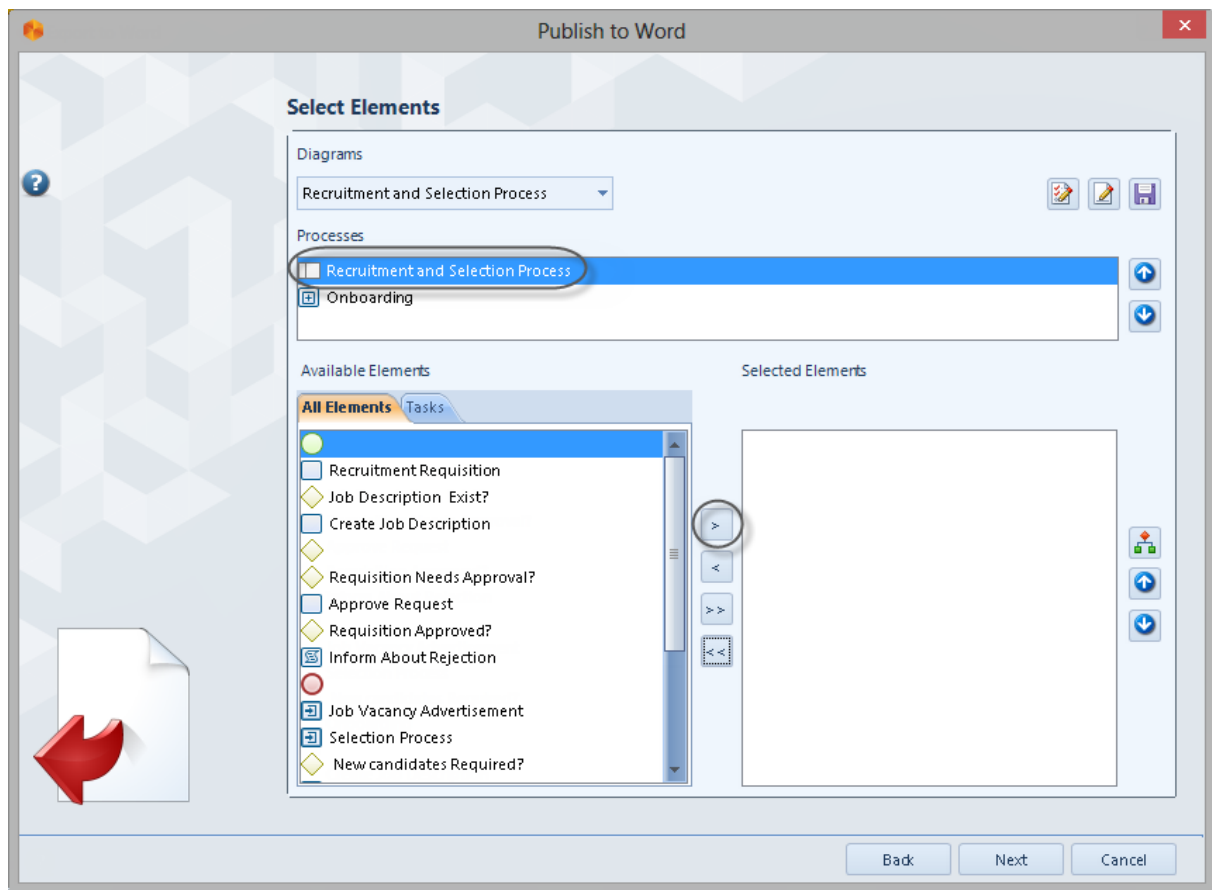


4. For each diagram select the elements that you wish to publish in the documentation.

You can select all elements across all diagrams using the  button.



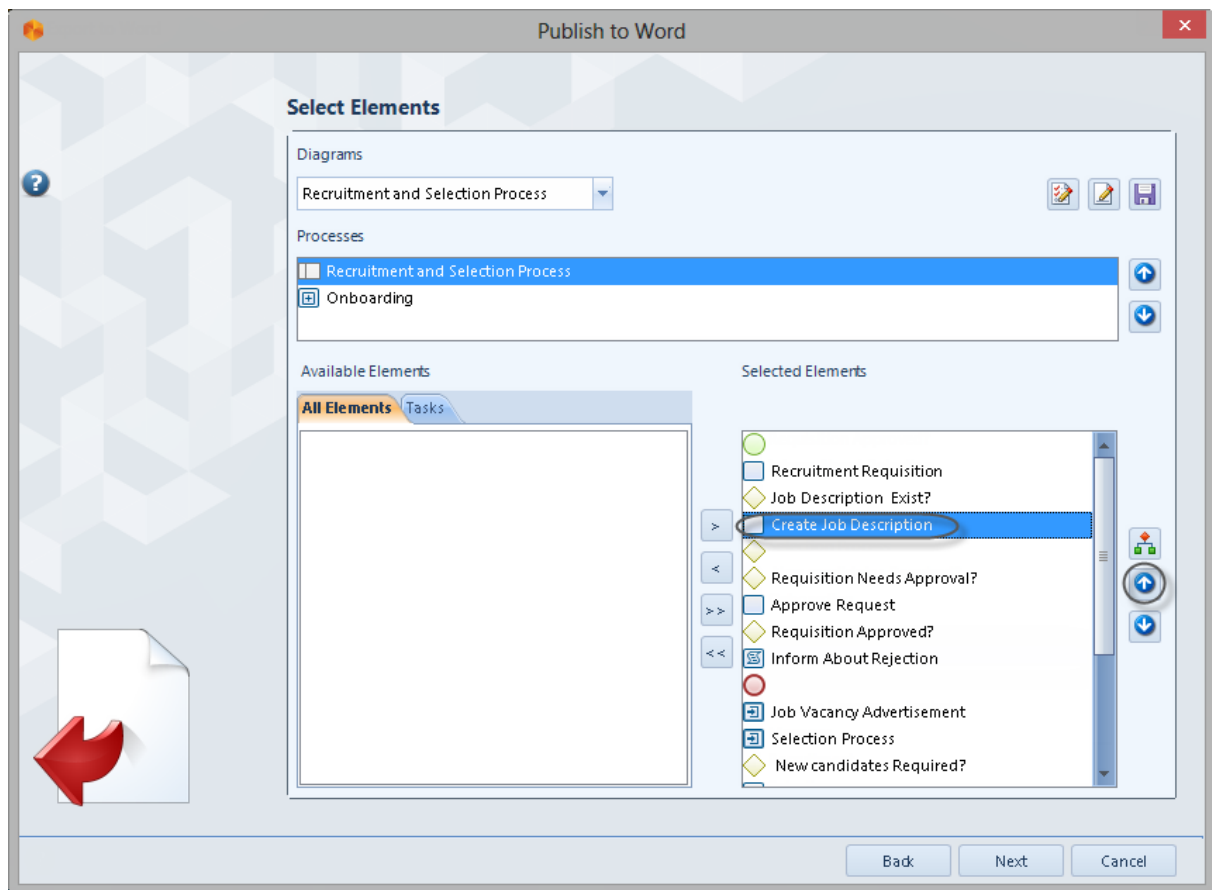
You can individually select elements from each diagram using the  button or by double clicking them.




5. For each diagram select the order in which you wish the elements to be exported. By default elements are organized according to the sequence of the process flow .



To move an element from its default position, select the element and click the button until you find the desired position.

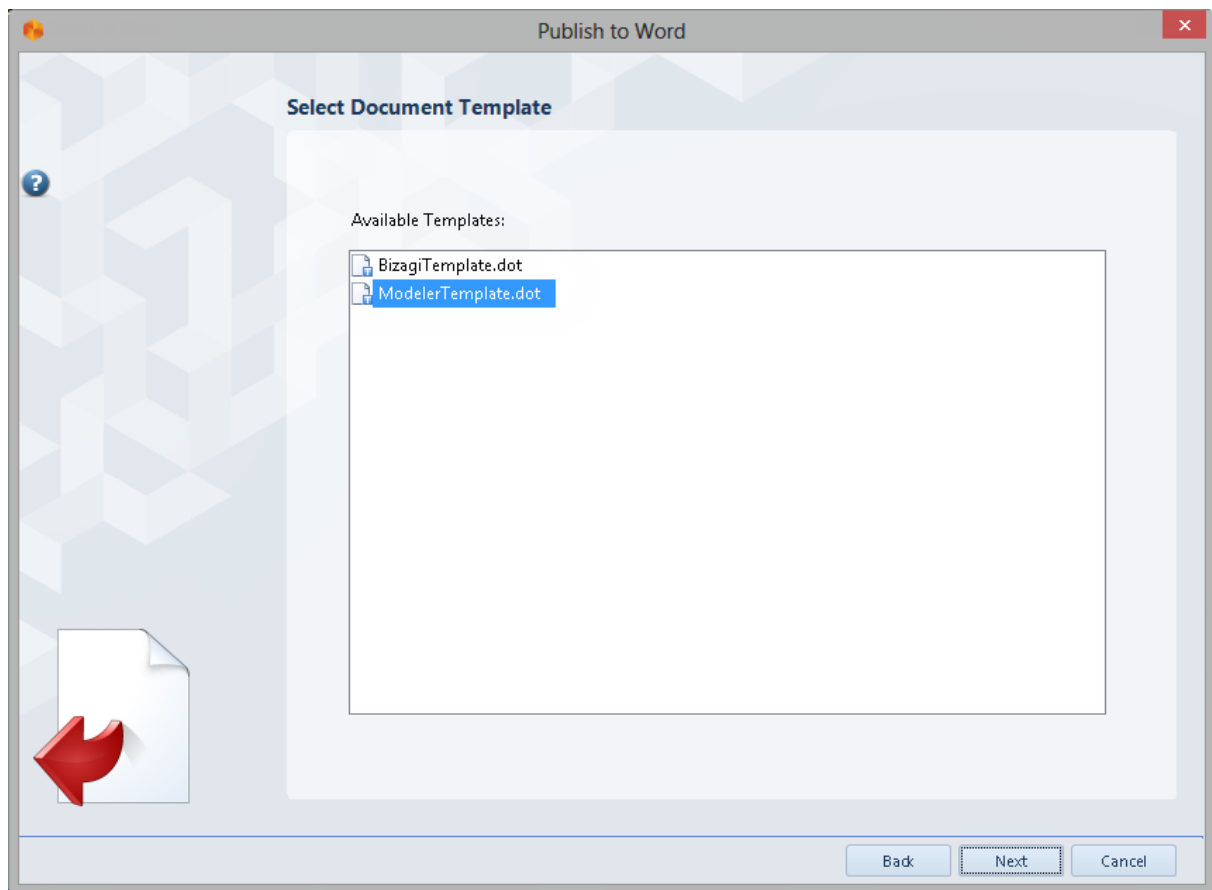


Click the  button to order the elements automatically.
When you are satisfied with the order of the elements for each diagram, click the **Next** button.

6. Select the template you wish to use for your export documentation.

By default the Modeler offers two templates: Bizagi Template with Bizagi's format (fonts, water marks) and the Modeler Template with a standard format.

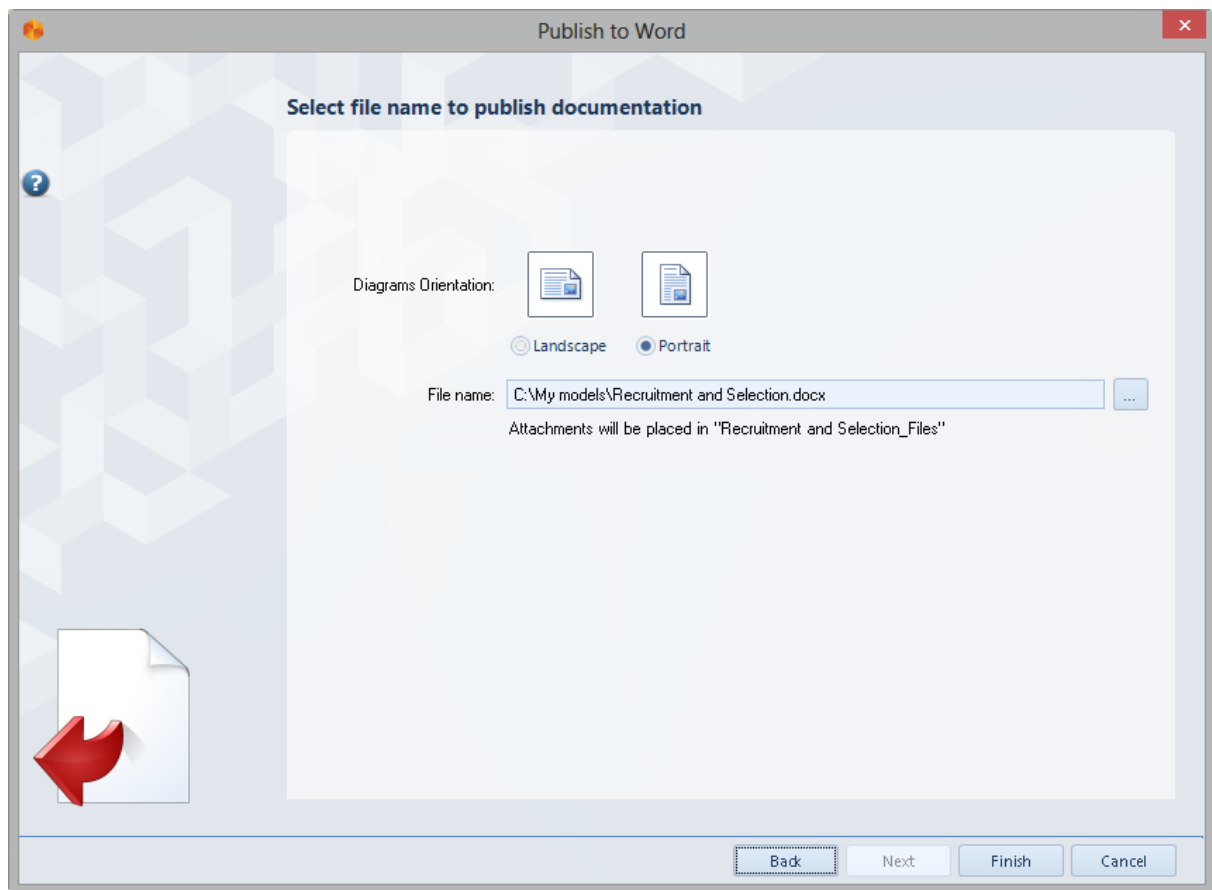
You can create your own user-defined template as well. Please refer to [Document Template](#) to learn how to customize and use your user-defined template. After selecting the template click the **Next** button.



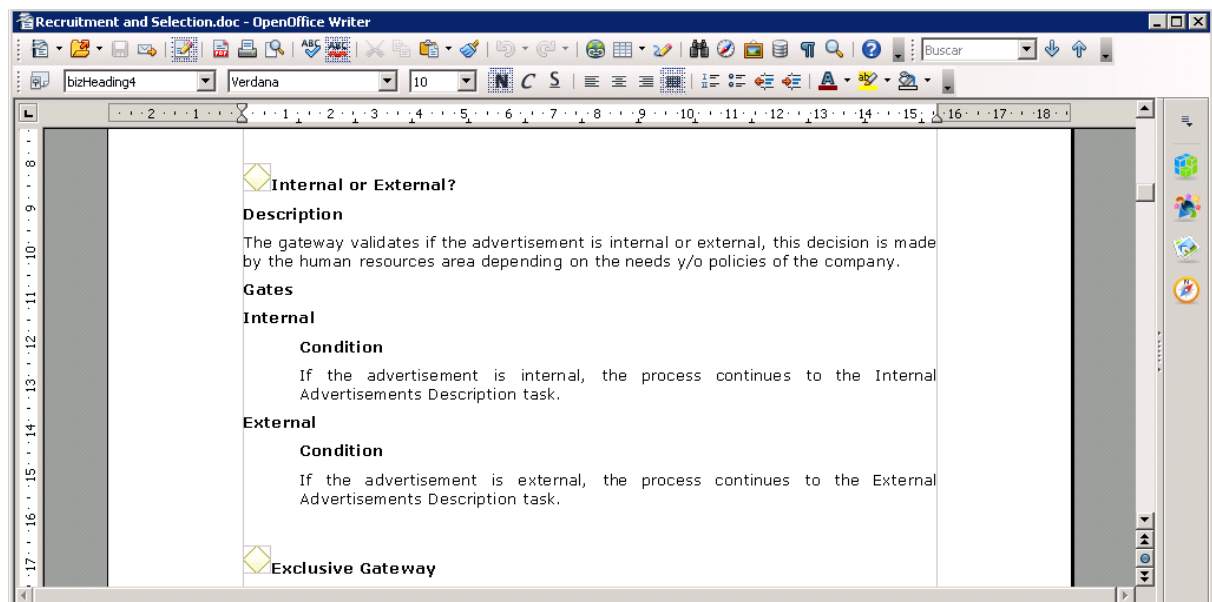
7. Specify the appropriate folder in which to publish your process. This folder should have Read and Write permissions.

By default, the Diagram's model will be published in a Landscape orientation (only this page). You may change this setting in this step as well.

Click the **Finish** button to generate your documentation.



8. The Word document will be opened as soon as the documentation is generated with the default program installed locally to handle .doc files (MS Word, Apache Open Office Writer, etc).



Document Template

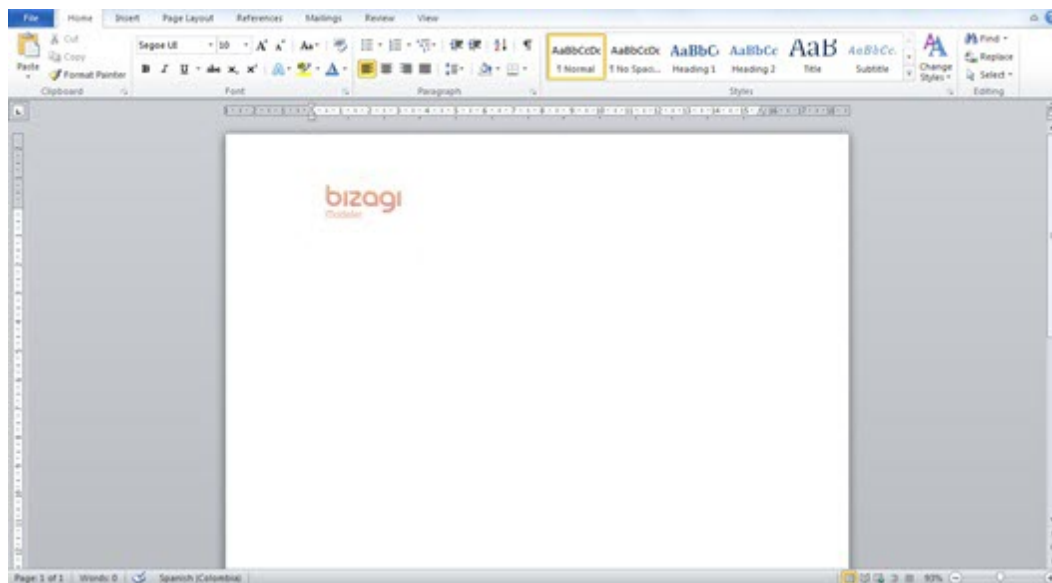
Bizagi Modeler has two predefined templates for the user to choose from to generate Word documentation.

- BizagiTemplate: this template contains Bizagi's logo, water marks and styles.
- ModelerTemplate: this template has no water marks and uses standard fonts.

You can design and define your own template in Microsoft Office Word to be used when you generate your Word documentation.

To customize your own template, take the following steps:

1. Use one of the default Templates and amend it as you wish to establish your own documentation template.



2. Modify your own template.

You may include water marks, new images or modify the styles.

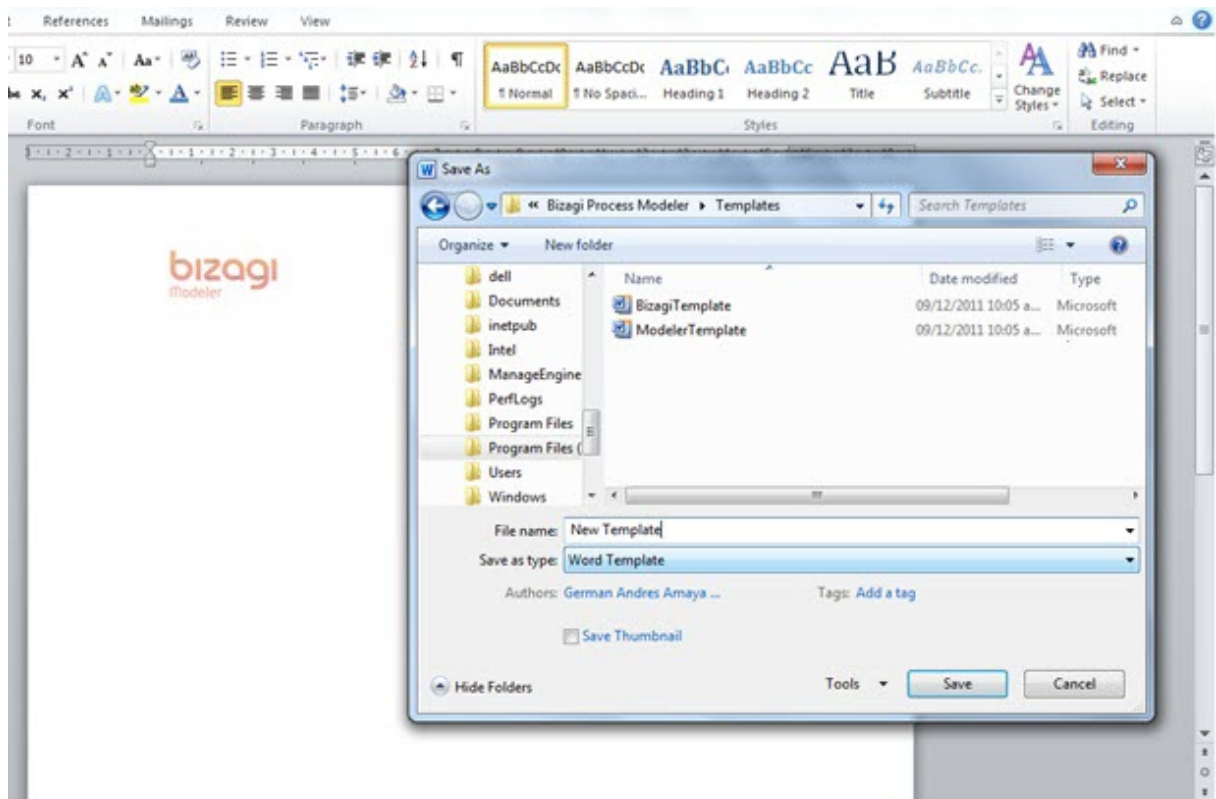
Make sure keep the following styles (you may re-define them):

- *bizTitle*: Used for the document's title.
- *bizSubtitle*: Used for the document's subtitle.
- *Normal / ModelerNormal*: Used for general text (i.e, in descriptions). It is used as the default/normal style.
- *bizHeading1*: Used by the documentation's title (taken from the file name). Seen in items numbered as "n".
- *bizHeading2*: Used by the Processes or Sub-Processes chapters. Seen in items numbered as "n.m".
- *bizHeading3*: Used by the Process Elements section. Seen in items numbered as "n.m.o".
- *bizHeading4*: Used by each of the elements. Seen in items numbered as "n.m.o.p".

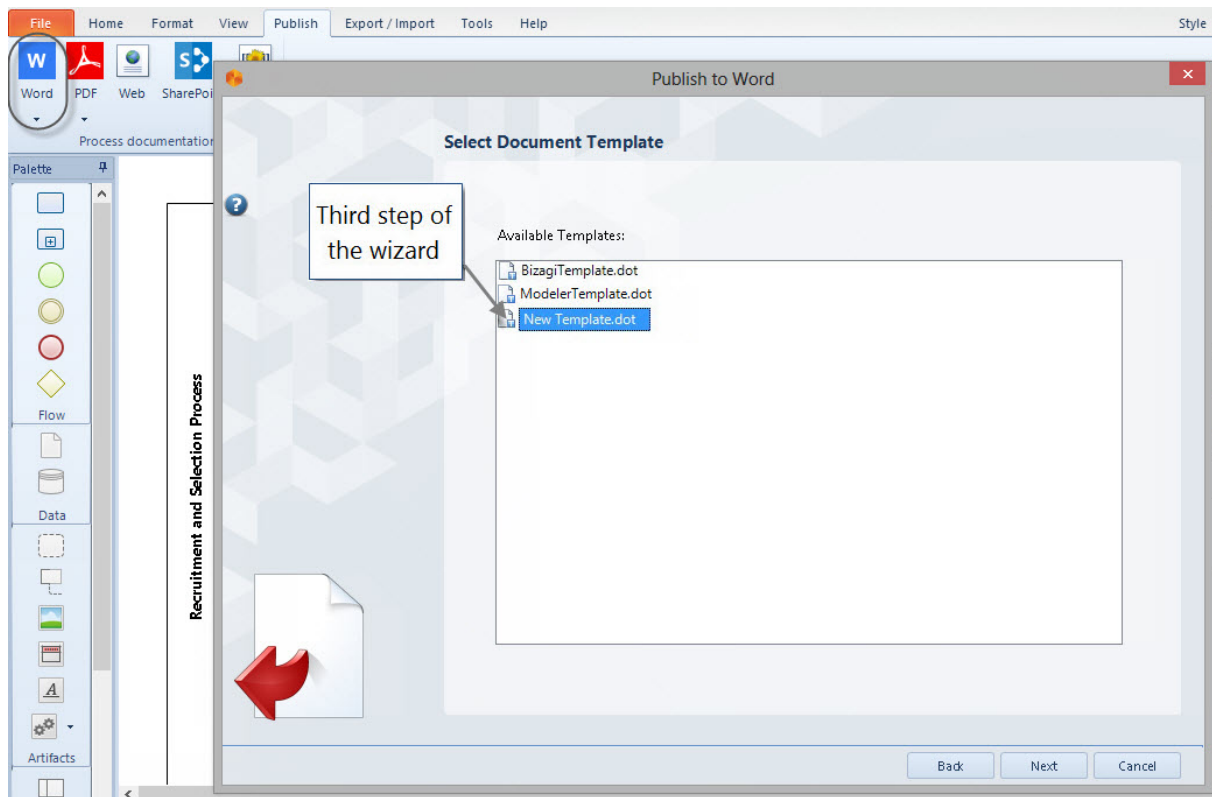
To modify default styles of the table of contents, modify the TOC1, TOC2, and TOC3 styles.

3. Save the Microsoft Word Document as a **Word Template (.dot)** in the path where the Modeler was installed. By default this path is:

C:\Program Files\Bizagi\Bizagi Modeler\Templates



4. When you generate your documentation in Microsoft Office Word, the wizard will allow you to choose your template from the list.

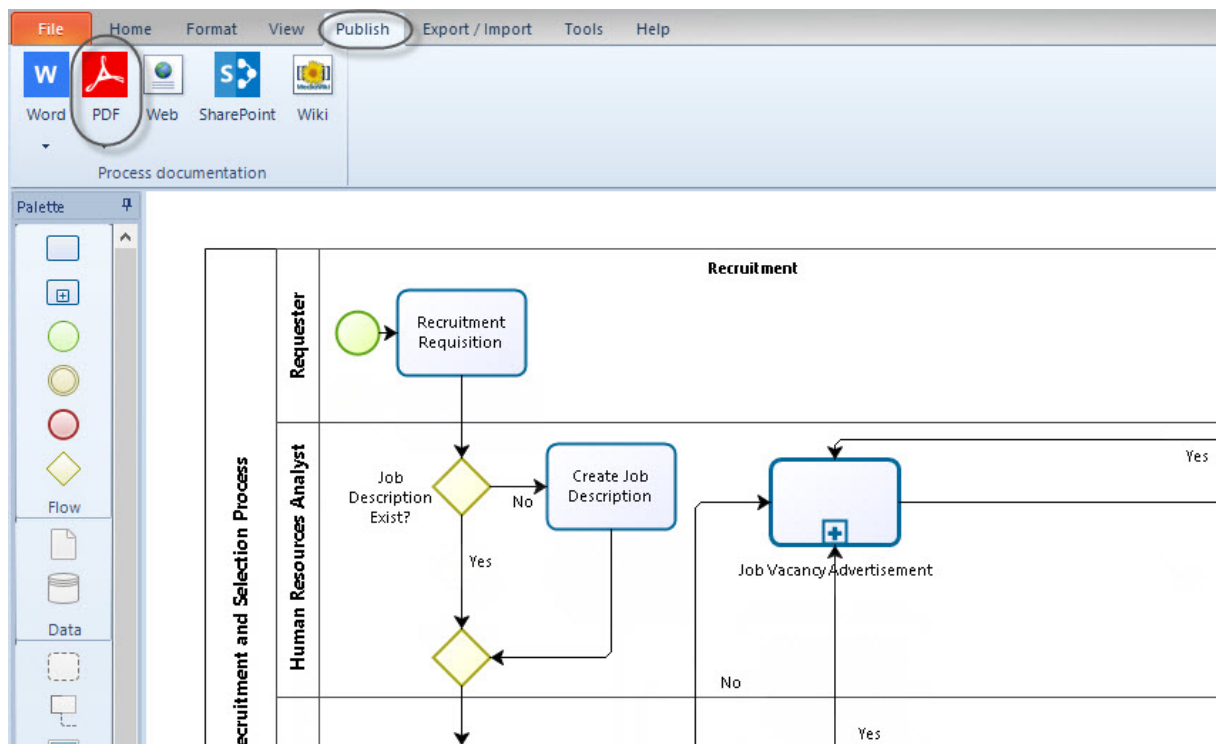


Publishing in PDF


You can publish your completed documentation and share it with your organization in PDF format. Customize the output information for inclusion in your document by selecting the diagrams and the elements to be included.


Bizagi provides an intuitive wizard to help you through the steps to generate your documentation.

1. On the **Publish** tab, in the **Publish** group, click **PDF**.

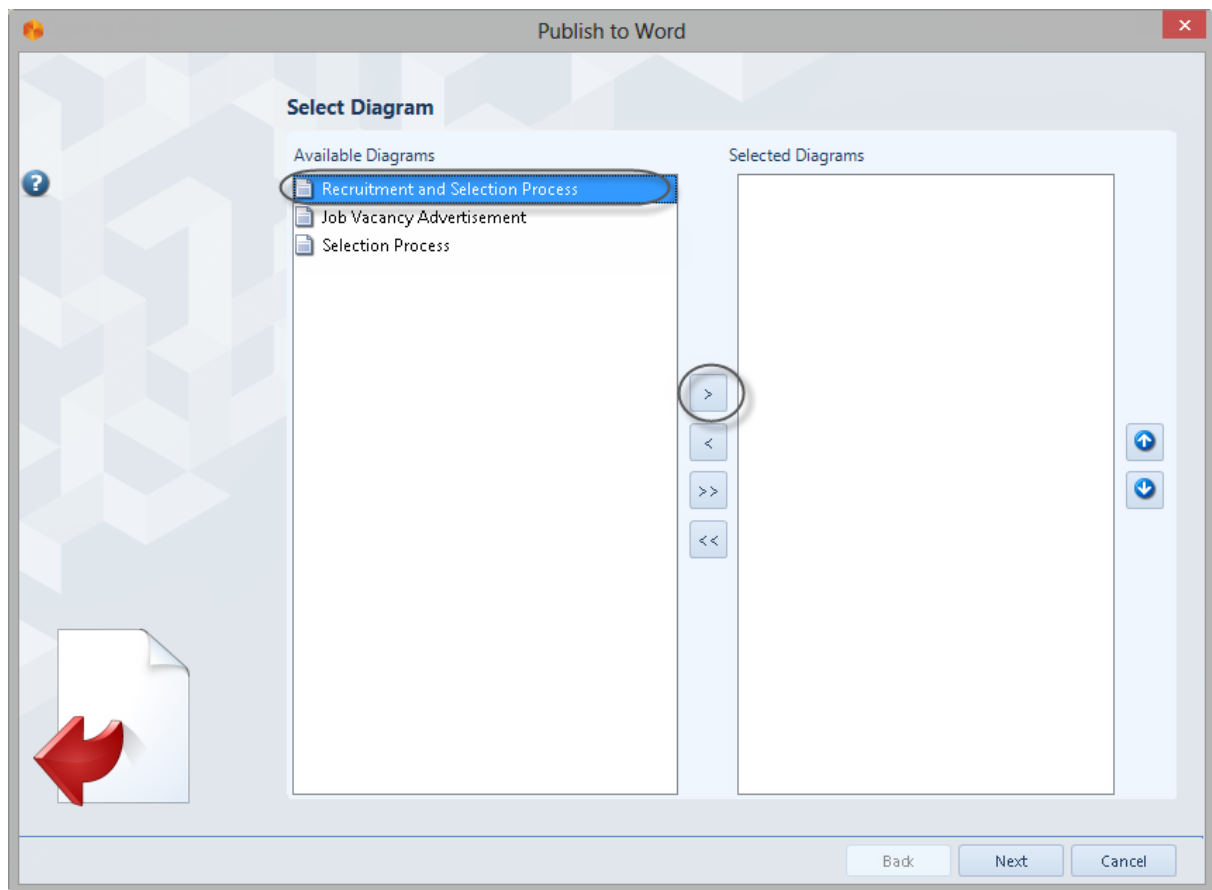


2. Select the Diagrams that you wish to publish.

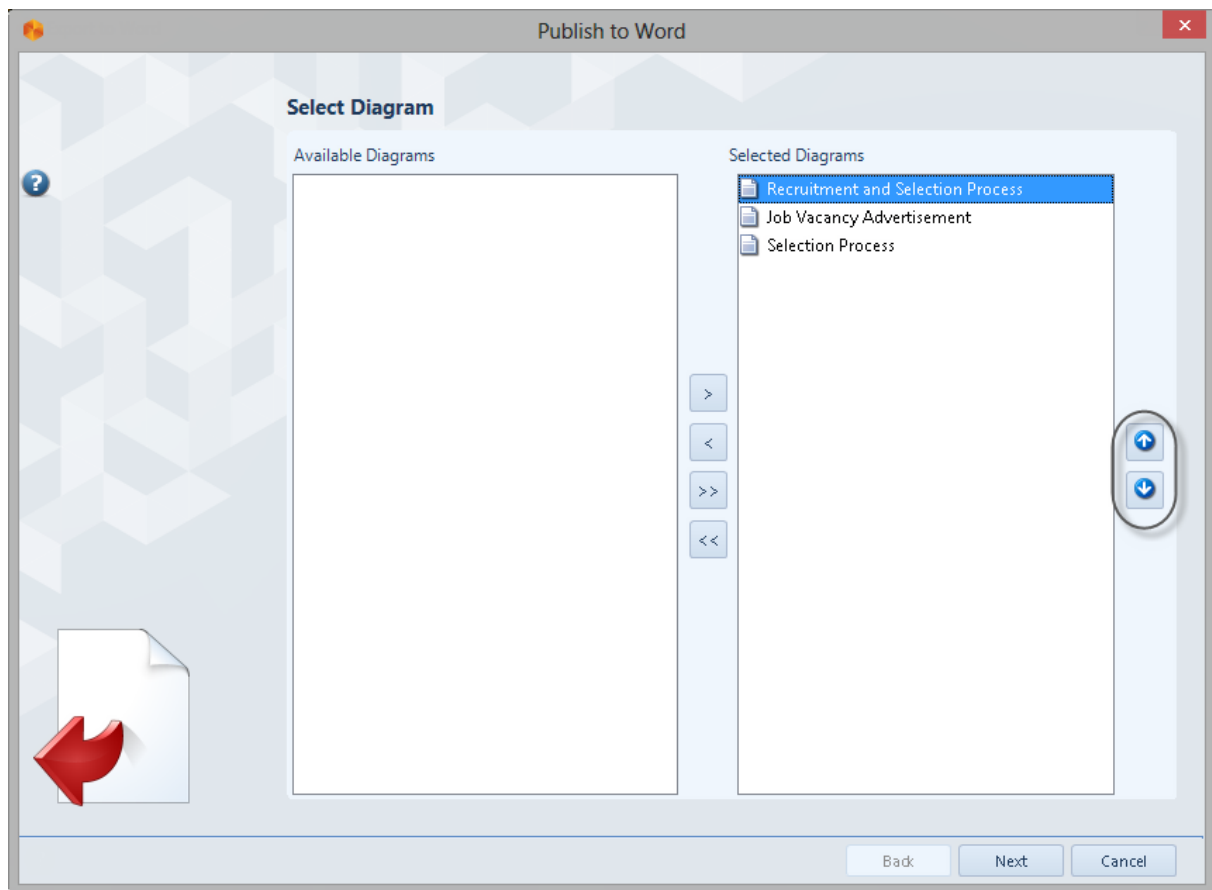
Select individually by using the  button or by double clicking them.

Select all by using the  button.


When all the diagrams you wish to publish are selected, click the **Next** button.

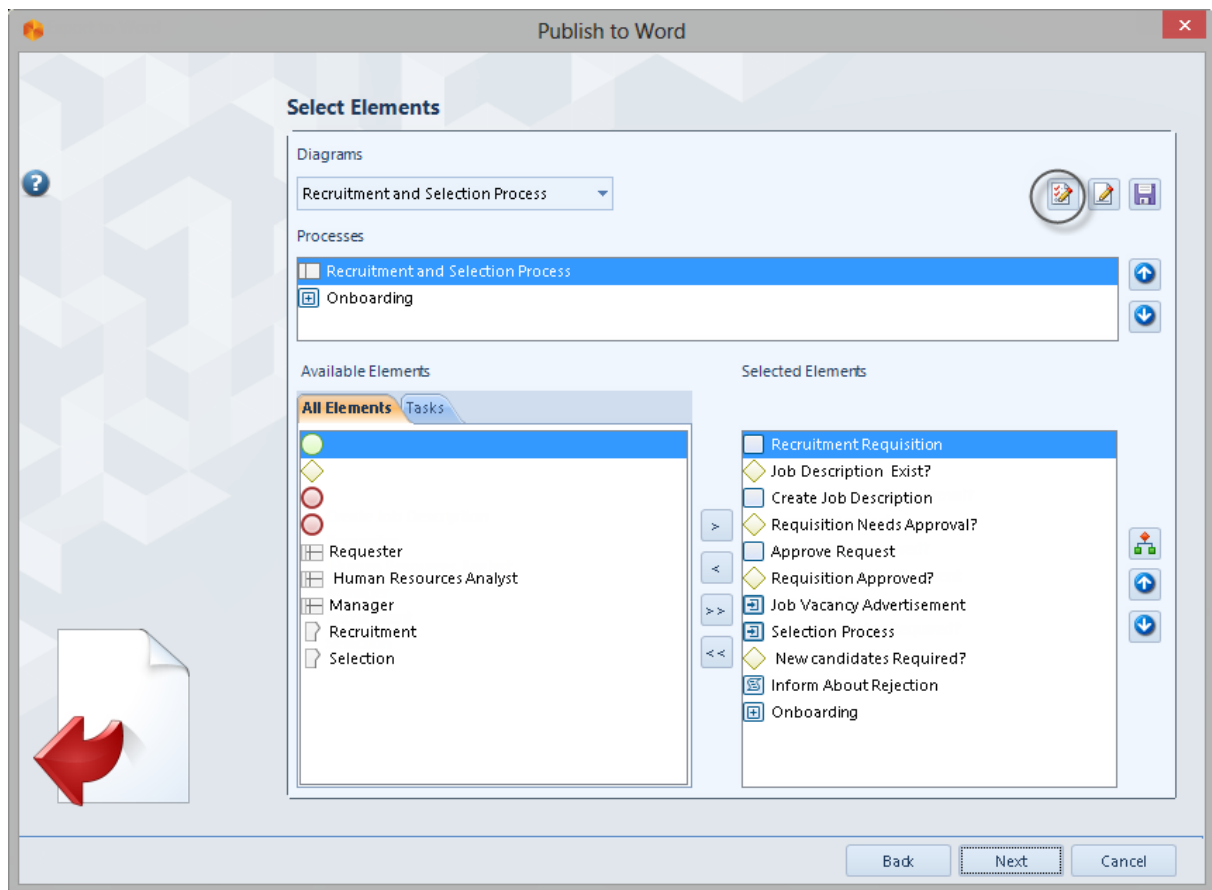


3. Choose the order in which you wish to publish your diagrams using the buttons on the right hand side. Once finished, click the **Next** button.



4. For each diagram select the elements that you wish to publish in the documentation.

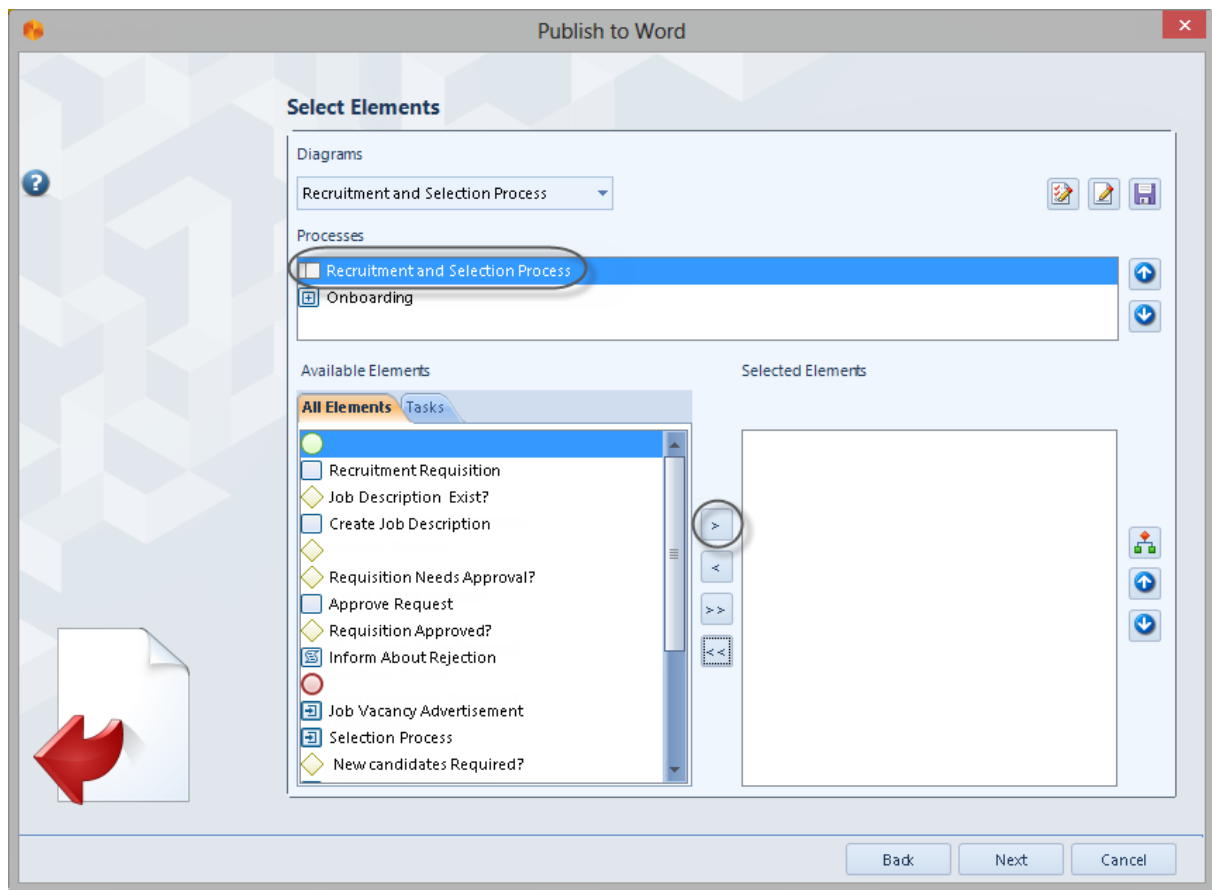
You can select all elements across all diagrams using the  button.



You can also individually select elements from each diagram using the



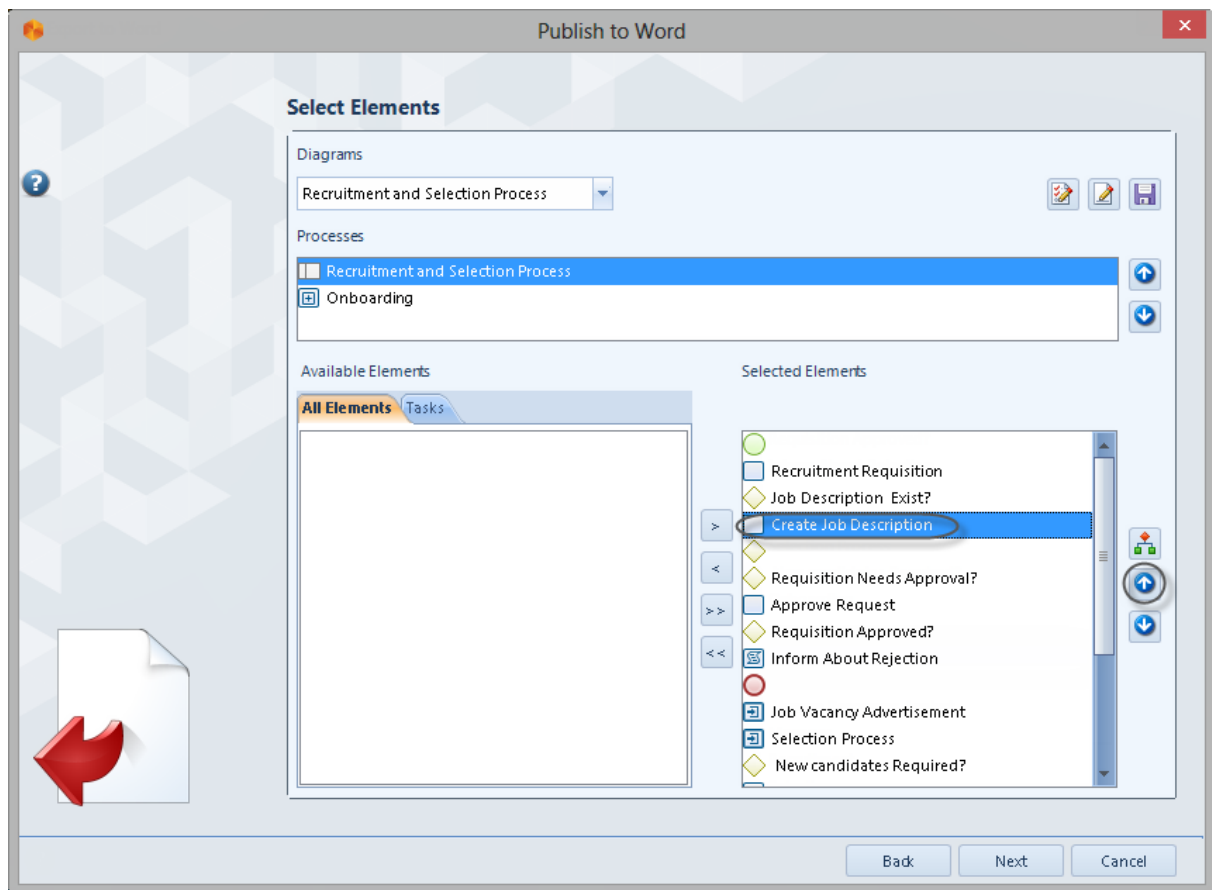
button or by double clicking them.




5. For each diagram select the order in which the elements should be exported.
By default elements are organized according to the sequence of the process flow .



To move an element from its default position, select the element and click the button until you find the desired position.

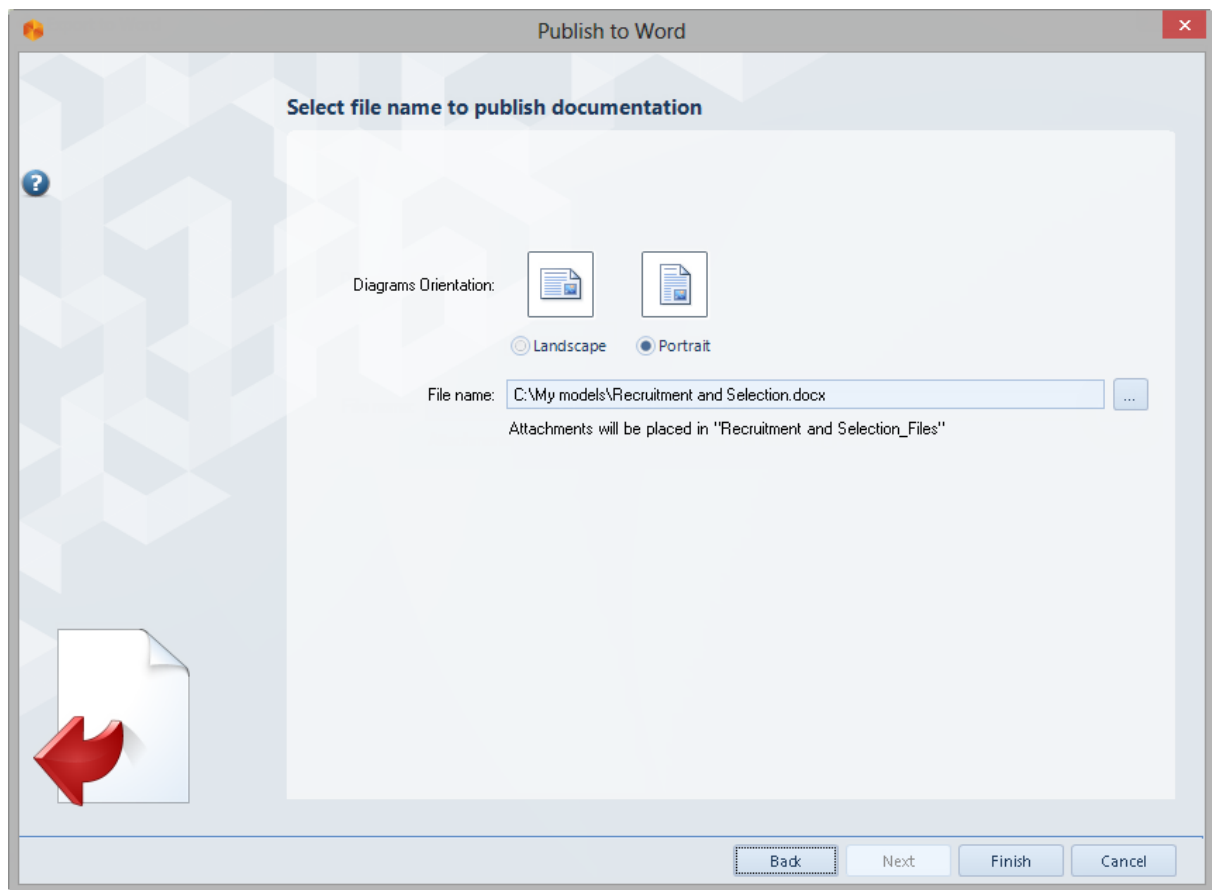


Click the  button to order the elements automatically..
When you are satisfied with the order of the elements for each diagram, click the **Next** button.

6. Specify the appropriate folder in which to publish your process. This folder should have Read and Write permissions.

By default, the Diagram's model will be published in a Landscape orientation (only this page).
You may change this setting in this step as well.

Click the **Finish** button to generate your documentation.



7. The PDF document will be opened as soon as the documentation is generated.

Note

You may customize your PDF output's styles (i.e, font color and sizes, include watermarks, etc). To do so, edit the ModelerTemplate.dot file located at the ./Templates/ folder of your Modeler installation.

For more information about editing styles in this template, refer to [Document template](#).

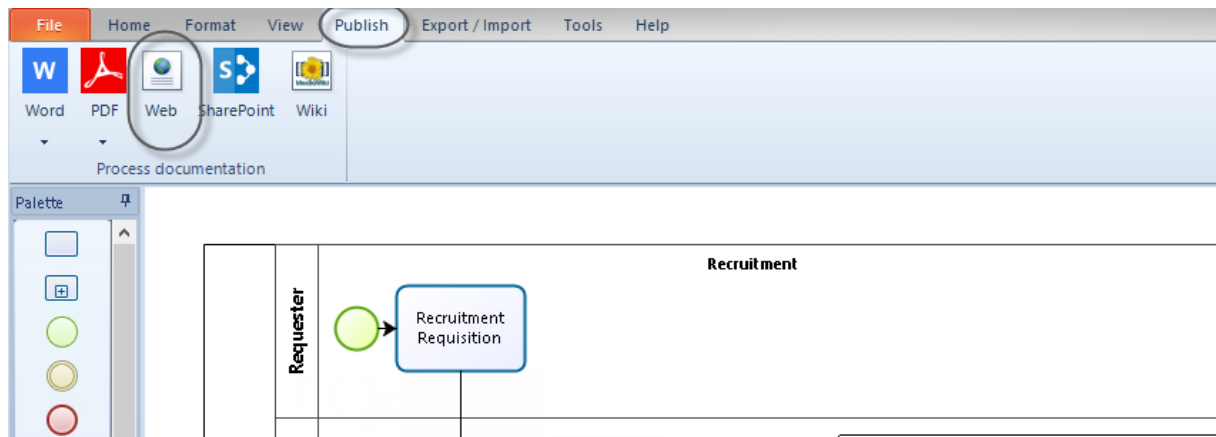
Publishing to Web

You can publish your completed documentation and share it with your organization in Web format. Customize the output information for inclusion in your document by selecting the diagrams and the elements to be included.


You may view the Web documentation from a browser. To review the supported browsers, refer to the [system requirements](#).

Bizagi provides an intuitive wizard to help you through the steps to generate your documentation.

1. On the **Publish** tab, in the **Publish** group, click **Web**.

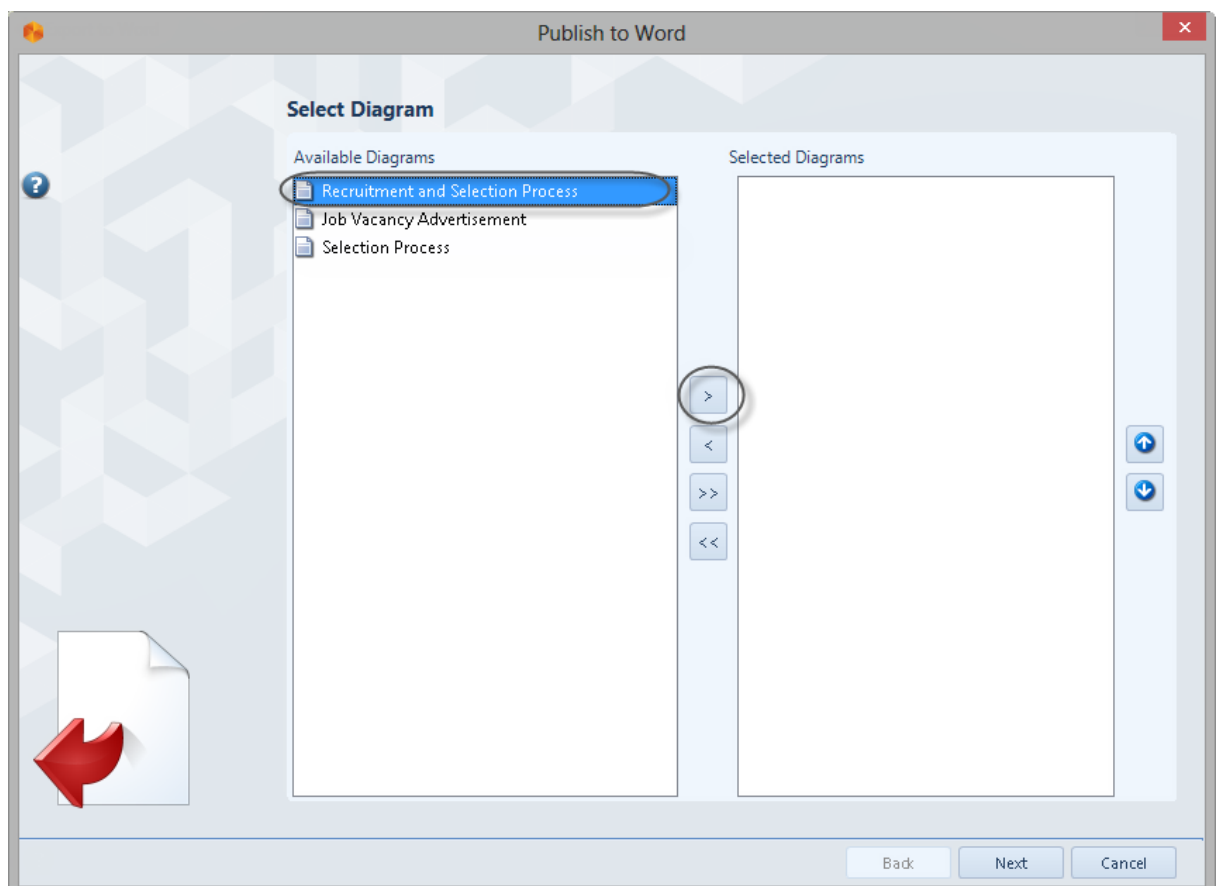


2. Select the Diagrams that you wish to publish.

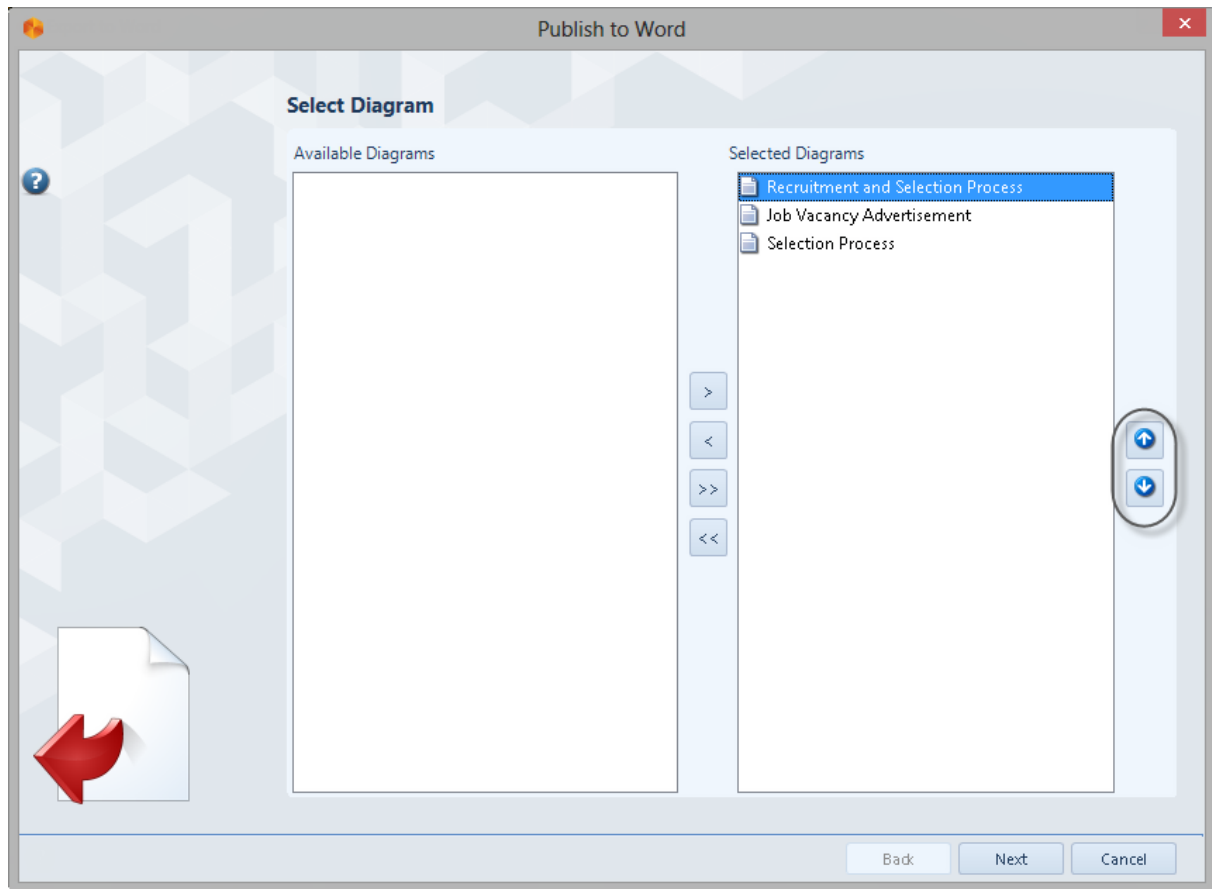
Select individually by using the  button or by double clicking them.

Select all by using the  button.

When all the diagrams you wish to publish are selected, click the **Next** button.

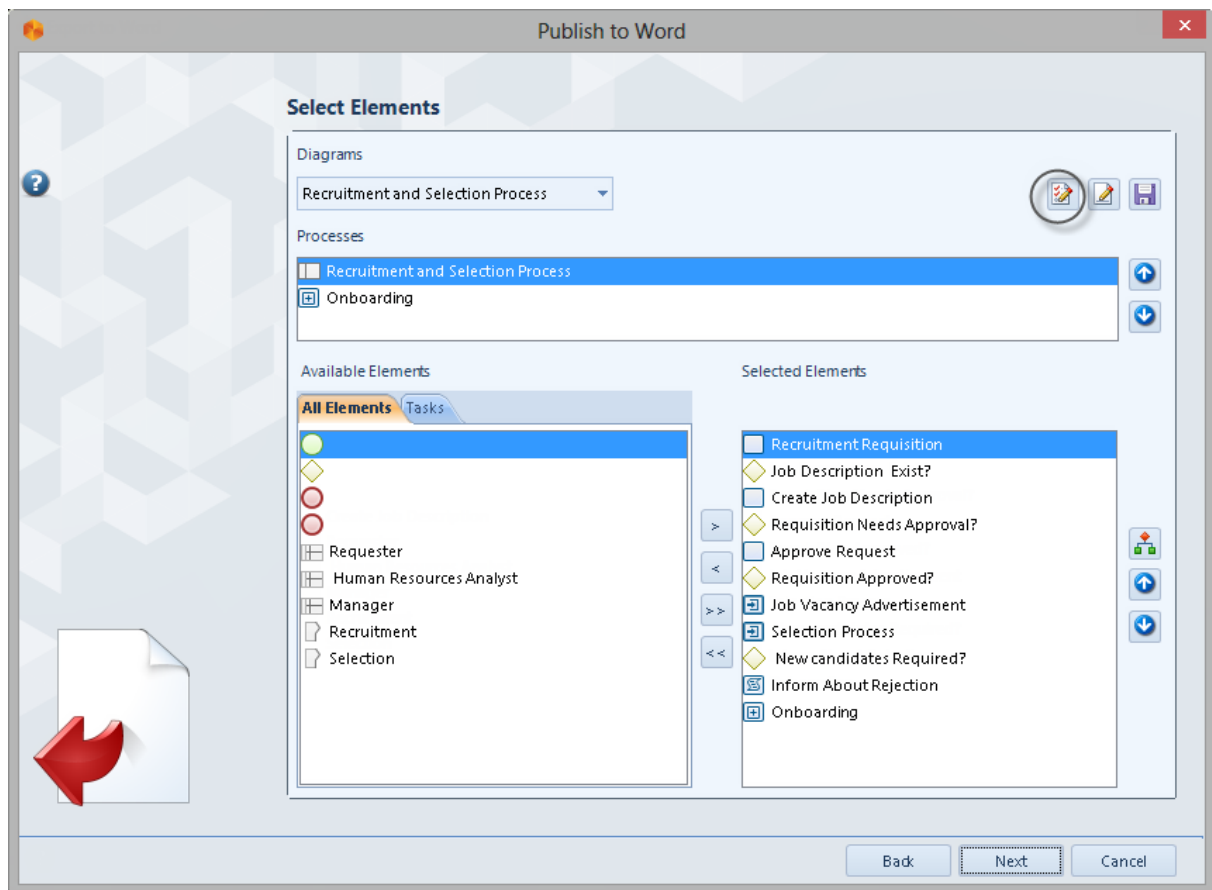



3. Choose the order in which you wish to publish your diagrams by using the buttons on the right hand side. Once finished, click the **Next** button.

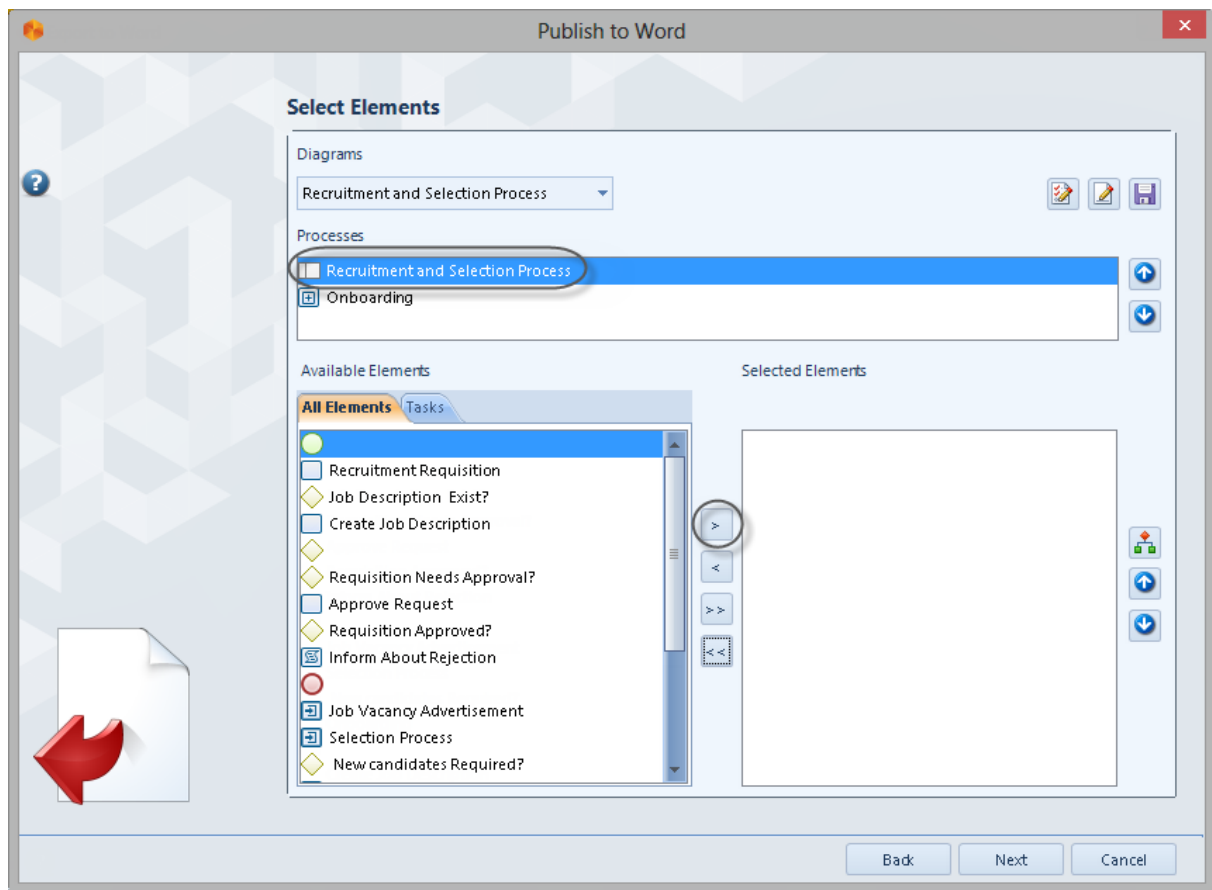


4. For each diagram select the elements that you wish to publish in the documentation.

You can select all elements across all diagrams by using the  button.



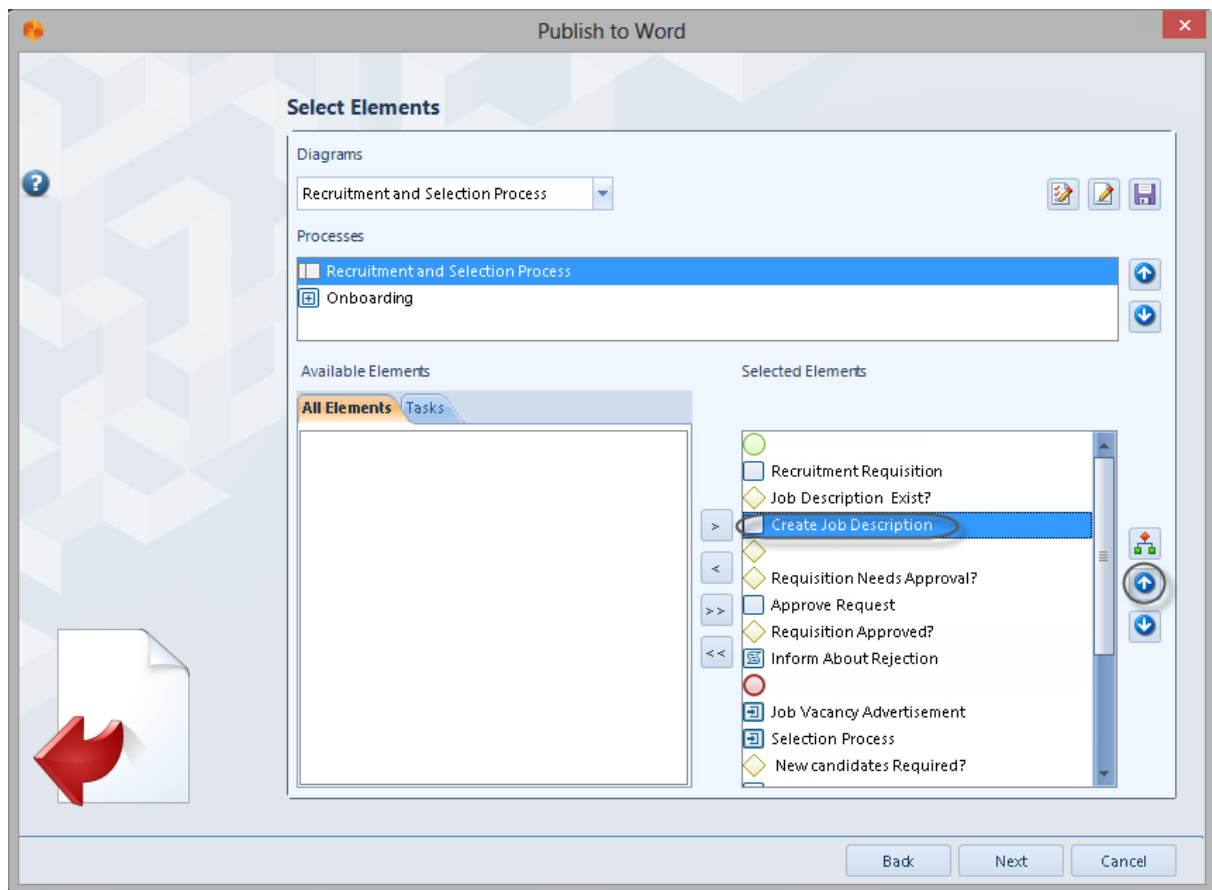
You can also individually select elements from each diagram using the  button or by double clicking them.




5. For each diagram select the order in which you wish the elements to be exported. By default elements are organized according to the sequence of the process flow .

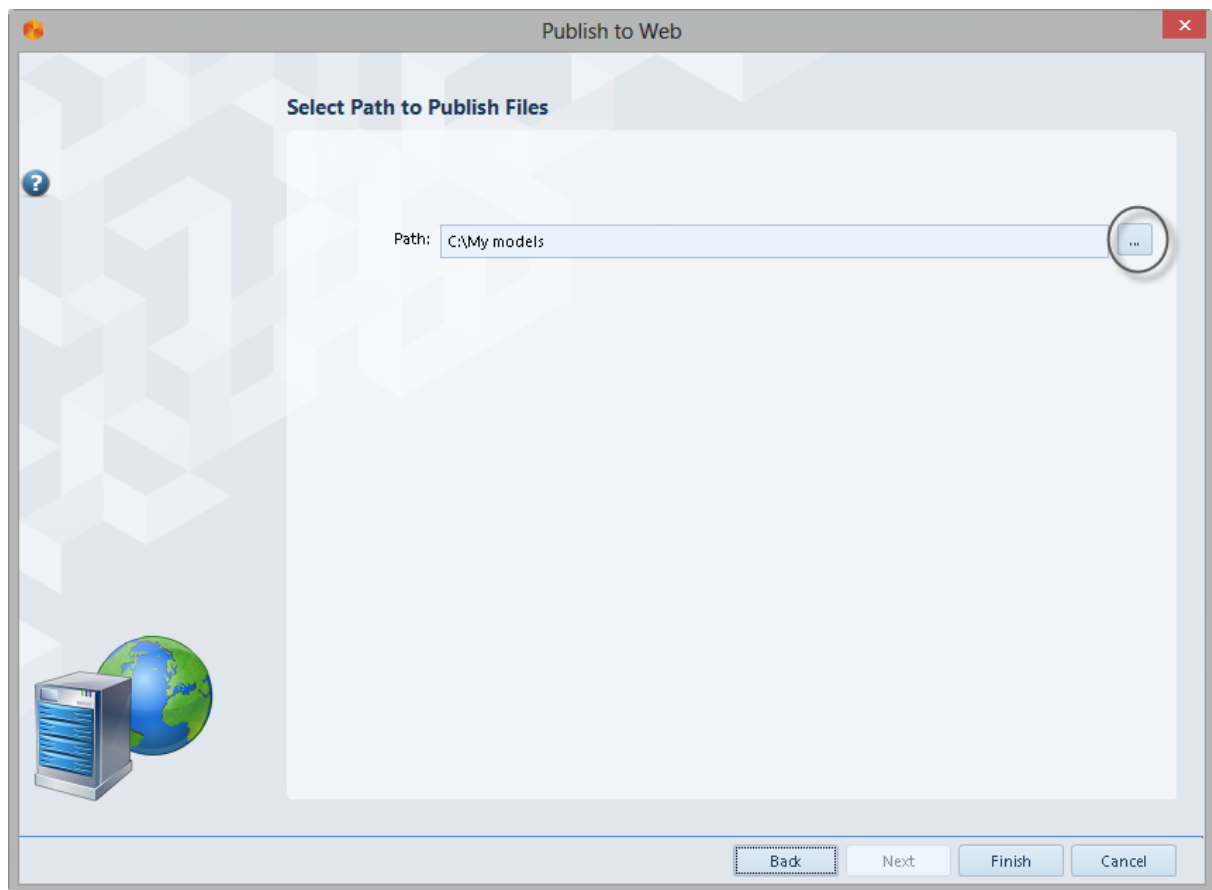


To move an element from its default position, select the element and click the button until you find the desired position.



Click the  button to order the elements automatically.
When you are satisfied with the order of the elements for each diagram, click the **Next** button.

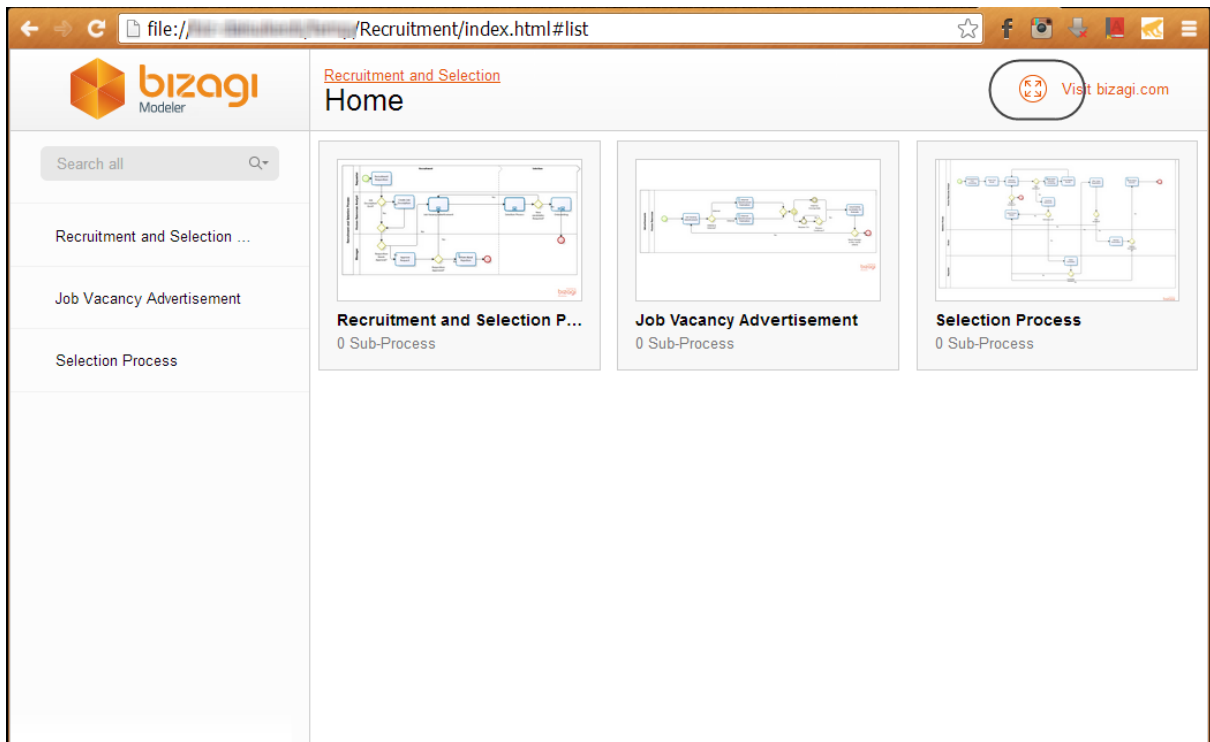
6. Specify the appropriate folder in which to publish your process. This folder should have Read and Write permissions.



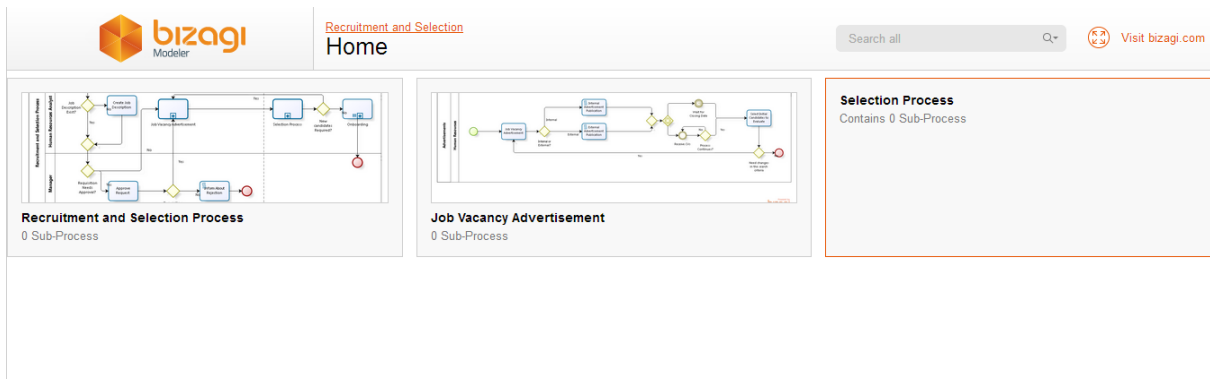
Once the process has been published on the Web, you will be able to view your diagram documentation.

Web Output

Generated documentation will show your selected processes in an initial Home page. The description is displayed when the mouse is hovered over each process.



At any time, you may go into the Full screen mode (specially useful to present or view wide diagrams) by clicking on the Full screen icon located at the top right corner:



Exit full screen mode by pressing the Escape key (*ESC*) or clicking on the Full screen icon again.

Further documentation included will be displayed when clicking over each element.

Click on your process to see the detailed information.

You will be able to see the documentation of any diagram element by clicking on it.

To exit from the details popup, close it or click anywhere else in the diagram.

file:///.../Recruitment/index.html#dialog/element/736e277f-d366-490f-9b9f-53c8

bizagi Modeler Recruitment and Selection Recruitment and Selection Process Visit bizagi.com

Search in t

Recruitment

Job Vacanc

Selection P

Recruitment and Selection Process

Recruitment Requisition

Performer Requester

Description The process begins when a person in a department needs to fill a vacancy. It is necessary to include the skills, abilities, experience and knowledge needed in the candidate. Also a brief job description is required.

Activities

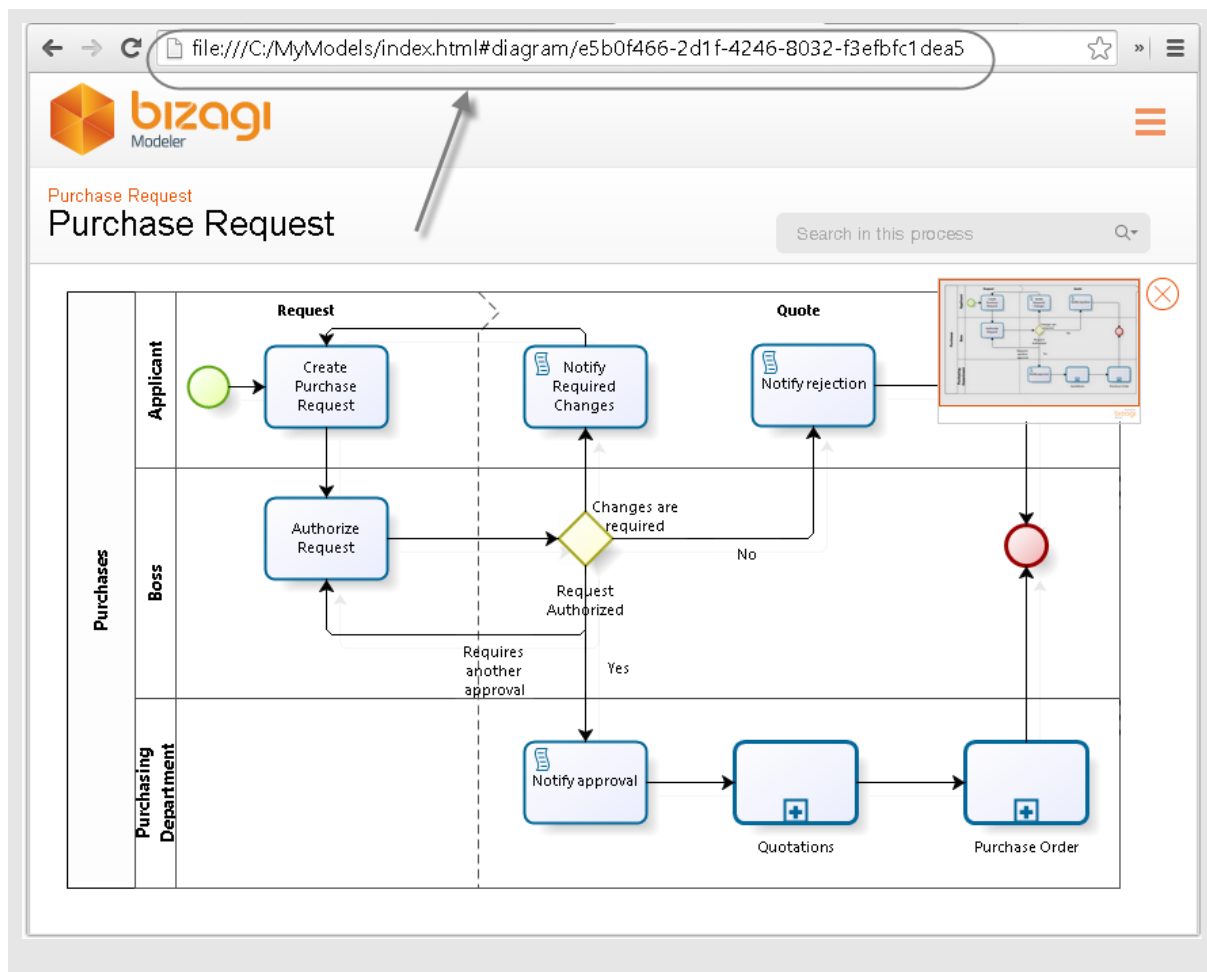
| Description | Item |
|---|----------|
| Set Case Creator and date as today | On Enter |
| Check whether the job description exists. | On Exit |

Allocations

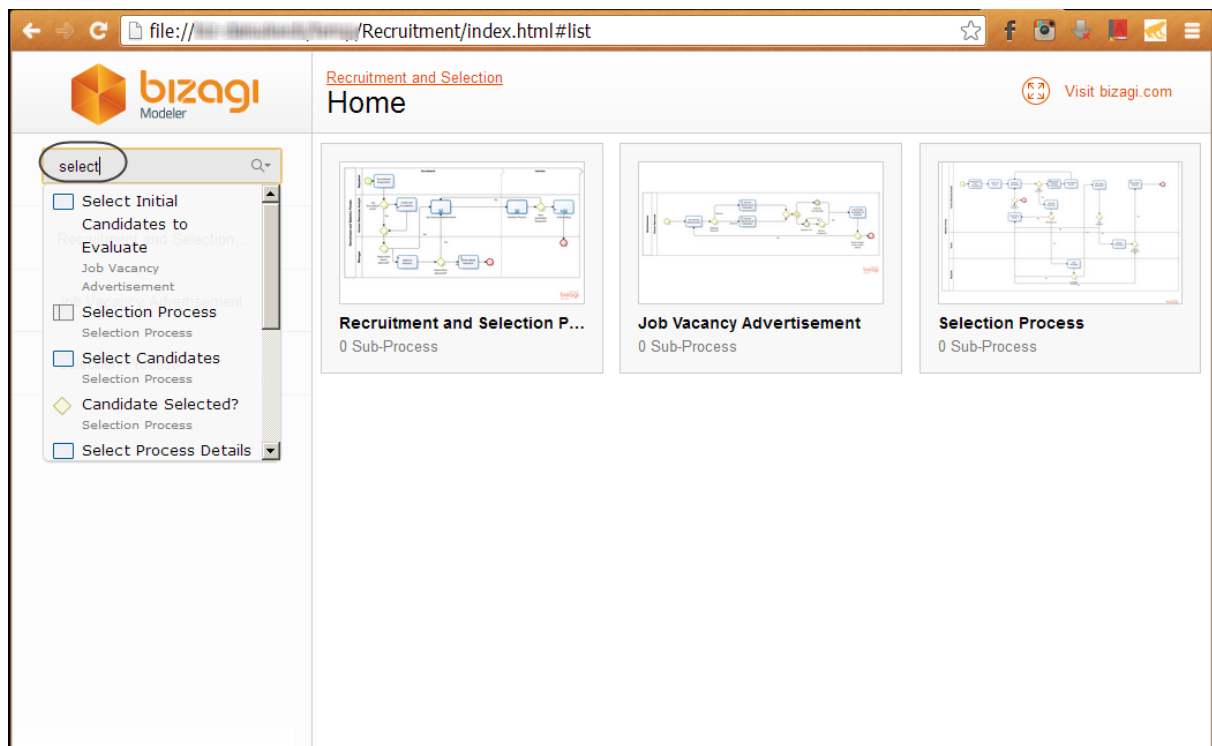
| Condition | Description |
|--------------|--|
| Case Creator | The case must be opened by a person how needs to fill a vacancy. |

Note

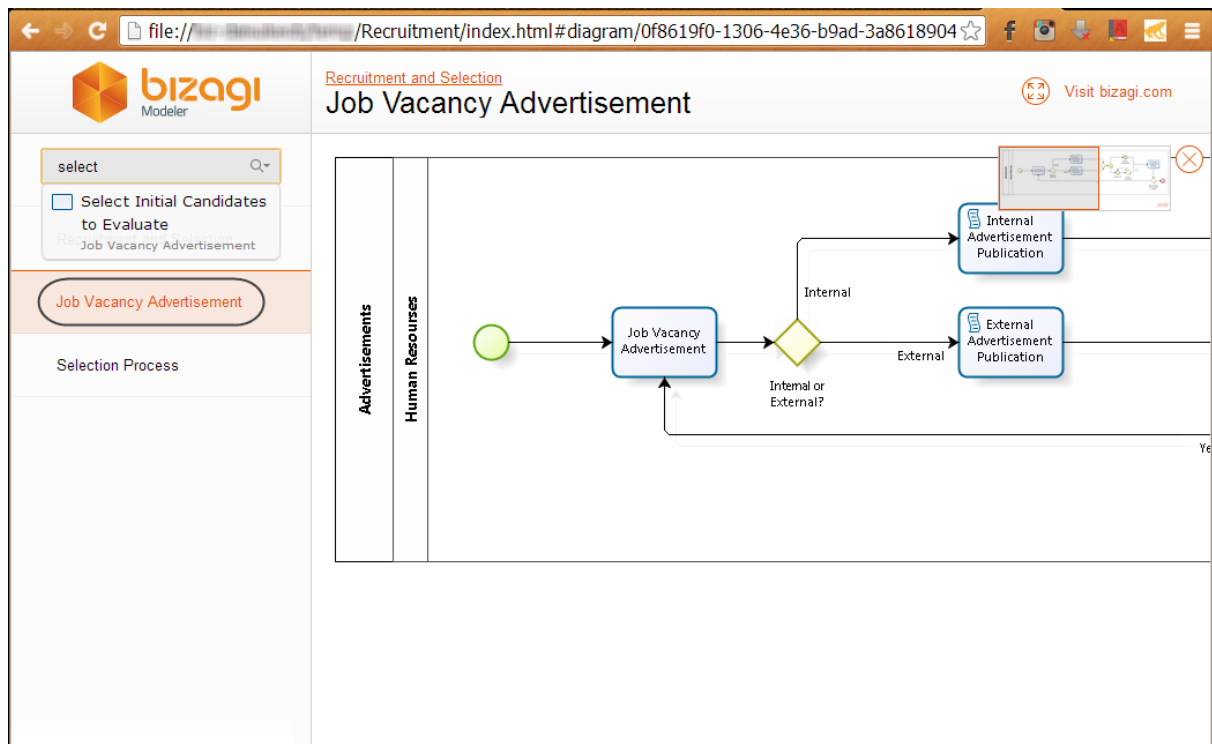
If you want to access a specific Diagram form an external location using a Hyperlink to open a process directly, instead of opening the Home page, open the desired process and copy the entire URL. This URL can be used as hyperlink and the process will be opened directly.



To perform quick searches on the Process Elements, you may use the search field. Notice that while searching on the Home page, you will be by default searching over all of your processes:

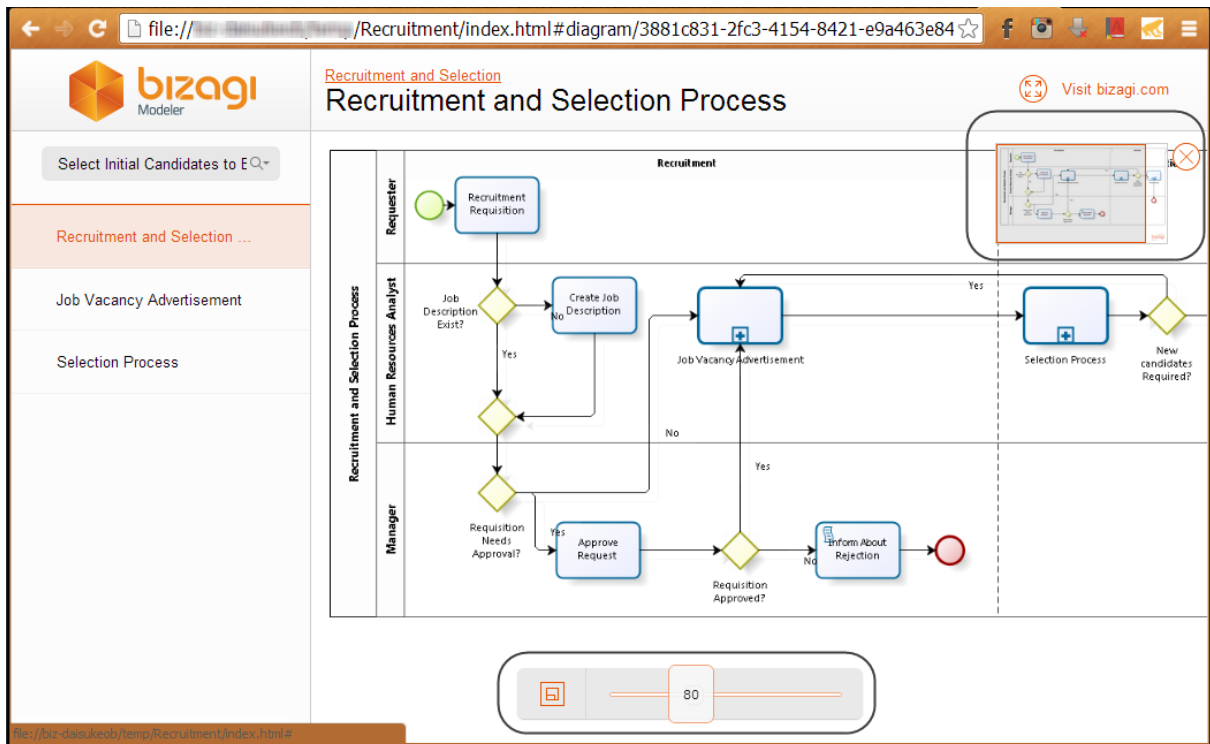


To search only in a given process, you may quickly first click on that process:

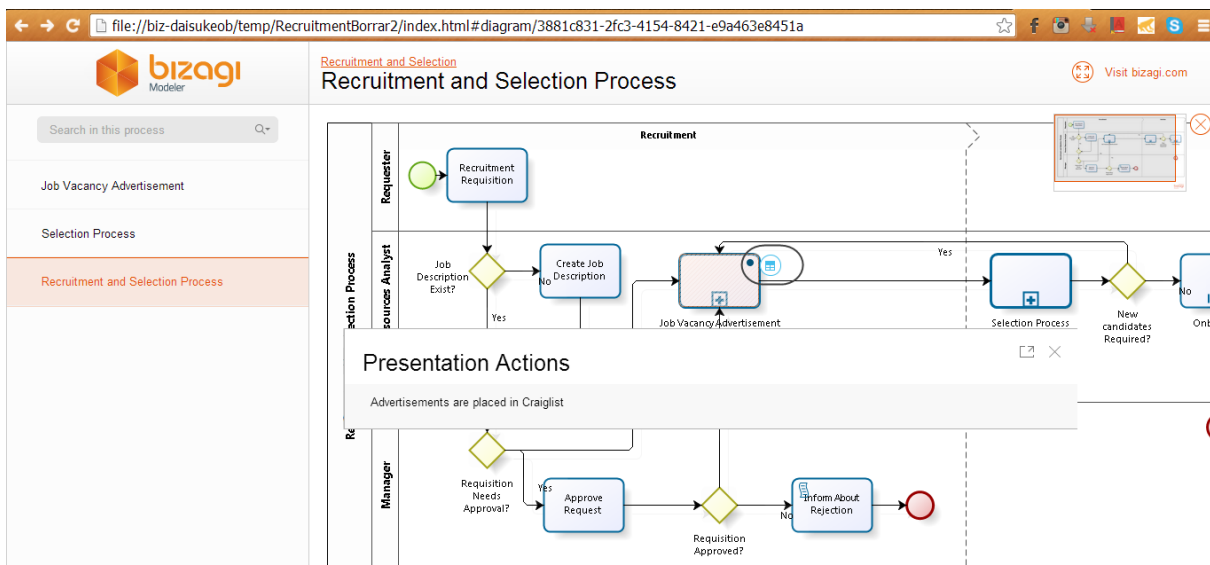


In addition to this, at any time as well, you may use the pan option for quick navigation in the diagram, or

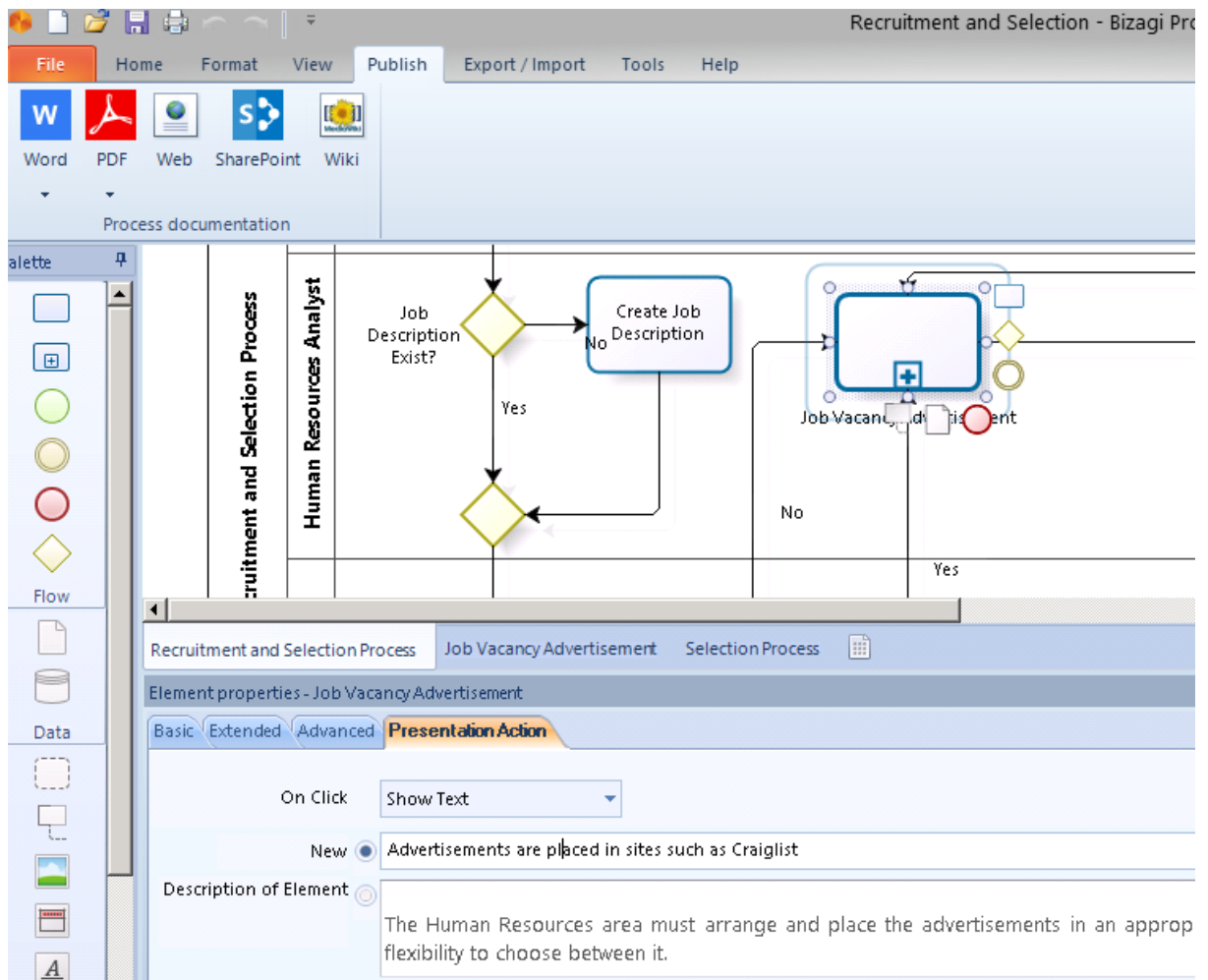
use zoom options which appear at the bottom part of the diagram when hovering the mouse in that zone:



To go into detail of a Sub-process diagram or to display any of the presentation actions, you may click on the small icons which appear at the top right corner of shapes, whenever the mouse is hovered on them:



Presentation actions configured for an element are those same which are set for the presentation mode:



Note

If you want to have the process documentation available to be downloaded and printed from the Web output, we recommend publishing to Word or PDF and saving the documents in a file server. Then, include the URL path as an Extended attribute in the Web output.

Customize styles in Web

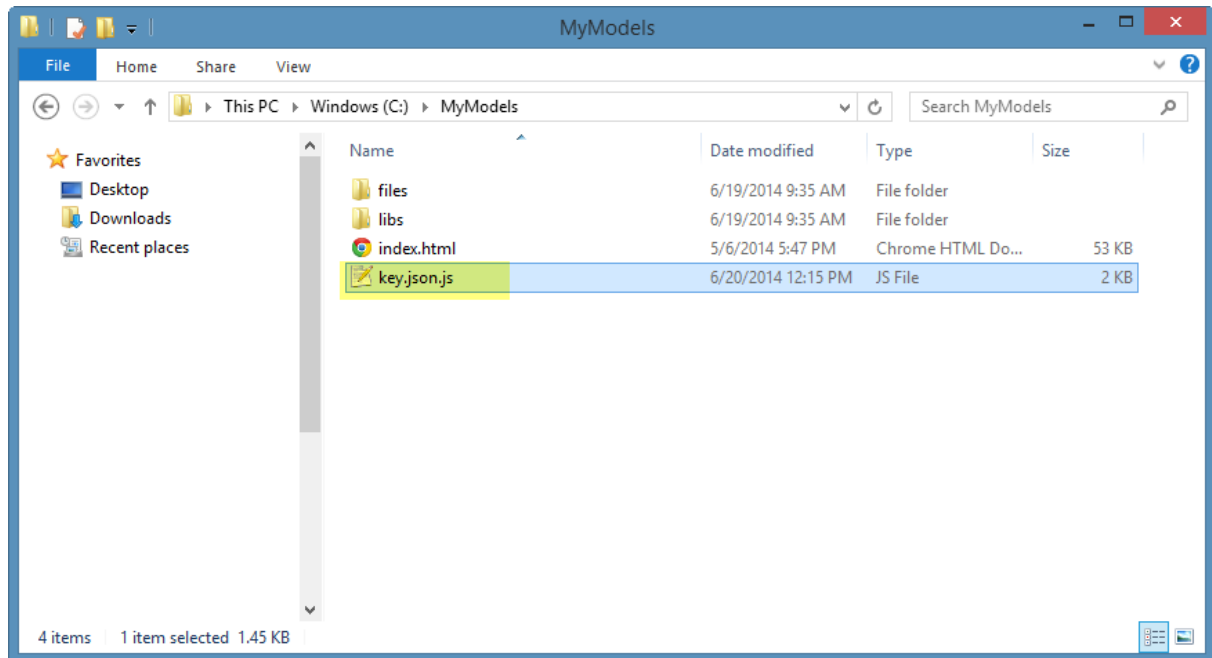
You can customize your Web output styles to adjust to your corporate standard.

Bizagi provides two ways to customize the web output colors: a [basic customization](#) where the main colors can be changed, and the [advanced css customization](#).

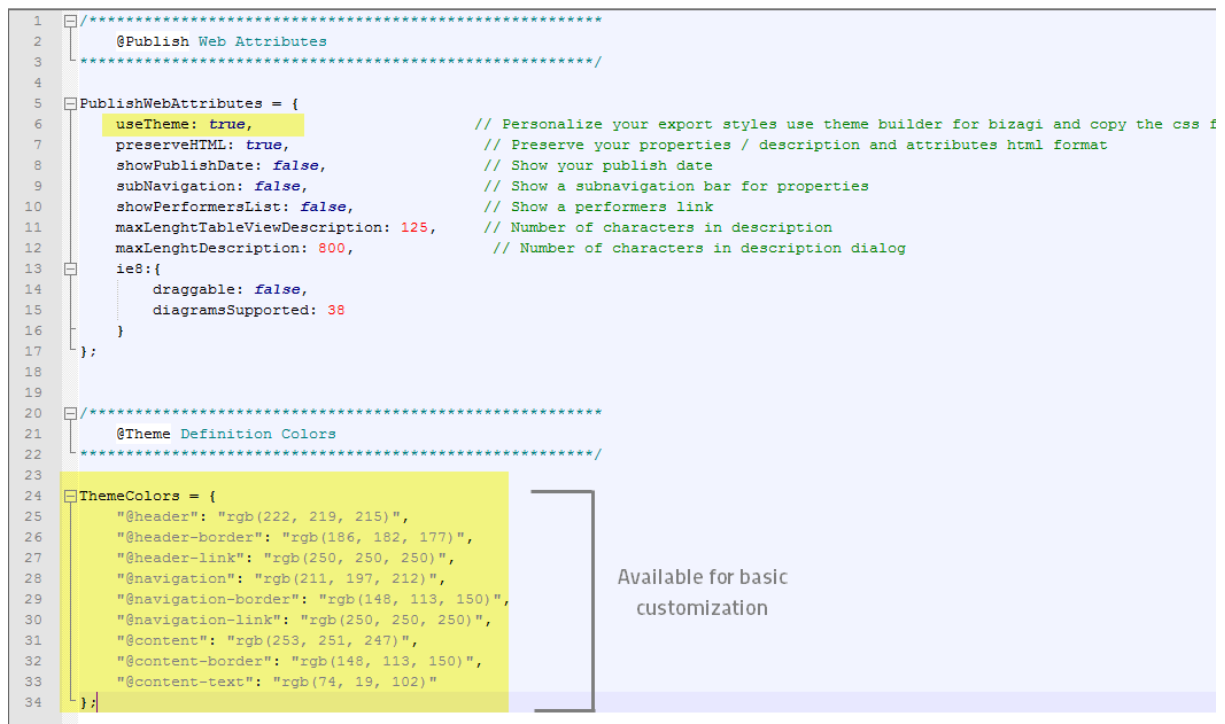
Basic customization

Once the Model has been published access the folder where the output is located and find the `key.json` file.

Open the file with a text editor.



Change the *useTheme* value to *true*, to enable the customization.
On the bottom of the file you will find the list of styles that can be changed.



Change the style color of the header, the navigation bar and the content panel. Save the file to view the changes in your site
The first option of each section is the background color. The second option is the border of the section.

The third option (link) refers to the font color.

1. Header

2. Navigation

3. Content

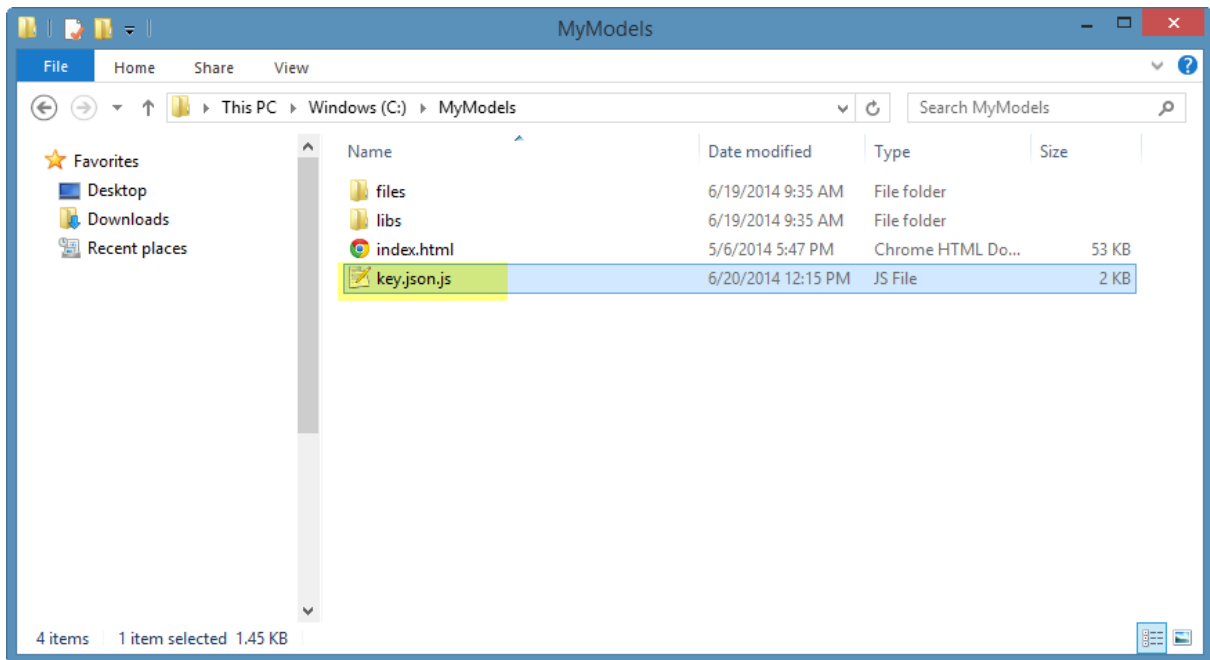
```
ThemeColors = {
  "@header": "rgb(222, 219, 215)",
  "@header-border": "rgb(186, 182, 177)",
  "@header-link": "rgb(250, 250, 250)",
  "@navigation": "rgb(211, 197, 212)",
  "@navigation-border": "rgb(148, 113, 150)",
  "@navigation-link": "rgb(250, 250, 250)",
  "@content": "rgb(253, 251, 247)",
  "@content-border": "rgb(148, 113, 150)",
  "@content-text": "rgb(74, 19, 102)"
};
```

Advanced css customization

For advanced css users, a .css file is available to customize the styles as you desire.

Once the Model has been published access the folder where the output is located and find the *key.json.js* file.

Open the file with a text editor.



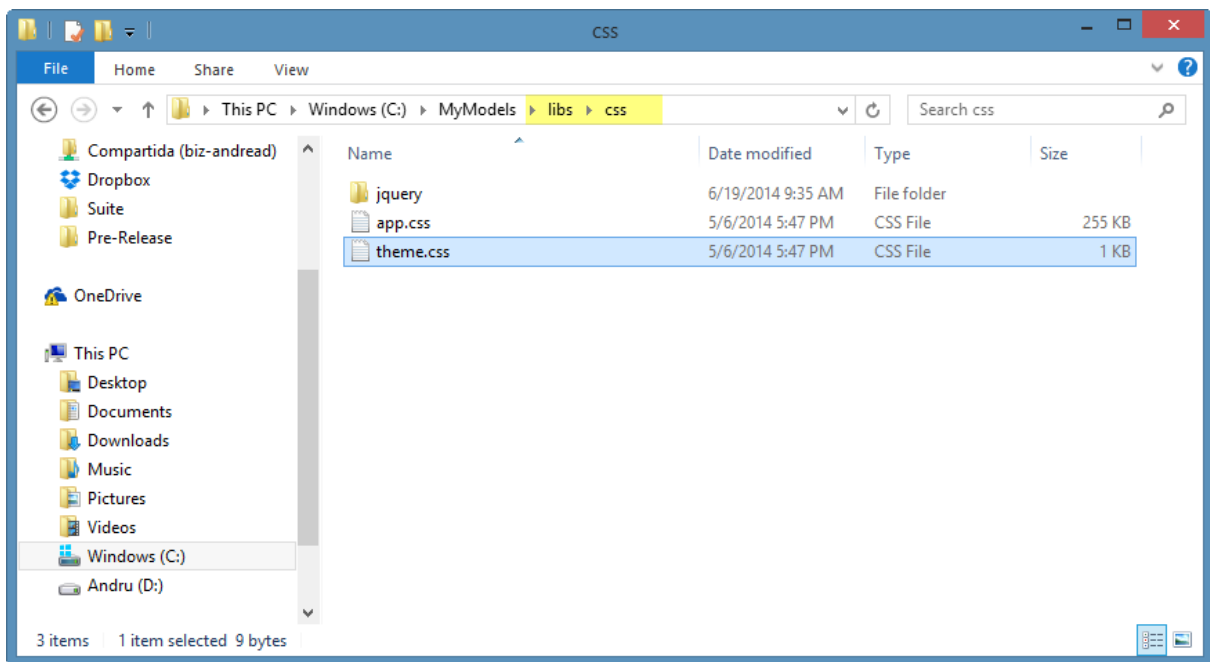
Change the *useTheme* value to true, to enable the customization.

```

1  /*****
2  @Publish Web Attributes
3  *****/
4
5  PublishWebAttributes = {
6      useTheme: true,           // Personalize your export styles use theme builder for bizagi and copy the css f
7      preserveHTML: true,      // Preserve your properties / description and attributes html format
8      showPublishDate: false,  // Show your publish date
9      subNavigation: false,    // Show a subnavigation bar for properties
10     showPerformersList: false, // Show a performers link
11     maxLenghtTableViewDescription: 125, // Number of characters in description
12     maxLenghtDescription: 800, // Number of characters in description dialog
13     ie8:{
14         draggable: false,
15         diagramsSupported: 38
16     }
17 };
18
19
20 /*****
21 @Theme Definition Colors
22 *****/
23
24 ThemeColors = {
25     "@header": "rgb(222, 219, 215)",
26     "@header-border": "rgb(186, 182, 177)",
27     "@header-link": "rgb(250, 250, 250)",
28     "@navigation": "rgb(211, 197, 212)",
29     "@navigation-border": "rgb(148, 113, 150)",
30     "@navigation-link": "rgb(250, 250, 250)",
31     "@content": "rgb(253, 251, 247)",
32     "@content-border": "rgb(148, 113, 150)",
33     "@content-text": "rgb(74, 19, 102)"
34 };

```

Open the .css file located in *libs/css/theme.css* and perform the desired changes.



Publishing to Wiki

Generate your complete process documentation to Wiki format and share it throughout your organization.

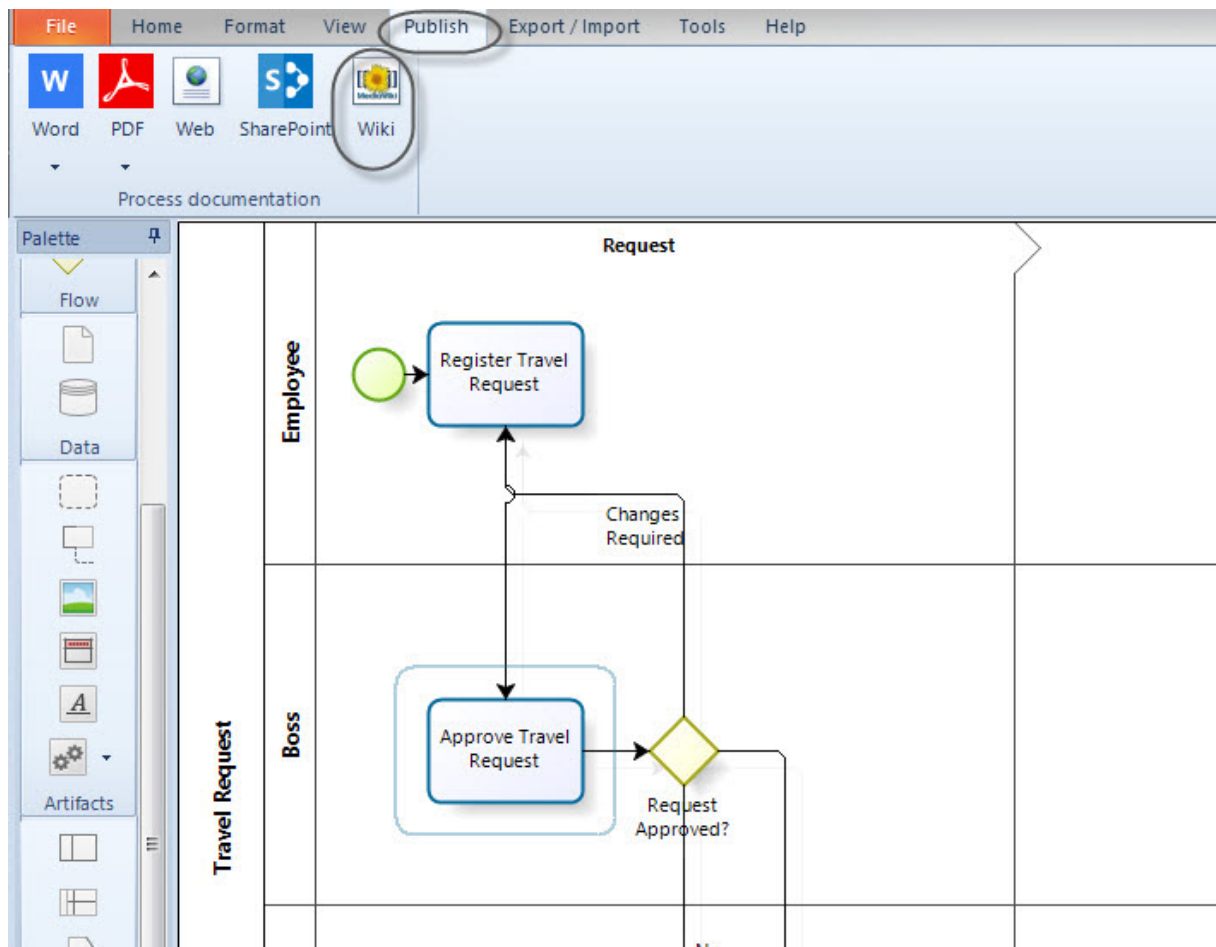
Customize the output information that you want to include in your document by selecting the diagrams and the elements that will be contained in it.

Make sure you have MediaWiki installed in your server and a user with publishing rights, when you generate this documentation.


[Please review the versions support](#)


Bizagi provides an intuitive wizard to help you through the steps to generate your documentation.

1. Go to the Publish tab and select Wiki.

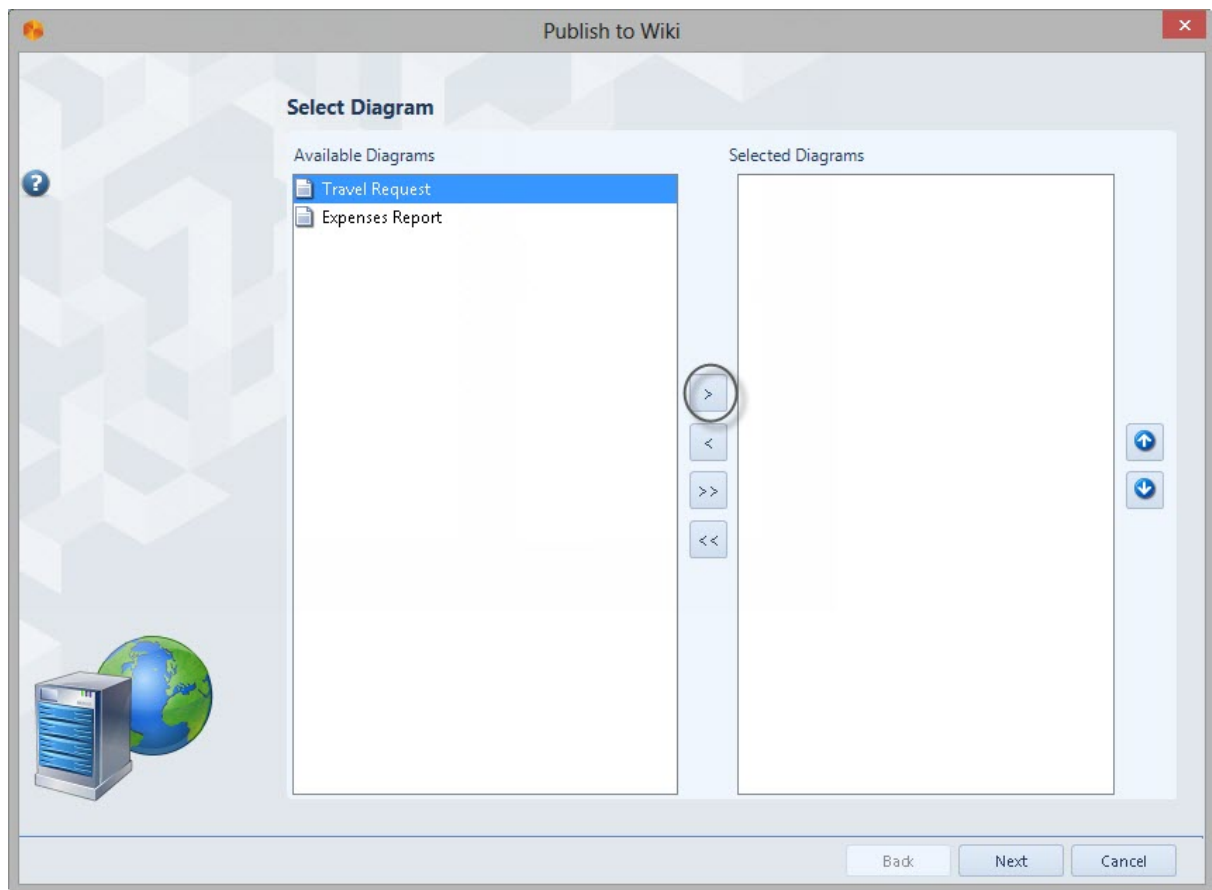


2. Select the Diagrams that you wish to publish.

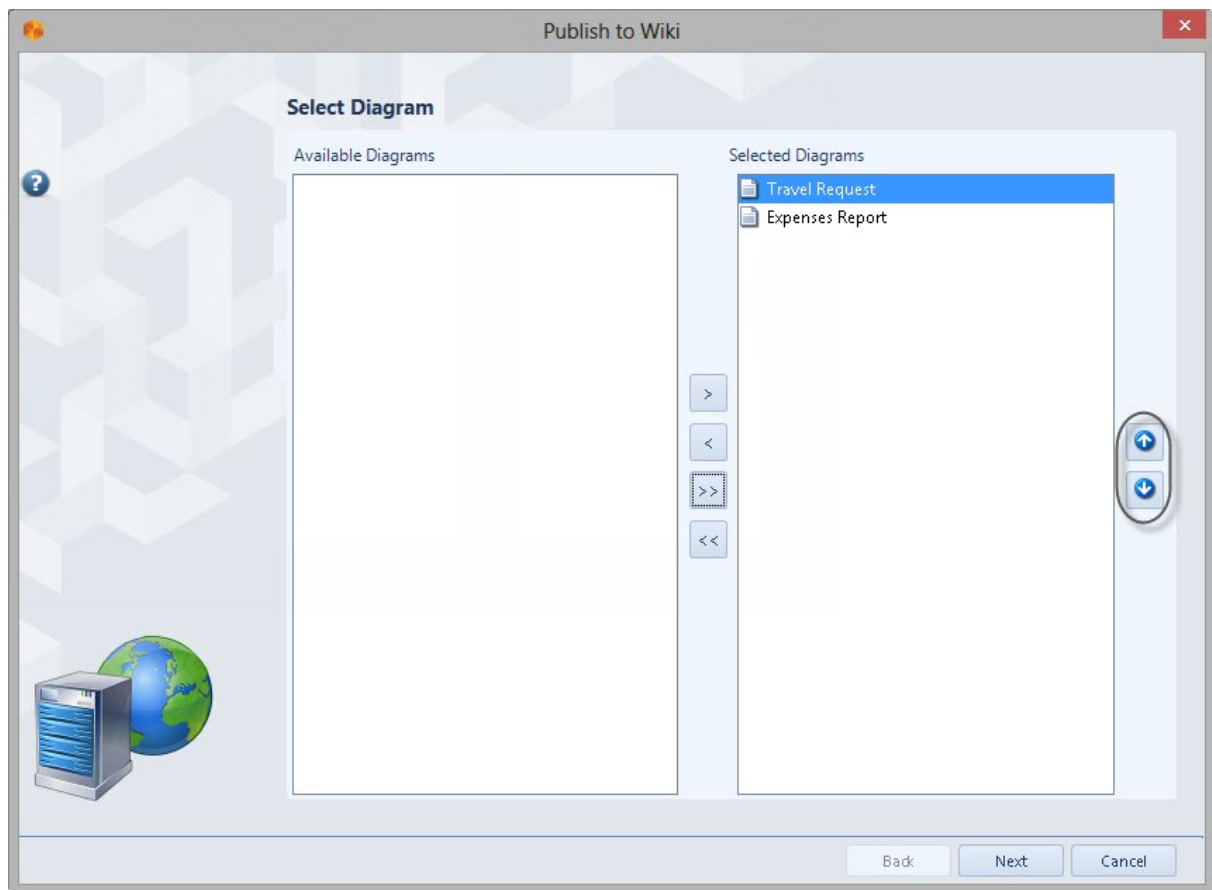
Select individually by using the  button or by double clicking them.

Select all by using the  button.


When all the diagrams you wish to publish are selected, click the **Next** button.

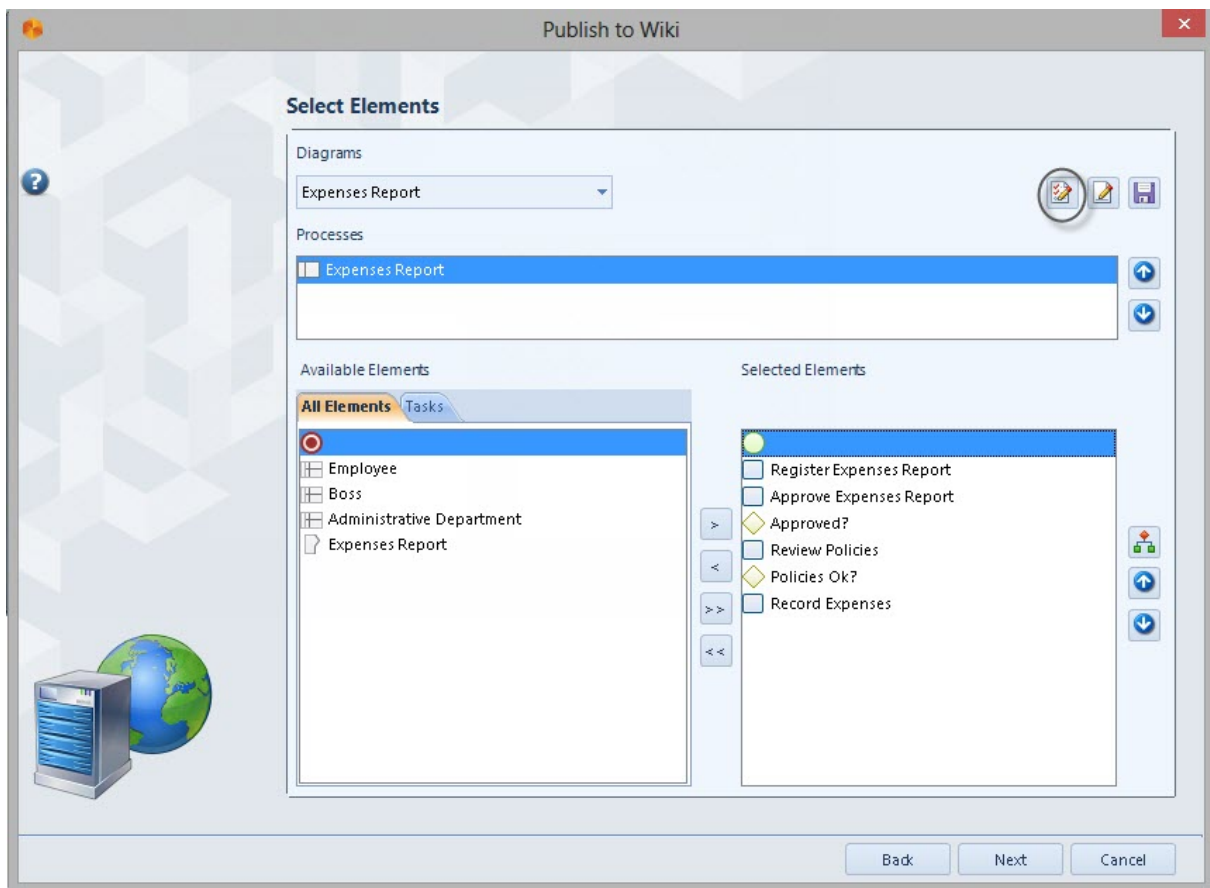


3. Choose the order in which you wish to publish your Diagrams by using the buttons on the right hand side. When you are finished, click on Next.

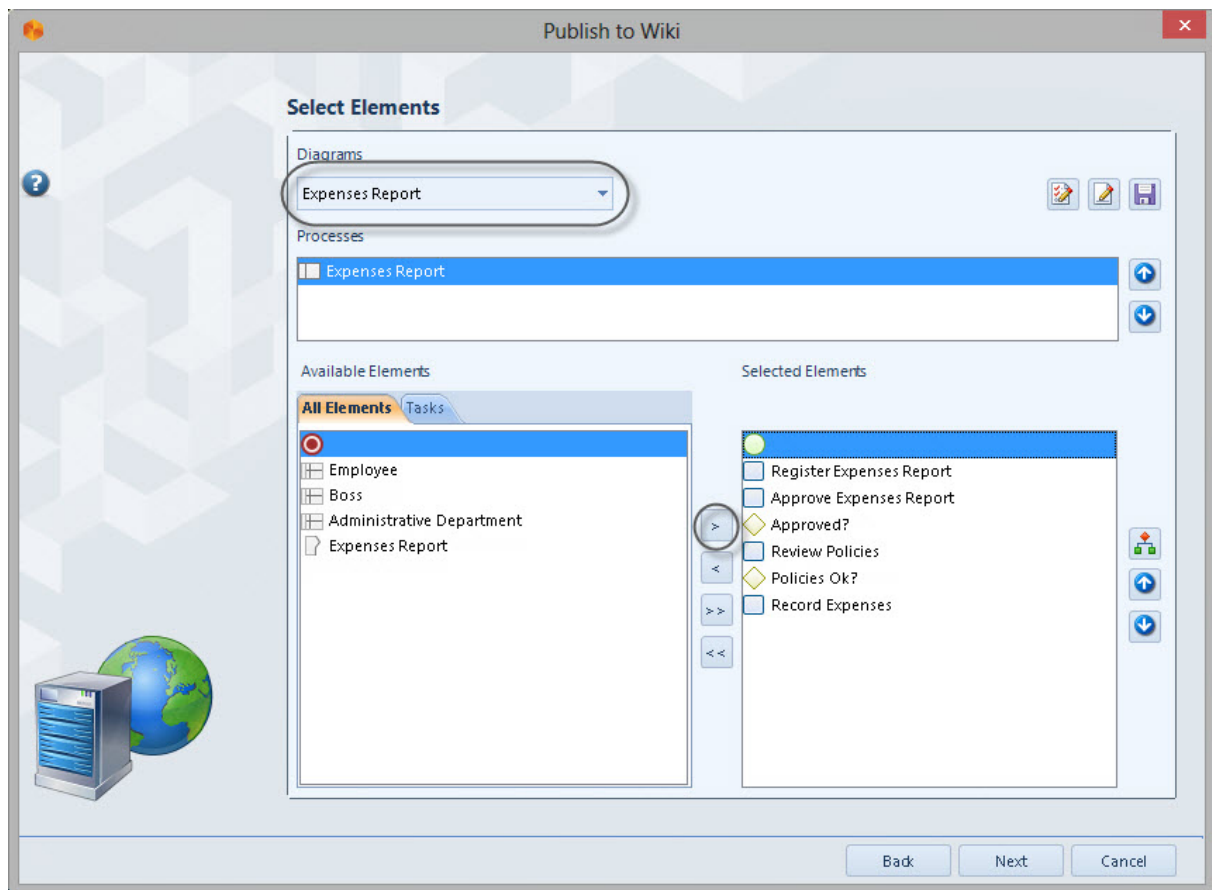


4. For each Diagram select the elements that you wish to publish in the documentation.

You can select all elements of all diagrams using the  button.



You can also choose specific elements from each diagram by using the button or double clicking them.

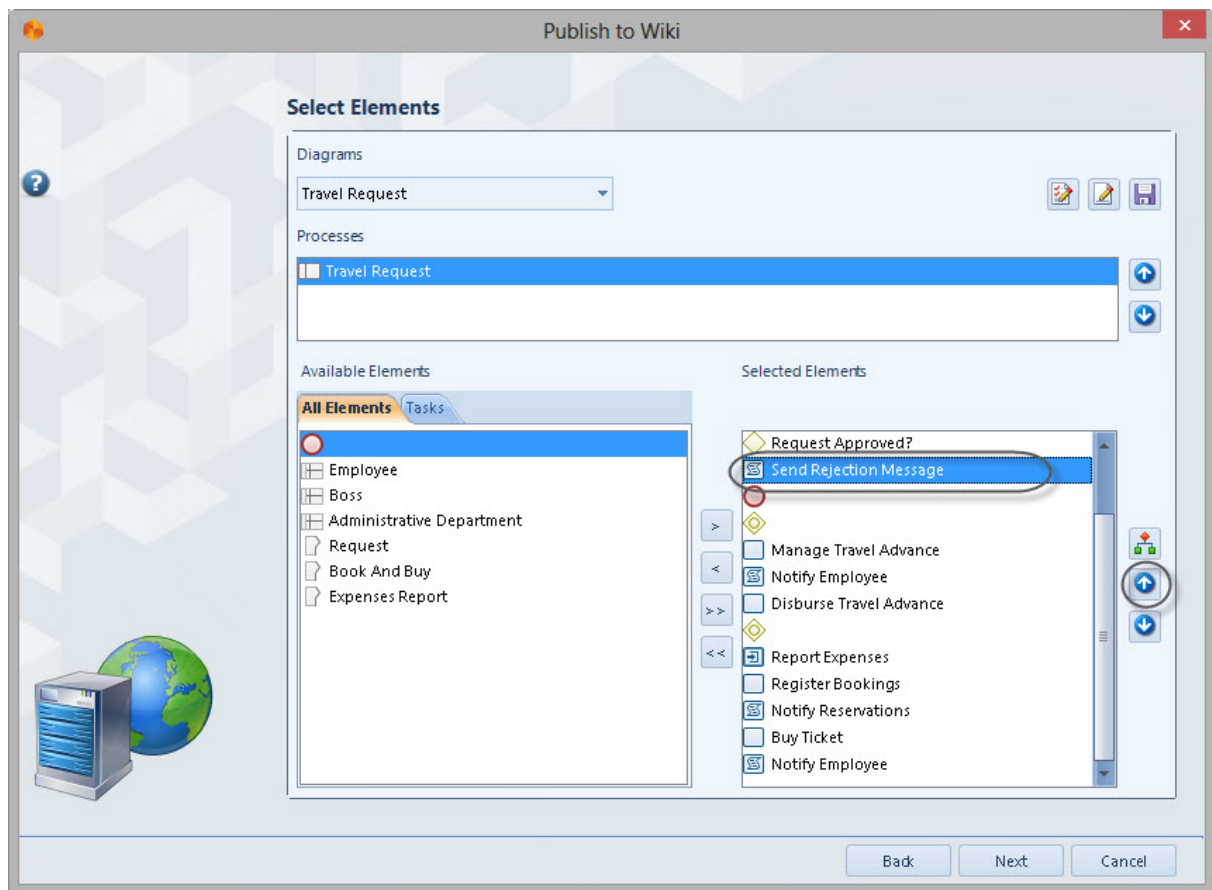



5. For each diagram select the order in which you wish the elements to be exported.
By default elements are organized according to the sequence of the process flow .

To move an element from its default position, select the element and click on the



button until you find the position you want.



Click on the  button and they will be ordered automatically.
When you are satisfied with the order of the elements for each diagram, click on Next.

6. The following Information about the Wiki Server will be requested:

- **Server:** URL of your Wiki Server
- **User and Password:** User credentials to access your server. The user must have writing permissions.
- **Namespace:** To help you differentiate thes process articles from others that are already published in your wiki, Bizagi allows you to enter a word that will be set before all the created pages.
- **Category:** To help you organize your documentation we recommend that you include a category to group the pages created in your wiki.

Click on Finish to publish the documentation on the selected server.

Publish to Wiki

Set Wiki Server Information

Server:

User:

Password:

Namespace:

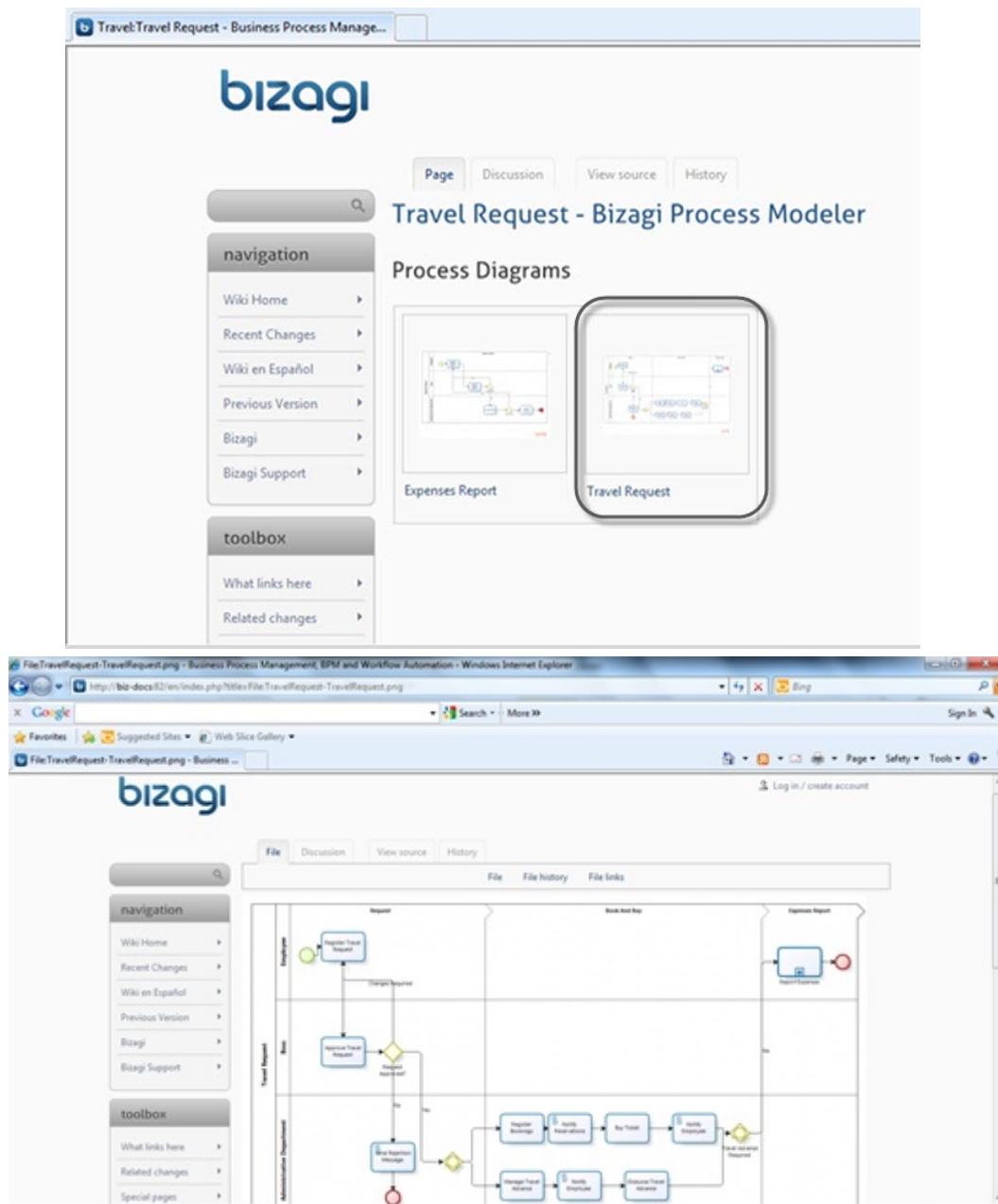
Category:

Wiki Output

Once the process has been published on your Wiki, you will be able to see the description of your diagrams.

The screenshot shows a web browser window displaying the Bizagi Wiki page for 'Travel Request - Bizagi Process Modeler'. The page features the Bizagi logo at the top left and a navigation menu on the left side. The main content area displays the title 'Travel Request - Bizagi Process Modeler' and a section titled 'Process Diagrams'. Under this section, there are two diagrams: 'Expenses Report' and 'Travel Request'. The 'Expenses Report' diagram is a flowchart showing a process starting with 'Start', followed by 'Request', 'Approval', 'Payment', and 'End'. The 'Travel Request' diagram is a flowchart showing a process starting with 'Start', followed by 'Request', 'Approval', 'Travel', and 'End'. The page also includes a search bar, a 'Page' tab, and a 'Log in / create account' link in the top right corner.

Click on your process to see the detailed information and elements.



You will be able to see the documentation of any shape by clicking on it.

Travel:Travel Request-Travel Request - Business P...

abc Currency

Travel Request

File:Bizagi-BPMN-Participant.png

Description

This process start when an employee request a flight ticket for a travel. The employee will select if an advance and hotel reservation is needed and the boss will approve the request. The administrative Department will handle bookings and Advance. At the end a subprocess will be available for the employee to register the expenses made in the trip.

Global Form

| Applicant | abc | | | | | | |
|--|--------------|---------------|---------------|-------|-------|-------|--|
| Identification Number | abc | | | | | | |
| Departure Information | | | | | | | |
| Departing Flight: | | | | | | | |
| <table border="1"> <thead> <tr> <th>Airline</th> <th>Departing On</th> <th>Flight Number</th> </tr> </thead> <tbody> <tr> <td>value</td> <td>value</td> <td>value</td> </tr> </tbody> </table> | Airline | Departing On | Flight Number | value | value | value | |
| Airline | Departing On | Flight Number | | | | | |
| value | value | value | | | | | |
| Departure From | abc | | | | | | |
| Departure Date | 18/11/2009 | | | | | | |

To perform quick searches on the elements of your process, use the contents table. This will allow you to quickly see the information of the shapes including basic and extended attributes.

Travel:Travel Request-Expenses Report - Business...

bizagi

Page Discussion View source History

Contents

- 1 Expenses Report - Bizagi Process Modeler
 - 1.1 Expenses Report
 - 1.1.1 Process Elements
 - 1.1.1.1 Register Expenses Report
 - 1.1.1.2 Approved?
 - 1.1.1.3 Element
 - 1.1.1.4 Review Policies
 - 1.1.1.5 Approve Expenses Report
 - 1.1.1.6 Record Expenses
 - 1.1.1.7 Element
 - 1.1.1.8 Policies Ok?
 - 1.1.1.9 Employee
 - 1.1.1.10 Boss
 - 1.1.1.11 Administrative Department
 - 1.1.1.12 Expenses Report

Expenses Report - Bizagi Process Modeler

Version: 1.0

What links here Related changes

Wiki version support

We support the following MediaWiki combinations with PHP

- Wiki 1.14.x with PHP 5.2.17
- Wiki 1.15.x with PHP 5.2.17 and 5.3.10
- Wiki 1.16.x with PHP 5.2.17 and 5.3.10
- Wiki 1.17.0 with PHP 5.2.17 and 5.3.10

Versions 1.17.1, 1.17.2 y 1.17.3 are not supported

- Wiki 1.18 with PHP 5.2.17 and 5.3.10
- Wiki 1.19 with PHP 5.3
- Wiki 1.20 with PHP 5.3
- Wiki 1.21 with PHP 5.3
- Wiki 1.22 with PHP 5.3

Settings

To publish both content and images into your Wiki server, make sure:

1. That the physical upload directory has permissions set to allow creation and edition of pages and files. Similarly, the images directory set by default as "C:\Web\[your_mediaWiki_folder]\images\" should be granted with full rights.
2. That the LocalSettings.php configuration file, contains the following settings:

```
$wgGroupPermissions['user']['upload'] = true;
$wgFileExtensions = array('png','gif','jpg','jpeg','doc','xls','mpp','pdf','ppt','tiff','bmp','docx','xlsx',
'pptx','ps','odt','ods','odp','odg');
$wgEnableUploads = True;
```

Note

For MediaWiki version 1.20, use:

```
$wgGroupPermissions['*']['upload'] = true;
$wgFileExtensions = array('png','gif','jpg','jpeg','doc','xls','mpp','pdf','ppt','tiff','bmp','docx','xlsx',
'pptx','ps','odt','ods','odp','odg');
$wgEnableUploads = True;
```

Publishing to Sharepoint

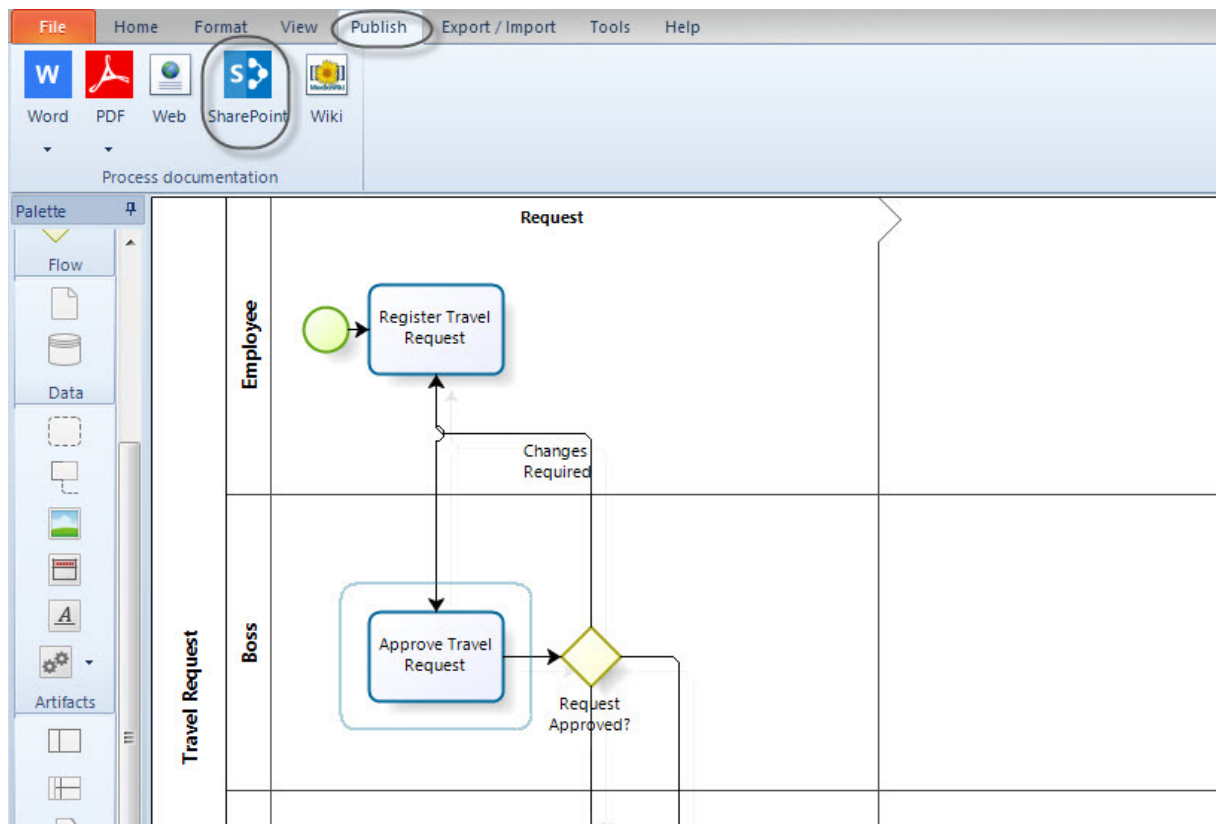
You can publish your completed documentation and share it with your organization in the SharePoint format.

Customize the output information for inclusion in your document by selecting the diagrams and the elements to be included.


Make sure you have SharePoint installed when you generate this documentation. Bizagi supports SharePoint Services 3.0.


Bizagi provides an intuitive wizard to help you through the steps to generate your documentation.

1. On the **Publish** tab, in the **Publish** group, click **Sharepoint**.

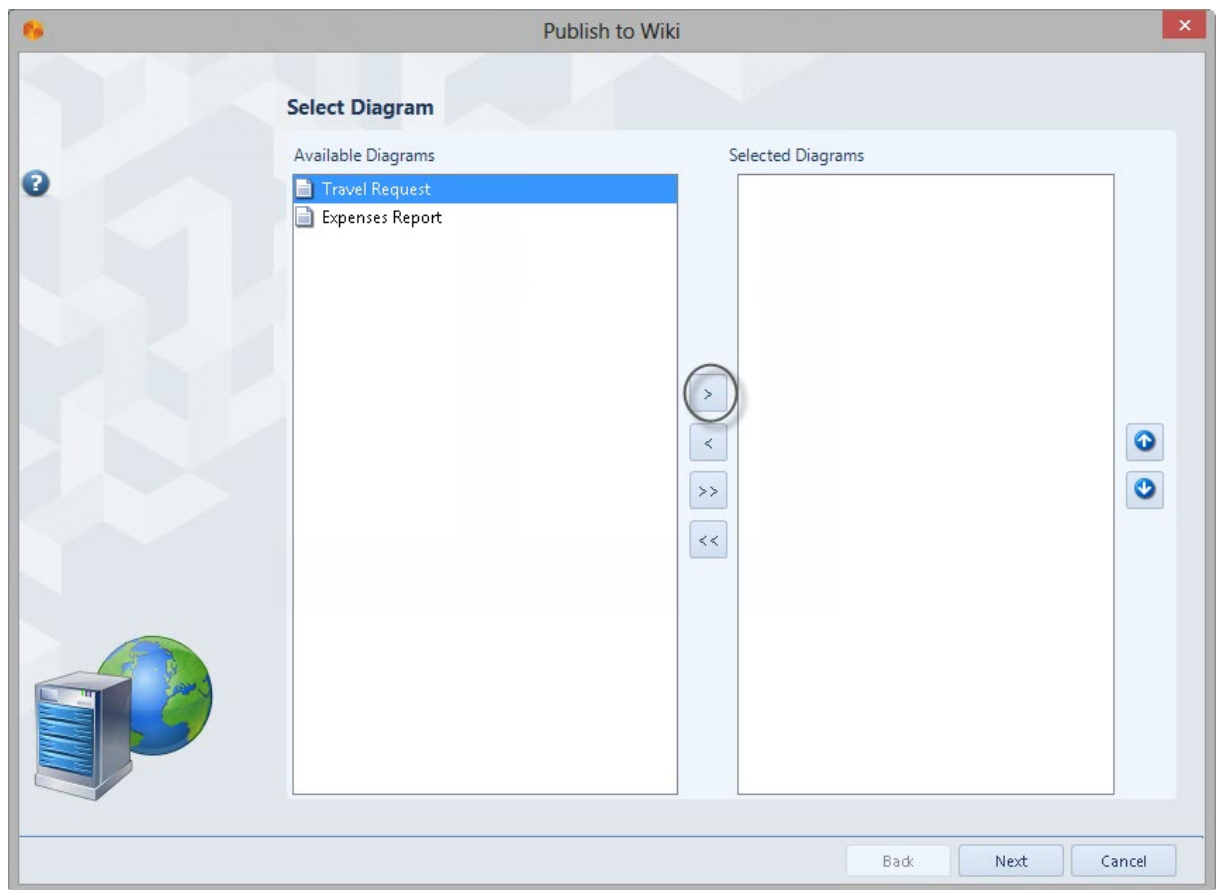


2. Select the Diagrams that you wish to publish.

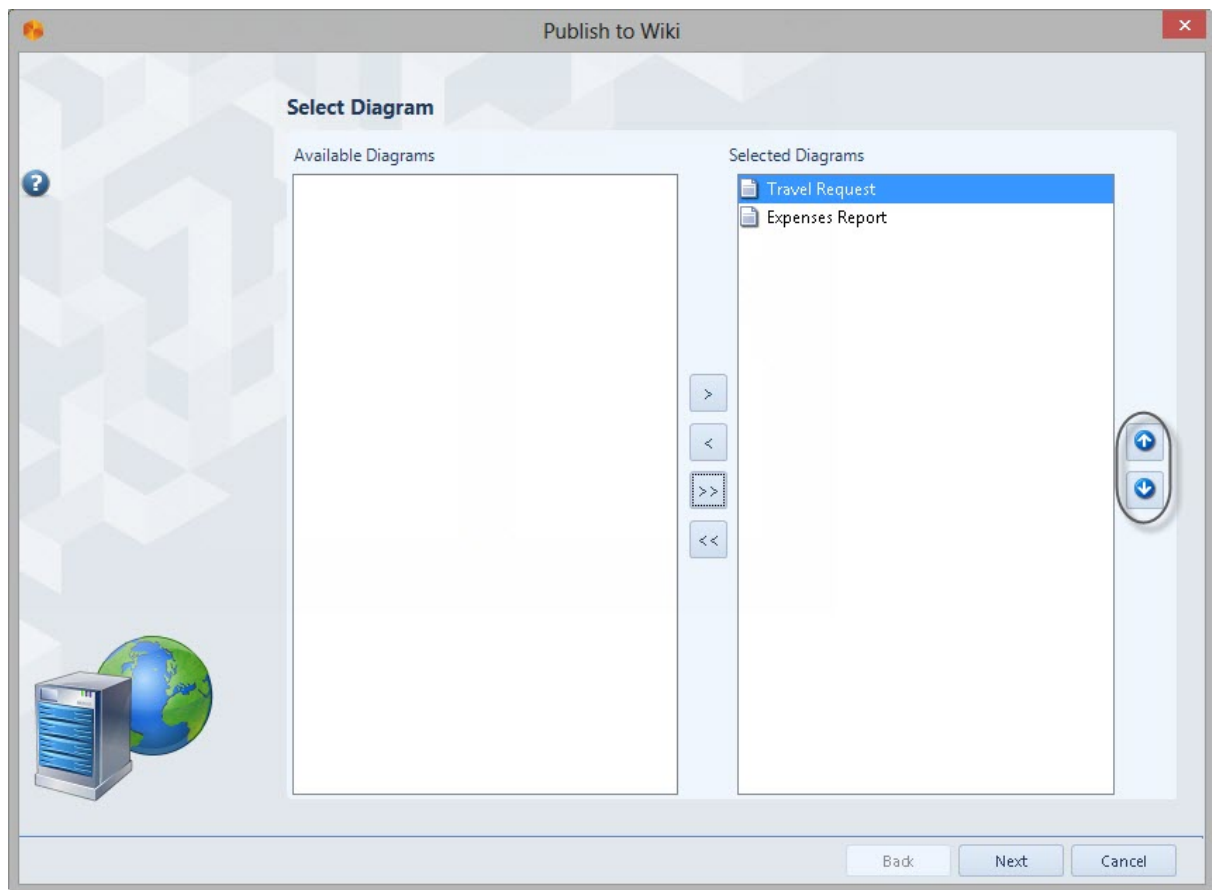
Select individually by using the  button or by double clicking them.

Select all by using the  button.

When all the diagrams you wish to publish are selected, click the **Next** button.

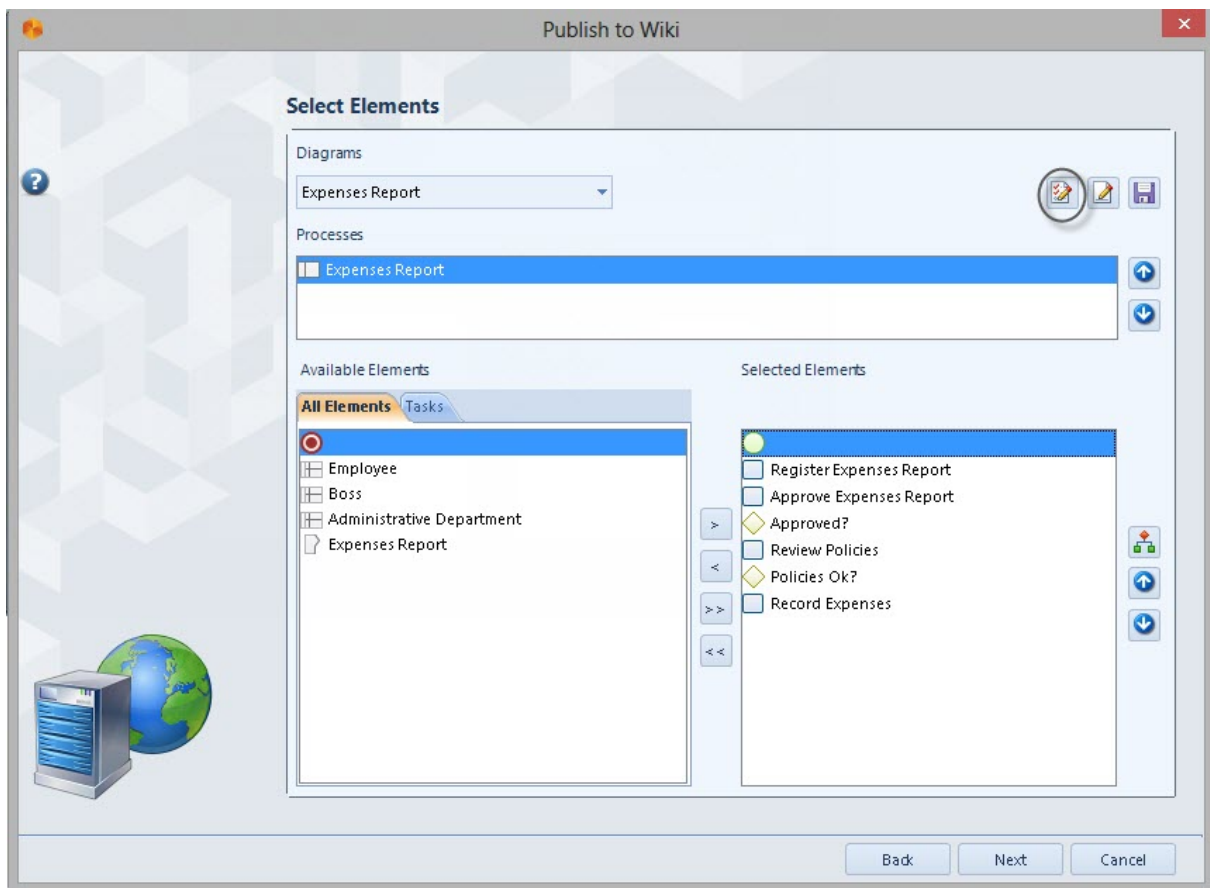


3. Choose the order in which you wish to publish your diagrams by using the buttons on the right hand side. Once finished, click the **Next** button.



4. For each diagram select the elements that you wish to publish in the documentation.

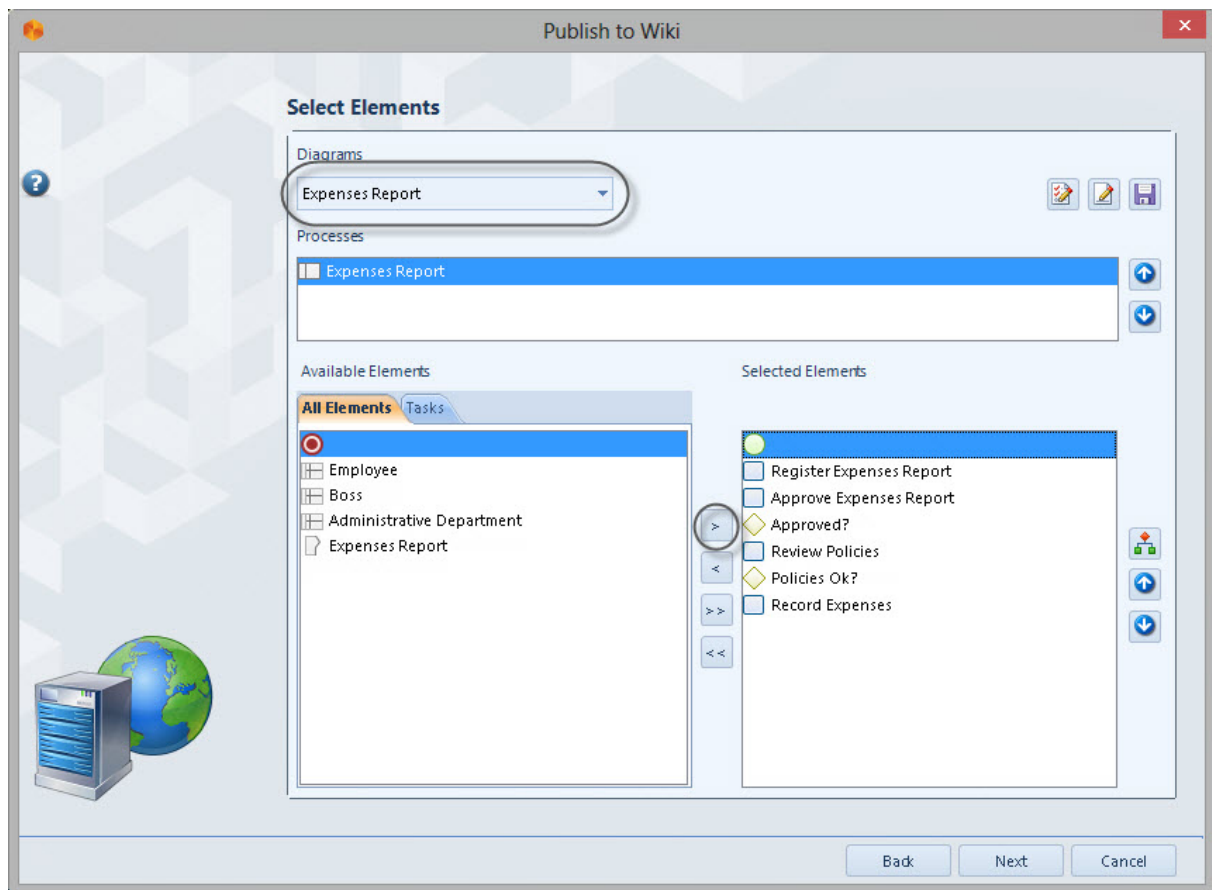
Select all elements across all diagrams by using the  button.



You can also individually select elements from each diagram using the



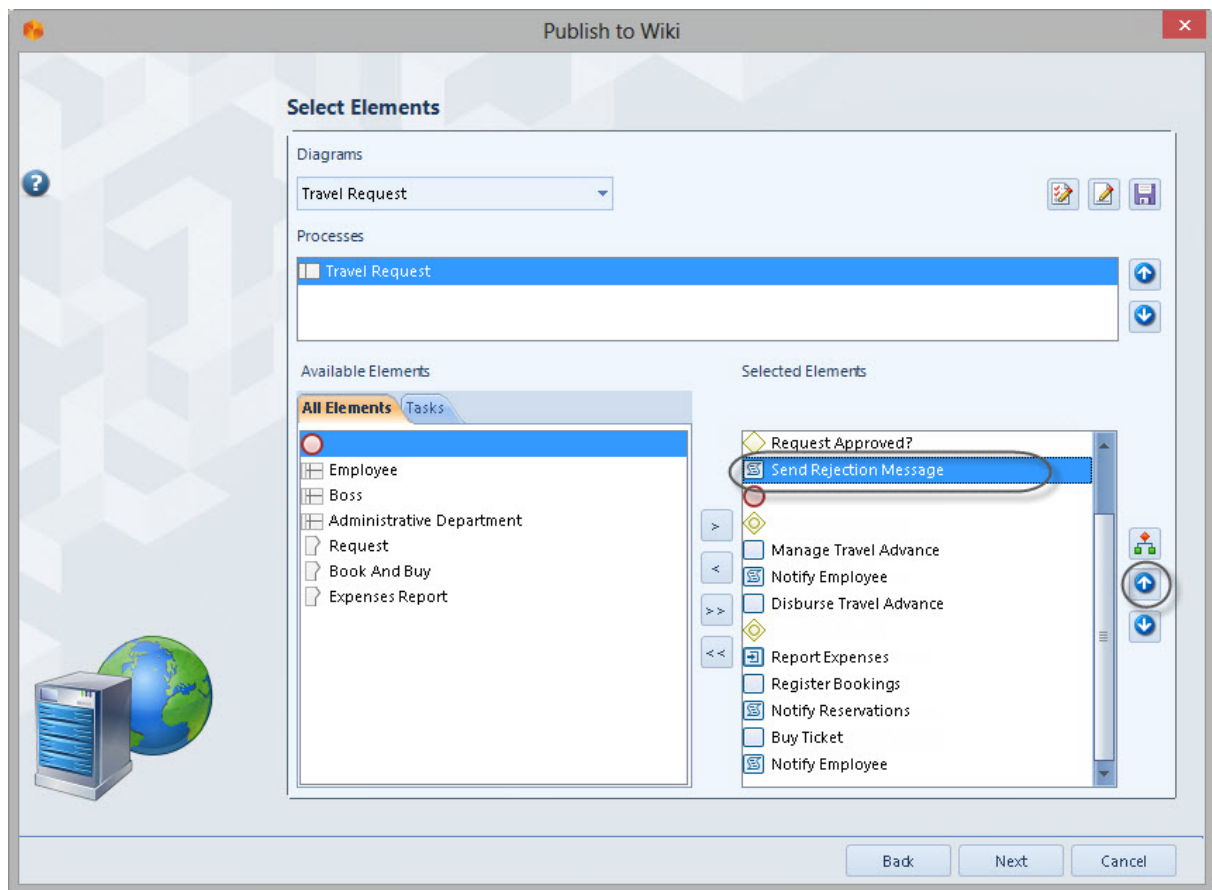
button or by double clicking them.




5. For each diagram select the order in which you wish the elements to be exported. By default elements are organized according to the sequence of the process flow .



To move an element from its default position, select the element and click the button until you find the desired position.



Click on the  button to order the elements automatically.
When you are satisfied with the order of the elements for each diagram, click the **Next** button.

6. The SharePoint Server Information will be required.
The SharePoint site must already be created. You need to provide the location and user credentials to access it. Then click the **Next** button.

The screenshot shows a Windows-style dialog box titled "Publish to SharePoint". Inside, the section "Set SharePoint Server Information" contains three input fields: "SharePoint site URL" with the value "http://biz-sharepoint02:100/", "User" with the value "DSmith", and "Password" with masked characters. A help icon (?) is on the left. At the bottom right are "Back", "Next", and "Cancel" buttons. A server and globe icon is in the bottom left corner.

Publish to SharePoint

Set SharePoint Server Information

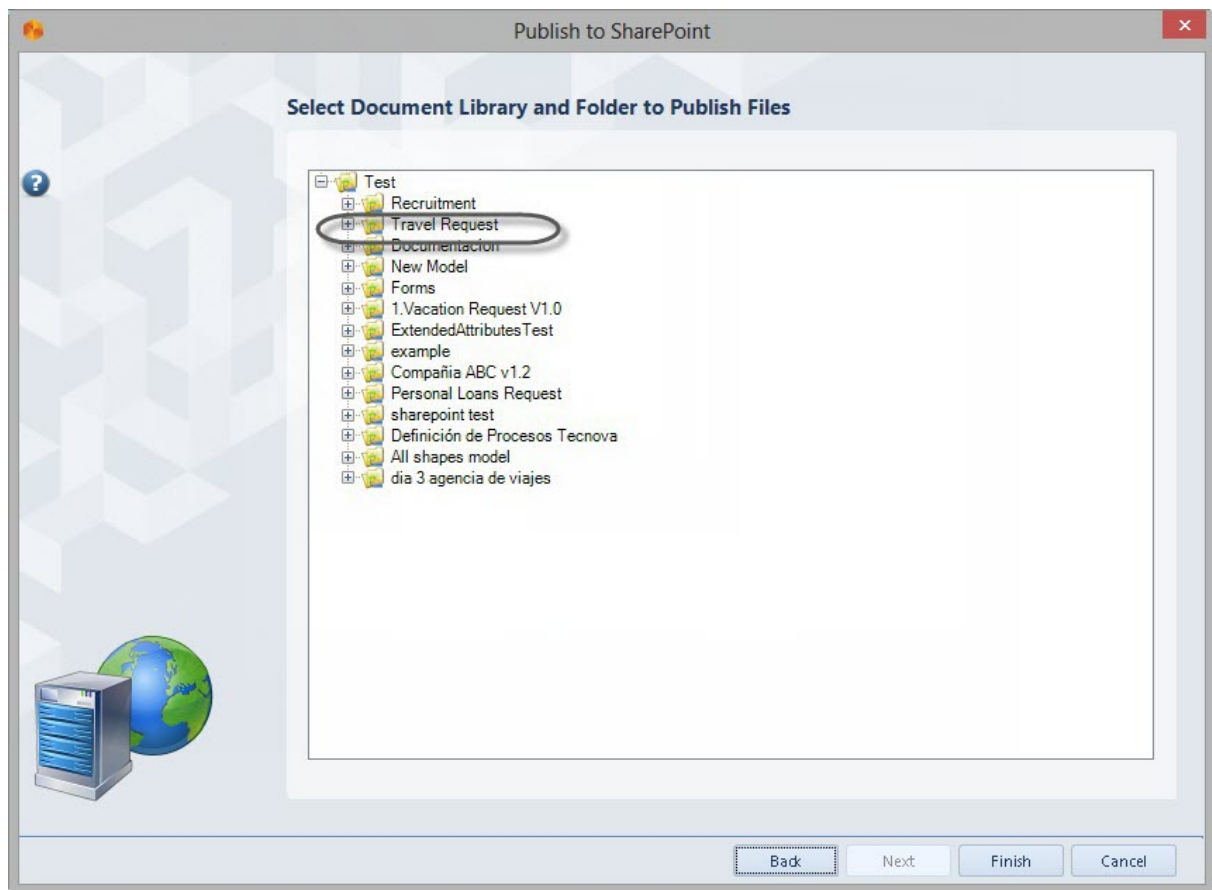
SharePoint site URL

User

Password

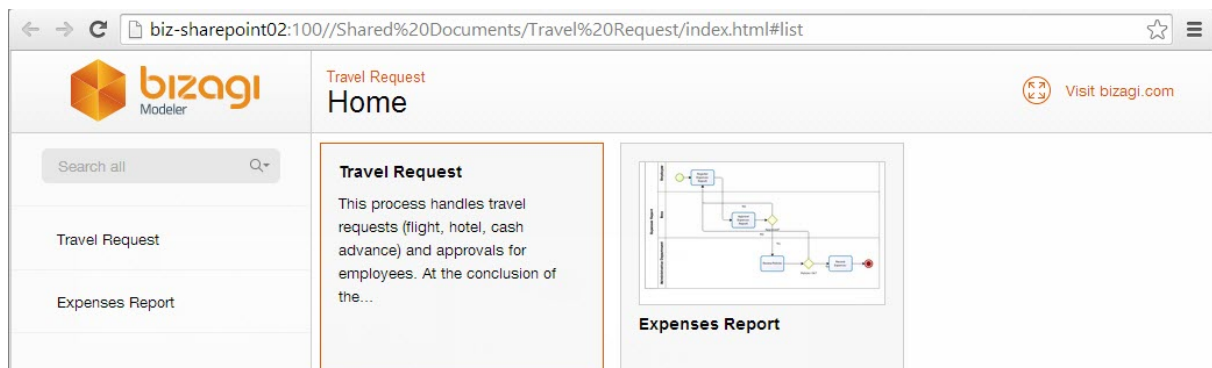
Back Next Cancel

7. Specify the appropriate folder in which to publish your process. This folder must have Read and Write permissions. Click the **Finish** button.

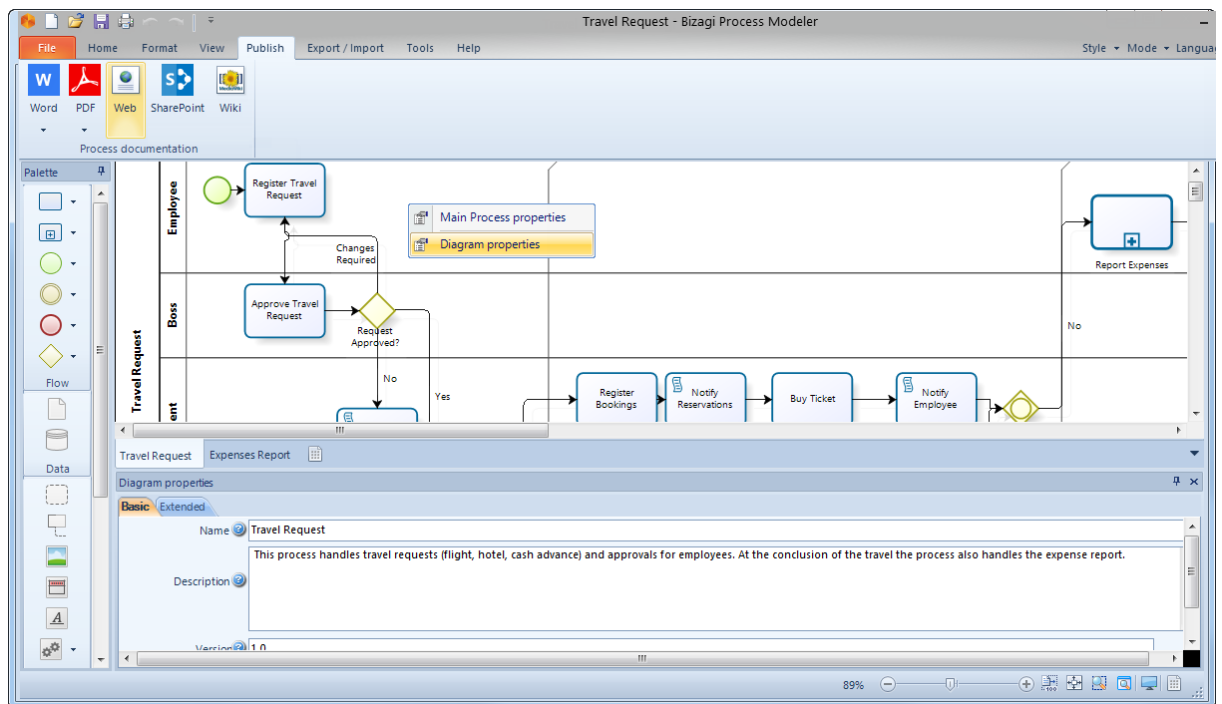


Once the process has been published on SharePoint, you will be able to view your diagram documentation.

SharePoint Output

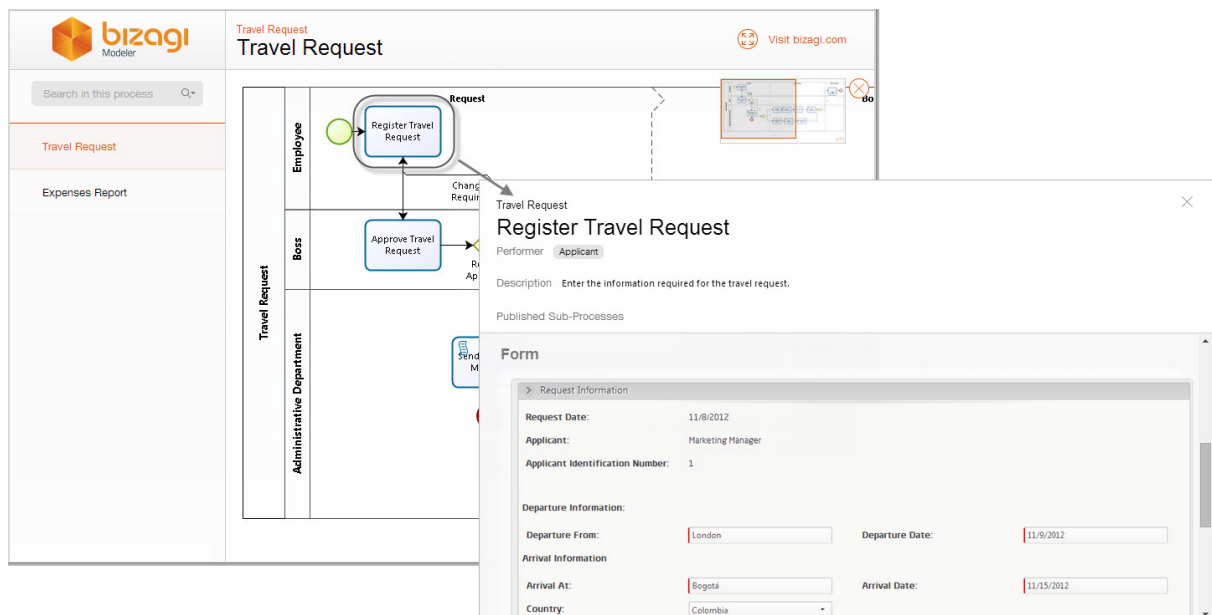


The legend displayed when the mouse is hovered over each process is defined in the Diagram properties. All other documentation included will be displayed when clicking over each element.

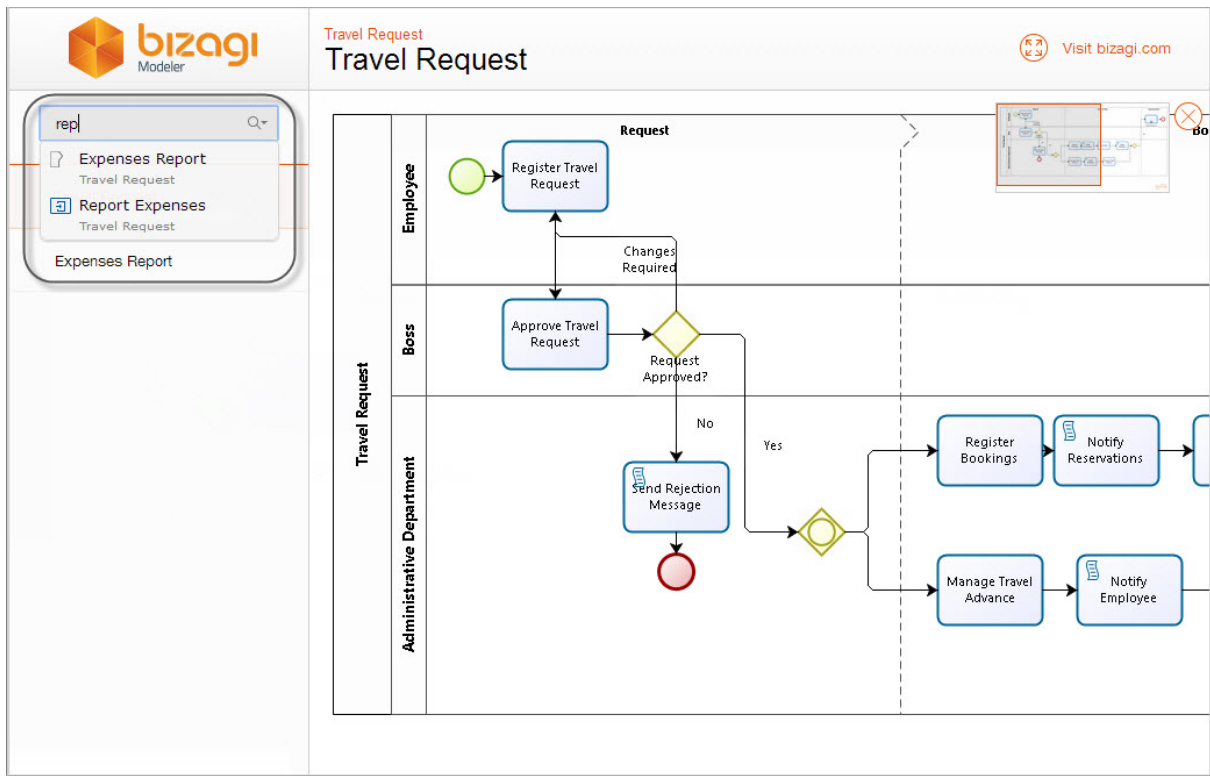


Click on your process to see the detailed information.

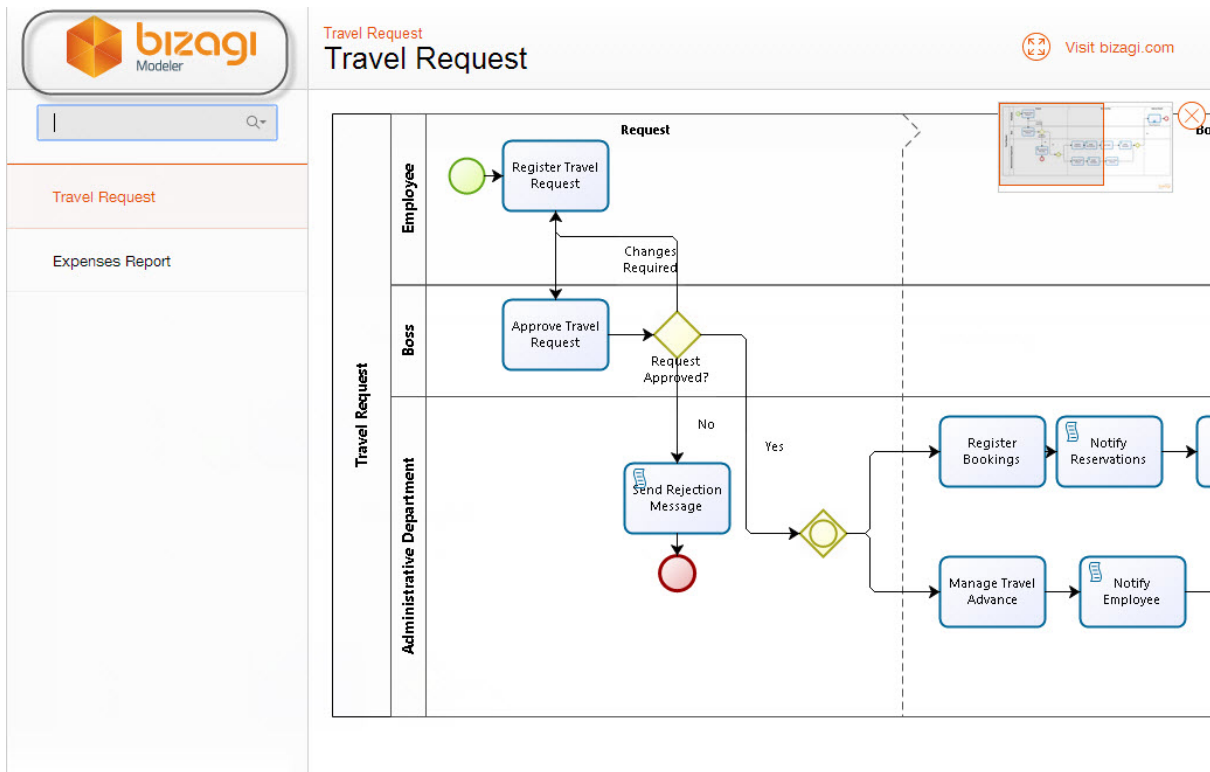
You will be able to see the documentation of any diagram element by clicking on it.



To perform quick searches on the Process Elements, use the search field.



To go back to the general view, click the Bizagi Modeler Logo.



Exporting to XPDL

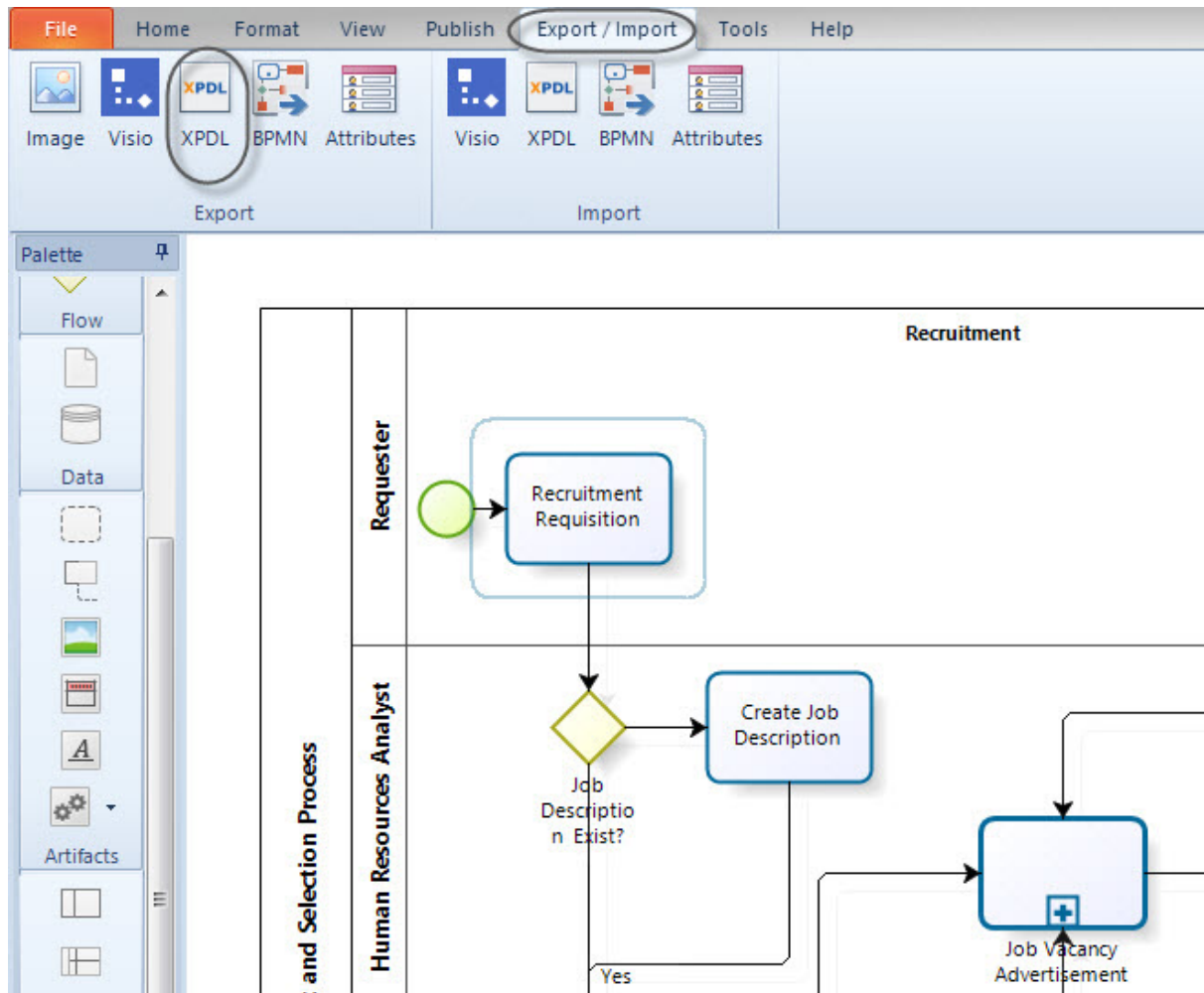
The XML Process Definition Language (XPDL) is a format standardized by the Workflow management Coalition (WfMC) to interchange business process definitions between different workflow products. The XPDL format can store all aspects of a BPMN diagram, such as attributes, resources, etc. Also some graphical information is held, for example the coordinates of the elements positions.

Bizagi offers the possibility to share your diagrams with others modeling tools that use BPMN notation. You can export your diagrams to XPDL using the BPMN 2.0 notation shapes.

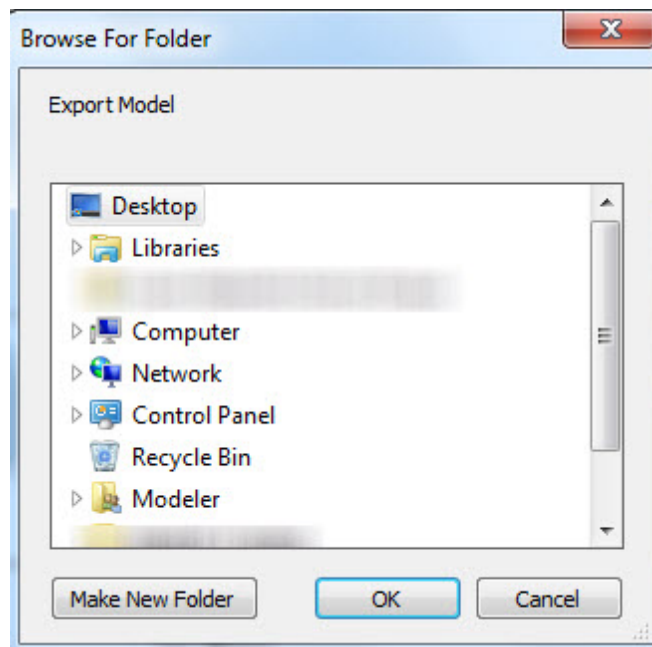
For more information about the currently supported XPDL version, refer to [Supported standards](#).

To export your diagrams, follow the steps below:

1. On the **Export/Import** tab, in the **Export** group, click **XPDL**.



2. Specify the appropriate folder to save your XPDL file, this folder need Read and Write permissions.



3. After export to XPDL format, you will be able use it in any program that supports this format.
4. You can also import a diagram in XPDL format into Bizagi Modeler.

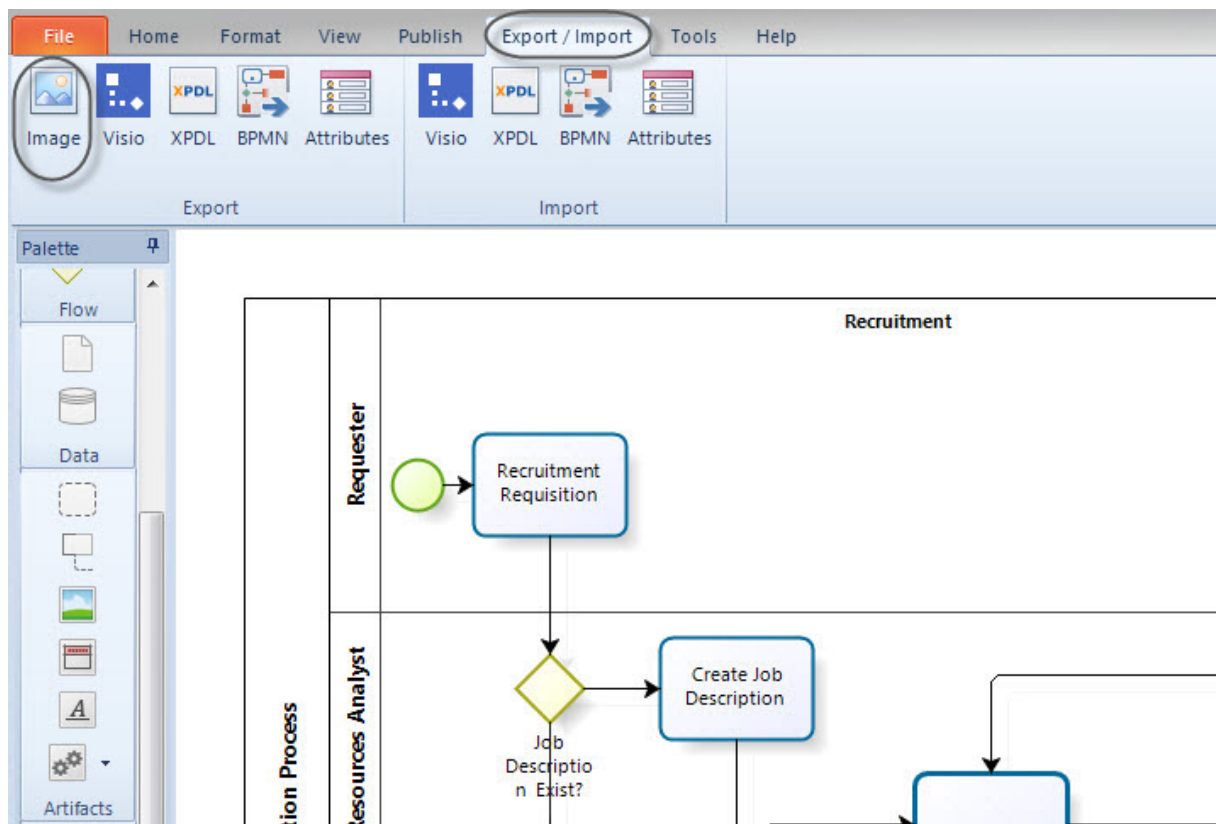
[Click to learn more about importing a diagram from XPDL](#)

Exporting diagrams as Image

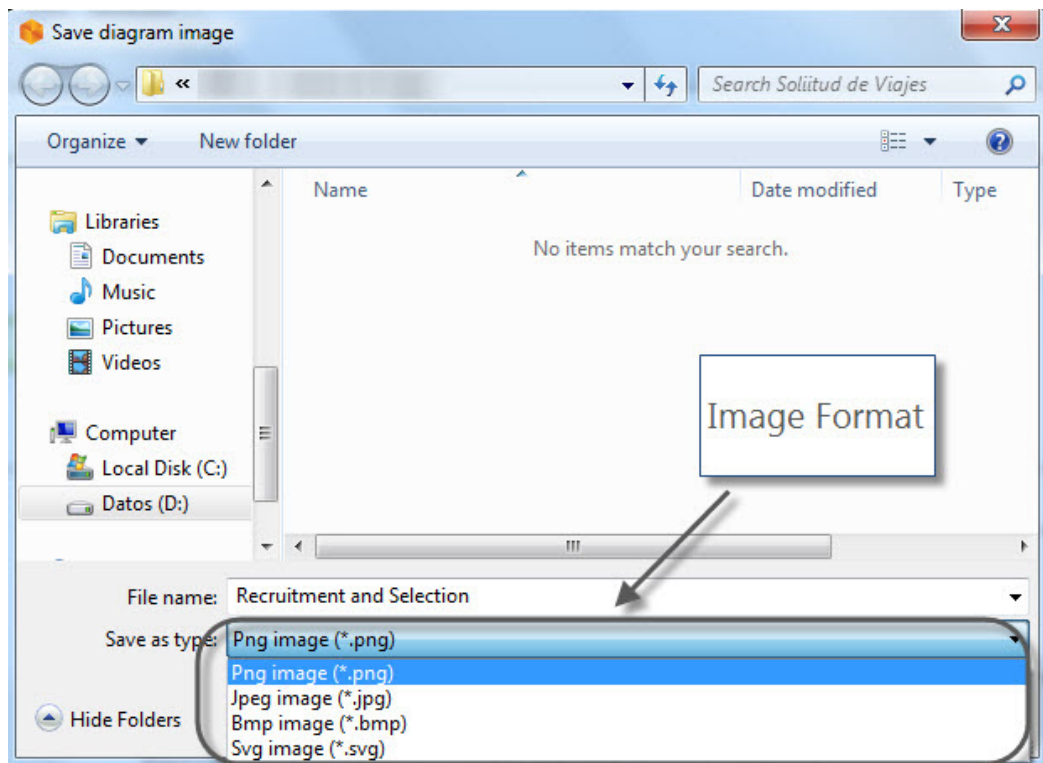
Bizagi Modeler allows you to export your diagrams as **images**, to be opened with any graphic editor, in the following formats: PNG, bpm, SVG or JPG.

To export your diagrams as images follow these steps.

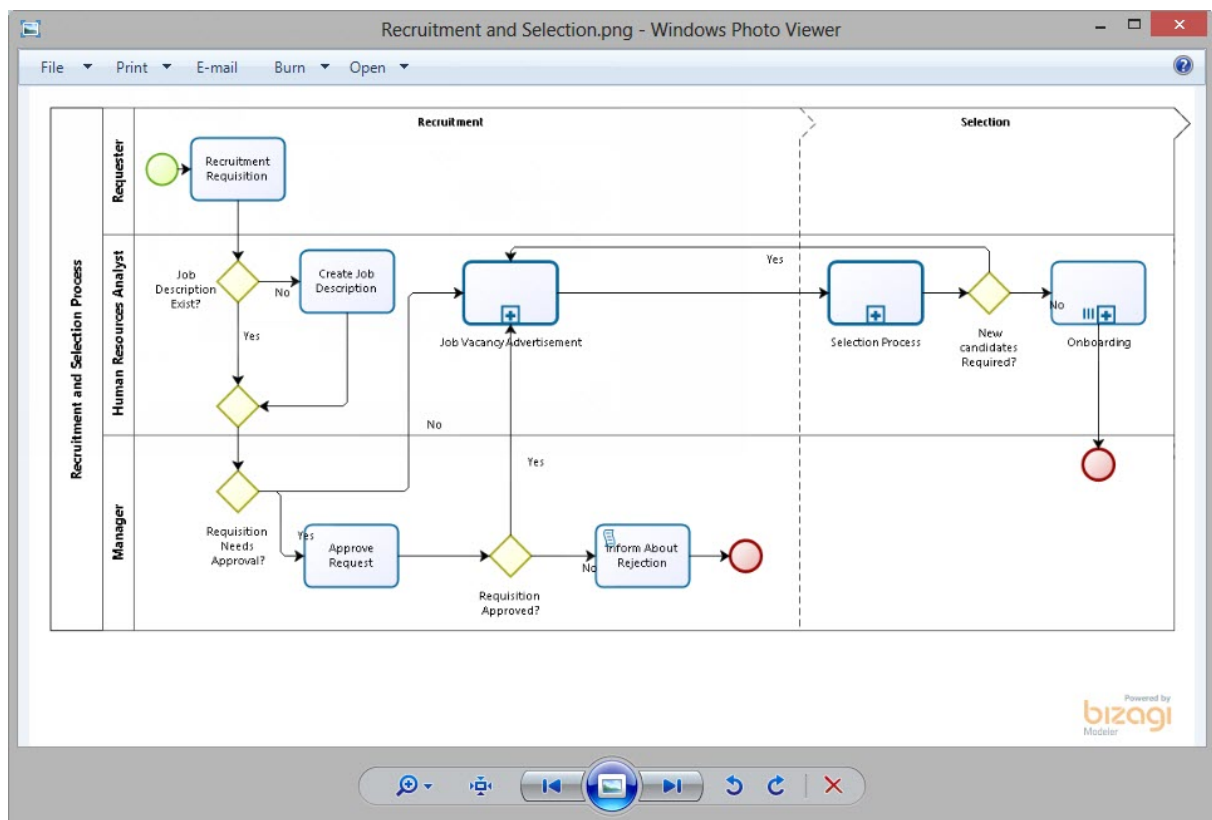
1. On the **Export/Import** tab, in the **Export** group, click **Image**.



2. Select one of the image formats; namely, PNG, bpm, SVG or JPG. Specify the appropriate folder to save your image. This folder need Read and Write permissions.



3. Click the **Save** button. Once the diagram has been exported, you will be able to see it in any graphical editor.



Exporting to Visio

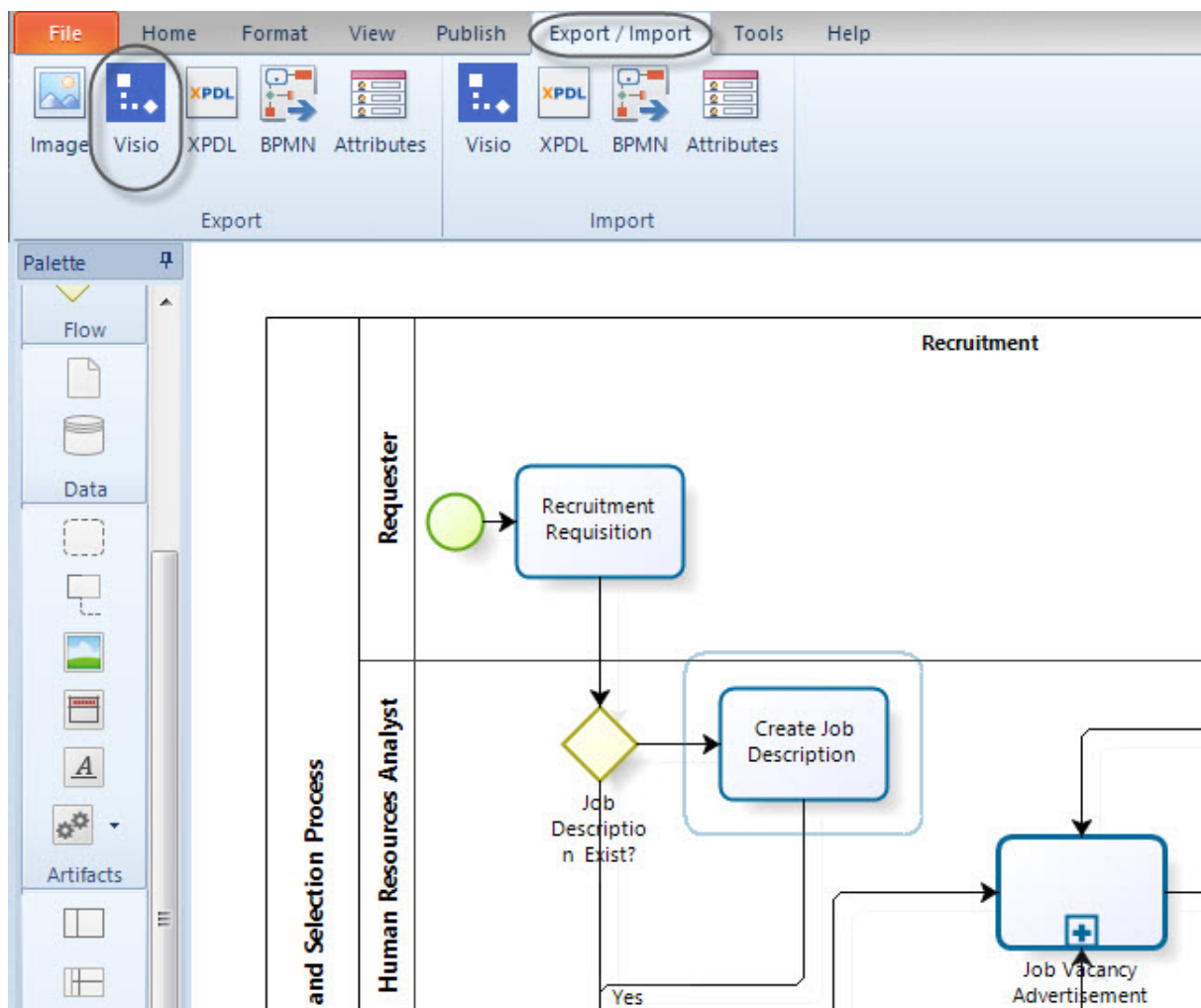
Bizagi Modeler allows you to export your diagrams to **Microsoft Visio** using the BPMN 2.0 notation shapes.

Bizagi supports Visio 2003, 2007 and 2010.

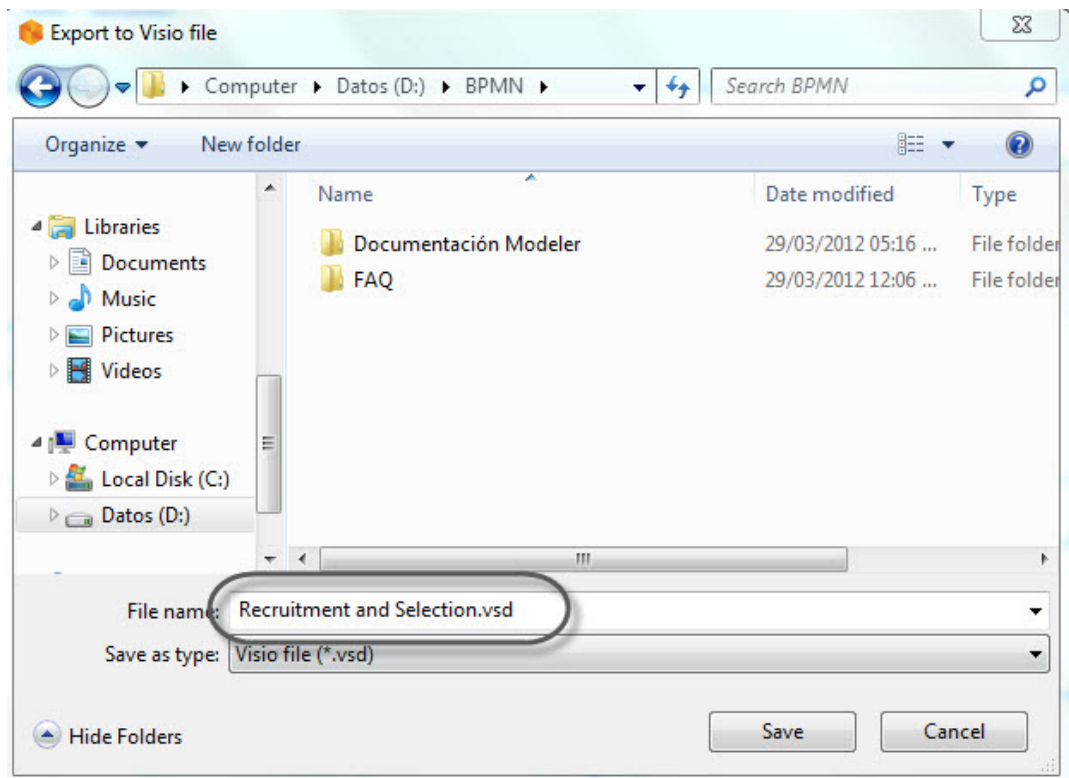
Make sure you have Microsoft Visio installed when you export your diagrams.

To export your diagrams, follow the steps below:

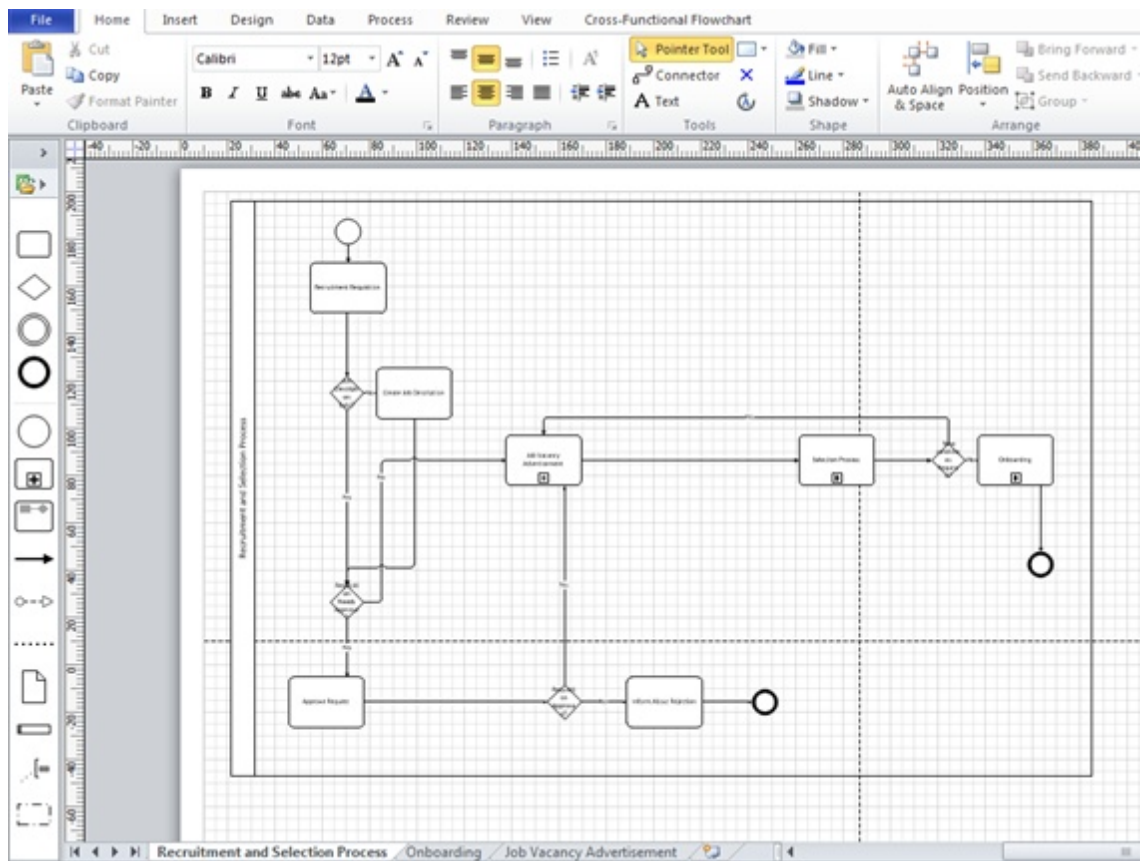
1. On the **Export/Import** tab, in the **Export** group, click **Visio**.



2. Specify the appropriate folder to save your Visio file, this folder need Read and Write permissions. Click the **Save** button.



Once the process has been exported to Visio, you will be able to edit and manage the diagram using the Visio BPMN stencil.

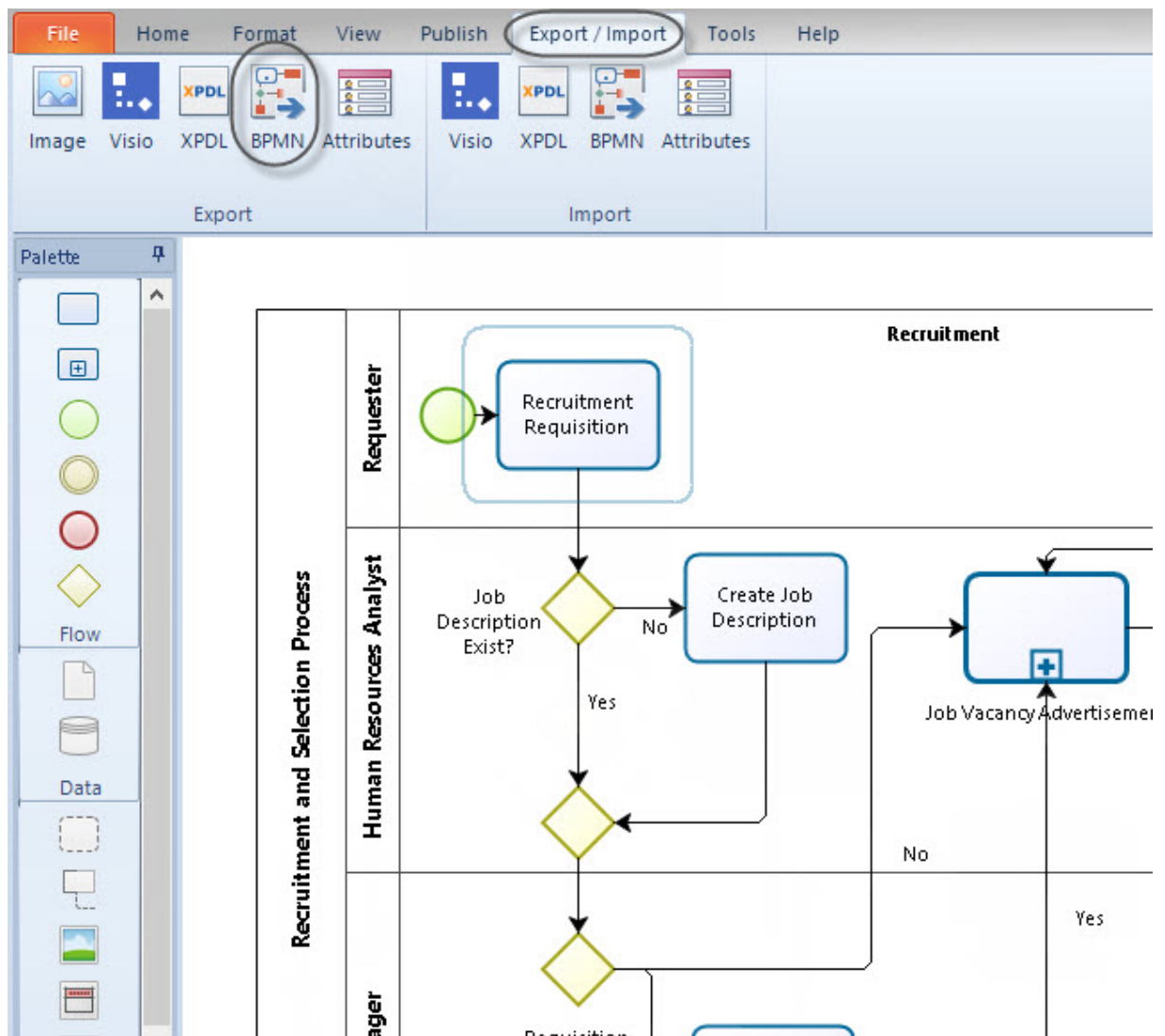


Exporting to BPMN

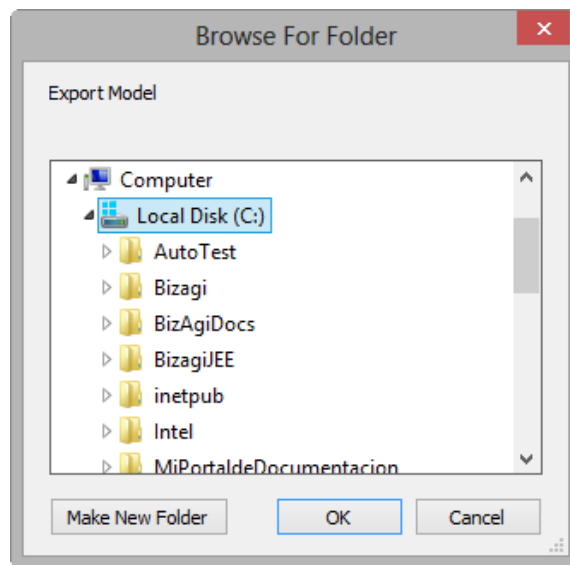
Bizagi offers the possibility to share your diagrams with others modeling tools that use BPMN notation. You can export your diagrams to the BPMN 2.0 xml format.

To export your diagrams, follow the steps below:

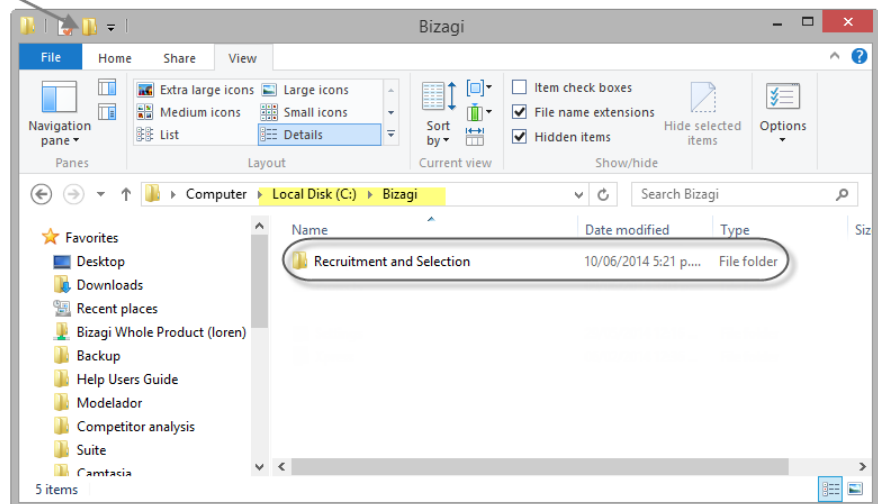
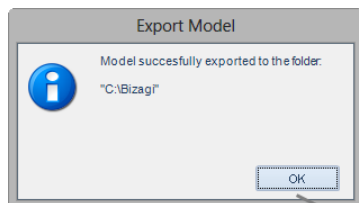
1. On the *Export/Import* tab, in the *Export* group, click *BPMN*.



2. Specify the appropriate folder to save your BPMN file, this folder need Read and Write permissions. Click the OK button.



3. A message will confirm the export and a folder containing the diagrams will be created in the specified location.



4. After exporting to BPMN 2.0 xml, you will be able use the file in any program that supports this format.

You can also import a diagram in BPMN format into Bizagi Modeler. [Click to learn more about importing a diagram from BPMN](#)

Documentation Portal

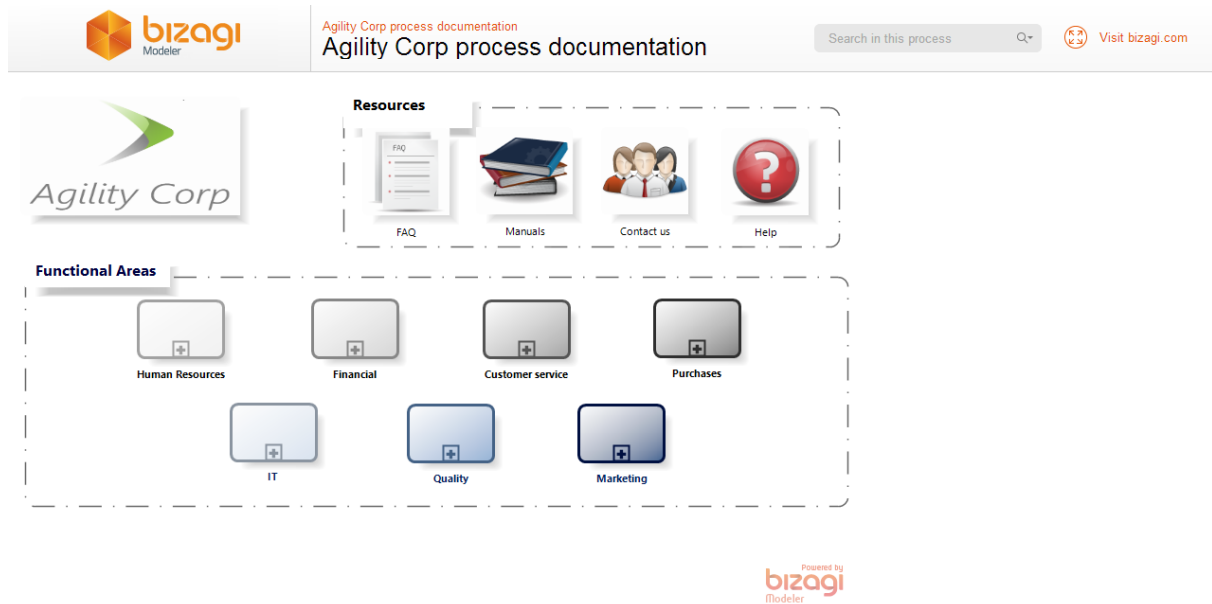
A *Documentation portal* is a shared repository where people within an organization can access the company's processes and related documentation.

The following articles will illustrate how to organize your company's processes using Bizagi Modeler. With a simple click users can navigate between various levels of detail, from a global view to the most detailed information of the organization's processes.


The Documentation Portal can be created in your intranet (a file server as a shared folder) or any Web portal. Just click the [Publish to Web feature](#). It can also be published in [SharePoint](#) or [Wiki](#).

Your portal must have an structure and hierarchy that aids its navigation. The images bellow show an example of this structure:

The highest level displays the functional areas and useful links.

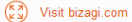



The next level shows the processes related to an specific area.










Agility Corp process documentation

1. Human Resources processes





 FAQ
 Manuals
 Contact us
 Help


 Vacation Leave Request
 Recruitment
 Travel Request

1. Human Resources processes

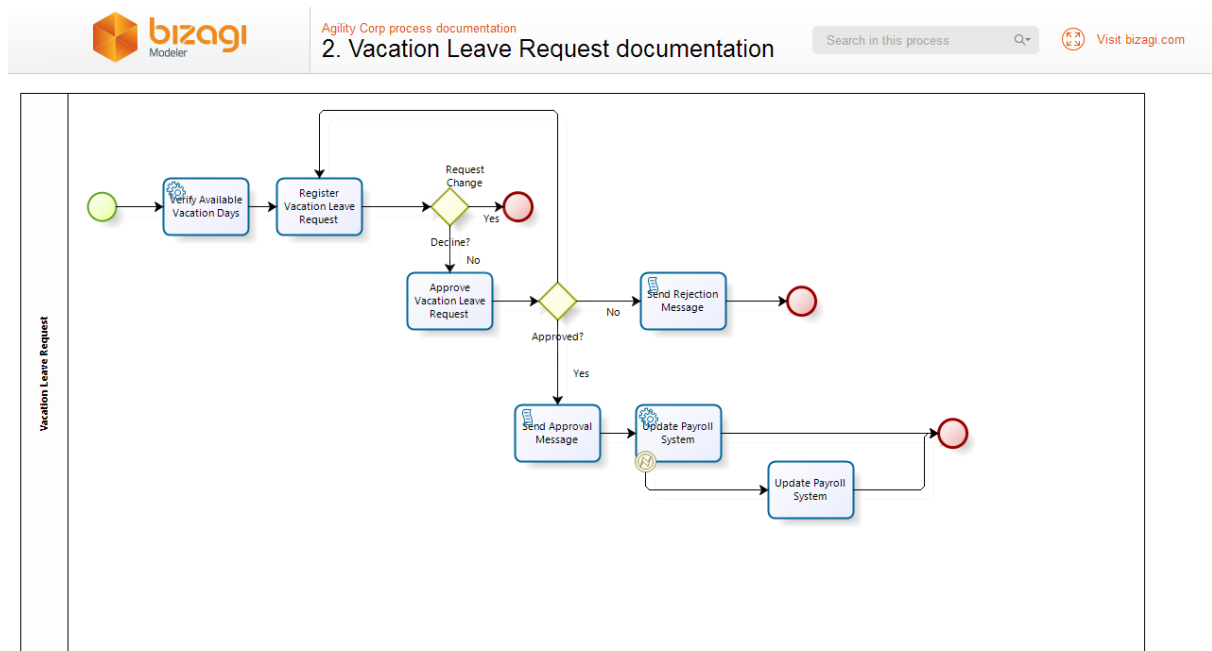
Author: ClaraM

Version: 1.0

Description: The forward thinking human resource department is devoted to providing effective policies, procedures, and people-friendly guidelines and support within companies...



The lowest level shows the process diagrams and their documentation.



[Click here to see an example of a Documentation Portal](#)

How to create a documentation portal

1. Define the structure of processes

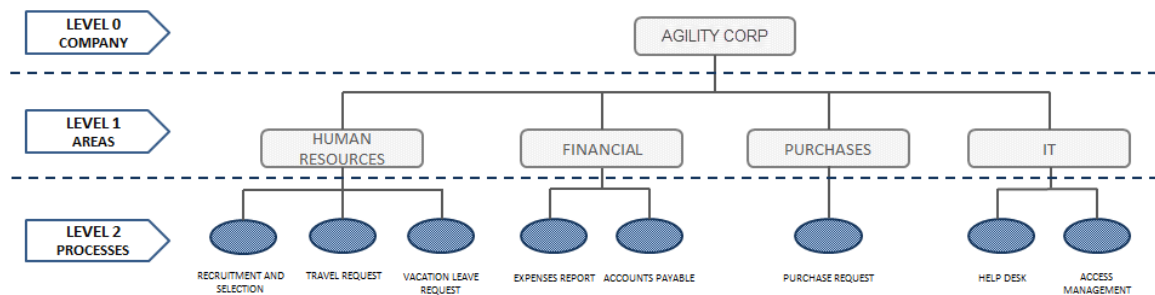
A defined structure establishes the hierarchy of organizational areas and clarifies how different processes of the business are classified and interrelated. In addition to the global structure, it is necessary to define the information to be published and the way in which it will be presented.

Classification and hierarchy of processes

Processes are classified into a hierarchy of *categories*. Each category represents a company, area, sub-area, process or any other grouping you define.

For example, in a completely flat organizational structure, if you classify your processes according to areas it will result in 2 levels. The first will represent areas and the second the processes.

The first level will have as many categories as areas in the organization (each area represents a category in level 1). The second level will have as many categories as processes in the organization (each process represents a category in level 2).



The structure and number of levels depends on the layout of each organization and its particular preferences. As shown, some organizations classify their processes according to areas and sub-areas (Human resources, Sales, Marketing etc). Process-oriented organizations tend to follow mapping structure of the ISO 9000 standards and so classify their processes according to operational function within the business (strategic processes, operative processes and support processes).

Defining the most suitable structure is essential to provide users an intuitive and logical navigation through the processes of your organization.

Information of each element

The information to be presented must be planned in advance. For each level define what information should be displayed and how it will be accessed by final users.

The correct implementation of this step will facilitate understanding of processes within your organization and ensure proper communication between them.

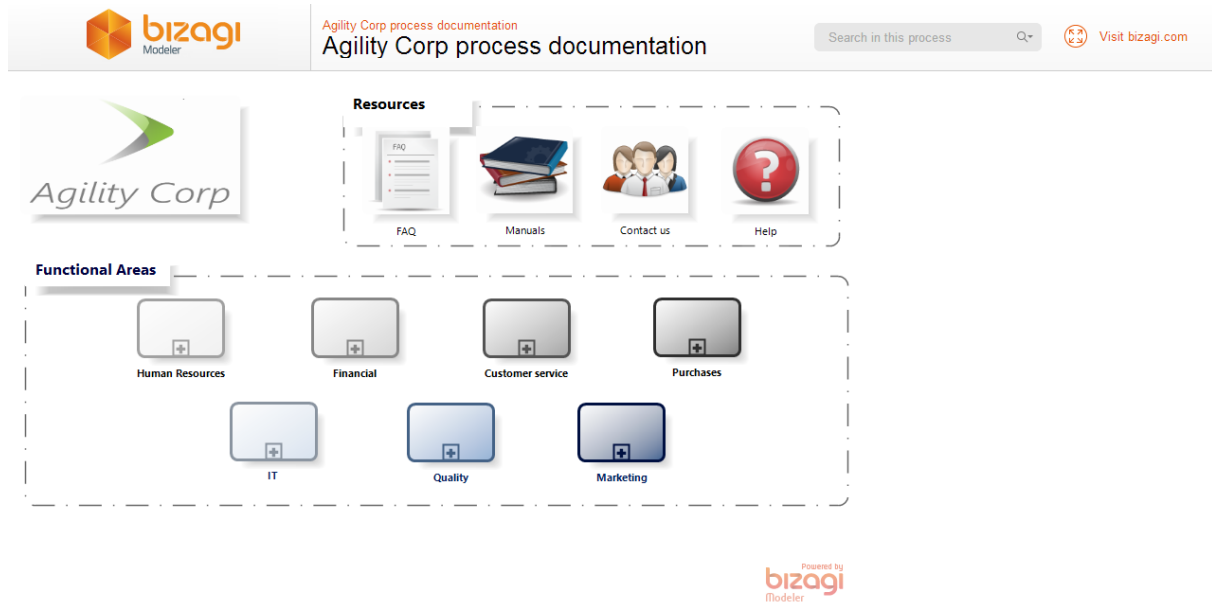
2. Create the Portal

Once the general structure of processes has been defined, you can proceed to organize it in Bizagi Modeler. The key is to translate the structure previously defined into an interface that allows users to easily navigate through the processes information.

In the Documentation Portal each category is represented by a *page (or tab)*. On each page you can define the information for display and the user interface.

Create the Main page

The main page is an overview of the processes areas within the organization. From here viewers can access company-related information and any of the pages in level 1.



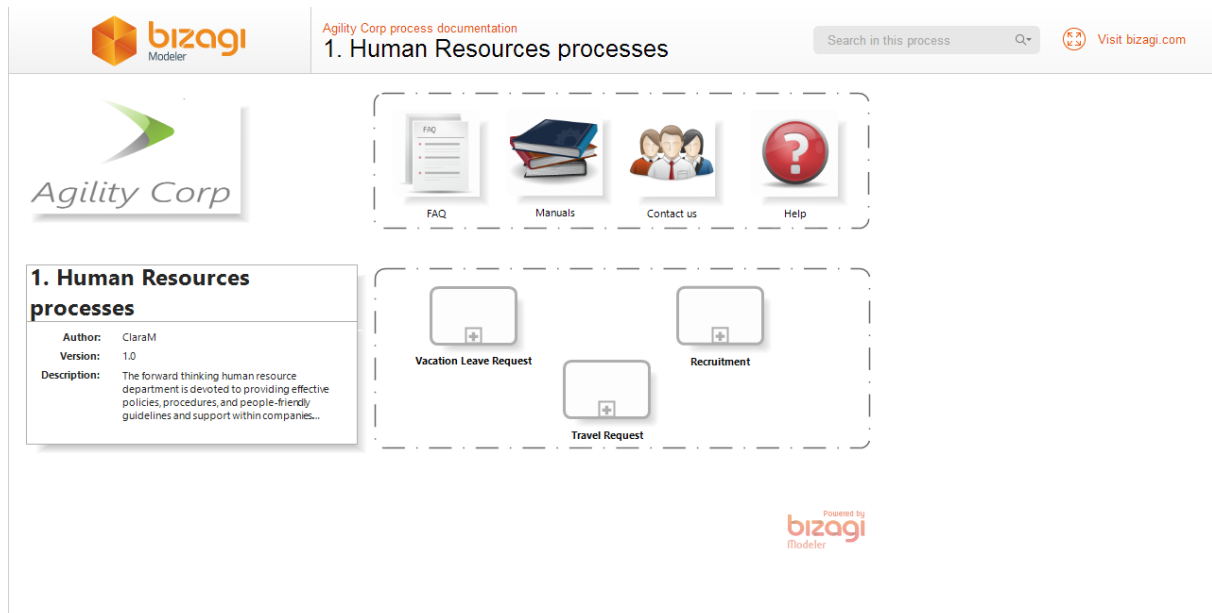
Icons to access level 1 pages are included as reusable sub-processes. This way it is possible to link each icon to the corresponding page.

Additional information can be added by using [Artifacts](#). Aside from improving the look and feel of the page these elements allow you including links to other sites, pictures and documents.

Create category pages

Recall that a level is composed of categories, where each category is displayed by means of a page; consequently a level comprises as many as there are categories.

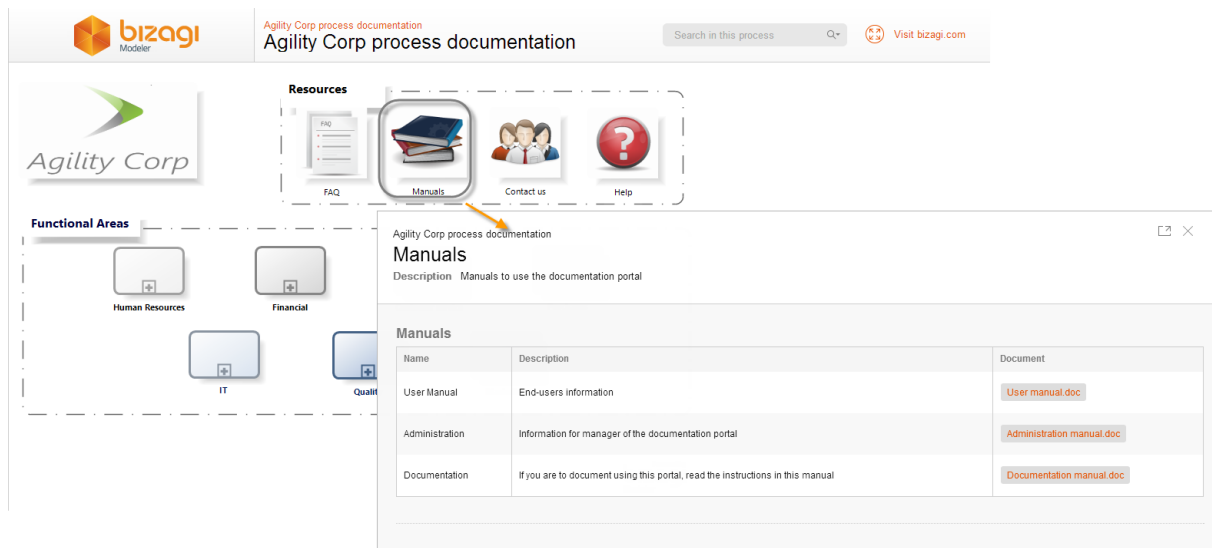
Each category page is created in the same way as the main page, apart from the user interface and information it displays. Use the reusable sub-process to represent the categories and incorporate artifacts to include additional information and improve the look and feel.



Information of elements

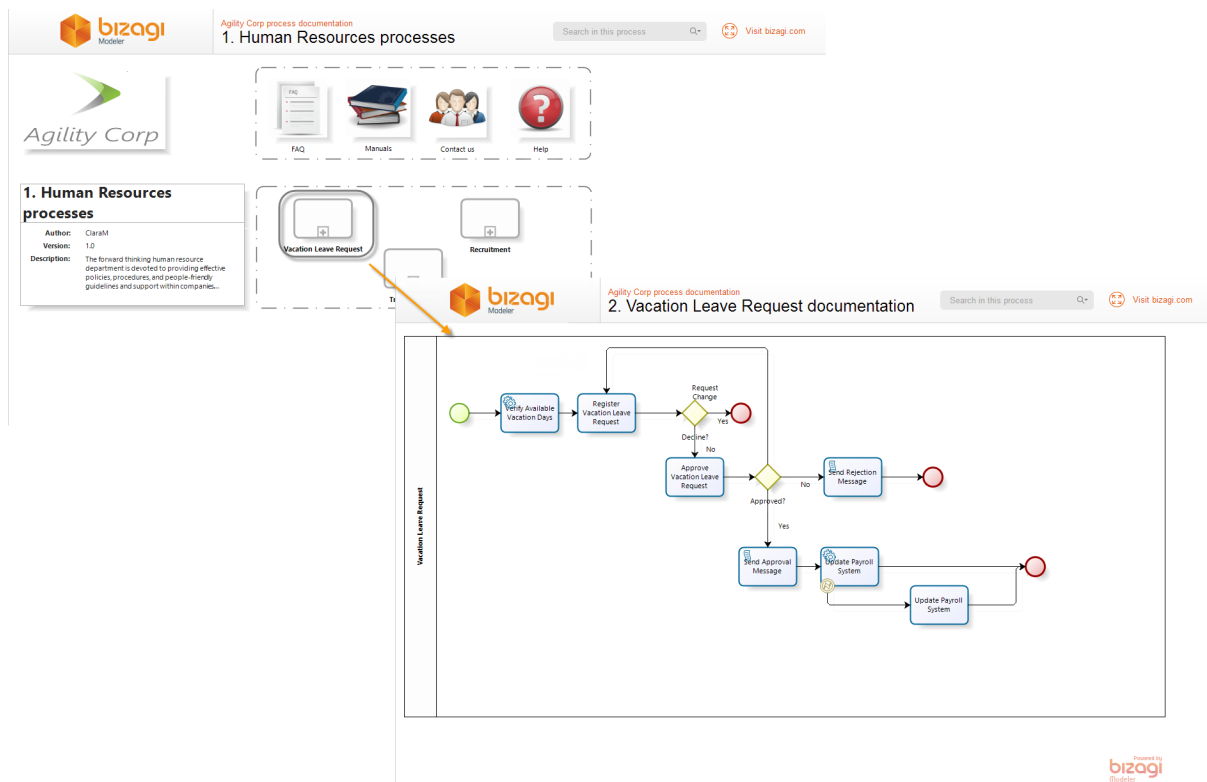
Once the pages have been designed, it is necessary to configure the information that each [Artifact](#) will display upon selection.

To customize the information, make use of [Extended attributes](#). These attributes can include links to another sites, images and documents, to name a few.



Link the menus

Once all the levels have been built, link the categories with their associated level. Associate the diagram (page) from the properties of the corresponding sub-process that represents the category..



3. Publish the portal to Web format

Once the portal has been built in Bizagi Modeler, the final step is to publish it. Use the *Web Publish* option to define the diagrams and information to be published.

[Click here to see an example of a Documentation Portal](#)

Creating a Documentation Portal (step by step)

In the following example we will build a documentation portal step by step.

Let us suppose that the Agility Corp has diagrammed and documented the following processes:

- Recruitment and selection
- Expenses report
- Help desk
- Travel request
- Access management
- Vacation leave request
- Accounts payable
- Purchase request

In order for processes to communicate and share all their related documentation, the Agility Corp has opted to build a documentation portal. All business processes are diagrammed in Bizagi Modeler and stored in a single *.bpm* file.

[Click here to see the Web output of this Portal](#)

[Download here the complete Documentation portal in .bpm format](#)

1. Defining the structure of processes

Classification and hierarchy of processes

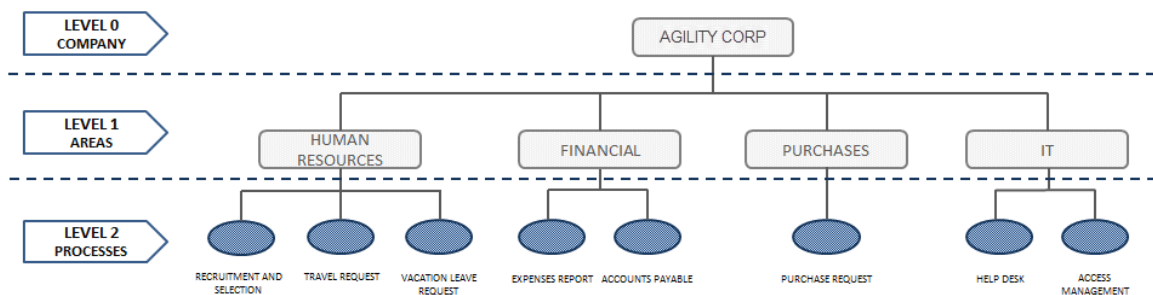
Agility Corp concluded that the easiest and most convenient way to classify its processes would be according to the area in which they are performed. Based on this, the following classification was established:

| Area | Process |
|-----------------|---|
| Human Resources | <ul style="list-style-type: none">• Recruitment and selection• Travel Request• Vacation Leave Request |
| Financial | <ul style="list-style-type: none">• Expenses report• Accounts payable |
| Purchases | <ul style="list-style-type: none">• Purchase request |
| IT | <ul style="list-style-type: none">• Help Desk• Access Management |

Note this gives a two-level classification; the first denotes the functional areas and the second the business processes.

The first level comprise of has four categories (each area represents a category of level 1). The second level contains eight categories (each process represents a category of level 2).

Level 0 is used to represent the highest level of hierarchy, in this case, the global view of the company.



Information of each element

In this step we have to define what information has to be displayed at which level. The Agility Corp wants different levels of information sharing:

Level 0: Company Level

- **FAQ:** Frequently asked questions about the company
- **Manuals:** Documentation on how to use the portal

- **Contact information:** Details of the company contact person if required.
- **Help:** Links to company resources.

Level 1: Areas Level

- **Area description:** A brief overview of the area and its functions.
- **FAQ:** Frequently asked questions about the area
- **Manuals:** Documentation setting out the structure and responsibilities of the area.
- **Contact information:** Details of the contact person for the area, if needed.
- **Help:** Links to area resources.

Level 2: Processes Level

This level will only contain the information of processes.

2. Creating the Portal in Bizagi Modeler

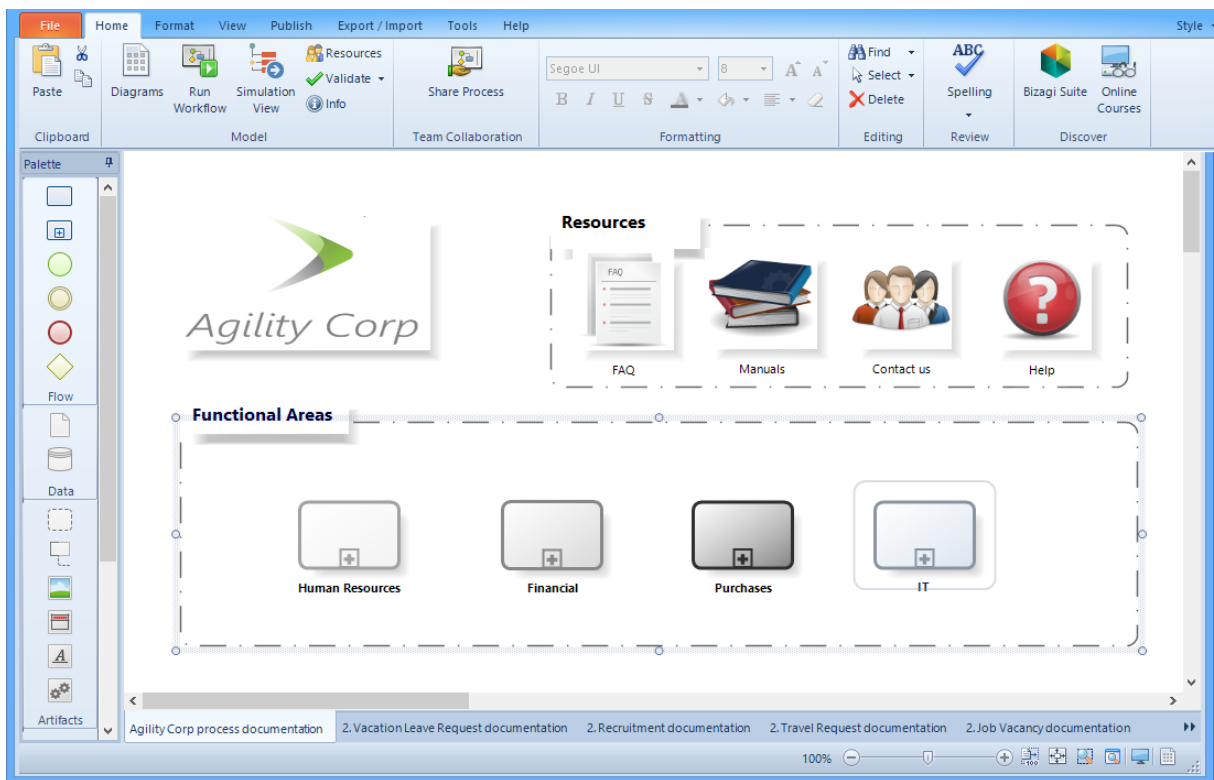
Now that the Agility Corp has structured its processes, we can proceed to build the Portal in Bizagi Modeler.

Creating the main page

The first step is to create the page associated with the Level 0 global view (Main page). On this page, the Agility Corp wants to show the different functional areas and some general information on the organization:

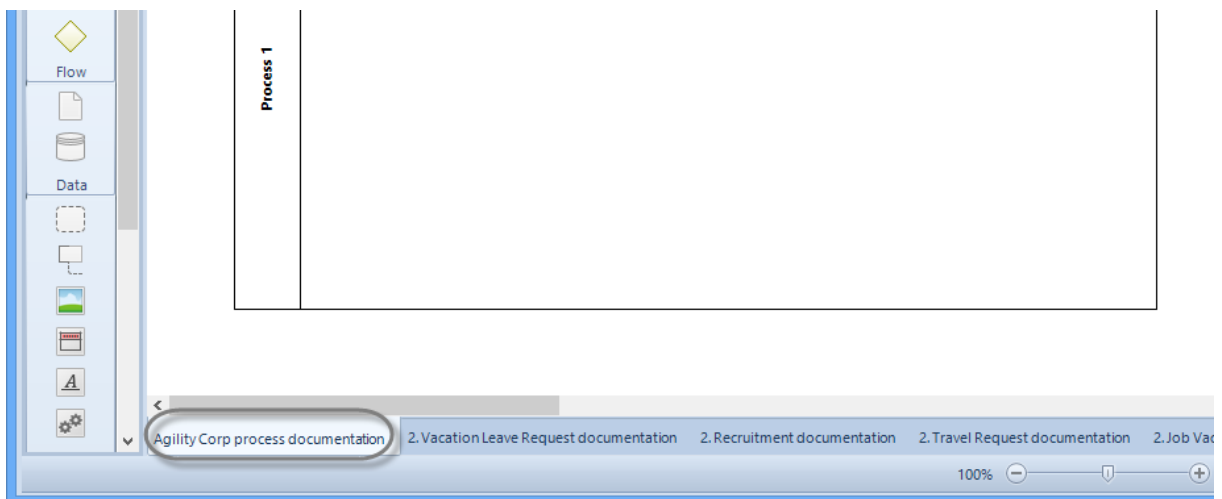
- Company logo
- FAQ
- Manuals
- Contact information
- Help

The main page should look like this:

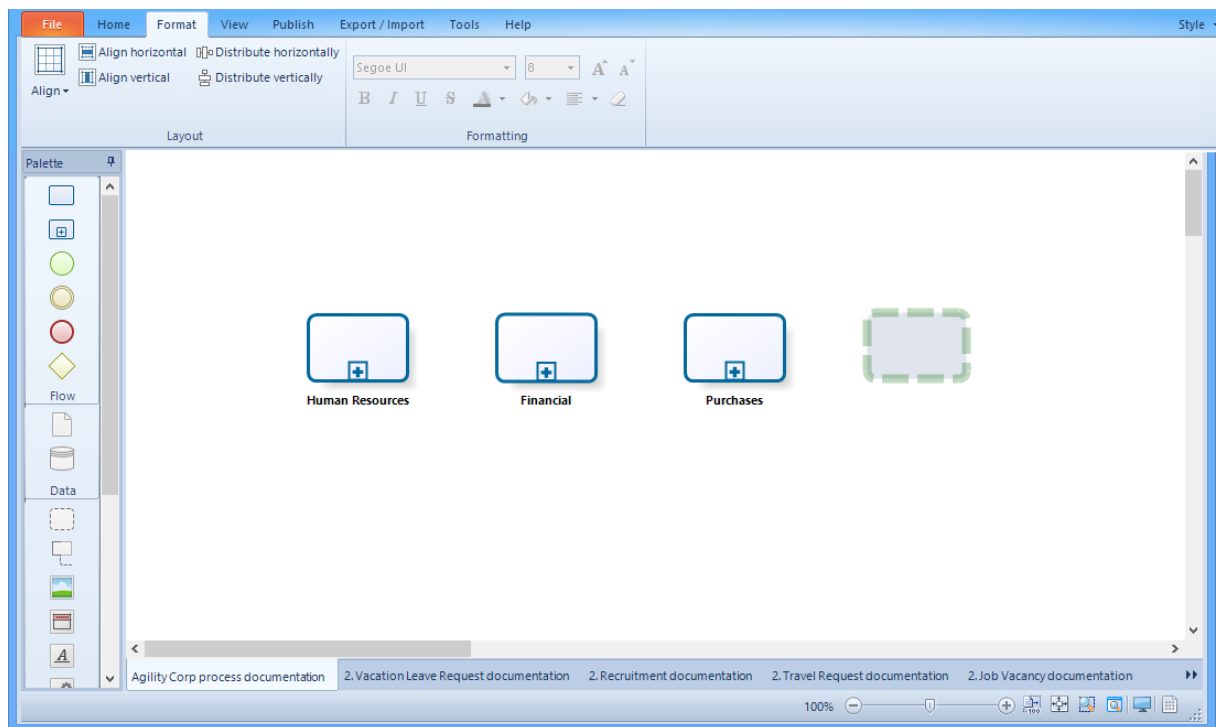


Follow the next steps to create the page:

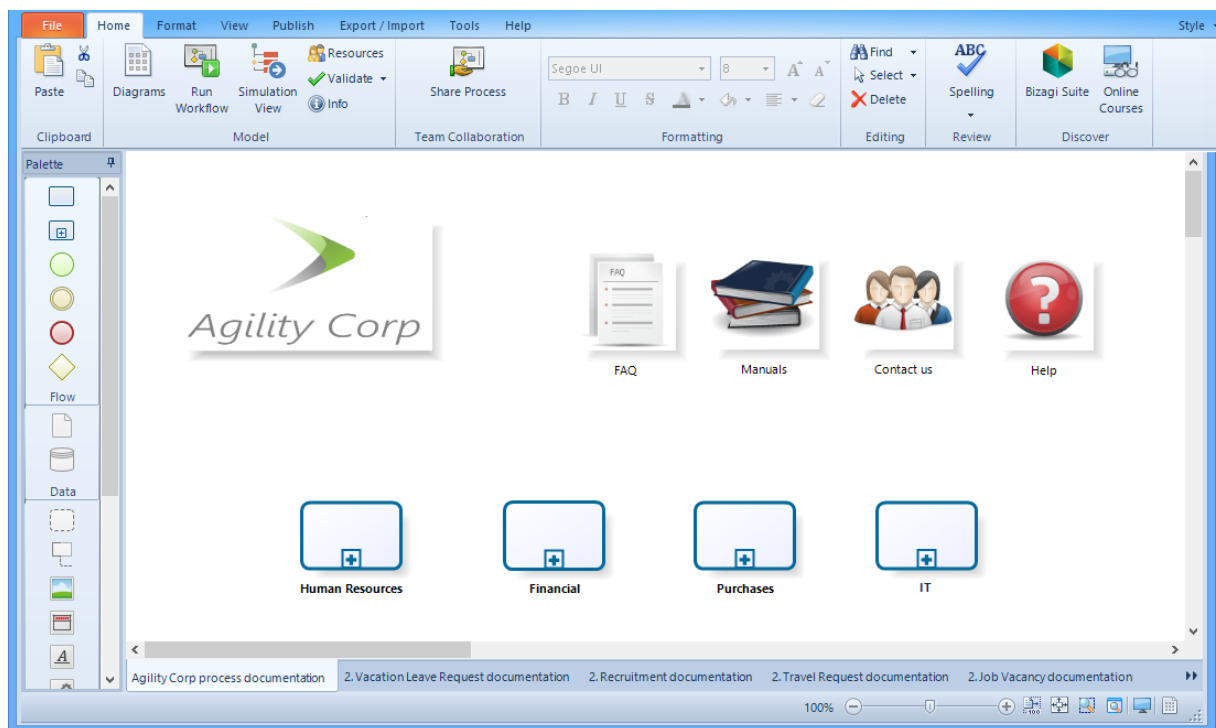
1. Create a new diagram.



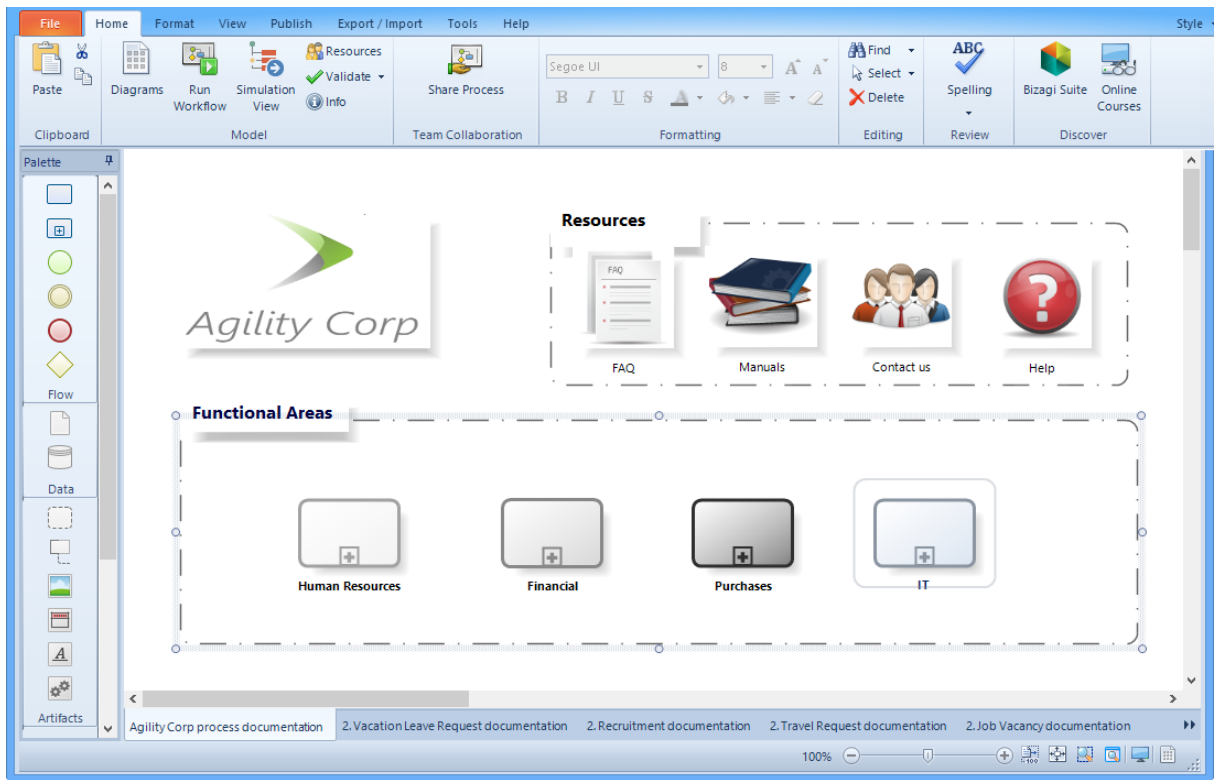
2. Remove the Pool shape and include the categories of Level 1, in this case, four sub-processes. Give each the name of the area it represents.



3. Use image artifacts to insert the company logo and add icons to represent the FAQs, Manuals, Contact us and Help.



4. Customize the appearance of the page using the different options and elements that Bizagi offers such as modifying shapes colors, using making use of grouping, changing font types etc.



Creating category pages

The next step is to create the level's pages. In our example, we have two levels. As the lowest level is composed of the processes already diagramed, we only have to create the pages associated with level 1.

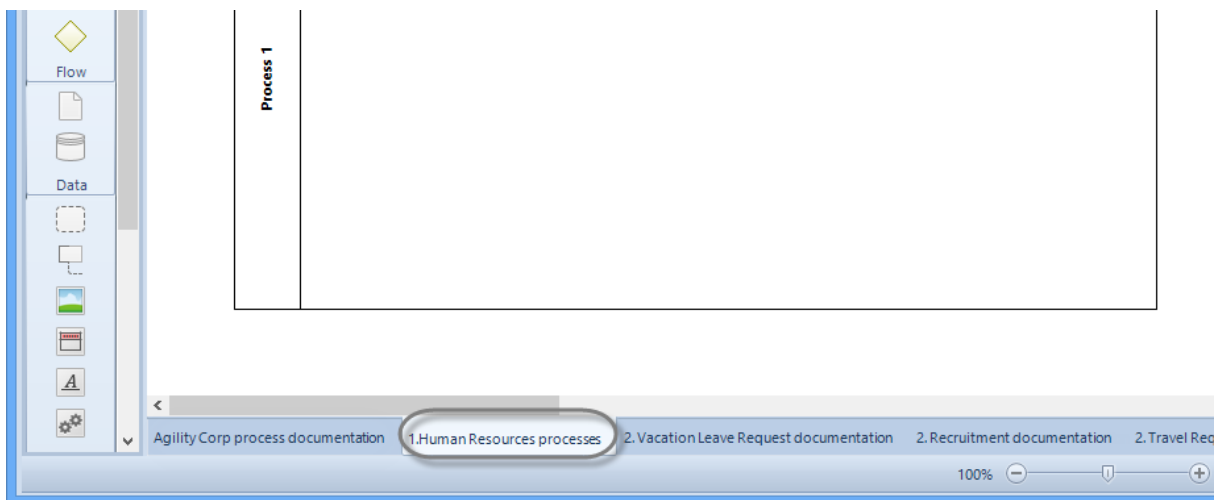
As level 1 is comprised of four categories, we create four pages, one for each category: Human Resources, Financial, Purchases and IT. On each page the Agility Corp wants to display the processes associated with the category (area) and the following general information about the area:

- Area description
- Company logo
- FAQ
- Manuals
- Contact information
- Help

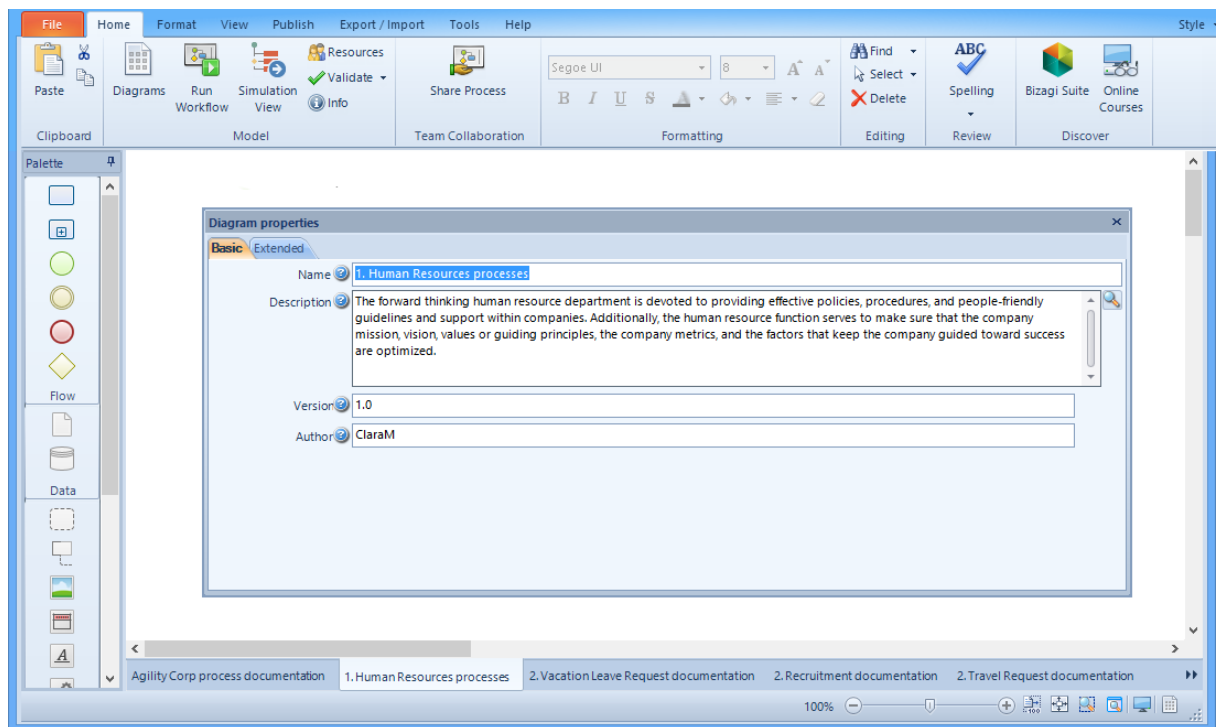


In the section below we illustrate how to create the page related to the Human resources category. The remaining three pages are built in the same way.

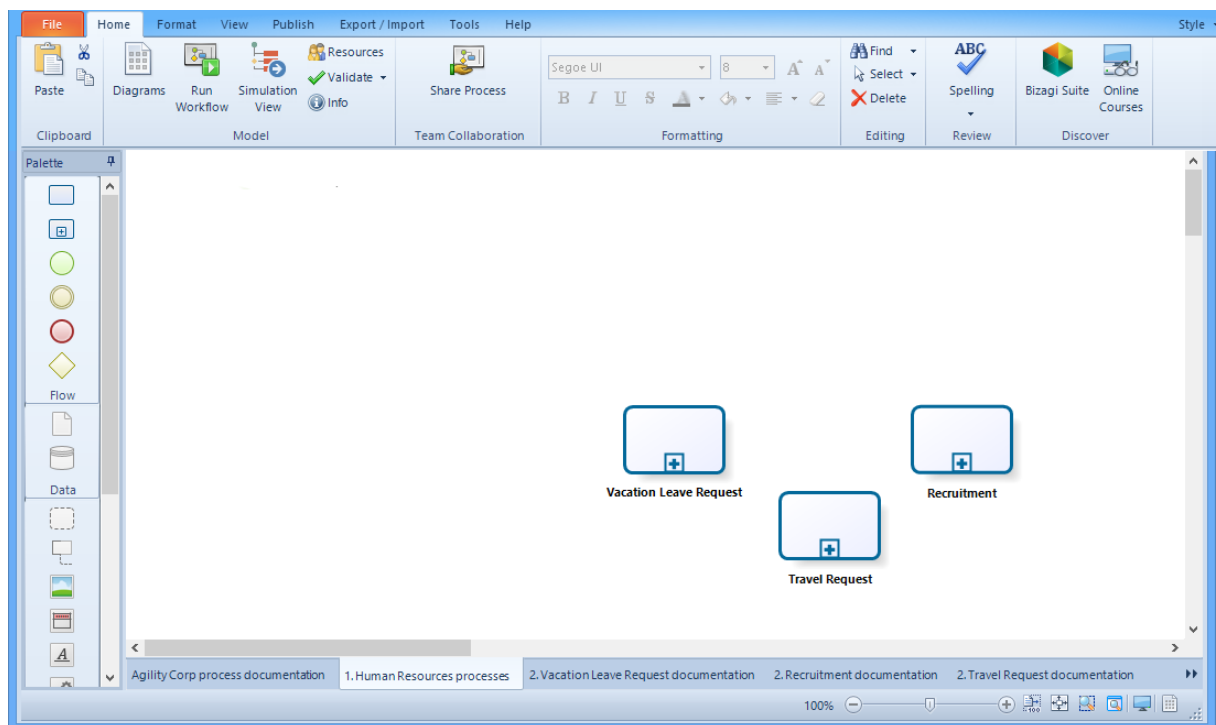
1. Create a new diagram and name it as the category. *Human Resources*. It may help to include numbers or codes to more easily identify to which level the diagram belongs.



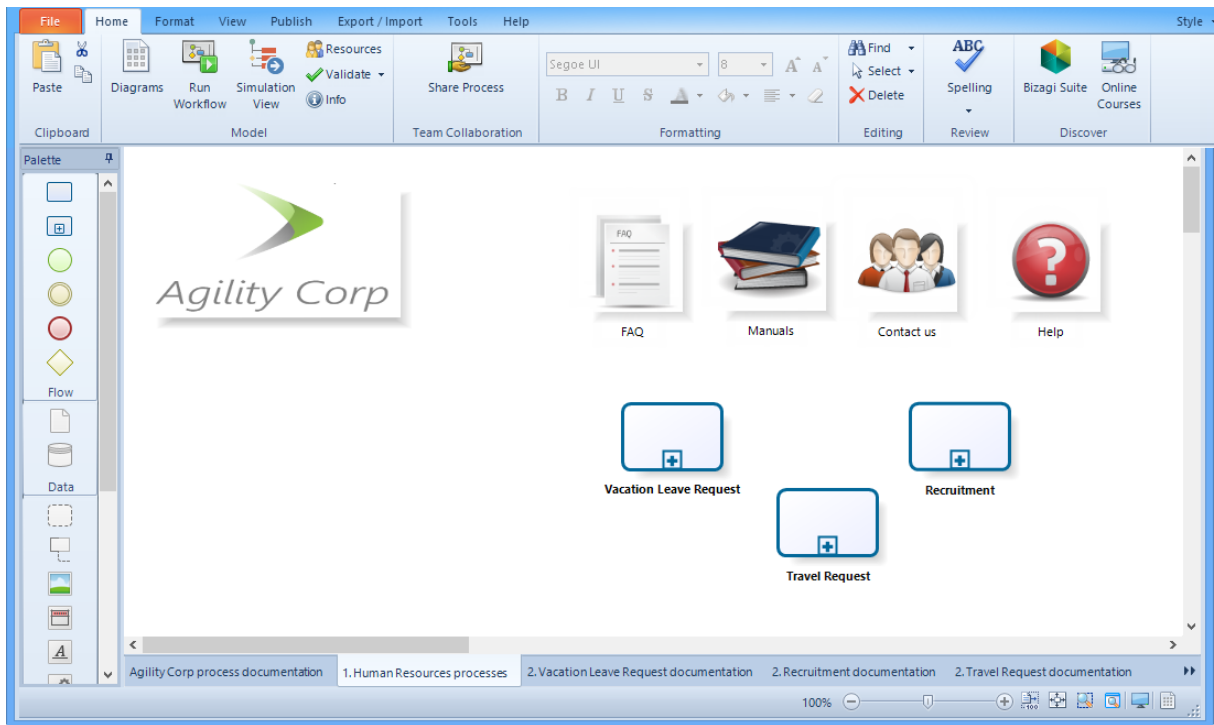
2. Right-click the diagram and open its properties. Enter a description of the area.



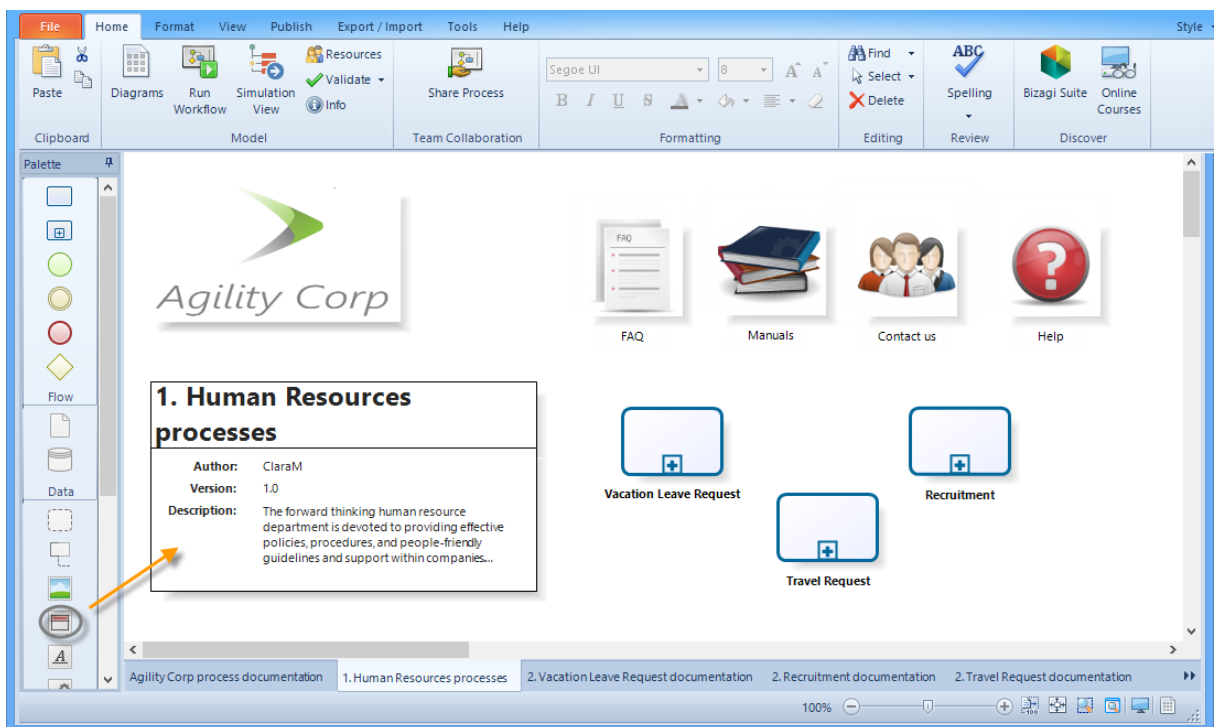
3. Remove the Pool shape and include three sub-processes to reflect categories of Level 2. Give each the name of the process it represents.



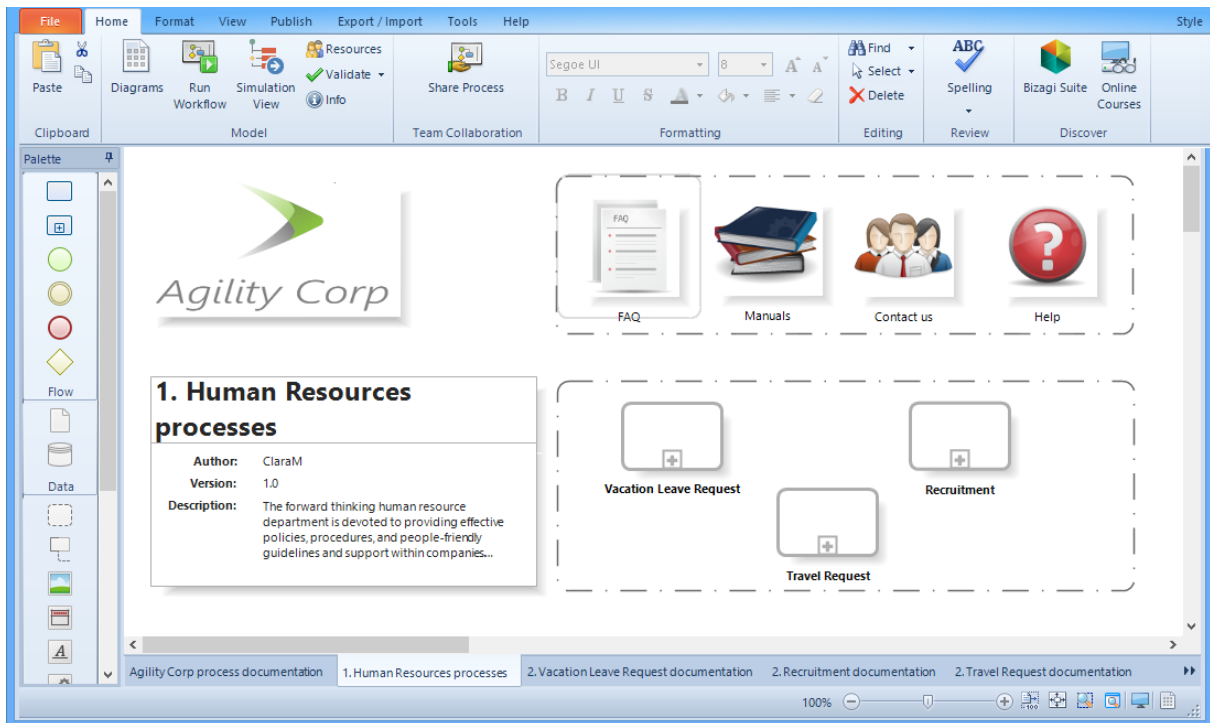
4. Use image [artifacts](#) to insert the company logo and include icons to represent the FAQs, Manuals, Contact us and Help.



5. Add a *Header* artifact to include information related to the area. Note the header information is the included in the diagram properties.



6. Customize the appearance of the menu using the different options and elements that Bizagi offers such as modifying shapes colors, using making use of grouping, changing font types etc.



Information of elements

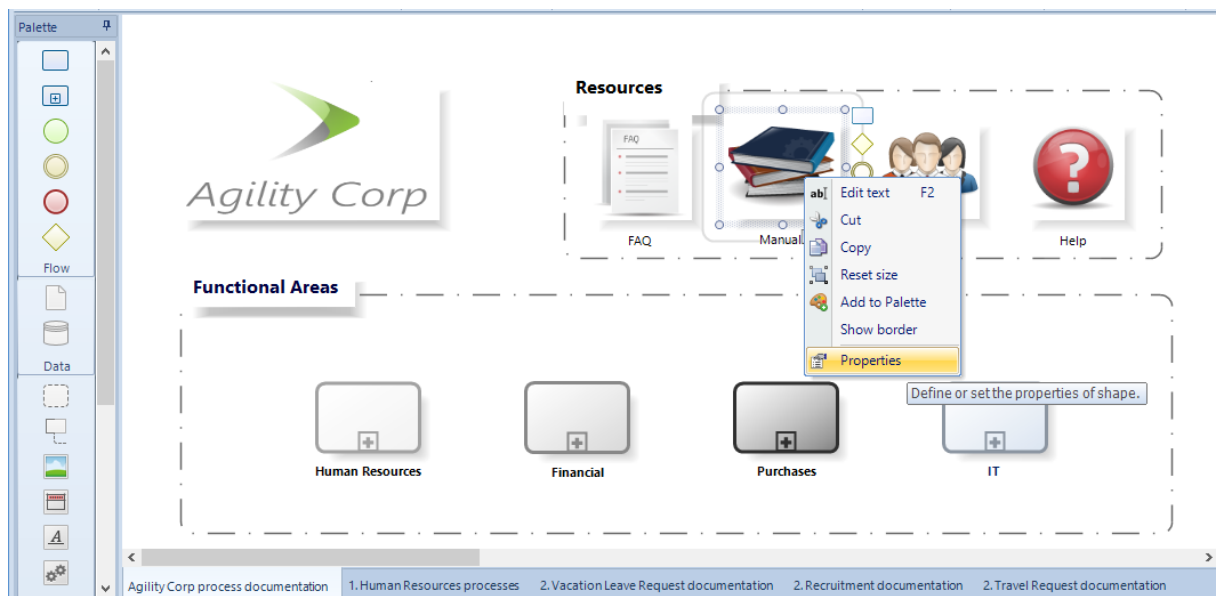
Once the structure of the pages has been configured we can continue to define each page element will displayed upon selection.

Since we used artifacts (Faqs, Manuals, Contact and Help) we can customize the properties of these objects to show the information required.

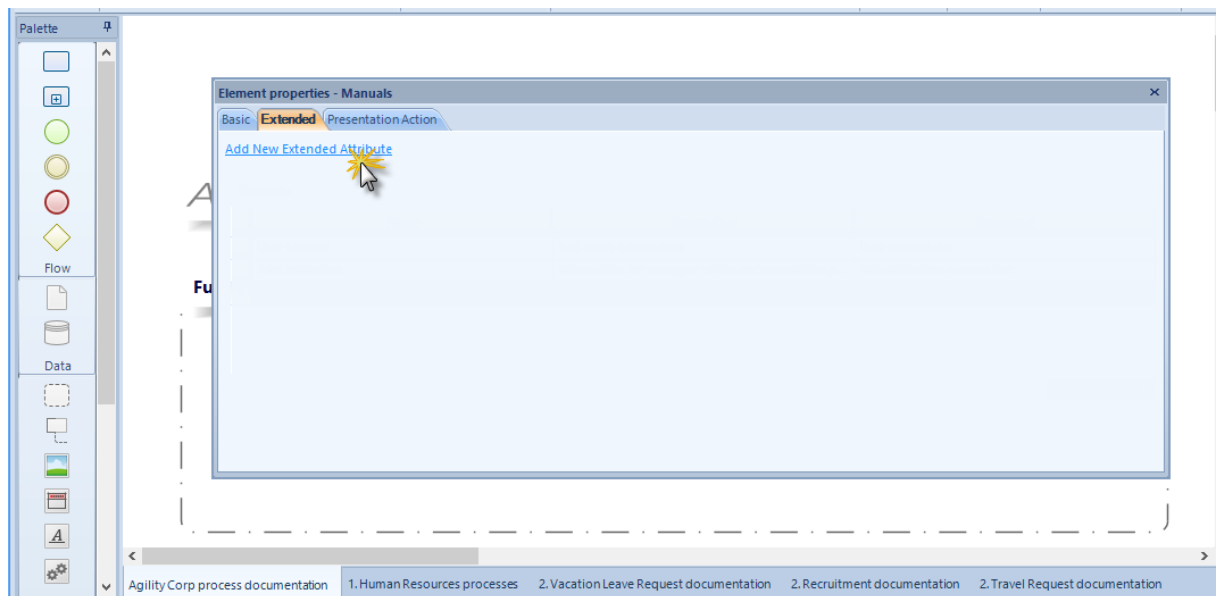
For instance, when viewers select the *Manuals* element in the main page, three different manuals must display. To do that we create a table type extended attribute.

Do the following to customize the information displayed in this artifact:

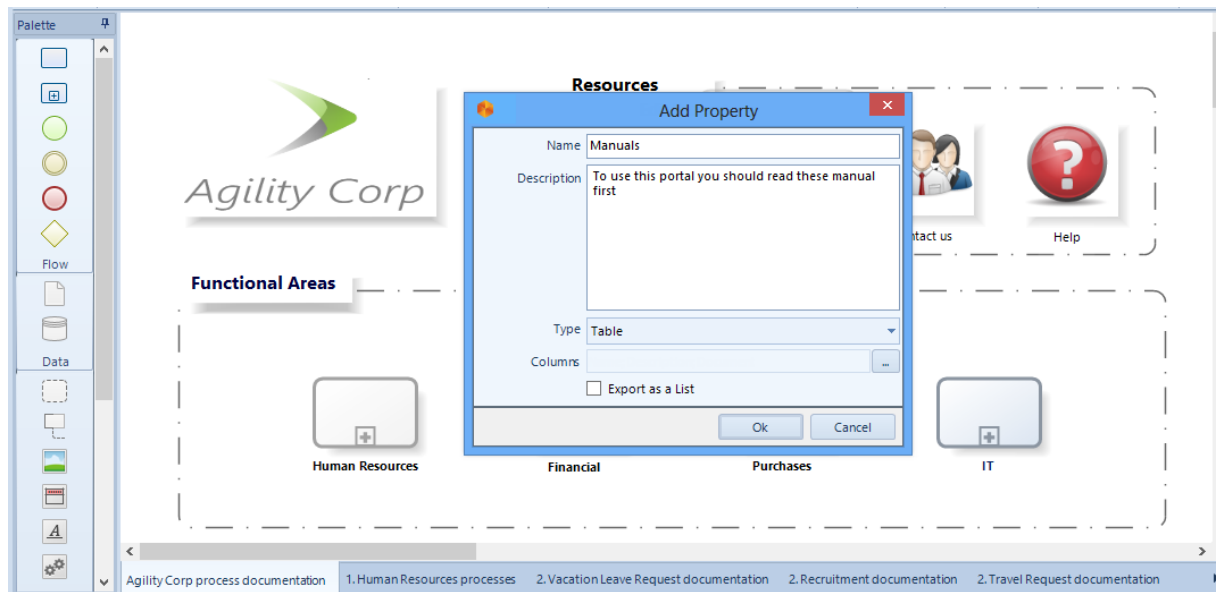
1. Right-click the artifact and select properties.



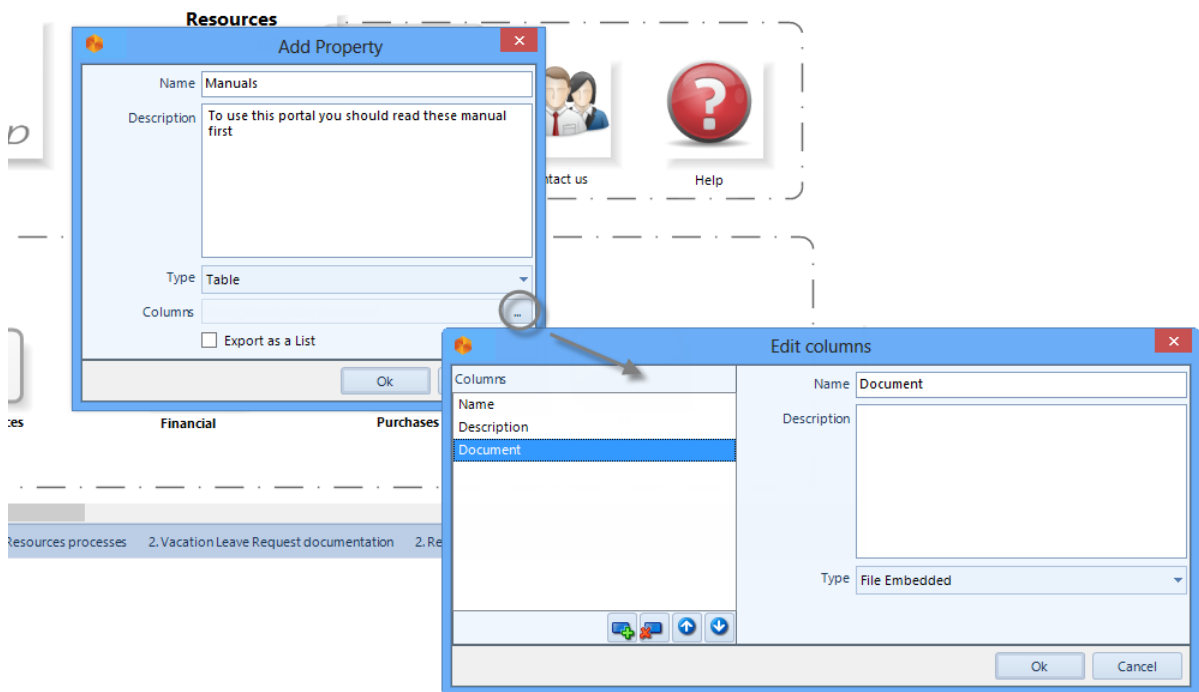
2. In the *Extended* tab click *Add new extended attribute*



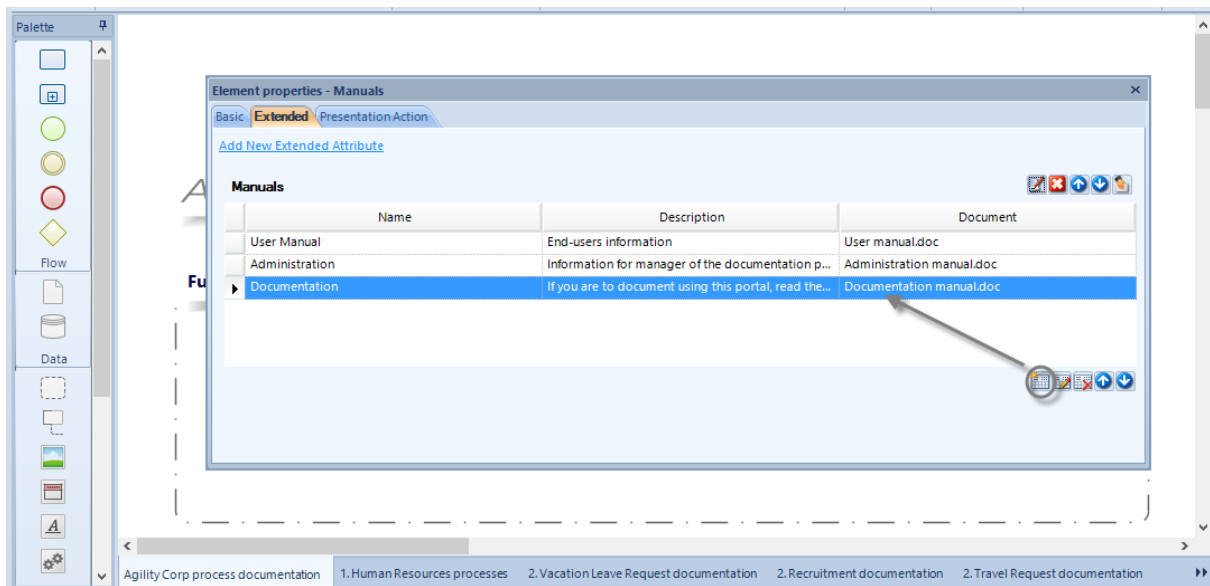
3. Assign the attribute name and description and select *Table* as the type.



4. Define the columns to be displayed in the table. Click the (...) icon in the columns field and set the necessary ones.



5. Next add the information to be displayed, in this case, the instruction manuals.



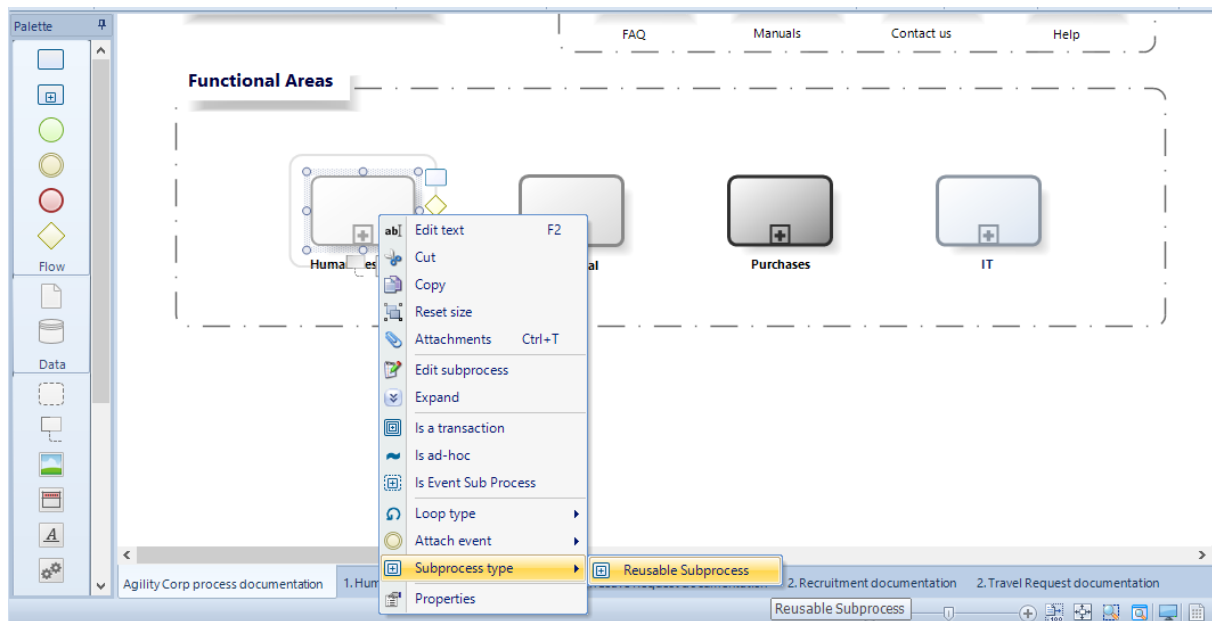
6. Repeat this procedure for all elements on all pages.

Linking the pages

Once all pages have been created, the next step is to link them taking into account their interrelations and hierarchy. As we saw, categories are represented by sub-processes. In order to connect them, these sub-processes have to be converted into reusable sub-processes. This way we can easily select the related diagram (page) from the sub-process properties.

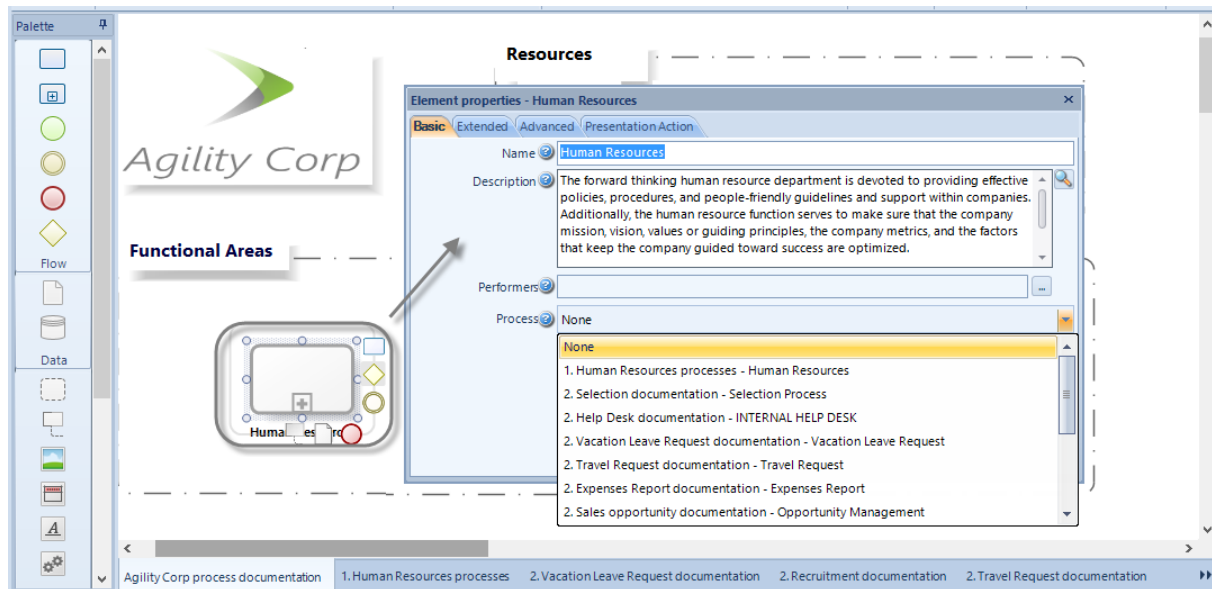
Bellow we will connect the Main page with the functional areas pages.

1. Right-click a category (in this example an area) and convert the shape into a reusable sub-process as shown below.
The shape borders will widen.



2. Right-click the category again and open its properties. From the *Process* field select the diagram to be linked.

In this way, when users click the shape in the Work Portal the associated diagram will open.



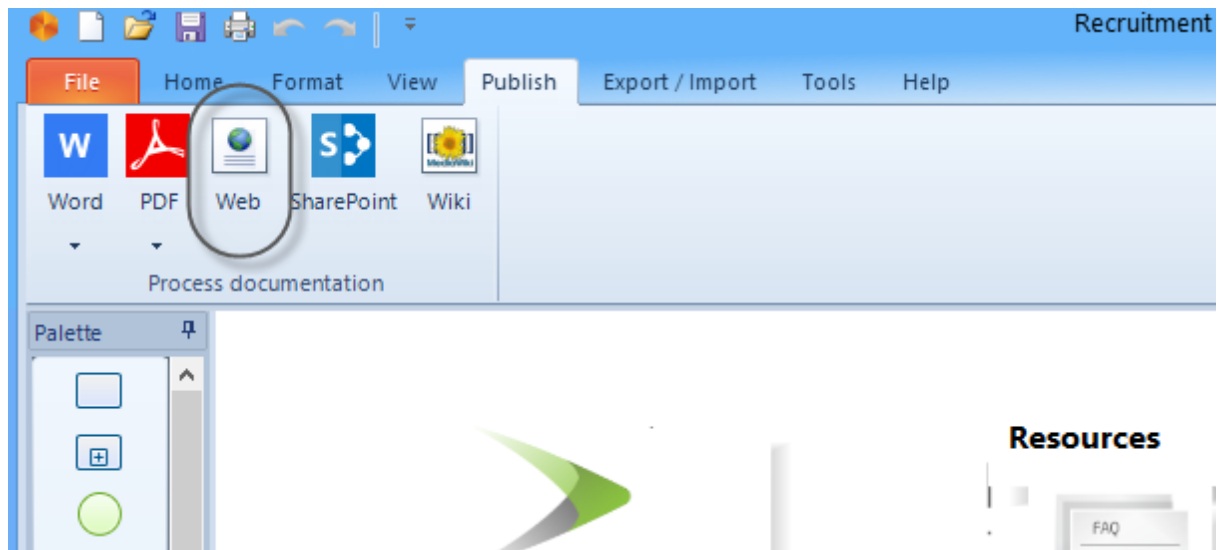
Repeat this procedure to link all the diagrams to pages in the Portal.

3. Publish the portal to web format


Once built, the Documentation Portal can be exported to the Web as a HTML file to share with other users within the organization.

To publish your Portal, do the following:

1. On the *Publish* tab, in the *Publish* group, click *Web*.

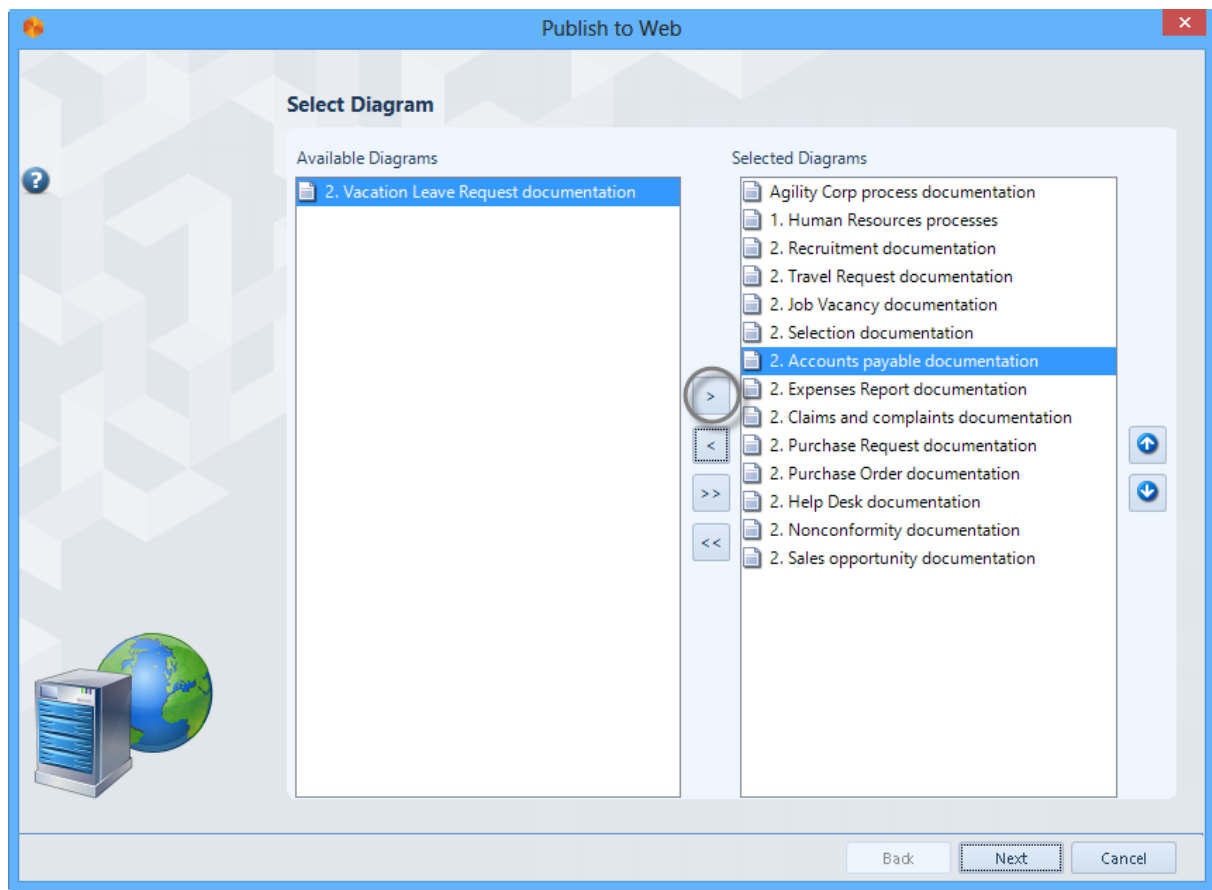


2. Select the diagrams you wish to publish.

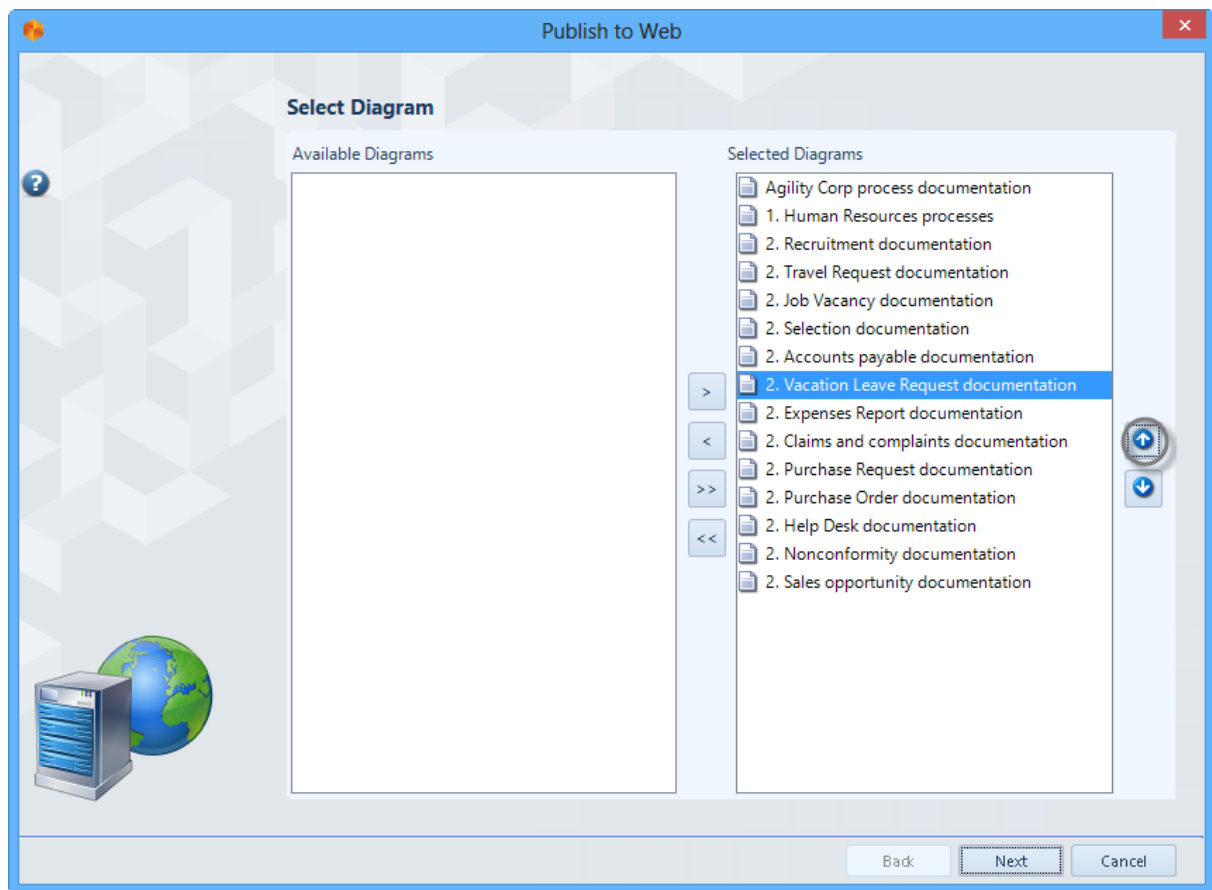
Select individually by using the  button or by double clicking them.

Select all by using the  button.

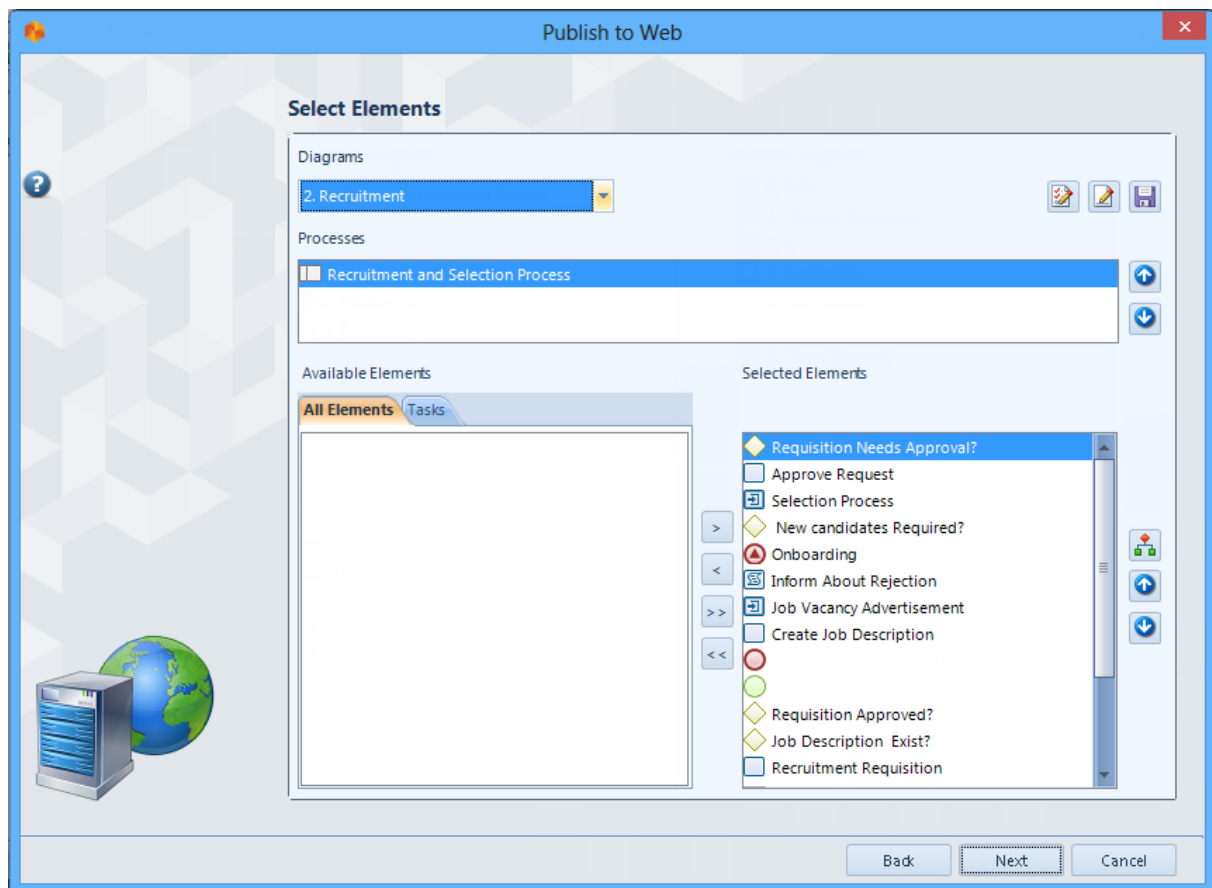
When all the diagrams you wish to publish are selected, click the **Next** button.



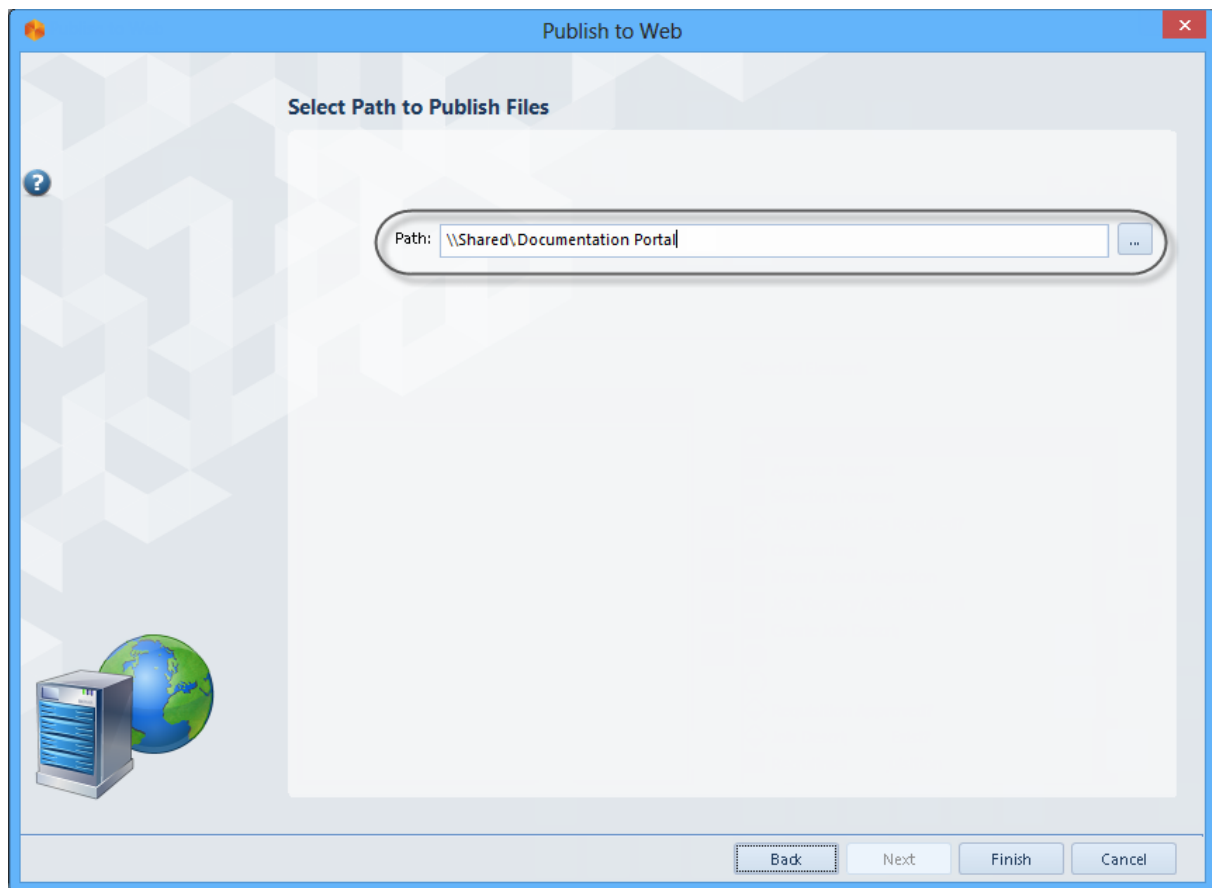
3. Choose the order in which you wish to publish your diagrams by using the ordering buttons on the right-hand side. Once finished, click the *Next* button.



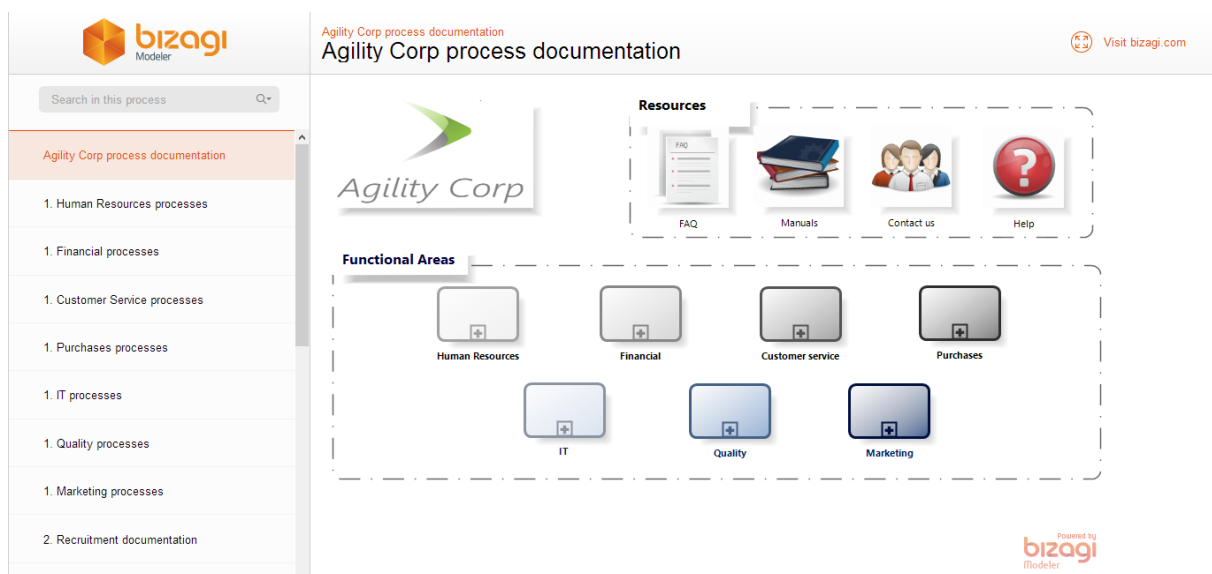
4. For each diagram select the elements that you wish to publish in the documentation and click *Next*.



5. Specify the appropriate folder in which to publish your process. This folder should have Read and Write permissions.



Once the process has been published on the Web, you will be able to view your Documentation Portal.



[Click here to see the Web output of this Portal](#)
[Download here the complete Documentation portal in .bpm format](#)



Part VI

Importing diagrams

Importing diagrams

Bizagi Modeler allows you to import diagrams from:

- Microsoft Office Visio or
- XPD format files.

Importing existing models will enhance agility and continuous process improvement efforts.

You can also import the Extended Attributes that you created in a previous model and use then in your current model.

We highly recommend using the same Extended Attributes within all your models. This allows you to maintain a uniform standard for all your documented processes.

[Click here for more information about Extended Attributes](#)

[Click here for more information about Importing Extended Attributes](#)

Why do you need to import?

Process diagramming requires a lot of dedication. Organizations often devote a significant amount of time and resources to it, and may use several diagramming tools.

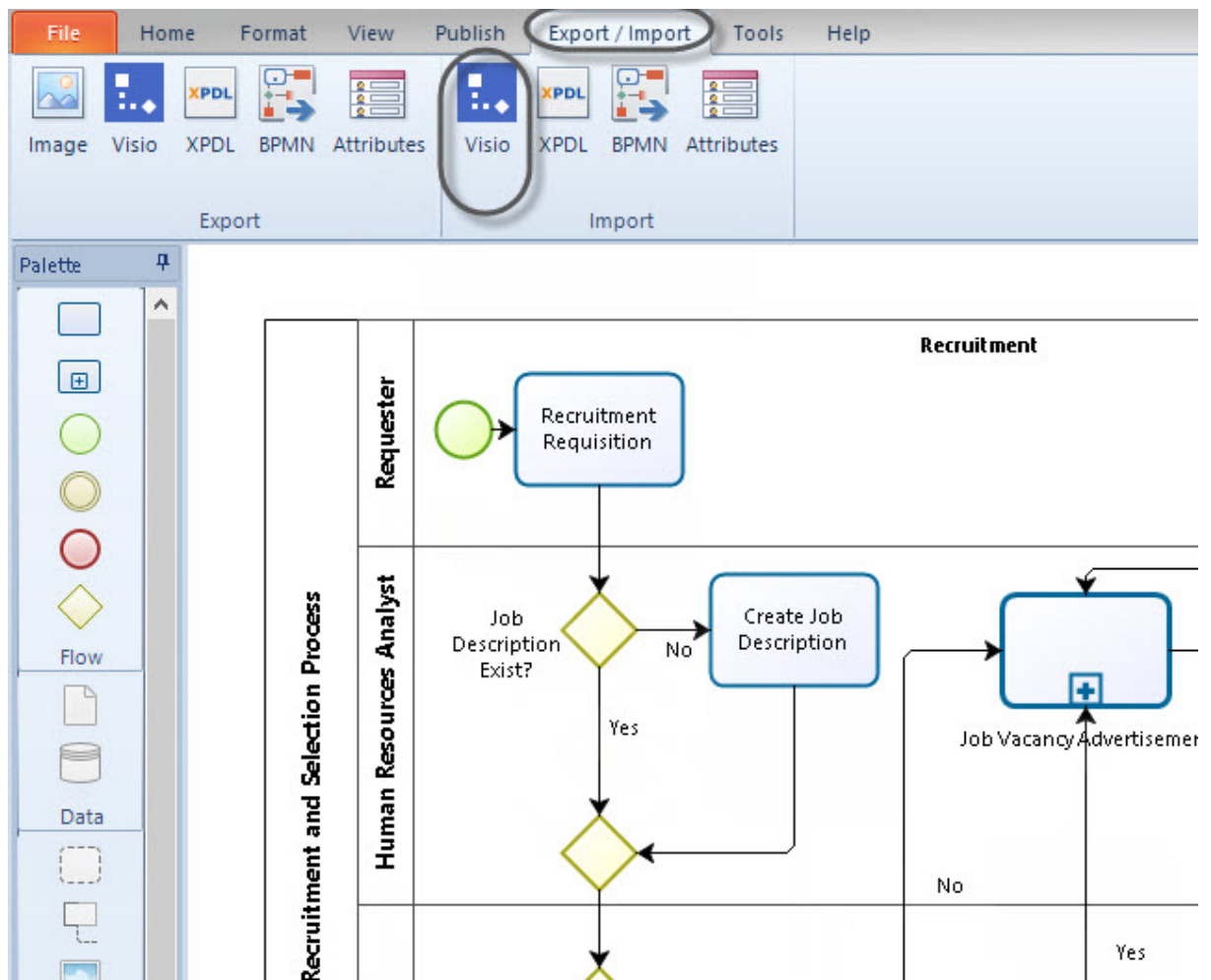
If this is the case and you have existing diagrammed Processes, all that valuable work will not be wasted. You can import your diagrams to the Bizagi Process Model and seamlessly continue to diagram and document.

Import diagram from Visio

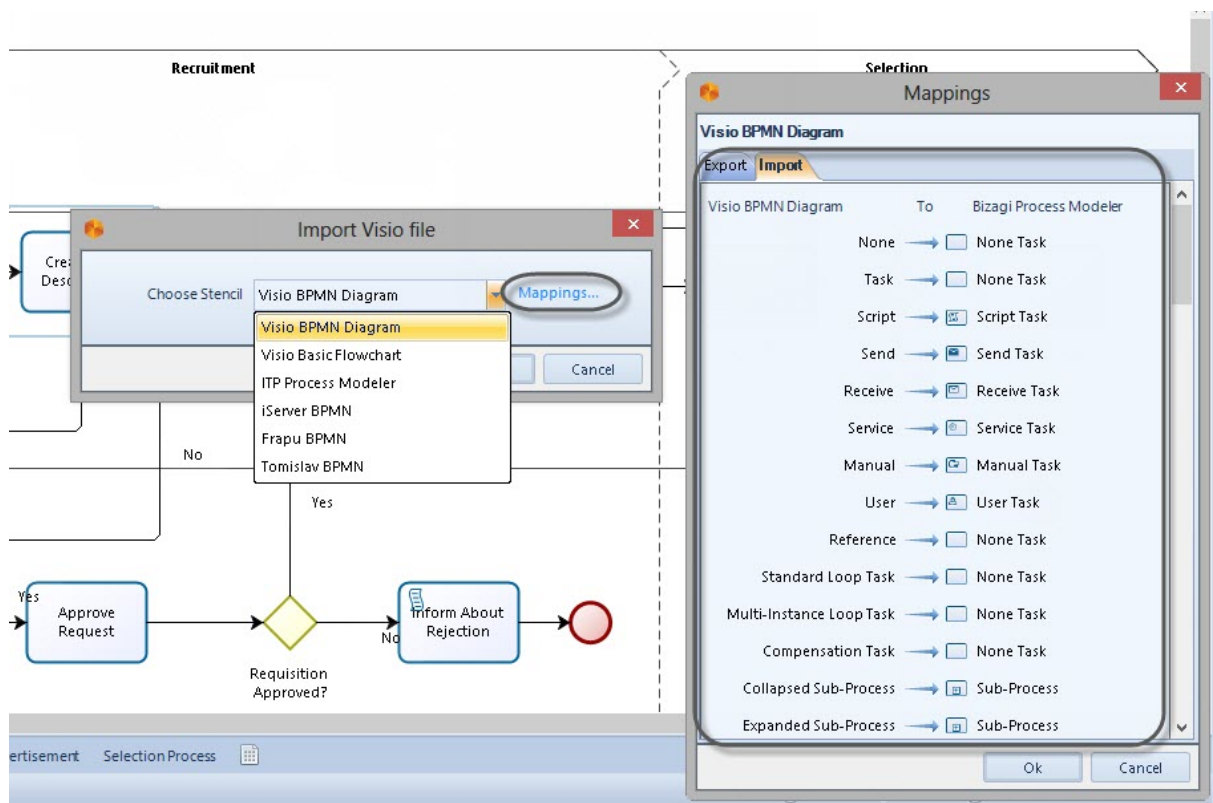
Microsoft Office Visio is a very common tool for diagramming processes. Bizagi Modeler allows you to import such processes to enable editing and manipulation.

To import diagrams from Visio, follow the steps below:

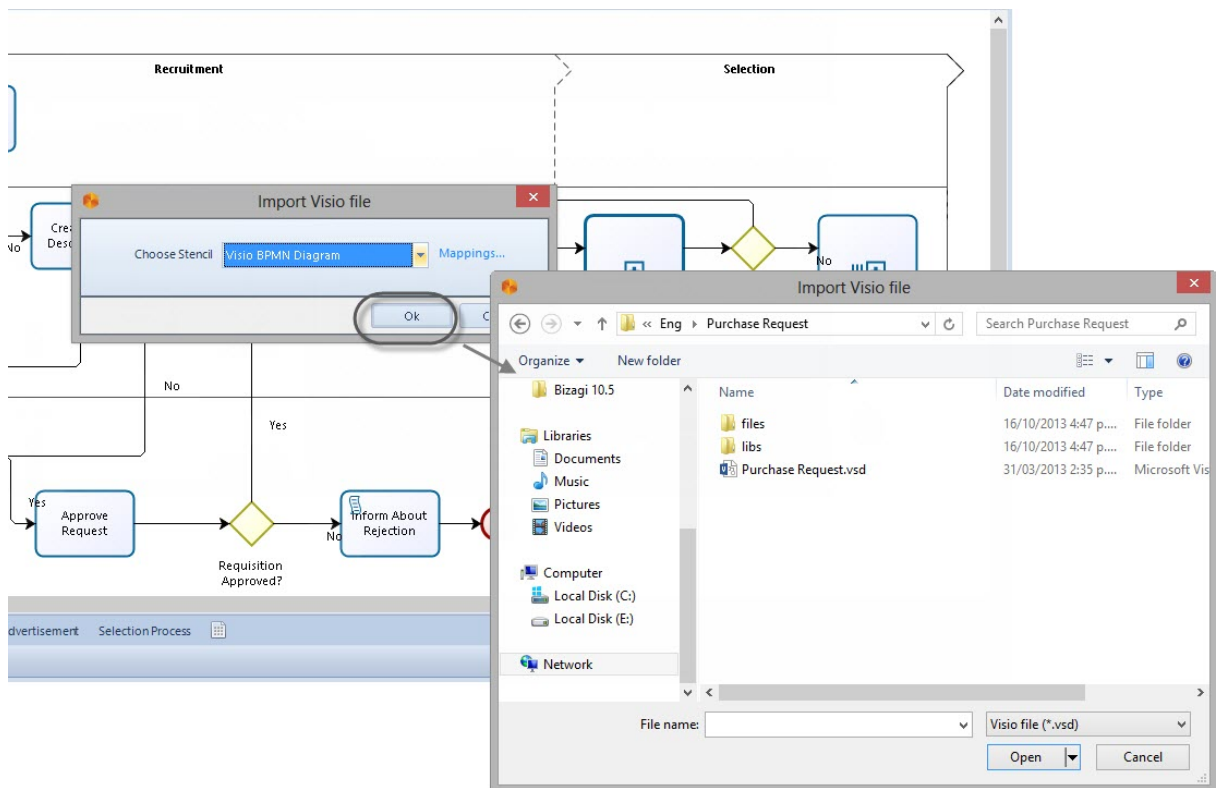
1. On the **Export/Import** tab, in the **Import** group, click **Visio**.



2. Select the stencil used in Visio to diagram the process.
If you click on the Mapping option, you will see the similarity between each of the elements used in the Visio Stencil and those of Bizagi Modeler.



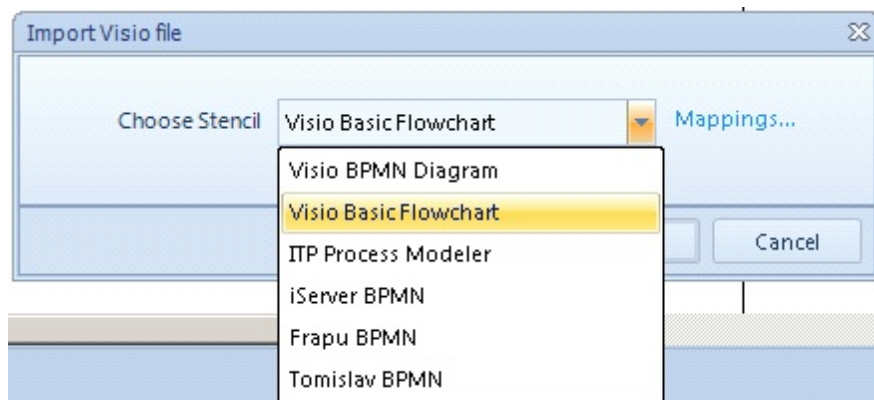
3. Click the OK button and upload the Visio file to be imported.



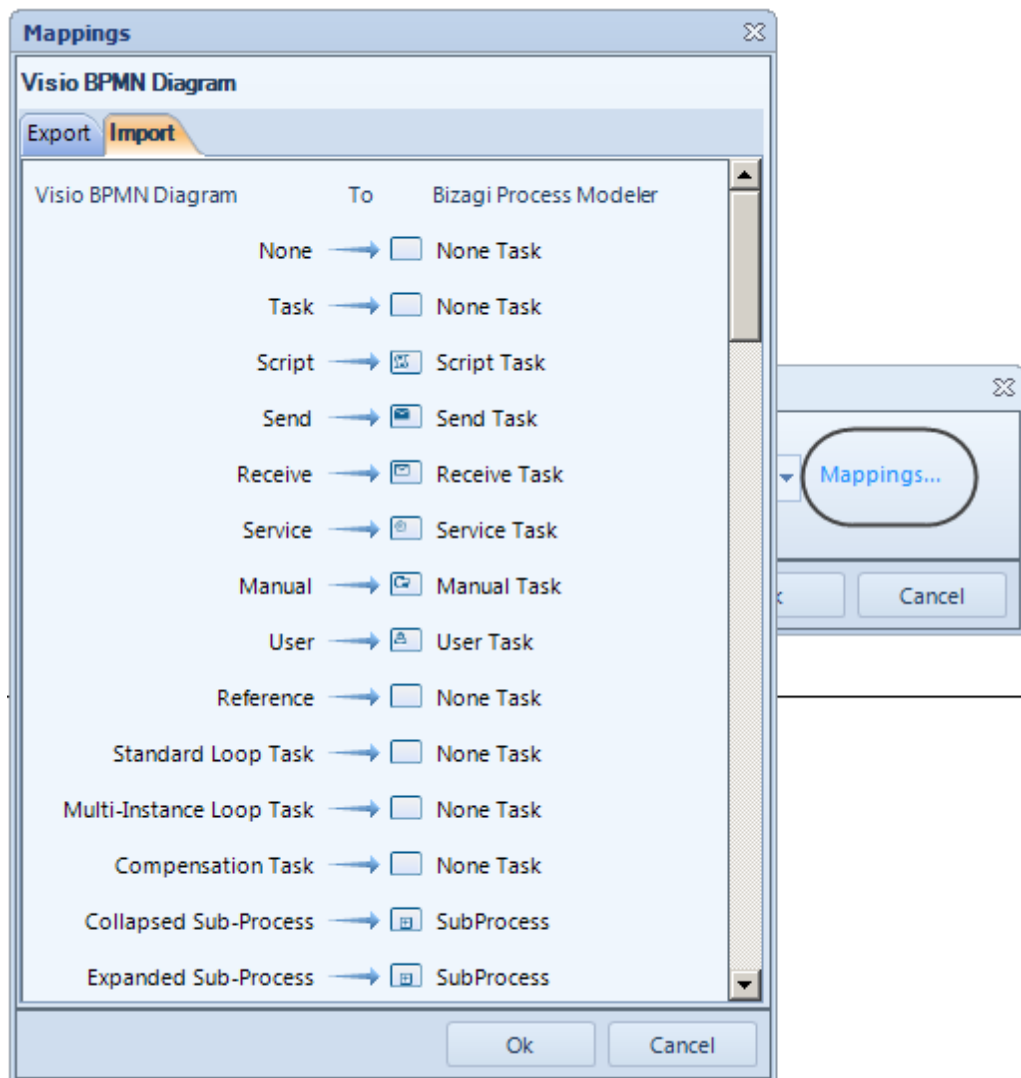
4. You will be able to modify the process in Bizagi Modeler after import.

Supported Stencils

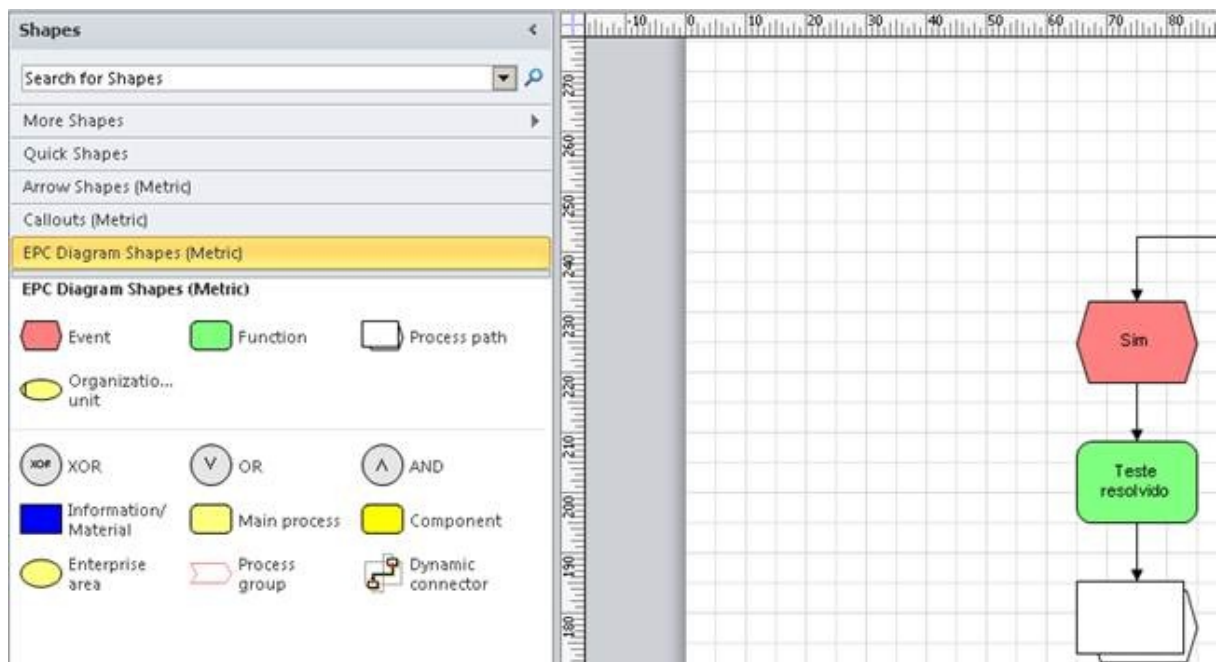
The stencils that are currently supported are those shown below:



For each stencil, you may review which elements are supported and how are they mapped in Bizagi:



You will need to ensure that your Visio model uses one of this stencils instead of “EPC Diagram shapes”.



Import diagram from XPD

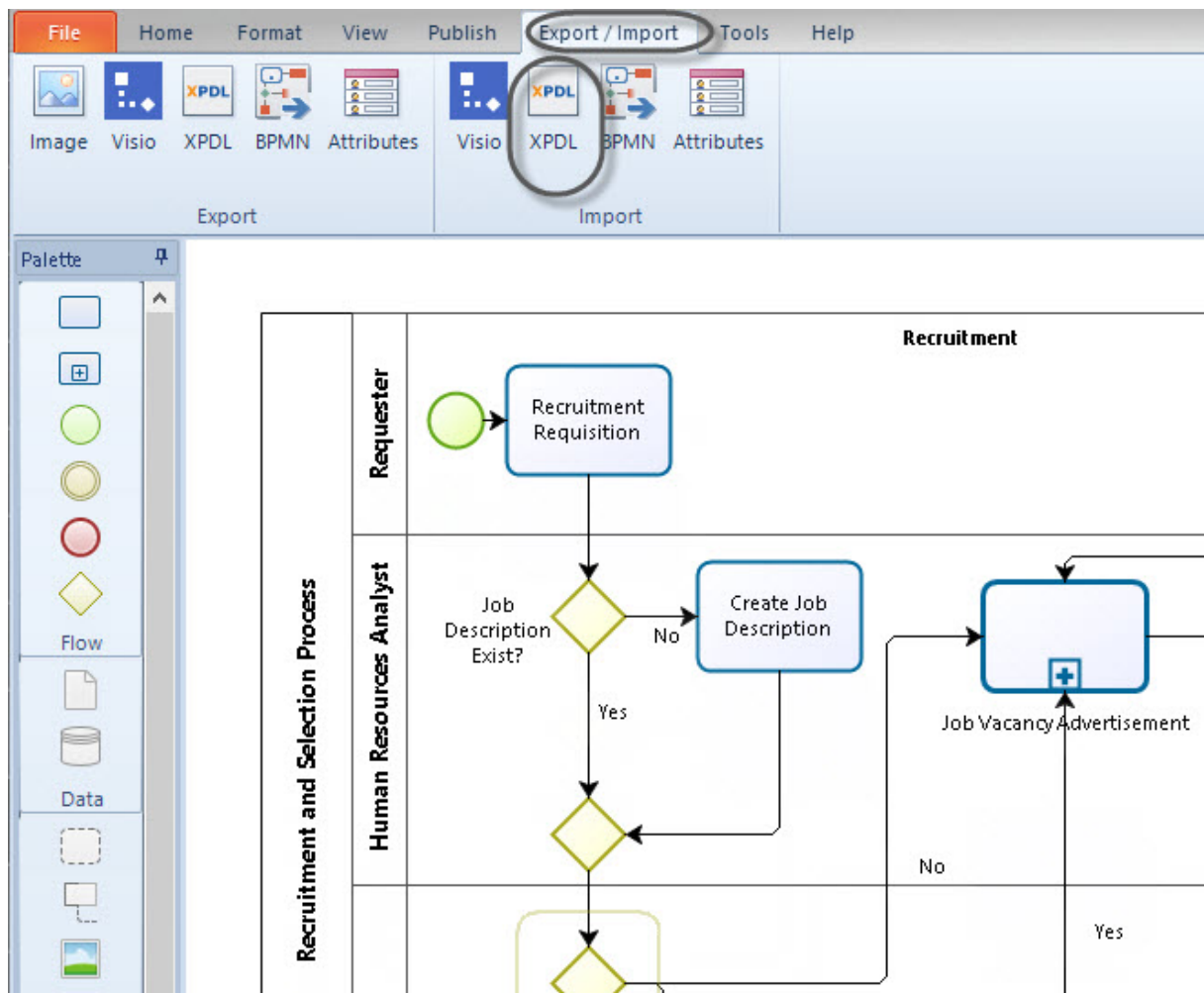
The XML Process Definition Language (XPDL) is a format standardized by the Workflow management Coalition (WfMC) to interchange business process definitions between different workflow products. The XPDL format can store all aspects of a BPMN diagram, such as attributes, resources, etc. Also, some graphical information is held, for example position coordinates of the elements.

Using XPDL in Bizagi offers the possibility to share your diagrams with other modeling tools that use BPMN notation. You can import your diagrams to XPDL using the BPMN 2.0 notation shapes.

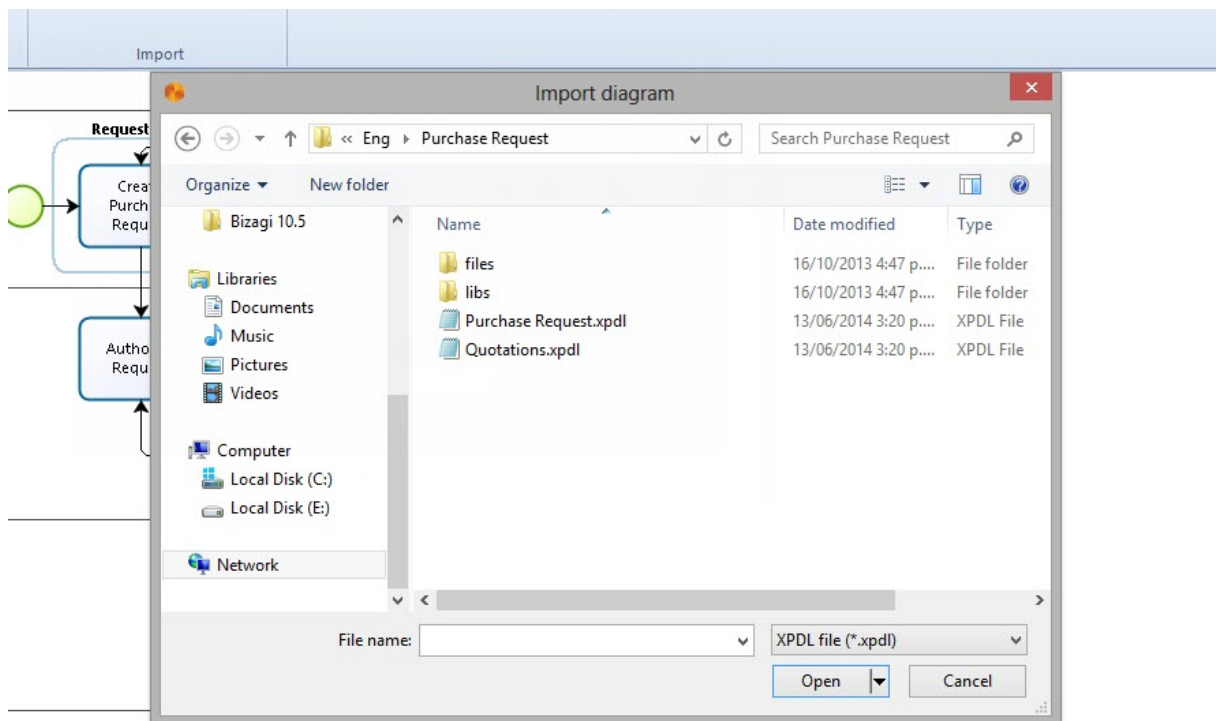
For more information about the currently supported XPDL version, refer to [Supported standards](#).

To import your diagrams follow the steps below.

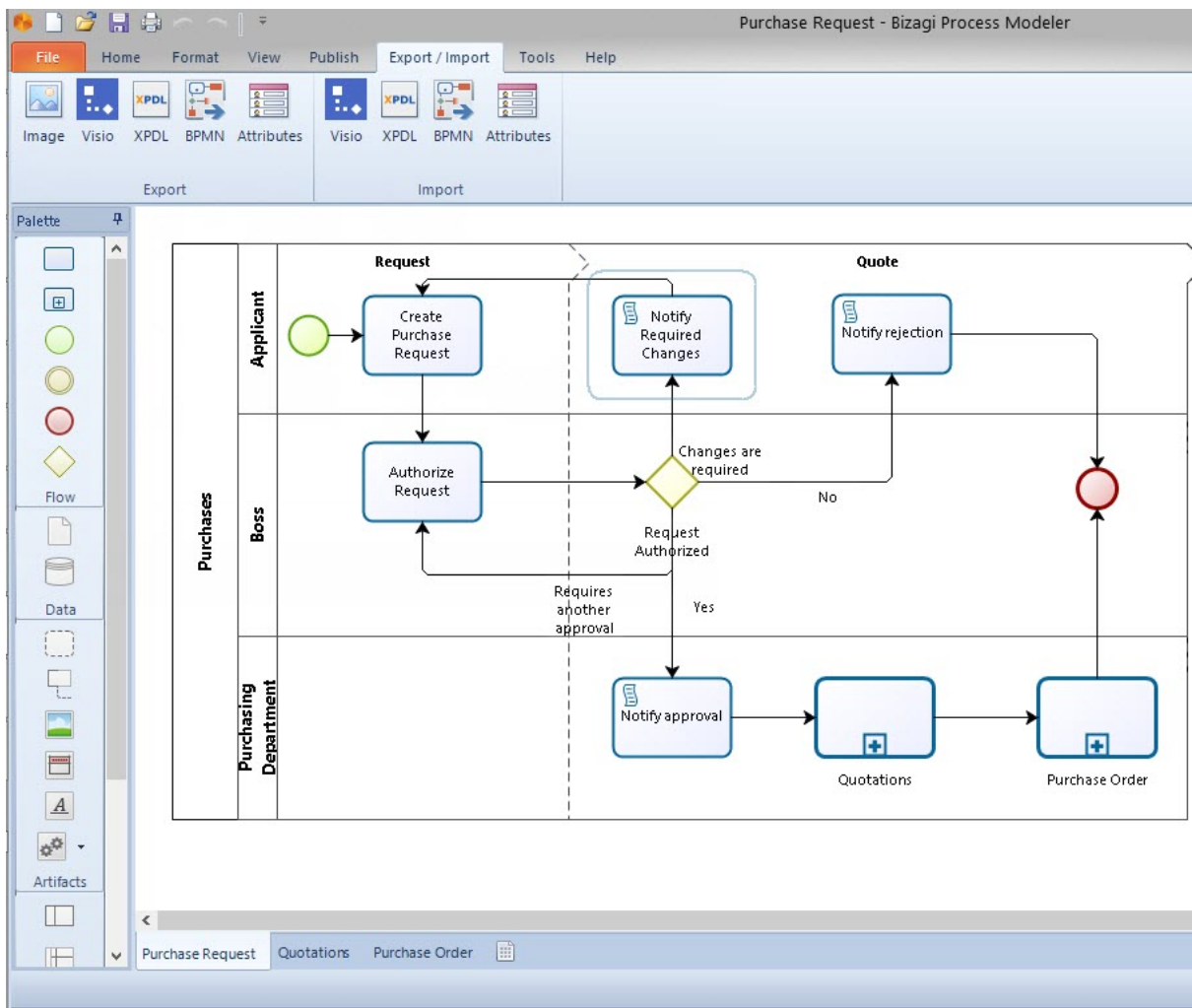
1. On the **Export/Import** tab, in the **Import** group, click **XPDL**.



2. Browse and select the XPDL file and click the Open button.



3. The XPDL file load and you can edit it in Bizagi Modeler. It will appear as if the diagram was created directly in Bizagi Modeler.



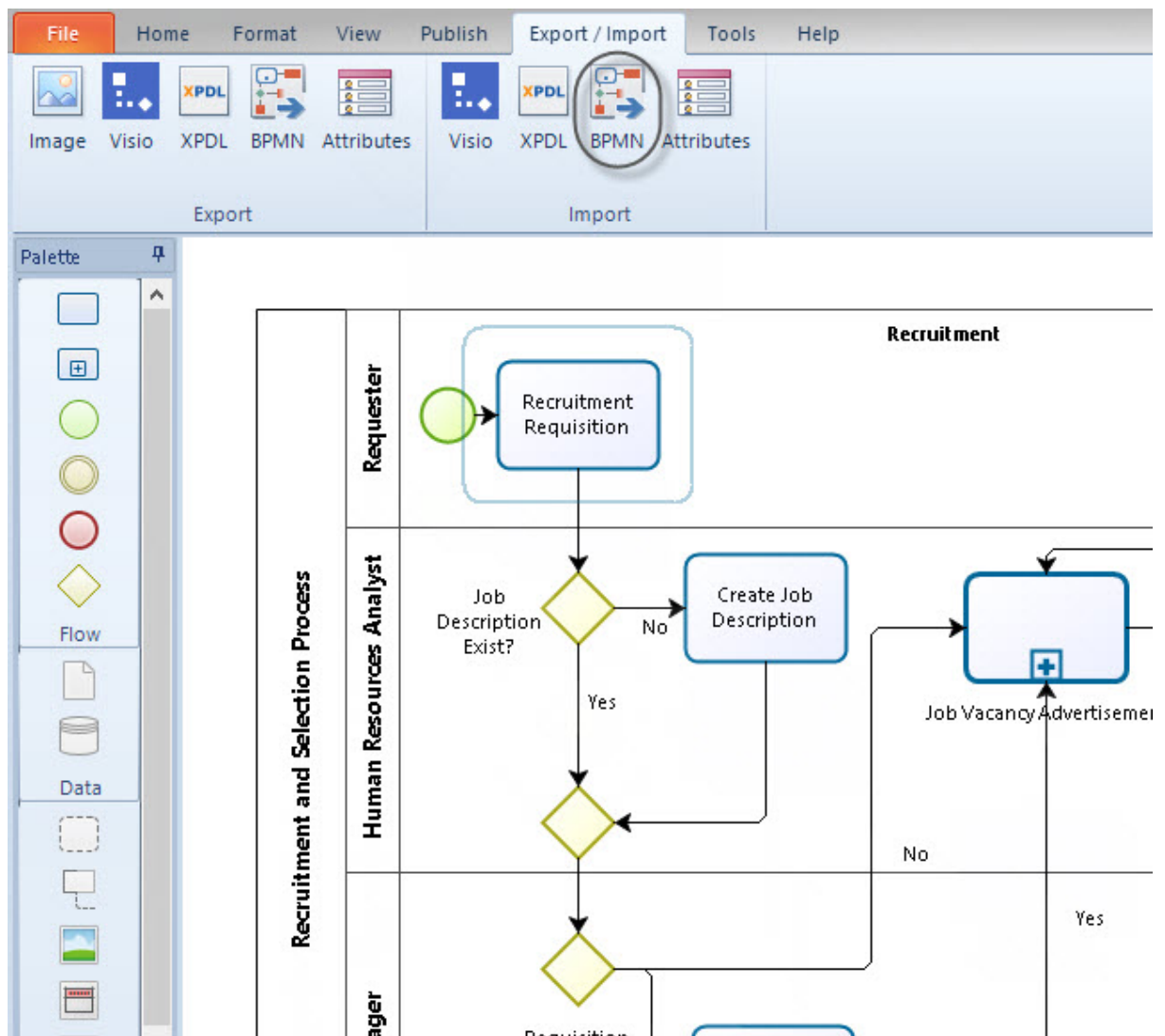
Import diagram from BPMN

Bizagi Modeler allows importing diagrams created with other modeling tools that BPMN xml 2.0 format to Bizagi Modeler.

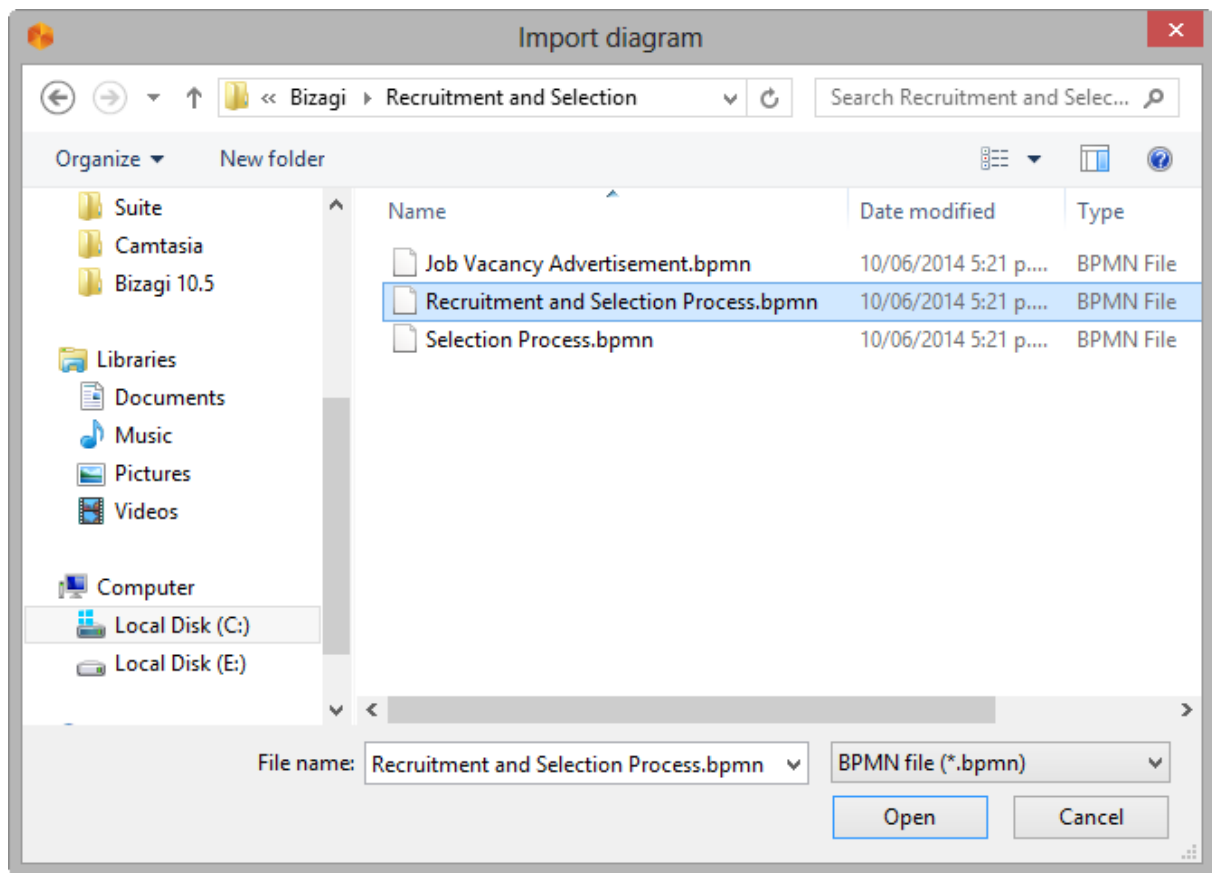
For more information about the currently supported BPMN version, refer to [Supported standards](#).

To import your diagrams follow the steps below.

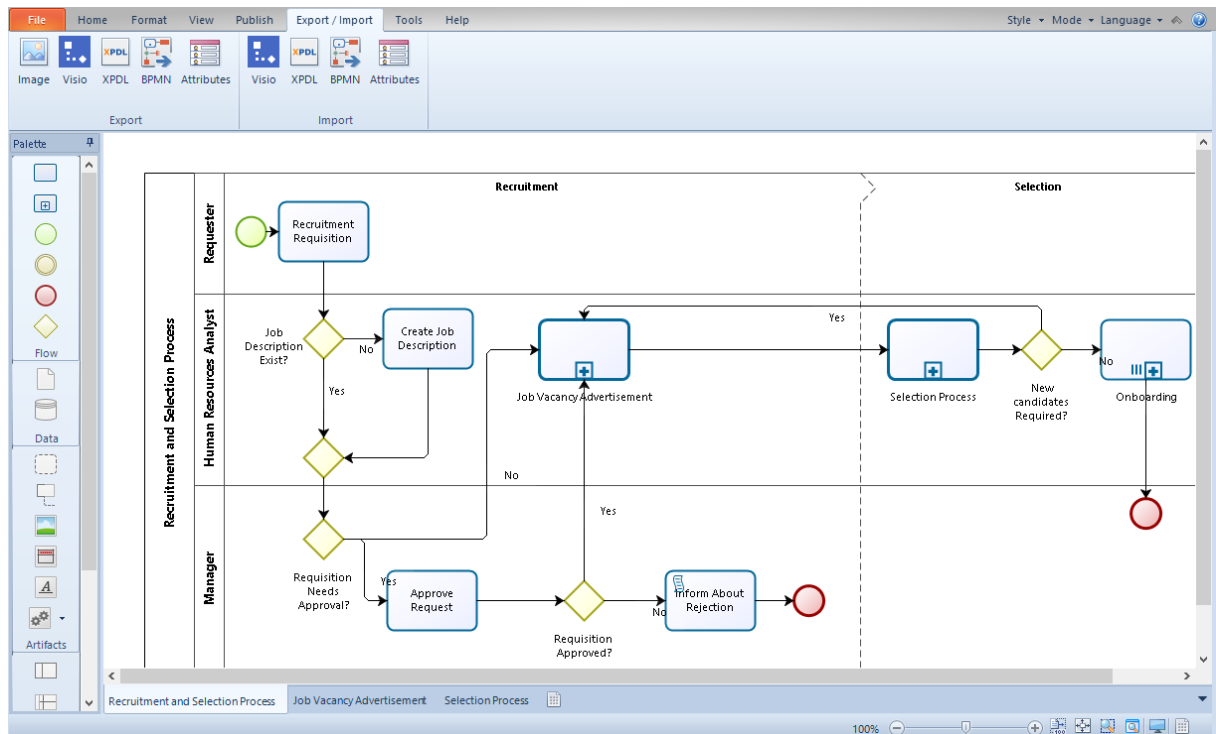
1. On the **Export/Import** tab, in the **Import** group, click **BPMN**.



2. Browse and select the .bpmn file and click the **Open** button.



3. The BPMN file load and you will be able to edit the diagram in Bizagi Modeler. It will appear as if the diagram was created directly in Bizagi Modeler.





Part VII

Simulation

Simulation

*Simulation is a tool to evaluate the performance of a model, under different configurations and over long periods of real time, to reduce the chances of failure to meet specifications, to eliminate unforeseen bottlenecks, to prevent under or over-utilization of resources (including people and money), and to optimize system performance.*¹

Simulation requires a clear objective to get maximum value for effort. This objective strongly influences the level of detail in the required data.

Bizagi Simulation follows [BPSim \(Business Process Simulation\) standard](#) that allows enhancement of business process models captured in BPMN to support rigorous methods of analysis.

1. Introduction to modeling and simulation. State University of New York at Binghamton.

What is simulation

Experiment definition

Randomness is simulated by the use of probabilities for sequence flows and token routing and also by using statistical distributions to reflect variability in process times of activities etc. To make sure results are valid, the simulation needs be run for long enough to yield random behavior without chance (consider the scenario of tossing a coin or rolling a dice multiple times). Provision should be made to compare results from the same scenario, but different run lengths or replications. The required run length to yield usable outcomes depends on the process model structure, amount of variability and the objective; consequently, a single recommended run length cannot be provided. A replication shares the same scenario configuration and runs for the same length of time, but uses an alternative random stream.

Comparison

Simulation is well known for providing [what-if](#) analysis capabilities; a single simulation run can provide valuable insight on the performance of a particular scenario. The simulation of multiple scenarios and the possibility to compare key outcomes, adds further value and support to decision makers.

Simulation in Bizagi

Overview

Bizagi Modeler allows simulation your business processes under the BPSim (Business Process Simulation) to support decision making and boost their continuous improvement.

To start using simulation in Bizagi all you need is a complete Process model. otherwise, it will not be able to be simulated.

For a complete simulation analysis we recommend using four levels:

- [Level 1 -Process Validation](#)
- [Level 2- Time Analysis](#)
- [Level 3 - Resources Analysis](#)
- [Level 4 - Calendars Analysis](#)

Each subsequent level incorporates additional information that adds more complexity, providing a coherent analysis of your processes. Levels are not interdependent, you may start at any level if you hold the required process data .

By default the Simulation mode will start at Level one, the first time a Simulation is run for the process model. It is best practice to start simulation at level one, and progress one level at a time. However, it is possible to move between levels at any time.

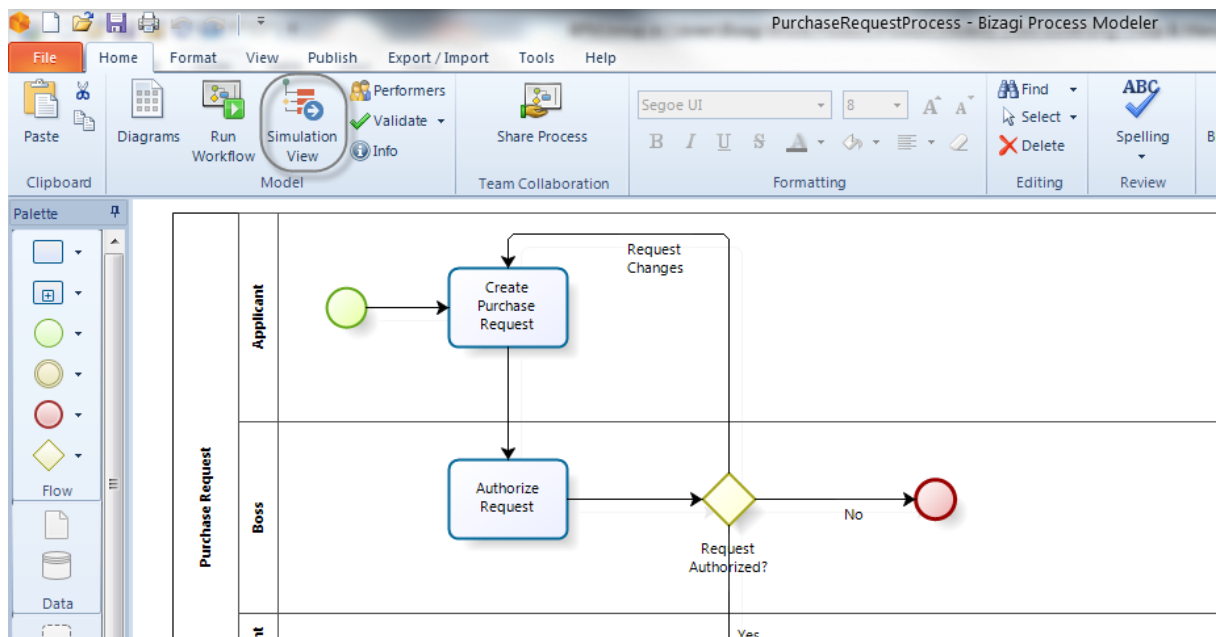
Certain options will be available in the context menu of the ribbon according to the level selected. For more information about these options, please refer to [examples for each level](#).

For each simulation level follow these steps:

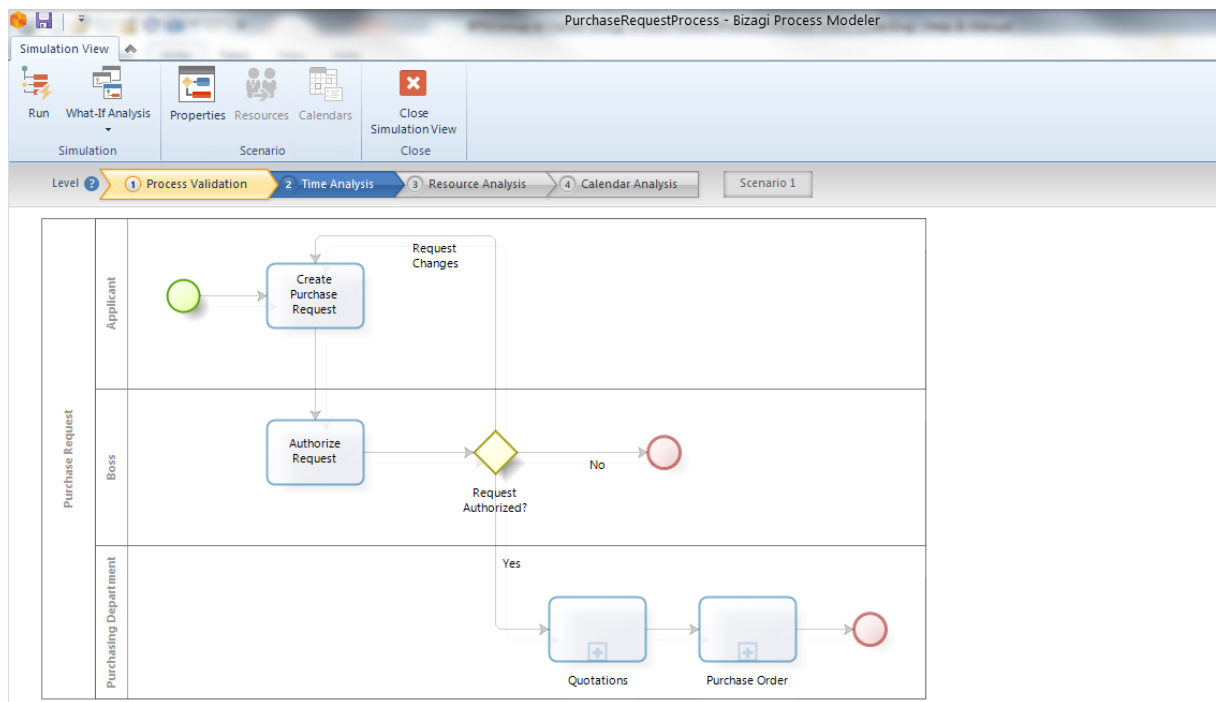
- Collect process data for the simulation.
- Add the data to the relevant shapes in the diagram.
- Interpret and present the outcomes.

How to create and run simulation models?

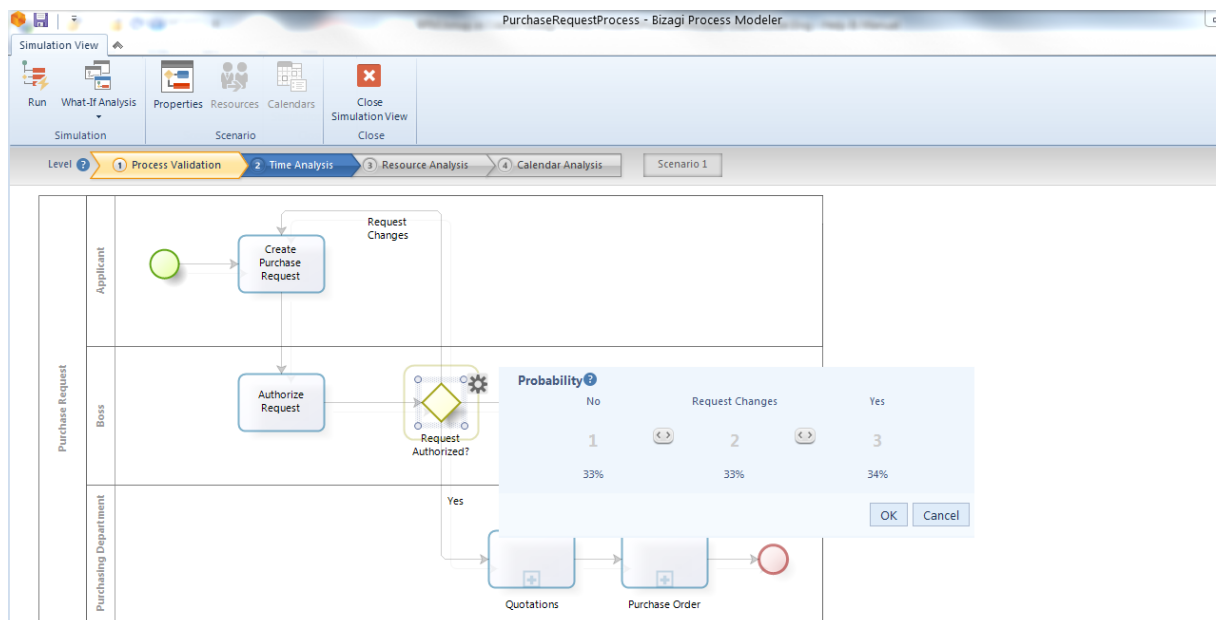
1. To simulate your process model, click the *Simulation View* button on the ribbon. If your diagram does not have any errors your process will display in read-only simulation mode.



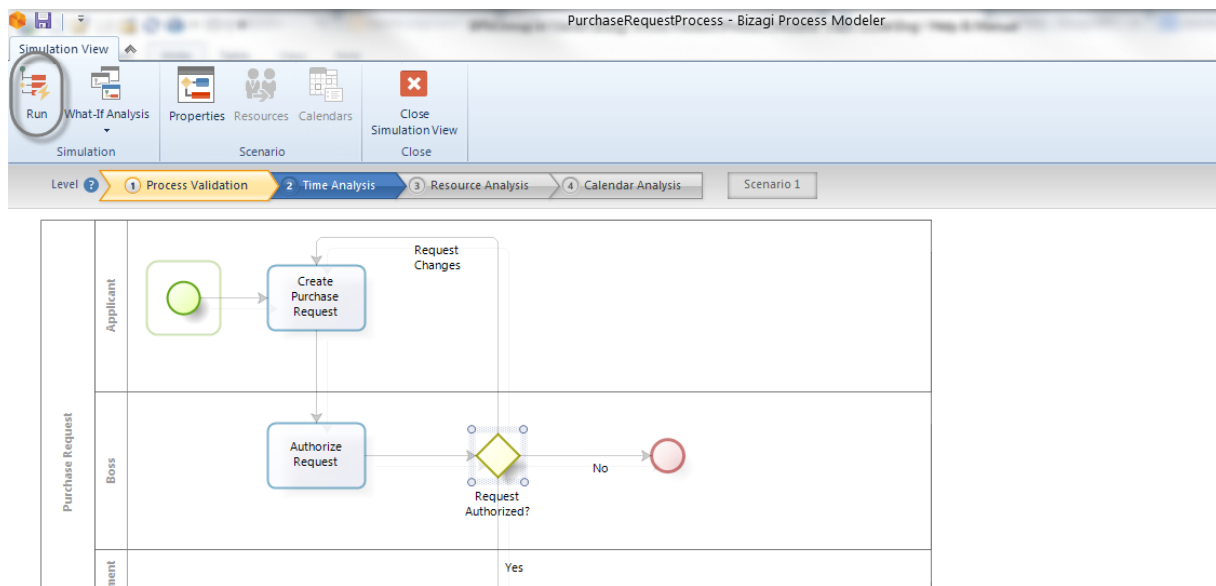
2. The shapes that require information will be highlighted according to the simulation level in scope. Note Bizagi will retain the level you are currently running once you save the model returning to the Process Model view.



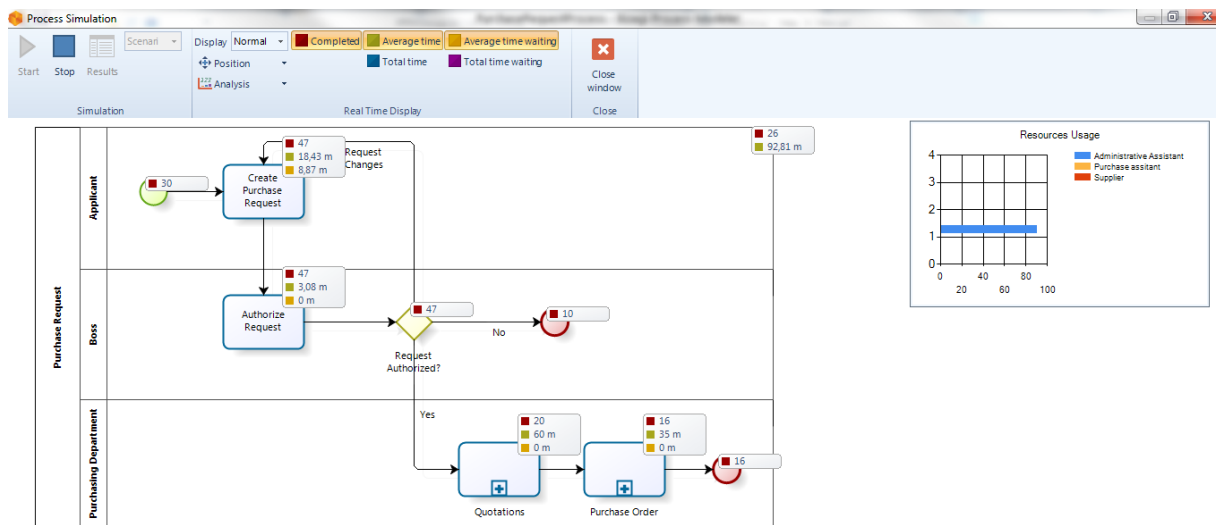
3. Select each highlighted shape in turn and enter the information.



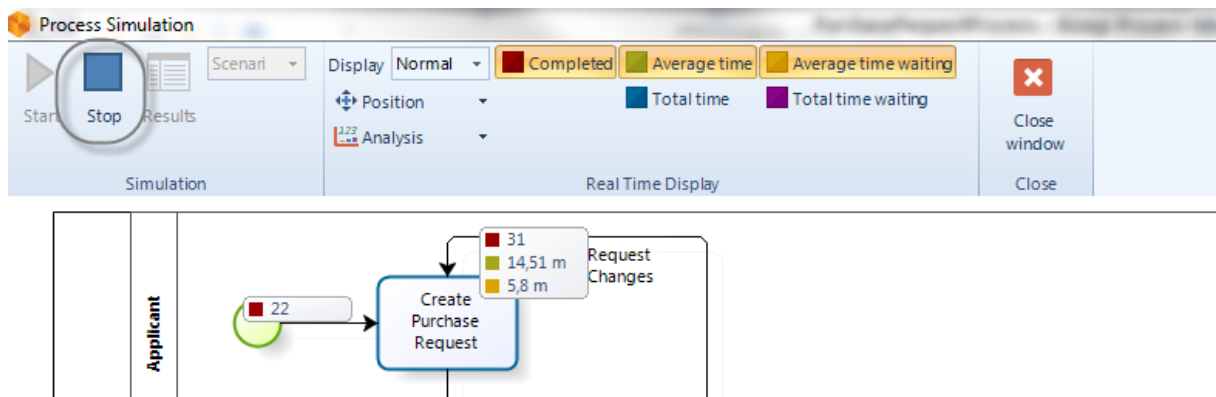
4. Once all the data has been added, click *Run* to launch the Process Simulation window.



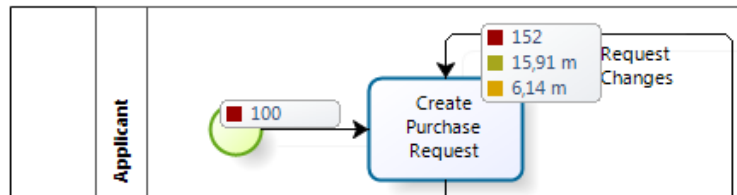
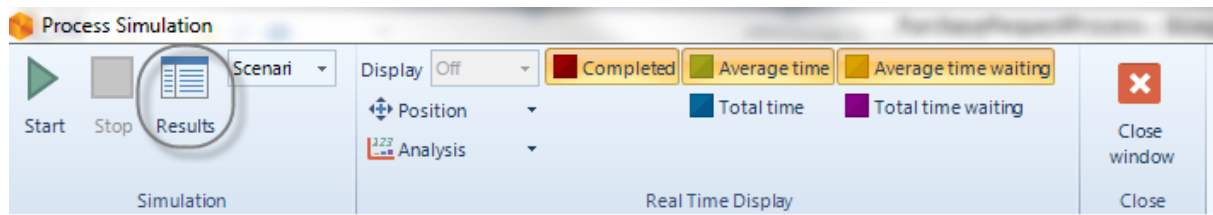
5. Click *Start* to run the simulation. When you run a simulation, it will show an animated view of the process in execution and the the flow of tokens between the activities.



You may click the *Stop* button at any time to end the simulation.



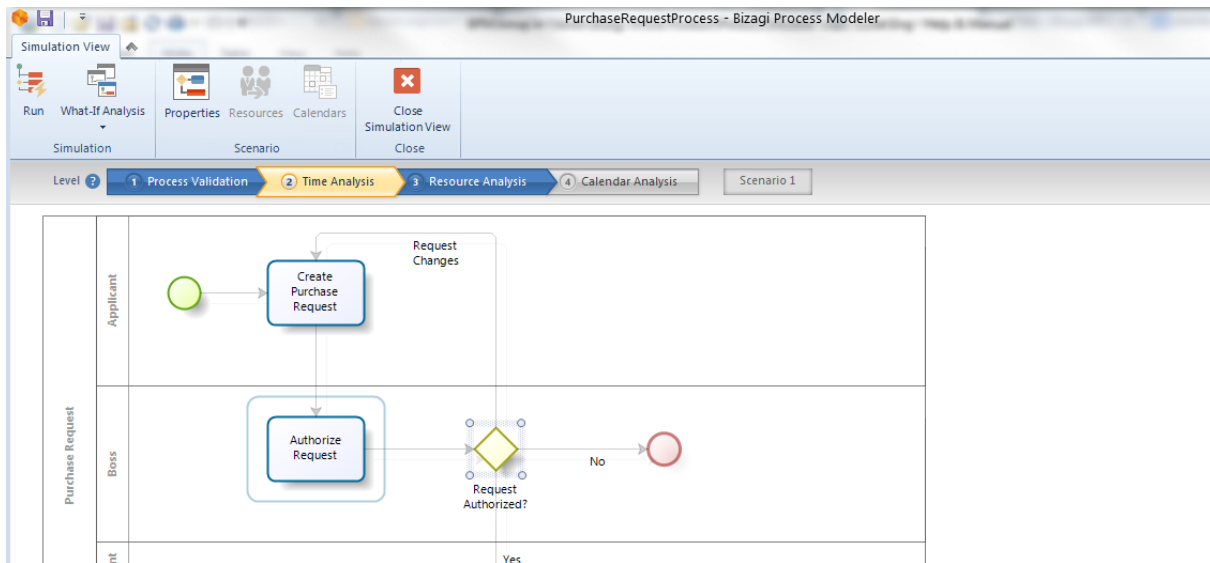
6. Once the simulation has run, the outcomes will display.
Click *Results* to view the outcomes.



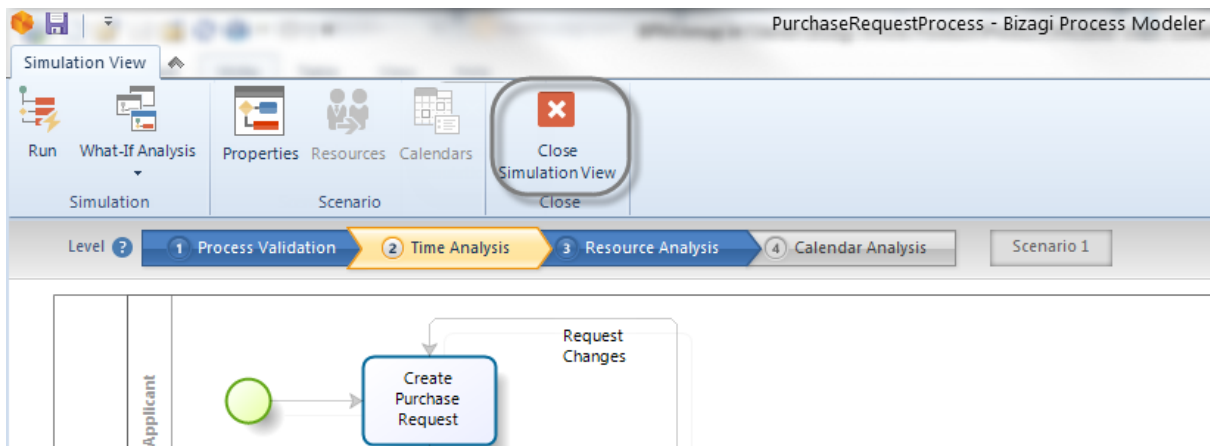
7. Click the *Export to Excel* button, located at the bottom left, to transfer the Results chart to Excel.

| Name | Type | Tokens completed | Tokens started | Min. time | Max. time | Avg. time | Total time |
|-------------------------|-------------|------------------|----------------|-----------|-----------|-----------|------------|
| Purchase Request | Process | 100 | 100 | 8,39 m | 169,25 m | 71,77 m | 7177,17 m |
| NoneStart | Start event | 100 | | | | | |
| Create Purchase Request | Task | 153 | 153 | 4,22 m | 15,59 m | 9,78 m | 1496,07 m |
| Authorize Request | Task | 153 | 153 | 0,72 m | 5,53 m | 2,98 m | 456,1 m |
| Request Authorized? | Gateway | 153 | 153 | | | | |
| NoneEnd | End event | 45 | | | | | |
| NoneEnd | End event | 55 | | | | | |
| Purchase Order | Process | 55 | 55 | 103,57 m | 169,25 m | 114,93 m | 1925 m |
| Quotations | Process | 55 | 55 | 68,57 m | 134,25 m | 79,93 m | 3300 m |

8. Process to the next level of simulation and repeat step 2-8.



9. To return to the Process Model view, click *Close Simulation View*.
Save your model for Bizagi to retain the current simulation level, returning to the Process Model view.



For information about how to manage scenarios, please refer to [Scenarios](#)

Considerations

Before creating a simulation model take into account the following considerations:

- The following BPMN elements are not supported by the simulation engine:
 - Multiple events: Start, Intermediate and End.
 - Complex gateways.
 - Event based gateways followed by none intermediate events or tasks.
 - Multiple instance tasks.
 - Multiple instance Sub-processes.
- The following diagrams are not supported by the simulation engine:
 - BPMN Choreography diagrams.
 - BPMN Conversation diagrams.
 - Transactional process.

- Ad Hoc process.
- Elements contained in Reusable Sub-processes are not simulated. If you include a Reusable Sub-process in your model you will have to set an overall processing time for the shape. If you want to simulate the logic included within a Sub-process, use Embedded Sub-processes.
- Tokens have no data associated, this affects the mapping of message, signal and link events:
 - Message events require message flows to map tokens. [Download an example.](#)
 - Links and Signal events are mapped based on their names. Make sure that throw and catch events share the same name.

Simulation levels

Bizagi Simulation comprises of four levels. Each subsequent level incorporates additional information exhibiting more complexity than the preceding one, thereby providing a detailed analysis of your processes. Levels are not interdependent, you may start at any level if you hold the required process data.

Level 1 - Process Validation: The first and most basic simulation level to evaluate the structure of the process diagram.

Data: It requires estimated percentage splits of sequence flows to provide a basis for routing. It also needs the value of the trigger counter contained in the Start Event shape.

Results: The outcomes show all paths activated during the execution and whether all tokens actually finished. Additionally, it evaluates how many tokens passed through each Sequence Flow, Activity and End Event.



Level 2 – Time Analysis: Second level of simulation to measure the end-to-end process time.

Data: Apart from the data entered in *Process Validation*, estimated timings (service times) of each activity and the interval time between token generation is required. This data can either be constant or samples from statistical distributions¹.

Results: The results show process throughput times for tokens, presented as minimum, maximum, mean and sum (total of all processing times). Similar results can be presented for individual key activities.



Level 3 – Resource Analysis: Predicts how the process will perform with different levels of resources. This level of detail provides a reliable estimate of how the process will perform in operation.

Data: In addition to the data entered in Time Analysis, this level includes the definition of resources (and/or roles): how many are available and where they are used. Due to the inclusion of resources, the activity times should be adjusted to represent the actual work time; delay due to unavailability of staff will be explicitly indicated.

Results: The structure of the results is similar to Time Analysis. Also, the time spent, the time spent busy or idle for each type of resource is presented.
This level assume an unlimited number of resources.



Level 4 – Calendar Analysis: Includes calendar information that reflects the process performance over dynamic periods of time, such as shifts, days schedules or weeks.
By default Bizagi includes a chosen calendar that works 24/7. If no calendars are defined, Bizagi will assume that the defined Resources will always be available.

Data: Apart from the data entered in Resource Analysis, it includes the definition of resource calendars.

Results: The structure of the results is similar to Resource Analysis.



EXAMPLE

To better illustrate each of the simulation levels let us consider an *Emergency attendance process*. In this process a call center receives a report of an emergency. Upon receiving the call, a call center agent enters details on the person affected, the symptoms and the physical address where the emergency occurred.

On receipt of the report, a qualified nurse classifies the emergency according to its severity.

- **Green:** Low severity. The patient can be easily stabilized.
- **Yellow:** Medium severity. The patient requires special attention but can be stabilized at the place of emergency.
- **Red:** High severity. The patient must be collected and taken to the nearest hospital.

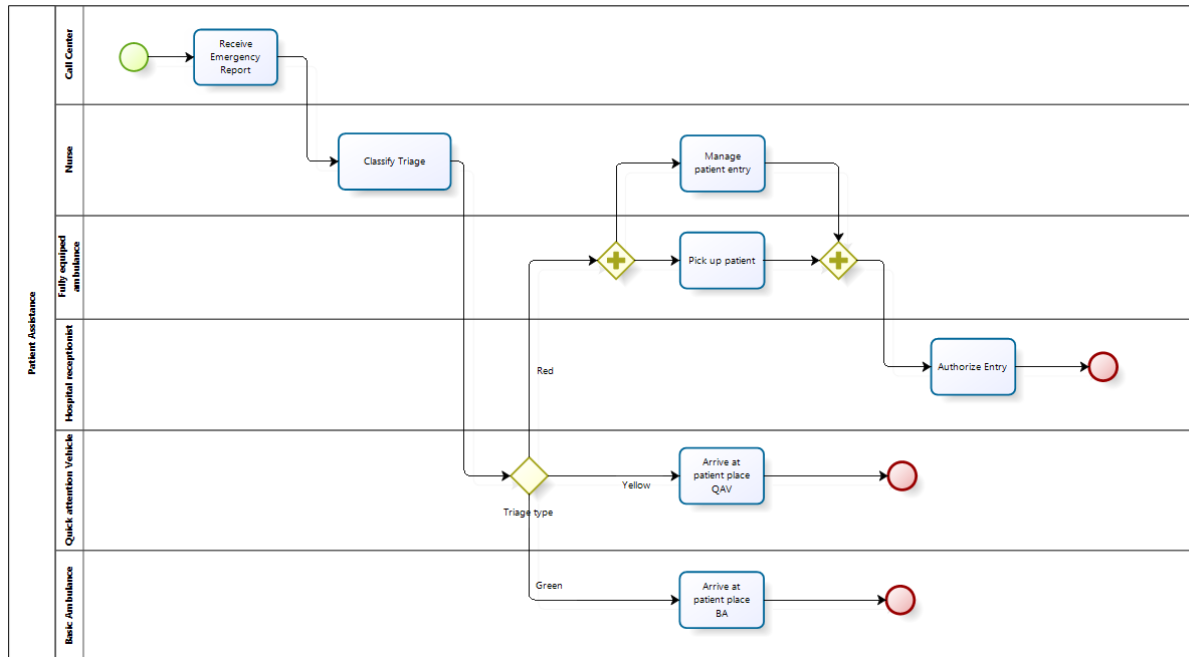
According to the priority assigned, the *Emergency attendance department* presents a different level of response.

- **Green:** This triage is assisted by a quick response vehicle (i.e. a motorcycle) carrying two people: a paramedic and a doctor.
- **Yellow:** This triage is assisted by a basic ambulance having a doctor, nurse and a paramedic on board.
- **Red:** This triage is assisted by a fully equipped ambulance holding two doctors, a nurse and a paramedic.

If the emergency is green or yellow, the process finishes once the response team arrives at the place of emergency.

If the emergency is red, the fully equipped ambulance transfers the patient to the nearest hospital. During the transfer a nurse carries out the necessary paperwork to ensure quick admittance.

When the patient arrives at the hospital with the necessary paperwork, the receptionist will be able to admit the patient quickly and provide medical assistance immediately.



This process must be carefully analyzed in order to reduce the time between receiving the request and providing medical assistance (at the place of emergency or the hospital). Here, time is life. Bizagi Simulation will help us to make clear decisions to best design the business process and reduce the emergency wait time.

1. Refer to [BPSim specification](#) to review statistical distributions supported and their explanation.

Level 1 - Process Validation

Overview

The first level of the simulation validates the Process Model, making sure the process passes through all the sequence flows, and behaves as expected.

Resources, processing times and costs are not included in this level. Such parameters will be included later in subsequent levels.

When validating a Process Model the simulation results will show if:

- Gateways are synchronized.
- Messages are synchronized.
- Decisions probabilities are correctly assigned.
- Routing behaves as expected.
- All tokens have ended.

Bizagi offers real-time animation of simulations to easily identify problems. The Results report will show

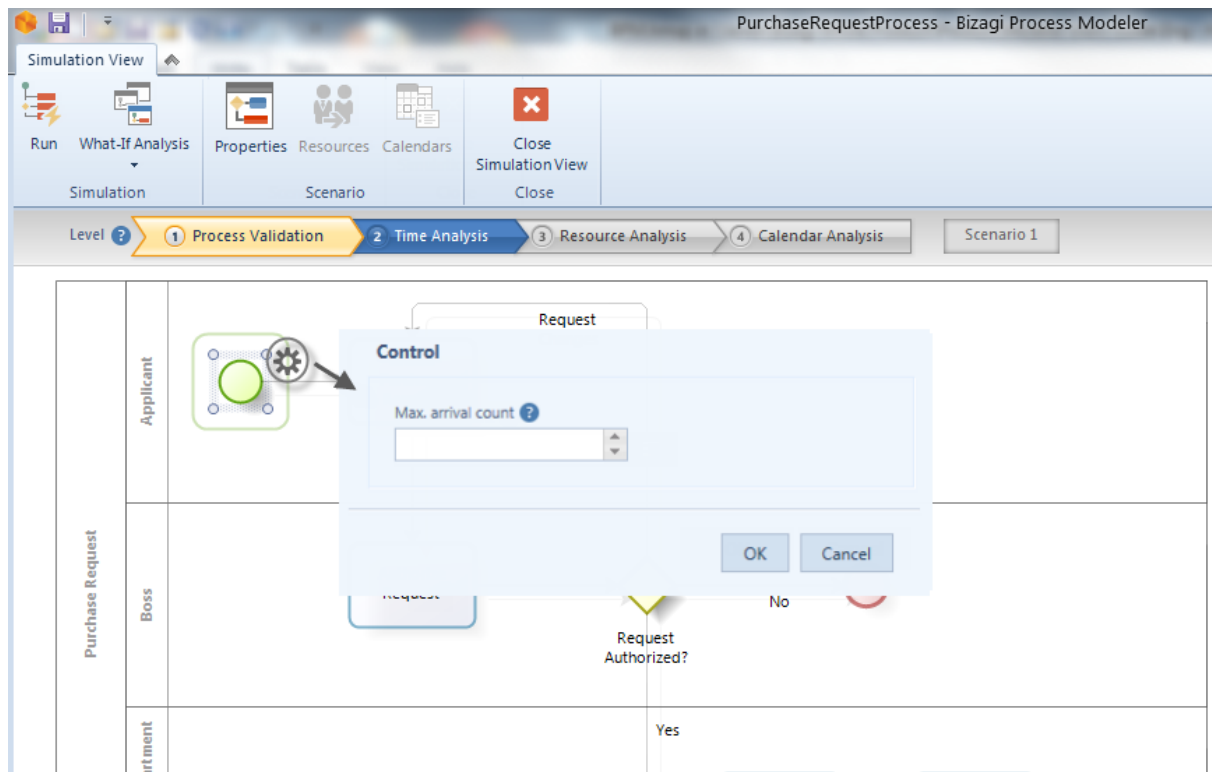
the behavior during execution

Defining the input data required for this level

In the *Process Validation level* you will note that only Start Events and Gateways are enabled for editing. For this level you need to define:

Max.arrival count: Define the number of token instances the process will generate (or trigger). We recommend defining a large enough number (at least 1000) to allow the execution to stabilize and present reliable outcomes.

Select the Start Event of the process and click the *Gear* icon on the pie menu. Enter the *Max.arrival count* in the pop-up window.



Note:

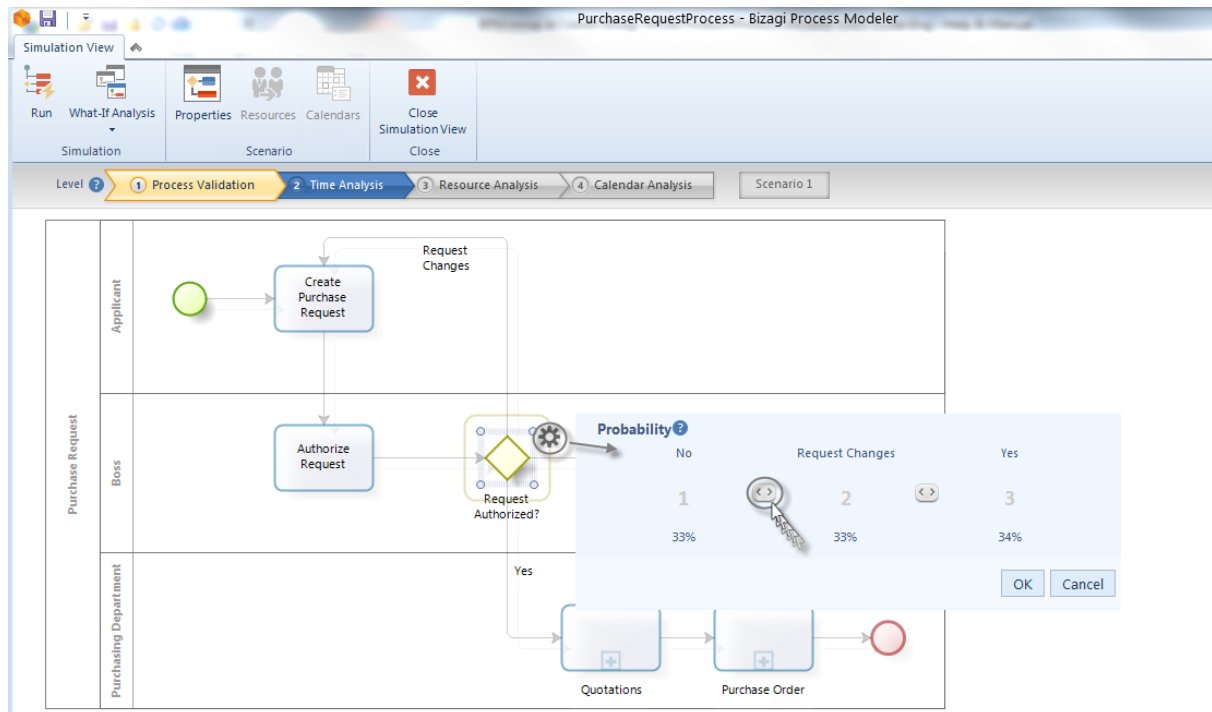
The simulation will finish when one of these options happens first: scenario's duration is reached, max arrival count is reached.

When you define a scenario duration, (in the [scenario's configuration](#)) the simulation will finish once this duration is reached, disregarding the Max arrival count.

The same applies the other way around: once the max arrival count is reached the simulation will finish disregarding the scenario's duration.

Gateways routing: Inclusive and exclusive Gateways have activation probabilities. Probabilities are values between 0 and 100%.

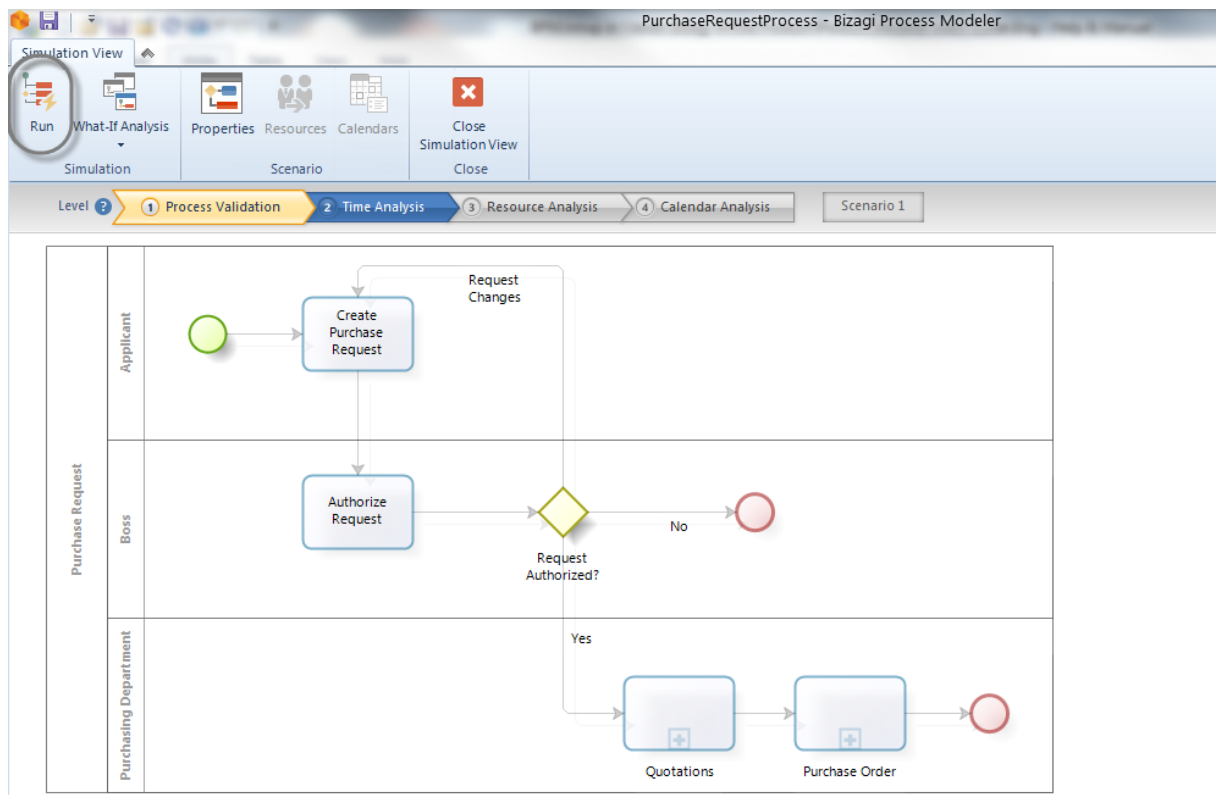
Select the Gateway and click the scroll arrow icons (↔) to set the probabilities.



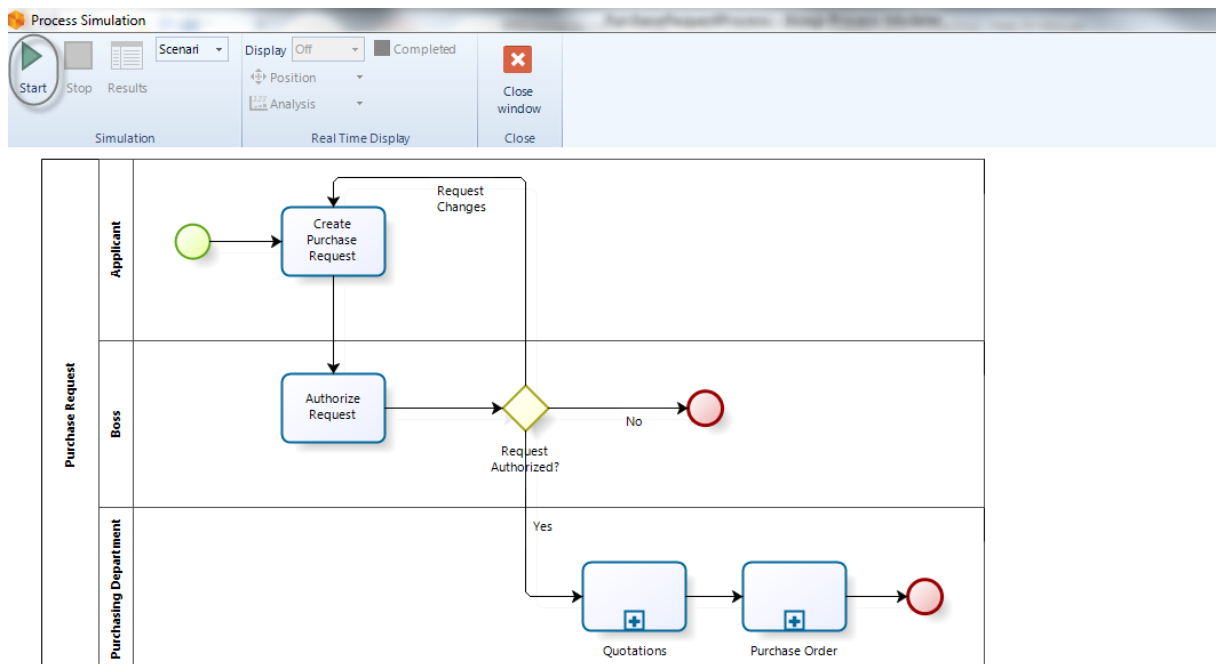
If you do not define probabilities for the paths, they will be equally distributed.

Running the simulation

Once the required data for this level have been defined, click the *Run* button to execute the simulation.

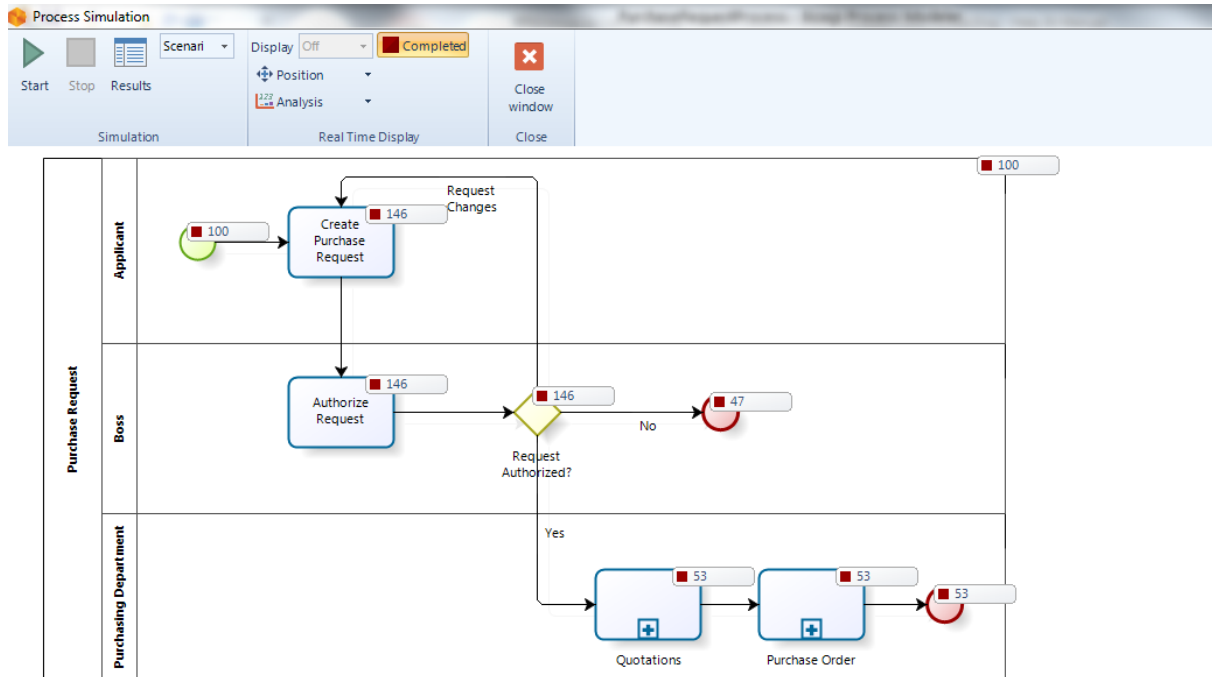


In the new window, click *Start* to run the simulation.



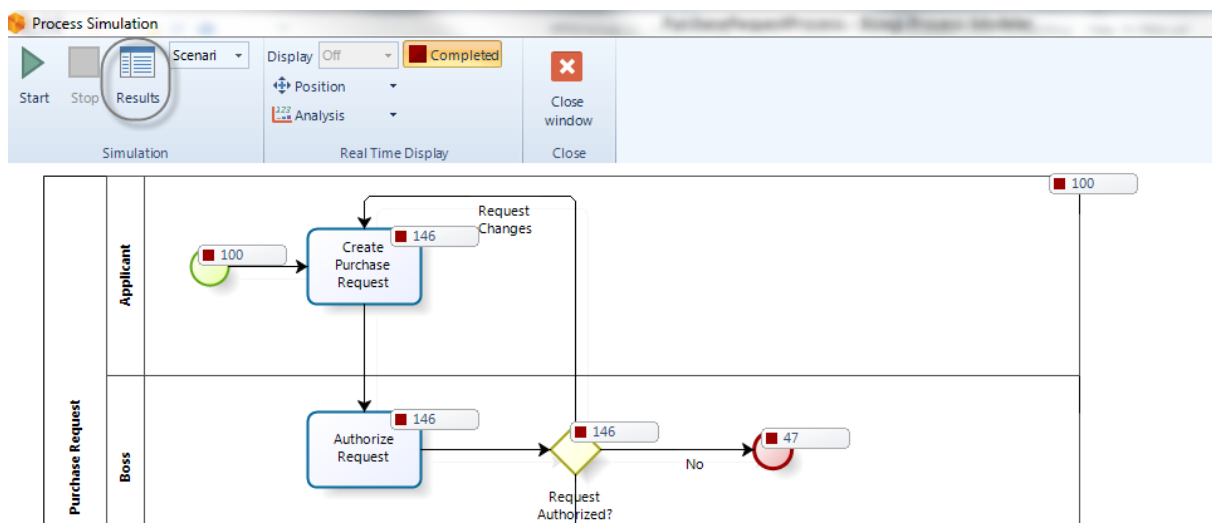
When running a simulation, the following analysis data will display:

- Number of completed tokens.
- Number of token instances created.
- Number of instances that activate each shape.
- Number of finished instances.



Results

When the simulation is finished, view the results by selecting the *Results* option.



For this first level, the results of the simulated outcome will contain the following information:

- **Name:** Identifies the specific BPM shape for which the results are displayed.

- **Type:** Identifies the element type of the BPM shape.
- **Tokens completed:** Indicates how many tokens were processed (instances) during the execution of the simulation.

You can transfer the results report to Excel by clicking the *Export to Excel* button.

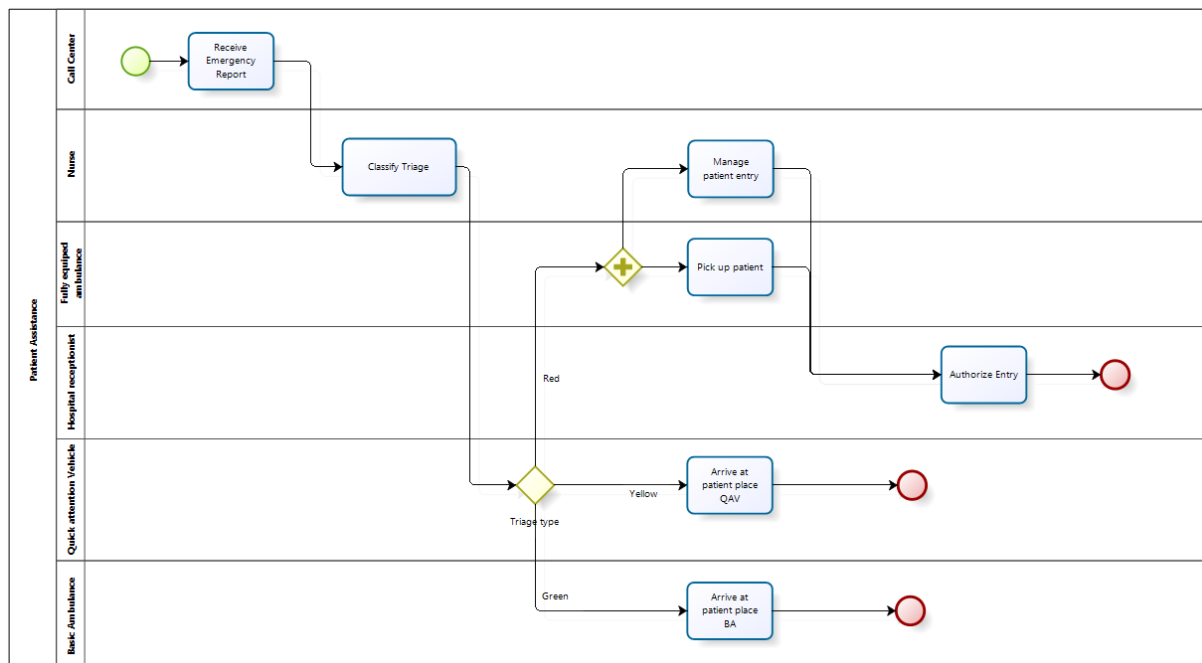


| Name | Type | Tokens completed |
|-------------------------|-------------|------------------|
| Purchase Request | Process | 100 |
| NoneStart | Start event | 100 |
| Create Purchase Request | Task | 146 |
| Authorize Request | Task | 146 |
| Request Authorized? | Gateway | 146 |
| NoneEnd | End event | 47 |
| NoneEnd | End event | 53 |
| Purchase Order | Process | 53 |
| Quotations | Process | 53 |

Export to Excel

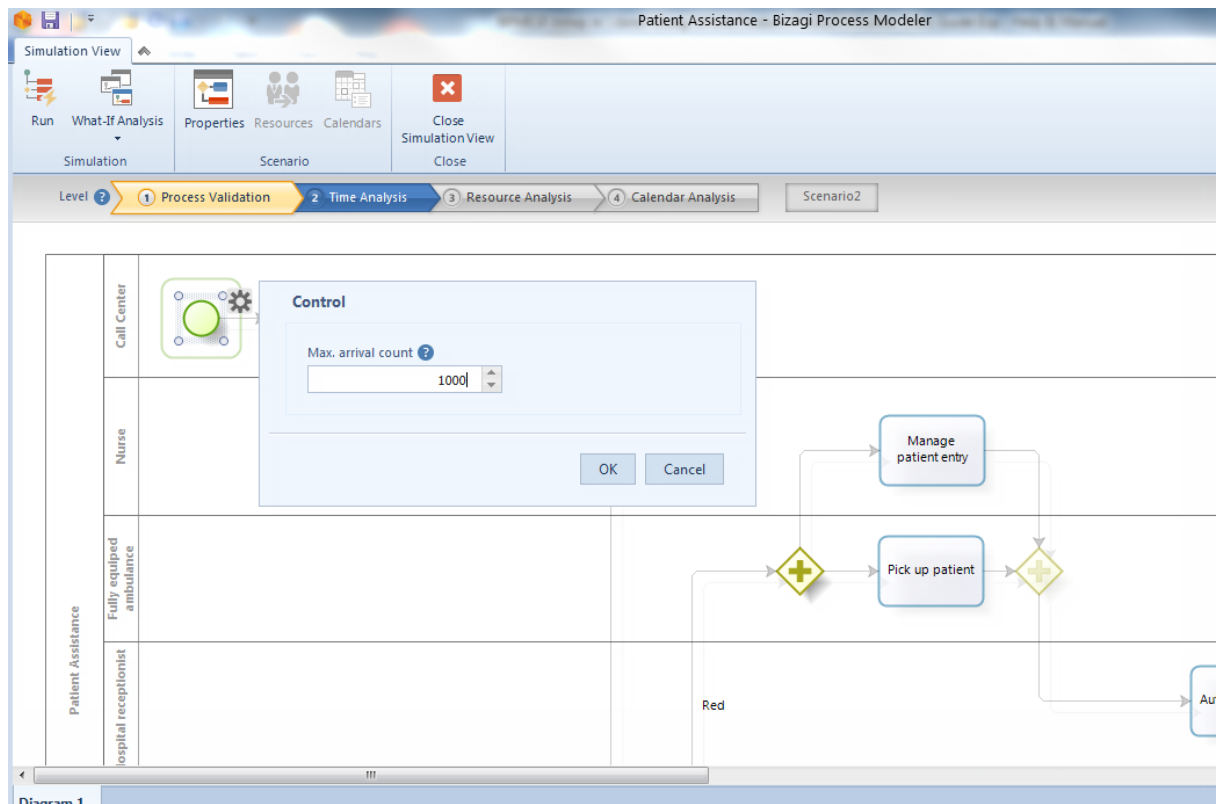
Example: Validating the Emergency attendance process

We wish to validate the process flow of the Emergency attendance process:



Define the required input data for this level, namely the max.arrival count and the probabilities for all decision Gateways

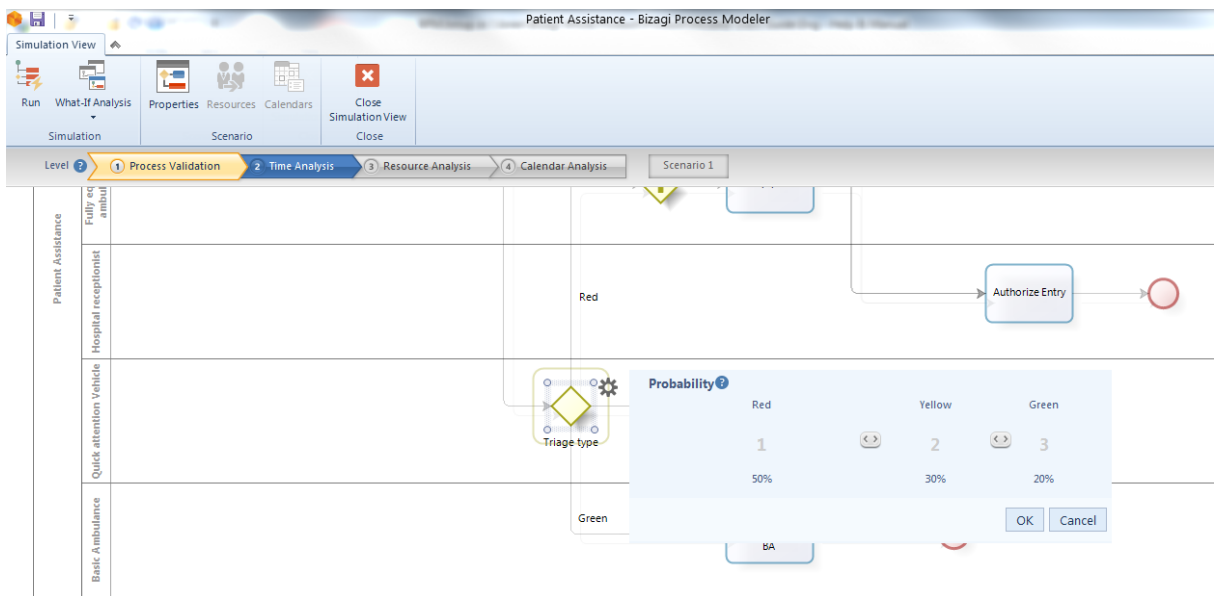
1. In this example we will generate 1000 token instances. Click the Start Event and then the *Gear* icon. Set the control's value to a **1000**.



2. Define the probabilities for all outgoing paths of the Gateway. Suppose the emergency department has estimated, based on historical data, that the probabilities for the different sequence flows are:

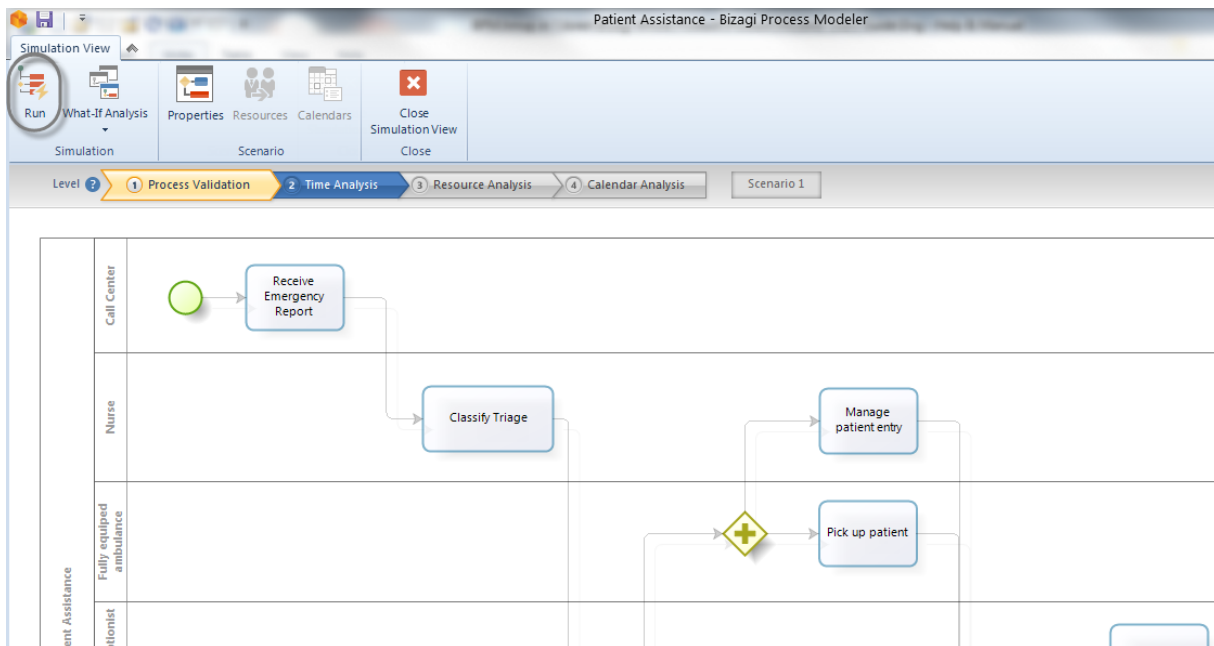
- **Green:** 20%
- **Yellow:** 30%
- **Red:** 50%

Define each probability for the Gateway named *Triage type*.

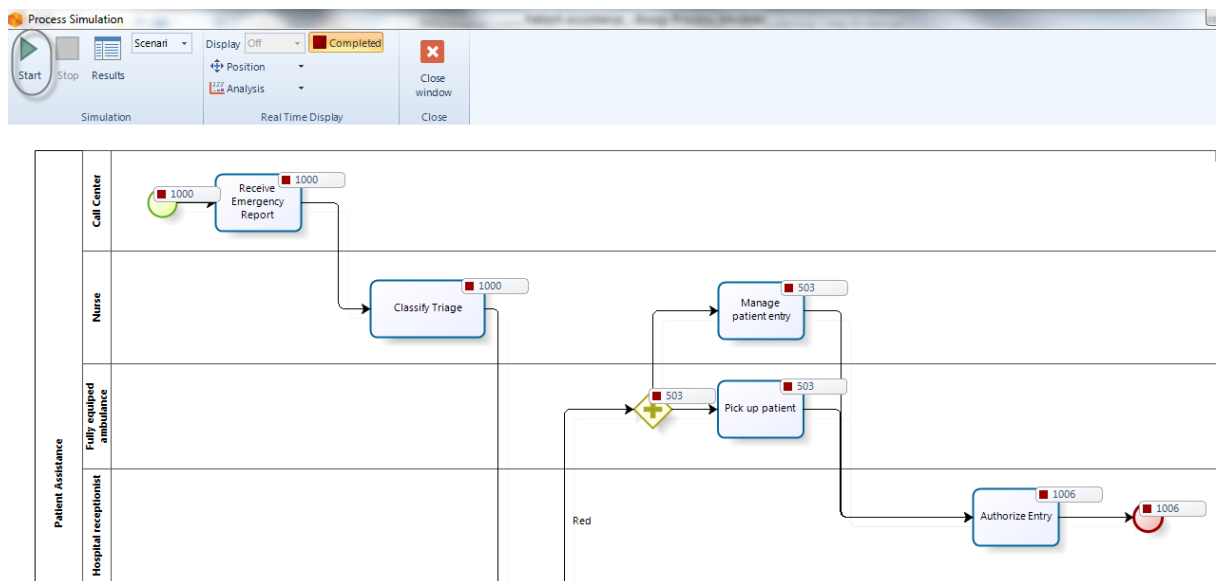


3. Parallel Gateways always activate all outgoing sequence flows; therefore, it is not necessary to define probabilities for this Gateway.

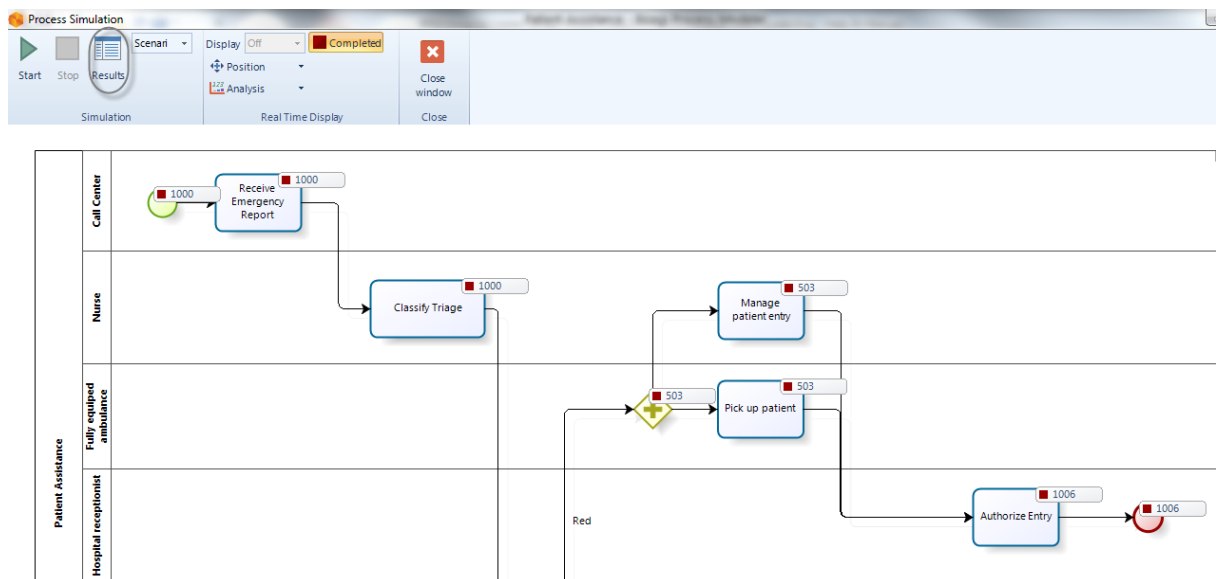
4. Click the *Run* button.



Now, click *Start* to run the simulation. Note how the number of completed events are displayed in execution.



When the simulation is complete, select *Results*.



Analyzing the results

The results obtained are:

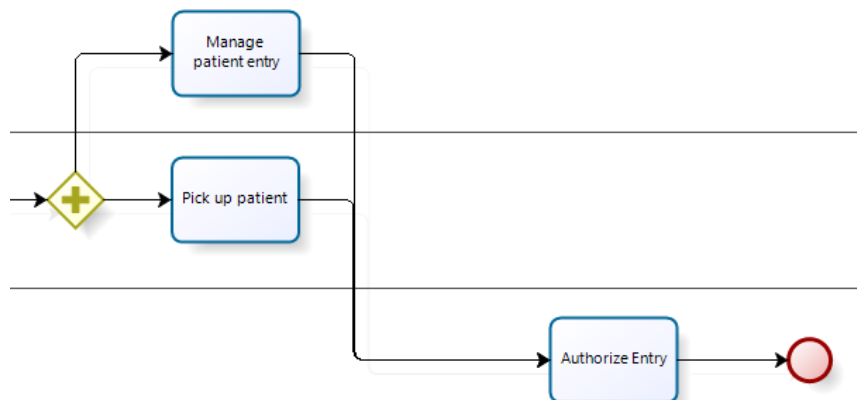
| Simulation Results | | | |
|--------------------|-----------------------------|-------------|------------------|
| Patient Assistance | Name | Type | Tokens completed |
| | Patient Assistance | Process | 1000 |
| | NoneStart | Start event | 1000 |
| | Receive Emergency Report | Task | 1000 |
| | Classify Triage | Task | 1000 |
| | Pick up patient | Task | 503 |
| | Authorize Entry | Task | 1006 |
| | Red triage end | End event | 1006 |
| | Arrive at patient place QAV | Task | 311 |
| | Arrive at patient place BA | Task | 186 |
| | Yellow triage end | End event | 311 |
| | Green triage end | End event | 186 |
| | Triage type | Gateway | 1000 |
| | Manage patient entry | Task | 503 |
| | ParallelGateway | Gateway | 503 |

Export to Excel

Analyzing the results we conclude that something is wrong. The number of tokens (1000) created at the Start Event of the process differs to the sum of tokens completed at the End Events ($1006 + 311 + 186$).

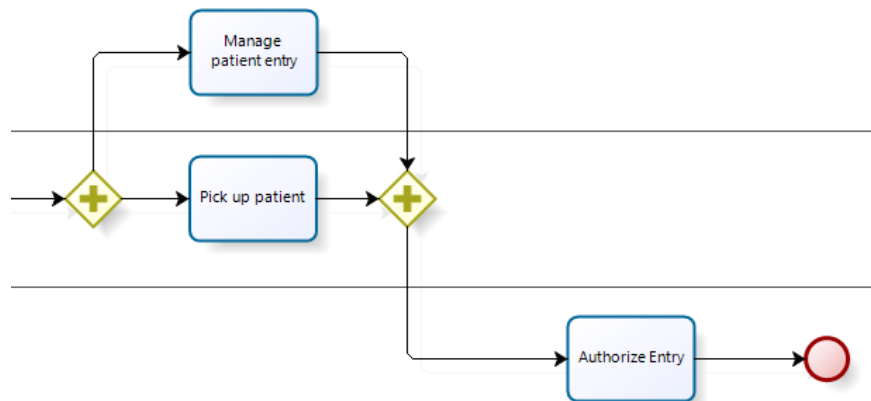
Can you identify what is wrong in the flow?

If you watch the diagram carefully, you will see there is no point of convergence, that is, no shape has been defined to synchronize the paths that exit the Parallel Gateway.



It is necessary to merge the outgoing flows into a single flow before the token continues to the next

activity. To do this, include a Parallel Gateway (as a convergence element) to synchronize them.



Once the change is done, *Run* the simulation again. Looking at the new results we can see that all is working as expected: The number of tokens created (1000) is equal to the sum of tokens completed (483 +315+202). In addition, each token is passed correctly to the triage based on the probabilities defined.

| Simulation Results | | | |
|-----------------------------|-------------|------------------|--|
| Patient Assistance | | | |
| Name | Type | Tokens completed | |
| Patient Assistance | Process | 1000 | |
| NoneStart | Start event | 1000 | |
| Receive Emergency Report | Task | 1000 | |
| Classify Triage | Task | 1000 | |
| Pick up patient | Task | 483 | |
| Authorize Entry | Task | 483 | |
| Red triage end | End event | 483 | |
| Arrive at patient place QAV | Task | 315 | |
| Arrive at patient place BA | Task | 202 | |
| Yellow triage end | End event | 315 | |
| Green triage end | End event | 202 | |
| Triage type | Gateway | 1000 | |
| Manage patient entry | Task | 483 | |
| ParallelGateway | Gateway | 483 | |
| ParallelGateway | Gateway | 483 | |

Level 2 - Throughput time analysis

Overview

The second level of the simulation is useful in measuring end-to-end process time.

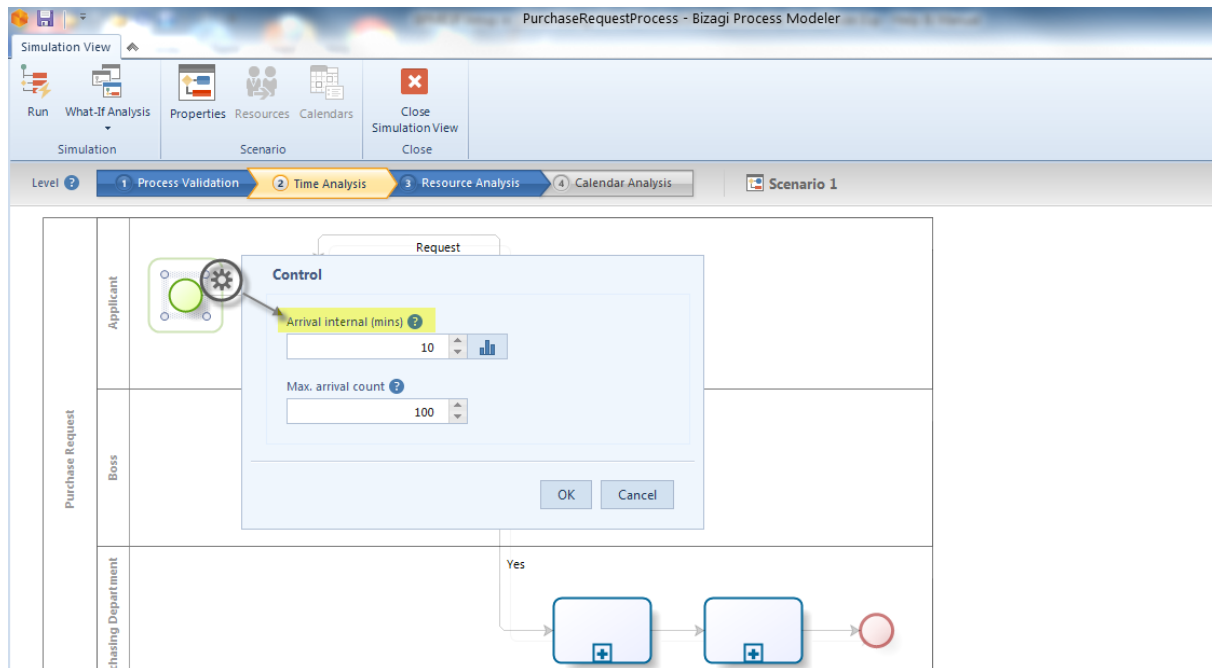
Here, resources are not included; Bizagi assumes an infinite capacity to avoid delays in the process flow. This is the best case scenario under the given flow and processing times.

Defining the input data required for this level

In addition to the information specified in the previous level, the following must be defined in the throughput *Time Analysis*:

Arrival interval time: Defines the time interval between token instances generation. **Instances will be created until the max.arrival count is reached.** This applies to Start Events, Activities that start processes or Timer Events.

Select the Start Event of the process and click the *Gear* icon on the pie menu. Set the value for the control.



- One option is to define the arrival interval time as a constant by entering a value. The time units for this value are defined in the [scenario's configuration](#).

In the following image tokens instances are generated every 5 minutes.

Control

Arrival interval (mins) ?

5

Max. arrival count ?

OK Cancel

- Alternatively, define a statistical distribution. Click the advanced icon alongside the field to view and select a distribution.

Control

Arrival interval (mins) ?

5

Max. arrival count ?

OK

Parameter Type Selector

All Constants Distributions

Numeric
Integer value

Beta Distribution

Binomial Distribution

Erlang Distribution

Gamma Distribution

LogNormal Distribution

OK Cancel

Once selected, you will be able to set the parameters of the distribution. In the following image the time between generation of tokens instances is exponentially distributed with mean equals to 5 minutes. Tokens will be generated until 100 are reached.

Control

Arrival interval (mins) ?

Negative Exponential Distribution

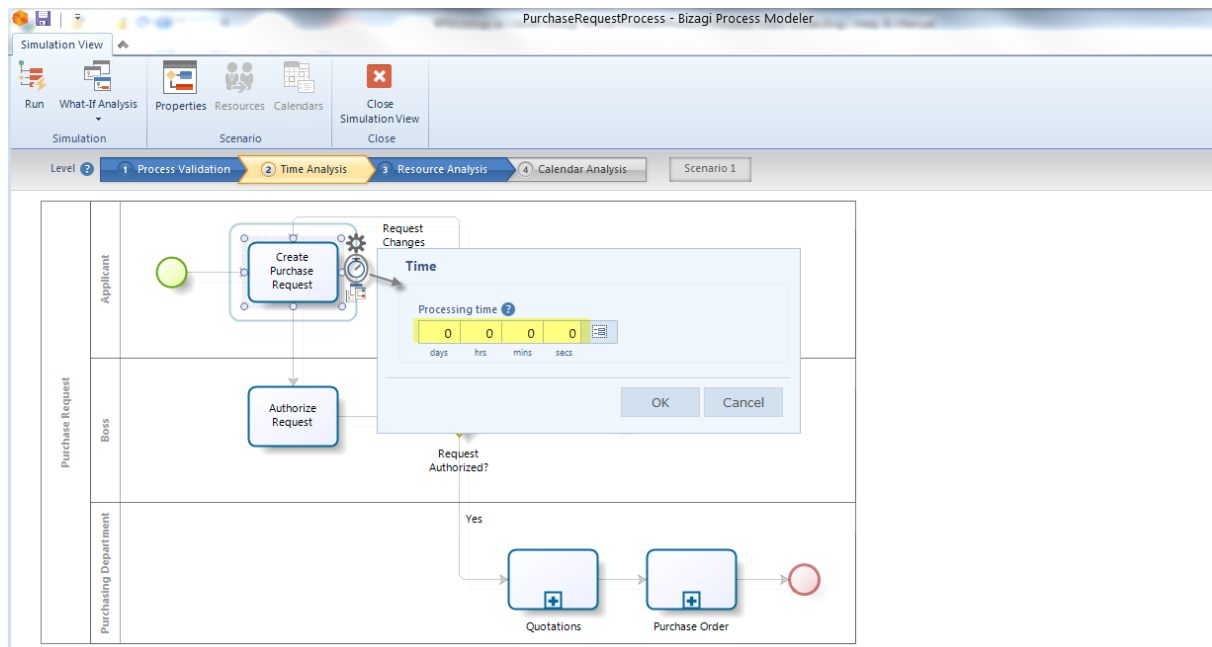
Mean

Max. arrival count ?

OK Cancel

Processing times: Defines the amount of time an Activity or Event needs to process a token. That is, it defines a service time period from the moment a token arrives at an Activity or Event until it is executed.


Click the Activity or Event. Select the *Clock* on the pie menu, and enter a processing period in the Time Control.



- You have the option of defining the processing time as a constant by entering values in the corresponding units.

Time

Processing time ?


| | | | | |
|------|-----|------|------|---|
| 0 | 0 | 3 | 12 |  |
| days | hrs | mins | secs | |

OK Cancel

- Alternatively, define a statistical distribution. Click the advanced icon alongside the field to view and select a distribution.

Time







Processing time ?

| | | | | |
|------|-----|------|------|---|
| 0 | 0 | 0 | 0 |  |
| days | hrs | mins | secs | |

OK

Parameter Type Selector

All Constants Distributions

| | | |
|---|--|---|
| <p>Numeric Integer value</p>  |  <p>Beta Distribution</p> |  <p>Binomial Distribution</p> |
|  <p>Erlang Distribution</p> |  <p>Gamma Distribution</p> |  <p>LogNormal Distribution</p> |

Once selected, you will be able to set the parameters of the distribution. In the following image the processing time of a token in a specific activity is normally distributed with mean 5 minutes and standard deviation of 3 minutes.

Time

Processing time (mins) ?

Normal Distribution

Mean

5

Standard deviation

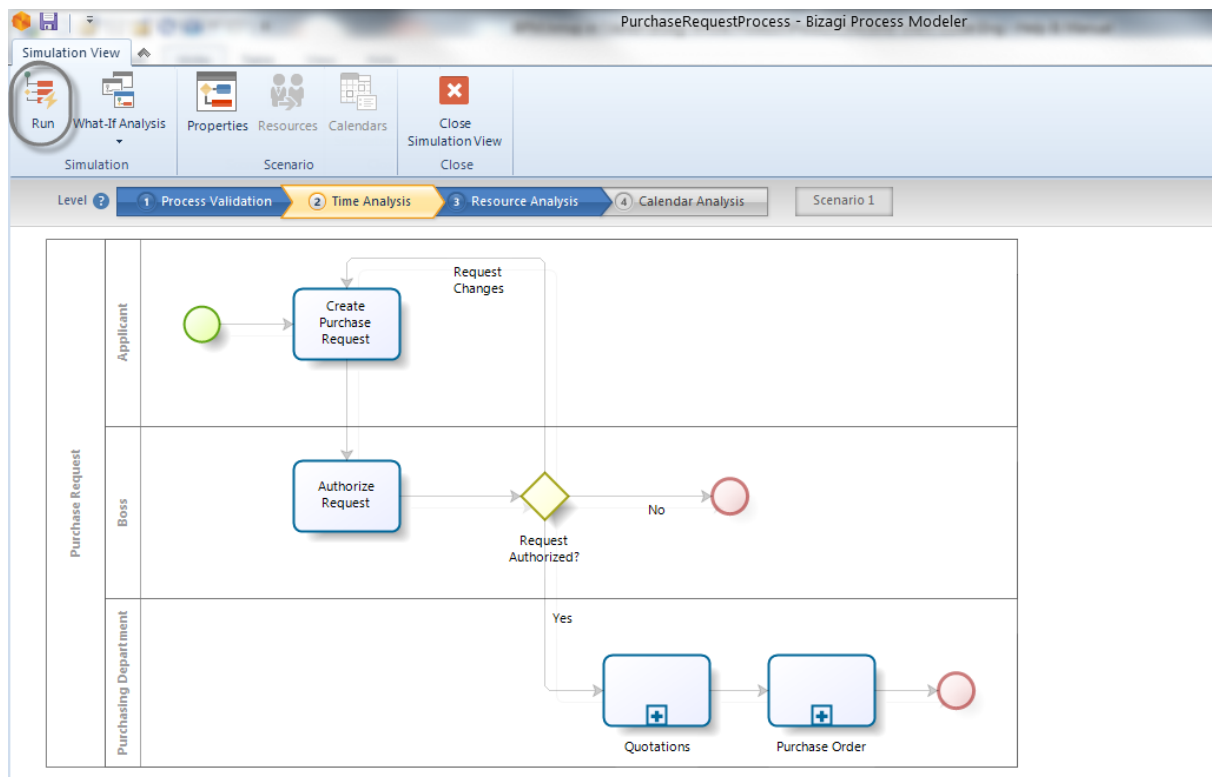
3

OK

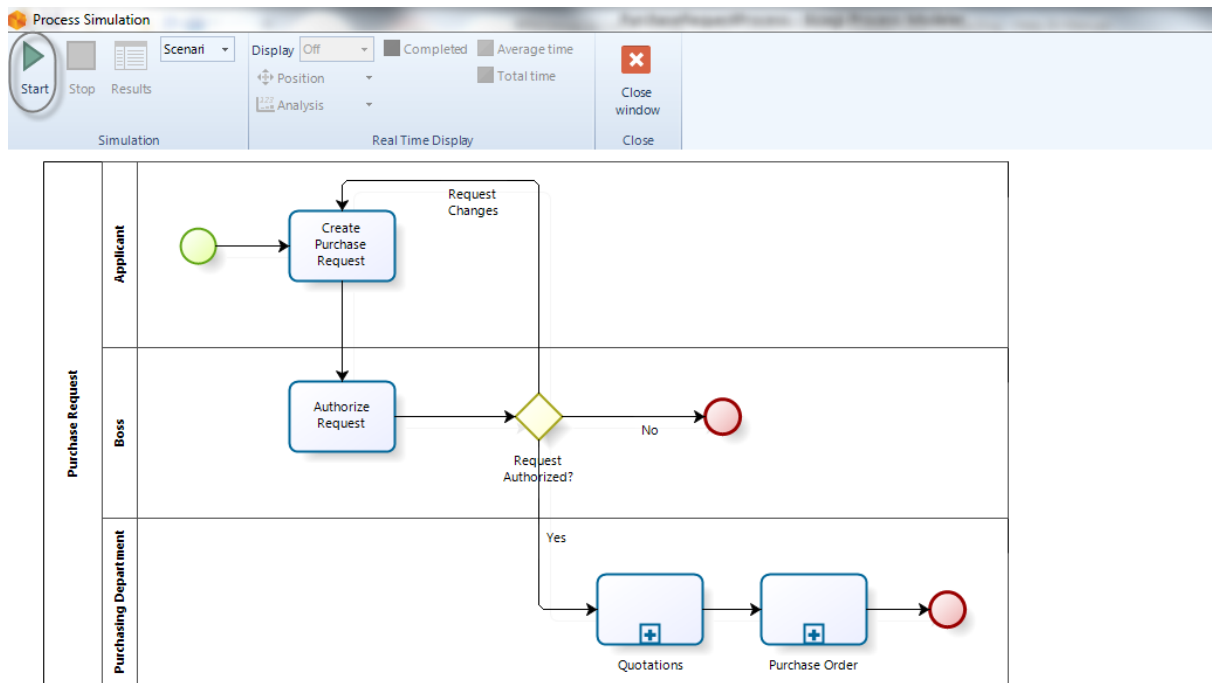
Cancel

Running the simulation

Once the required data for this level have been defined, click the *Run* button to execute the simulation.

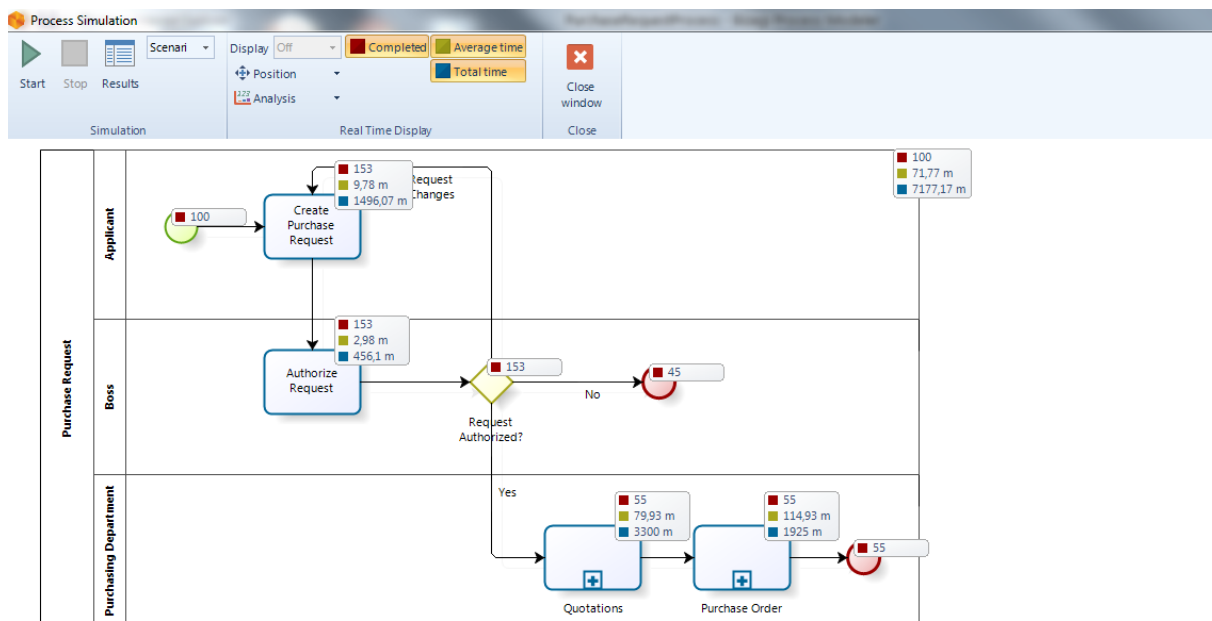


In the new window, click *Start* to run the simulation.



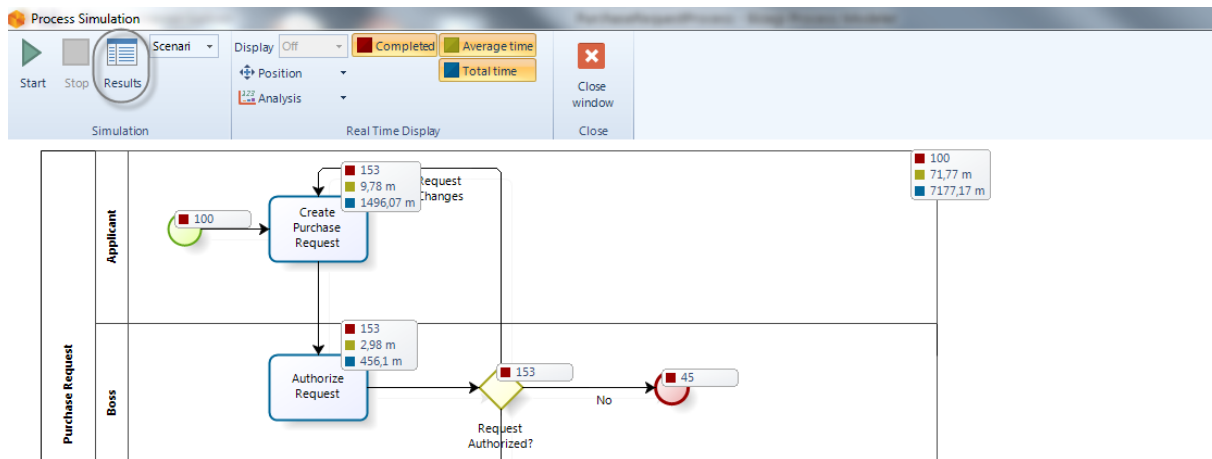
When running a simulation, the following analysis data will display .

- Number of tokens completed.
- Average time per activity.
- Total processing time per activity



Results

When the simulation is complete, select **Results** to view the outcome.



For the Time Analysis level, the results of the simulated outcome will contain the following information:

- **Name:** Identifies the specific BPM shape for which the results are displayed.
- **Type:** Identifies the element type of the BPM shape.
- **Tokens completed:** Indicates how many tokens were processed (instances).
- **Tokens started:** Indicates how many tokens arrived at the shape.
- **Minimum time:** Indicates the minimum processing time of the shape.
- **Maximum time:** Indicates the maximum processing time of the shape.
- **Average time:** Indicates the average processing time of the shape.
- **Total time:** Indicates the total time employed to process the shape.

You can transfer the results report to Excel by clicking the **Export to Excel** button.

The screenshot shows the 'Simulation Results' window. It contains a table with the following data:

| Name | Type | Tokens completed | Tokens started | Min. time | Max. time | Avg. time | Total time |
|-------------------------|-------------|------------------|----------------|-----------|-----------|-----------|------------|
| Purchase Request | Process | 100 | 100 | 8,39 m | 169,25 m | 71,77 m | 7177,17 m |
| NoneStart | Start event | 100 | | | | | |
| Create Purchase Request | Task | 153 | 153 | 4,22 m | 15,59 m | 9,78 m | 1496,07 m |
| Authorize Request | Task | 153 | 153 | 0,72 m | 5,53 m | 2,98 m | 456,1 m |
| Request Authorized? | Gateway | 153 | 153 | | | | |
| NoneEnd | End event | 45 | | | | | |
| NoneEnd | End event | 55 | | | | | |
| Purchase Order | Process | 55 | 55 | 103,57 m | 169,25 m | 114,93 m | 1925 m |
| Quotations | Process | 55 | 55 | 68,57 m | 134,25 m | 79,93 m | 3300 m |

At the bottom of the window, there is an 'Export to Excel' button.

Example: Performing a time analysis for the Emergency attendance process

In order to provide a general insight into processing times, the emergency response department has decided to perform a time analysis.

For this analysis the following assumptions have been made:

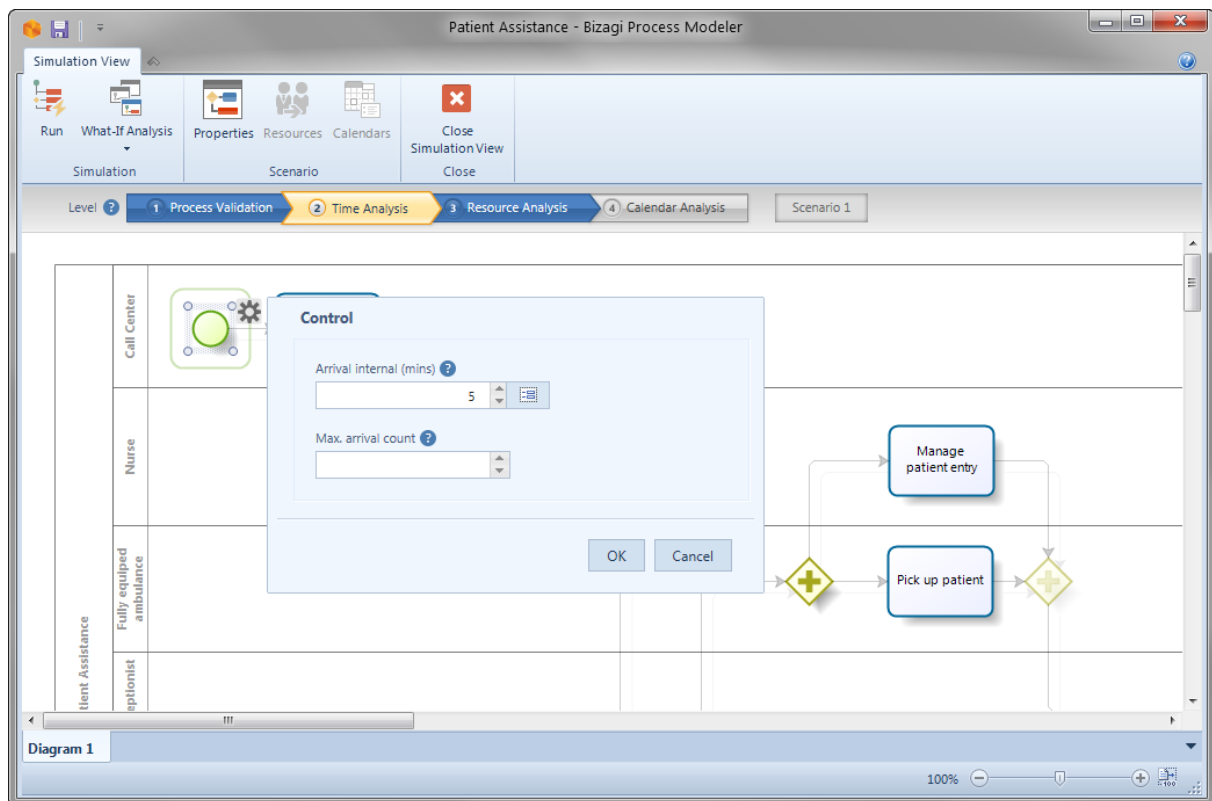
- Necessary resources to perform activities have infinite capacity.
- The expected time between reports is 5 minutes.
- The simulation will evaluate a period of 1 week.
- The estimated processing times for each of the activities are fixed as shown in the next table:

| Activity | Processing time (min) |
|-----------------------------|-----------------------|
| Receive emergency report | 4 |
| Classify Triage | 5 |
| Manage patient entry | 11 |
| Pick up patient | 20 |
| Arrive at patient place QAV | 7 |
| Arrive at patient place BA | 10 |
| Authorize entry | 4 |

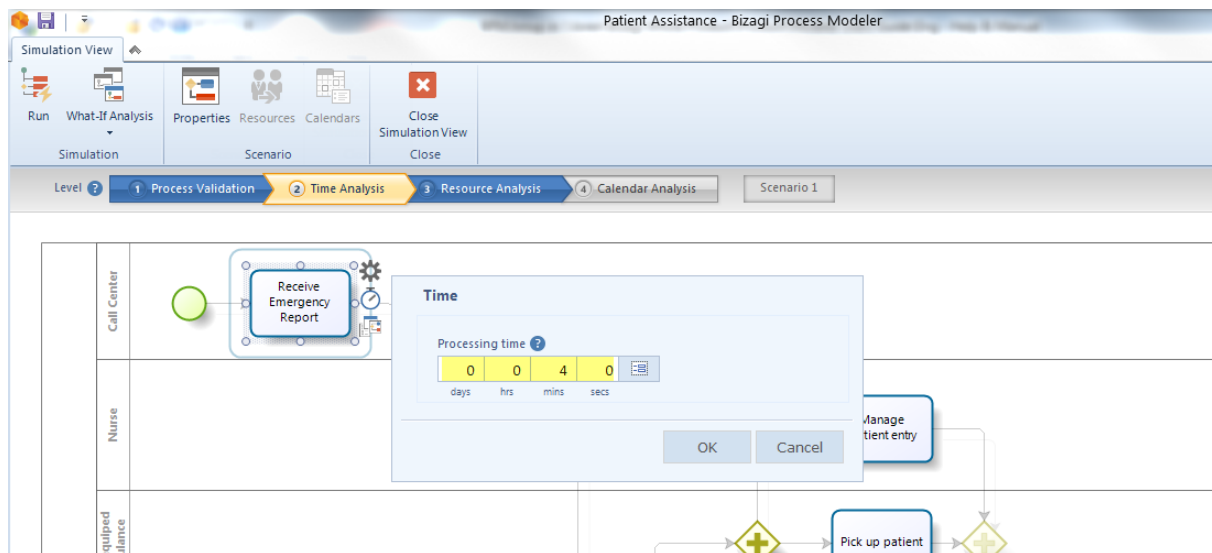
1. Define trigger times. To do so, click the Start Event and then the *Gear* icon on the pie menu.

For this example, the expected time between reports is 5 minutes, so set the time to this value. Note the value entered is in minutes.

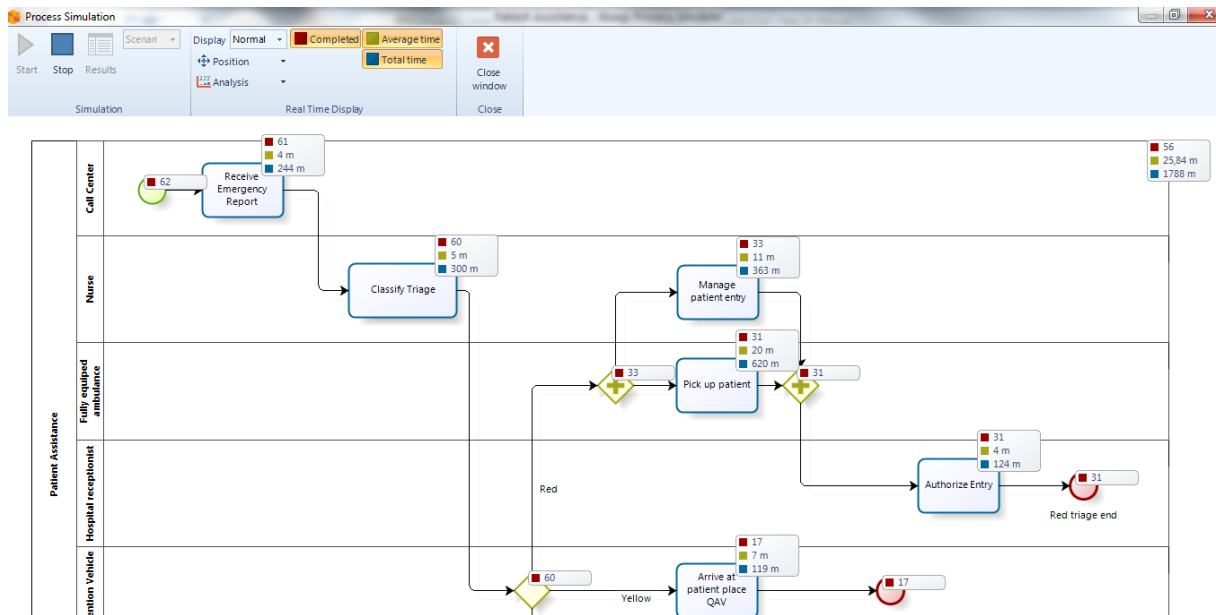
For more information about units please refer to [Scenarios](#).



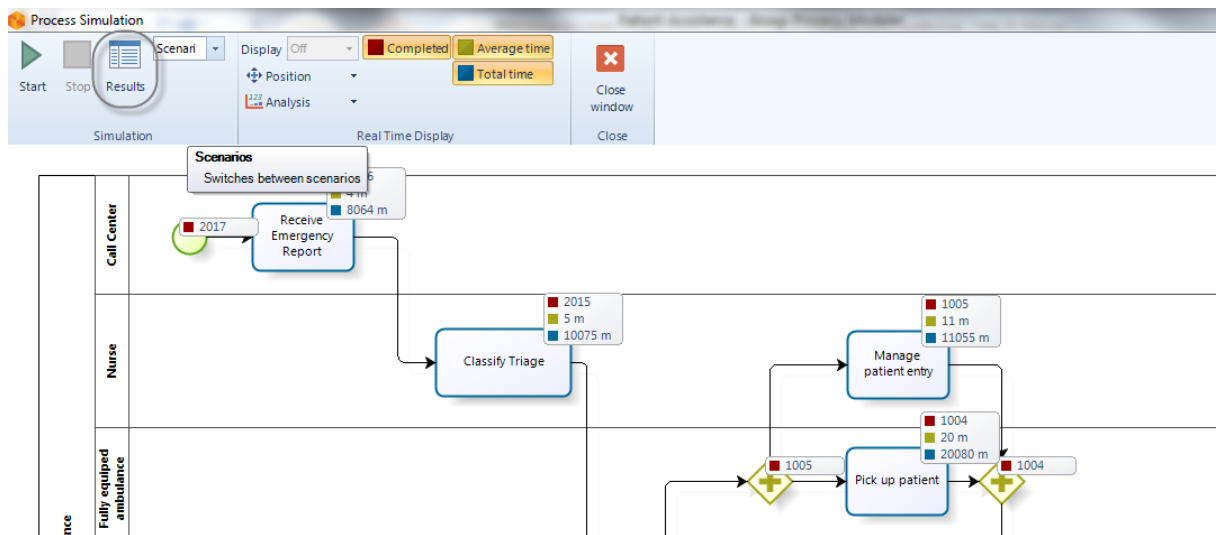
2. Define the Activities' processing times.
Click the Activity, select *Clock* on the pie menu and set a value for the Time control.
In the following image the processing time for the first activity is set to 4 minutes.



3. Once all the processing times have been defined, run the simulation. Click the *Run* button.
Note the simulation shows analysis findings for each shape in real time as it executes, such as average time, total processing time and the number of completed tokens.



4. When the simulation is finished, select *Results* to view the outcome.



Analyzing the results

As we mentioned before, the results on this level give us a general insight into the cycle time of the process. For this specific case we are able to identify the expected time a person has to wait from the moment the emergency is reported until medical attention is received.

| Simulation Results | | | | | | | | |
|-----------------------------|-------------|------------------|----------------|-----------|-----------|-----------|------------|--|
| Patient Assistance | | | | | | | | |
| Name | Type | Tokens completed | Tokens started | Min. time | Max. time | Avg. time | Total time | |
| Patient Assistance | Process | 2011 | 2017 | 16 m | 33 m | 25,06 m | 61436 m | |
| NoneStart | Start event | 2017 | | | | | | |
| Receive Emergency Report | Task | 2016 | 2017 | 4 m | 4 m | 4 m | 8064 m | |
| Classify Triage | Task | 2015 | 2016 | 5 m | 5 m | 5 m | 10075 m | |
| Pick up patient | Task | 1004 | 1005 | 20 m | 20 m | 20 m | 20080 m | |
| Authorize Entry | Task | 1003 | 1004 | 4 m | 4 m | 4 m | 4012 m | |
| Red triage end | End event | 1003 | | | | | | |
| Arrive at patient place QAV | Task | 616 | 617 | 7 m | 7 m | 7 m | 4312 m | |
| Arrive at patient place BA | Task | 392 | 393 | 10 m | 10 m | 10 m | 3920 m | |
| Yellow triage end | End event | 616 | | | | | | |
| Green triage end | End event | 392 | | | | | | |
| Triage type | Gateway | 2015 | 2015 | | | | | |
| Manage patient entry | Task | 1005 | 1005 | 11 m | 11 m | 11 m | 11055 m | |
| ParallelGateway | Gateway | 1005 | 1005 | | | | | |
| ParallelGateway | Gateway | 1004 | 1005 | | | | | |

Export to Excel

Based on the results, we can conclude:

- A patient waits at least 16 minutes before receiving medical attention.
- A patient waits no more than 33 minutes for medical attention.
- The expected time a patient waits to receive medical attention is 25,06 minutes.

Level 3 - Resource analysis

Overview

This analysis shows the potential effect of resource constraints on process performance. Remember that a *Resource* is defined as a person, equipment, or space necessary for the execution of a specific task.

In the previous level, Time Analysis, we assumed infinite resource capacity, that is, activities are able to process infinite quantity of tokens at the same time. However this assumption is not practical at all. In real terms there are always resources constraints.

The most common issue arising from introducing resources constraints is that tokens need to wait to be processed at a given moment. This results in bottlenecks and increase in cycle time, thereby reducing the capacity of the process.

Money is another resource directly or indirectly involved in a process. Consequently, this level also allows you to analyze your business operation in terms of costs.

The purpose of this analysis is to identify and minimize the impact of these constraints in terms of cycle time and costs.

The resource analysis results will allow you to evaluate the following performance measures:

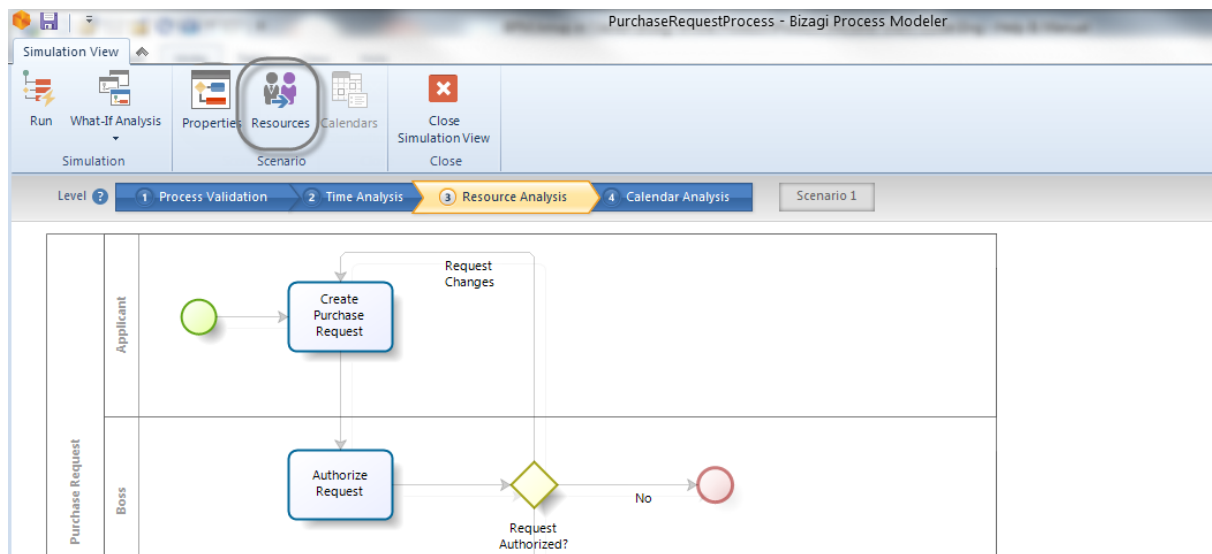
- Sub- or over-utilization of resources.
- Total resources costs.
- Total activity costs.
- Delays (time an activity waits for a resource).
- A more accurate expected cycle time.

Defining the input Data required for this level

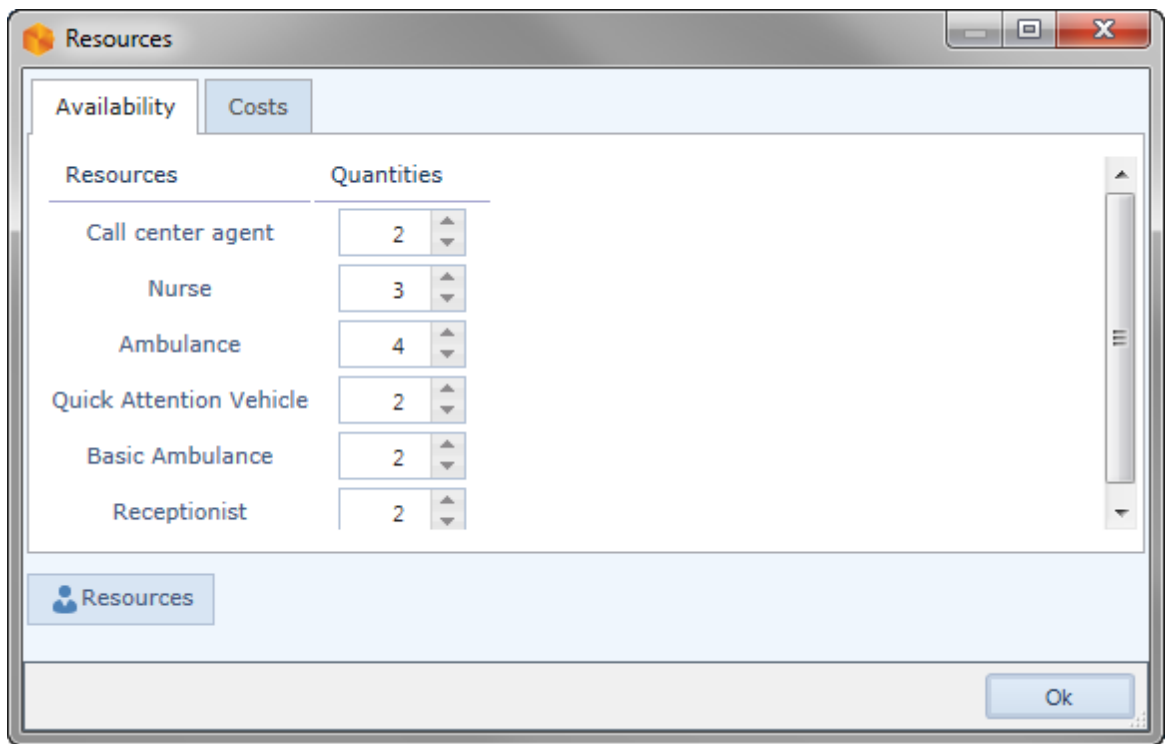
By default the Performers defined in the process documentation are defined as resources. In the Resources Analysis level you need to define the following parameters:

Resources: Remember that a resource is a person, equipment or space necessary for the execution of a specific task.

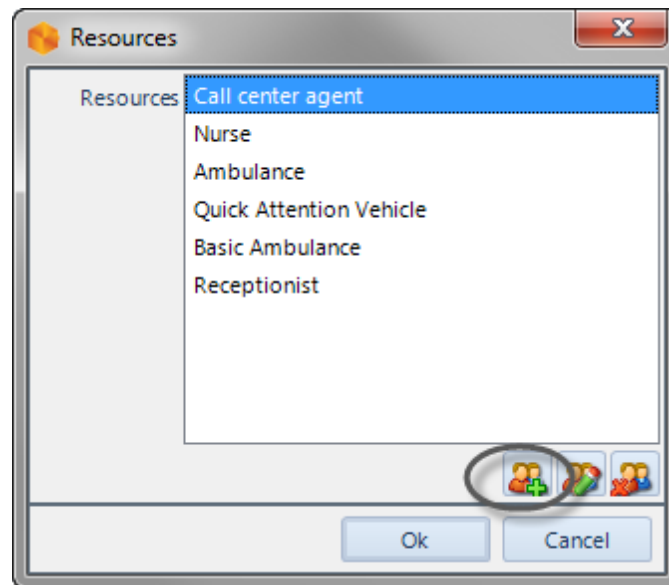
To define a Resource click the *Resources* option found in the ribbon.



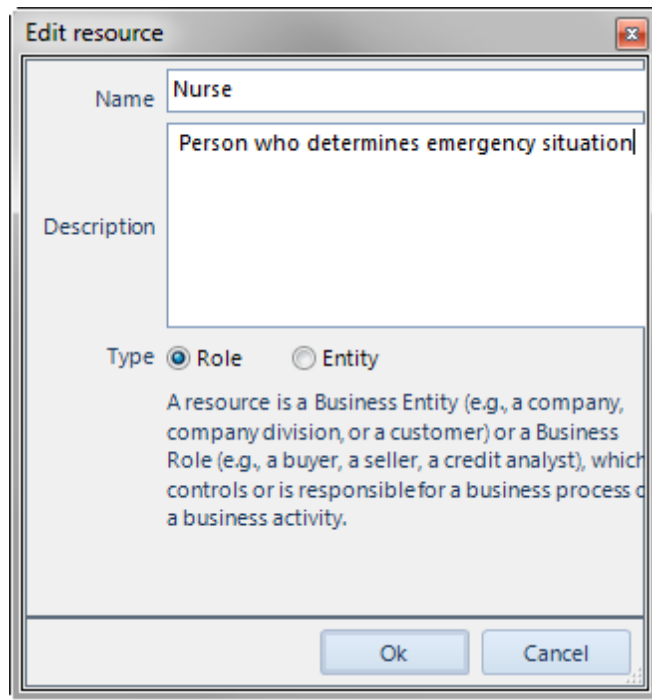
A new window will display the available resources.
To add a new resource, click *Add resource*.



Select *Add performer*.



Enter the name, description and type of the new resource. Click *OK*.



Edit resource

Name:

Description:

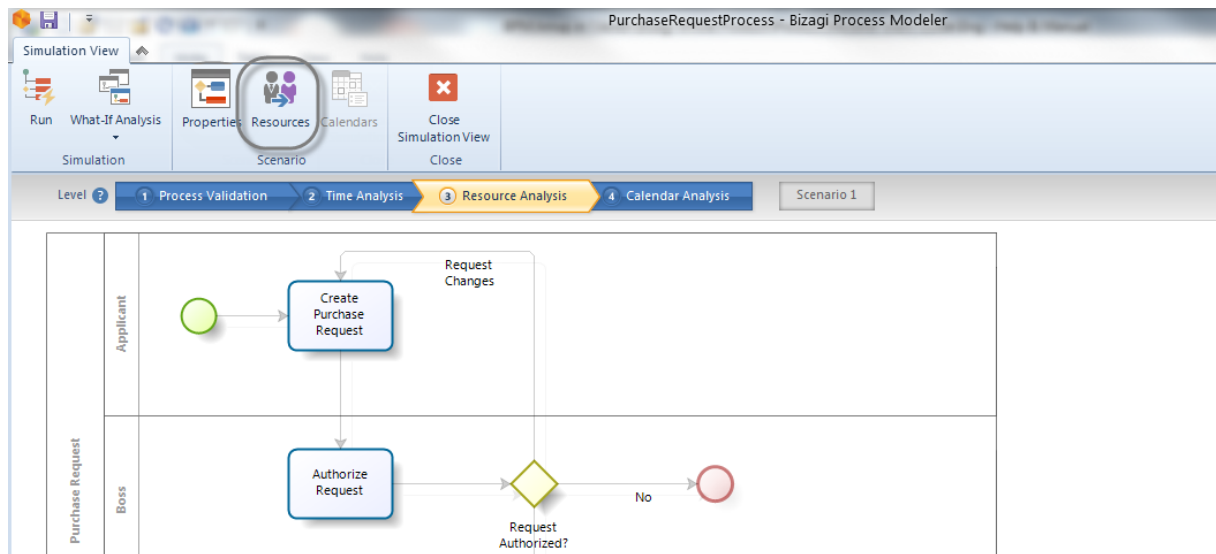
Type: ☒ Role ☐ Entity

A resource is a Business Entity (e.g., a company, company division, or a customer) or a Business Role (e.g., a buyer, a seller, a credit analyst), which controls or is responsible for a business process or a business activity.

Ok Cancel

Availability and costs of resources:

To define availability and costs of resources, select the *Resources* option found in the Ribbon. The availability of Resources determines how many resources of a given type you have as a whole (not for a particular activity).



A new window will display the available resources. In the *Availability* tab, enter the value for each Resources available.

| Resources | Quantities |
|-------------------------|------------|
| Call center agent | 2 |
| Nurse | 3 |
| Ambulance | 4 |
| Quick Attention Vehicle | 2 |
| Basic Ambulance | 2 |
| Receptionist | 2 |

To define the costs of Resources, proceed to the *Costs* tab.
 You can define the *fixed* and *per hour* costs for each Resource.

- **Fixed cost:** This cost is generated each time a resource processes a token.
- **Per hour cost:** This cost is generated for each hour a resource employs processing a token.

The cost units are defined in the [scenario's configuration](#).

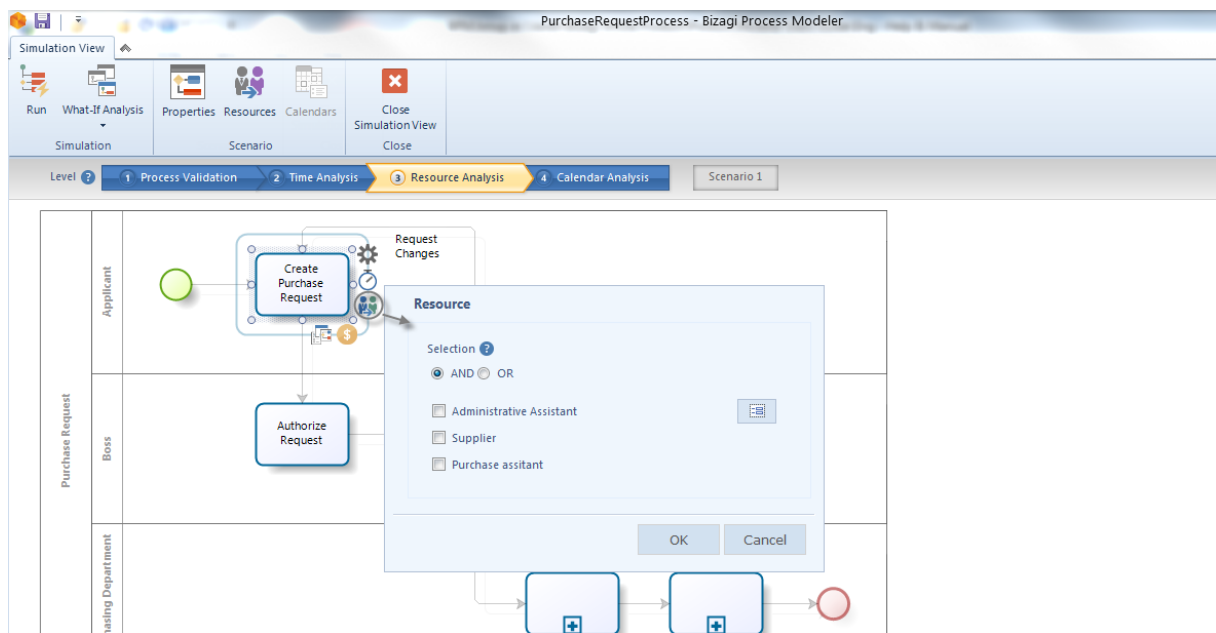
The Resources dialog box has two tabs: Availability and Costs. The Costs tab is active, displaying a table of resource costs.

| Resources | Fixed cost | Cost per hour |
|-------------------------|------------|---------------|
| Call center agent | 3 | 0 |
| Nurse | 5 | 0 |
| Ambulance | 30 | 0.4 |
| Quick Attention Vehicle | 25 | 0.3 |
| Basic Ambulance | 18 | 0.22 |
| Receptionist | 3 | 0 |

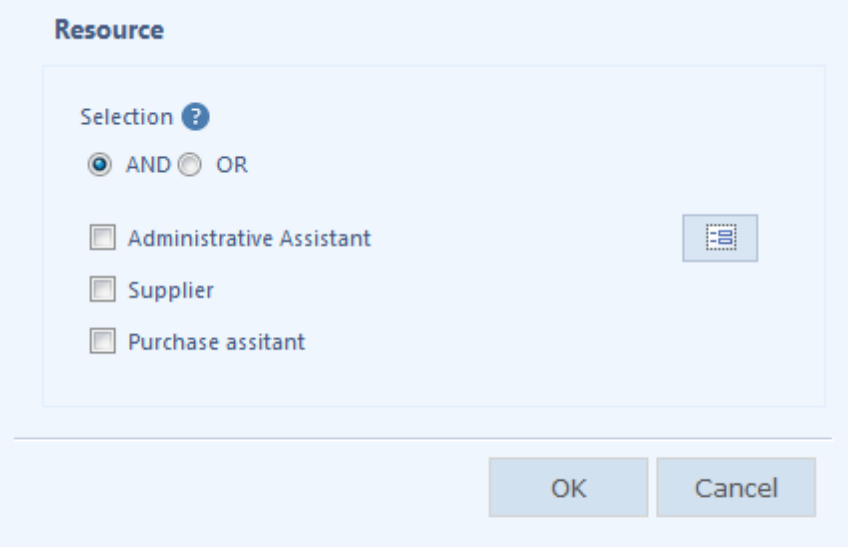
At the bottom of the dialog, there is a 'Resources' button with a person icon and an 'Ok' button.

Resources requirements: Tasks require resources to be performed. Once you have defined the process' resources, you have to define how many are required in order to perform a task.

To define the Resources requirements for a task, click the task and select the *Resource* icon in the pie menu.

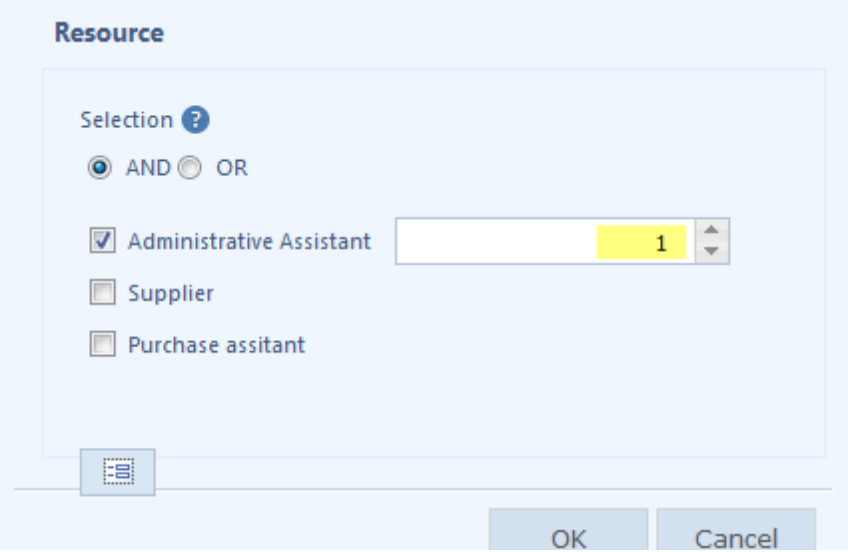


Select the desired resources from the list available in the *Resource* window. You can select one or more resources. The AND/OR selection mode is available in order to define if all the selected resources are required by the task at the same time or only one at a time.



The dialog box is titled "Resource". It contains a section labeled "Selection ?" with two radio buttons: "AND" (selected) and "OR". Below this are three checkboxes, each followed by a resource name: "Administrative Assistant", "Supplier", and "Purchase assitant". To the right of these checkboxes is a small icon of a document with a list. At the bottom right are "OK" and "Cancel" buttons.

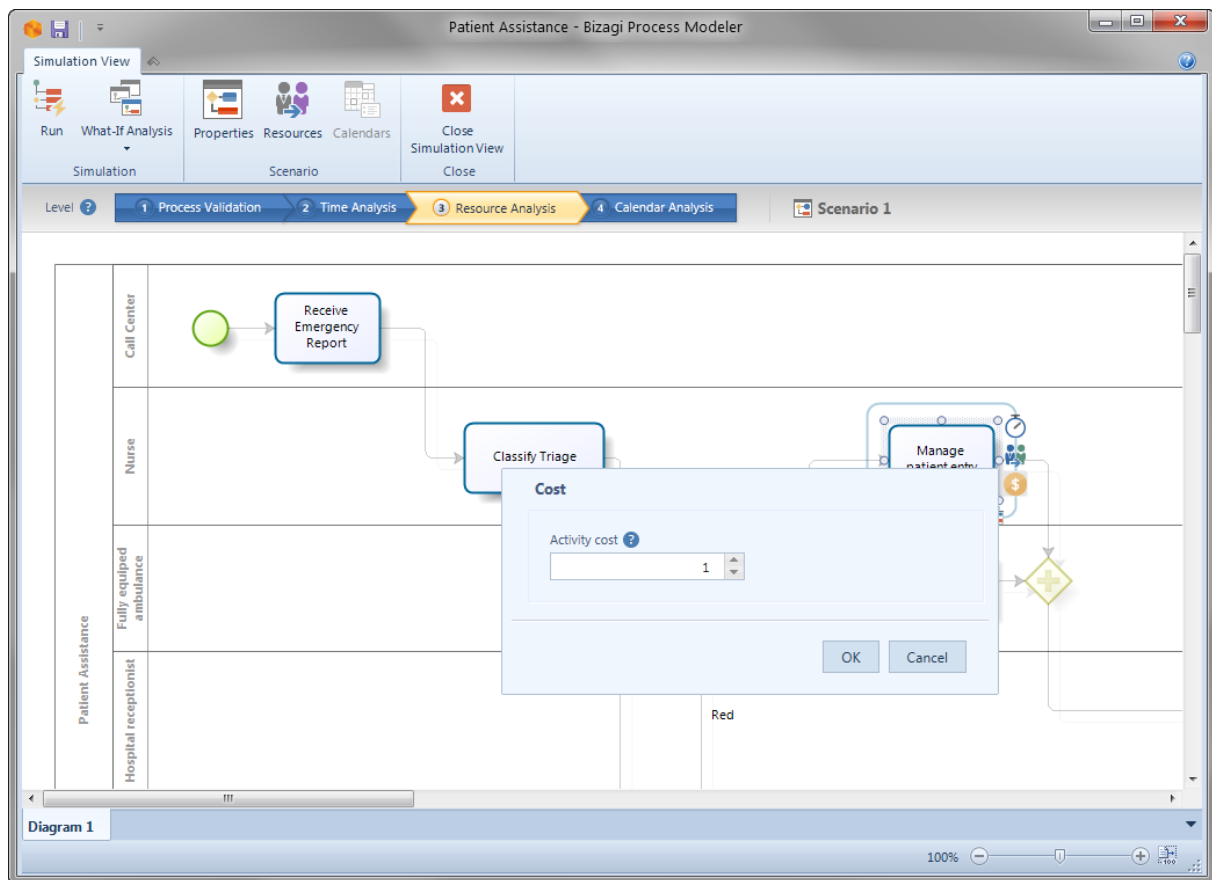
For each resource selected you must define how many of them are used in the task.



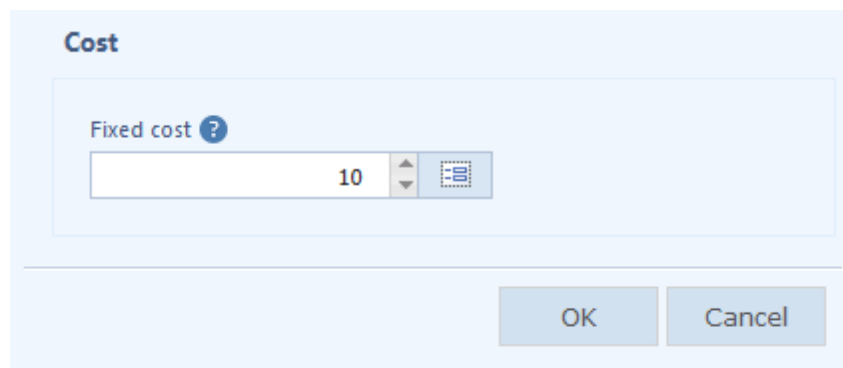
The dialog box is titled "Resource". It contains a section labeled "Selection ?" with two radio buttons: "AND" (selected) and "OR". Below this are three checkboxes, each followed by a resource name and a quantity input field: "Administrative Assistant" (checked, quantity 1), "Supplier", and "Purchase assitant". To the right of these checkboxes is a small icon of a document with a list. At the bottom right are "OK" and "Cancel" buttons.

Activity costs: The cost of performing an activity, that is, how much an activity costs once executed.

To define the cost of performing an activity, select the Activity and click *Cost* on the pie menu.

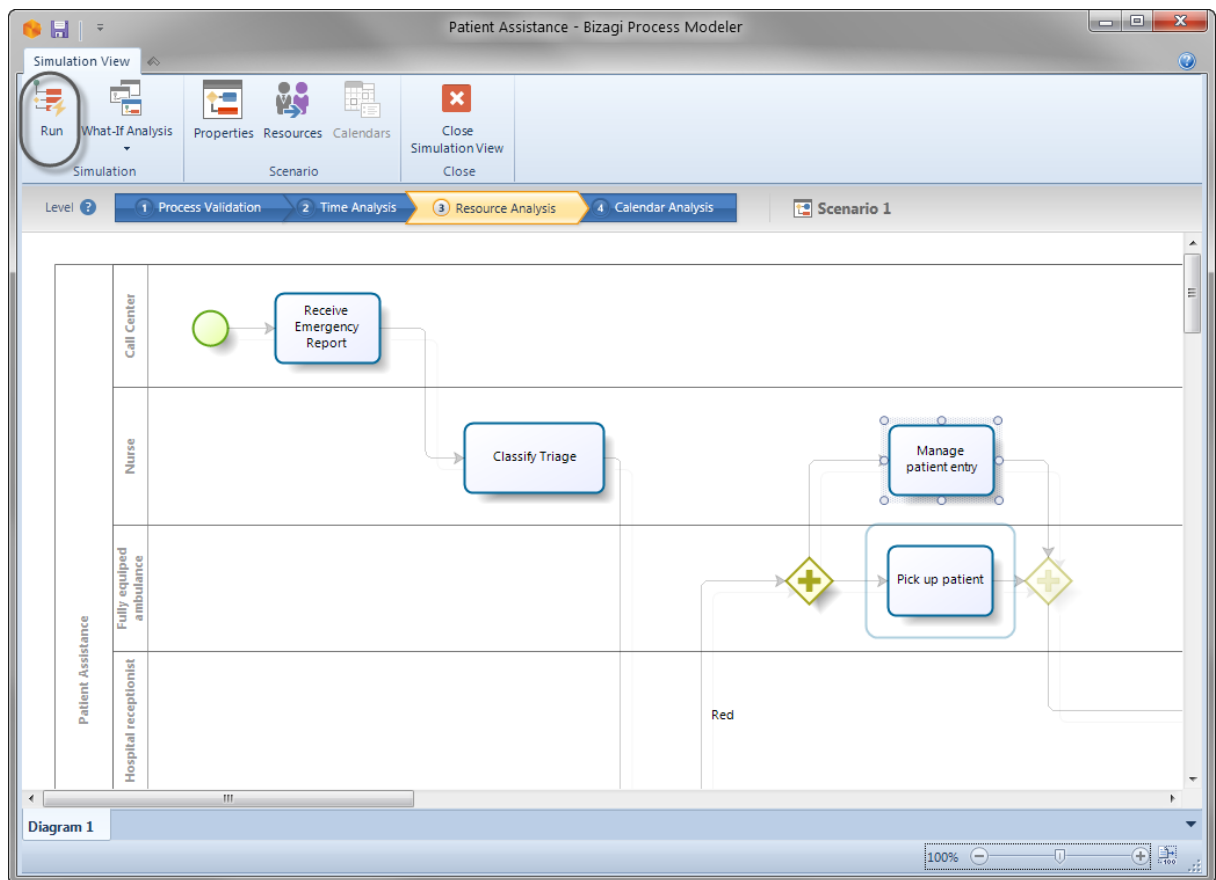


Set a *fixed* cost amount. The cost units are defined in the [scenario's configuration](#).

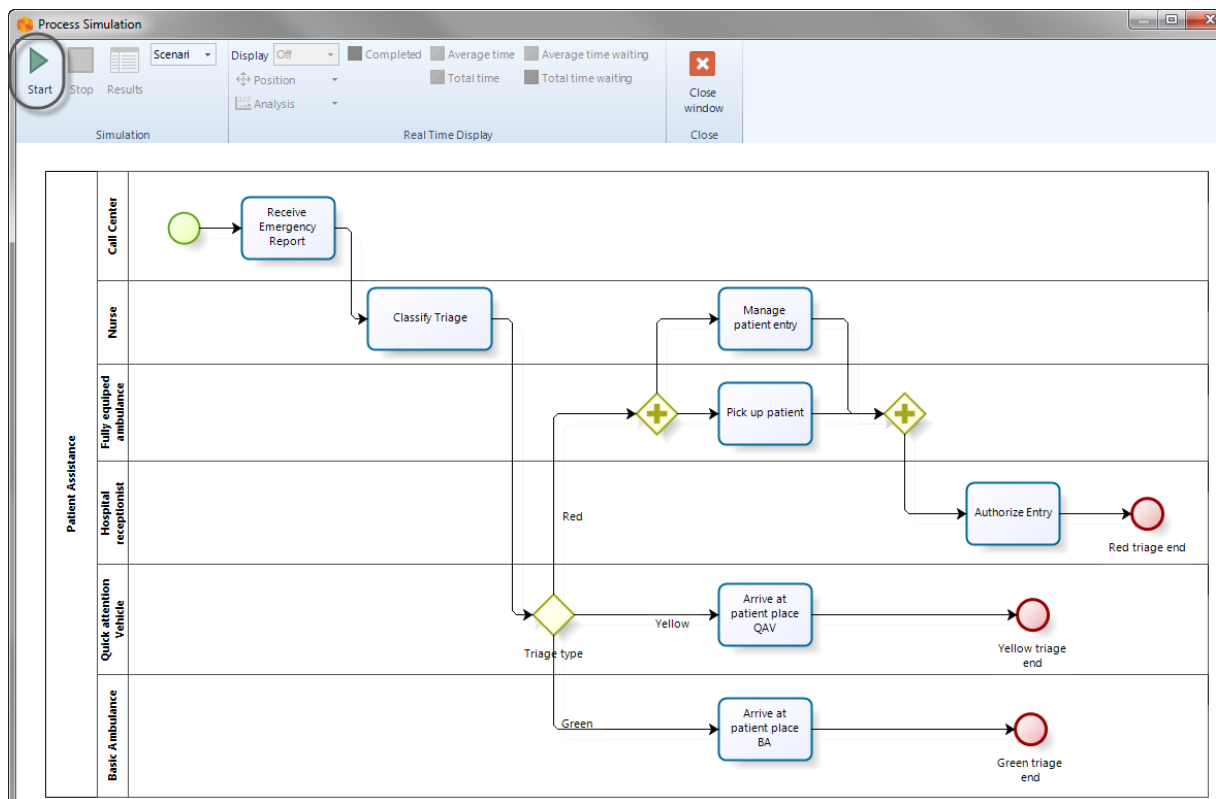


Running the simulation

Once the required data has been entered, click the *Run* button to execute the simulation.

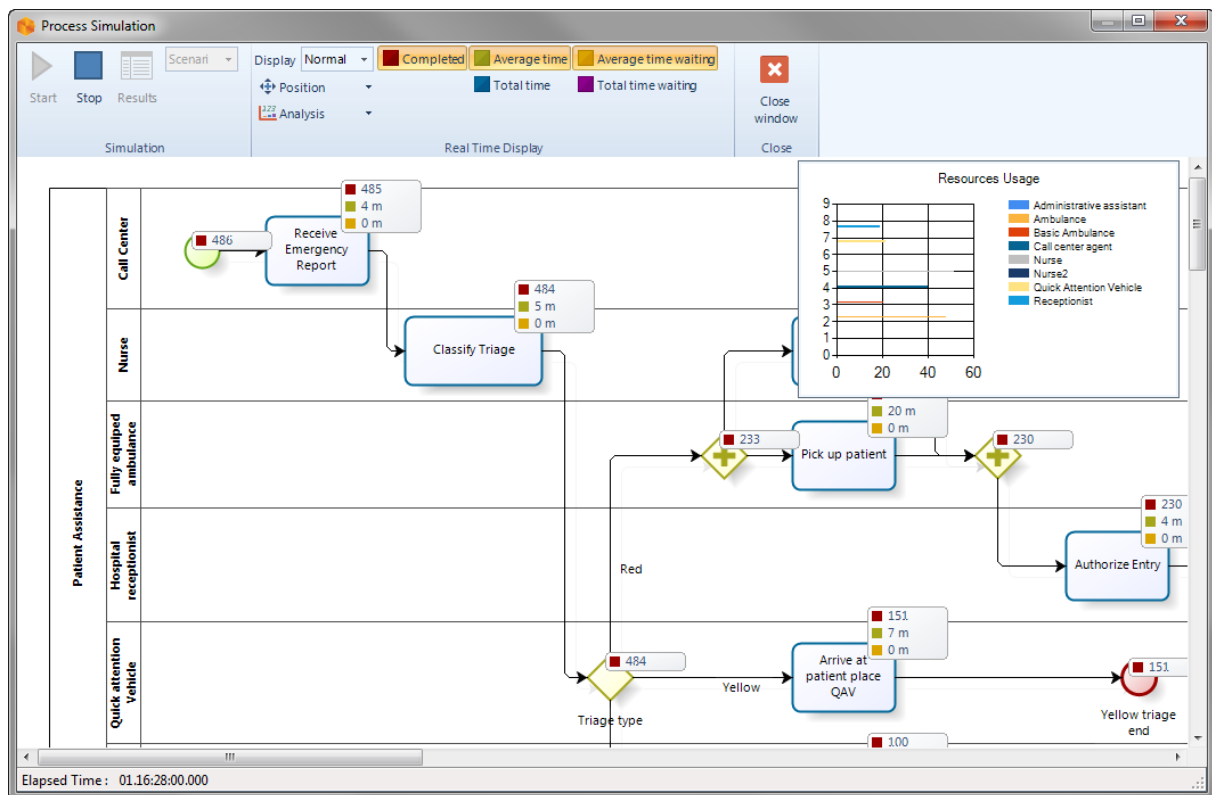


In the new window, click **Start** to run the simulation.



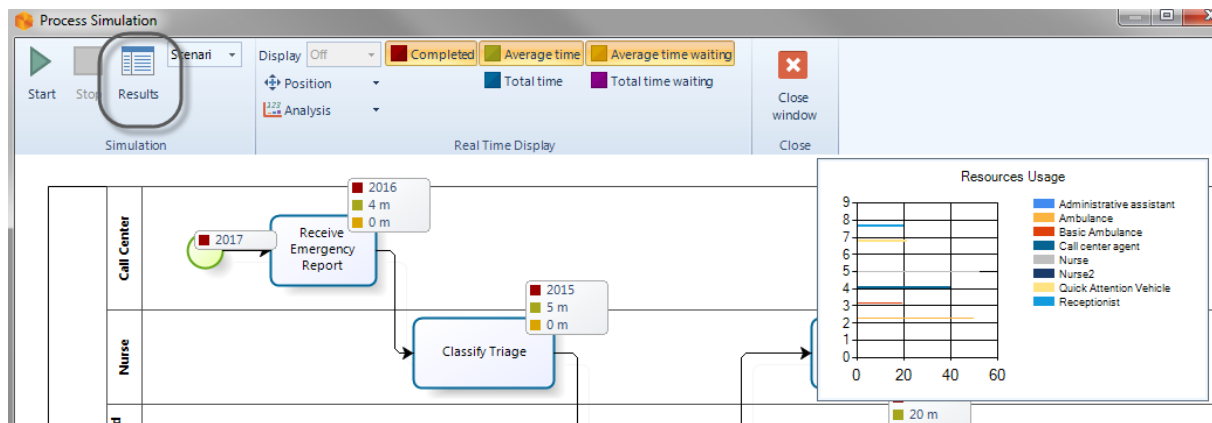
When running a simulation, the following analysis data will display.

- Resource usage status.
- Number of tokens completed.
- Average time per activity.
- Total processing time per activity
- Average waiting time per activity.



Results

When the simulation is complete, select **Results** to view the outcome.



For the Resource Analysis level, the results of the simulated outcome will contain the following information for Process and Resources:

For Process and activities

| Simulation Results | | | | | | | | | |
|--------------------|--|-----------------------------|-------------|------------------|----------------|-----------|-----------|-----------|------------|
| Resources | | Name | Type | Tokens completed | Tokens started | Min. time | Max. time | Avg. time | Total time |
| Patient Assistance | | Patient Assistance | Process | 2011 | 2017 | 16 m | 33 m | 25.06 m | 61436 m |
| | | NoneStart | Start event | 2017 | | | | | |
| | | Receive Emergency Report | Task | 2016 | 2017 | 4 m | 4 m | 4 m | 8064 m |
| | | Classify Triage | Task | 2015 | 2016 | 5 m | 5 m | 5 m | 10075 m |
| | | Pick up patient | Task | 1004 | 1005 | 20 m | 20 m | 20 m | 20080 m |
| | | Authorize Entry | Task | 1003 | 1004 | 4 m | 4 m | 4 m | 4012 m |
| | | Red triage end | End event | 1003 | | | | | |
| | | Arrive at patient place QAV | Task | 616 | 617 | 7 m | 7 m | 7 m | 4312 m |
| | | Arrive at patient place BA | Task | 392 | 393 | 10 m | 10 m | 10 m | 3920 m |
| | | Yellow triage end | End event | 616 | | | | | |
| | | Green triage end | End event | 392 | | | | | |
| | | Triage type | Gateway | 2015 | 2015 | | | | |
| | | Manage patient entry | Task | 1005 | 1005 | 11 m | 11 m | 11 m | 11055 m |
| | | Parallel Gateway | Gateway | 1005 | 1005 | | | | |

- **Name:** Identifies the specific BPM shape for which the results are displayed.
- **Type:** Identifies the element type of the BPM shape.
- **Tokens completed:** Indicates how many tokens were processed for each specific BPM shape.
- **Tokens started:** Indicates how many tokens arrived at the shape.
- **Minimum time:** Indicates the minimum processing time at the shape.
- **Maximum time:** Indicates the maximum processing time at the shape.
- **Average time:** Indicates the average processing time at the shape.
- **Minimum time waiting resource:** Indicates the minimum time a task had to wait for a resource.
- **Maximum time waiting resource:** Indicates the maximum time a task had to wait for a resource.
- **Average time waiting resource:** Indicates the average time a task had to wait for a resource.
- **Standard deviation:** Indicates the standard deviation of the average time a task had to wait for a resource.
- **Total fixed cost:** Indicates the total cost of performing a task during execution of the simulation.

For Resources

Simulation Results

| Resources | Resource | Usage | Total fixed cost | Total unit cost |
|--------------------|--------------------------|---------|------------------|-----------------|
| Patient Assistance | Call center agent | 40.00 % | 0 | 0 |
| | Administrative assistant | 0.00 % | 0 | 0 |
| | Nurse | 52.41 % | 0 | 0 |
| | Ambulance | 49.84 % | 0 | 0 |
| | Nurse2 | 0.00 % | 0 | 0 |
| | Quick Attention Vehicle | 21.39 % | 0 | 0 |
| | Basic Ambulance | 19.47 % | 0 | 0 |
| | Receptionist | 19.91 % | 0 | 0 |

- **Usage:** Indicates the percentage of time the resource was busy.
- **Total fixed cost:** Indicates the fixed component cost of using the resource.
- **Total unit cost:** Indicates the variable component cost of using the resource.

Example: Performing a resource analysis for the Emergency attendance process

In order to analyze the impact of resources constraints in the Emergency attendance process, the emergency department has decided to perform a resource analysis.

For this analysis the following assumptions have been made:

- The expected time between reports is 5 minutes.
- The simulation will evaluate a period of 1 week.
- Resources can be shared between activities.

The following tables respectively show:

- The resources involved in this process, the current available quantity and the related costs.

| Resource | Quantity | Fixed Cost (US) | Unit Cost (US) |
|--------------------------|----------|-----------------|----------------|
| Call center agent | 2 | 3 | 0 |
| Nurse | 2 | 5 | 0 |
| Fully equipped ambulance | 4 | 30 | 0,4 |
| Basic ambulance | 2 | 25 | 0,3 |
| Quick attention vehicle | 2 | 18 | 0,22 |

| | | | |
|--------------|---|---|---|
| Receptionist | 2 | 3 | 0 |
|--------------|---|---|---|

- The necessary quantity of resources for each activity.

| Activity | Resource | Quantity |
|-----------------------------|--------------------------|----------|
| Receive emergency report | Call center agent | 1 |
| Classify Triage | Nurse | 1 |
| Manage patient entry | Nurse | 1 |
| Pick up patient | Fully equipped ambulance | 1 |
| Arrive at patient place QAV | Basic ambulance | 1 |
| Arrive at patient place BA | Quick attention vehicle | 1 |
| Authorize entry | Receptionist | 1 |

- The cost associated with the performance of each activity.

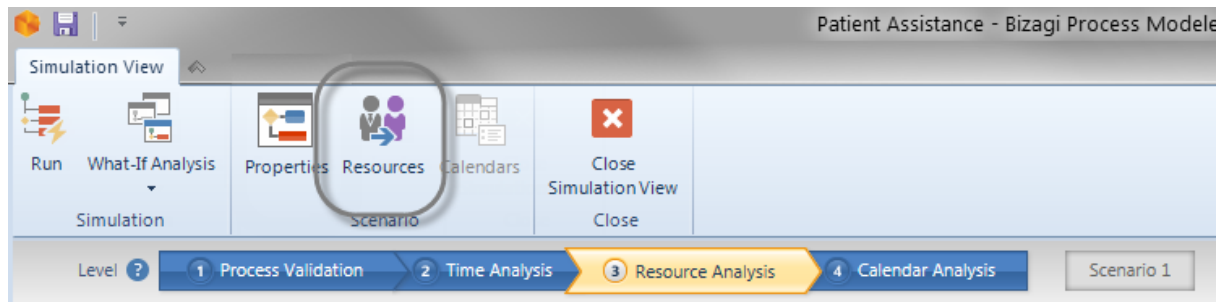
| Activity | Cost (US dollars) |
|-----------------------------|-------------------|
| Receive emergency report | 2 |
| Classify Triage | 1 |
| Manage patient entry | 1 |
| Pick up patient | 0 |
| Arrive at patient place QAV | 0 |
| Arrive at patient place BA | 0 |
| Authorize entry | 1 |

- The estimated processing times for each of the activities

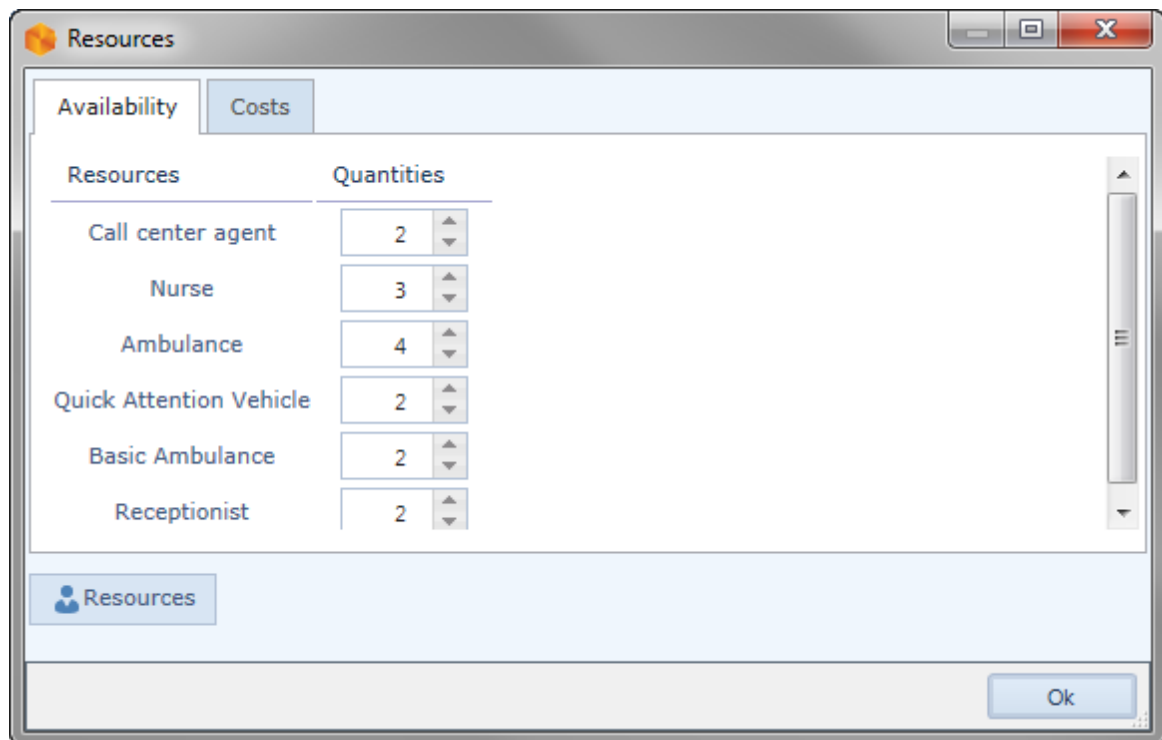
| Activity | Processing time (min) |
|-----------------------------|-----------------------|
| Receive emergency report | 4 |
| Classify Triage | 5 |
| Manage patient entry | 11 |
| Pick up patient | 20 |
| Arrive at patient place QAV | 7 |
| Arrive at patient place BA | 10 |

Define the required input data for this level: Resources, requirements and costs.

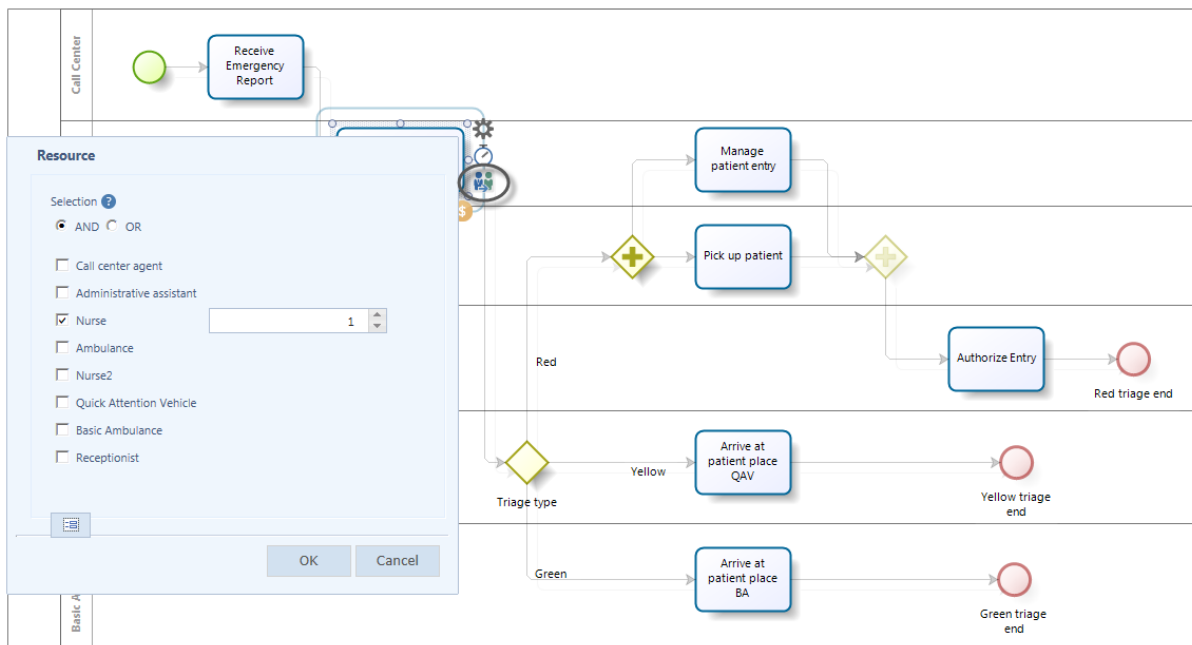
1. Define the resources involved in the process. Create the necessary resources from the Resources option.



2. For each resource define the available quantity, fixed cost and unit cost.

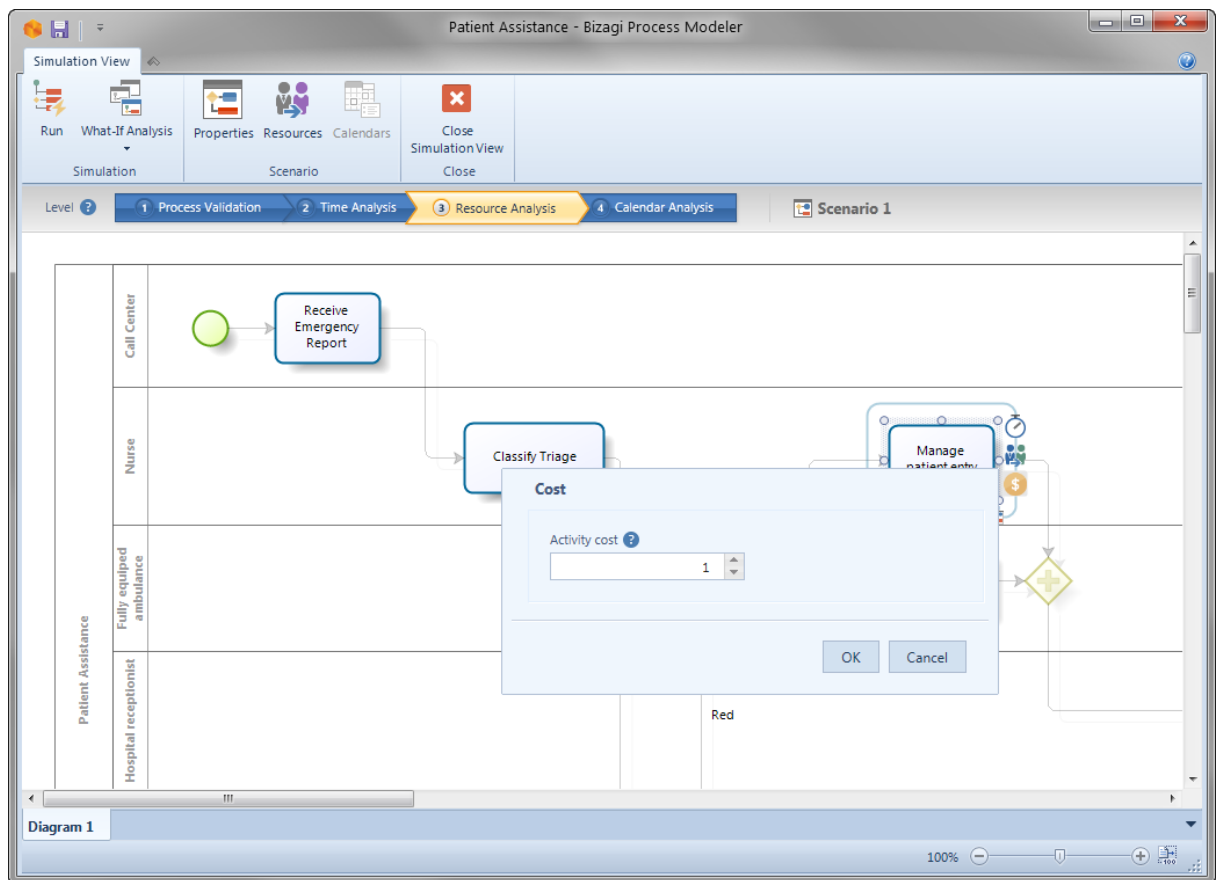


3. Define the resources requirements for each activity. Click the activities and then the *Resources* icon. Set the resource and number of instances to perform the activity. For example, here we are defining that the second activity requires a nurse in order to be performed.

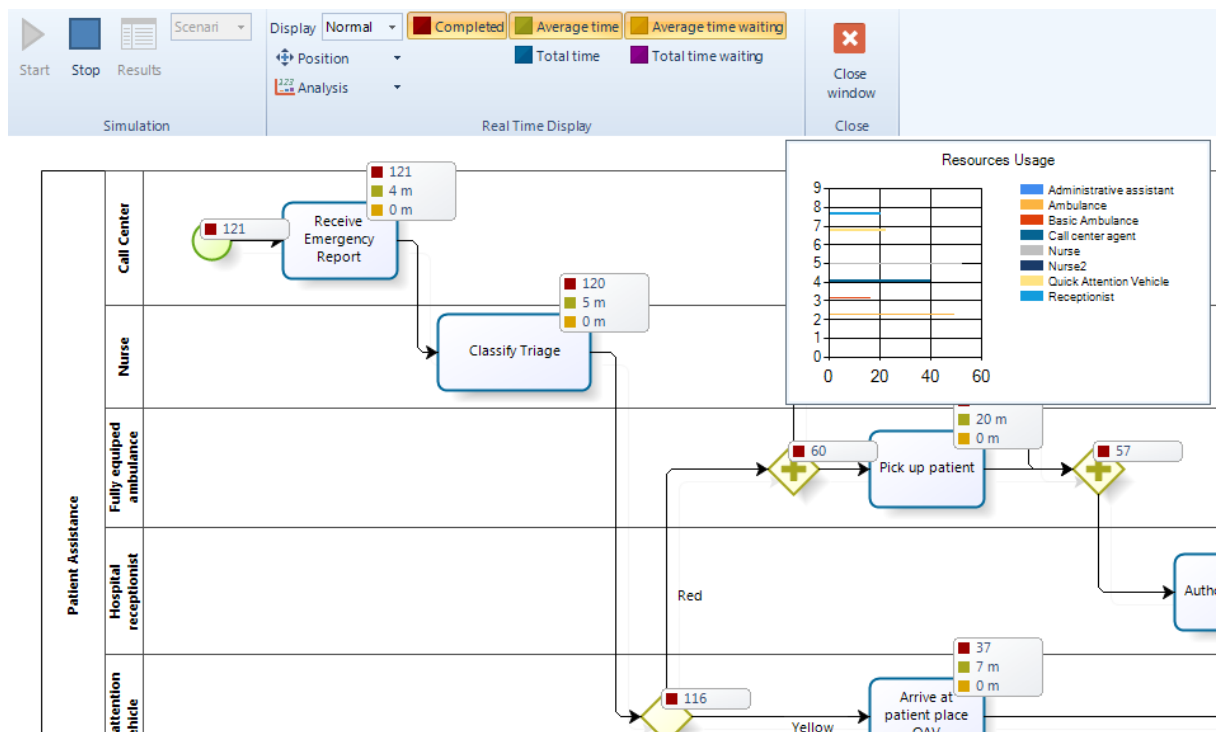


4. Finally, define the cost of performing each activity. Click the activity, select **Cost** and enter the corresponding cost.

Here we are defining the the cost of performing the Manage patient entry activity is 1 dollar. This cost is related to paperwork and calls.



5. Click *Run*, then select *Start* in the new window to execute the simulation. Note the number of completed Events are displayed. When the simulation is finished, select **Results** to view the outcome.



Analyzing the results

As we mentioned before, the results of a resource analysis give us a general insight into the cycle time of the process. Consequently, we can identify how the cycle time is affected.

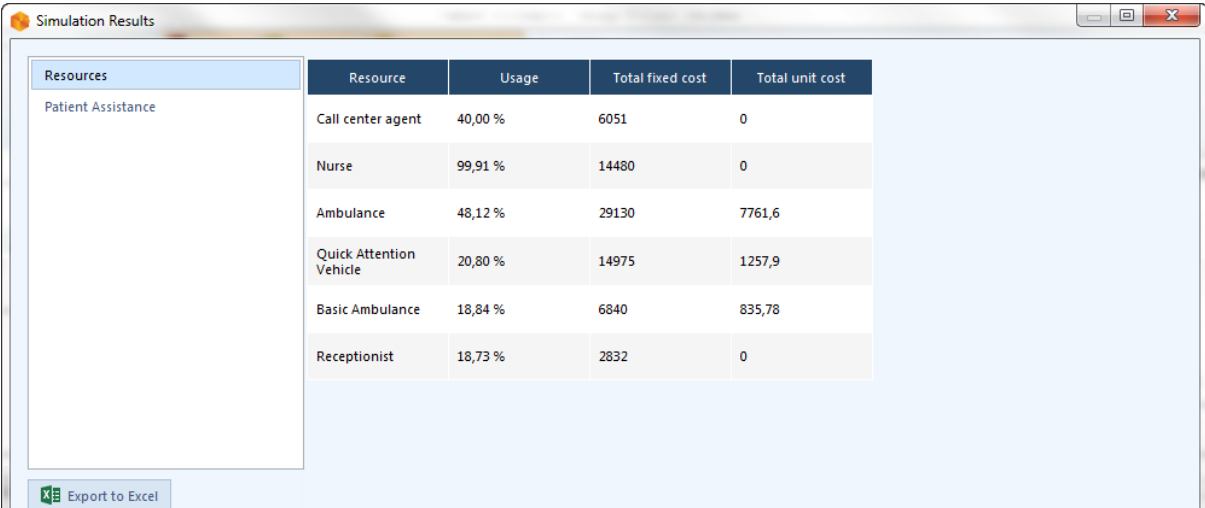
First we analyze the process results.

| Simulation Results | | | | | | | | | | | | |
|--------------------|-----------------------------|-------------|------------------|----------------|-----------|-----------|-----------|------------|----------------------------|----------------------------|--------------------------------|--|
| Resources | Name | Type | Tokens completed | Tokens started | Min. time | Max. time | Avg. time | Total time | Min. time waiting resource | Max. time waiting resource | Avg. time waiting for resource | |
| Patient Assistance | Patient Assistance | Process | 1922 | 2017 | 16 m | 657 m | 204,91 m | 58321 m | | | | |
| | NoneStart | Start event | 2017 | | | | | | | | | |
| | Receive Emergency Report | Task | 2016 | 2017 | 4 m | 4 m | 4 m | 8064 m | 0 | 0 | 0 | |
| | Classify Triage | Task | 1950 | 1952 | 5 m | 331 m | 130,01 m | 253528 m | 0 | 326 m | 125,21 m | |
| | Pick up patient | Task | 970 | 971 | 20 m | 30 m | 20,25 m | 19641 m | 0 | 10 m | 0,25 m | |
| | Authorize Entry | Task | 944 | 944 | 4 m | 4 m | 4 m | 3776 m | 0 | 0 | 0 | |
| | Red triage end | End event | 944 | | | | | | | | | |
| | Arrive at patient place QAV | Task | 599 | 599 | 7 m | 11 m | 7,06 m | 4230 m | 0 | 4 m | 0,06 m | |
| | Arrive at patient place BA | Task | 379 | 380 | 10 m | 15 m | 10,06 m | 3811 m | 0 | 5 m | 0,06 m | |
| | Yellow triage end | End event | 599 | | | | | | | | | |
| | Green triage end | End event | 379 | | | | | | | | | |
| | Triage type | Gateway | 1950 | 1950 | | | | | | | | |
| | Manage patient entry | Task | 944 | 944 | 11 m | 336 m | 137,2 m | 129519 m | 0 | 325 m | 126,2 m | |
| | ParallelGateway | Gateway | 971 | 971 | | | | | | | | |
| | ParallelGateway | Gateway | 944 | 970 | | | | | | | | |

Compared with the best case scenario achieved in the previous level, the inclusion of resources constraints has significantly increased the cycle times.

- The minimum time remains at 16 minutes but the maximum increased to 657 minutes and now the average is 204,91 minutes. The previous results only had an average waiting time of 25,06 minutes.
- As is evident, the processing times for each activity have changed. Now, they reflect delays. The highest average processing times are recorded at *Classify triage* and *Manage patient*. The average waiting times confirm there is a problem in those activities. Possibly, resources used in them are not enough.

Now let's analyze the resources results.



The screenshot shows a window titled "Simulation Results" with a sidebar on the left containing a "Resources" section with "Patient Assistance" listed. The main area displays a table with the following data:

| Resource | Usage | Total fixed cost | Total unit cost |
|-------------------------|---------|------------------|-----------------|
| Call center agent | 40,00 % | 6051 | 0 |
| Nurse | 99,91 % | 14480 | 0 |
| Ambulance | 48,12 % | 29130 | 7761,6 |
| Quick Attention Vehicle | 20,80 % | 14975 | 1257,9 |
| Basic Ambulance | 18,84 % | 6840 | 835,78 |
| Receptionist | 18,73 % | 2832 | 0 |

Below the table is an "Export to Excel" button.

- The usage of the resources indicates some sub and over-utilization.
- For this case we confirm our hypothesis about a possible problem of resources capacity.
- The nurse who performs the *Classify triage* and *Manage patient reception* has a usage of 99,91%. This means she is utilized at full capacity and tokens have to wait until she becomes available. The emergency department should consider increasing the number of triage nurses to reduce service and waiting times, and thereby reducing the cycle time.

We'll see if the situation gets better including a new nurse in the available resources. Now we would have three nurses.

Click *Run* to simulate the new scenario.

Analyze the new results:

| Simulation Results | | | | | | | | | | | |
|--------------------|-----------------------------|-------------|------------------|----------------|-----------|-----------|-----------|------------|----------------------------|----------------------------|--------------------------------|
| Resources | Name | Type | Tokens completed | Tokens started | Min. time | Max. time | Avg. time | Total time | Min. time waiting resource | Max. time waiting resource | Avg. time waiting for resource |
| Patient Assistance | Patient Assistance | Process | 2011 | 2017 | 16 m | 35 m | 25,26 m | 61436 m | | | |
| | NoneStart | Start event | 2017 | | | | | | | | |
| | Receive Emergency Report | Task | 2016 | 2017 | 4 m | 4 m | 4 m | 8064 m | 0 | 0 | 0 |
| | Classify Triage | Task | 2015 | 2016 | 5 m | 7 m | 5,2 m | 10474 m | 0 | 2 m | 0,2 m |
| | Pick up patient | Task | 1004 | 1005 | 20 m | 20 m | 20 m | 20080 m | 0 | 0 | 0 |
| | Authorize Entry | Task | 1003 | 1004 | 4 m | 4 m | 4 m | 4012 m | 0 | 0 | 0 |
| | Red triage end | End event | 1003 | | | | | | | | |
| | Arrive at patient place QAV | Task | 616 | 617 | 7 m | 7 m | 7 m | 4312 m | 0 | 0 | 0 |
| | Arrive at patient place BA | Task | 392 | 393 | 10 m | 11 m | 10 m | 3921 m | 0 | 1 m | 0 |
| | Yellow triage end | End event | 616 | | | | | | | | |
| | Green triage end | End event | 392 | | | | | | | | |
| | Triage type | Gateway | 2015 | 2015 | | | | | | | |
| | Manage patient entry | Task | 1005 | 1005 | 11 m | 15 m | 11,06 m | 11113 m | 0 | 4 m | 0,06 m |
| | ParallelGateway | Gateway | 1005 | 1005 | | | | | | | |
| | ParallelGateway | Gateway | 1004 | 1005 | | | | | | | |

- Introducing another resource brings us closer to the best case scenario with no process delays. The minimum time remains at 16 minutes, the maximum now becomes 35 minutes and the average 25,26
- The results also show waiting times close to 0 in the activities where they exist. The current resources are sufficient to avoid critical delays.

The above can be confirmed from the resources results.

| Simulation Results | | | | |
|--------------------|-------------------------|---------|------------------|-----------------|
| Resources | Resource | Usage | Total fixed cost | Total unit cost |
| Patient Assistance | Call center agent | 40,00 % | 6051 | 0 |
| | Nurse | 69,88 % | 15105 | 0 |
| | Ambulance | 49,84 % | 30150 | 8038,4 |
| | Quick Attention Vehicle | 21,39 % | 15425 | 1293,9 |
| | Basic Ambulance | 19,47 % | 7074 | 863,72 |
| | Receptionist | 19,91 % | 3012 | 0 |

- Usages are acceptable. Nurses now have a utilization of 69,88%.
- From the resources cost perspective, there was a total cost of 84.163 US. The new cost of 86.986 US includes the additional nurse. The increase of 2.823 US offsets the benefit in reducing the average waiting time to 179,5 minutes.
- There may be other ways to reduce the cost even further and to improve resource utilization, but for now we can accept the state of affairs.

Level 4 - Calendar analysis

Overview

In addition to the resources constraints discussed in the previous level, we should also consider the effect of resources availability over time to obtain a better understanding of true process performance.

In real scenarios, processes are subjected to ever changing conditions in the availability of resources. Holidays, weekends, shifts and breaks restrict and define the true performance of a process.

This level predicts how a process will perform during dynamic periods of time, such as shifts, days schedules or weeks.

At the end of this level you will obtain more accurate information on:

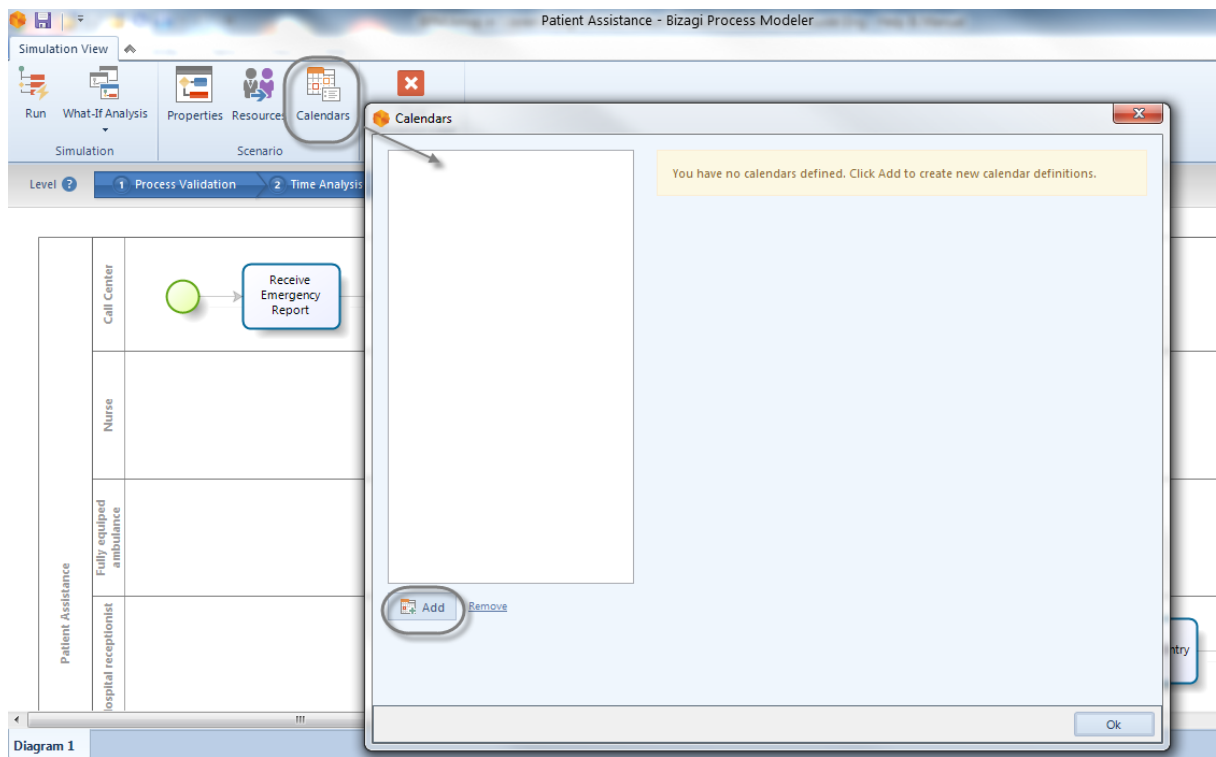
- Sub- or over-utilization of resources.
- Total resources costs.
- Total activity costs.
- Delays (time an activity waits for a resource).
- Expected cycle time.

Defining the input data required for this level

Additional to the information required in the previous level, the following must be defined in the *Calendar Analysis*:

Calendars: A Calendar defines resource capacity over certain periods of times. They define the schedules, shifts, holidays and other time constraints to reflect the process in real life.

To create a Calendar click the *Calendars* option. Click *Add calendar*.



Defining a Calendar is done in the same way as Outlook. Thus, you can configure time shifts or longer periods of time.

In the Calendar configuration you find the following options:

- **Name:** Defines the name of the calendar. It should be short and clear in order to allow identifying the period of time it represents. For example night shift, cooffe break, lunch hour etc.
- **Start Time:** Defines the starting time of the calendar.
- **Duration:** Defines the total duration of the calendar.
- **Recurrence Pattern:** Defines the frequency with which a Calendar will be repeated. It can be daily, weekly, monthly or yearly.
- **Range of recurrence:** Defines the period of time for which the calendar applies.
- **Start of recurrence:** Defines start date of the period of time for which the calendar applies.
- **End of recurrence** Defines the end date of the period of time in which the calendar applies. It can also be defined in terms of number of recurrences.

Click *OK* to save the changes.

Calendars assignment:

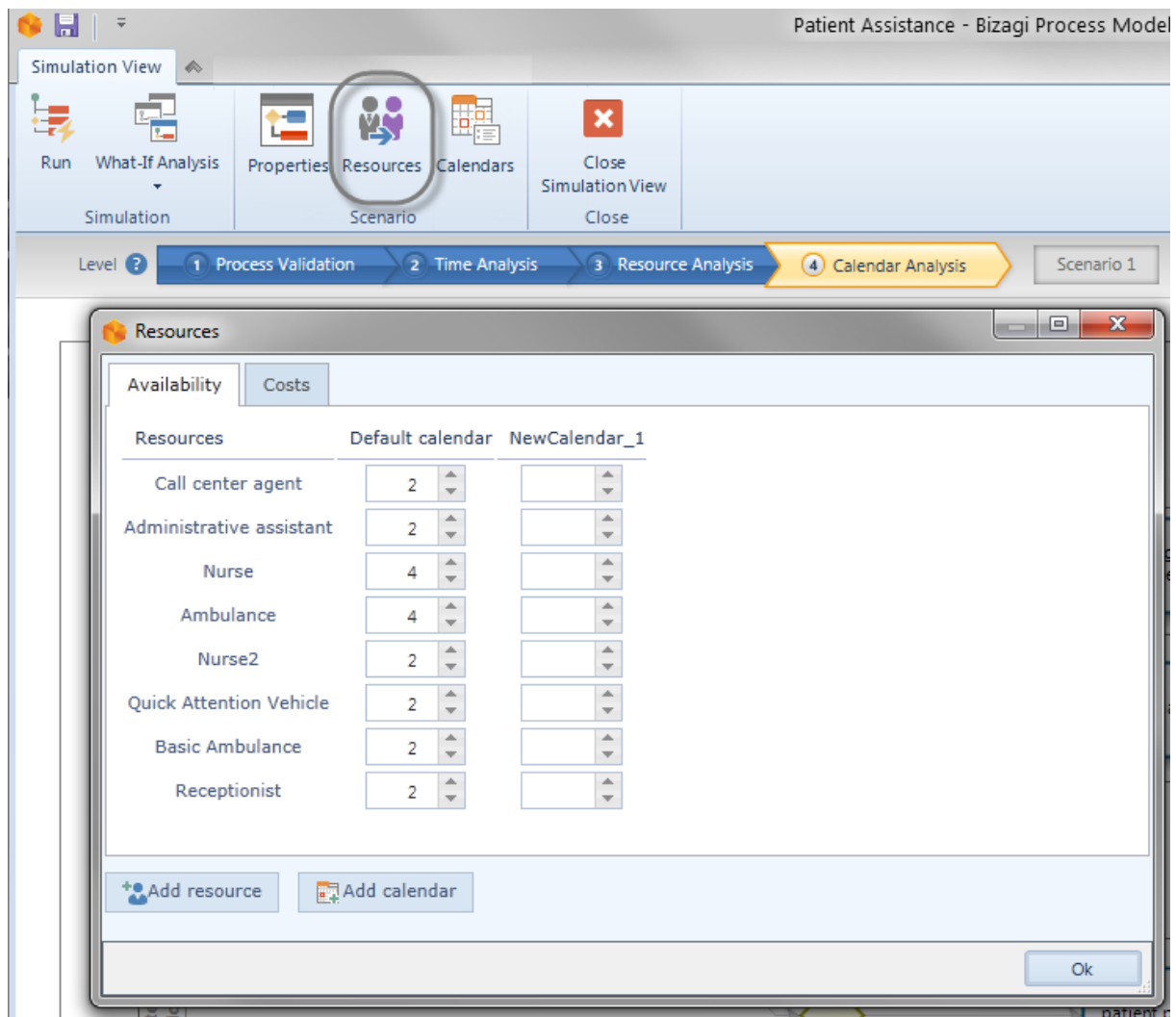
Additionally in this level, you have to define the availability of resources for each defined calendar.

To define the calendars assignment click the *Resources* option

For each Resource (row) you must define the availability for each calendar (column).

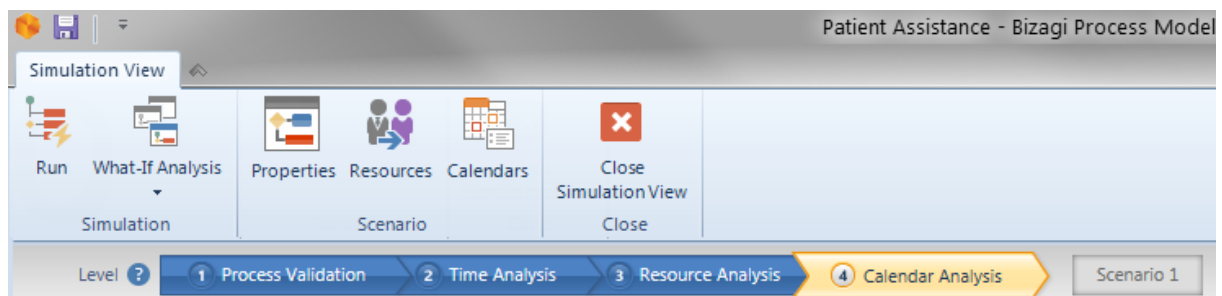
Keep in mind that if you leave a Calendar blank, Bizagi will assume the availability value of a resource is the one defined in the *Default Calendar*.

This calendar includes the same resources availability defined in Level 3 (Resources Analysis).

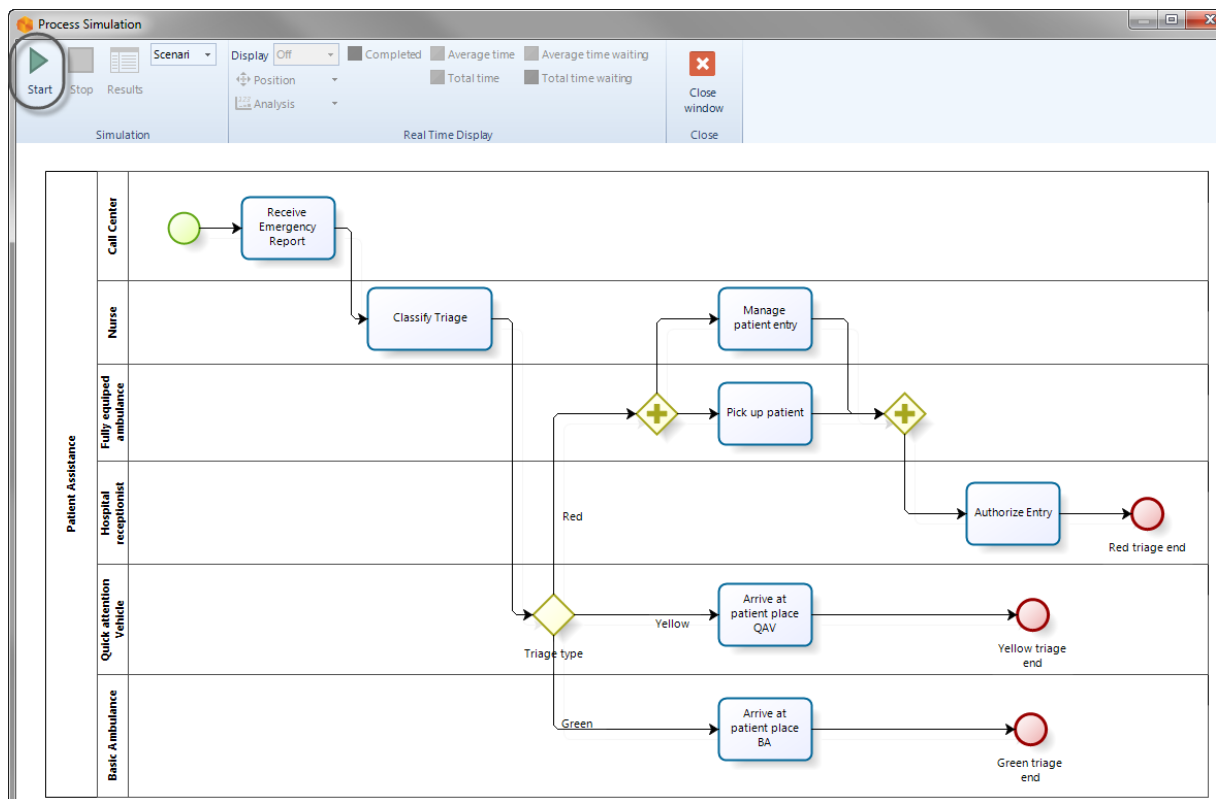


Running the simulation

Once the required data for this level have been defined, click the **Run** button to execute the simulation.



In the new window, click **Start** to run the simulation.



When running a simulation, the following analysis data will display.

- Status of resource usage
- Number of tokens completed
- Average time per activity
- Total processing time for each activity
- Average waiting time for each activity

Results

When the simulation is complete, select **Results** to view the outcome. For a calendar analysis , the results of the simulated outcome will contain the following information:

Resources (All resources)

Tab for each Resource

- **Name:** Identifies the specific BPM shape for which the results are displayed.
- **Type:** Identifies the element type of the BPM shape.
- **Tokens completed:** Indicates how many tokens were processed (instances).
- **Tokens started:** Indicates how many tokens arrived at the shape.
- **Minimum time:** Indicates the minimum processing time of the shape.
- **Maximum time:** Indicates the maximum processing time of the shape.
- **Average time:** Indicates the average processing time of the shape.
- **Total time:** Indicates the total time employed to process the shape.
- **Min. time waiting:** Indicates the minimum waiting time for the shape.
- **Max. time waiting:** Indicates the maximum waiting time for the shape.

- **Avg. time waiting:** Indicates the average waiting time for the shape.
- **Standard deviation waiting:** Indicates the standard deviation of the waiting time for the shape.
- **Total time waiting:** Indicates the total waiting time for the shape.
- **Total fixed cost:** Indicates the total fixed cost for the shape.

Example: Performing a calendar analysis for the Emergency attendance process

In order to analyze the impact of calendars in the Emergency attendance process, the Emergency department has decided to perform a Calendar analysis.

The shifts for the process will be as follow:

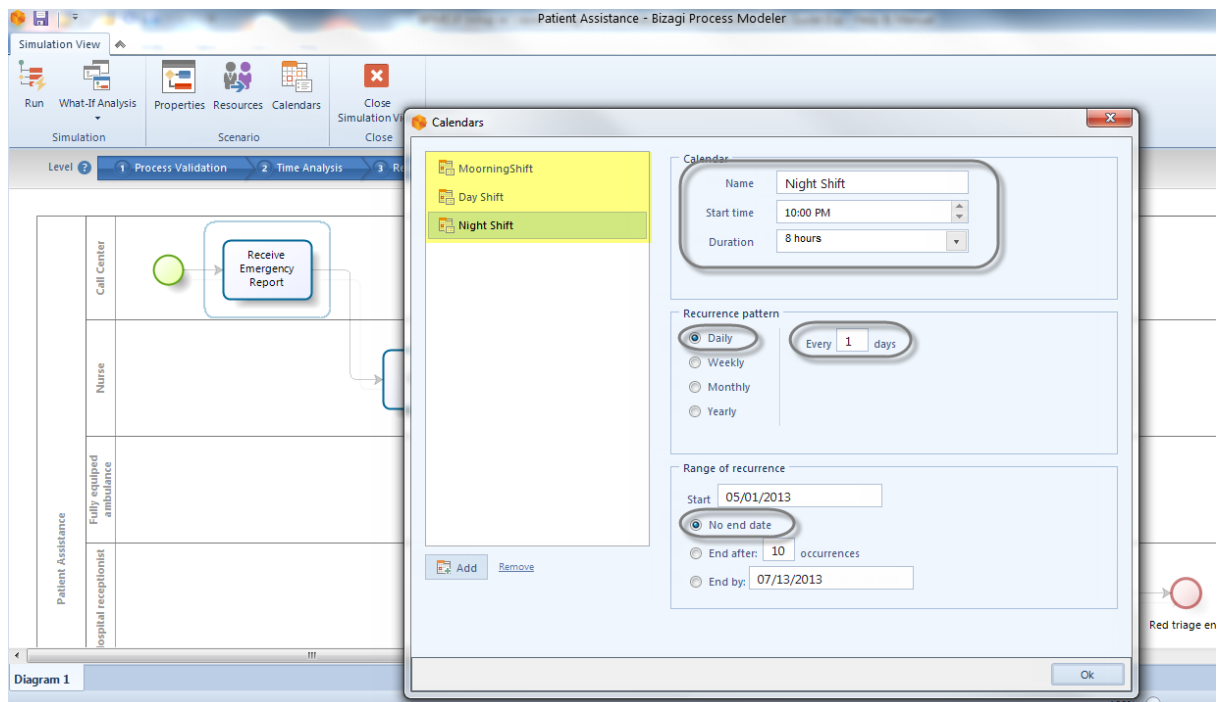
| Resource | Morning shift (6:00 am - 2:00 pm) | Day shift (2:00 pm - 10:00 pm) | Night shift (10:00 pm - 6:00 am) |
|--------------------------|------------------------------------|---------------------------------|-----------------------------------|
| Call center agent | 2 | 2 | 1 |
| Nurse | 3 | 3 | 3 |
| Fully equipped ambulance | 4 | 4 | 4 |
| Basic ambulance | 2 | 1 | 2 |
| Quick attention vehicle | 1 | 2 | 1 |
| Receptionist | 2 | 1 | 1 |

1. Create the three calendars (working shifts).

Click the *Calendars* and add a new Calendar.

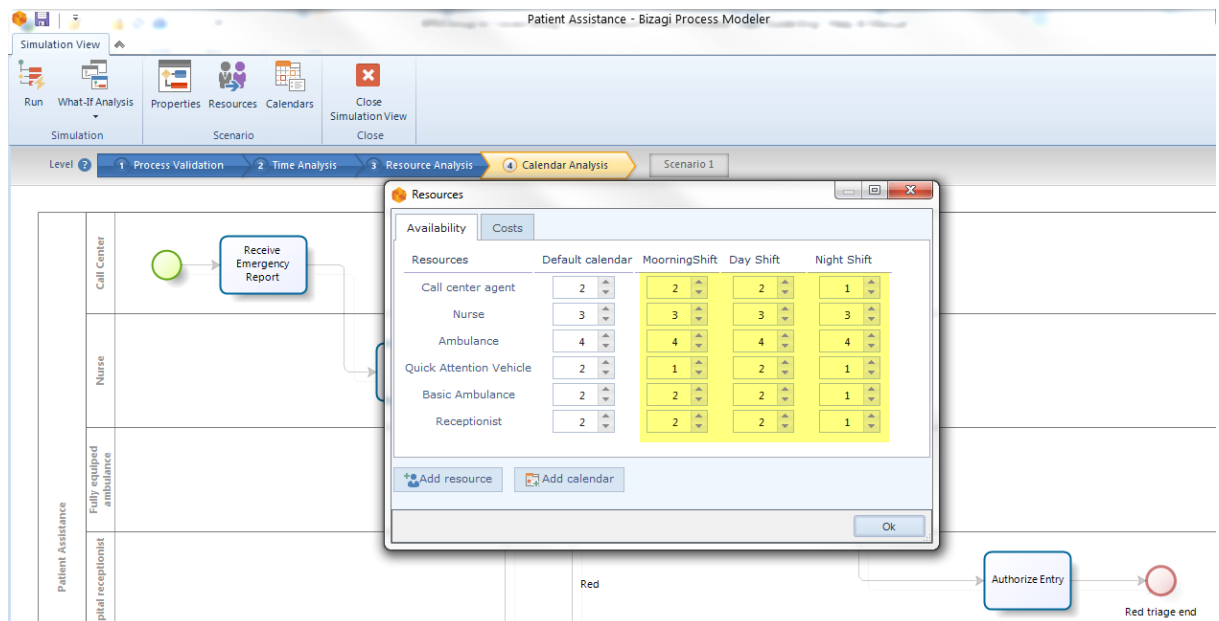
We are going to create the Night shift. In the Calendar configuration options enter the following information:

- **Name:** Type Night Shift
- **Start Time:** This calendar starts at 10:00 pm (see table above) so this is the start time
- **Duration:** This calendar starts at 10:00 pm and finishes at 6:00 am so the calendar duration is 8 hours.
- **Recurrence Pattern:** This calendar is repeated everyday so select Daily and type 1 in the alongside field.
- **Start of recurrence:** This calendar applies always so the start date is the same start date of the simulation.
- **End of recurrence** This calendar applies always so it has no end date.

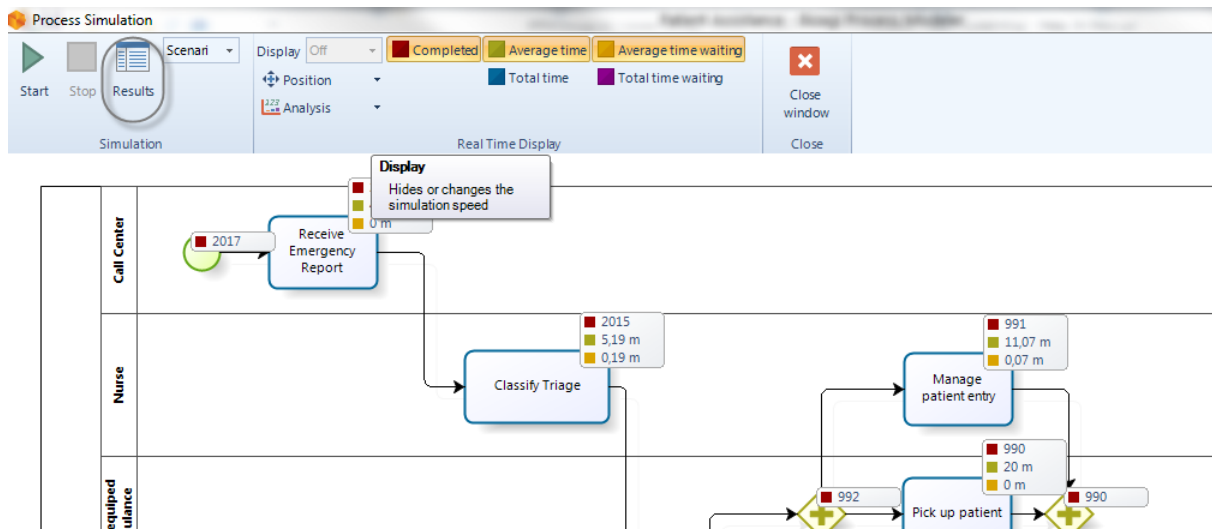


Repeat the procedure for the morning and day shift calendars.

2. Through the *Resources* option, set the availability of resource for each calendar created previously.



3. Click the *Run* button. When the simulation is finished, select **Results** to view the outcome.



Analyzing the results

Recall that incorporating ever changing conditions in the resource availability gives us a better understanding of true process performance.

The results of the calendar analysis will reflect this change. Let us analyze them.

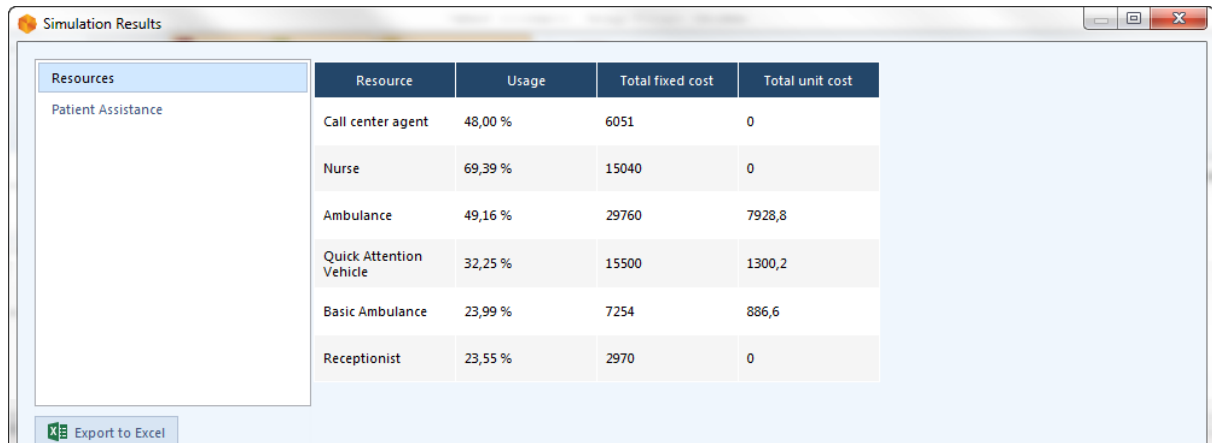
First we examine the process results:

| Simulation Results | | | | | | | | | | | | |
|--------------------|-----------------------------|-------------|------------------|----------------|-----------|-----------|-----------|------------|----------------------------|----------------------------|--------------------------------|--|
| Resources | Name | Type | Tokens completed | Tokens started | Min. time | Max. time | Avg. time | Total time | Min. time waiting resource | Max. time waiting resource | Avg. time waiting for resource | |
| Patient Assistance | Patient Assistance | Process | 2011 | 2017 | 16 m | 39 m | 25,48 m | 61077 m | | | | |
| | NoneStart | Start event | 2017 | | | | | | | | | |
| | Receive Emergency Report | Task | 2016 | 2017 | 4 m | 4 m | 4 m | 8064 m | 0 | 0 | 0 | |
| | Classify Triage | Task | 2015 | 2016 | 5 m | 7 m | 5,19 m | 10449 m | 0 | 2 m | 0,19 m | |
| | Pick up patient | Task | 990 | 992 | 20 m | 21 m | 20 m | 19802 m | 0 | 1 m | 0 | |
| | Authorize Entry | Task | 989 | 990 | 4 m | 4 m | 4 m | 3956 m | 0 | 0 | 0 | |
| | Red triage end | End event | 989 | | | | | | | | | |
| | Arrive at patient place QAV | Task | 619 | 620 | 7 m | 15 m | 7,59 m | 4695,58 m | 0 | 8 m | 0,58 m | |
| | Arrive at patient place BA | Task | 403 | 403 | 10 m | 30 m | 10,74 m | 4327,58 m | 0 | 20 m | 0,74 m | |
| | Yellow triage end | End event | 619 | | | | | | | | | |
| | Green triage end | End event | 403 | | | | | | | | | |
| | Triage type | Gateway | 2015 | 2015 | | | | | | | | |
| | Manage patient entry | Task | 991 | 992 | 11 m | 14 m | 11,07 m | 10974 m | 0 | 3 m | 0,07 m | |
| | ParallelGateway | Gateway | 992 | 992 | | | | | | | | |
| | ParallelGateway | Gateway | 990 | 991 | | | | | | | | |

- The average time a patient waits for assistance suffered a little increase from 25,06 minutes to 25,48 minutes. This is not significant.
- The increase from 35 to 39 minutes in the maximum time can be explained by the existing waiting times in some of the activities of the process that were not present in the previous level.

- The *Arrive at patient place BA* task has a maximum waiting time of 20 min. It could be critical for a patient, however the average waiting time is 0,74 min. It is clear that high waiting times in this task are rare.
- Despite the presence of waiting times, they are not regarded critical.

The resources usage results will highlight any critical capacity problems.



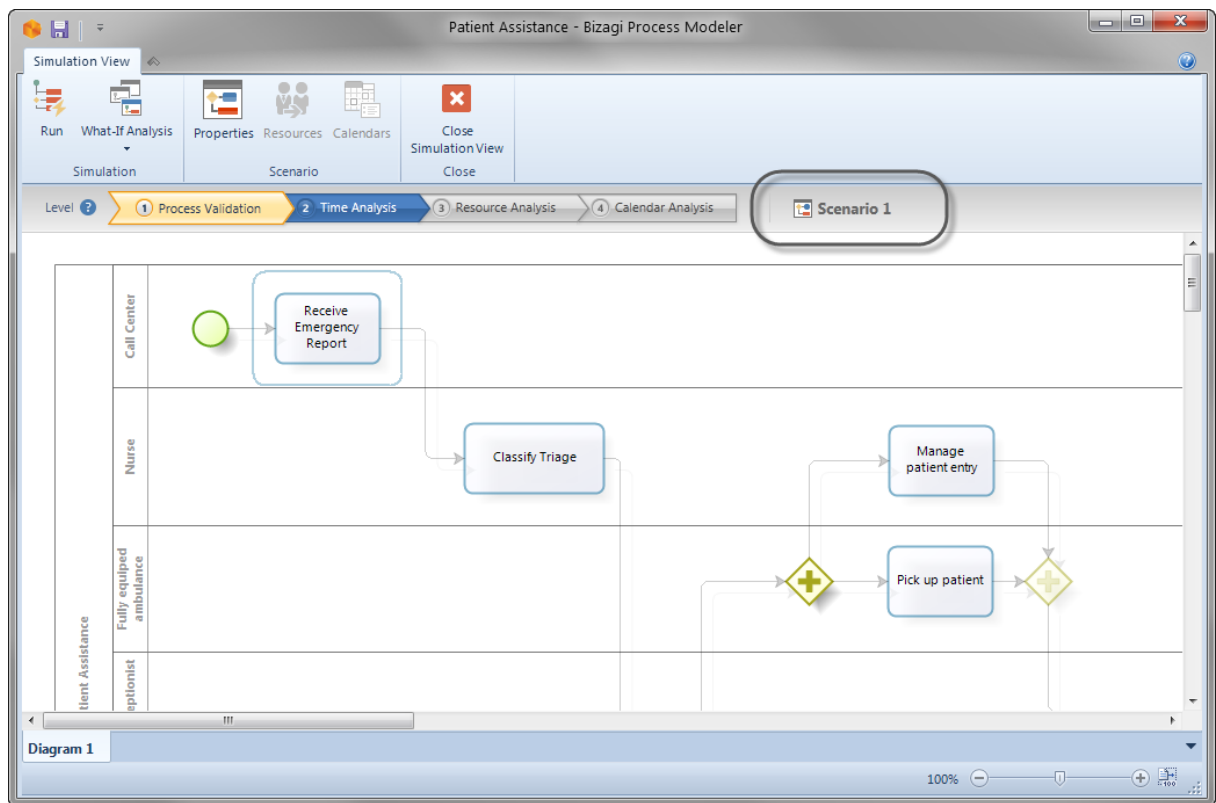
| Resource | Usage | Total fixed cost | Total unit cost |
|-------------------------|---------|------------------|-----------------|
| Call center agent | 48,00 % | 6051 | 0 |
| Nurse | 69,39 % | 15040 | 0 |
| Ambulance | 49,16 % | 29760 | 7928,8 |
| Quick Attention Vehicle | 32,25 % | 15500 | 1300,2 |
| Basic Ambulance | 23,99 % | 7254 | 886,6 |
| Receptionist | 23,55 % | 2970 | 0 |

- The highest usage is for the Nurse. Remember that this resource performs two activities in the process: *Classify triage* and *Manage patient entry*.
- From the Process results we can conclude that the usage of nurses is not at full capacity since the waiting times of the associated activities are not significant.
- Assigning shifts and resources did not overtly affect the process in general; therefore, we can conclude that the allocation is adequate for our purpose.

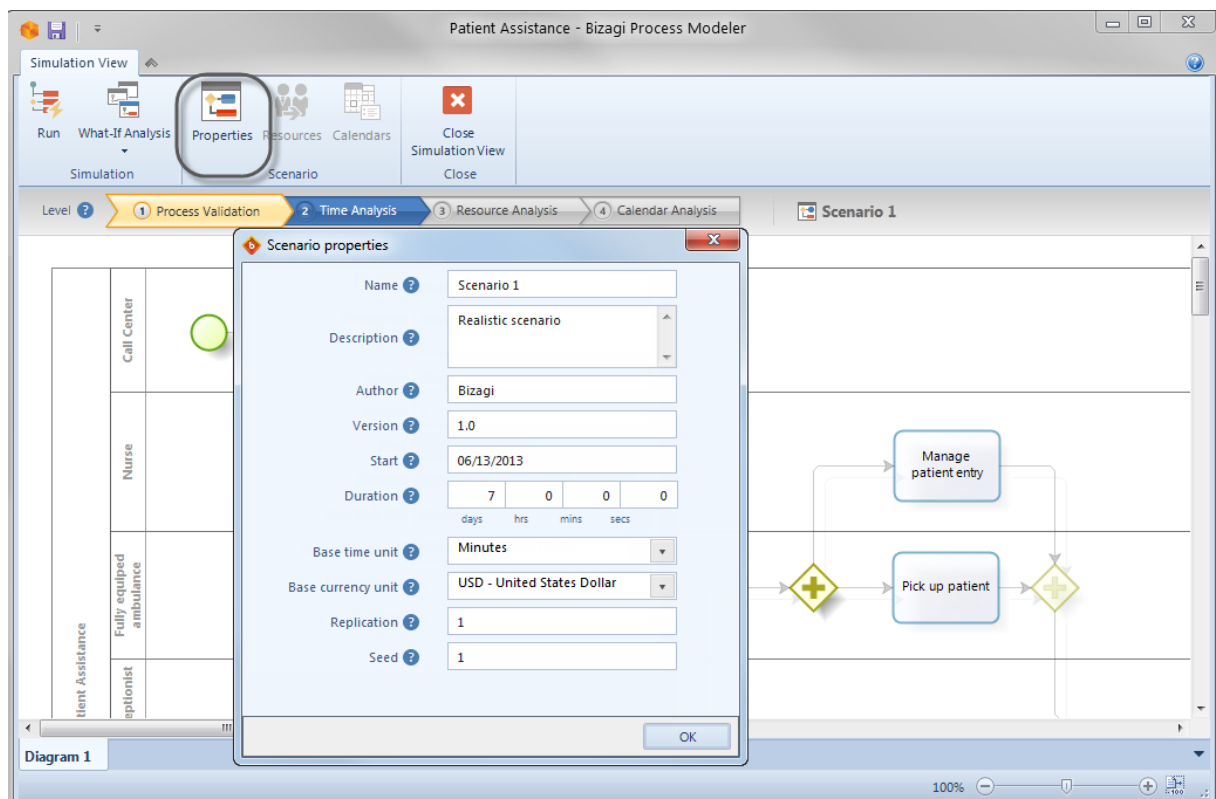
Scenarios

Bizagi Simulation allows you to create multiple scenarios for your process model, to analyze different combinations of data input and observe many possible outcomes. Scenarios are completely independent from one another, from the definition of the scenario itself to the data included in each shape of the model.

When you are in Simulation View, the model will display a default scenario created by Bizagi. All information entered belongs to that specific scenario. The name of the process scenario being simulated is displayed above the model:



Click the *Properties* button in the ribbon to manage the scenario.



For each scenario provide the following information:

- **Name:** The name of the scenario. It should be clear and descriptive to easily identify the simulation conditions.
- **Description:** A detailed description of the new assumptions and changes made to the process.
- **Author:** The person or group that created the scenario.
- **Version:** The version number of the scenario.
- **Start:** Date on which the simulation starts.
- **Duration:** Period of time during which the process will be simulated.
- **Base Time units:** The units in which time metrics and results will be displayed.
- **Base currency unit:** The units in which cost metrics and results will be displayed.
- **Replication:** Number of simulations for the given scenario.
- **Seed:** Value of the seed used to generate random numbers.

Note:

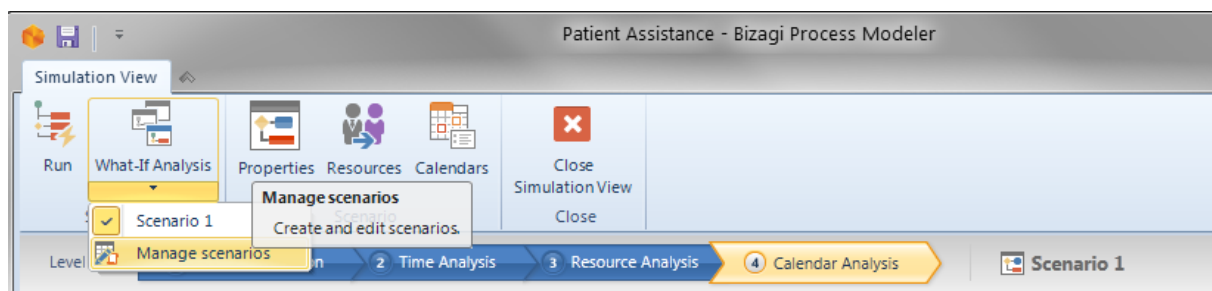
We recommend using 30 replications to make sure the simulation reaches a stable state. For the replications to take place, keep in mind that you should run the [What-If analysis](#) which provides direct results (instead of using the graphical simulation with Real-time display at the Run option). Notice that you may select only 1 scenario, to run the 30 replications.

Note:

The simulation will execute according to the duration defined disregarding the [max arrival count](#). If the max arrival count is reached and the duration is not, the resources will remain idle and the results may not reflect the reality. If no duration is defined, the default duration is 30 days.

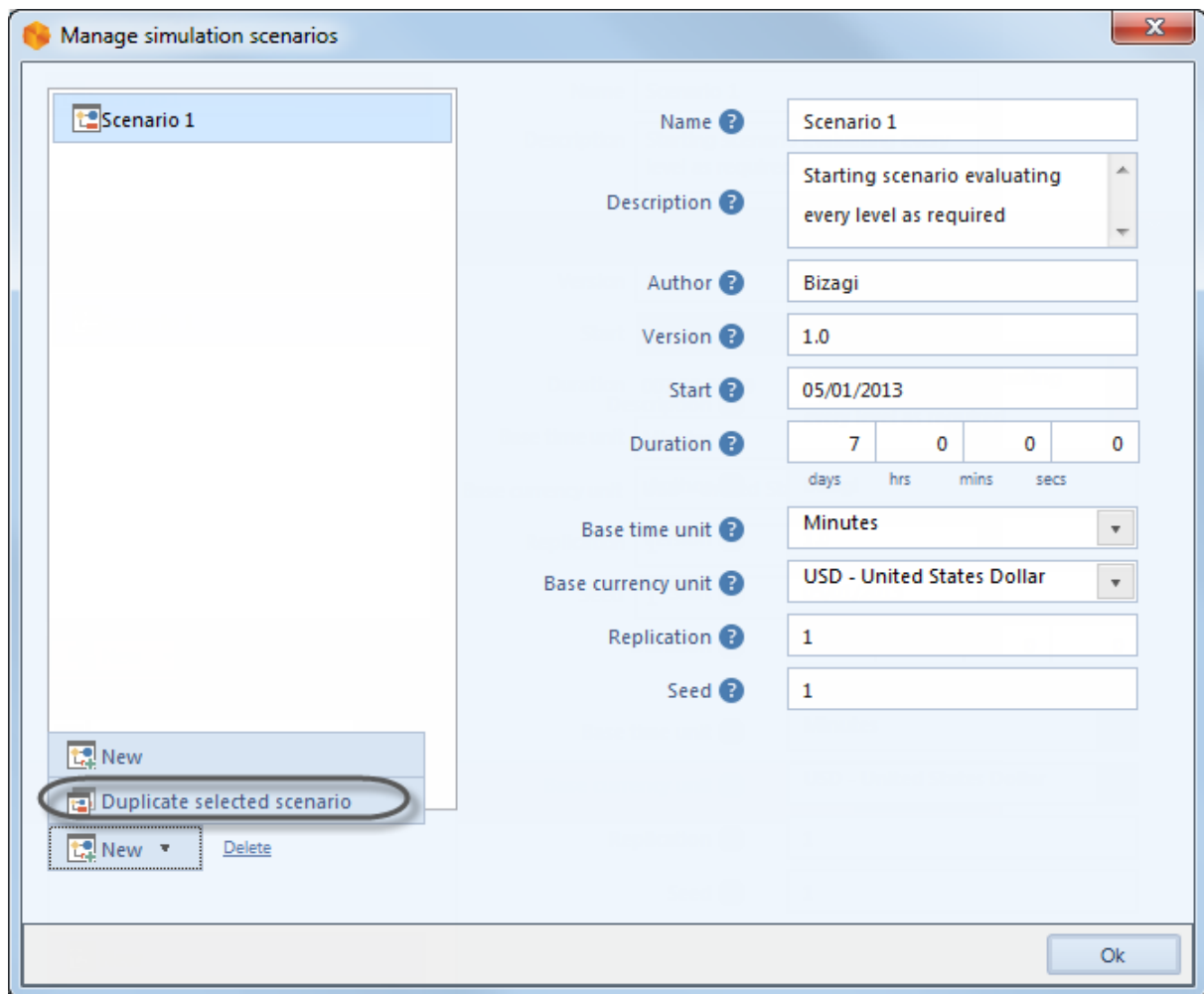
Create scenarios

To create a new what-if scenario, select the *What if* option (found in the Simulation group on the ribbon) and select *Manage scenarios*.

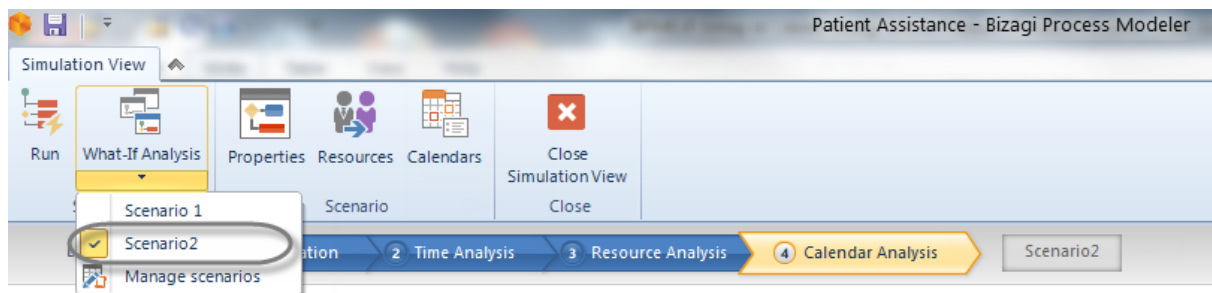


Click *New*. Two actions are available:

- **Duplicate selected scenario:** Creates a copy of the current scenario with the same parameters configurations (number of resources, processing time, calendars etc).
- **Blank scenario:** Creates a scenario with blank simulation parameters.



Edit the new scenario to add specific information to your activities.



What If analysis

What if analysis is a powerful tool for improvement that evaluates how strategic, tactical or operational changes may impact the business . Through different *scenarios* you will be able to perform a true-to-life analysis of your processes without putting your business operation at risk.

Bizagi allows you to easily carry out what-if analyses on your processes to evaluate, understand and predict the effects of your decisions over given performance measures. You will be able to perform *What if* analysis in any of the simulation levels.

You will be able to answer questions like:

- How would the processing time of a case decrease if the number of available resources is doubled?
- What would be the cost/benefit rate of reducing the process time in a specified activity?
- What would be the effect of altering the working shift configuration in the operational cost and service level?

The reports generated in *What if* analysis will display the results of all scenarios to be easily compared.

Note:

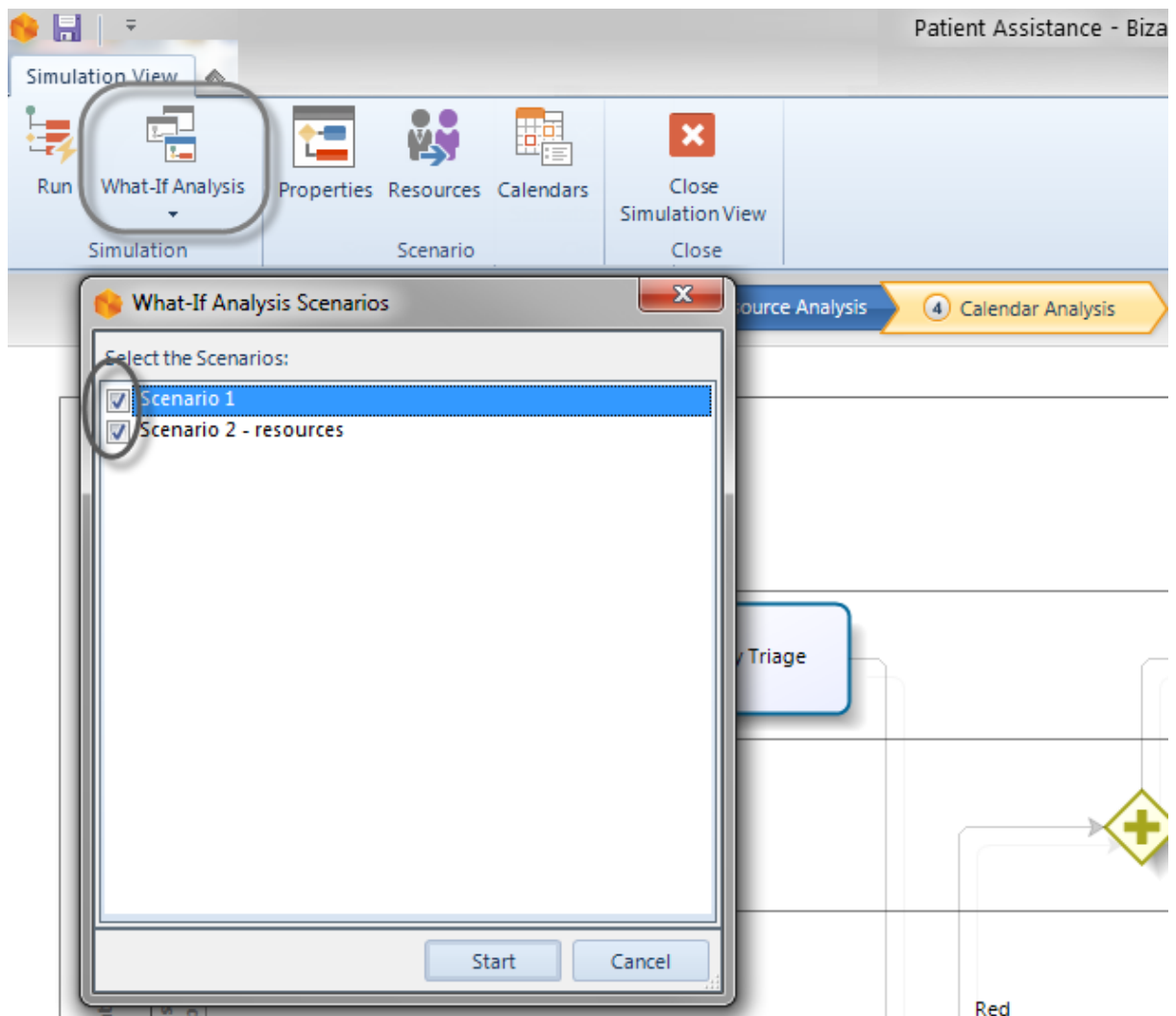
We recommend using 30 replications to make sure the simulation reaches a stable state. For the replications to take place, keep in mind that you should run the What-If analysis which provides direct results (instead of using the graphical simulation with Real-time display at the Run option). Notice that you may select only 1 scenario, and in this example we used 100 replications.

Using What if analysis

To perform a what-if analysis, first create the desired scenarios and then run the simulation, selecting the scenarios for comparison.

Compare scenarios

When each scenario with its relevant data has been created, click *What if* and mark the scenarios you wish to compare. Thereafter, run the simulation to generate the reports.



The Report will compare the scenarios, including all information for the selected analysis level. For readability, disparities are highlighted in color.

We recommend comparing two scenarios at a time; with many scenarios the results evaluation may become too complex.

What if analysis example

Based on the [calendar analysis example](#), we will reduce the number of resources for all shifts and see if the processing times are affected.

To do this, we will create an additional scenario by duplicating the original one:

Manage simulation scenarios

Scenario 1
Scenario 2 -Resorces

Name ? Scenario 2 -Resorces

Description ? Scenario to evaluate changing in resources availability

Author ? Bizagi

Version ? 1.0

Start ? 05/01/2013

Duration ? 7 0 0 0
days hrs mins secs

Base time unit ? Minutes

Base currency unit ? ARS - Argentine Peso

Replication ? 1

Seed ? 1

New Delete

Ok

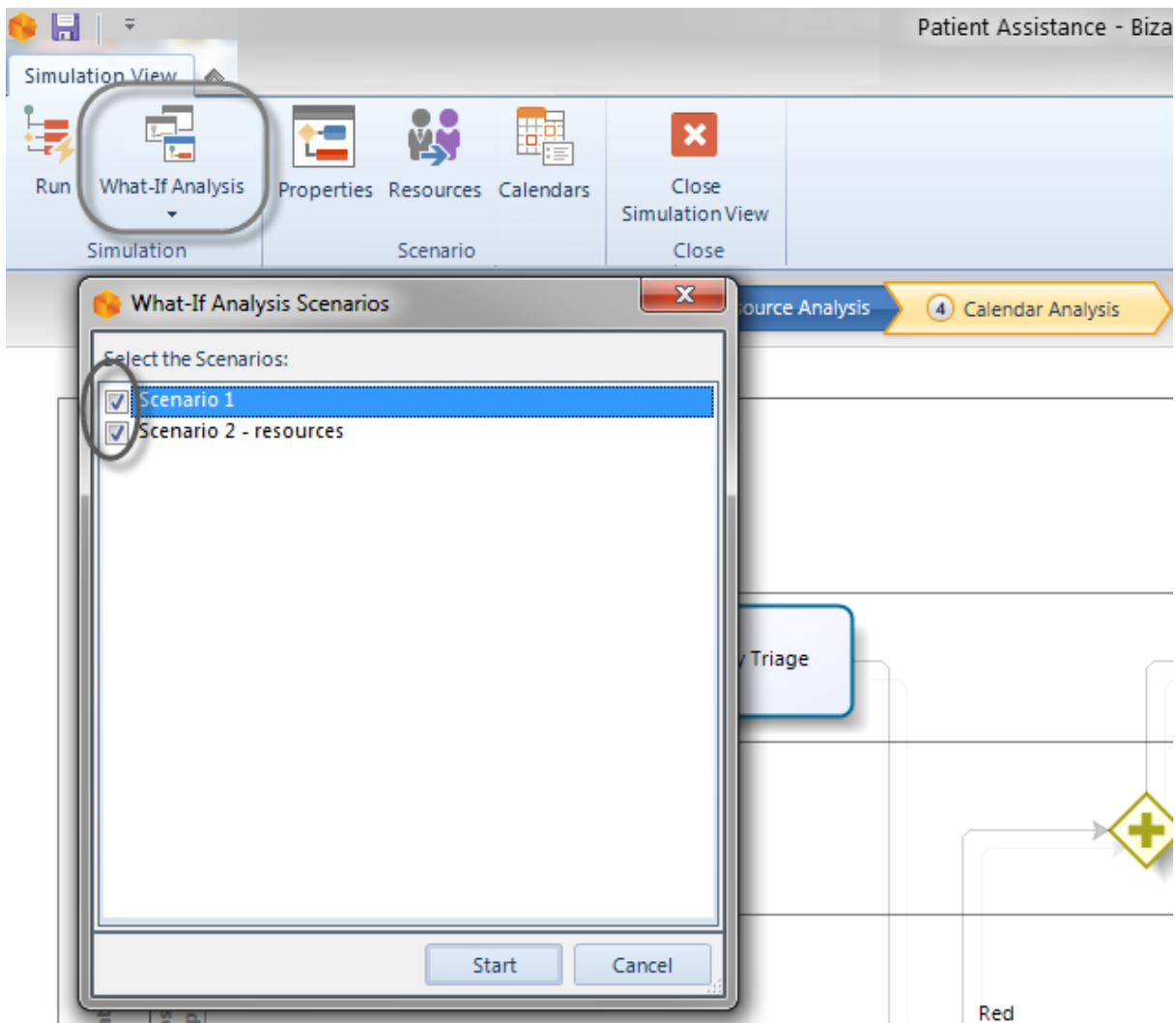
In Scenario 1 the resources availability is:

| Resource | Morning shift (6:00 am - 2:00 pm) | Day shift (2:00 pm - 10:00 pm) | Night shift (10:00 pm - 6:00 am) |
|--------------------------|-----------------------------------|--------------------------------|----------------------------------|
| Call center agent | 2 | 2 | 1 |
| Nurse | 3 | 3 | 3 |
| Fully equipped ambulance | 4 | 4 | 4 |
| Basic ambulance | 2 | 1 | 2 |
| Quick attention vehicle | 1 | 2 | 1 |
| Receptionist | 2 | 1 | 1 |

In Scenario 2 the resources availability will be altered as follows:
We reduced Nurse, Fully equipped ambulance and Receptionist. We increased basic ambulance and quick attention vehicle.

| Resource | Morning shift (6:00 am - 2:00 pm) | Day shift (2:00 pm - 10:00 pm) | Night shift (10:00 pm - 6:00 am) |
|--------------------------|-----------------------------------|--------------------------------|----------------------------------|
| Call center agent | 2 | 2 | 1 |
| Nurse | 2 | 2 | 2 |
| Fully equipped ambulance | 2 | 2 | 2 |
| Basic ambulance | 2 | 2 | 2 |
| Quick attention vehicle | 2 | 2 | 2 |
| Receptionist | 1 | 1 | 1 |

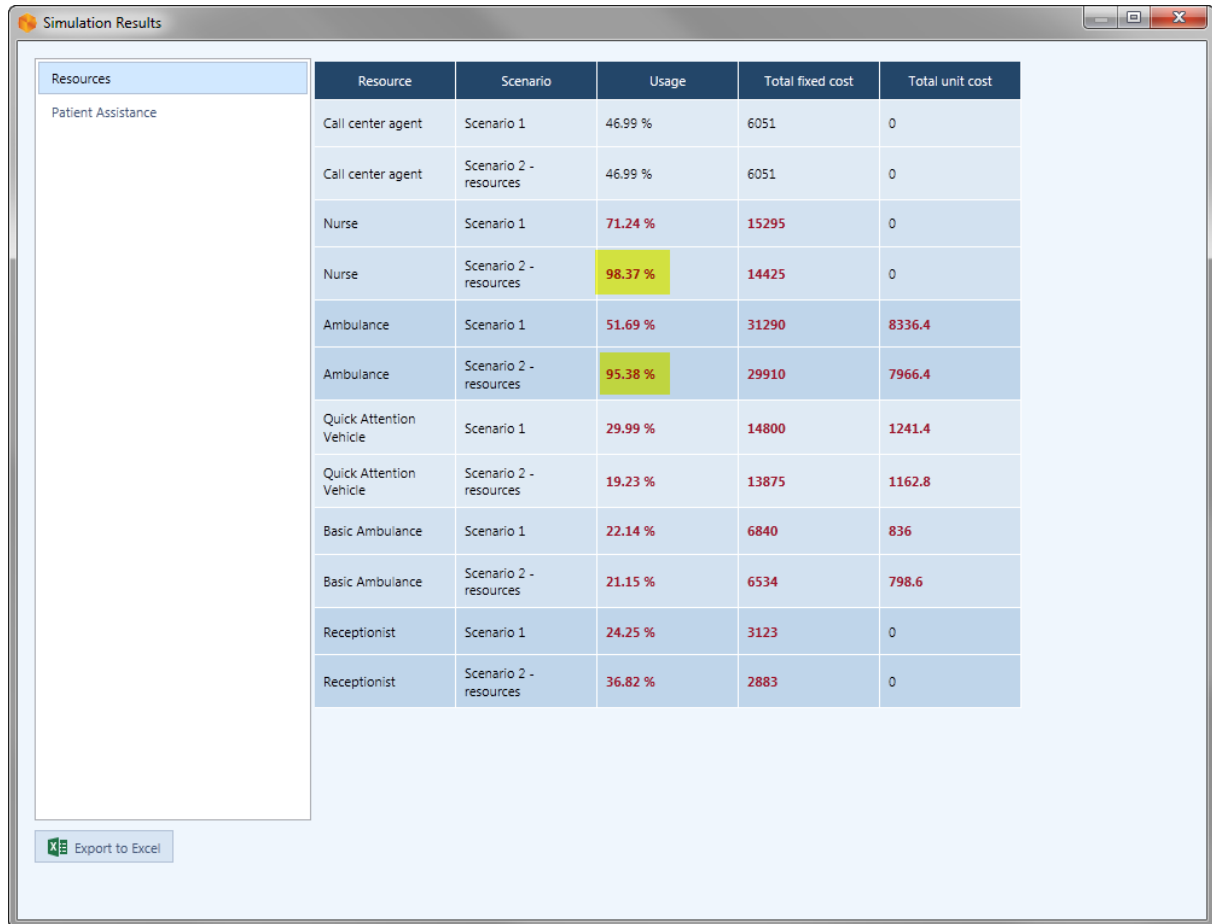
We run the what-if analysis including both scenarios.
Mark the scenarios and click *Start*.



As soon as the analysis is complete, the Results will display.

Color is used to emphasize differences between scenarios. Values that differ are highlighted in red.

The resources results show that the usage of resources increased, especially for the Nurse, now at full capacity. This gives us an idea that there will be delays and patients will be held waiting. The positive result is that costs are reduced.



The screenshot shows a 'Simulation Results' window with a 'Resources' tab selected. A list on the left shows 'Patient Assistance' under 'Resources'. The main table compares two scenarios across various resources. Values that differ between scenarios are highlighted in red, and the 'Usage' for Nurse and Ambulance in Scenario 2 is highlighted in yellow.

| Resource | Scenario | Usage | Total fixed cost | Total unit cost |
|-------------------------|------------------------|---------|------------------|-----------------|
| Call center agent | Scenario 1 | 46.99 % | 6051 | 0 |
| Call center agent | Scenario 2 - resources | 46.99 % | 6051 | 0 |
| Nurse | Scenario 1 | 71.24 % | 15295 | 0 |
| Nurse | Scenario 2 - resources | 98.37 % | 14425 | 0 |
| Ambulance | Scenario 1 | 51.69 % | 31290 | 8336.4 |
| Ambulance | Scenario 2 - resources | 95.38 % | 29910 | 7966.4 |
| Quick Attention Vehicle | Scenario 1 | 29.99 % | 14800 | 1241.4 |
| Quick Attention Vehicle | Scenario 2 - resources | 19.23 % | 13875 | 1162.8 |
| Basic Ambulance | Scenario 1 | 22.14 % | 6840 | 836 |
| Basic Ambulance | Scenario 2 - resources | 21.15 % | 6534 | 798.6 |
| Receptionist | Scenario 1 | 24.25 % | 3123 | 0 |
| Receptionist | Scenario 2 - resources | 36.82 % | 2883 | 0 |

Export to Excel

Analyzing the outcomes we note that:

The completed tokens have been reduced. This means we are tending to less patients with this new resources distribution.



The screenshot shows the 'Simulation Results' window with the 'Resources' tab. The 'Patient Assistance' resource is selected. The table displays metrics for 'Patient Assistance' across two scenarios, comparing tokens completed, started, and various time metrics.

| Name | Scenario | Type | Tokens completed | Tokens started | Min. time | Max. time | Avg. time | Total time | Min. time |
|--------------------|------------------------|-------------|------------------|----------------|-----------|-----------|-----------|------------|-----------|
| Patient Assistance | Scenario 1 | Process | 2011 | 2017 | 16 m | 39 m | 25.86 m | 62436 m | |
| Patient Assistance | Scenario 2 - resources | Process | 1877 | 2017 | 16 m | 934 m | 348.13 m | 58029 m | |
| NoneStart | Scenario 1 | Start event | 2017 | | | | | | |
| NoneStart | Scenario 2 - resources | Start event | 2017 | | | | | | |

Waiting time has increased in several activities:

| Simulation Results | | | | |
|--------------------|--------------------------|----------------------------|--------------------------------|--------------------------------------|
| Resources | Name | Max. time waiting resource | Avg. time waiting for resource | Standard deviation waiting resources |
| Patient Assistance | Patient Assistance | | | |
| | Patient Assistance | | | |
| | NoneStart | | | |
| | NoneStart | | | |
| | Receive Emergency Report | 0 | 0 | 0 |
| | Receive Emergency Report | 0 | 0 | 0 |
| | Classify Triage | 2 m | 0.21 m | 0.42 m |
| | Classify Triage | 478 m | 220.19 m | 144.47 m |
| | Pick up patient | 1 m | 0 | 0.04 m |
| | Pick up patient | 188 m | 80.97 m | 48.57 m |
| | Authorize Entry | 0 | 0 | 0 |
| | Authorize Entry | 4 m | 0.13 m | 0.62 m |

In the whole, this new scenario is not beneficial. The hospital cannot afford such high waiting times since it offers a health care service.

We recommend reverting the resources availability for Nurse and Ambulance to their original values, and changing the availability of other activities. Run the simulation again and examine the results.



Part VIII

Team Collaboration

Team Collaboration

Team Collaboration is a feature that allows teams to participate simultaneously in the definition of a process, aiding innovation and delivering efficiency across organizations.

Multiple users work simultaneously on a model during the process's design phase, achieving greater participation of team members and, ensuring the best quality in a process's definition.

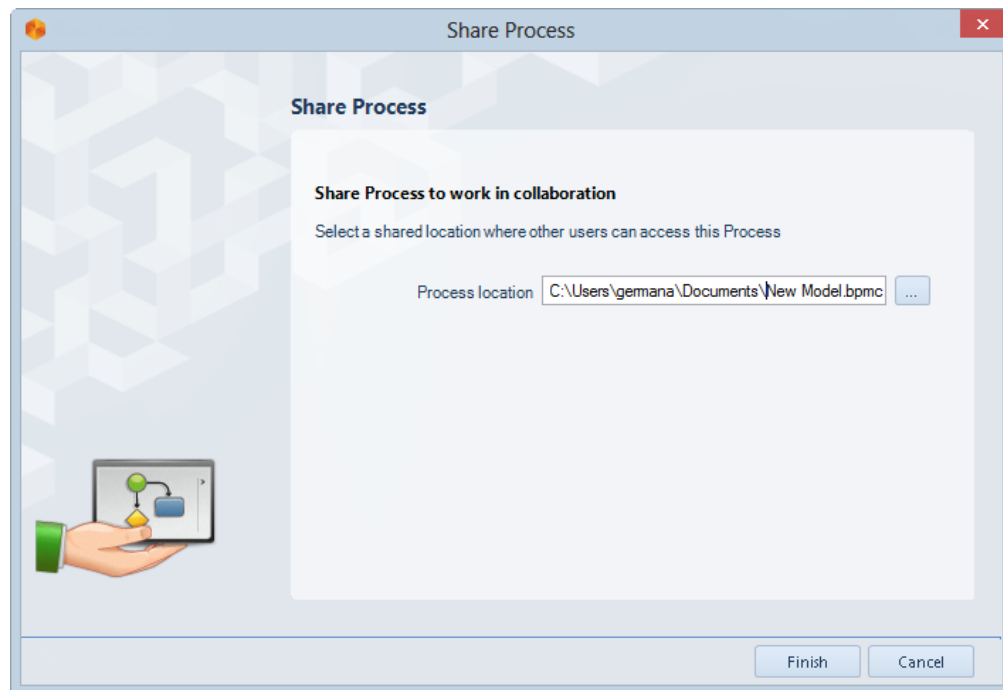
Bizagi's collaboration features allow users to change and improve a process's flow, run online team discussions and enter comments in real time, visible to all participants.

Collaborative process modeling

Collaborative process modeling requires a Model to be stored in a location where you, and your team, can access it. This means you need a network connection in order to be able to access the shared model.

You can save your collaboration process models on your **computer**, in a **file server** or using **cloud** (online) storage service.

To enable collaboration, select **Share Process** on the *Team Collaboration* group and select a shared location.



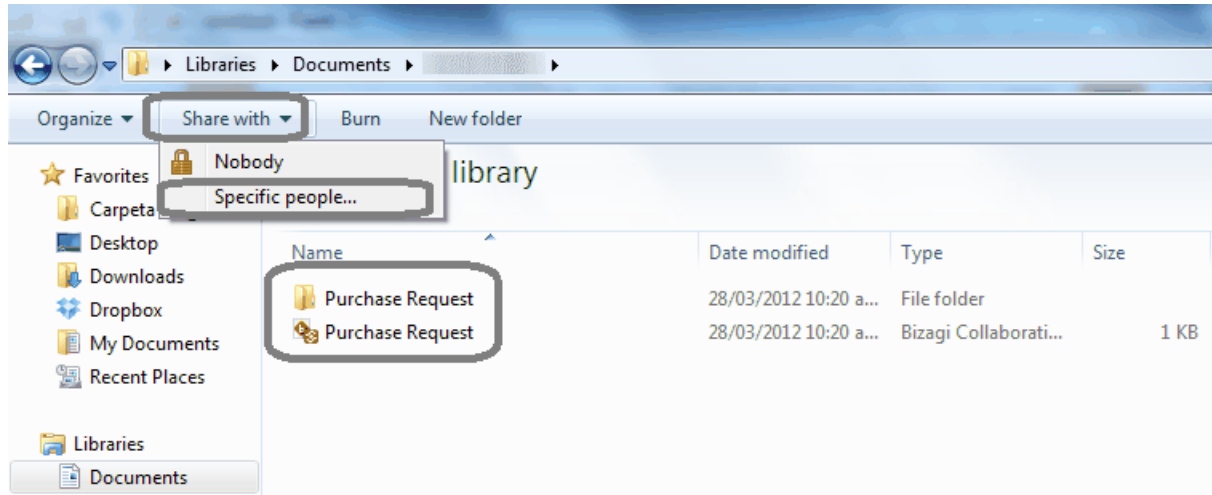
Once the model is saved Bizagi Modeler creates a file with a **.bpmc** extension, along with a new folder. The folder contains special files to make collaboration work, **PLEASE DO NOT MANIPULATE THIS FOLDER**.

Allocate appropriate permissions to your team, so that they can access the new folder and the files within. Anyone with access to the location, where the collaboration model is saved (the **.bpmc** file), can access the Model.

Sharing a model in a File Server

Your collaboration models can be saved on your company's file server. After sharing a model give your team the permissions to the file and folder through Windows' Sharing options.

Right-click the folder and the **.bpmc** file and click the arrow next to **Share with**. Select **Specific people** to add the necessary people. The invitees will have access to the model.



Sharing a model in a Online Storage Service

If you have Internet access at your company, you can also share your models via Online Storage Services such as **Dropbox**, **Sugarsync** or **Sky drive**.

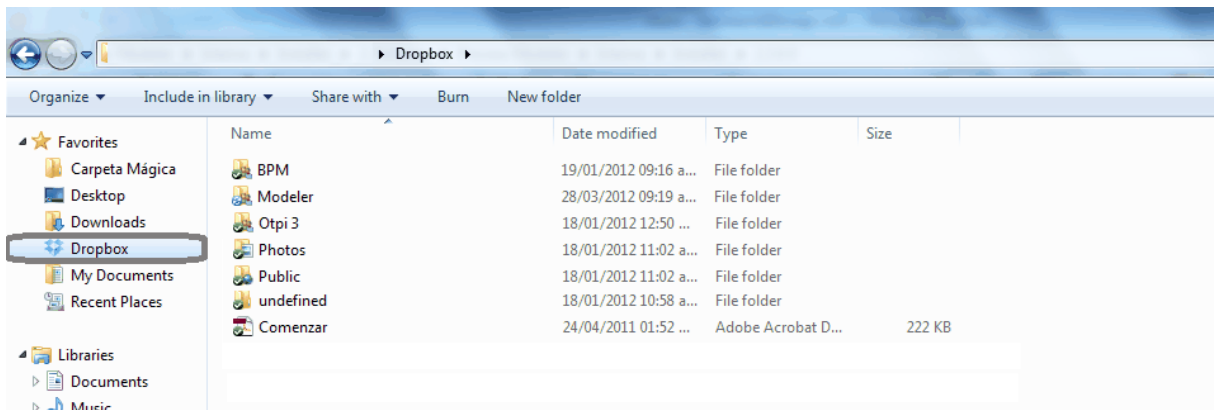
To share a model in an Online Storage Service, follow the steps below:

1. Download and install the Online Storage Service software on your computer, in this example we will use Dropbox.

Note

Since a shared model relies on both a **.bpmc** file and an annex folder, it is strictly important to ensure that you open a model when having both the file and the folder in the same path (by using the desktop software that synchronizes files from your online storage service).

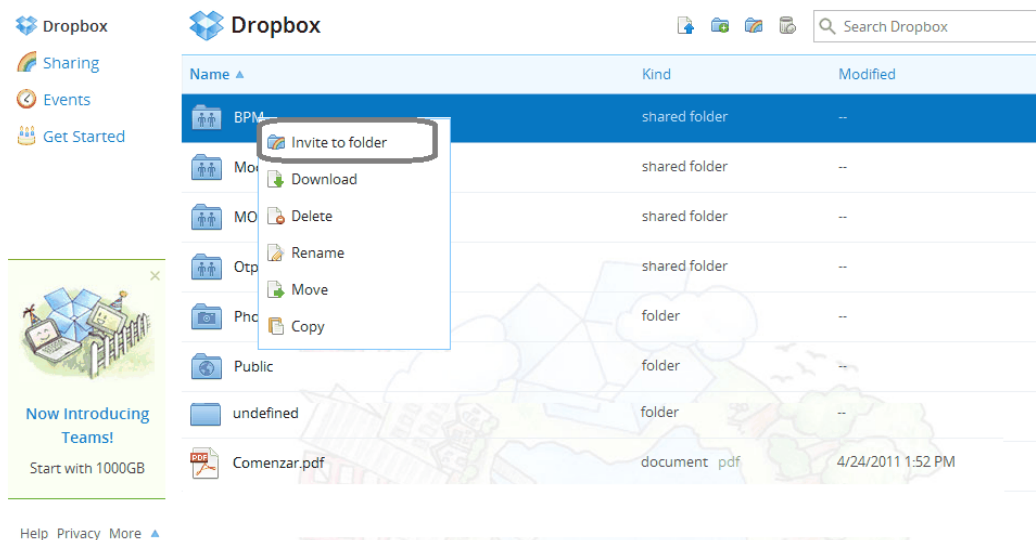
2. A Dropbox folder will be created on your computer. Any files placed in this folder can be shared with other users of Dropbox.



3. Login to Dropbox. Create an account if you do not already have one.



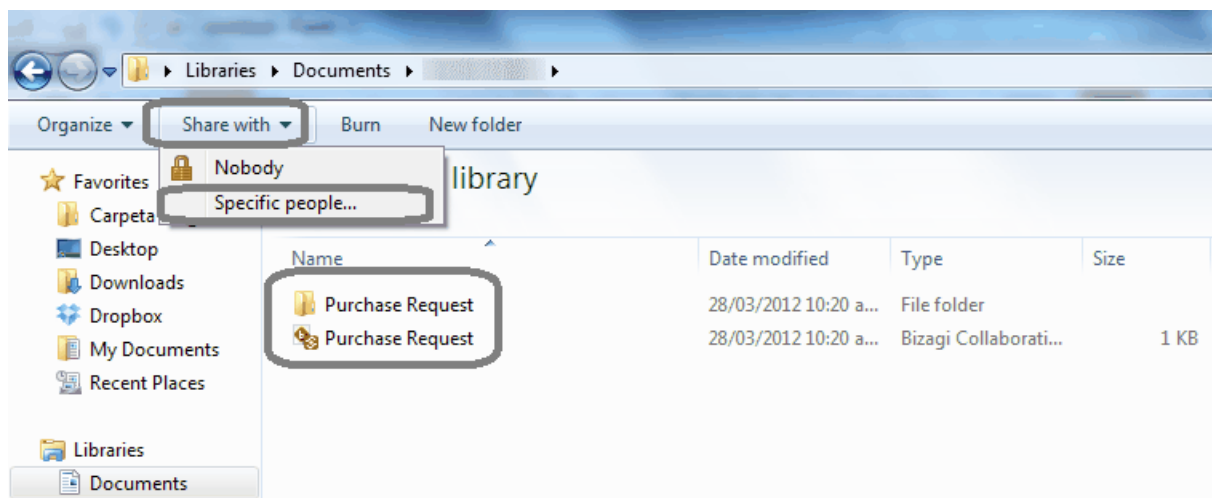
4. Save your new folder, containing your Share Model, and all the files within to the Dropbox folder. Right-click on the folder where you stored the collaboration file and select the option **Invite to folder**. A window will be displayed. Enter the email addresses of the people you wish to share the model with and click on **Share folder**. This will allow your team access to the model.



Sharing a model in your computer

If you do not have company access to a File Server or Internet, you can share your models on your own computer. As soon as you share a model, give your team the permissions to the file and folder through Windows' Sharing options.

Right-click the folder and the **.bpmc** file and select the arrow next to **Share with**. Select **Specific people** to add the necessary people. The team members added will have access to the model.



Example of collaboration

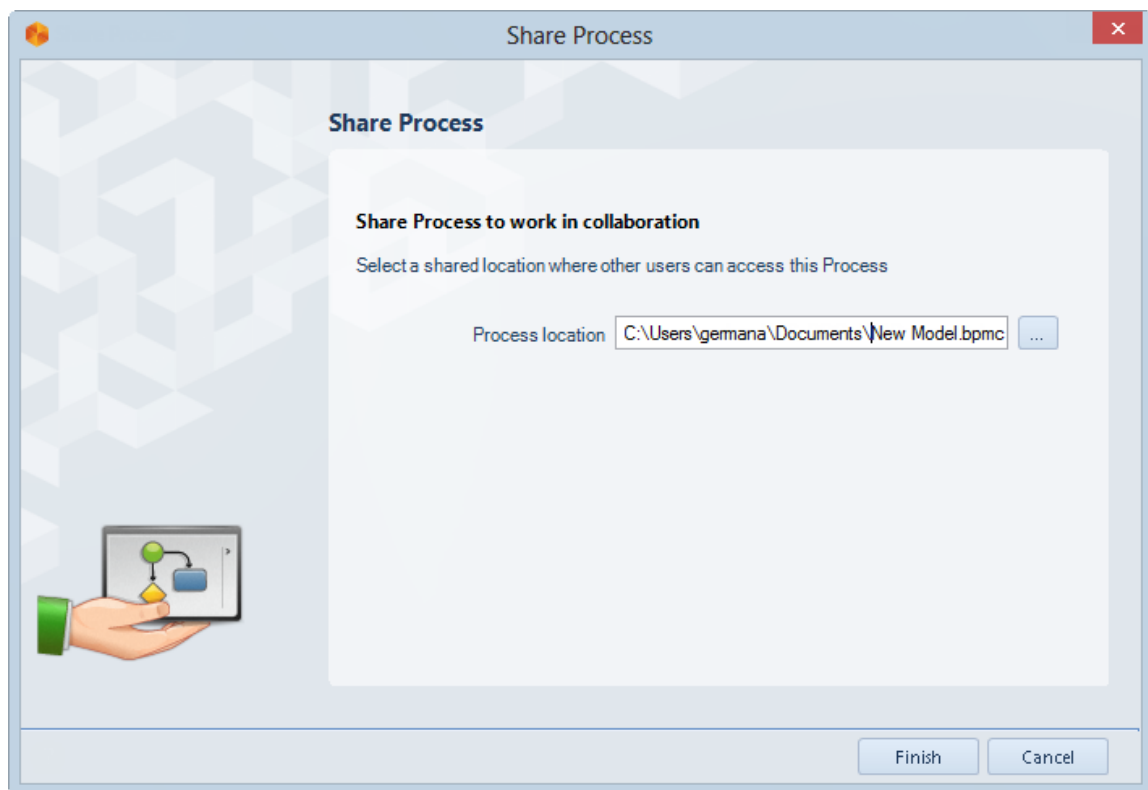
You can find the contents of this article in the video: [Collaboration Explained](#)

To illustrate how to perform collaboration within a process we will use the following example:

Assume that Andrea works in the administrative department of her company. She has been working on the Travel Request process, which involves employee activities to manage a request for a flight ticket, a currency advance and a hotel reservation.

She needs to share her model to collaborate with Mark on her team, allowing him to review the model and suggest any improvements.

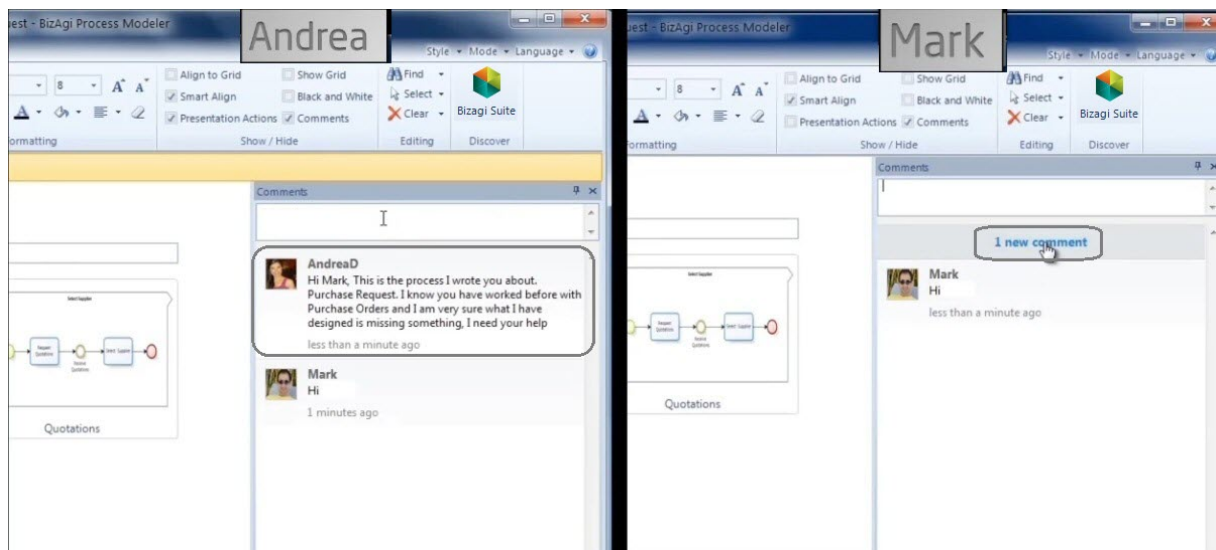
1. To share her model, she clicks on the **Share Process** button, located in the **Team collaboration** group on the **Home** tab. She saves the model in a shared location (using the wizard), where Mark can access it.



Upon her sharing the model, Bizagi creates a new model with a **.bpmc** extension, the 'c' denotes collaboration.

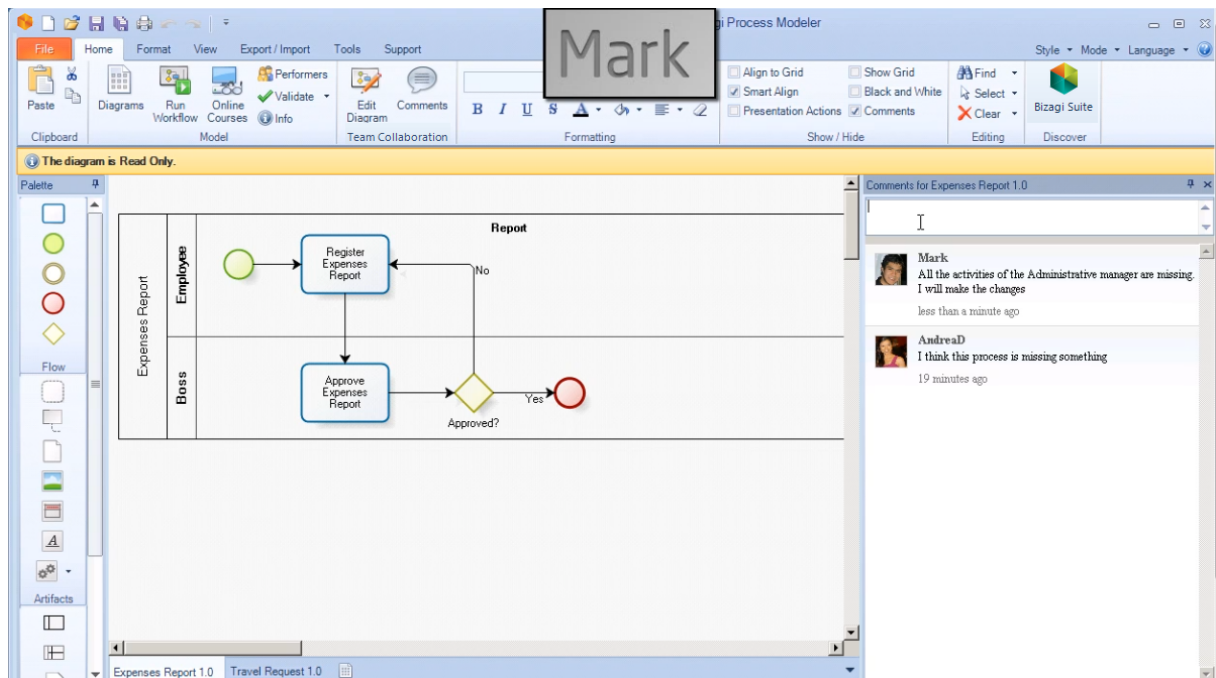
[Click here for more information about Bizagi Modeler extensions.](#)

2. She grants Mark privileges to access the location where the model is shared. Once Mark is given permission, he opens the **.bpmc** file.
3. Andrea and Mark can now both open the model and work concurrently on it. They can communicate with each other by entering messages in the Comments window found on the right of the screen. Messages are displayed in real-time; hence, as soon as either party types a comment and clicks the Enter button, the comment will be instantaneously displayed.

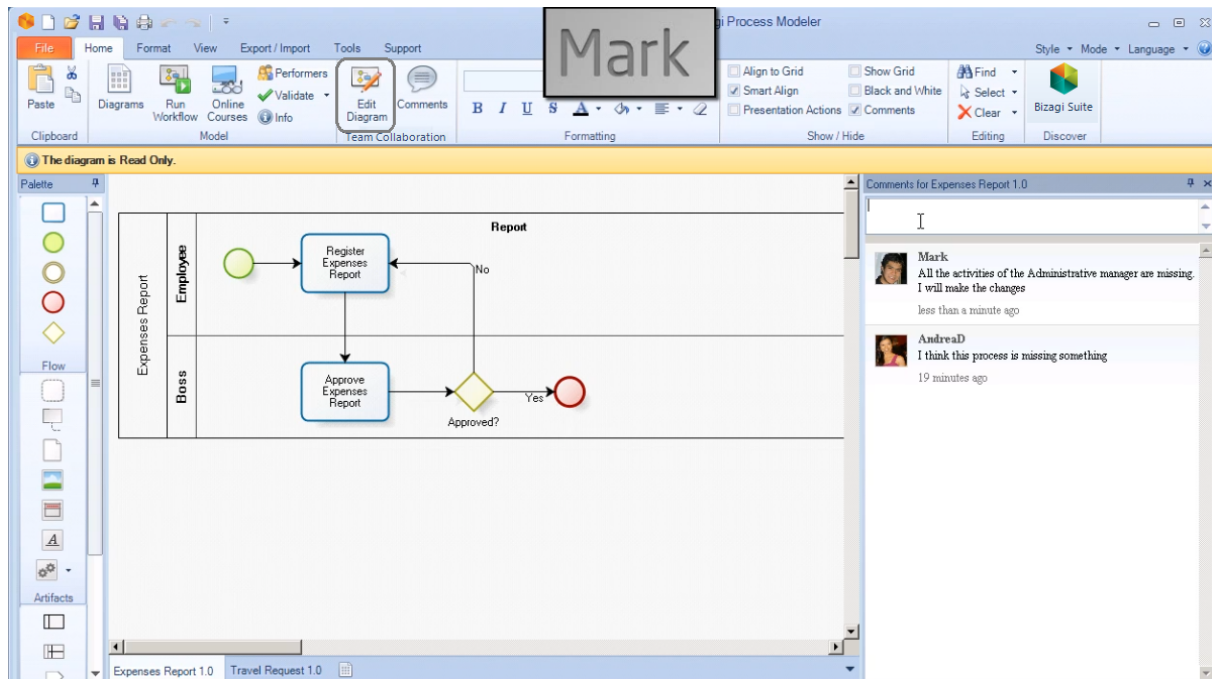


They can also leave their comments for later review by team members. Comments in Bizagi Modeler work very similarly to Twitter.

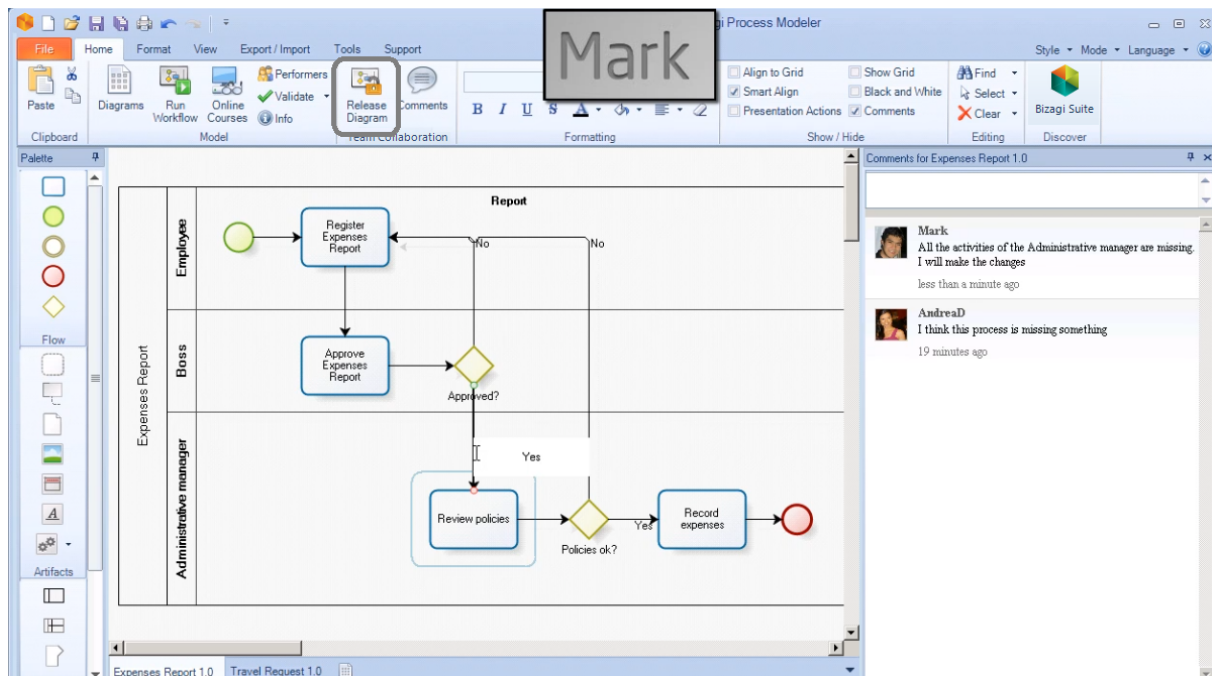
4. Andrea asks Mark to help her with the Expenses report diagram. They can both view the Expense report diagram simultaneously and thereafter discuss it. Mark reviews the diagram. He comments, at the Diagram level, that all the activities of the Administrative Manager are missing and stipulates that he will make the changes.



5. By default all diagrams are **read-only**. To change or update a diagram it is necessary to click **Edit Diagram**, located in the **Team Collaboration** group on the **Home** tab. In the given example, this feature enables Mark to perform any changes on the diagram; however, for Andrea and other users the diagram will be locked.

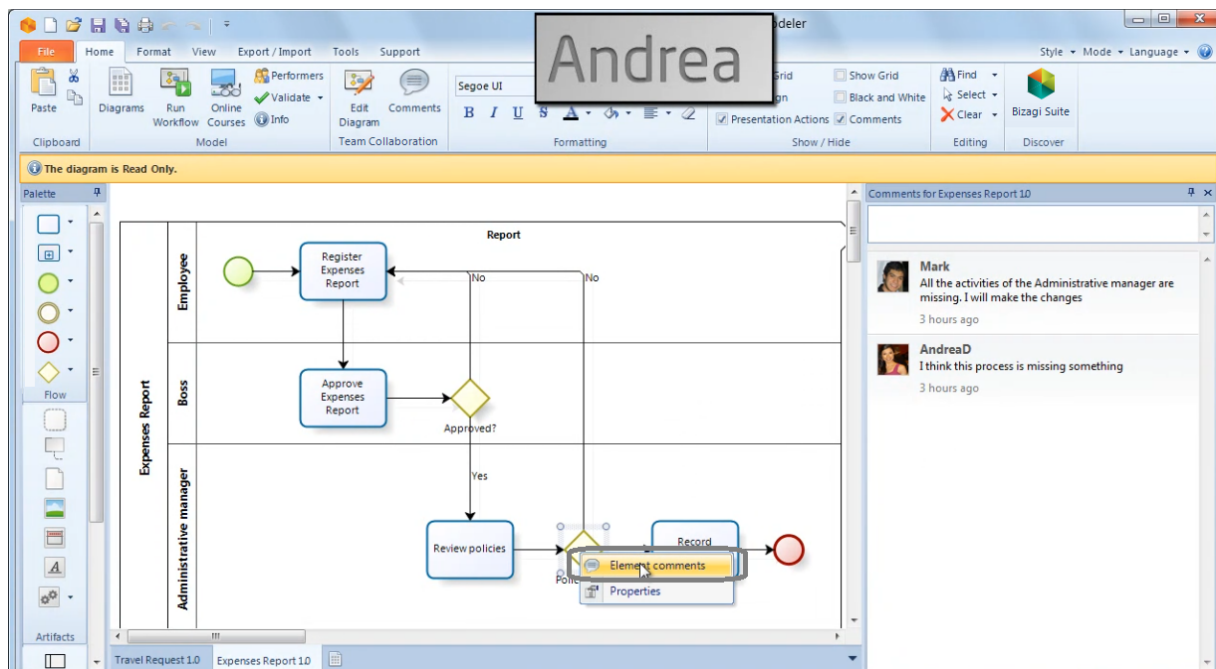


6. Once Mark has completed his changes he clicks on the Release Diagram button, located in the Team Collaboration group on the Home tab.

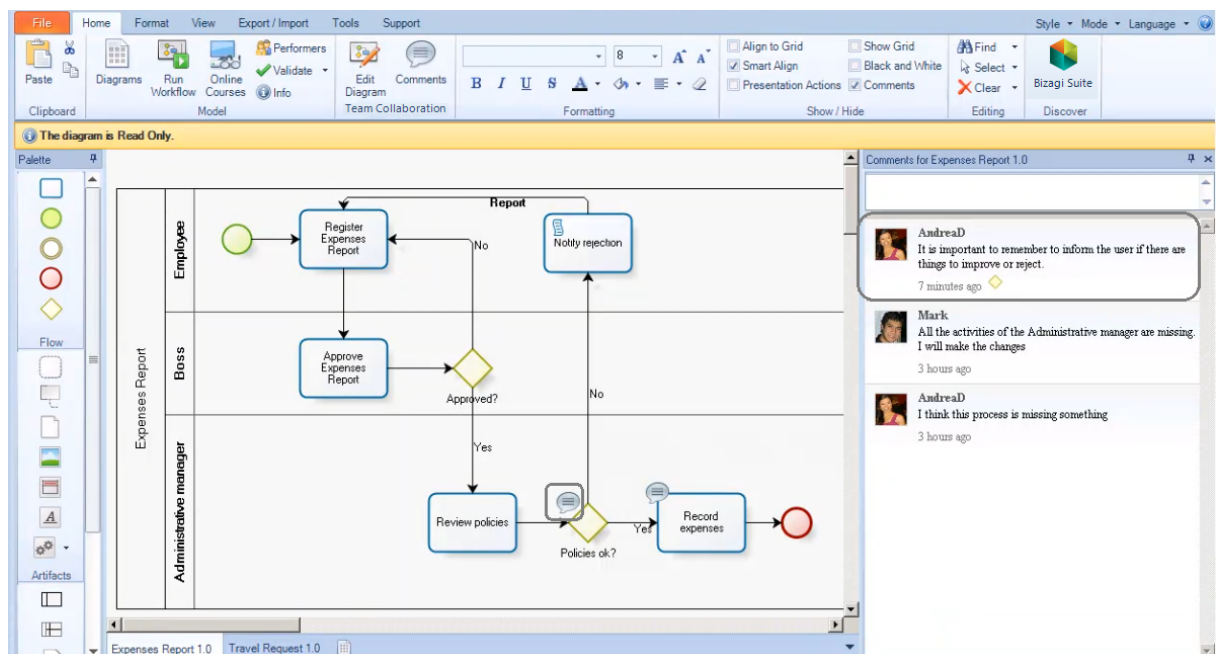


7. Andrea receives a notification informing her there has been a change in the Expense report diagram.

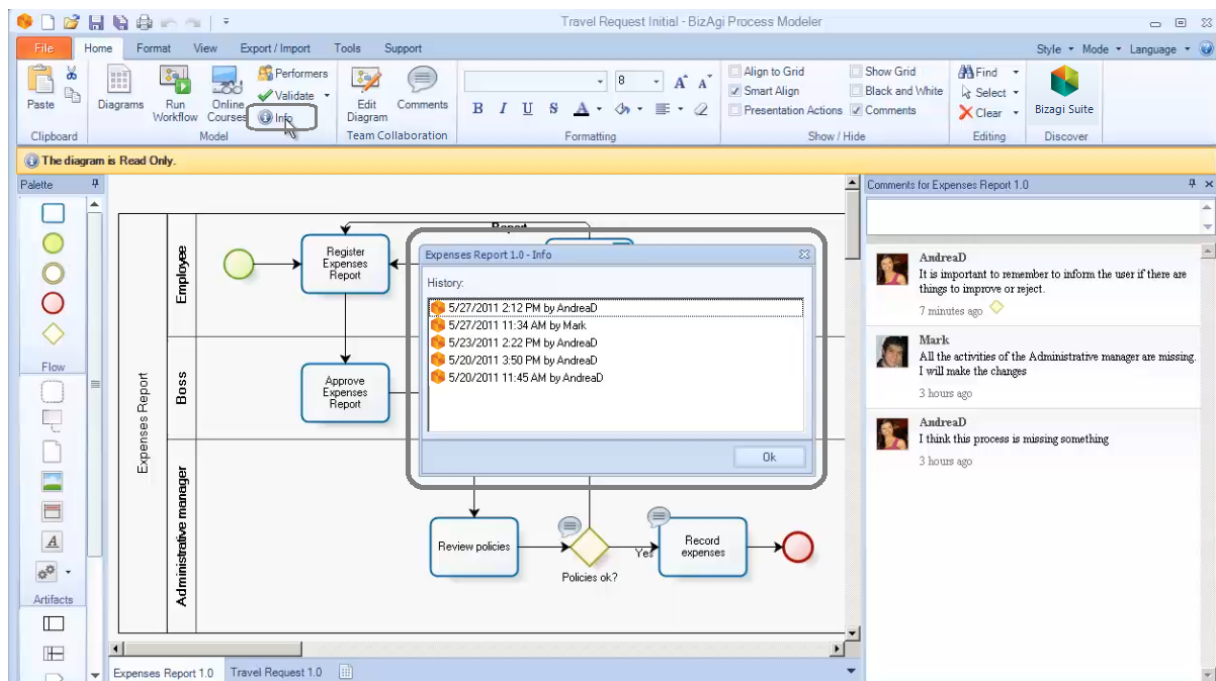
8. Andrea reviews the model and note the last activity should have some additional changes. Consequently, she adds an Element comment for Mark's perusal.



9. Mark reviews Andrea's latest comment. Either Mark or Andrew can make the change. Whoever makes the change will lock the diagram, using the Edit Diagram feature, enforcing single-user editing only.



There is an Info button available for everyone to track the editing history. The History window displays the date-time and user details of each addition.



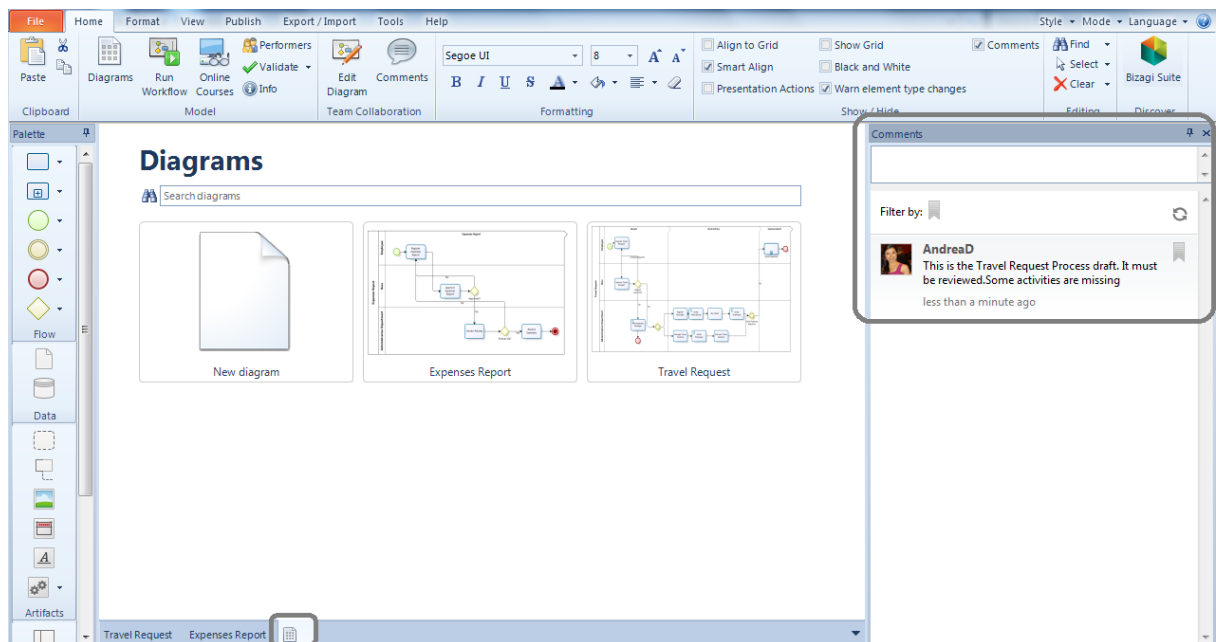
Video example: Collaboration explained

[This video shows how to collaborate with your team with Bizagi Modeler](#)

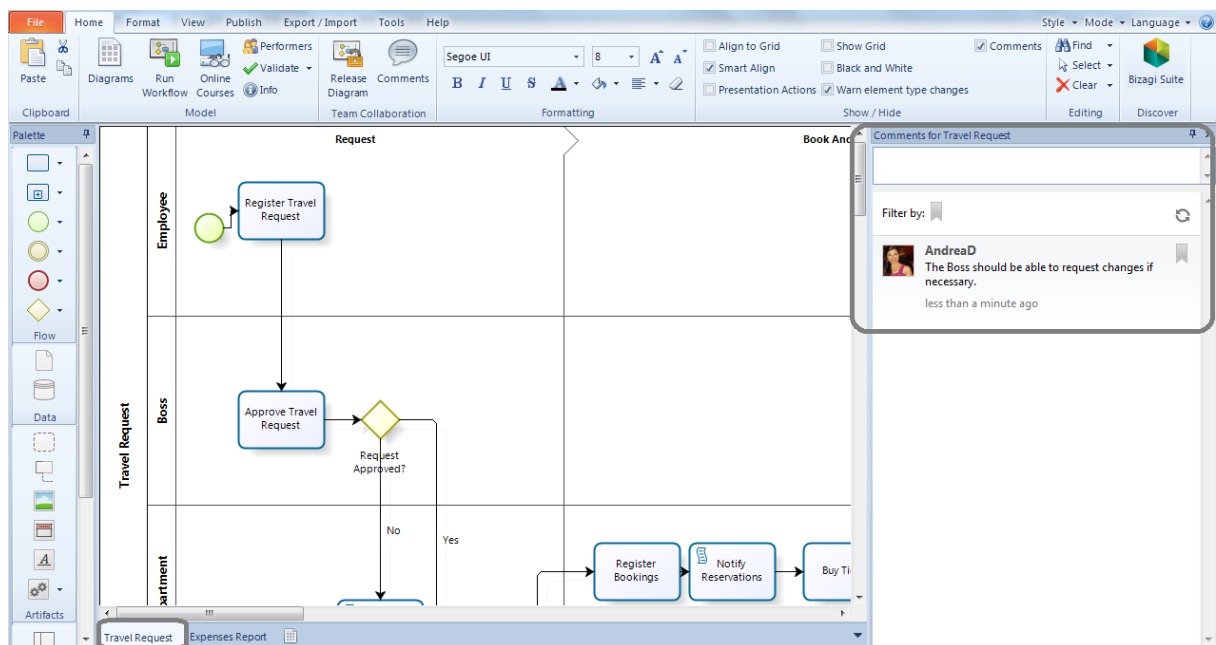
Collaboration levels

Collaboration comments can be made at three different levels: **model**, **diagram** and **element**, so that team members can comment on the context in each level.

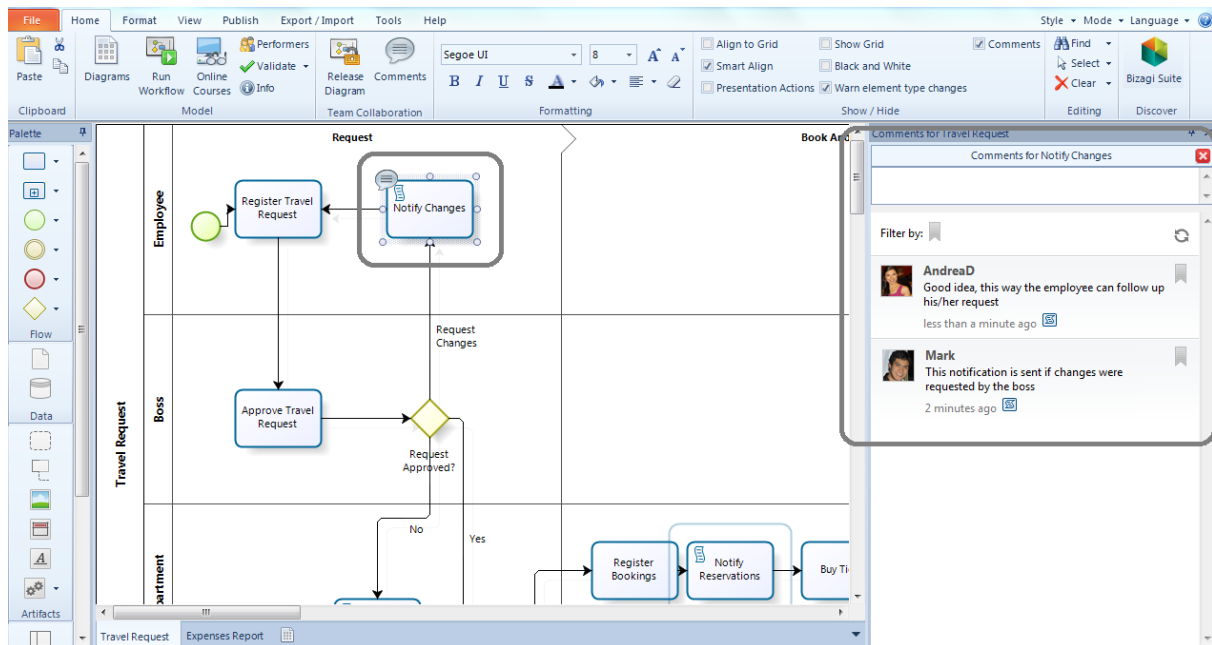
- **Model comments:** comments posted within the Model apply to all the diagrams, i.e. are visible from any diagram. These comments are found in the Diagrams tab.



- **Diagram comments:** comments posted within a diagram only apply to that diagram.



- **Element comments:** comments posted within a selected diagram element only apply to that element within a diagram.



Offline collaboration

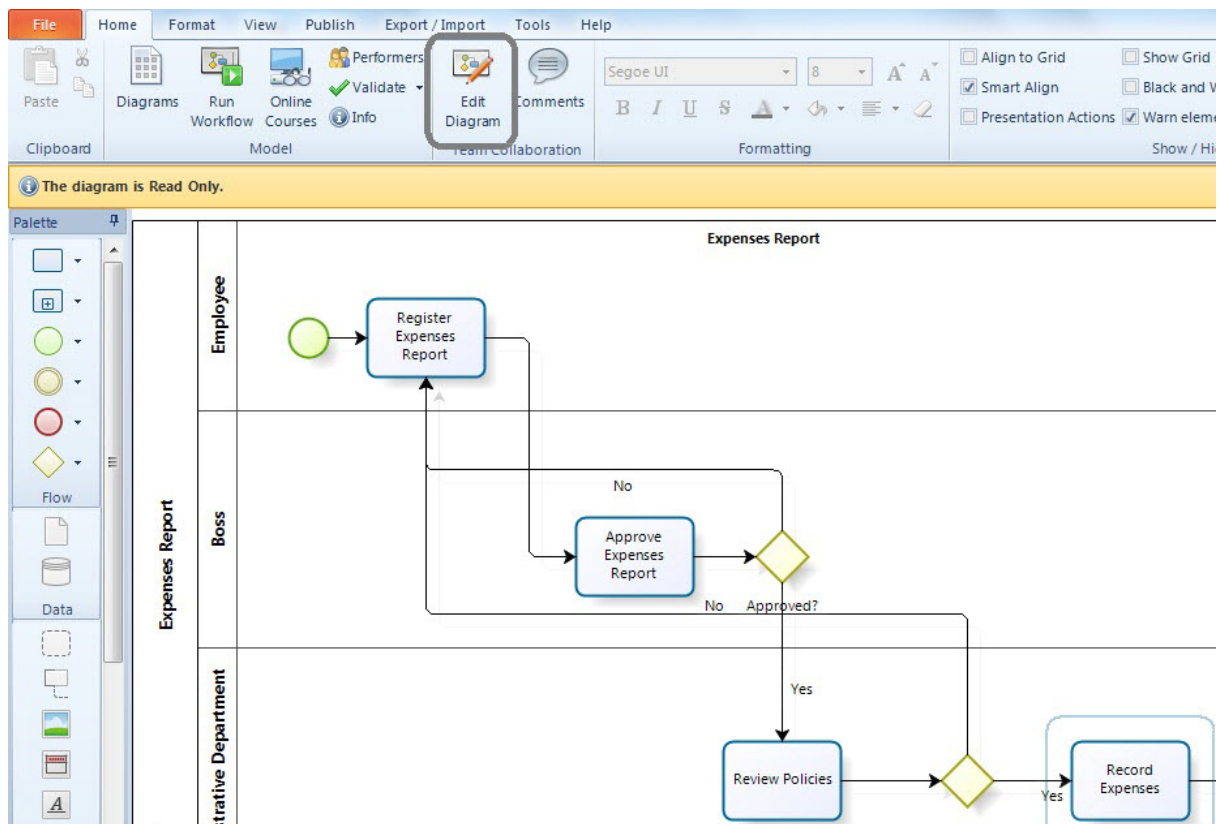
You, or your team, can also work offline within a collaboration model. Offline collaboration allows modification even if there is no access to a network connection. Offline collaboration is only possible when the collaboration model files (.bpmc file and folder) are available in offline mode through an Online Storage Service or if your network folder is always available offline.

You can lock the process for editing before or after you log off the network. However we recommend that you lock the diagram for edit BEFORE you disconnect or log off from the network to avoid conflicts.

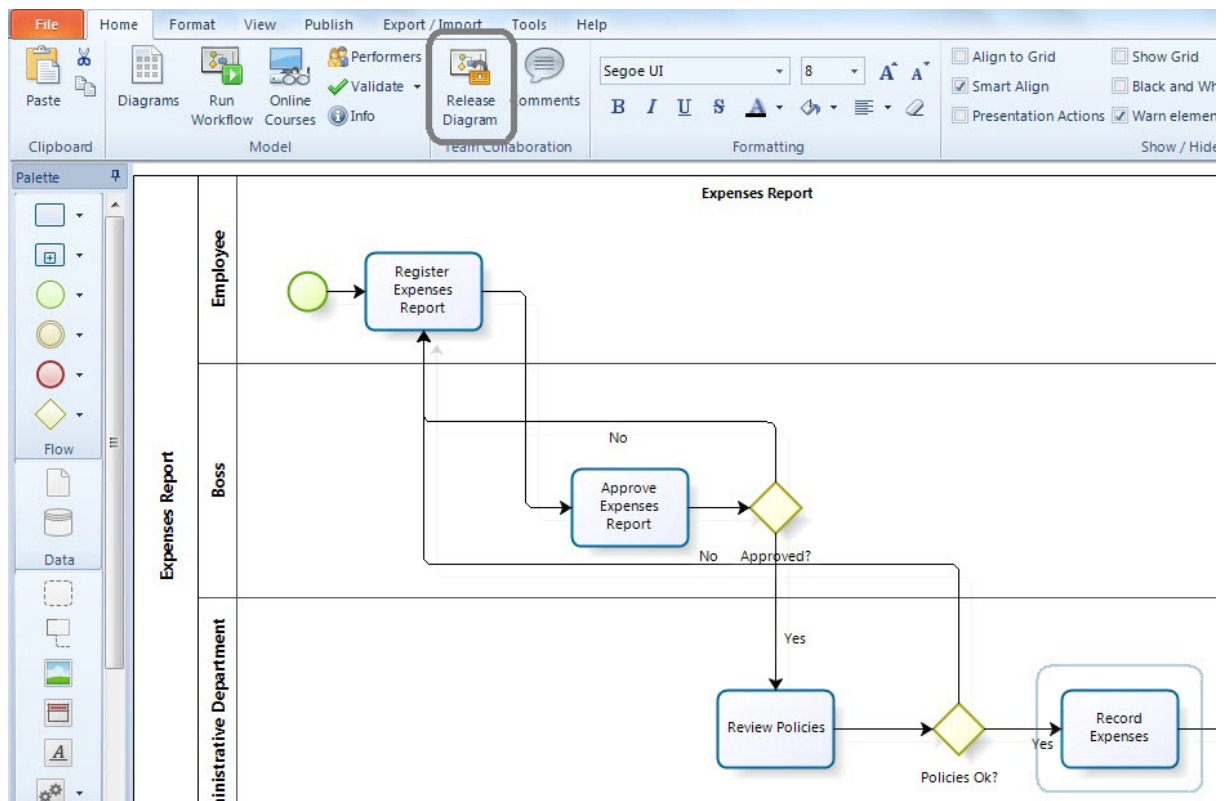
[Click here to learn more about Conflicts resolution.](#)

An example of an offline collaboration being needed is where you may be on a business trip and plan to work whilst on the airplane.

1. Before you leave your office click the **Edit Diagram** button, in the **Team Collaboration** group on the **Home** tab, to lock the diagram for editing.
(Since the diagram is in edit mode you alone are able to make the changes, which can be done whilst on the plane.)



2. Once the changes are made, click the **Release diagram** button, in the **Team Collaboration** group on the **Home** tab. The diagram will automatically synchronize when next you connect to the network. Once synchronized your team will be able to view all changes.

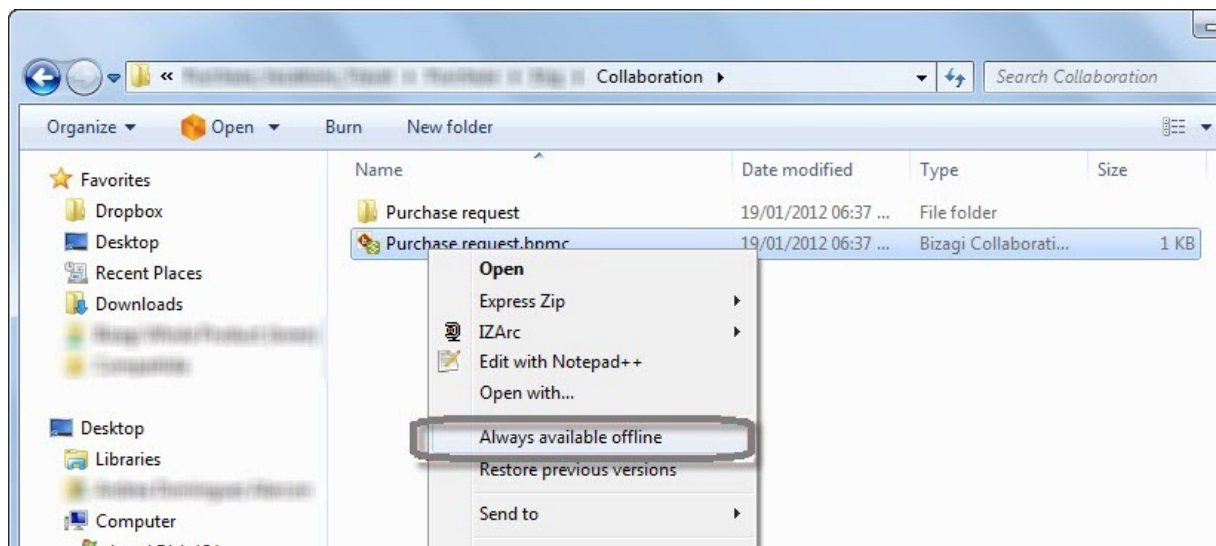


NOTE:

In order for offline collaboration to work you need to use:

An Online Storage Service, for example: Dropbox which creates local copies of all files on your computer; or

If you are using a file server, the shared folder must be made available offline.



Conflicts resolution

Collaboration allows multiple users to work together on a model which is saved in a shared folder. Team members can perform changes to a model at the same time, some being online and others being offline. When offline users come back online, and diagrams are synchronized, conflicts in the changes can occur. Conflicts will occur if changes are made by more than one person to the process flow or to the documentation of any element in the same diagram.

The following example illustrates how conflicts can occur:

You have shared a model through Dropbox with another team member but you need to travel abroad whilst they work on the model. During the flight you decide to work on a diagram and make some changes offline. However at the same time your team member is also working on the same diagram whilst being online.

When you next connect to the network your model will automatically synchronize. Consequently, your changes will now conflict with your colleague's.

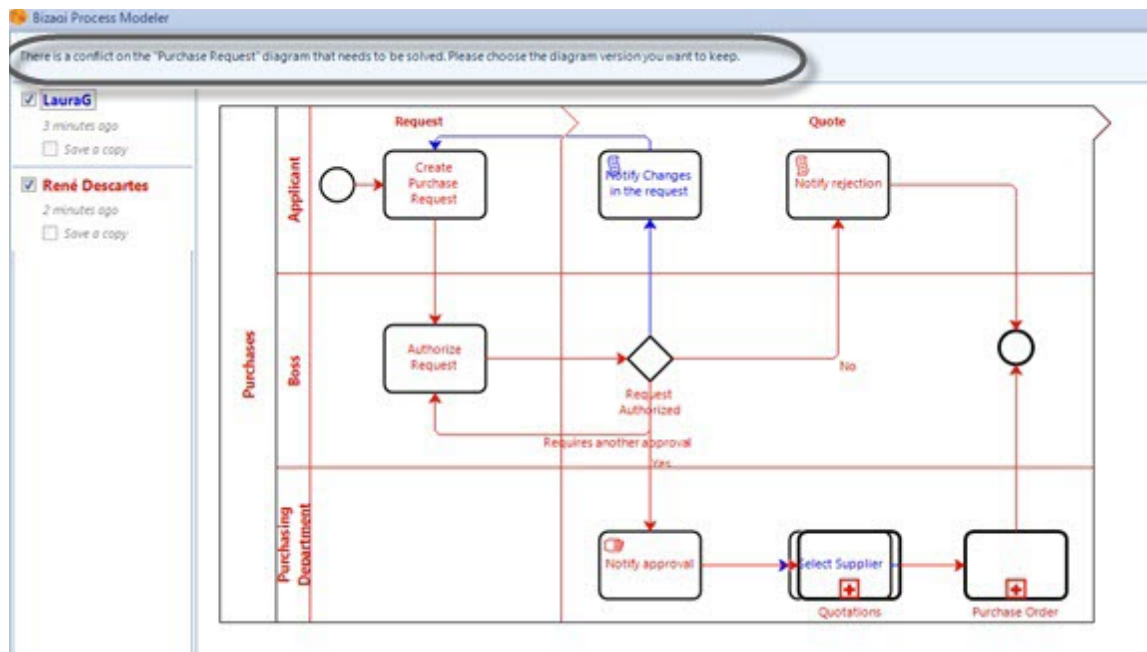
Bizagi has a tool that allows you to resolve these conflicts.

Process flow conflicts

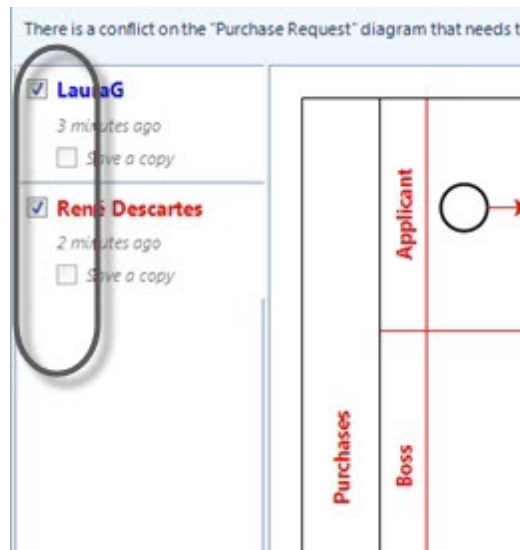
Let us assume that you and your team member work in the Administrative department of your company and you are collaborating via Dropbox on the Purchase Request process. You changed a diagram offline and your team member, whilst being online, also made some changes to the model.

As you come back online and synchronize the model, a new window will be displayed to warn that there is a conflict.

There will be two diagrams, one in blue and one in red. The blue one will be your diagram i.e.; being the person who synchronized.

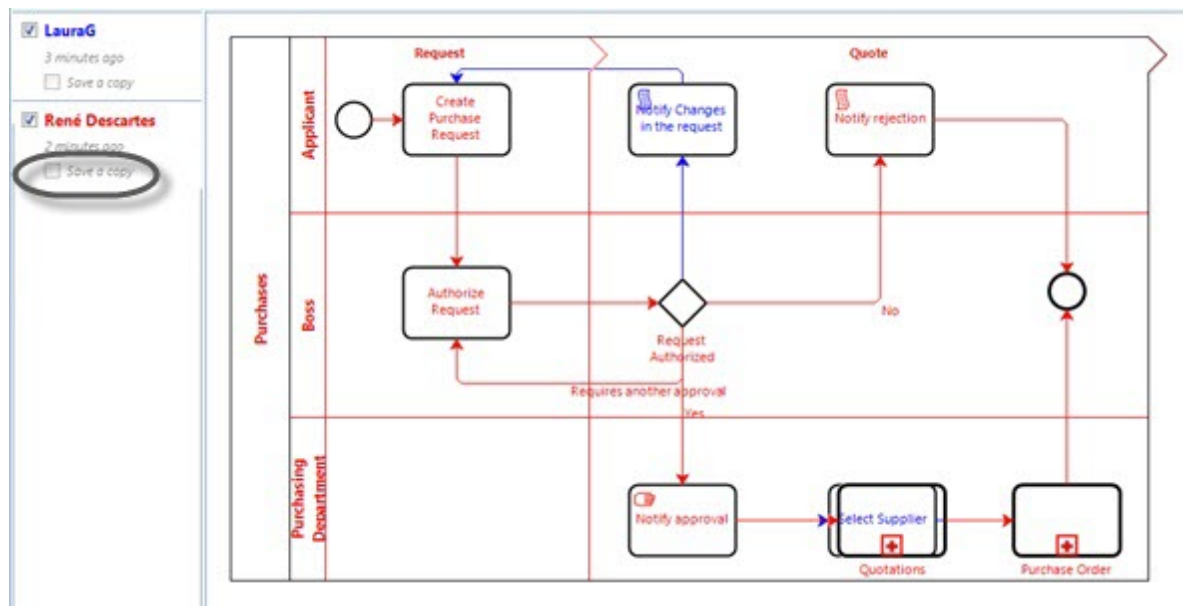


The left pane shows the conflicting versions. You can switch between the diagrams to analyze which version to keep, just as in Word or Excel.



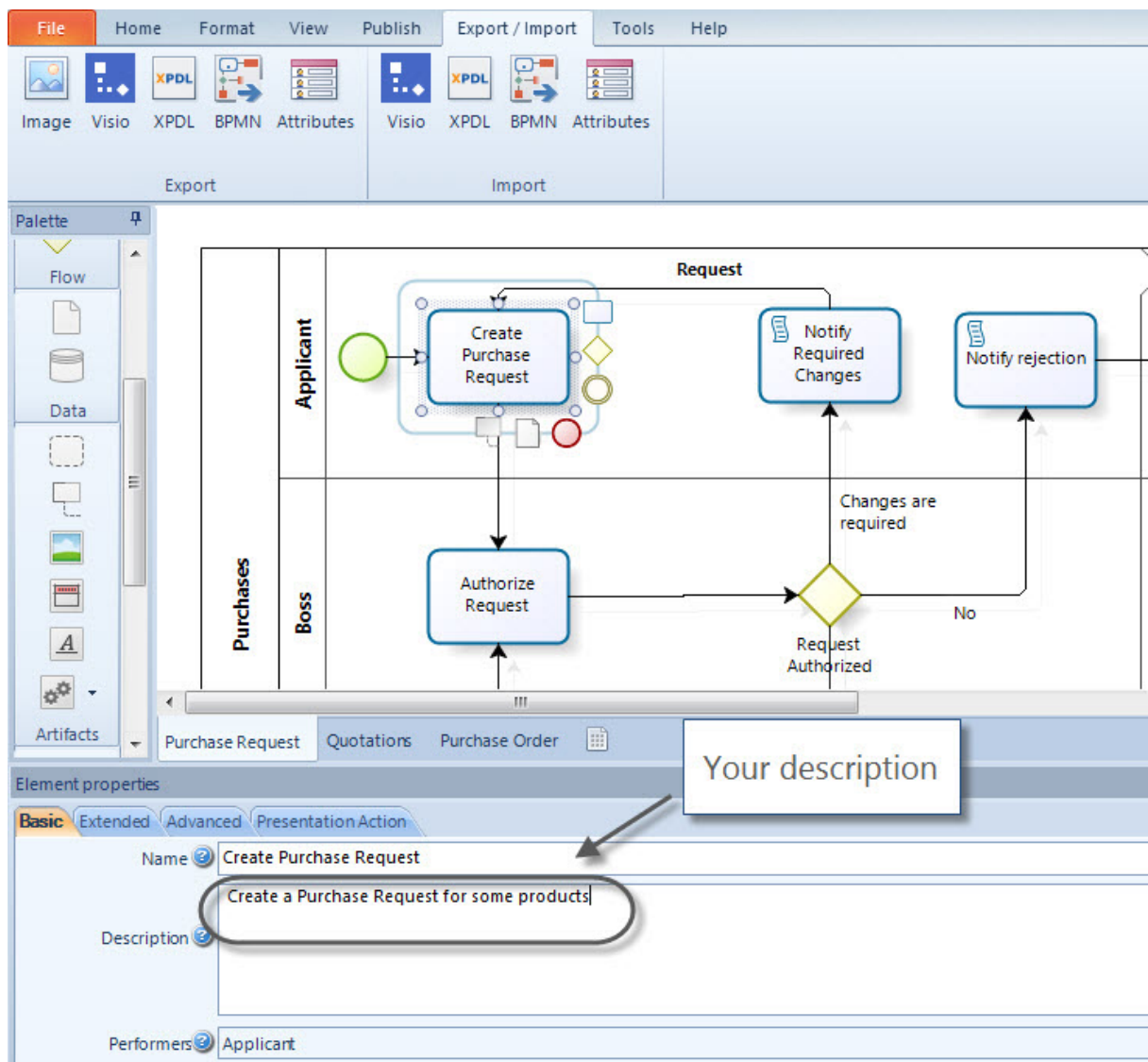
The person synchronizing (you in this case) must decide how to handle the conflict.

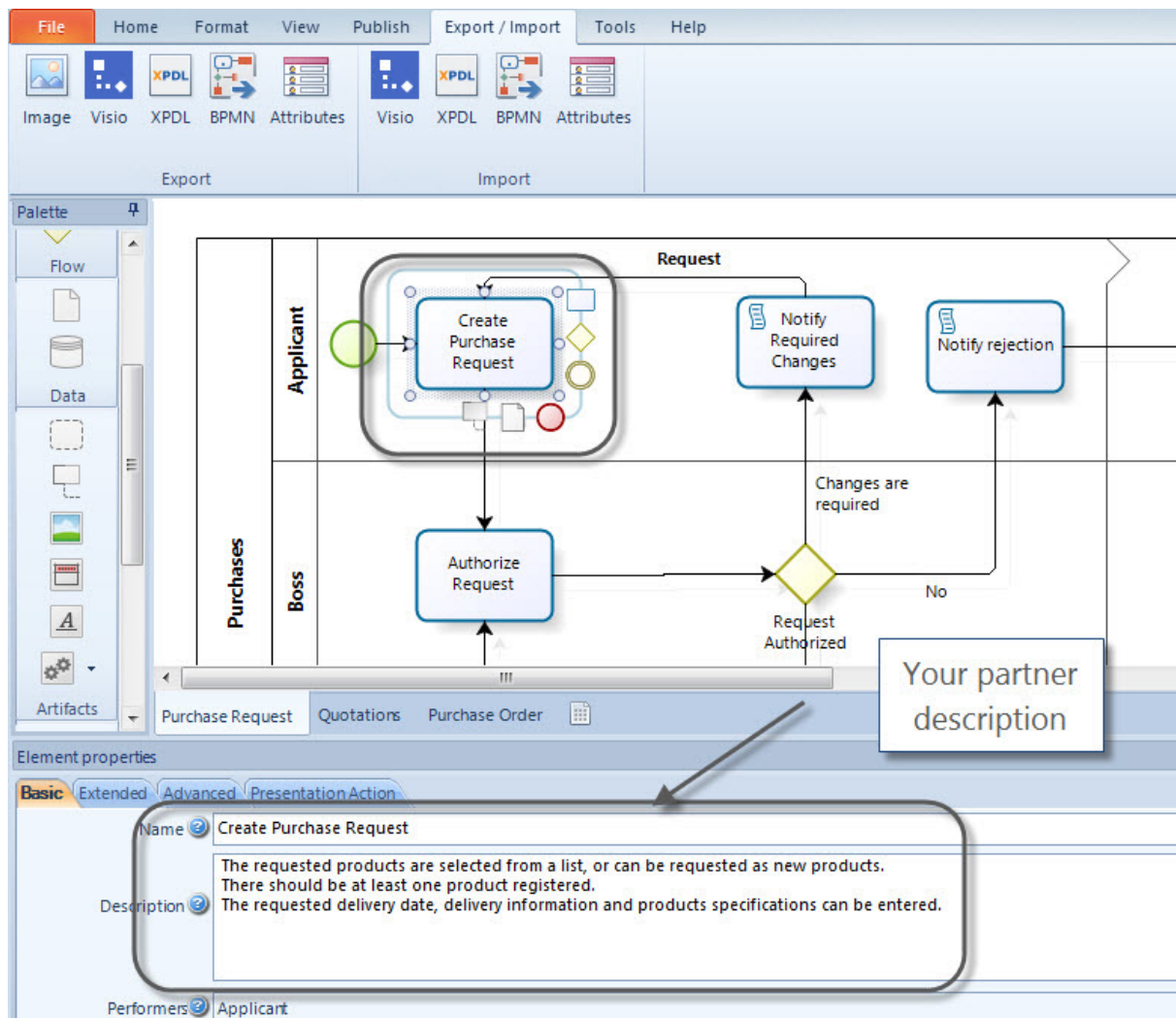
You can revert to your colleague's online version or retain your own offline version. Note, you can always create a copy of the diagram that was not kept, by selecting the option **Save a copy**. Doing so will allow you to implement the changes in the discarded version.



Attribute conflicts

Again, let us assume that you and your team member work in the Administrative department of your company and you are collaborating via Dropbox on the Purchase Request process. As in the previous example you both made changes offline and online respectively, but this time to the attribute information for the same diagram element. For example, the description of the Create Purchase Request task.

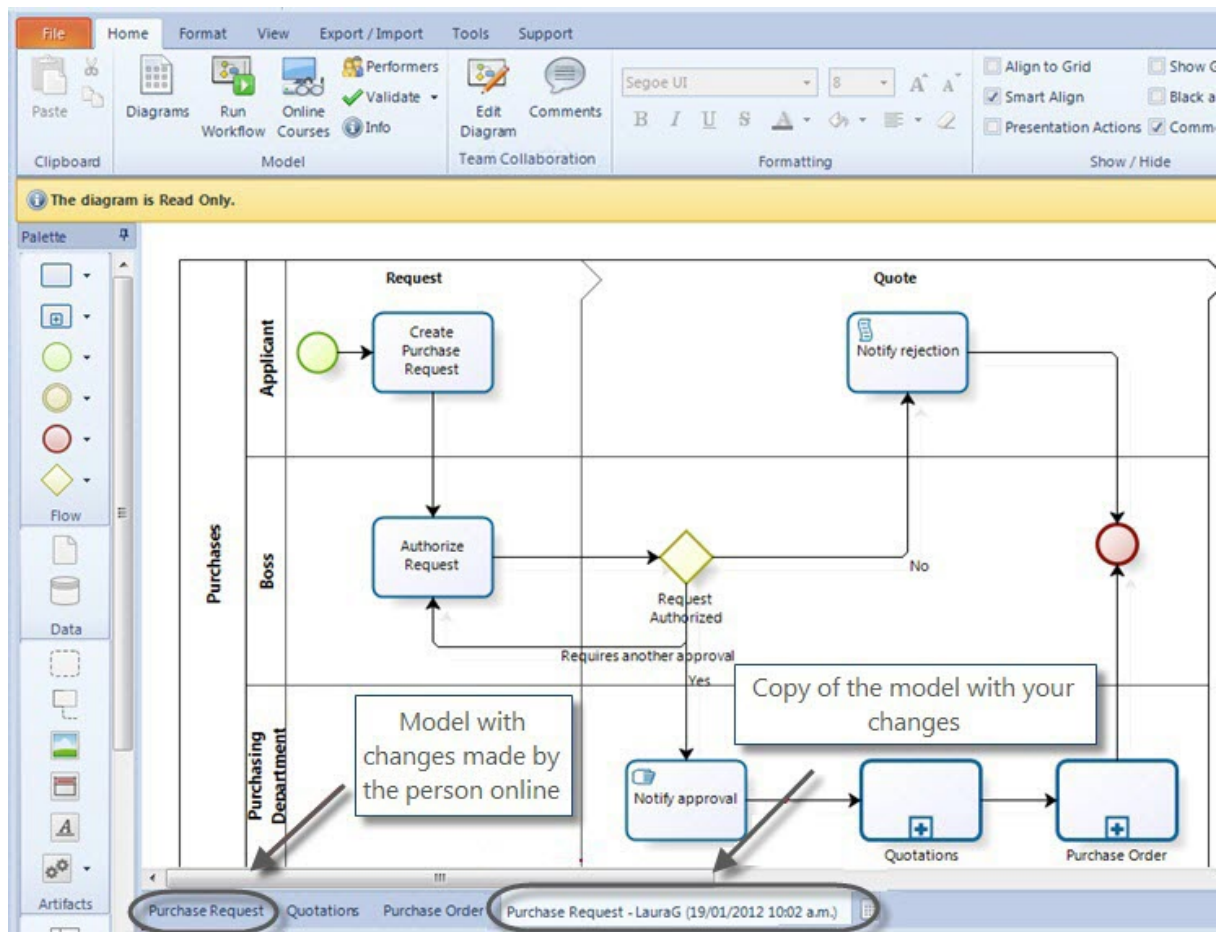




When you are next able to connect to the network and synchronize your model, a message will display to warn that there is a conflict.



Two diagrams will be displayed: one with your changes and another with your team member's conflicting version. As the person synchronizing, you need to decide whether to retain your own, offline, version or revert to your colleague's online version.



Using Categories

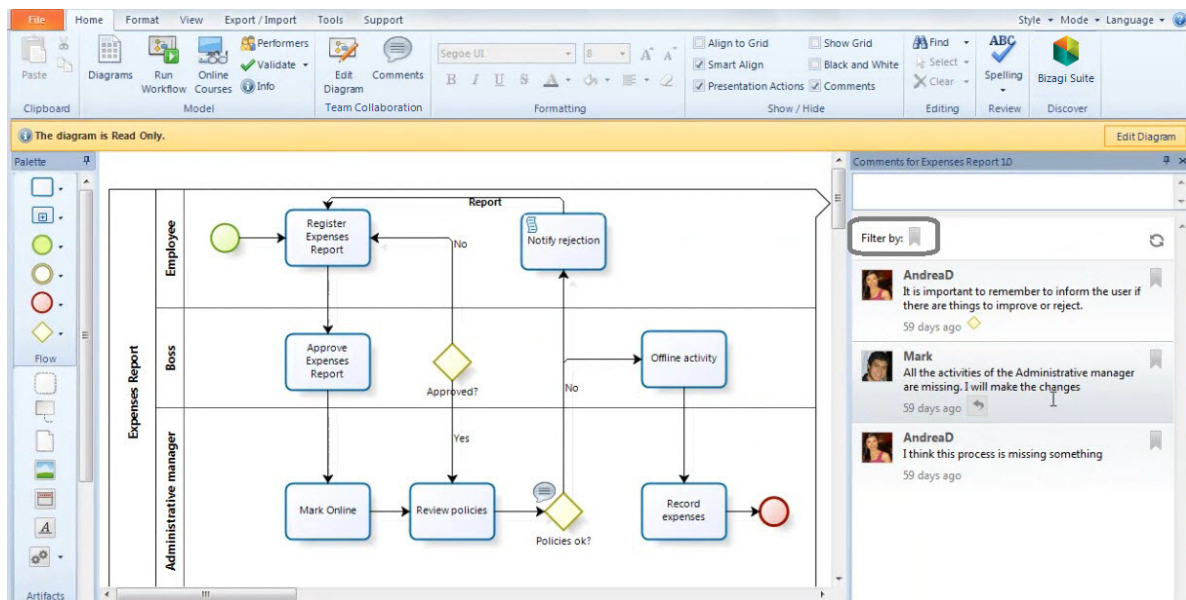
Categories classify comments, that have been made in the **Comments** Window, according to their priority, relevance or topic. For example you can classify your comments to distinguish between urgent changes, issues to evaluate, etc.

Defining and assigning categories enables you to filter comments and so focus on the most important information.

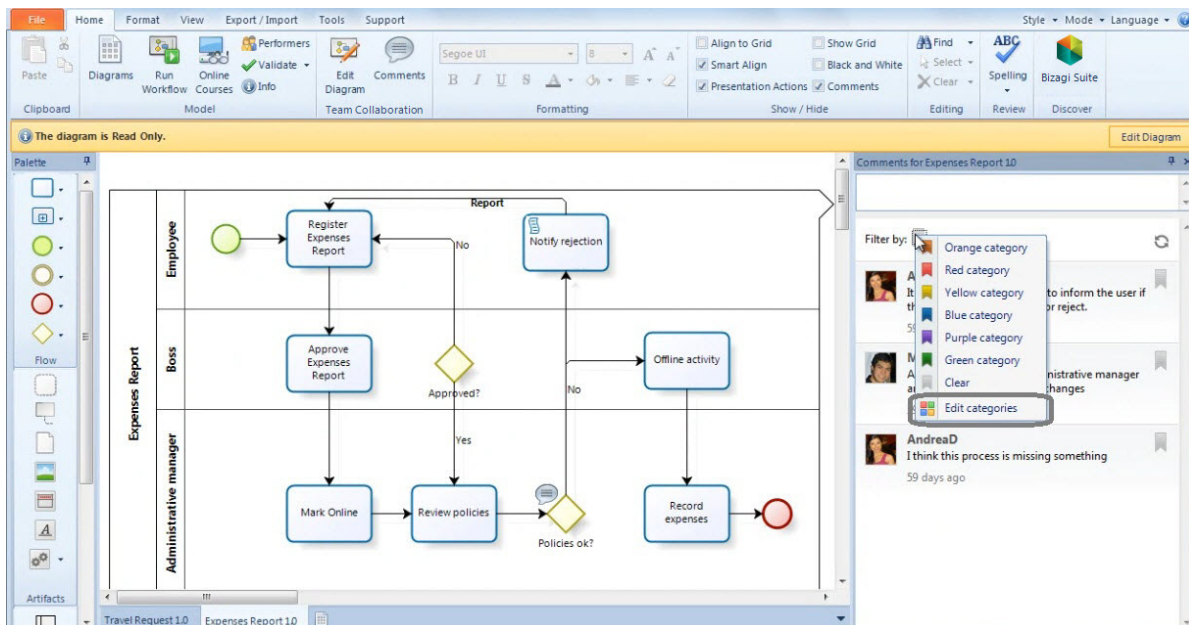
To define categories follow the steps below:

Create and assign filters to comments

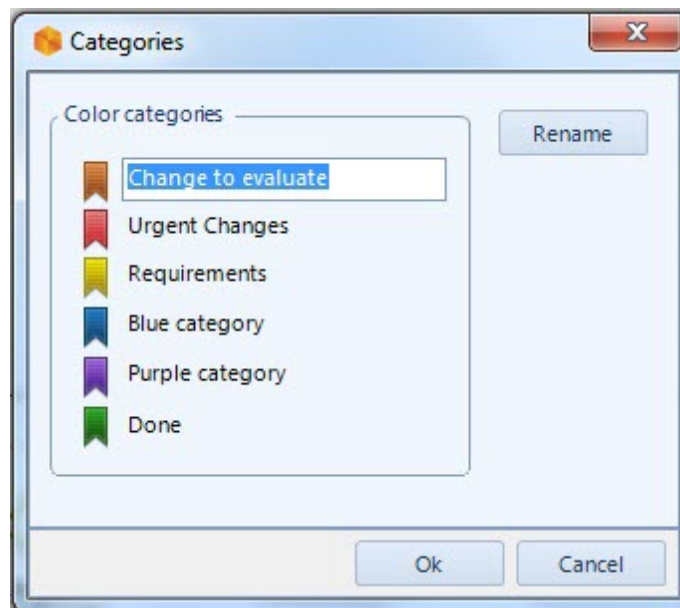
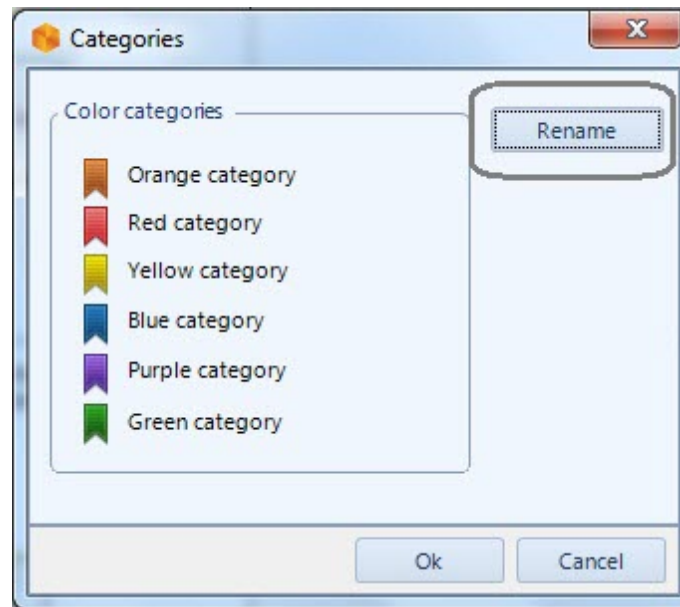
1. Select **Filter by** in the **Comments** Window.



2. Select Edit Categories.



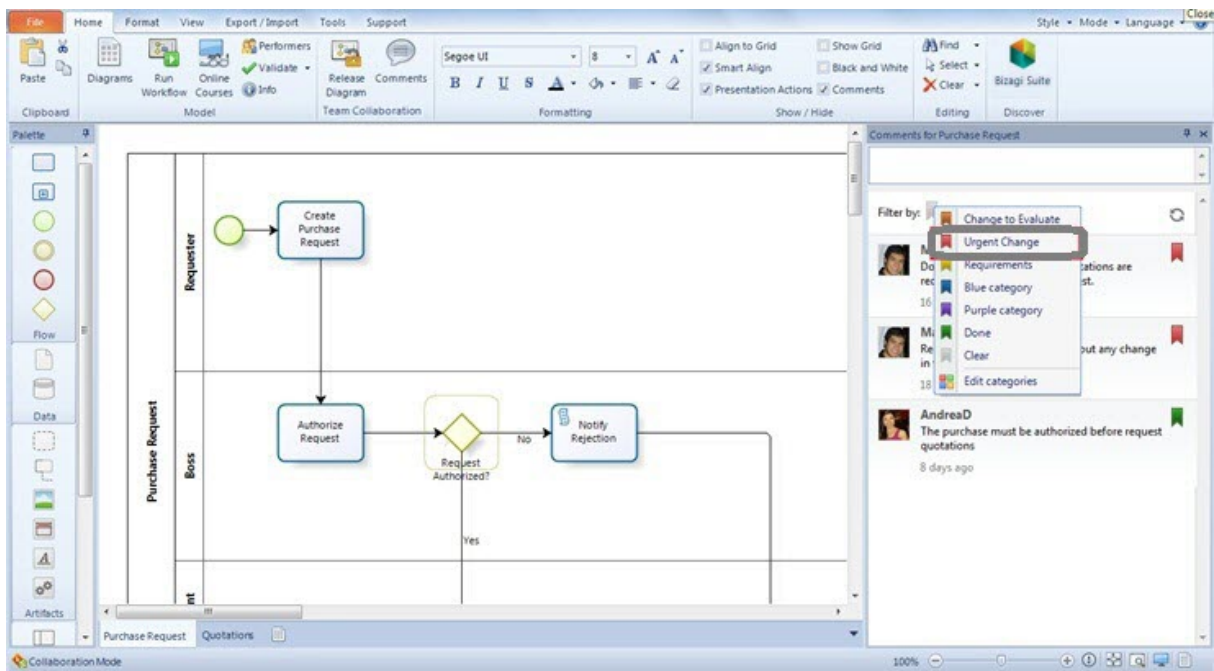
3. Select the category you wish to define and then click the **Rename** button. Name it and click OK button.



4. Click the category icon located on the right hand side of the comment and select the desired category.

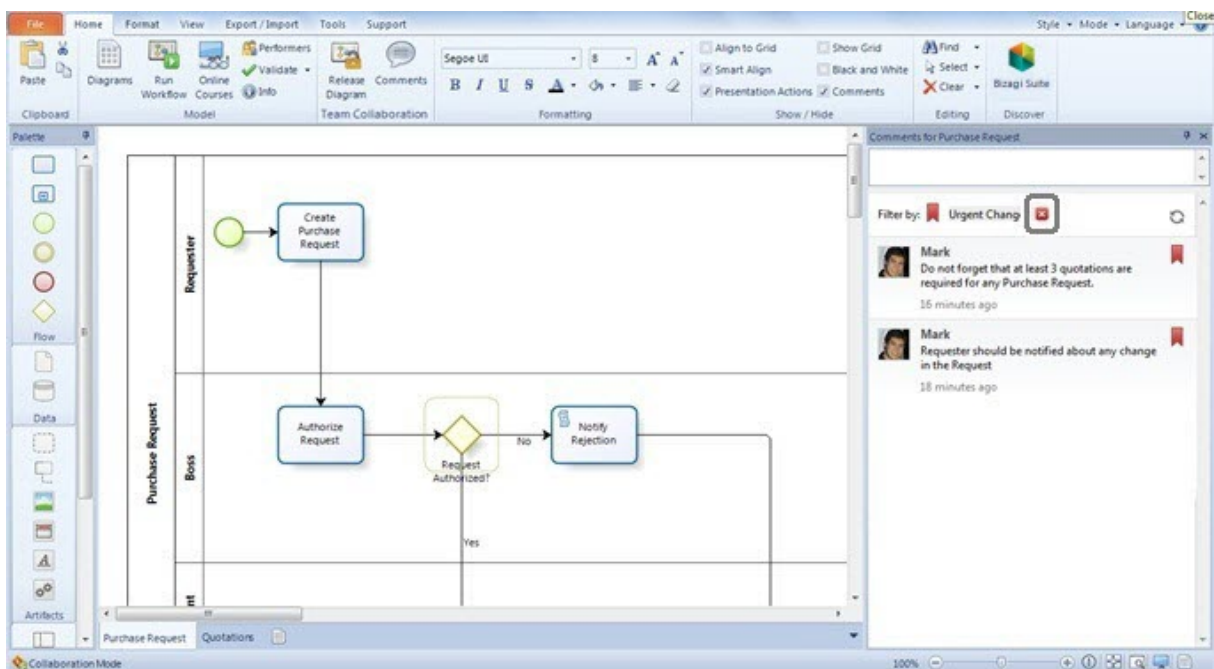
Filter comments by category

Comments can be filtered if you associate the relevant comments to category tags. To tag your comment, click the **Filter by** option and select the category.

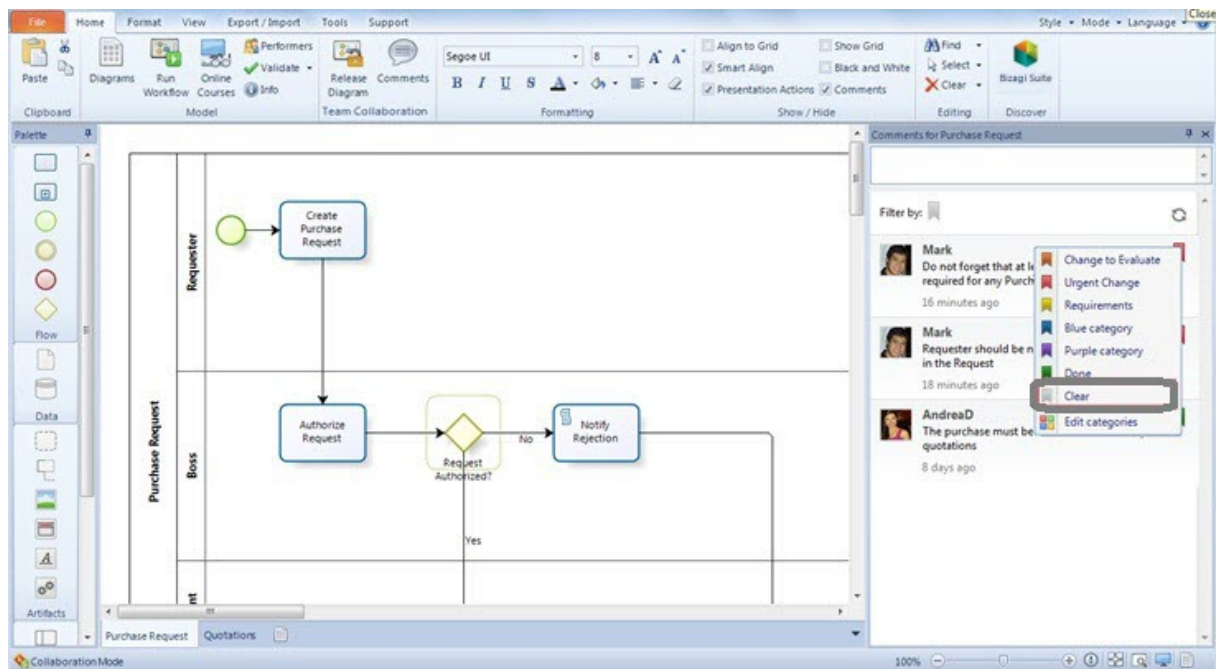


Remove filters and clear categories

To remove a filter click the red button located on the right-hand side of the category.



To clear an associated category tag, select the category icon, located on the right-hand side of the comment; thereafter, select the **Clear** option from the drop-down list.

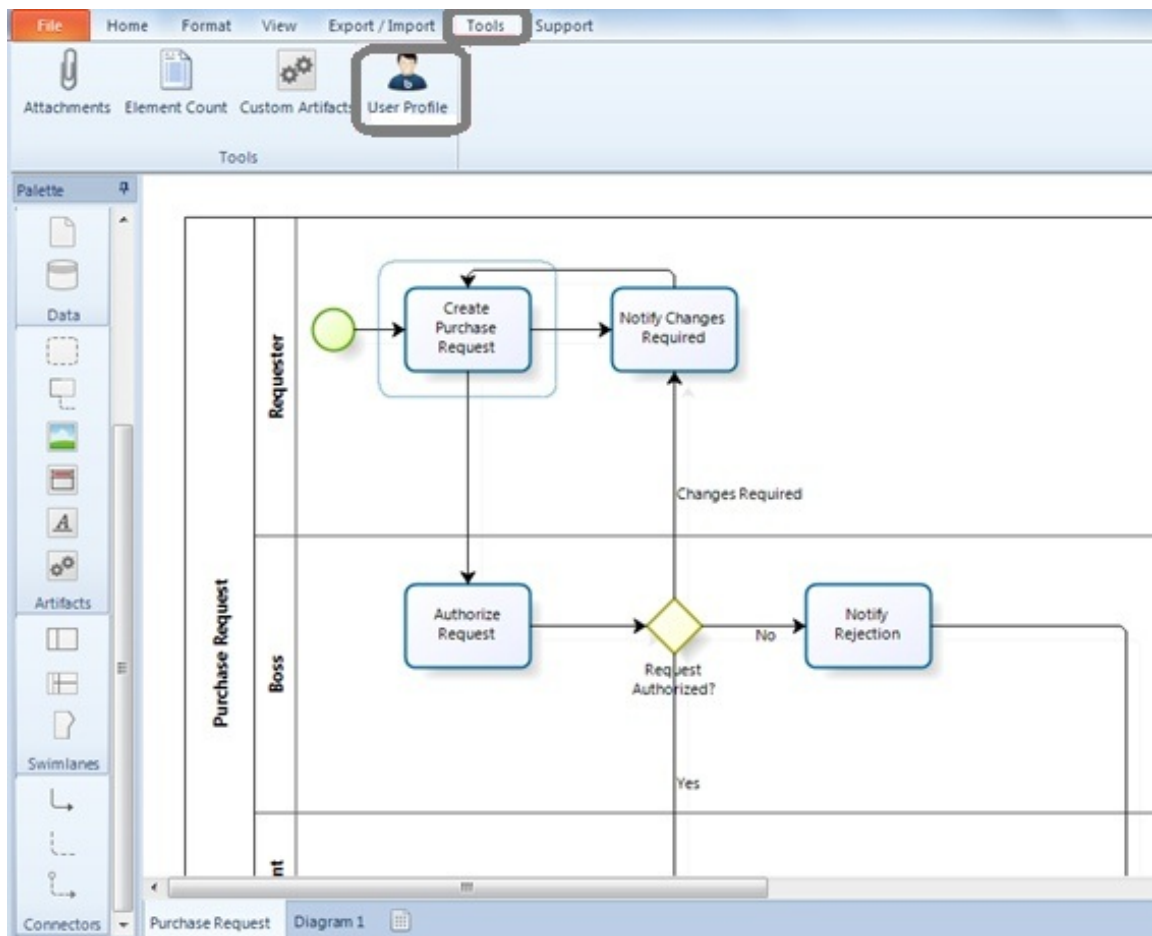


User profiles

When a model is in collaboration mode, the user profile identifies the team member. Your profile can be configured to include a personalized user name (nickname) and a picture. User profiles are defined locally to each computer. A local user profile is created and stored on the first computer the user logs into. If you use Bizagi Modeler on multiple computers you will need to define a user profile on each one.

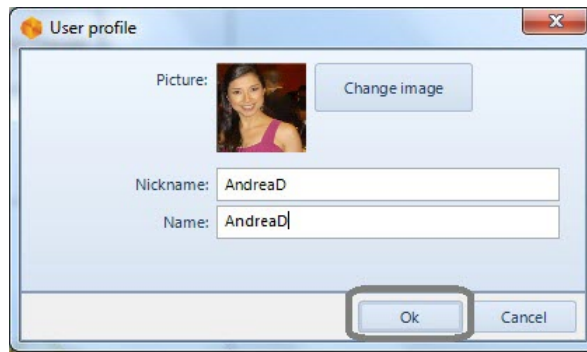
You can customize your user profile by following the steps below:

1. On the **Tools** tab, in the **Tools** group, click **User Profile**.

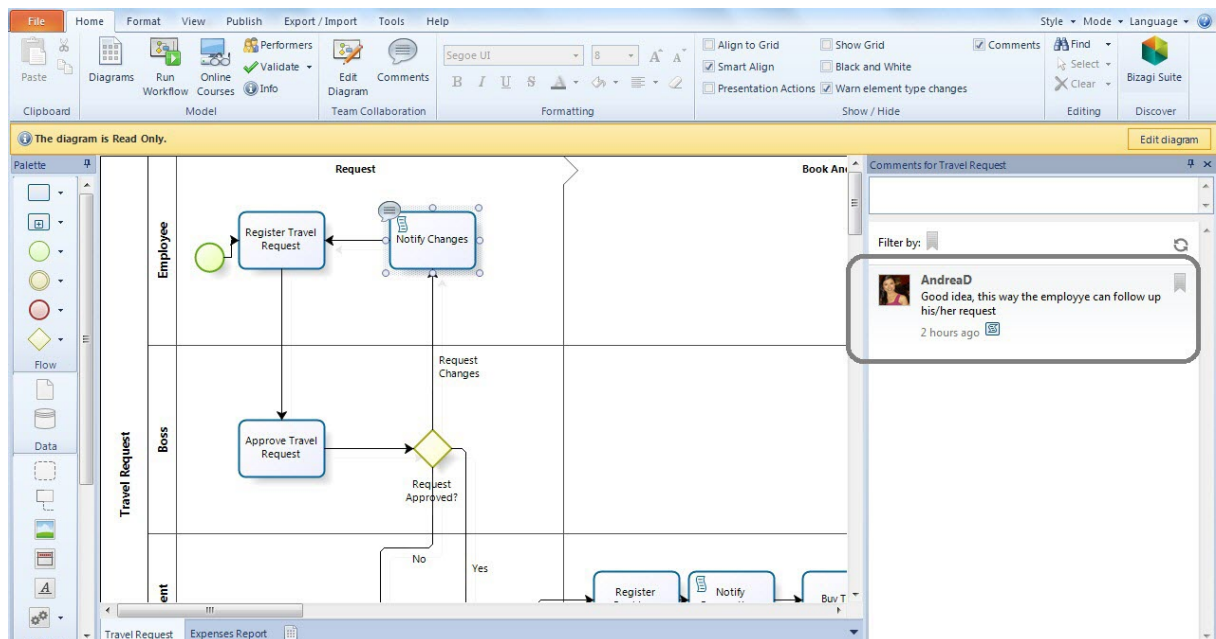


2. The **User Profile** window will be displayed. Click the **Change Image** button to load an image for the display picture.

3. Enter your **Nickname** and **Name** and click the **OK** button.



4. After updating your user profile all your comments will show your picture and nickname.

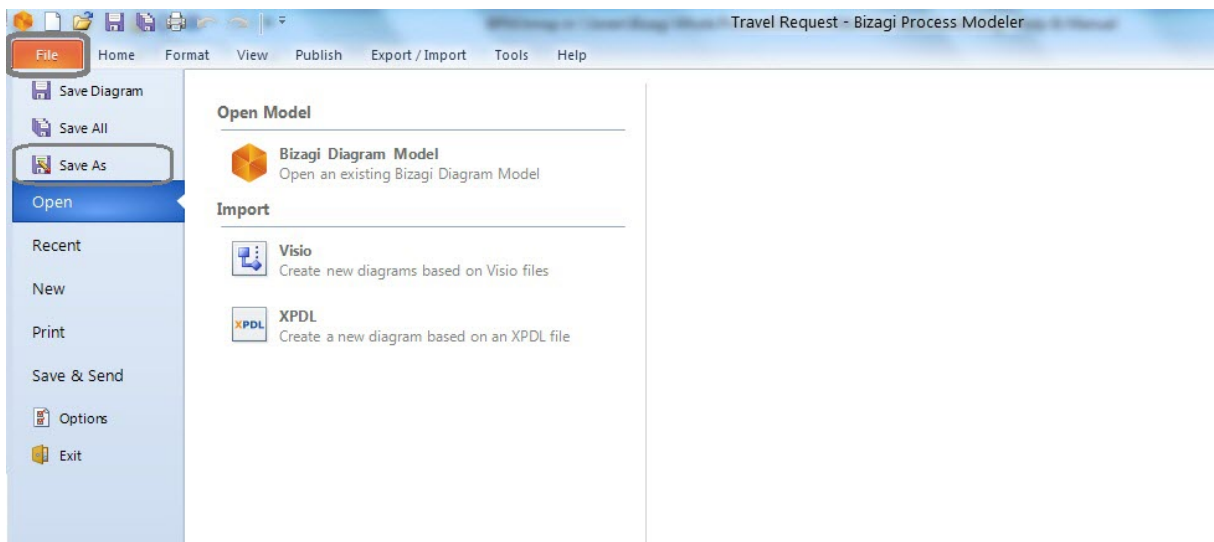


Saving as non-collaborative file

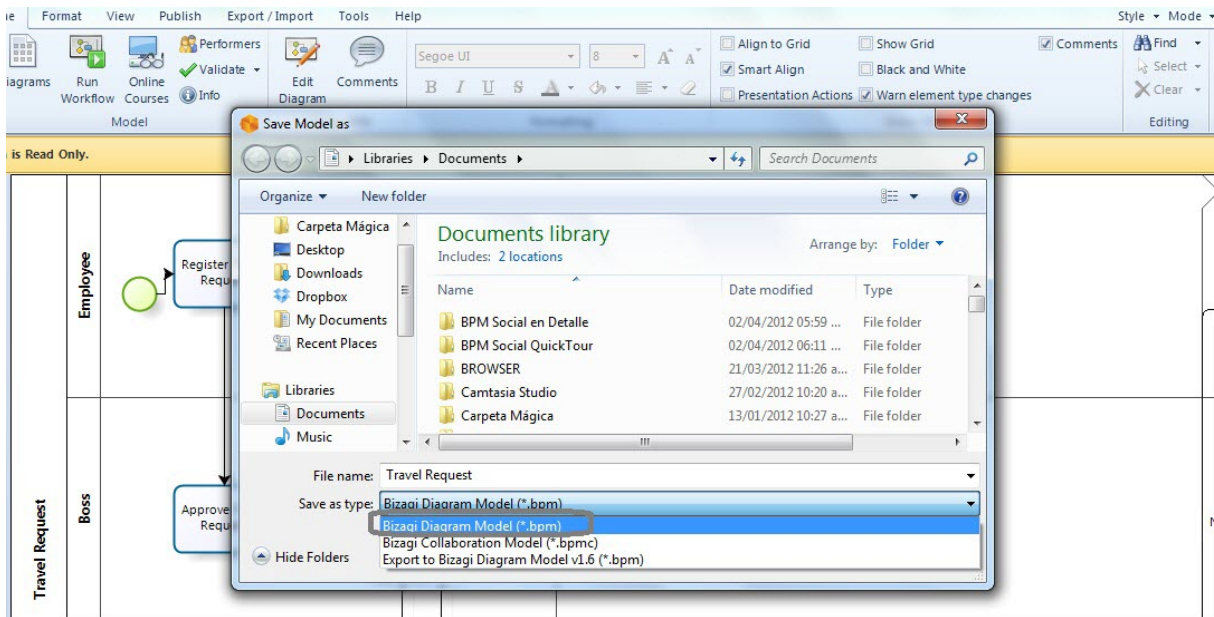
Collaborative process models are saved with a **.bpmc** extension (the 'c' denotes collaboration), in comparison to non-collaborating models that use a **.bpm** extension. [Click here for more information about Bizagi Modeler extensions.](#)

When you have finished collaborating, that is, your process design is finished, you can save your model as a **.bpm** file again in the location where all your processes are stored.

1. Click **Save As** on the **File** tab.



2. Specify the save location and select *Bizagi Diagram Model (*.bpm)* from the **Save as type** drop-down list.



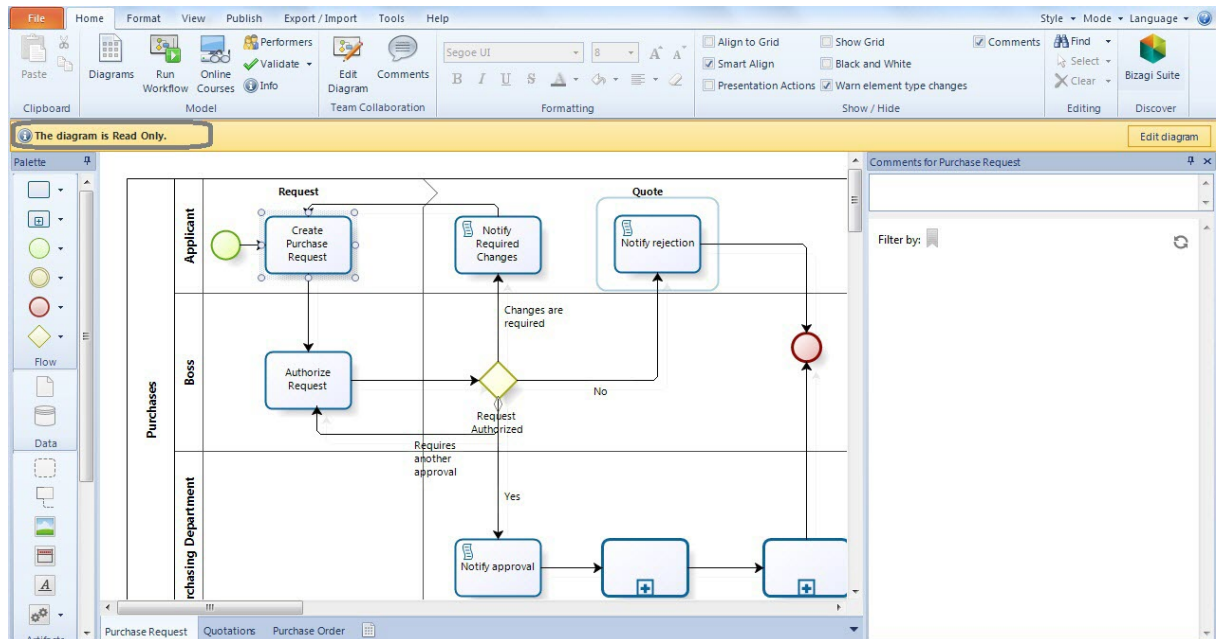
Force unlock

By default all diagrams are read-only. To change or update a diagram it is necessary to click **Edit Diagram** on the **Home** tab. This will enable you to perform any changes on the diagram, and for everyone else, the diagram will be locked.

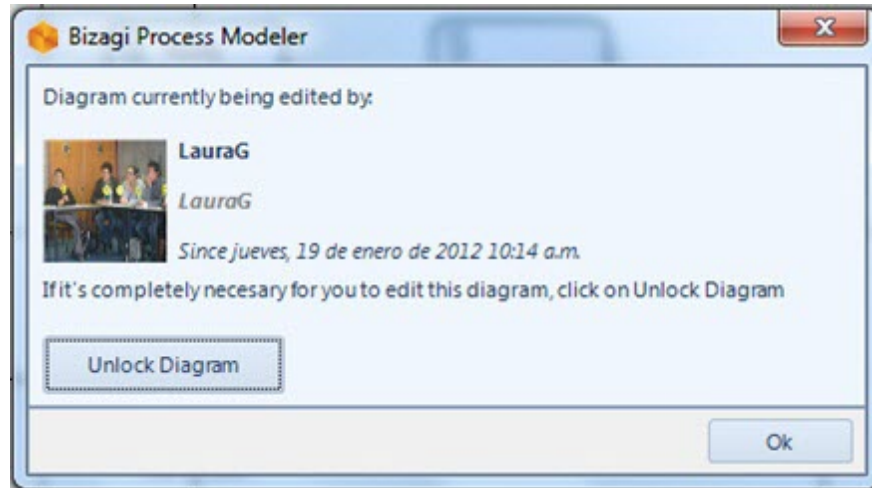
Doing so avoid inconsistencies, as single-user editing prohibits conflicting updates on shared data, which is important to maintain integrity. However, you may override this feature by forcing an unlock at which point Bizagi Modeler will warn you that conflicts may occur.

A locked diagram is evident by a display message stating that the model is read only.

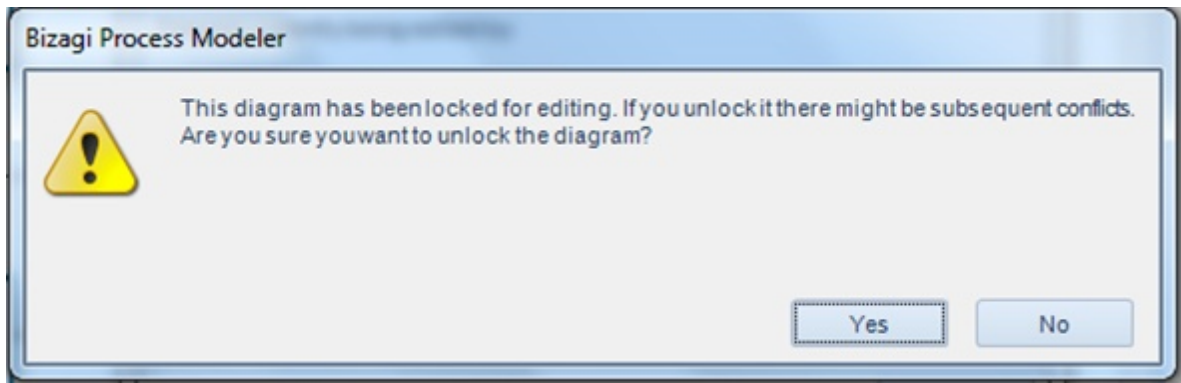
Click the **More info** link.



A window will display showing the users currently editing the model.



If you click the **Unlock diagram** button the following warning message will be shown.



Click the **Yes** button. This will unlock the diagram and you will be able to make the necessary changes.



Part IX

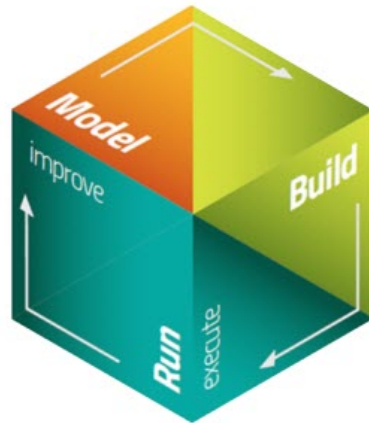
Process Execution

Process Execution

Bizagi offers three complementary products: **Bizagi Modeler**, **Bizagi Studio** and **Bizagi Engine**.

To model and automate your processes you need Bizagi Modeler and Bizagi Studio on your Computer or laptop.

Use the free Modeler to diagram and document your process. Once your process is complete you can then press the *Run* button to export the process to Bizagi Studio, where a wizard will guide you through all the necessary steps to automate the process, and turn it into an executable application (workflow).



Manage the complete process life cycle:

- **Bizagi Modeler:** Diagram and documentation module available as **Freeware**
- **Bizagi Studio:** Construction module available in the Bizagi BPM Suite
- **Bizagi Engine:** Execution and control module available in the Bizagi BPM Suite

With Bizagi Modeler you start mapping and documenting the process flowchart.

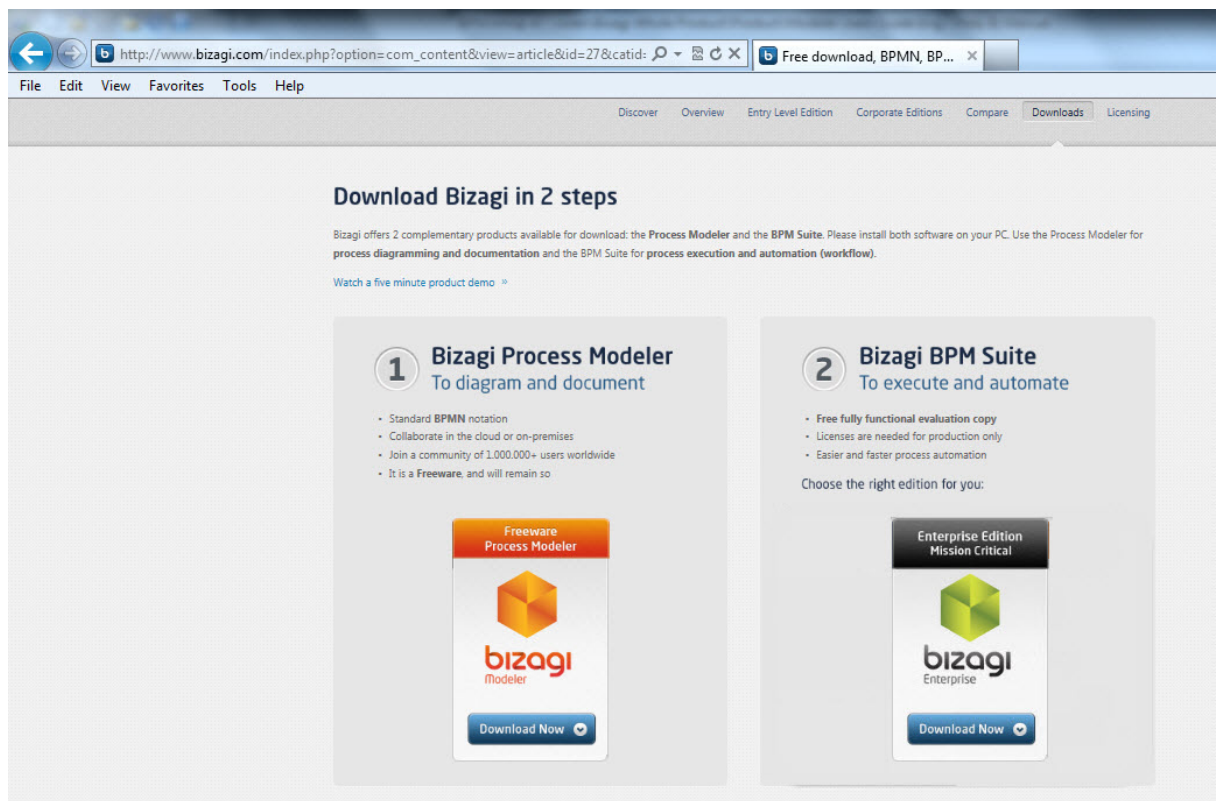
Use our Bizagi Studio to enter all the necessary information for process execution: standard time, costs, user interfaces, business rules, etc. This model is stored in a database and used for process execution by the Bizagi Engine.

Bizagi BPM Suite allows you to enter all the necessary information for process execution: standard time, costs, user interfaces, business rules, etc. This information is stored as a model in a database and used at runtime for process execution through a work portal for end users.

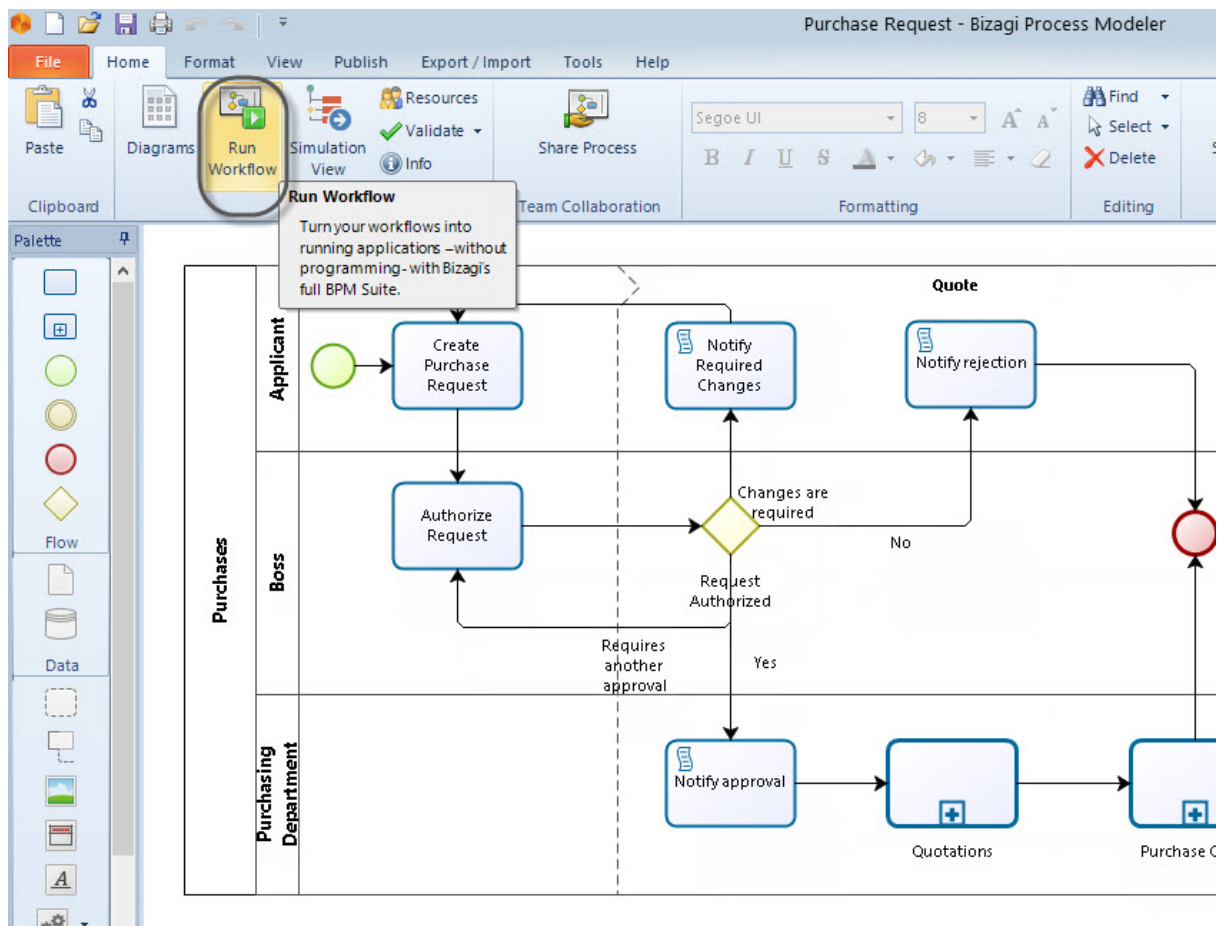
[Click here for more information about process automation](#)

To start your process automation, follow the steps below:

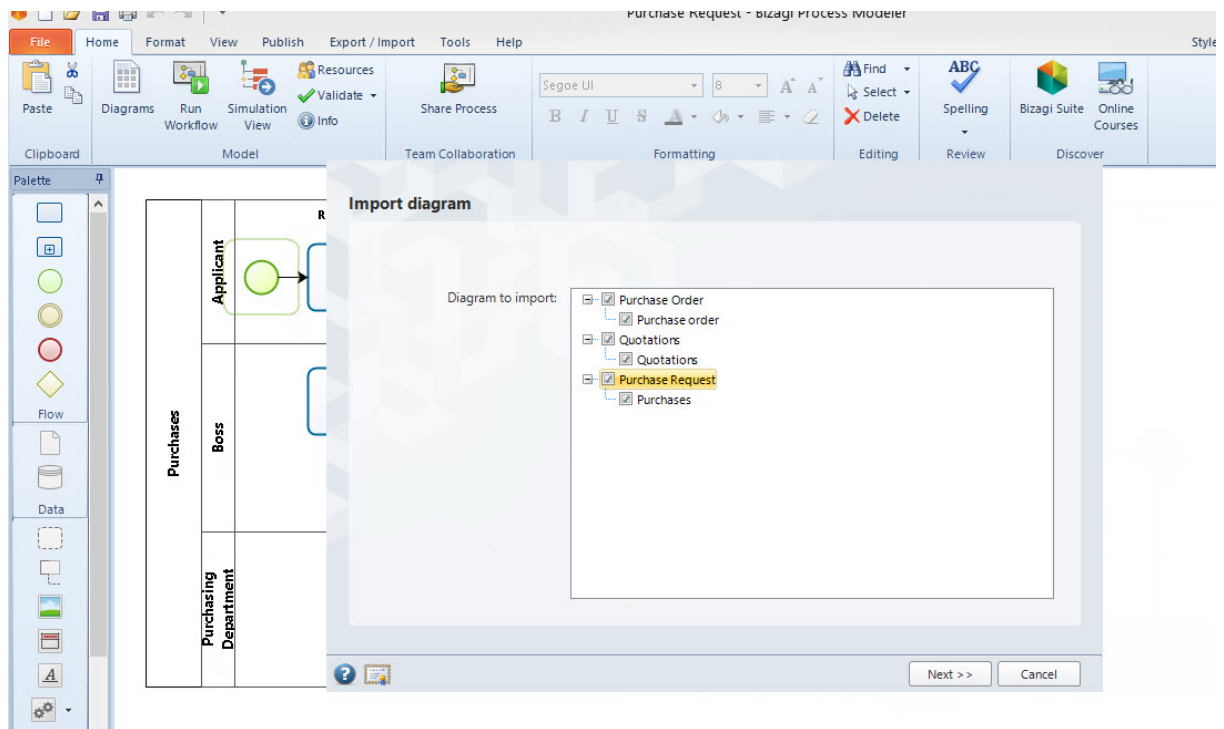
1. Download Bizagi BPM Suite from www.bizagi.com and follow the instructions to install it.



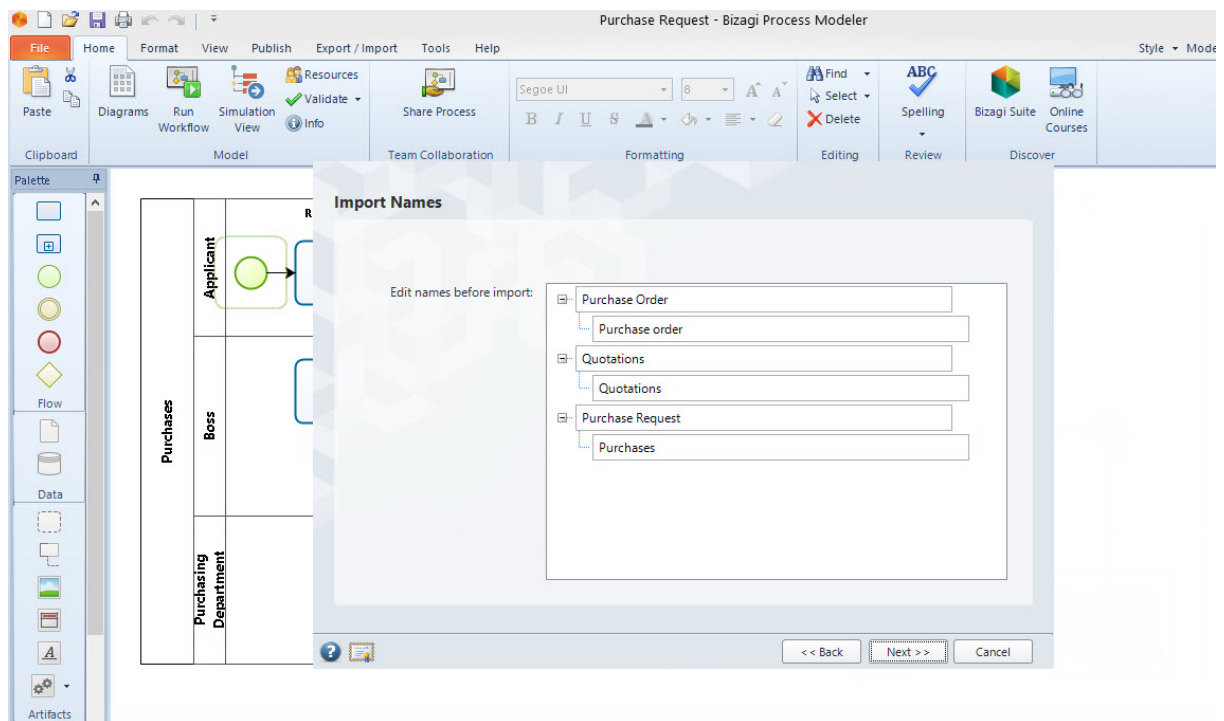
2. Open your process in Bizagi Modeler and select *Run Workflow* on the *Home* tab.



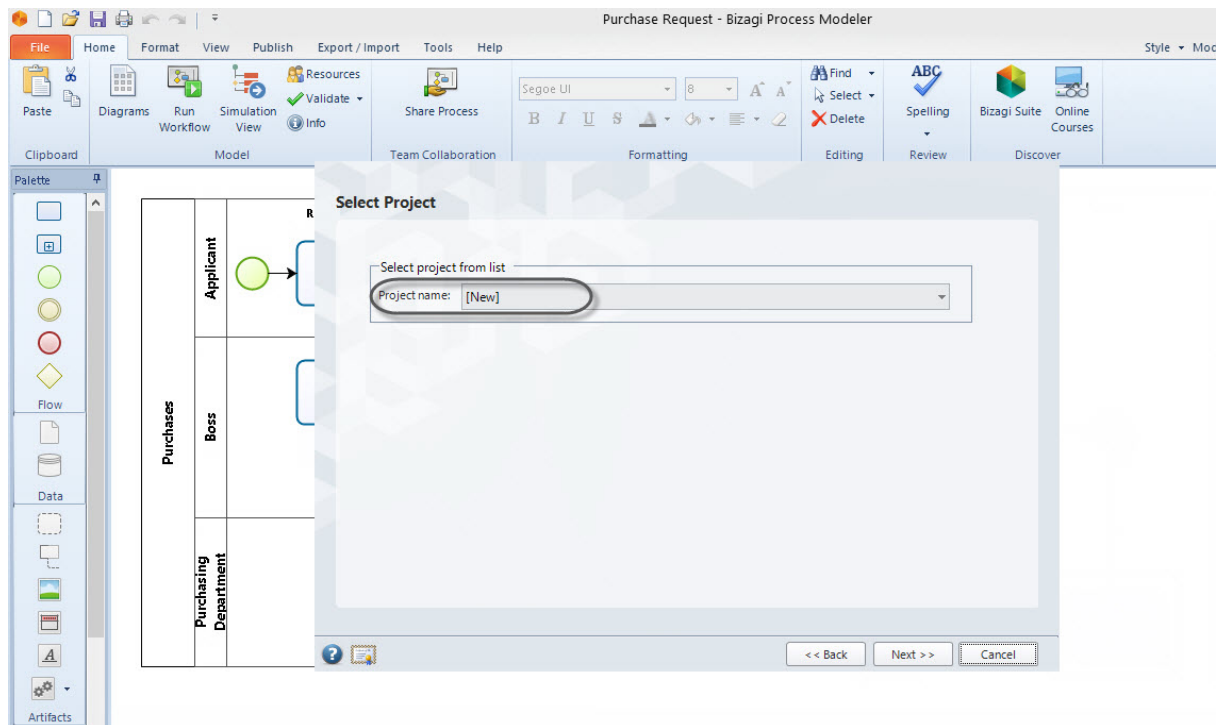
3. Mark the diagrams to export and click the **Next** button.



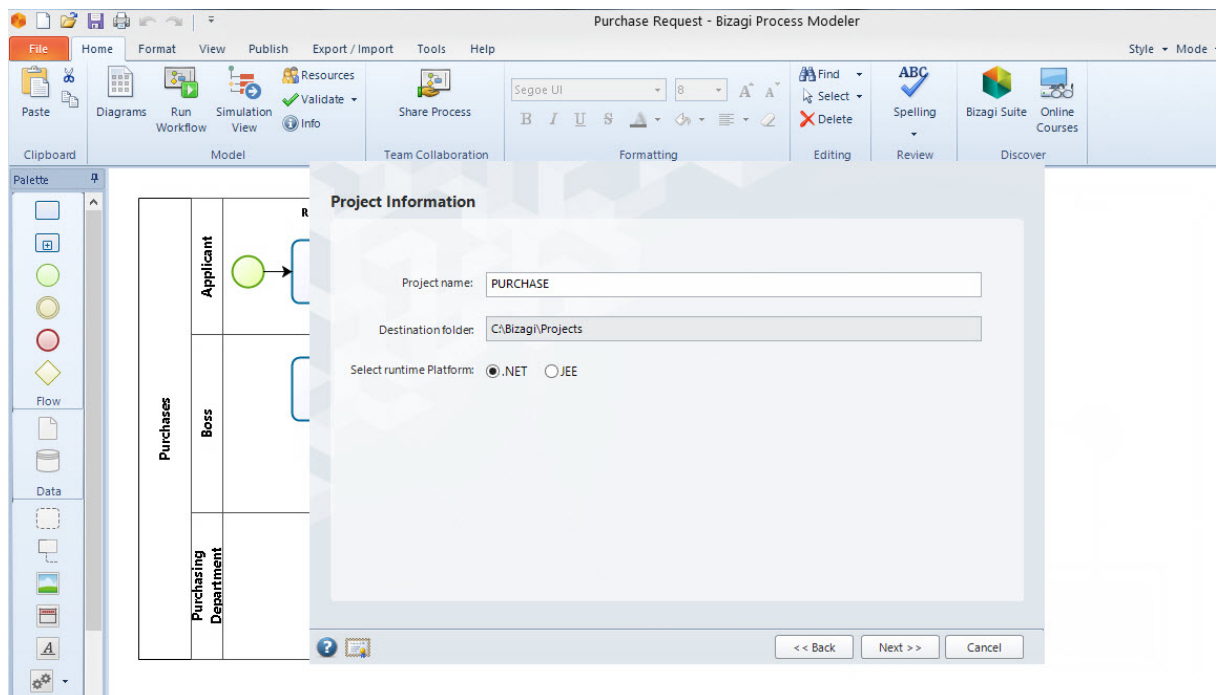
4. Edit the diagram's name, if necessary, and click the **Next** button.



5. Choose the **New** option in the project list and click the **Next** button.
If you already have a project in Bizagi Studio, you can opt to create this new process there.



6. Enter the project name and click the **Next** button. The project will be created and are able to start the automation in Bizagi Suite.



7. In Bizagi Studio a wizard will guide you step by step through the automation process and will have your processes up and running in no time.



Guidance for automation

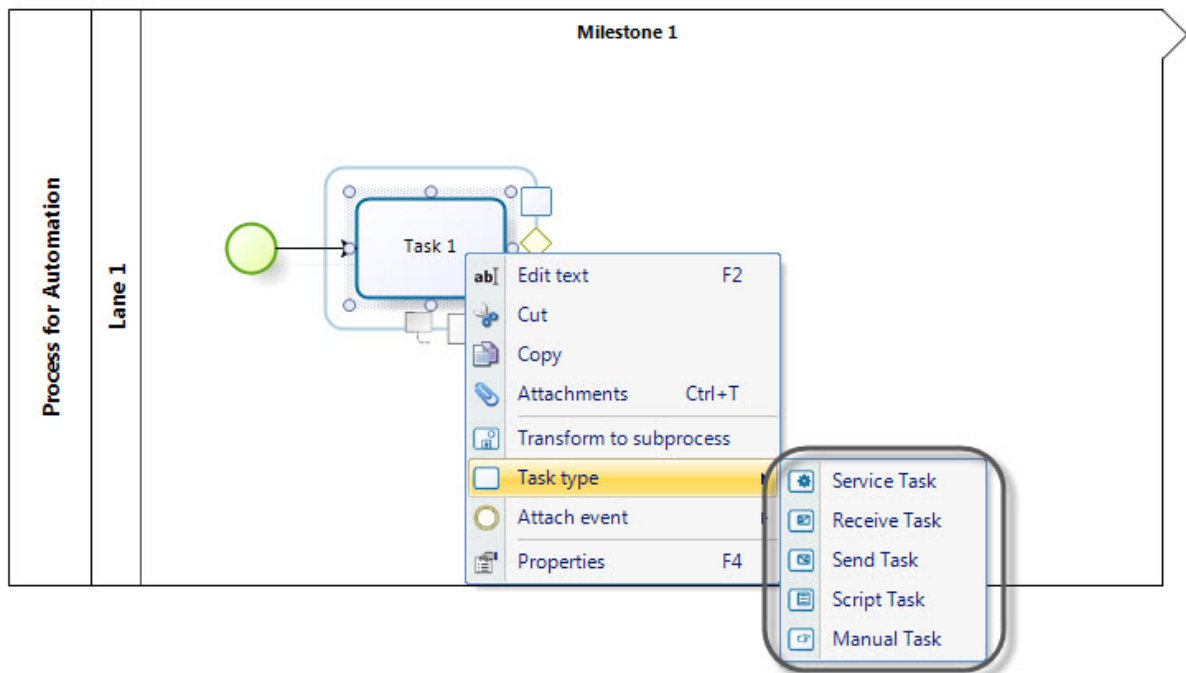
Bizagi Studio is the construction environment that transforms processes designed with Bizagi Modeler into applications without the need for programming.

Bizagi offers a set of tools that enables you to graphically define the model associated with a business process (flowchart, business rules, user interface, etc.). This model is stored into a database, then is interpreted and executed in production by Bizagi BPM Server without having to use intermediate code. Bizagi Studio is available for **free** download from our site www.bizagi.com.

To model processes that are executable in Bizagi Studio, you need to consider the following.

Activities

Activities represent work or tasks carried out by members of the organization. Bizagi Studio only supports some of the types of activities. You can define your tasks as User Task, Service Task, Receive Task, Send Task, Script Task or Manual Task.

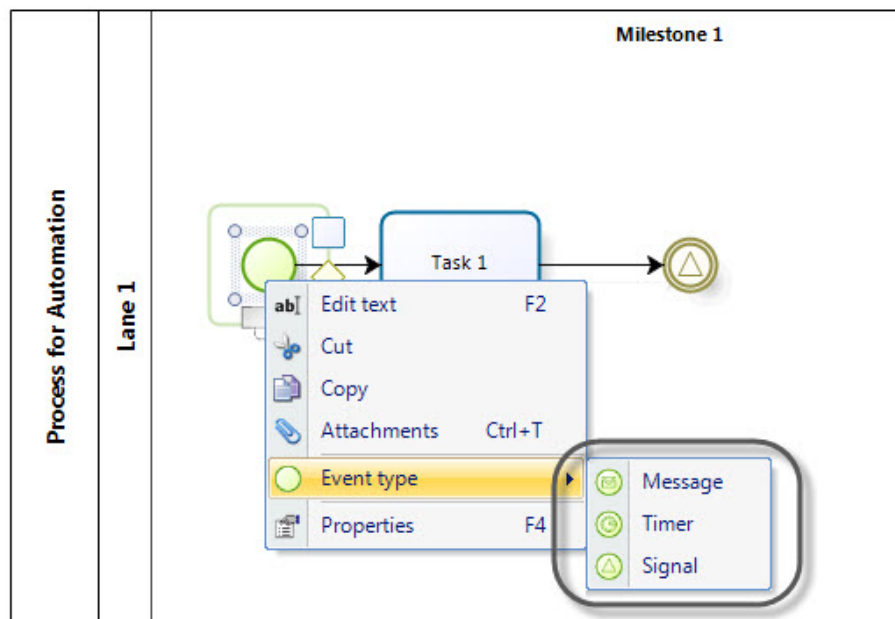


Events

Start Events

The start event indicates the start of the process. Bizagi Studio supports several start events:

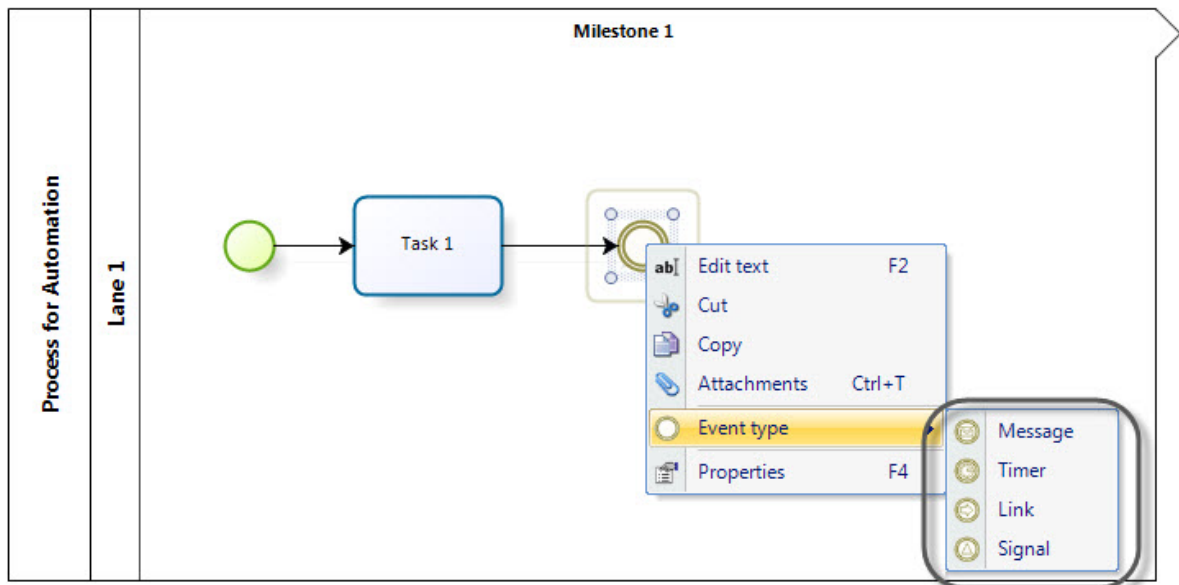
- Start Event (it does not have any particular behavior)
- Message Start Event
- Timer Start Event
- Signal Start Event



Intermediate Events

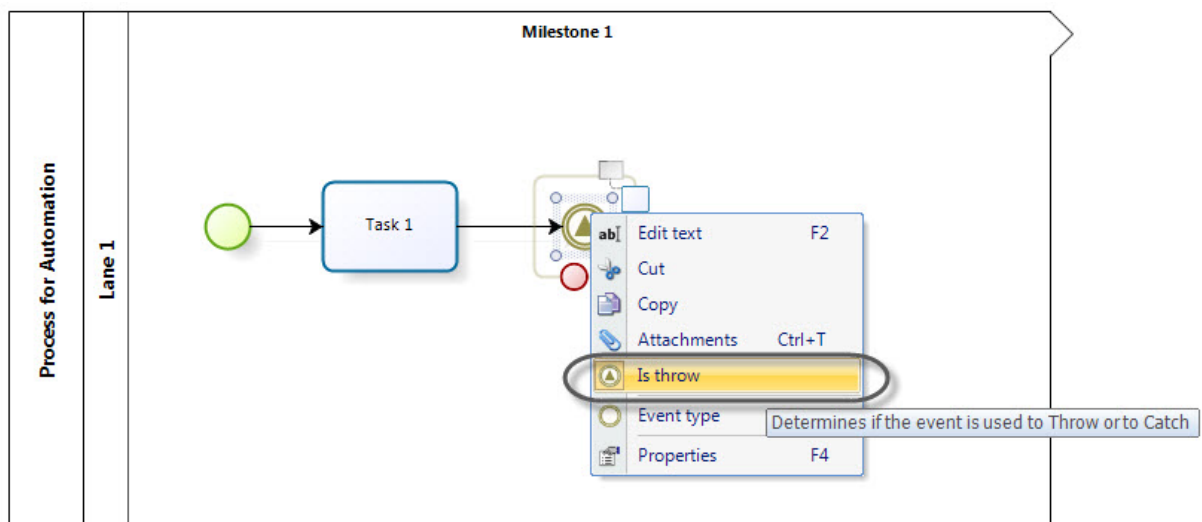
Intermediate events indicate where something happens somewhere between the start and the end of a Process. Bizagi Studio allows you to include five types of intermediate event in your processes.

- Intermediate Event
- Message Intermediate Event
- Timer Intermediate Event
- Link Intermediate Event
- Signal Intermediate Event



When you include a message or a signal event in the diagrams, you must indicate if the event is used to **Throw** or to **Catch**.

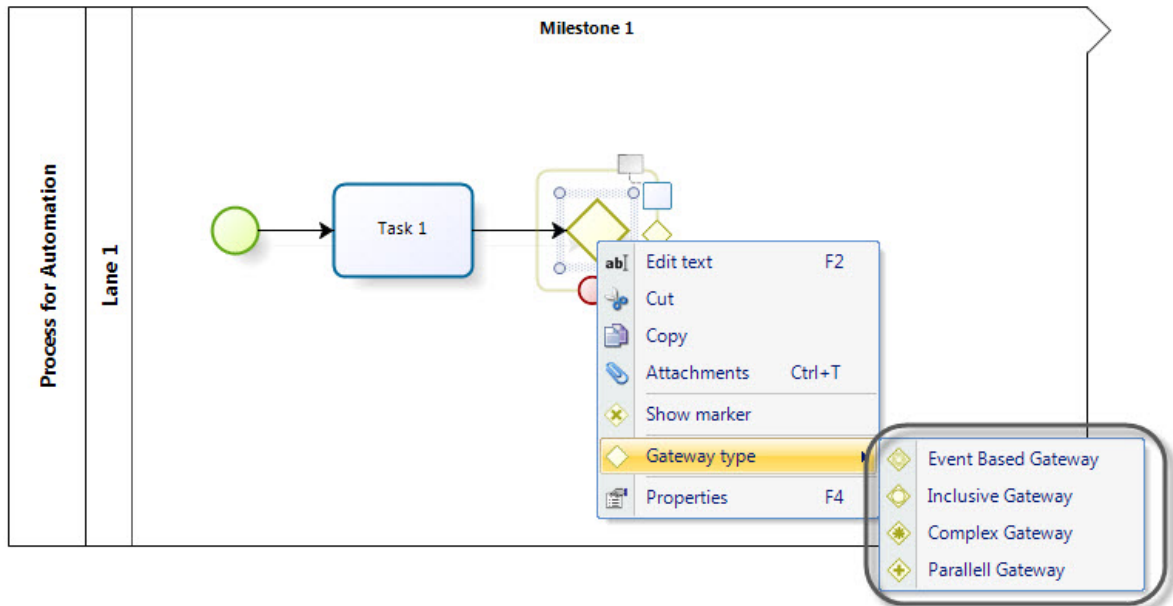
[Click here for more information about how to communicate between processes.](#)



End Events

End events indicate when a process ends. Bizagi Studio supports the following end events.

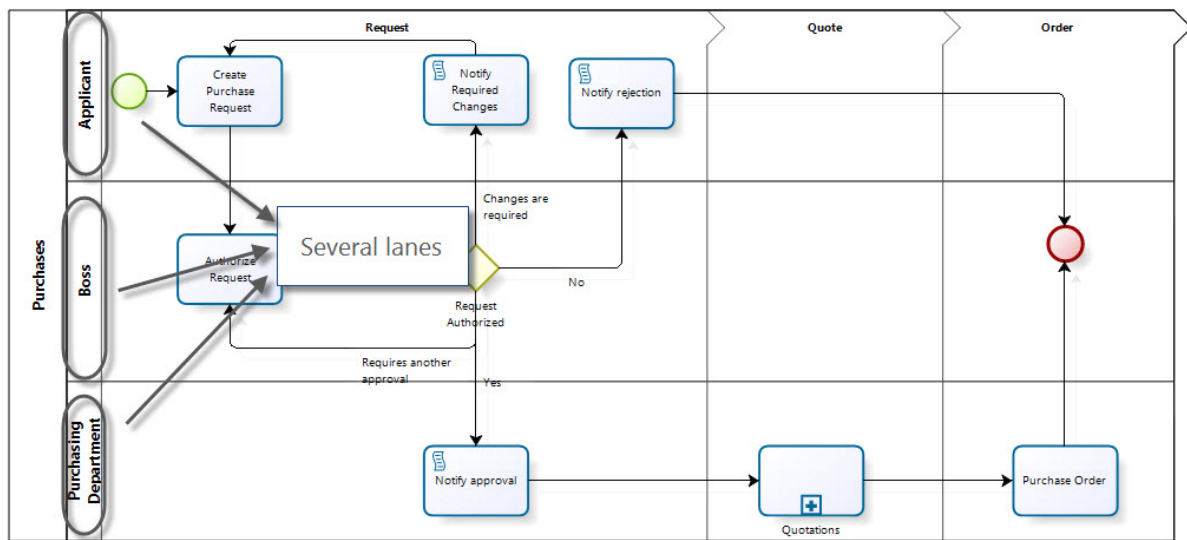
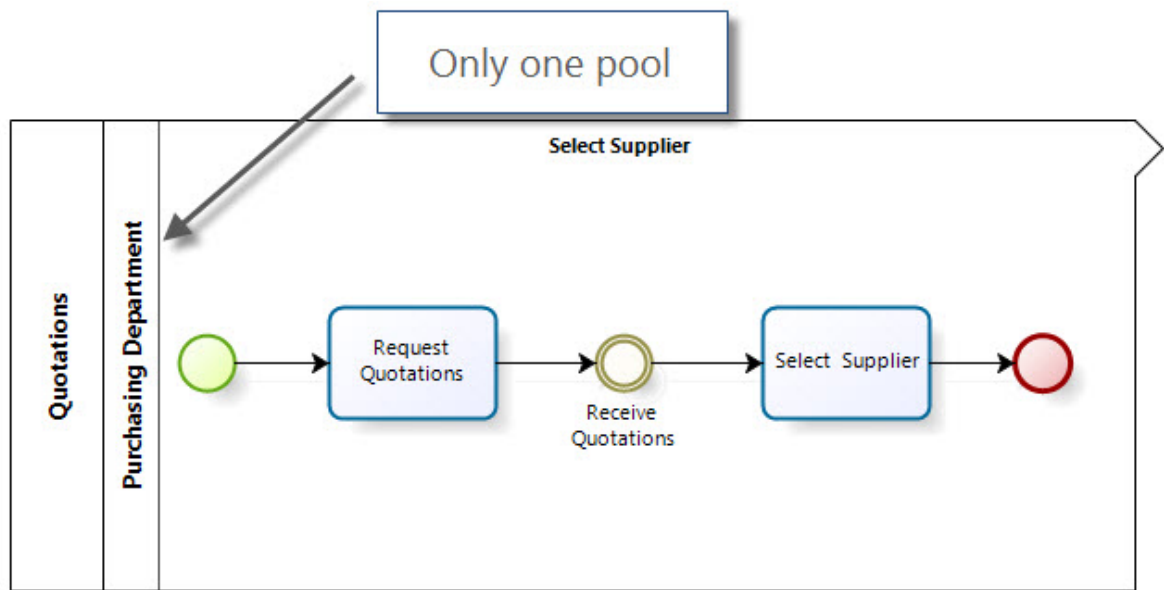
- Message End Event
- Error End Event
- Cancel End Event
- Signal End Event



Multiple Pools and Lanes

Multiple pools are not supported by the Bizagi BPM Suite. The processes that can be executed in Bizagi Studio must contain only one pool.

You can include several lanes to define and differentiate elements in the process: for example roles and departments.



Connectors

To execute your model, you can use Sequence Flow Connectors



to connect the different elements in the process.

You can also include the association connector



to link artifacts to an element.

Sub-process

Bizagi Studio supports four types of sub-processes, each sub-process has a special behavior:

- Embedded: When you define a Sub-process as Embedded, which is the default Sub-process, it will be dependent on the parent Process and consequently have visibility of the parent's global data.
- Reusable: A Reusable Sub-process is defined when an activity within a Process calls another predefined Process. The Process that is called is not dependent on the parent.
- Multiple: A multiple Sub-process is instantiated several times. It could be executed in Parallel or in Sequence.
- Transactional: The transactional Process is a Sub-process which behavior is controlled through a transaction protocol.

[Click here for more information about transactional sub processes.](#)

Execution

[Once you have completed the process modeling you can run it on the Bizagi BPM Suite.](#)

Video: Bizagi BPM Quicktour

[Watch a 5 minutes quicktour and learn about Bizagi BPM Suite - Process execution](#)



Part X

Advanced topics

Advanced topics

Interaction between processes

More than one pool in a diagram represents interaction between separated business entities or performers.

Many business processes require interaction between each other to be correctly performed and accomplished. In BPMN these interactions are defined as a sequence of activities that represent message exchange patterns between the entities involved.

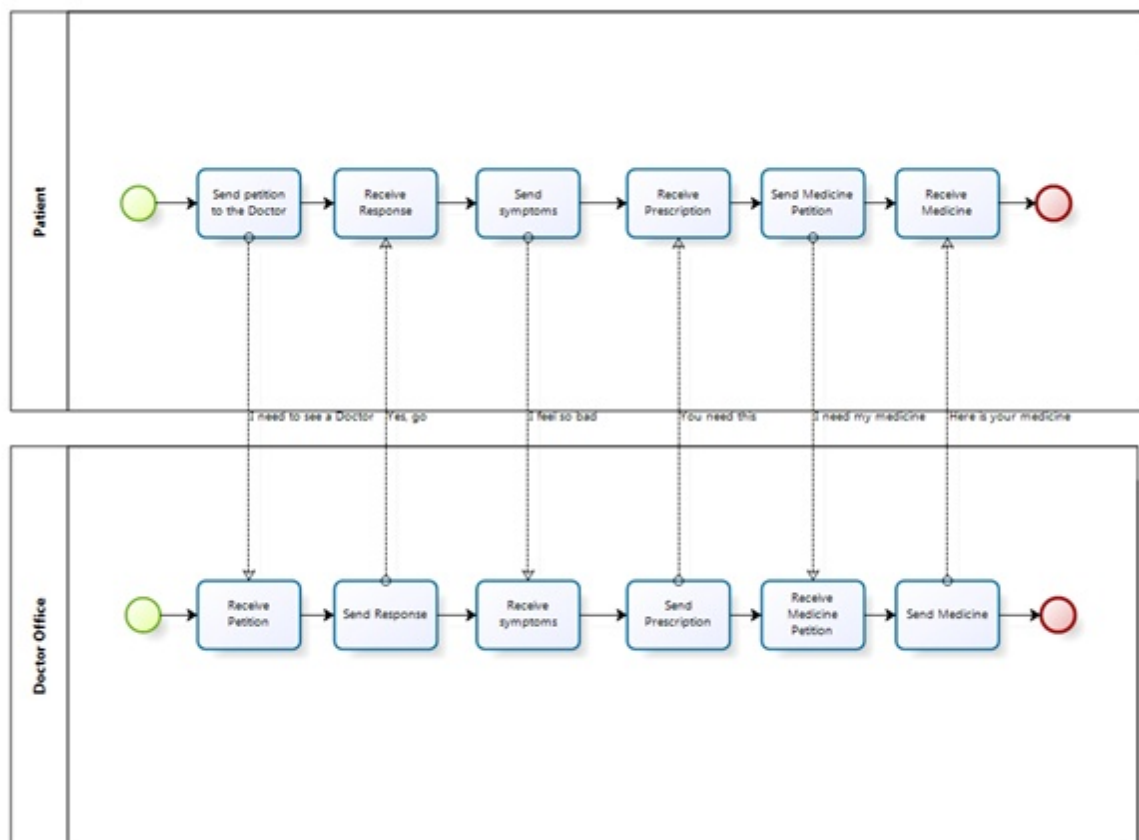
In BPMN this behavior is known as **Collaboration**.

Understanding interaction between processes

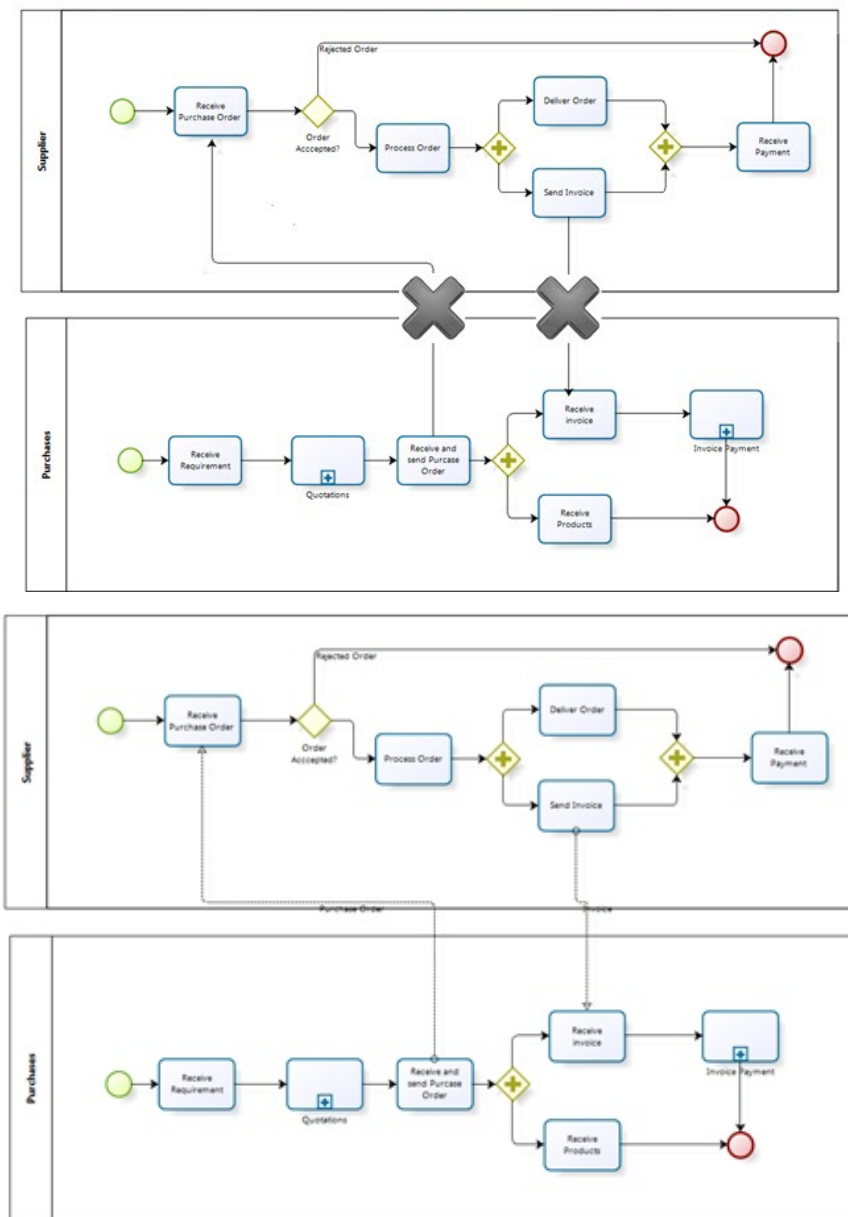
BPMN defines Pools as Process performers (Entity or Role) that contain the Sequence Flows between activities.

There is always at least one Pool for each diagram even if it is not diagrammed.

More than one pool in a diagram represents interaction between separate business entities or performers.











As the activities within Pools are considered auto-contained processes, the sequence flow must not cross the pools' boundaries. The interaction between Pools is shown through Message Flows, represented as dotted lines.



Modeling Collaborative processes

Collaboration enables communication between two or more processes by sending and receiving messages containing actionable information. In Bizagi, collaboration is carried out through the throw and catch shapes which are configured in each process. The shapes that allow Collaboration in Bizagi are:

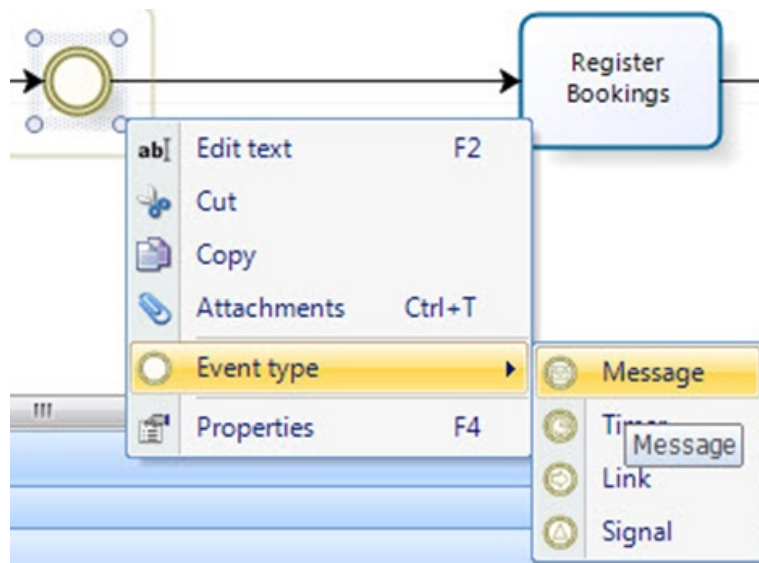
| ELEMENT | DESCRIPTION | NOTATION |
|---------------------|---|---|
| Message Start Event | Used when a message arrives from a participant and triggers the start of the process. |  Message |

| | | |
|--------------------|--|---|
| Message event | <p>Indicates that a message can be sent or received.</p> <p>If a Process is waiting for a message and it is caught the Process will continue its flow.</p> <p>A catch Message Event waits for a message to arrive and once the message has been received, the Process will continue. The Event marker in this instance will be filled.</p> <p>A throw Message Event sends a message to an external participant. The unfilled Event marker is allocated to the throw message.</p> |  Message Throw  Message Catch |
| Message end | Indicates that a message is sent when the process is ended. |  Message |
| Signal Start Event | <p>The start of the Process is triggered by the arrival of a signal that has been broadcast from another Process.</p> <p>Note that the signal is not a message; messages have specific targets, signals do not.</p> |  Signal |
| Signal event | <p>These Events are used to send or receive signals within or across the Process. A signal is similar to a signal flare that is shot into the sky for anyone who might be interested to notice and then react.</p> <p>If the Event is used to catch the signal, the signal Event marker will be filled. Alternatively, the unfilled Event marker is allocated to the throw message.</p> |  Signal Throw  Signal Catch |
| Signal end | It indicates that a signal is sent when the process is complete. |  Signal |

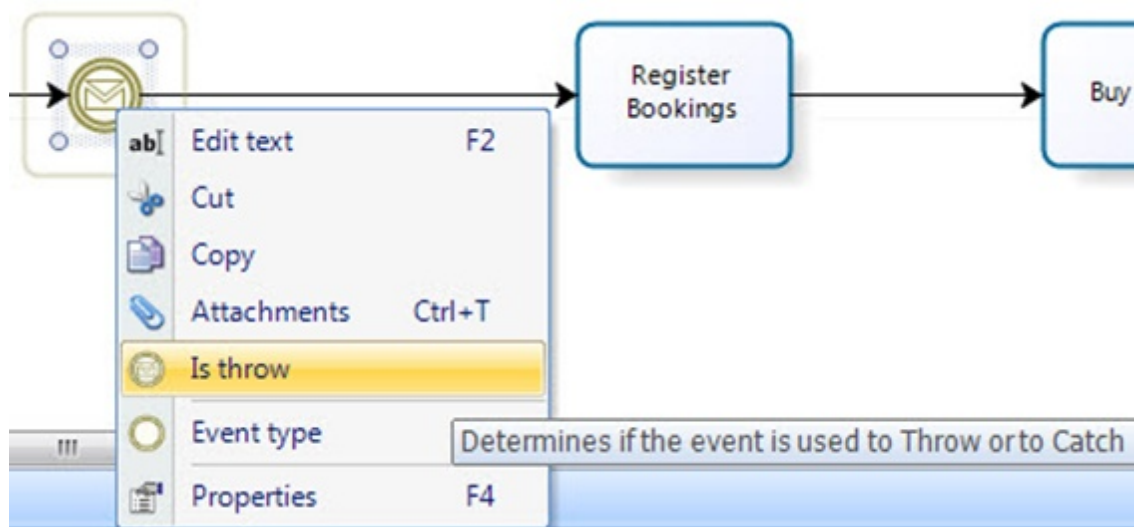
When you drag and drop an Intermediate Event into a process, you can convert it to another type of event.

For example to convert an Intermediate Event to a Message Event, follow these two steps:

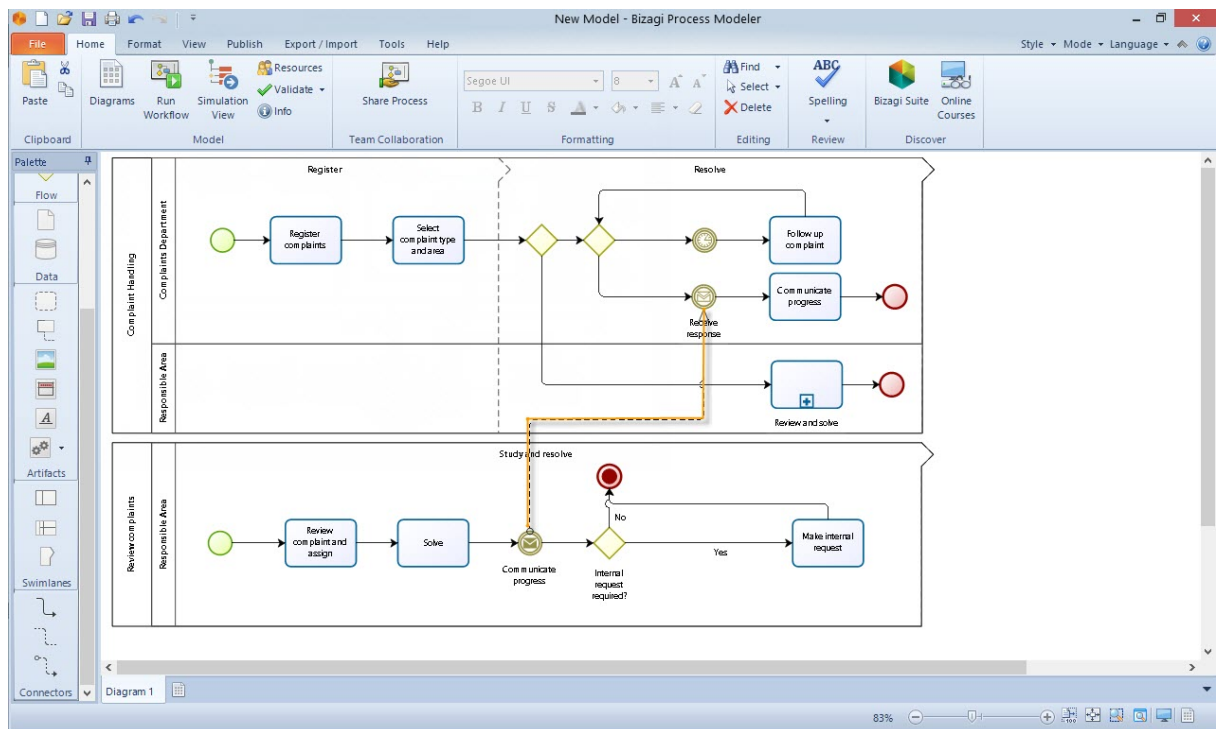
1. Convert the event type from Intermediate Event into Message. Right-click on it, select **Event Type** and choose **Message**.



2. If you have a catch message (the event marker that is NOT filled) and you need a throw message (the event marker that IS filled).
Right-click on the shape and select *Is Throw*, in order to convert the message into a throw message.



In the collaboration diagram, the messages will appear as follows:



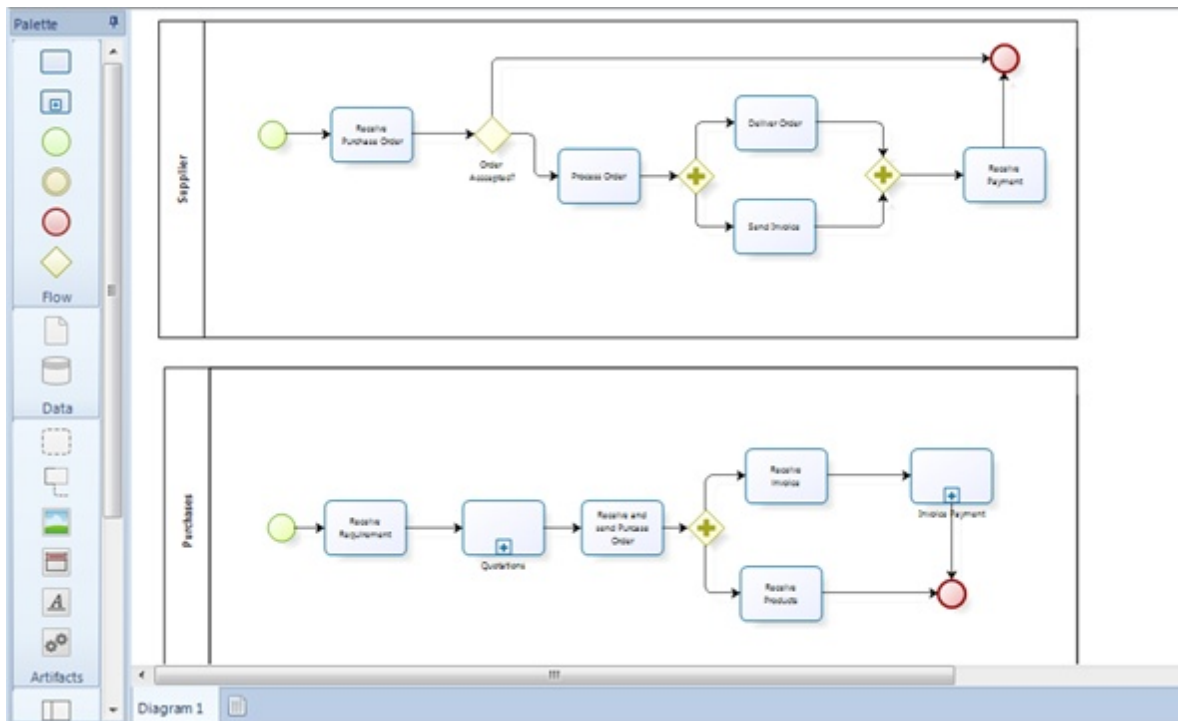
Example: Interaction between processes

In this example a company decided to diagram the Purchase Process interacting with the process performed by your suppliers.

The two processes are independent but information flows constantly via messages (phone calls, emails, etc.).

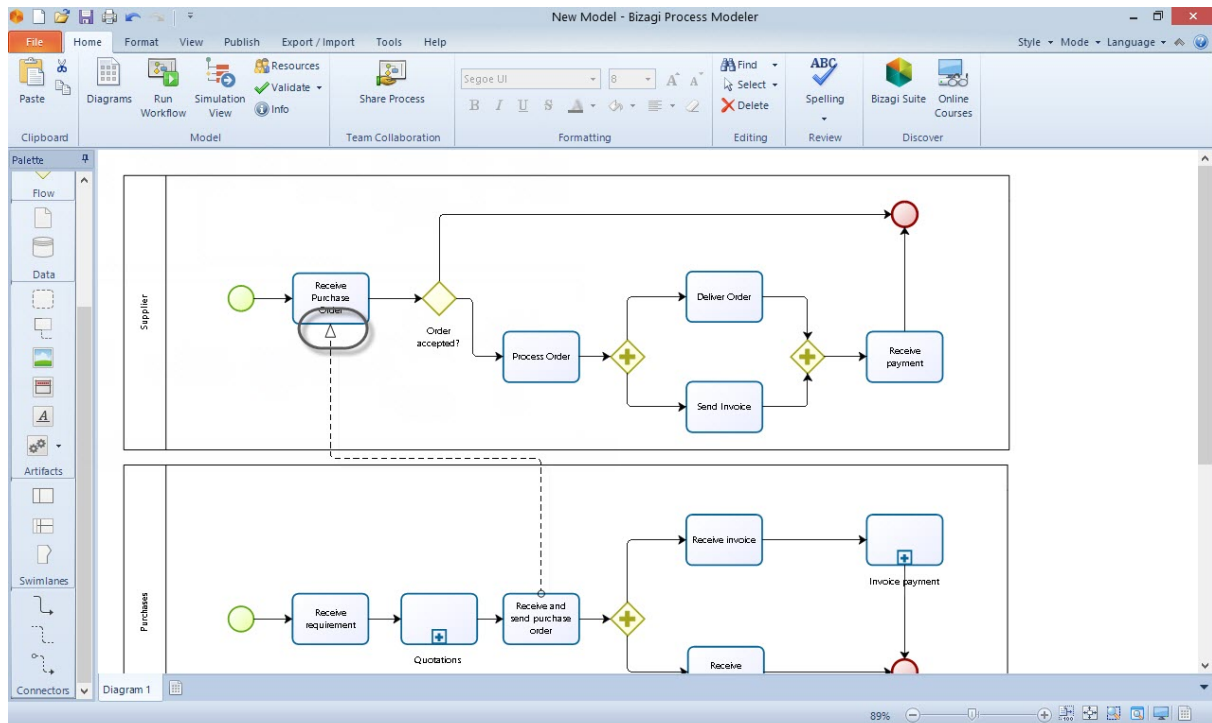
Each company needs information from the other to successfully complete the process.

The following is the diagram shows the Purchase Process example.

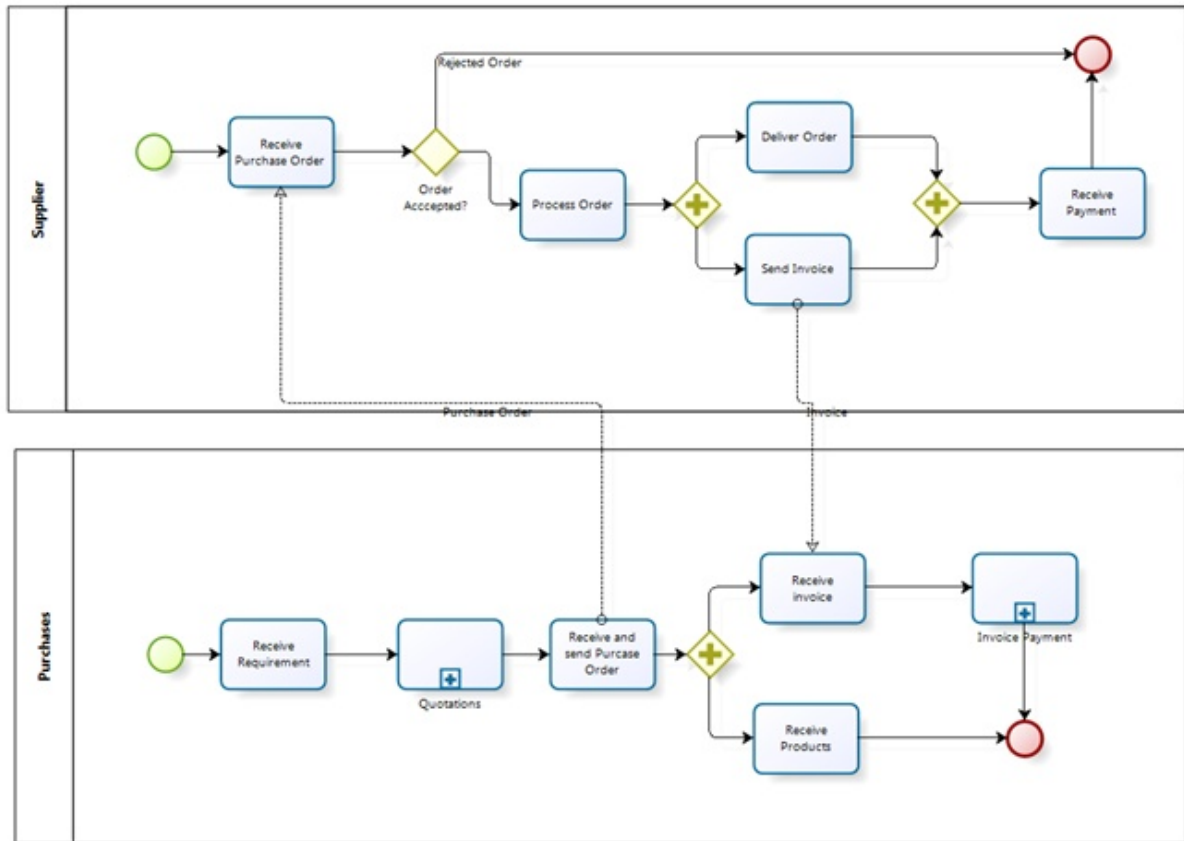


The Purchase department sends a Purchase Order to the Supplier.
Then, when the products are delivered, an invoice is sent to the purchase department by the Supplier.

Those interactions between processes can be represented with messages. To inset a message, click on the Message line option in the Connectors palette.



By doing the same for the send and receive invoice activities, the diagram showing collaboration will be finished.



































Message Flow connection rules

The following table has been **extracted from the BPMN 2.0** standard where the rules to connect objects through message flows is defined.

"The arrow symbol indicates that the object listed in the row can connect to the object listed in the column. (...) Only those objects that can have incoming and/or outgoing Message Flows are shown in the table. Thus, Lane, Gateway, Data Object, Group, and Text Annotation are not listed in the table."

Business Process Model and Notation, v2.0 page 44

| | | | | | | |
|---|---|---|---|---|---|---|
| From\To |  |  |  |  |  |  |
|  | | | | | | |
|  | ^ |  |  |  |  | |
|  | ^ |  |  |  |  | |
|  | ^ |  |  |  |  | |
|  | ^ |  |  |  |  | |
|  | ^ |  |  |  |  | |

Alignment features between processes

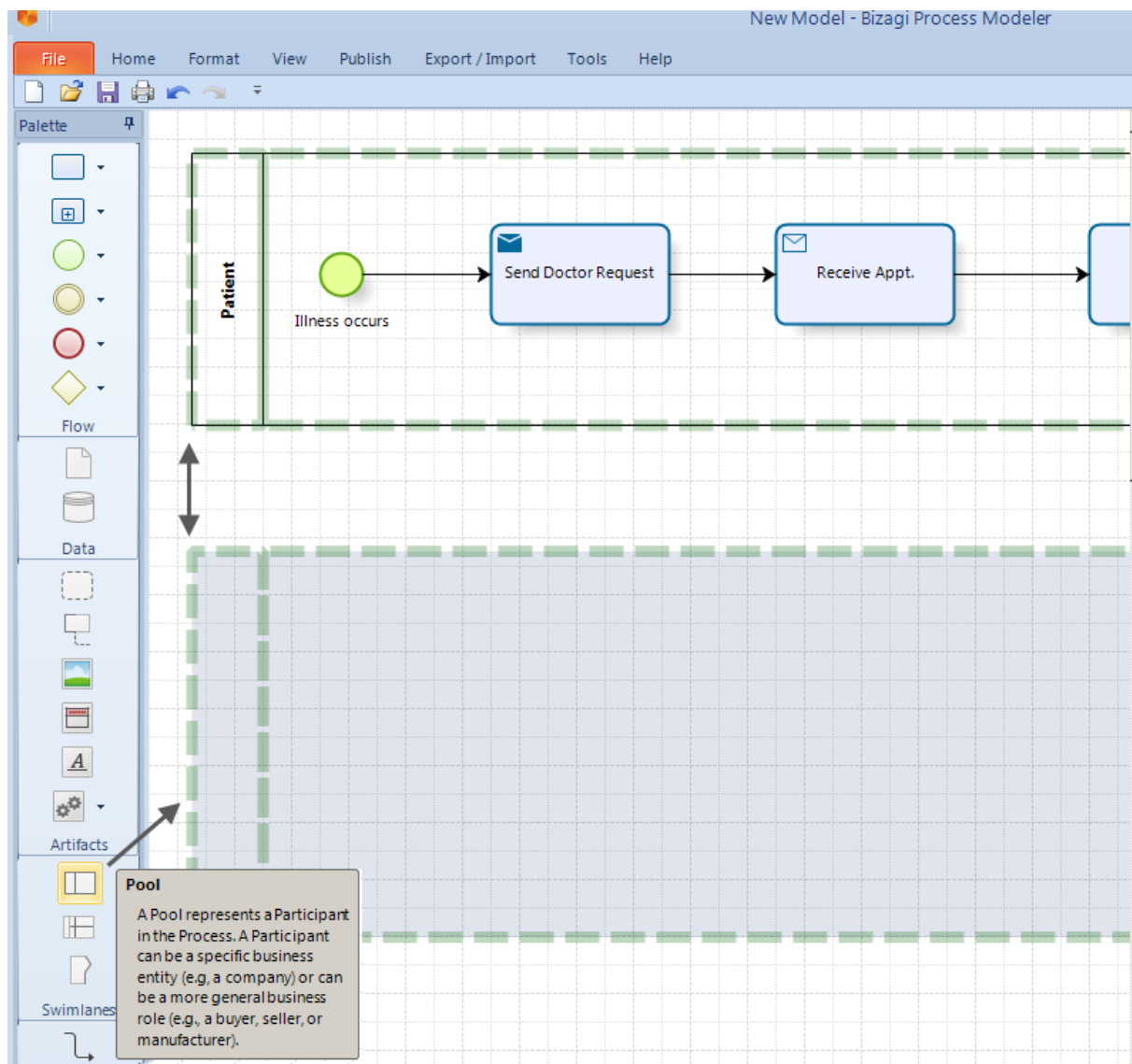
When modeling interaction between Processes, Bizagi provides smart-align options for both the new Pools and Message Flows between them.

New Pools alignment

Recall that as soon as you open the Modeler a Pool will be ready for you to start diagramming. When including a new Pool into a diagram, using smart alignment will line up the Pools to each other (left vertically alignment).

To use this feature, make sure you drag the new Pool to the existing Pool's left start point (vertically near).

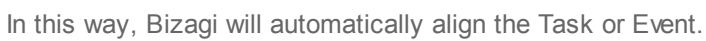
Bizagi will highlight both Pools to indicate that you may drop the new one at this location and allow auto-alignment.

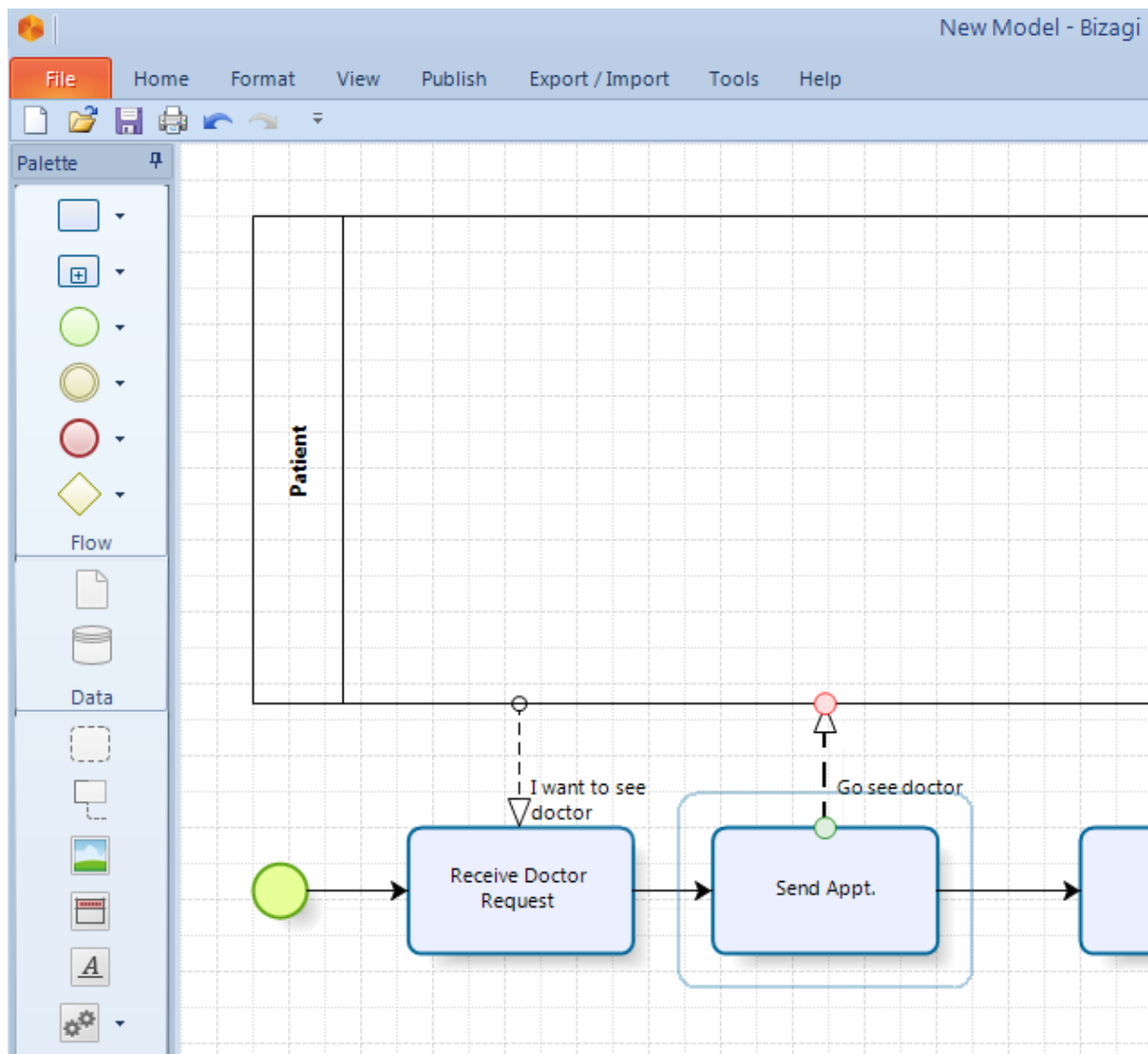


Message Flows alignment

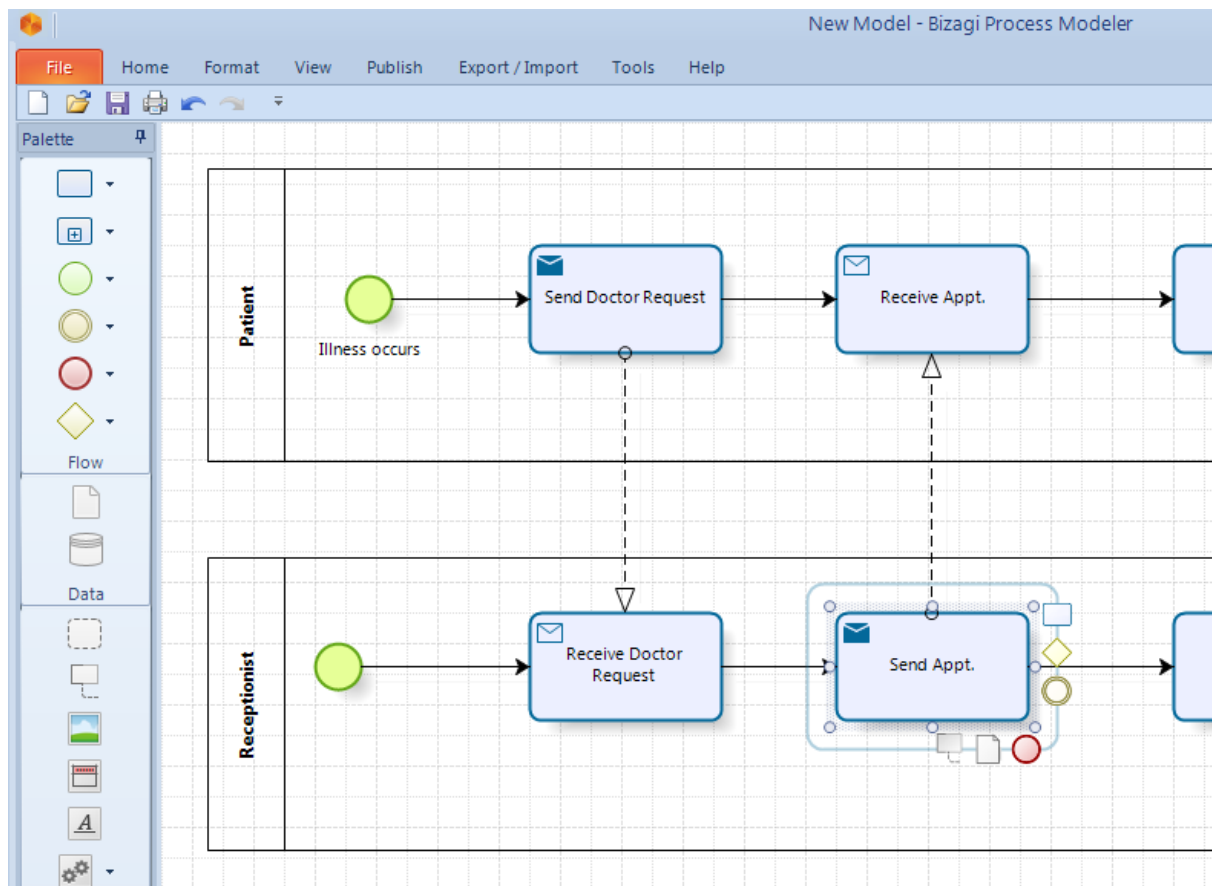
When using Message Flows to model the interaction between Processes, smart alignment will show flows emanating from a straight line parallel or vertical to the element.

To use this feature, ensure your Task or Event being connected to the Message Flow is placed close enough to allow for a straight line.





Note that this feature applies for Message Flows connected to Tasks or Events, and at least to one of their two endpoints (e.g Message Flows with the following related elements: Task-Task, Event-Event, Task-Event, Pool-Task, Pool-Event).

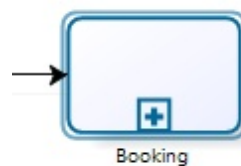


Long lasting transactions

Bizagi Modeler is a powerful tool that allows you to model your business process from the simplest to the most complex process.

A transactional process is an example of a complex model that can be modeled by **Bizagi Modeler**.

Transactional processes are used to coordinate multiple activities that need to be completed successfully. If any of them are not successful it is necessary to return to the initial state (a state before the activities where ever performed). BPMN uses the following diagram element to represent a Transactional Sub-process:

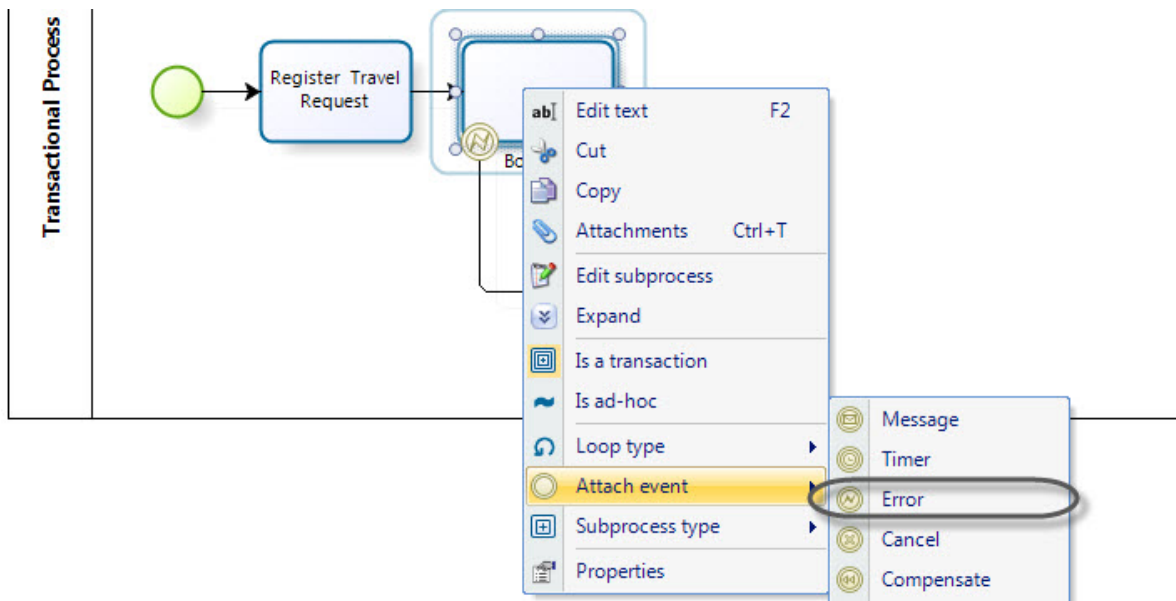


The long lasting transactional BPMN models have three possible outcomes:

- The first outcome is when all activities in the process are successfully performed, the process continues with the normal flow.

- The second outcome is when a failure occurs, and it is necessary to reverse all activities that have already been completed within the process. This is achieved through the execution of compensation activities. Each activity that needs compensation has one task associated to it. Compensation is executed when it is necessary to return to the initial state of something and is only performed when an activity has successfully ended.
- The last outcome occurs when an unexpected error is presented, the transactional sub process activities are interrupted without any compensation and the process continues with the intermediate error event.

To model a transactional process it is necessary to attach the Error and Cancel events to the sub process. In any of these two events occur the process will have a flow to continue:

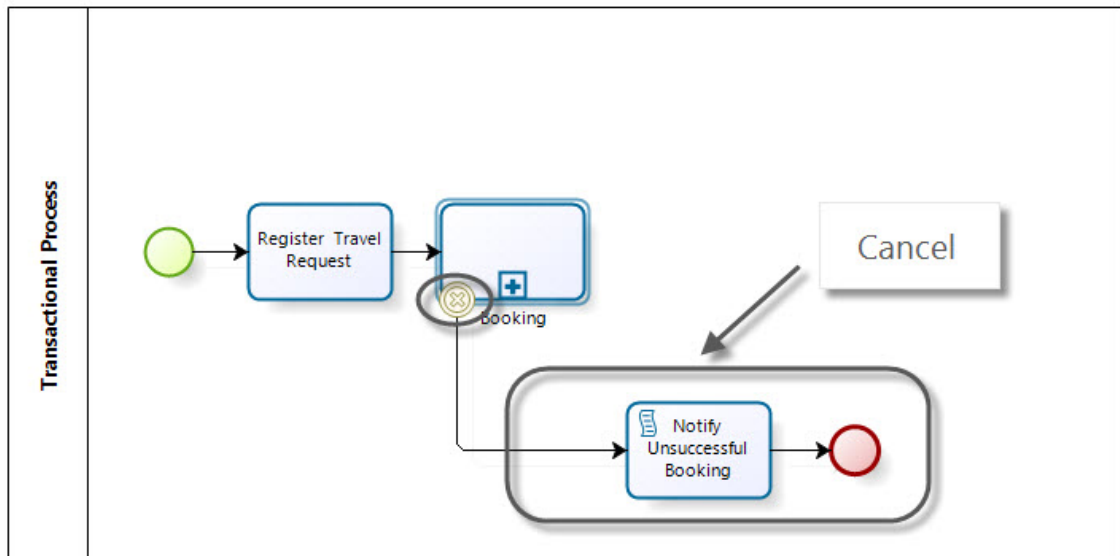
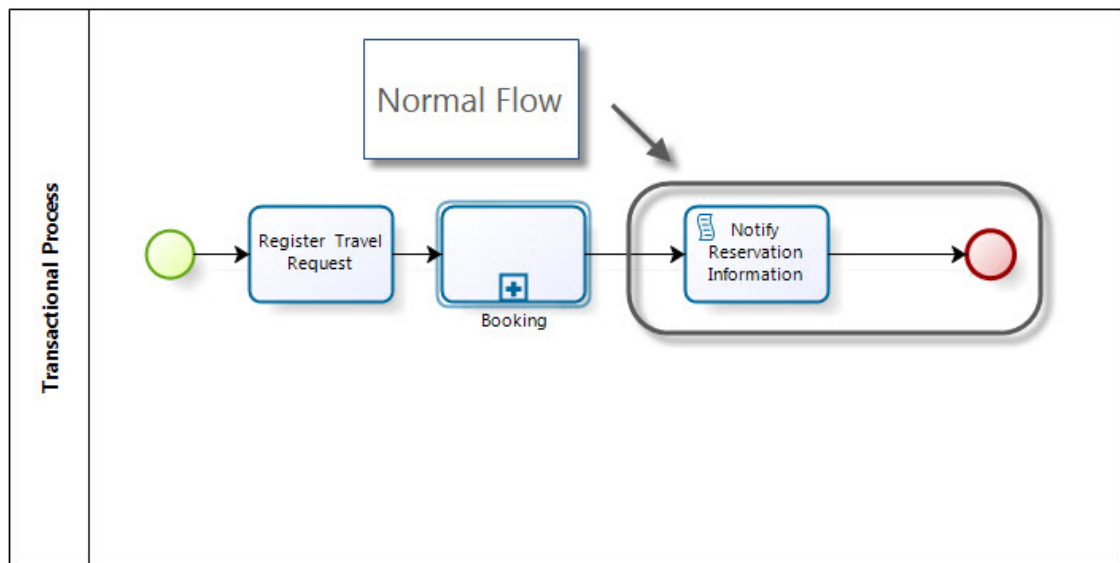


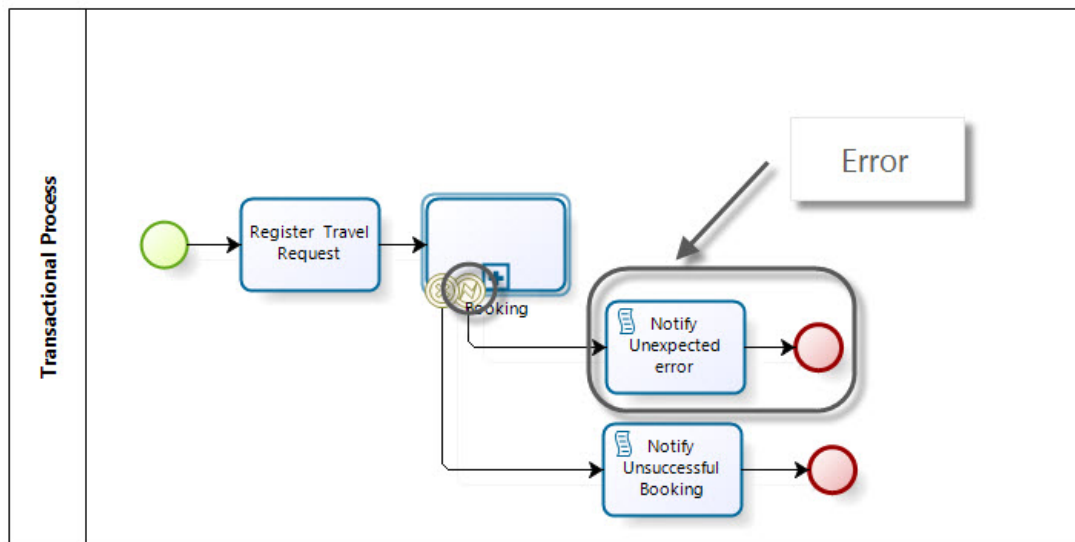
Transactional example

To demonstrate this type of process we are going to use the a travel request.

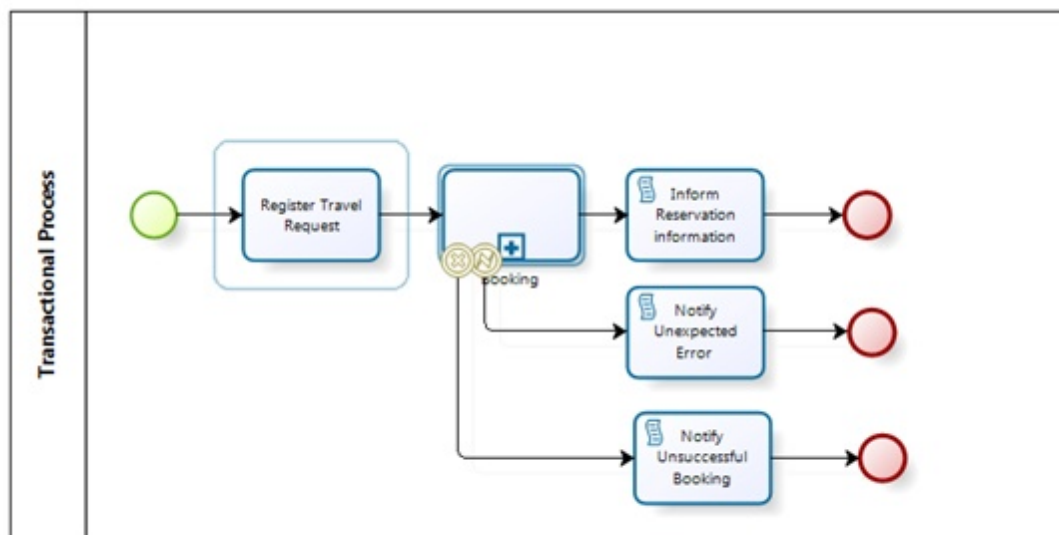
When a travel request is made, it is necessary to make reservations for travel, hotel and car hire. If any one of them cannot be successfully completed, then the whole trip is not possible. The reservations that were made successfully, must be compensated.

The following images illustrate these three possible outcomes:

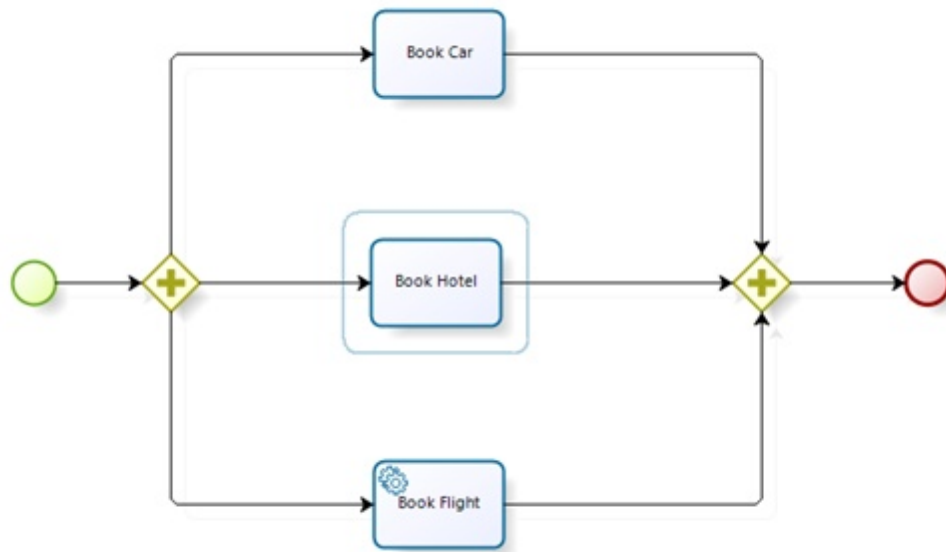




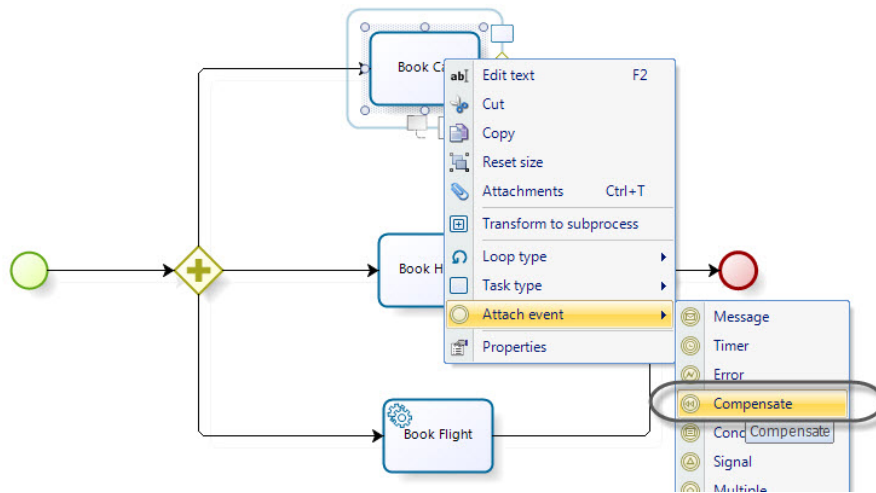
The complete process looks like this.

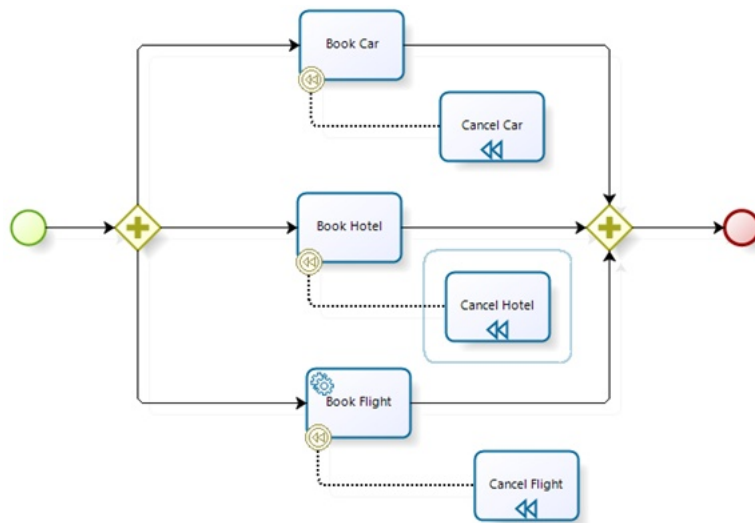


To Model the activities of the Sub-Process include the required activities. In this case we will include three activities, Book Car, Book Hotel and Book Flight.



Include a compensation event for each activity. This way, if any activity fails, the completed activities can be compensated.





Now your Process is complete: The parent Process contains the sequence flows that will allow the Process to take action if the Sub-process fails to complete successfully. The Sub-process contains actions that will compensate any reservation that has already been performed correctly.



Part XI

FAQ

FAQ

General FAQs

- [What is the price of Bizagi Modeler?](#)
- [Is Bizagi Modeler open source?](#)
- [How do I install Bizagi Modeler on my Mac?](#)
- [Can I install Bizagi Modeler on a multi-user setup?](#)
- [What kind of files does the Modeler handle?](#)
- [What is the BPMN version supported by Bizagi Modeler?](#)
- [How do I know if my diagram has modeling errors?](#)

Diagramming and documenting FAQs

- [Can I work on diagrams that were not designed in Bizagi Modeler?](#)
- [Can I import and export extended attributes using XPDL language?](#)
- [My model includes several sub-processes. How can I import all the diagrams in a new model?](#)
- [How can I diagram the communication between processes?](#)
- [How can I diagram a large process?](#)
- [Can I remove or change the Bizagi logo from my diagrams?](#)
- [How should I manage fonts in my documentation?](#)
- [How can I include special characters to support my language?](#)
- [How can I disable the message that shows up when changing element types?](#)

Sharing documentation FAQs

- [Can I use the Modeler with several people to work simultaneously on the same diagram?](#)
- [How can I share my process diagrams and documentation with colleagues?](#)
- [How can I present my processes in a business meeting?](#)
- [Why is my sub-processes' information not being included when I publish?](#)

Troubleshooting FAQs

- [Why can't I use pools, lanes and milestones in a sub-process?](#)
- [Why can't I see all the figures in the palette?](#)
- [Why is the Modeler included in the BPM Suite different from Bizagi Modeler?](#)
- [Why do I get an activation message of ActiveX every time I export my models to web?](#)
- [I get the error Exception from HRESULT: 0x80010001 \(RPC_E_CALL_REJECTED\) when exporting to Word](#)
- [Why can't I open my .bpm models shared in SharePoint directly with Bizagi Modeler?](#)
- [After publishing the web output to SharePoint 2010, the default page will not open. What can I do?](#)
- [Why can't I publish to my MediaWiki?](#)

General FAQs

What is the price of Bizagi Modeler?

Bizagi Modeler is available at no cost as a **free** download. It is not a trial version or community edition, the entire product is available for free.

Is Bizagi Modeler open source?

No, Bizagi Modeler is a **freeware**, but not open source. We do not have a developer version.

How do I install Bizagi Modeler on my Mac?

Mac OS is not currently supported.

However you can execute our Modeler using a Windows virtual machine on your Mac.

We recommend installing VMware's emulation software that will enable to run windows applications.

<http://www.vmware.com/products/fusion/>

Can I install Bizagi Modeler on a multi-user setup?

Bizagi Modeler can be installed in a Server (as per the [requisites](#)) in order to be accessed by multiple users.

For this setup, there are third-party technologies which will allow them access, such as Terminal Services.

What kind of files does the Modeler handle?

Bizagi Modeler has two main file types, differentiated by the file extension:

- **.bpm**, the file format used to save a Bizagi Modeler file.
- **.bpmc**, the file format used to save diagrams for Team Collaboration Mode.
Team Collaboration is used to provide collaboration within your work team for the definition of your process diagrams and documentation.
Click this link [Team Collaboration](#) for further information.
- The **.bpm in the 1.6 version** is used to save a model that will be imported to our Bizagi BPM Suite to be automated and turned into a running application (workflow).

If you want to have interoperability (import, export) with other BPM tools, then you should use the standard XPD language or Microsoft Visio.

[For more information please refer to Exporting and Importing.](#)

What is the BPMN version supported by Bizagi Modeler?

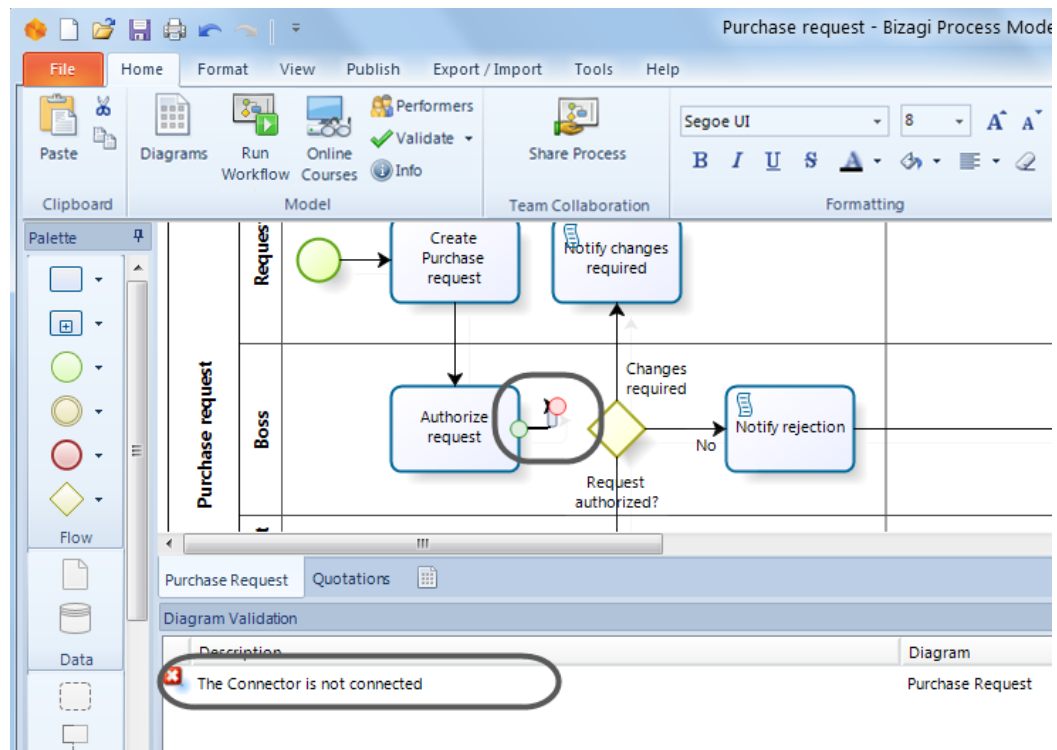
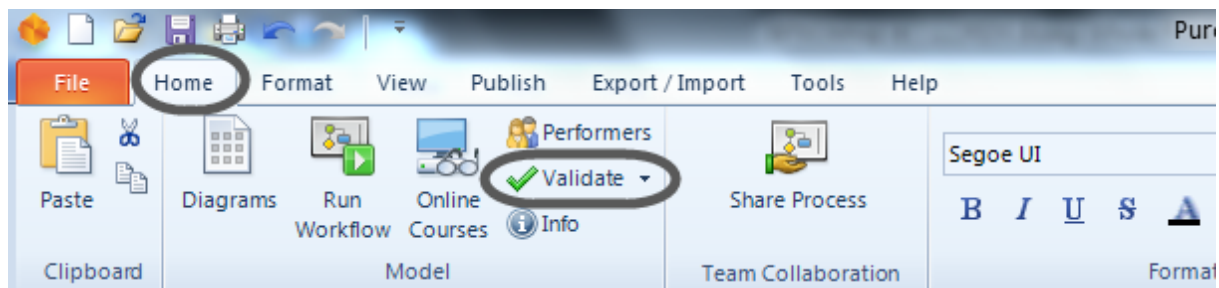
Bizagi Modeler supports the current version, BPMN 2.0.

For more information about BPMN 2.0, see <http://www.omg.org/spec/BPMN/2.0>

How do I know if my diagram has modeling errors?

Bizagi includes a button that validates the element's location. and connections. On the **Home** tab, in the **Model** group, click on **Validate** to start error checking.

Select the error description in the **Diagram Validation** add-on window in order to correct it.



Bizagi Modeler does not validate the notation and the logic used in your diagram. However we offer several types of support to help you through your process modeling and documentation. [For more information please refer to Training and Support.](#)

Best practices in modeling

The BPMN (Business Process Modeling Notation) standard provides organizations with the capability of understanding their internal business processes in a graphical notation and the ability to communicate their procedures in a standard manner. However, the use of the standard do not ensure that processes are modeled in a clear and effective way; the way modelers interpret business conditions, and how they define its structure, is crucial to ensuring they are understood correctly.

This article provides process modelers some guidelines to build clear and effective models compliant with the BPMN standard.

BPMN modeling principles

When defining process diagrams you should take into account the following basic principles:

- 1. Keep a logical and clear sequence
- 2. Use the BPMN standard
- 3. Use strict labeling
- 4. Simplify diagrams

Below you will find useful tips to follow these principles and aid the correct processes definition and communication.

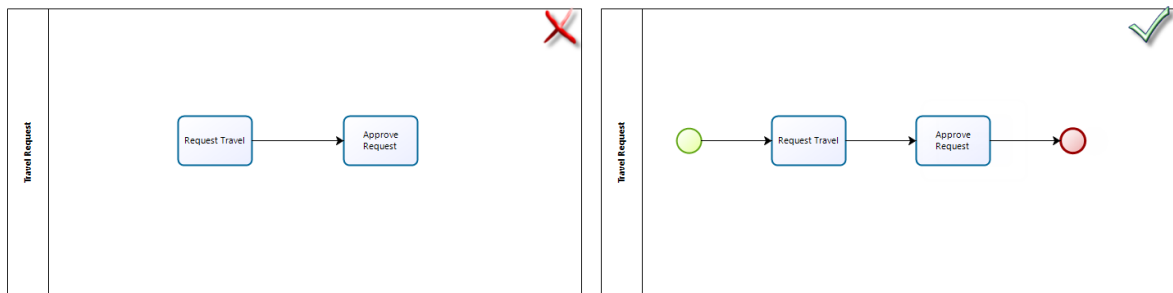
1. Keep a logical and clear sequence

This seems to be obvious but is one of the most common errors in process modeling. Diagrams can become unreadable and very confusing when the process logic is not explicit and clear. The following techniques will help you to maintain a logical and clear sequence in your models.

Define a clear beginning and end:

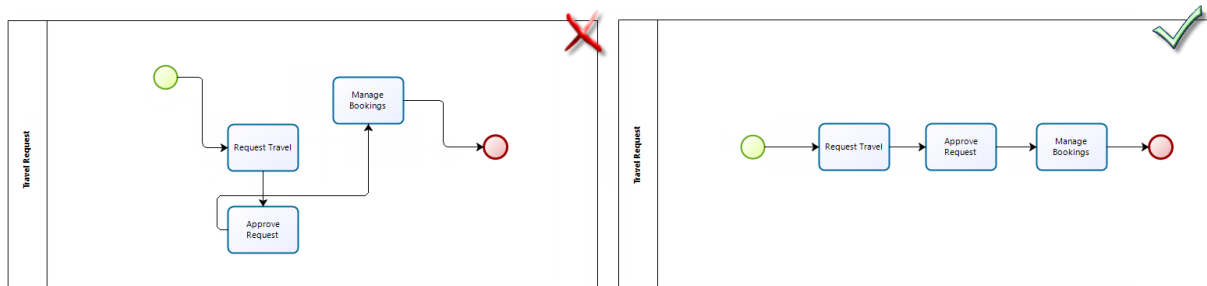
In BPMN, start and end events are optional. However, processes with implicit start and end events are undesirable and could lead to misinterpretations.

Use start and end events in each process and sub-process to represent its beginning and completion.



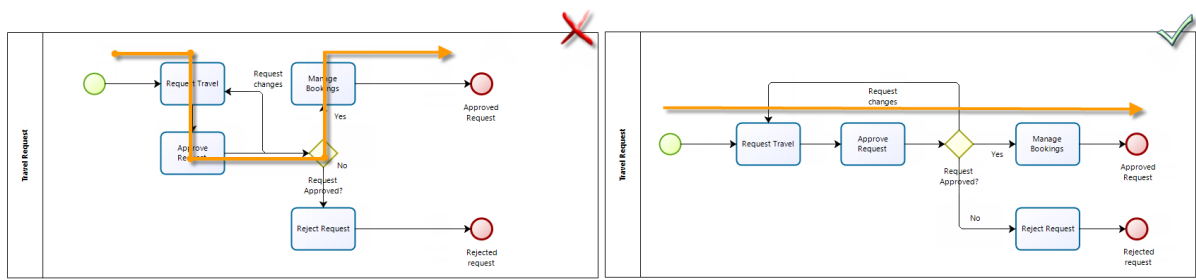
Follow a consistent direction of flow

Make the process logic visible in the diagram. Avoid crossed lines (connectors), maintain a time sequence and keep a consistent direction of flow. The diagram reading will be easier and its communication efficient.



Keep primary scenario clear

The "happy path" should be easily identified when reading a diagram. Diagram the happy path first and then the alternative flows.



Keep alternative scenarios clear

BPMN offers the necessary tools to represent exception handling logic explicitly in the diagram. Once the primary scenario is diagrammed, make use of the following elements to model alternative flows as required:

Use events attached to tasks

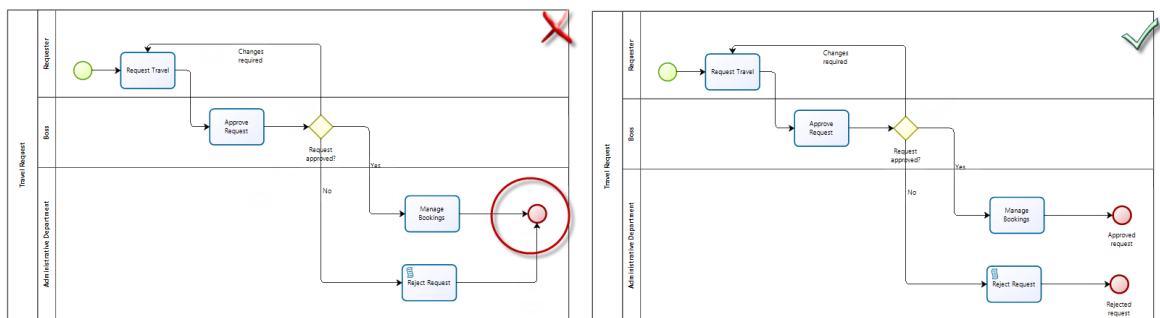
If an Event is attached to the boundary of an activity, it will change the normal flow into an exception flow when something happens (a message is received, a condition is met, a time is reached, etc). For further information see [Attached events](#)

Use transactional processes

Transactional processes allow business scenarios with transactions. A set of activities must be successfully accomplished, otherwise compensation or cancellation flows are followed. For further information see [Sub-processes types](#)

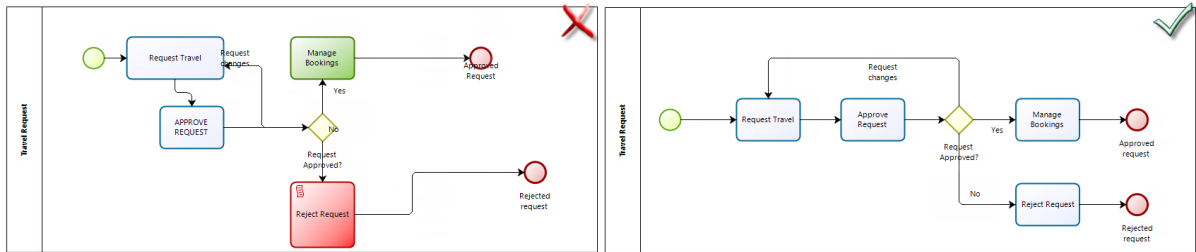
Distinguish success and failure end states

Use separate end events to identify when a process finished successfully and when it did not.



Keep a format standard

Keep a unique format along your diagrams and focus on a clean and friendly look and feel. Using different font sizes, colors, boxes sizes or overlapping labels might make the diagrams reading a challenge.



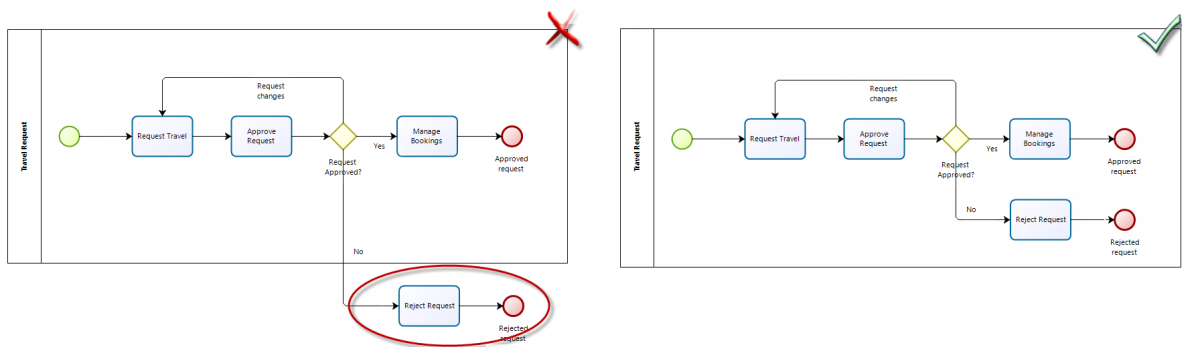
2. Use the BPMN standard

The BPMN standard defines the standards used to diagram business processes. However, following the BPMN guidelines is completely in your hands. Make sure your models comply with the standard to ensure its correct understanding.

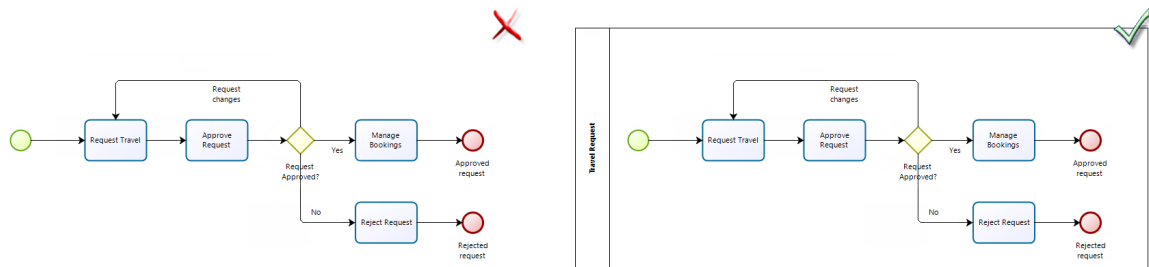
Once the process logic has been defined, validate your diagrams making sure you properly use the different BPMN elements. The following aspect should be checked for each BPMN element:

What to check in Pools

- Diagram processes completely within a Pool. Never diagram flows across Pool boundaries.

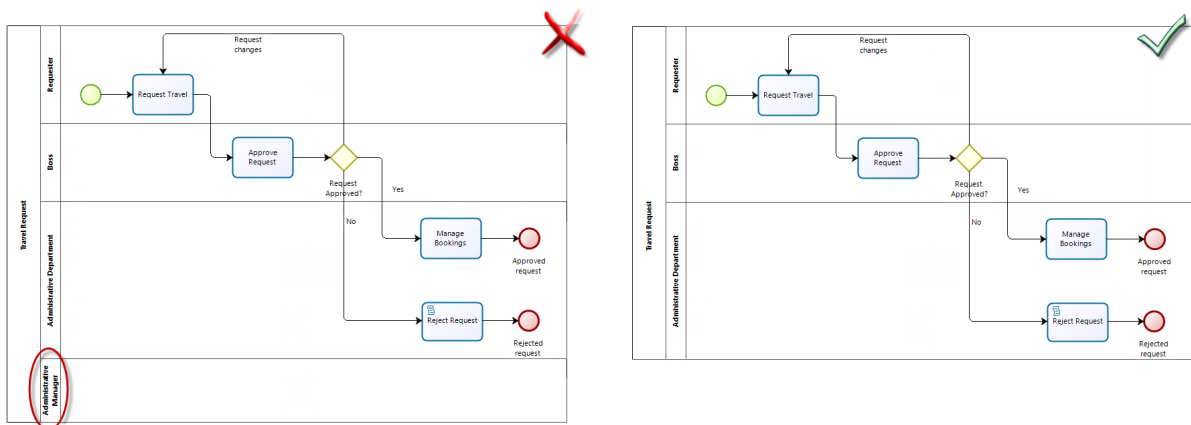


- Define as many pools as processes. There must be always at least one Pool.

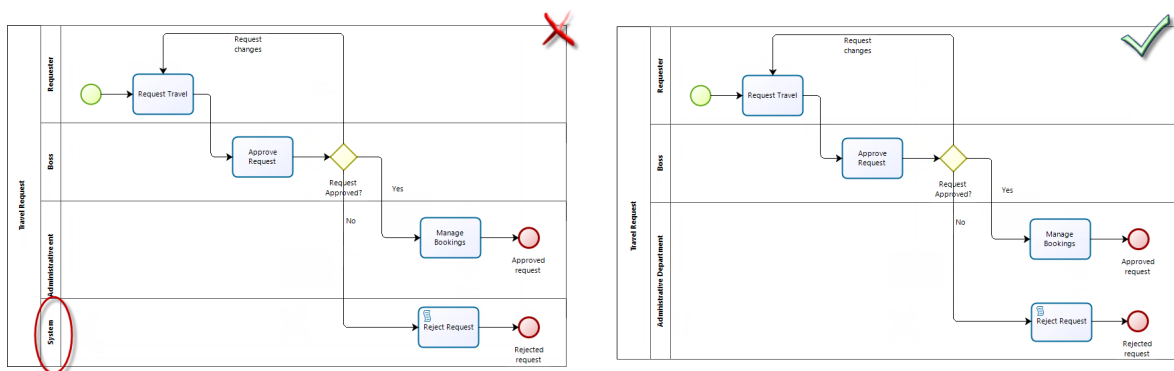


What to check in Lanes

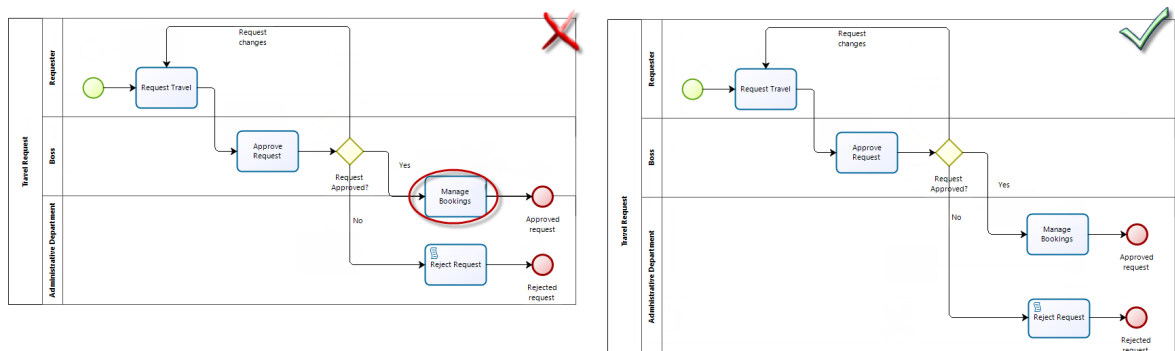
- Create a lane only if at least one task or intermediate event is performed in it.



- Do not create lanes to represent the area or entity that carries out automatic tasks or gateways.

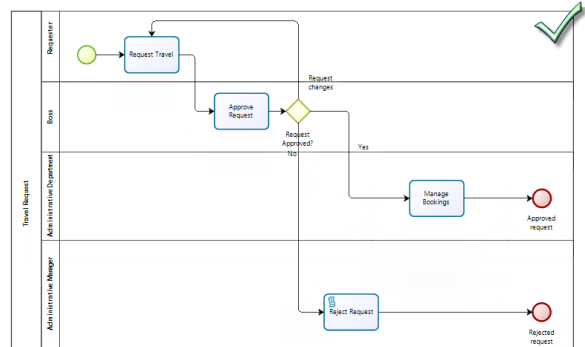
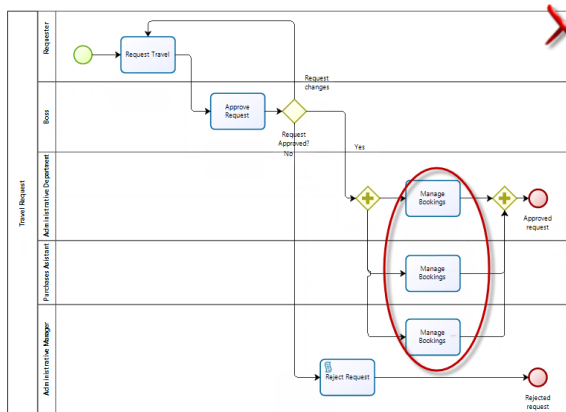


- Do not diagram tasks, gateways or events at the middle of two lanes.

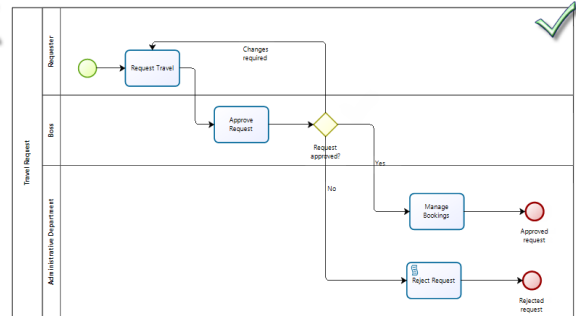
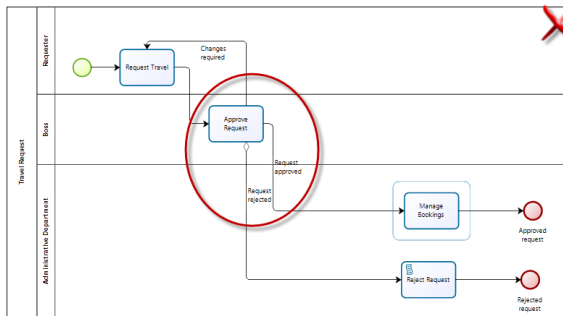


What to check in Activities

- Do not diagram multiple instances of the same task to represent multiple performers. Just diagram one task in one area. Define the multiple performers as Allocation Conditions in the documentation.

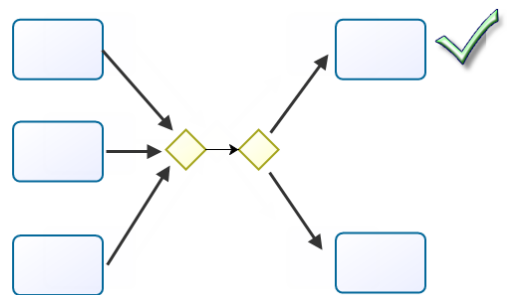
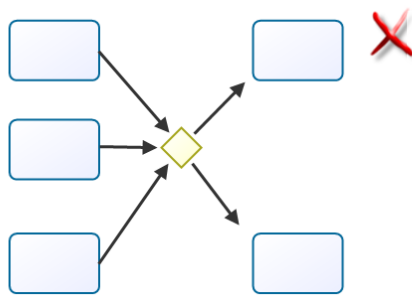


- Do not branch flows using tasks. Always use gateways to do so.

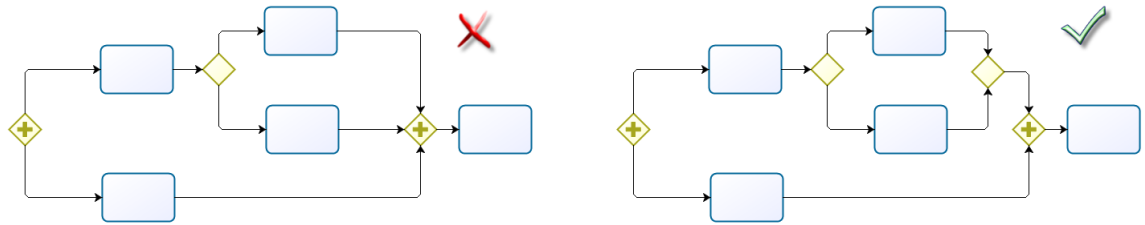


What to check in Gateways

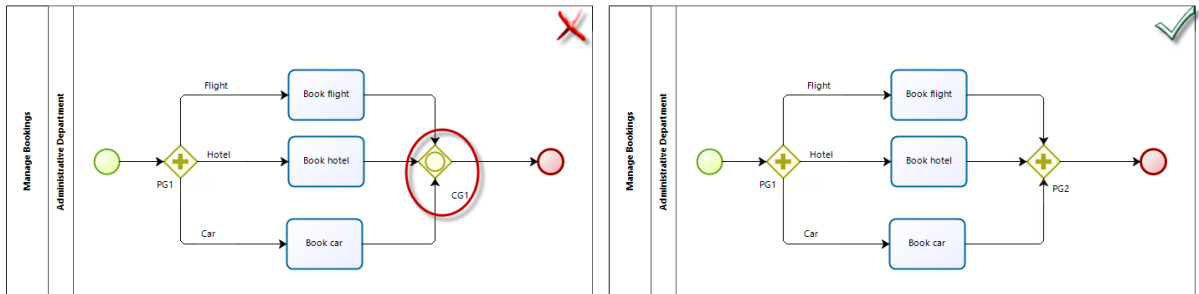
- Do not use gateways to join and split at the same time.



- Balance gateways. Splits must be joined equivalently.

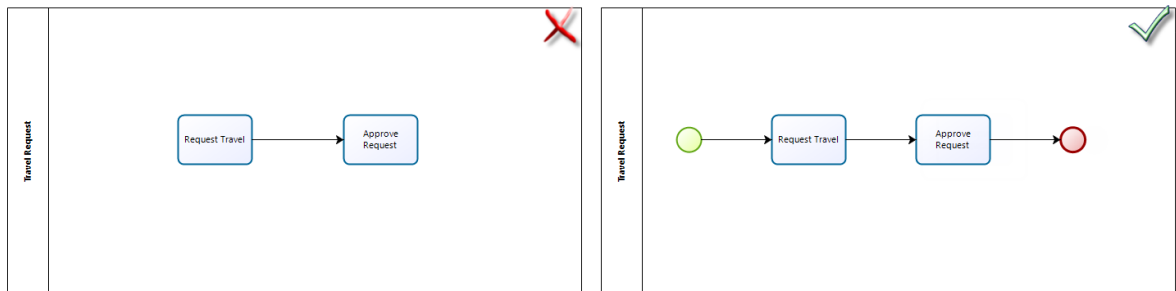


- Always use the same type of Gateway used as for splitting to join the flow.

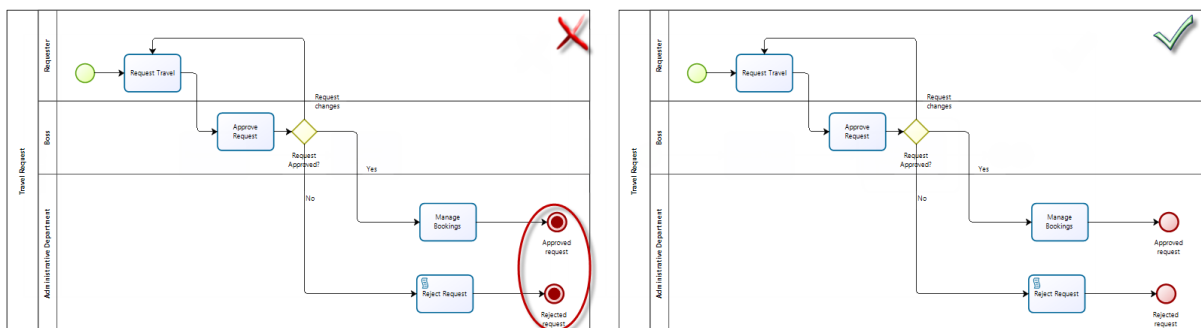


What to check in Events

- Always use start and end events.

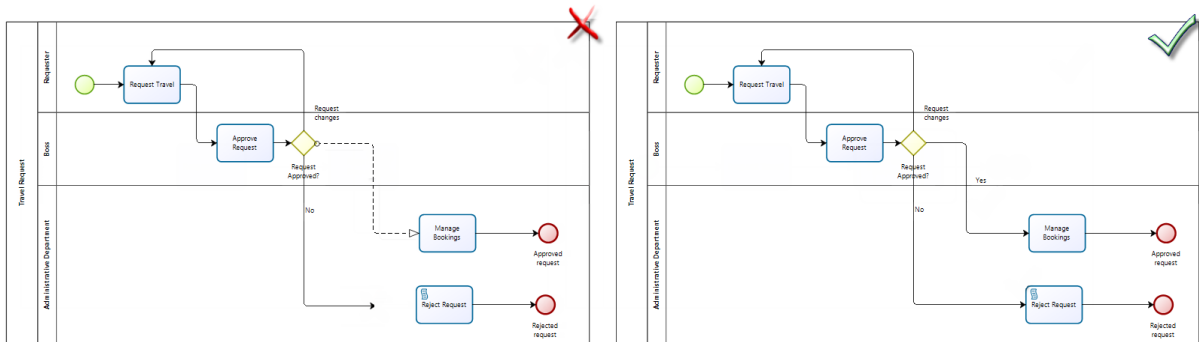


- Use terminate events only when this is strictly necessary. They are used to model situations where several alternative paths are enabled and the entire process have to be finished when one of them is completed.

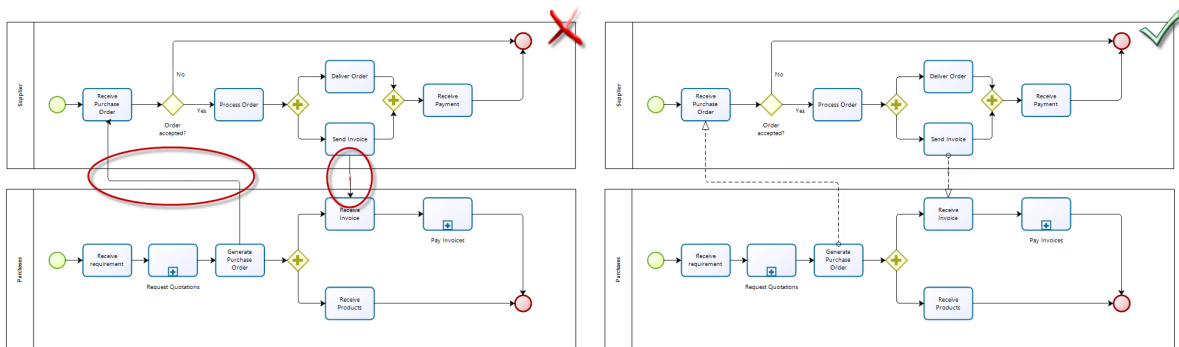


What to check in Connectors

- Use sequence flows to connect all the activities, events and gateways. Never use message flow to connect activities within the same pool or leave shapes unconnected.

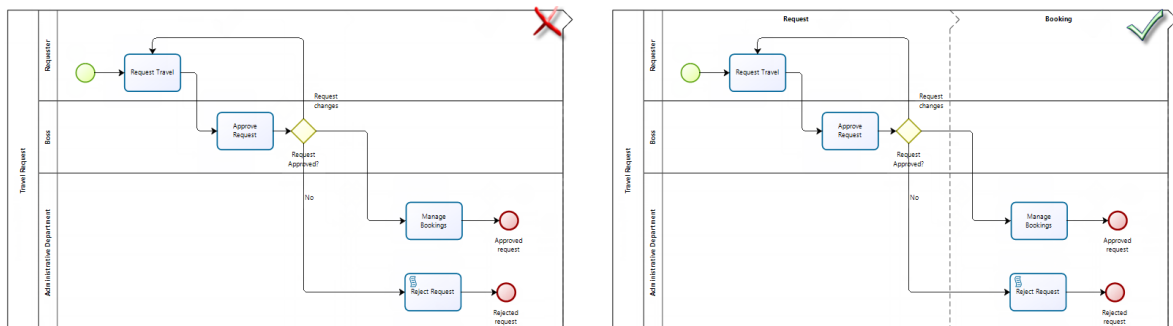


- Never use sequence flows to connect elements of different pools. Use message flows to represent information exchanging between processes.

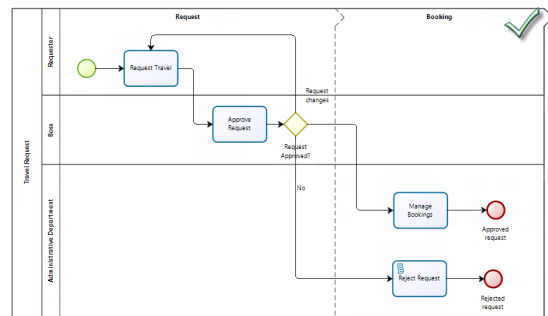
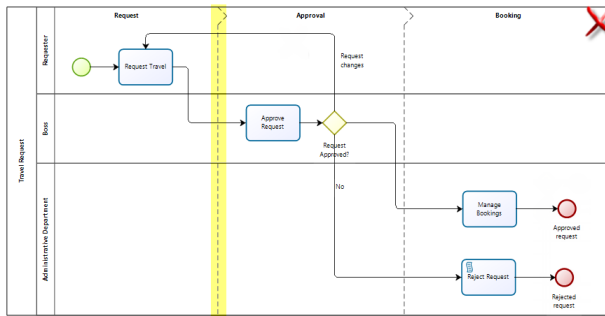


What to check in Milestones

- Always identify and define phases; these represent a period of time goal or transition in the process.



- Avoid come back or looping back across a milestone.



3. Use strict labeling

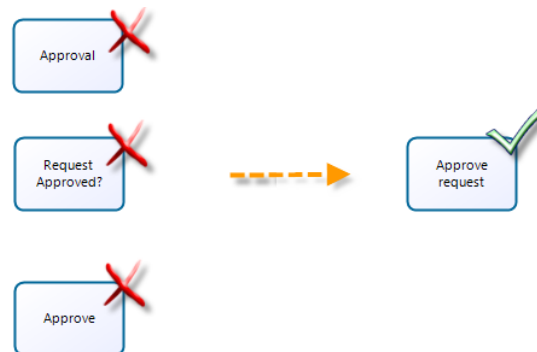
Correct labeling of the different elements of the diagrams is fundamental for an easy and correct understanding of processes. Here are some recommendations to help you do so:

Labeling Processes

Processes labels should clearly describe their main purpose. Ensure that you do not use short names or abbreviations.

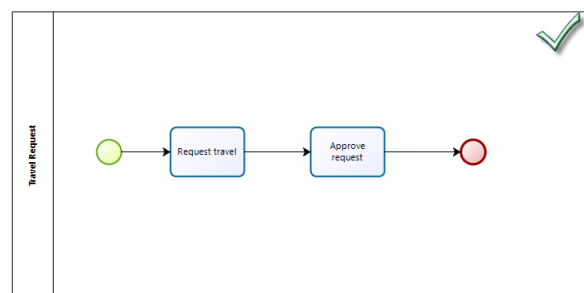
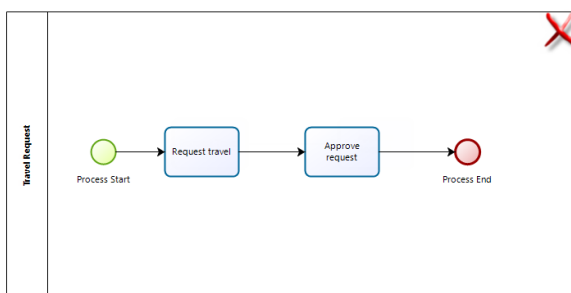
Labeling Activities

Give activities a label composed of **one verb**, and **one object**. This way readers can clearly understand the objective of a task. Also, ensure that you do not use short names or abbreviations.



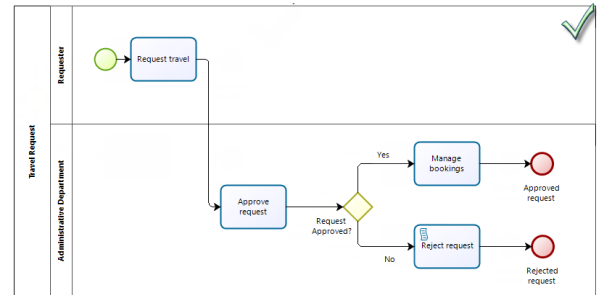
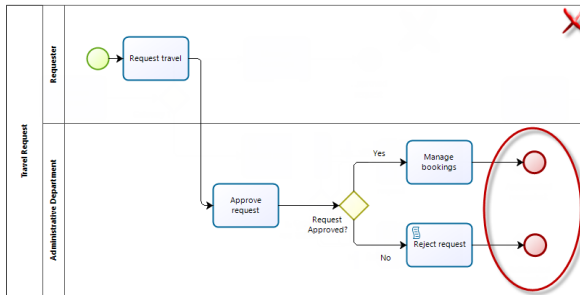
Labeling Events

Do not label start and end events when only one instance of them is used. It is very common to label them as "Process start" and "Process end" but this is redundant and not necessary.



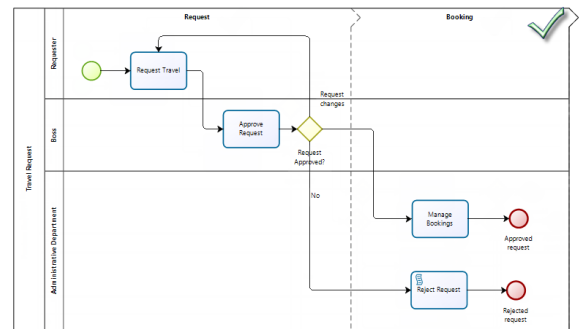
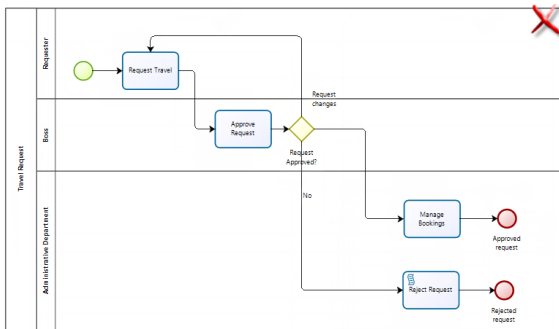
- Use labeling when multiple start and end events are used. Label them according to what they

represent using a noun. Do not repeat names.



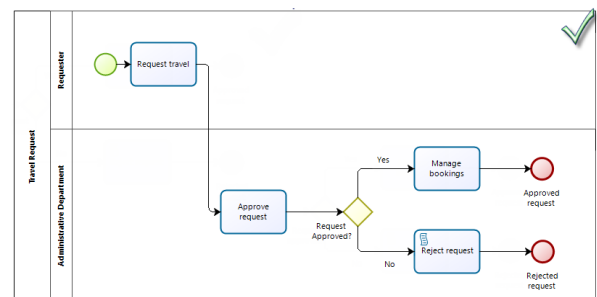
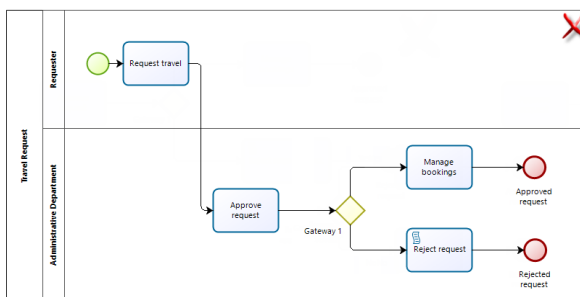
Labeling Milestones

Milestones should be labeled with a noun making reference to a period of time (summer, maturity) or what happens in a period of time (creation, approval, delivery).

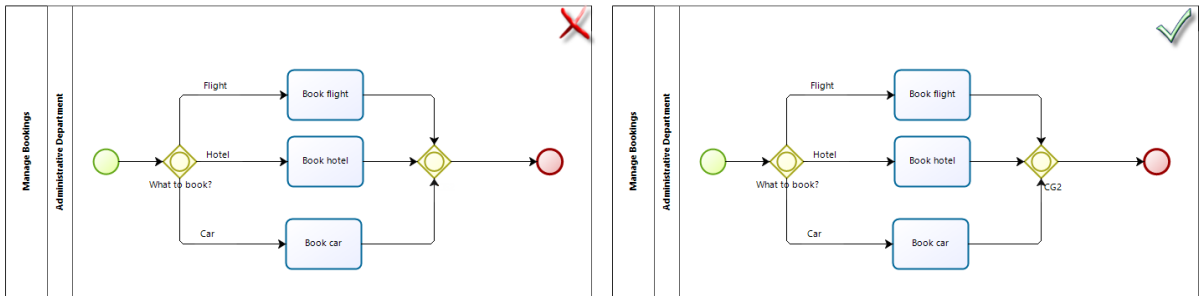


Labeling Gateways

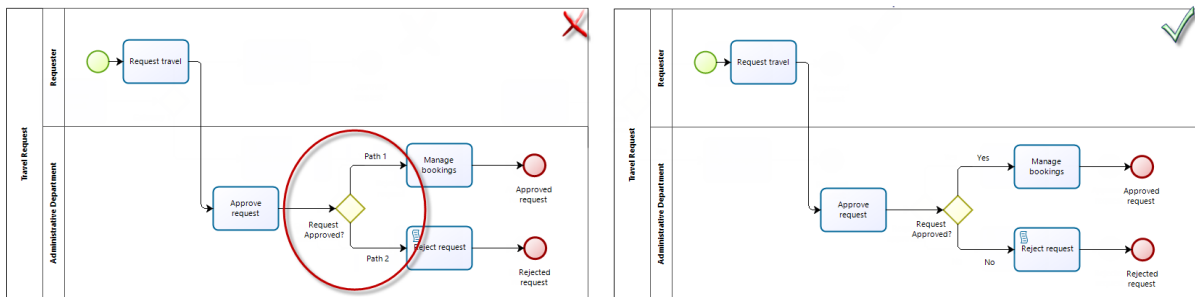
Divergence gateways should have a clear name indicating the decision or condition evaluated when it applies. Use a name composed of one verb, one object, and a question mark to identify what is being evaluated. You can even use questions to clarify the decision involved.



- If names do not apply for any gateway use abbreviations or numbers to differentiate them.



- Name transitions indicating the condition related



4. Simplify diagrams

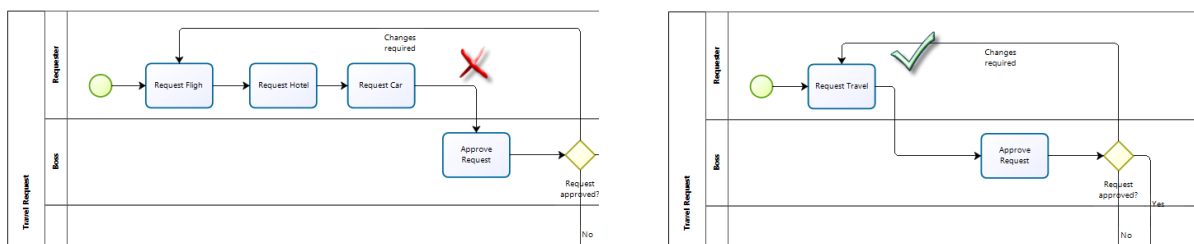
Large diagrams do not allow giving an end-to-end perspective to readers. They are difficult to read and clearly communicate the purpose of the process.

Defining the correct scope of tasks and level of detail of processes is key to reduce the overage of information. The following tips will help:

Reduce the number of redundant tasks

The level of detail in a process is sometimes a true challenge. In many cases you may face difficulties to define the scope of a single task. Take into account that:

- When diagramming it is useful to imagine that you are a final user. If a set of consecutive activities can be performed by the same person, at the same time then these activities could be integrated into a single activity.
- A set of consecutive activities in the same lane may indicate missing participant details, too much detail, or a misalignment in scope. Review these patterns to identify opportunities for activity integration.



Group activities

Use sub-processes to group activities with the same purpose. You can expand the sub-processes later to expose details of lower levels of hierarchy. A process will contain multiple pages, but internally the integrity of a single model is maintained.

Use embedded sub-processes when:

- A set of consecutive activities has an owner different from the main process owner (e.g a *Purchase request* process is performed by the Purchasing area and the *Accounts payable* process is performed by the *Financial area*).
- A set of consecutive activities has an different goal from the main process one (e.g a *Credit request* is focused on managing all the activities to approve a credit request and the *Verify applicant information* is focused on checking if the applicant is in the black list as well as the information submitted).

Use reusable sub-processes when:

- The sub-process needs to be invoked from different processes (e.g a *Verify applicant information* sub-process can be invoked from a *credit request* process or from a *Insurance request* process).

Apply process patterns

Do not reinvent the wheel. BPMN experts have worked on defining modeling patterns to different business situations. Use them to model the required business conditions while simplifying your diagrams.

For further information about modeling patterns please check the [BPMN Workflow patterns document](#)

Document minor details

Leave details to documentation. Do not include all the information on diagrams. Additional information should be documented as shape properties not as objects or text in the diagram.

Diagramming and documenting FAQs

Can I work on diagrams that were not designed in Bizagi Modeler?

Yes. Bizagi Modeler allows you to import diagrams from Microsoft Office Visio or XPDL format files. Importing existing models will enhance agility and allow for continuous process improvement efforts. For more information please refer to [Exporting to XPDL](#) or [Exporting to Visio](#)

Can I import and export extended attributes using XPDL language?

Yes, it is possible to import and export the extended attributes using XPDL. Keep in mind that you can import/export paired-up attributes (i.e., name, value). Hence, tables are not imported or exported. It is not possible to import or export milestones, artifacts (include data objects) and embedded files as these elements are not defined by XPDL language. In addition, presentation actions are not exported because they are an unique feature of Bizagi Modeler.

My model includes several Sub-processes. How can I import all the diagrams in

a new model?

It is possible to import as many diagrams as you want. However, if you are importing the diagrams from XPDL format you must import them one by one (XDPL files only save information about one process). If any Process includes a reusable Sub-process, you must include both diagrams and create the relationship between them. However, if the Sub-process is embedded, the parent process will automatically import it.

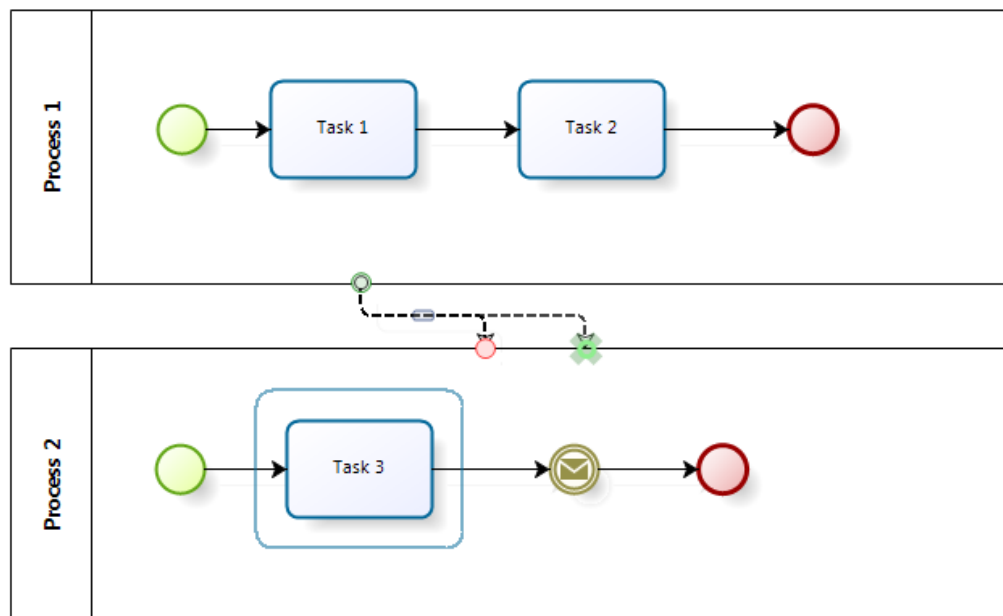
If you use Visio, all Processes and Sub-processes, within a Visio file, are imported to Bizagi in a single step.

How can I diagram the communication between processes?

In BPMN the communication between Processes is defined as a sequence of activities that represents message exchange.

These messages flows are represented by a dotted arrow called Message flow connector. As the connections are made between pools, it is incorrect to connect a message flow to an activity within a process.

A Pool has many connection points, you can locate the points by dragging the start or end connection along the border. Whenever a connection is available it will highlight to a green point.



How can I diagram a large process?

The maximum space to model processes with Bizagi Modeler is calculated as follows:

- Width by Height must not be over 36.000 pixels.
- The maximum width size is 10.000 pixels.

If your diagram is bigger than this allocated size, we recommend dividing the diagram into sub-processes. This allows for a large and complex model to be more readable and easily understood.

Can I remove or change the Bizagi logo from my diagrams?

Due to popular demand from the Bizagi user community, we now offer the option to replace the Bizagi logo with your own company logo.

[For more information please refer to Company Logo](#)

How should I manage fonts in my documentation?

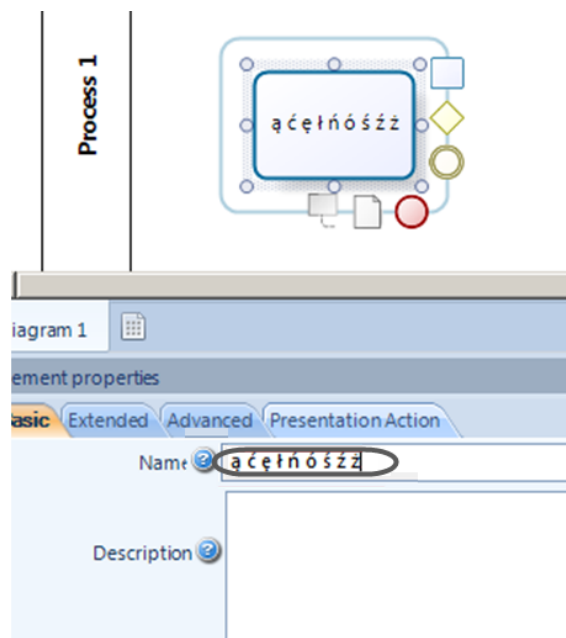
Since the 2.4 release, Bizagi supports rich-text formatting in Descriptions and any extended attributes information contained in Text boxes or Text areas.

We recommend to keep in mind the following considerations on how Bizagi uses formatting options for both the application and documentation:

1. Bizagi Modeler in its application, uses Segoe UI with size 8 as the default font. Even though you may change font, font size and font style for information where rich-text formatting is available (text in description, Text box and Text area extended attributes), you may not change this for other information such as the one in Name, Start quantity, etc.
2. There is no option to customize the font used for the actual labels and captions such as "Name", "Description", "Performers".
3. You may change the default font and font size for the visual labels in BPMN elements (when modeling the Process). This is a whole different setting which is configured in the general options of the application. When changing this setting, it will apply for brand new elements from that moment on. It does not currently provide an option to apply the change for existing elements, due to the fact that this would most likely not adjust to the position of elements already modeled. Keep in mind that the default font setting is stored per User (it will apply for the given user's work in a particular installation), and therefore you may want to review that existing models continue to work with the previous font and font size.
4. When launching the Presentation mode, the same default setting applies in labels and captions (Segoe UI size 8). This will be off course overridden by any other explicit format entered for the text inside descriptions and Text box or Text area extended attributes. A similar concept applies when publishing to Web, MediaWiki or PDF.
5. When publishing to Word, you may use a custom template of your choice. If you do, this template will contain implicitly the font and styles to be used for the Word output. Yet again, this applies for information other than that contained inside descriptions, and text or textarea extended attributes (given that the text with defined rich-text format will override it).

How can I include special characters to support my language?

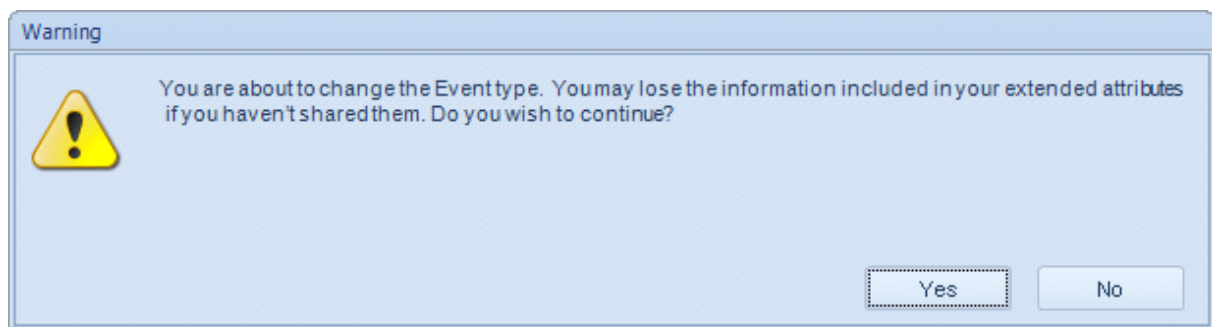
You can include special characters or alter the descriptive text using the ALT keys directly in the Name Attribute (or other Attributes) on the **Basic** tab of the **Element properties** add-on window.



How can i disable the message that shows up when changing element types?

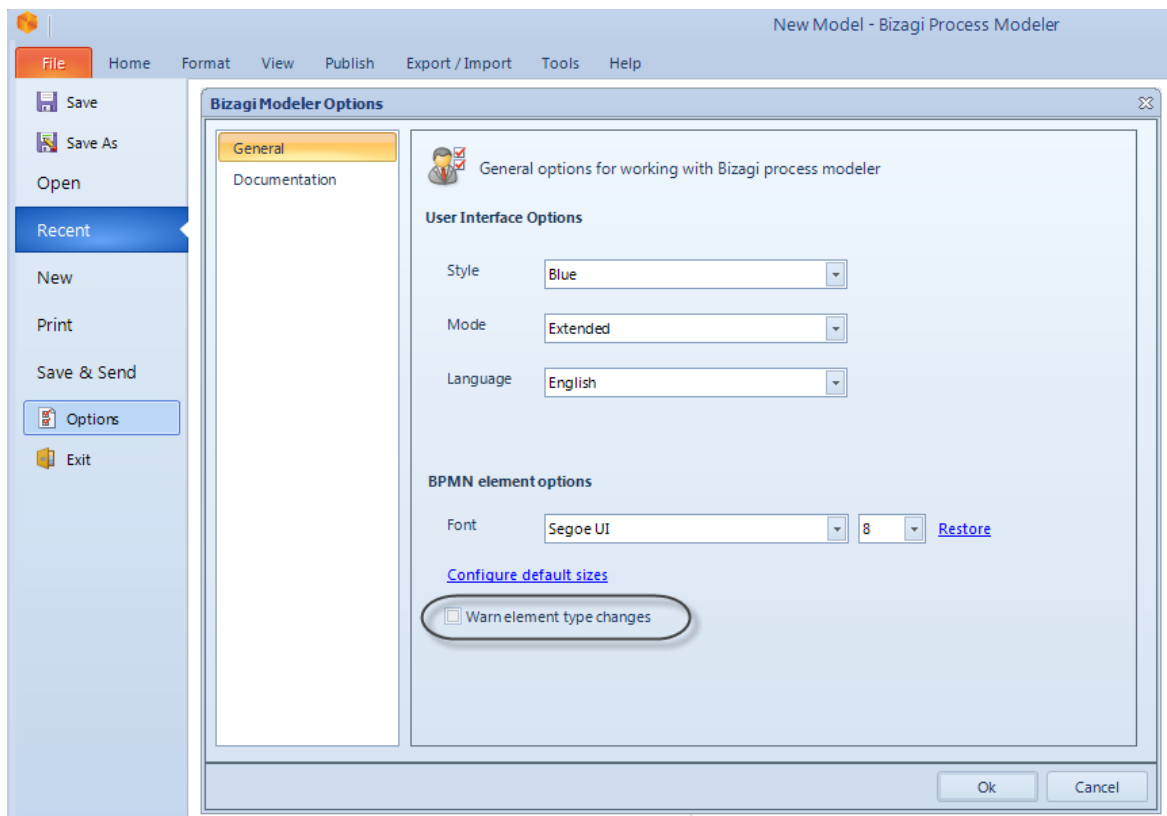
When you change an element type, any extended attributes information entered will be lost if it hasn't been shared.

That is why Bizagi Modeler warns you before changing types.



You can turn on or off this warning by marking the **Warn element type changes** checkbox (located at the application general Options).

[Please click for further information about sharing extended attributes](#)



Sharing documentation FAQs

Can I use the Modeler with several people to work simultaneously on the same diagram?

Yes. The Team Collaboration functionality allows teams to collaborate by working simultaneously on a model during the process design phase. This achieves greater participation of team members and helps ensure the best quality in process definition.

[For more information please refer to Team Collaboration](#)

How can I share my process diagrams and documentation with colleagues?

You can share your models in different ways depending on your needs:

1. Share you models among team members and work together simultaneously during the process design phase with the Team Collaboration feature.

[For more information please refer to Team Collaboration](#)

2. You can generate and publish your completed process documentation to Word, PDF, SharePoint, Web and MediaWiki.

[For more information please refer to Generating Documentation](#)

3. You can share processes and export to either Visio or XPD. Your business process can also be exported as images to PNG, bpm, SVG or JPG format files.

[For more information please refer to Publish or Export](#)

4. Display the process in presentation mode with a full read-only screen view. For more information please refer to [Presentation Mode](#).

How can I present my processes in a business meeting?

Bizagi allows you to display your models in Presentation Mode where a full display view, read-only mode, is used (similar to the Full screen view in Microsoft products).

In Presentation Mode you can access the main features of your processes and the documentation you have included. Additionally, you can define Presentation Actions to allow for a more interactive and understandable presentation.

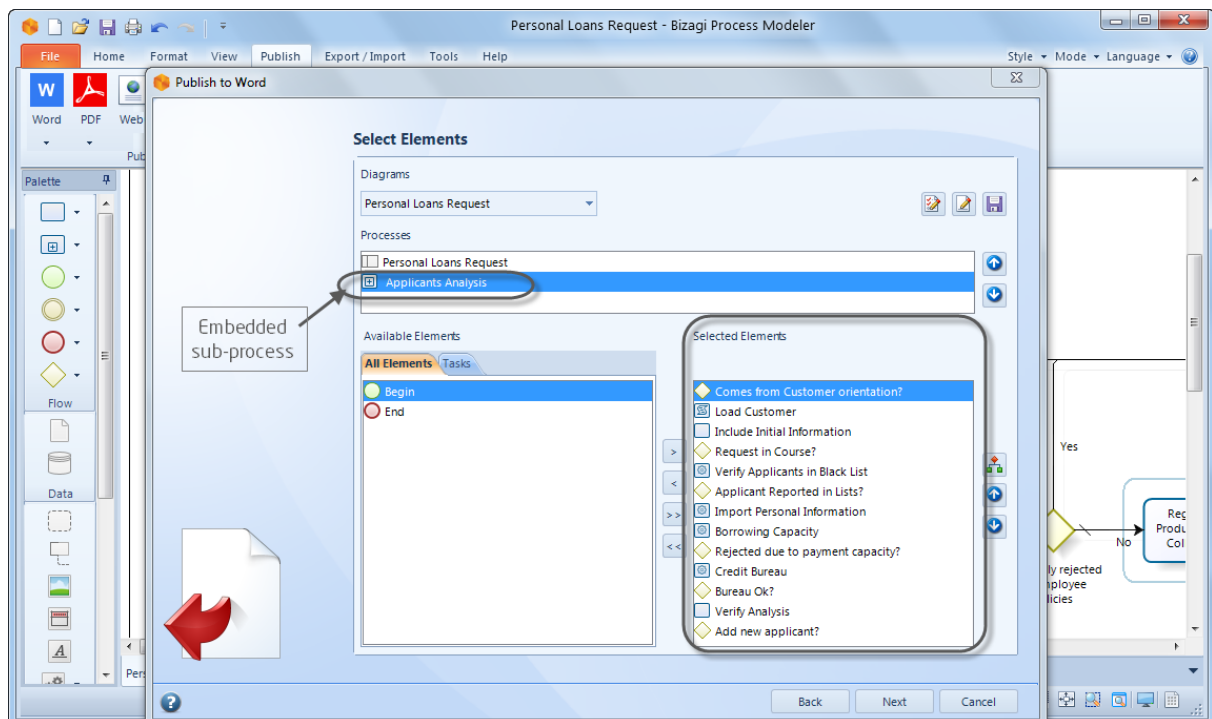
[For more information please refer to Presentation Mode](#)

Why is my sub-processes' information not being included when I publish?

By default sub-processes are created as embedded. When you publish your documentation, embedded sub-processes are shown as tasks belonging to the parent process.

Therefore to include your sub-processes to your published documentation you would need to go into the second configuration window in the *Publish wizard*, where you can include each BPMN element per process.

In the following image, we illustrate how you can include the sub-process and its BPMN elements.



Troubleshooting FAQs

Why can't I use pools, lanes and milestones in a Sub-process?

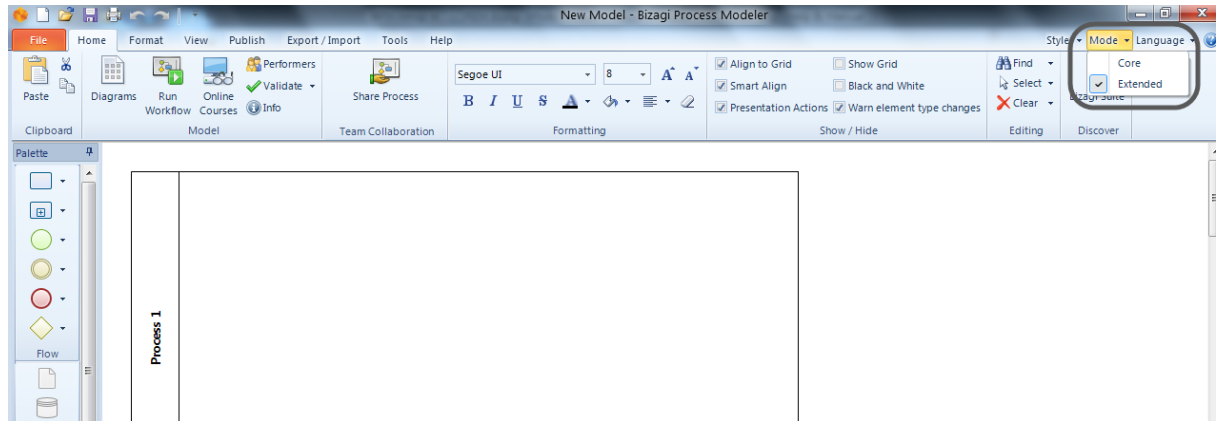
Embedded Sub-processes are an Inline block, that group process elements used in a certain point in the process within a Sub-process. According to BPMN, a Sub-process should not have pools or lanes as they are dependent on the parent process and subsequently have visibility to the parent's global data.

In order to make use of pools, lanes and milestones diagram elements in a Sub-process, change your default Sub-process to a reusable Sub-process. Reusable Sub-processes allow all of these elements. Note, in BPMN reusable sub-processes are called "Call Activities".

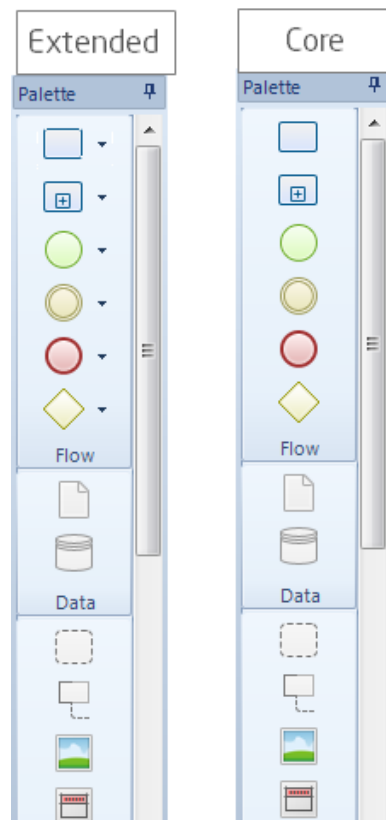
[For more information please refer to Converting to reusable sub-process](#)

Why can't I see all the figures in the palette?

The Palette includes two views: a Core view that displays basic BPMN element; and an Extended view that displays the complete element list.



Note, the Extended Palette has a drop-down arrow next to each item.



Why is the Modeler included in the BPM Suite different from Bizagi Modeler?

Bizagi offers two complementary products: Bizagi Modeler and Bizagi BPM Suite.

Each one has a specific objective. Bizagi Modeler is used to diagram and document processes, and the BPM Suite is focused on taking the next step in automating/executing the models.

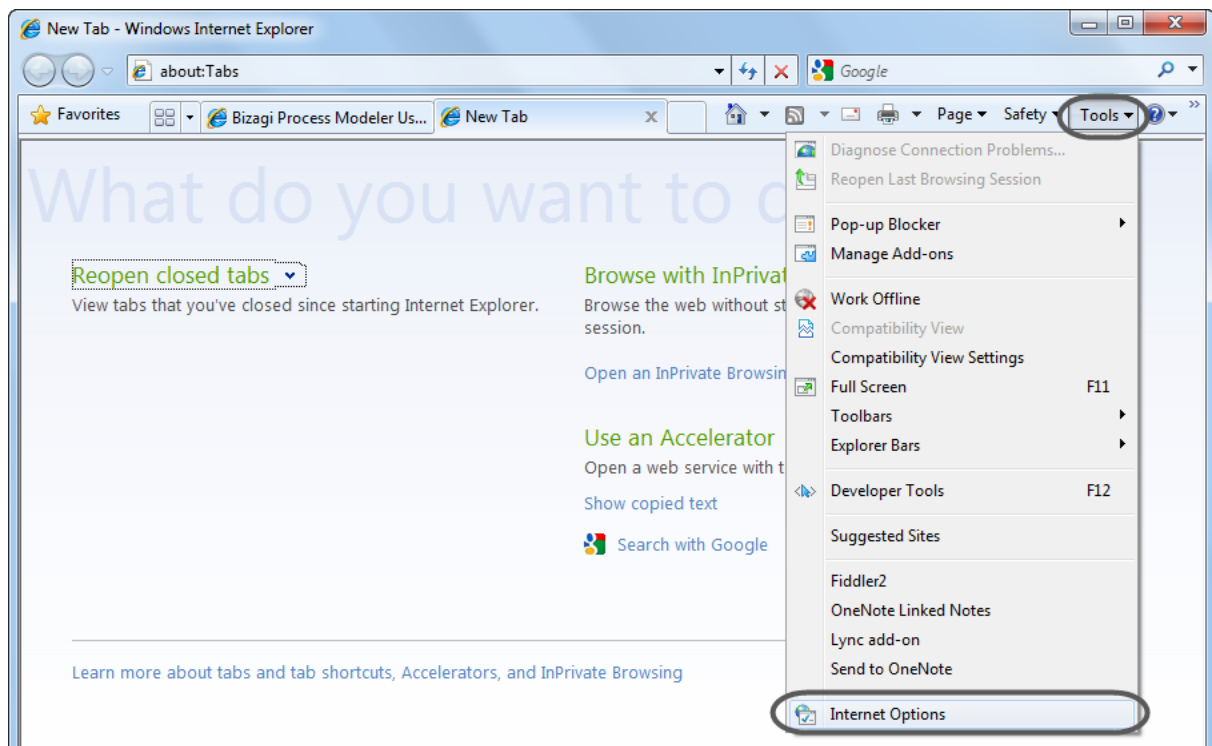
Bizagi Modeler's purpose is oriented towards complete documentation of models in a **.bpm** file. Whereas the BPM Suite will present ways to achieve effective implementation, through an assisted process wizard, with the minimum amount of programming.

Why do I get an activation message of ActiveX every time I export my models to web?

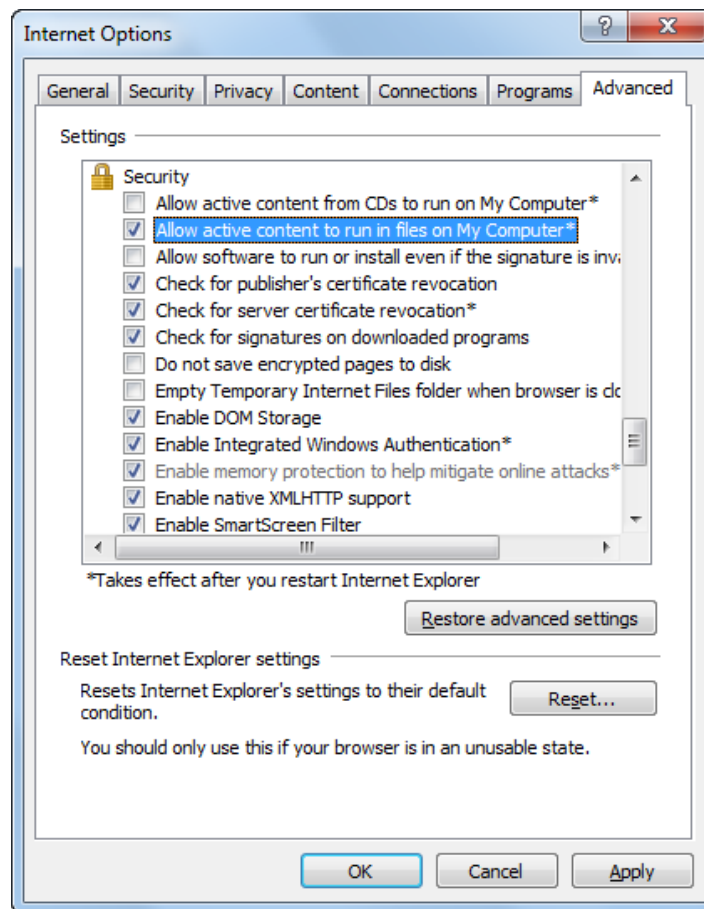
Internet Explorer validates the execution of ActiveX for security purposes. However you can enable ActiveX to run the active content in the files, both for a model published in a local intranet location or on your local computer.

To adjust Internet Explorer's security settings for ActiveX control behavior, follow the next steps:

1. Select **Internet Options** on the **Tools** tab of your browser.

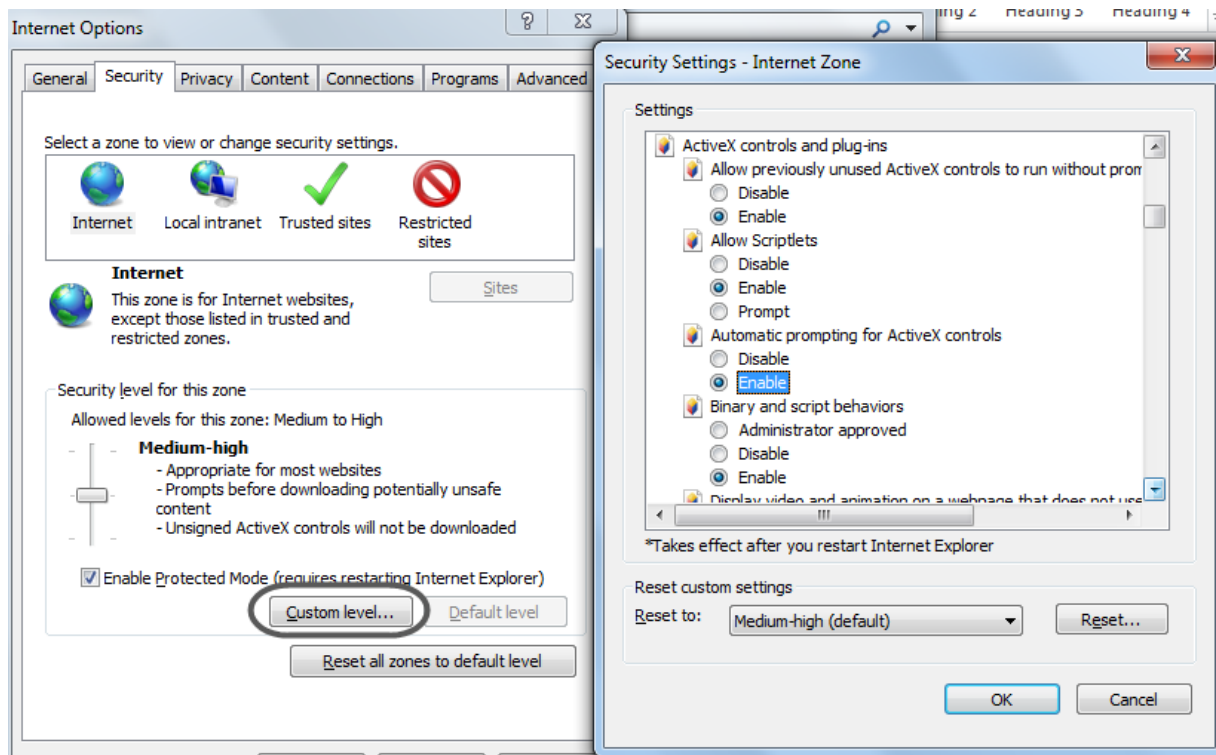


2. Select the **Advanced** tab. In the Security options, select the option **Allow active content to run in files on My Computer**.



3. Click the **Custom level** button. Check the **Enable** radio buttons for all Active X control and plug-ins in **Settings**.

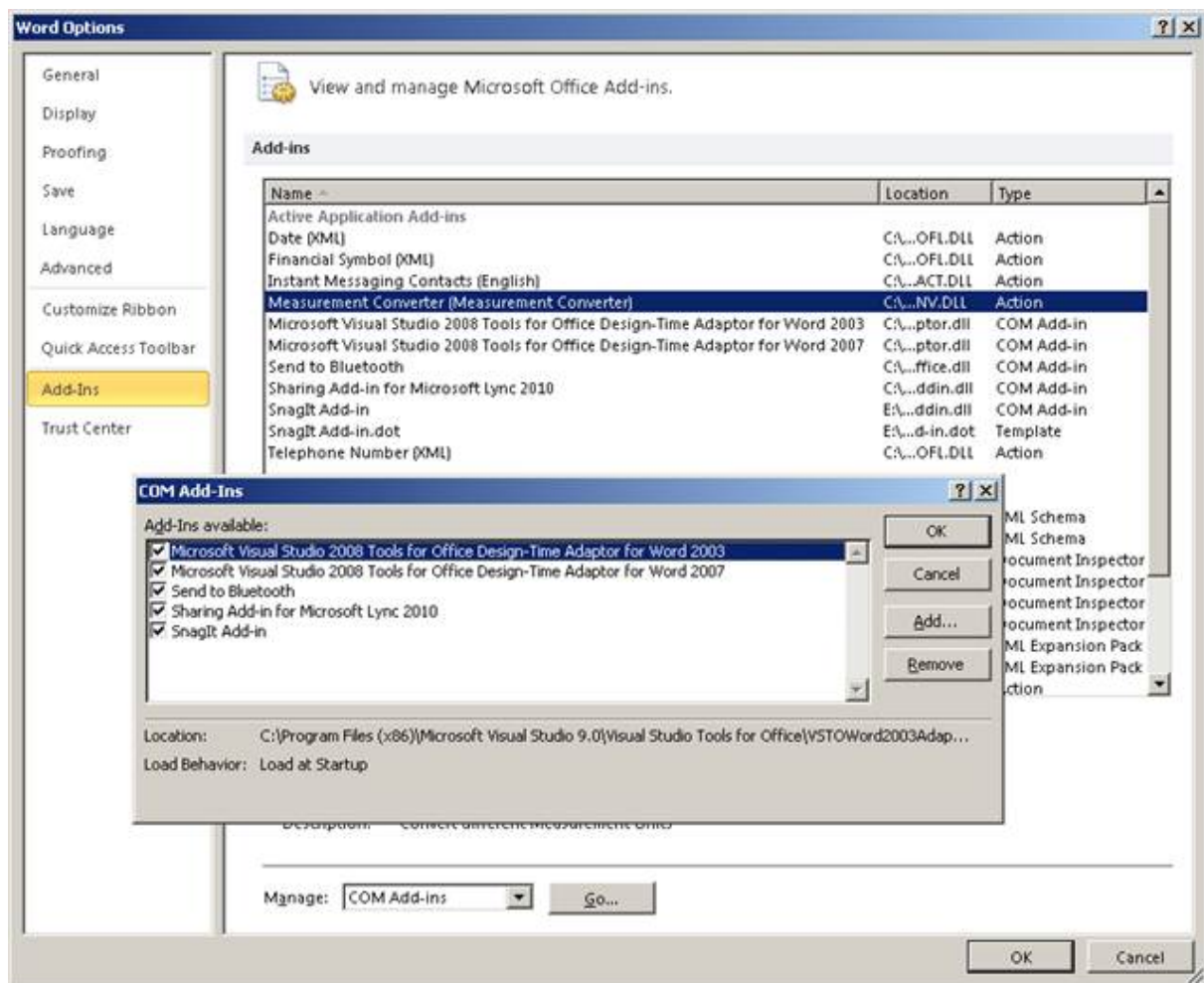
If the site is on your local intranet or from a trusted source you can make this change permanently. Internet Explorer includes five predefined zones: Internet, Local Intranet, Trusted Sites, Restricted Sites, and My Computer. You can set the security options that you want for each zone, and then add or remove Web sites from the zones, depending on your level of trust in a Web site.



I get the error Exception from HRESULT: 0x80010001 (RPC_E_CALL_REJECTED) when exporting to Word

If you are getting this error when exporting to Word we recommend to check the following:

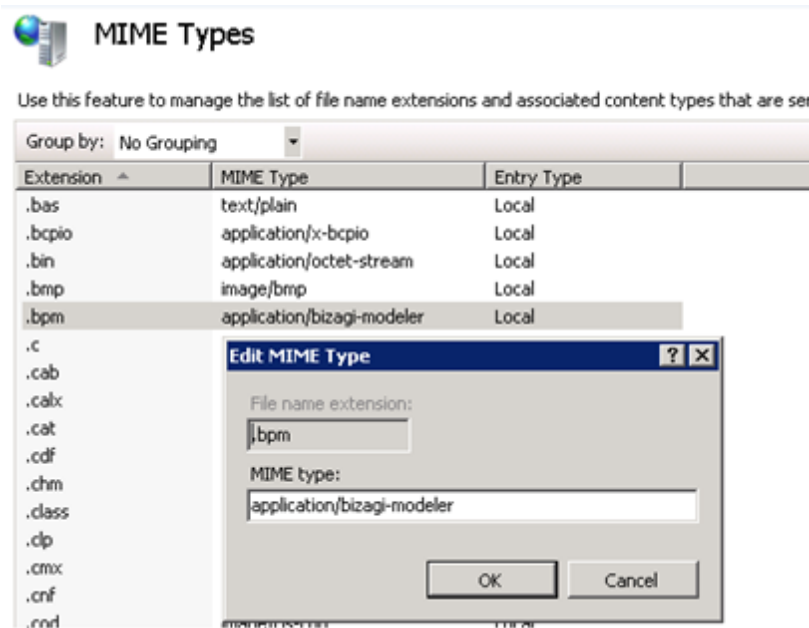
1. Check if your current Word installation has any issues by going to your control panel and repairing the installation.
2. Review if Word has add-ins, which may be affecting word instances being opened by a remote call. This means that you can check in your Word options, in the Add-ins tab, if un-marking your COM add-ins solves this problem.



Why can't I open my .bpm models shared in SharePoint directly with Bizagi Modeler?

To avoid this situation you need to create a MIME type for the the .bpm file extension in the Sharepoint IIS Manager.

1. Log into your server through Remote Desktop Connection
2. Click **Start, Programs, Administrative Tools**, and select **Internet Information Services (IIS) Manager**
3. Under the IIS header, there is an icon **MIME Types**. Double-click the **MIME Types** icon to open the feature



After publishing the web output to SharePoint 2010, the default page will not open. What can I do?

When you publish a web output to SharePoint, sometimes the default file will not open the web browser, but instead it prompts to choose a program.

If this is your case there is a configuration error. We suggest following this guided article for your Sharepoint 2010 web application settings:

<http://www.myriadtech.com.au/blog/James/Lists/Posts/Post.aspx?ID=49>.

For further information on how to configure Sharepoint 2010 settings please review Microsoft's articles, such as:

<http://technet.microsoft.com/en-us/library/cc262107.aspx>

Why can't I publish to my MediaWiki?

1. Ensure you have MediaWiki installed in the server where you are publishing,
2. Please review [the supported MediaWiki and PHP combinations](#)
3. Check the upload directory has permission set for for creating and editing pages.
4. The LocalSettings.php contains the configuration settings of your wiki. Assign permission to LocalSettings.php as follows:

```
$wgGroupPermissions['user']['upload'] = true;
$wgFileExtensions = array('png','gif','jpg','jpeg','doc','xls','mpp','pdf','ppt','tiff','bmp','docx','xlsx','pptx','ps','odt','ods','odp','odg');
```



Part XII

Process Templates

Process Templates

The following process templates are common processes used in many companies. Feel free to customize them to your particular needs.

PROCESS TEMPLATES



20-F SOX Management

About to enter the stock market or already part of it? This neat process app significantly reduces the time and effort needed to comply with the Sarbanes-Oxley Act.

[Click here to download this process template](#)



Access Management ITIL based

This process app helps control user privileges based on the roles & responsibilities of individual users in-line with the principles of ITIL.

[Click here to download this process template](#)



Accounts Payable

Incorrect payments hit your bottom line hard. Gain better control and accuracy over the complete invoice receipt process with the Bizagi Accounts Payable process app.

[Click here to download this process template](#)



Ad-Hoc process

Do you have processes that fall outside predefined patterns? Not a problem. Bizagi makes it easy to assign, schedule and resolve tasks on the fly.

[Click here to download this process template](#)



Change Management ITIL based

Introduce, manage, evaluate and analyze the impact of your technological changes with Bizagi's ITIL-based Change Management process app.

[Click here to download this process template](#)



Help Desk

The Bizagi Help Desk app embeds a formal yet flexible flow enabling all your internal IT request cases to be effectively qualified, managed and solved.

[Click here to download this process template](#)



Non Conformity Management ISO 9000

Easily spot, manage and correct those anomalies that, when left untreated, threaten your budget, customer base and industry credentials.

[Click here to download this process template](#)



Onboarding

Put an end to first day frustrations with the Bizagi Onboarding process app - a simple workflow to ensure new employees have what they need from day one.

[Click here to download this process template](#)



Offboarding

Ensure your offboarding process is as tight as your onboarding one. Get complete control over all the necessary tasks to ensure a satisfactory experience for both HR and employee.

[Click here to download this process template](#)



Personal Loans Request

Streamline the complete credit request cycle of your most complex financial products, from approval and evaluation right through to final delivery.

[Click here to download this process template](#)



Petitions Claims and Complaints

Claims, Complaints and Suggestions getting out of hand? This process app gives you total clarity to identify, resolve and improve all company interactions.

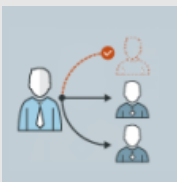
[Click here to download this process template](#)



Purchase Request

The purchase lifecycle made easy. Automate every stage and enjoy better buying power within your supply chain.

[Click here to download this process template](#)



Recruitment and Selection

Struggling to assess applicants' information? Interviews proving difficult to schedule? Streamline your selection process with Bizagi's Recruitment app.

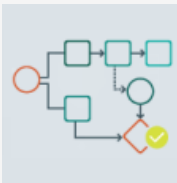
[Click here to download this process template](#)



Sales Opportunity Management

Convert more business leads into closed deals. Analyze your sales performance. Improve your service levels. All made simpler with Bizagi.

[Click here to download this process template](#)



Transactional process

Coordinate multiple activities without returning to the initial state. From small and simple to large and complex, handle every process outcome.

[Click here to download this process template](#)



Travel Request and Expenses Report

A simple yet effective process app to provide tight control over travel and expenses requests, complete with reports.

[Click here to download this process template](#)



Six Sigma

Perform your projects more effectively in line with leading Six Sigma / DMAIC methodology.

[Click here to download this process template](#)



Vacations Request

Easily submit leave. Gain control & visibility. Reduce manual updates across your company. This app does it all, in line with your company handbook and approval procedures.

[Click here to download this process template](#)



Vehicle Insurance Policy Underwriting

This process app provides underwriters with control and visibility of the vehicles required to insure, reducing paperwork and unnecessary duplication.
[Click here to download this process template](#)

Download the process used in the Webinar
"Creating a process documentation portal with Bizagi"

[This is the example file for you to use as a reference to model your processes and create your own documentation portal.](#)

"Criando um portal de documentação com o Bizagi"

[Arquivo de exemplo utilizado no Webinar: Criando um portal de documentação com o Bizagi](#)



bizagi
Modeler