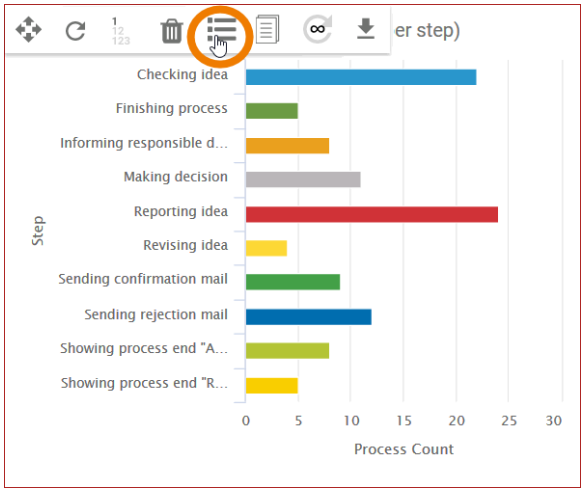
Examining Instances

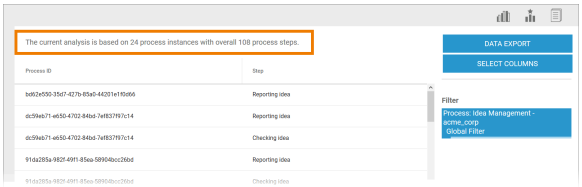
You can use the instance list or instance table to examine individual process instances. Since instance data from the **Scheer PAS** components (Designer, Integration and BPaaS) are different in some respects, the instance displays also differ slightly.



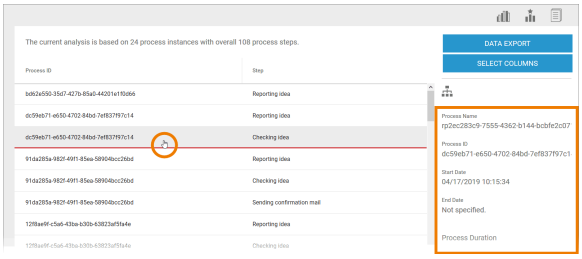
The instance table lists all the instances of the underlying process of an analysis.

You can open the instance table via option in the analysis menu.

The process instances are listed on the active dialog window. The heading includes a statement of the total number:



Click on an instance to select it. The instance details are shown in the sidebar:

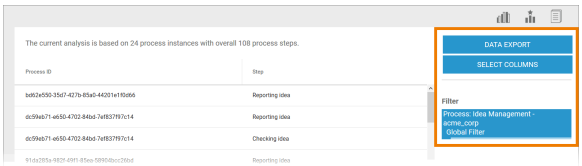


The following process instance details are shown:

- **Process Name**
- **Process ID**
- **Start Date** (including time, accurate to the second)
- **End Date** (including time, accurate to the second)
- **Process Duration** (accurate to the second)

Configuring the Instance List

Users can configure the instance list using the buttons in the sidebar:



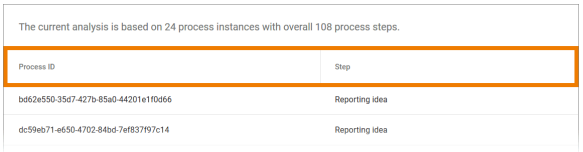
On this Page:

- Configuring the Instance List
  - Adapting the Column Selection
  - Filtering the Instance List
  - Sorting the Instance List
- Showing Process History
  - Exporting Instance Data
- Analyzing Process-specifc Values
  - Process-specific Values for Logging in Process Mining
    - Example

Related Pages:

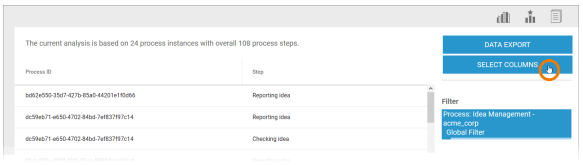
- The User Interface
  - The Analyses Sidebar
  - The Variants Sidebar
  - The Templates Sidebar
- Analyses
  - Configuring Filters

To enable identification of individual instances, the **process ID is** always specified as a column. The second standard column is a result of the axis allocation of the analysis:

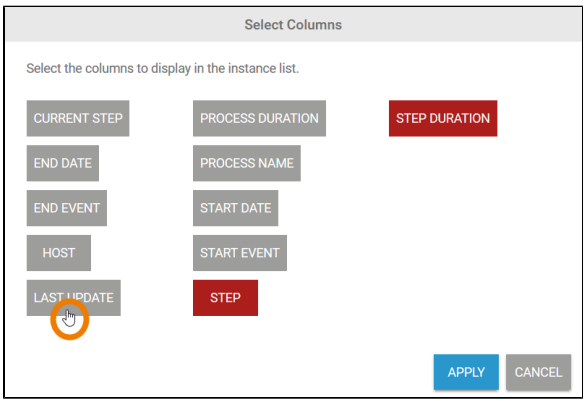
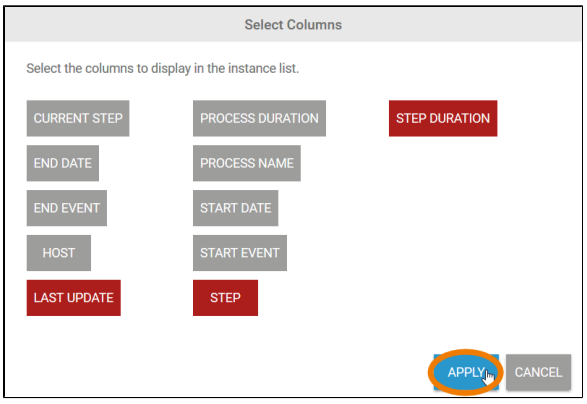
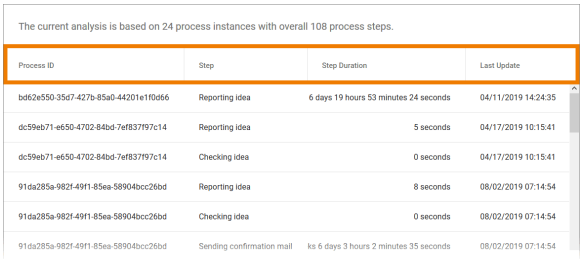


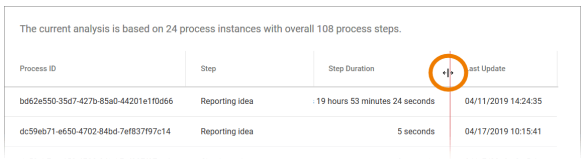
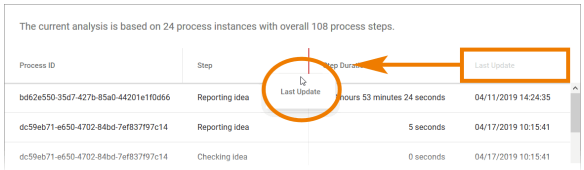
Adapting the Column Selection

You can adapt the columns of the instance list. Use option **Select Columns** in the sidebar:



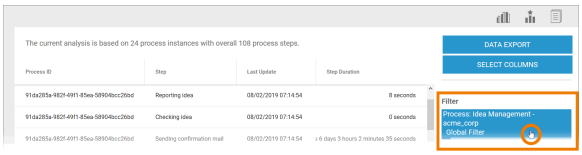
> To enable identification of individual instances, the **process ID** is always specified as a column. Other features can be chosen freely by the user.

	In the **Select Columns** dialog, select the values that you want to use as a column.
	The selected column contents are highlighted in color. Click **Apply** to adopt the selection and reconfigure the instance list.
	The selected columns are added to the instance list.

	You can adjust the column size by moving the tab.
	You can change the column order by moving an entire tab to a new position.

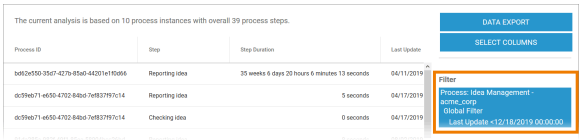
Filtering the Instance List

Use option **Filter** in the sidebar to set a filter for the instance table:

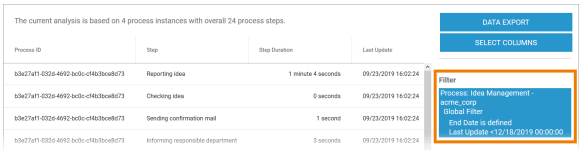


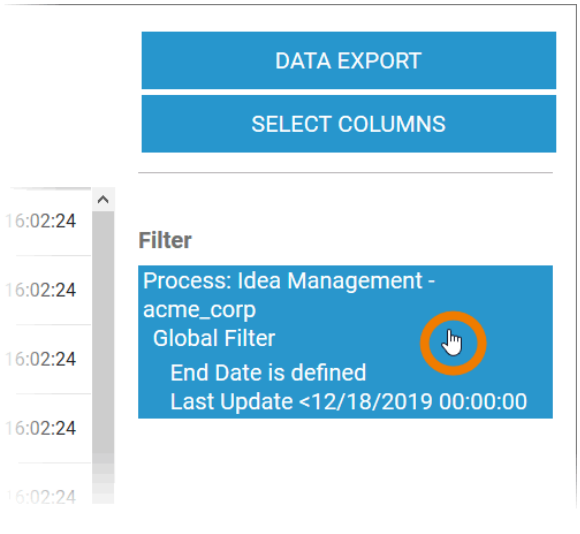
> An instance table filter does not affect the underlying analysis. If you exit the instance table, the filter is discarded.

If you have already set a filter for the underlying analysis, this filter will also be applied initially to the instance table:



If various measure-specific filters are used in the analysis, these are stored for the instance list:



	An existing filter that has been

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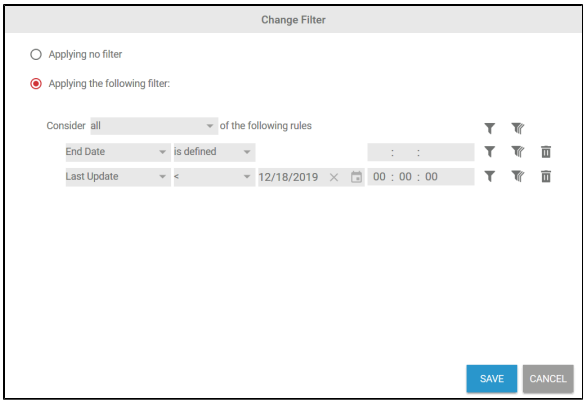
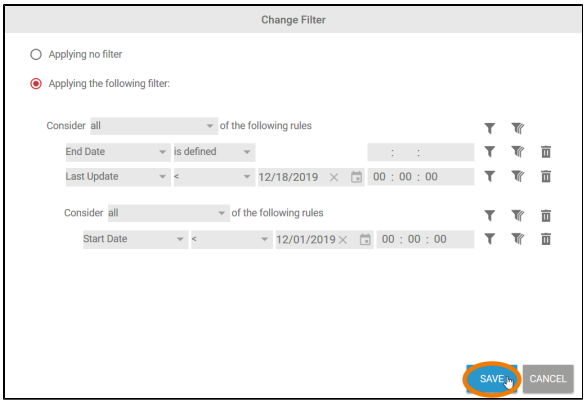
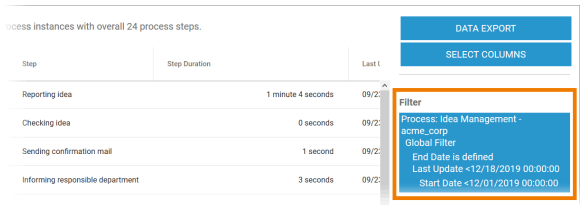
	ginalfilterremainssavedintheanalysis. To define a new filter or to change an existing filter, click on the filter display in the sidebar.



The filter settings open in a separate dialog. To create a new filter, select option **Applying the following filter**.

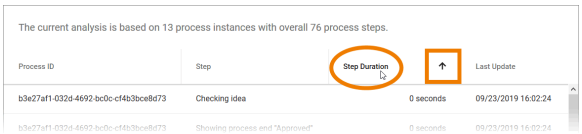
An instance filter is configured in accordance with the same principle as the creation of an analysis filter.

Refer to Configuring Filters for detailed explanations on all filter options.

	You can create as many filters as you wish. Filters can also be nested to any depth you require. **Save** the entries to apply the filter to the instance list.
	The filter is applied to the instance list. The filter settings are shown in the sidebar.

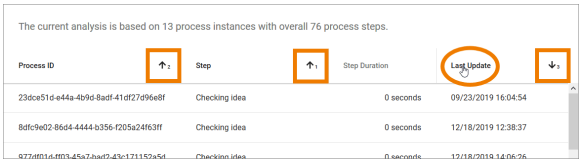
Sorting the Instance List

You can also ssort the contents of the instance list. Click the column you want to sort by:



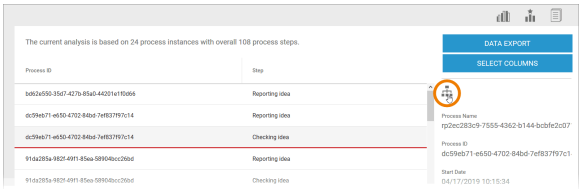
The instances are sorted according to the selected column. In addition an arrow appears in the top column, indicating whether the data has been sorted in an ascending ↑ or descending ↓ order. Change the direction by clicking again.

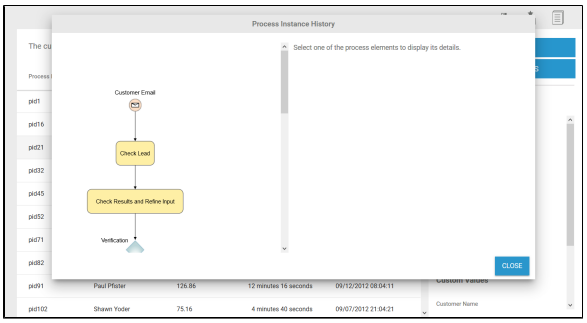
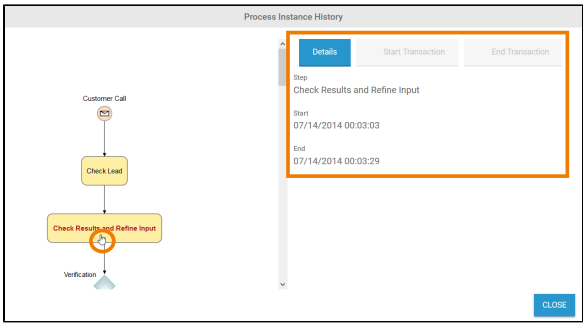
Multi-level sorting is also possible. Select the column by which you wish to sort first and then click on another column while holding down the **Shift** key. The sorting order is identified by the corresponding numbering of the columns:



Showing Process History

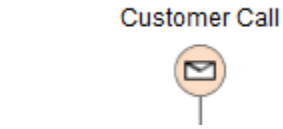
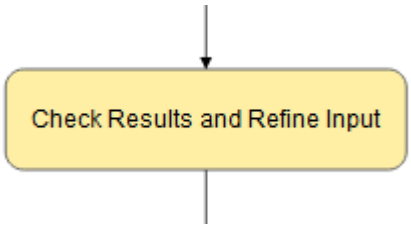
You can display the history of the selected process instance. Use option to open it.



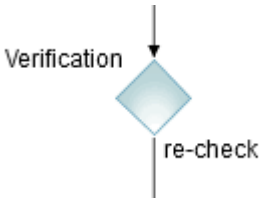
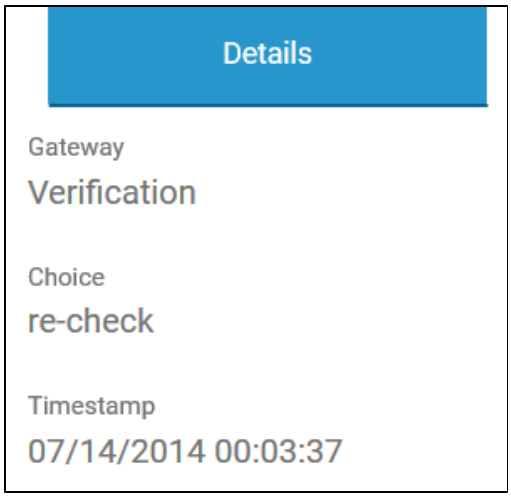
	The history of the process instance openes in a separate dialog. The consecutive steps run by the instance can be retraced by reference to the BPMN chart.
	The charts are interactive. Click on a process step to show details of the instance for this step in the right hand column of the window.

The detail view varies depending on the type of process step selected. The following details are shown:

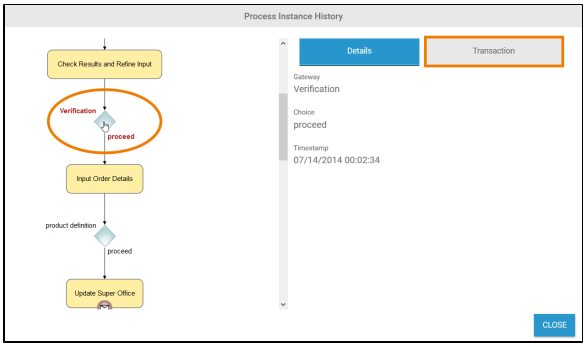
Step in the Chart	Detail View	Contents

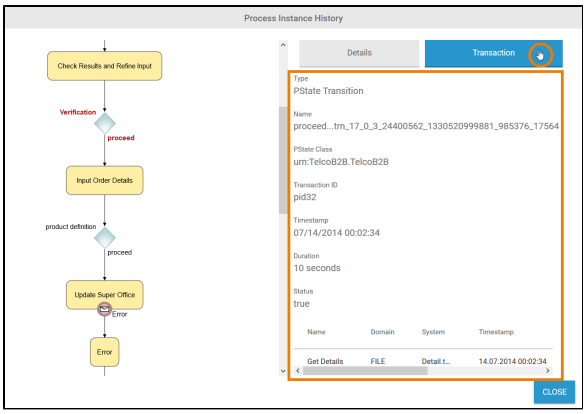
Event  	Details Start Event Customer Call Timestamp 07/14/2014 00:02:56	• Event name • Timestamp for event begin (accurate to the second)
Schritt (Task)  	Details Step Check Results and Refine Input Start 07/14/2014 00:03:03 End 07/14/2014 00:03:29	• Name of the step

		• Start (date incl. time, accurate to the second) • End (date incl. time, accurate to the second)

Gateway  	 	• Name of the Gateway • Name of the decision • Timestamp for event begin (accurate to the second)

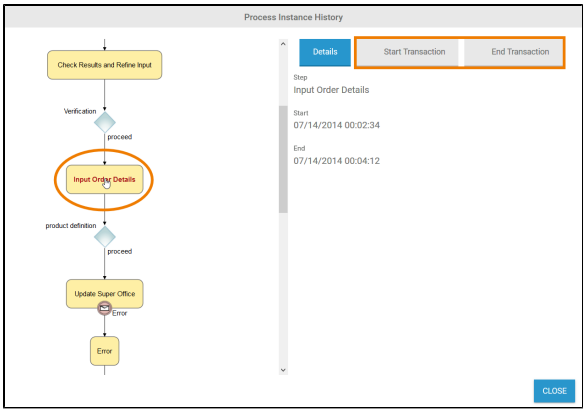
In addition to the detail view, another tab allows you to display transaction data.

	Tab **Trans action** is shown for events and gateways. The data shown relates to the Bridge call that executed the event or gateway.



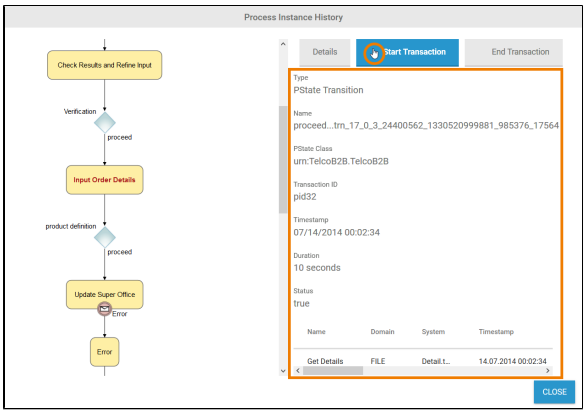
The following data is listed:

- Type (Service Operation or P-State Transition)
- Name
- PState Class
- Transaction ID
- Timestamp
- Duration
- Status (true /false)
- Associated IO Operation table:
  - Name
  - Domain
  - System
  - Timestamp
  - Duration
  - Status
  - Transaction ID



The **Start Transaction** and **End Transaction** tabs are shown for tasks.

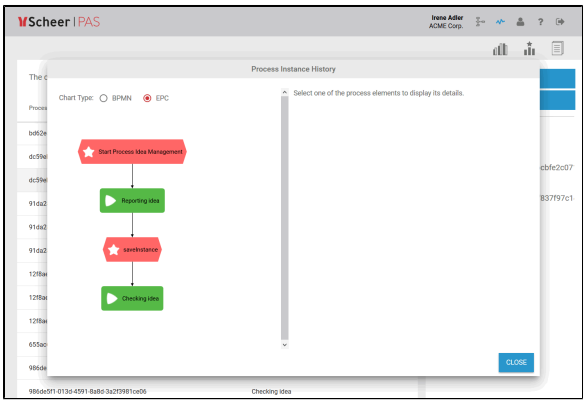
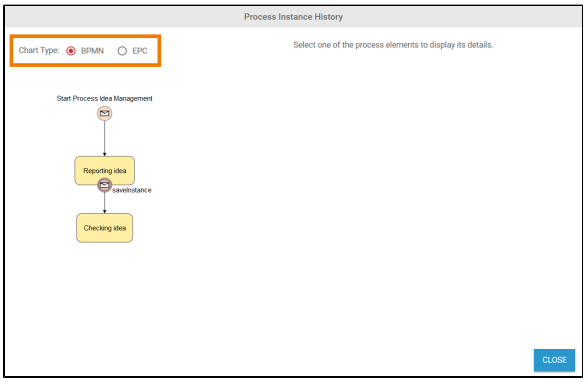
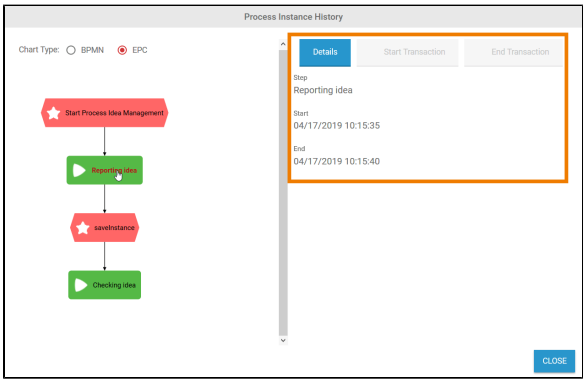
The data shown relates to the Bridge call that triggered the execution of the step (start transaction) or ended it (end transaction).



The data for **Start-** and **End Transactions** is listed as follows:

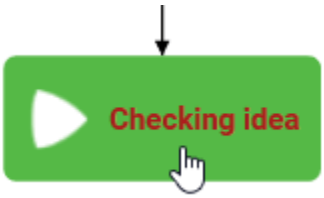
- Type (Service Operation or P-State Transition)
- Name
- PState Class
- Transaction ID
- Timestamp
- Duration
- Status (true /false)
- Associated IO Operation table:
  - Name
  - Domain
  - System
  - Timestamp
  - Duration
  - Status
  - Transaction ID

Refer to **Scheer PAS** *BRIDGE* Documentation > Transaction Logger for detailed information.

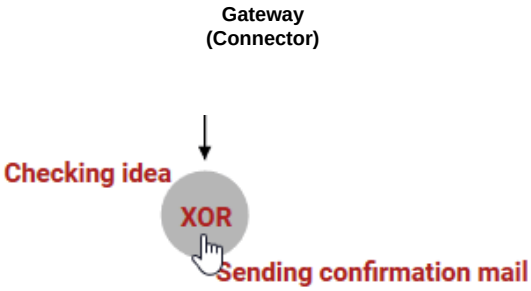
	The history of the process instance opens in a separate window. The consecutive steps run by the instance can be retraced by reference to the chart.
	Users of **Scheer PAS** component *BPaaS* can choose between an EPC or BPMN model view.
	The charts are interactive. Click on a process step to show details of the instance for this step in the right hand column of the window.

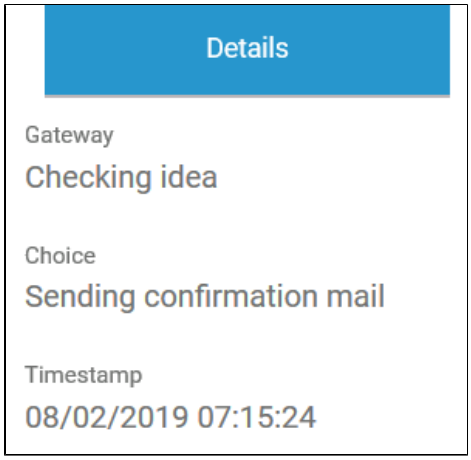
The detail view varies depending on the type of process step selected. The following details are shown:

Step in the Chart	Detail View	Contents

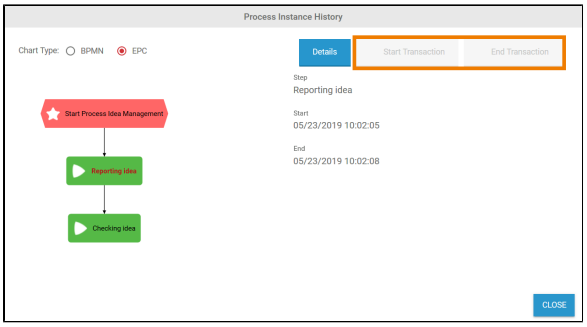
Event 	Details Event saveInstance Timestamp 04/17/2019 10:15:40	• Event name • Timestamp for event begin (accurate to the second)
Step (Function)  	Details Step Checking idea Start 04/17/2019 10:15:41 End 04/17/2019 10:15:41	• Name of the process step

		• Start (date incl. time, accurate to the second) • End (date incl. time, accurate to the second)

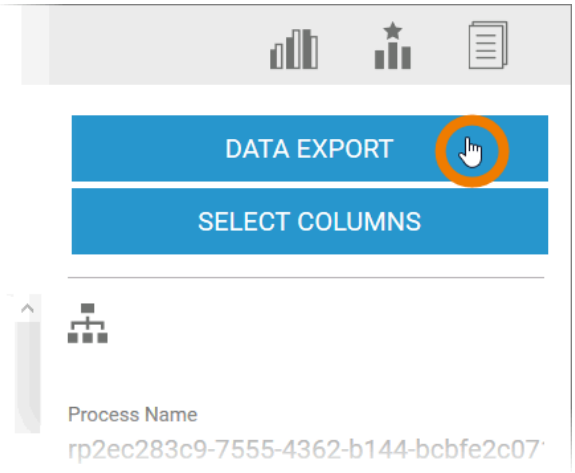
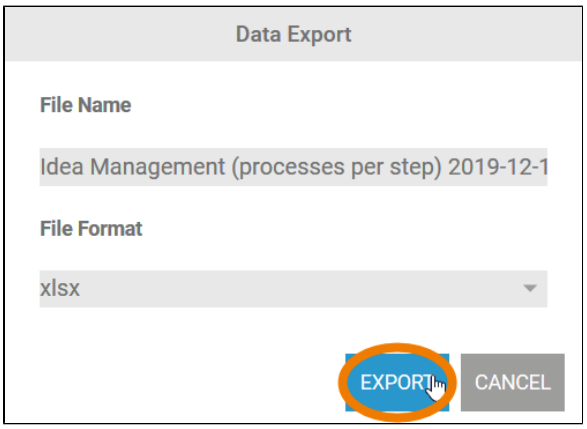




- Gateway (name of the process step **before** the decision)
- Decision (name of the process step **after** the decision)

		• Timestamp for event begin (accurate to the second)
		The **Start Transaction** and **End Transaction** tabs are greyed out for BPaaS users. This data is only available for processes in the integration component (Bridge).

Exporting Instance Data

	Instance data can be exported in file format. The file formats supported are • **xlsx** • **csv** • **ods** • **html** Use **Data Export** in the sidebar to export instances.
	In the **Data Export** dialog, enter the desired **File Name** and select the **File Format** for the export. The corresponding file extension is automatically added. Process name and current date are used as standard file name. Finally, click **Export** to start the download.

Analyzing Process-specifc Values

It is also possible to transfer process-specific values ("custom values") to **Scheer PAS** *Process Mining*. To do this the values must be logged during execution and transferred to Process Mining.

Process-specific Values for Logging in Process Mining

You can evaluate process information in Process Mining, for example in order to identify problems in a process. A pre-requisite for the evaluation is that the required process information is logged and transferred to Process Mining.

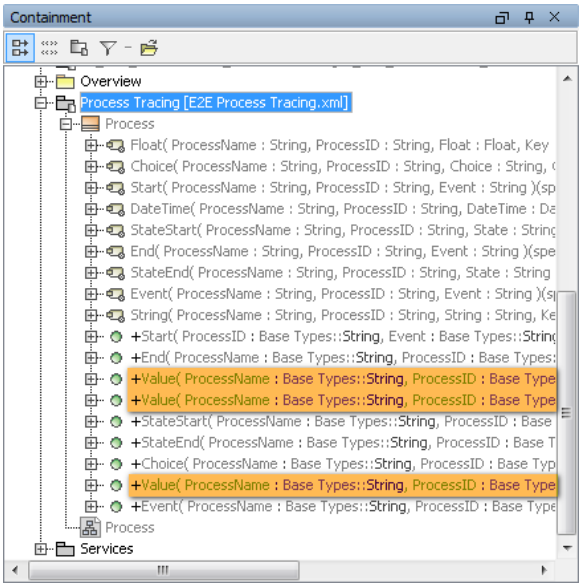
By default the following data is logged:

- **Current Step**
- **End Date**
- **End Event**

- **Host**
- **Last Update**
- **Process ID**
- **Process Count**
- **Process Duration**
- **Process Name**
- **Step**
- **Step Duration**
- **Start Date**
- **Start Event**

If you wish to expand the analysis with additional information on a process instance, you can widen the xUML service and log the values of customer specific fields (also referred to as **custom fields** or **custom values**). Each Builder model has a **process tracing** repository that can be used for this purpose.

Illustration: Process Tracing Repository in the Containment Tree of Magic Draw



The **process** class contains three **value** operations which can be used to log additional values from **String** , **Float** and **DateTime** fields.

> Process Mining tracing can also be used for SOAP services not based on a business process. Please use the following operations in the order shown below to do this:
>
> - **Start**
> Use **Start** at the beginning of a SOAP operation.
> - **Value**
> Use **Value** as often as necessary.
> - **End**
> Place **End** at the end of the SOAP operation.
>
> With this approach, you can use Process Mining to analyze the values logged by the SOAP service

Example

Example File (Builder project Advanced Modeling\BPMN):

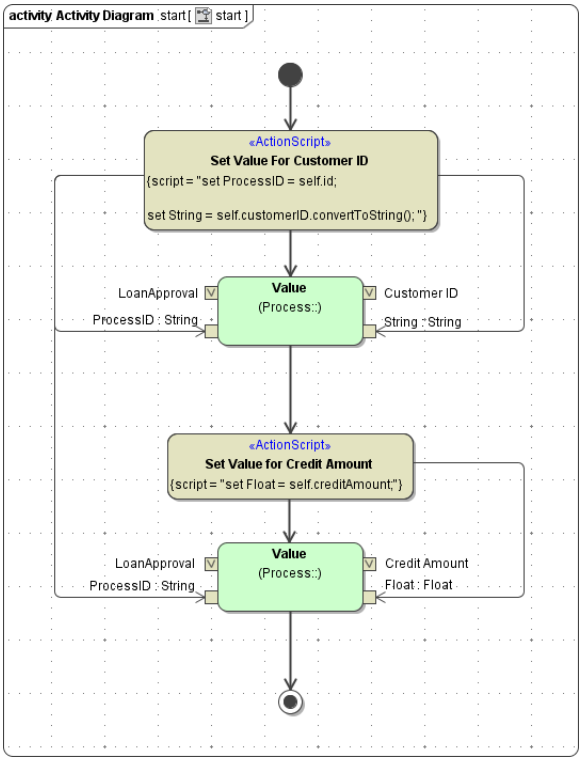
	<your example path>\AdvancedModeling\BPMN\uml\BPMNLoanApprovalServices.xml

The **LoanApproval** example implements a very simple credit authorization process. You can find further information on this example process in the **Scheer PAS** *BRIDGE* Documentation > A Simple Business Process.

In the **Loan Approval** process, additional custom fields are logged alongside the standard data:

- **Customer ID**
- **Credit Amount**

Illustration: Logging Additional Values for Process Mining



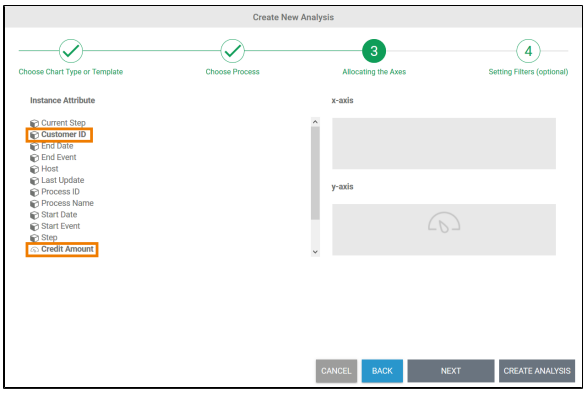
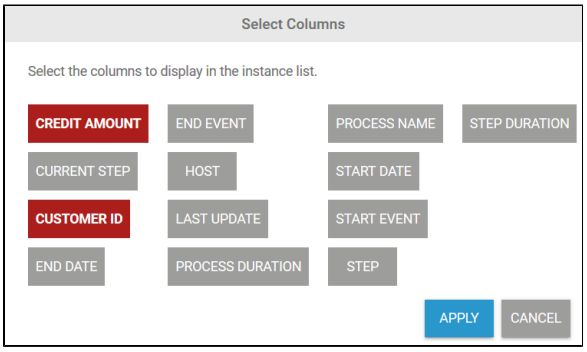
The three value operations each contain four parameters:

Group	Parameter Name	Type	Description
Process	ProcessName	String	Contains the name of the BPMN process. This value corresponds to the name of the Persistent State Class and must be set manually (for example **LoanApproval**).
	ProcessID	String	Contains the Process ID. The Process ID can be taken from the object.
Value	Key	String	Contains the name of the custom field (for example **credit amount**). This name appears in Process Mining: • when saving an analysis during the axis allocation step. • as a possible column in the instance table.
	String Float DateTime	String Float DateTime	Contains the value to be logged. This value is shown in the **Key** column in the instance list. The choice of **Value** operation is dependent on the value to be logged. Use the appropriate operation and apply the necessary parameters (**String**, **Float** or **DateTime)** .

Insert the logging of custom values only after logging the process start otherwise the additional logs cannot be assigned to the process.

If you want to create analyses for a service in process mining, you must first activate the log collection for this service. This is done in the process mining administration. Refer to Administration Guide > Collecting Logs for details.

In Process Mining, custom values are displayed in **bold**:

	When creating an analysis, custom values are available as selectable instance attributes for axis allocation.
	You can also select custom values as possible column configurations. Use option **Select Columns** in the right hand sidebar to open the list of available values.

Process-specific content, for example values from form fields, can be transferred to Process Mining and used in analyses. If you wish to log process specific values for Process Mining please contact your **Scheer PAS** consultant for advice.

> If you want to create analyses for a service in process mining, you must first activate the log collection for this service. This is done in the process mining administration. Refer to Administration Guide > Collecting Logs for details.

Process-specific content, for example values from form fields, can be transferred to Process Mining and used in analyses.

> **Restrictions for Designer Services**
>
> It is not possible to implement the logging for custom values with the following Designer elements:
>
> - **Start Event**
> - **Message Start event**
> - **Timer Start Event**
> - **End Event**

> If you want to create analyses for a service in process mining, you must first activate the log collection for this service. This is done in the process mining administration. Refer to Administration Guide > Collecting Logs for details.

Currently, log collection is only possible for services with deployment target **Integration**.