

# HOPEX PLANNING

## User Guide



HOPEX V2  
1st Edition (July 2016)

Information in this document is subject to change and does not represent a commitment on the part of MEGA International.

No part of this document is to be reproduced, transmitted, stored in a retrieval system, or translated into any language in any form by any means, without the prior written permission of MEGA International.

© MEGA International, Paris, 1996 - 2016

All rights reserved.

HOPEX Planning and HOPEX are registered trademarks of MEGA International.

Windows is a registered trademark of Microsoft Corporation.

The other trademarks mentioned in this document belong to their respective owners.

# INTRODUCTION TO HOPEX PLANNING



An enterprise information system is continually evolving; new applications are integrated, updated versions of existing applications are redeveloped and technology supporting the system must be regularly updated.

The **HOPEX Planning** application has been designed to support the approach described here. With this application, you can:

- ✓ Create one or several master plans of an object list;
- ✓ Generate comparison reports at functional, application and technical levels;
- ✓ Use these reports to select master plans corresponding closest to business function expectations;
- ✓ Set up implementation projects based on formalized methods and synchronize these with selected master plans.

The purpose of this guide is therefore to present how to make best use of these functionalities to successfully accomplish evolution of your information system.

## OVERVIEW OF HOPEX PLANNING

---

### Proposed Functionalities

To best manage these evolutions, information system strategists and architects first produce master plans presenting planning of new software and hardware elements in the medium and long term.

Evolution of the information system is generally based on installation of new versions of existing applications. It is therefore important to have a tool capable of mapping what exists, not only to be aware of and to control content, but also to simplify modeling of different versions by concentrating on differences compared with previous versions: additions, deletions and modifications.

This type of modeling linked to the capacity to integrate time information on system photographs at different moments of its existence.

---

### Connect to the Solution and Learn About the Desktop

#### MEGA Web Front-End

See the HOPEX Common Features guide, chapter "Web Front-End HOPEX Desktop".

#### MEGA Windows Front-End

See the HOPEX Common Features guide, chapter "Web Front-End HOPEX Desktop".

## ABOUT THIS GUIDE

This guide presents how to take make best use of **HOPEX Planning** to plan strategic projects to be managed in your enterprise.

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

---

### Guide Structure

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

- ["Discovering the Workspace"](#), [page 11](#), describes steps prior to use of the solution and presents the interface as a function of the connected user.
- ["Describing a Master Plan"](#), [page 39](#), explains how **HOPEX Planning** enables creation and updating of a master plan;
- ["Using Master Plans"](#), [page 27](#), explains how **HOPEX Planning** enables best use of information defined in a master plan.
- ["Glossary"](#), [page 37](#): summarizes definitions of the main concepts used in **HOPEX Planning**.

---

### Additional Resources

This guide is supplemented by:

- **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 Power Supervisor** administration guide.
- More advanced technical functions are described in the **HOPEX Power Studio** guide.

---

## Conventions Used in the Guide

### Styles and formatting

- ☞ *Remark on the preceding points.*
- 📖 *Definition of terms used.*
- 😊 *A tip that may simplify things.*
- 🐾 *Compatibility with previous versions.*
- 💣 **Things you must not do.**



**Very important remark to avoid errors during an operation.**

Commands are presented as seen here: **File > Open**.

Names of products and technical modules are presented in bold as seen here: **HOPEX**.

# DESCRIBING A MASTER PLAN



In the context of information system planning, a *master plan* defines long term evolutions of the system that will best respond to business demands. Having created a portfolio with initiatives and timespots, you can study implementation planning of your different projects by creating master plans from your portfolio or from an initiative group.

 *A master plan is a low detail level definition of a long-term project. A master plan coherently groups milestones and planned elements with time periods defined by milestones.*

We expect a master plan not only to show planned elements at different successive levels, but also to provide information on functional suitability of evolutions related to business function expectations, and the impact on hardware of implementation of this master plan.

This complementary information provides stakeholders (functional evolution requester business function managers, IS managers, technical architects) with decision-making criteria enabling selection, rejection, postponement, etc. of particular master plans.

Master plan description corresponds to a study phase, actual implementation of the master plan taking place at a later stage.

This presentation relates to improvement of an auto repair service in a car hire company.

The following points are covered here:

- ✓ ["Master Plan Example", page 40](#)
- ✓ ["Defining Object Life", page 42](#)
- ✓ ["Declaring a New Master Plan", page 47](#)
- ✓ ["Using the Gantt Chart of a Master Plan", page 50](#)

## MASTER PLAN EXAMPLE

The proposed example relates to improvement of an auto repair service in a car hire company. After analysis of the process, it appears that improvements can be tackled in two ways: either by improving the invoicing system, or by improving determination of breakdowns. These two aspects are not exclusive.

The first scenario itself offers two possible software solutions.

### **Auto Repair Service Improvement - Invoice A**

In this master plan the invoicing system is improved. The solution proposed is to develop and install a new version (2.0) of an existing application called "Invoice".

You can see the preparation phases of the new application version, its installation and production phases and the retirement of the old version.

*Note that production of new elements is executed when the last milestone has been reached, in other words when the master plan has been completed.*



Compared to its first version, version 2.0 of the invoicing application offers new functionalities, for example compatibility with SWIFT format.. This can be confirmed by consulting the application properties dialog box.

## Auto Repair Service Improvement - Invoice B

In this software alternative, a similar plan is proposed but based on version 2.1 of the invoicing software.



The new Invoicing V2.1 application also provides new functionalities. These functionalities are visible in the application properties window.

You can find the functionalities described in version 2.0 as well as the functionalities already available in version 1.0. This display of information defined in earlier versions is possible thanks to modeling of application variants.

➡ For more details on variations, see "Object Variations" in the **HOPEX Common Features** guide.

## DEFINING OBJECT LIFE

To enable detailed analysis of repository object master plans, you can describe, from an *object life*, the planning of steps in the object life cycle.

 *The life of an object is a set of time periods representing the real calendar of object states.*

An object life can be defined for:

- a business process
- an application
- a hardware item.

---

### Viewing Application Life (Gantt Chart)

An object evolving over time can take different states (preparation, production, retirement, etc.).

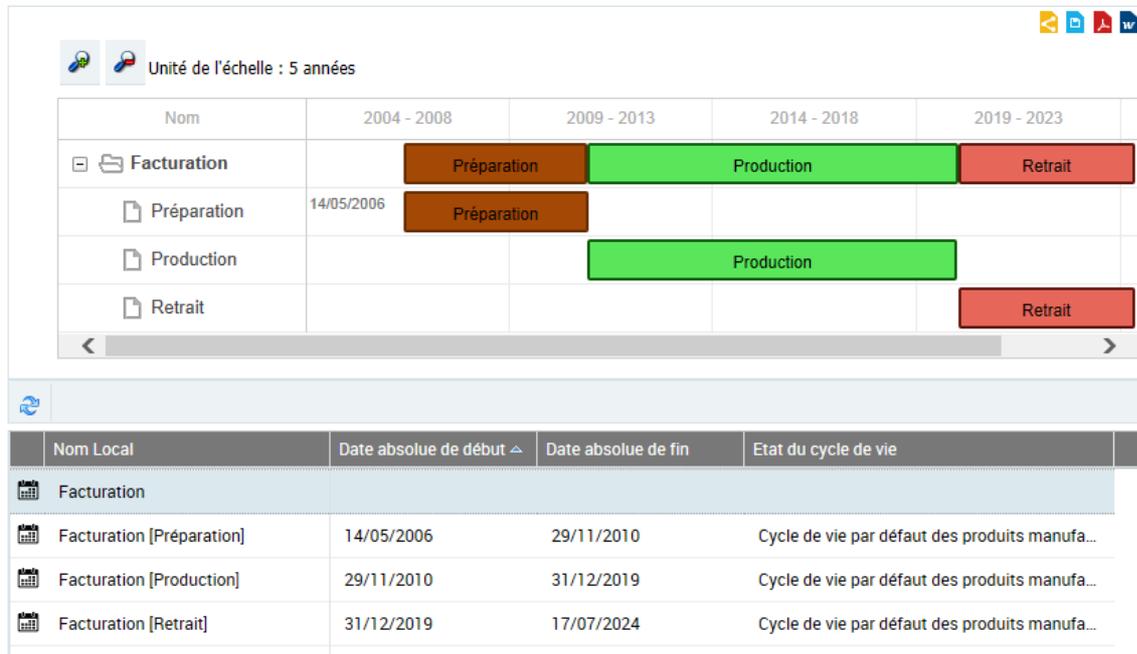
The *Object life* enables viewing of the planning of these different states in the form of a Gantt chart.

To view the Gantt chart representing the different states of an application for example:

1. Right-click the application and open its **Properties** window.
2. Select the **Characteristics > Characteristics** page then the **Gantt** section

## Gantt chart example

The first line shows the synthesis of the life cycle of the application (here "Billing"), with the sequence of different states. Under this line you access the details of the time periods associated with each state (preparation, production, etc.).



The *object life* is characterized by:

- a **Life Cycle** which enables definition of the list of possible states of the object.  
 ➤ For more details on the life cycle concept, see "[Specifying Object Life](#)", page 43.
- a **Begin Date** and an **End Date** which enable definition of the time periods over which the different states are spread.

From information on the *object life*, the Gantt chart represents planning of the different steps in time.

## Specifying Object Life

### Creating an object life

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

To create the *object life* of an application for example:

 *The life of an object is a set of time periods representing the real calendar of object states.*

1. Right-click the object, here the application, and open its **Properties**.
2. [Windows Front-End] Click the **Object life** tab.  
[Web Front-End] Click the drop-down list then **Object life**.  
The **Object Life** window appears.
3. Click the **New** button.
4. Specify the following characteristics:
  - a **Life Cycle** which enables definition of the list of possible states of the object.
 

 *For more information on proposed life cycles, see "Defining Life Cycle of an Object Type", page 45.*
  - a **Begin Date** and an **End Date** which enable positioning of the object life in time.
5. Click **OK**.

The object life appears in the Gantt chart of the application.

See "[Viewing Application Life \(Gantt Chart\)](#)", page 42.

## Updating the dates of the object life

By default, the different steps in the object life cycle are distributed in equal *time periods* between object life begin and end dates.

These dates are accessible and can be modified in the application Gantt chart.

Nom Local	Date absolue de début ▲	Date absolue de fin	Etat du cycle de vie
 Facturation			
 Facturation [Préparation]	14/05/2006	29/11/2010	Cycle de vie par défaut
 Facturation [Production]	29/11/2010		le de vie par défaut
 Facturation [Retrait]	31/12/2019		le de vie par défaut

< Novembre 2010 >						
D	L	M	M	J	V	S
31	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	1	2	3	4
5	6	7	8	9	10	11

## Accessing properties of a time period

In the Gantt chart, the pop-up menu of a time period presents commands specific to the described application ("Billing" in our example), followed by the commands relating to the time period itself.

To access properties of a time period of the application life:

1. In the Gantt chart, right-click the time period.

2. In the time period pop-up menu, select **Properties**.

## Defining Life Cycle of an Object Type

### Overview of Concepts

The life cycle of an object defines the list of possible object states.

A life cycle is defined by a "State Machine".

A state machine is the set of states and transitions between states that define the life cycle of an object variable over time. A state machine can be associated with several life cycles.

A state machine is associated with object types (MetaClasses): states of this machine are therefore valid for objects of associated types.

### State diagram

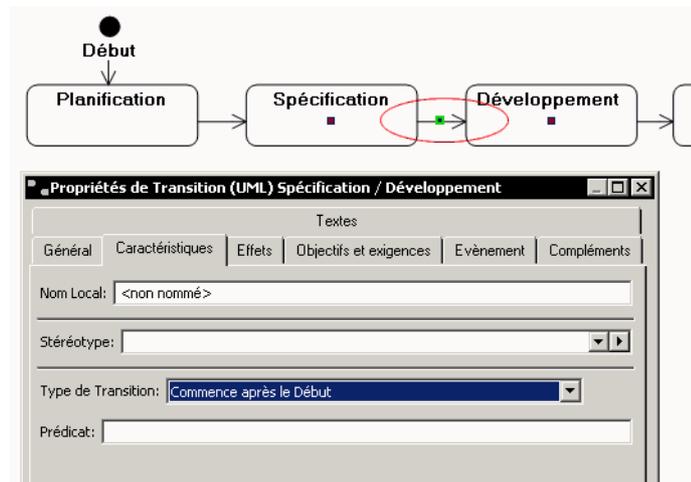
The state diagram describes the sequence of states operating during the life cycle of an element. Each state, which can be considered as a point in time, is followed by other states.

Passage from one state to another is modeled by a transition.

### Passage between states

Passage from one state to another is modeled by a transition. On this transition you can specify state sequencing:

- **Starts After End**: the next state can intervene when the previous state has been completed.
- **Starts After Start**: the next state can intervene when the previous state has started, whether or not it is completed.



## Life cycles supplied by default

**HOPEX** provides a standard state machine for applications and artifacts.

A default state machine is provided for all *artifacts*; this is "Artifacts Default Life Cycle".



*An artifact is any type of physical element outside the application or organizational domain (organizational including persons). An artifact can represent a hardware system, sub-system, platform or component, or simply a physical element with specific characteristics.*

The life cycle described in this state machine includes three states: Preparation, Production, Retirement. It is valid for all time-dependent objects.

## Creating state machines other than those defined as standard

Modifying a standard state machine has consequences on data already modeled in the repository. It is therefore a modification that should be restricted to appropriate authorization levels.

To formalize states other than those supplied as standard by **HOPEX**, it is preferable to create a new state machine.

To create a state machine from a library:

1. [Windows Front-End] Open the **Home** navigation tree.
2. [Web Front-End] Click the **Repository** navigation pane, then **Library**.
3. Right-click the library concerned and select **New > Model Building Block**.

A dialog box prompts you to specify the type of object to be created.

4. Select the "State machine" MetaClass.  
The **Creation of State Machine** dialog box appears.
5. Enter its **Name**.
6. Click **Next**.

The new dialog box allows you to specify the list of MetaClasses that can be associated with the life cycle created.

7. In the **Valid Type** section, click **Connect**.  
Several default queries are proposed to assist you in your choice.
8. Select for example "Types of objects that can be planned".
9. Select the MetaClasses that interest you and click **OK**.  
The list of selected MetaClasses appears in the dialog box.
10. Click **Finish**.

To describe states associated to this new state machine, you must create a state diagram.

➡ For more details on the use of state diagrams, see the guide **HOPEX UML**.

## DECLARING A NEW MASTER PLAN

Having debugged the different life cycle steps of your objects, you can study implementation planning of your different projects by creating *master plans* allowing you to then create Gantt charts.

 *A master plan is a low detail level definition of a long-term project. A master plan coherently groups milestones and planned elements with time periods defined by milestones.*

---

### Creating a Master Plan

To create a master plan:

1. [Windows Front-End] Expand the **Main Objects** navigation tree.
2. [Web Front-End] Click the **Repository** navigation window then **Main Objects**.
3. Right-click the **Master Plans** folder and select **New > Master Plan**
4. In the dialog box that appears, indicate the name of the master plan.
5. Indicate the owner library if required. By default, the master plan created is connected to the default library.
 

 *Libraries enable storage of objects contained in the **HOPEX** repository.*
6. Select the MetaClasses of objects that enable definition of the type of master plan to be created.
7. If the objective of the master plan is to study the cumulative results of several master plans, select the **Master plans aggregation** check box.
 

 *For more details on this feature, see "[Synchronizing Master Plans](#)", page 28.*
8. Select the planning mode. By default the master plan is oriented by dates.
 

 *For more details on this feature, see "[Planning mode](#)", page 47.*
9. Click **OK**.
 

 *You can create a master plan from an application by right-clicking the application to open its pop-up menu, then select **New Master Plan**.*

#### **Planning mode**

Two planning modes are possible:

- Date oriented: planning of elements is carried out according to precise dates. In this case, creation of a new plan will not include default milestones. This type of plan is useful to describe technological constraints. In this case, availability dates are not controlled by enterprise business function milestones, but are collected from external information. Milestones are therefore unnecessary in this type of plan.
- Milestone oriented: planning of elements is according to milestones, which represent a business function timespot without a precise date imposed. In the case of an applications master plan, we can imagine that

milestones constraining applications correspond to expectation of a new functionality.

---

## Viewing and Updating Master Plan Content

On creation of a master plan, the corresponding Gantt chart is automatically created.

To view the Gantt chart of a master plan:

1. Open the master plan properties dialog box.
2. Display the **Gantt Chart** page.

☛ You can also select **Open Gantt Chart** from the master plan pop-up menu.

---

## Master Plan Objectives and Requirements

Master plan creation can be motivated with the aim of achieving strategic objectives, or by the need to satisfy external requirements (from customers and from other enterprise departments). These two aspects are not exclusive. In both cases, it is useful to keep track of motivations that led to establishment of a master plan. It consists here of determining the corresponding objectives and requirements.

When a master plan has to meet a major *objective* or a major *requirement*, we should create the objective or requirement in question from the master plan.

 *An objective is a goal that a company or organization wants to achieve, or is the target set by a process or an operation. An objective allows you to highlight the features in a process or operation that require improvement.*

 *A requirement is a need or expectation explicitly expressed, imposed as a constraint to be met within the context of a project. This project can be a certification project or an organizational project or an information system project.*

### Creating objectives

Objectives and requirements are not visible by default. To use objectives and requirements, you must select the corresponding option:

1. [Windows Front-End] In the workspace, click **Tools > Options**.
2. [Web Front-End] In the workspace, click **Main menu > Settings > Options**.  
The options window appears.
3. In the options tree, click **Business Process and Architecture Modeling**:
4. In the right pane of the window, select the **Objectives and requirements modeling** check box.
5. Click **OK**.

To create an objective in the master plan:

1. Open the master plan properties dialog box.

2. Display the **Objectives & Requirements** page.
3. In the **Achieved Objective** space, click the **New** button.

## Defining the contributing elements of an objective

When the objective or requirement has been specified, you can indicate the elements that will contribute to achievement.

The response to new objectives and requirements of the master plan is by adding new functionalities to the information system. At this stage, components supporting these functionalities are as yet unknown, their design is the expected result. A first step therefore consists of listing the functionalities allowing the system to support demand, and to connect these functionalities to objectives (or requirements) for tracking.

To indicate functionalities contributing to an objective or requirement:

1. Open the properties dialog box of the objective or requirement in question.
2. Select the **Contributors** tab.
3. Select the **Functionality** element type and click the **New** or **Connect** button depending on whether you wish to create a functionality or add an existing functionality.

Example: in a given scenario, one of the objectives could be to encourage exchanges between two partner financial applications. The contributing element could be integration of the Swift format exchange functionality. The functionality to be implemented should be attached to the application that executes it.

---

## Master Plan Status

Based on analysis reports associated with master plans, a plan will be selected or rejected. Master plans have a dedicated property to specify this decision: **Master Plan Status**

The different values of this property are:

- In Study
- Selected
- Rejected
- Canceled
- Postponed
- Restarted

You can indicate the status of a master plan from its pop-up menu: **Master Plan Status**.

 **Master Plan Status** is accessible in the plan properties dialog box in the **Characteristics** tab.

In the **Main Objects** navigation tree, master plans are automatically classified by their status. Status of the master plan can be modified by moving it to the corresponding folder.

## USING THE GANTT CHART OF A MASTER PLAN

---

### Adding Objects to a Master Plan

The Gantt chart of a master plan relates to certain object types. You can check the type of the objects displayed in the master plan in its properties dialog box, **Setup** tab, **Plannable MetaClasses** subtab. It is possible to add new object types.

Adding an object to a master plan means integrating planning of the different object life cycle steps in the Gantt chart of the master plan. You can therefore plan all the steps in the life of the object.

### Planning object life

Take the example of a master plan relating to applications.

To plan an application in the Gantt chart:

1. Click the **Add Object** button above the chart.  
The query dialog box appears.
2. Select the object type, here "Application", and click **Find**.
3. Select the application to be planned and click **OK**.  
The selected object appears in the add object dialog box.
4. Click **Next**.

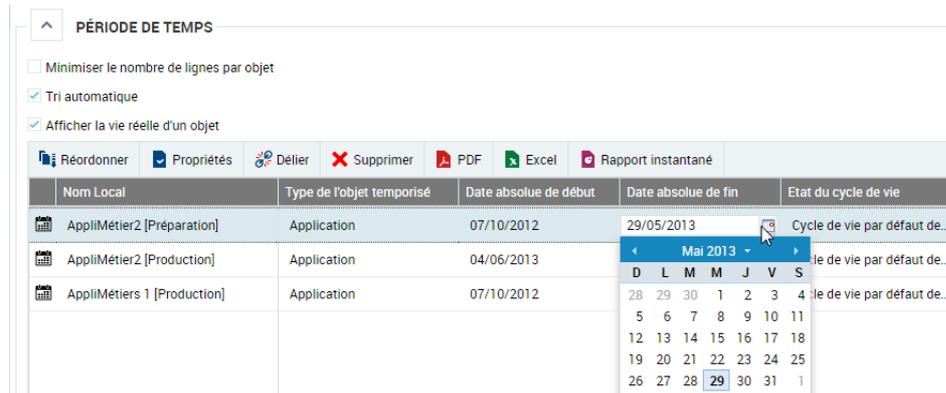
☛ *If it is proposed, select the **Add existing object life check box**.*

The next dialog box allows you to specify the object life to be taken into account in the master plan.

5. In the **Life Cycle to Apply**, select an object life.
6. Specify the **Begin Date** and the **End Date**.
7. Click **Finish**.  
Application life planning appears in the master plan.

You can define absolute start and/or end dates on the time period.

☛ The date can be given at time of creation of the period.



The period is no longer constrained related to a milestone, but to the specified date. The period does not adjust automatically to milestones that you move in the calendar; it remains fixed in the calendar at the date indicated.

## Indicating object life cycle status

When a status is specified on a time period, the name of the period is automatically updated. The name is composed of the name of the element associated with the period, followed by the name of the status. For example, a time period associated with the "Invoicing" application and the "Development" status will be named "Invoicing [Development]".

☛ Description of the life cycle of an element constitutes a state machine.

## Indicating object life cycle status

To find a status from a time period:

1. Open the properties dialog box of the time period.
2. Select the **Characteristics** page.
3. At extreme right of the **Lifecycle Status** box, click the down-pointing arrow and select the appropriate status.
4. Click **OK**.

☛ You can also use the pop-up menu of the time period and select **Connect Life Cycle Status**.

## Modifying time period color

Color of a time period depends on the status with which it is associated. Each status defined in the default life cycle belongs to one of the following types:

- **Preparation** : brown color
- **Production**: green color
- **Retirement**: red color

To modify status color:

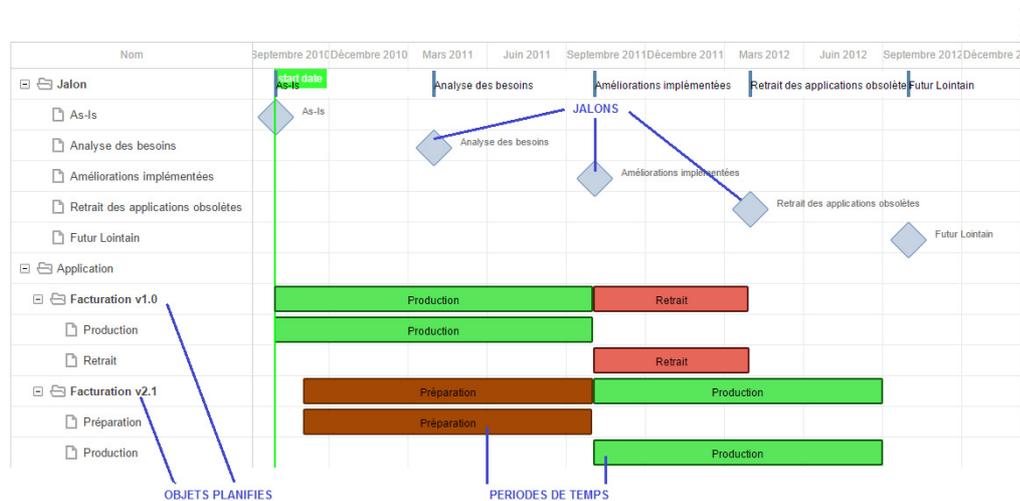
1. Open the properties dialog box of the time period.
2. Select the **Characteristics** tab, and scroll down to the **Time Period Color in Gantt Chart** section.
3. Select the color of the period in the **Time period color with fixed date**.
  - ☛ *The period takes the specified color if dates are defined in the **Absolute Dates** section.*
4. Click **OK**.

## Using Gantt Charts

### Diagram objects

Planned objects appear on the left of the plan with their start and end times.

Master plan evolutions are represented in columns, with planned objects and their start and end times in lines.

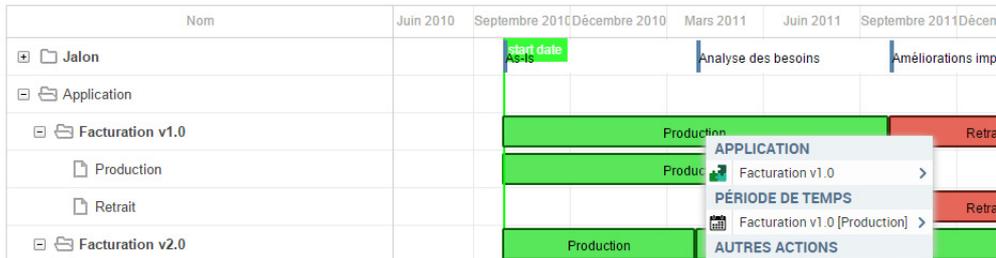


☛ *Master plan objects displayed in the chart can be modified in the master plan properties dialog box, in the **Characteristics** tab.*

## Accessing objects

To access a Gantt chart object:

- 1. Right-click the object in question.



## Modifying Gantt chart presentation

By default, objects are presented in alphabetical order and time periods are listed in chronological order. Finally, periods appear in different lines. You can modify:

- order of objects
- order of time periods
- presentation of time periods in the Gantt chart.

To change the order of objects:

1. Right-click on the master plan and select **Reorder Elements in Gantt Chart**.  
A reorganization dialog box opens.
2. Clear the **Automatic Sorting** check box.
3. Drag the objects to position them in the required order.
4. Click **OK**.

To change the order of periods:

1. Open the properties window of the master plan and select the **Characteristics** page.
2. In the **Time Period** section, click the **Reorganize** button.  
The dialog box that opens allows you to modify time periods presentation order.
3. Drag the time periods to change their order.
4. Click **OK**.

To present all time periods of the same object in the same line:

1. Open the properties window of the master plan and select the **Characteristics** page.
2. In the **Time Period** section, select the **Minimize number of lines per object** check box.

3. Click on **OK** and refresh the Gantt chart to display the modifications.



## Zoom functions

Zoom functions at the right of the chart allow you to customize chart display.



Zoom in on calendar



Zoom out

## Defining Milestones

A *milestone* marks the timespot on which results of a task are expected.



*A milestone is a terminal element that marks completion of a work group or a phase.*

If you selected "Milestone oriented" planning mode when creating the master plan, three milestones appear by default in the Gantt chart: milestones "As-Is" and "Distant Future", which define the master plan calendar, as well as a third milestone "To-Be", which you can modify.

The calendar is defined automatically. You can modify start and end times by modifying the corresponding milestones.

## Milestones defining the master plan

In a master plan, a milestone marks a point in time by which certain actions must be completed and certain deliverables made available. A milestone can also indicate the start point for new tasks.

In addition to the elements described in the plan, it may be necessary to describe upstream elements, essential to successful initiation of a master plan. Similarly, we may wish to indicate the state of the system after implementation of a master plan. This master plan post-implementation information is of interest since it indicates not only work done, but also the result obtained.

To describe prerequisite elements and results obtained, a master plan includes specific milestones outside the master plan itself: "As-Is" and "Distant Future".

In the example below, the "Breakdown System v1.0" application starts at milestone "As-Is", which means it is earlier than the plan. At the end of this plan, a new

application "Breakdown System v2.0" passes to production; this is connected to the "Distant Future" milestone, which means it is prolonged beyond the master plan.



These milestones are created automatically in the chart, but are not mandatory for master plan description.

## Creating milestones

Milestone arrangement is from left to right.

To add a milestone in the Gantt chart:

1. Click the **Milestone** button at the top of the chart.



A dialog box opens.

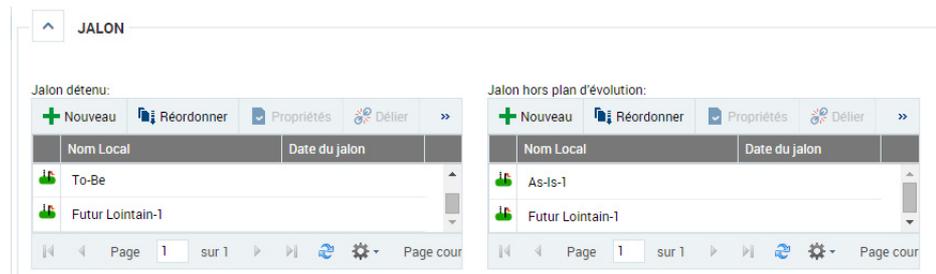
2. Indicate the type of milestone to be created. In the case of a standard milestone, select the preceding milestone.
3. Click **OK**.

Milestones held by the master plan are displayed in the properties dialog box of the master plan in the **Characteristics** tab.

## Milestone oriented planning

You can build a master plan without specifying dates. The milestones you create are placed automatically depending on specified constraints, in other words between the preceding milestone you have indicated and the milestone that follows. You can then move the milestone directly in the chart.

You can also fix a date on the milestone, under the **Characteristics** tab of the master plan.



## Using Timelines

A *timeline* is an object specific to the enterprise, it can be referenced by a master plan to position milestones related to key enterprise timespots.

 *A timeline presents key timespots of the organization from fixed dates or defined periods.*

### Creating a timeline

To create a timeline from a library in the navigator:

1. Open the **Main Objects** navigation window.
2. Right-click the **Timeline** folder and select **New > Timeline**.  
The **Timeline creation** dialog box appears.
3. Enter the name of the timeline.
4. Click **Finish**.

The timeline is created and added to the list of timelines in the library.

### Defining a timeline

The **Timeline diagram** allows you to define the different key events that make up the timeline, as well as their dependency links.

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

#### **Windows Front-End**

To create a timeline diagram:

1. Right-click the timeline and click **New > Diagram**.
2. In the wizard that appears, select **Timeline Diagram** and click the **Create** button.  
An empty diagram appears.

## Web Front-End

To create a timeline diagram:

1. Right-click the timeline name and select **Timeline Diagram**.  
The diagram window appears. You are now in the **HOPEX** graphic editor.

To create a **TimeSpot**:

1. In the insert toolbar, click the **Timespot**  button, then click in the diagram.  
The Add TimeSpot dialog box appears.
2. Indicate the name of the timespot and click **Create**.  
The timespot appears in the diagram.

To specify time links between timespots, you will create a sequence flow:

1. Click the **Sequence Flow** button. 
2. Click the timespot representing the start step, and holding the mouse button down, draw a line to the timespot representing the next step.
3. Release the mouse button.  
A directional link from one timespot to the next appears in the diagram.  
Previous and next timespots also appear in the **Properties** dialog box of a timespot, in the **Characteristics** tab.

## Dating a timespot

A timespot can be associated with a precise date or a time interval. The time interval is defined by a date at earliest and a date at latest.

To define timeline timespot dates:

1. Open the properties dialog box of the timeline.
2. Select the **Characteristics** page.
3. In the **Owned TimeSpot** section, you can date timespots.

 You can also specify sequence flows.



# USING MASTER PLANS



Master plans described with **HOPEX Planning** can be used in different objectives presented in this chapter.

- ✓ ["Synchronizing Master Plans", page 28](#)
- ✓ ["Detecting Conflicts", page 30](#)
- ✓ ["Implementing a Master Plan in a Project", page 33](#)
- ✓ ["Converting a Master Plan to Facts", page 35](#)

## SYNCHRONIZING MASTER PLANS

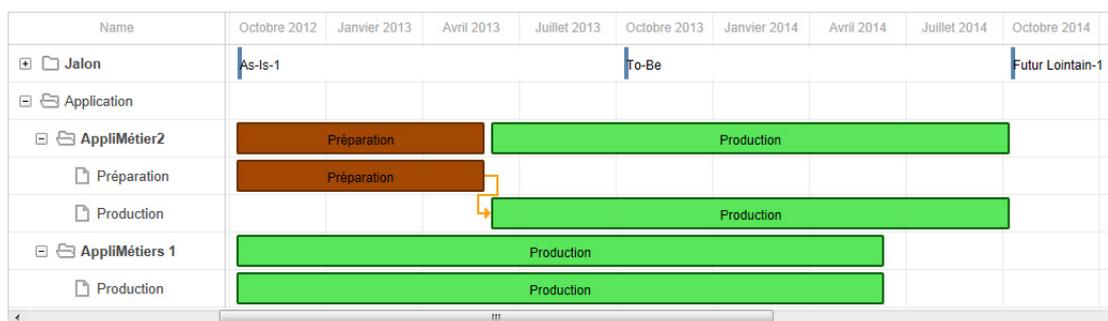
Master plans are scenarios, in which time-dependent objects are planned according to their milestones. When the different master plans have been created, they must be synchronized so as to:

- Understand how they are coordinated,
- Determine possible conflicts between sub-master plans and the global plan, and between sub-master plans themselves.

A master plan type is available for this purpose: **Master plans aggregation**. It enables a check on cumulative results of several master plans

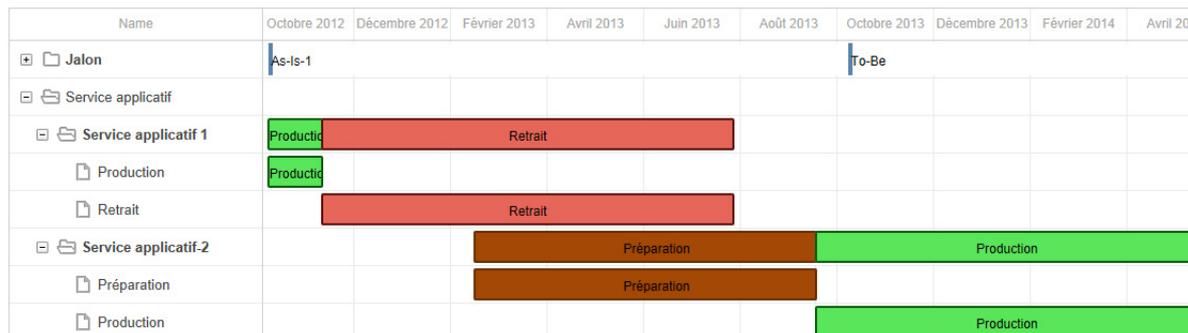
### Synchronization example

Imagine a master plan that describes implementation of applications responding to business requirements.



These applications depend on a certain number of IT services.

Installation of these IT services is represented by another master plan.



Though intervening at two distinct levels, an application view on the one hand, and a more technical view on the other, the two master plans are complementary - the applications cannot be installed if IT services are not available.

Synchronization will indicate if the applications implementation plan corresponds with the standards evolution scenario. This assumes that applications are connected to IT services.

## Master Plan Aggregation

A master plan aggregation merges sub-master plans using milestone dates.

Milestones displayed in the higher level plan are those of one or of all selected sub-master plans.

These milestones are included automatically when you select the "Milestone Inclusion" option on each sub-master plan.

To create a master plans aggregation:

1. Right-click the master plan folder and click **New > Master Plan**.
2. In the wizard that appears, select **Master Plans Aggregation**.
3. Click **Next**.
4. Connect the master plans to be synchronized, for example: the applications evolution plan and the IT services evolution plan.
5. Click **Finish**.

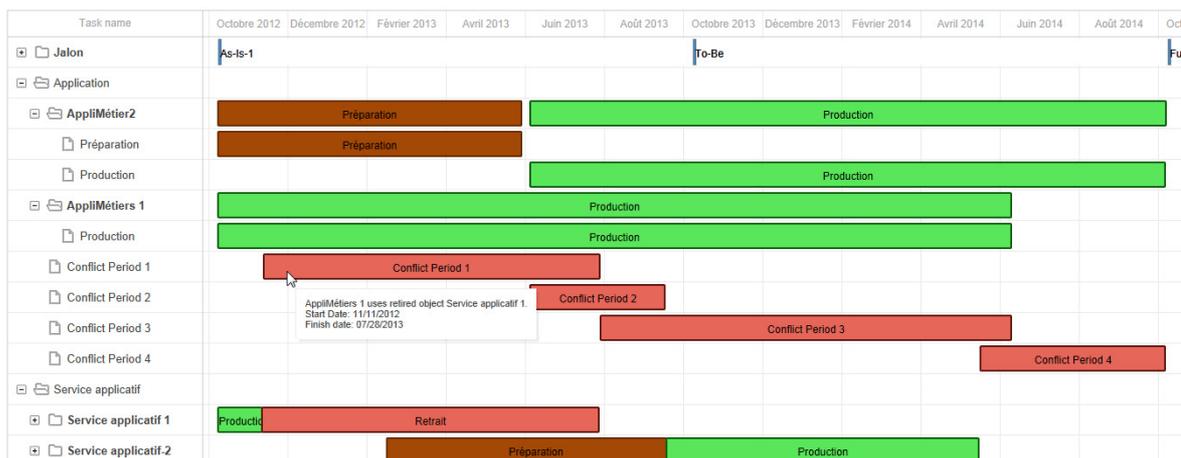
## DETECTING CONFLICTS

The Gantt diagram of a master plan offers a dynamic view of conflicts of the described diagram.

### Conflicts detection example

Included in the example below are the milestones of the two sub-master plans (applications master plan and IT services master plan). At each sub-master plan milestone and for each object type (applications and IT services), the planned objects and their state are presented.

For applications, periods of conflict arise. Passing the mouse cursor over a period of conflict, a message informs you of the inconsistency. Below, the period of conflict indicates that the application depends on a IT service that is not available.



### Conflicts detection operation

In a Gantt chart, **HOPEX Planning** checks that arrangement of periods relating to planned elements is consistent. This consistency depends on links that connect elements of the diagram. In a plan that includes applications and application services for example, the tool considers that the application services connected to the described applications must be available on the same dates as these.

☛ *The query can be recursive, ie. if an element A uses an element B and B uses C, if A is available then C should also be available.*

Cases of conflict can arise if:

- The application is in preparation and the service in retirement.
- The application is in production and the service in preparation.
- The application is in production and the service in retirement.
- The application is in production and the service in an undefined state (there is no time period indicating service state at the same moment in time).

Below are Type of element that can describe a Master Plan and the Links analyzed for detection of conflicts by Product:

With **HOPEX Architecture** in addition to **HOPEX Planning**:

- Capability/resource architecture: composition of Capability and sub-configuration of Capability.
- Resource Architecture/Communicating Physical Resource: element of architecture adopted and resource deployed.
- Artifact/Application: hosting of adopted application and hosted application.
- Application/Artifact: required artifact.
- Application/Application: application of internal architecture.
- Application/IT Service: IT Service of internal architecture.
- IT Service/IT Service: IT Service of internal architecture.
- Application/Technical Infrastructure: Required Technical Infrastructure.
- Technical infrastructure/technical infrastructure element: infrastructure element.

With **HOPEX Business Process Analysis** in addition to **HOPEX Planning**: conflicts detected are between processes or related to org-units, applications or services used via notions of **Participant** or **Service Used**.

- BPMN Process/Participant: Internal participant.
- BPMN Process/Owned BPMN element: Owned element.  
An owned BPMN element can be one of the following types: Contextualization, Shared object, Event, Gateway, Message flow, Offer, Participant, Sequence flow, System used.
- Participant/Participant: Contained participant.
- Participant/Participant element: Assignment.
- Participant/BPMN element: BPMN element.  
A BPMN element can be one of the following types: Business process, Event, Functional activity, Functional process, Gateway, Operation, Organizational process, System process, Task.
- Message flow element/Message flow: Target element.
- Message flow/Message flow element: Source element.
- Functional process/Functional activity: Owned functional element.
- Functional activity/Functional process: Functional process called.
- Organizational process/Operation: Owned operation.
- Operation/Organizational process: Organizational process called.
- System process/Task: Owned task.
- Task/System process: System process called.

- System element/System used: System specification.  
A system element can be one of the following types: Application, Functionality, Application service, Resource.
- Element using system/System used: System used.  
An element using a system can be one of the following types: Business process, Functional activity, Functional process, Operation, Organizational process, System process, Task.

With **HOPEX TOGAF** in addition to **HOPEX Planning**:

- TOGAF Decomposition Element/TOGAF Decomposition Element: Comprise Of (used for TOGAF element decomposition).
- TOGAF Information System Service/TOGAF Logical Application Component: ISS Is Realized Through.
- TOGAF Logical Application Component/TOGAF Physical Application Component: Is Realized By.
- TOGAF Realization/TOGAF Physical Technology Component: Realized By.
- TOGAF Platform Service/TOGAF Logical Technology Component: Is Supplied By.

## IMPLEMENTING A MASTER PLAN IN A PROJECT

When the master plan has been selected, it should be implemented via one or several *projects*.

 *A project is a part of a system whose study is entrusted to the same team.*

A project contains a set of tasks to be completed to achieve a specific objective. Definition of these tasks is one of the elements differentiating the project from the master plan. The project does not specify how elements are implemented. Similarly, structures responsible for this implementation are specified only within the framework of a project.

Finally, the project will enable definition of deliverables produced, used or updated. In that a project contributes to master plan implementation, we expect that a proportion of the deliverables supplied or updated corresponds to those specified in the master plan. An analysis report can be used to view the extent of this contribution.

**HOPEX Planning** enables creation of a project and its association with a master plan to specify the contribution of the project to the master plan.

In addition, **HOPEX Planning** provides a report template that gives a view of the contribution of a project to a master plan.

### Creating a project from a master plan

To create a project:

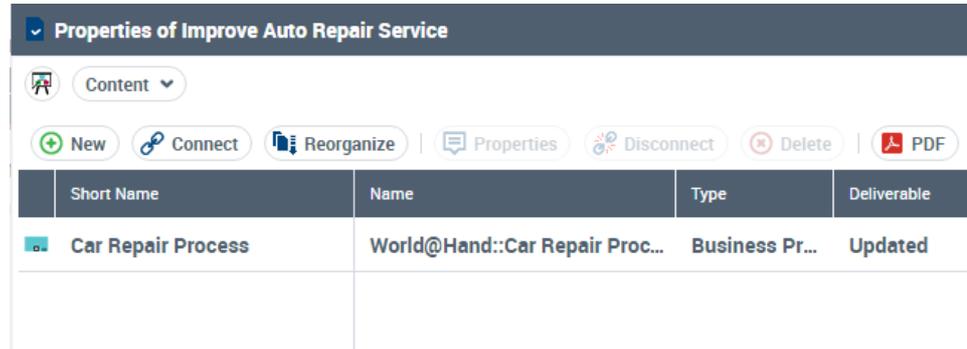
1. In the properties dialog box of the master plan, select the **Implementation** tab.
2. Click the **New** button.  
The **Create Project** dialog box appears.
3. Enter the **Name** of the project.
4. Click **Finish**.  
The project is created and added to the list of projects in the menu tree.

 *In the project creation wizard, you can choose to base your project on a project type and on a method. To do this, select **Next** instead of **Finish**. For more details on the project creation wizard, see chapter "Project Creation Assistance" of the HOPEX Common Features guide .*

### Attaching deliverables to the project

We expect a project contributing to master plan implementation to produce deliverables in the state declared in the master plan. A project will not necessarily cover all expectations of a master plan, but at minimum it will handle certain of its elements. In this case, several projects are required to successfully accomplish the expected evolution.

To specify the deliverables provided by a project, you must attach these to the project in the **Content** tab of the project properties dialog box. You can specify if a deliverable is produced, used or modified.



The screenshot shows a web interface for managing project properties. The title bar reads "Properties of Improve Auto Repair Service". Below the title bar is a "Content" tab selected from a dropdown menu. A toolbar contains several action buttons: "New", "Connect", "Reorganize", "Properties", "Disconnect", "Delete", and "PDF". Below the toolbar is a table with the following data:

Short Name	Name	Type	Deliverable
Car Repair Process	World@Hand::Car Repair Proc...	Business Pr...	Updated

*project properties (Web Front-End)*

## CONVERTING A MASTER PLAN TO FACTS

When a master plan has been selected and executed, you can convert the time periods of the planned elements to facts. This conversion duplicates the master plan time periods into effective periods. The new periods created are connected to the planned object but detached from the master plan.

Differences between master plan time periods and facts are kept for comparison. They are kept in the object history, to understand its current and previous states. A link is established between the source time period and the target time period.

To convert time periods to facts:

1. Right-click the master plan.
2. Select **Convert to Facts**.  
A wizard opens.
3. Select the objects for which you wish to convert the time periods.
4. Click **Next**.
5. The **Duplicate a period only if no similar period exists** option appears. This option allows us to not duplicate periods already converted to facts.
6. Click **Finish**.

Time periods of a planned object are visible in its properties dialog box, **General** tab, **Lifecycle** subtab.

The **Master Plan** column indicates if the period belongs to a master plan or if it represents a fact.

Time periods that have already been duplicated appear as duplicates.

