HOPEX Business Process Analysis

User Guide

HOPEX V2

INTRODUCTION

HOPEX Business Process Analysis is software edited by **MEGA International** to assist:

- ✓ Organizers in improving and redesigning enterprise business processes.
- ✓ Quality engineers describing the business processes of their organization.

It enables:

- ✓ Description of the detailed organization of operations during execution of organizational processes, and the participation of each of the enterprise org-units in these processes.
- ✓ Description of product or service offerings proposed by enterprise business processes.
- ✓ Description of enterprise value chains.
- ✓ Description of the enterprise organizational chart.
- ✓ Identification of the risks linked to the enterprise processes.
- ✓ Detailing of information system requirements involved in these application business processes. It is then possible to draw a map of the enterprise organization and information system (in conjunction with **HOPEX IT Architecture**).

☛ *The description of processes with **HOPEX Business Process Analysis** is based on the Business Process Modelling Notation (BPMN) maintained by the Object Management Group (OMG).*

Proposed Functionalities

Why Model Enterprise Activity?

Because business modeling helps you:

- Explain how your enterprise operates.
- Consider changes in the organization.
- Define IT requirements.
- Identify the risks linked to the enterprise processes.
- Specify collaborations with partners.

Explaining how your enterprise operates

There are three situations in which an explanatory diagram of processes implemented in an enterprise can enable better understanding of its operation:

- When a person is hired.
- When a person's duties change.
- When instructions are not fully understood.

The standard organizational chart provides you with only an overview showing the organizational unit hierarchy, without explaining how the enterprise functions. A process diagram helps you better understand how your enterprise operates.

Considering changes in the organization

Management must improve processes in an enterprise in order to eliminate weaknesses. Management can go further by transforming certain processes so that they become key competitive advantages for the enterprise.

Formally defining processes is a way to highlight those areas needing improvement.

Defining IT requirements

Business process description can be supplemented with IT means required, functionalities to be implemented, applications or application services used.

- The functionalities (which may or may not be IT) required to execute each operation.
- Applications used
- Other material or human resources required to carry out the process.

Identify the risks linked to the enterprise processes

The description of processes can be completed with the risks identified at each step of these processes or with IT resources or other equipment or human resources that they need.

Specifying interactions with partners

Interactions with partners of the enterprise should be precisely defined to enable automation of exchanges between the business processes of the enterprise and those of its partners as part of an e-business or EAI (Enterprise Application Integration) project.

Modeling with HOPEX Business Process Analysis

HOPEX Business Process Analysis offers tools enabling enterprise organization description.

Describing processes

You can write comments for each process element directly from the diagram. This offers many advantages:

- Description of each element is simpler and faster than writing the complete process.
- Reports can be built automatically.
- Easy retrieval of process descriptions for insertion into other processes.
- The volume of text is significantly reduced.

Producing documents

Documents are automatically generated from the elements entered when describing the diagram.

- The general structure is independent of the writer.
- Document generation is automatic.
- Documents have a standard layout and consistent style.
- Descriptions are automatically reused in the different documents.
- Document consistency is assured.

☺ *You can modify the layout and formatting of documents generated by **HOPEX Business Process Analysis** and create new ones. See the **HOPEX Power Studio** guide.*

Producing an Intranet site

HOPEX Business Process Analysis allows you to automatically generate an Intranet site describing the processes used in the enterprise.

Upgrading and maintaining your processes

As your organization evolves, so do your processes.

HOPEX Business Process Analysis allows you to make your changes in one location, and have them propagated to all processes involving those elements. This allows:

- Rapid access to the elements that you want to modify.
- You can analyze impacts of modification of a process in other processes in which this element appears.
- Automatic regeneration of all documents concerned.

This User Guide is designed to help you quickly discover the power of **HOPEX Business Process Analysis**.

Connecting to HOPEX Business Process Analysis

Prerequisites for Using HOPEX Business Process Analysis

Certain administration operations are necessary for the use of assessment questionnaires supplied with **HOPEX Business Process Analysis**.

HOPEX is installed. To access the functions specific to **HOPEX Business Process Analysis**, you must:

- have **HOPEX Business Process Analysis** product,
- import the ISO solution pack, compressed in the ISO.exe file.

☛ *The ISO.exe file gives access to the data of the ISO 9001 2015 standard.*

For more details on importing a solution pack, see the **HOPEX Power Supervisor** guide, "Managing objects"> "Importing Reference Frameworks in MEGA" > "Importing a Solution Pack".

Connecting to the solution

To connect to **HOPEX Business Process Analysis**, see HOPEX Common Features, "HOPEX Web Front-End Desktop".

HOPEX Business Process Analysis Profiles

In **HOPEX Business Process Analysis** , there are, by default, business profiles with which specific activities are associated.

Presentation of the solution interface depends on the profile selected by the user on connection to the application; the tree of menus and functions varies from one business role to another.

Profiles	Tasks
Process Functional Administrator	In addition to the functional rights of the Process Manager, the Process Functional Administrator has rights to all objects, methods, projects and workflows. Prepares the work environment and creates elements required for management of process. Manages: - Users, assignment of roles and access rights to the different project steps. - all environment objects (processes, customer journeys, reports, etc.), - Workflows.
Process Manager	The Process Manager has rights to all objects, methods, projects and assessments.
Process Designer	The Business Process Designer is responsible for creating the functional and organizational process models entrusted to him/her. In addition to the business process designer (basic), the Process Designer can manage transformation projects.
Process Designer (Basic)	The Business Process Designer (basic) is responsible for creating the functional and organizational process models entrusted to him/her.
Process Contributor	The contributor to a process is responsible for validating the design of the processes entrusted to him/her.
Process Viewer	The Process Viewer has read-only rights on objects in the repository.
Process Risk Designer	The process risk designer is responsible for identifying the risks associated with the functional and organizational process models entrusted to him/her.

Other roles are provided to assure operation of **HOPEX Business Architecture**, for example: Project Head, Project Participant or Owner.

HOPEX Business Process Analysis Overview

HOPEX Business Process Analysis Desktop Presentation

The menus and commands available in **HOPEX Business Process Analysis** depend on the profile with which you are connected.

☛ *For more details on using the Web platform for HOPEX solutions, see the **HOPEX Common Features** guide.*

☛ ***HOPEX Business Process Analysis** is mainly intended for web users. Desktops described in this guide are accessible to Web desktop users.*

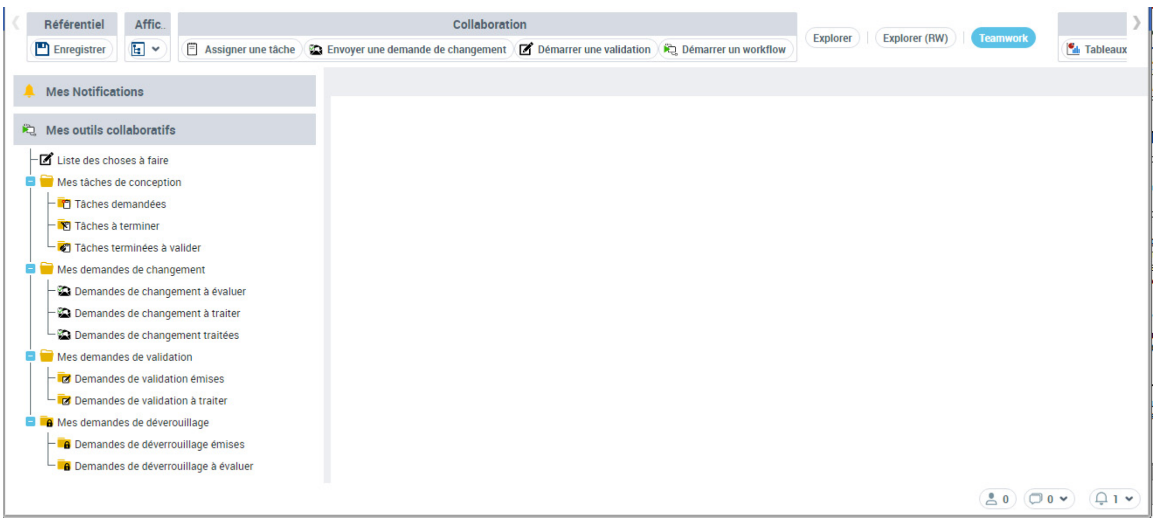
Presentation of space common to all profiles

All users have access to the **HOPEX Business Process Analysis** desktop and access to the following panes:

- **Home** and **List of Tasks** that are common to all **HOPEX** solution users.
- **Design** : gives access to all the process models described.
- **Customer journey**: gives access to the mapping of the customer journey if you have the **HOPEX Customer Journey** module.
- **Reports**: accesses all reports, improving understanding of terms and their use.

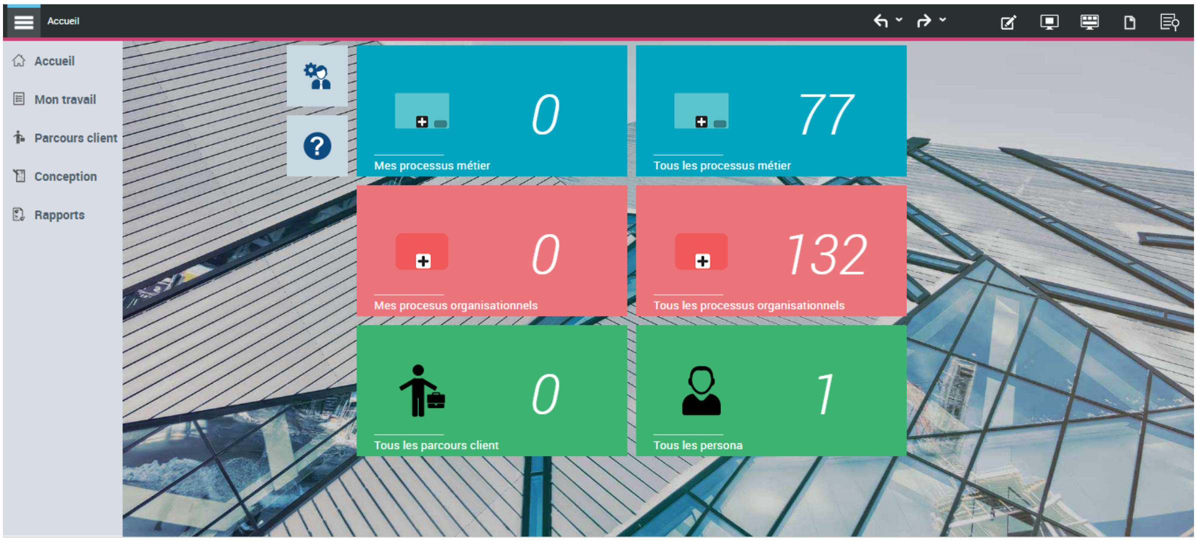
Presenting the Process Viewer space

Users connected with the **Process viewer** profile have access to the Enterprise Architecture desktop for **HOPEX** solutions via the **HOPEX Explorer** application.



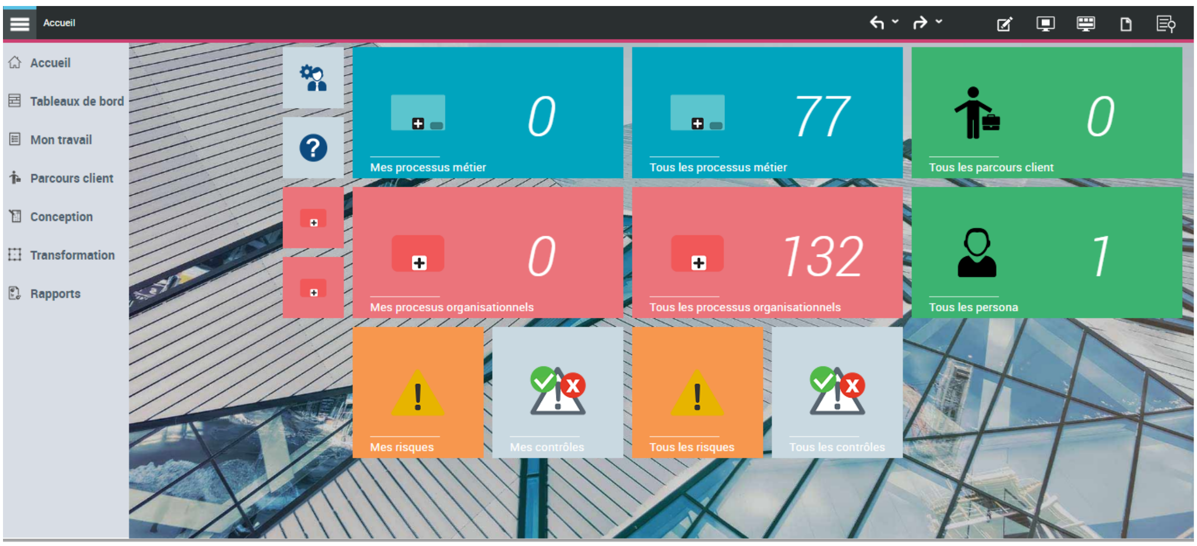
Presenting the Process Designer space (basic)

Users connected with the **Process designer (basic)** profile have access to the panes offered in standard mode to all users of the **HOPEX Business Process Analysis** desktop.



Overview of the Process Designer and the Process Risk Designer space

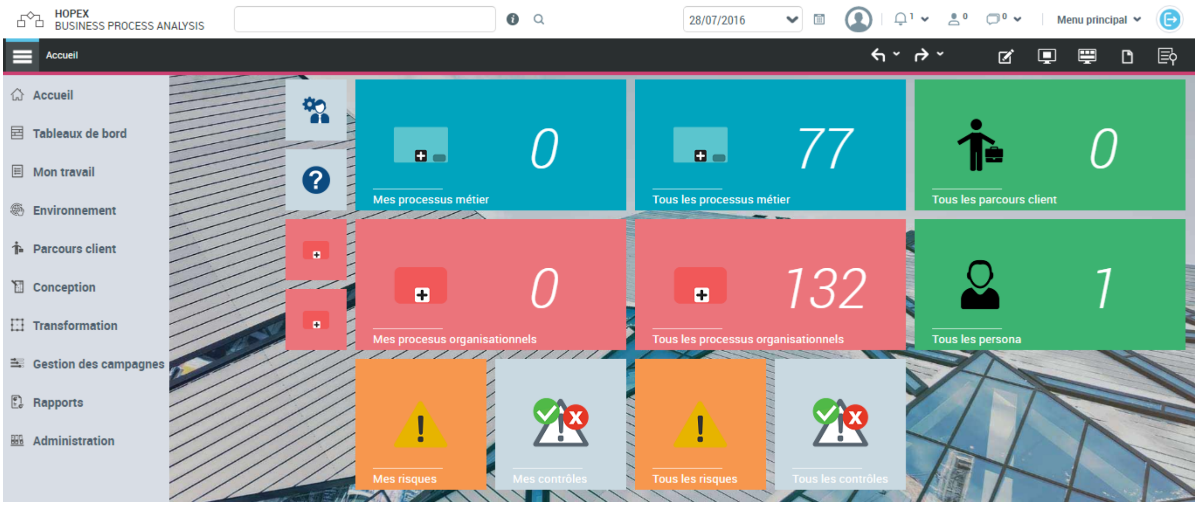
In addition to the panes offered in standard mode to all users of the **HOPEX Business Process Analysis** desktop, the process designer has access to the **Transformation** pane which gives access to all the phases and all the steps of each of its projects.



Overview of the Process Functional Administrator and the Process Manager space

In addition to the panes offered in standard mode to all **HOPEX Business Process Analysis** desktop users, the users connected to one or the other of these profiles have access to the following panes:

- **Environment** , for managing libraries;
- **Transformation**, which gives access, at a minimum, to the project management facilities;
- **Campaign management** , which gives access to the assessment facilities;
- **Administration**, which gives access to user management facilities.



Using Libraries

Libraries are collections of objects used to split HOPEX repository content into several independent parts. They allow creation of virtual partitions of the repository. In particular, two objects owned by different libraries can have the same name.

In the context of the **HOPEX Business Process Analysis** solution, a library can hold all the elements of your project: processes and org-units, for example.

Accessing the list of libraries

To access the list of libraries from the **Environment** navigation pane:

- Select **Libraries** in the navigation menu.
  The library tree appears.

Creating a Library

To access the list of libraries from the **Environment** navigation pane:

1. Select **Libraries** in the navigation menu.
   The library tree appears.
2. Select **New > Library**.
   A **Libraries** creation dialog box opens.
3. Specify the the name of the library.
4. If appropriate, enter the name of the **Owner**.
5. Click **OK**.
   The library appears in the tree.

Defining a Default Library

The default library is used to store an object if the holder is not defined at the time of object creation.

To define your default library:

1. In the **Environment** navigation pane, select the library on which you wish to work.
2. Right click on the library and select **Set As Default**.
   This library appears with a green tick, and is automatically placed in the **Default Library** folder.

Accessing the Properties of a Process with HOPEX Business Process Analysis

The properties of the different business processes (business, functional or organizational) available in **HOPEX Business Process Analysis** depend on the profile with which you are connected and the products that you possess.

Process characteristics

The **Characteristics** tab of the properties window of a process is divided into different sections:

The **Identification** section of the properties window for a process provides access to:

- its **Name**,
- its **Owner**, by default on creation of the process, it is held by the default library.

  ☛ *For more details on containers, see "Using Libraries", page 19.*

- its **Code**,
- its **Parent**,
- its update **State**,
- the text of its **Description**.

The property tabs of a process

With **HOPEX Business Process Analysis**, a process is described by the following tabs:

- the **Assessment** tab that is used to access the different possibilities for assessing the process.

  ☛ *For more details, see "Assessments With HOPEX Business Process Analysis", page 157.*
- the **Collaboration** tab, which is used to access:
  - the collaborative work facilities with the **Wall** sub-tab,
  - the request for change facilities with the **Work flow** sub-tab,
- the **Reporting** tab, used to access the different reports available on the process.

  ☛ *For more details, see "HOPEX Business Process Analysis Reports", page 177.*
- the **Solution Manager** tab, used to access the facilities offered with the **HOPEX SAP Blueprint** product.

  ☛ *For more information, see **HOPEX SAP Blueprint**.*

About This Guide

This guide presents how to make best use of **HOPEX Business Process Analysis** to assure efficient management of your modeling projects.

☛ *Differences between **HOPEX Windows Front-End** and **HOPEX Web Front-End** are indicated where appropriate for each functionality.*

Guide Structure

The **HOPEX Business Process Analysis** guide comprises the following chapters:

- "Organizational Processes", page 25 presents how to define participants and the sequence flow of operations of an organizational process.
- "Business Processes", page 55 presents how to specify enterprise product and service offerings, and the breakdown of the processes producing these.
- "Functional Processes", page 63 describes the representation of enterprise value chains in terms of activities. It enables freeing from the existing organization to imagine new organization solutions for your processes.
- "System Processes", page 71 describes the IT process required for implementation of an organizational process by sequencing tasks executed.
- The "Conversations", page 85 chapter explains how to model conversations between process architecture components.
- "Organizational Charts and Responsibilities", page 99chapter describes how to create an enterprise organizational chart and how to define responsibilities of persons and org-units.
- The "The customer journey", page 111 chapter is used to represent the acquisition process of a product or a service by a specific customer.
- The "Tabular diagram input", page 141 chapter describes the automatic building facilities of a diagram using a table.
- The "Assessments With HOPEX Business Process Analysis", page 157 chapter describes how to assess the execution and performance of business and organizational processes with **HOPEX Business Process Analysis**.
- The "Action Plans with HOPEX Business Process Analysis", page 167 chapter describes how to use the action plans with **HOPEX Business Process Analysis**.
- "HOPEX Business Process Analysis Reports", page 177 presents reports proposed by **HOPEX Business Process Analysis** to assist users at each step of architecture description and analysis projects.

Additional Resources

This guide is supplemented by:

- The **HOPEX Common Features** guide describes the basic functions common to **HOPEX** products and solutions.

  ☛ *It can be useful to consult this guide for a general presentation of the interface.*
- The **HOPEX Assessment** guide, which describes functions proposed by **HOPEX** to use and customize assessment questionnaires.
- the **HOPEX Power Supervisor** administration guide.
- More advanced technical functions are described in the **HOPEX Power Studio** guide.

ORGANIZATIONAL PROCESSES

The aim of this chapter is to familiarize you with **HOPEX Business Process Analysis**: it introduces a fewfeatures of the software dedicated to organizational process modeling activities.

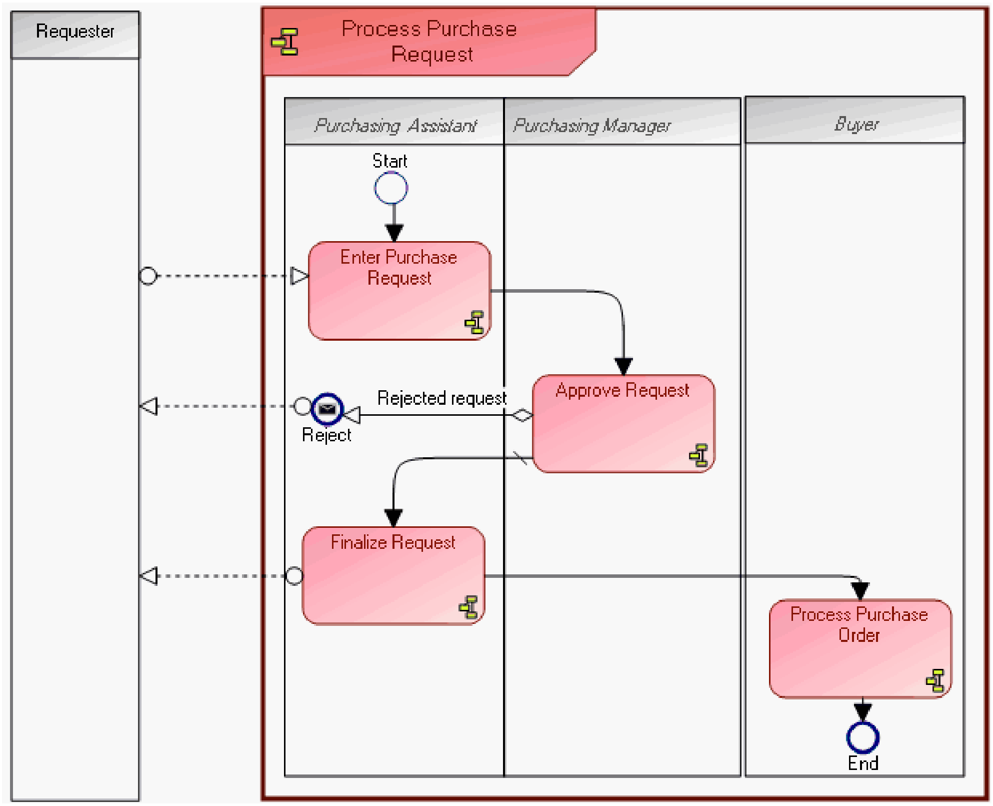
☛ *For more details on management of your desktop, and of diagrams and objects, see the **MEGA Common Features** guide.*

An organizational process is a set of operations performed by org-units within a company or organization, to produce a result. It is depicted as a sequence of operations, controlled by events and conditions.

The points covered here are:

ORGANIZATIONAL PROCESS EXAMPLE

In the example of the purchase request process, the organization is represented by the following diagram.




```
The purchase request is received by a purchasing assistant,
who enters the request and submits this for the approval of
the purchasing manager.
If the request is rejected, the purchasing manager informs
the requester.
If the request is approved, the assistant sends a completed
request to buyers responsible for issuing the order, and
sends a confirmation message to the requester.
```

This chapter explains how to use the main objects presented in this diagram.

- The frame containing the different components represents the *organizational process* described by the diagram. Its name "Process Purchase Request" appears in the box at top left.

  An organizational process is a set of operations performed by org-units within a company or organization, to produce a result. It is *depicted as a sequence of operations, controlled by events and conditions.*

- The *participants* in execution of this process are *org-units*. They are represented in columns for reasons of diagram readability.

  An org-unit represents a person or a group of persons that intervenes in the enterprise business processes or information system. An org-unit can be internal or external to the enterprise. An internal org-unit is an organizational element of enterprise structure such as a management, department, or job function. It is defined at a level depending on the degree of detail to be provided on the organization (see org-unit type). Example: financial management, sales management, marketing department, account manager. An external org-unit is an external entity that exchanges flows with the enterprise. Example: customer, supplier, government office.

  A participant (org-unit) enables representation of org-units assigned to execute a group of process operations.

  See "Defining Participants", page 30.

- The different steps in this process are *operations*. Organization of these steps is described by sequence flows.

  An operation is an elementary step in an organizational process executed by an org-unit. It cannot be broken down. An operation can be industrial (manufacturing a component), logistical (receiving a delivery), or can involve information processing (entering an order).

- *Message flows* enable representation of data or information circulating between a process and the exterior.

  A message flow is information flowing within an enterprise or exchanged between the enterprise and its business environment. A message flow can carry a content.

CREATING ORGANIZATIONAL PROCESSES

This section explains how to describe your work context and describe an organizational process.

An organizational process is a set of operations performed by org-units within a company or organization, to produce a result. It is depicted as a sequence of operations, controlled by events and conditions.

Work Library

The context in which you will work is defined by a library.

In the context of this example, you will create a specific library.

To create a library:

1. In the **HOPEX** workspace, select the **Home** navigation window.
2. In the navigator, right-click the **Default Library** folder.
3. Select **New** > **Library**.
   The **Creation of Library** dialog box appears.
4. Enter the name of your library.
5. Click **OK** to close this dialog box.
   The library appears in the **Home** navigation window and becomes the default library.

   ☛ *Under normal circumstances, a work library in an enterprise is defined by the project manager.*

Creating an Organizational Process

To create an organizational process from a library:

1. Right-click the library in question.
2. Select **New** > **Organizational Process**.
   The **Create Organizational Process** dialog box appears.
3. Enter the name of the organizational process.
4. Click **OK** to close this dialog box.
5. Expand the tree of your library to display the new process.

Creating an Organizational Process Diagram

The procedure varies slightly depending on whether you are in Windows Front-End or Web Front-End.

Windows Front-End

To create an organizational process diagram:

1. Right-click the process name and select **New Diagram**, then the "Organizational Process Diagram" diagram type.
2. Keep the option **Diagram initialization** selected (by default) to initialize the diagram. Diagram initialization automatically positions the frame of the described process and the main events.
3. Click **Create**.

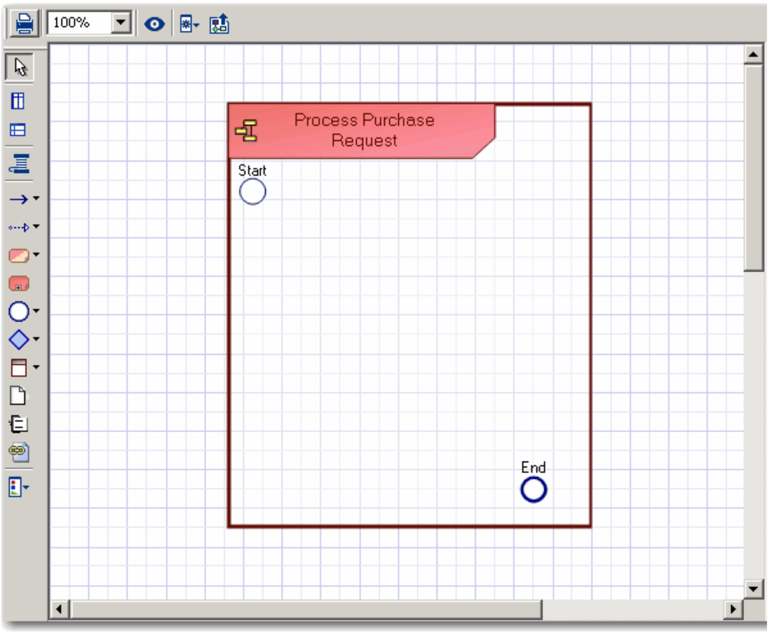
Web Front-End

To create an organizational process diagram:

- Right-click the process name and select **Organizational Process Diagram**.

The diagram window appears. You are now in the **HOPEX** graphic editor.

Example



The diagram is initialized: the current process, represented by a frame, is placed in the diagram.

DEFINING PARTICIPANTS

A participant enables:

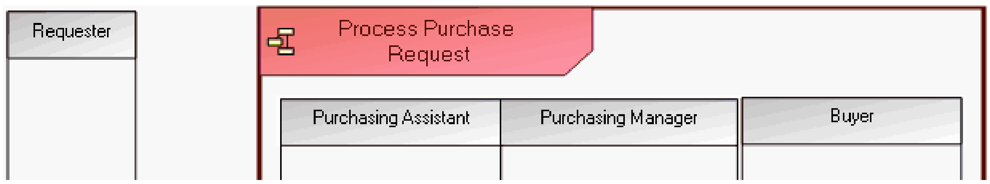
- Assignment of a group of operations to one or to several enterprise org-units.
- Representation of a unit external to the process with which the process communicates by means of message flows.

Creating Participants

To create an org-unit participating in execution of a process:

1. In the diagram insert toolbar, click the **Participant** button .
2. Click in the diagram workspace within the organizational process frame. The participant appears in the diagram.
3. Click the "Participant" name and press key <F2> to modify the name of the participant.

Example of participants



Creating an Org-Unit Participant

To create an org-unit from a new participant:

1. Click the arrow on the right of the **Participant** button in the insert toolbar, and in the drop-down list select **Participant (Org-Unit)**.
2. Click in the diagram workspace within the organizational process frame. The **Create Participant (Org-Unit)** wizard opens.
3. To create an org-unit from this participant, enter the name of the new org-unit in the **Org-Unit** text box.
4. Indicate the name of the participant if you wish to specify the org-unit role in the process.

5. Click **Finish** (Windows Front-End) or **OK** (Web Front-End).
   The participant is positioned in the diagram. If you have not specified a name, it will carry the name of the assigned org-unit.

   ☺ *To hide the name of the participant, open its pop-up menu and select **Shapes and Details**. In the tree on the left, click the "Short Name" folder, then in the **Content** tab, clear the **Short Name** check box.*

Assigning Org-Units to Participants

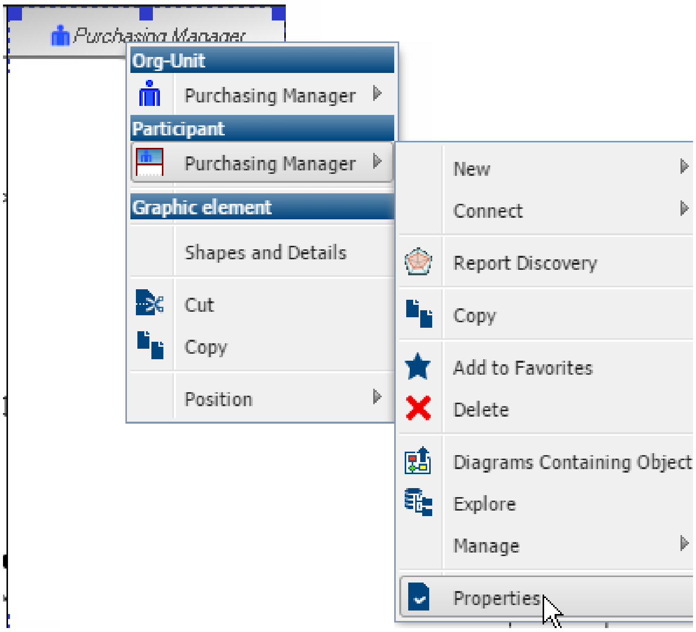
Org-units, either new or already created, can be assigned to participants of a process.

```
Example: The "Analyze Purchase Request" operation in the
"Process Purchase Request" process, handled by the
Purchasing Manager, is assigned to the Purchasing Assistant
when the manager is absent. To represent this, we assign
org-units "Purchasing Manager" and "Purchasing Assistant"
org-units to the same participant.
```

Assigning org-units

To assign an org-unit to a participant:

1. Right-click the participant name.
2. In the pop-up menu of the participant, "Purchasing Manager" in the example, select **Properties**.



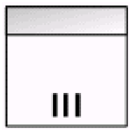
The properties window opens.

3. In the **Characteristics** tab, **Assignment** section, click the **Connect** button.
A wizard opens.
4. Select **Org-Unit** and select **Propose**.
A list of proposed org-units is displayed.
5. Select the org-unit you wish to assign to the participant, "Purchasing Assistant" in the example, and click **OK**.
The assignment appears in the properties dialog box of the participant..

Multiple participants

To specify that several instances of participant can be involved:

1. Open the properties of the participant.
2. Click **Characteristics**.
3. In the **Multiple Participant** field, select **Yes**.
The participant takes the following form:

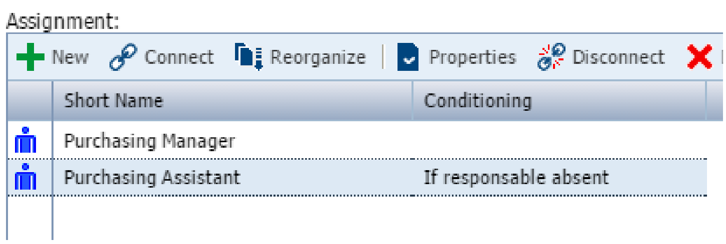


4. Click **OK**.

Conditioning org-unit assignment

To condition participation of an org-unit:

1. Open the participant properties dialog box.
2. Under **Characteristics** in the **Assignment** section, select the line of the org-unit of which you wish to condition assignment.
3. Click in the **Conditioning** column.
4. Enter the text of the condition.



5. Click **OK** to close the properties of the participant.
The text of the condition appears between brackets alongside the name of the org-unit in the participant title bar.

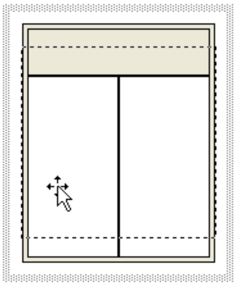
Positioning a Participant in a Swimlane

The swimlane is a tool that enables graphical presentation of certain diagram types. Objects arranged in swimlanes automatically take the same dimensions and are aligned.

To create a swimlane and place in it the participants you have just created:

1. In the insert tool bar, click the **Vertical Pool** button 
2. Click on the diagram.
   The swimlane is created.
3. Drag the participant into the swimlane holding the mouse button down.
4. Release the button when the swimlane frame and the described process are highlighted.

☛ *If the process frame does not appear highlighted, the participant is considered as external to the process.*



The swimlane adapts to the size of the participant.

☛ *For more details on swimlanes, see "Using swimlanes" in "Handling MEGA Objects" in **MEGA Common Features**.*

CREATING OPERATIONS

An operation is an important step in an organizational process. For steps requiring greater detail, organizational processes can be used.

Creating an Operation on a Participant

To create an operation and connect it to the participant responsible for its execution:

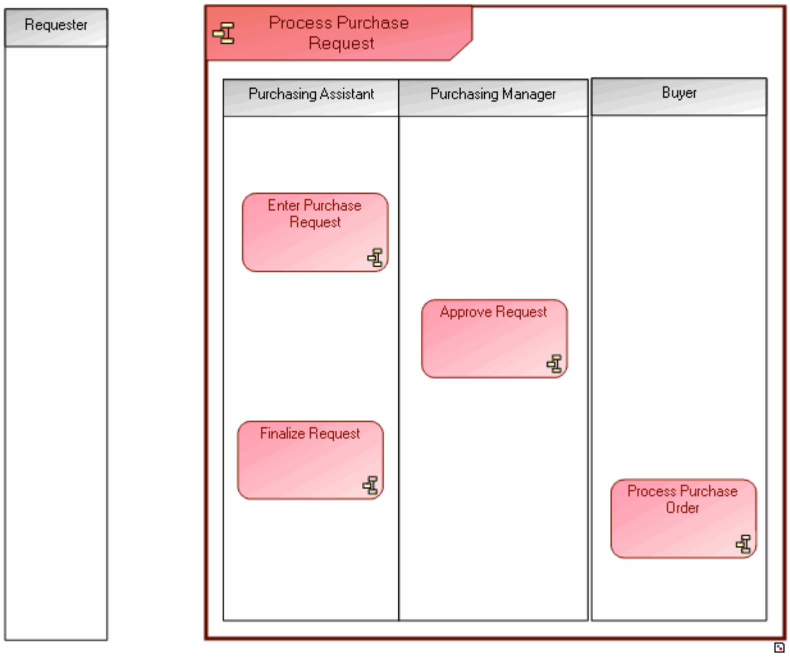
1. Click the **Operation** button in the insert toolbar and click in the diagram within the frame of the participant concerned.
   The operation creation dialog box appears.
2. Enter the name of the operation.
3. Click **OK**.

To assign an operation to another participant:

- Select the operation and move it from one participant to the other.
  The frame of the destination participant is highlighted.

  ☛ *When positioned, the operation is disconnected from the initial participant and reconnected to the new participant executing the operation.*

Operations example



Calling an Organizational Process in an Operation

You can create an operation that calls an organizational process. This functionality enables, for example, replacement of the process called by another process without disturbing description of the main process.

To create an operation that calls an organizational process:

1. Select the **Operation** button and select **Organizational Process Call**.

2. Click in the diagram within the shape of the participant responsible for its execution.
   The **Creation of Organizational Process Call** dialog box opens.
3. In the **Organizational Process** field, enter the name of the process.

   `In our example, "Process Purchase Request" could be replaced by "Process Urgent Purchase Request".`

   ☛ *By default, the operation carries the same name as the organization process called.*
4. Click **OK**.
   The operation appears in the diagram with the name of the organizational process.

Using an Existing Organizational Process

To more closely detail behavior of a processing step such as an operation, you must replace it by an organizational process.

An organizational process is a set of operations performed by org-units within a company or organization, to produce a result. It is depicted as a sequence of operations, controlled by events and conditions.

To use an existing organizational process:

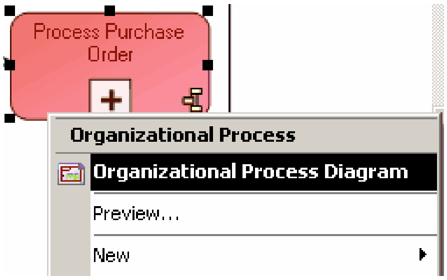
1. Click the **Organizational Process** button and click in the diagram outside the frame of the described process.
   The **Add Organizational Process** dialog box opens.
2. Click the arrow at the right of the **Organizational Process** field and select **Connect Organizational Process** in the drop-down list.
   The list of organizational processes in the library appears in a dialog box.
3. Select the organizational process that interests you.
4. Click **Add**.

5. Click **OK** (Web Front-End) or **Finish** (Windows Front-End) in the **Add Organizational Process** dialog box.
   The organizational process appears in the diagram.

Accessing an Organizational Process Diagram

To access an organizational process diagram:

1. Right-click the process to open its pop-up menu.
2. Select **Organizational Process Diagram**.



The diagram opens in a new window.

☛ *If the process does not have a diagram, you can create it by clicking* ***New*** *in its pop-up menu.*

DEFINING PROCESS EVENTS

The *events* enabling representation of facts occurring during process execution.

An event represents a fact occurring during execution of a process, for example a new contract concluded with a supplier. An event marks the impact on process progress of a phenomenon internal or external to the process. There are different natures of events: start events, catch events, throw events and end events.

Events can be used:

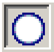
- Within a process to define facts internal to the process.
- Outside a process to describe causes and effects of events of the process depending on its use context.

The different event types are presented in this section.

Defining an event

Creating Events

To create an event:

1. Click the **Event** button  in the insert toolbar.
2. Click on the diagram.
   The **Create Event** dialog box opens.
3. Enter the name you want to give the event.

   ☛ *You can directly click the **OK** button (Web Front-Endo) or **Finish** (Windows Front-End) of the wizard. A catching event without type is created.*
4. Select the nature of new event.

   ☛ *By default, the nature is **Catching**.*
5. Click **Next** and select the type of event you wish to create.

   ☛ *By default the type is **None**.*
6. Click **OK** (Web Front-End) or **Finish**(Windows Front-End).
   The new event appears in the diagram. The shape of the event respects conventions linked to its type and nature.

   ☛ *By default the event is **interruption**.*

You can directly create the most frequently used events:

1. Click the **Events** button in the toolbar and select from the predefined events the event that interests you.

2. Click on the diagram.
   The new event appears in the diagram.

Event natures

The nature of the event enables specification of its position in the processing.

- **Start**: start of the processing sequence
- **Catching**: awaiting an event (arrival of a message, signal, etc.) before continuation of processing
- **Throw**: triggering an event (message, signal, etc.) and continuation of processing
- **End**: end of processing

Event types

Event type enables specification of what will trigger the event and what will be triggered by the event.

- **None** the trigger is not specified, generally at the start or end of a process
- **Message**: the event is receiving or sending messages
- **Timer**: the event is triggered by a timer
- **Error**: the event is triggered by errors or throws errors that cause interrupt of the process
- **Escalation**: the event is triggered by an error or throws a non-critical error
- **Cancel**: the event reacts to cancellation of a process step or triggers cancellation
- **Compensation**: the event handles or triggers compensation of a failed process
- **Conditional**: the event is triggered by a condition
- **Link**: the event is used to connect two sections of a process
- **Signal**: the event waits for a signal or throws a signal. One signal thrown can be caught multiple times
- **Finish**: the event indicates that all process steps should be immediately ended without compensation or event processing
- **Multiple**: the event has multiple triggers
- **Multiple**: the event has several simultaneous triggers

Current process interruption

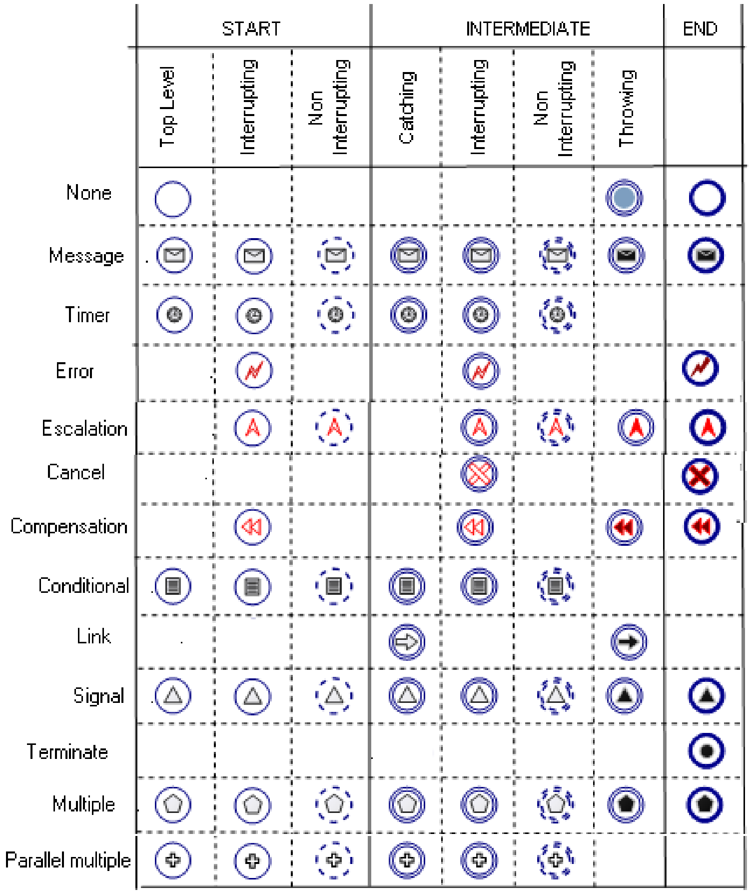
The current process may be interrupted when an event occurs. This characteristic of the event is specified in **Interruption** which can be one of the following values:

- **Interruption**
- **Non interruption**

☛ *By default the event interrupts the current process.*

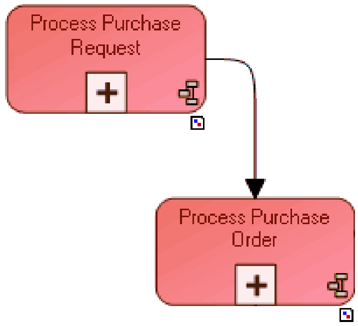
Event type and nature combinations

The following table presents valid combinations of event type and nature.



Connecting Events to Sequence Flows

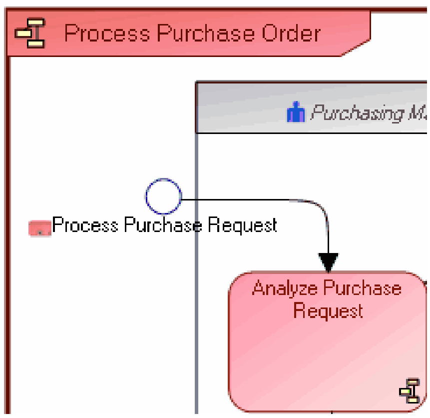
In a given context, a process can be connected to another process by a sequence flow.



In the example above, the "Process Purchase Request" process precedes the "Process Purchase Order" process.

Displaying external processes

In the diagram describing the process, the preceding process can be displayed.



In the diagram that describes the "Process Purchase Order" process, the "Process Purchase Request" process that precedes it is shown.

To do this, it is necessary to specify the event involved in the sequence flow:

1. Right-click the sequence flow.
2. Select **Properties** in its pop-up menu.
   The properties window opens.
3. In the **Characteristics** tab, **Triggered Event** section, click the **Connect** button.
   The query dialog box appears.

4. Find **Possible Triggered Events**.
   The list displayed proposes start events or catching events of the successor process.

   > ☛ *The successor process is generally triggered at its start and normally has only a single start event. This start event is therefore generally the event that interests you.*

5. Select the event corresponding to the sequence flow.
6. Click **Add**.

If you open the organizational process diagram containing this event, you can view the process that precedes it. For more details, see "Accessing Preceding or Succeeding Processes", page 41.

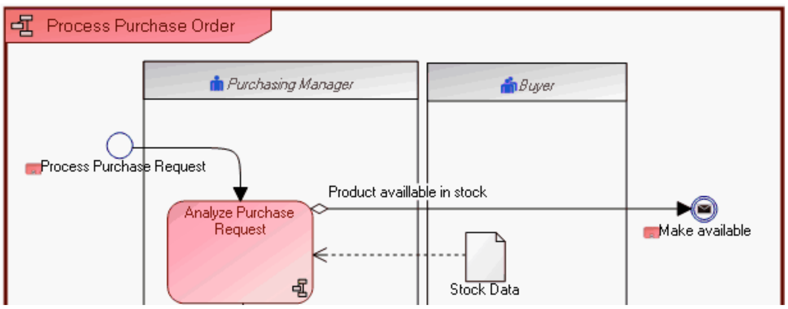
You can similarly select the triggering event of the previous process. In this case, end events or throw events from the preceding process will be proposed.

Accessing Preceding or Succeeding Processes

In the following example, the "Process Purchase Order" organizational process is activated after processing of the purchase request, and itself activates the "Make Available" process. For more details, see "", page 52.

To show, at events level, the processes preceding and succeeding the described process, you must:

- Specify the sequence flows in which the events are involved. For more details, see "Connecting Events to Sequence Flows", page 40.
- Activate the views enabling access to context-sensitive information.



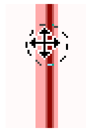
To activate the context-sensitive view:

1. Click the **Views and Details** button in the diagram toolbar.
2. Select the **View External Processes** check box.
3. Click **OK**.

Attaching an Event to a Process

To attach an event to a process:

1. Click the event and hold the mouse button down.
2. Position the event on the border of the process.
   The border of the process is highlighted.



To detach the event from the process border:

- Right-click the event and select **Detach**.

DESCRIBING OPERATIONS SEQUENCE FLOWS

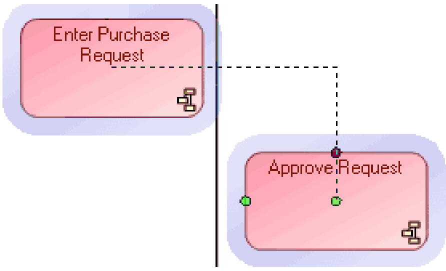
A *sequence flow* is a directional link that represents the chronological organization of the different processing steps.

A sequence flow is used to show the order in which the steps of a process will be performed. A sequence flow has only one source and only one target.

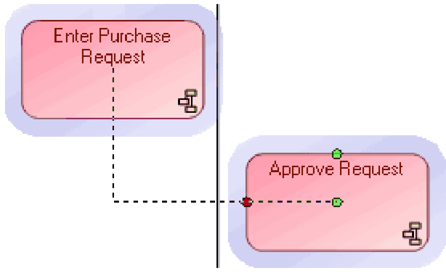
Creating Sequence Flows

To create a sequence flow between two operations::

1. Click the **Sequence Flow** ➞ button.
2. Click the sender operation and draw a link to the recipient operation. The two operations appear highlighted and a dotted line link indicates the path taken by the graphic link.



☛ *Several paths are possible: you need only move the cursor in the recipient operation frame.*



(Moving Sequence Flows

You may need to change the predecessor or successor of a sequence flow.

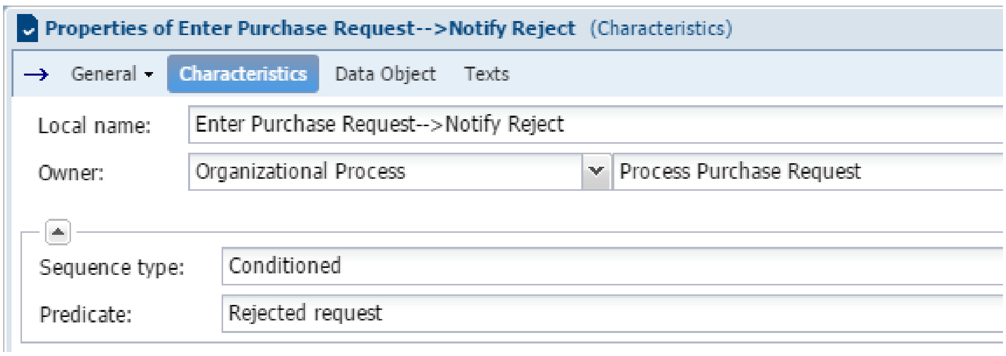
To move a sequence flow:

1. Click the sequence flow:.
   The two link ends are marked by squares..
2. Holding the <Shift> key down, position the mouse on the square at the end you wish to move.
   A reel appears when you are correctly positioned on the link end.
3. Still holding the <Shift> key down, click the square and, holding the mouse button down, move it to its new predecessor or successor before releasing the mouse button.
   The link appears in its new position in the diagram.

Defining a Condition on a Sequence Flow

To define a condition on a sequence flow:

1. Right-click the sequence flow and select **Properties**.
2. In the dialog box that opens, select the **Characteristics** tab.
3. Click the arrow at the right of the **Sequence Flow Type** field.
4. Select "Conditioned" in the drop-down list.
5. In the **Predicate** field, specify the conditioning expression.



6. Click **OK**.
   The text associated with the condition appears on the link which then takes form .

Defining a default condition on a sequence flow

If several conditioned sequence flows are from the same operation, you can specify that one of these should be used as default. For example, having completed the "Enter Purchase Request" operation, the assistant always executes the "Finalize Request" operation, except if the request is not acceptable and is below a given amount.

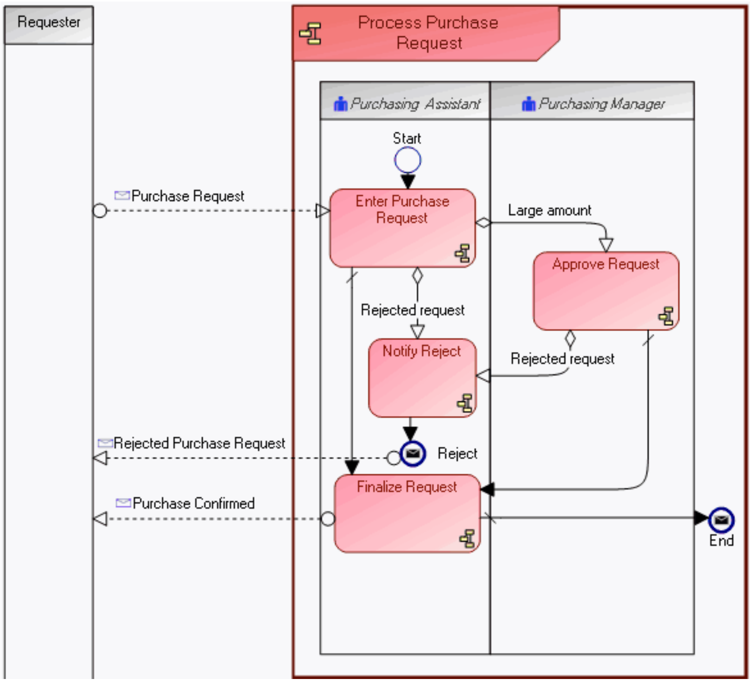
To define that a sequence flow is used by default:

1. Right-click the sequence flow and select **Properties**.
2. In the dialog box that opens, select the **Characteristics** tab.
3. Click the arrow at the right of the **Sequence Flow Type** field.

4. Select **Default** in the drop-down list.
5. Complete the **Predicate** text box if you wish to add a comment.
6. Click **OK**.
   The link then takes form .

Defining Message Flows

The content of message flows exchanged with the exterior can be specified.



Defining Message Flow Content

A message flow is information flowing within an enterprise or exchanged between the enterprise and its business environment. A message flow can carry a content.

To define content of a message flow:

1. Right-click the message flow and select **Properties**.
   The properties window opens.
2. Select **Characteristics**.
3. Click the arrow at the right of the **Content** field and select **Connect Content**.
   The selection dialog box appears, with a list of contents proposed for the message flow.

4. Select the content name and click **OK**.

   ☛ *A content can be used by several message flows since it is not associated with a sender or recipient.*

   The name of the content appears in the diagram.

Creating a Message Flow With Content

You can specify the content of *message flows* exchanged between a process and its environment directly at flow creation.

A message flow is information flowing within an enterprise or exchanged between the enterprise and its business environment. A message flow can carry a content.

To create a message flow and its content:

1. In the diagram insert toolbar, click the **Message Flow** button arrow, option **Message Flow With Content**

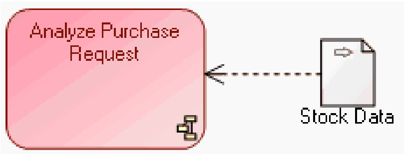
2. Click the first object representing the start step, and, holding the mouse button down, draw a line to the object representing the next step.
   The **Creation of Message Flows With Content** dialog box opens.
3. In the **Content** drop-down list, select the content you wish to associate with the flow.
   The message flow is displayed with its content in the diagram.

   ☛ *You can associate several contents with the message flow. For more details, see* *"Defining Message Flow Content", page 46*.

USING SHARED OBJECTS

In an organizational process diagram, a *data object* can be used to represent the fact that data or objects (correspondence, raw materials, finished products, etc.) are in stock awaiting use.

A data object is used to explain how documents, data, and other objects are used and updated during the process. A data object can represent an electronic document, or any other type of object, electronic or physical.



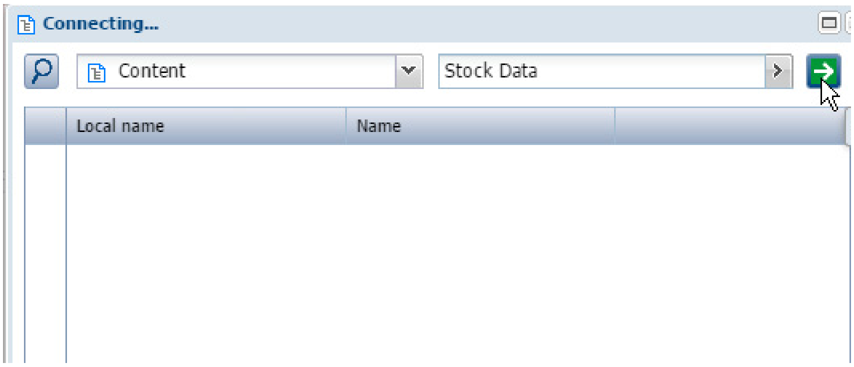
☛ *In this example, the shared object "Stock Data" is represented with an open head arrow since it is used by the "Analyze Purchase Request" process without having been produced by one of the processes represented in the repository.*

Creating a Data Object

To create a data object:

1. Click the **Data Object** button in the diagram insert toolbar.
2. Click in the diagram to position the object.
   The **Create Data Object** dialog box appears.
3. Click the arrow at the right of the **Content** field and select **Connect Content**.
4. The query dialog box appears.

5. Enter the name of the content, for example "Stock Data" , or directly click the **Find** button  to display all repository contents.



6. Select the content in the results and click the **Connect** button.

   ☛ *A content can be used by several data objects.*

7. Enter **Data Object State** if required.

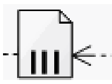
   ☛ *By default the data object carries the same name as its content. The state appears between brackets.*

8. Click **OK**.
   The data object appears in the diagram.

Describing a Data Object

To specify that a shared object corresponds to an object collection:

1. Open the properties dialog box of the shared object and select the **Characteristics** tab.
2. Click the arrow  at the right of the **Collection** box, and select **Yes**.
   The shared object then takes the following form:



Information necessary for execution of operations can be consulted or updated in the data objects.

To indicate that information was obtained from a data object, for example that stock data used by the "Analyze Purchase Request" operation was obtained from the "Stock Data" data object:

1. Click the reel button  in the insert toolbar.

2. Click the data object , for example "Stock Data" and, holding the mouse button down, draw a link to the operation.

   ☛ *A data object is represented by an open head arrow if it is read by a process without having been updated by one of the processes in the repository.*

   ☛ *A data object is represented with a solid head arrow if it is updated by a process and not read by any of the processes in the repository.*

Associating a Data Object with a Sequence

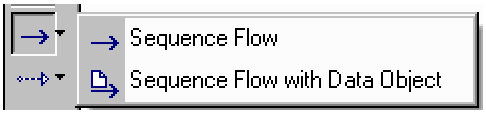
You can specify that the content of a *shared object* is sent at sequencing of two operations.

```
For example, a shared object "Purchase Request" can be sent
between the operations "Enter Purchase Request" and
"Finalize Request".
```

A data object is used to explain how documents, data, and other objects are used and updated during the process. A data object can represent an electronic document, or any other type of object, electronic or physical.

To simultaneously create a sequence flow and a data object:

1. Click the **Sequence Flow** button arrow, option **Sequence Flow With Data Object**.



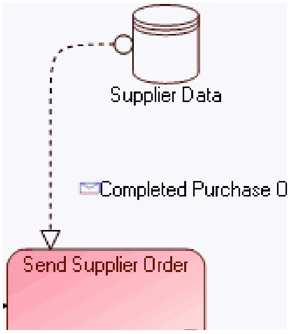
2. Click the operation representing the start step, and, holding the mouse button down, draw a line to the operation representing the next step.
   The **Creation of Sequence Flow With Data Object** dialog box opens.
3. In the **Content** drop-down list, select the content you wish to associate with the flow.
   The sequence flow and its content are displayed in the diagram.

Using Data Stores

Objects that are shared, supplied or used in processing can be stored in a *data store*.

A data store provides a mechanism to update or consult data that will persist beyond the scope of the current process. It enables storage of input message flows, and their retransmission via one or several output message flows.

In the example below, data relating to suppliers is represented by the "Supplier Data" data store.



To create a data store:

1. Click the **Data Store** button in the insert toolbar.

   ☛ *If the button is not visible by default, click the diagram **Views and Details** button and select the "Data Stores" view.*
2. Click in the diagram to position the object.
   The **Add Data Store** dialog box appears.
3. Enter the name of the data store.
4. Click **OK**.

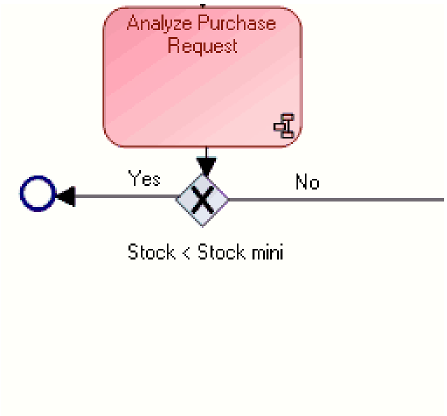
You can specify the content of *message flows* exchanged between the data store and the processes by creating message flows in your diagram.

A message flow is information flowing within an enterprise or exchanged between the enterprise and its business environment. A message flow can carry a content.

☛ *For more details on flows, see paragraph "Defining Message Flows", page 46.*

Using Gateways

The following example presents a case where continuation of processing is conditioned: following analysis of a purchase request, the process either ends, or an order is sent to a supplier.



To specify that several processing steps are accessible following a particular processing step, you can use a *gateway*.

Gateways are modeling elements that are used to control how sequence flows interact as they converge and diverge within a process.

☛ *Conversely, you can also use a gateway to indicate that a particular processing step is available from several processing steps of a process.*

For more information on gateways, see "System Process Gateways", page 79.

Improving Presentation

Various functionalities allow you to improve presentation of objects in diagrams: annotation of objects, modification of shapes and presentation of names, etc. For more details, see chapter "Handling Objects in Diagrams" in the **MEGA Common Features**. guide.

BUSINESS PROCESSES

This chapter presents how to describe products or services provided by the enterprise to its customers.

The business process diagram enables representation of product or service offerings proposed by the enterprise to each of its markets, as well as the processes that produce these.

The points covered here are:

Creating a Business Process

To create a *business process*:

A business process represents a system that offers products or services to an internal or external client of the company or organization. At the higher levels, a business process represents a structure and a categorization of the business. It can be broken down into other processes. The link with organizational processes will describe the real implementation of the business process in the organization. A business process can also be detailed by a functional view.

1. Select the **Home** navigation window.
2. Right-click the current library.
3. Select **New** **Business Process**.
   The **Create Business Process** dialog box appears.
4. In the **Name** field, enter the name of the business process.
5. Click **OK**.

The business process is created and added to the list of business processes.

*The **OK** button is grayed if the **Name** box is not completed.*

In **HOPEX**, business processes are described by diagrams.

Creating a Business Process Diagram

Windows Front-End

To create a business process diagram:

1. Right-click the business process name and select **New** **Diagram**.
2. Select the "Business Process Diagram" diagram type.
3. Keep the option **Diagram initialization** selected (by default) to initialize the diagram. Diagram initialization automatically positions the frame of the described process and the main events.
4. Click **Create**.

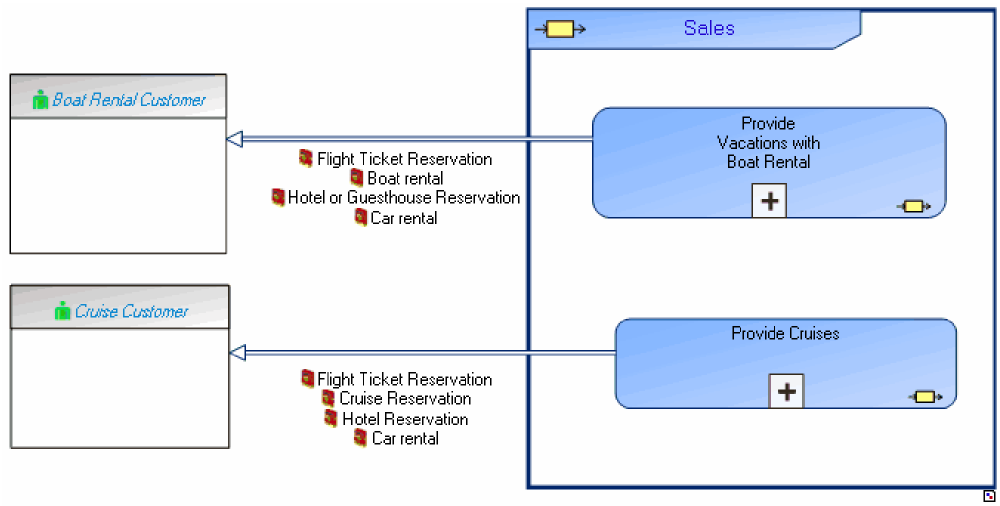
Web Front-End

To create a business process diagram:

- Right-click the process name and select **Business Process Diagram**.

Representing Product Offerings

The business process diagram enables representation of product or service offerings proposed by the enterprise to each of its markets, as well as the processes that produce these.



In the example above, the enterprise is targeting two customer segments, those that rent boats, and those to whom cruises are proposed.

In the case of boat rental, the enterprise also proposes flight ticket reservation, hotel or guesthouse reservation and car rental.

In the case of cruises, the enterprise also proposes flight ticket reservation, hotel reservation and car rental.

Defining Offerings

Offerings are proposed by enterprise business processes to participants outside the enterprise.

An offering represents the availability of a product or service supplied by an enterprise through a specific process.

Creating an offering

To create an offering:

1. Click the **Offering** button.

2. Click the business process and, holding the mouse button down, draw a link to the participant.
3. Release the mouse button.
   The link representing the offering appears in the diagram.

Defining offering products

A product represents commodities offered for sale, either goods or merchandise produced as the result of manufacturing, or a service, i.e., work done by one person or group that benefits another.

To specify detail of offerings of *products*:

1. Right-click the offering and select **Properties**.
   The properties window opens.
2. Select **Characteristics**.
3. In the **Product** section, click the **New** button and enter the product name.
4. Click **OK**.
   The name of the product appears in the diagram.

☛ *A product can be broken down into component products from its properties dialog box or from the navigator.*

Describing offering implementation

Use the **business process diagram** of the process that is linked to the offering to describe the organization and exchanges that are associated with it.

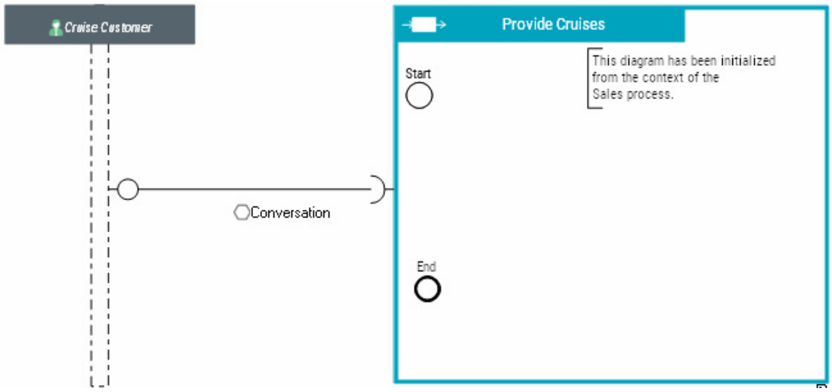
In this way, when you initialize a **business process diagram** for a process, a conversation is automatically created for each offering.

☛ *For more details on business process diagrams, see "Creating a Business Process Diagram", page 56.*

☛ *For more details on conversations, see "Conversations", page 85.*

The conversation bears the name of the exchange that is automatically created.

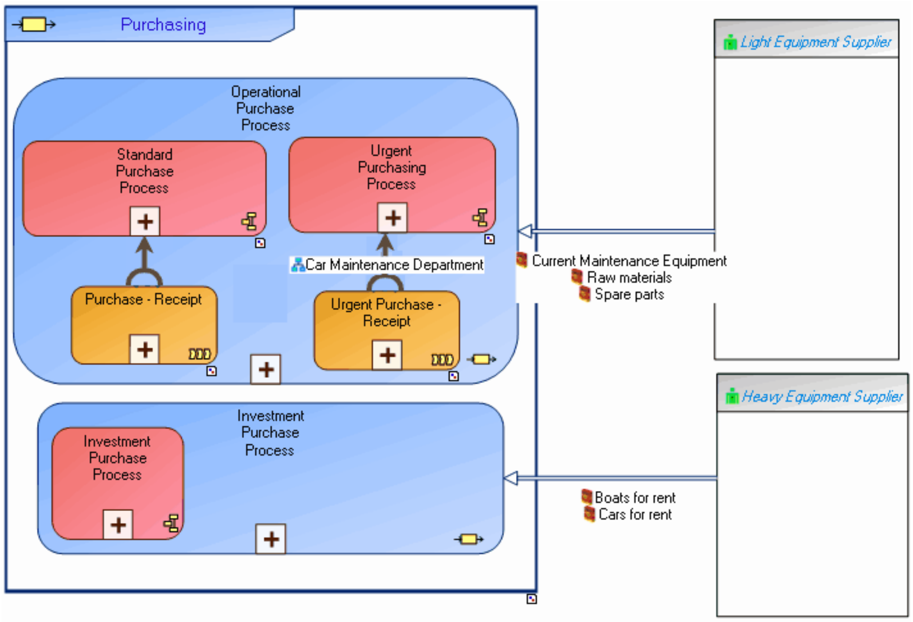
The name of the exchange is that of the offer, or failing this, that of its first product.



In the example above, a conversation is created to describe the exchanges that support the airline ticket and hotel reservation and car rental offerings.

REPRESENTING PROCESS CONTEXTUALIZATION

The business process diagram enables representation of the context in which the organizational or functional processes comprising the business process are used.



Purchasing business process diagram

In the example above, enterprise purchase processes are shared between operational purchase processes and investment purchase processes.

A specific organizational process is defined to process urgent purchase of car maintenance.

Defining Contextualizations

Contextualizations enable association of processes between themselves.

A contextualization allows specification of the implementation of a process by another process in a specific context, such as the geographical location on a site.

Creating a contextualization

To create a contextualization:

1. Click the **Contextualization**  **button**
2. Click the process to be implemented and, holding the left mouse button down, draw a link to the process describing implementation. Release the mouse button.
   The link representing the contextualization appears in the diagram.

Defining context

To specify the context in which a process implements another process:

1. Right-click the contextualization and select **Properties**.
   The properties dialog box opens.
2. Click **Characteristics**.
3. In the **Implementation Context** section, click the **Connect** button.
4. In the window that opens, select the context type, org-unit or site.
5. Click the **Find** button .
6. In the list that opens, select the org-units or sites concerned and click **Connect**.
7. Click **OK** (Web Front-End) or **Close**(Windows Front-End).
   The implementation contexts appear in the diagram.

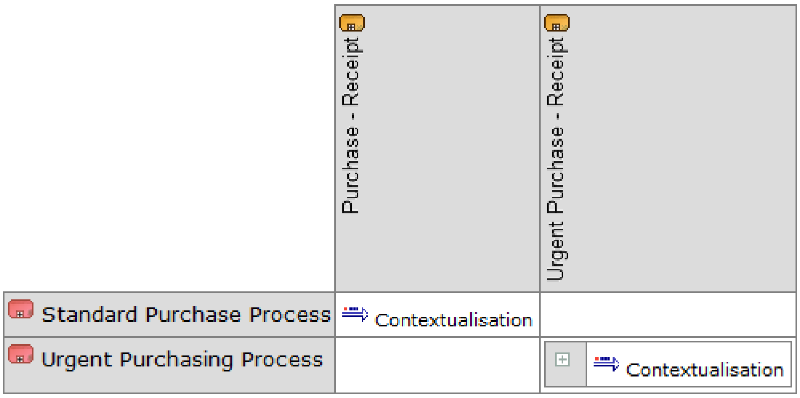
Launching a Report Illustrating Contextualizations

From a business process, you can launch a report in the form of a matrix to illustrate contextualizations.

To launch a report illustrating contextualizations:

1. Right-click the business process concerned and select **Report Discovery**.
2. In the list of available reports, expand the "Process Analysis" folder.
3. From the "Business Process Contextualization Matrix (BPMN)" report, click **Launch a new report**.

4. In the report page, click the name of the report chapter.
A matrix appears.

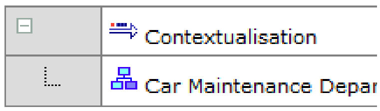


This matrix presents:

- the functional processes of the business process in columns
- the organizational processes of the business process in rows

To view a specific context (org-unit, site or product):

› Click the + in the cell.



FUNCTIONAL PROCESSES

Value chains of the enterprise can be described in the form of functional processes. For example, when an enterprise operates out of numerous geographical locations, organization of business process operations can vary significantly between regions.

It is therefore useful to have a summary view, independent of organizational structure, to represent steps in the value chain connected to enterprise business and common to all organizational variants.

A functional representation of the value chain also facilitates improvement in enterprise operation.

Indeed, when the operation of each organizational process is represented, this enables local optimization of each process.

This structure however remains partitioned by existing organizational structures. More significant changes require a broader view of the value chain, independent of organization. This global view is represented by the functional process diagram.

HOPEX Business Process Analysis enables the creation and description of enterprise value chains.

Creating a Functional Process

To create a *functional process*:

1. Open the **Home** navigation window.
2. Right-click the current library.
3. Select **New** > **Functional Process**.
   The **Create Functional Process** dialog box appears.
4. Enter the name of the functional process.
5. Click **OK** (Web Front-End) or **Finish**(Windows Front-End).
   The functional process is created and added to the list of functional processes in the menu tree.

   ☛ *The **Finish** button is grayed if the **Name** box is not completed.*

Creating a Functional Process Diagram

Windows Front-End

To create a functional process diagram:

1. Right-click the business process name and select **New Diagram**.
2. Select the "Functional Process Diagram" diagram type.
3. Keep the option **Diagram initialization** selected (by default) to initialize the diagram. Diagram initialization automatically positions the frame of the described process and the main events.
4. Click **Create**.

Web Front-End

To create a functional process diagram:

- Right-click the process name and select **Functional Process Diagram**.

Representing a Functional Process

Functional Process representation principles

Highlighting organizational choices

Each enterprise has activities related to its business that must be performed whatever the organization in place. These activities can be purchasing, sales, sales administration, manufacturing, etc.

Defining their organization consists of assigning these activities to the org-units that will perform them.

We can distinguish between:

- Processes relating to the business of the enterprise: these are difficult to change unless the enterprise decides to totally review its business.
- Processing depending on organizational choices.

Diversity of variants

Most variants of a process are the result of organizational choices such as giving preference to urgent orders, special processing for large or export orders, etc.

It is necessary to overcome this diversity in order to move on to a new set of variants, for example processing orders via telephone or the Internet. Representing a business process in terms of activities gives a unique representation of the value chain, highlighting what must be done irrespective of organization choices.

Number of steps

Certain steps in an organizational process are exclusively linked to the chosen organization. In such cases, it is useful to check whether these steps provide any real added value to clients or only concern the way things are done.

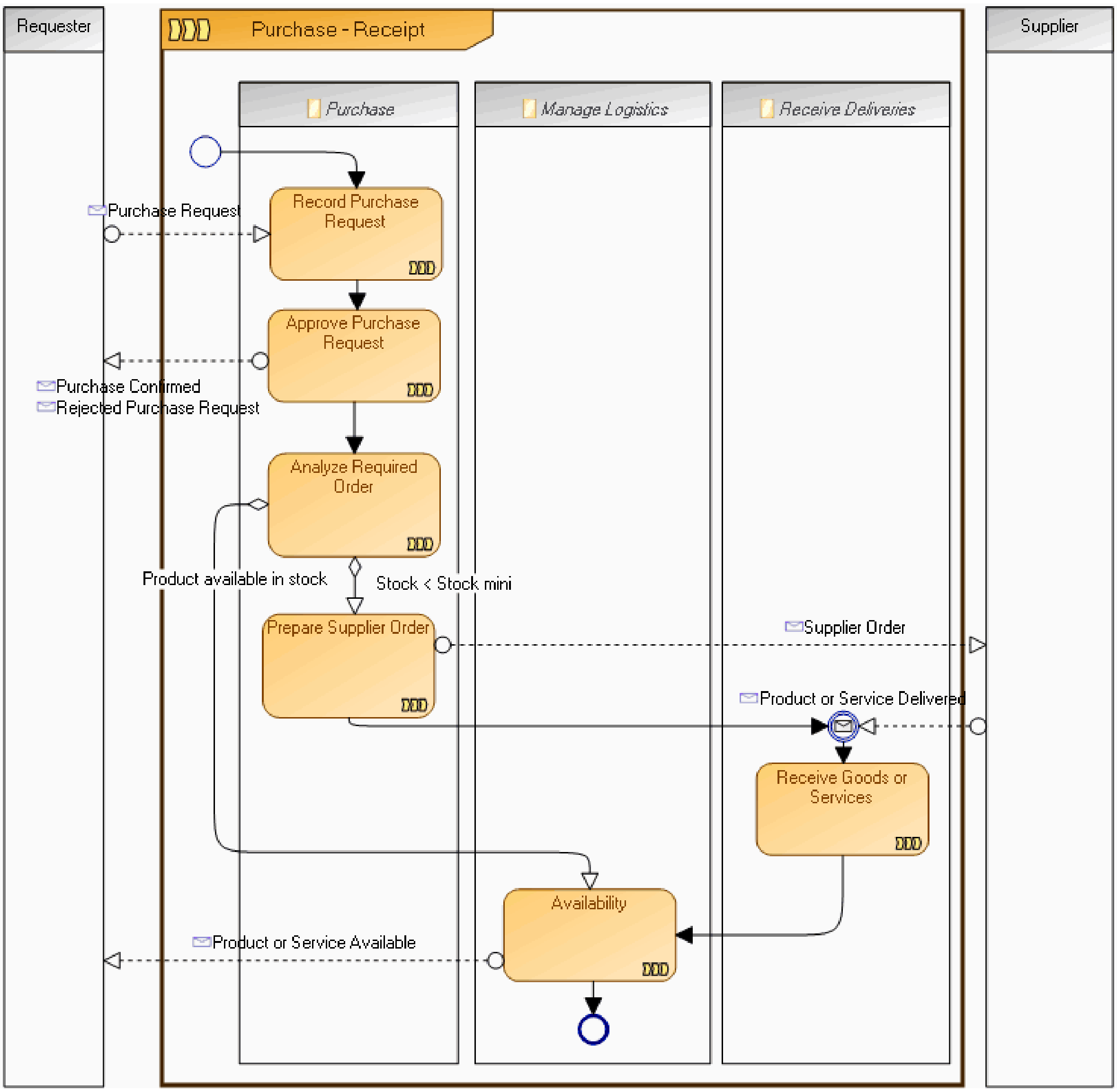
Delivery times can also be reduced by restructuring the order of these steps.

To highlight possible improvements, you can represent a value chain by flows exchanged between enterprise *activities*.

A functional activity is a step in a process. This step represents the contribution of a business line to the process value chain.

Functional process example

The following diagram presents a functional process example:



"Purchase-Receipt" functional process

The purchase request is recorded and must then be approved. The requester is informed of approval or rejection of the

```
request. If the request is validated, an analysis of the
required order is carried out.
```

```
If stock is lower than a given threshold, an order is
prepared and sent to the supplier for resupply.
```

```
If the product is available, or as soon as it is received
from the supplier, it is made available to the requester.
```

In this example, the *business functions* concerned are represented in columns.

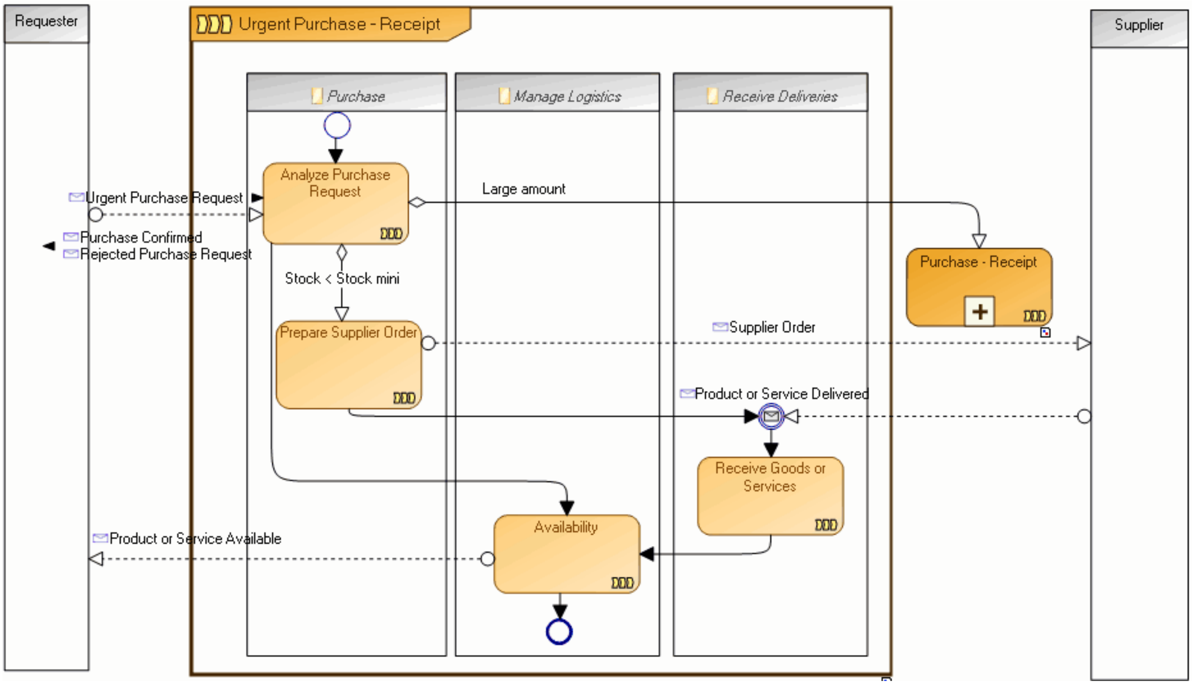
A business function is a skill or grouping of skills of interest for the enterprise.

In the organization previously presented, three org-units: purchasing assistant, purchasing manager and buyer, systematically participate to execute the first four steps: record and approve the request, analyze and send the order.

Optimization of the organized process "Process Purchase Requests" has saved one step: when amount of the order is not significant, the purchasing assistant can himself approve or refuse the purchase request.

In the case of urgent orders, you can again save steps by authorizing the purchasing assistant to send the order when the amount is not significant.

We obtain the following functional process for processing of urgent orders:



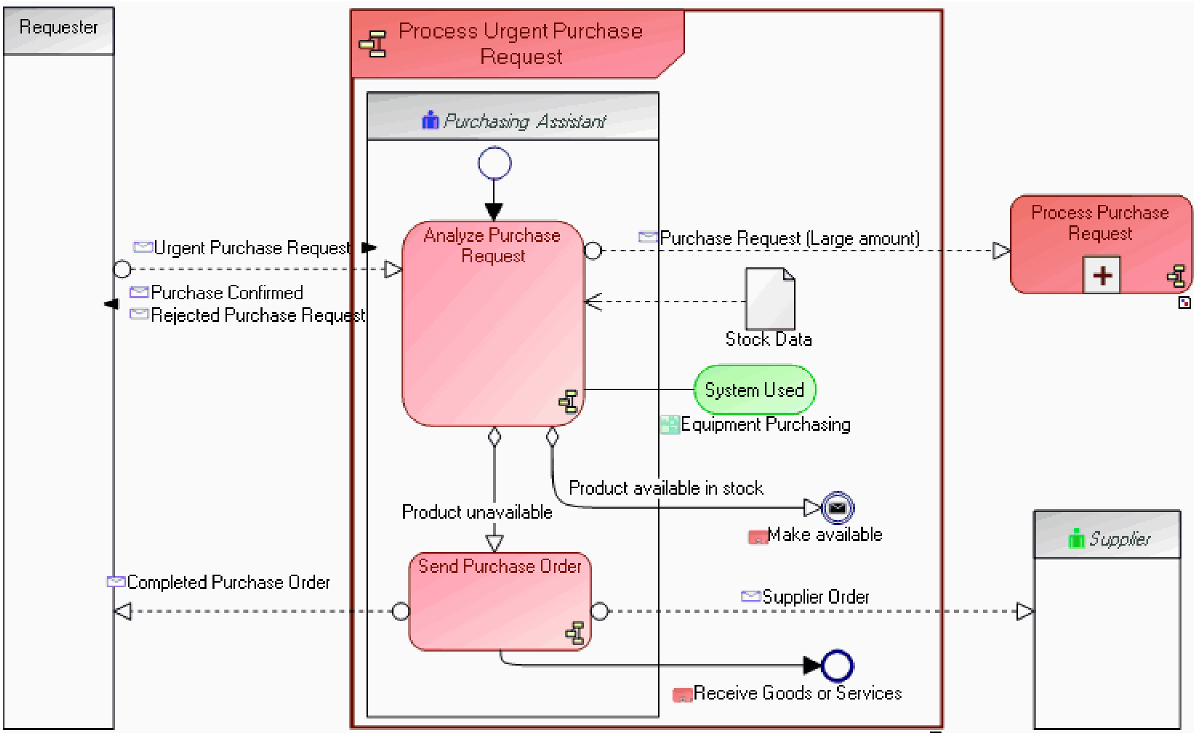
"Urgent Purchase-Receipt" functional diagram

```
The first step consists of analyzing the purchase request.
If the total amount is large, normal processing is carried
out.
```

```
Otherwise, the availability request and a restock request
are sent, if necessary. Continuation of this functional
```

process is identical to the previous one: when the order has been received, it is made available to the requester.

We can define a new organizational process for processing of urgent purchase requests, in which responsibilities of the purchasing assistant are extended.



"Process Urgent Purchase Request" Organizational Process

The purchasing assistant begins by analyzing the purchase request. If the amount is large, the normal process purchase request process is implemented. If the product is available, the assistant sends the availability request.

If not, the assistant sends a purchase order to the supplier. The rest of the processing is carried out within the framework of the normal "Process Purchase Request" organizational process.

To analyze the purchase request and send the order, the purchasing assistant requires data on stock levels. He will have access to the "Equipment Purchasing" application.

This new variation of the organizational process enables faster processing for urgent orders. It demands higher qualifications of the purchasing assistant who has more responsibilities.

You can show systems used by operations by selecting "System used" in the window opened from the "Views and Details" button .

A system used during the execution of a step of a process represents what is necessary to realize this step. It can be an *application or an IT service, or any other non IT resource, or more generally a functionality.*

SYSTEM PROCESSES

HOPEX Business Process Analysisallows you to model the IT system process implemented when using an organizational process. This description is made in a BPMN model detailing the sequence flow of tasks performed when executing the application in the particular context.

The BPMN (Business Process Modeling Notation) specification was created to formalize graphical representation of IT and business processes, offering notation easily used by all participants concerned.

The points covered here are:

Managing a System Process

A system process represents automated execution of an organizational process.

The system process diagram uses notation proposed by BPMN standard.

Creating System Processes

You can create a *system process* from the navigator or from an organizational process diagram.

A system process is the executable representation of a process. the events of the workflow, the tasks to be carried out during the processing, the algorithmic elements used to specify the way in which the tasks follow each other, the information flows exchanged with the participants.

To display the view of system processes in an organizational process diagram:

1. Click the **Views and Details** button in the diagram toolbar.
2. Select the **Implementation Contexts** check box.
3. Click **OK**.

   The **Contextualization** and **System Process** buttons appear in the insert toolbar.

To create a system process from an organizational process diagram, the procedure varies slightly according to whether you are in Windows Front-End or Web Front-End.

Windows Front-End

To create a system process from an organizational process diagram:

1. Click the **System Process** button in the diagram insert toolbar.
2. Click on the diagram.
   The **Add System Process** dialog box opens.
3. Enter the name of the system process.
4. Click **Create**.

Web Front-End

To create a system process from an organizational process diagram:

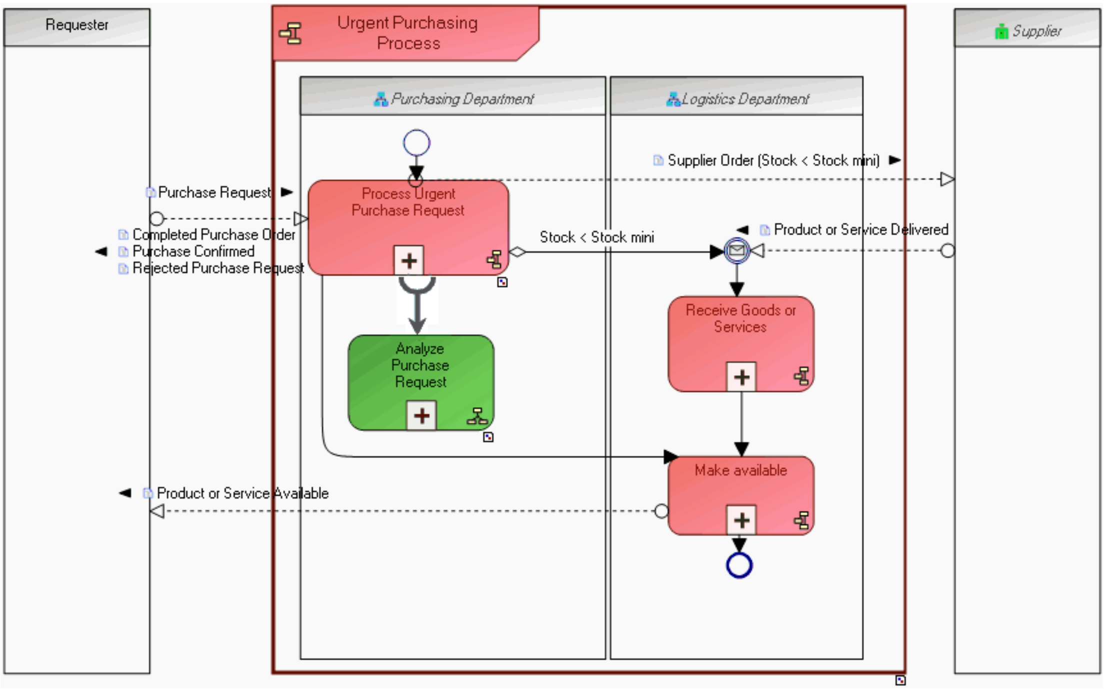
1. Click the **System Process** button in the diagram insert toolbar.
2. Click on the diagram.
   The process appears in the diagram.
3. To rename the system process, select it and press your keyboard F2 key.

Connecting a System Process to an Organizational Process

To specify that an organizational process is implemented by a system process in a given context, you must create a *contextualization* link between the two objects.

> *A contextualization allows specification of the implementation of a process by another process in a specific context, such as the geographical location on a site.*

For example, the "Process Urgent Purchase Request" process is implemented by the "Analyze Purchase Request" system process to assure speed and efficiency of processing.



To create a connection between an organizational process and a system process from an organizational process diagram:

1. Click the **Views and Details** button in the diagram toolbar.
2. Select the **Implementation Contexts** check box.
3. Click **OK**.

   The **Contextualization** and **System Process** buttons appear in the insert toolbar.

4. Click the **Contextualization** button in the insert toolbar.
5. Click the organizational process and, holding the mouse button down, drag the cursor to the system process and release the mouse button. The contextualization appears in the diagram.

Creating a System Process Diagram

Windows Front-End

To create a system process diagram:

1. Right-click the business process name and select **New Diagram**.
2. Select the "System Process Diagram" diagram type.
3. Keep the option **Diagram initialization** selected (by default) to initialize the diagram. Diagram initialization automatically positions the frame of the described process and the main events.
4. Click **Create**.

Web Front-End

To create a system process diagram:

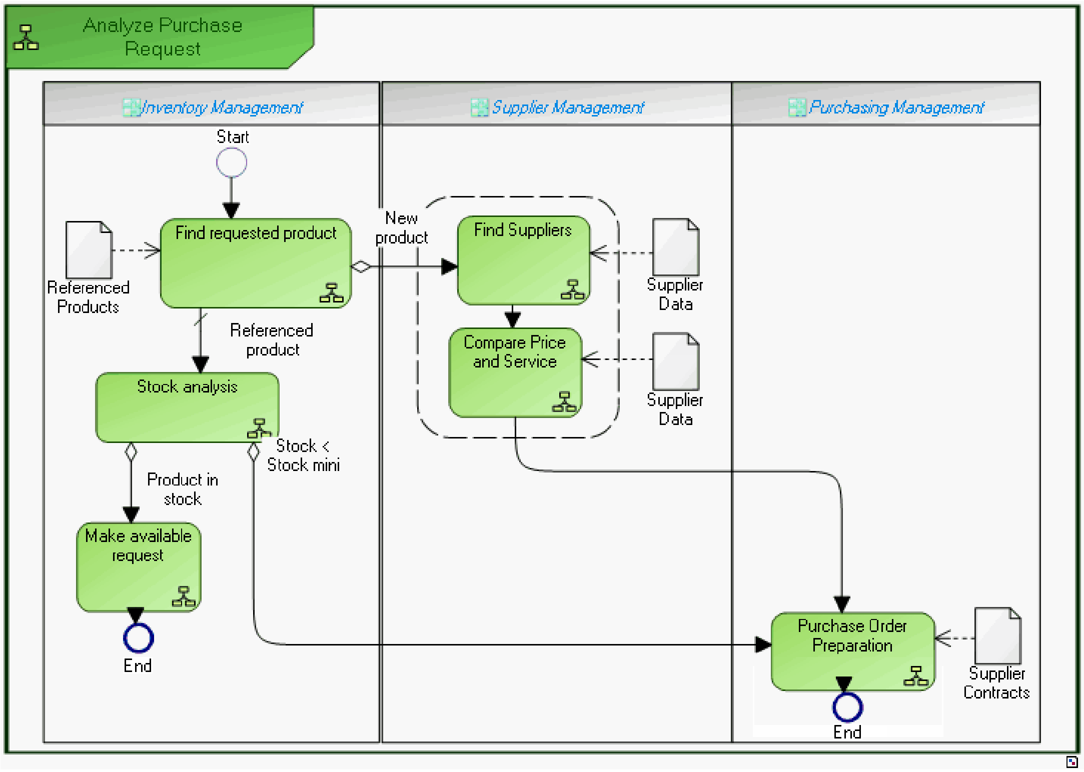
- Right-click the process name and select **System Process Diagram**.

The system process algorithm can be expressed by sequencing of tasks and decisions.

Example

The diagram below represents purchase request processing.

- A product search is carried out from the referenced products repository.
- If the product is new, search for a supplier and comparative study of prices is carried out. An order is then sent and the process ends.
- If the product is referenced, stock is analyzed.
- If stock is sufficient, a "Make available" request is activated and the process ends.
- If stock is less than minimum stock, an order is sent to the supplier and the process ends.



TASKS

Tasks correspond to process steps.

A task is an elementary step that is included within a system process. A task is used when the work in the system process is not broken down to a finer level of the process. Generally, an end-user and/or an IT service are used to perform the task when it is executed.

Creating a task in a system process

To create a task:

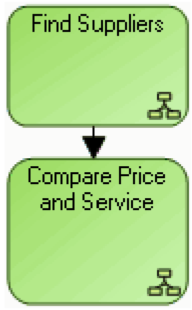
1. In the diagram insert toolbar, click the **Task** button then click in the diagram.
2. Enter the task name and click **OK**.
   The task appears in the diagram.

Sequence Flows, Events and Message Flows

Sequence flows

Organization of tasks in the system process is represented by *sequence flows* between tasks.

A sequence flow is used to show the order in which the steps of a process will be performed. A sequence flow has only one source and only one target.



Events

Events represent facts occurring during process execution.

An event represents a fact occurring during execution of a process, for example a new contract concluded with a supplier. An event marks the impact on process progress of a phenomenon internal or external to the process. There are different natures of events: start events, catch events, throw events and end events.

An example is the start or end of the system process.

Start

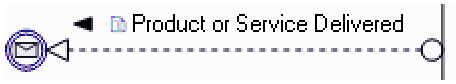
Final

The event can also be sending or receiving a message flow.

Message flows

Message flows represent exchanges between the system process and the exterior.

A message flow is information flowing within an enterprise or exchanged between the enterprise and its business environment. A message flow can carry a content.



☛ *A message flow can be linked to an event of message type.*

GATEWAYS

In compliance with the BPMN standard, in the object toolbar, several *gateway* types are available to you.

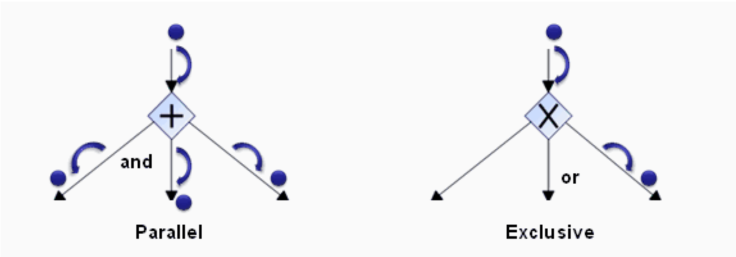
Gateways are modeling elements that are used to control how sequence flows interact as they converge and diverge within a process.

To better understand the main use cases, we distinguish output gateways of a processing step from input gateways.

Processing Step Output Gateways

In the case of an **Exclusive** gateway, only one output branch can be selected from those available. The branch can be selected as a function of the **Data** available for the process, or of the **Events** occurring during its execution.

In the case of a **Parallel** gateway, all output branches are processed simultaneously.



In the case of a **Complex** gateway, one or several output branches can be selected from those available.

A **Complex** gateway represents a combination of those above.

When the gateway has been created, its type can be modified in its properties dialog box.

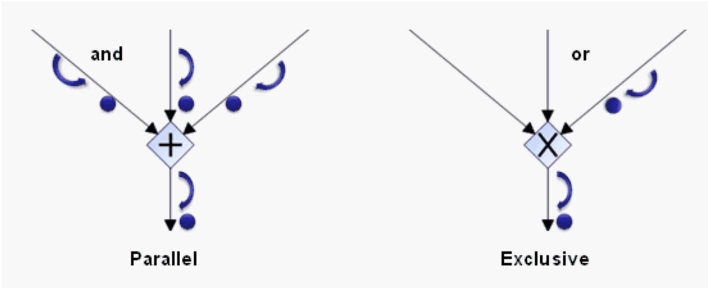
At output of a step, a gateway represents a point of divergence of sequence flows of a process.

Step Input Gateways

At input of a step, a gateway represents a point of convergence of sequence flows of a process.

In the case of an **Exclusive** gateway, the process step is triggered when one of these branches is active.

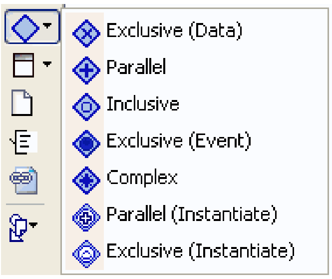
In the case of a **Parallel** gateway, all input branches are processed simultaneously.



Creating gateways

To create a gateway:

1. Click the arrow at the right of the **Gateway** button in the diagram insert toolbar and select the gateway type you wish to create.



2. Click on the diagram.
   The gateway appears in the diagram with the shape appropriate to its type.

Modifying gateways

To modify a gateway:

1. Right-click the gateway and select **Properties** in its pop-up menu.
   The properties window opens.
2. Click **Characteristics**.
   You can modify the name or type of the gateway.

Gateway type

The different **gateway types** proposed are:

- **Complex**: the process can take a complex combination of paths.
- **Exclusive (Data)**: the process can take a single path from several possible paths depending on the value of the data available. This is the default gateway type.
- **Exclusive (Start)**: the process is triggered by the first event occurring; others are ignored.
- **Exclusive (Event)**: the process can take a single path from several possible paths depending on the events occurring.
- **Inclusive**: the process can take one or several paths simultaneously.
- **Parallel**: the process takes several parallel paths simultaneously.
- **Parallel (Start)**: the process is triggered by the first event occurring. The other events occurring during progress of the process are also taken into account.

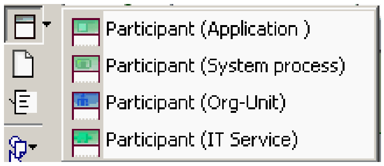
3. Click **OK**.

Creating a System Process Participant

In a system process diagram, a participant enables grouping of tasks assigned to an application or service.

To create a participant:

1. In the diagram insert toolbar, click the arrow at the right of the  **Participant** button.

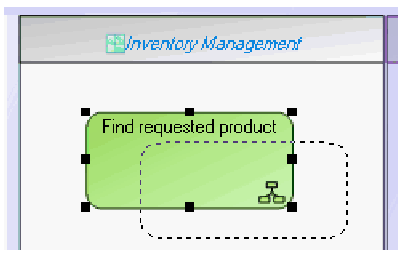


2. In the list proposed, select for example **Application Participant** and click in the diagram.
   The participant creation dialog box appears.
3. Click the arrow  at the right of the **Application** field and select **Connect Application**.
   The query dialog box appears.
4. Find the application and click **Connect**.
5. In the participant creation dialog box, click **OK** (Web Front-End) or **Finish**(Windows Front-End).
   The participant created appears in the diagram with a header containing the name of the assigned application.

   ☛ *To place a participant with assignment as yet unknown, select the* ***Participant*** *icon.*

To assign a task to a participant:

- place the task within the frame of the participant.



SPECIFYING PROCESS BEHAVIOR

Complying with BPMN standard, a process can have different behaviors. With **HOPEX Business Process Analysis**, these behaviors are available for organizational processes, operations, system processes and tasks.

To describe for example that a system process is executed by a loop:

1. Right-click the process and select **Properties**.
   The properties window opens.
2. Click **Characteristics**.
3. In the **Loop** field, select the loop type corresponding to process behavior.
4. Click **OK**.
   Shape of the process is modified to display the symbol of the loop.

Behaviors proposed are:

- **Transaction**: a transaction is a set of coordinated activities leading to a consistent, and verifiable outcome.
- **Loop**: a loop is a process step that is repeated as long as a condition is true.
  - "Do while": the condition is evaluated before the first execution.
  - "Do until": the condition is evaluated after the first execution. In this case, the process step is executed at least once.

  The predicate enables specification of the loop execution condition.
- **Ad Hoc**: steps of an ad hoc process are not controlled or sequenced in a particular order. Their performance is determined by the performers of the process.
- **Multiple**: the process is repeated a predefined number of times, evaluated only once before it is carried out. Execution type can be specified:
  - "Parallel": all executions carried out simultaneously.
  - "Sequential": executions carried out one after the other.
- **Compensation**: a compensation defines the set of activities that are performed during the roll-back of a transaction to compensate for activities that were performed during the normal flow of the process.

Task type

To specify the type of a task:

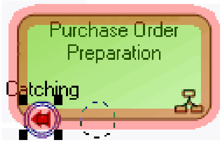
1. Open the properties of the process.
2. Click **Characteristics**.

3. Click the arrow at the right of the **Type Type** field.
   A list of task types appears.
   - **Call Process**: task used to call a second process while executing the current process.
   - **Receive:** elementary task which waits for arrival of a message from a participant external to the process. When the message has been received, the task is completed.
   - **Send**: task that sends a message to a participant external to the process. When the message has been sent, the task is completed.
   - **Manual**: task executed without the help of a automatic execution engine of a process or IT application.
   - **Business Rule**: execution task of a business rule with a rules engine which processes input data and returns calculation results.
   - **Script**: task executed by a process execution engine. The designer defines a language that the engine is able to interpret. When the task is ready to start, the engine executes the script. The task is completed when script execution is completed.

   ☛ *Shape of the process is modified to display the symbol associated with the task type.*

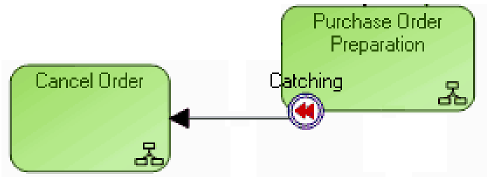
Compensation description

Compensation is caused by an event occurring during process execution. This event is placed at the edge of the interrupted process. It can be moved along the edge of the process.



To free the event from the process, use the detach command in its pop-up menu.

This event can trigger a compensation operation.



☛ *For reasons of consistency and simplification, the compensation link is represented in MEGA by a sequence flow. BPMN standard proposes a specific link.*

CONVERSATIONS

This chapter presents how to describe conversations between process architecture components.

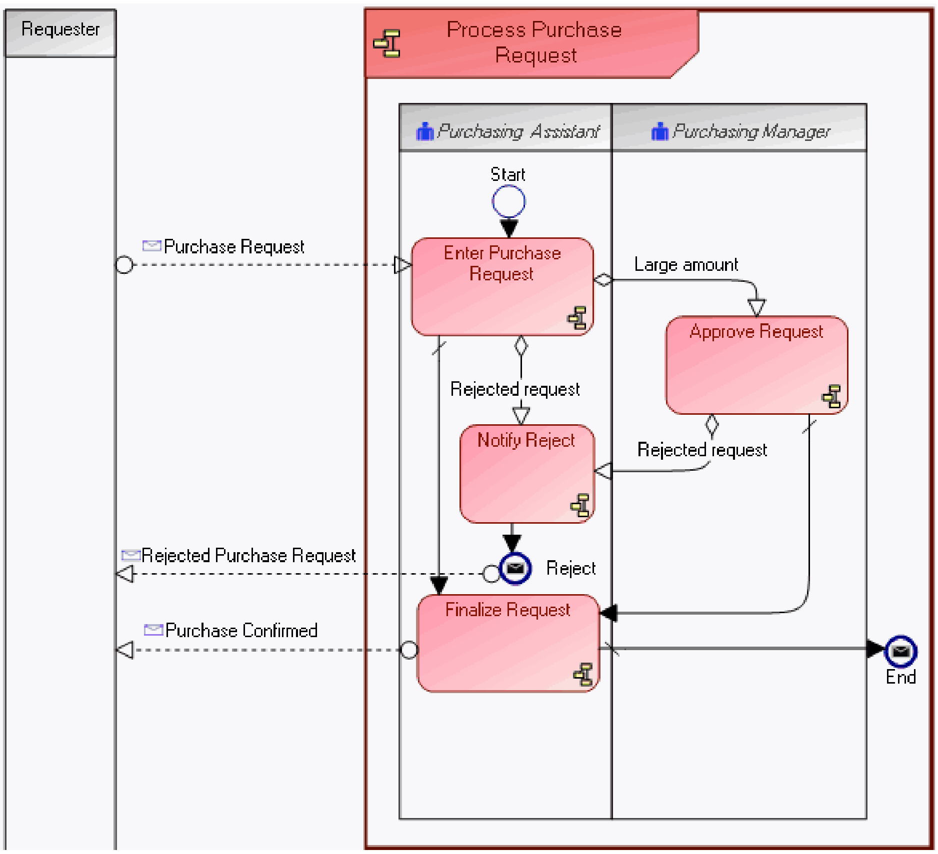
Conversations Example

The **Conversation** concept is introduced in standard BPMN 2.0.

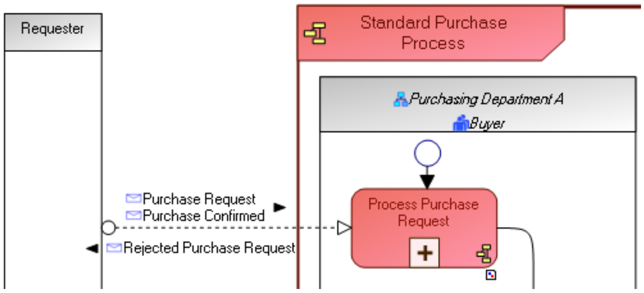
In **HOPEX Business Process Analysis**, a conversation is implemented by an **Exchange**.

An exchange specifies message flow exchanges between two participants.

```
The example of purchase request processing involves several
exchanges between the requester and the "Purchasing
Assistant".
```



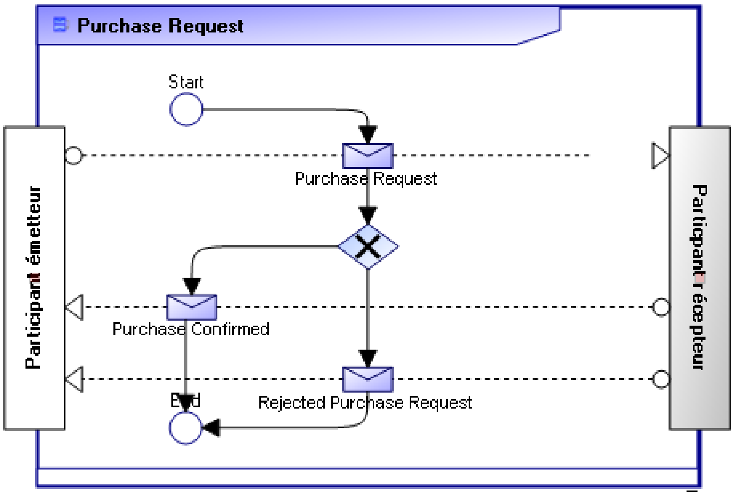
At the highest level, these exchanges can be represented by the same message flow.



A conversation is described by a set of message flows with content.

An exchange diagram can be built presenting the sequence of message flows exchanged.

The "Purchase Request" exchange diagram is shown below.



MANAGING CONVERSATIONS

A conversation represents the exchange of information between architecture components.

A conversation describes an exchange of several message flows between two roles.

Creating Conversations with an Existing Exchange

A conversation is described by an exchange representing an information exchange channel between architecture components.

An exchange specifies message flow exchanges between two participants.

To create a conversation from an existing exchange:

1. In a process diagram objects toolbar, click the **Conversation** button.
   
2. Draw a link between the two entities in communication.
3. In the conversation creation dialog box:
   - Specify the name of the conversation.
   - Select the **Exchange** you want to use.

   You can also create a new exchange, see "Creating Conversations with a New Exchange", page 88..
4. Click **OK**.

Creating Conversations with a New Exchange

You can create an **Exchange** from a library or a process diagram.

To create an *exchange* from a process diagram:

1. Click the **Conversation** button  and create a link between the two communicating entities.
   The conversation creation dialog box appears.
2. Click the arrow at the right of the **Exchange** field and select **Create Exchange**.
   The Creation of Exchange dialog box appears.
3. Enter the **Name** of your exchange.
4. Click **OK** to close this dialog box.
   The exchange is automatically created.
5. Click **OK**.
   The conversation appears in the diagram.

Describing Exchange Message Flows

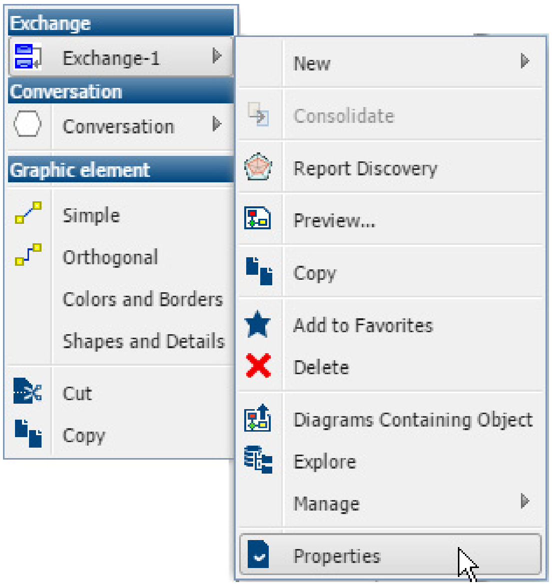
Content of the exchange is described by message flows and their content which are exchanged between the two roles representing the stakeholders in the conversation.

A message flow is information flowing within an enterprise or exchanged between the enterprise and its business environment. A message flow can carry a content.

A content designates the content of a message flow or message, independently of its structure. A content may be used by several message flows or messages, since it is not associated with a sender or with a recipient.

To describe message flows exchanged:

1. Right-click the conversation containing the exchange.
2. In the pop-up menu of the exchange, click **Properties**.

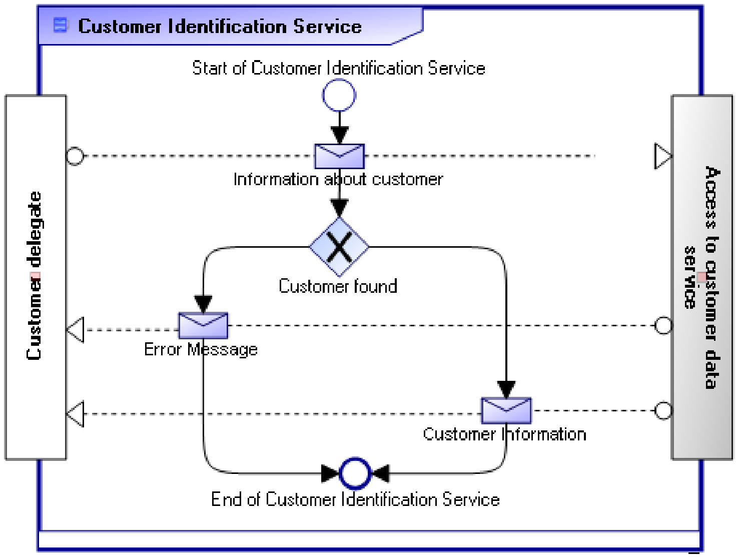


3. Select the **Message Flows** tab.
4. Click the **New** button.
   The **Creation of Message Flows With Content** dialog box opens.
5. From the **Content** drop-down list, select the content you wish to associate with the message flow.
   The message flow with its content is displayed in the list of conversation contents.

   ☛ *You can associate several contents with the message flow.*
6. Specify the direction of each message flow.
7. Click **OK**.

Describing Exchanges

The sequence flow of messages exchanged during a conversation can be described by an exchange diagram.



"Customer Identification Service" Exchange Diagram

```
The customer identification service protocol begins by
sending information enabling identification of the
customer. An error message appears if the customer is not
found, otherwise customer information is sent (customer
identification, status of orders, etc.).
```

Creating an exchange diagram (BPMN)

The procedure varies slightly depending on whether you are in **HOPEX Windows Front-End** or **HOPEX Web Front-End**.

Windows Front-End

To create an exchange diagram:

1. Right-click the conversation containing the exchange.
2. In the pop-up menu of the exchange, select **New** > **Diagram**.
3. In the window that opens, select "Exchange Diagram (BPMN)", confirm that the **Diagram initialization** check box is selected and click **Create**.

Web Front-End

To create an exchange diagram:

1. Right-click the conversation containing the exchange.

2. In the pop-up menu of the exchange, select **New** > **Exchange Diagram (BPMN)**.

The diagram opens. The exchange frame is positioned and the two roles (Consumer and Supplier) are created. The message flows associated with the exchange are also positioned in the diagram.

MANAGING EXCHANGE CONTRACTS

An **Exchange Contract** represents the exchange of information between architecture components of the process.

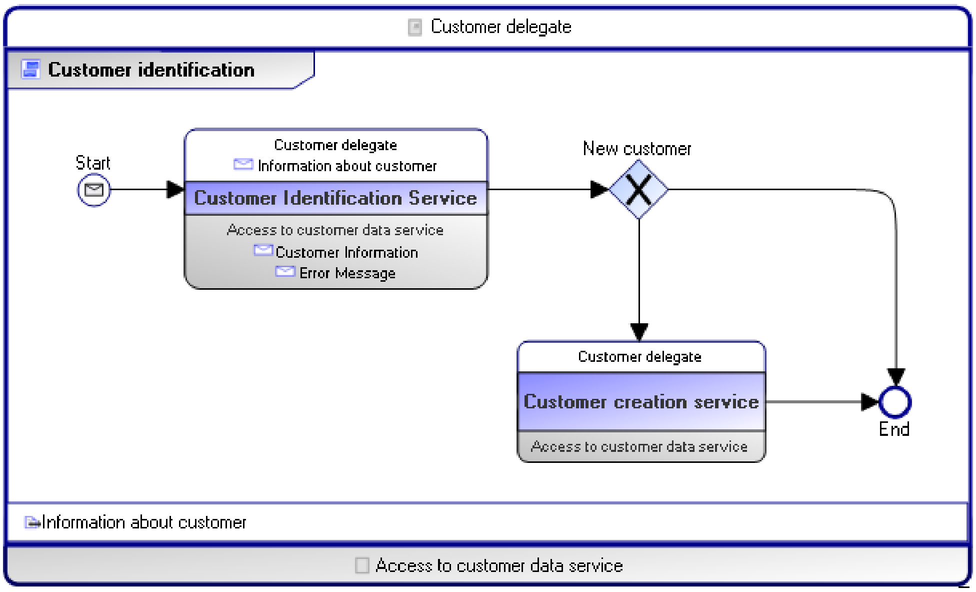
An exchange contract is a model of a contract between organizational entities. This contract is described by exchanges between an initiator role and one or several contributor roles.

With **HOPEX Business Process Analysis**, an exchange contract can be built using exchanges or using exchange contracts.

Exchange Contract Example

Example of exchange contract using exchanges

The "Customer Identification" exchange starts with a customer search step. If the customer is found, the protocol returns customer information, if not, a "Customer Creation" protocol is activated. The result of the "Customer Identification" exchange contract is a "Customer Information" message.



Exchange contract diagram (BPMN)

Progress steps are represented by **Exchange Uses**.

An exchange use represents the usage of an exchange in another exchange contract.

Example of exchange contract using exchange contracts

With **HOPEX Business Process Analysis**, a protocol is described by a sequence flow of steps which are represented:

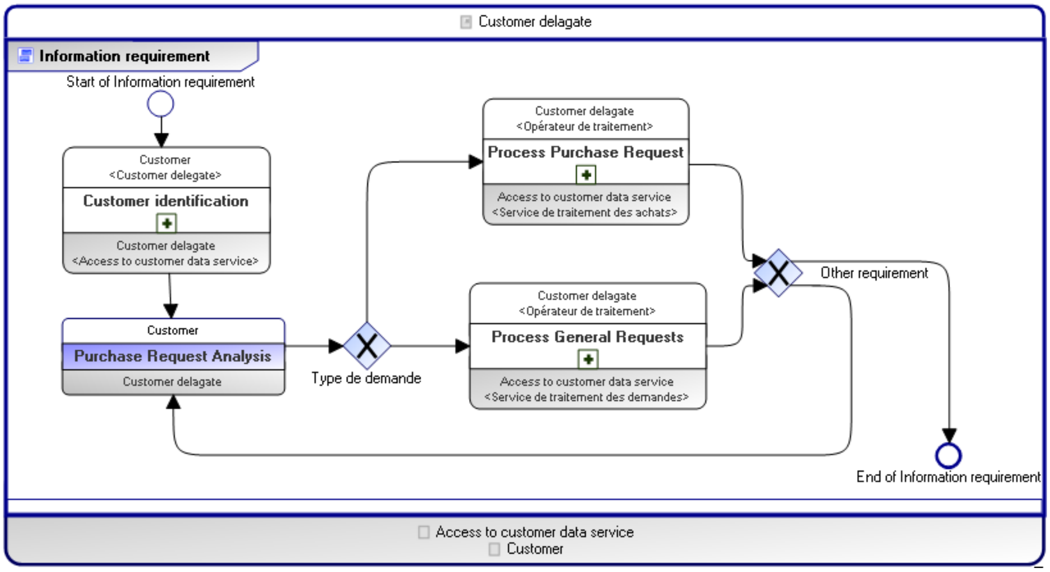
- by **Exchange Uses**
- by **Exchange Contract Uses**

An exchange contract use represents the usage of an exchange contract in another exchange contract.

The protocol roles, presented at the border of the frame, represent participants:

- consumer or
- supplier

An exchange can be described by involving more than two participants. In this case, a role is consumer of the exchange contract and the others are suppliers.



"Information Requirement" Exchange Contract Diagram (BPMN)

The "Information Request" exchange contract is used by the supplier call center to take account of a customer request online. There are therefore three participants in this contract: the customer, the IT applications and the customer representative who is the effective requester of the service (in this case the call center).

This contract consists of identifying the customer, then analyzing the request. The request is then processed as a purchase request or as another request if it is an information request for example.

Using Exchange Contracts

An **Exchange Contract** is described by a **Composite Conversation** which represents the information exchange channel between architecture components.

An exchange contract is a model of a contract between organizational entities. This contract is described by exchanges between an initiator role and one or several contributor roles.

A composite conversation is described by an exchange contract. This exchange contract uses other exchanges or exchange contracts.

To create a composite conversation:

1. In a process diagram objects toolbar, click the **Composite Conversation** button.
2. Draw a link between the two entities in communication.
3. In the add composite conversation dialog box, specify the name of the conversation and the exchange contract you want to use.

   You can also create a new exchange contract, see "Creating Conversations with a New Exchange", page 88..
4. Click **OK**.

Creating Exchange Contracts

To create an exchange contract from a composite conversation:

To create an exchange contract from a composite conversation:

1. In the diagram insert toolbar, click the **Composite Conversation** button.
2. Draw a link between the two communication entities.
3. In the composite conversation creation dialog box, click the arrow on the right of the **Exchange Contract** field and select **Create Exchange Contract**.
   The **Creation of Exchange Contract** dialog box opens.
4. Enter the name of the contract in the **Name** box.
5. Click **OK**.
   The composite conversation and exchange contract are created.

Describing Exchange Contracts

An **Exchange Contract** can be supported by **Exchanges** or **Exchange Contracts** representing information exchanges between architecture components.

> *An exchange contract is a model of a contract between organizational entities. This contract is described by exchanges between an initiator role and one or several contributor roles.*

> *An exchange use represents the usage of an exchange in another exchange contract.*

> *An exchange contract use represents the usage of an exchange contract in another exchange contract.*

To describe that an exchange is used by an exchange contract:

1. Open the exchange contract properties dialog box.
2. Select the **Exchange** tab.
3. Click the **New** button.
   A selection dialog box opens.
4. Select **Exchange Use**, which is the type of exchange you want to use, and click **OK**.
   The creation dialog box opens.
5. Click the arrow at the right of the **Specification** box.
6. Select **List** in the drop-down list and select the exchange to be associated with the exchange use.
   The name of the exchange appears in the **Specification** field.
7. In the **From** field, select the described exchange role connected to the Consumer role of the exchange used.
8. In the **To** field, select the described exchange role connected to the supplier role of the exchange used.
9. Click **OK**.

   ☛ *You can associate several exchanges with the exchange contract.*

10. Click **OK**.

Creating an Exchange Contract Diagram

With **HOPEX Business Process Analysis**, an exchange contract is represented by an Exchange Contract Diagram (BPMN).

The procedure varies slightly depending on whether you are in Windows Front-End or Web Front-End.

Windows Front-End

To create an Exchange Contract Diagram (BPMN) from a composite conversation:

1. Right-click the composite conversation containing the exchange contract.
2. In the pop-up menu of the exchange contract, select **New** > **Diagram**.
3. In the window that opens, select "Exchange Contract Diagram (BPMN)", confirm that the **Diagram initialization** check box is selected and click **Create**.

Web Front-End

To create an exchange diagram:

1. Right-click the conversation containing the exchange.
2. In the pop-up menu of the exchange, select **New** > **Exchange Contract Diagram (BPMN)**.

The diagram opens with the exchange contract frame and the two roles representing consumer or supplier.

Defining exchange and exchange contract uses

In an Exchange Contract Diagram (BPMN), operations are described by:

- **Exchange Uses**
- **Exchange Contract Uses**

An exchange use represents the usage of an exchange in another exchange contract.

An exchange contract use represents the usage of an exchange contract in another exchange contract.

To create an exchange contract use:

1. Click the **Exchange Contract Use** button and click in the diagram within the exchange contract frame.
The creation dialog box opens.
2. Click the arrow at the right of the **Specification** box.
3. Select **List** in the drop-down list and select the exchange contract associated with the exchange contract use.
4. In the **From** field, select the described exchange contract role connected to the consumer role of the exchange contract used.
5. In the **To** field, select the described exchange contract role connected to the Supplier role of the exchange contract used.
6. Click **Finish**.

Summary of Concepts

	Exchange	Exchange contract
Definition	An exchange specifies message flow exchanges between two participants.	An exchange contract is a model of a contract between organizational entities. This contract is described by exchanges between an initiator role and one or several contributor roles.
Use in a Process Diagram	A conversation describes an exchange of several message flows between two roles.	A composite conversation is described by an exchange contract. This exchange contract uses other exchanges or exchange contracts.
Use in an Exchange Contract Diagram	An exchange use represents the usage of an exchange in another exchange contract.	An exchange contract use represents the usage of an exchange contract in another exchange contract.

ORGANIZATIONAL CHARTS AND RESPONSIBILITIES

HOPEX enables representation of enterprise structure It indicates the hierarchy of org-units in the enterprise, specifies the persons that play the role of these org-units, and shows at which site the org-unit is located.

HOPEX also enables definition of organizational process responsibilities by means of the RACI matrix (Responsible, Accountable, Consulted, Informed) as well as business processes.

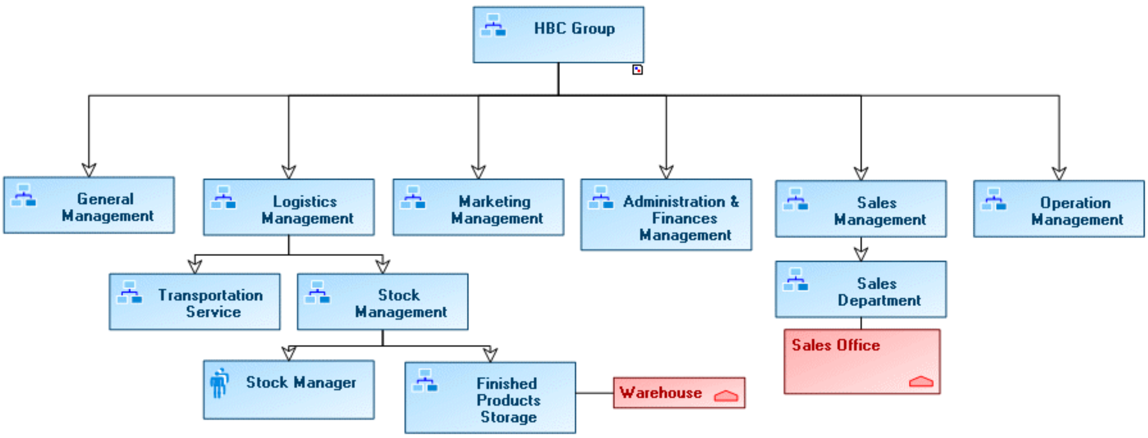
MANAGING A ORGANIZATIONAL CHART

An organizational chart provides an overview of the enterprise structure. **HOPEX Business Process Analysis** allows you to design your organizational charts using the same tools and methods as applied to processes.

HOPEX Business Process Analysis organizational charts contain the following descriptive objects:

- Org-Units, which are generally elements defining the enterprise structure, such as Sales Department.
- Sites that are geographical locations pivotal to the organization, such as headquarters, plants, etc.

Organizational chart example



Creating an Organizational Chart

To create an organizational chart:

1. In the workspace, select the **Main Objects** navigation window.

   ☛ *The **Main Objects** navigation window is accessed from a menu in **View** box.*

2. Right-click an org-unit and select:
   - (Windows Front-End) **New > Diagram**. In the diagram creation wizard, click **Org-Unit Organizational Chart** then **Create**.
   - (Web Front-End) **New** > **Org-Unit Organizational Chart**.

The corresponding organizational chart opens. It is automatically initialized with the component org-units of the described org-unit.

Drawing an Organizational Chart

Searching for Objects

To simultaneously add all the org-units involved in your processes that were not automatically inserted at diagram initialization:

1. In the query tool, select the **Org-Unit** object and click the **Find** button .

   The result dialog box appears.
2. Select the desired org-units holding the <Shift> key down.

   ☺ *When you click on an object while holding down the Ctrl key, you add it to the list of selected objects if it was not previously selected, or you remove it from the selection if it was.*
3. Drag-and-drop the selected objects from the result dialog box into the diagram.
4. Draw the links between these org-units.

   ☛ *Note that certain links might already exist.*

When you create a link between two org-units, always drag from the org-unit higher in the hierarchy down to the subordinate. Once the link is drawn, an arrowhead indicates the direction of the hierarchy.

You can can associate *business persons* with an org-unit using the **Person** in the org-unit properties pane.

☛ *A business person holds a position in an organization. It is designated by its name. Example: Mr. Smith.*

The name of the persons linked to the org-unit appear in the org-unit frame.

☛ *If the **Person** tab does not appear, you can associate **System persons** with the **Characteristics** tab in the **Member** section. For more details, see "HOPEX Business Process Analysis Profiles", page 16.*

You can also add *sites*  where the org-units are located.

A site is a geographical location of an enterprise. Examples: Boston subsidiary, Seattle plant, and more generally the headquarters, subsidiaries, plants, warehouses, etc.

You must then draw the links between these objects. Note that certain links might already exist.

Specifying org-unit properties

To specify the properties of an org-unit:

1. Right-click the org-unit.
2. Select **Properties**.

☺ *When an org-unit appears in a diagram, you can describe it with a new organizational chart using its pop-up menu.*

3. In the **Org-Unit-Type** list box, select the org-unit type.

There are several types of org-unit:

- Supplier
- Institution
- Company
- Public Department
- "Structure" (for example, Sales Management).
- Function (for example, Sales Engineer)
- Accountable (for example, Sales Manager)
- Generic: corresponds to a role to be played during a project (Writer, Requester).

☛ *You can also specify its details (company name, e-mail address, telephone number, etc.).*

Consulting the RACI Matrix of Org-Units

HOPEX Business Process Analysis proposes a report in the form of a matrix which presents:

- the selected org-unit and sub-org-units
- the organizational processes and operations in which these org-units intervene.

☛ *RACI is the acronym of Responsible, Accountable, Consulted, Informed.*

To consult the RACI matrix:

1. Open the properties of the org-unit.
2. Select the **RACI** tab.

To generate the matrix to search for org-units in depth, you must use report "Org-Unit and Sub-Org-Unit RACI Matrix (BPMN)". For more details, see “Launching an RACI matrix from an object", page 109 (operation identical to business processes).

Business Process Responsibilities

From a business process, you can:

- define business process control responsibilities
- view org-units concerned by the organizational processes connected to this business process

> ☛ *RACI is the acronym of Responsible, Accountable, Consulted, Informed.*

Defining business process control responsibilities

Business process control is the responsibility of persons. The business process control team therefore comprises a list of persons, with the possibility of indicating the role of each in the team.

To specify business process control responsibilities:

1. Open the properties of a business process.
2. Click the **Characteristics** tab.
3. In the **Responsible Persons** frame, create or connect the system persons involved in process control.

Generating an RACI matrix from a business process

From a business process you can generate a matrix presenting:

- organizational processes connected to the business process or to its sub-processes
- operations of these organizational sub-processes
- org-units concerned by these organizational processes and operations

To generate an RACI matrix from a business process:

1. Right-click the business process and select **Report Discovery**.
2. In the list of available reports, click **Process Analysis**.
3. From the "Business Process RACI Matrix (BPMN)" report, click **Launch a new report**.

4. In the generated report, select report chapter "Business Process RACI Matrix (BPMN)".
You obtain a result like this:

	Finance Department	Customer Satisfaction Department	Sales Department	Sales Rep
Deliver Vacation Business				
Invoice Customer	(A)			
Vacation Package Booking			(A)	
Vacation Package Delivery		(A)		
Vacation Request Formalization			(A)	

☛ *To generate a matrix to search for organizational processes and operations in depth, you must use report "Business Process and Sub-Process RACI Matrix (BPMN)".*

ORGANIZATIONAL PROCESS AND OPERATION RESPONSIBILITIES (RACI)

HOPEX Business Process Analysis specifies the responsibility level of the various org-units:

- on an operation
- on an organizational process.

The proposed responsibility levels are as follows:

Scope of responsibility	Meaning
Responsible	Org-unit responsible for the operation or process
Accountable	Org-unit monitoring progress of the operation or process and taking decisions. There is only one "Accountable" org-unit for each action.
Responsible/Accountable	Org-unit executing the operation or process, informs on progress and takes decisions. There is only one "Accountable" org-unit for each action.
Consulted	Org-unit consulted as first priority before an action or decision.
Informed	Must be informed after an action or decision.

☛ *RACI is the acronym of Responsible, Accountable, Consulted, Informed.*

Defining responsibilities

Organizational process and operation responsibilities

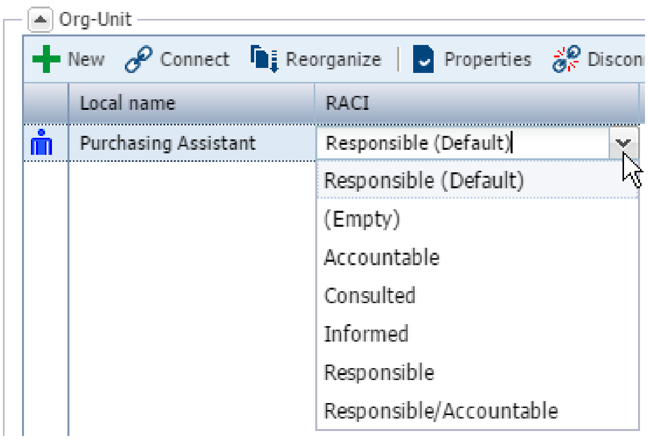
To indicate the responsibility of an org-unit in an operation or organizational process:

1. Open the properties dialog box of the operation or process.
2. Click the **Characteristics** tab.
3. In the **Org Unit** section, click the **Connect** button.

4. In the dialog box that opens, select **Candidate Org-Units (RACI)** and click the **Find** button .
   A dialog box proposes the list of org-units that execute the operation or the process via a participant.

   ☛ *An org-unit can be connected directly to an operation or process or indirectly via a participant. An RACI candidate org-unit is an org-unit assigned to a participant.*

5. Select the org-units that interest you and click **Relier**.
   The org-units appear in the properties dialog box of the operation or process.
6. For each of these, in the **RACI** drop-down list, select a responsibility level from the four proposed.
   - **Consulted** (C)
   - **Responsible** (R)
   - **Responsible/Accountable** (R/A)
   - **Informed** (I)
   - **Accountable** (A)



The selected responsibility level appears with an icon corresponding to context:

Icon	Meaning
	Indicates that responsibility is deduced from the participant. The icon appears when the selected org-unit is: - assigned to the participant, and - declared with **Responsible** responsibility (default responsibility).
No icon	There is no icon when the selected org-unit is: - assigned to the participant, and - declared with responsibility other than **Responsible** (default responsibility).
	The icon appears when the selected org-unit is not assigned to the participant.

Org-units displayed in a participant

The list of org-units displayed in the header of the shape of a participant groups:

- org-units attached to the participant but with no responsibility in the process or operations executed by the participant. These org-units are declared in the properties of the participant.

  ☛ *For more details on org-units connected to a participant, see "Assigning Org-Units to Participants", page 31.*

- org-units attached to the participant but with a responsibility in the process or operations executed by the participant. The name of the org-units is followed by a letter corresponding to their responsibility. These org-units are declared in the properties of the participant.

  ☛ *For more details, see "Responsibilities of org-units of a participant", page 107.*

- org-units not attached to the participant but with a responsibility in the process or operations executed by the participant. These org-units are declared in the properties of at least one process or operation executed by the.

  ☛ *For more details, see "Organizational process and operation responsibilities", page 105.*

Responsibilities of org-units of a participant

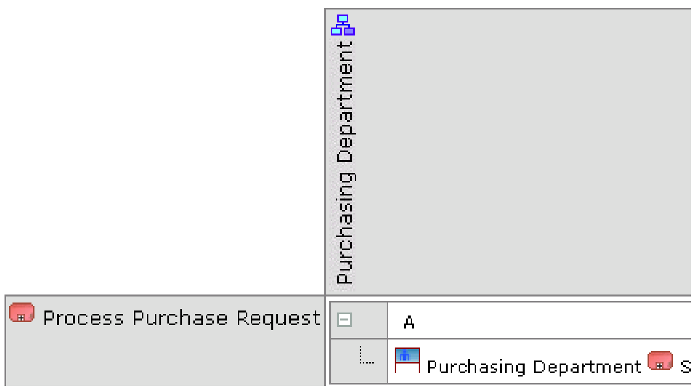
To indicate responsibility of each of the org-units attached to a participant in the different operations or organizational processes it executes:

1. Open the participant properties dialog box.

2. Select the **RACI** tab.
The analysis report is displayed carrying the letter representing the responsibility of the org-unit in the process or operation:
   - (A) for Accountable
   - (R) for Responsible
   - (R/A) for Responsible/Accountable
   - (C) for Consulted
   - (I) for Informed

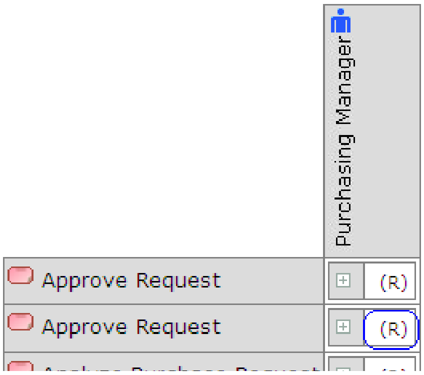
In the example above, the "Purchasing Department" assigned to the participant to which the analysis relates, executes the "Process Purchase Request" process and is Accountable for "Process Purchase Order".

3. Click .
The context of responsibility of the org-unit is indicated. You can view:
   - the name of the participant to which the org-unit is assigned
   - the name of the process that is owner of the participant



To define the responsibility level of an org-unit related to an operation or organizational process:

1. Open the participant properties dialog box.
2. Select the **RACI** tab.
3. Click on the corresponding cell in the matrix.



A selection dialog box opens.

4. Click the arrow at the right to display the list of responsibility levels.
5. Select the level that interests you.
6. Click **OK** in the selection dialog box.
7. Click button on the right to refresh the report.

Using RACI Matrices

HOPEX Business Process Analysis allows you to generate reports in the form of matrices which identify and analyze data of your repository so as to have a clearer view of the information.

☛ *For more details on the use of analysis reports, see the* ***HOPEX Common Features*** *guide.*

Launching an RACI matrix from an object

When you launch an RACI matrix form an organizational process, the list of sub-processes is automatically deduced from the links between org-units and organizational processes/operations.

The following are reports available from an organizational process:

- Organizational Process RACI Matrix (BPMN)
  This matrix queries organizational sub-processes and operations located under the organizational process.
- Organizational Process and sub-processes RACI Matrix (BPMN)
  This matrix drops n levels to retrieve sub-processes and operations located under the organizational process.

> ☛ *The principle is the same with org-units and business processes.*

> ☛ *To generate a matrix to search for organizational processes and operations in depth, you must use report "Business Process and Sub-Process RACI Matrix (BPMN)", page 194.*

To access this type of matrix:

1. Right-click the process and select **Report Discovery**.
2. Click**Process Analysis** and select an RACI report that references sub-objects.
3. Open the report properties page via the **Customize and Launch New Report** button.
   The report properties page opens and the report is accessed in the **Reports** tab.

> ☛ *Click button on the right to refresh the report if you have modified objects or parameters of the report.*

Creating an RACI with objects of your choice

The "RACI Management (BPMN) report allows you to create a matrix which displays:

- org-units in columns
- operations or organizational processes in rows

> ☛ *Cells present RACI values: R for Responsible, A for Accountable, C for Consulted, I for Informed.*

> ☛ *For more details, see "Managing RACI (BPMN)", page 190.*

7

THE CUSTOMER JOURNEY

The **HOPEX Customer Journey** module is used to represent the acquisition process of a product or a service by a specific customer. Mapping a customer journey provides an overview of customer expectations, painpoints encountered, and the resources used at each step of the journey. Last but not least, he touchpoints, which are the points of interaction between the customer and the company, are used to measure and improve overall customer satisfaction.

As customer journey mapping is created with **HOPEX Customer Journey** in tabular input mode only, the **HOPEX Customer Journey** module is therefore only available with the **HOPEX Web Front-End** module.

Representing a customer journey will allow you to easily identify these critical points. **HOPEX Customer Journey** is used to describe solutions for improvement and to assess them at different dates.

☛ *To access the assessment functionalities described here, you must have acquired the **HOPEX Assessment** module.*

The points covered here are:

PRESENTATION OF THE MODULEHOPEX CUSTOMER JOURNEY

Associated with **HOPEX Business Process Analysis**, the **HOPEX Customer Journey** module supports the methodology and the tools that are used to describe and improve the acquisition process of your products and services.

The methodology embedded in the **HOPEX Customer Journey** module is based on the features of the **HOPEX** Suite to describe and manage the different project phases and steps in the customer journey.

Last but not least, the **HOPEX** suite assessment tool is used to record, over time, an assessment of the steps in the customer journey. The consolidated results of these assessments are visible in the customer journey diagrams. Standard reports are also available to facilitate analysis of the journey and help with identifying a solution for improvement.

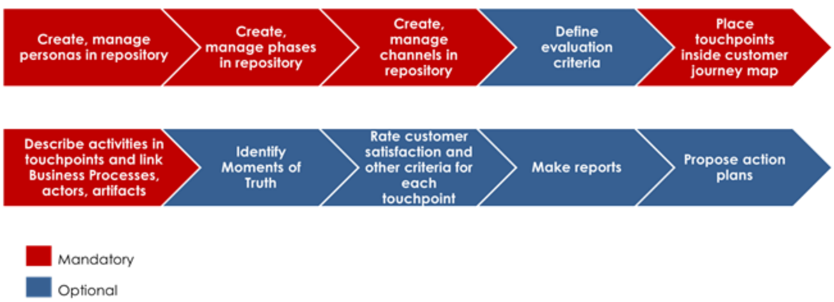
> This presentation is based on the example of a travel agency that offers different types of holidays to different types of customers.

The **HOPEX Customer Journey** module is introduced here by :

- "Description of a customer journey", page 112
- "Assessing a customer journey", page 117

Description of a customer journey

To be able to benefit, at the end of your customer journey representative work, from the analysis facilities offered by **HOPEX Customer Journey**, we recommend you follow the methodological steps shown in the diagram below.



Defining persona and business lines

This consists of preparatory work identifying the different types of customers according to their needs and what they bring to the company.

The purpose of this phase is to identify the *persona* as well as the *business lines*.

A persona corresponds to a customer segment targeted by the experience of the client journey. The resources implemented to give customers the ability to interact with the enterprise and its environment, to acquire the expected results, are supported by the interaction channels.

A business line is a high level classification of main enterprise activities. It corresponds for example to major product segments or to distribution channels. It enables classification of enterprise processes, organizational units or applications that serve a specific product and/or specific market.

```
Using our example of the travel agency, we are interested in
the young adult segment. The business line preferred for
this population is "Sports holidays".
```

You must begin by assessing the customer expectations for each *persona*.

A customer expectation is an enterprise result expected by the persona at the end of the journey.

```
For example, a population of young adults can expect, with a
sports holiday, a wide range of activities in an exceptional
setting for a reasonable price.
```

From a methodological point of view, we suggest you proceed as follows:

1. Identify the customer segments,
2. Define, via the hierarchy, the *persona groups* and the *persona* associated with each segment,

   ☛ *For more details, see* *"Defining persona hierarchy", page 118* and *"Creating a persona", page 118*.
3. Identify the org-units that correspond to the segments,
4. Create *customer expectations* for a given *persona*,

   ☛ *For more details, see* *"Specifying the expectations of a persona", page 119*.
5. Create the *business lines*.

   ☛ *For more details, see* *"Creating a business line", page 119*.

Defining the customer journey

Each *customer journey* corresponds to a specific *persona* . So, when the *persona* are identified, you can create *customer journeys*.

☛ *If you wish, you can also create the customer journey first and the persona second.*

A customer journey is used to describe and organize all interactions between the enterprise and a persona for a given result.

```
We can, for example, build the customer journey that
corresponds to a "sports holiday" for a "young adult"
persona.
```

☛ *For more details, see* *"Creating a customer journey", page 120*.

Defining the phases of a customer journey

A *customer journey* is described by a number of sequenced *phases*.

A customer journey phase is a time or experience-bound period within a Customer Journey.

`In the example "sports holiday", we identify three phases: the "selection of holidays", the "qualification of holidays" selected and the holiday "reservation".`

☛ *For more details, see "Defining the customer journey phases in tabular input mode", page 121.*

Defining the steps in a customer journey

The customer journey *steps* are closely linked to the business line. The customer journey *steps* are organized to most closely represent reality. They are essential because the assessments deal with each of the steps of a customer journey.

A customer journey step is the basic elementary advancement unit of a customer via a customer journey phase.

`In the "reservation" phase of the holiday, we can identify the following steps: "Validate the order", "Complete the customer information", "Proceed with payment".`

Finally, the resources used at each *step* of the customer journey are represented by *channels*.

A channel is used to identify the enterprise resources used by a persona to achieve a step. For example, a channel can be a phone or internet connexion.

`In our example for selling sports holidays, the resources made available to customers are advertising brochures, web applications and a support service to answer customer questions.`

To describe the steps of a customer journey, we suggest you proceed as follows:

1. Define the customer journey *steps* associated with each phase.

   ☛ *For more details, see "Creating the customer journey steps in tabular input mode", page 122.*

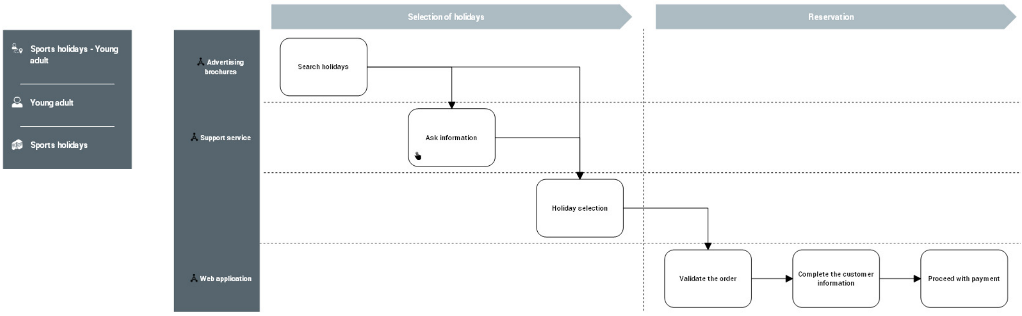
2. Describe the sequences that link the steps.

   ☛ *For more details, see "Organizing the customer journey steps in tabular input mode", page 123.*

3. Link the steps to the *channels* concerned.

   ☛ *For more details, see "Defining the channels in a customer journey", page 123.*

At this stage, the diagram that you are building with **HOPEX Business Process Analysis** looks like the figure below.



Understanding customer expectations and painpoints

Each customer journey *step* can be linked to:

- one or more customer expectations.

  A customer expectation is an enterprise result expected by the persona at the end of the journey.

  The expectations of young adults for a sports holiday can concern the context of the holiday or activities offered.

  For more details, see "Adding persona expectations to customer journey mapping", page 124.

- one or more *painpoints*.

  A painpoint describes the difficulties encountered by a persona when carrying out a step in the customer journey.

  The painpoints of a group of young adults can concern the painpoint of agreeing, prices that are too high or the painpoint of accessing the site.

  For more details, see "Defining customer painpoints", page 125.

Identifying the touchpoints

The objective is to identify the organizational elements that are used during the customer journey and that could have an impact on customer satisfaction.

A touchpoint describes an interaction between a persona and an enterprise.

The touchpoints between the customers and the travel agency are by telephone and by email. A support center can thus be put in place.

For more details, see "Creating a touchpoint in a customer journey", page 126.

Each *touchpoint* can be linked to:

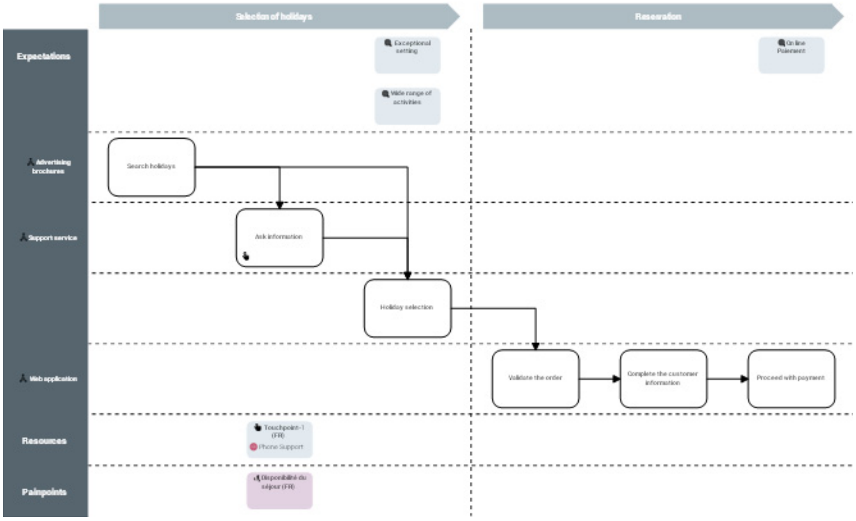
- one or more *business opportunities*.

  📖 *An opportunity characterizes an improvement action for one of the composite elements of the customer journey (steps, touchpoint).*

  ```
  To be able to offer another holiday if the holiday selected
  is no longer available constitutes a business opportunity.
  ```

  ☛ *For more details, see "Defining the business opportunities of a customer journey", page 127.*

- one or more *painpoints*.



Identifying moments of truth

📖 *A moment of truth is a decisive step for the remainder of the customer journey. Either customers believe that they cannot obtain what they are searching for under the desired conditions and they exit; Or, on the contrary, they believe that they have found what they are looking for and continue the journey.*

```
A reservation that is too late constitutes a moment of
truth. The sports holiday is completed or, on the contrary,
it was canceled due to low staff numbers.
```

☛ *For more details, see "Identifying a moment of truth", page 127.*

Following this last description step of your customer journey, you obtain a diagram that looks like this.

Assessing a customer journey

Customer satisfaction can be assessed at each *step* of the customer journey on a list of criteria by a number of people on different dates.

A customer journey step is the basic elementary advancement unit of a customer via a customer journey phase.

☛ *For more details, see* *"Assessment of a customer journey", page 129.*

The assessment criteria are presented in a questionnaire specific to each customer journey.

The results of the assessments filled in for the steps of a customer journey are then consolidated and accessible from:

- reports available on a customer journey,

  ☛ *For more details, see* *"The reports available on a customer journey", page 136.*
- the shape of the steps in the diagram of the customer journey which is different depending on the results of the assessment,
- the **Assessment > All Assessed Customer Journeys** folder,
- the properties page of the customer journey in the **Assessment** tab.

MANAGING THE COMPONENTS OF A CUSTOMER JOURNEY

The following points are covered here :

Describing persona and persona groups

This phase consists of identifying the different customer segments according to their needs and what they bring to the company.

A persona corresponds to a customer segment targeted by the experience of the client journey. The resources implemented to give customers the ability to interact with the enterprise and its environment, to acquire the expected results, are supported by the interaction channels.

Defining persona hierarchy

A persona group is grouping of personas according to similar objectives on several customer journeys.

To create a persona:

1. Open the **Customer journey** navigation window.
2. Select **Customers > Persona Groups**.
   The Persona Group tree appears in the edit area.
3. Click on the tree root to display its pop-up menu and select **New > Persona Group**.
   The **Creation of a Persona Group** window appears.
4. Enter the name of the group.

   `"Sports clientele" and "Young clientele", for example.`
5. Click **OK** to close this dialog box.
   The persona group that you have just created appears in the tree of the Persona Group.

Creating a persona

A persona corresponds to a customer segment targeted by the experience of the client journey. The resources implemented to give customers the ability to interact with the enterprise and its environment, to acquire the expected results, are supported by the interaction channels.

You can create a persona from a persona group or from of the persona tree.

You can create a report from the persona tree.

1. Open the **Customer journey** navigation window.
2. Select **Customers > Persona**.
   The Persona tree appears in the Edit Area.
3. Right-click the tree root to open its pop-up menu and select **New > Persona**.
   The **Creation of a Persona** page appears.
4. Enter the name of the persona.

   ```
   "Young adults", for example. This persona can be connected
   to two persona groups: "Sports clientele" and "Young
   clientele".
   ```
5. Click **OK** to close this dialog box.
   The persona you have just created now appears in the persona tree.

Specifying the expectations of a persona

A customer expectation is an enterprise result expected by the persona at the end of the journey.

To create a customer expectation from a persona:

1. Open the properties window of the persona that interests you.
2. In the **Customer Journey** tab, expand the **Customer Expectations** section.
3. Click **New**.
   The **Creation of a Client Expectation** window appears.
4. Enter the name of the customer expectation.
5. Click **OK**.
   The customer expectation is added to the list of persona expectations.

Using Business Lines

Creating a business line

A business line is a high level classification of main enterprise activities. It corresponds for example to major product segments or to distribution channels. It enables classification of enterprise processes, organizational units or applications that serve a specific product and/or specific market.

To create a business line:

1. Open the **Customer journey** navigation window.
2. Select **Customers > Business Lines**.
   The business line tree appears in the edit area.
3. Click on the tree root to display its pop-up menu and select **New > Business Line**.
   The **Creation of a Business Line** window appears.
4. Enter the Name.
5. Click **OK** to close this dialog box.
   The business line appears in the business line tree.

Connecting a business line to a customer journey

Customer journeys connected to a business line are accessible from the **Characteristics** tab of the business line.

For more details, see "Connecting a customer journey to a business line", page 120.

Building a customer journey

A customer journey is used to describe and organize all interactions between the enterprise and a persona for a given result.

A customer journey is associated with a persona. Therefore, a customer journey can be created in three different ways:

- from a persona or a persona group,
- from a customer journey group,
- directly from the **Customer Journey** navigation pane.

Creating a customer journey

To create a customer journey directly:

1. Open the **Customer Journey** navigation pane.
2. Select **Customer Journeys > All Customer Journeys**.
   A list of customer journeys is displayed in the edit area.
3. Click on the tree root to display its pop-up menu and select **New > Customer Journey**.
   The **Creation of a Customer Journey** window appears.
4. Enter the Name.
5. Click **OK** to close this dialog box.
   The customer journey appears in the customer journey tree.

Connecting a customer journey to a persona

To connect a persona to a new customer journey from the customer journey tree:

1. Select the line of the new customer journey.
2. Click in the **Persona** column.
3. Select the persona that interests you.

☛ *The persona associated with a customer journey is accessible in the* ***Characteristics*** *tab of the customer journey.*

Connecting a customer journey to a business line

To connect a business line to a customer journey

1. Open the properties window of the customer journey in question.
2. Select the **Characteristics** tab and expand the **Business Lines** section.
3. Click **Add**.
   Select the business line that interests you.

☛ *The customer journey is accessible in the* ***Characteristics*** *tab of the business line.*

Creating a customer journey group

A customer journey group consolidates the journeys that comply with similar criteria.

To create a customer journey group

1. Open the **Customer journey** navigation window.
2. Select **Customer Journeys > All Customer Journey groups**.
   A list of customer journey groups is displayed in the edit area.
3. Click on the tree root to display its pop-up menu and select **New > Customer Journey group**.
   The **Creation of a Customer Journey Group** window appears.
4. Enter the name of the group.

   `"Sports holidays" and "cruises"², for example.`
5. Click **OK** to close this dialog box.
   The Customer Journey group that you have just created appears in the tree of the Customer Journey Group.

Using the **Characteristics** tab of the customer journey properties window, you can then connect the customer journey to the group.

Creating a customer journey mapping

Customer journey mapping can only be created and updated in tabular input mode.

☛ *Tabular input is available with the **HOPEX Web Front-End** module. For more details on the use of tabular input, see* *"Tabular diagram input", page 141**.*

To create a customer journey mapping:

1. In the navigation pane, right-click on the customer journey concerned to display its pop-up menu.

   ☛ *If a mapping already exists for the selected customer journey, its name appears in the pop-up menu of the object.*
2. Select **New > Customer Journey Map**.
   The UI of the table input mode opens in the edit area. The tabs available are **Phases** and **Steps**.

Defining the customer journey phases in tabular input mode

A customer journey phase is a time or experience-bound period within a Customer Journey.

A customer journey is described by several sequenced phases.

☛ *The list of phases of a customer journey is accessed from the **Characteristics** properties window, in the **Phases** section.*

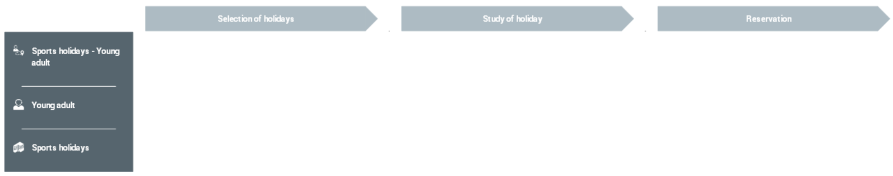


Diagram of a customer journey connected to a persona and a business line with phases

Creating a customer journey phase in tabular input mode

To create a phase in tabular input mode for a customer journey:

1. Click the **Phase** tab.
2. Click **New.**
   The new phase appears in the list of journey phases.
3. Click on the name of the phase to update it.
   If you are in **Auto Refresh** mode, the diagram is automatically updated, otherwise click **Refresh Diagram** to display the new phase in the diagram.

Ordering the customer journey phases in tabular input mode

By default, the phases are ordered in their order of creation.

To modify the order of a customer journey using its diagram:

1. Click the **Phase** tab to access the list of diagram phases.
2. Select the phase whose order you want to modify and click in the **Order** column.
3. Modify the value of the order of the phase.

> ☛ *If you enter an order number that already exists, the order of creation remains the same in the diagram.*

Describing the steps of a customer journey

> 🕮 *A customer journey step is the basic elementary advancement unit of a customer via a customer journey phase.*

A customer journey is described by several sequenced phases.

> ☛ *The list of steps of a customer journey is accessed from the* ***Characteristics*** *properties window, in the* ***Phases*** *section.*

You can, for example, proceed as follows:

1. "Creating the customer journey steps in tabular input mode", page 122,
2. "Organizing the customer journey steps in tabular input mode", page 123,
3. "Defining the channels in a customer journey", page 123.

Creating the customer journey steps in tabular input mode

To create a step in tabular input mode for a customer journey:

1. Click the **Step** tab.
2. Click **New.**
   The **Choose object type** window appears.
3. Select **Steps** and click **OK**.
   The new step appears in the list of journey phases.
4. Click on the name of the step to update it.
   The step created appears in the diagram outside of the phase area.

Organizing the customer journey steps in tabular input mode

By default, steps are not associated with phases and they are not sequenced.

Defining the sequencing of a customer journey

To define the sequencing order of the steps of a customer journey, you must specify the list of predecessors at each step.

To specify the predecessor of a step of a customer journey from its diagram:

1. Click the **Step** tab to access the list of diagram steps.
2. Select the step concerned and click **OK**.
   A window opens with the list of steps of the diagram that can be connected.
3. Select the step concerned.

   ☛ *You can select several steps..*
4. Click outside of the selection pane of the steps.
   The organization of the steps in the diagram are automatically updated. Connections are created between each other.

Specify the phase of a customer journey step

To specify that a customer journey step is performed within the context of a journey phase:

1. Click the **Step** tab to access the list of diagram steps.
2. Select the step that you want to connect to a phase and and click **Phase**.
   Use the down arrow to easily access the list of customer journey phases.
3. Select a phase in the list proposed.
   The step is moved to the swimlane that corresponds to the phase.

Defining the channels in a customer journey

A channel is used to identify the enterprise resources used by a persona to achieve a step. For example, a channel can be a phone or internet connexion.

The channels of a customer journey are also linked to the steps of the journey that uses them.

To create a customer journey channel in tabular input mode

1. Click the **Step** tab to access the list of diagram steps.
2. Select the step that you want to connect to a channel and click **Channel**.

   ☛ *Use the down arrow to easily access the list of customer journey channels and connect the step to a channel that already exists.*
3. Click the right facing arrow and select the **Create Channel** command.
   The **Creation of Channel** window appears.
4. Enter the Name.
5. Click **OK** to close this creation window.
   The channel is created and appears in the list. The step is automatically moved to the line that corresponds to the channel.

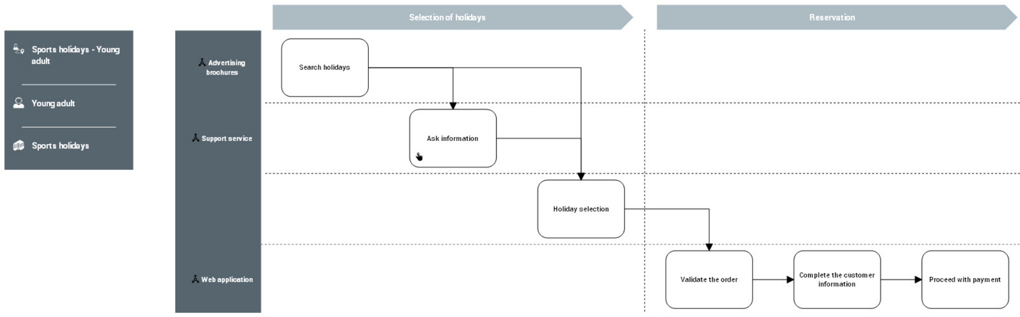
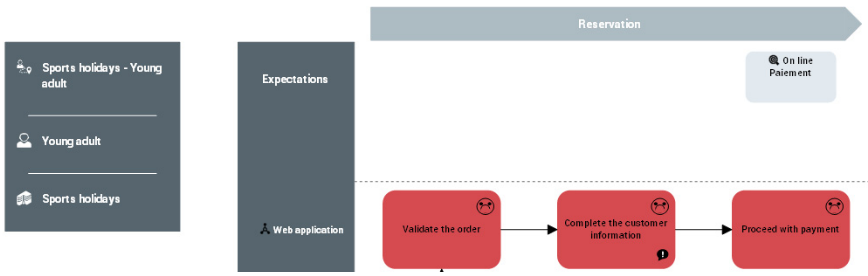


Diagram of customer journey with steps and channels

Client expectations and painpoints

The expectations and painpoints are specific to each persona with respect to a customer journey step.



Adding persona expectations to customer journey mapping

A customer expectation is an enterprise result expected by the persona at the end of the journey.

The expectations of a customer journey are also connected to personas and they must be connected to the steps in the customer journey that use them.

☛ *The list of expectations of a customer journey is accessed from the **Characteristics** properties window, in the **Phases** section.*

☛ *The list of expectations of a persona is accessed from the **Customer Journey** properties window, in the **Customer Expectations** section.*

☛ *For more details, see "Specifying the expectations of a persona", page 119.*

To specify that a new customer expectation is connected to a customer journey:

1. Click the **Step** tab to access the list of steps in the customer journey.

2. Select the step that you wish to connect to an expectation and click the **Expectations** column.
   A window appears with the list of customer expectations connected to the mapping of the customer journey.

   ☛ *To complete the list of expectations proposed, click **Connect**.*
3. Click **Add** to create a new expectation.
   The new customer expectation appears in the list of customer journey expectations.
4. Change the name of the customer expectation.
5. Select the expectations that you want to connect to the step and click on the outside of the selection window pane.
   The customer expectations selected appear in the swimlane of the step.

Defining customer painpoints

A painpoint describes the difficulties encountered by a persona when carrying out a step in the customer journey.

To specify that a new painpoint is connected to a customer journey:

1. Click the **Step** tab to access the list of steps in the customer journey.
2. Select the step that you wish to connect to an expectation and click in the **Painpoints** column.
   A selection window appears with the list of painpoints connected to the mapping of the customer journey.

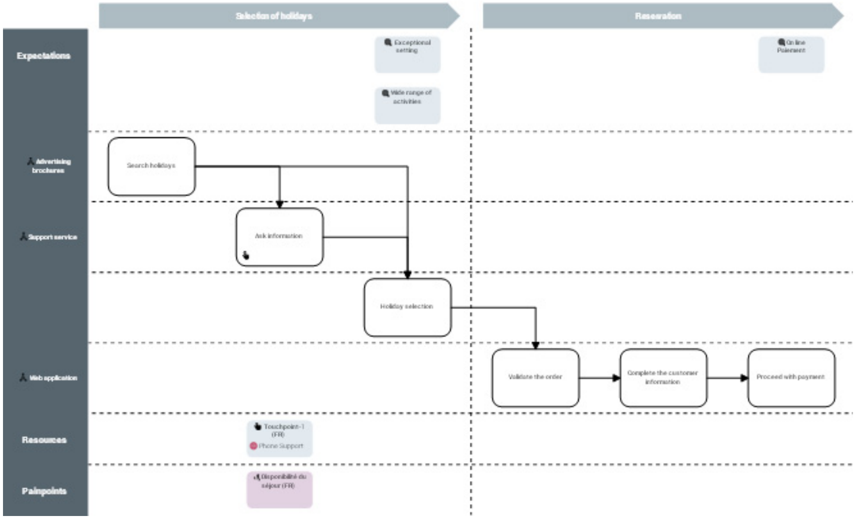
   ☛ *To complete the list of painpoints proposed, click **Connect**.*
3. Click **Add** to create a new painpoint.
   The new painpoint appears in the list of customer journey painpoints.
4. Specify the name of the painpoint.
5. Select the painpoints that you want to connect to the step and click on the outside of the selection window pane.
   The painpoints selected appear in the swimlane of the step.

The touchpoints and the business opportunities of a customer journey

A touchpoint describes an interaction between a persona and an enterprise.

A touchpoint is used to identify the organizational elements, used during the customer journey, that could have an impact on customer satisfaction. A touchpoint is connected on the one hand to a step and its channels and painpoints, and on the other hand to business improvement opportunities.

In the diagram, the touchpoints, the channels and the painpoints and the business opportunities are in the same swimlane as the customer journey step.



Creating a touchpoint in a customer journey

📖 *A touchpoint describes an interaction between a persona and an enterprise.*

To create a touchpoint in a customer journey:

1. Click the **Step** tab to access the list of steps in the customer journey.
2. Select the step that you want to connect to a touchpoint and click in the **Touchpoint** column.
   A selection window appears with the list of touchpoints connected to the mapping of the customer journey.

   ☛ *To complete the list of touchpoints proposed, click* ***Connect****.*
3. Click **Add** to create a new touchpoint.
   The new touchpoint appears in the list of touchpoints of the customer journey.
4. To change the name of the touchpoint.

5. Select the touchpoints that you want to connect to the step and click on the outside of the selection window pane.
The touchpoints selected appear in the swimlane of the step.
The step shape is modified.

Step connected to a touchpoint

☛ *The list of touchpoints of a customer journey is accessed from the **Characteristics** properties window, in the **Touchpoint** section.*

☛ *The list of painpoints connected to a customer journey is accessed from the **Characteristics** tab, in the **Painpoints** section.*

☛ *For more details on painpoints, see "Defining customer painpoints", page 125.*

Defining the business opportunities of a customer journey

An opportunity characterizes an improvement action for one of the composite elements of the customer journey (steps, touchpoint).

To specify that a new business opportunity is connected to a customer journey:

1. Click the **Step** tab to access the list of steps in the customer journey.
2. Select the step that you wish to connect to a business opportunity and click in the **Opportunity** column.
A window appears with the list of business opportunities connected to the mapping of the customer journey.

   ☛ *To complete the list of painpoints proposed, click **Connect**.*
3. Click **Add** to create a new business opportunity.
The new business opportunity appears in the list of customer journey opportunities.
4. Specify the name of the business opportunity.
5. Select the business opportunity that you want to connect to the step and click outside of the selection window pane.
The business opportunities selected appear in the swimlane of the step directly under the touchpoints of the step and are automatically connected.

   ☛ *The list of business opportunities connected to a customer journey is accessed from the **Characteristics** tab, in the **Business Opportunities** section.*

Identifying a moment of truth

A moment of truth is a decisive step for the remainder of the customer journey. Either customers believe that they cannot obtain what they are searching for under the desired conditions and they exit; Or, on the contrary, they believe that they have found what they are looking for and continue the journey.

To specify the steps of a customer journey that constitute moments of truth:

1. Click the **Step** tab to access the list of steps in the customer journey.

2. Select the **Moment of Truth** column.
   Check boxes appear on each row of the column.
3. Select the check box that corresponds to the step you wish to specify as a moment of truth.
   The step shape is modified.

Step declared as a moment of truth

☛ *In the **Characteristics** tab of the properties window for the selected steps, the **Moment of Truth** check box is also checked.*

Creating Action Plans

Following the identification of possible improvements to a customer journey, it is possible to create an action plan from a touchpoint.

📖 *An action plan comprises a series of actions. Its objective is to reduce the risks or events that have a negative impact on enterprise activities, or to improve efficiency of a process or organization.*

To create an action plan from a customer journey touchpoint:

1. Click the **Step** tab to access the list of steps in the customer journey.
2. Select the step to which the touchpoint concerned is connected.
3. Click the **Action plan** column.
   A selection window appears with the list of action plans connected to the mapping of the customer journey.

   ☛ *To complete the list of touchpoints proposed, click **Connect**.*
4. Click **Add** to create a new action plan.
   The new action plan is created in the list of action plans of the customer journey.
5. Change the name of the action plan.
6. Select the action plans that you want to connect to the step and click on the outside of the selection window pane.
   The action plans selected appear in the swimlane of the step.

   ☛ *The list of action plans of a customer journey is accessed from the **Characteristics** properties window, in the **Plans** section.*

   ☛ *For more information on managing action plans, see "Action Plans with HOPEX Business Process Analysis", page 167.*

ASSESSMENT OF A CUSTOMER JOURNEY

The objective of the **HOPEX Customer Journey** module is to describe your customer journeys with a view to improving efficiency. By performing assessments, you can acquire valuated information and compare it.

With **HOPEX Customer Journey**, assessments are made using questions attached to channels. It is therefore possible to measure improvements made through the implementation of touchpoints on the sensitive steps of the journey.

HOPEX Customer Journey is based on **HOPEX Assessment** facilities to formulate questions and obtain the assessments of the steps of your customer journeys.

> ☛ *To access these functions, you must have access to the **HOPEX Assessment** module.*

The following points are covered here:

- "Defining questions", page 129,
- "Assessing a customer journey", page 130,
- "Consolidating results and assessments", page 131.

Defining questions

With **HOPEX Customer Journey** , you assess the tools used by the persona for a customer journey. As a result, the questions are carried by the channels connected to the customer journey steps. The assessment of the customer journey takes place via questions posed on the channels.

Creating Questions

To create a question:

1. Open the **Customer journey** navigation window.
2. Select **Assessment > All Questions**.
   A tree with the list of Channels appears.
3. Click on the channel that interests you to display its pop-up menu and select **New > Question**.
   The **Creation of a Question** window appears.
4. Specify the **Local Name** of the question.
   > ☛ *The local name of the question is not visible to the questionnaire respondent.*
5. Specify the **Title**, which represents the question as it appears in the customer journey assessment questionnaire.
6. Specify if required:
   - The **Mandatory Element** field (indicates the mandatory or optional nature of the answer to this question).
7. The **Type** of question is **ComboList**.

8. Creating possible answers.

   ☛ *For more details, see* *"Entering possible answer values", page 130.*

9. Click **OK**.

Entering possible answer values

To create a possible answer value for a question:

1. Open the dialog box of the question that interests you.
2. In the **Possible Answer Value** section, click **New**.
   A possible answer value creation window opens.
3. Enter the **Name**of the value.
4. Indicate the color associated with the answer value.
   You have two possibilities:
   - Specify a **MetaPicture** if you have one.

     ☛ *The MetaPicture enables association of an image with an answer value.*

   - Specify the **RGBColor**.
5. In the **Answer Value** field, specify a strictly positive integer value that will be used to calculate the value of the assessment.

   ☛ *The lowest note corresponds to a very poor assessment and the highest note corresponds to an excellent assessment.*

   ☛ *For more details on calculating assessment values, see* *"Consolidation rules", page 131*

   ☛ *You must create at least two possible answer values.*

6. Click **OK**.

Assessing a customer journey

When the questions have been defined, the customer journey can be assessed.

Access the customer journeys for the assessments

Access to the customer journey is different depending on what you want to do:

To access the list of customer journeys that have never been assessed:

- Select **Assessment > Non Assessed Customer Journeys**.

To consult the results of the assessment consolidation of a customer journey:

- Select **Assessment > All Assessed Customer Journeys**.

  ☛ *For more details on calculating assessment values, see* *"Consolidation rules", page 131*

To assess a customer journey that has already been assessed:

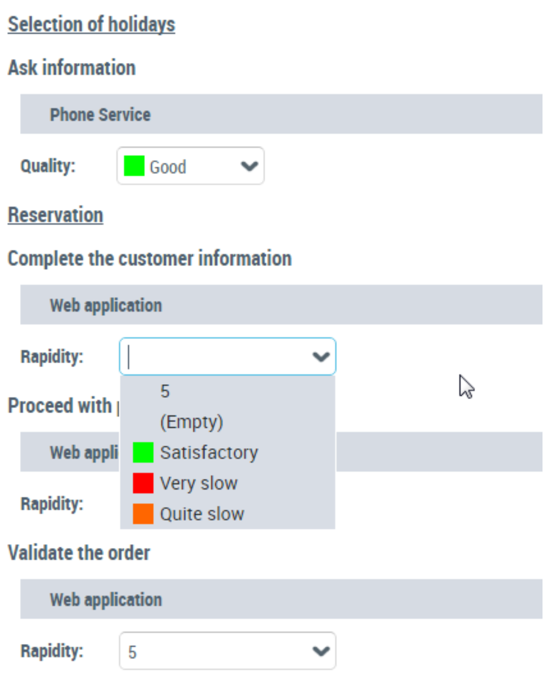
- Select **Customer Journeys > All Customer Journeys**.

Answering questions for the assessment of a customer journey

To assess a customer journey for the first time:

1. Open the **Customer journey** navigation window.
2. Select **Assessment > Customer Journey Non Assessed**.
   The list of non-assessed customer journeys is displayed.

   ☛ *To access a customer journey that has already been assessed, select **Customer Journeys > All Customer Journeys**.*
3. Select the customer journey that interests you and click **Assess**.
   The properties dialog box for the window appears.
4. Answer the question and click **OK**.



☛ *To assess a customer journey that has already been assessed: open the **Customer journey** navigation pane, select **Assessment > All Assessed Customer Journeys** and click **Assess**.*

Consolidating results and assessments

Consolidation rules

Each answer to a question is associated with a percentage calculated using:

- the value defined in the **Answer Value** field of the chosen answer,
- the maximum value of possible answers,
- the minimum value of possible answers.

☛ *For more details on the values associated with answers, see* *"Entering possible answer values", page 130.*

In this way, the value of the answer that corresponds to the best assessment equals 100% and the value of the answer that corresponds the least equals 1%.

For example, if the best answer to the question "Rapidity of the web application" is "Satisfactory" associated with a value equal to 11, the "Very slow" assessment is associated with a value equal to 1 and the intermediate assessment "Quite slow" is associated with 3, then the value of the "Quite slow" assessment equals 20%.

Overview

The assessment results presented in the diagrams, the lists and properties pages are in general the values of the latest assessment.

Only the reports present average results. The calculation rules for averages are always the same irrespective of the object:

- the average value of the assessments of an object is the average of the assessment values of the object for a given period.

  For example, if for the question "Rapidity of web application" the first answer was "Satisfactory" (value 100%) and a second answer was "Too slow" (value 1%), then the average value of assessments equals 50%.

Value of the latest assessment of a question

The value of the latest assessment of a question is used to calculate the values of the last assessment of the steps for which the answers were given.

The value of the latest assessment of a question is the value of the percentage calculated for the answer during the latest assessment.

In the example of the question concerning "Rapidity of the web application", if the response "Satisfactory" was chosen during the latest assessment, then the value of the latest assessment of this question is 100%.

Value of the latest assessment of a step

Each of the questions associated with a channel are asked for all steps that use the channel.

For example, the web application channel is used for all the steps in the "Holiday reservation" phase.

The questions on the "Application web" channel can deal with its "Rapidity" and its "Conviviality"

The value of the latest assessment of a step is used to calculate the assessment values of a channel if answers were given.

The value of the last assessment of a step is the average of the values of the latest assessment of each of the questions relating to the step.

> For example, the value of the "Proceed to payment" step is the average calculated using the value of the latest assessment given to the "Rapidity" and to "Conviviality".

Value of the latest assessment of a channel

The value of the latest assessment of a channel is the average of the values of the latest assessment of each of the steps connected to the channel.

Value of the latest assessment of a customer journey

The value of the latest assessment of a customer journey is used to calculate the assessment values of a customer journey group and a persona.

The value of the latest assessment of a customer journey is the average of the values of the latest assessment of each of the steps in the customer journey.

Value of the latest assessment of a customer journey group

The value of the latest assessment of a customer journey group is the average of the values of the latest assessment of the customer journey of the group.

Value of the latest assessment of a Persona

The value of the latest assessment of a persona is used to calculate the assessment values of a persona group.

The value of the latest assessment of a persona is the average of the values of the latest assessment of the customer journeys connected to the persona for a given period of time.

Value of the latest assessment of a Persona Group

The value of the latest assessment of a persona group is the average of the values of the latest assessment of the group persona.

Consolidated results

The consolidated results on the customer journey are presented in:

- diagrams,

  ☛ *For more details, see "Representation of consolidated results in the diagrams", page 134.*

- lists,

  ☛ *For more details, see "Representation of consolidated results in the lists", page 135.*

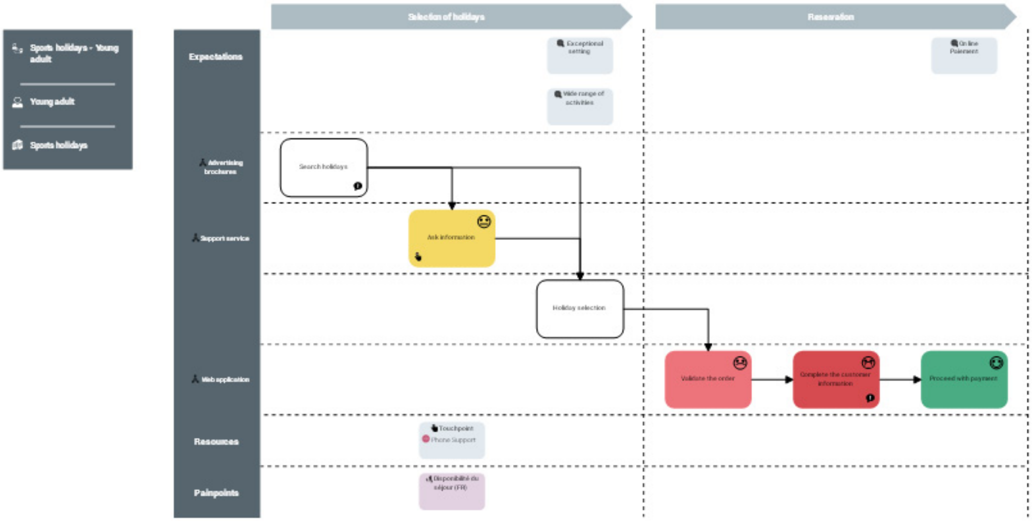
- dedicated reports.

  ☛ *For more details, see "The reports available on a customer journey", page 136.*

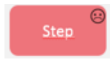
Representation of consolidated results in the diagrams

After assessment of a customer journey, the shape of the steps in the customer journey diagram is modified to present the results of the latest assessment of steps.

☛ *For more details on calculating the value of the assessment, see* *"Value of the latest assessment of a step", page 132*



Mapping a journey after assessment

Journey step	Comment
	Customer satisfaction very low
	Customer satisfaction low
	Customer satisfaction neutral
	Customer satisfaction high
	Customer satisfaction very high
	Customer satisfaction not assessed

Presentation of the shape of steps differs according to the consolidated result of assessments.

Representation of consolidated results in the lists

After assessment of a customer journey, the consolidated results of the latest assessment appears in the lists. For example:

- In the **Assessment > All Assessed Customer Journeys** folder.

  ☛ *For more details on calculating the value of the assessment, see* *"Value of the latest assessment of a customer journey", page 133*

- In the properties page for the customer journey in the **Assessment** tab.

  ☛ *For more details on calculating the value of the assessment, see* *"Value of the latest assessment of a step", page 132*

The Reports Available on a Customer Journey

This paragraph presents the list of reports available from a customer process.

- "Global satisfaction", page 136
- "Improvement Scope", page 138

Global satisfaction

This report presents the results of the satisfaction of persona with the various customer journeys.

Report parameters

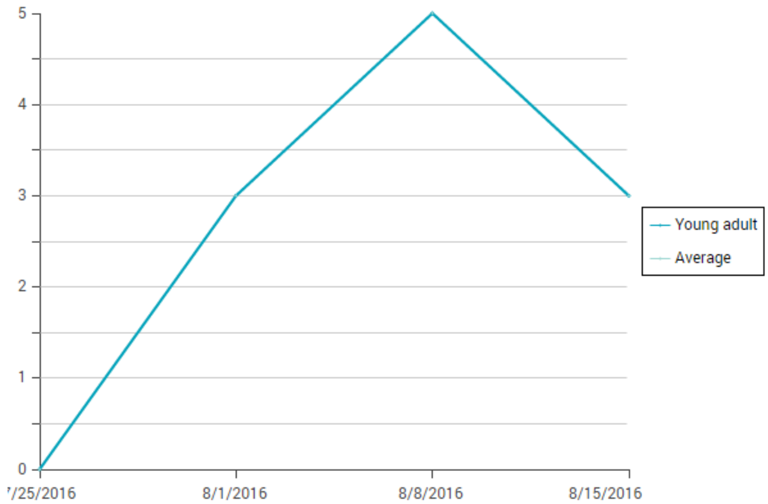
Parameter	Parameter type	Constraints
Assessment values	"All assessment values" or "Latest assessment values"	Mandatory
From Date	Date	Today's date by default.
To	Date	Today's date by default.

Persona satisfaction

The first chapter presents a summary view of the satisfaction of persona with the customer journey for given dates.

- The x-axis carries the dates of the assessment period.
- The y-axis carries the value of the latest assessment of persona.
  The table under the curve indicates the value of the latest assessment of each persona at different dates.

  ☛ *For more details on calculating the satisfaction of a persona, see* *"Value of the latest assessment of a Persona", page 133.*
- The figure presents a curve by persona and a curve that presents the average.



Customer Journey	Persona	Assessment Date	Customer Satisfaction
Sports holidays - Young adult	Young adult	01/08/2016	Neutral
Sports holidays - Young adult	Young adult	07/08/2016	Neutral
Sports holidays - Young adult	Young adult	09/08/2016	Very High
Sports holidays - Young adult	Young adult	15/08/2016	Very High
Sports holidays - Young adult	Young adult	17/08/2016	Very Low

Satisfaction of customer journey groups

The table is organized as follows:

- Each row is associated with a customer journey group assessed between the two dates given as a parameter.

  ☛ *The group expands to show the results of the customer journeys to which they are connected.*

- Each column is associated with a persona
- The cells present the satisfaction of the persona with the corresponding journey group (or with the customer journey itself).

  ☛ *For more details on calculating the satisfaction of the persona for a customer journey, see "Value of the latest assessment of a customer journey", page 133 and "Value of the latest assessment of a customer journey group", page 133.*

2. Customer Journey Group satisfaction

	Young adult	Single pizza eater
1 Take away		High
Order pizza		High
Game day		
Ordering pizzas for a game event		

Improvement Scope

This report presents the assessment results with respect to the resources associated with the touchpoints.

Report parameters

Parameter	Parameter type	Constraints
Assessment values	"All assessment values" or "Latest assessment values"	Mandatory
From Date	Date	Mandatory, today's date by default.
To	Date	Mandatory, today's date by default.

Assessment of the scope

The first chapter of this report presents a bubble chart that is used to assess the efficiency of the touchpoints with respect to the assessment period.

- Each bubble represents a touchpoint.
- The size of the bubble represents the number of customer journeys that use the touchpoint resource.
- The color of the bubble represents the average value of the assessment of the resource for the steps assessed.
- The x-axis shows the number of touchpoints to which the resource is connected.
- The y-axis presents the average value of the assessment of the resource for the steps assessed.

☛ *The x-axis presents the same information as the colour of a bubble. Thus, the red bubbles are at the bottom of the diagram and the green bubbles are on top.*

The table under the bubble diagram specifies the value of the latest assessment of each person at different dates.

☛ *For more details on calculating the satisfaction of a persona, see* *"Value of the latest assessment of a customer journey", page 133.*

Customer Journey	Persona	Assessment Date	Customer Satisfaction
Sports holidays - Young adult	Young adult	01/08/2016	Neutral
Sports holidays - Young adult	Young adult	07/08/2016	Neutral
Sports holidays - Young adult	Young adult	09/08/2016	Very High
Sports holidays - Young adult	Young adult	15/08/2016	Very High
Sports holidays - Young adult	Young adult	17/08/2016	Very Low

The latest table of the report details the data presented in the bubble diagram.

- Each row is associated with a resource (if appropriate connected to a number of touchpoints).
- The first column specifies the average value of the assessment of the resource for the steps assessed.
- The second column specifies the number of touchpoints to which the resource is connected.
- The third column specifies the number of customer journeys to which the resource is connected.
- The name of the customer journey that uses the resource is specified in the fourth column.
- The fifth column specifies the percentage of steps noted as moments of truth that use the resource.
- The last column draws up the list of channels to which the resource is connected.

	Customer satisfaction value average	Number of touchpoints	Number of customer journey	Parcours client	Percentage of moment of truth	Canaux concernés
Planning Mgt	55.0	1.0	1.0	Order pizza		Phone
Store Manager	65.0	2.0	1.0	Order pizza	50.0 %	Phone
Welcome client	75.0	1.0	1.0	Order pizza	100.0 %	Phone

☛ *For more details on calculating the satisfaction a persona for a customer journey, see "Consolidation rules", page 131.*

5

TABULAR DIAGRAM INPUT

Tabular diagram input, available with the **HOPEX Web Front-End** module, is used to define the contents of a diagram from a table. The characteristics of the objects described in the diagram, or the links between the objects, are defined in the table columns.

You can preview the diagram at any time.

A diagram is a representation of an object. It is also a repository object.

☛ *For more details on updating a diagram with the editor, see* ***HOPEX Common Features****, "Handling Diagrams".*

The following points are covered in this chapter:

TABULAR INPUT PRINCIPLES

This chapter introduces the principles used to offer this functionality. It describes successively the tools proposed to:

- start with tabular input mode, see "Using tabular input mode", page 142.
- use this functionality globally, see "Overview of functionalities", page 144.
- determine the list of diagrams that have a tabular input mode, see "Diagram types with tabular input mode", page 146.

Using tabular input mode

Tabular input mode is recommended during the initialization phase of a diagram. It is used to quickly and easily insert objects in the diagram.

The updates in the input table are saved in the snapshot repository.

On each opening of a diagram in tabular input mode, the position of elements is recalculated to preview the diagram.

If a diagram was modified manually with the editor, a message is displayed to inform you that the position of the objects in the diagram will be recalculated.

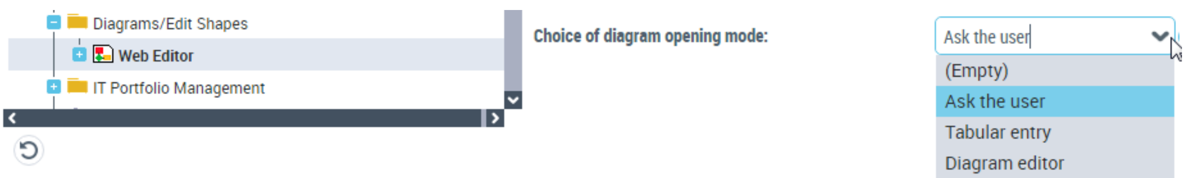
User options

A number of opening options are available:

- Always open in tabular mode,
- Always open in editor mode,
- Offer the choice of mode on each diagram opening.

To modify the user options:

1. Open the options window.
2. In the left part, select **Choose diagram opening mode**, then **Web editor**.
3. In the right part, select the **Choose diagram opening mode** that interests you.



Opening a diagram in tabular input mode

Tabular input mode is offered for certain diagram types only.

☛ *See "Diagram types with tabular input mode", page 146.*

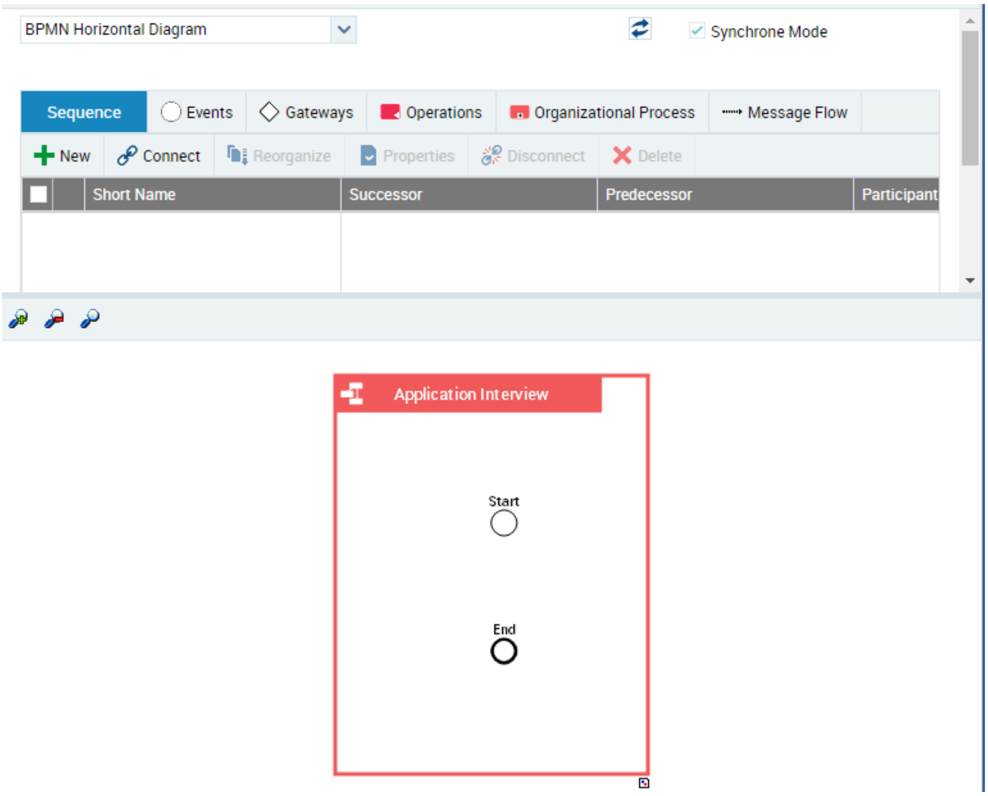
To open a diagram in tabular mode:

1. In the navigation window, right-click the object concerned to display its pop-up menu.

   ☛ *If a diagram already exists for the object selected, its name appears in the pop-up menu of the object.*

2. Click the diagram you want to open.
   The UI of the table input mode opens in the edit area. The table already contains the elements contained in the diagram. The view of the elements in the table and the diagram can vary according to the rights attached to the user profile.

   ☛ *For more details on updating a diagram with the editor, see **HOPEX Common Features**, "Previewing Diagrams".*



The tabular input page is divided into two sections:

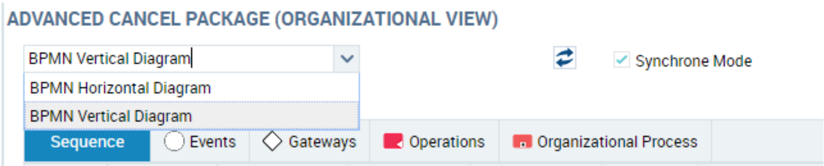
- one section contains the input table for the diagram data,
  - ☛ *See "Overview of functionalities", page 144.*
- the other section contains a preview of the diagram.
  - ☛ *See "Previewing the diagram", page 145.*

Overview of functionalities

The functionalities presented here are standard functionalities for tabular input mode. Many depend on the type of diagram described. Tabular input mode can be configured for each type of diagram.

☛ *For more details, see "Diagram types with tabular input mode", page 146.*

Title banner



At the top of the section, a banner is reserved for the title. It contains:

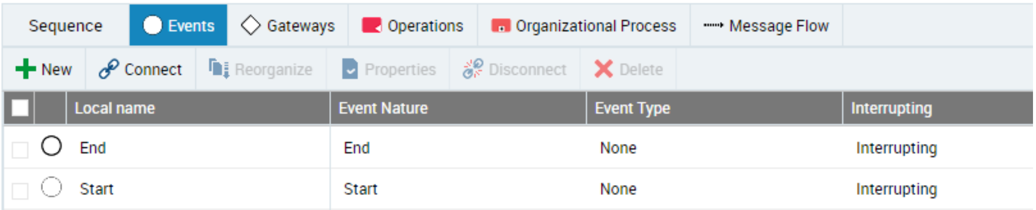
- the name of the element described,
- vertical or horizontal display mode of component display in the diagram is available for BPMN diagrams only,
- the **Refresh diagram** button to refresh the page in non-synchronized display mode,
- the synchronization mode of the preview of the diagram that is used to optimize display performance.
  Two display modes are available:
  - Synchronized mode: the preview is updated directly as the table is populated. Simply select the **Synchronized mode** check box.
  - Non-synchronized mode: the preview is frozen, and can only be updated by clicking on a **Refresh the diagram** button.

Filter tabs

Tabs are used to display all the objects in the diagram broken down according to their type.

The number and the nature of tabs vary according to the type of diagram and the user profile.

> For example, **Sequence**, **Event** or **Gateway** are the tabs proposed for an **Organizational Process Diagram**.



☛ *The order of tab display is defined in the configuration.*

Tab content

Each tab presents, in table form, the list of objects of a given type contained in the diagram.

The characteristics and the links associated with each of them are presented in columns.

☛ *The columns displayed for each object type are defined in the parameters.*

Use these tables to add objects to the diagram.

☛ *See "Adding an existing object in tabular diagram mode", page 147.*

Multi-type tab

Depending on the type of diagram, it is possible to provide a tab that you can use to conduct actions on several types of objects contained in the diagram.

> For example, in an organizational process diagram, use the **Sequence** tab to position participants and define the sequences between the objects.

The content of the columns of the summary table is configurable.

Previewing the diagram

Opening the diagram in tabular input mode must always display the preview section that opens the diagram studied in read mode.

☛ *For more details on updating a diagram with the editor, see **HOPEX Common Features**, "Previewing Diagrams".*

From the toolbar at the top of the diagram, you can perform the following actions on the diagram:

- Zoom in ( ).
- Zoom out ( ).
- Return to original image size (**See all**).

☛ *The mouse wheel also allows you to zoom in and out.*

- print ( )

To move the diagram in the window:

› Click the diagram and move the mouse.

Diagram types with tabular input mode

The diagrams offered with **HOPEX Business Process Analysis** that can be updated in tabular input mode are as follows:

- Business process diagrams,
- Functional process diagrams,
- Organizational process diagrams,
- Application process diagrams,
- Customer journey mapping.

Tabular input mode is configurable. It can be proposed for diagram types whose presentation can be calculated by a macro.

Moreover, for a given type of diagram, it is also possible to configure functionalities including:

- the order of tabs associated with the object types represented,
- the display of a tab that provides an overview of all the objects in the diagram,
- the content of columns for a given object type and display order,
- the list of profiles authorized to use tabular input mode.

☛ *For more details on configuring tabular input mode and its tabs, see the **HOPEX Power Studio** guide.*

Constructing a Diagram in Tabular Input Mode

Opening a diagram in tabular input mode is used to update the content of the diagram.

The objects created, added and modified in the tabular input tables are updated in the repository.

Updating a diagram in tabular input mode

☛ *When you create an object in a diagram, it is automatically connected to the diagram.*

Creating a diagram in tabular input mode

To create an object in tabular input mode to add it to a diagram:

1. Click the tab corresponding to the type of object you want to create.
2. Click **New.**
   The **Add object** window appears.
3. Enter the name of the object and click **OK**.
   If you are in **Synchronized** mode, the diagram is automatically updated; otherwise, click on **Refresh**.

Adding an existing object in tabular diagram mode

To add an existing object to a diagram:

1. Click the tab corresponding to the type of object you want to create.
2. Click **Connect**.
   The query dialog box appears.
3. If applicable, select the type of object and perform a search on the objects.
4. Select the objects that interest you and click **Connect**.
   If you are in **Synchronized** mode, the diagram is automatically updated; otherwise, click on **Refresh**.

Creating connections in tabular input mode

For BPMN diagrams in tabular input mode, connections are created using the columns that characterize the **Previous** or **Next** objects.

For example, to connect a start event to an organizational process in an organizational process diagram:

1. Click the **Sequence** tab to have access to the list of objects in the diagram that can be connected to a sequence,

2. Select the line of the organizational process that you want to connect and click in the column that represents the **Predecessor** object.
A window opens with the list of diagram objects that can be connected.
3. Select the event that interests you.

☛ *You can select several* ***Predecessor*** *objects. The list of objects then appears in the table.*

4. Click **OK**.
The organization of objects in the diagram is updated automatically.

Creating BPMN participants in tabular input mode

In the BPMN diagrams, the participants are special objects for the following reasons:

- If they are inside the described object, they are represented as pools that contain objects.
- If they are outside the described object, they are used to describe the flows exchanged between the described object and the outside.

The creation mode for participants in tabular input mode is specific to each of the two cases.

Creating a participant inside a described object

To create a participant in an organizational process diagram, for example:

1. Click the **Sequence** tab to have access to the list of objects in the diagram.
2. Select the line in the organizational process that you want to insert in the participant and click the **Participant** column.
A window opens prompting you to create or connect an org-unit to a participant.
3. Select the org-unit that interests you and click **OK**.

☛ *You can select several org-units. The list of objects selected then appears in the header of the participant.*

Creating a participant outside a described object

A participant external to a described process only has meaning if it is connected to a flow exchanged with an element included in the described process.

To create a participant outside of an organizational process diagram, for example:

1. Click the **Flow** tab to have access to the list of flows in the diagram,
2. Click **New** to create a new flow.
3. Select the flow line that you have just created and click in the check box of the **Target element** column, for example.
A window opens prompting you to create a participant.

Removing and Deleting Objects

To delete an object from the repository object using the tabular input table:

1. Click the tab corresponding to the type of object you want to delete.
2. Select the check box for the object that you want to delete.
3. Click **Delete**.

Warning: The deleted objects are removed from the repository and consequently from all diagrams that use them.

To remove an object from a diagram without deleting the repository:

1. Click the tab corresponding to the type of object you want to remove from the diagram.
2. Select the check box for the object that you want to remove.
3. Click the **Disconnect** button.

If you have deleted an object in error, you can restore it by using the function that enables undo and redo of actions.

MANAGING QUALITY

HOPEX Business Process Analysis offers functions that simplify creation and maintenance of a quality system conforming to ISO 9000 standards. You can:

- Draw up your organizational processes graphically using organizational process diagrams.
- Enter the characteristics specific to the quality problem.
- Synchronize your processes and the various chapters or themes of the quality repository on which you are based (ISO 9001 standard, 2015 edition, etc.).
- Generate a quality manual automatically

Organizational Process Properties

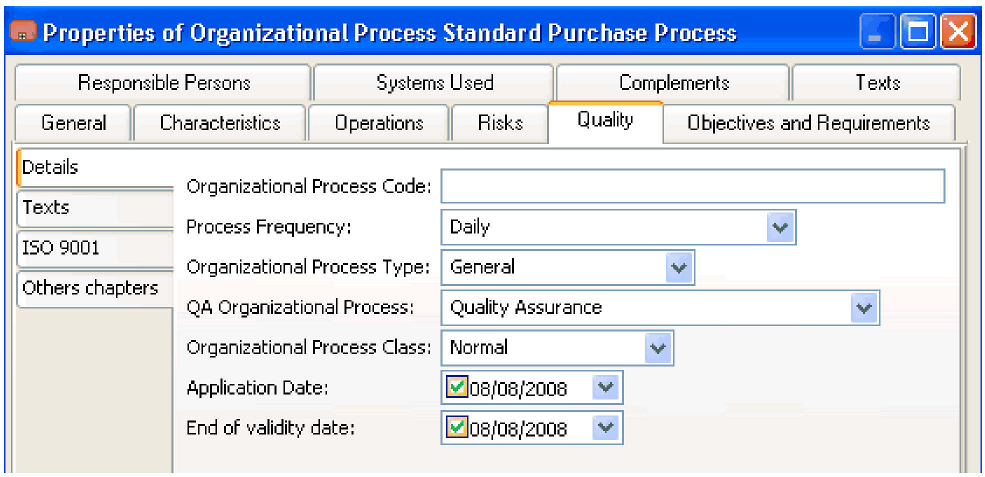
In the properties dialog box of an organizational process, the **Quality** tab allows you to:

- enter quality characteristics specific to processes.
- indicate to which section of which repository the process you are describing refers. In this way, the processes are associated with chapters or themes so as to indicate their field of application.

☛ *For the **Quality** tab to appear, the corresponding filter must be activated in user options. To do this, in the workspace, select **Tools Options**, then double-click the **Process and Architecture Modeling** icon. Select or clear the **Quality Modeling** option to show or hide elements relating to quality.*

Indicating Organizational Process Quality Characteristics

In the **Details** sub tab , you can enter characteristics relating to quality issues.



Organizational process types and classes

Two **types** of organizational process are managed:

- "General" organizational processes: involve the entire enterprise or organization.
- "Specific" organizational processes: specific to a part of the enterprise or to a product.

Organizational process **classes** proposed are:

- "Normal" organizational processes: describe the typical operations of the enterprise.
- "Urgent" organizational processes: describe a fast track such as providing speedier service to a customer.
- "Special" organizational processes: used for exceptional events such as accidents.

Other organizational process characteristics

The **QA-Organizational Process** option allows you to specify if the procedure forms part of the Quality Assurance (external) or Quality System (internal) documentation of the organization.

☛ *This option concerns the 1994 version of ISO 9001 standard.*

You can type a unique mnemonic in the **Code** text box for your procedure. This mnemonic should follow the code standards used in your organization.

☛ *The **Code** is also valid for processes.*

The **Frequency** of the process can be:

- On Request (the process is applied when the event that triggers it occurs).
- Daily, Weekly, Monthly, Twice a Month, Quarterly, or Annually.

The **Application date** and **End of validity date** of the process can also be indicated.

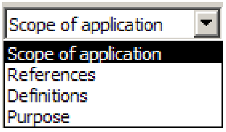
☛ *The application and validity end dates are displayed using the Windows default format. You can change this format in the Regional Settings properties dialog box (short date).*

To enter a date beyond the year 2000, you should select short date format of type dd/MM/yyyy with four characters for the year.

The **Manager Org-Unit** (**Characteristics** tab) is the org-unit in the organization responsible for developing and maintaining the process.

Entering the texts of an organizational process

In the **Quality** tab of the properties dialog box of an organizational process, there is a **Texts** subtab. You can enter different types of text: application domain, process object, references, definitions, etc.



Specifying Context of the Quality Approach

The subtabs **ISO 9001** and **Other chapters** correspond to different repositories serving as the basis for your quality approach:

- **ISO 9001**
  This sub-tab presents the 20 chapters (or requirements) of the ISO 9001 standard.
- **Other chapters**
  This sub-tab concerns you if you are using another standard for your quality approach or certification. The chapters that you may have created will appear here.

  ☛ *To create new chapters you must use the explorer.*

To connect a chapter or theme to a process:

- Clear the corresponding box.

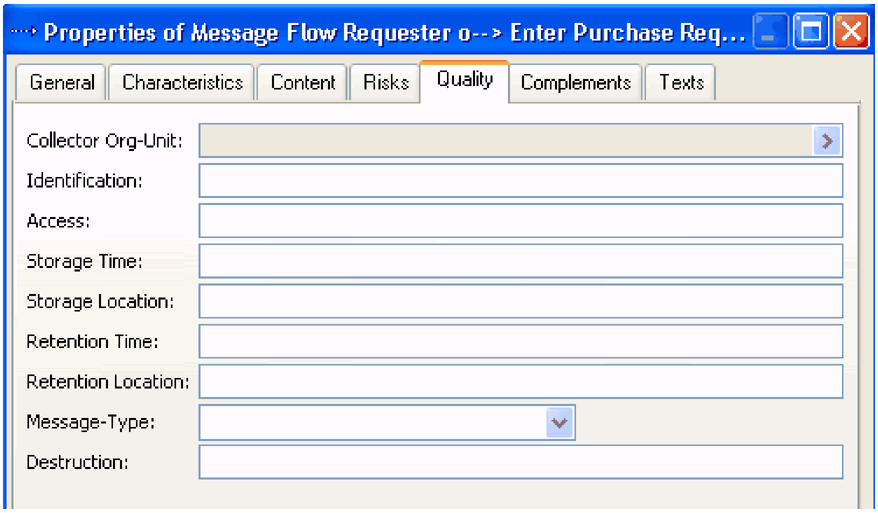
To disconnect a process from a chapter or theme:

- Clear the corresponding box.

Message Flow Properties

Message Flows - Quality tab

The **Quality** tab allows you to specify characteristics of a message flow related to quality.



The **Message-Type** list box enables characterization of the message flow: "External Data", "Quality Record" or "Instruction".

The other fields allow you to enter additional indications for messages of "Quality record" type that are particularly important in documentation of your quality system. Here you can define the controls needed for identification, storage, retention time, etc.

According to the ISO 9000 standard, a "Record" is a "document stating results achieved or providing evidence of activities performed". It can document traceability and provide evidence of verification, preventive action, and corrective action. It can consist of a form, report, list of actions, etc. It can be written or saved on any data carrier. Generally records need not be under revision control.

Assessments With HOPEX Business Process Analysis

Questionnaires are used to obtain an assessment of the execution and performance of business and organizational processes.

HOPEX Business Process Analysis uses features of **HOPEX Assessment** to carry out assessments of your business and organizational processes based on answers to standard questionnaires. In this way you can improve their real and perceived quality.

☛ *To access these functions, you must have access to the **HOPEX Assessment** module.*

☛ *To access assessment examples described in this guide, you must have imported data specific to process assessments, see* *"Prerequisites for Using HOPEX Business Process Analysis", page 16**.*

The following points are covered here:

Assessment Principles

Concepts Overview

Assessment is carried out using assessment questionnaires. In **HOPEX Business Process Analysis**, these questionnaires are accessible directly. Results are then aggregates according to predefined rules to present results so they can be used.

Assessments relate to process execution and performance.

An assessment is a mechanism used to receive feedback (qualitative or quantitative) from an identified population on identified objects. The assessment is then supplemented by results analysis tools.

An assessment questionnaire is a list of questions relating to a particular object and addressed to persons questioned.

The results of these assessments are then presented in reports. For more details, see "Execution and Performance Heatmap", page 198.

Criteria assessed with HOPEX Business Process Analysis

These characteristics relate to attribute values linked to process performance and execution.

List of characteristics linked to process execution:

- **Specification**: assessment of quality of description of the object in the repository.
- **Knowledge**: assessment of knowledge of the object by stakeholders.
- **IT Support**: assessment of application support of the object.
- **Execution**: this characteristic is a global assessment of object execution. It is calculated from assessment of object specification, knowledge and support.

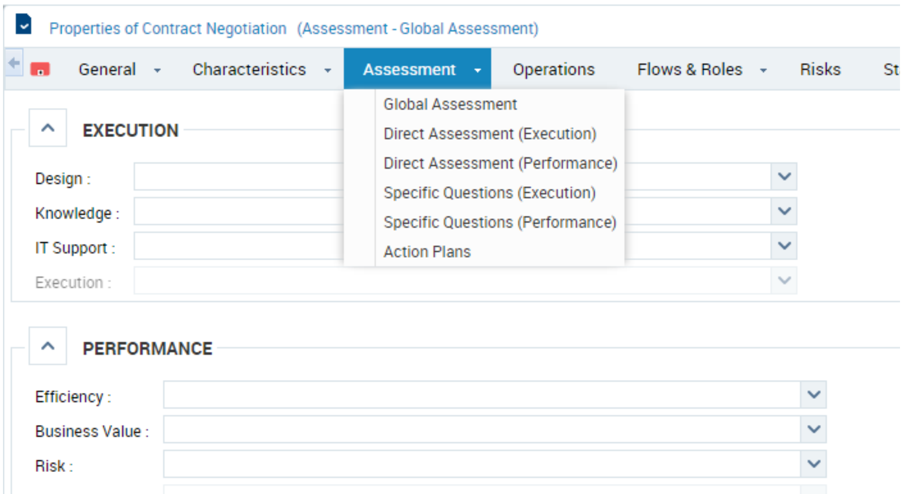
List of characteristics linked to process performance:

- **Effectiveness**: characterizes effectiveness of object operation
- **Business Value**: characterizes business value of the object.
- **Risk**: characterizes risks concerning the object.
- **Performance**: this characteristic is a global assessment of process performance. It is calculated from assessment of process business value, effectiveness and risk.

ASSESSING A PROCESS WITH HOPEX BUSINESS PROCESS ANALYSIS

Accessing the Process Assessment with HOPEX Business Process Analysis

In the properties pane of an organizational process or a business process, the **Assessment** tab enables an expert user to specify attribute values linked to assessed characteristics.



The following choices are available:

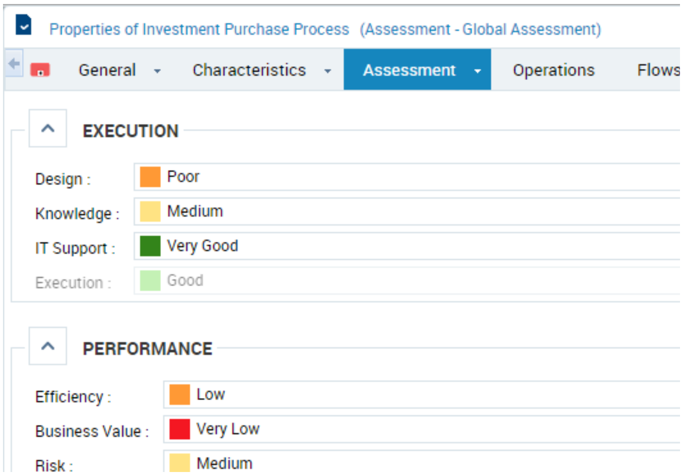
- **Global Assessment**: to attribute values to the assessment criteria of the process.
  See "Global assessment", page 160.
- **Direct Assessment (Execution)** and **Direct Assessment (Performance)**: enables expert users to assess the execution and performance criteria for a process in its different use contexts.
  See "Direct Assessment", page 160.
- **Specific Questions (Execution)** and **Specific Questions (Performance)**: to add questions to existing assessment questionnaires.
  See "Specific questions", page 162.

Completed assessments are used to obtain summary reports.

> ☛ *For more details on the report presented above, see "Execution and Performance Heatmap", page 198.*

Global assessment

In the properties of an organizational process or a business process, the **Assessment** tab allows an expert user to specify values of attributes linked to assessed characteristics.



Direct Assessment

You can create new assessments to globally assess an organizational process or a business process on all the organizational contexts to which it is connected (i.e. entities).

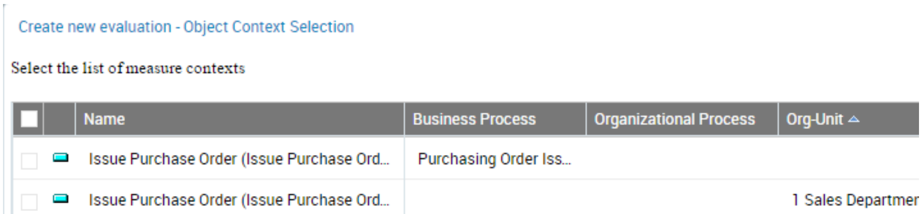
This is an "expert view" assessment.

Creating direct assessments (Execution)

To create a direct execution campaign:

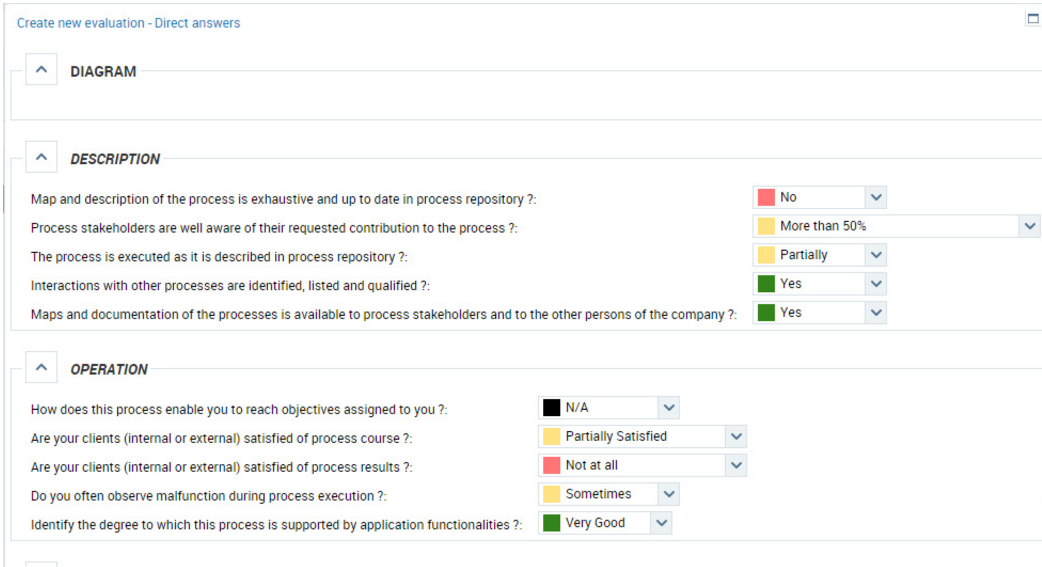
1. Open the properties of the process in question.
2. Click the **Assessment** tab of the process and select **Direct Assessment (Execution)**.
3. Click the **Evaluate** button.

4. Select the contexts in which the process is to be assessed, then click Next.



☛ *The contexts are available only if there is more than one.*

5. Click **Next**.
   The assessment questionnaire page appears.

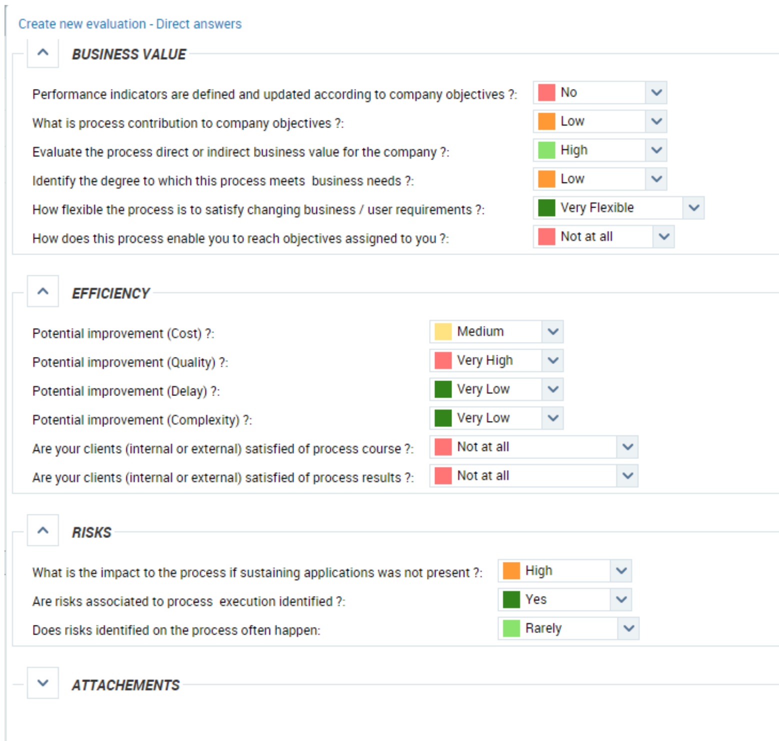


6. Specify the values for the questionnaire characteristics:
7. Specify the assessment date.
8. Click **OK**.
   An assessment is created.

Creating direct assessments (Performance)

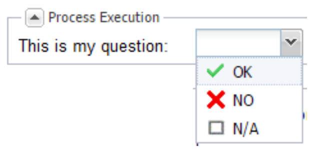
You create an assessment of the performance of your process in the same way as for an execution assessment (see "Creating direct assessments (Execution)", page 160).

The standard questionnaire for the performance appears.



Specific questions

You can add new questions to your questionnaires for your processes.
Your question then appears in the associated questionnaire in the corresponding section: "Process execution" or "Process performance".



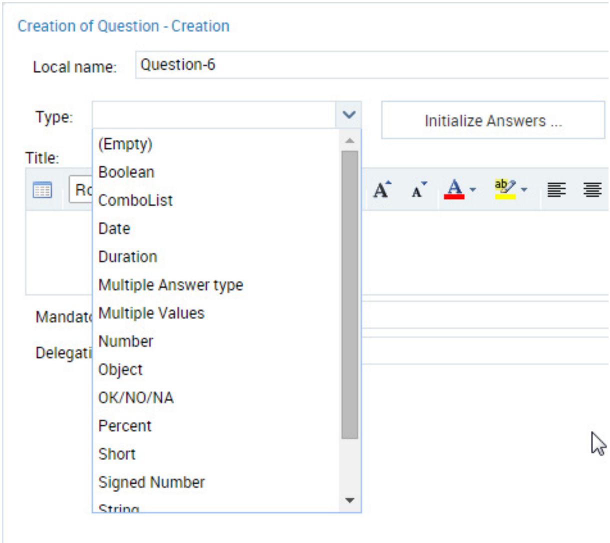
***OK/NO/NA** specific question type*

Creating a specific question (Execution)

To create a specific execution question:

1. Open the properties of the process in question.
2. Click the **Assessment** tab of the process and select **Specific Questions (Execution)**.

3. Click the **New** button.
   The question creation page appears.



4. Specify the **Local Name** of the question.

   ☛ *The local name of the question is not visible to the questionnaire respondent.*

5. Specify the **Title**, which represents the question as it appears in the questionnaire.
6. Specify if required:
   - The **Mandatory Element** field (indicates the mandatory or optional nature of the answer to this question).
   - The **Delegation Allowed** field (specifies if the answer to this question can be assigned to another person by delegation).
7. Select the **Type** of question enabling specification of the answer format.

   ☛ *Depending on the **Type** of question, an **Answer** section appears. Answers of "Multiple answers" type require require manual creation of answers. For more details, see "Entering possible answer values", page 165.*

8. Click **OK**.

Question Types

The question types that can be used to directly enter an answer are listed below.

- **Text**: to enter the text.
- **String**: to enter a string of characters in a field.

  ☛ *If you must display your answer in more than one field/row, select the **Multiple Answer Type** value.*

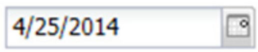
- **Multiple Answer Type**: to display several answer fields for the same question.

  `Example of use: to enter an address you may need several fields.`

☛ *This type of answer requires creation of answer values. For more details, see "Entering possible answer values", page 165.*

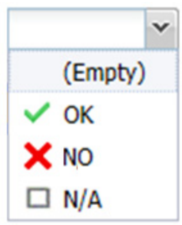
- **Signed Number**: to enter a negative or positive number
- **Timespan**: to enter a timespan
- **Floating**: to enter a a floating point number.
- **Percentage**: to enter a percentage.
- **Integer**: to enter a short integer.

- **Date**: to enter a date using a calendar

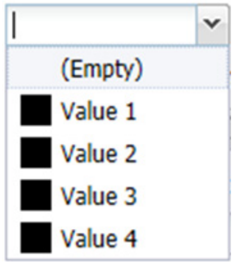


The types of questions used to select a value using predefined suggestions are listed below.

- **OK/NO/NA**: provides a drop-down list containing three values:
  - OK
  - NO
  - N/A (Not Applicable)



- **Drop-down List**: to select a value from a drop-down list.



☛ *This type of answer requires creation of answer values. For more details,* *see "Entering possible answer values", page 165.*

- **Radio button (vertical)**: to display vertical radio buttons in the answer.

☛ *This type of answer requires creation of answer values. For more details,* *see "Entering possible answer values", page 165.*

Entering possible answer values

You must specify the answer values possible if you have defined the following question types:

- multiple answer
- drop-down lists
- radio buttons (vertical)

In this case, an **Internal Default Value** field and a **Possible Answer Value** section open automatically in the question creation page.

Creating Possible Answer Values

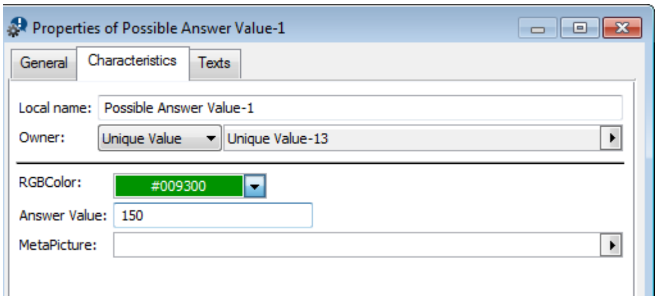
In this case, an **Internal Default Value** section opens automatically in the question creation page.

To create a possible answer value:

1. In the **Possible Answer Value** section, click **New**.
   A possible answer value creation window opens.
2. In the **Answer Value** field, specify a value.

   ☛ *This value can be used by quotation rules.*
3. Indicate the color associated with the answer value.
   You have two possibilities:
   - Specify a **MetaPicture** if you have one.

     ☛ *The MetaPicture enables association of an image with an answer value.*
   - Specify the **RGBColor**.



4. Click **OK**.

☛ *You must create at least two possible answer values.*

Defining an answer value by default in the event of a non-answer

You can allocate an internal default value for the drop-down list and radio button type questions. This value is used if the respondent omits to answer a question.

To specify an internal value by default:

- In the properties page for the question, specify the **Internal Default Value** field.

Creating a specific question (Performance)

You create a question specific to the performance of your process in the same way as you do for an execution assessment (see "Creating a specific question (Execution)", page 162).

The question then appears in the direct assessment questionnaire (Performance).

11

Action Plans with HOPEX Business Process Analysis

HOPEX Business Process Analysis allows you to specify, implement and follow up *action plans* defined for remediating, for example, a customer journey.

An action plan comprises a series of actions. Its objective is to reduce the risks or events that have a negative impact on enterprise activities, or to improve efficiency of a process or organization.

The following points are covered here:

Managing Action Plans

An *Action plan* can be set up, for example, for improvement of a Customer Journey.

An action plan comprises a series of actions. Its objective is to reduce the risks or events that have a negative impact on enterprise activities, or to improve efficiency of a process or organization.

Creating Action Plans

To create an action plan from a Customer Journy, see "Creating Action Plans", page 168.

Characterizing Action Plans

Before submitting the action for approval, the action plan requester can complete information on the action plan.

To update fields that characterize an action plan:

- Open the properties of the action plan that interests you.
  In the **Characteristics** tab, the following sections appear:

  - "General characteristics", page 169
  - "Action plan statuses", page 169
  - "Financial assertion", page 169
  - "Success factors", page 170
  - "Scope", page 170
  - "Milestones", page 170
  - "Attachments", page 170

General characteristics

In the **Characteristics** section, you can specify action plan fields, for example:

- **Name**: action plan name.
- **Owner**: this field is specified by default by the user who created the action plan.
- **Owner Entity**: enables restriction of the list of owner entities.
- **Approver**: user responsible for validation of the action plan when all actions are completed.
- **Means**: text description of means required/desired for action plan execution.
- **Priority**: enables indication of a level. Priority can be: "Low", "Medium", "High" or "Critical".
- **Organizational Level**: final objective of plan; this can be "Global" or "Local".
- **Origin**: enables definition of the context of carrying out the action plan: "Audit", "Compliance", "Event", "Risk", "RFC" or "Others".
- **Category**: enables specification of the action undertaken, for example: "Process Improvement".
- **Nature**: enables definition of the action plan undertaken: "Preventive" or "Corrective".
- **Comment**: supplements information on the action plan and its characteristics.

Action plan statuses

- **To Send**: proposed by the action plan creator.
- **To Start**: accepted by the person designated as "approver" in the properties of an action plan.
- **Canceled**: the action plan responsible user has refused the action plan, which will not be implemented.
- **In Progress**: accepted by the action plan responsible user, actions are defined or being executed.
- **Completed**: all action plan actions have been executed. The responsible user has submitted a closing request to the approver, who can accept or refuse it.
- **Closed**: the action plan is completed and approved.

Financial assertion

- **Forecast Cost**: estimate of action plan cost expressed in **Currency**.
- **Real Cost**: action plan real cost expressed in **Currency**.
- **Forecast Cost (Man-Days)**: estimate in man-days of action plan implementation workload.
- **Real Cost (Man-Days)**: cost of action plan implementation expressed in man-days .

Success factors

In the **Success Factors** section, you can specify in text the success indicators enabling assessment of success of the action plan.

- **Key Success Factors**: text information on action plan success factors.
- **Success**: information on action plan final success. "None", "True" or "False"
- **Comments on Success**: text information on action plan results.

Scope

To position an action plan in its environment, you can associate objects with the action plan in the **Scope** section.

You can connect objects of risk, business and organizational process, control, entity or application type.

Milestones

Milestones are important dates of the action plan. You can specify these dates later.

- **Effective Begin Date** and **Planned Begin Date**
- **Effective End Date** and **Planned End Date**

Attachments

You can attach business documents to an action plan:

☛ *For more details on the use of business documents, see the* ***HOPEX Common Features*** *guide.*

Action Plan Progress Steps

Creating the action plan

When the action plan is created, it is in "To submit" state.

By default, the action plan creator is the action plan **Owner**. Having specified the characteristics of a new action plan, the creator can:

- **Propose** the action plan.
  In this case, the user defined as "Approver" receives a notification mail, and the new action plan appears with status "To Begin" in his/her tasks list.

Preparing the action plan

The action plan "Responsible" user can **Validate** or **Cancel** the action plan.

- **Validate**: the action plan, which then takes status "In Progress". Actions can then be created.
- **Cancel**: the action plan which takes status "Canceled".

Executing the action plan

Having executed actions relating to the action plan, the "Owner" can:

- **Terminate** the action plan which takes status "Closed". To do this, all action plan actions must be terminated.
  The "Approver" user is notified of the action plan termination request.

Closing the action plan

After having consulted action plan follow-up reports, the "Approver" user can **Close** and then **Reopen** the action plan.

- **Close**: the action plan, which retains "Closed" status and disappears from the task lists of creator, approver and owner.
- **Reopen**: additional actions can then be created. The action plan again takes status "In Progress".

Action Plan Progress Follow-Up

Action plan progress is specified at periodic dates by the action plan responsible user. For more details, see "Specifying action plan progress rate", page 171.

HOPEX Business Process Analysis offers the opportunity to regularly remind the action plan responsible user that he must update the progress of his action plan using a steering calendar. So that a reminder e-mail can be automatically sent to the action plan responsible user, you can connect a **Steering Calendar** to the action plan. For more details, see "Using steering calendars", page 172.

Specifying action plan progress rate

The action plan progress rate can be specified if the action plan is in the status "In progress", that is it has been validated.

To indicate progress of an action plan:

1. Open the properties of the action plan and expand the **Action Plan Progress** section.

2. In the **Progress Rate** table, click **New**.
   The **Progress Rate** creation page appears.
3. Specify the **Name** of the progress rate.
4. Specify the **Updated Progress Percentage** and add a percentage **Comment**, if required.
5. Verify the **Progress Date**.
6. Specify the **Progress Assessment**:
   - Delayed
   - On Time
7. In the progress rate properties page, click **OK**.
   The progress rate appears in the list.

   The **Last Progress Percentage** and **Last Progress Percentage Comment** fields are updated.

Using steering calendars

Creating a steering calendar

You can connect a **Steering Calendar** to the action plan so that the action plan responsible user can indicate a progress percentage at dates defined in this calendar. A message is sent to the user on these dates.

☛ *For more details on managing steering calendars, see the technical article **HOPEX Power Studio - Steering calendar**.*

To create a steering calendar for an action plan:

1. Open the properties of an action plan.
2. In the **Characteristics** section, click the arrow at the right of the **Steering Calendar** field.
3. Select **Create a steering calendar**.
   The steering calendar creation page appears.
4. Specify the **Name** of the steering calendar.
5. In the **Steering Calendar Type** field, leave the default value "Action Plan".
6. In the **Scheduler Configuration** field, leave the default value "Steering Calendar - Configuration scheduler".
7. In the **Reminder** field, leave the default value "Steering Calendar - Emailing SchedulerJob".
8. Click **OK**.
   You must then create Steering Dates.

Creating steering dates

A steering date is a date defined in a steering calendar on which a reminder will be sent to the person responsible for an element. This can be an initial date, reminder date or final due date.

To create a steering date for an existing steering calendar:

1. Open the properties of the steering calendar that interests you.
2. In the **Steering Date** section, click **New**.
   The new steering date appears in the list.

To define steering date characteristics:

1. Open the steering date properties dialog box and select the **Characteristics** tab.
2. Specify the **Name** of the date, to enable its reuse in another steering calendar if required.
3. Specify the **Date Type**.
   - "Initial" - to signify start of an action plan
   - "Remind" - to remind the responsible user of progress rate update
   - "Last" - to signify close of an action plan
4. Specify messages that will be addressed as notification and as E_mail.
   You must then plan the dates of actions execution.

To schedule a steering date:

- Open the steering date properties dialog box and select the **Scheduling** tab.
  You must define the **Start date** (absolute ou Relative) and the **Recurrence Type**.

  ☛ *The start hour is defined in **UTC** format.*

  - The **Start date** may be specified by **Start date (absolute)** or by **Relative Date**.

    ☛ *The **Relative Date** is defined related to the **Effective Begin Date** of the action plan.*

  - The **Recurrence Type** defines the frequency at which reminders are sent: daily, weekly, monthly, once only.

    ☛ *For details on scheduler configuration, see "Scheduling" chapter in the **HOPEX Power Studio - Steering calendar** technical article*

MANAGING ACTIONS

An action is included in an action plan and represents a transformation or processing in an organization or system.

☛

The action plan Responsible User must define actions enabling execution of the action plan. The Responsible User can create actions and assign these.

Creating an Action

To create an action from an action plan:

1. Select **Home > My Desktop > My Responsibilities > My Action Plans**.
2. In the page that appears, select the action plan that interests you and click **Property**.
3. In the **Actions** section, click **New**.
   The action appears in the list of action plan actions.
4. Open the properties of the action and specify its **Name**.
5. Specify the following fields:
   - **Priority**: enables indication of a level. Priority can be: "Low", "Medium", "High" or "Critical".
   - **Action Responsible**: responsible for the action as specified by the action plan creator.
   - **Owner Entity**: owner organization unit enabling restriction of the list of action owners.
6. You can specify milestones, which are important dates of the action.
   - **Effective Begin Date** and **Planned Begin Date**.
   - **Effective End Date** and **Planned End Date**.
7. Click **OK**.
   The action is created with "Created" status.
8. Connect the controls you want to implement.

☛ *These fields are accessible when the action has taken "Open" status.*

Action statuses

- **Created**: the action is created.
- **Project**: the created action awaits opening by the "action owner".
- **In Progress**:action is accepted by its owner.
- **To Close**: the action is completed and must be approved by the "action plan owner or approver".
- **Closed**:the action is completed and approved.

Defining Action Scope

An action can concern one or several objects of control, risk or application type.

For example, to define the controls that will be executed in the framework of the action:

1. Open the properties of the action.
2. Expand the **Scope** section.
3. Connect the controls you want to implement.

☛ *These fields are accessible when the action has taken "Open" status.*

Action Management Steps

☛ *For more details on an action workflow, see the, chapter "Le workflow d'une action" in the **HOPEX Collaboration Manager guide**.*

When an action has been created, the action creator can declare the action as being in "Project" status.

When all actions of an action plan have been published and accepted, the action plan can be implemented.

Command proposed to creator

Having specified the characteristics of a new action, the "action plan owner or approver" can use the commend:

- **Project**.
  In this case the user defined as "Responsible User" receives a notification by mail and the new action takes status "Project".

Command proposed to entities concerned by an action in "Project" status

When an action has been proposed by the user the "action plan owner or approver" and the "Responsible" user can:

- **Open** the action, which takes status "Open".

Command proposed to "Open" action responsible user

Having studied action execution possibilities, the "Responsible User" can:

- **Terminate** the action.
  A notification is sent to the user defined as "action plan owner or approver".

Commands proposed to the "action plan owner or approver" of a terminated action

After studying characteristics of the action he/she created, the action plan owner or approver" creator can:

- **Close**.
  In this case the user defined as "Responsible" receives a notification and the action takes status "Closed".
- **Return to responsible user**, for supplementary actions.

HOPEX Business Process Analysis Reports

HOPEX Business Process Analysis offers analysis and follow-up of implementation of the business architecture evolutions of your enterprise. **HOPEX** Suite uses reports to group sets of repository objects and study their interactions.

☛ *For more details on operation of reports, see the* ***HOPEX Common Features*** *guide, "Generating Reports".*

Report templates proposed as standard by **HOPEX Business Process Analysis** offer various analysis presentation possibilities.

The following points are covered here:

Managing Processes

This paragraph presents the list of reports available from a process.

- "Process Support Table", page 178
- "Geographical Process Support Table", page 179

Process Support Table

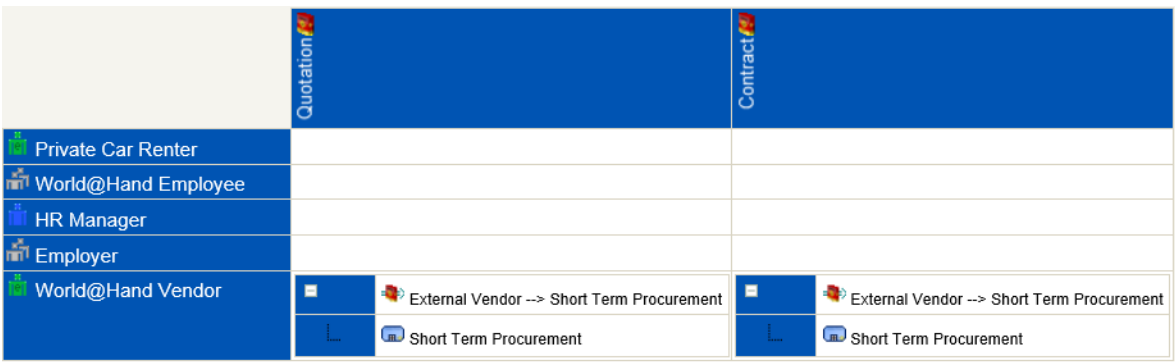
This report describes which business applications support processes, and for which org-units.

Cells contain offerings of the business process which:

- contain the product of the column,
- have as source or target a business process participant assigned to the org-unit in the row.

This report also displays the business or organizational processes that are source or target of the offering.

☛ *For more details on the use of products and offerings, see the* ***HOPEX Business Process Analysis*** *guide.*



☛ *This matrix is displayed in the* ***Products x Markets*** *tab of the business process.*

Report parameters

Parameter	Parameter type	Constraints
Object	Business process	At least one object mandatory.
Object	Org Unit	At least one object mandatory.

Geographical Process Support Table

This report describes which business applications support processes, and for which geographical sectors.

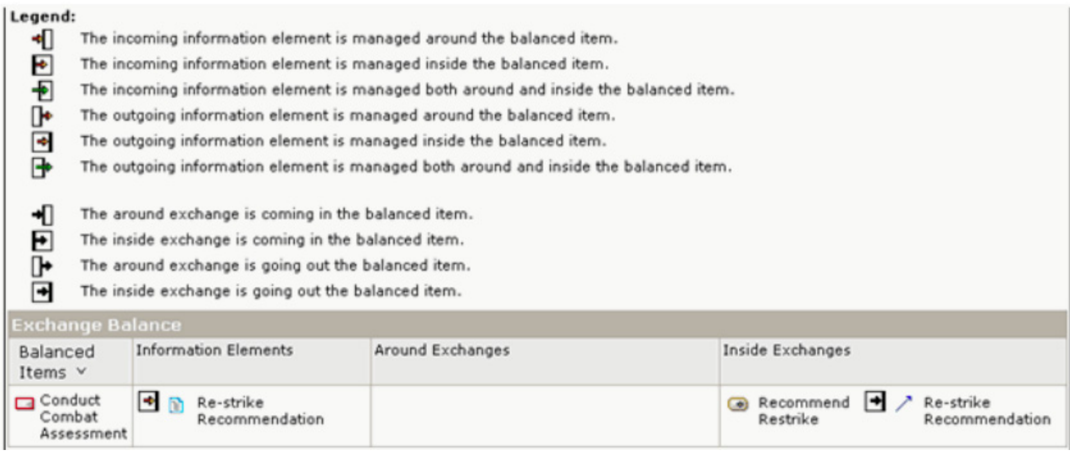
Report parameters

Parameter	Parameter type	Constraints
Site	Site	At least one Site mandatory.
Object	Business process	At least one Process mandatory.

EXCHANGE BALANCE

Exchange Balance Between Organizational Processes

The exchange balance between functional processes report controls consistency of exchange design. A comparison of all incoming and outgoing exchanges defined inside and outside functional processes identifies elements missing in the design, or those that are unnecessary.



This report enables consistency check of exchanges defined within the organizational process with exchanges sent and received from the exterior.

Different icons are used to symbolize exchange type: message, flow or interaction. These icons enable identification that exchanges between interior and exterior are balanced.

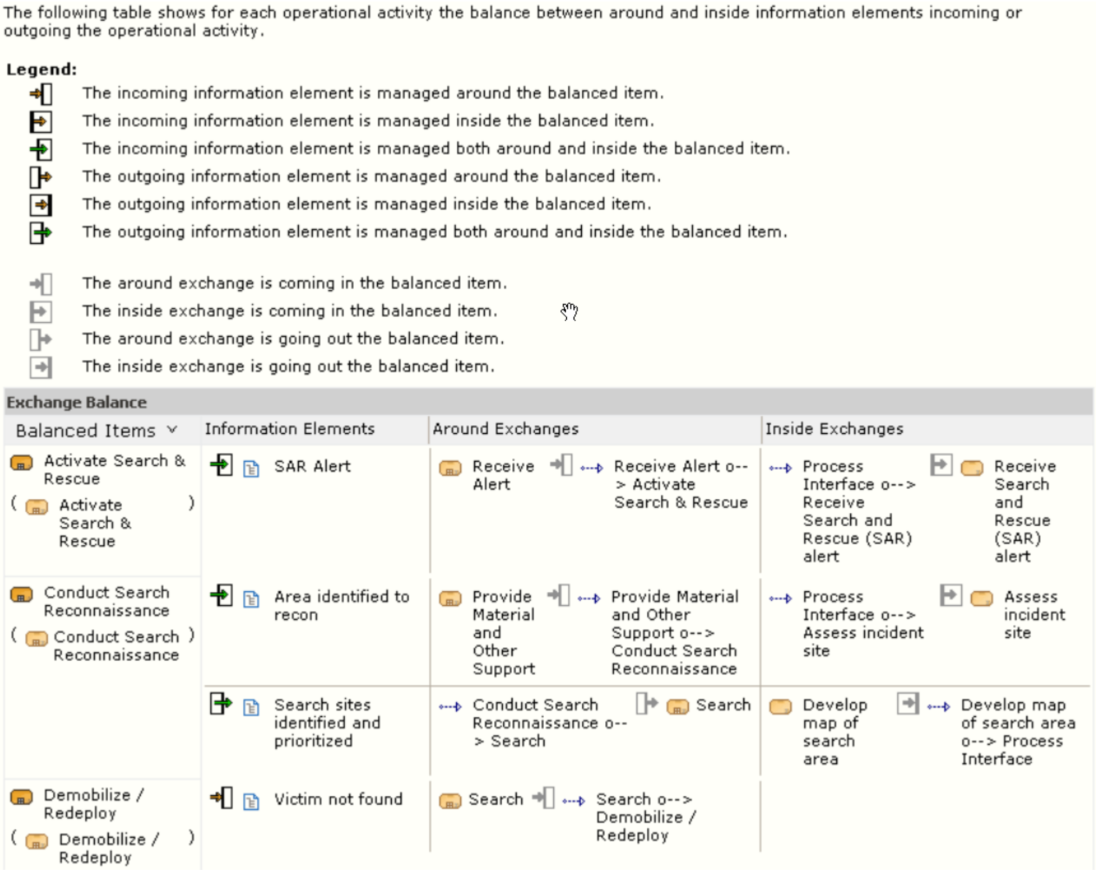
This report is presented in the form of a table, rows of which are organizational processes defined as parameters.

Report parameters

Parameter	Parameter type	Constraints
Object	Organizational process	At least one object mandatory.

Exchange Balance Between Functional Processes

Like report "Exchange Balance Between Organizational Processes", page 180, this report checks consistency of design of exchanges between functional processes.



The following table shows for each operational activity the balance between around and inside information elements incoming or outgoing the operational activity.

Legend:

The incoming information element is managed around the balanced item.
The incoming information element is managed inside the balanced item.
The incoming information element is managed both around and inside the balanced item.
The outgoing information element is managed around the balanced item.
The outgoing information element is managed inside the balanced item.
The outgoing information element is managed both around and inside the balanced item.

The around exchange is coming in the balanced item.
The inside exchange is coming in the balanced item.
The around exchange is going out the balanced item.
The inside exchange is going out the balanced item.

Exchange Balance

Balanced Items	Information Elements	Around Exchanges	Inside Exchanges
Activate Search & Rescue (Activate Search & Rescue)	SAR Alert	Receive Alert; Receive Alert o--> Activate Search & Rescue	Process Interface o--> Receive Search and Rescue (SAR) alert; Receive Search and Rescue (SAR) alert
Conduct Search Reconnaissance (Conduct Search Reconnaissance)	Area identified to recon	Provide Material and Other Support; Provide Material and Other Support o--> Conduct Search Reconnaissance	Process Interface o--> Assess incident site; Assess incident site
	Search sites identified and prioritized	Conduct Search Reconnaissance o--> Search; Search	Develop map of search area; Develop map of search area o--> Process Interface
Demobilize / Redeploy (Demobilize / Redeploy)	Victim not found	Search; Search o--> Demobilize / Redeploy	

Report parameters

Parameter	Parameter type	Constraints
Object	Functional process	At least one object mandatory.

Exchange Balance Between Business Processes

Like report "Exchange Balance Between Organizational Processes", page 180, this report checks consistency of design of exchanges between business processes.

Report parameters

Parameter	Parameter type	Constraints
Object	Business process	At least one object mandatory.

Exchange Balance Between Activities

Like report "Exchange Balance Between Organizational Processes", page 180, this report checks consistency of design of exchanges between activities.

Report parameters

Parameter	Parameter type	Constraints
Object	Activity	At least one object mandatory.

Exchange Conformity Between Businesses

The report on conformity of exchanges between businesses checks that exchanges between businesses are consistent with exchanges in processes that describe how its elements behave.

Report parameters

Parameter	Parameter type	Constraints
Object	Business function	At least one object mandatory.

PROCESS ANALYSIS

This paragraph presents the list of reports available from a process.

- "Business Process Automation", page 183
- "Process Supervision", page 186
- "Automated Process Supervision", page 186
- "Process Functional Analysis", page 187
- "BPMN Business Process", page 188
- "BPMN Functional Process", page 188
- "BPMN Organizational Process", page 189
- "Support of Processes by Applications Table (Statistics)", page 189
- "Managing RACI (BPMN)", page 190
- "Business Process RACI Matrix (BPMN)", page 192
- "Business Process and Sub-Process RACI Matrix (BPMN)", page 194
- "Organizational Process RACI Matrix (BPMN)", page 194
- "Organizational Process and sub-processes RACI Matrix (BPMN)", page 195
- "Org-Unit RACI Matrix (BPMN)", page 195
- "Org-Unit and owned org-units RACI Matrix (BPMN)", page 195
- "Business Process Products x Markets Matrix (BPMN)", page 195
- "Products x Markets Matrix (BPMN)", page 196
- "Business Process Contextualization Matrix (BPMN)", page 197
- "Contextualization Matrix (BPMN)", page 197
- "Execution and Performance Heatmap", page 198
- "Org-Unit Analysis", page 201
- "Site Analysis", page 204

Business Process Automation

This report enables detection of potential improvements in the information system in its support of human resource activities.

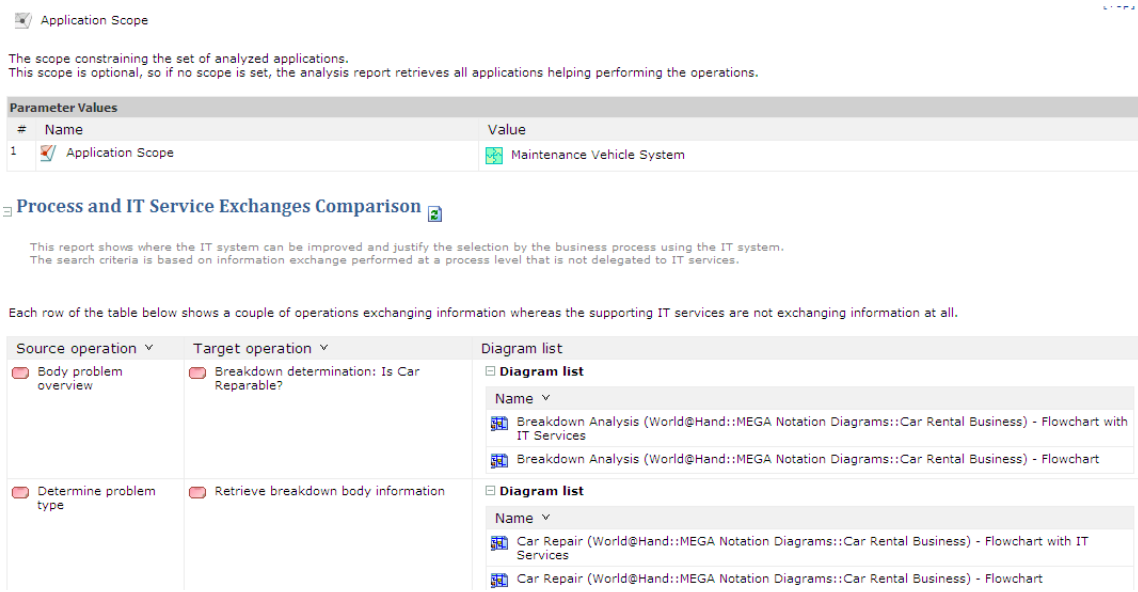
The human activity analyzed comprises the set of operations executed by one or several org-units. This set can be defined in different ways:

- Processes or processes folder: in this case, processes are used to find all operations contained in the processes that implement them.
- Operations: a set of operations can be given directly. This set can also be specified by a query or a query instance (for example all operations using at least two IT services).
- Org-units or org-units folder: in this case the set of operations is built from the operations executed by these org-units.

Comparison of exchanges at process and IT levels

This report explains how the information system can be improved related to the processes it uses.

Search criteria are based on information exchanges carried out at process level that are not delegated to IT services.


Application Scope

The scope constraining the set of analyzed applications.
This scope is optional, so if no scope is set, the analysis report retrieves all applications helping performing the operations.

Parameter Values		
#	Name	Value
1	Application Scope	Maintenance Vehicle System

Process and IT Service Exchanges Comparison

This report shows where the IT system can be improved and justify the selection by the business process using the IT system.
The search criteria is based on information exchange performed at a process level that is not delegated to IT services.

Each row of the table below shows a couple of operations exchanging information whereas the supporting IT services are not exchanging information at all.

Source operation	Target operation	Diagram list
Body problem overview	Breakdown determination: Is Car Reparable?	**Diagram list** Name Breakdown Analysis (World@Hand::MEGA Notation Diagrams::Car Rental Business) - Flowchart with IT Services Breakdown Analysis (World@Hand::MEGA Notation Diagrams::Car Rental Business) - Flowchart
Determine problem type	Retrieve breakdown body information	**Diagram list** Name Car Repair (World@Hand::MEGA Notation Diagrams::Car Rental Business) - Flowchart with IT Services Car Repair (World@Hand::MEGA Notation Diagrams::Car Rental Business) - Flowchart

This report functions on organizational process operations, successively processing the following points:

1. analysis of the content of messages, message flows or shared objects exchanged directly or indirectly between operations,
2. analysis of services used by operations,
3. verification that exchanges between services are consistent with contents.

Querying IT services

IT services that can be used by process operations are found using common functionalities attached to services and operations.

All process operations are displayed so as to list those that are supported by IT services, those that could be supported using existing services, and those that require design of new services.

IT Services Research

IT Services that can be used by the process operations are retrieved using the common functionalities attached to both the IT services and the operations.
All process operations are shown to demonstrate those that are using IT services, those that might use existing IT services and those that they need new IT service designs.

Operation	Expected functionalities	Related services
Body problem overview	Input a Breakdown Analysis	✓ Breakdown Analysis Report Form
Breakdown determination: Is Car Reparable?	Input a Breakdown Determination	✓ Breakdown Determination Form
Determine problem type		✓ Repair Order Scheduler
Engine problem overview	Input a Breakdown Analysis	✓ Breakdown Analysis Report Form
Fix tire problem		
Prepare estimate, task and vehicle loan		✓ Estimate Form
Prepare invoice	Input a Car Repairing Invoice	✓ Invoice Form
	Print Car Repairing Invoice	

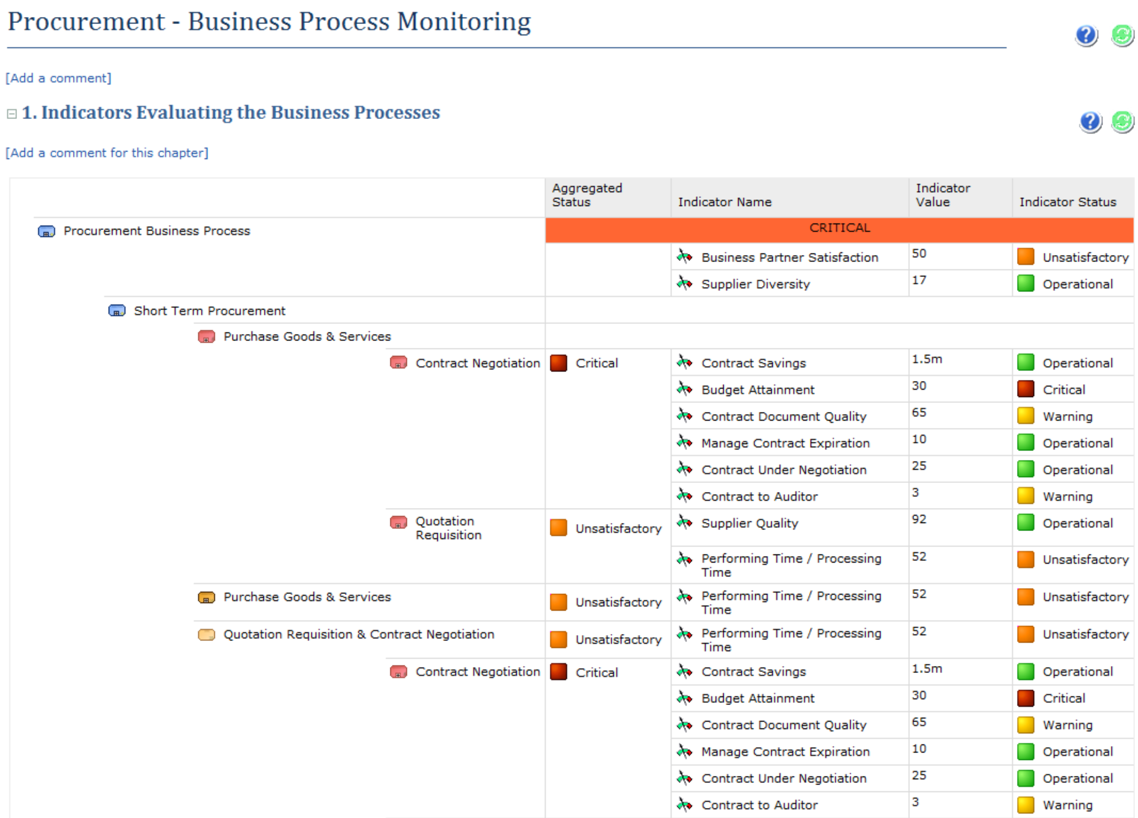
Report parameters

Parameter	Parameter type	Constraints
Human activity	Process, operation or org-unit.	At least one object mandatory.
Scope	Applications	Not mandatory.

☛ *Application scope indicates the scope restricting all applications analyzed. This scope is optional. If it has not been mentioned, the analysis report finds all applications used to execute operations.*

Process Supervision

This report finds indicators and dashboards dedicated to business or functional processes.


Procurement - Business Process Monitoring

[Add a comment]

1. Indicators Evaluating the Business Processes

[Add a comment for this chapter]

	Aggregated Status	Indicator Name	Indicator Value	Indicator Status
Procurement Business Process	CRITICAL			
		Business Partner Satisfaction	50	Unsatisfactory
		Supplier Diversity	17	Operational
Short Term Procurement				
Purchase Goods & Services				
Contract Negotiation	Critical	Contract Savings	1.5m	Operational
		Budget Attainment	30	Critical
		Contract Document Quality	65	Warning
		Manage Contract Expiration	10	Operational
		Contract Under Negotiation	25	Operational
		Contract to Auditor	3	Warning
Quotation Requisition	Unsatisfactory	Supplier Quality	92	Operational
		Performing Time / Processing Time	52	Unsatisfactory
Purchase Goods & Services	Unsatisfactory	Performing Time / Processing Time	52	Unsatisfactory
Quotation Requisition & Contract Negotiation	Unsatisfactory	Performing Time / Processing Time	52	Unsatisfactory
Contract Negotiation	Critical	Contract Savings	1.5m	Operational
		Budget Attainment	30	Critical
		Contract Document Quality	65	Warning
		Manage Contract Expiration	10	Operational
		Contract Under Negotiation	25	Operational
		Contract to Auditor	3	Warning

Report parameters

Parameter	Parameter type	Constraints
Object	Business process Functional process	At least one object mandatory.

Automated Process Supervision

Like report "Process Functional Analysis", page 187, this report contains indicators and dashboards dedicated to supervision of system processes.

Report parameters

Parameter	Parameter type	Constraints
Object	System process	At least one object mandatory.

Process Functional Analysis

This report is designed to compare a group of processes providing functionalities with a set of expected functionalities (defined in functional scope).

The functional scope determines which functionalities are expected to achieve a given objective. It comprises functionalities that can be defined from processes or businesses. We therefore find all linked functionalities.

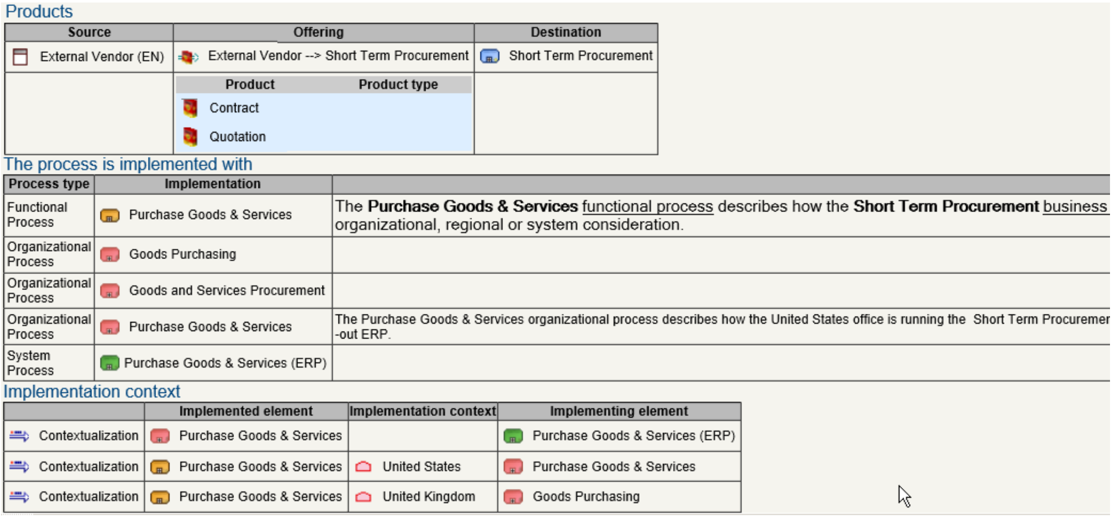
Report parameters

Parameter	Parameter type	Constraints
Functional scope	Business, process, functionalities, operation	At least one object mandatory.
Process analyzed	Business, process, operation	At least one object mandatory.

☛ *The "Process analyzed' parameter indicates the group of processes compared to the functional scope. It can also be applied to business functions or processes.*

BPMN Business Process

This report describes a business process, its structure, its exchanges with other processes and with external participants, as well as detail of the products it supplies.


Products

Source	Offering	Destination
External Vendor (EN)	External Vendor --> Short Term Procurement	Short Term Procurement

Product	Product type
Contract	
Quotation	

The process is implemented with

Process type	Implementation	
Functional Process	Purchase Goods & Services	The **Purchase Goods & Services** functional process describes how the **Short Term Procurement** business organizational, regional or system consideration.
Organizational Process	Goods Purchasing	
Organizational Process	Goods and Services Procurement	
Organizational Process	Purchase Goods & Services	The Purchase Goods & Services organizational process describes how the United States office is running the Short Term Procuremer -out ERP.
System Process	Purchase Goods & Services (ERP)	

Implementation context

	Implemented element	Implementation context	Implementing element
Contextualization	Purchase Goods & Services		Purchase Goods & Services (ERP)
Contextualization	Purchase Goods & Services	United States	Purchase Goods & Services
Contextualization	Purchase Goods & Services	United Kingdom	Goods Purchasing

Report parameters

Parameter	Parameter type	Constraints
Object	Business process	One object mandatory.

BPMN Functional Process

Like report "BPMN Business Process", page 188, this report describes a functional process, its template and its participants, as well as the activities for which each participant is responsible. This analysis also presents exchanges, systems used to support activities and the risks encountered during process execution.

Report parameters

Parameter	Parameter type	Constraints
Object	Functional process	One object mandatory.

BPMN Organizational Process

Like report "BPMN Business Process", page 188, this report describes an organizational process, its template and its participants, as well as the activities for which each participant is responsible. This analysis also presents exchanges, systems used to support activities and the risks encountered during process execution.

Report parameters

Parameter	Parameter type	Constraints
Object	Organizational process	One object mandatory.

Support of Processes by Applications Table (Statistics)

This report describes which business applications support business or organizational processes.

An organizational process is considered as supported by an application if this process or one of its sub-processes or one of their operations is connected to this application or to one of its sub-applications or to one of their application services.

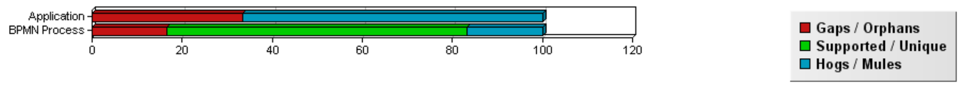
A business process is considered as supported by an application if this business process or one of its sub-processes or one of their organizational processes or one of their sub-processes or one of their operations is connected to this application or to one of its sub-applications or to one of their application services.

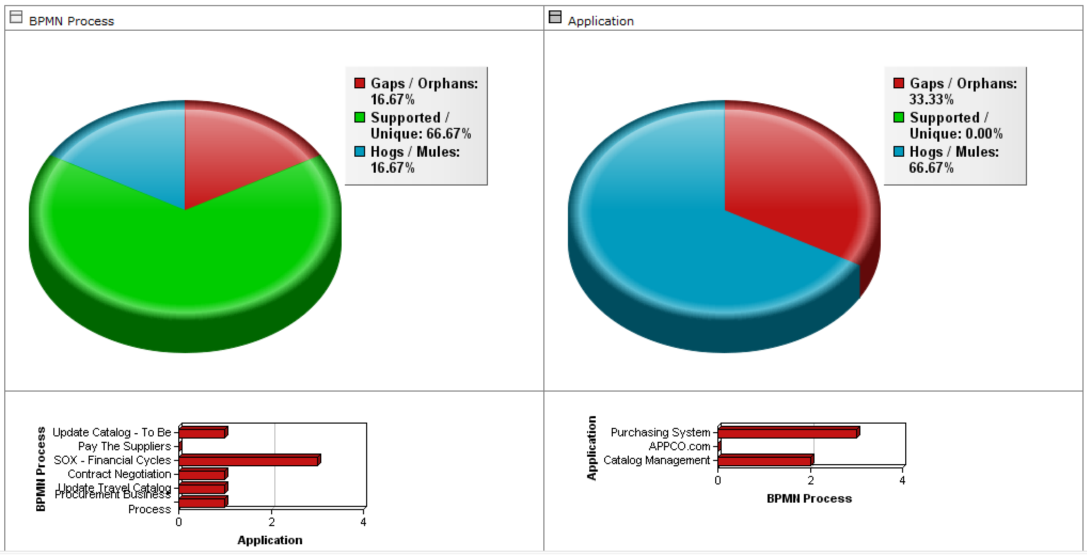
In a report of this type, applications are broken down into several categories:

- A process can be supported by zero (Orphan), one (Unique) or several (Mule) applications.
- An application can support zero (Gap), one (Supported) or several (Pivot) processes.

The number of components of each category is presented:

- as stacked bars.
- as pie charts.





Report parameters

Parameter	Parameter type	Constraints
Business	Business process	At least one object mandatory.
Applications	Applications	At least one object mandatory.

Managing RACI (BPMN)

This report displays a matrix with org-units in columns and organizational processes operations in rows.

☛ *For more details on managing RACI, see "Consulting the RACI Matrix of Org-Units", page 102.*

Cells of this matrix are filled with a letter representing responsibility of the org-unit in the process (or operation):

- (A) for Accountable
- (R) for Responsible
- (R/A) for Responsible/Accountable
- (C) for Consulted
- (I) for Informed

	Finance Department	Customer Satisfaction Department	Sales Department	Sales Rep
Deliver Vacation Business				
Invoice Customer	(A)			
Vacation Package Booking			(A)	
Vacation Package Delivery		(A)		
Vacation Request Formalization			(A)	

This value can be automatically proposed when a participant assigned to the org-unit executes the operation or organizational process. It can be modified or confirmed by the user.

A warning is displayed when the org-unit executing an operation or responsible for a process is not connected via an intermediary participant to this operation or process.

If you click button ⊞, the context of the responsibility of the org-unit is indicated. You can view:

- the name of the participant to which the org-unit is assigned
- the name of the process that is owner of the participant

Report parameters

Parameter	Parameter type	Constraints
Org-unit (in columns)	Org Unit	At least one object mandatory.
Process (in rows)	Organizational process or operation	At least one object mandatory.

Business Process RACI Matrix (BPMN)

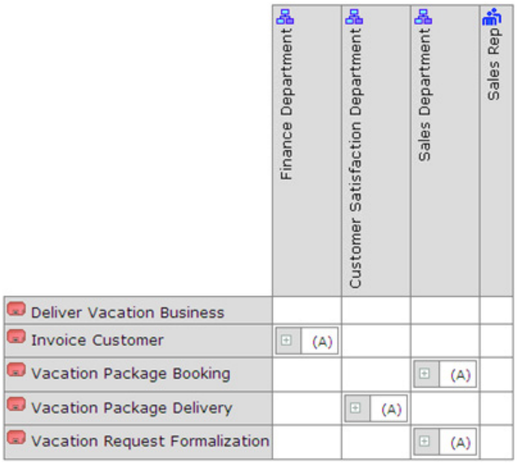
This report is a matrix presenting the RACI value of org-units presented in columns related to operations and/or organizational processes presented in rows.

The org-units and organizational processes presented are directly connected to business processes specified as parameters.

☛ *To generate a matrix to search for organizational processes and operations in depth, you must use report* *"Business Process and Sub-Process RACI Matrix (BPMN)", page 48**.*

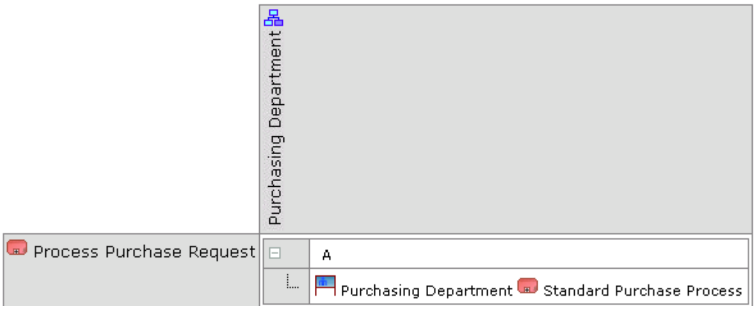
Cells of this matrix are filled with a letter representing responsibility of the org-unit in the process (or operation):

- (A) for Accountable
- (R) for Responsible
- (R/A) for Responsible/Accountable
- (C) for Consulted
- (I) for Informed



If you click button , the context of the responsibility of the org-unit is indicated. You can view:

- the name of the participant to which the org-unit is assigned
- the name of the process that is owner of the participant



Report parameters

Parameter	Parameter type	Constraints
Object	Business process	At least one object mandatory.

Business Process and Sub-Process RACI Matrix (BPMN)

Like report "Business Process RACI Matrix (BPMN)", page 47, this report describes a matrix presenting the RACI value of org-units presented in columns related to operations and/or organizational processes presented in rows.

The org-units and organizational processes presented are connected to business processes with a depth level specified in parameters.

Defining matrix depth level

You can choose to increase object query depth.

To define depth level of the matrix:

1. Open the properties of the report.
2. Select the **Parameters** tab.
3. In the **Levels** field, indicate the value that interests you.

   ☛ *If you enter value "2", the matrix will query sub-sub-processes of the selected process. Beyond value "3", the matrix will query all processes located below the selected process, whatever the level.*
4. Click **Apply**.
   The report is accessible in the **Reports** Tab.

   ☛ *If you modify setting values, remember to refresh the generated report.*

Report parameters

Parameter	Parameter type	Constraints
Object	Business process	At least one object mandatory.
Level	Integer	

Organizational Process RACI Matrix (BPMN)

Like report "Business Process RACI Matrix (BPMN)", page 192, this report describes a matrix presenting the RACI value of org-units presented in columns related to organizational processes presented in rows.

☛ *To generate a matrix to search for organizational processes and operations in depth, you must use report "Organizational Process and sub-processes RACI Matrix (BPMN)", page 195.*

Organizational Process and sub-processes RACI Matrix (BPMN)

Like report "Business Process and Sub-Process RACI Matrix (BPMN)", page 194, this report describes a matrix presenting the RACI value of org-units presented in columns related to operations and/or organizational processes presented in rows.

Org-Unit RACI Matrix (BPMN)

Like report "Business Process RACI Matrix (BPMN)", page 192, this report describes a matrix presenting the RACI value of org-units presented in columns related to operations and organizational processes presented in rows.

This report automatically specifies matrix rows and columns with objects connected to objects specified as parameters.

> ☛ *To generate a matrix to search for organizational processes and operations in depth, you must use report "Business Process and Sub-Process RACI Matrix (BPMN)", page 194.*

Org-Unit and owned org-units RACI Matrix (BPMN)

Like report "Business Process and Sub-Process RACI Matrix (BPMN)", page 194, this report describes a matrix presenting the RACI value of org-units presented in columns related to operations and/or organizational processes presented in rows.

The second parameter of this report indicates the number N of the depth level of search for sub-org-units. If this number is not indicated, the complete hierarchy of sub-org-units is specified.

The report searches for all sub-org-units of the given org-unit given as parameter to N levels and adds this org-unit. It presents in columns the org-units found, and in rows the operations or organizational processes associated with these org-units, with the RACI value in the cell.

Business Process Products x Markets Matrix (BPMN)

This report presents products of offers of business process displayed in columns.

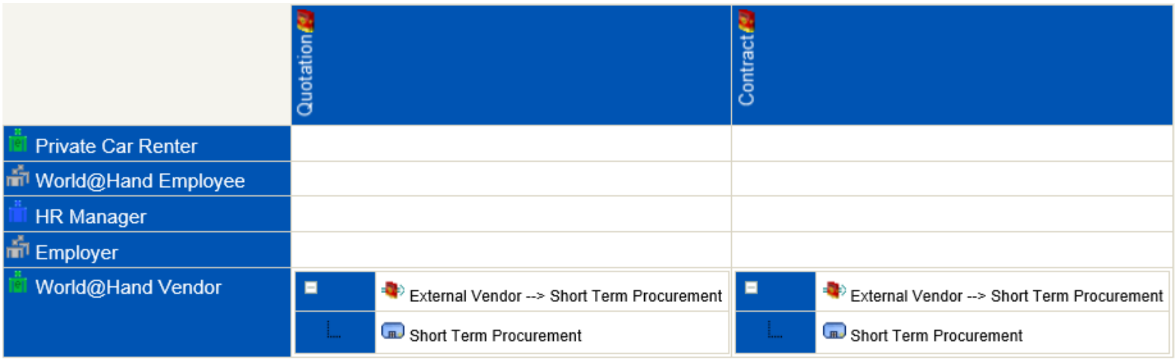
Or-units of business process external participants are displayed in rows.

Cells contain offerings of the business process which:

- contain the product of the column,
- have as source or target a business process participant assigned to the org-unit in the row.

This report also displays the business or organizational processes that are source or target of the offering.

☛ *For more details on the use of products and offerings, see the guide* ***MEGA Process BPMN Edition****, "Representing Product Offerings" chapter.*



	Quotation	Contract
Private Car Renter		
World@Hand Employee		
HR Manager		
Employer		
World@Hand Vendor	External Vendor --> Short Term Procurement Short Term Procurement	External Vendor --> Short Term Procurement Short Term Procurement

☛ *This matrix is displayed in the* ***Products x Markets*** *tab of the business process.*

Report parameters

Parameter	Parameter type	Constraints
Object	Business process	At least one object mandatory.

Products x Markets Matrix (BPMN)

Like report "Business Process Products x Markets Matrix (BPMN)", page 29, this report presents offerings proposed via products to external org-units presented in columns.

Report parameters

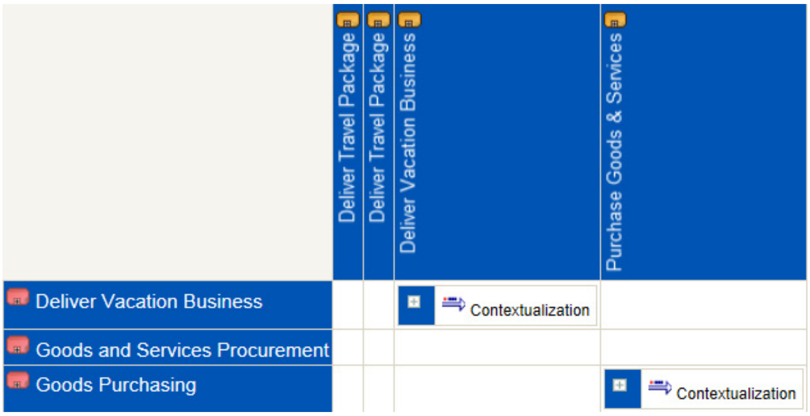
Parameter	Parameter type	Constraints
Market	Org Unit	At least one market mandatory.
Product	Product	At least one product mandatory.

Business Process Contextualization Matrix (BPMN)

This report is a matrix presenting functional processes of the business process in columns, and organizational processes of the business process in rows. When an organizational process is the implementation of a functional process in a particular context, this is displayed in the cell.

If a contextualization exists between a functional process and an organizational process, it is presented in the corresponding cell.

☛ *For more details on the use of contextualizations, see the guide* ***MEGA Process BPMN Edition****, "Defining Contextualizations" chapter.*



Report parameters

Parameter	Parameter type	Constraints
Object	Business process	At least one object mandatory.

Contextualization Matrix (BPMN)

Like report "Business Process Contextualization Matrix (BPMN)", page 30, this report enables identification of contextualizations representing the implementation of organizational processes (specified as parameters and presented in rows) between functional processes (presented in columns).

Report parameters

Parameter	Parameter type	Constraints
Organizational process	Organizational process	At least one process mandatory.
Functional process	Functional process Activity	

Execution and Performance Heatmap

This report presents, in the form of a matrix, the assessment results of processes.

Assessed criteria

These characteristics relate to attribute values linked to process performance and execution.

List of characteristics linked to process performance:

- **Business Value**: characterizes business value of the object.
- **Effectiveness**: characterizes effectiveness of object operation
- **Risk**: characterizes risks concerning the object.
- **Performance**: this characteristic is a global assessment of process performance. It is calculated from assessment of process business value, effectiveness and risk.

List of characteristics linked to process execution:

- **Specification**: assessment of quality of description of the object in the repository.
- **Knowledge**: assessment of knowledge of the object by stakeholders.
- **Support**: assessment of application support of the object.
- **Execution**: this characteristic is a global assessment of object execution. It is calculated from assessment of object specification, knowledge and support.

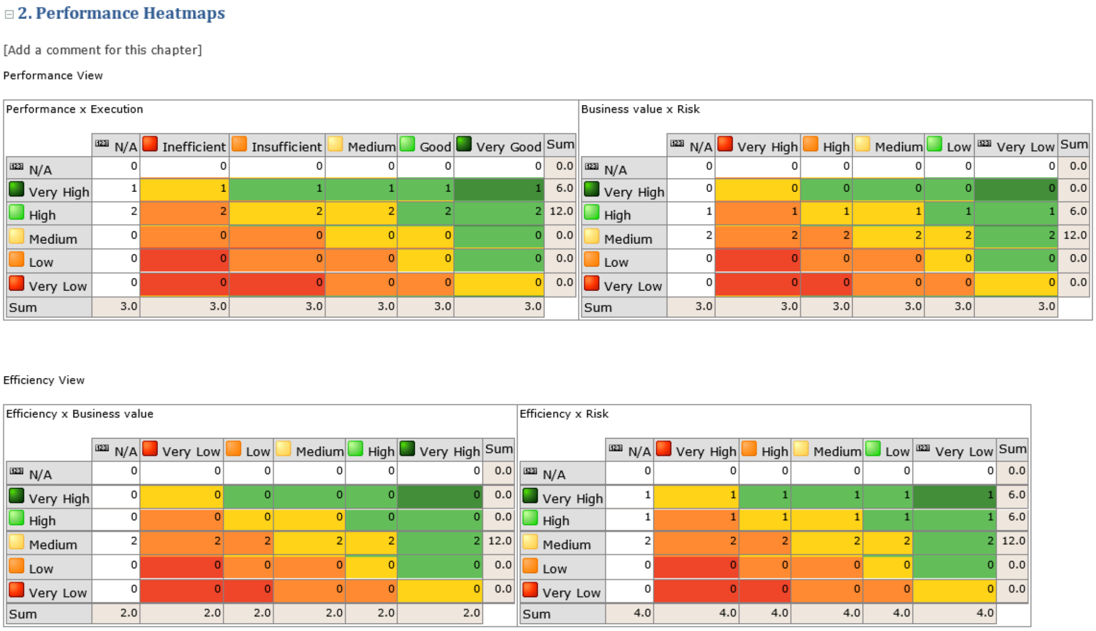
The results of this report can have two origins:

- the values of attributes linked to the characteristics assessed on objects directly specified as "expert view" by the user
  - ☛ *For more details, see "Expert view assessment", page 34.*
- the questionnaires results aggregation that enable to get a value for each attribute connected to assessed characteristics of each object ((**Performance**, **Execution**, for example).
  - ☛ *For more details, see "Assessment by questionnaire", page 34.*

Report presentation

This report is broken down into three parts:

- The first part details the performance assessment heatmaps.



2. Performance Heatmaps

[Add a comment for this chapter]

Performance View

Performance x Execution

	N/A	Inefficient	Insufficient	Medium	Good	Very Good	Sum
N/A	0	0	0	0	0	0	0.0
Very High	1	1	1	1	1	1	6.0
High	2	2	2	2	2	2	12.0
Medium	0	0	0	0	0	0	0.0
Low	0	0	0	0	0	0	0.0
Very Low	0	0	0	0	0	0	0.0
Sum	3.0	3.0	3.0	3.0	3.0	3.0	

Business value x Risk

	N/A	Very High	High	Medium	Low	Very Low	Sum
N/A	0	0	0	0	0	0	0.0
Very High	0	0	0	0	0	0	0.0
High	1	1	1	1	1	1	6.0
Medium	2	2	2	2	2	2	12.0
Low	0	0	0	0	0	0	0.0
Very Low	0	0	0	0	0	0	0.0
Sum	3.0	3.0	3.0	3.0	3.0	3.0	

Efficiency View

Efficiency x Business value

	N/A	Very Low	Low	Medium	High	Very High	Sum
N/A	0	0	0	0	0	0	0.0
Very High	0	0	0	0	0	0	0.0
High	0	0	0	0	0	0	0.0
Medium	2	2	2	2	2	2	12.0
Low	0	0	0	0	0	0	0.0
Very Low	0	0	0	0	0	0	0.0
Sum	2.0	2.0	2.0	2.0	2.0	2.0	

Efficiency x Risk

	N/A	Very High	High	Medium	Low	Very Low	Sum
N/A	0	0	0	0	0	0	0.0
Very High	1	1	1	1	1	1	6.0
High	1	1	1	1	1	1	6.0
Medium	2	2	2	2	2	2	12.0
Low	0	0	0	0	0	0	0.0
Very Low	0	0	0	0	0	0	0.0
Sum	4.0	4.0	4.0	4.0	4.0	4.0	

- The second part details the execution assessment heatmap.

  ☛ *The values used for these reports can be obtained in different ways. For more details, see "Expert view assessment", page 34 and "Assessment by questionnaire", page 34.*

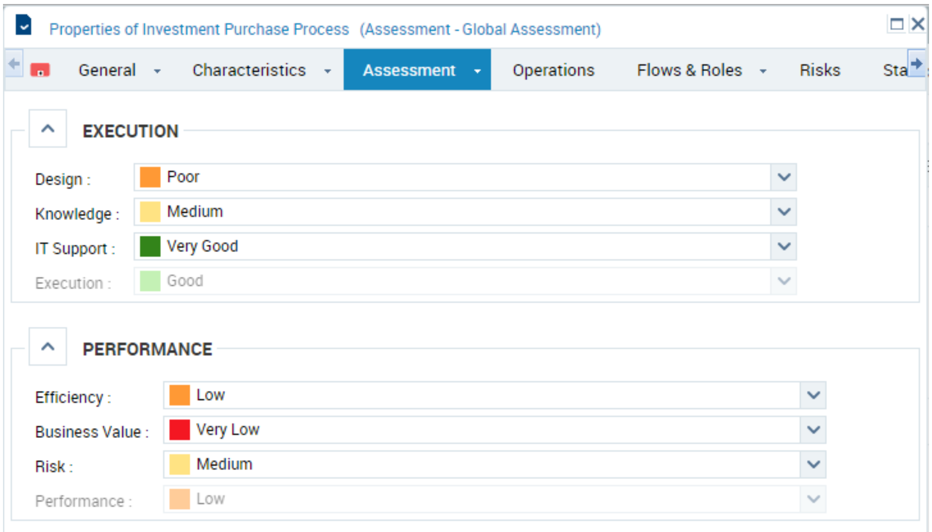
- The final part presents geographical distribution of org-units on sites.

Report parameters

Parameter	Parameter type	Constraints
Object	Business process Organizational process	At least one object mandatory.

Expert view assessment

In the properties of an organizational process or a business process, the **Assessment** tab allows an expert user to specify values of attributes linked to assessed characteristics.



Assessment by questionnaire

☛ *To access assessment by questionnaire, you must have acquired the **MEGA Assessment** module.*

Assessment is carried out using assessment questionnaires. Assessment questionnaires are sent to the appropriate addressees using customizable deployment modes. Results are then aggregates according to predefined rules to present results so they can be used.

☛ *For more details on the interface and assessment functions of **MEGA**, see the **MEGA Assessment** guide.*

Questionnaires

☛ *To access assessment examples described in this guide, you must have imported data specific to process assessments.*

Questionnaires relate to characteristics to be assessed for all processes determined as objects of assessment.

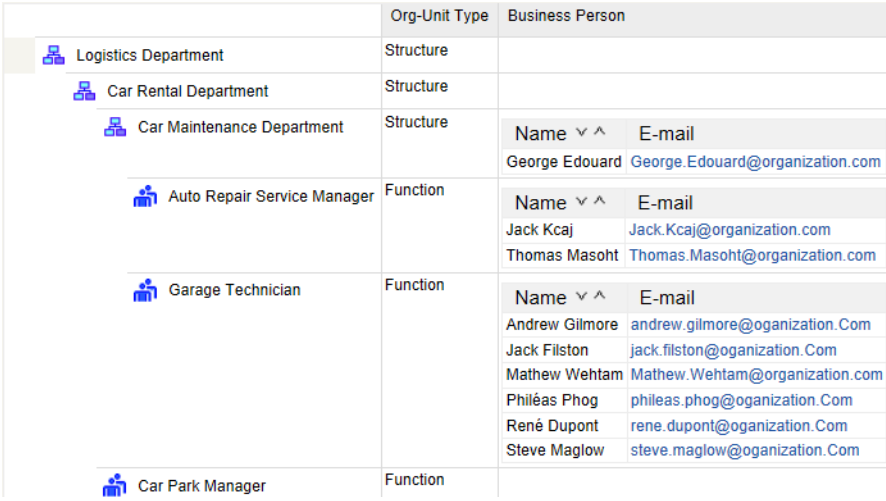
		Assessed Characteristics			Possible Answers					
Performance		Efficiency	Business value	Risk	0	1	2	3	4	5
Business value										
Performance indicators are defined and updated according to company objectives.	CPP	x			N/A	No	-	Partially		Yes
What is process contribution to company objectives?	MPP		x	x	N/A	Very Low	Low	Medium	High	Very High
Evaluate the process direct or indirect business value for the company			x		N/A	Very Low	Low	Medium	High	Very High
Identify the degree to which this process meets business needs.	BPM		x			Very Low	Low	Medium	High	Very High
How flexible the process is to satisfy changing business / user requirements.	BPM	x				Not at all	Insufficiently	Medium	Flexible	Very Flexible
How does this process enable you to reach objectives assigned to you?		x				Not at all	-	Partially	-	Fully
Efficiency										
Potential improvement (Cost)	MPP	x			-	Very High	High	Medium	Low	Very Low
Potential improvement (Quality)	MPP	x	x		-	Very High	High	Medium	Low	Very Low
Potential improvement (Delay)	MPP	x			-	Very High	High	Medium	Low	Very Low
Potential improvement (Complexity)	MPP	x		x	-	Very High	High	Medium	Low	Very Low
Are your clients (internal or external) satisfied of process course?		x			-	Not at all	Dissatisfied	Partially Satisfied	Satisfied	Very satisfied
Are your clients (internal or external) satisfied of process results?			x		-	Not at all	Dissatisfied	Partially Satisfied	Satisfied	Very satisfied
Risks										
What is the impact to the process if sustaining applications was not present?	APM			x	N/A	Very High	High	Medium	Low	Very Low
Are risks associated to process execution identified?				x	-	No	-	Partially	-	Yes
Does risks identified on the process often happen?				x	N/A	Very Often	Often	Sometimes	Rarely	Never
Comments and Attachments										
You can add a comment to justify your answers					Text					
Fill free to add attachments justifying your answers					Business Documents					

Org-Unit Analysis

This report details the organizational structure, the responsibilities and the sites associated to the org-units specified as parameters.

This report is broken down into three parts:

- The first part details organizational structure of each org-unit specified as parameter. In this part, the org-units analyzed are listed with their type, parent, sub-org-units, persons involved in execution of the tasks associated with the org-unit, including other information related to these persons. This part also displays statistical data: number of org-units, number of persons.



	Org-Unit Type	Business Person	
		Name	E-mail
Logistics Department	Structure		
Car Rental Department	Structure		
Car Maintenance Department	Structure	George Edouard	George.Edouard@organization.com
Auto Repair Service Manager	Function	Jack Kcaj	Jack.Kcaj@organization.com
		Thomas Masoht	Thomas.Masoht@organization.com
Garage Technician	Function	Andrew Gilmore	andrew.gilmore@oganization.Com
		Jack Filston	jack.filston@oganization.Com
		Mathew Wehtam	Mathew.Wehtam@organization.com
		Philéas Phog	phileas.phog@oganization.Com
		René Dupont	rene.dupont@oganization.Com
		Steve Maglow	steve.maglow@oganization.Com
Car Park Manager	Function		

- The second part describes responsibilities of org-units. It presents detail of operations executed by the org-units and the processes for which it is responsible. This part also displays statistical data: maximum, minimum and average value of operations executed per org-unit, as well as equivalent values for assigned processes.

Min. responsibilities per org-unit : 0
Max. responsibilities per org-unit : 55
Average number of responsibilities per org-unit : 6,5

Name	Org-Unit Type	Responsibilities
Catalog Manager Michel Starbrook The catalog manager is in charge of updating the catalog in compliance with	Function	Update Catalog - As Is Update Catalog - To Be Integrate New Negotiated Travel Option Integrate Regional Book into Global Catalog Remove Obsolete Travel Options Review All Travel Options Validity Dates Design Text Content Integrate New Negotiated Travel Options Integrate Regional Book into Global Catalog Remove Obsolete Travel Options Review All Travel Options Validity Dates
CIO Laurent Valrent	Function	
CIO - America Andrew Sketch	Function	

- The final part presents geographical distribution of org-units on sites.

3. Org-Unit Geographical Distribution

[Add a comment for this chapter]

Name	Sites
Catalog Manager The catalog manager is in charge of updating the catalog in compliance with	
CIO	
CIO - America	California
Clock-In Correspondent	
Controler The controler, based at Head Office, audits company accounts and acts as advisor on tax optimization.	
Customer Service Representative The Customer Service Representative coordinates customer support pre-sale, during the journey and thereafter if claims arise.	
Designer The designer is responsible for the graphical layout of the catalog including position of text and graphics. He's also responsible for creating appropriate graphics to illustrate promotions.	Agency Site

Report parameters

Parameter	Parameter type	Constraints
Org-units analyzed	Org Unit	Not mandatory. If no value is given, all org-units are analyzed.

☛ *Org-units can be distributed in sub-groups. In this case, statistical values are calculated for each of these.*

Site Analysis

This report details the geographical structure of the enterprise.

Report parameters

Parameter	Parameter type	Constraints
Sites analyzed	Site	Not mandatory. If no value is given, all sites are analyzed.

☛ *Sites can be distributed in sub-groups. In this case, statistical values are calculated for each of these.*

RISK MANAGEMENT

This paragraph presents the list of reports available from a BPMN process, on condition of having access to the facilities of **HOPEX** concerning risk management.

- "Absolute Risks Heatmap", page 205
- "Matrix of Risks Incurred by Org-Units", page 205
- "Matrix of Risks Concerning Sites", page 206

Absolute Risks Heatmap

This report inventories risks incurred by a set of processes.

Each risk linked to a capability is associated with a level of **Severity** (**Negligible**, **Significant**, **Critical** or **Strategic**) and a level of **Likelihood** (**Low**, **Moderate**, **Probable** or **Frequent**).

This report presents, in the form of a matrix, distribution of risks associated with a list of capabilities related to criteria.

⊟ **2. Absolute Risk Map Report Chapter**

[Add a comment for this chapter]

	Insignificant	Significant	Critical	Strategic
High	0	1	1	0
Medium High	0	0	1	2
Medium	1	3	1	1
Low	0	1	0	0

Report parameters

Subject of this report type is a set of processes.

Matrix of Risks Incurred by Org-Units

This report inventories risks incurred by a set of org-units.

Report parameters

Parameter	Parameter type	Constraints
Org-units exposed to risks	Org-Units	At least one object mandatory.
Scope of analyzed risks	Risk	Not mandatory. If no value is given, all risks are analyzed.

Matrix of Risks Concerning Sites

This report inventories risks incurred by a set of sites.

Report parameters

Parameter	Parameter type	Constraints
Sites exposed to risks	sites	At least one object mandatory.
Scope of analyzed risks	Risks	Not mandatory. If no value is given, all risks are analyzed.

Data management

This paragraph presents the list of reports available from a BPMN process, on condition of having access to the facilities of **HOPEX** concerning data management.

- "Recommendation of Entities to be Managed", page 207
- "Data Models X Associated Elements Matrix", page 207
- "Data Model Implementation", page 208
- "Entities and Associations X Data Model Matrix", page 208

Recommendation of Entities to be Managed

Implementation of a process requires management of certain information entities. This information is described either by linking a set of terms to the process, or by associating a data model.

This report is broken down into three parts:

- **Recommended Notions List**, these notions are related to processes analyzed, requiring their storage and management,
- **Recommended Data Models List**, these data models are associated with processes analyzed,
- **Recommended Data Models (Details) List** provides detailed information on data models associated with processes analyzed.

Report parameters

Parameter	Parameter type	Constraints
Business	Business processes	At least one object mandatory.

Data Models X Associated Elements Matrix

This tool analyzes objects described by data models.

This report is broken down into three parts:

- **Data Models X Associated Elements Matrix**, this part presents all data models cross-referenced with repository described objects (of which the list is specified as parameter). All data model data is displayed in the report.

- **Recommended Data Models List**, this part presents data models analyzed cross-referenced with repository described objects. All data model data is displayed in the report.
- **All Data Models X Selected Elements**, this part presents repository data models cross-referenced with analyzed described objects. The distinction between objects owned and used enables addition of further information to data modeled by the data model.

Report parameters

Parameter	Parameter type	Constraints
Data models	Data models	At least one object mandatory.
Associated elements	Application, process, etc.	At least one object mandatory.

Data Model Implementation

This report concerns follow-up of correspondence setting between data models. It provides details of correspondence at the level of entities, their attributes and associations. The charts enable display of the rate of progress of correspondences already established.

This report is broken down into two parts:

- **Data Models to be Implemented**,
- **Data Models to be Implemented**

Report parameters

Parameter	Parameter type	Constraints
Data models	Data models	At least one object mandatory.

Entities and Associations X Data Model Matrix

This tool analyzes entities and associations according to data models.

This report is broken down into three parts:

- **Entities and Associations X Data Model Matrix**, data models analyzed are cross-referenced with entities (DM) and associations (DM) analyzed. The distinction between objects owned and used is displayed in the report.

- **Repository Entities and Associations X Data Model Matrix**, data models analyzed are cross-referenced with all entities (DM) and associations (DM) of the repository. The distinction between objects owned and used enables enhancement of data modeled by the data model analyzed.
- **Entities and Associations X Repository Data Model Matrix**, repository data models analyzed are cross-referenced with entities and associations. The distinction between objects owned and used enables addition of further information to data modeled by the data model.

Report parameters

Parameter	Parameter type	Constraints
Data models	Data models	At least one object mandatory.