

Loan Assessment Process

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Introduction to Bizagi BPM Suite

Bizagi BPM Suite is the leading Business Process Management (BPMS) system that automates processes with more speed and flexibility than ever before. In Bizagi, most of the common and recurring requirements in process automation have been prebuilt. That is why Bizagi delivers faster!

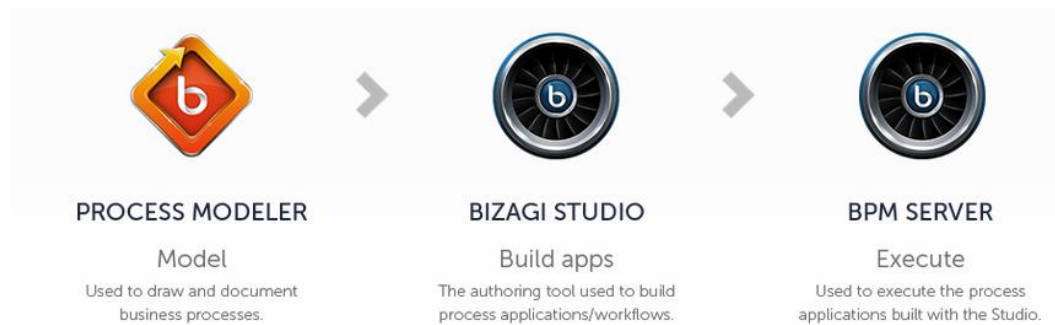
Furthermore, Bizagi empowers business users to automate and modify complex, dynamic business processes quicker and with more flexibility than any other solution, thus supporting the continuous improvement of the organization’s critical processes.

Bizagi BPM Suite is composed of three tools that will help you manage the complete life cycle of a business process: Model, Execute, and Improve.

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

Bizagi Studio: The construction module supports the definition for: the data model, the user interfaces (known as forms), the business rules, the participants or performers of the workflow activities, and integration with external systems, amongst other things.

Bizagi BPM Server: The BPM Suite executes the model in a Work Portal, accessed through a browser via the Bizagi BPM Server, for effective and intelligent process management. End users are presented with a Work Portal to carry out their daily activities and to monitor business operations in real time with a complete set of reports.



Process Modeler

Bizagi Process Modeler provides:

- **Easy to use interface:** An intuitive and easy to use interface that allows you to diagram from the simplest to the most complex business processes.
- **Process documentation:** Capability to publish high quality documentation in your preferred format: Word, PDF, Web pages, SharePoint or Wiki.
- **Team Collaboration:** Ability to collaborate with other team members during process definition. Run discussions. Collaborate in the cloud or on premise. Work offline and sync when online again.
- **Simulation:** A powerful simulation engine that allows you to predict how your great ideas will impact real-world businesses.

Bizagi BPM Suite

Once the process map is designed, access the Process in Bizagi Studio, where a user-friendly wizard will walk you through all the necessary steps to turn your design into a running application.

Bizagi BPM Suite provides:

- **Control and visibility:** Graphical real-time tracking and monitoring (who is doing what, when and where). This feature ensures people execute according to the predefined workflow and policies.
- **Alarms and notifications:** Exceptions to service level agreements or non-compliance issues generate alarms and are reported to the appropriate people.
- **Performance analysis and reporting:** Out-of-the-box reports with deep insights into operational performance (intelligent BPM or IBPM)
- **Auditing and traceability:** Detailed log of performed activities – who changed what and when.
- **Workload routing and balancing:** Graphical editor to define work allocation rules. This includes load optimization algorithms and deals with delegates and working calendars.
- **Mobility:** Stay connected to your business processes, be productive and take action while on-the-go.
- **Extensibility and interoperability:** Easy integration with applications such as SAP, Documentum, SharePoint and mail.
- **Robustness:** Secure, scalable and reliable workflow application (fault tolerant, clustering)
- **Quality:** Solution tested in hundreds of implementations. There is no need to debug custom software development code.

Workshop: Loan Assessment Process

The purpose of this workshop is to show how to use Bizagi to automate, run and monitor business processes. The Loan Assessment example is taken from Chapter 9 of the textbook *"Fundamentals of Business Process Management"*, by Marlon Dumas, Marcello LaRosa, Jan Mendling and Hajo A. Reijers, published by Springer in 2013.

Description of the Loan Assessment Process

The Loan Assessment process takes place between an applicant and a loan provider, with the purpose of approving loan applications. A BPMN representation of this process is provided in [Diagram 1](#).

This process is executed by four loan provider roles: a financial officer takes care of checking the applicant's credit history; a property appraiser is responsible for appraising the property, and an insurance sales representative is responsible for producing a home insurance quote, if required. The loan officer, who is the applicant's main point of contact, will perform all other activities.

The Loan Assessment process starts on receipt of a loan application submitted by an applicant. Once the loan provider receives the loan application, it is checked for completeness. If incomplete, it is returned to the applicant to fill the missing information and resubmit it to the loan provider. This process is repeated until the application is received complete or terminated, which occurs if an application is not resubmitted within 5 days from the date of return to the applicant.

Next, the application must pass two checks to be approved: 1) the applicant's loan risk assessment, done automatically by a service, and 2) the appraisal of the property for which the loan is being sought, carried out by a property appraiser. Before conducting the risk assessment, a financial officer performs a credit history check on the applicant. After both the loan risk assessment and the property appraisal have been done, a loan officer can assess the applicant's eligibility. If the applicant is not eligible the application is rejected; otherwise, the loan officer prepares an acceptance pack, prints it and sends the hard copy to the applicant by post.

The acceptance pack includes a repayment agreement that the applicant must sign, and return to the loan officer by post within two weeks. If received on time, the loan officer verifies that the applicant has accepted the loan conditions and the repayment schedule of the agreement. Based on this check, a different loan officer makes the final loan approval decision (i.e., the two-man rule is enforced). If the applicant failed to accept all terms, the loan officer cancels the application; otherwise, it is approved. In either case, the process completes with the applicant being notified of the final result.

A loan application may be coupled with a home insurance plan, which is offered at a discounted price. The applicant may express their interest in such a plan at the time of submitting their loan application. This option is checked after sending the acceptance pack. If insurance is required, an insurance sales

representative will send a home insurance quote to the applicant. The acceptance of this quote by the applicant and the associated insurance contract fall outside the scope of the Loan Assessment process.

Scope

This Process focuses on mortgage loan application processing, from receipt to approval.

Assumptions

- The real-world process is collaborative, but to allow for simplicity of construction, we will regard the process as non-collaborative. For this reason shapes showing interaction between processes, such as message events, are replaced with different shapes.
- The Loan Officer communicates via email with the applicant.
- The Loan Officer receives the application form and enters the information in the *Check application form* activity.
- If the application is incomplete, a Timer event will be enabled that allows the Loan Officer to resume the application once it is resubmitted via email.
- All notifications to the applicant are sent via email.

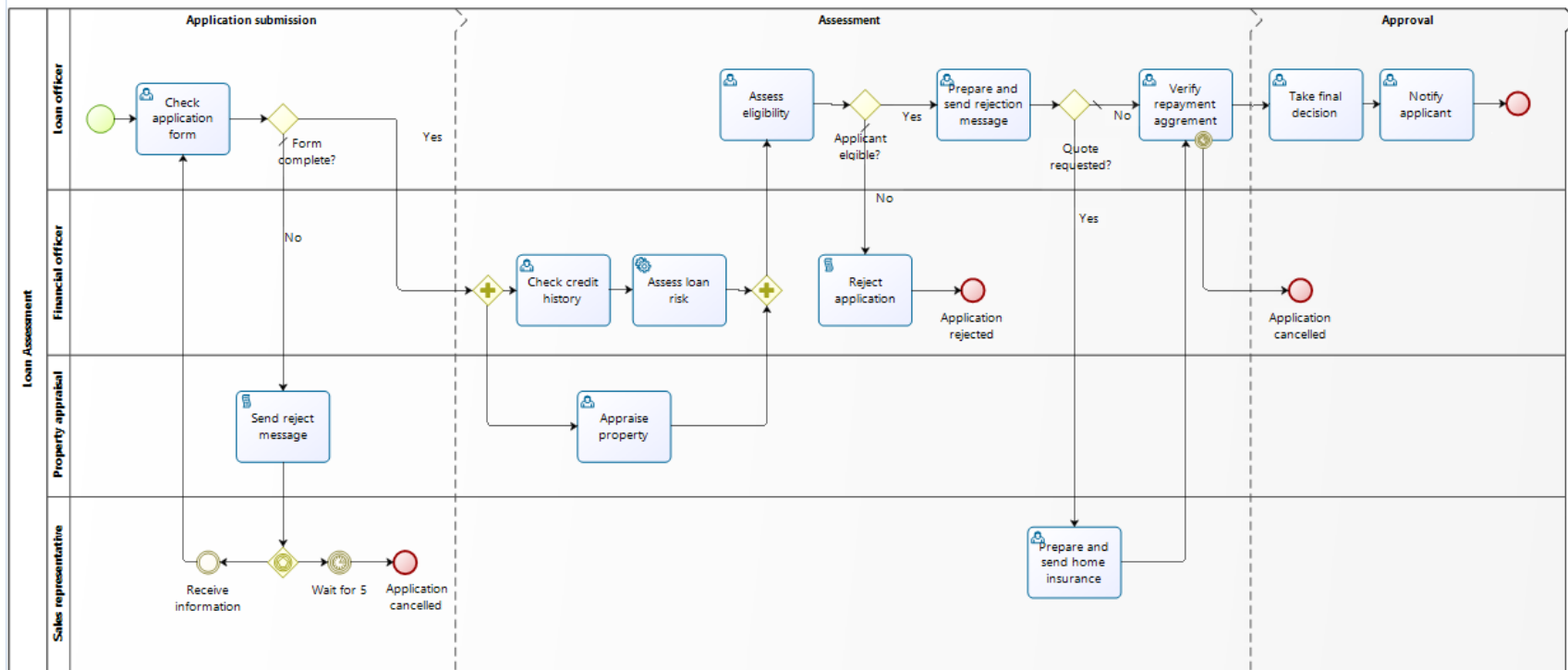


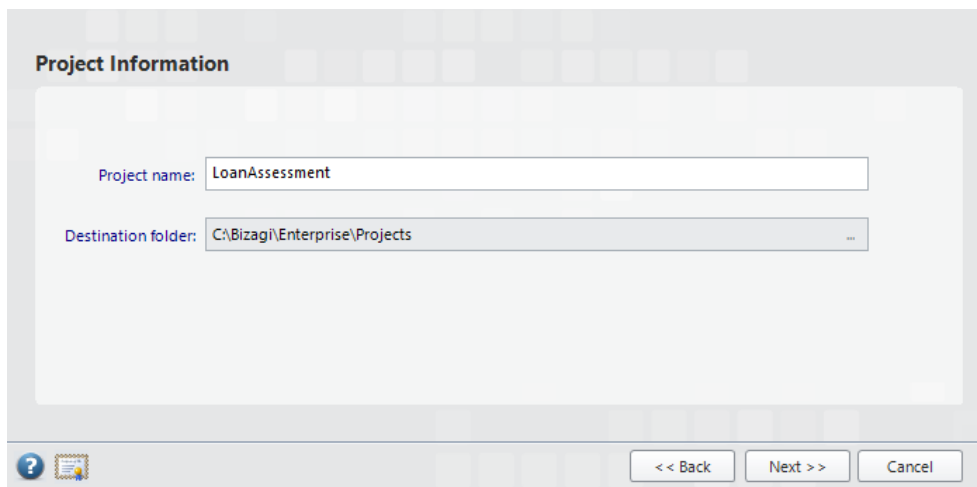
Diagram 1. Loan Assessment process diagram

I. Create the project

Click the Bizagi icon on your desktop to open the application. Select *New* to create a new Bizagi Project.



Name the project, *LoanAssessment*, and click **Next**.



Enter the following database credentials:

- Loginname: *sa* and Password: *Bizagi10GO*

Bizagi Database Information

Type: SQL Server Oracle

Database Information

Server: BIZ-GERMANA\SQLEXPRESS

Database: LoanAssessment

Login Information

Type: SQL Server Authentication

Login name: sa

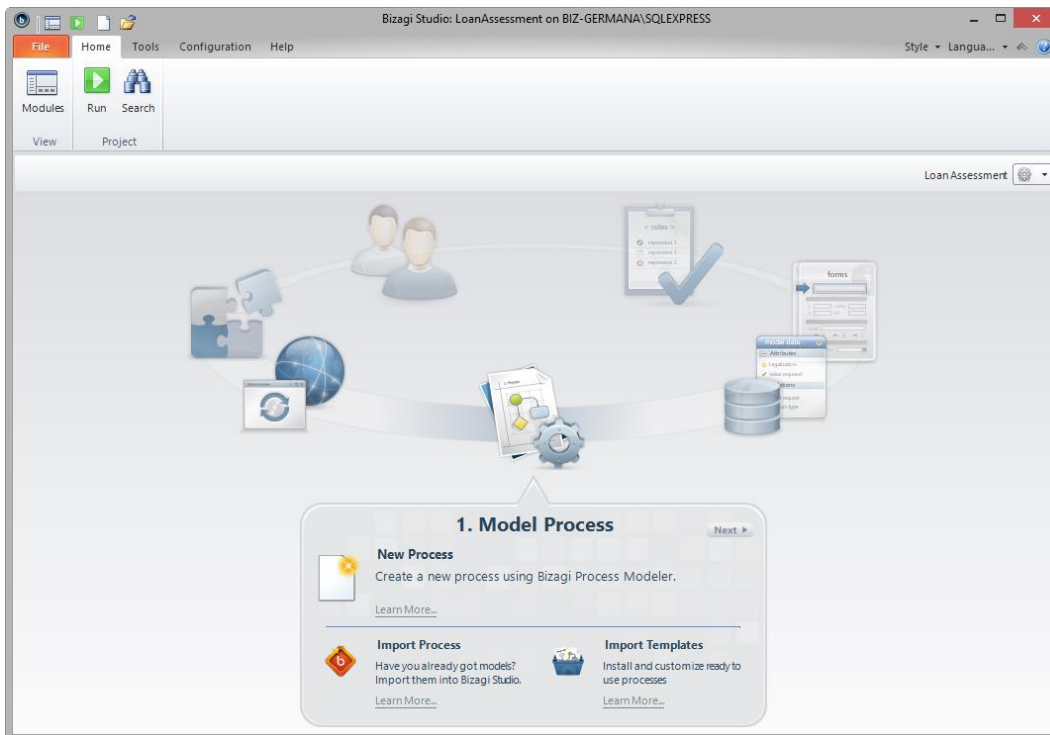
Password: *****

Unicode support

<< Back Next >>

Bizagi will create the project, which may take a few minutes.

Once done Bizagi Studio will display a user-friendly wizard that will walk you through all the necessary steps to turn your process map into a running application.



II. Model the process

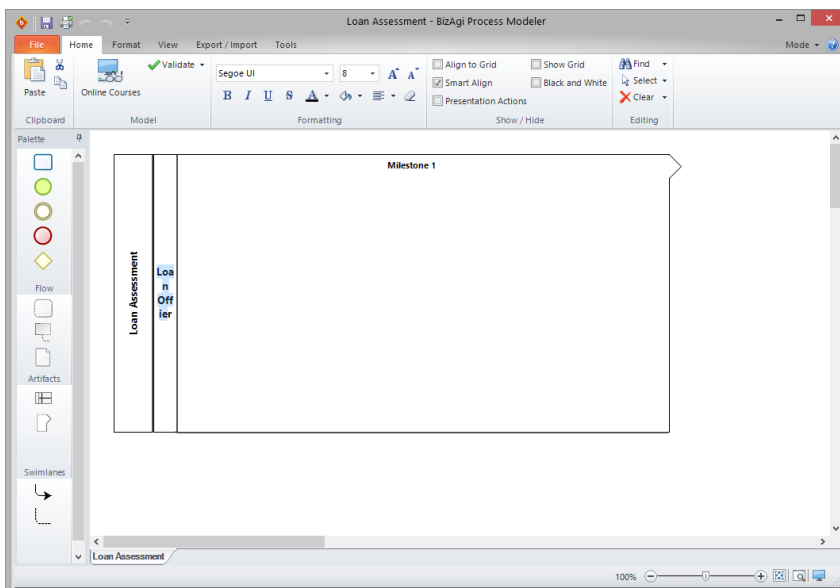
Process modeling is the first step in the automation of a Process.

To create a process, go to Model Process in the Process Wizard and select *New Process*.

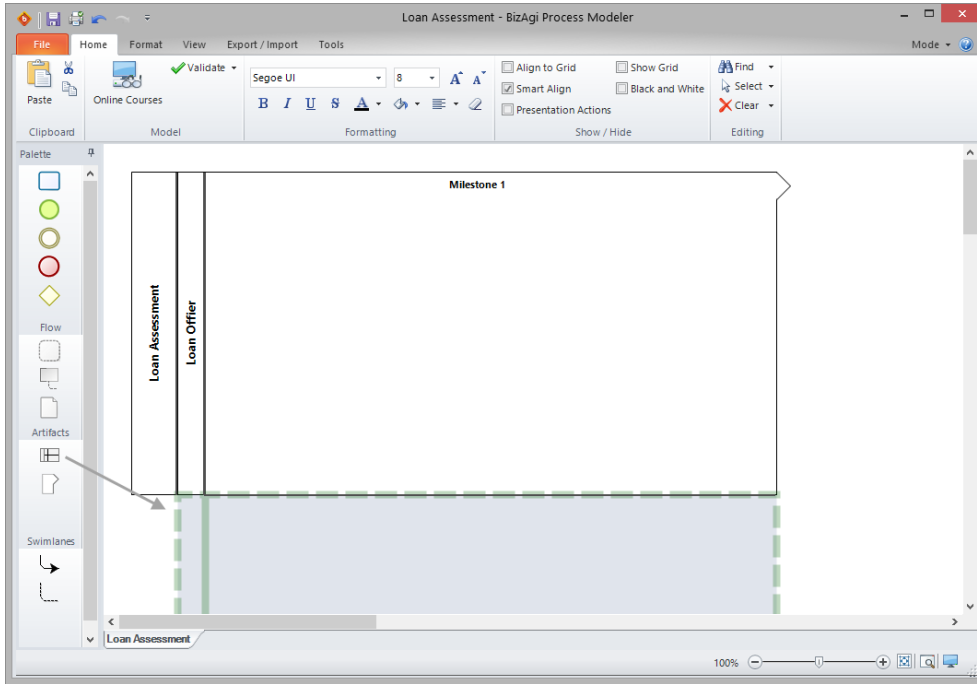


Type the name of the Process, *Loan Assessment*, and click **Ok**.

A Pool consisting of one Lane will load upon startup. Rename the Lane; double-click the Lane and type *Loan Officer*.



Add three more Lanes to the Process: *Financial officer*, *Property appraiser* and *Insurance sales representative*. Drag and drop the Lanes from the Palette.



Drag and drop three Milestones to add phases. Rename them: *Register*, *Assesment* and *Approval*.

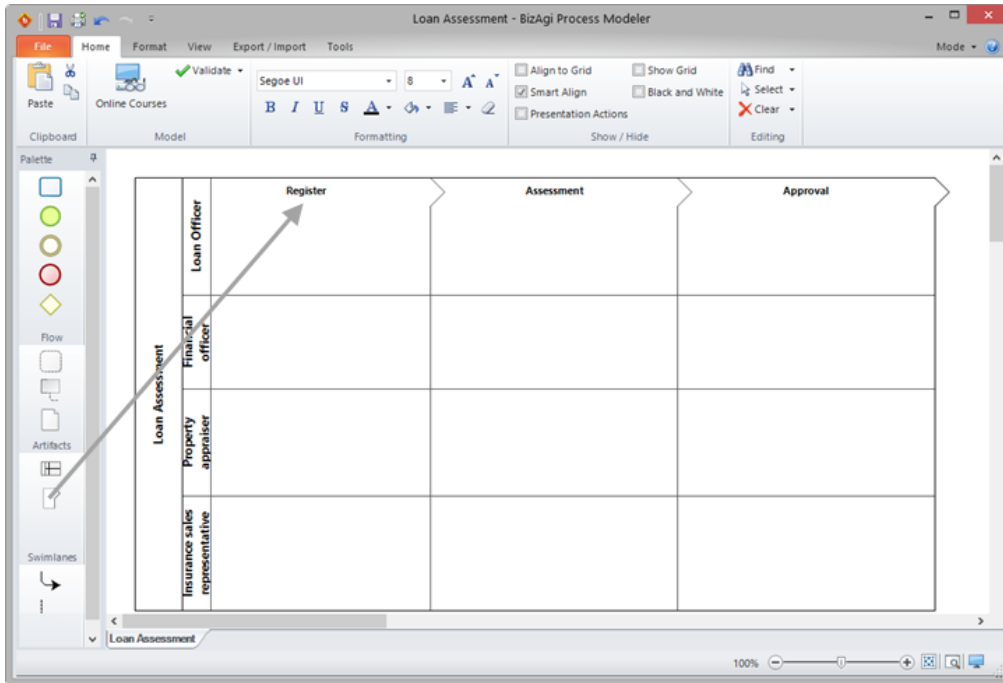


Diagram the process flow by selecting all required shapes from the Palette and placing them in the correct position on the Process diagram.

All figures show a pie menu that allows easy selection of shapes for inclusion in the diagram. Icons for manipulation of the shapes become visible when positioning the mouse over a figure.



To rename shapes and transitions, double-click on them and change their display name.

Important: All transitions must be properly connected and all the figures must be located inside Phases and Functional Areas.

In the same way, add the remaining shapes until the diagram looks like [Diagram 2](#).

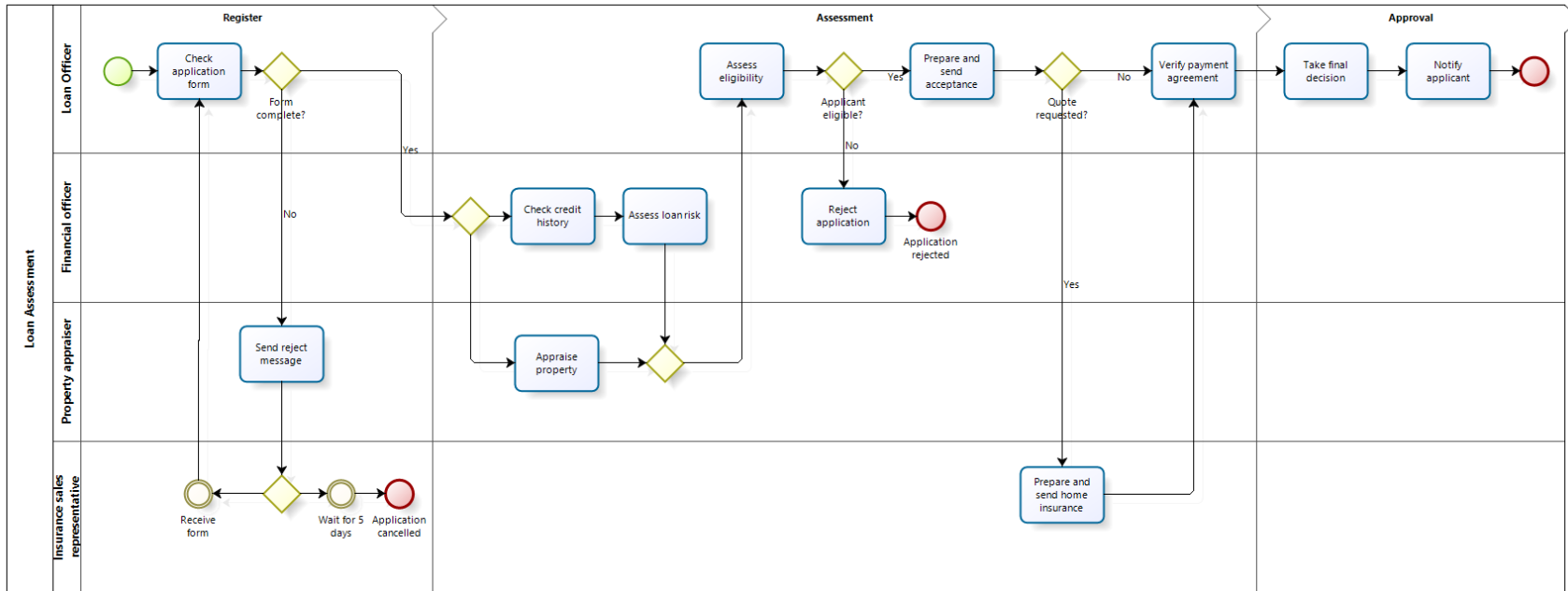
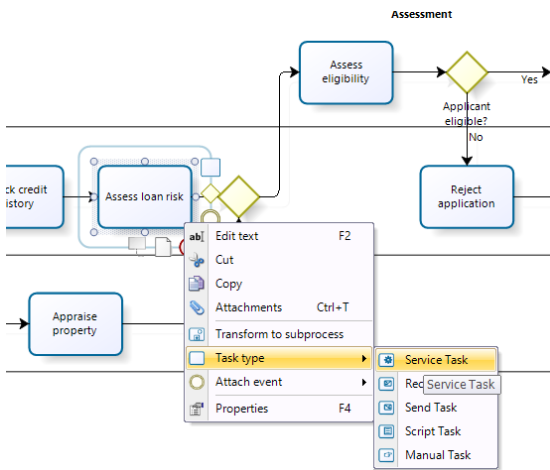
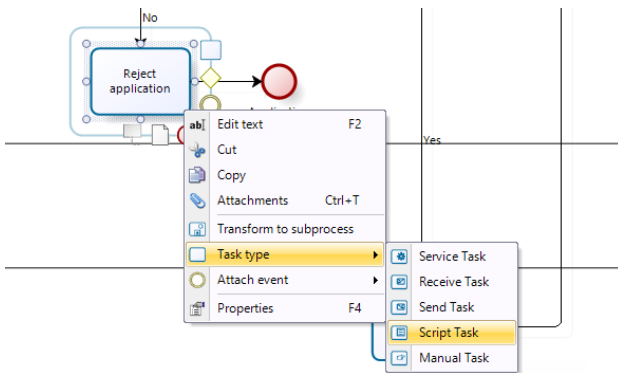


Diagram 2. Basic Loan Assessment process diagram

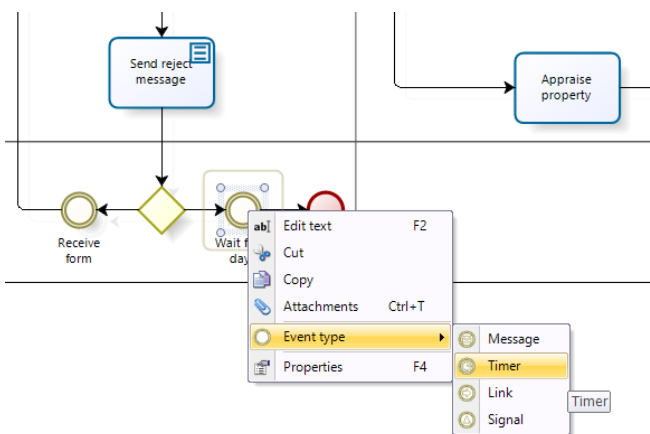
Convert Tasks, Events and Gateways to the proper types.
 Right-click on the *Assess loan risk* Activity and transform it to a *Service Task*.



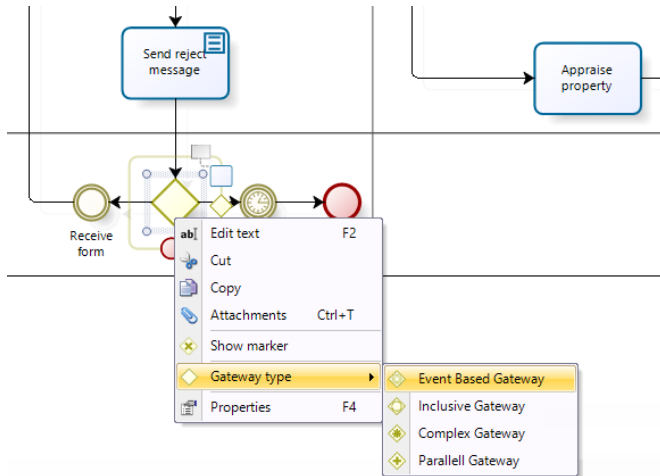
The three Notifications Activities, namely *Send rejection message*, *Reject application* and *Notify applicant* must be transformed to Script Tasks.



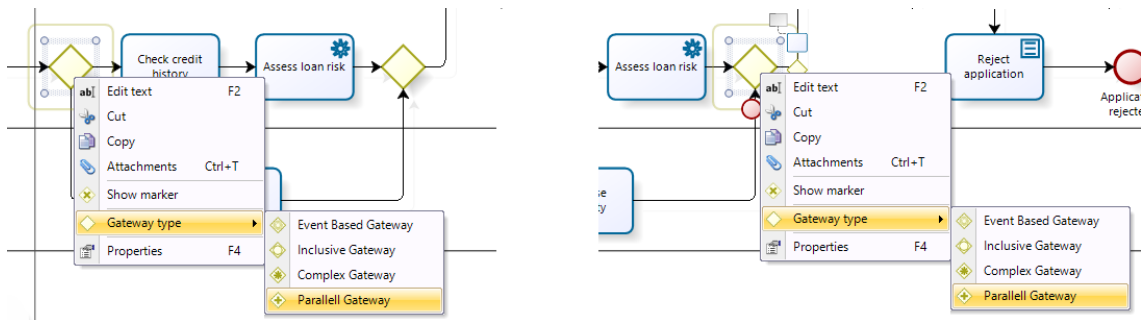
Convert the *Wait for 5 days* Event to a Timer Event.



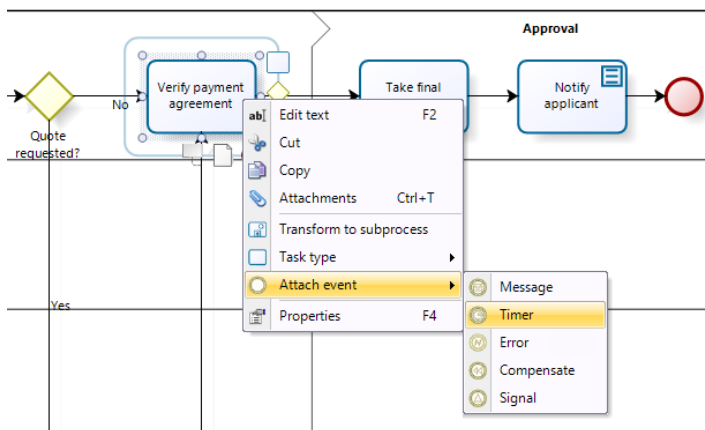
The Gateway preceding the Timer Event must be an *Event based Gateway*.



The *Check credit history* and *Appraise property* Activities must enabled simultaneously. Also, the process cannot continue until the *Loan risk assessment* and *Property appraisal* have been completed. To model this situation convert the related gateways to a Parallel Gateways.



Finally, attach the Timer event to the *Verify repayment agreement* Activity. Right-click the Activity and select *Timer* as the attached Event.



At this point, your Process should look like [Diagram 3](#).

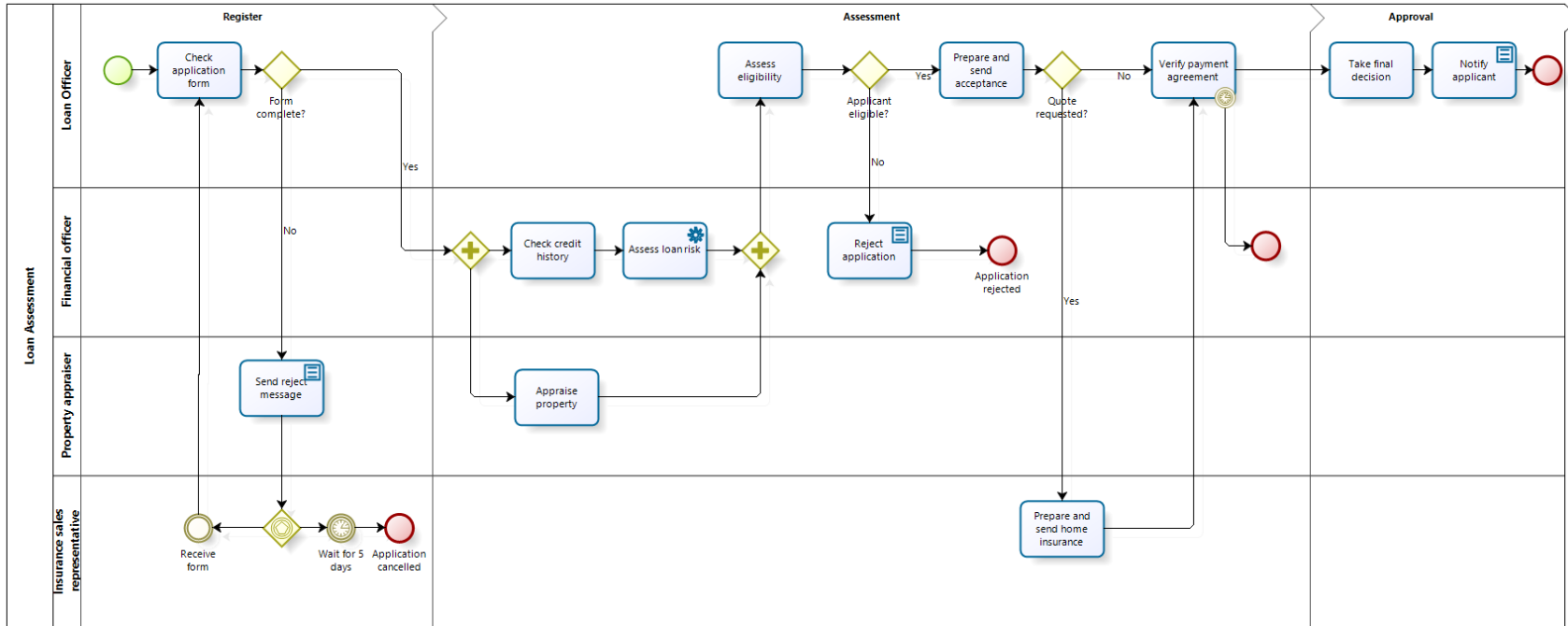
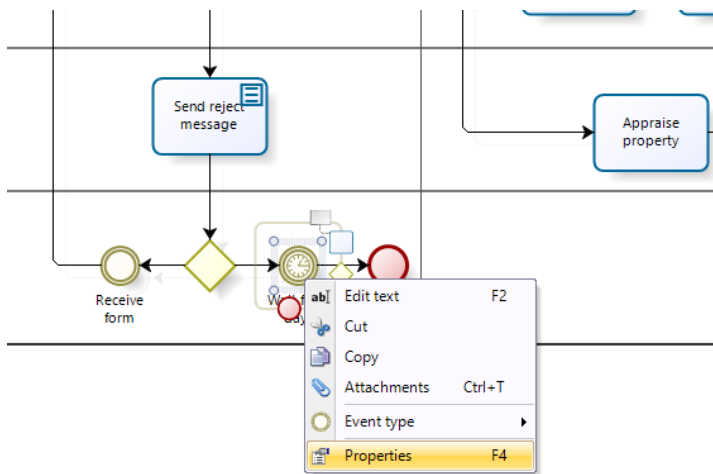


Diagram 3. Complete Loan Assessment Process diagram

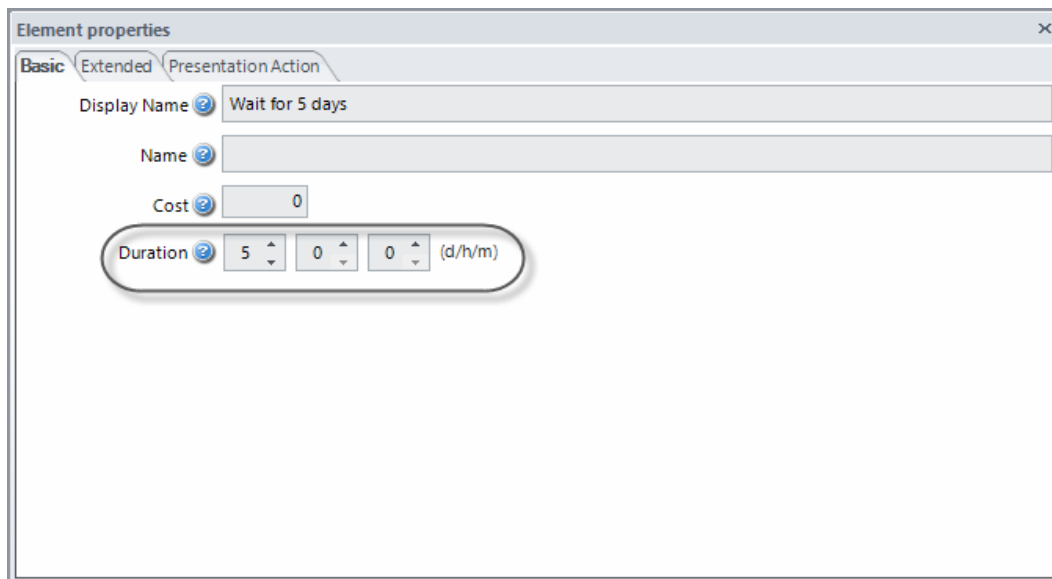
Some parameters (properties) like the duration of Activites and Events must be set when the Process diagram is complete. Set the duration of the timers as follows:

Event	Duration (days)
Wait for 5 days	5
Verify repayment agreement	14

To do this, right-click on the Timer Event and select *Properties*.



In the properties window enter the duration.



Lastly, save and close the Diagram Modeler windows to return to the Process Wizard.

III. Process data

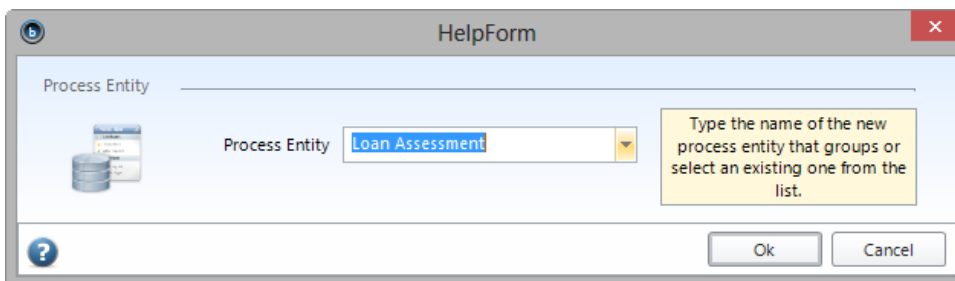
Now that the Process Diagram has been created, we will proceed to the Data Model creation. The model will include all the information required by the Process.

Bizagi provides a user-friendly wizard to build a structured data model with defined entities that allow the data to be created only once and used throughout the process and, if necessary, be reused in other processes. Most entities and attributes are known beforehand at the time of defining the case. If more attributes or entities are needed, they can be included later in the design.

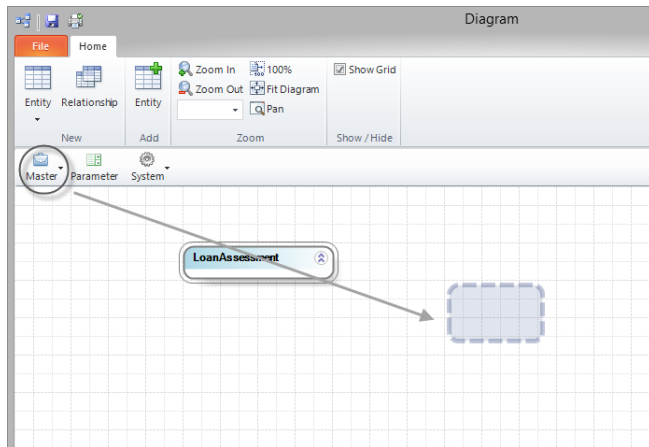
1. In the second step of the Process Wizard, select *Model Data*.



2. A pop-up window will display requesting the name of the Process Entity. The Process Entity is the navigational starting point of the data model, that is the entity that gives access to all other entities in the data model. Name it *Loan Application* and click **Ok**.



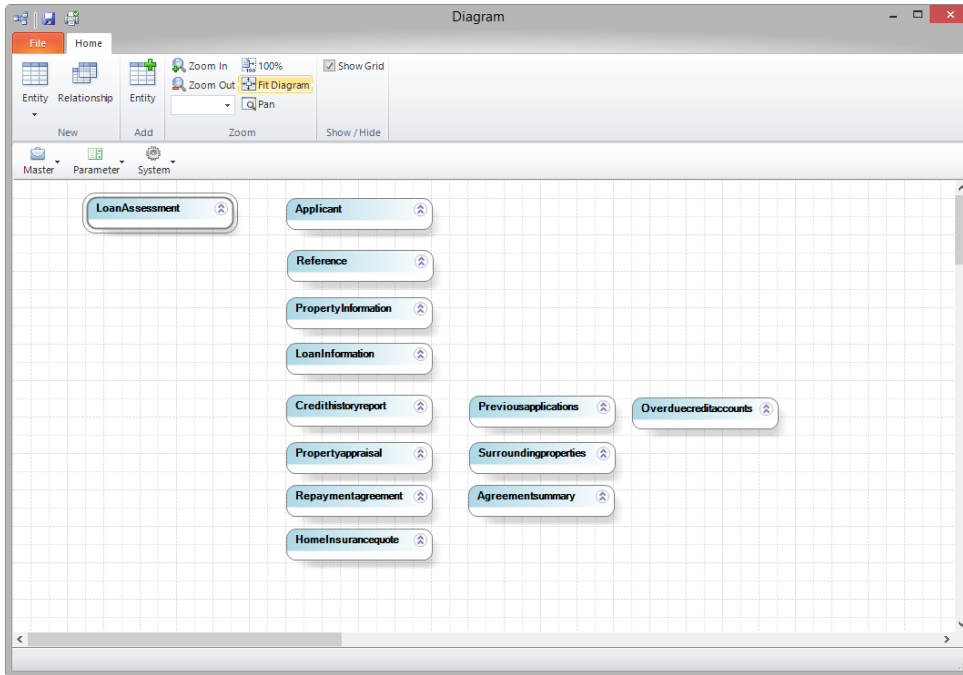
3. Create the Master Entities. These are the business entities that store information which is directly and exclusively related to each Process instance. To add a Master Entity, click the button located in the Entity Bar called *Master*. Drag and drop the entity, and rename it.



Repeat the procedure for the remaining entities.

Entity	Description
Loan Application	Contains all information of the application.
Applicant	Holds the applicant's details (identifying particulars, contact details, financial information).
Reference	Contains details of the applicant's reference (identifying particulars, contact details, financial information).
Property Information	Contains the particulars of the mortgaged property.
Loan Information	Contains information of the loan (amount, number of years, start date, interest rate, interest type)
Credit history report	Holds information relating to the applicant's credit history (previous applications, overdue credits, current credi card).
Previous applications	Contains information of past applications made by the applicant (loan type, amount, duration, interest rate).
Overdue credit accounts	Includes details on any overdue credit accounts held by the applicant.
Property appraisal	Holds information on the appraisal of the morgaged property.
Surrounding properties	Contains information of surrounding properties. This information is useful to appraise the mortgaged property.
Repayment agreement	Contains details on the repayment schedule (Monthly repayment amount, Number of repayments).

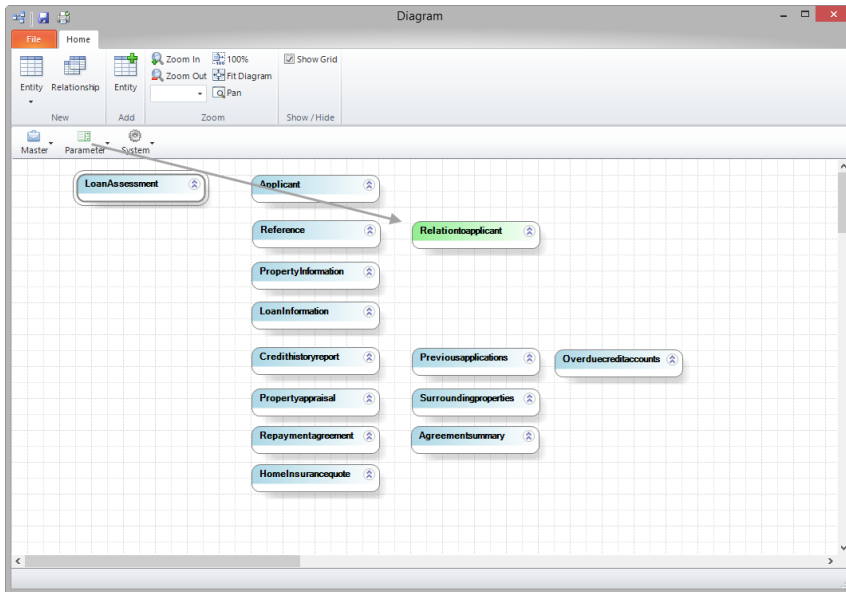
Home Insurance quote	Holds information related to the quote of the home insurance (total cost, monthly payment)
Agreement summary	Contains the main information on the repayment agreement (Conditions agreed, digitized copy of the repayment agreement).



4. Create the Parameter Entities. These entities store predefined values, or parameter values, that are independent from the Processes' execution. Parameter values cannot be modified or written to during execution of a case.

Entity	Description
Relation to applicant	Possible relationships between the applicant and his/her reference (e.g. parent, sibling, friend, etc).
Interest type	Interest rate types (i.e. fixed, variable).
Status	Statuses of an application (i.e. completed, rejected, cancelled).
Loan type	Types of loans (i.e. household, personal, domestic).
Credit assessment	Ratings that indicate credit quality (i.e. AAA,AA,A,BBB,BB,B).
Credit card provider	Accepted credit card providers (e.g. Visa, MasterCard).
Credit type	Types of credit (e.g. bank, consumer, investment).
Property type	Type of property (e.g. house, department, business premise).

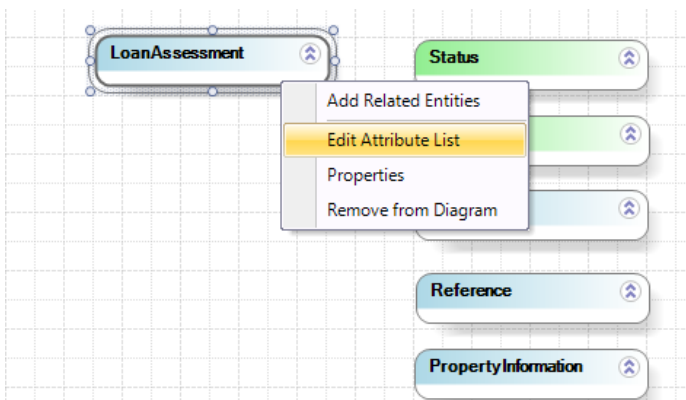
To add a Parameter Entity, click the **Parameter** button located in the Entity Bar. Drag and drop the entity and give it a name.



Do the same for all the parameter entities. You may need to reorganize the entities as per your desire.

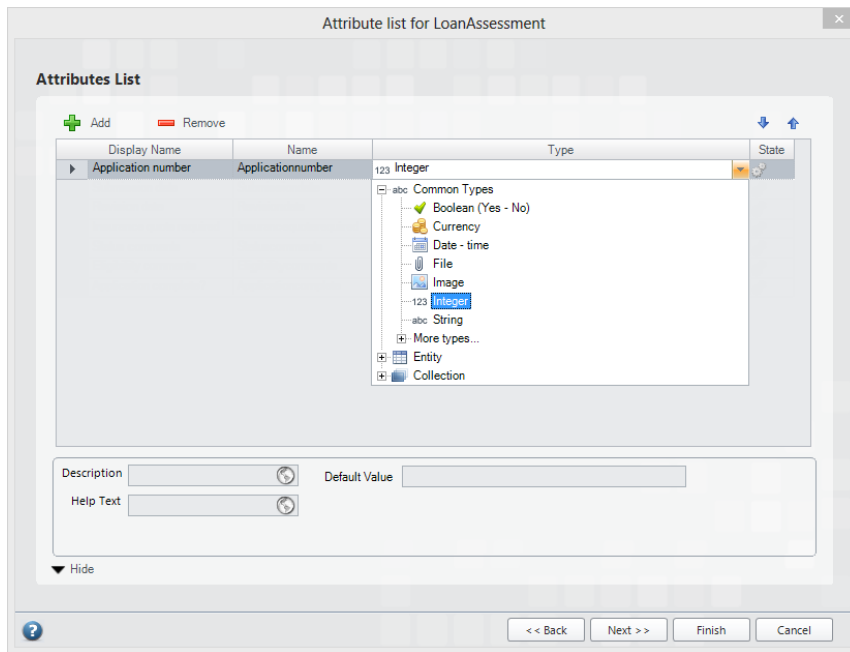
5. Create the attributes, that is, the information that will be stored in each entity.

Right-click on the *Loan Assessment* entity and select *Edit attribute list*.



The Attribute List window, for the Loan Assessment entity, will display. Click the **Add** button to create attributes; for each new attribute complete the following information:

- **Display Name:** this is name that will be presented to the end user. It does not allow special characters.
- **Name:** this field will be automatically filled by the system and will be used for Business Rules.
- **Type:** holds the data type of the attribute.
- **Length:** determines the number of characters allowed in String data types.

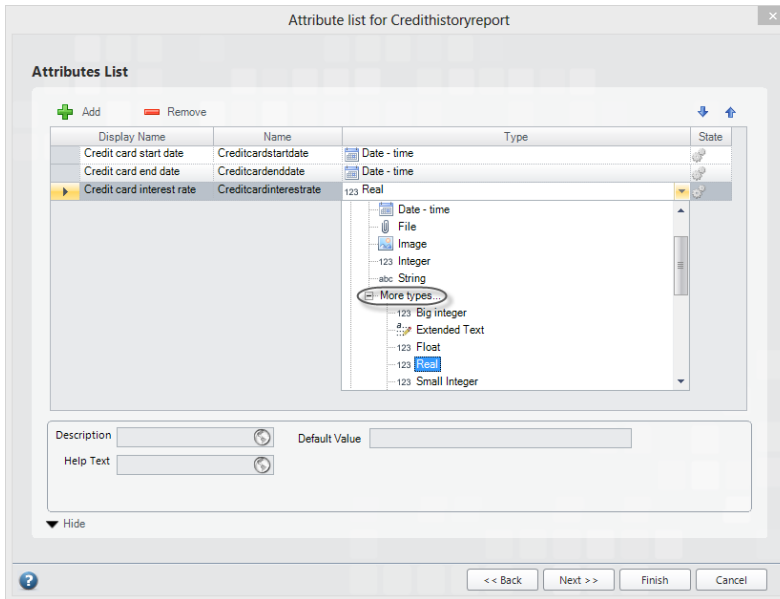


The *Loan application* entity contains the following attributes:

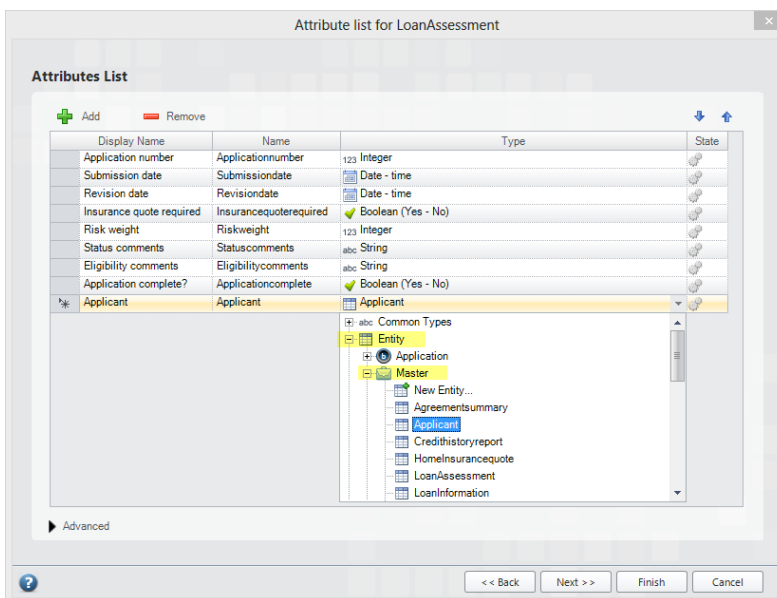
Display Name	Type	Entity
Application number	Integer	-
Submission date	Date-Time	-
Revision date	Date – Time	-
Insurance quote required	Boolean	-
Risk weight	Integer	-
Status comments	String	-
Applicant eligible?	Boolean	-
Eligibility comments	String	-
Application complete?	Boolean	-
Applicant	Entity – Master	Applicant
Reference	Entity – Master	Reference
Property Information	Entity – Master	PropertyInformation
Loan Information	Entity – Master	LoanInformation
Credit history report	Entity – Master	Credit history report
Property appraisal	Entity – Master	Propertyappraisal
Repayment agreement	Entity – Master	Repaymentagreement
Home insurance quote	Entity – Master	Homeinsurancequote
Agreement summary	Entity – Master	Agreement summary
Status	Entity – Parameter	Status
Loan Officer	Entity -System	WFUSER

Before creating these attributes take into account:

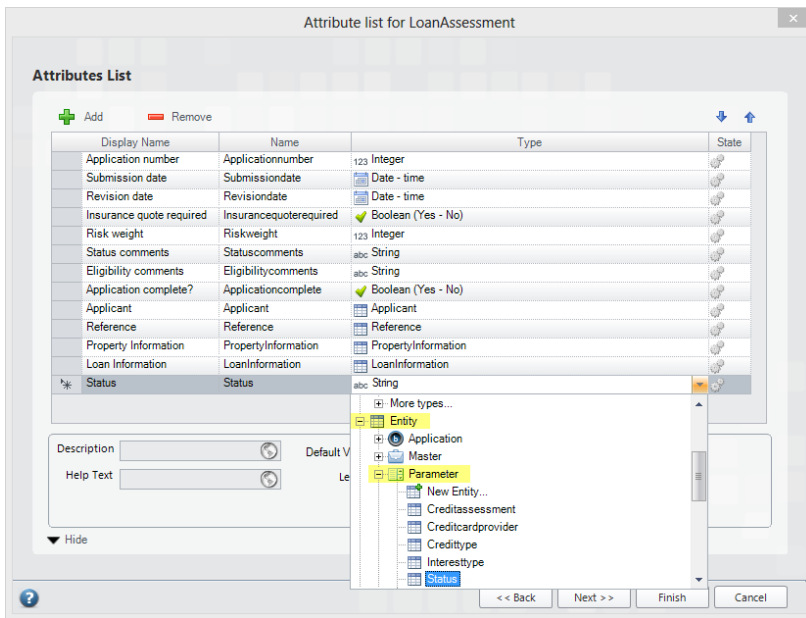
In order to find some attribute types (such as Float, Real, among others) you have to expand the *More types* node:



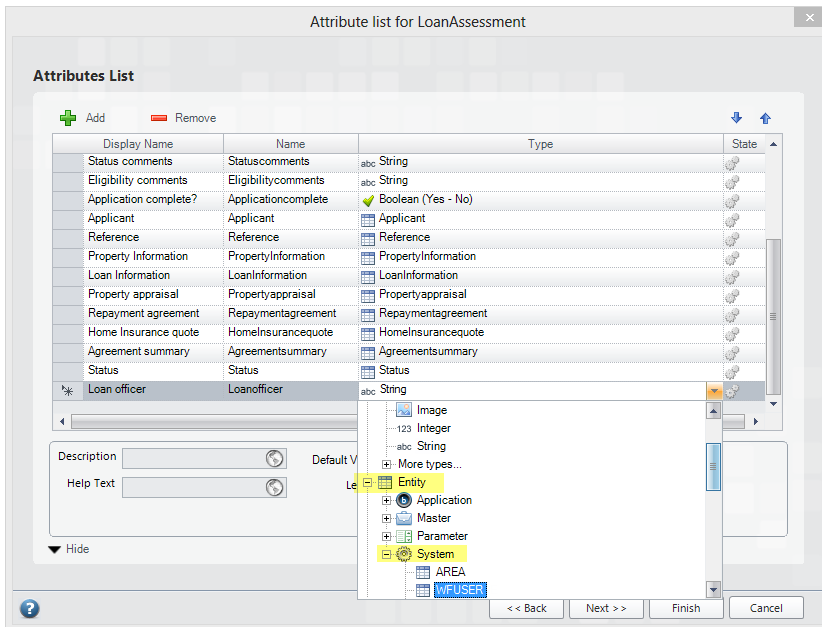
Entity – Master type attributes are attributes related to Master entities. To create these attributes expand the *Entity* node, followed by the *Master* node and select the corresponding entity from the list.



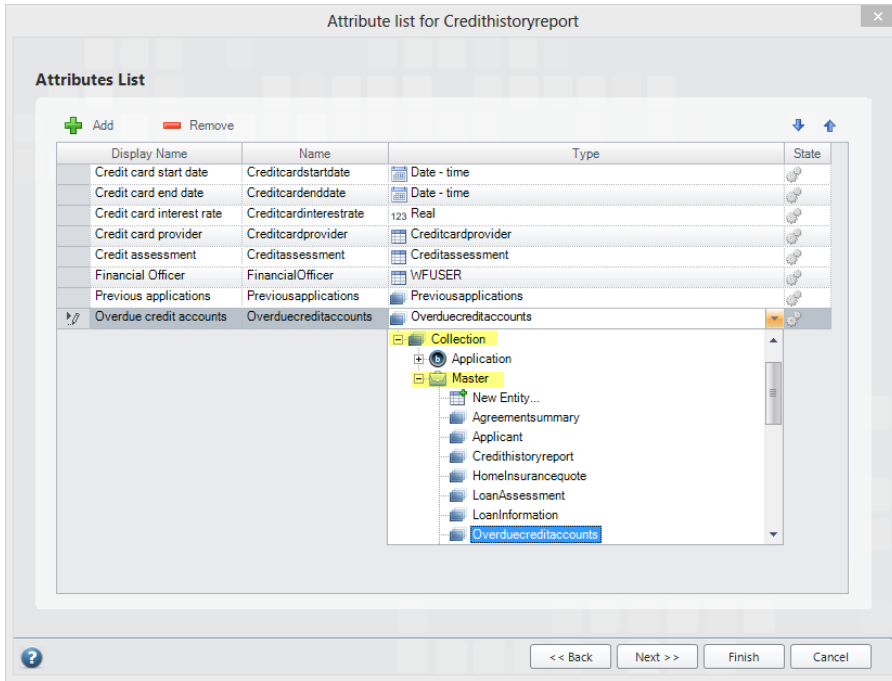
Entity – Parameter type attributes are attributes related to Parameter entities. To create these attributes expand the *Entity* node, followed by the *Parameter* three and select the desired entity from the list.



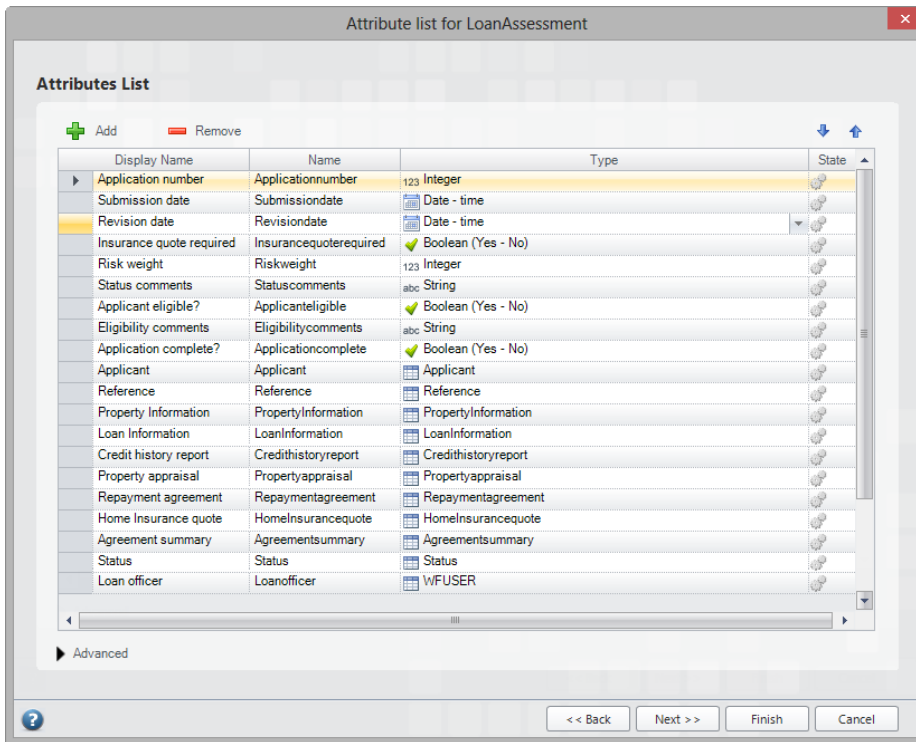
Entity – System type attributes are attributes related to System entities. These entities belong to the Bizagi’s internal data model. This group of entities includes information concerning the end user, areas, locations, roles, skills among others. To create these attributes, expand the *Entity* node, followed by the *System* node, and select the corresponding entity from the list.



Collection – Master type attributes are attributes with a one-to-many relationship to a Master entity (multiple relationship). To create these attributes expand the *Collection* node, followed by the *Master* node and select the desired entity from the list.



Once created, the attribute list for *Loan Assessment* will look as illustrated in the following screen.



Entity	Attribute	Type	Entity
Applicant	Name	String	-
	Sur name	String	-
	Identification number	String	-
	Telephone number	String	-
	Email address	String	-
	Current address	String	-
	Previous address	String	-
	Duration of stay (years)	Real	-
	Current employer	String	-
	Monthly incomes	Currency	-
	Monthly expenses	Currency	-
Reference	Name	String	-
	Sur name	String	-
	Identification number	String	-
	Telephone number	String	-
	Email address	String	-
	Address	String	-
	Relation to applicant	Entity - Parameter	Relationtoapplicant
Property Information	Property address	String	-
	Purchasing price	Currency	-
	Property type	Entity - Parameter	Propertytype
Loan Information	Loan amount	Currency	-
	Number of years	Real	-
	Start date	Date - Time	-
	Interest rate	Real	-
	Interest type	Entity - Parameter	Interesttype
Credit history report	Credit card start date	Date – Time	-
	Credit card end date	Date – Time	-
	Credit card interest rate	Real	-
	Credit card provider	Entity - Parameter	Creditcardprovider
	Credit assessment	Entity - Parameter	Creditassessment
	Previous applications	Collection -Master	Previousapplications
	Overdue credit accounts	Collection -Master	Overducreditaccounts
Financial Officer	Entity -System	WFUSER	
Previous applications	Amount	Currency	-
	Duration (years)	Real	-
	Loan type	Entity - Parameter	Loantype

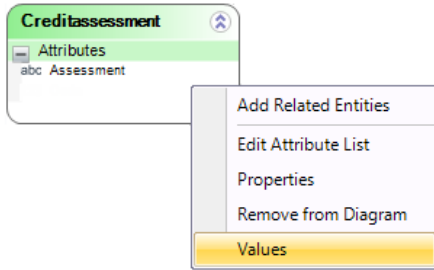
Create the attributes for the remaining Master entities.

Entity	Attribute	Type	Entity
Overdue credit accounts	Default amount	Currency	-
	Duration (years)	Real	-
	Interest rate	Real	-
	Credit type	Entity - Parameter	Credittype
Property appraisal	Estimated commercial value	Currency	-
	Comments	String	-
	Surrounding properties	Collection -Master	Surroundingproperties
	Property appraiser	Entity -System	WFUSER
Surrounding properties	Address	String	-
	Commercial value	Currency	-
Repayment agreement	Monthly repayment amount	Currency	-
	Number of repayments	Integer	-
	Repayment agreement	File	-
Agreement summary	Conditions agreed	Booelan	-
	Repayment agreed	Booelan	-
	Repayment agreement (digital copy)	File	-
Home insurance quote	Insurance cost	Currency	-
	Additional monthly payment	Currency	-
	Insurance quote	File	-
	Sales representative	Entity -System	WFUSER

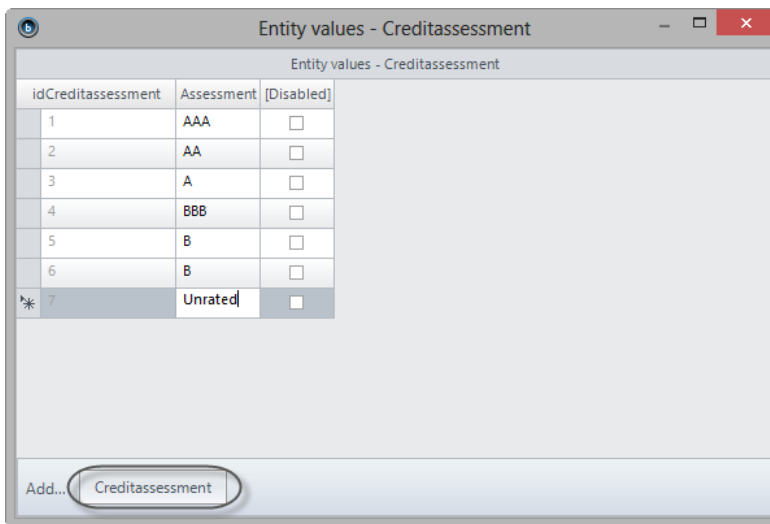
Also create the attributes for the Parameter entities.

Entity	Attribute	Type
Relation to Applicant	Relation	String
Interes type	Interest type	String
Status	Status	String
Loan type	Loan type	String
Credit assessment	Assessment	String
Credit card provider	Provider	String
Credit type	Credit type	String
Property type	Property type	String

Add values to the Parameter Entities. Right-click the Entity and select *Values*.



Click the **Add...** button to include values. The unique record identifier is generated automatically; you only need to enter the description.

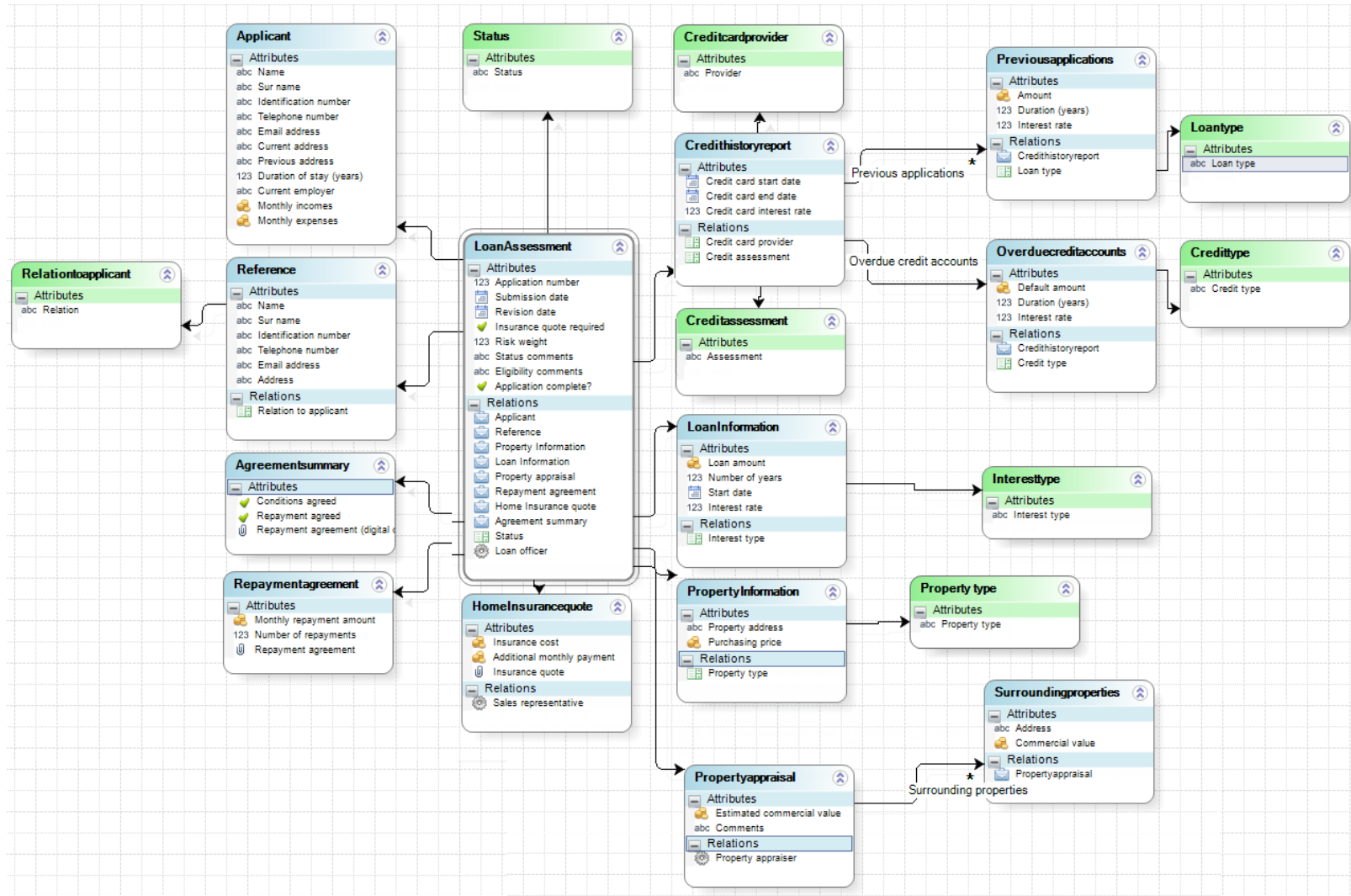


Enter the following values:

Entity	Attribute	Values
Relation to Applicant	Relation	Parent, sibling, friend
Interest type	Interest type	Fixed, variable
Status	Status	Incomplete,complete,assessed,rejected, cancelled, approved.
Loan type	Loan type	Household, personal, domestic
Credit assessment	Assessment	AAA, AA, A, BBB, BB, B, Unrated
Credit card provider	Provider	Visa, Master Card
Credit type	Credit type	Bank, consumer, investment
Property type	Property type	House, department, business premise

Once complete, save and close the Data Modeler window to return to the Process Wizard.

At this point, the model should look like [Data Model 1](#)



Data Model 1. Loan Assessment data model.

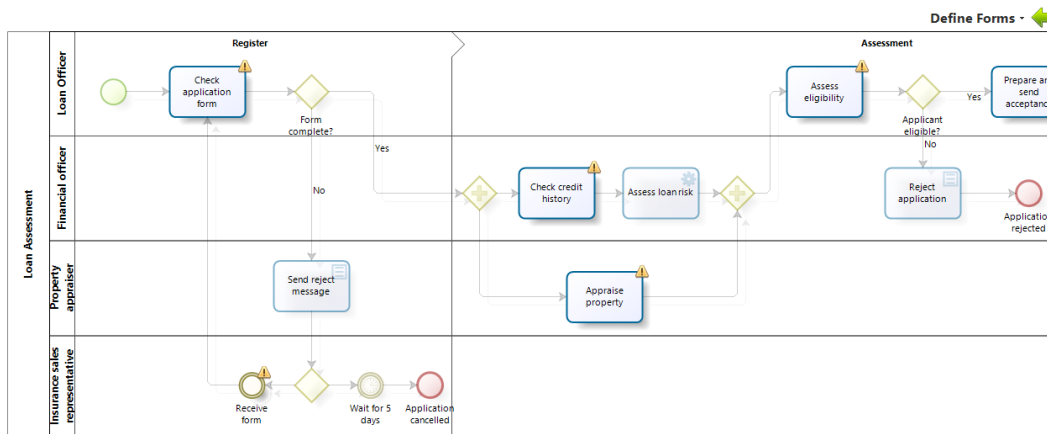
IV. Forms creation

Once the Process Diagram and the Data Model are ready, we will proceed to create the forms (user screens) associated with each one of the human activities of the Process. Forms are used to enter and display required information, so that end users may interact with the process.

In the Process Wizard, go to the third step of the Process Wizard: *Define Forms*.



In the new window, all activities without a form associated will be highlighted with an exclamation mark. Click the desired activity to create its form.

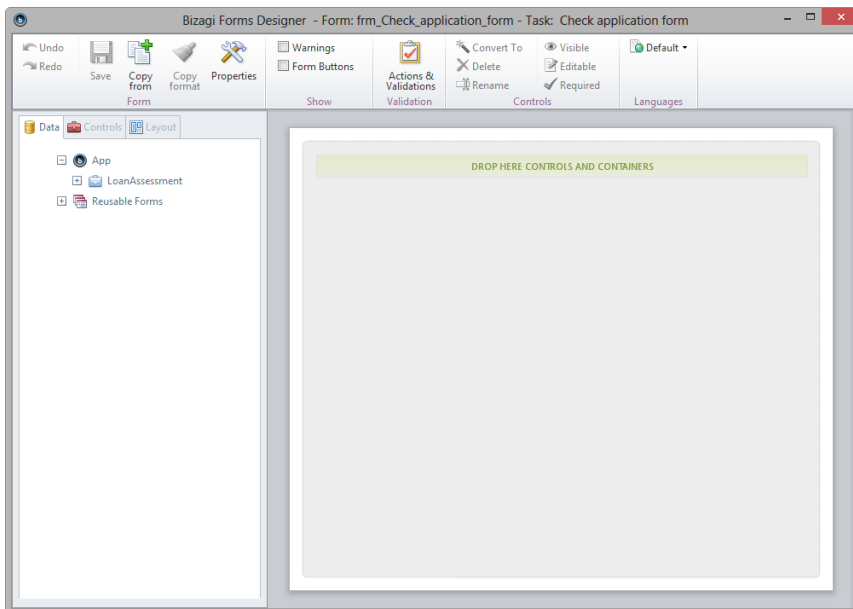


Activity: Check application form

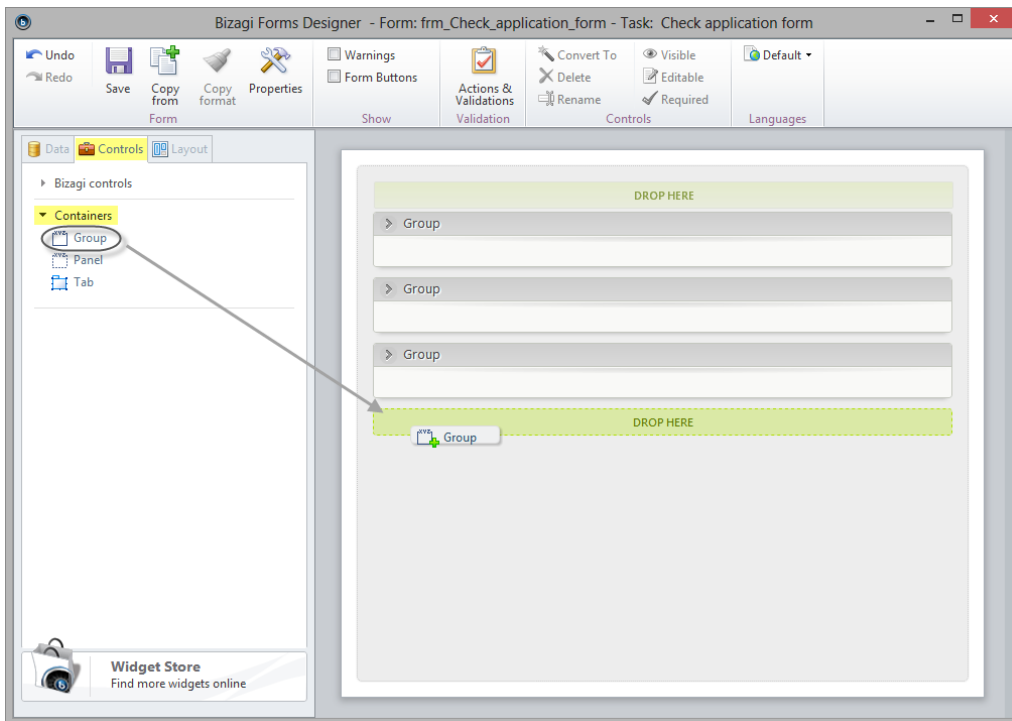
The first Activity of the Process, *Check application form*, must contain the following information:

> Administration Information			
Application number:	<input type="text"/>	Status:	<input type="text"/>
Submission date:	<input type="text"/>	Revision date:	<input type="text"/>
Loan officer:	<input type="text"/>		
> Applicant Information			
Name:	<input type="text"/>	Sur name:	<input type="text"/>
Identification number:	<input type="text"/>	Telephone number:	<input type="text"/>
Email address:	<input type="text"/>		
Current address:	<input type="text"/>		
Previous address:	<input type="text"/>	Duration of stay (years):	<input type="text"/>
> Reference Information			
Name:	<input type="text"/>	Sur name:	<input type="text"/>
Identification number:	<input type="text"/>	Telephone number:	<input type="text"/>
Address:	<input type="text"/>	Relation to applicant:	<input type="text"/>
Email address:	<input type="text"/>		
> Property Information			
Property type:	<input type="text"/>		
Property address:	<input type="text"/>		
Purchasing price:	<input type="text"/>		
> Loan Information			
Loan amount:	<input type="text"/>	Number of years:	<input type="text"/>
Interest rate:	<input type="text"/>	Interest type:	<input type="text"/>
Start date:	<input type="text"/>	Insurance quote required:	<input type="radio"/> Yes <input type="radio"/> No
Application complete?:	<input type="radio"/> Yes <input type="radio"/> No		
Status comments:	<input type="text"/>		

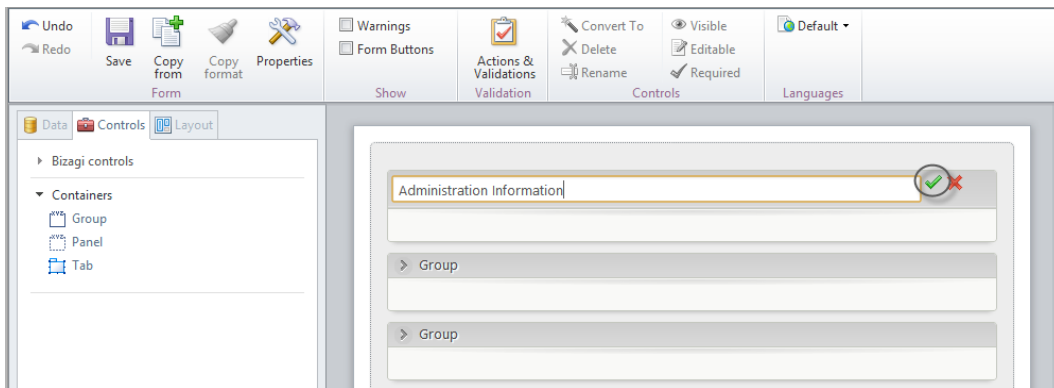
1. Select the Activity *Check application form*. The Forms Designer window will display:



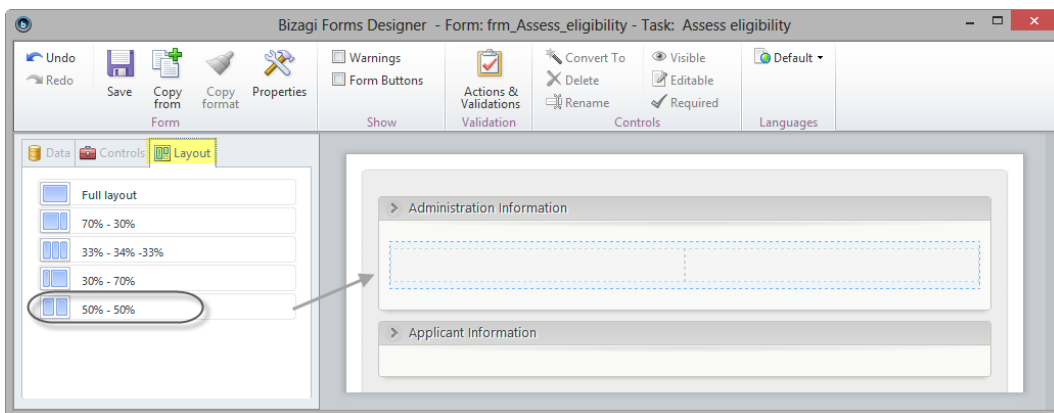
2. Drag and drop five *Groups*, from the Containers menu located in the Controls tab, onto the Display Area.



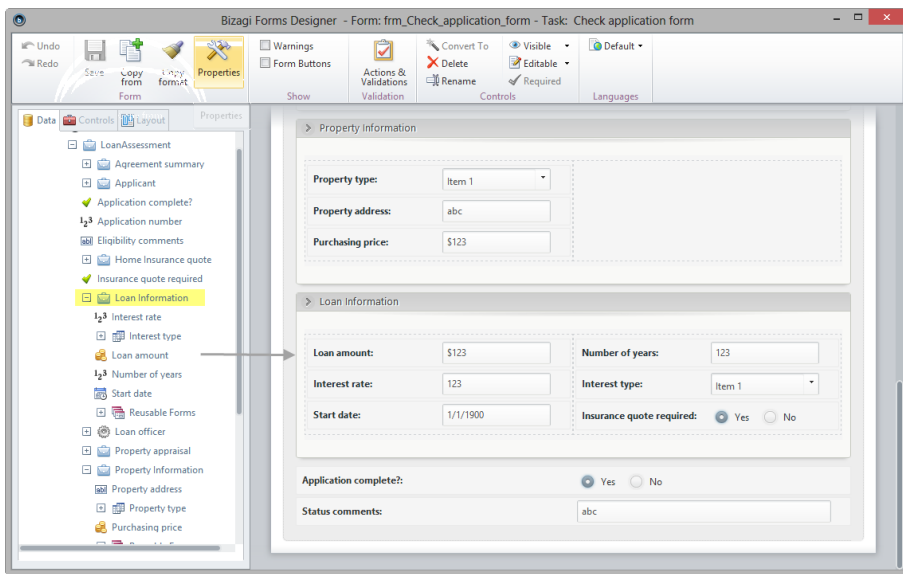
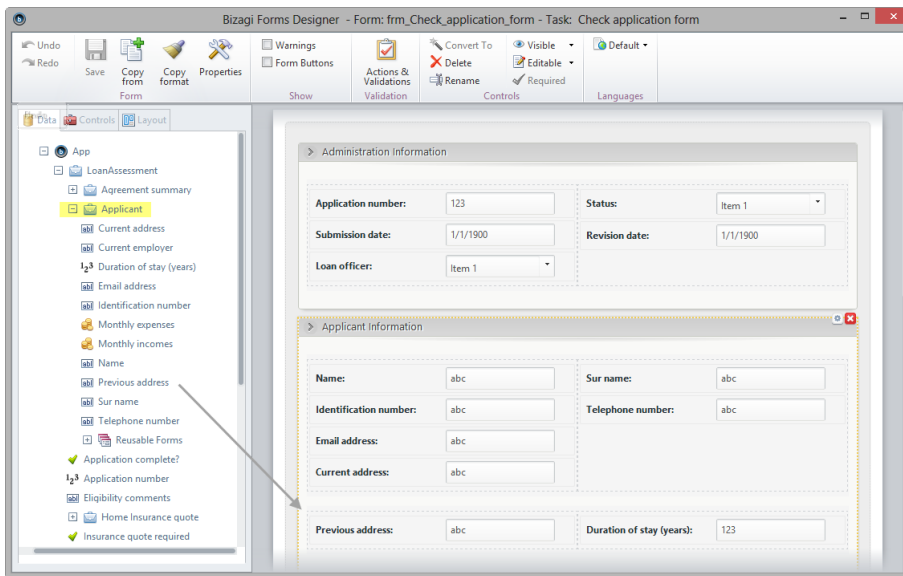
3. Rename the groups to: *Administration information*, *Applicant information*, *Reference Information*, *Property information* and *Loan information*. To do so, double-click the group, enter the desired display name and select the *Check* icon.



- Go to the Layout tab to alter the layout. Layouts enables you to design the form, specifically to separation of content into different columns to make it visually more appealing. Drag and drop 50%-50% layouts into the DROP HERE section within the Groups.

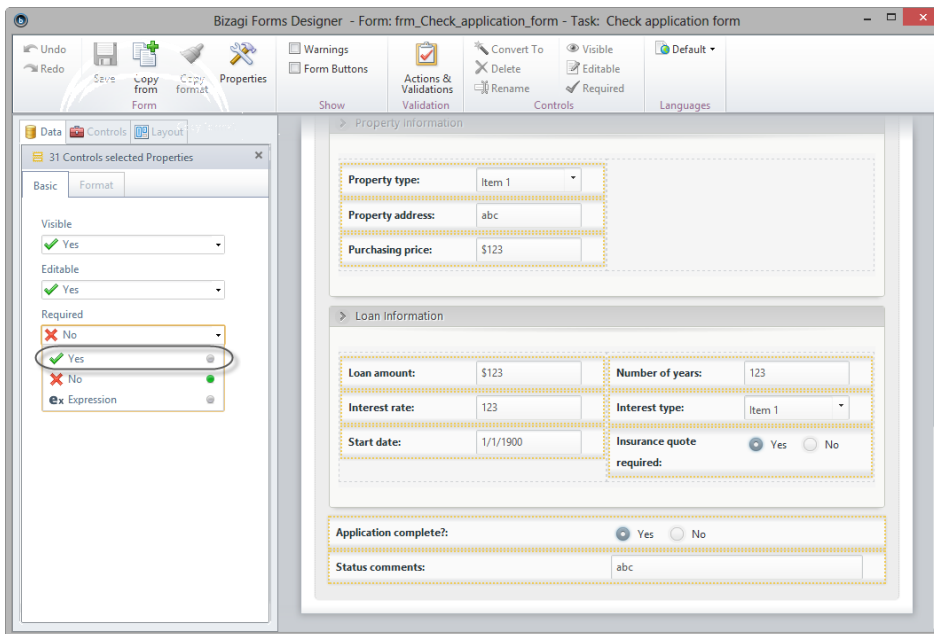


- Click the Data tab in the left panel to add the data model attributes. Drag and drop elements from the Data Model to the chosen layout section. To find attributes of related entities, expand the Process Entity node.

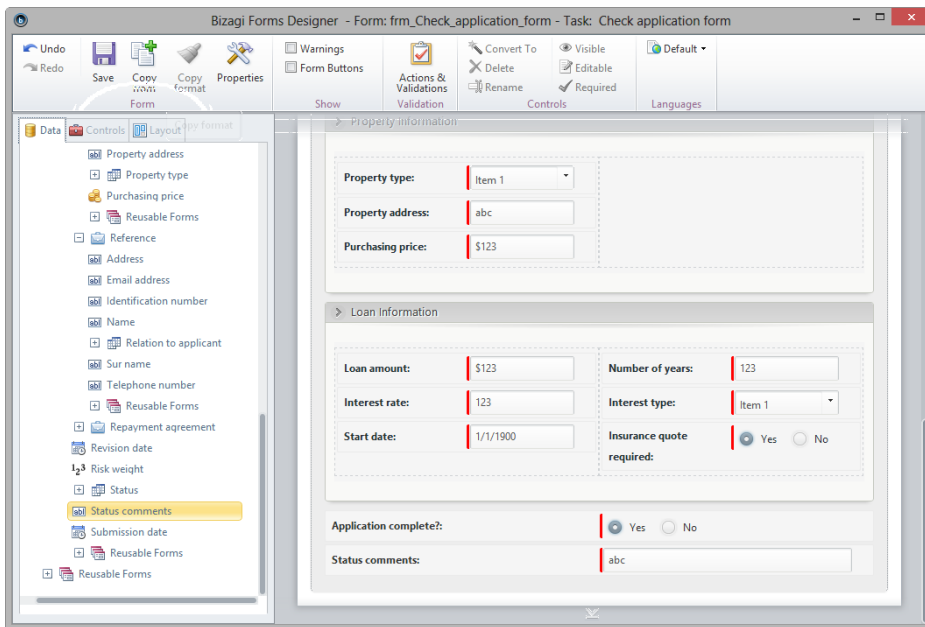


- Once the required attributes have been included, define which of them will be mandatory. In this activity all the attributes are required. To select multiple controls, click the first control and then hold down the Ctrl key whilst you select the others.

In the left panel select Yes for the Required property to make all selected controls mandatory.



For easy identification, the left border of a mandatory control is highlighted in red.



7. Save the Form and close it to return to the diagram.

Activity: Check credit history

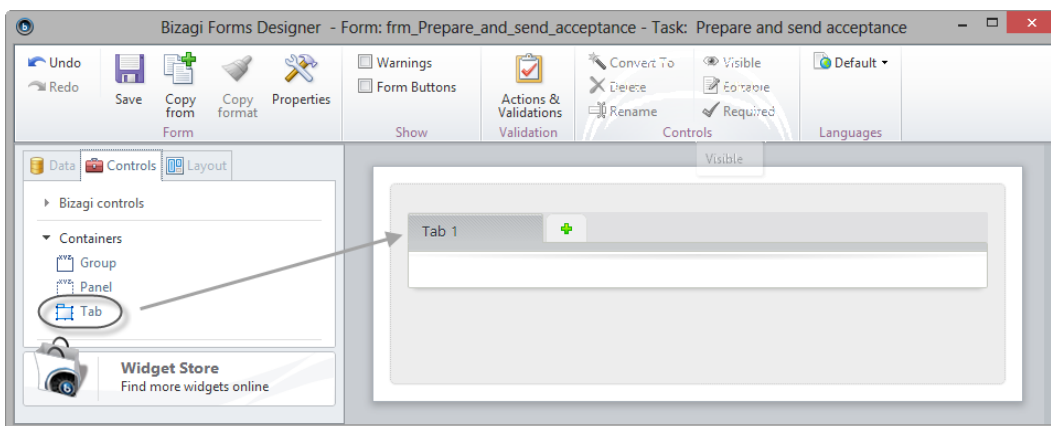
The activity form must contain the following information:

The form is divided into two tabs: **Credit Information** and **Application Information**.

Credit Information contains:

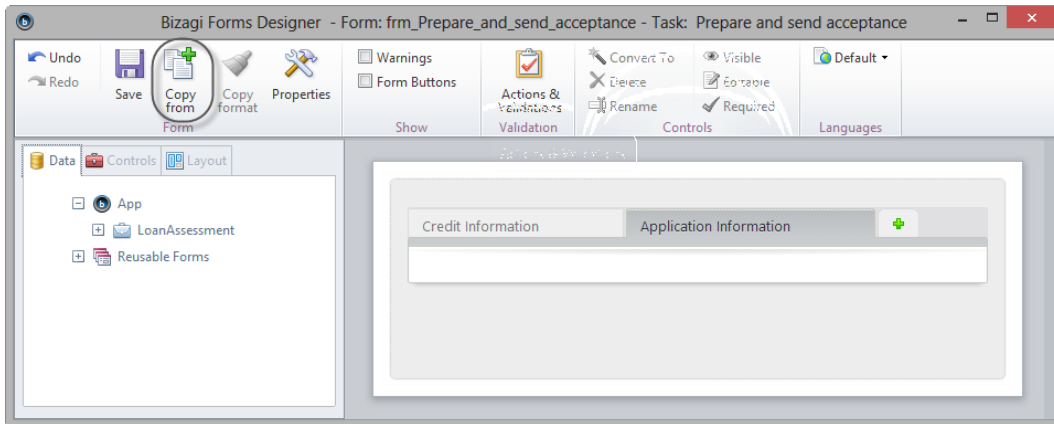
- Financial Officer:** [Text Field]
- Credit assessment:** [Dropdown Menu]
- Previous loans applications:**
 - Previous applications
 - Table with columns: Loan type, Amount, Interest rate, Duration (years)
 - + -
- Overdue credit applications:**
 - Overdue credit accounts
 - Table with columns: Credit type, Default amount, Interest rate, Duration (years)
 - + -
- Credit card Information:**
 - Credit card provider: [Dropdown Menu]
 - Credit card interest rate: [Text Field]
 - Credit card start date: [Text Field]
 - Credit card end date: [Text Field]

1. In the third step of the Process Wizard, select the activity *Check credit history*. Drag and drop a *Tab* control from the Containers section in the Controls tab, then click the **Add** icon (plus sign) to add a new tab.

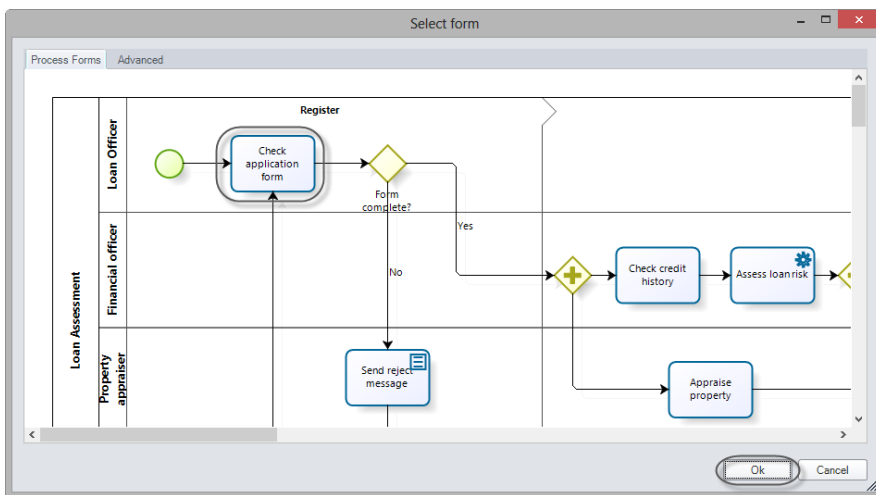


2. Rename the tabs to *Credit information* and *Application information*.

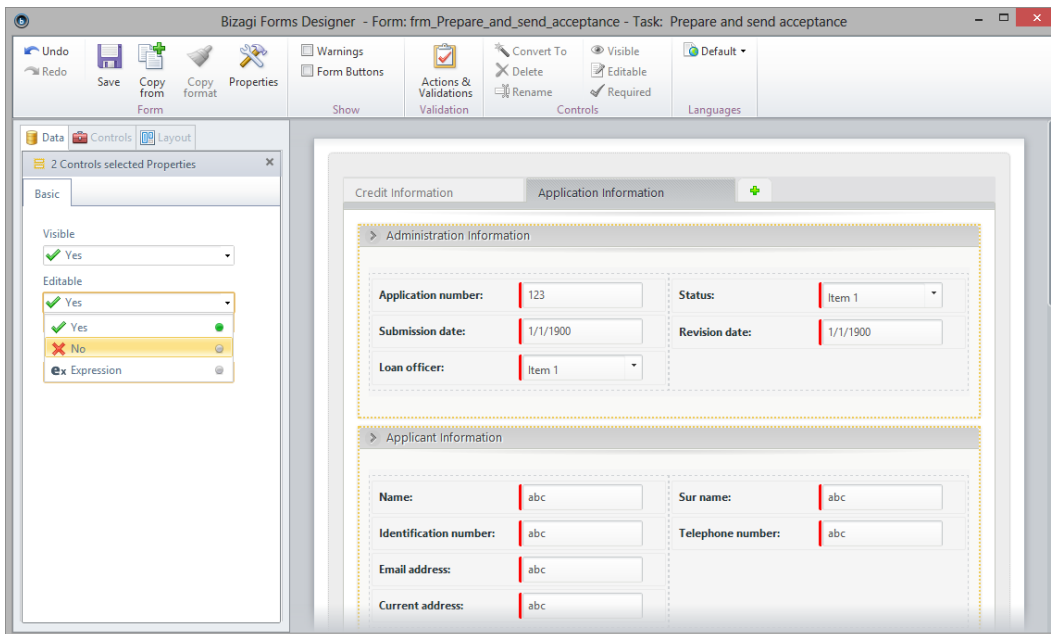
- The *Application information* tab contains exactly the same information as the previously designed form; duplicate the form by selecting the *Copy From* option.



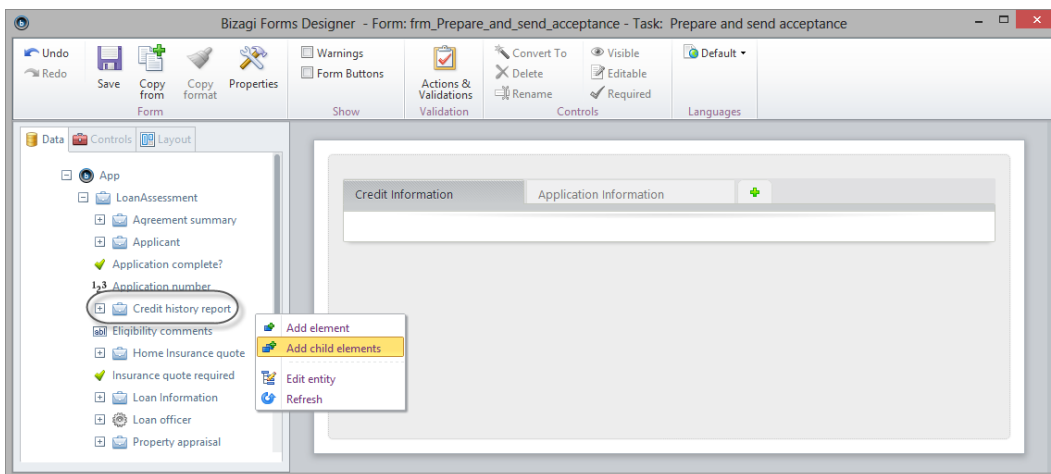
- In the new window select the activity from which to duplicate. In this case, *Check applicant* activity. Click **Ok**.



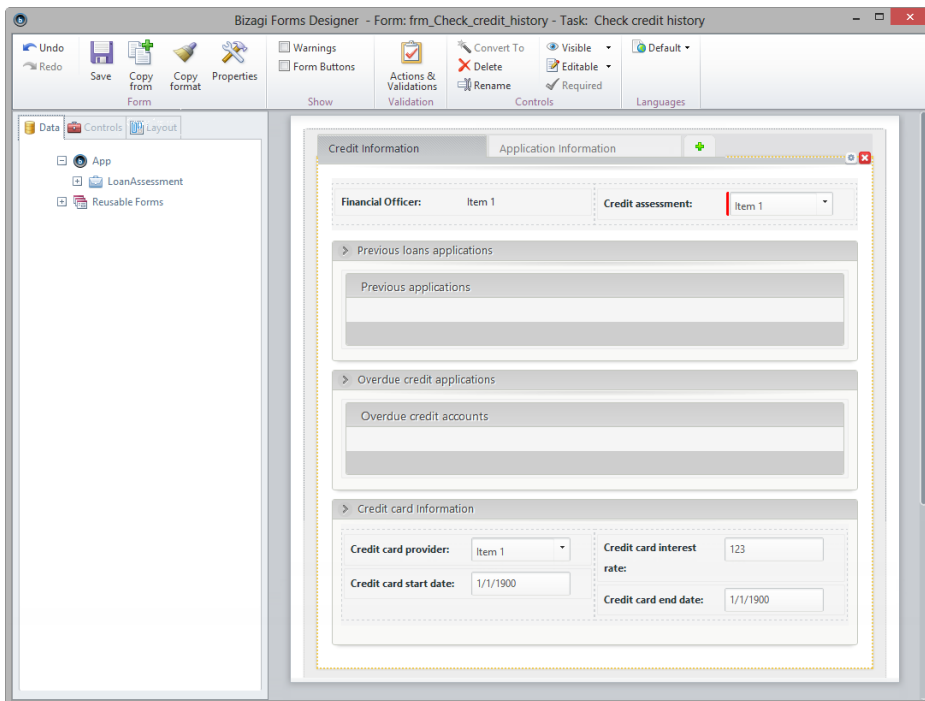
- The form associated with the *Check applicant* activity will be copied onto the *Application information* tab. As this information is for the purpose of review only, change all controls on the tab to be read-only. As before, hold the *Ctrl* key to select multiple controls and then set the *Editable* property to *No* in the Basic Properties panel.



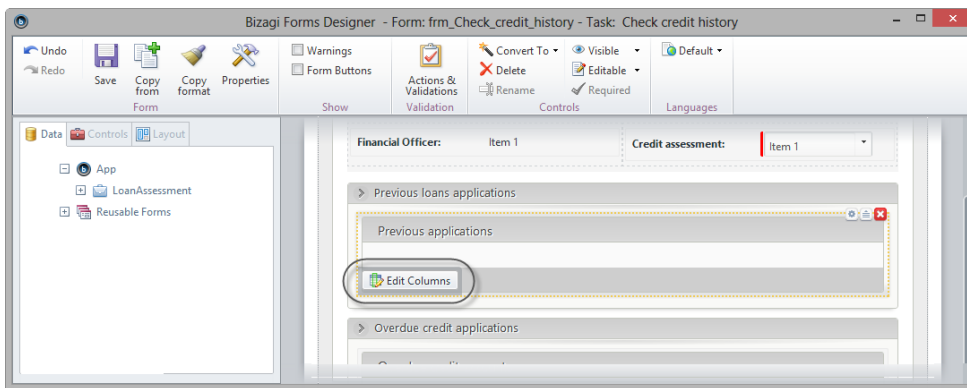
- It is possible to include all the attributes of an entity. Activate the *Credit Information* tab. Locate and right-click the *Credit History report* entity in the data model; select *Add child elements* to insert all the attributes of this entity in the form.



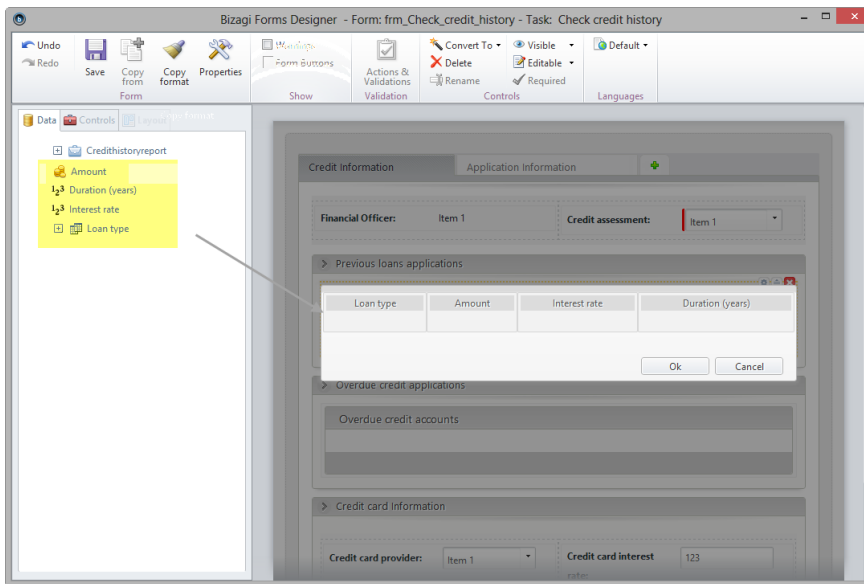
- Include the necessary groups and reorganize the controls as in the image below.



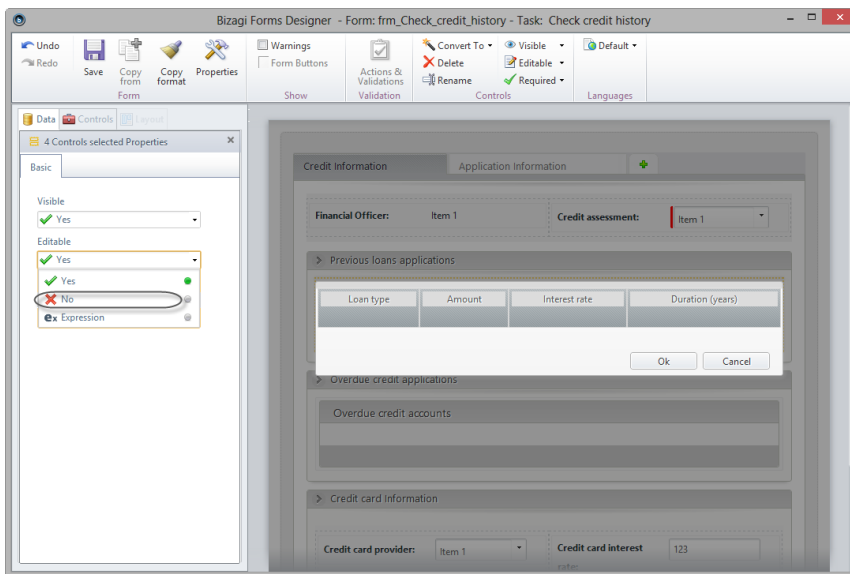
- Next, add columns to the tables. Select the *Previous applications* table and click the **Edit columns** button.



- Navigate the data model (Note the view shows from the many entity of the collection), and select the required attribute. Drag it onto the Table control to become a column.



10. Multi-select all columns in the table and make them read only.



11. Repeat the steps to add columns to the *Overdue credit applications* table.

12. Save the form and close it to return to the diagram.

Activity: Appraise property

The activity form must contain the following information:

Property appraisal Application Information

Property appraiser:

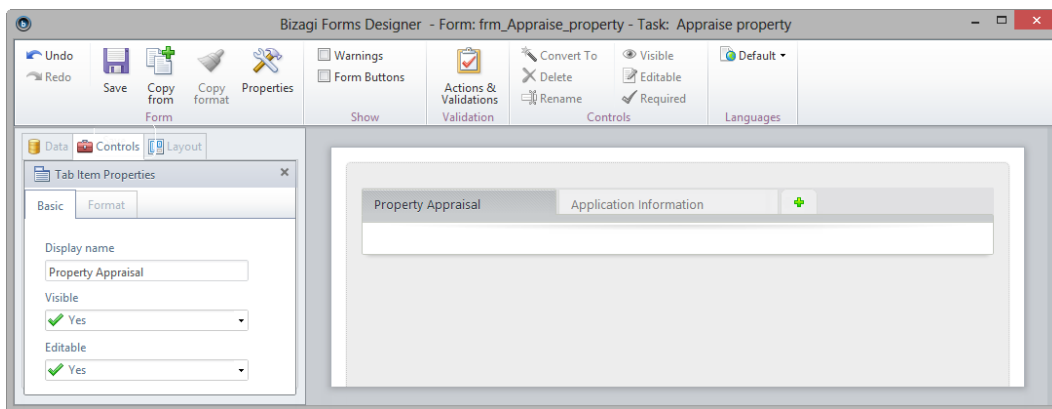
> Similar surrounding properties

Surrounding properties	
Address	Commercial value

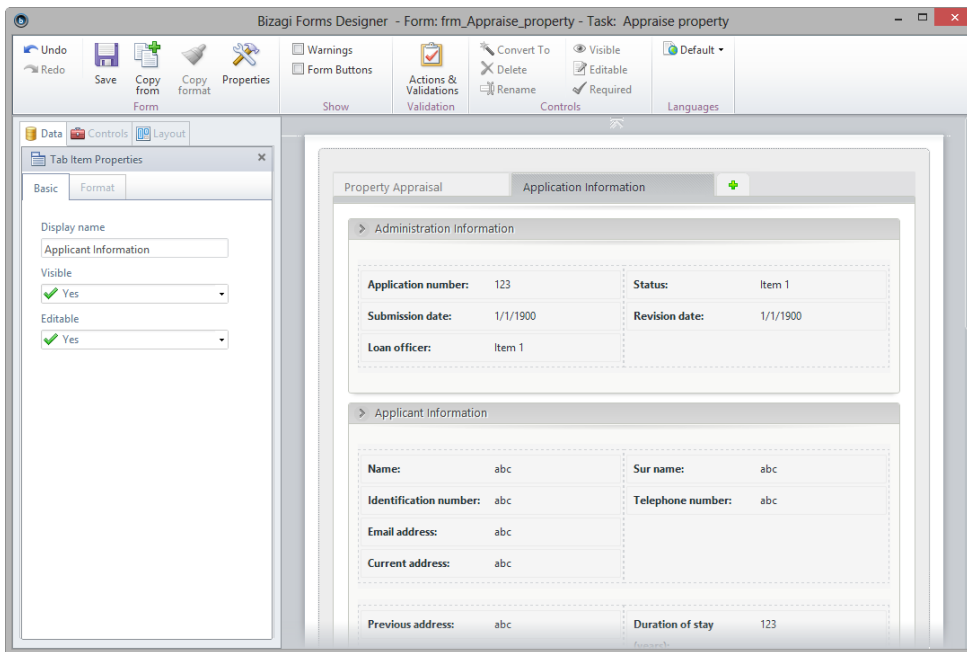
+ -

Estimated property market value:

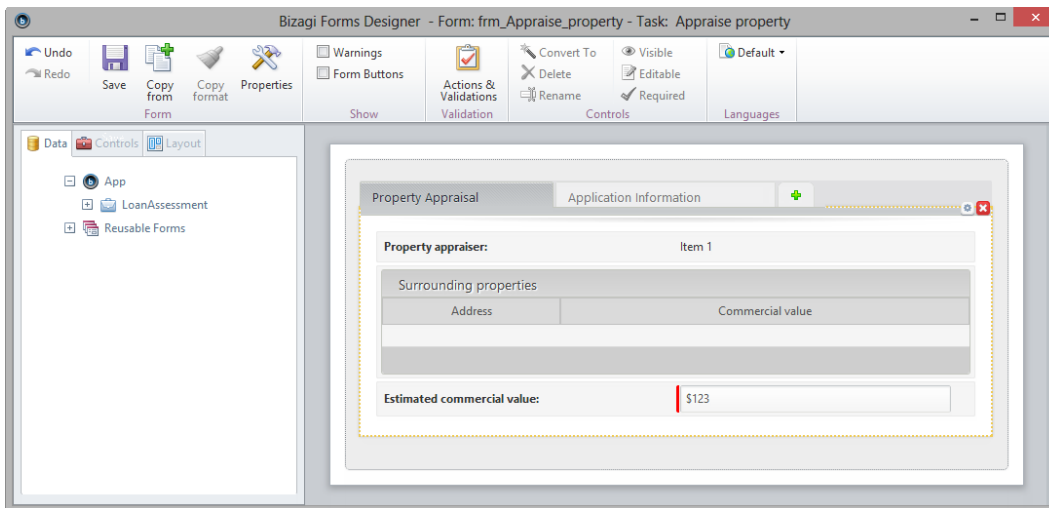
1. In the third step of the Process Wizard, select the activity *Appraise property*.
2. Create two tab controls: *Property appraisal* and *Application Information*.



3. Follow the same steps used in the previous activity to replicate the *Check applicant* activity form onto the *Application Information* tab.



4. Move to the *Property appraisal* tab. Locate the *Property appraisal* entity and add all attributes of the entity in the form, using the *Add child elements* option.
5. Next, add columns to the properties table and arrange the controls as shown below.

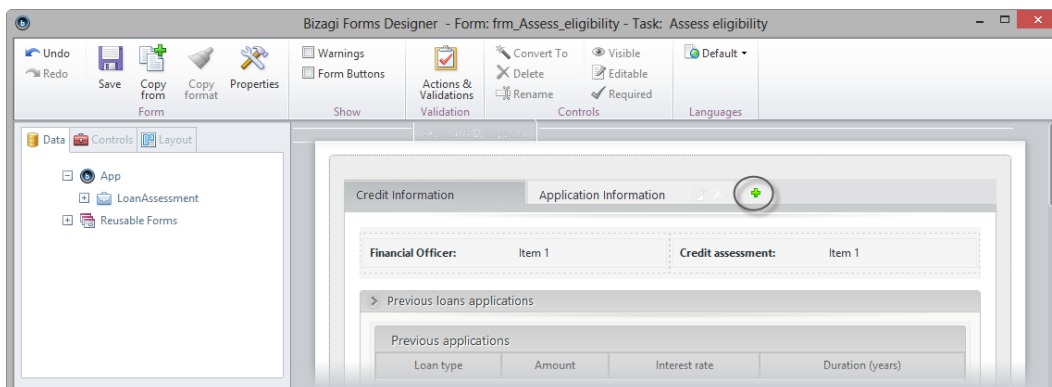


6. Save the form and close it to return to the diagram.

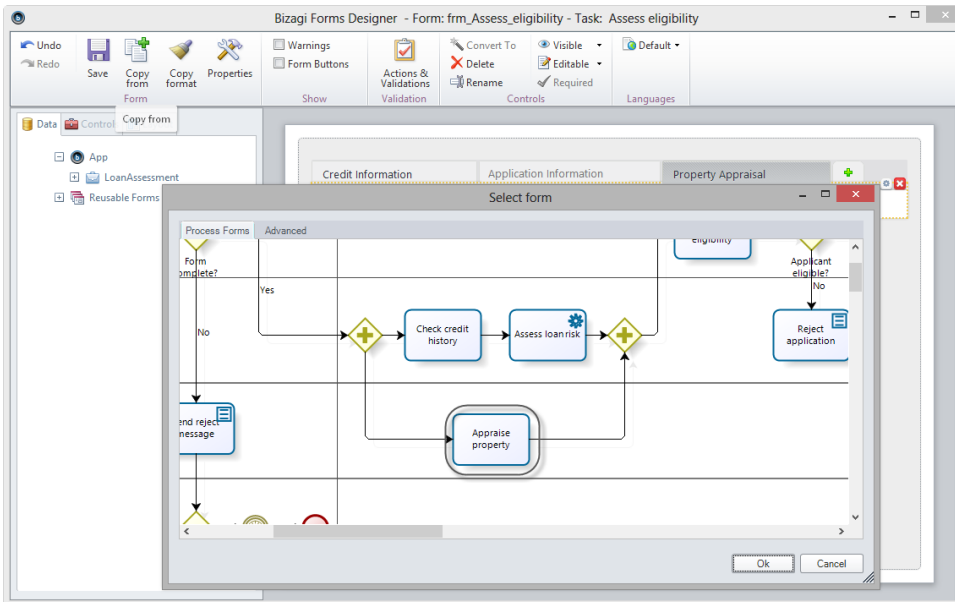
Activity: Assess eligibility

The final form should look as below.

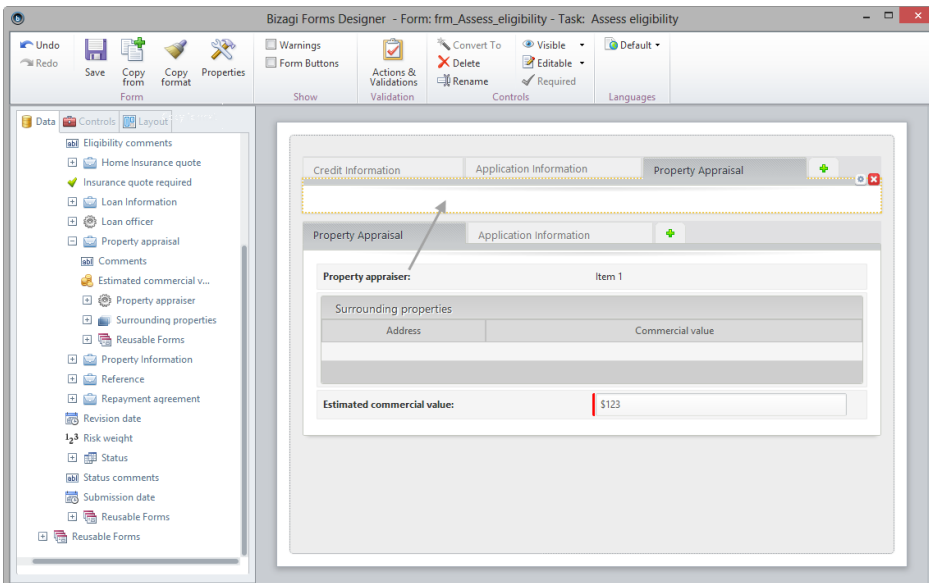
1. In the third step of the Process Wizard, select the activity *Assess eligibility*.
2. Use the *Copy From* option to duplicate the *Check credit history* activity form on the Credit Information tab.
3. Create a new tab and name it *Property Appraisal*.



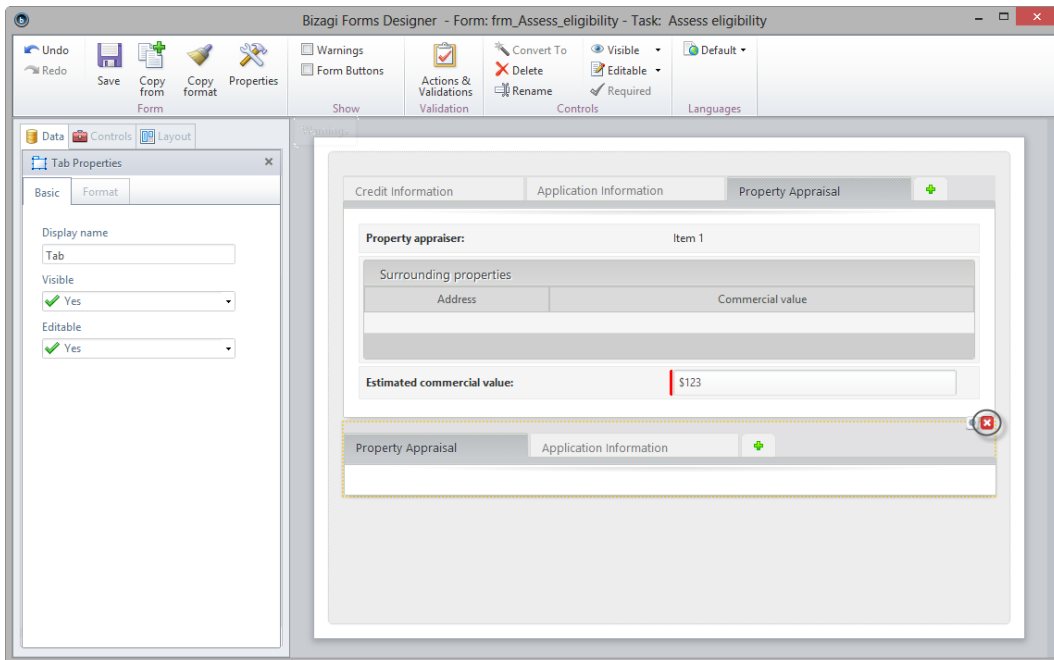
4. Activate the *Property Appraisal* tab and copy the form associated with the *Appraise property* activity.



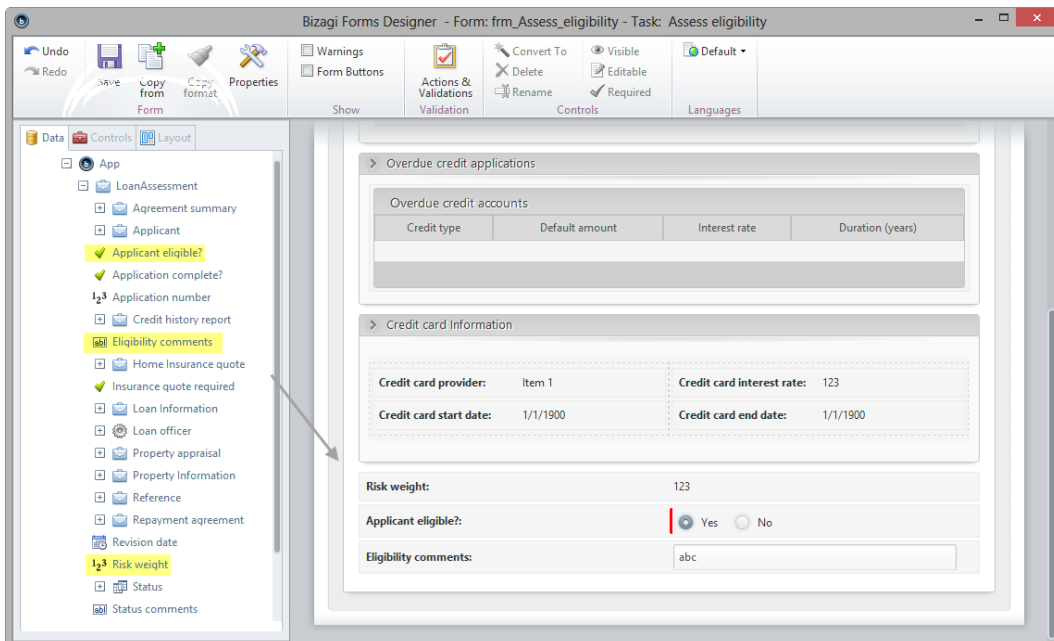
5. The form associated with the *Appraise property* activity containing two tabs namely, *Property appraisal* and *Application Information* will be copied onto this form's *Property Appraisal* tab. Drag and drop the controls from the duplicated *Property appraisal* tab onto this form's tab of the same name.



6. Remove the copied information that are not longer necessary. In this case, the now empty *Property Appraisal* and the *Application Information* tabs remaining from the duplicated form. To do this, select each tab control and click the **delete** (red cross) icon.



7. Make all the controls of the form read-only, on all three tabs.
8. Finally, navigate the data model and include the attributes pertaining to this form: *Risk weight*, *applicant eligible* and *eligibility comments*.



9. Save the form and close it to return to the diagram.

Activity: Prepare and send acceptance pack

The final version of the form should look as below.

Application Information	Credit Information	Property appraisal
<p>> Administration Information</p> <p>Application number: <input type="text"/> Status: <input type="text"/></p> <p>Submission date: <input type="text"/> Revision date: <input type="text"/></p> <p>Loan officer: <input type="text"/></p>		
<p>> Applicant Information</p> <p>Name: <input type="text"/> Sur name: <input type="text"/></p> <p>Identification number: <input type="text"/> Telephone number: <input type="text"/></p> <p>Email address: <input type="text"/></p> <p>Current address: <input type="text"/></p> <p>Previous address: <input type="text"/> Duration of stay (years): <input type="text"/></p>		
<p>> Reference Information</p> <p>Name: <input type="text"/> Sur name: <input type="text"/></p> <p>Identification number: <input type="text"/> Telephone number: <input type="text"/></p> <p>Address: <input type="text"/> Relation to applicant: <input type="text"/></p> <p>Email address: <input type="text"/></p>		
<p>> Property Information</p> <p>Property type: <input type="text"/></p> <p>Property address: <input type="text"/></p> <p>Purchasing price: <input type="text"/></p>		
<p>> Loan Information</p> <p>Loan amount: <input type="text"/> Number of years: <input type="text"/></p> <p>Interest rate: <input type="text"/> Interest type: <input type="text"/></p> <p>Start date: <input type="text"/> Insurance quote required: <input type="text"/></p>		
<p>> Loan Information</p> <p>Loan amount: <input type="text"/> Number of years: <input type="text"/></p> <p>Interest rate: <input type="text"/> Interest type: <input type="text"/></p> <p>Start date: <input type="text"/> Insurance quote required: <input type="text"/></p>		
<p>> Loan repayment</p> <p>Monthly repayment amount: <input type="text"/> Number of repayments: <input type="text"/></p> <p><input type="button" value="Generate repayment agreement"/></p>		

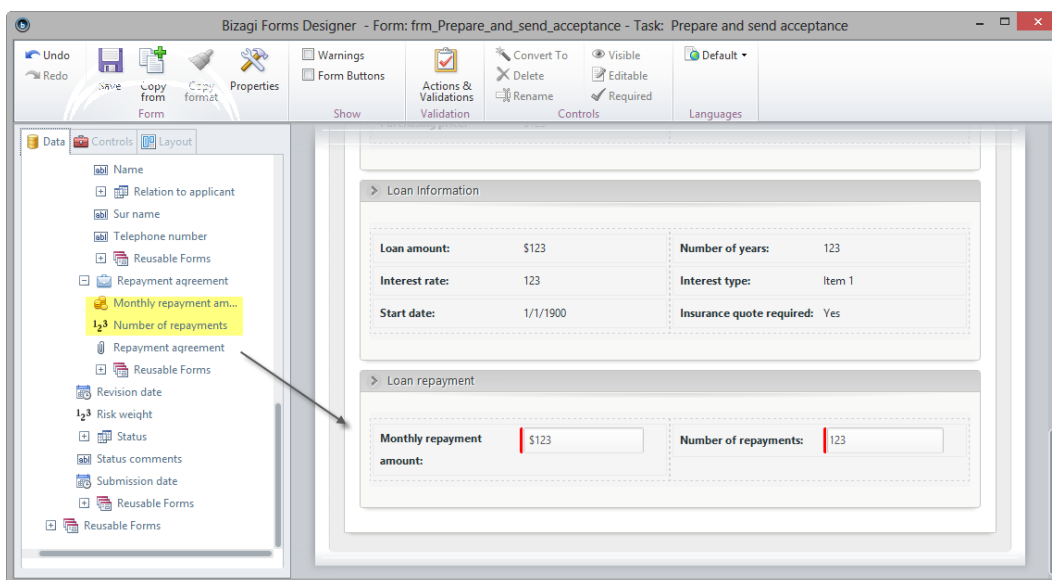
In this activity the *Loan Officer* will generate a Repayment agreement. Bizagi will create the document based on a predefined template, so it can be sent via email.

Download the template *Repayment agreement.docx* from:
<http://download.bizagi.com/>

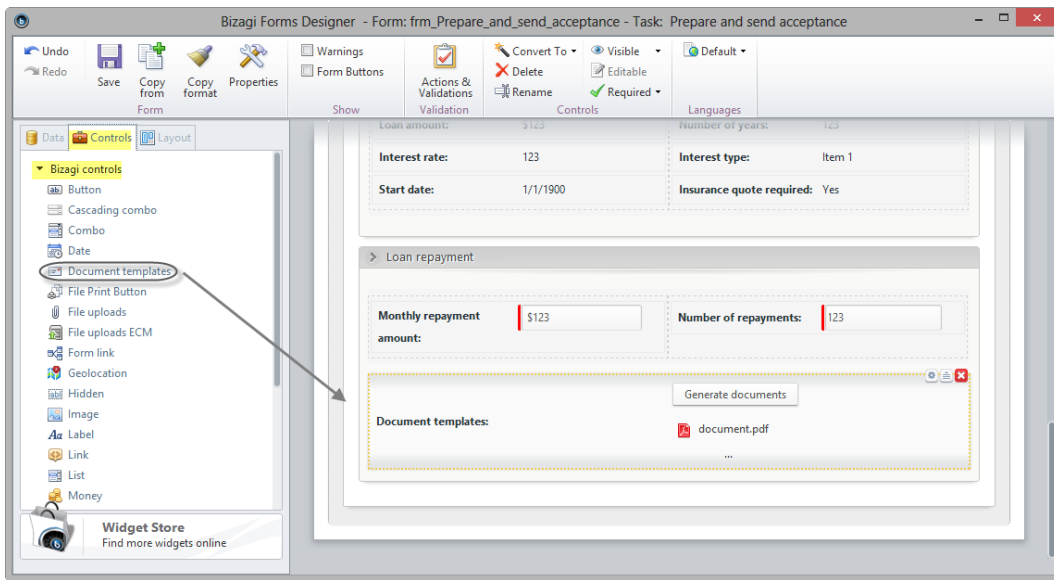
Save this file in a local folder for easy access.

1. Select the activity *Prepare and send acceptance pack* in the third step of the Process Wizard.
2. Copy the form associated with the *Assess eligibility* activity and make all the controls of the form read-only.
3. Switch the order of the first two tabs; drag and drop the *Application information* tab to the left.
4. At the bottom of the Application Information tab, include a new group: *Loan repayment*.

Also include the *Monthly repayment amount* and *Number of repayment* attributes and define them as required.

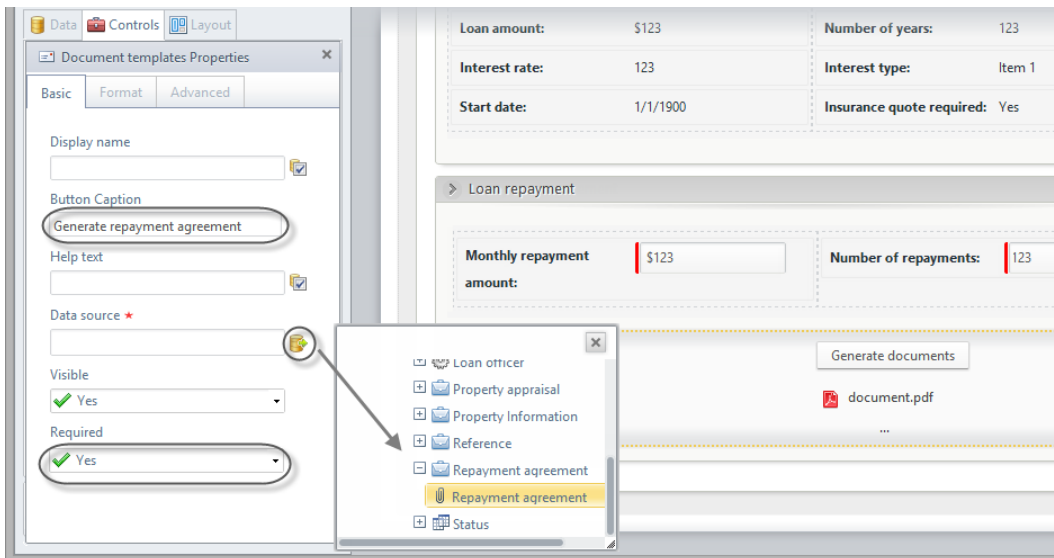


5. Recall that the Repayment agreement document will be generated using Bizagi's Document template functionality. Drag and drop a *Document template* control from the *Bizagi controls* section in the *Controls* tab.

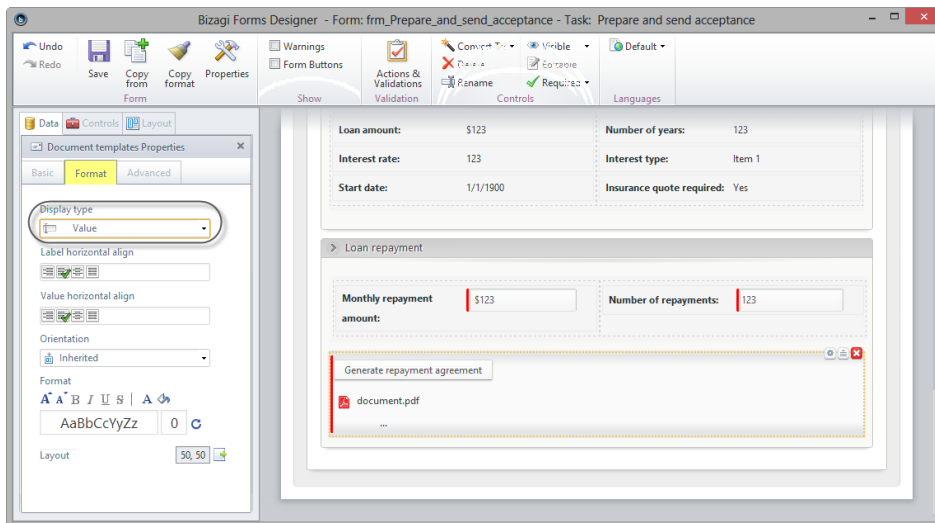


6. Select the Document template control to access its properties.

- Type *Generate Repayment agreement* as the button caption.
- Select *Repayment agreement* as the data source (this attribute is located under the Repayment agreement entity).
- Make the control mandatory.

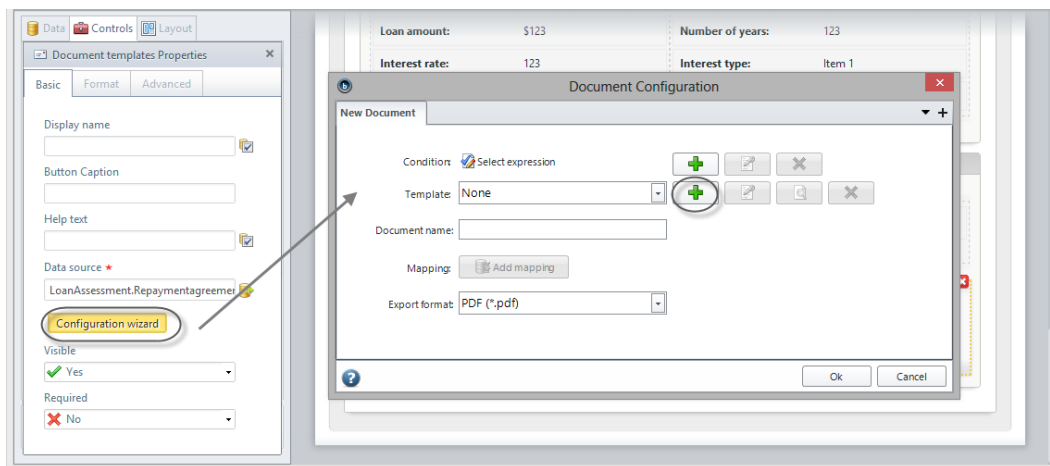


7. In the Format tab, change the Display type to *Value* so that button caption will not display.

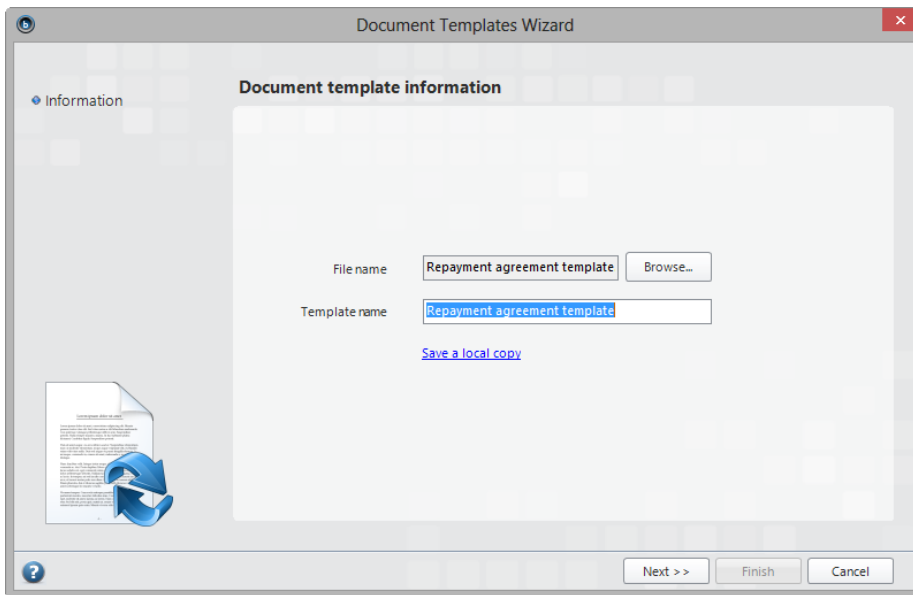


- Next, configure the template. Return to the Basic tab and click **Configuration Wizard** to launch the wizard

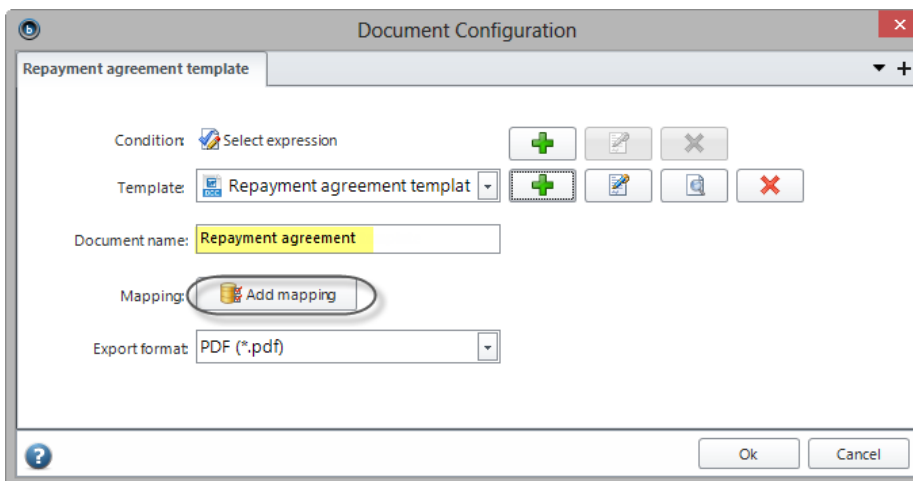
Click the **Add** icon alongside the Template control.



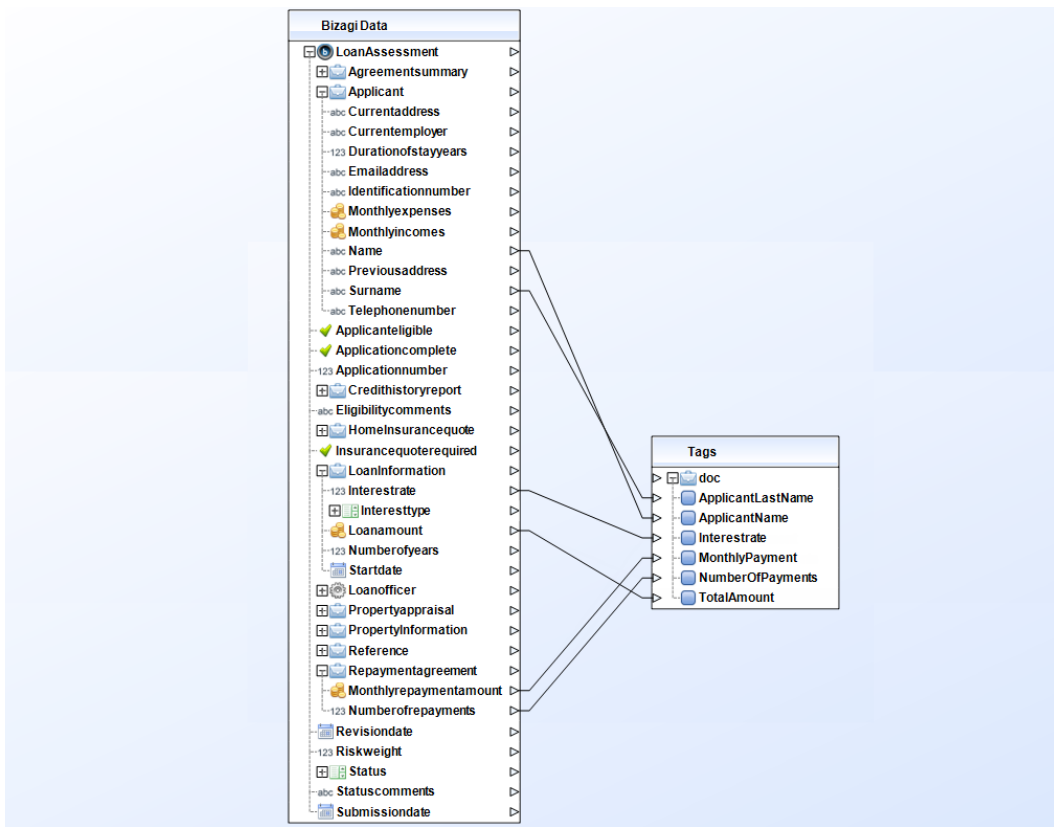
- Browse to the location where you previously saved the downloaded *Repayment agreement* document, select it and click **Next**. Bizagi will upload the document as the template and name it accordingly. Finally, click **Finish**.



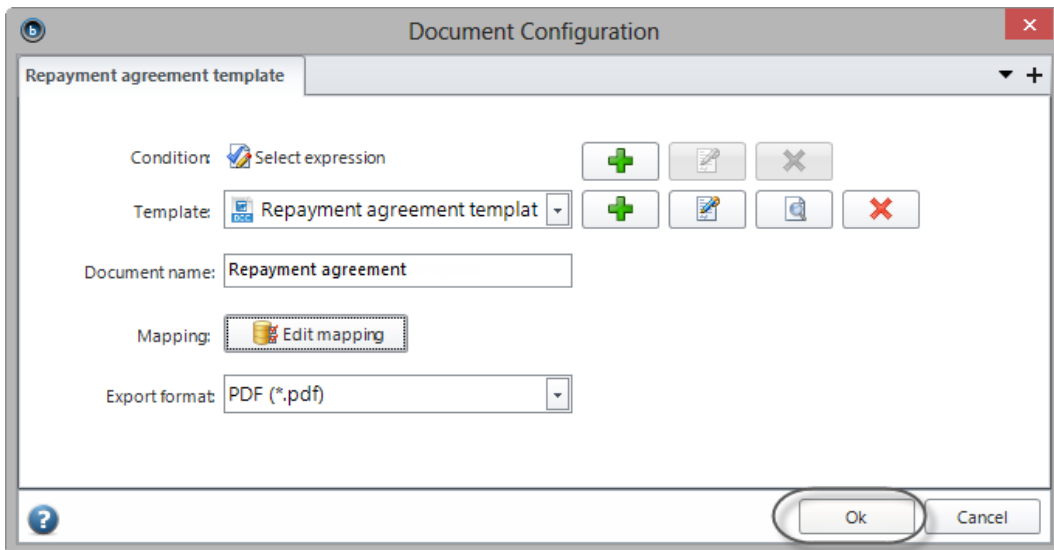
10. Rename the document to *Repayment agreement*. This is the name that Bizagi will display for the generated document.
11. Next, click **Add mapping** to map the attributes from the Data Model to the template.



12. On the left, you will find the attributes in Bizagi's data model (Bizagi Data). The table on the right shows all the tags used in the template. To map an attribute, click on the left table's attribute and then click on the right table's corresponding tag. Alternatively, drag the connection from the data model attribute to the tag.



13. Minimize the window to exit full screen and click **Finish**. Click **Ok** to close the Configuration wizard.



14. Save the form and close it to return to the diagram.

Activity: Prepare and send insurance quote

The final form should look as below.

Application Information	Credit Information	Property appraisal
<p>> Administration Information</p> <p>Application number: <input type="text"/> Status: <input type="text"/></p> <p>Submission date: <input type="text"/> Revision date: <input type="text"/></p> <p>Loan officer: <input type="text"/></p>		
<p>> Applicant Information</p> <p>Name: <input type="text"/> Sur name: <input type="text"/></p> <p>Identification number: <input type="text"/> Telephone number: <input type="text"/></p> <p>Email address: <input type="text"/></p> <p>Current address: <input type="text"/></p> <p>Previous address: <input type="text"/> Duration of stay (years): <input type="text"/></p>		
<p>> Reference Information</p> <p>Name: <input type="text"/> Sur name: <input type="text"/></p> <p>Identification number: <input type="text"/> Telephone number: <input type="text"/></p> <p>Address: <input type="text"/> Relation to applicant: <input type="text"/></p> <p>Email address: <input type="text"/></p>		
<p>> Property Information</p> <p>Property type: <input type="text"/></p> <p>Property address: <input type="text"/></p> <p>Purchasing price: <input type="text"/></p>		
<p>> Loan Information</p> <p>Loan amount: <input type="text"/> Number of years: <input type="text"/></p> <p>Interest rate: <input type="text"/> Interest type: <input type="text"/></p> <p>Start date: <input type="text"/> Insurance quote required: <input type="text"/></p>		
<p>> Loan Information</p> <p>Loan amount: <input type="text"/> Number of years: <input type="text"/></p> <p>Interest rate: <input type="text"/> Interest type: <input type="text"/></p> <p>Start date: <input type="text"/> Insurance quote required: <input type="text"/></p>		
<p>> Loan repayment</p> <p>Monthly repayment amount: <input type="text" value="\$323.00"/> Number of repayments: <input type="text" value="1"/></p> <p>> Insurance quote</p> <p>Insurance cost: <input type="text"/></p> <p>Additional monthly payment: <input type="text"/></p> <p>Sales representative: <input type="text" value="admon"/></p> <p><input type="button" value="Generate insurance quote"/></p>		

In this activity the Insurance Sales representative generates an Insurance quotation. Bizagi will create the document based on a predefined template, so it can be sent via email.

Download the template Insurance quotation.docx from:

<http://download.bizagi.com/>

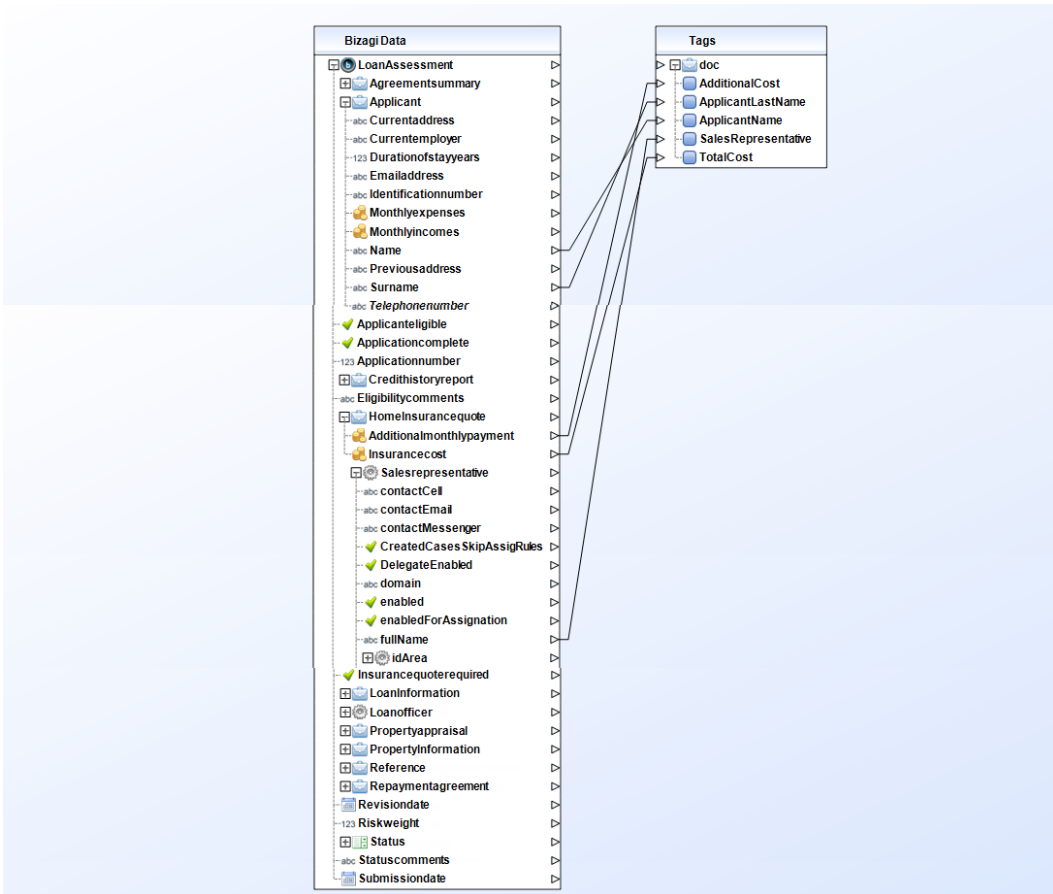
Save this file in a local folder for easy access.

1. In the third step of the Process Wizard, select the activity *Prepare and send home insurance quote*.
2. Copy the form associated with the *Prepare and send acceptance pack* activity. Remove the document template control and then make all controls of the form read-only.
3. Add a new group called *Insurance quote* to the Loan repayment section, at the bottom of the Application Information tab. Also, include the *Insurance cost*, *Additional monthly repayment* and *Sales representative* attributes.
4. As before, a template will be generated using Bizagi's document template functionality.

Repeat the procedure described in the previous activity to include a *Document template* control. Create the following property definitions:

- Set the button caption to *Generate Insurance quote*.
- Select the *Insurance quote* attribute (found in the Home Insurance quote entity) as the data source
- Set the Required property to *Yes*.

5. Launch the Configuration Wizard and add *Insurance quote.docx* as the template.
6. Rename it to *Insurance quotation* and map the attributes from the Data Model to the template as follows:



7. Exit full screen to click **Finish**.
8. Save and close the form to return to the diagram.

Activity: Verify payment agreement

The final form should look as below.

Application Information	Credit Information	Property appraisal
<p>> Administration Information</p> <p>Application number: <input type="text"/> Status: <input type="text"/></p> <p>Submission date: <input type="text"/> Revision date: <input type="text"/></p> <p>Loan officer: <input type="text"/></p>		
<p>> Applicant Information</p> <p>Name: <input type="text"/> Sur name: <input type="text"/></p> <p>Identification number: <input type="text"/> Telephone number: <input type="text"/></p> <p>Email address: <input type="text"/></p> <p>Current address: <input type="text"/></p> <p>Previous address: <input type="text"/> Duration of stay (years): <input type="text"/></p>		
<p>> Reference Information</p> <p>Name: <input type="text"/> Sur name: <input type="text"/></p> <p>Identification number: <input type="text"/> Telephone number: <input type="text"/></p> <p>Address: <input type="text"/> Relation to applicant: <input type="text"/></p> <p>Email address: <input type="text"/></p>		
<p>> Property Information</p> <p>Property type: <input type="text"/></p> <p>Property address: <input type="text"/></p> <p>Purchasing price: <input type="text"/></p>		
<p>> Loan Information</p> <p>Loan amount: <input type="text"/> Number of years: <input type="text"/></p> <p>Interest rate: <input type="text"/> Interest type: <input type="text"/></p> <p>Start date: <input type="text"/> Insurance quote required: <input type="checkbox"/></p>		
<p>> Loan repayment</p> <p>Monthly repayment amount: <input type="text"/> Number of repayments: <input type="text"/></p> <p>> Insurance quote</p> <p>Insurance cost: <input type="text"/> Additional monthly payment: <input type="text"/></p> <p>Sales representative: <input type="text"/></p> <p>Conditions agreed: <input type="radio"/> Yes <input type="radio"/> No</p> <p>Repayment agreed: <input type="radio"/> Yes <input type="radio"/> No</p> <p>Repayment agreement (digital copy): <input type="text"/></p>		

1. Select the activity *Verify payment agreement*, in the third step of the Process Wizard.

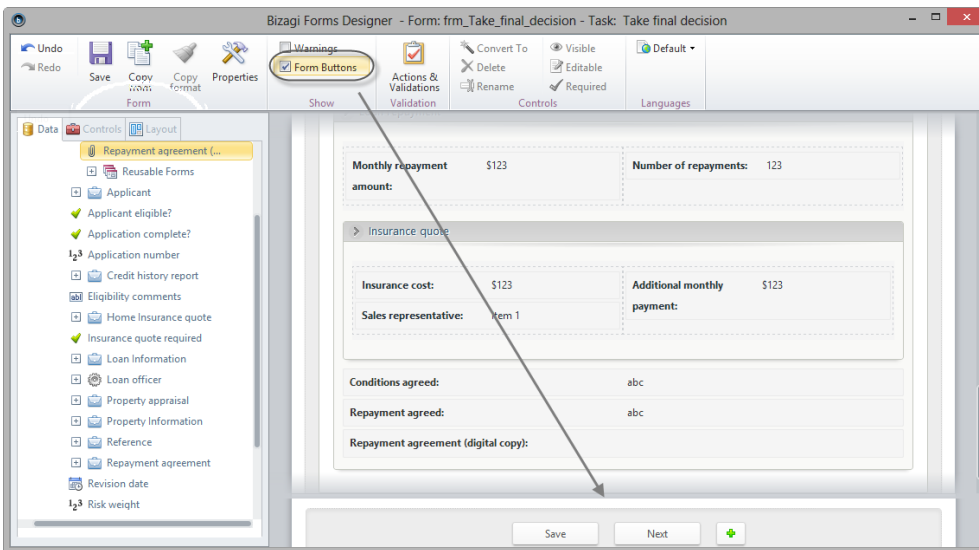
2. Duplicate the *Prepare and send home insurance* activity from. Remove the document template control and make all controls read-only.
3. Navigate the data model and locate the Agreement summary entity. Add the *Conditions agreed*, *repayment agreed* and *repayment agreement* controls to the the Loan repayment group and make them mandatory.
4. Save and close the form to return to the diagram.

Activity: Take final decision

The final form should look as below.

Application Information	Credit Information	Property appraisal
<p>> Administration Information</p> <p>Application number: <input type="text"/> Status: <input type="text"/></p> <p>Submission date: <input type="text"/> Revision date: <input type="text"/></p> <p>Loan officer: <input type="text"/></p>		
<p>> Applicant Information</p> <p>Name: <input type="text"/> Sur name: <input type="text"/></p> <p>Identification number: <input type="text"/> Telephone number: <input type="text"/></p> <p>Email address: <input type="text"/></p> <p>Current address: <input type="text"/></p> <p>Previous address: <input type="text"/> Duration of stay (years): <input type="text"/></p>		
<p>> Reference Information</p> <p>Name: <input type="text"/> Sur name: <input type="text"/></p> <p>Identification number: <input type="text"/> Telephone number: <input type="text"/></p> <p>Address: <input type="text"/> Relation to applicant: <input type="text"/></p> <p>Email address: <input type="text"/></p>		
<p>> Property Information</p> <p>Property type: <input type="text"/></p> <p>Property address: <input type="text"/></p> <p>Purchasing price: <input type="text"/></p>		
<p>> Loan Information</p> <p>Loan amount: <input type="text"/> Number of years: <input type="text"/></p> <p>Interest rate: <input type="text"/> Interest type: <input type="text"/></p> <p>Start date: <input type="text"/> Insurance quote required: <input type="text"/></p>		
<p>> Loan Information</p> <p>Loan amount: <input type="text"/> Number of years: <input type="text"/></p> <p>Interest rate: <input type="text"/> Interest type: <input type="text"/></p> <p>Start date: <input type="text"/> Insurance quote required: <input type="text"/></p>		
<p>> Loan repayment</p> <p>Monthly repayment amount: <input type="text"/> Number of repayments: <input type="text"/></p> <p>> Insurance quote</p> <p>Insurance cost: <input type="text"/> Additional monthly payment: <input type="text"/></p> <p>Sales representative: <input type="text"/></p> <p>Conditions agreed: <input type="checkbox"/></p> <p>Repayment agreed: <input type="checkbox"/></p> <p>Repayment agreement (digital copy): <input type="checkbox"/></p>		
<p><input type="button" value="Approve"/> <input type="button" value="Reject"/></p>		

1. In the third step of the Process Wizard, select the activity *Take final decision*.
2. Copy the information from the *Verify payment agreement* activity. Make all controls on the form read-only. In this activity we will include two buttons to allow the Loan Officer to approve or reject the application. Enable the *Form buttons* option on the ribbon to display the button panel at the bottom of the form.

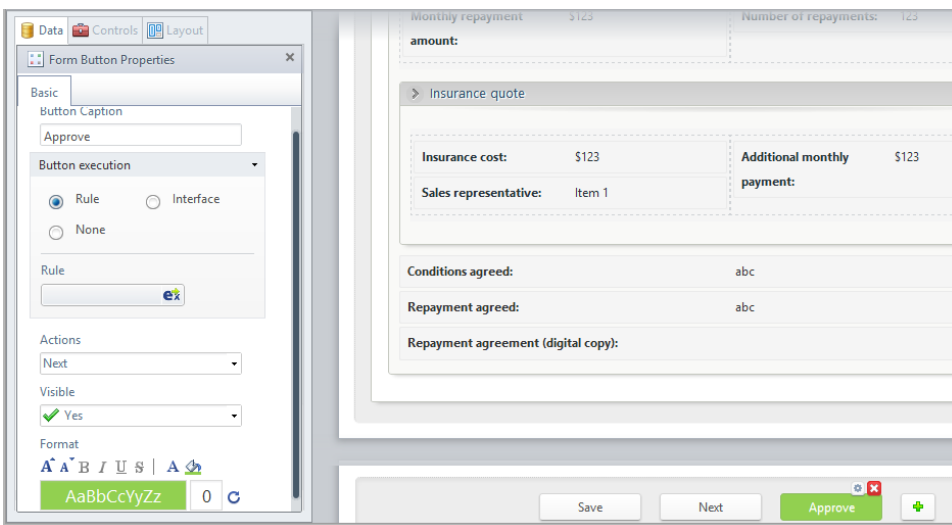


3. Click the **Add** icon to create a new button, select it to display its properties.

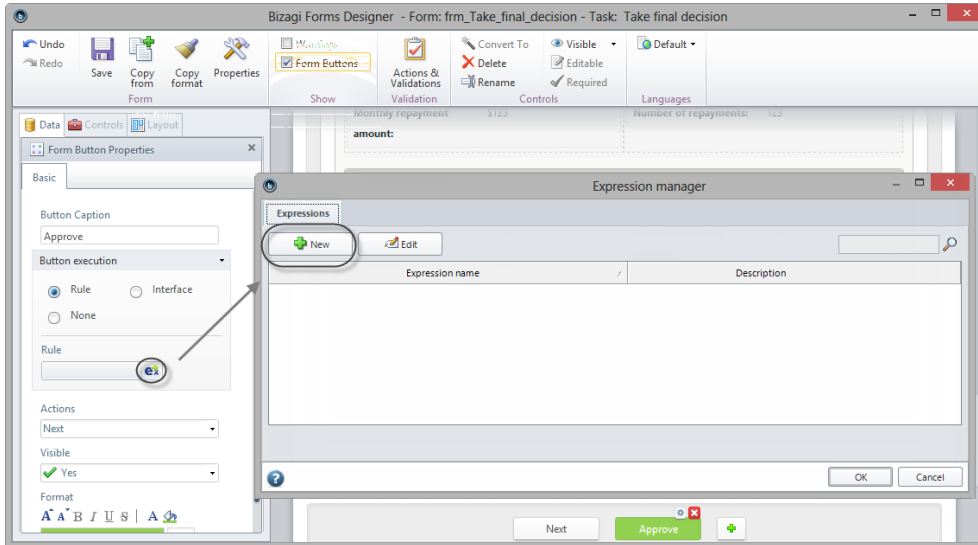


4. Define the following Basic properties.

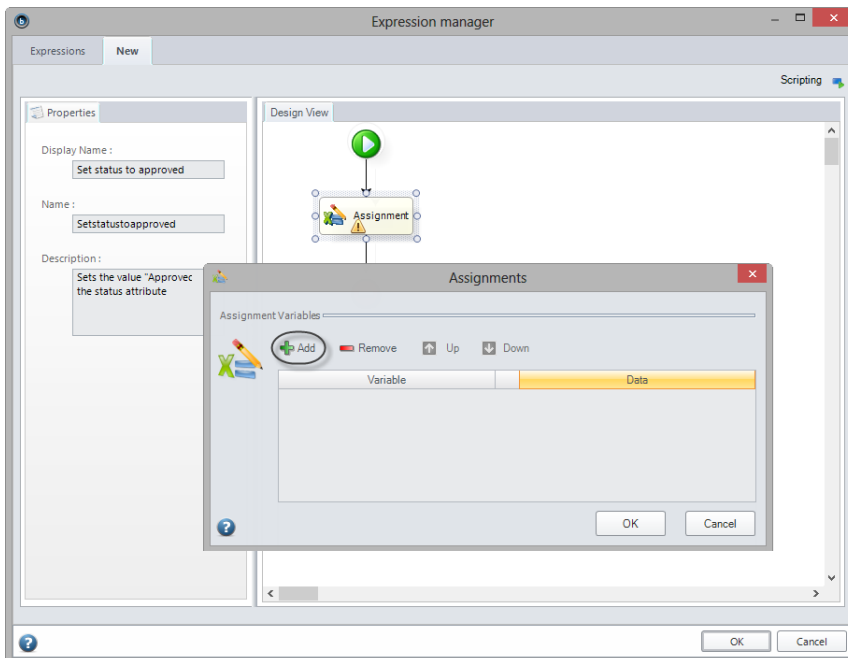
- Button caption: *Approve*
- Button execution: *Rule*
- Action: *Next*
- Format:
 - Background color: *green*
 - Forecolor: *white*



- Define the action to perform when the button is clicked. Click the **expression** icon alongside the Rule property to create a business rule. The rule must set the status of this application to being approved. Click the **New** button in the expression manager.

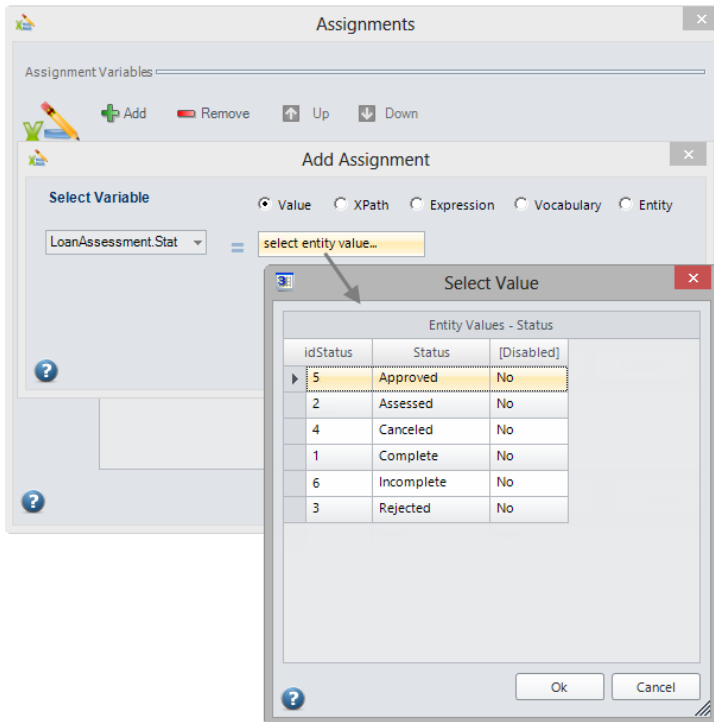


- First complete the basic information in the Properties tab: type a name, display name and meaningful description. Right-click the arrow in the Design View and select *Add assignment*.
- Double-click to select the Assignment element and then choose **Add** to create a new assignment.



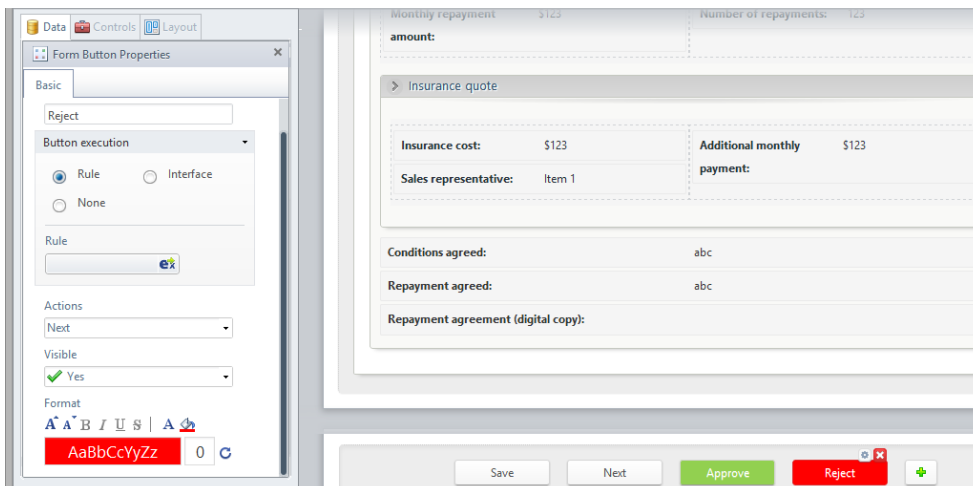
- Browse the variables list and select the *Status* attribute of the Loan Assessment.

- Click select entity value and then select *Approved* from the list of predefined values. Select **Ok** to close each form and return to the Form Designer.

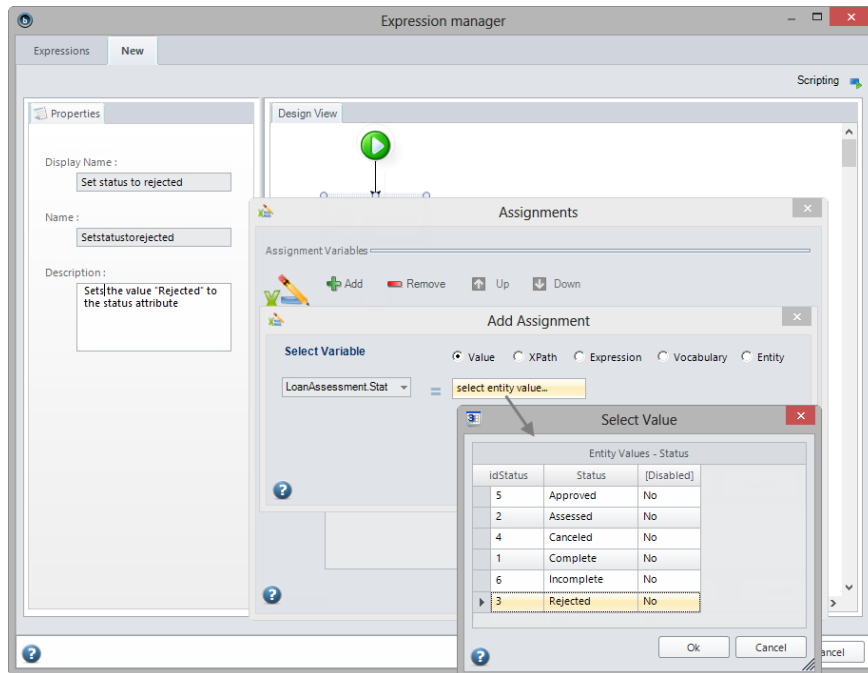


- Repeat the previous steps to create another button. Define the following properties:

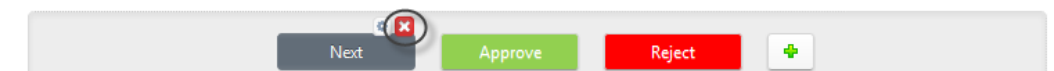
- Button caption: *Reject*
- Button execution: *Rule*
- Action: *Next*
- Format:
 - Background color: *red*
 - Forecolor: *white*



- Associate a rule with the Reject button. In the expression manager window type a *name*, *display name* and *description* for the rule. Add an *assignment element* and set the *Status* attribute of the Loan Assessment to the value of *Rejected*. Select **Ok** to close each form and return to the Form Designer.



- Finally, delete the Save and Next buttons.



- Save and close the form and the diagram to return to the Process Wizard.

V. Business rules

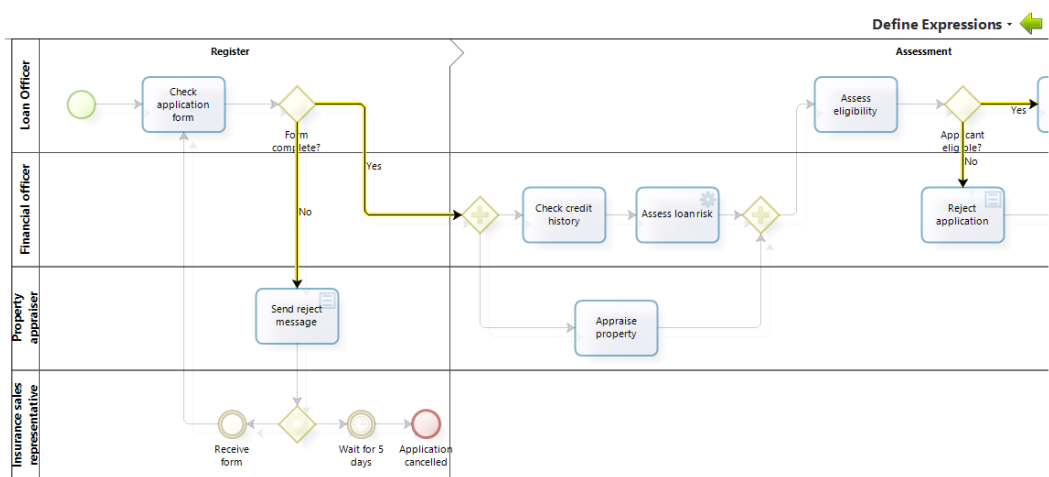
Process routing

The next step in the Process Wizard is the definition of business rules that control the process routing. First, we will assign the transition rules. These rules evaluate conditions and determine which control flow should be used to continue the process. They are associated with the gateway shapes and return Boolean values of true or false.

1. To route the Process go to the fourth step of the Process Wizard and select *Define Expressions*.



2. The expressions editor will open, highlighting the transitions that have no condition associated.



Gateways enable one or more paths according to business conditions. We will show how to define expressions, to evaluate these business conditions, and determine which path the process has to follow.

Gateway 1. Form complete?

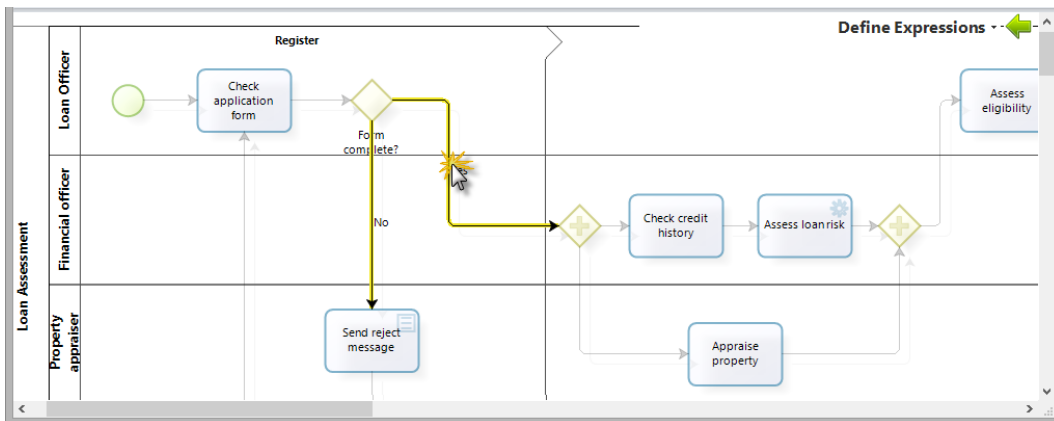
To identify if an application form is complete or not, the *Application complete* attribute is utilized. The Loan Officer sets this attribute in the *Check application form* activity.

The Gateway evaluates the value of the *Application complete* attribute and enables one of two paths as follows:

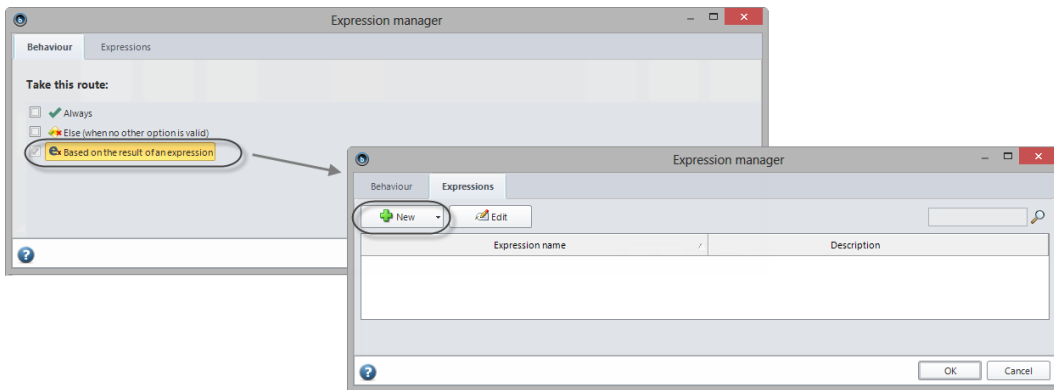
- If the application form is complete, the process will continue to the *Check credit history* and *Appraise property* activities.
- If incomplete, the process will notify the applicant to make the necessary changes in the form.

To configure this evaluation follow the next steps:

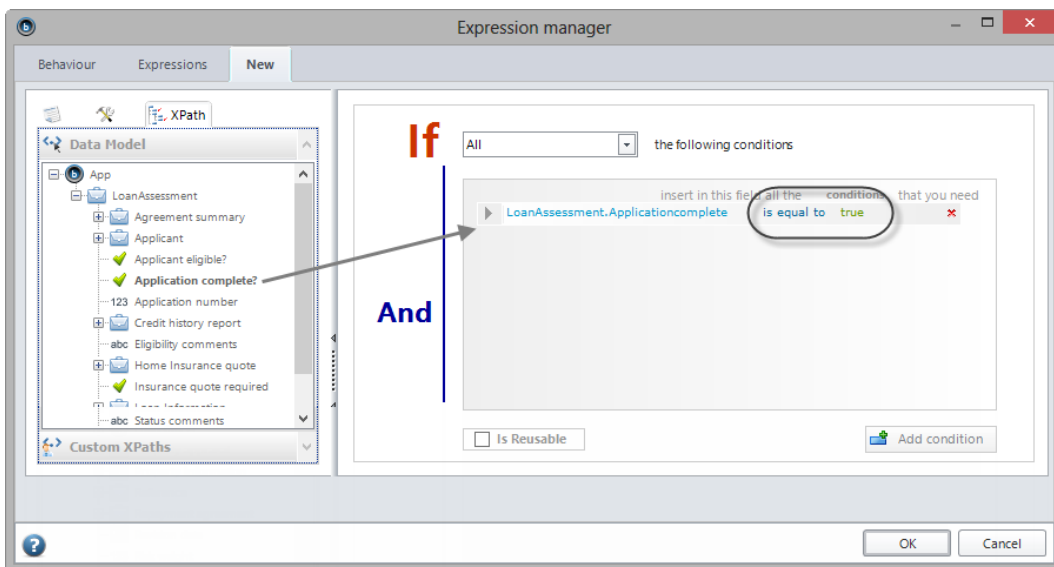
1. Click the transition named Yes that flows to the parallel gateway.



2. Select the route based on the result of an expression. Click **New** to create a business rule.



3. In the Boolean Expression editor, define the condition to be evaluated.
4. Drag and drop the *Application complete* attribute, use the equal operator and select *True* as the value of the condition. Consequently, the Yes sequence flow will be enabled if the *Application complete* attribute is equal to true.



5. Click **Ok** to save the rule.
6. Now configure the other path. This path will be followed when the business rule is NOT met, that is, when the *Application complete* attribute is equal to False. Click the transition named *No* that flows to the *Send reject message* task.
7. The No transition should have the Else condition associated. Select the *Else* condition in the *Expression Selection* window and then click **Ok**.



Gateway 2. Applicant eligible?

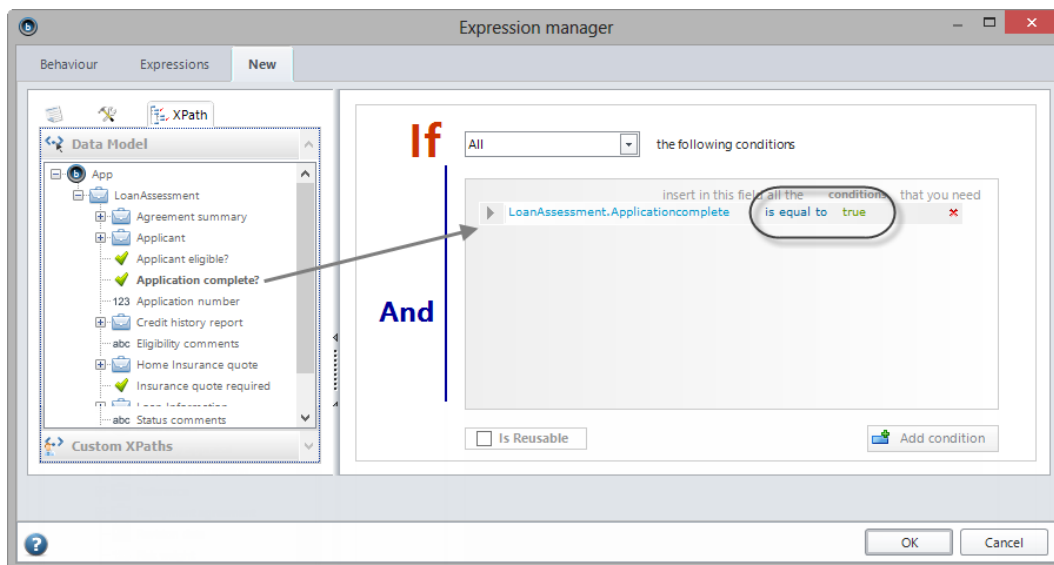
The *Applicant eligible* attribute identifies if the applicant qualifies for the loan. The *Loan Officer* sets this attribute in the *Assess eligibility* activity.

Based on the *Applicant eligible* value, the gateway enables one of two possible paths:

- If the applicant is eligible, the process will continue to the *Prepare and send acceptance pack* Activity
- If the applicant is not eligible the process will notify the applicant that the loan has been rejected.

To configure this evaluation follow the same logic used in the previous Gateway:

Select the *Yes* sequence flow and define the following condition.



For the transition named *No*, select the *Else* condition in the Expression Selection window.

Gateway 3. Quote requested?

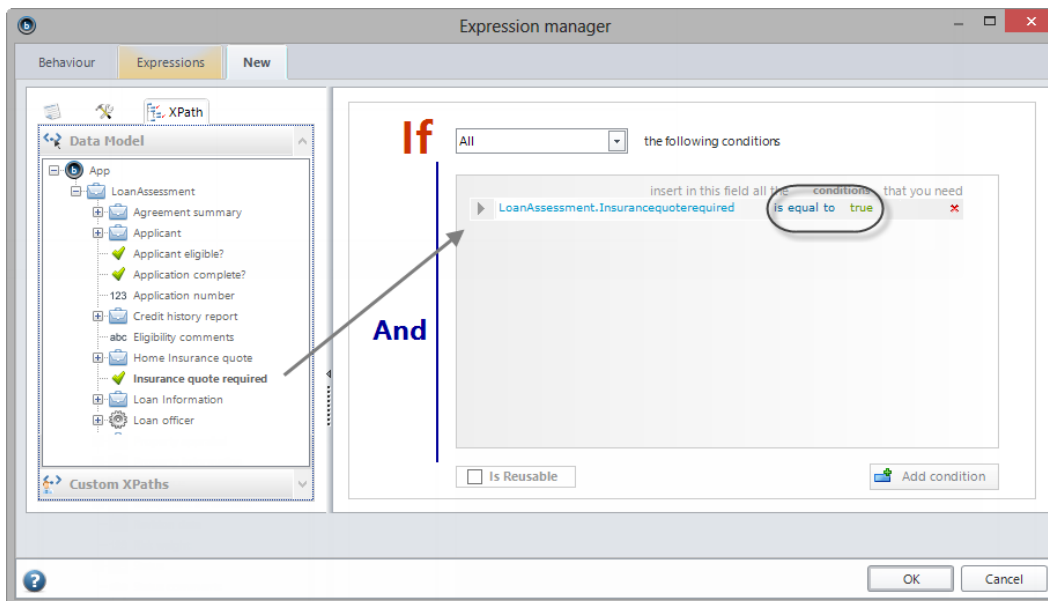
The *Insurance quote requested* attribute indicates if a quote has been requested. The Loan Officer assigns the value in the *Check application form* activity.

This gateway evaluates one of two possible paths based on the value entered in the *Insurance quote requested* attribute:

- If a quotation was requested, the process will continue to the *Prepare and send home insurance quote* activity.
- If no request was made, the process will continue to the *Verify payment agreement* activity.

To configure this evaluation follow the same logic used in the previous gateway:

1. For the transition named *Yes* define the following condition.



2. Associate the *Else* condition with the *No* transition.
3. Close the diagram to return to the Process Wizard.

Activity events

The *Activity Actions* option enables you to perform calculations and validations in every activity of the process. These events can be executed when a token enters the activity, when the end user clicks on the Save button, or when the token exits the activity.

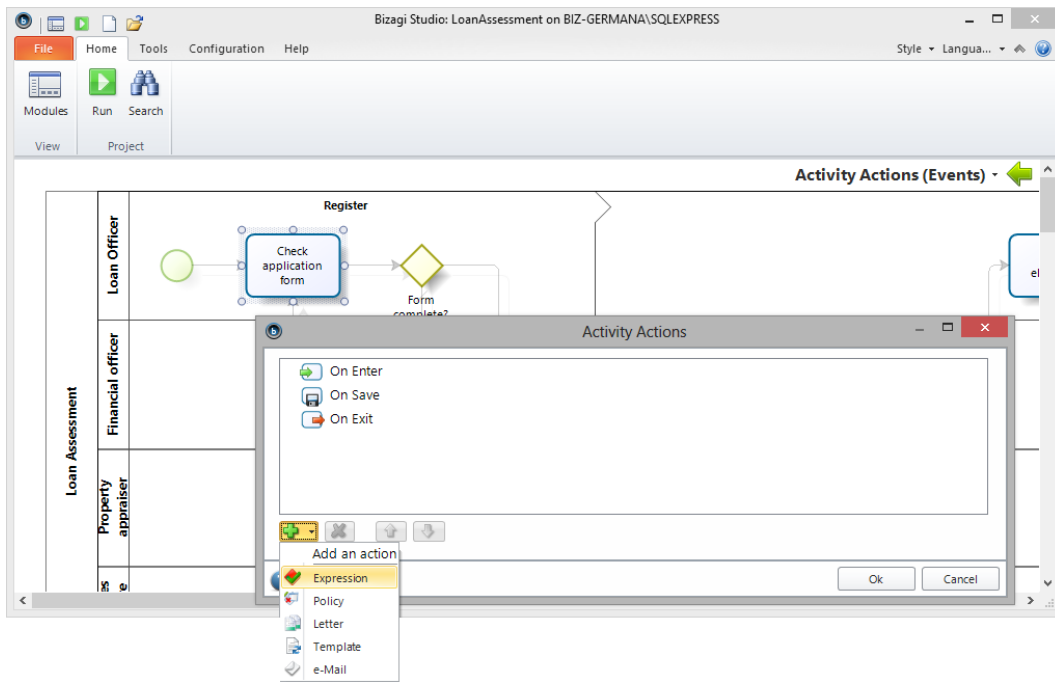


In this Process, we will use activity actions to automatically fill in known information:

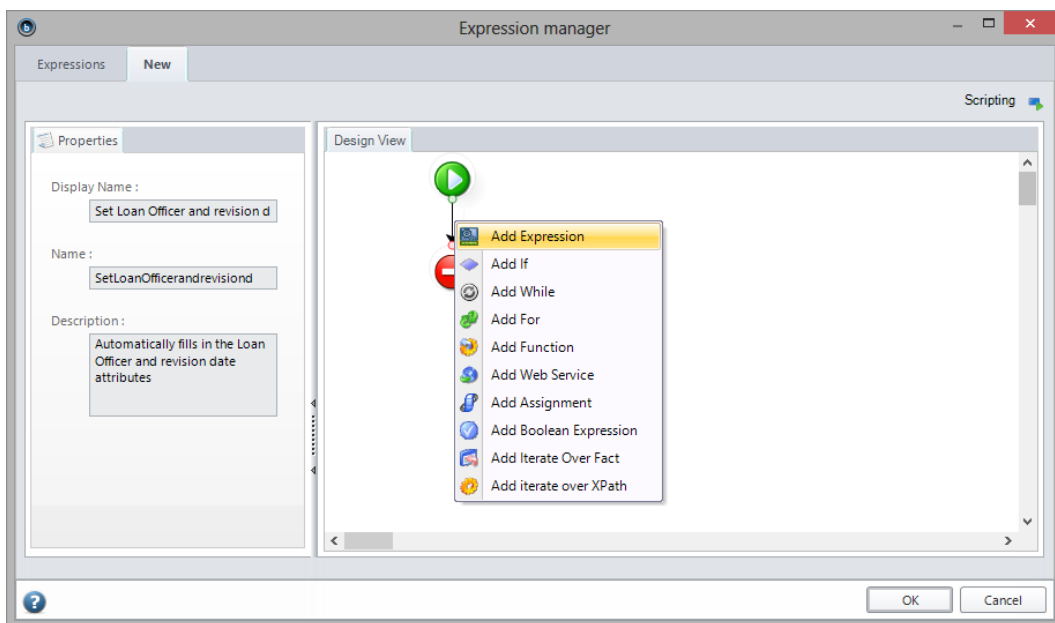
- Users working on a task: *Loan Officer, Financial Officer, Insurance sales representative and Property appraiser.*
- Revision date (the date on which the Loan Officer start working on an application).
- Application status (set to the activity status that is active in the process).
- Risk weight (defined according to the credit assessment).

Set Loan Officer and Revision date

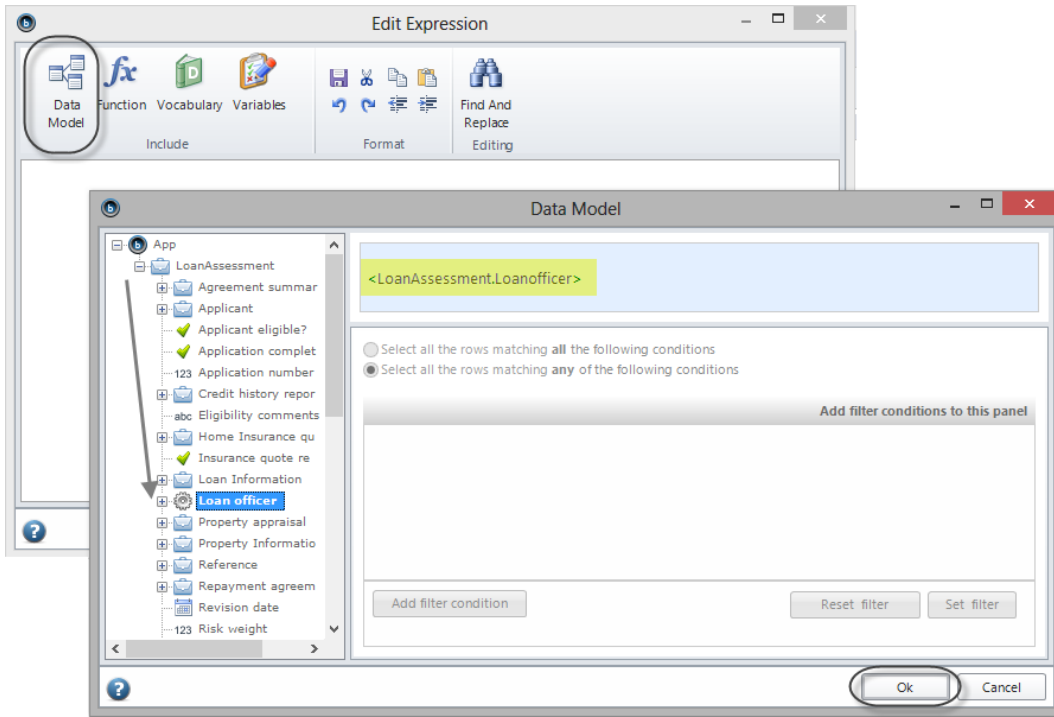
1. As details of the case creator is automatically retained in Bizagi, it can automatically filled. Similarly, the Revision date can be set to the current date (today's date).
2. In the first activity select the *On Enter* option. Then click the **Add** icon to add an action in the activity and then select *Expression*.



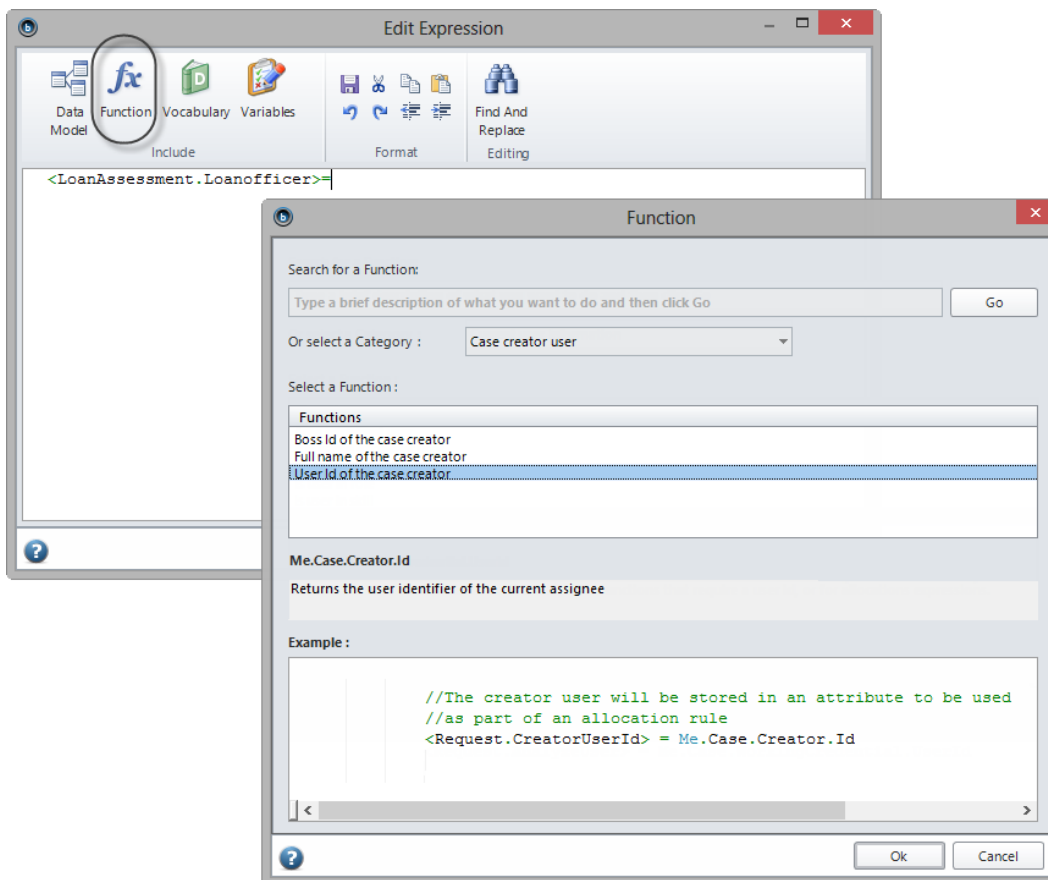
3. Click **New** to create a new rule.
4. The Expression editor will display. First complete the basic information in the Properties tab; this information will let you identify the expression for reuse.
5. Right-click the arrow in the Design View and select *Add Expression*. Type a name for the expression: *Loan Officer and Date*.



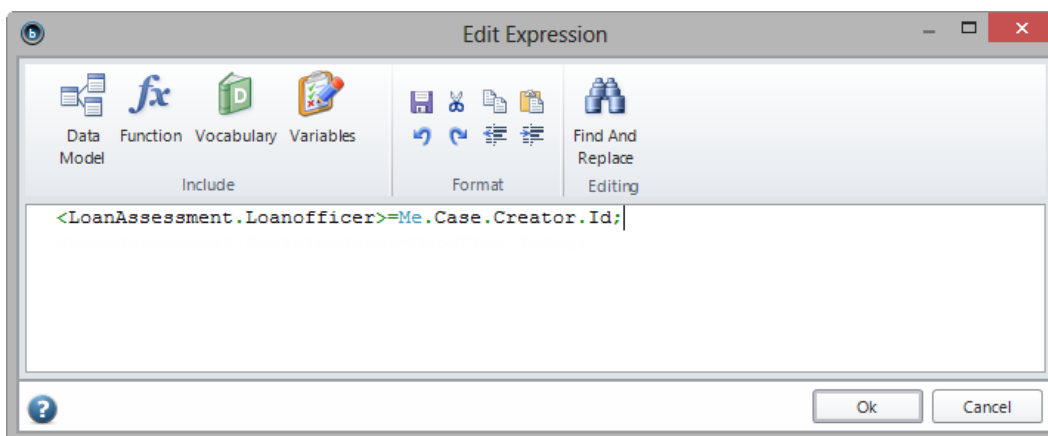
- Next, click *Data Model* to navigate the Loan Assessment entity and locate the *Loan Officer* attribute. Click **Ok**.



- Click the Function option to view the set of Bizagi functions. Select the *Case creator* function found in the *Case creator user* category. Click **Ok**.



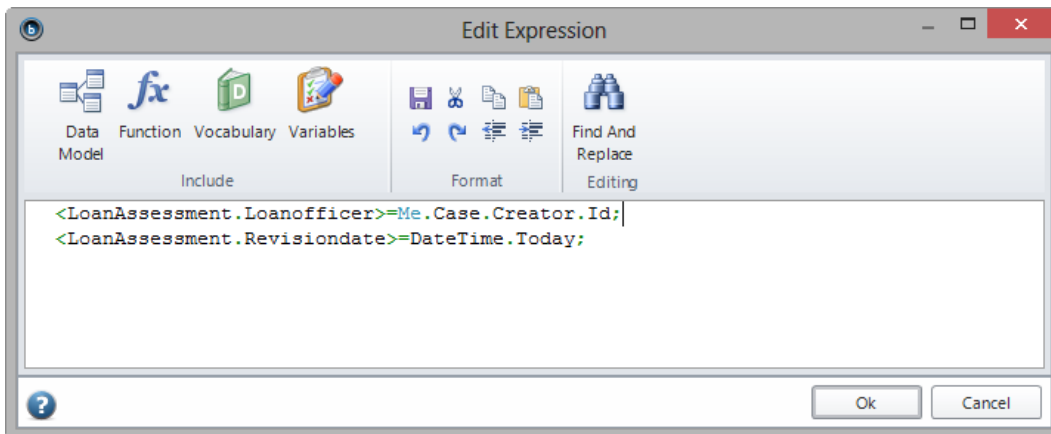
At this point the expression should look like the example in the image below:



Follow the same logic to set the revision date:

- Select the *Revision date* attribute from the Data model. Then type '='
- Select the *Today* function from the *Date & time* Category.

The final expression should look as follows:



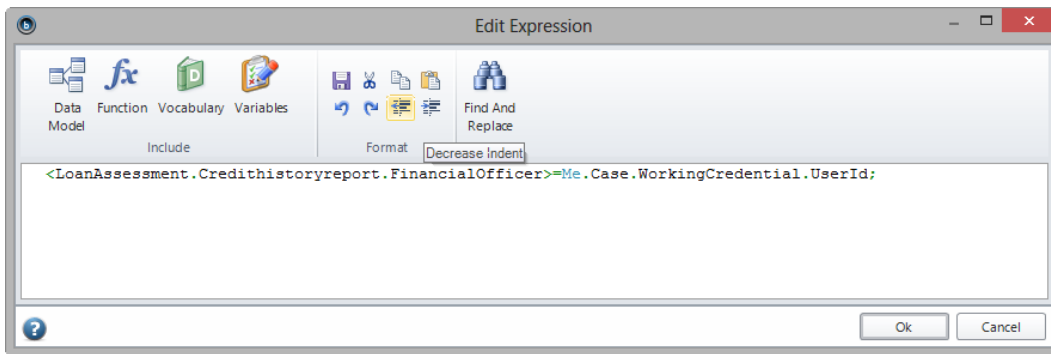
8. Click **Ok** when done. Click **Ok** once more to save the Expression.

Set Loan Officer, Financial Officer, Property appraiser and Sales representative

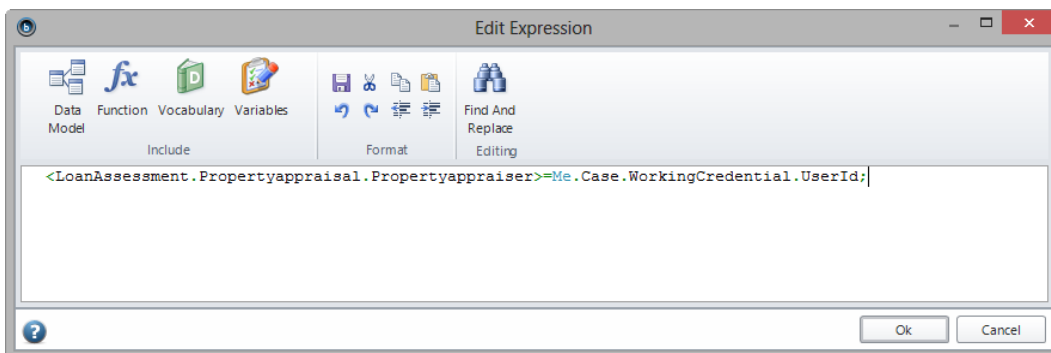
1. The details of *Financial Officer*, *Insurance sales representative* and *Property appraiser* are allocated during different stages in the process. The current user of an activity is always known and can be automatically filled.
2. We will define the following rules:

Rule	Activity	Execution type
Set Financial Officer	Check credit history	On enter
Set Property appraiser	Appraise property	On enter
Set Sales representative	Prepare and send home insurance quote	On enter

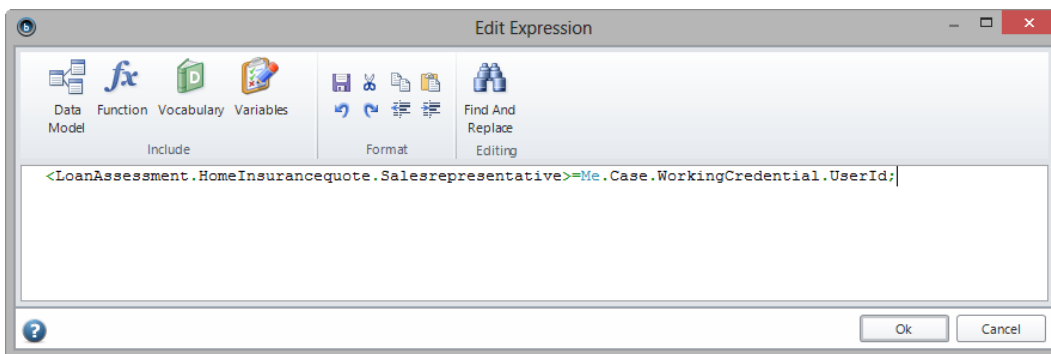
3. To set the Financial Officer click the *Check credit history* activity, create an *On enter* expression and add an *expression module*.
4. Navigate the the data model and select the *Financial Officer* attribute.
5. Choose the *User id of current user* function found in *Current user information*. Click **Ok**.
6. The final expression should look like this example:



7. The same logic can be used to set the *Property appraiser* in the *Appraise property* activity.



Finally, set the Insurance sales representative in the Prepare and send home insurance quote Activity.



Set Status

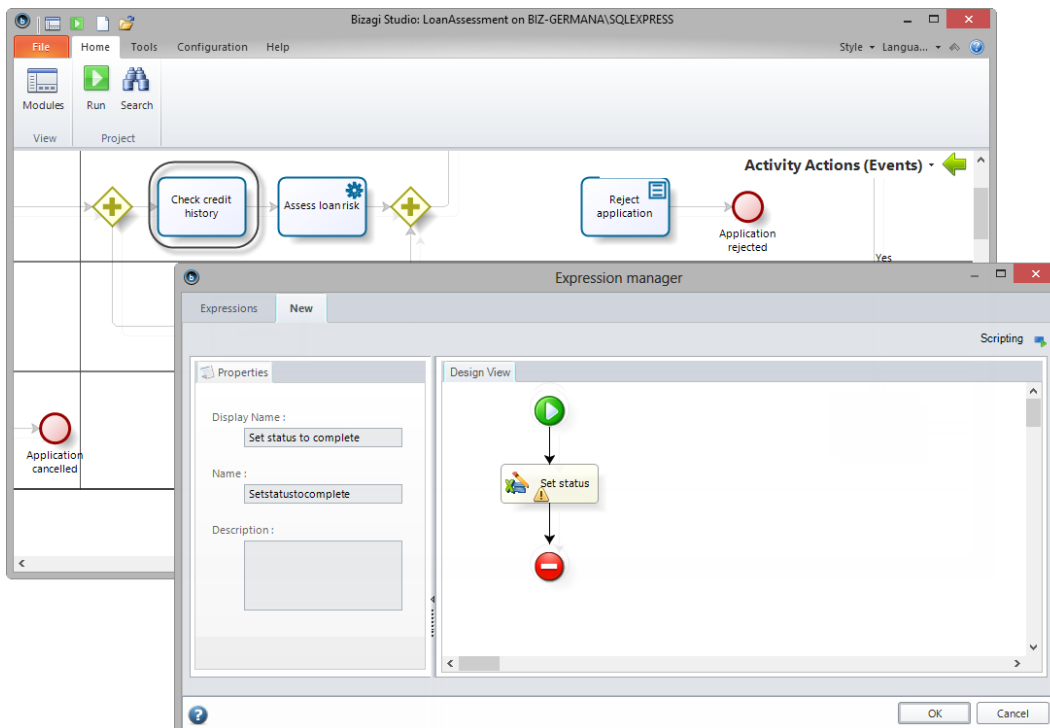
The status of the application must be set in line with the active activity in the process flow. For example, if the process enters the *Check credit history* activity, it logically follows the application is complete and so its status can be set to complete.

We previously defined rules to [set the status](#) according to decisions made in the *Take final decision* activity. In this section, we will define the rules for the remaining statuses by creating the following activity events.

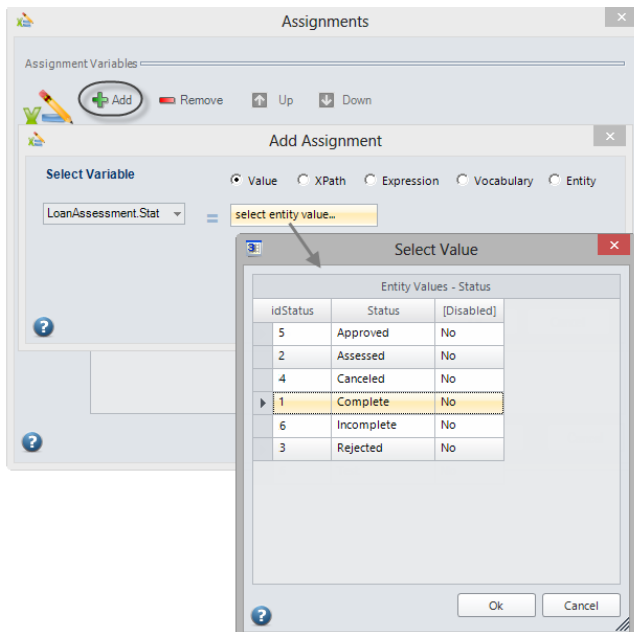
Rule	Activity – Event	Execution type
------	------------------	----------------

Set status to complete	Check credit history	On enter
Set status to incomplete	Send reject message	On enter
Set status to assessed	Assess eligibility	On enter
Set status to cancelled	Application cancelled	On enter
Set status to rejected	Reject application	On enter

1. We will start with the first row of the table above and assign the status to complete. Select the *Check credit history* activity, create an *On enter* expression and add an *assignment element* as shown.



2. Add a new assignment and choose the Loan Assessment *Status* attribute from the variables list. Select the *Complete* value from the associated entity values.



3. Apply the same logic to define the remaining actions as set out in the [table](#).

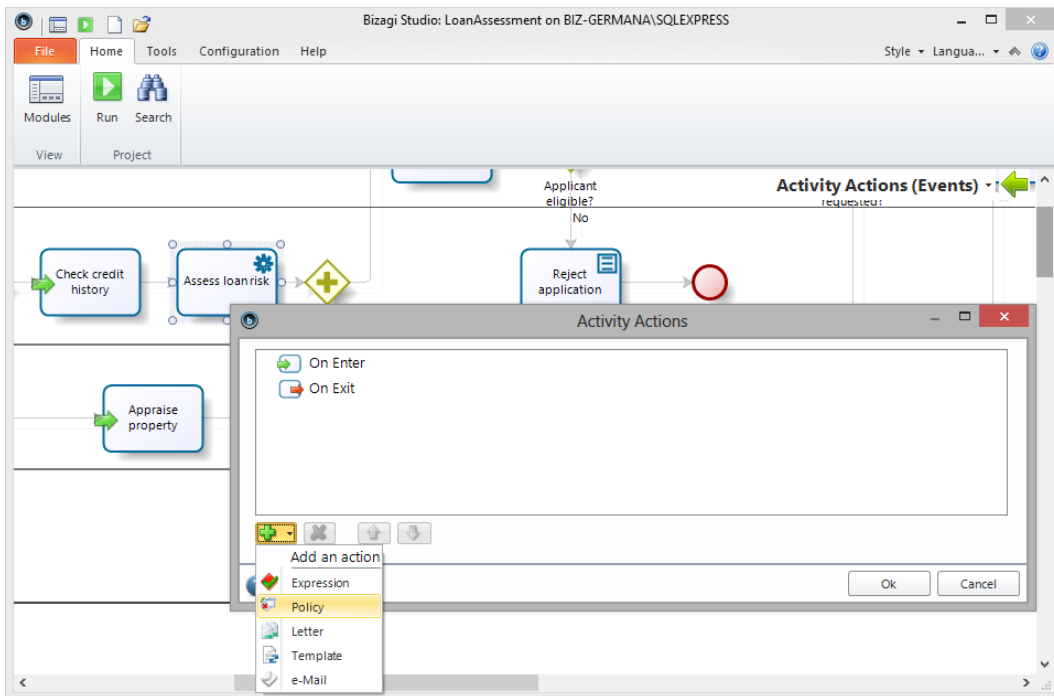
Set the Risk Weight

The risk weight must be set automatically according to the credit assessment as show in the next table.

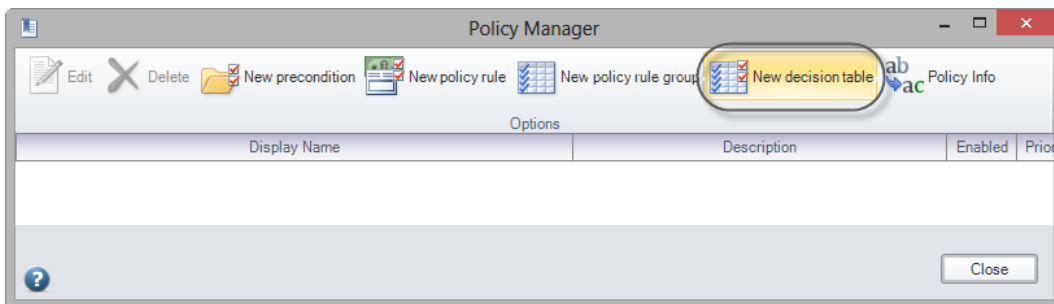
Credit assessment	Risk weight
AAA	100
AA	80
A	60
BBB	40
BB	20
B	0

We will use a policy action to assign the risk factor.

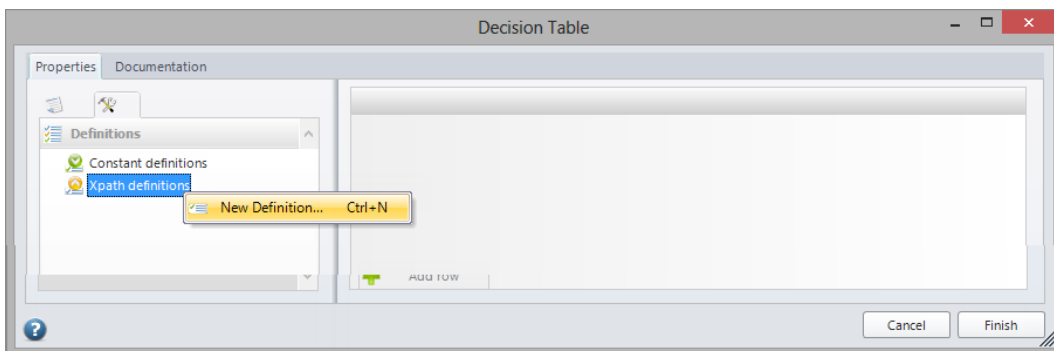
1. Click the *Assess loan risk* Task and create a *Policy* action. Give the policy a display name, name and meaningful description.



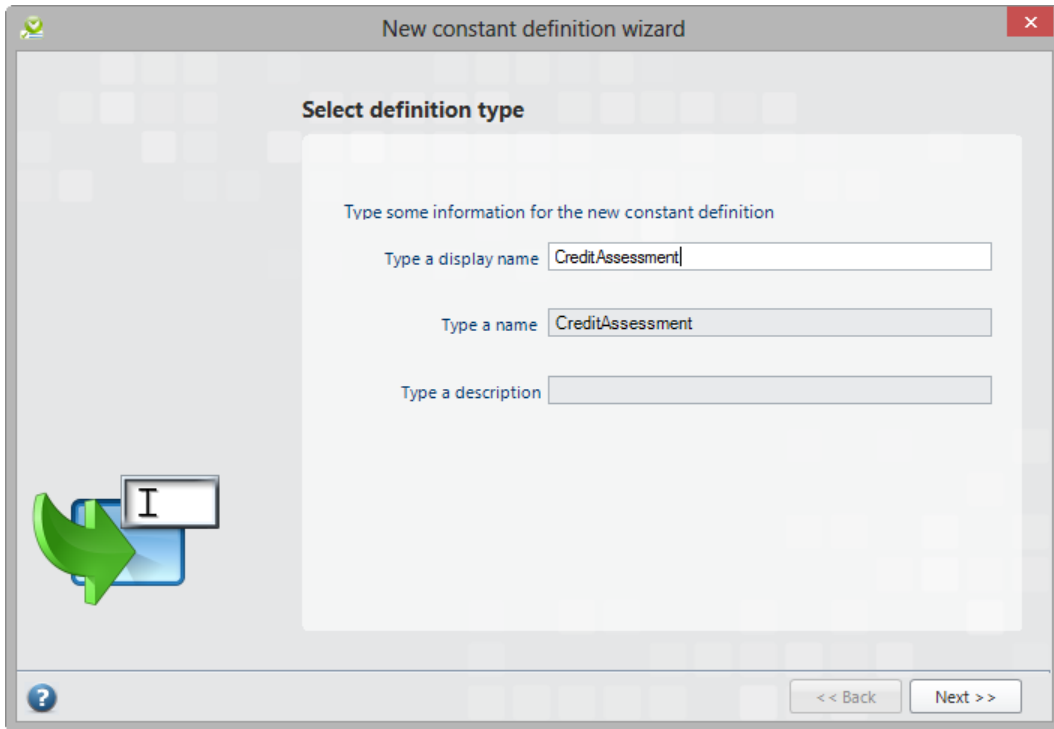
2. In the Policy Manager window, click the *New decision table* option.



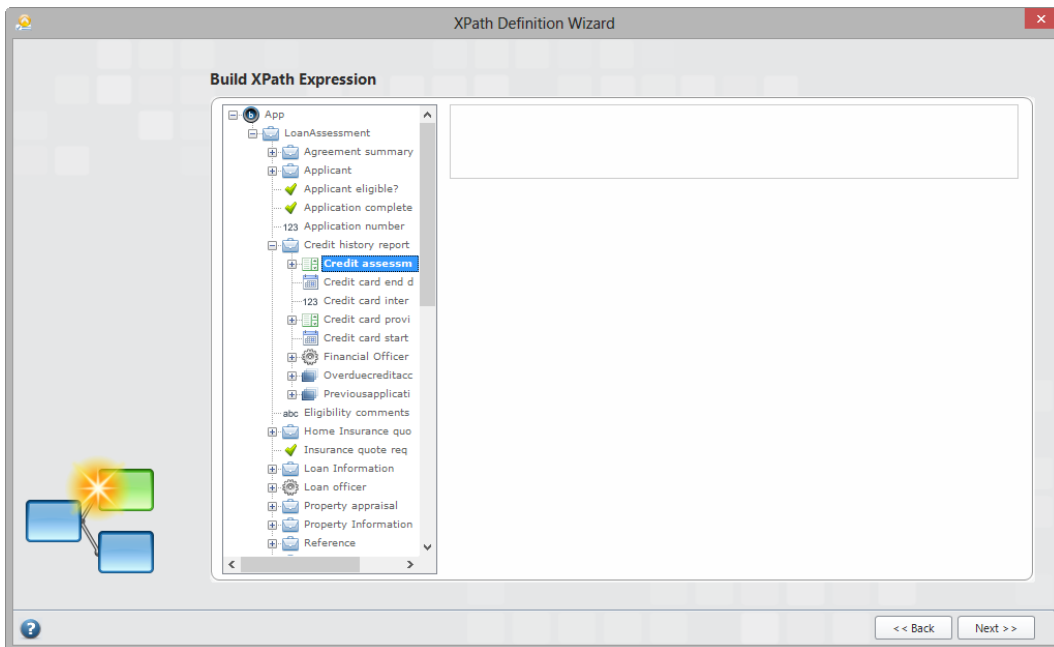
3. Right-click the Xpath definition option and create a new definition.



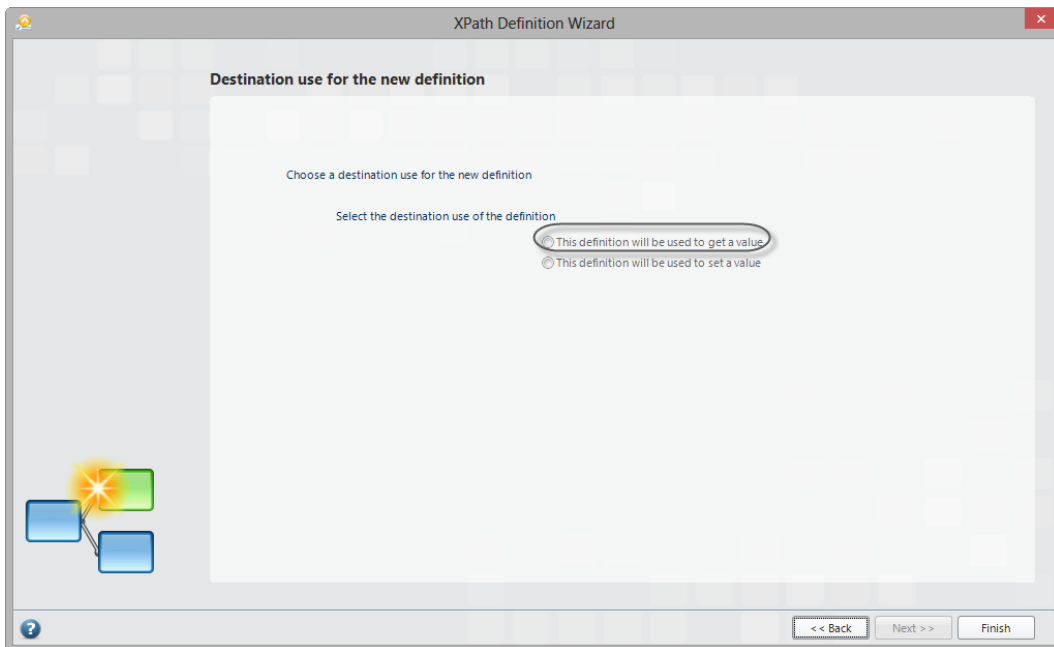
4. Give it a name and display name.



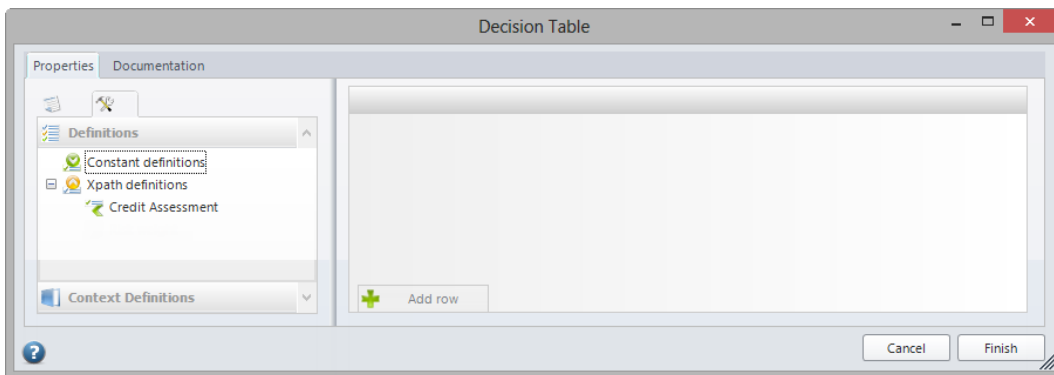
5. Navigate the the data model and select the *Credit Assessment* attribute. Click **Next**.



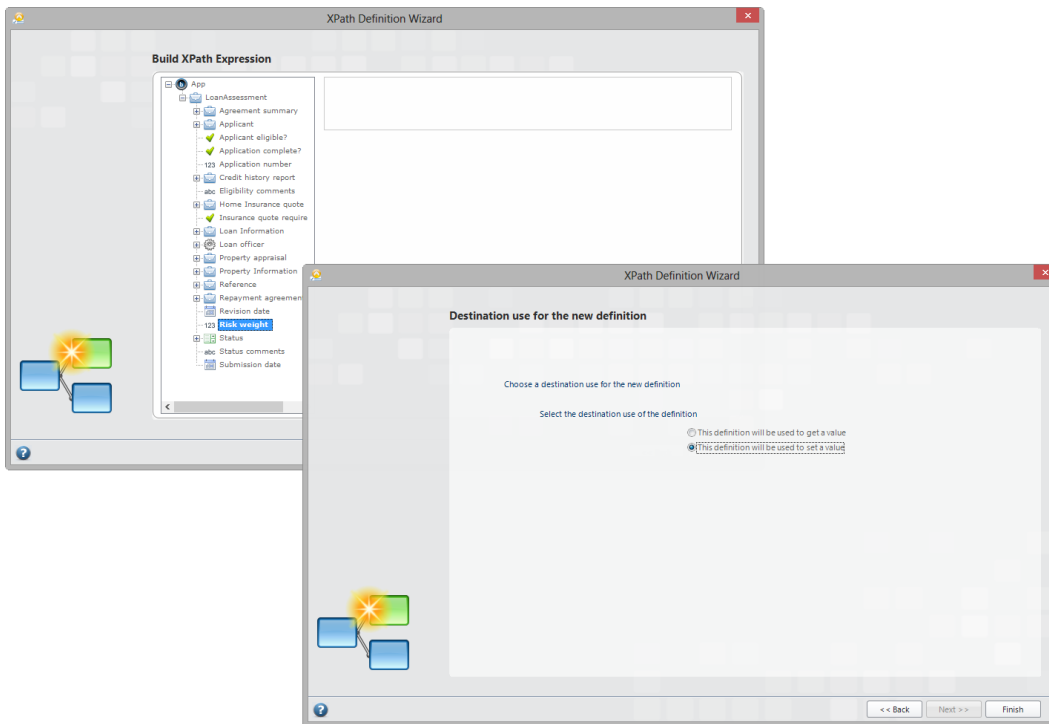
6. Mark the option *This definition will be used to get a value option* and then click **Finish**.



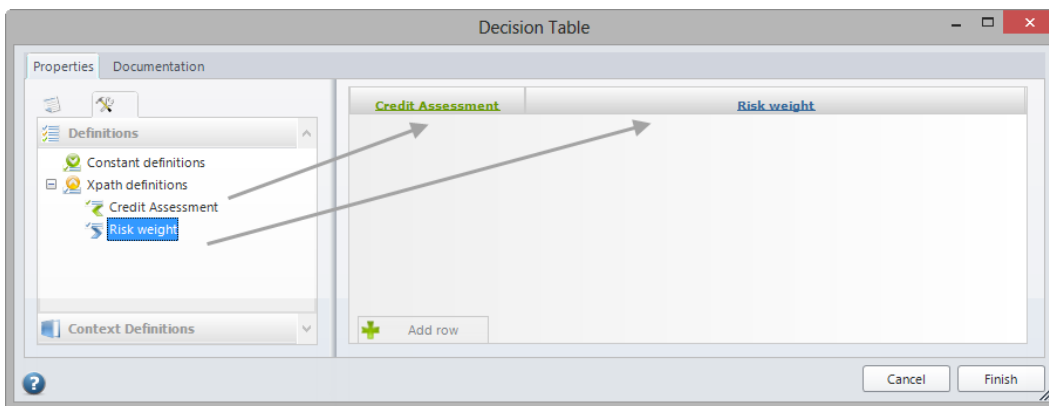
The new definition will appear in the panel on the left.



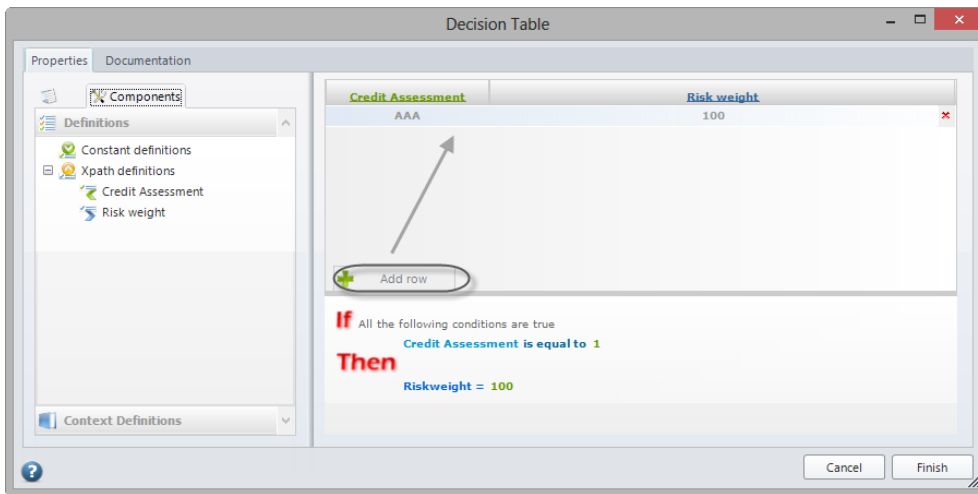
- Repeat the steps to create another definition, this time select the *Risk weight* attribute from the data model and again mark the *This definition will be used to set a value* option.



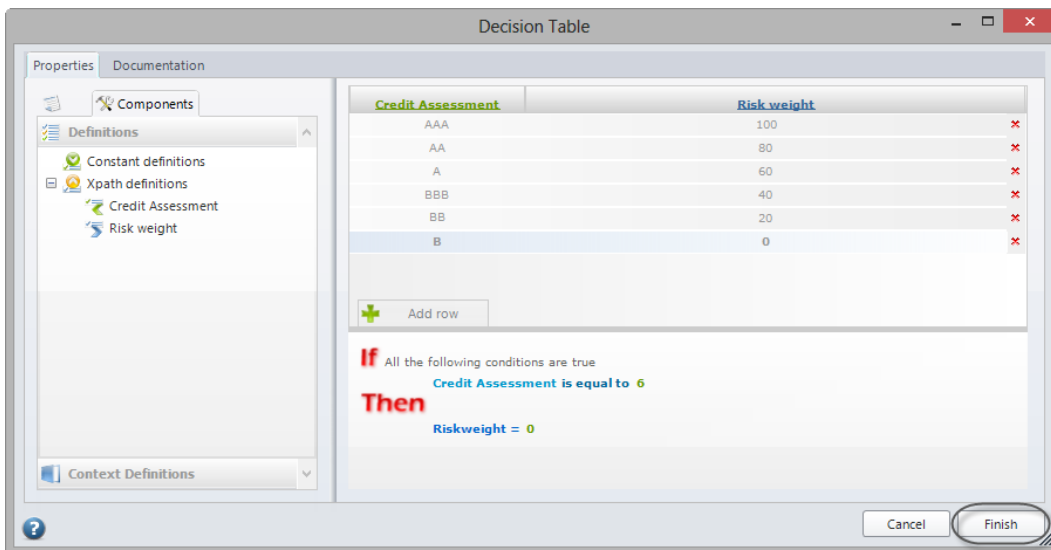
- Next, create the columns in the Decision Table. To do this, drag and drop each definition onto the design area on the right.



- Click the Add row option to insert the first row and duplicate the values as shown in the [Risk weight table](#).



10. Duplicate the remainder rows and click **Finish**.

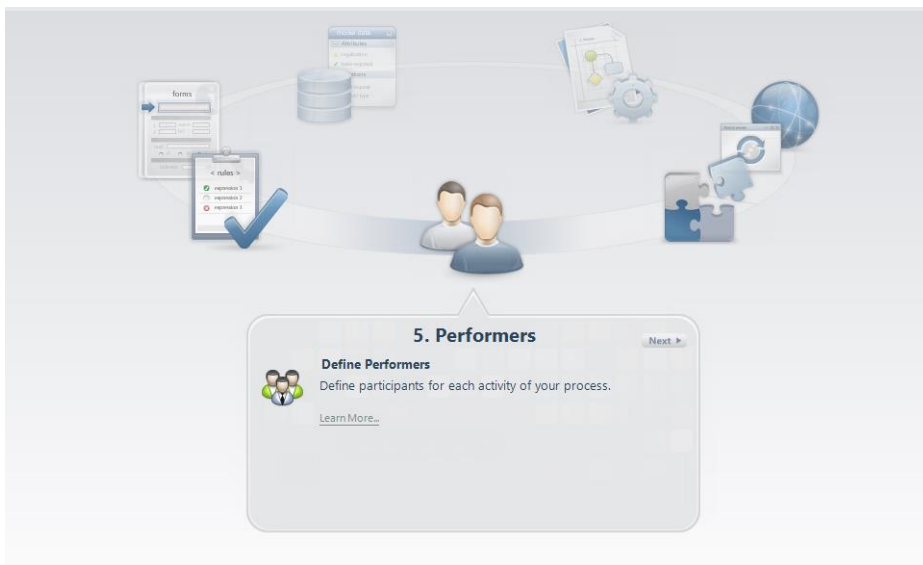


VI. Performers

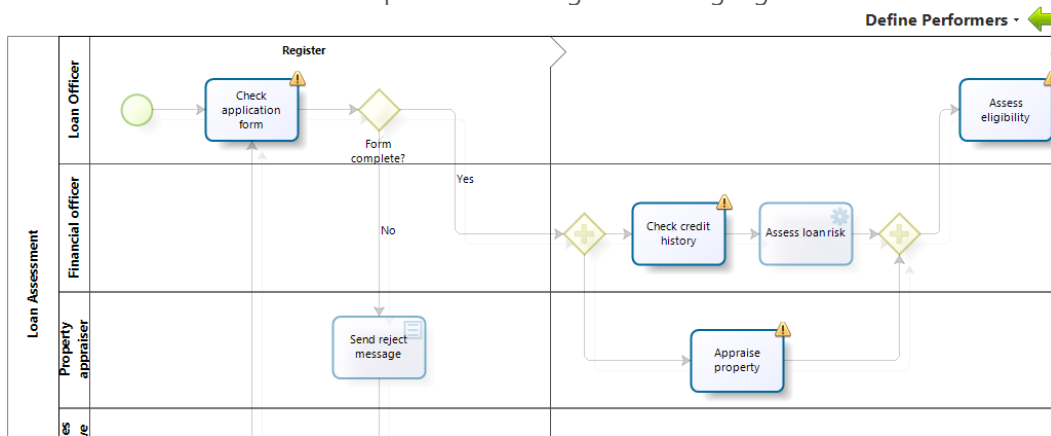
The resources assignment is a very important stage within Bizagi. The participants responsible for each of the process activities are defined in this stage.

To allocate these performers we will use the same procedure as in the first workshop.

1. Click on the fifth step of the Process Wizard and select the *Define Performers* option.



The activities that do not have a performer configured are highlighted in the workflow.



For this process we will have five different allocations:

- The activities *Check application form*, *Assess eligibility*, *Prepare and send acceptance pack* and *Verify payment agreement* will always be performed by the case creator.
- The *Check credit history* activity will always be executed by a Financial Officer.

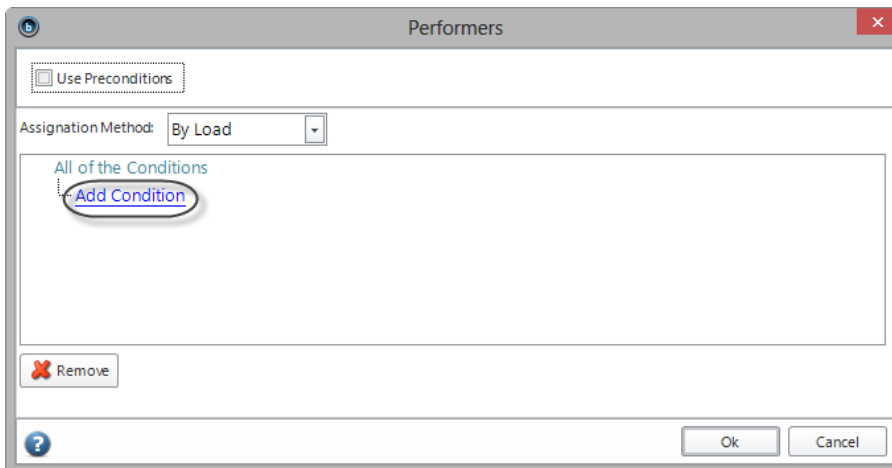
- The *Appraise property* activity will always be carried out by a Property appraiser.
- The *Prepare and send home insurance quote* will always be performed by an Insurance sales representative.
- The *Take final decision* will always be executed by a Loan officer different from the officer who verified the repayment agreement (i.e. following the two-man rule).

Activity: Check application form

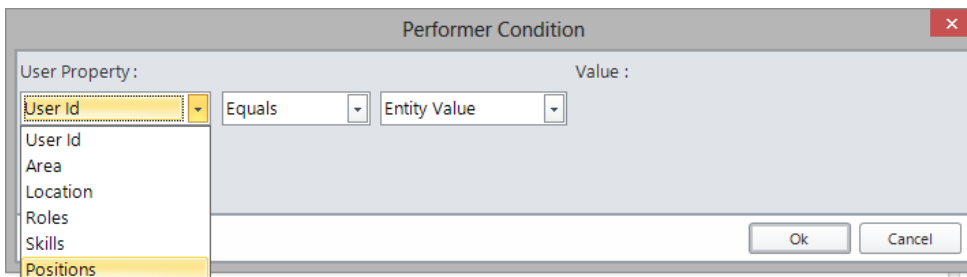
This Activity must be assigned to the creator of the case; this is a default functionality Bizagi provides, so we need not create an assignment for it (despite the fact that the activity is highlighted with an exclamation mark).

Activity: Check credit history

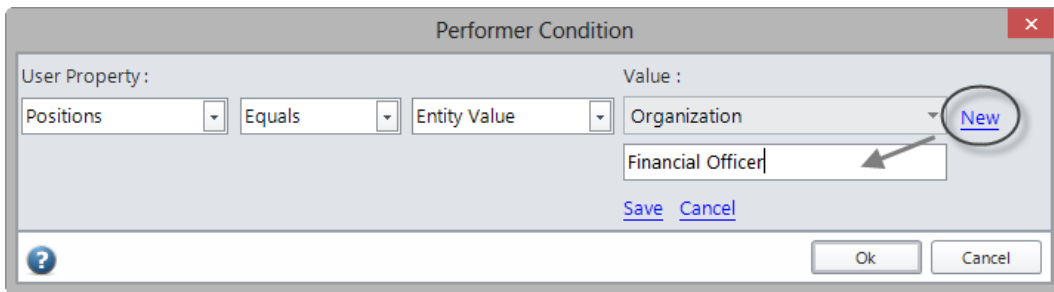
1. Select the Activity and click on *Add condition* in the Performers assignment window.



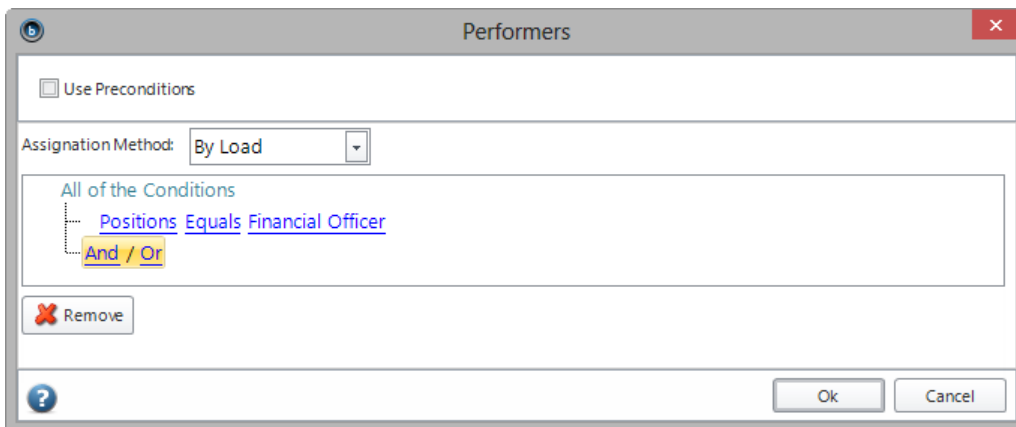
2. We need to add a performer holding a position of Financial Officer: Select *Position* in the first drop-down list.



3. In the Value field select Organization to be able to add a new position within the Organization. Click **New** to add a new position within the Organization structure. Name it *Financial Officer*. Click **Save**.

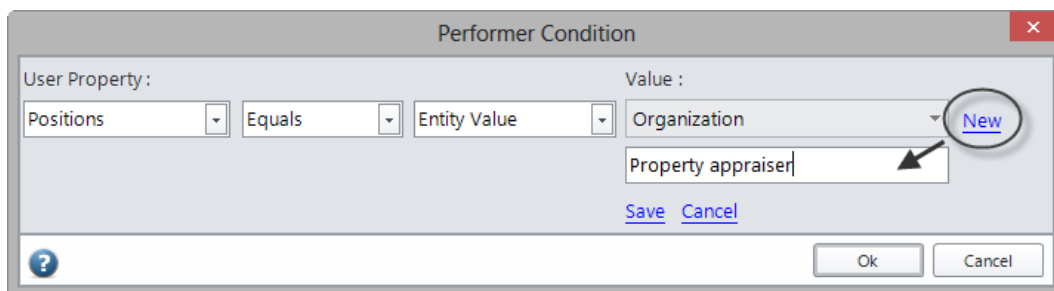


The final expression will look like this:



Activity: Appraise property

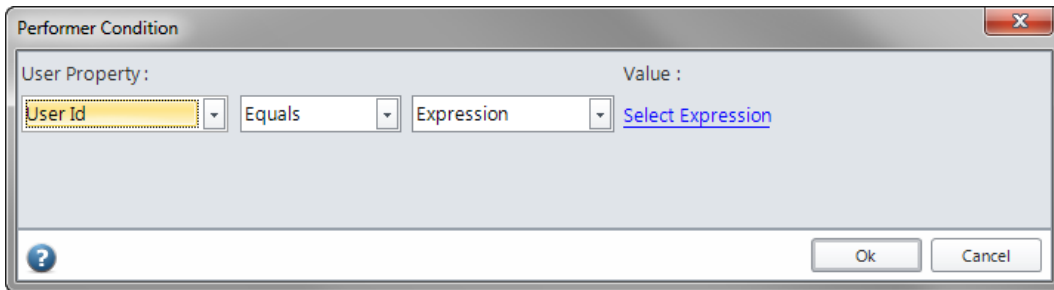
Select the *Appraise property* Activity and repeat the previous steps to add a new position within the Organization structure called *Property appraiser*.



Activity: Assess eligibility

1. The Assess eligibility Activity is performed by the case creator. That is the user identified as the case creator of this activity. Select the activity and add a new condition in the Performers assignment window.

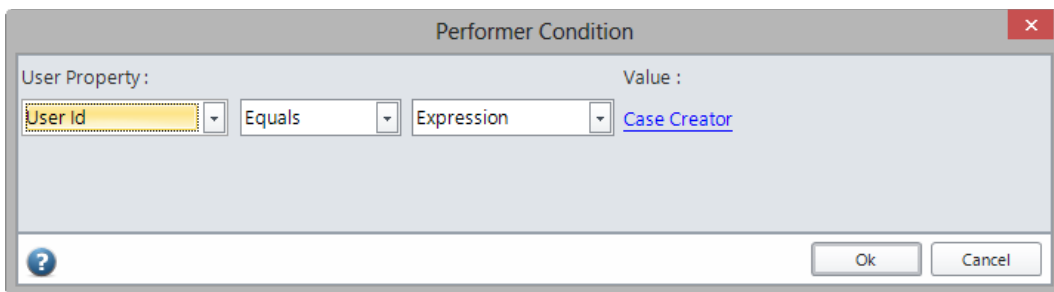
2. Select *User Id* in the User Property drop-down.



3. The list of Bizagi default expressions will display. Select the *Case creator* and click **Ok**.



The expression will be assigned automatically to the task:



Click **Ok** to save the Performer Condition and again to save the performer.

Activity: Prepare and send acceptance pack - Verify repayment agreement

1. Select the activity in the process diagram.

- Repeat the previous steps to assign the case creator as the preformer for the *Prepare and send acceptance pack* and *Verify repayment agreement* Activities.

Activity: Prepare and send home insurance quote

Follow the [assignment steps](#) in the *Check credit history* activity to create and assign the new position of *Sales representative*.

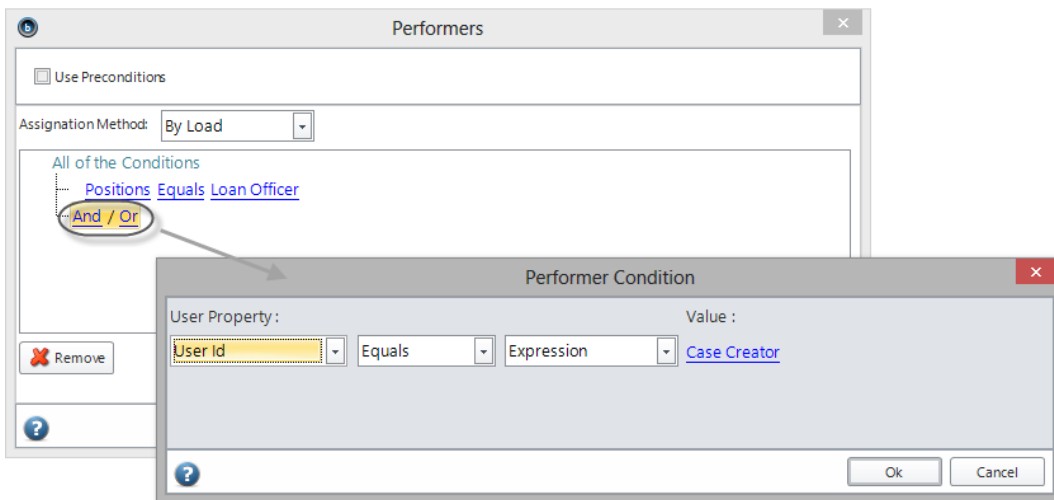
The screenshot shows a 'Performer Condition' dialog box. It contains two main sections: 'User Property' and 'Value'. Under 'User Property', there is a dropdown menu with 'Positions' selected. To its right is an operator dropdown with 'Equals' selected. Further right is an 'Entity Value' dropdown with 'Sales representative' selected. A 'New' link is visible to the right of the 'Sales representative' dropdown. At the bottom of the dialog, there are 'Ok' and 'Cancel' buttons.

Activity: Take final decision

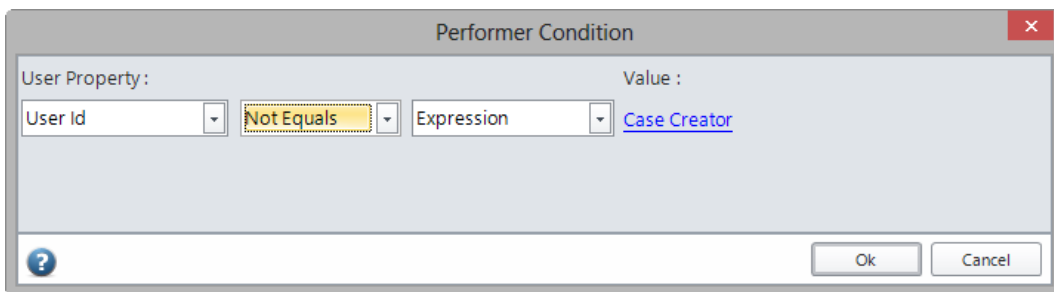
- Select the Activity and click on *Add condition* in the Performers assignment window.
- Again, [follow the assignment steps](#) in the *Check credit history* activity to create and assign the new position of *Loan Officer*.

The screenshot shows a 'Performer Condition' dialog box. It contains two main sections: 'User Property' and 'Value'. Under 'User Property', there is a dropdown menu with 'Positions' selected. To its right is an operator dropdown with 'Equals' selected. Further right is an 'Entity Value' dropdown with 'Loan Officer' selected. A 'New' link is visible to the right of the 'Loan Officer' dropdown. At the bottom of the dialog, there are 'Ok' and 'Cancel' buttons.

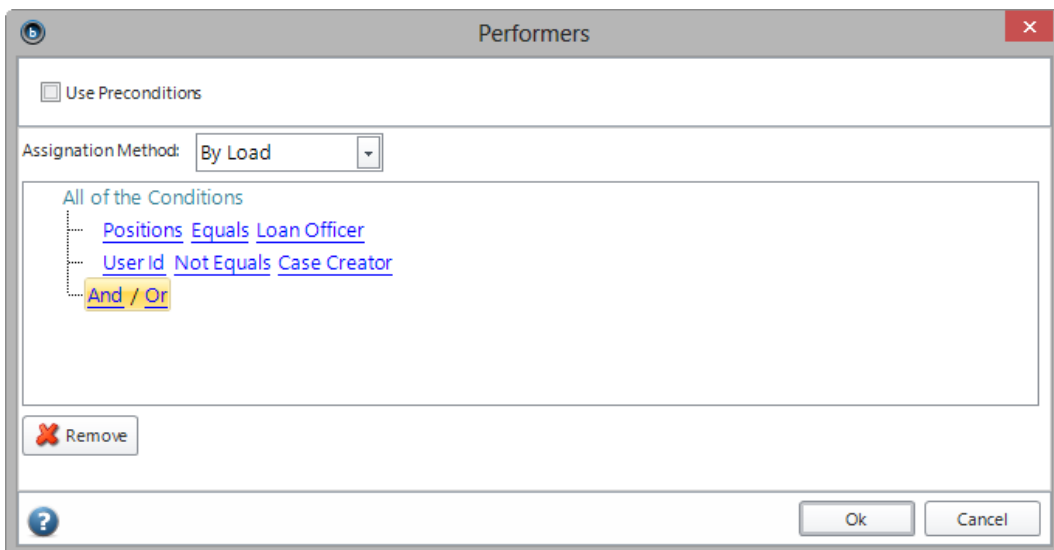
- Click **And** to add another condition. [Assign the Case creator](#) as was done in the *Assess eligibility* activity.



4. The two-man rule denotes that the Loan officer must differ from the officer who verified the agreement (the case creator); therefore, set the operator to *Not equals*.



The Expression must look like this:



5. Click **Ok** to save the Performer conditions.

VII. Execute

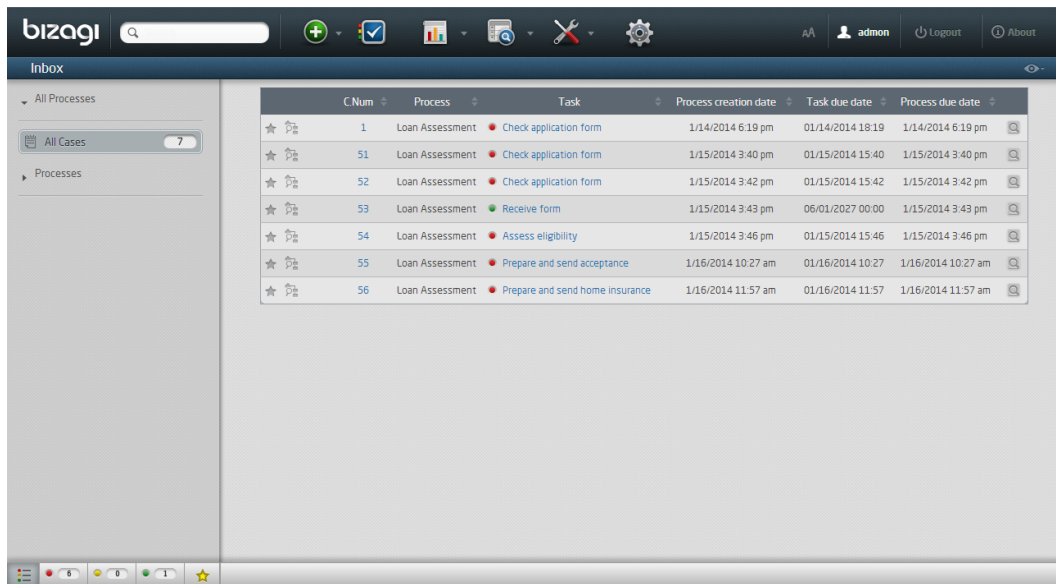
So far, the Process flow has been completed along with the structuring of the process information, the user interface design for each one of the process activities, the definition of the business rules and the performers. We will now execute the automated process in the Work Portal.

The Work Portal enables participants in the process to see their pending activities, or inbox, as well as real-time information relating to processes performance. Through color-coded indicators, alarms, and a useful set of features you will be able to perform, manage and control your processes.

Click on the seventh step of the Process Wizard. In the new window select *Run Process* and then *Development*.



Bizagi presents a work portal where the processes are interpreted and presented for end users.



Testing the Work Portal

Creating the users

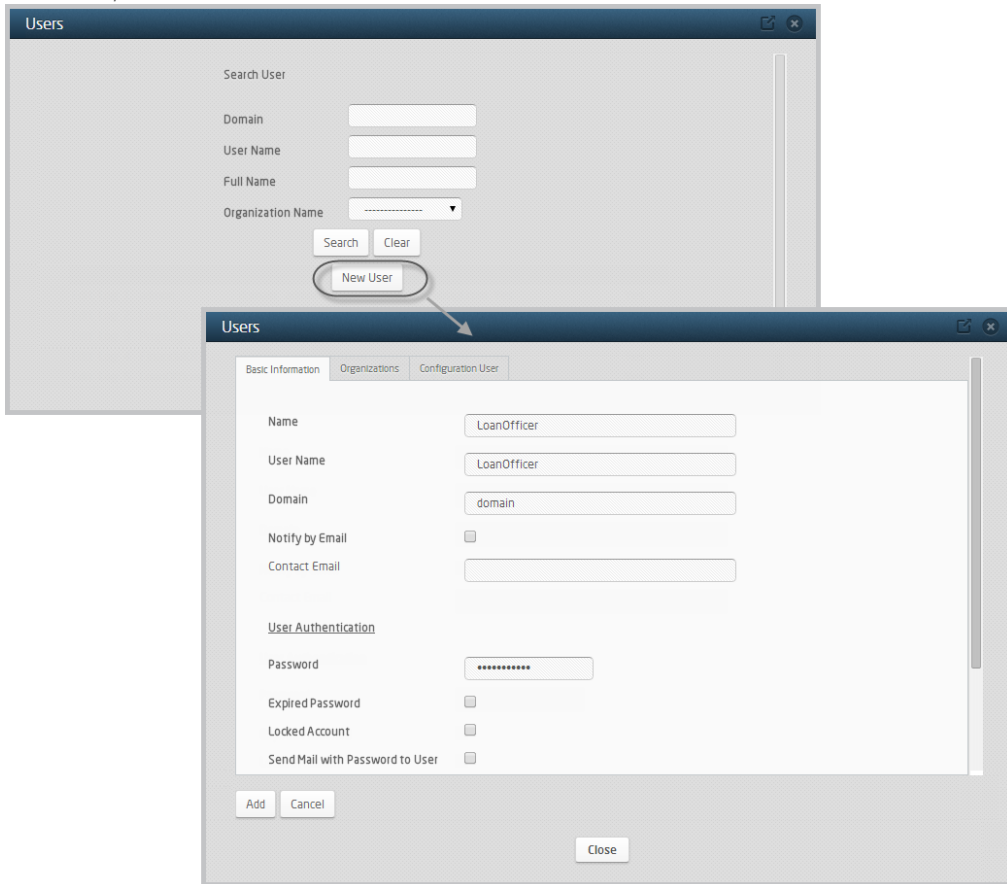
To test the Work Portal we have to create the end users. The following table presents the user list.

USER	PASSWORD	DOMAIN	POSITION
LoanOfficer	Loanofficer	domain	LoanOfficer
Financial Officer	Financialofficer	domain	Financial Officer
Property appraiser	Propertyappraiser	domain	Property appraiser
Sales representative	Salesrep	domain	Sales representative
LoanOfficer2	Loanofficer2	domain	LoanOfficer2

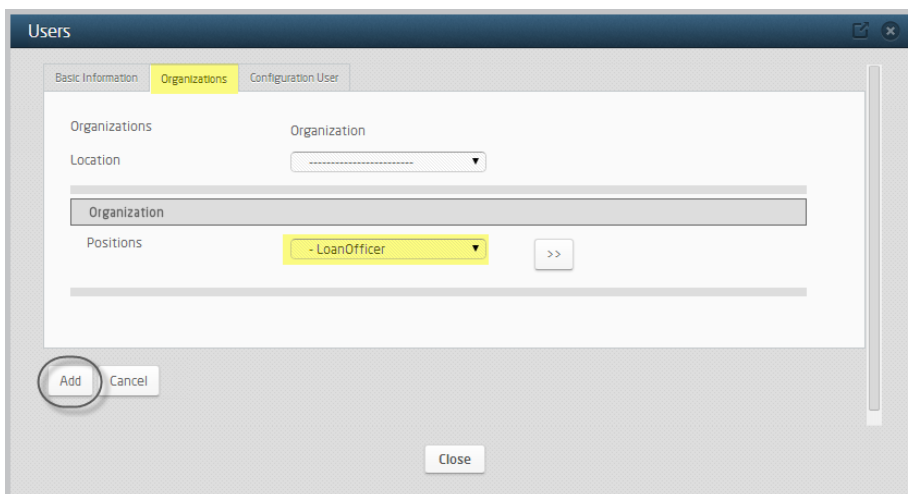
1. Select the *Admin Menu* and click the *Users* option.



Click on *New User* and fill out the information from the [user list table](#). Deselect all checkboxes: *Expired Password, Locked Account* and *Send Mail with Password to User*.



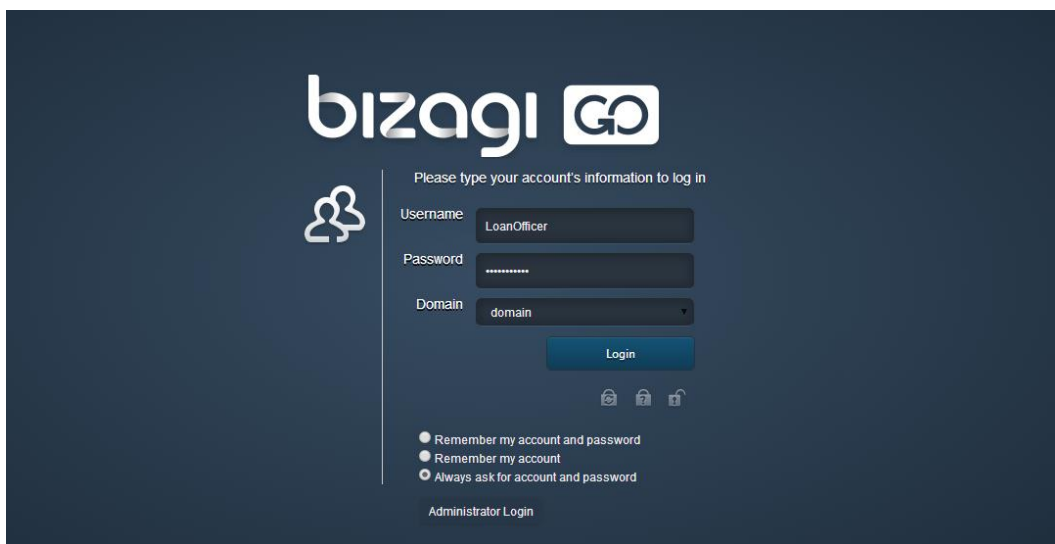
2. Move to the Organization tab and in the Positions field select *Loan Officer*. Click on **Add** to save the user.



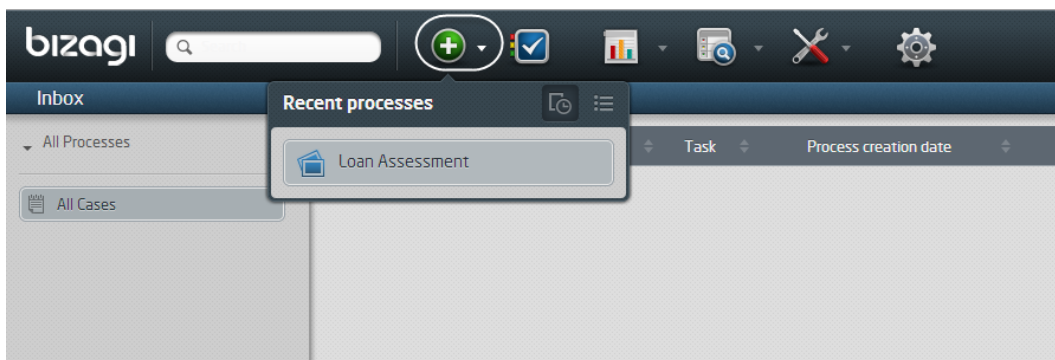
Do the same for the remaining users.

Running the application

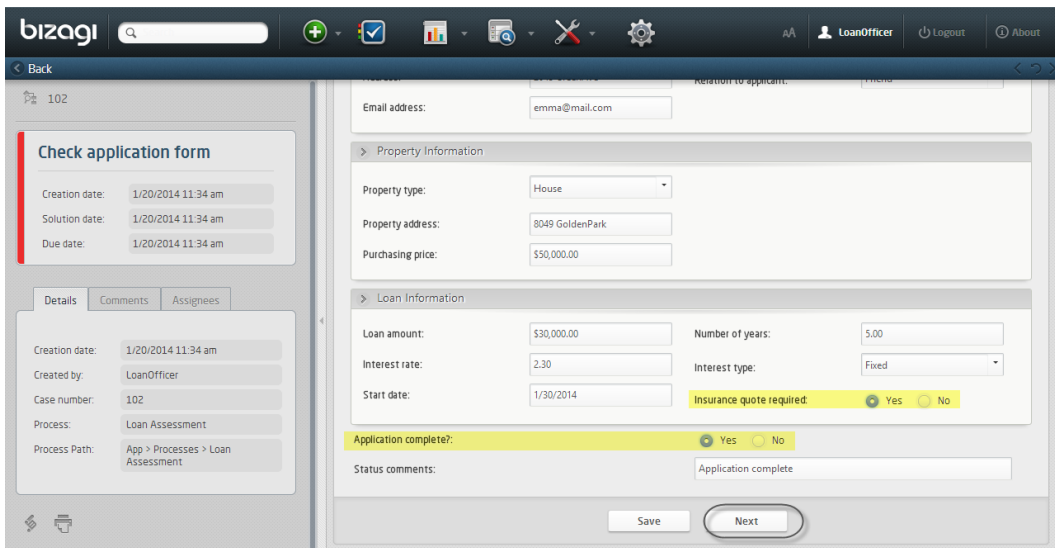
1. Open the Work Portal, and login as the *Loan Officer* user.



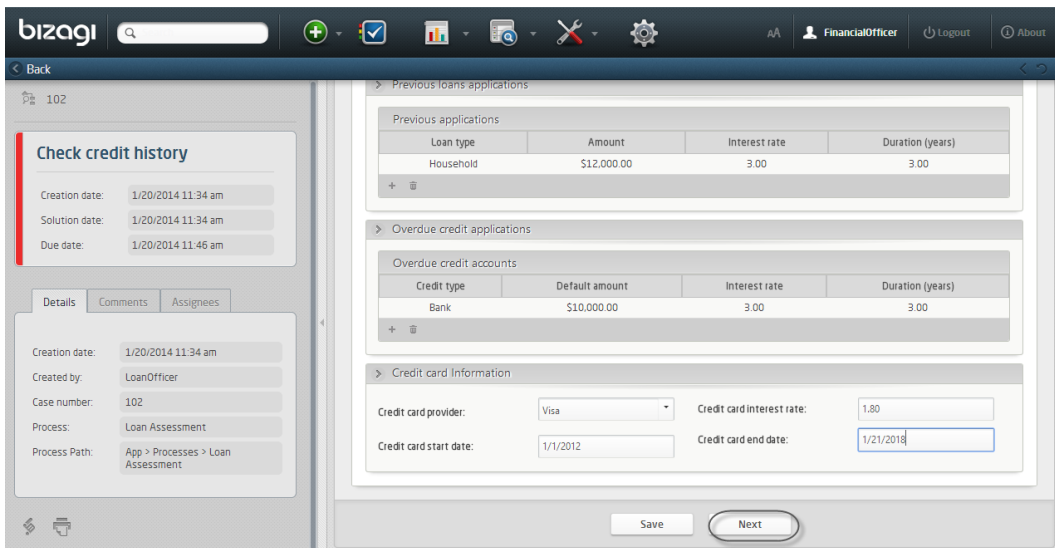
2. Create a new case for the process and test all the activities.



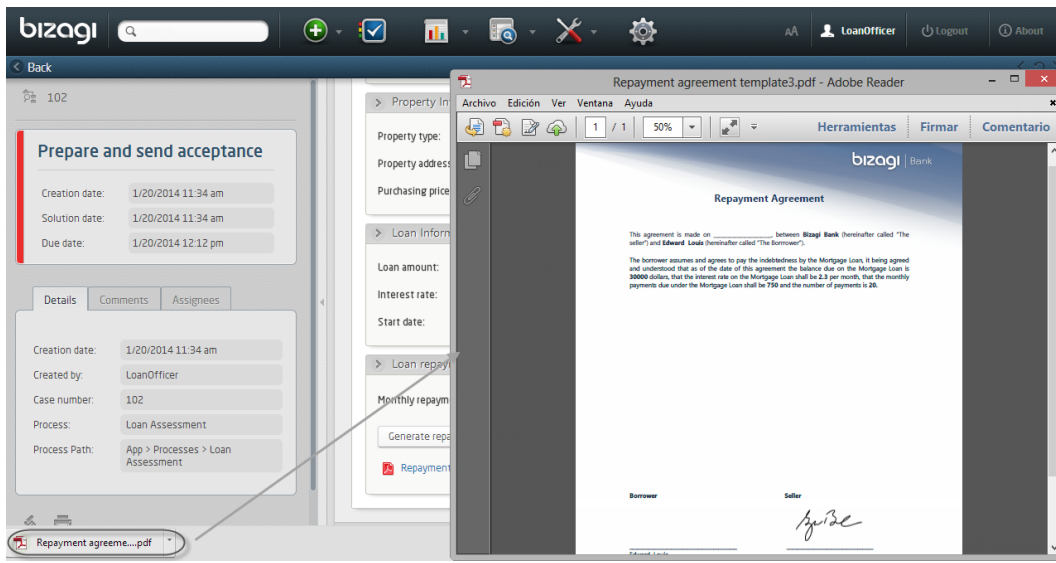
3. Enter all the required and click **Next**.



- Note, the assignee is now the Financial Officer. Log out and log in as the *Financial Officer*. Continue with the process flow entering the necessary information for each activity, as the assignee. When the information is complete click **Next**.



- In the *Prepare and send acceptance package* activity you can click the **Generate repayment agreement** button to generate the PDF document. The document will be generated and the link inserted below the button. Click the document name to open it. Click **Next**



- In the *Take final decision* activity, click the **Approve** button to approve the application and finish the process.

Loan amount:	\$30,000.00	Number of years:	5.00
Interest rate:	2.30	Interest type:	Fixed
Start date:	1/30/2014	Insurance quote required:	Yes

Loan repayment			
Monthly repayment amount:	\$750.00	Number of repayments:	20

Insurance quote			
Insurance cost:	\$3,000.00	Additional monthly payment:	\$80.00
Sales representative:	LoanOfficer		

Conditions agreed:

Repayment agreed:

Repayment agreement (digital copy): [Agreement.png](#)

We have successfully tested our process.

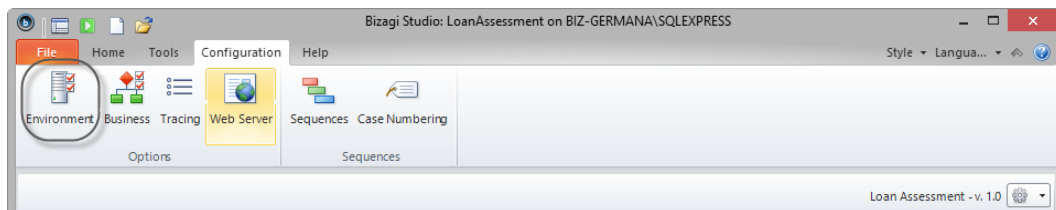
VIII. Sending notifications (optional)

Emails, send during the Process life cycle, are easily configured in Bizagi.

Configuring the SMTP Server

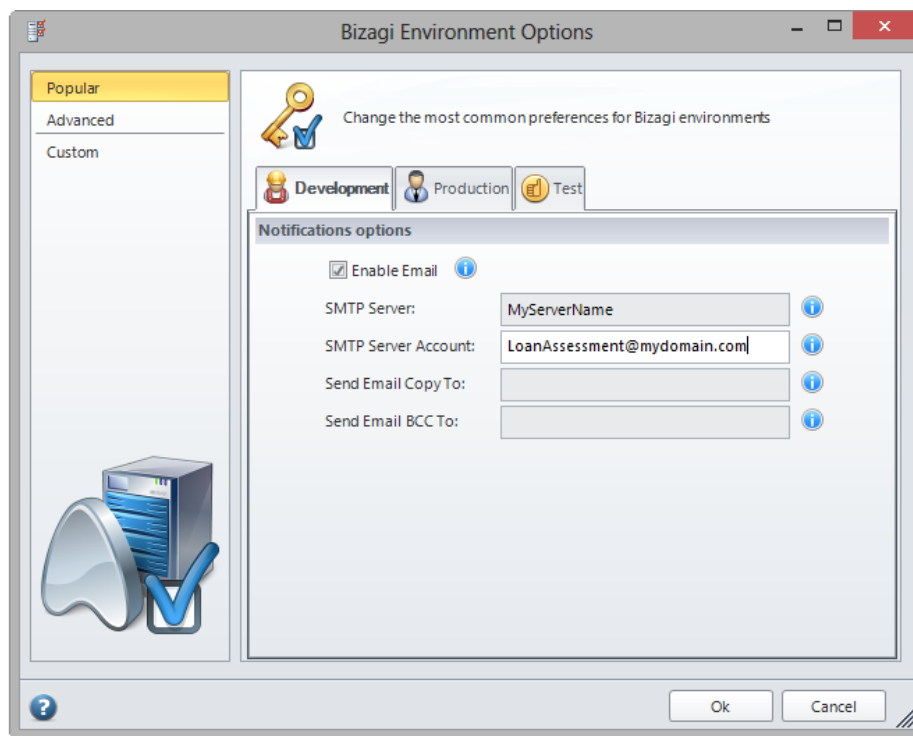
To configure the SMTP server:

Go to the *Configuration* tab in Bizagi Studio and select *Environment*.



The Bizagi Environment Options window will display. Check the enable mail checkbox and fill in the information for the SMTP server as follow:

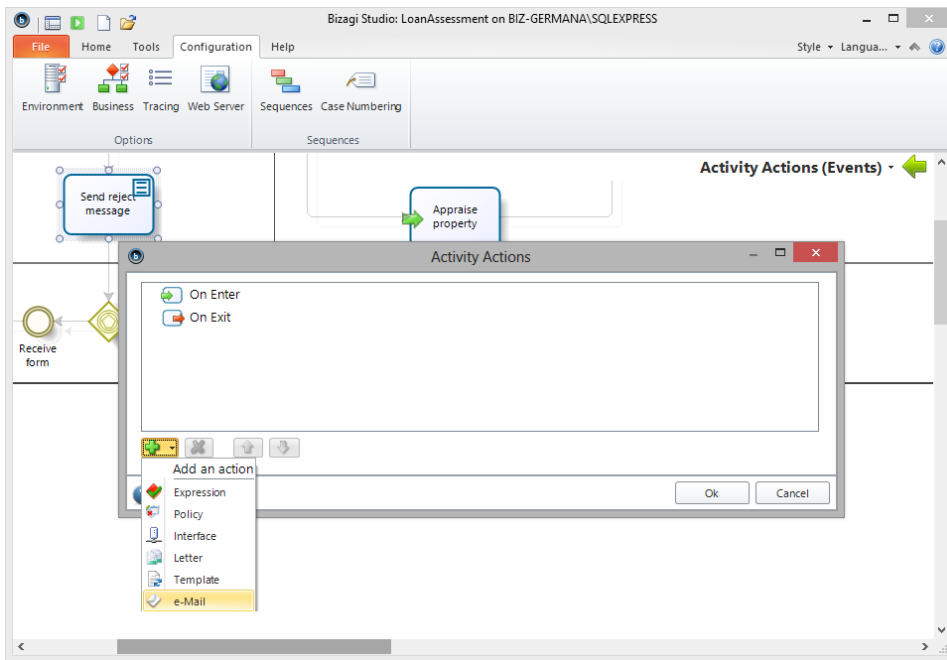
- **SMTP Server:** Your SMTP Server Name
- **SMTP Server Account:** A Valid E-mail Account on the domain. It will appear as return recipient of the emails sent.



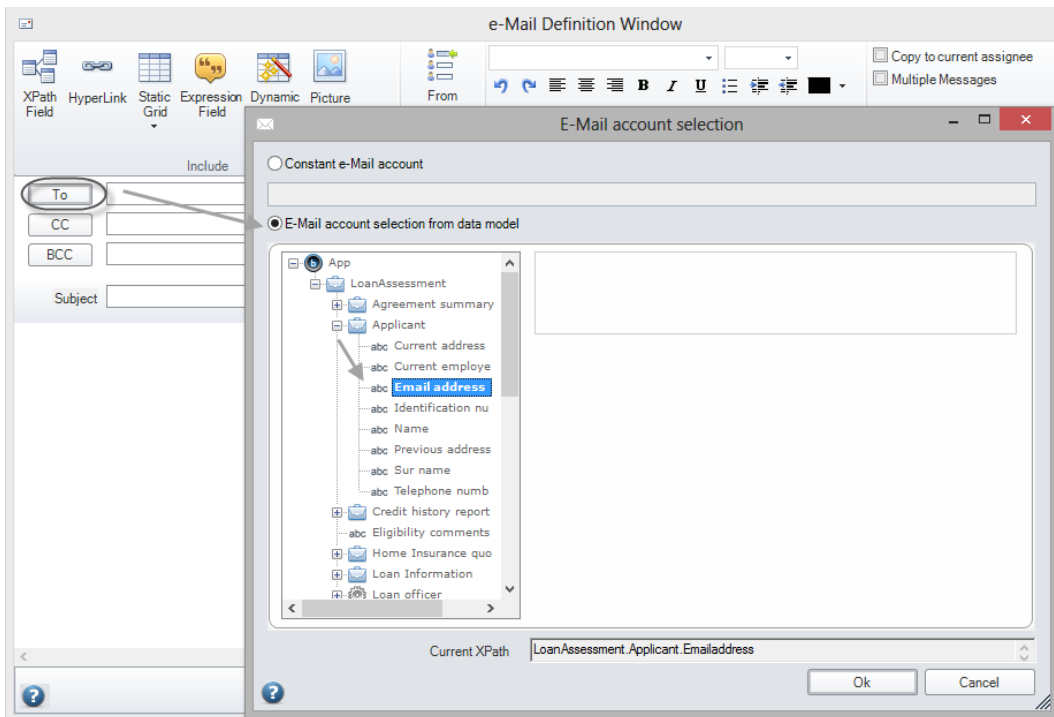
Creating the email actions

To create email actions:

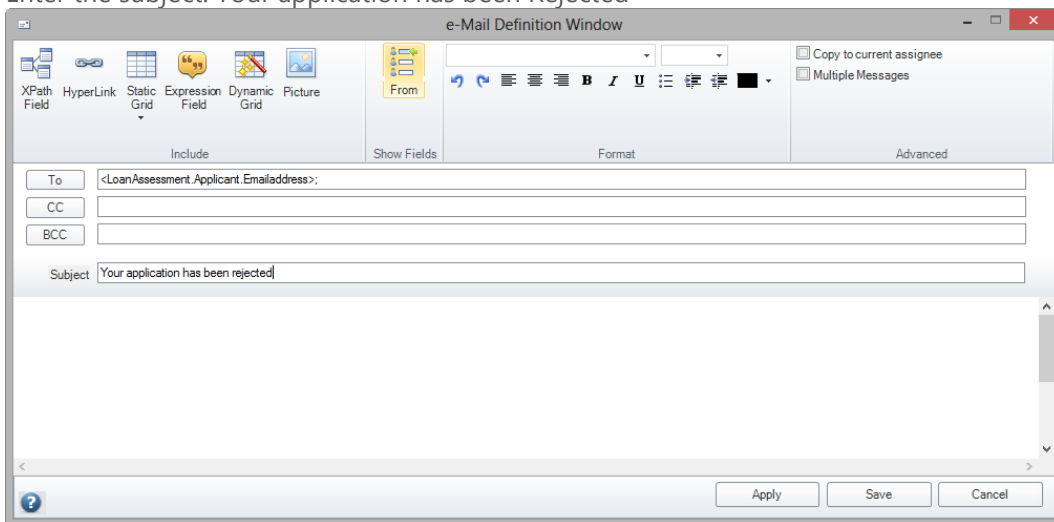
1. Go to the fourth step of the Process Wizard and select the option *Activity Actions*.
2. Click on the *Send rejection message* Task and add an *e-Mail* on exit of the Task.



In the Definition Window, set the To field to the *Email address of the LoanAssessment Applicant*.



Enter the subject: Your application has been Rejected



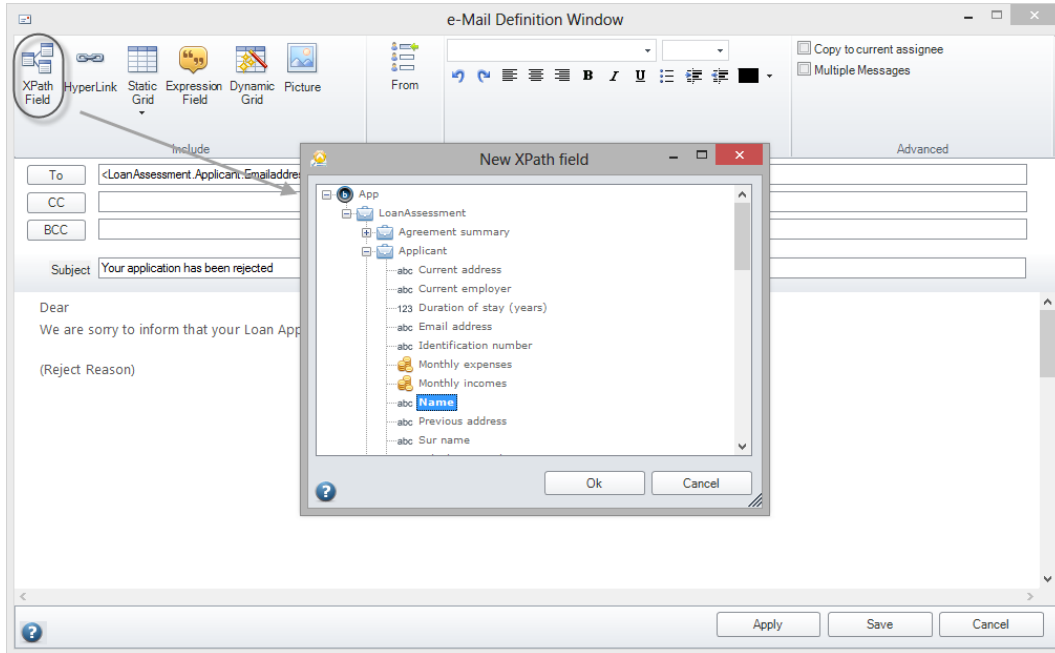
Include the following text in the body of the email (Note the text within brackets are only to show the location of the placeholders):

Dear (Applicant full name):

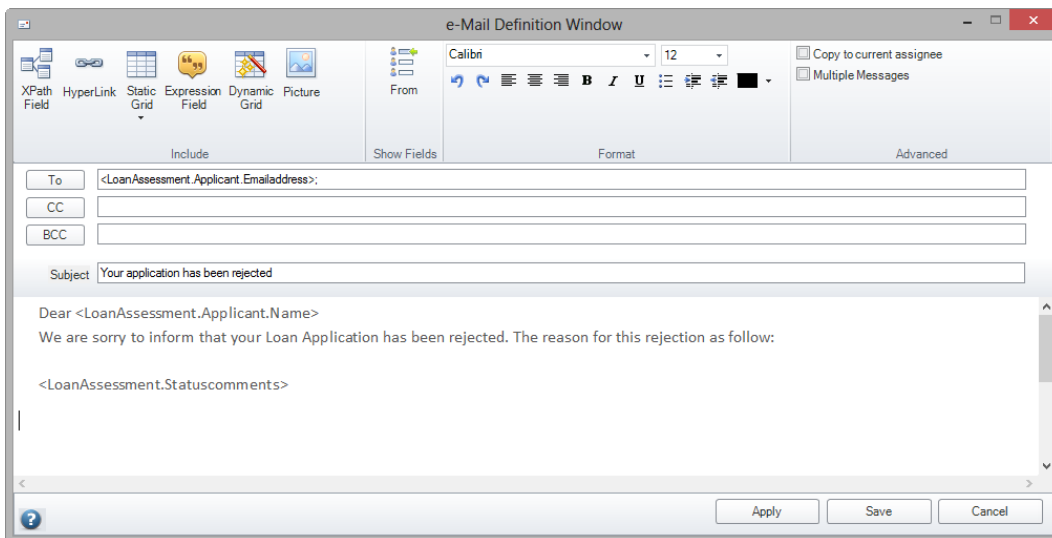
We are sorry to inform that your Loan Application has been rejected. The reason for this rejection as follow:

(Reject Reason)

- Next, we will include the placeholder attributes for applicant name and reject reason. Select the *XPath Field* option. Navigate the Data Model and select the *Name* attribute. Click **Ok**. Note the inclusion of the placeholder attribute in the body of the email. Do the same for the reject reason.

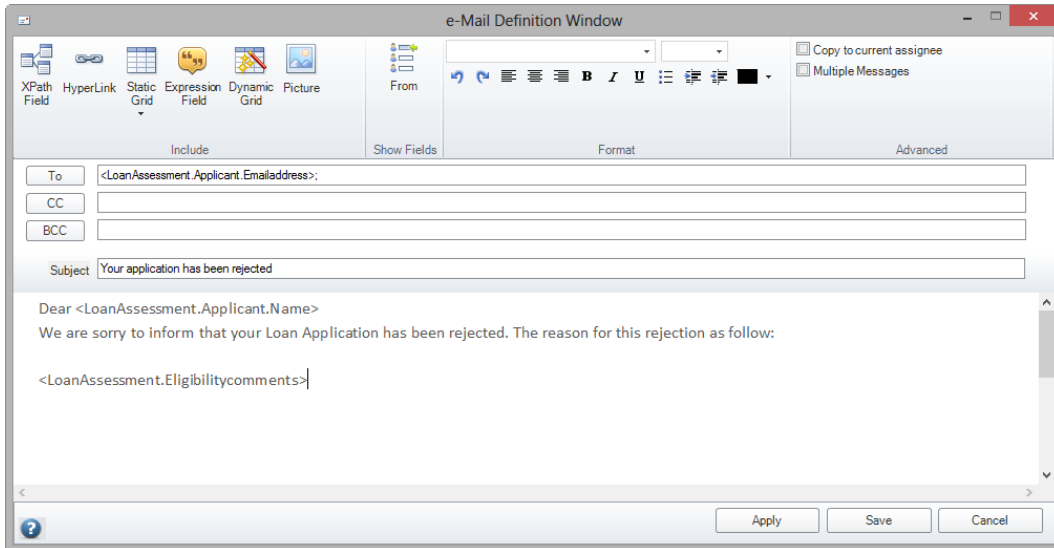


Your e-mail should look like this:

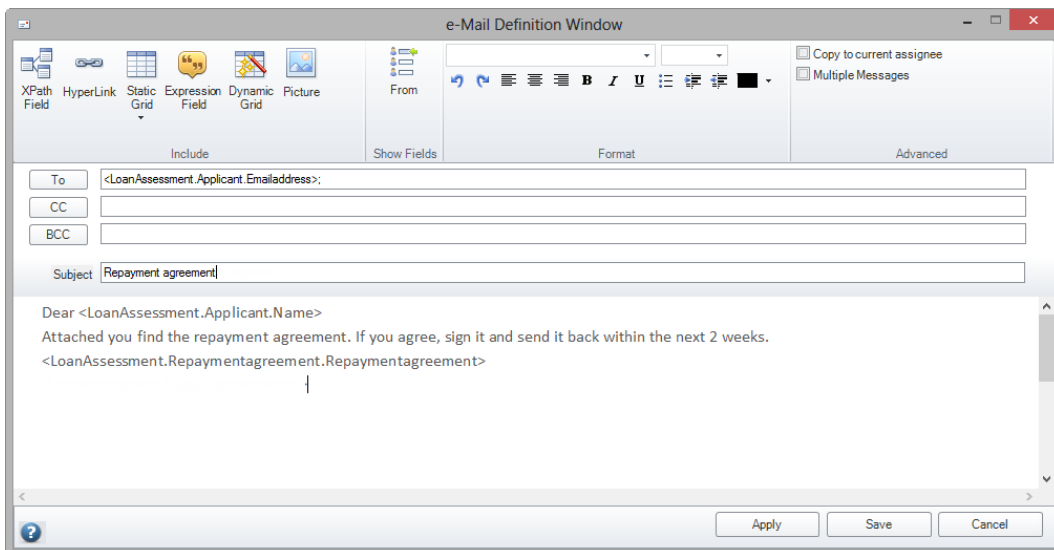


- Click **Save** to close the e-mail Definition Window and then **Ok** on the Activity Actions Window.
- Repeat the previous steps to create the following emails:

Reject application



Prepare and send acceptance pack



Prepare and send home insurance quote

The screenshot shows the 'e-Mail Definition Window' with the following configuration:

- To:** <LoanAssessment.Applicant.Emailaddress>
- CC:** (empty)
- BCC:** (empty)
- Subject:** Home insurance quotation
- Body:**

Dear <LoanAssessment.Applicant.Name>
 Attached you find the insurance quotation. If you agree, sign it and send it back within the next 2 weeks.
 <LoanAssessment.HomeInsurancequote.Insurancequote>
- Buttons:** Apply, Save, Cancel

Notify applicant

The screenshot shows the 'e-Mail Definition Window' with the following configuration:

- To:** <LoanAssessment.Applicant.Emailaddress>
- CC:** (empty)
- BCC:** (empty)
- Subject:** Status of your application
- Body:**

Dear <LoanAssessment.Applicant.Name>
 Your application was <LoanAssessment.Status.Status>
- Buttons:** Apply, Save, Cancel

Final words

Thank you for completing the workshop! It has been a pleasure for Bizagi to showcase why we are the most agile solution for process automation.

We hope your experience with Bizagi has been beneficial; should you have any questions or comments, please feel free to contact us at: <http://www.bizagi.com/contact/>

Next steps

- To learn more about Bizagi and BPMN please take our online courses at <http://elearning.bizagi.com/>
- Visit our documentation center at <http://help.bizagi.com/bpmsuite/en/>