






Scheduling software for the Industry, Project and Service

**Preparation
Installation
Configuration**

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Terminology

INTRODUCING DIRECT PLANNING

Direct Planning 2.x is a highly configurable planning and scheduling software that meets your trade. Thanks to its 10 years experience, Direct Planning 2.x has improved with new major functionalities, based on extensive consumer feedback.

Among these new developments, Direct Planning now features 3 working modes: **Service**, **Project** and **Industry**.

CHAPTER 1 TERMINOLOGY

After reading this chapter, you'll be familiar with the concepts of Direct Planning.

A **schedule** lets you plan **jobs**. A job represents an occupation or an activity at a given time for a given **resource**. A resource can be human or material. Each resource has its own **calendar**, which specifies the working hours, the public holidays, the exceptions, the shifts...

*Schedule samples in **Service** mode:*

- Booking meeting rooms
- Booking vehicles
- Managing the schedule of a trainer
- A servicing company manages the intervention schedule of its technicians.

*Schedule samples in **Project** mode:*

- Forecast schedule of project managers and software developers
- Schedule of consultants in a consulting firm
- Construction planning of a building

*Schedule samples in **Industry** mode:*

- Forecast schedule of machines in a workshop
- Planning of a printing company (with ERP interface)
- The schedule of a sub-contractor, managed on a just-in-time basis (at the latest)

You may enter **entities** for each job. Entities are management data, very useful to qualify jobs. They consist in lists.

Examples:

Customers, products, orders, production orders, sales persons, product families, material ...

Each job can have **flags**: these are visual indicators that have the meaning you give them.

Examples: urgent job, status of goods reception, pending financial confirmation.

The **display modes** let you customize the way the jobs are displayed and colored in the schedule. They also define the **time scales** and the **display restrictions**.

CHAPTER 2 THE WORKING MODES

According to your need, you'll choose among of the 3 Direct Planning modes described below:

Section 1 The Service mode 🏠

You have simple needs: you want to set up a schedule to book rooms, vehicles, meetings, holidays, for example.

Choose the **Service** mode, suitable for service activities.

A large number of items, data and colors can be configured to adapt Direct Planning to your trade.

➡ To know more about the Service mode: page 18

Section 2 The Project mode 🏗️

Do you need to manage sequences of steps, estimated and performed times?

The **Project** mode is convenient for the schedules that require links between the various jobs: project, construction, computer deployment, monitoring marketing steps, for example.

Main additional features (compared to the service mode):

- links between jobs,
- time constraints (earliest start date, latest end date),
- automatic alerts (warnings) in case of non-compliance with the constraints, planning assistance (adjusting at the earliest / latest),
- monitoring the progress and the estimated / performed times per job.

➡ To know more about the Project mode: page 23

The working modes

Section 3 The Industry mode

Do you need to manage quantities, setting times and work rates?

The Industry mode is particularly well suited for the SMIs that want both a planning and an accurate monitoring of their production.

Here are the main features (compared to the project mode):

- Resources are machines.
- Fully configurable setting times and work rates that may depend upon operations and technical elements.
- Automatic recalculation of job durations (setting and running times) upon machine change.
- Follow-up of planned and performed quantities
- Follow-up of performed times: setting, running, machine downtimes with automatic update of schedules duration according to the progress report.

Direct Planning is also particularly adapted to the industrial word: it manages linear or complex routes subject to time constraints (earliest start date, latest end date).

It not only features a manual planning assistance, complying with all these constraints, but it can also propose the best scheduling solutions, thanks to its innovative module.

The **Industry** mode proposes an additional option, also called **Integral** offer, dedicated to the most demanding industrials.




It offers the following additional features:




- The scheduling module allows a full, “at the soonest” scheduling, with automatic selection of the best suited machine.
Upon machine change, the scheduling module automatically recalculates the job duration with this new machine (setting and running time).
- Transition time between jobs. Depending on the changes in the technical items between two consecutive jobs, Direct Planning is able to automatically bring in transition times between two jobs.
Example: time required for washing, mounting / dismounting, sizing, changing color, etc.

➡ To know more about the Industry mode: page 28

Section 4 Comparative table of modes

There are 4 commercial offers for these 3 modes of Direct Planning.

	<i>Direct Planning Mode</i>	<i>Commercial offer</i>
	Service mode	Direct Planning Service Offer
	Project mode	Direct planning Project Offer
	Industry mode	Direct Planning Industry Offer
		Direct Planning Integral Offer

Features				
	Service	Project	Industry	Integral
Secure access with password / login	✓	✓	✓	✓
Customization by business	✓	✓	✓	✓
Configurable display modes	✓	✓	✓	✓
Configurable entities (customer, order, etc.)	✓	✓	✓	✓
Jobs can be locked	✓	✓	✓	✓
Status "to schedule"	✓	✓	✓	✓
Configurable visual flags	✓	✓	✓	✓
Warning if expected item not received	✓	✓	✓	✓
Visual alert	✓	✓	✓	✓
Calendar by resource	✓	✓	✓	✓
Importing from / Exporting to ERP	✓	✓	✓	✓
Configurable lists	✓	✓	✓	✓
Links between jobs		✓	✓	✓
Time constraints (earliest start date, latest end date)		✓	✓	✓
Planning assistance (shifting to the earliest / latest)		✓	✓	✓
Automatic alerts on time constraints		✓	✓	✓
Job progress report		✓	✓	✓
Follow-up of planned and performed times		✓	✓	✓
Automatic recalculation of planned duration according to the progress report		✓	✓	✓
Workload histogram		✓	✓	✓
Production operations			✓	✓
Technical items			✓	✓
Running times and workrates specified by machine, operation and technical items			✓	✓
Planned and performed quantities			✓	✓
Working units			✓	✓
Follow-up of setting, running and down times (planned, performed)			✓	✓
Planned and performed work rates			✓	✓
Automatic calculation of duration according to the machine			✓	✓
Automatic transition time between 2 jobs				✓
Scheduling				✓

In order to prepare your schedule, please go to the relevant page.

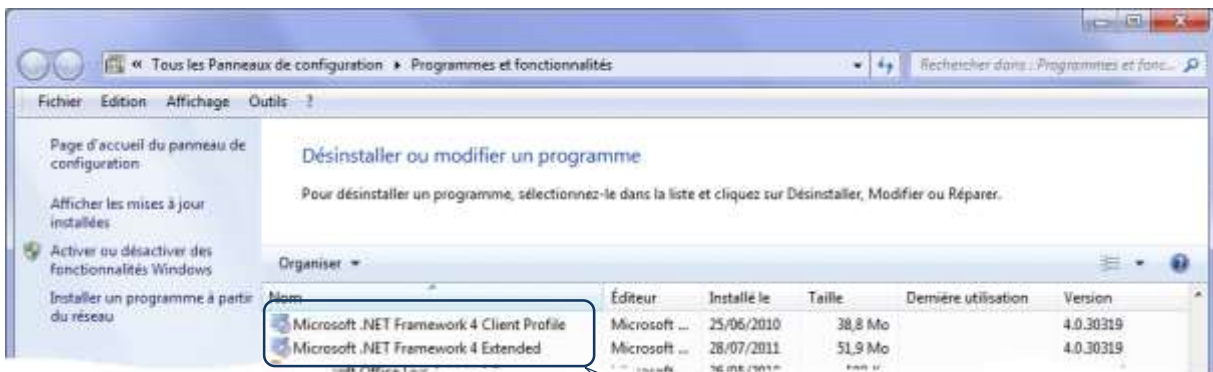
- Service Page 18
- Project Page 23
- Industry Page 28

INSTALLING DIRECT PLANNING

CHAPTER 3 PREREQUISITE

The person who performs the installation must have the administrator rights.

- Operating system : Windows XP SP3, Windows Vista, Windows Seven, Windows 8
For a server : Windows 2003 SP2, Windows 2008 R2
- Microsoft .NET Framework Runtime 4 **full** (client + extended)



Recommended configuration

Processor	2 GHz
RAM Memory	4 to 8 Gb
Available disk space	2 to 3 Gb
Screen resolution	1280 X 1024

Microsoft .NET
Framework Runtime 4
full (client + extended)

About SQL Server Express 2008 R2

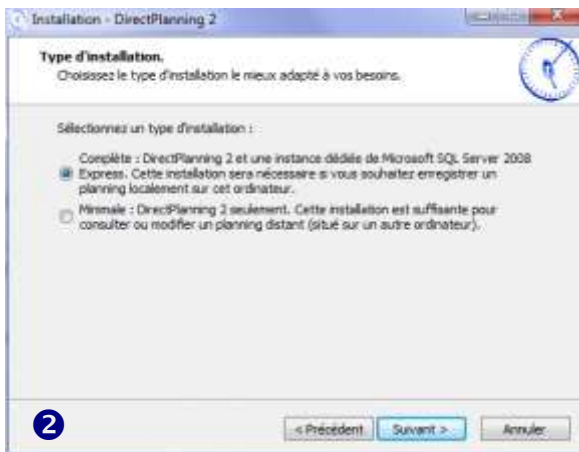
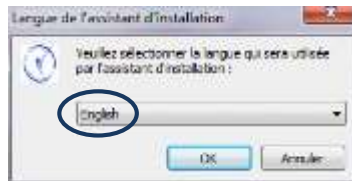
When in *Full Installation* mode (see next page), SQL Server Express 2008 R2 is installed and a VSW (Volume Software) instance is pre-configured.

1. Installation of SQL Server Express 2008 R2 requires that your version of Microsoft Windows is permanently updated so that it meets Microsoft's prerequisites.
Depending on the version of Microsoft Windows that you are using, you might have to update some components.
These prerequisites are described in the topic *Hardware and Software Requirements for Installing SQL Server 2008 R2* which you may find on Microsoft's site at the following address: [http://technet.microsoft.com/en-us/library/ms143506\(sql.105\).aspx](http://technet.microsoft.com/en-us/library/ms143506(sql.105).aspx)
In particular, a Windows Installer update in version 4.5 minimum will be required if your operating system is other than Windows 7 or Windows Server 2008 R2.
2. The installation setup of our pre-configured instance of SQL Server Express 2008 R2 is not compatible with a Windows server that has its domain controller enabled. Microsoft strongly advises against using an SQL Server instance in such a configuration. Using our setup in this configuration will result in failing to create an instance of SQL Server Express 2008 R2.

CHAPTER 4 INSTALLING

Please download the latest version of Direct Planning from Volume Software web site.

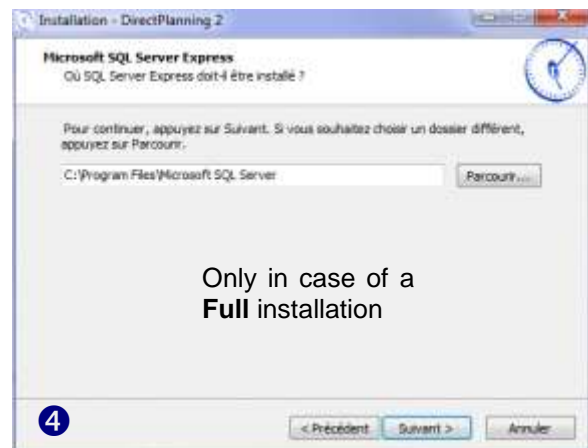
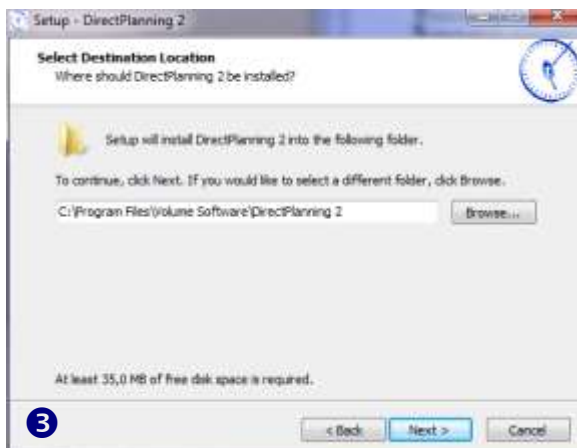
Please select the language used for the installation process ↓



← This window is **not** displayed if our instance of Microsoft SQL Server 2008 Express © is already installed.

Select **Full** if you want to save a schedule locally on this computer. Other users will have the possibility to access this schedule for consultation as well as modification.

Select **Minimum** if you don't plan to create local schedules on this computer. In that case, you can still consult or modify schedules that are hosted on other computers.



Only in case of a **Full** installation

Installing



Our instance of Microsoft SQL Server 2008 Express © is already installed (step 2).



You have asked for a **Full** installation (step 2).



You have asked for a **Minimum** installation (step 2).



CHAPTER 5 TYPES OF LICENSES

Direct Planning can be configured as a single user workstation or as a server with client workstations.

30-day trial version

Following the first installation on your workstation, Direct Planning works as a triable version for 30 days.

The trial version is the same as the full offer: there is no restriction of the operating range.

At the end of the trial period, or before, if you wish so, you can purchase a license of Direct Planning.

To do so, please contact Volume Software at this number: +33 247 66 47 20 or at info@directplanning.com.

When you contact Volume Software, it is also possible to extend the trial period.

The single user license

The single user license allows a workstation to works on its own.

It may or not be connected to a network.

It is a kind of license that is often used on notebook computers.

Thus, these computers may run Direct Planning under all conditions, whether or not they are connected to the network.



When you register the Direct Planning license (next section), you will select a **local activation key**.

A single user license only grants the right for a local use on one given workstation. Consequently, Direct Planning with a single user license may never be used remotely by several users. The customers who are willing to install Direct Planning on a TSE or Citrix server should purchase a server license.

Types of licenses

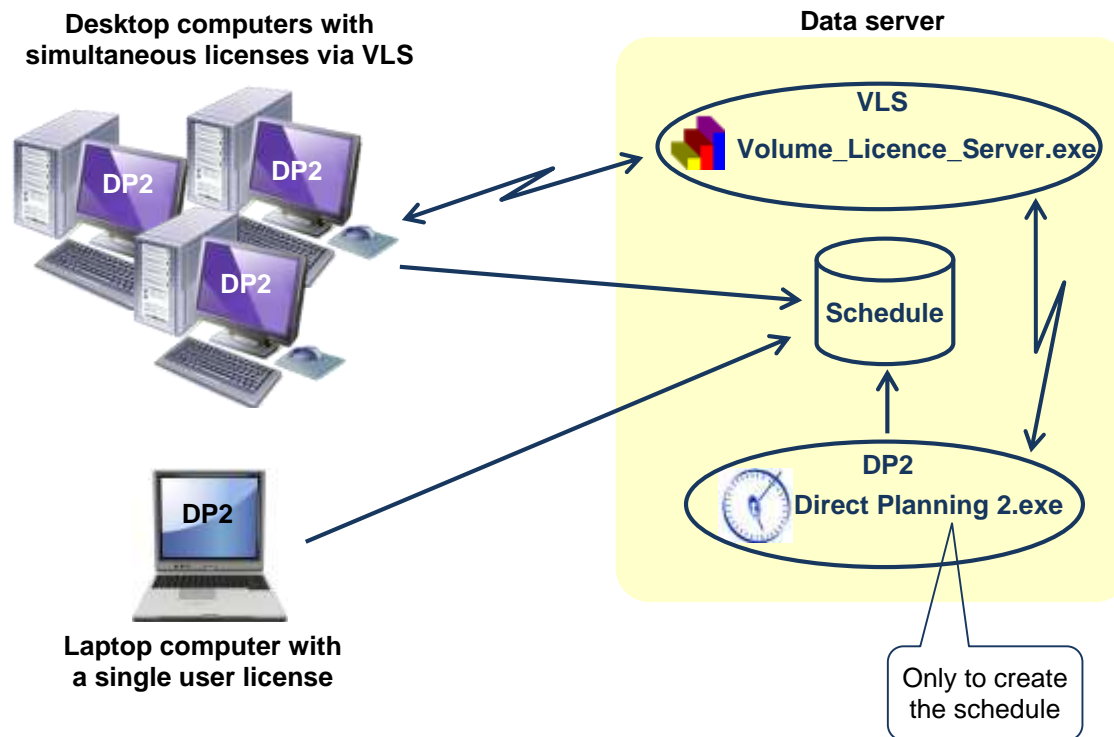
Server License with Direct Planning installed on every workstation

Direct Planning works with “simultaneous licenses”, which lets you only purchase the needed number of licenses.

A computer on which you install a server-type license plays the role of a license server for all the client workstations.

A maximum number of simultaneous users is associated with this server license.

Example | You purchase a license for 3 simultaneous users.
 You may install direct Planning on as many workstations as you wish, only 3 users can be connected at the same time.
 A 4th user cannot connect; he has to wait for one the 3 users to log out (thus making a session available).

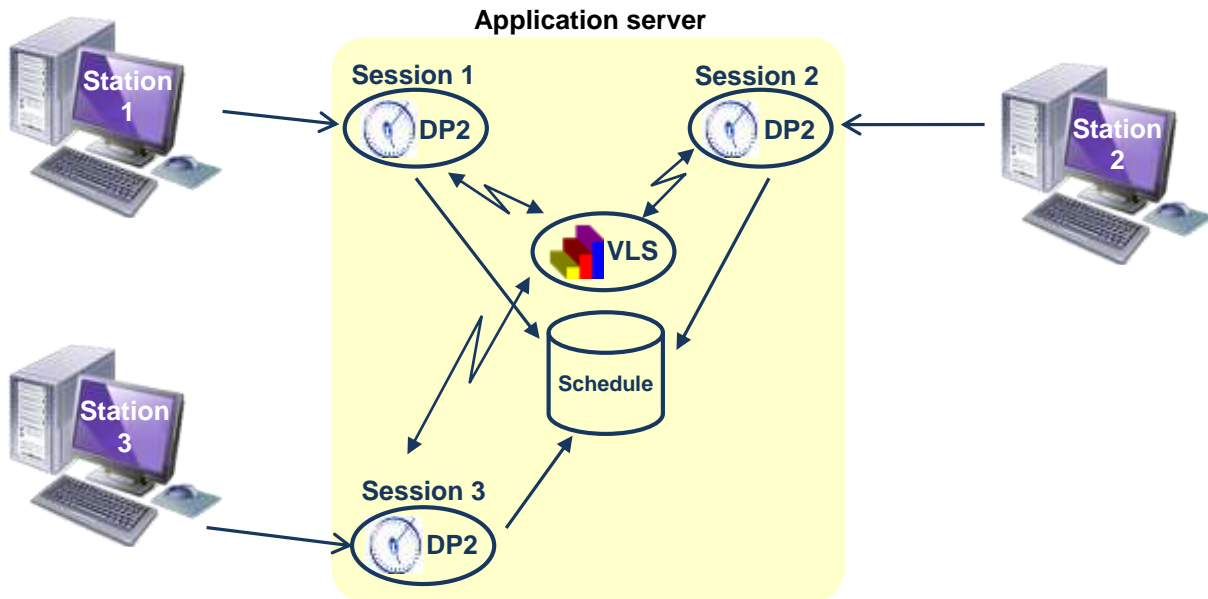


Volume Licence Server grants licenses to the requesting workstations.
 Please refer to the VLS (Volume License Server) administrator’s guide.

- Remarks*
- The license server (VLS) is not an application server.
 - The license server may be installed on any machine connected to the network.
 - The machine that hosts the server license has to be permanently powered on.
 - The client workstations with simultaneous licenses should always be able to communicate with the server license; thus, they have to be connected to the same network.
 - The number of users reflects the number of opened Direct Planning sessions: if a user opens two Direct Planning sessions on his workstation, he will use 2 licenses.

Server license with Direct Planning installed on an application server

The principle of simultaneous licenses is the same as in the previous case. Volume License Server grants licenses to the requesting workstations. There may not be a single user license in this context. Direct Planning is not installed on each workstation, but on an application server.



VLS = Volume License Server

CHAPTER 6 REGISTERING DIRECT PLANNING LICENSE



Upon first start, Direct Planning runs in trial mode, valid for 30 days starting from the installation date. This screen reminds you this whenever you start Direct Planning, as long as the product is not registered.

You may also display this window, just selecting *About Direct Planning* in the ? menu.

Click here to start Direct Planning now in trial version. You can register your license later on.

After the 30-day trial period, a license will have to be registered onto your software.

There are 2 possibilities:

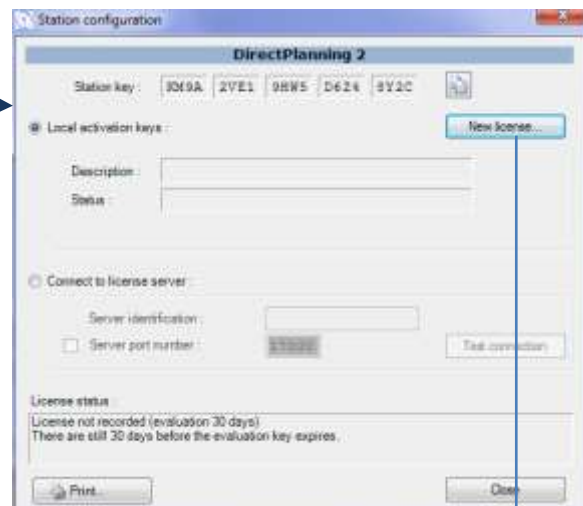
1-Local activation key

Volume Software will provide you with a local activation key for this workstation, particularly if it is a notebook computer.

This key is personal and must not be used on another computer.

2-Connection to a license server

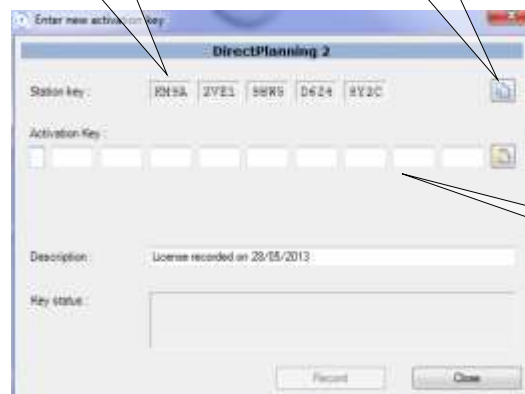
Please go to next page.



Write down the Workstation Key... 1

... or copy it into the clipboard ... 2

... then communicate it to Volume Software who will give you the Activation Key in return.



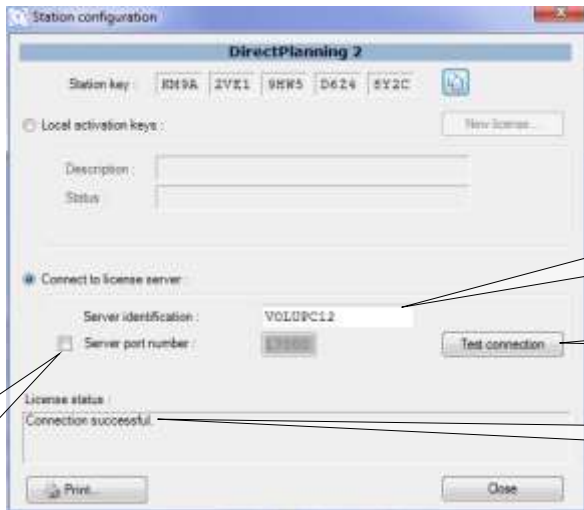
Copy the Activation Key in the clipboard and click here to paste it... 3

... or manually enter it with the keyboard.

Registering Direct Planning license

Connection to a license server (in the context of a server license)

Volume Licence Server (VLS) has to be installed and configured first.
Please refer to the documentation of this product.



Station configuration

DirectPlanning 2

Station key: RM9A 2VK1 9RW5 D624 SY2C

Local activation keys: New license...

Description:

Status:

Connect to license server:

Server identification: VOLUPC12

Server port number: Test connection

License status

Connection successful

Print Close

Give the name of the machine (the server) that hosts VLS.

Click here...

...and check this message.

If required (in case of conflict, for example), check this box and change the port number.

PREPARING YOUR SCHEDULE

CHAPTER 7 PREPARING YOUR SCHEDULE IN SERVICE MODE

The **Service** mode is adapted to the schedules like room / vehicle booking, meeting, holidays...

Section 5 Overview of a schedule in Service mode

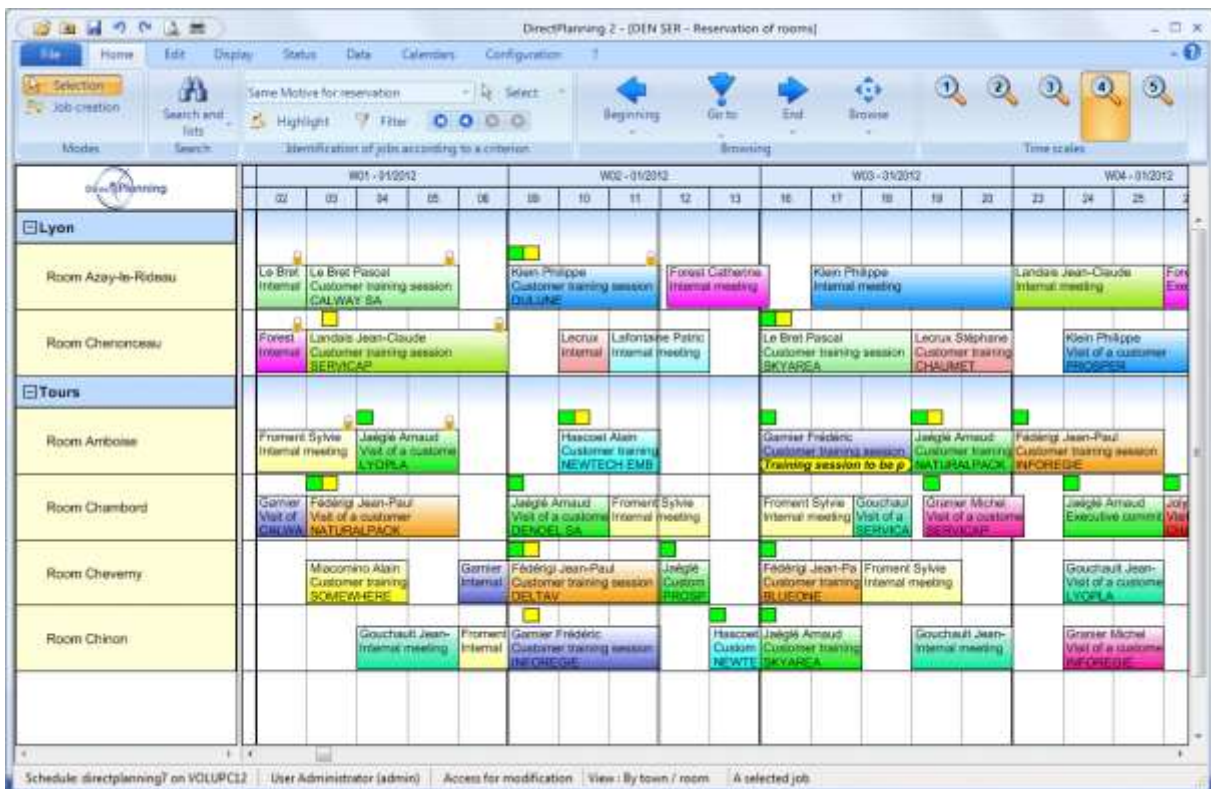


Figure 1 - Example of a schedule in Service mode: Room booking

Here's an example showing a common use of Direct Planning: room booking.

- 1 The resources: in this schedule, the resources are rooms. In other cases, resources might be sales persons, rental vehicles... In our example, we schedule our resources. We named our resource: **Booked room** We also created several rooms: *Amboise, Chambard, Cheverny, Azay-le-Rideau, Chenonceau...* Each resource is assigned a Calendar: the calendars make it possible to specify working time slots, exceptions, shifts, etc.
- 2 We have created resource families, and we named them **Sites**. We created 2 sites: *Lyon* and *Tours*, and we linked the rooms to the sites: The rooms *Azay-le-Rideau* and *Chenonceau* are linked to the site *Lyon*, while the other rooms are linked to the site *Tours*.

Preparing your schedule in Service mode

We configured the data ① & ② when creating the schedule.
In the same time, we created entities (see below ④).

- ③ Finally, we started the operational phase and created jobs in our schedule.
In our example, one job = the occupancy of a room.
Let's examine a job. →

Here, we have 3 pieces of information:

- A Who booked this room?
- B For which purpose?
- C For which customer?

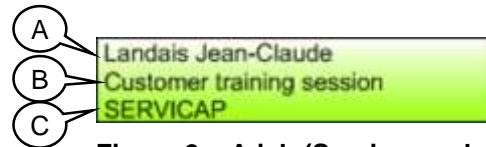


Figure 2 – A job (Service mode)

- ④ These 3 pieces of information are entities.
Indeed, when creating the schedule, we defined 3 entities:
(you can define up to 10 of them).

- A **Booked by**
- B **Reason for booking**
- C **Customer**

In other cases, entities might be customers, orders, categories of service...

In this example, these 3 pieces of information are displayed in this order.

Why? Because we created a display mode in which we chose the following layout:

- The resources are displayed in the left panel, grouped by families of resources.
This is called a Projection in Direct Planning.
Other projections are possible. For example: orders, grouped by customers.
- In the schedule, the jobs are displayed on 3 lines respectively containing the name of the person who booked the room, the reason and the customer's name.

In Direct Planning, we call this layout a Display mode.

A display mode specifies a projection as well as the contents and the way the jobs are displayed in the schedule. It also specifies other notions that we'll see later: the time scale, the display restrictions...

According to each user's needs, you will have the possibility to create several display modes, each one containing a different view of the schedule, highlighting the resources, or such entity or any other item that we'll see later.

Resources, Resource families and Entities are the main 3 types of data of your schedule.

By convention:

- The terminology of Direct Planning is in underlined characters.
- Your terminology is in **bold characters**.
- The examples of entered data are in *italics*.

The terminology of Direct Planning is used in the configuration phase.

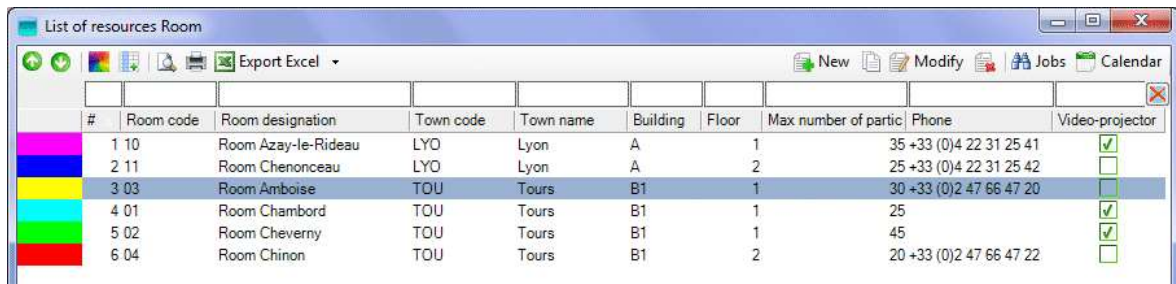
In the user's guide, it is replaced by **your** terminoly.

Remark

Ressources and families are lists that you specify once for all in the starting phase; they evolve very little afterwards.
Entities are list that frequently evolve: for example, the list of **orders**.

Preparing your schedule in Service mode

Section 6 Resources



#	Room code	Room designation	Town code	Town name	Building	Floor	Max number of partic	Phone	Video-projector
1	10	Room Azay-le-Rideau	LYO	Lyon	A	1	35	+33 (0)4 22 31 25 41	<input checked="" type="checkbox"/>
2	11	Room Chenonceau	LYO	Lyon	A	2	25	+33 (0)4 22 31 25 42	<input type="checkbox"/>
3	03	Room Amboise	TOU	Tours	B1	1	30	+33 (0)2 47 66 47 20	<input checked="" type="checkbox"/>
4	01	Room Chambord	TOU	Tours	B1	1	25		<input checked="" type="checkbox"/>
5	02	Room Cheverny	TOU	Tours	B1	1	45		<input checked="" type="checkbox"/>
6	04	Room Chinon	TOU	Tours	B1	2	20	+33 (0)2 47 66 47 22	<input type="checkbox"/>

Figure 3 – Service mode: List of resources

Here, we named our resource: **Booked room**.

We named **Room code** the unique identifier of the resource (03, here).

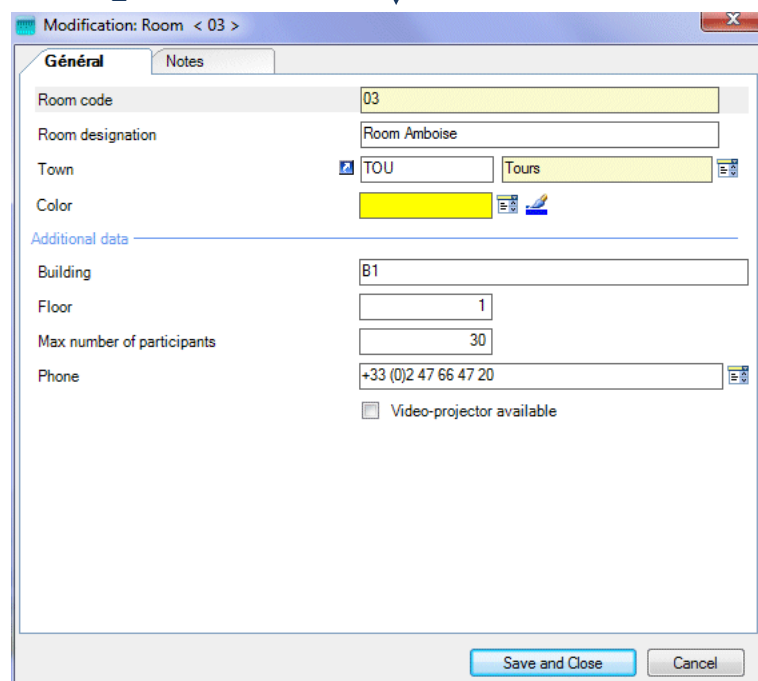
We named **Room designation** the designation of the resource (*Room Amboise*, here).

We named **Site** the resource family, (*Tours*, here).

The *room Amboise* has a color (**yellow**, here).

Not that this room is painted in yellow, but this color will let you distinguish this resource in the schedule.

The colors may play an important role in the layout of the schedule: depending on the display mode, they allow highlighting such a piece of data.



Modification: Room < 03 >

Général | Notes

Room code: 03

Room designation: Room Amboise

Town: TOU | Tours

Color: Yellow

Additional data

Building: B1

Floor: 1

Max number of participants: 30

Phone: +33 (0)2 47 66 47 20

Video-projector available

Save and Close | Cancel

Figure 4 - Service mode: Entry of a resource

At last, we defined additional data to characterize our rooms more precisely. Here we defined 5 of them (there may be up to 10):

Building, Floor, Maximum number of participants, Phone number and Equipment level.

Each of these data can be a text, a number, a date, a time, etc.

More information on the configurable areas and their type on page 106.

Section 7 Resource families

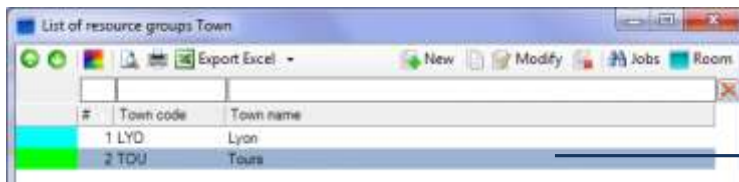


Figure 5 - Service mode: List of resource families

Here, we named our resource family: **Site**.

We named **Site code** the unique identifier of the family (*TOU*, here).

We named **Site name** the designation of the family (*Tours*, here).

The site *Tours* has a color (**green**, here).

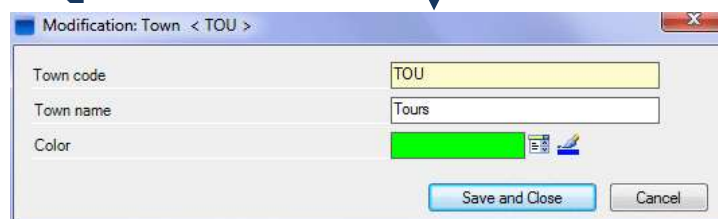
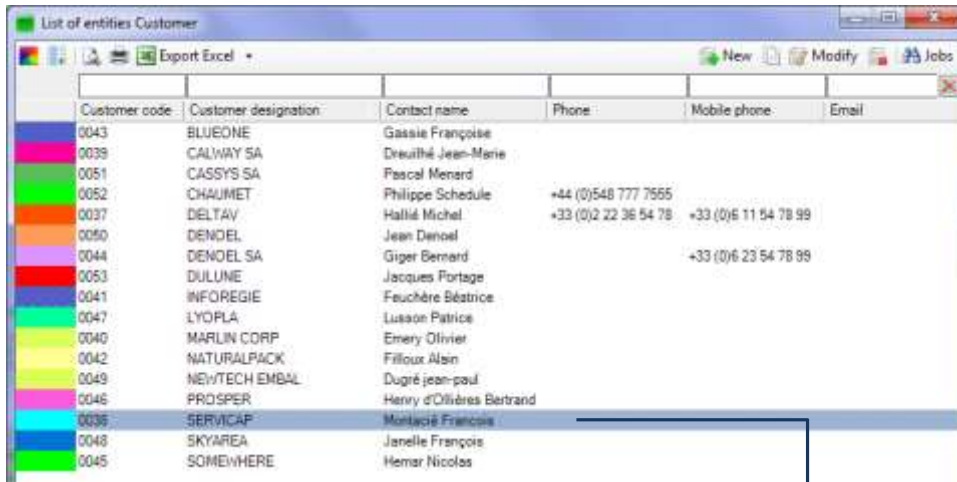


Figure 6 - Service mode: Entry of a resource family

Preparing your schedule in Service mode

Section 8 Entities

At the beginning of this chapter, we saw that there are 3 entities (bullet #4).
 Let's have a closer look at the third entity (C).
 We named this entity: **Customer**. ↓



Customer code	Customer designation	Contact name	Phone	Mobile phone	Email
0043	BLUEONE	Gassie Françoise			
0039	CALWAY SA	Dreuilhé Jean-Marie			
0051	CASSYS SA	Pascal Menard			
0052	CHAUMET	Philippe Schedule	+44 (0)548 777 7565		
0037	DELTA V	Hallié Michel	+33 (0)2 22 36 54 78	+33 (0)6 11 54 78 99	
0050	DENDEL	Jean Denoel			
0044	DENDEL SA	Giger Bernard		+33 (0)6 23 54 78 99	
0053	DULUNE	Jacques Portage			
0041	INFOREGIE	Feuchère Béatrice			
0047	LYOPLA	Lussan Patrice			
0040	MARLIN CORP	Emery Olivier			
0042	NATURALPACK	Filoux Alain			
0049	NEWTECH EMBAL	Dugré jean-paul			
0046	PROSPER	Henry d'Olivères Bertrand			
0038	SERVICAP	Montacié François			
0048	SKYAREA	Janelle François			
0045	SOMEWHERE	Hemar Nicolas			

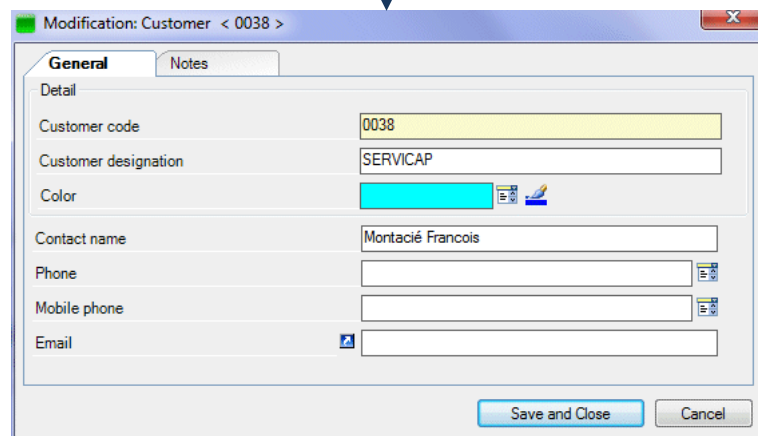
Figure 7 - Service Mode: List of the items of an entity

We named **Customer code** the unique identifier of this entity (0038, here).

We named **Company name** the designation of this entity (SERVICAP, here).

The customer *SERVICAP* has a color (blue, here).

At last, we defined additional data to characterize our customers more precisely. Here we defined 4 of them (there may be up to 10):



Modification: Customer < 0038 >

General | Notes

Detail

Customer code: 0038

Customer designation: SERVICAP

Color: [Blue color swatch]

Contact name: Montacié François

Phone: [Empty field]

Mobile phone: [Empty field]

Email: [Empty field]

Save and Close | Cancel

Figure 8 - Service Mode: Entry of an entity

Contact name, Phone number, Mobile phone number, Email.

Each of these data can be a text, a number, a date, a time, etc.

More information on the configurable areas and their type on page 106

CHAPTER 8 PREPARING YOUR SCHEDULE IN PROJECT MODE

Section 9 Overview of a schedule in Project mode

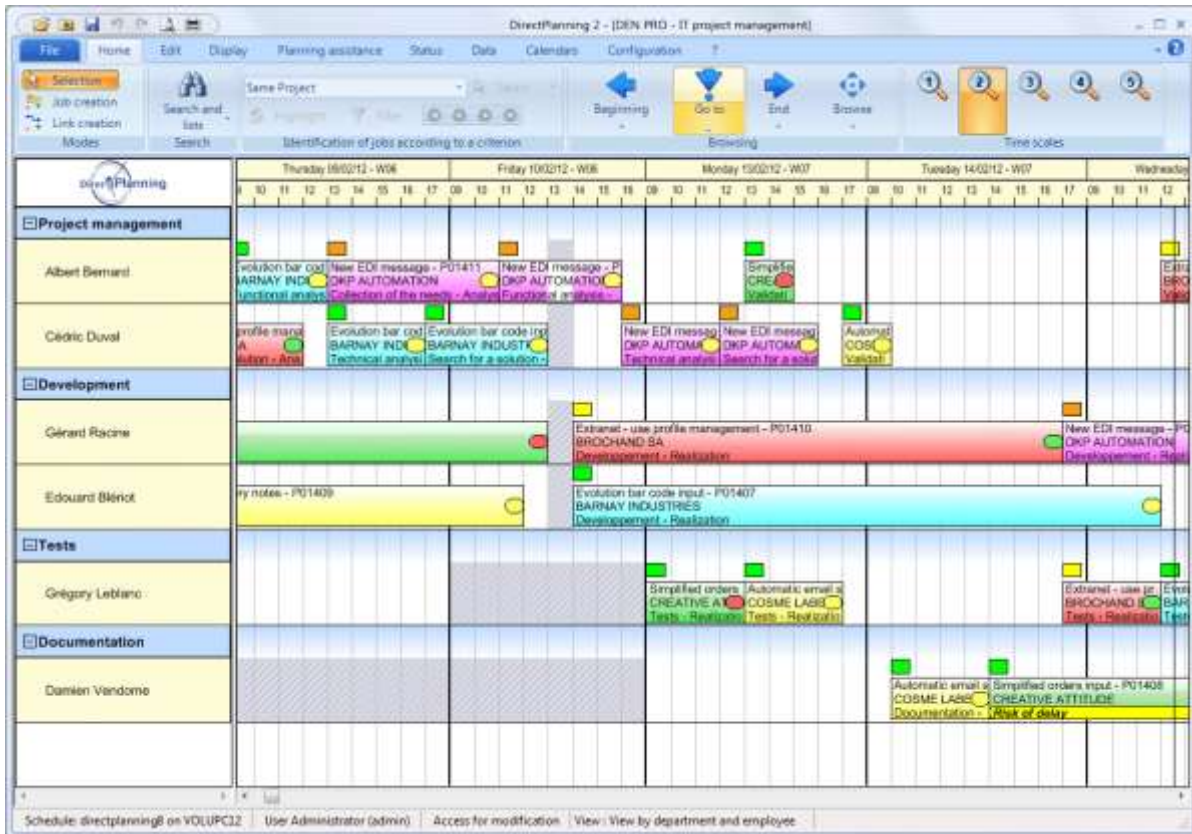


Figure 9 - Example of a schedule in Project mode: Project management

Here's an example showing a common use of Direct Planning: a project management

- 1 The resources: in this schedule, the resources are employees. In other cases, resources might be sales persons, project managers... In our example, we schedule our resources. We named our resource: **Employees** We also created several employees: *Albert Bernard, Cédric Duval, Gérard Racine ...* Each resource is assigned a Calendar: the calendars make it possible to specify working time slots, exceptions, shifts, etc.
- 2 We have created resource families, and we named them **Departments**. We created departments: *Project management, Development, Tests and Documentation*, and we linked the employees to the departments: For example, *Albert Bernard and Cédric Duval* are linked to the *Management*

We configured the data 1 & 2 when creating the schedule. In the same time, we created entities (see below 4).

Preparing your schedule in Project mode

- 3 Finally, we started the operational phase and created jobs in our schedule. In our example, one job = the occupation of an employee. Let's examine a job. →

Here, we have 4 pieces of information:

- A The name of the project
- B The customer
- C The current step
- D The sub-step

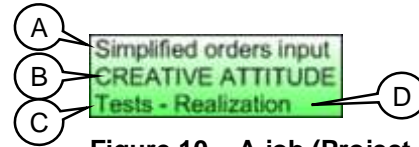


Figure 10 – A job (Project mode)

- 4 These 4 pieces of information are entities. Indeed, when creating the schedule, we defined 4 entities: (you can define up to 10 of them).

- A **Name of project**
- B **Company name**
- C **Designation of step**
- D **Designation of sub-step**

In other cases, entities might be customers, orders, categories of service...

In this example, these 4 pieces of information are displayed in this order.

Why? Because we created a display mode in which we chose the following layout:

- The resources are displayed in the left panel, grouped by families of resources. This is called a Projection in Direct Planning. Other projections are possible. For example: orders, grouped by customers.
- In the schedule, the jobs are displayed on 3 lines respectively containing the name of the person who booked the room, the reason and the customer's name.

In Direct Planning, we call this layout a Display mode.

A display mode specifies a projection as well as the contents and the way the jobs are displayed in the schedule. It also specifies other notions that we'll see later: the time scale, the display restrictions...

According to each user's needs, you will have the possibility to create several display modes, each one containing a different view of the schedule, highlighting the resources, or such entity or any other item that we'll see later.

Resources, Resource families and Entities are the main 3 types of data of your schedule.

By convention:

- The terminology of Direct Planning is in underlined characters.
- Your terminology is in **bold characters**.
- The examples of entered data are in *italics*.

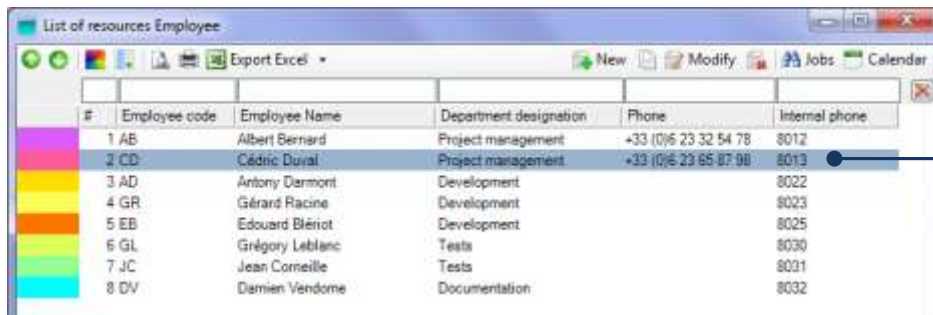
The terminology of Direct Planning is used in the configuration phase.

In the user's guide, it is replaced by **your** terminoly.

Remark

Ressources and families are lists that you specify once for all in the starting phase; they evolve very little afterwards.
Entities are list that frequently evolve: for example, the list of **orders**.

Section 10 Resources



#	Employee code	Employee Name	Department designation	Phone	Internal phone
1	AB	Albert Bernard	Project management	+33 (0)6 23 32 54 78	8012
2	CD	Cédric Duval	Project management	+33 (0)6 23 65 87 98	8013
3	AD	Antony Darnont	Development		8022
4	GR	Gérard Racine	Development		8023
5	EB	Edouard Béniot	Development		8025
6	GL	Grégory Leblanc	Tests		8030
7	JC	Jean Corneille	Tests		8031
8	DV	Damien Vendome	Documentation		8032

Figure 11 – Project mode: List of resources

Here, we named our resource: **Employee**.

We named **Employee code** the unique identifier of the resource (CD, here).

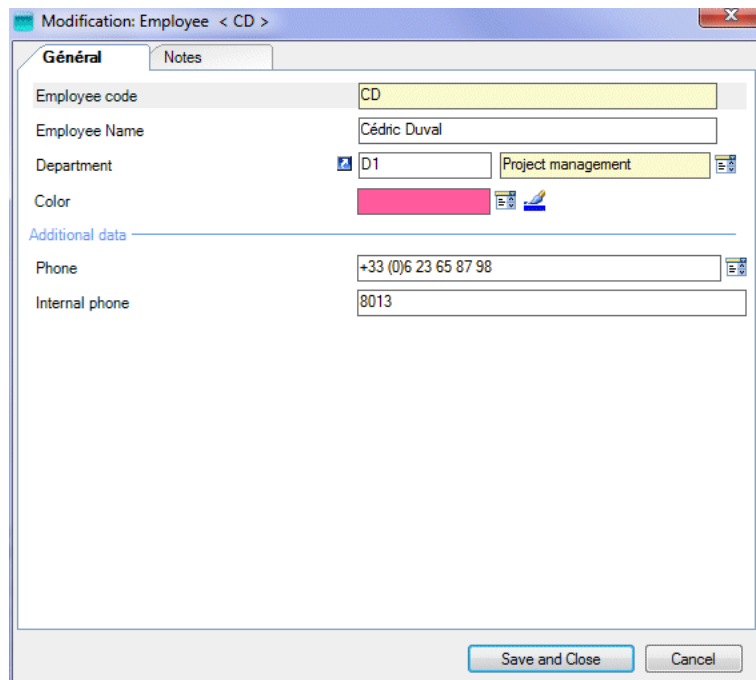
We named **Employee name** the designation of the resource (*Cédric Duval*, here).

We named **Department** the resource family, (D1, here).

The *Employee Cedric Duval* has a color (**pink**, here).

This color will let you distinguish this resource in the schedule.

The colors may play an important role in the layout of the schedule: depending on the display mode, they allow highlighting such a piece of data




Modification: Employee < CD >

Général Notes

Employee code: CD

Employee Name: Cédric Duval

Department: D1 Project management

Color: 

Additional data

Phone: +33 (0)6 23 65 87 98

Internal phone: 8013

Save and Close Cancel

Figure 12 – Project mode: Entry of a resource

At last, we defined additional data to characterize our employees more precisely.

Here we defined 2 of them (there may be up to 10):

Mobile phone number and **Internal speed-dial number**.

Each of these data can be a text, a number, a date, a time, etc.

More information on the configurable areas and their type on page 106.

Preparing your schedule in Project mode

Section 11 Resource families

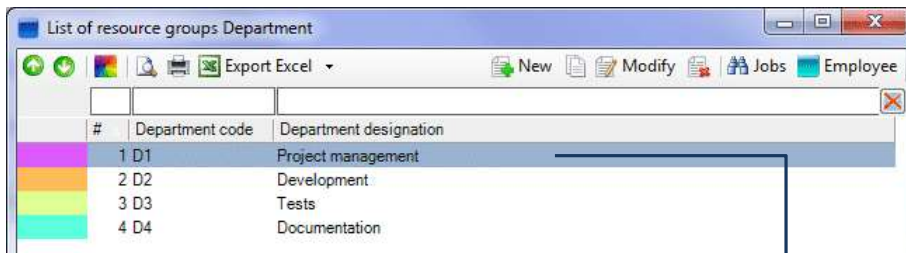


Figure 13 – Project mode: List of resource families

Here, we named our resource family: **Department**.

We named **Department code** the unique identifier of the family (*D2*, here).

We named **Department designation** the designation of the family (*Development*, here).

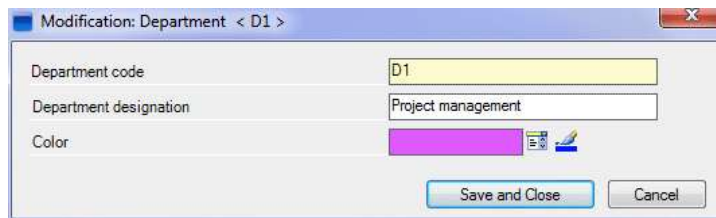


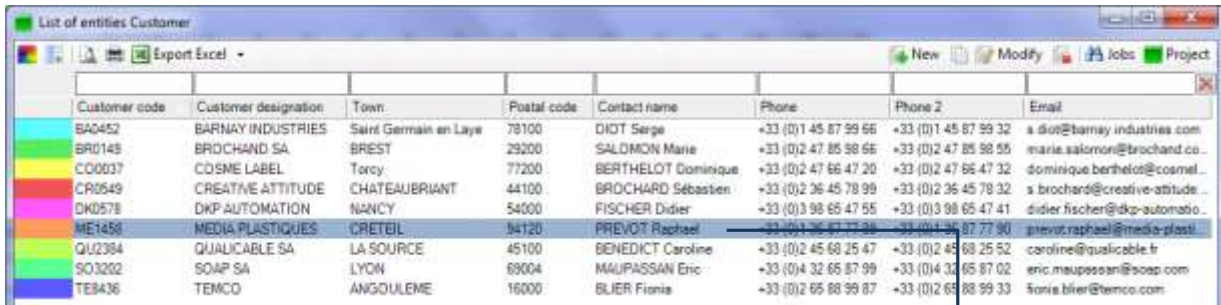
Figure 14 – Project mode: Entry of a resource family

The *Development* has a color (**orange**, here).

Preparing your schedule in Project mode

Section 12 Entities

At the beginning of this chapter, we saw that there are 3 entities (bullet #4).
 Let's have a closer look at the third entity (C).
 We named this entity: **Customer**.



Customer code	Customer designation	Town	Postal code	Contact name	Phone	Phone 2	Email
BA0452	BARNAY INDUSTRIES	Saint Germain en Lays	78100	DIOT Serge	+33 (0)1 45 87 99 66	+33 (0)1 45 87 99 32	a.diot@barnay-industries.com
BR0148	BROCHAND SA	BREST	29200	SALOMON Marie	+33 (0)2 47 85 98 66	+33 (0)2 47 85 98 55	marie.salomon@brochand.co...
CO0037	COSME LABEL	Torcy	77200	BERTHELOT Dominique	+33 (0)2 47 66 47 20	+33 (0)2 47 66 47 32	dominique.berthelot@cosmel...
CR0549	CREATIVE ATTITUDE	CHATEAUBRIANT	44100	BROCHARD Sébastien	+33 (0)2 36 45 78 99	+33 (0)2 36 45 78 32	s.brochard@creative-attitude...
DK0578	DKP AUTOMATION	NANCY	54000	FISCHER Didier	+33 (0)3 98 65 47 55	+33 (0)3 98 65 47 41	didier.fischer@dkp-automatio...
ME1458	MEDIA PLASTIQUES	CRETEIL	94120	PREVOT Raphaël	+33 (0)1 36 87 77 89	+33 (0)1 36 87 77 90	prevot.rafael@media-plasti...
QU2384	QUALICABLE SA	LA SOURCE	45100	BENEDICT Caroline	+33 (0)2 45 68 25 47	+33 (0)2 45 68 25 52	caroline@qualicable.fr
SO3202	SOAP SA	LYON	69004	MAUPASSAN Eric	+33 (0)4 32 65 87 99	+33 (0)4 32 65 87 02	eric.maupassan@soap.com
TEB436	TEMCO	ANGOULENE	16000	BLIER Florie	+33 (0)2 65 88 99 87	+33 (0)2 65 88 99 33	florie.blier@temco.com

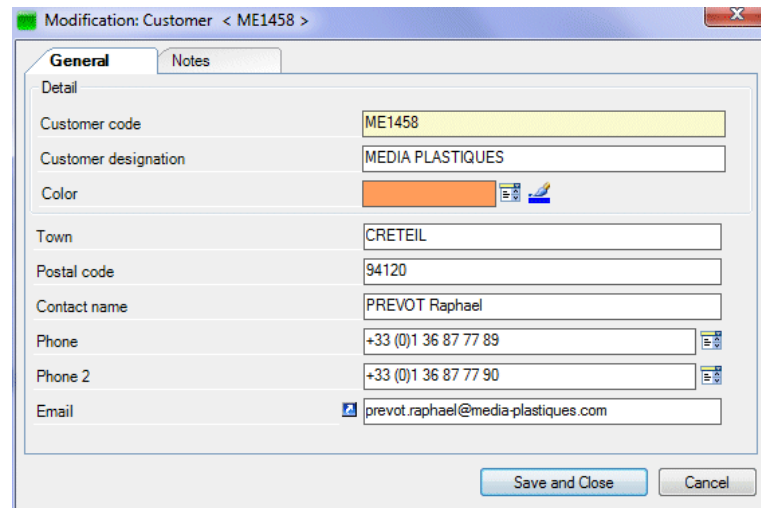
Figure 15 - Project Mode: List of the items of an entity

We named **Customer code** the unique identifier of this entity (*ME1458*, here).

We named **Company name** the designation of this entity (*MEDIA PLASTIQUES*, here).

The customer *MEDIA PLASTIQUES* has a color (**orange**, here).

At last, we defined additional data to characterize our customers more precisely. Here we defined 6 of them (there may be up to 10):



Modification: Customer < ME1458 >

General | Notes

Detail

Customer code: ME1458

Customer designation: MEDIA PLASTIQUES

Color:


Town: CRETEIL

Postal code: 94120

Contact name: PREVOT Raphaël

Phone: +33 (0)1 36 87 77 89

Phone 2: +33 (0)1 36 87 77 90

Email:  prevot.rafael@media-plastiques.com

Save and Close | Cancel

Figure 16 - Project Mode: Entry of an entity

Town, Zip code, Name of contact, Standard phone number, Contact phone number, Contact email address.

Each of these data can be a text, a number, a date, a time, etc.

More information on the configurable areas and their type on page 106

Preparing your schedule in Industry mode

CHAPTER 9 PREPARING YOUR SCHEDULE IN INDUSTRY MODE

The Industry mode is well-suited to the SMLs that want an accurate planning and production follow-up.

Section 13 Overview of a schedule in Industry mode

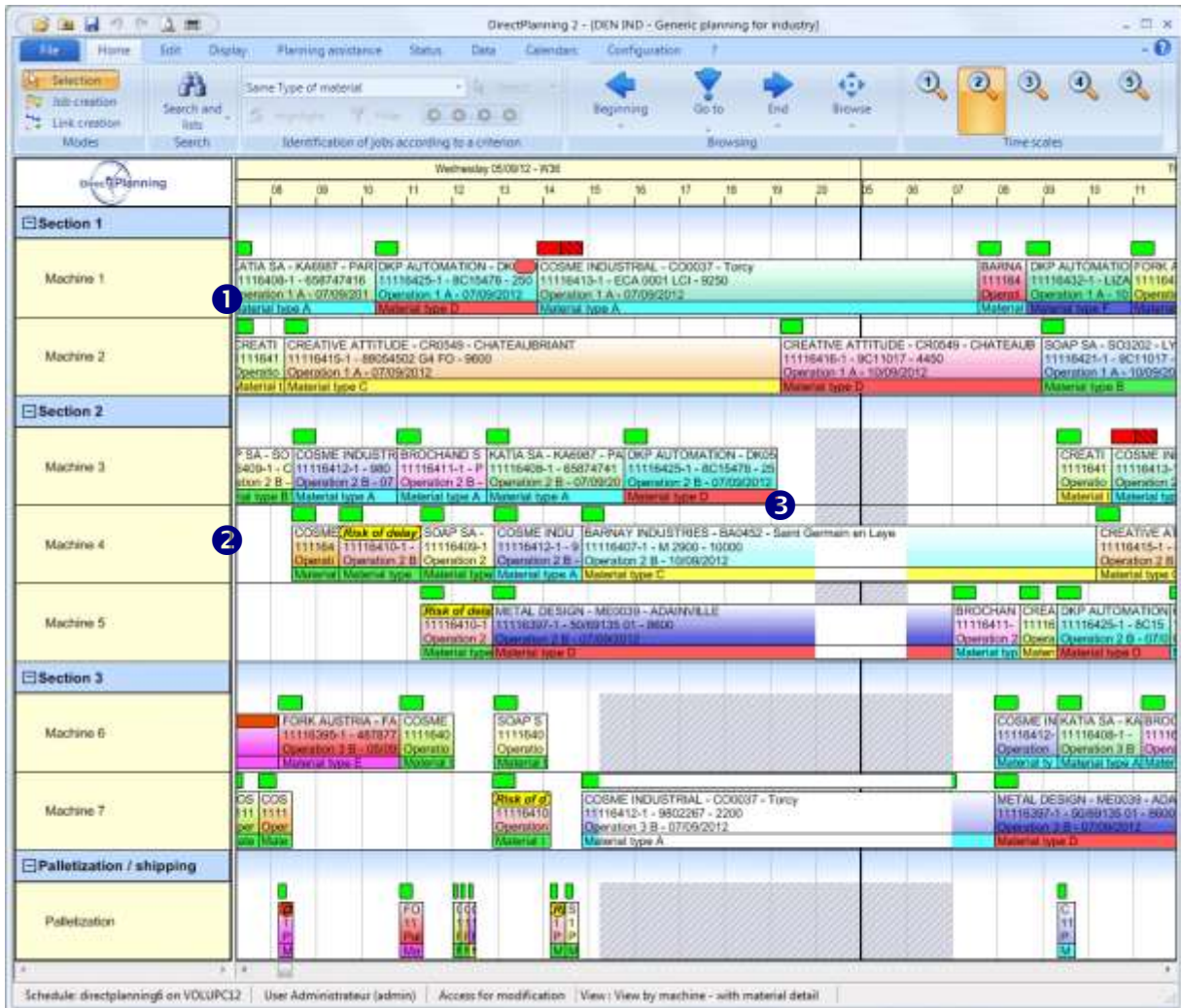


Figure 17 - Example of a schedule in Industry mode

Here's an example showing a use of Direct Planning in a plant.

- 1 The machines: this is what you are going to schedule.
There are several machines here: *Machines 1 to 7, Palettization...*
Each machine is assigned a Calendar: the calendars make it possible to specify working time slots, exceptions, shifts, etc.
- 2 We created 4 sections (or workshops): *Sections 1 to 4* and we linked our machines to them.
For example, the *Machines 6 and 7* are linked to the section 3.

Preparing your schedule in Industry mode

We configured the machines and the sections during the schedule creation stage.

In the same stage, we configured other data.

Here's the list of this data: (we'll see them starting on next page):

- Machines and sections (page 30)
- Entities (page 32)
- Working units (page 34)
- Operations (page 36)
- Technical items (page 40)

- 3 Finally, we started the operational phase and created jobs in our schedule. In our example, one job = the activity of a machine at a given time.

Let's examine a job →

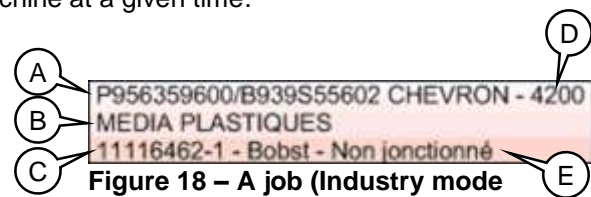


Figure 18 – A job (Industry mode)

Here, we have 5 pieces of information:

- A Job description (entered upon job creation)
- B Company name (it's an entity – page 32)
- C Order number (it's an entity – page 32)
- D Engaged quantity (entered upon job creation)
- E Operation (operations are discussed on page 36)

In this example, these 5 pieces of information are displayed in this order.

Why? Because we created a display mode in which we chose the following layout:

- The machines are displayed in the left panel, grouped by sections.
This is called a Projection in Direct Planning.
Other projections are possible. For example: orders, grouped by customers.
- In the schedule, the jobs are displayed on 3 lines containing these 5 pieces of information.

In Direct Planning, we call this layout a Display mode.

A display mode specifies a projection as well as the contents and the way the jobs are displayed in the schedule. It also specifies other notions that we'll see later: the time scale, the display restrictions...

According to each user's needs, you will have the possibility to create several display modes, each one containing a different view of the schedule, highlighting the machines, or such entity or any other item that we'll see later.

By convention:

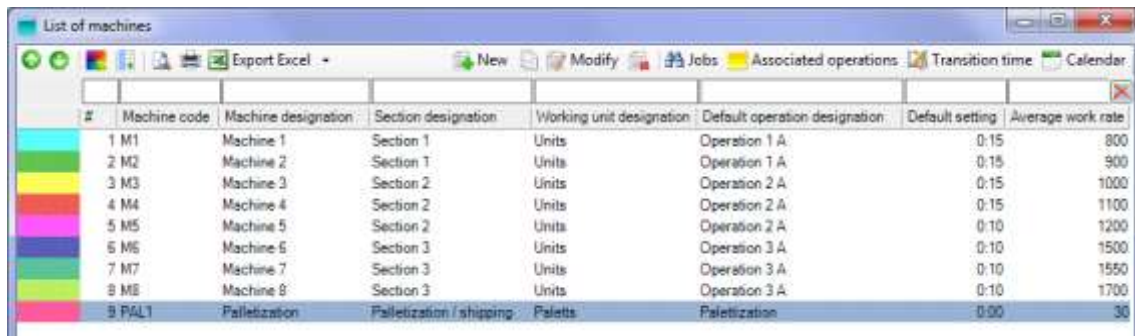
- The terminology of Direct Planning is in underlined characters.
- Your terminology is in **bold characters**.
- The examples of entered data are in *italics*.

The terminology of Direct Planning is used in the configuration phase.

In the user's guide, it is replaced by **your** terminology.

Preparing your schedule in Industry mode

Section 14 Machines



#	Machine code	Machine designation	Section designation	Working unit designation	Default operation designation	Default setting	Average work rate
1	M1	Machine 1	Section 1	Units	Operation 1 A	0:15	800
2	M2	Machine 2	Section 1	Units	Operation 1 A	0:15	900
3	M3	Machine 3	Section 2	Units	Operation 2 A	0:15	1000
4	M4	Machine 4	Section 2	Units	Operation 2 A	0:15	1100
5	M5	Machine 5	Section 2	Units	Operation 2 A	0:10	1200
6	M6	Machine 6	Section 3	Units	Operation 3 A	0:10	1500
7	M7	Machine 7	Section 3	Units	Operation 3 A	0:10	1550
8	M8	Machine 8	Section 3	Units	Operation 3 A	0:10	1700
9	PAL1	Palletization	Palletization / shipping	Palets	Palletization	0:00	30

Figure 19 – Industry mode: List of machines

In this example, we created a machine, *Palettization*, which we linked to the section *Palettization / Shipping*.

This machine has a color (pink). The colors are very present in Direct Planning. For example, when you configure the display modes, you can color jobs according to the machine, or to any other piece of data.

Then we entered technical data: Working unit, Default operation, Average setup time, Average work rate. All these technical data will be discussed in the following chapters.

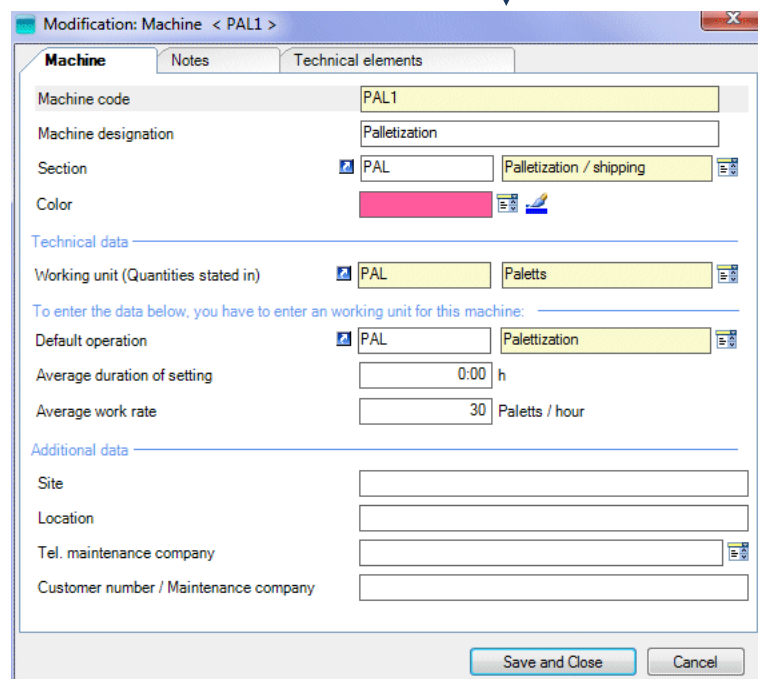


Figure 20 - Industry mode: Entry of a machine

Finally, we defined additional data to add a few details about our machines.

In our example, we defined 4 of them (there may be up to 10 in all): **Site**, **Location**, and phone numbers.

Each of these data can be a text, a number, a date, a time, etc.

More information on the configurable areas and their type on page 106.

Section 15 Sections

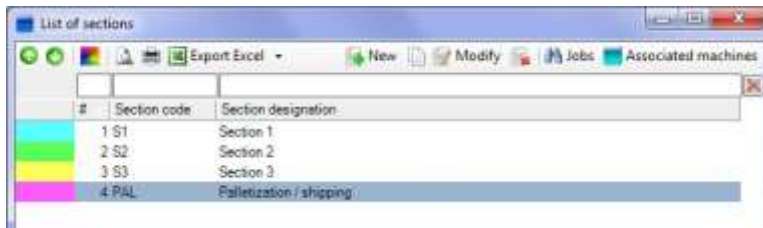


Figure 21 – Industry mode: List of sections

As the machines are linked to sections (or workshops), you have to enter the sections. →

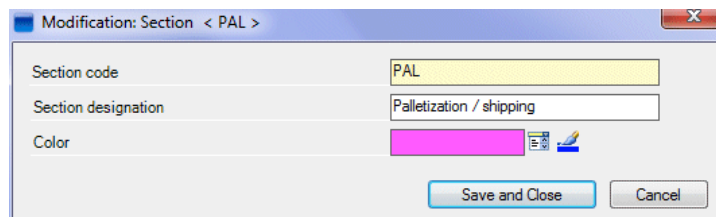


Figure 22 – Industry mode: Entry of a section

Tip | You can save time entering sections before machines: when you're on a section, all the machines you'll enter from there will be automatically linked to that section..

Preparing your schedule in Industry mode

Section 16 Entities

Entities are lists of data that evolve along with your activity (customers, order, products, projects...)

Configuring an entity lets you have a list of these data.

Entities can be automatically imported from an ERP (contrary to the other technical data whose list is supposed to be finished, and which don't evolve much over time).

During the creation stage of our schedule, we defined 3 entities (you can define up to 10 in all):

1. **Sales person**
2. **Customer**
3. **Order**

At the beginning of this chapter, we saw there were 3 entities (③).

Let's examine the third one:

We named this entity: **Order**. ↓



Order number	Order designation	Product code	Process information	Qty ordered	Due date	Order note	Trial order	Sales person name	Customer code	Customer designation
11116392-1	CR 66	PF063165610		1000	05/09/2012		<input type="checkbox"/>	CHAJMET Stéphane	#STOCK	INTERNAL STOCK
11116393-1	REF 19584	PF199460710		1500	05/09/2012		<input type="checkbox"/>	FAB476	FAB476	FORK AUSTRIA
11116394-1	REF 62547	PF184185710		2200	05/09/2012		<input type="checkbox"/>	#STOCK	#STOCK	INTERNAL STOCK
11116395-1	467877RT	PF159470410		3000	05/09/2012		<input type="checkbox"/>	CHAJMET Stéphane	FAB476	FORK AUSTRIA
11116396-1	EM 023	PF173130310		1800	05/09/2012		<input type="checkbox"/>	DELAC Sandrine	KA6987	KATIA SA
11116397-1	5049135 01	PF118341110		8500	07/09/2012		<input type="checkbox"/>	MARTIN Yannick	ME2009	METAL DESIGN
11116398-1	5049135 01	PF118341110		5000	07/09/2012		<input type="checkbox"/>	MARTIN Yannick	ME2009	METAL DESIGN
11116400-1	1059687 KJ	PF298540110		950	05/09/2012		<input type="checkbox"/>	DELAC Sandrine	C00037	COSME INDUSTRIAL
11116401-1	1055687 KJ	PF298540120		950	07/09/2012		<input type="checkbox"/>	DELAC Sandrine	C00037	COSME INDUSTRIAL

Figure 23 – Industry mode: List of the items of an entity

We named **Order number** the unique identifier of this entity (11116396-1, here).

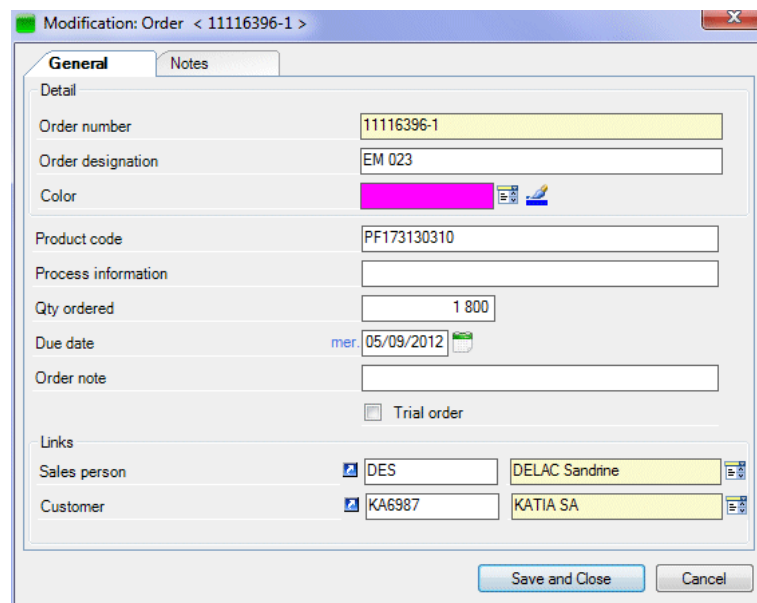
We named **Order designation** the designation of this entity (EM 023, here).

This order has a color.

At last, we defined additional data to characterize our orders more precisely. Here we defined 6 of them (there may be up to 10): **Product code...**

Each of these data can be a text, a number, a date, a time, etc.

More information on the configurable areas and their type on page 106.



Modification: Order < 11116396-1 >

General | Notes

Detail

Order number: 11116396-1

Order designation: EM 023

Color: [Color selection icon]

Product code: PF173130310

Process information: [Empty field]

Qty ordered: 1 800

Due date: mer 05/09/2012

Order note: [Empty field]

Trial order

Links

Sales person: [DES] DELAC Sandrine

Customer: [KA6987] KATIA SA

Save and Close | Cancel

Figure 24 – Industry mode: Entry of an entity

You can create a hierarchy between entities, linking them with each other.

In our example, the *Order* is linked to the *Customer*, which in turn is linked to the *Sales person*. This principle lets you automatically retrieve the entity of the upper lever.

For example, when entering the job details, if you enter an *order*, the *customer* is automatically recalled, and, hence, the *sales person*.

Preparing your schedule in Industry mode

Section 17 Considerations about technical data

When you schedule a job, you specify a start date and time, and an end date and time. When possible, if Direct Planning has the required information; it will calculate an end date and time, based upon the job duration.

In order to calculate this duration, it will need an average setup time and an average work rate. It will also need the planned, engaged quantity that you enter upon job creation.

- The average setup time is the required time for setting up a machine before starting a job. It is stated in hours and minutes.
- The average work rate, together with a quantity stated in the working unit, allows calculating the running time of a job.

Here are a few examples in the carboarding area.

- A slitter / scorer is able to process 1500 sheets / hour.
- A folder / gluer is able to process 500 cases / hour.
- A stitcher can process 400 cases / hour.

The following section will provide you with a few considerations that will help you answer this question:

“How can Direct Planning calculate my default values for the average setup time and work rate?”

Several factors may be taken into account in this calculation. We'll describe them in the ascending order of precision level:

- Level 1 The setup time and the work rate are defaulted by the machine. The operations are only used to specify the compatibilities between machines and operations. The working unit has to be specified for each machine. More details on page 34.
- Level 2 The setup time and the work rate are imposed by the machine / operation pair. More details on page 36.
- Level 3 The setup time and the work rate are imposed by the machine / operation pair and may vary according to one technical item. More details on page 40. Which technical item may be factored into the calculation of the setup time and work rate?
- Level 4 The setup time and the work rate are imposed by the machine / operation pair and may vary according to two technical items. More details on page 40. Which technical items may be factored into the calculation of the setup time and work rate?

We have already seen:

- The machines and the sections (page 30)
- The entities (page 32)

We are now going to see:

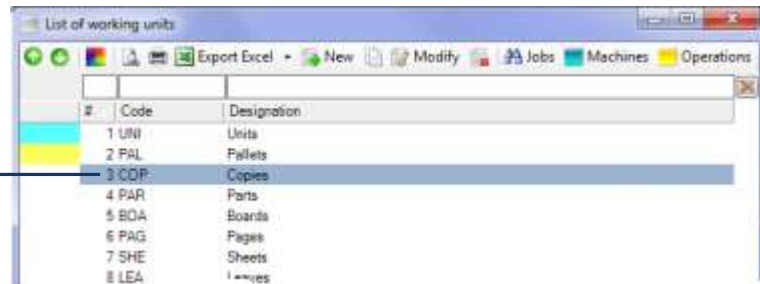
- The working units (page 34)
- The operations (page 36)
- The technical items (page 40)

Preparing your schedule in Industry mode

Section 18 Working units

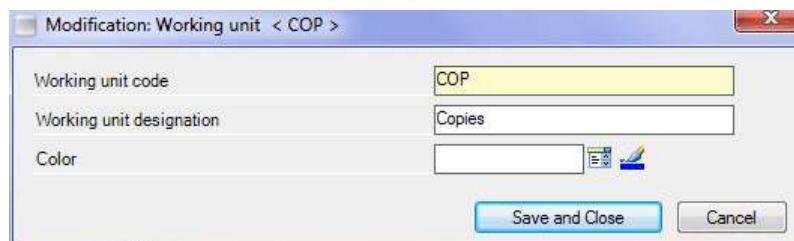
Which working unit allows measuring the activity of your machines?

Sheets? Kilos? Copies? Linear meters?



#	Code	Designation
1	UNI	Units
2	PAL	Pallets
3	COP	Copies
4	PAR	Parts
5	BOA	Boards
6	PAG	Pages
7	SHE	Sheets
8	LEA	Linear meters

Figure 25 – List of working units



Modification: Working unit < COP >

Working unit code: COP

Working unit designation: Copies

Color:

Save and Close Cancel

Figure 26 – Entry of a working unit

All you have to do is to specify a code and a designation to define a working unit.

Not to mention the color, which allows, for example, to color jobs according to the working unit, in the schedule.

The working unit is used when measuring the work rate of a machine. For example, the number of sheets / hour.

Why should you specify the working unit upon machine creation?

There are 3 good reasons you do it:

Reason 1: You create a first level of compatibility. In the schedule, if you move a job onto a machine that doesn't have the same working unit, a warning message will be displayed.

The scheduling module also complies with this consistency.

There's also a second level of compatibility that we'll see with the operations (page 36).

Reason 2: This allows specifying an average setup time and an average work rate, which has been discussed in the previous section. An example is provided on page 35.

Reason 3: This lets you specify the default operation, which will ease the linking between operations and machines. More information on operations: page 36.

Preparing your schedule in Industry mode

Level 1 - Example of automatic calculation of duration only based on the machine

(The levels were announced on page 33).

On this machine, we have specified a working unit (1), an average setup time (2) and an average work rate (3).

These 3 values are recalled when we create a job for this machine.



Figure 27 – Linking a working unit with a machine

Upon job entry, we specify a planned, engaged quantity (4) stated in the working unit (1) of the machine.

Direct Planning calculates the running time (5) and, consequently, the planned end date (6).

Ticking one of the boxes (7), the planner can change the setting and / or running time calculated by Direct Planning.

Duration	Planned
Setting	0.15 h
Running	2.47 h
Total	3.02 h

Figure 28 – Entering a job with automatic calculation of duration

Preparing your schedule in Industry mode

Section 19 Operations

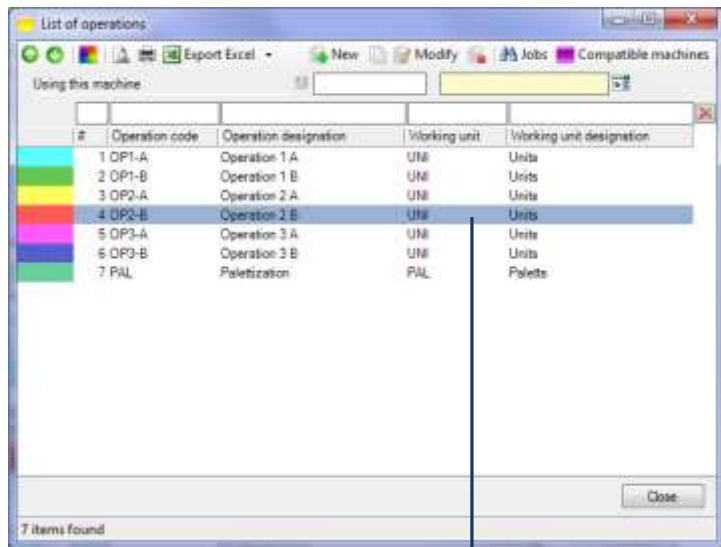
Which operations can your machines perform?

Cutting? Glueing? Stitching? Slitting / Scoring?

In the example below, the operation OP2-B is performed on the working unit Units.

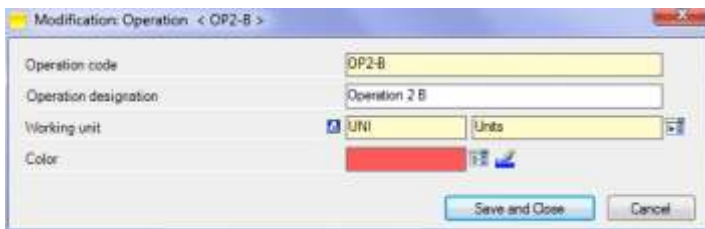
To define your operations, you indicate a code, a designation and a working unit.

Not to mention the color, which allows, for example, to color jobs according to the working unit, in the schedule.



#	Operation code	Operation designation	Working unit	Working unit designation
1	OP1-A	Operation 1 A	UNI	Units
2	OP1-B	Operation 1 B	UNI	Units
3	OP2-A	Operation 2 A	UNI	Units
4	OP2-B	Operation 2 B	UNI	Units
5	OP3-A	Operation 3 A	UNI	Units
6	OP3-B	Operation 3 B	UNI	Units
7	PAL	Palettization	PAL	Pallets

Figure 29 – List of operations



Modification: Operation < OP2-B >

Operation code: OP2-B

Operation designation: Operation 2 B

Working unit: UNI Units

Color: [Red]

Save and Close Cancel

Figure 30 – Entry of an operation

Preparing your schedule in Industry mode

Why should you link an operation to a machine?

There are 2 good reasons you do it:

Reason 1: You create a second level of compatibility. In the schedule, if you move a job onto a machine that doesn't perform the same operation, a message warns you. The scheduling module also complies with this consistency. We have already seen the first level of compatibility on page 34.

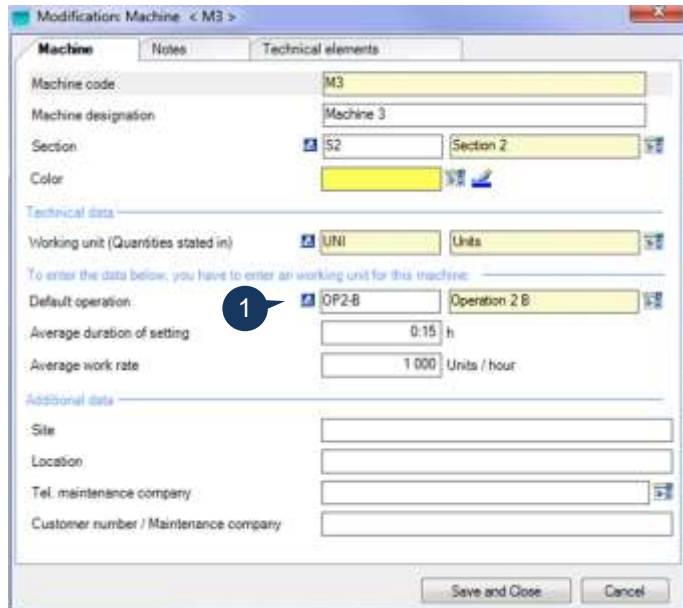
Reason 2: This allows you to impose an average setup time and an average work rate that have already been discussed on page 33. An example is provided on the next page.

To be linked to a machine, an operation must have the same working unit as the machine.

On page 35, we have linked the working unit *Units* to the machine *Machine 3*.

On page 36, we have linked the working unit *Units* to the operation *OP2-B*.

Machine and operation have the same working unit: now, we can specify that the operation *OP2-B* is the default operation of the machine *Machine 3* (1). →



The next screen has 2 goals:

Goal 1. Create families of machines that are compatible with each other. These machines have the same working unit as the operation. In the schedule, if you move a job to an incompatible machine, a warning message will be displayed.

The scheduling module complies with this compatibility: in its optimizing process, it will move a job to another machine only if both machines belong to the same family.

We have already seen the first level of compatibility on page 34 with the working units

Goal 2. Impose the average setup time and the average work rate that we saw on page 33.

- At the level of the machine / operation pair (referred to as level 2 - page 33).
- At the level of the machine / operation pair (referred to as level 3 - page 33), including one technical item.
- At the level of the machine / operation pair (referred to as level 4 - page 33), including two technical items)

Preparing your schedule in Industry mode

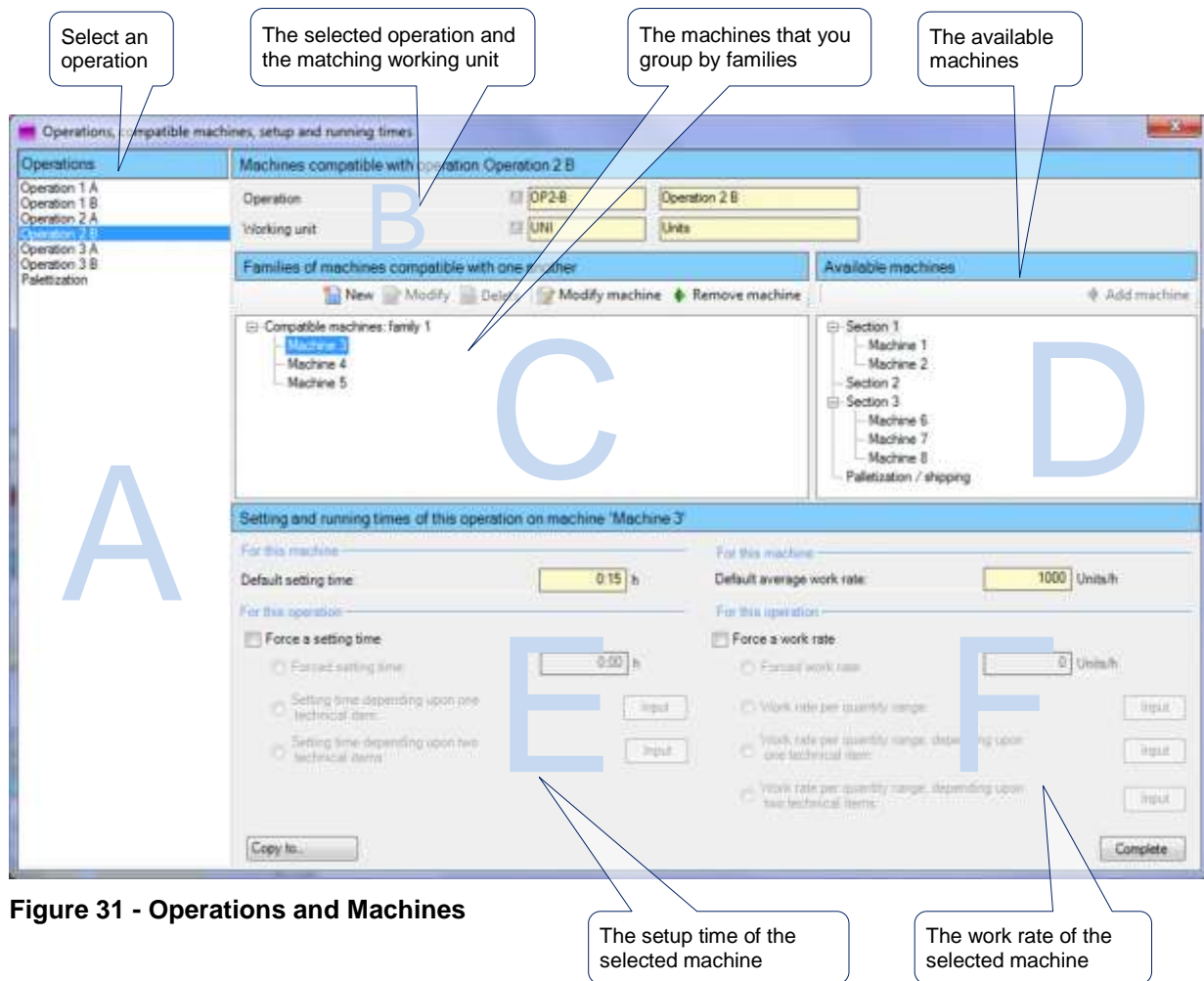


Figure 31 - Operations and Machines

To create families of mutually compatible machines

Select an operation in the **A** area. In our example, the operation *Folding-Glueing*.

The **B** area displays the selected operation and the matching working unit.

The **D** area displays the mutually compatible machines (same working unit, same operation)

Use the mouse to select machines from the **D** area and drop them into the **C** area, in one of the families. The family #1 is always created by default; you can rename it or create other ones, see below.

As an alternative, you can select a machine in the **D** area and click *Add machine*.

Or you can do the reverse operation: select a machine in the **C** area and click *Remove machine*.

- You can also
- create a new family: button *New*
 - rename a family: button *Modify*
 - delete a family: button *Delete*
 - modify a family: button *Modify machine* (or double-click)

Preparing your schedule in Industry mode

Level 2 - Setup time and work rate according to the machine / operation pair

The levels were announced on page 33.

The **E** area lets you impose a setup time for this machine / operation pair.

The **F** area lets you impose an average work rate for this machine / operation pair.

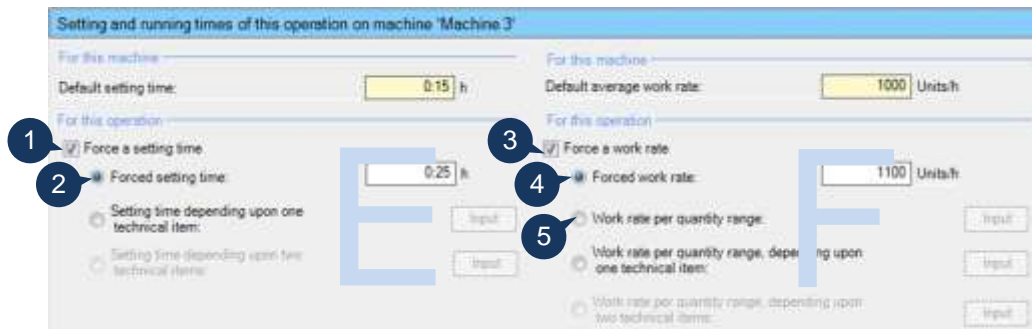


Figure 32 – Impose a setup time and a work rate for a machine / operation pair

To impose a setup time, you must first tick the box 1.

This lets you enter an imposed setup time (2): 0:25, in the above example.

To impose a work rate, you must first tick the box 3.

This lets you then:

- enter an imposed work rate:
select the button 4 and enter an imposed work rate (1100, in the above example).

[or else]

- have the work rate vary according to quantity ranges:
select the button 5 then, if required, click the button **Input**.

You are now presented with an entry grid that lets you enter quantity ranges and the corresponding work rates.

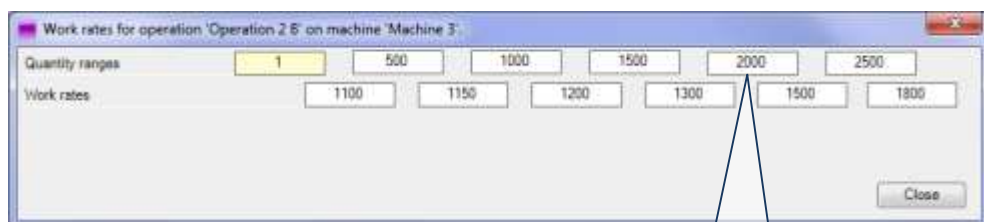


Figure 33 – Specifying a work rate by quantity range

Example: quantity $\leq 2000 \Rightarrow$
work rate is 1300.

Preparing your schedule in Industry mode

Section 20 Technical items

What are the technical items?

They are additional characteristics of your machines.

Examples in the cardboarding area →

Examples

Number of colors

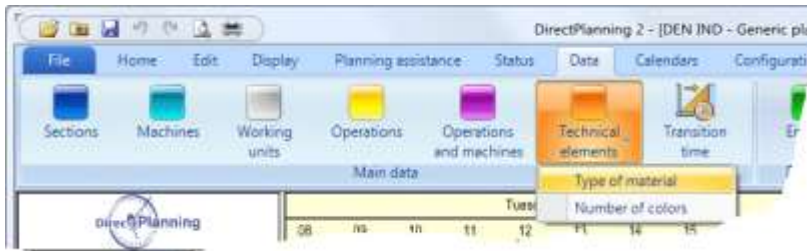
Fluting type

Splicing type

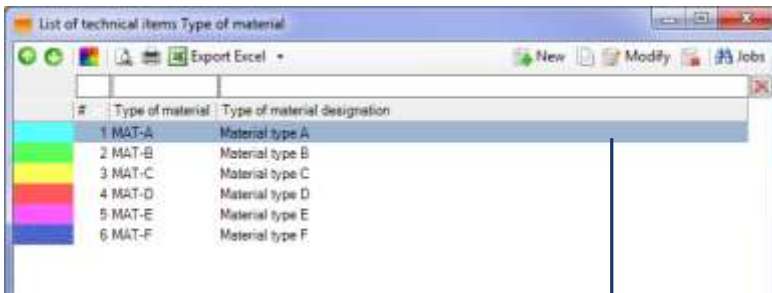
What are the technical items for?

They play an important role in determining the setup time and the work rate (next page).

After you have configured them, you can enter them via the data menu ↙



The data menu



You can define up to 20 technical items.

Here, we defined 2 of them:

- *Type of material*
- *Number of colors*

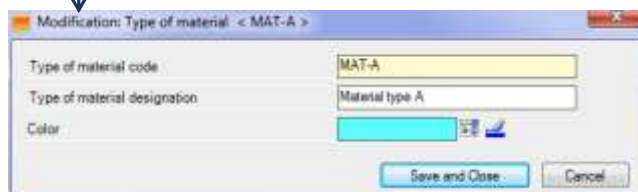


Figure 34 – Entry of a technical item

The technical items are then specified upon job creation.

Some technical items are not involved in some machines: thus, when creating / modifying a machine, you can uncheck the technical items that are not relevant for this machine.

In the opposite example, the *M3* machine is concerned by this *Type of material*. →

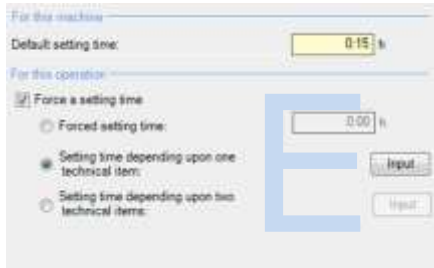


Figure 35 – Technical items & Machines

Preparing your schedule in Industry mode

Level 3 – Setup time and work rate by machine, operation and one technical item

On page 39, we have imposed a setup time and a work rate for a machine / operation pair.



Now, let's say that the setup time varies upon one technical item: the **number of colors**.

In the **E** area, the default setup time is recalled on a yellow background (0:15 h).

Select the relevant button to open the table of the setup times varying upon one technical item. ↓

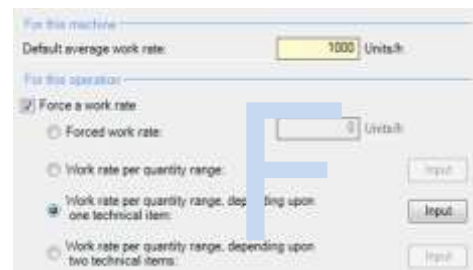
Material type	Setting rate
Material type A	0:15
Material type B	0:20
Material type C	0:22
Material type D	0:25
Material type E	0:35
Material type F	0:30

Figure 36 – Table of setup times varying upon one technical item

Let's say that the work rate varies upon the quantity and one technical item: the **type of material**.

In the **F** area, the default average work rate is recalled on a yellow background (1000 units/hour).

Select the relevant button to open the table of the work rates by quantity and to enter the decreasing / increasing coefficients according to the selected technical item. ↓



Material type	Decreasing / increasing coefficient of work rate
Material type A	1.10
Material type B	
Material type C	0.95
Material type D	0.95
Material type E	1.05
Material type F	1.20

Figure 37 – Table of work rates according to one technical item

Preparing your schedule in Industry mode

Level 4 – Setup time and work rate by machine, operation and two technical items

Let's say that the setup time varies upon two technical items: the **number of colors** and the **flute type**.

In the **E** area, the default setup time is recalled on a yellow background (0:15 h).

Select **⊙** the relevant button to open the table of the setup times varying upon two technical items. **⬅**

	No printing	1 color	2 colors	3 colors
Material type A	0:20	0:25	0:30	0:35
Material type B	0:15	0:15	0:15	0:15
Material type C	0:25	0:30	0:35	0:40
Material type D	0:25	0:30	0:35	0:40
Material type E	0:20	0:30	0:35	0:40
Material type F	0:20	0:25	0:30	0:35

Figure 38 - Table of setup times varying upon two technical items

Let's say that the work rate varies upon the quantity and two technical items: the **number of colors** and the **flute type**.

In the **F** area, the default average work rate is recalled on a yellow background (200 cases/hour).

Select **⊙** the relevant button to open the table of the work rates by quantity and to enter the decreasing / increasing coefficients according to both selected technical items. **⬇**

	No printing	1 color	2 colors	3 colors
Material type A	1.10	1.15	1.20	1.20
Material type B	1.10	1.10	1.20	1.25
Material type C	1.10	1.15	1.20	1.25
Material type D	1.15	1.10	1.20	1.25
Material type E	0.90	0.90	0.95	
Material type F	0.95	0.95	0.95	

Figure 39 - Table of work rates according to two technical items



Preparing your schedule in Industry mode

You can use one or two technical item(s) to have the setup time and the work rate vary.

If you find that two technical items are not enough, try the following approach:

Merge the technical items together with the operations: instead of creating a simple operation broken down into several technical items, try to see if you can't include the technical items in the operation.

For example, instead of creating the OP1 operation, detailed into several technical items called ET1, ET2, ET3 ..., we could have several operations:

- OP1-ET1
- OP1-ET2
- OP1-ET3
- ...

Preparing your schedule in Industry mode

Section 21 Transition times

A *transition time between two jobs* is the required time to change the machine configuration between two jobs (changing tools, mounting, dismounting, sizing...)

It is an additional notion to the traditional "Setup time" that exists on any job.

In Direct Planning 2, the transition times can be automatically determined according to a change in a technical item between 2 jobs.

They can also be modified or manually imposed.

A transition time will be automatically added upon any change of technical item between 2 successive jobs.

A few examples...

- Time required for washing on a printing machine upon color change.
- Time required for changing tool on a machine.
- Changing splicing mode.

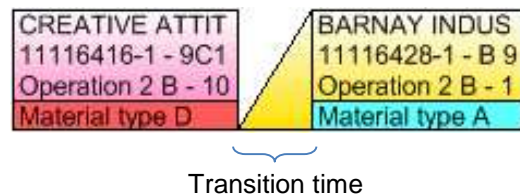
In the schedule, a transition time takes the form of a triangle between the involved jobs.

The color of the triangle has a meaning.

In the example below, we switch from a D-type material to an A-type material.

The transition times are taken into account in the calculation of the scheduling.

Transition times are always declared for a pair "machine / type of technical item".



There are two ways to manage transition times

Simple transition times

You specify a single transition time for a machine and a type of technical item.

Example

Your technical item identifies a die-cutting form number.

If the die-cutting form changes between 2 jobs, a transition will be automatically inserted.

In that case, switching from tool X to tool Y doesn't particularly matter: what matters is that there's been a change.

This method proves to be crucial when you manage a large number of technical items (several hundreds of die-cutting forms, in the case of a cardboard converter).

If the technical item is not specified, the no transition time is inserted.

Detailed transition time

When several technical items change between 2 consecutive jobs, the transition times are cumulated.

Example

Switching from stitching to glueing: 30 minutes

Switching from 4-color printing to Pantone printing: 60 minutes

⇒ The total transition time is 90 minutes.

A transition time can also be manually forced upon job entry.

CHAPTER 10 STEPS FOR CREATING A SCHEDULE

Section 22 Creating an Industry schedule in 12 steps

Etape 1	Create a new schedule	Page 46
Etape 2	General configuration (Machines, Families, Jobs, Flags).....	Page 62
Etape 3	Configure technical elements	Page 83
Etape 4	Configure entities	Page 84
Etape 5	Create display modes	Page 85
Etape 6	Create users	Page 102
Etape 7	Enter sections	User guide
Etape 8	Enter machines	User guide
Etape 9	Enter operations (option)	User guide
Etape 10	Enter technical elements (option)	User guide
Etape 11	Associate machines and operations (option).....	User guide
Etape 12	Save the schedule	User guide

Section 23 Creating a Project or Service schedule in 8 steps

Etape 1	Create a new schedule	Page 46
Etape 2	General configuration (Resources, Families, Jobs, Flags).....	Page 62
Etape 3	Configure entities	Page 84
Etape 4	Create display modes	Page 85
Etape 5	Create users	Page 102
Etape 6	Enter resource families	User guide
Etape 7	Enter resources.....	User guide
Etape 8	Save the schedule	User guide

Creating a new schedule

CREATING, SAVING, OPENING A SCHEDULE

CHAPTER 11 CREATING A NEW SCHEDULE

Warning: To create a new schedule, you have to connect to the machine that will host the schedule. Indeed, any created schedule will be saved in a local database on the machine that is running Direct Planning.

Other workstations will then be able to consult or modify the schedule.

Upon schedule creation, you specify:

- The schedule type (Industry, Project or Service)
- The template (more information on templates on page 52)
- The name of the schedule
- The administrator's password

Direct Planning features a wizard for creating a schedule.

Choose one of the 3 schedule types as defined at the beginning of this document.



Figure 40 – Creating a schedule: selecting the type

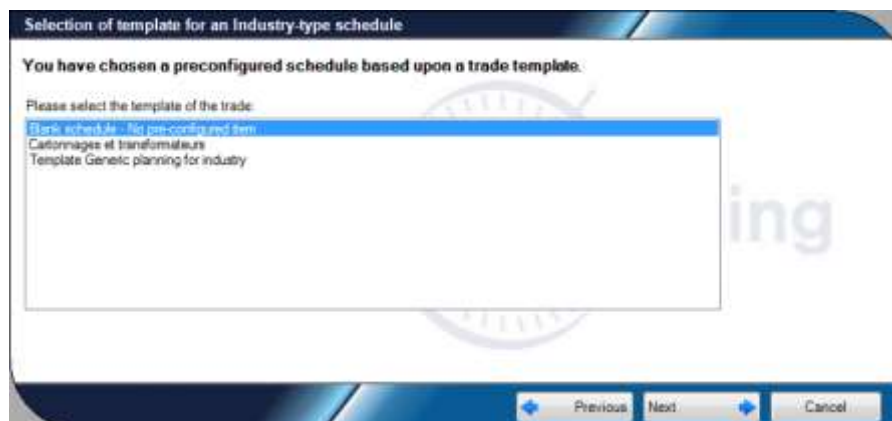


Figure 41 - Creating a schedule: selecting a template

You can create a schedule from scratch or you can base upon a predefined template (more information on templates on page 52).

The opposite screenshot offers a template called *Cardboarding and converters*.

Creating a new schedule

Give your schedule a name.

Do not hesitate to give a telling name.

The users will see this name when they open this schedule

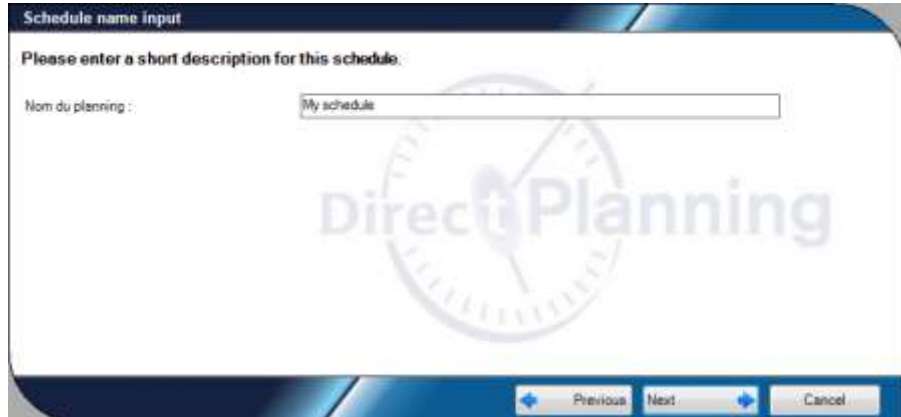
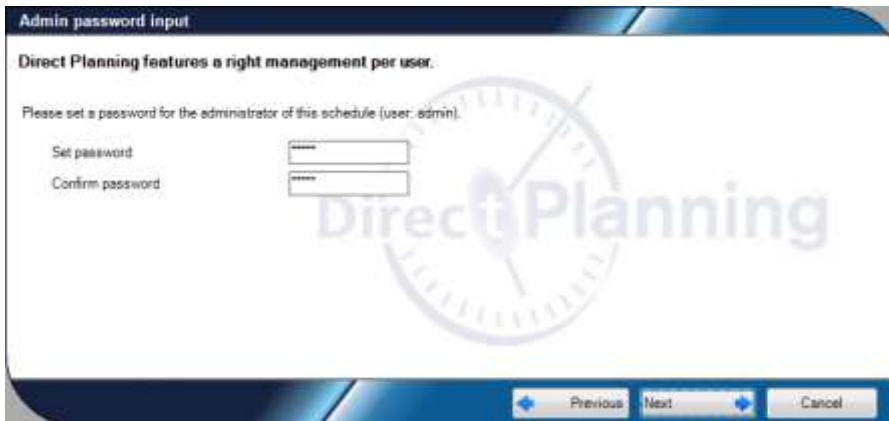


Figure 42 – Creating a schedule: choosing a name



Specify the administrator's password.

Reminder: as said on page 103, we strongly recommend you specify a password that only you know.

Figure 43 – Creating a schedule: administrator's password

Your schedule is ready for use.

It is in memory, but it is not yet saved on your machine.

After clicking on *Complete*, save it on your machine.



Figure 44 – Creating a schedule: Complete

Saving a schedule

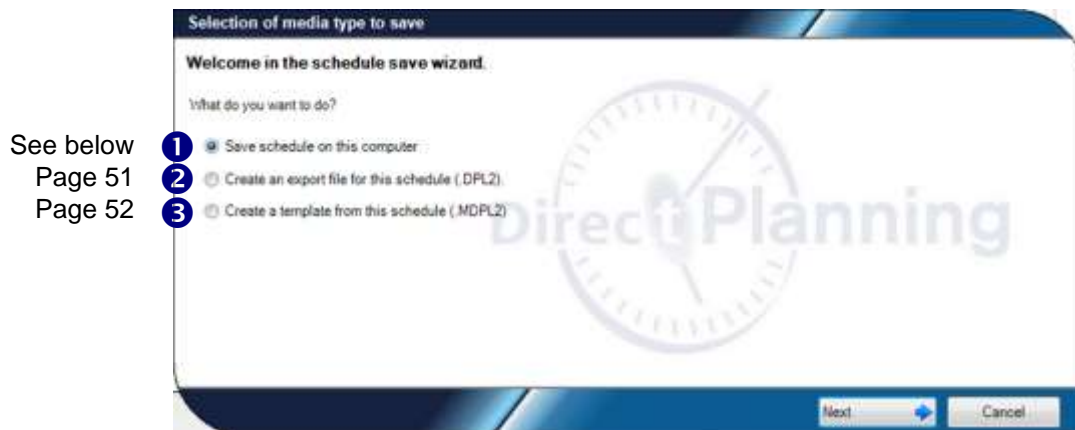
CHAPTER 12 SAVING A SCHEDULE

Several situations are possible:

- You are saving a schedule for the first time (a schedule that you've just created).
The schedule is saved in a local database on the machine that is running Direct Planning (SQL Server 2008).
A wizard will guide you through the steps: see below.
- You are saving an existing schedule, keeping its current name: the **Save** command of the **File** menu saves the schedule without any further question, whatever the location of the schedule (local or remote).
- You are saving an existing schedule, giving it another name (command **Save as**).
- You are saving a schedule further to opening an export file with the **fpl2** extension: this particular case is discussed on page 56.

Section 24 Saving a schedule for the first time

If your schedule has just been created (in other words, it has never been saved before) the **Save** and **Save as** commands of the **File** menu start the same wizard:



See below
Page 51
Page 52

①
②
③

Figure 45 – Saving a schedule: the available file formats

Important:

The schedule you're saving will be saved in a local database, on the machine that is running Direct Planning.

Once it is saved:

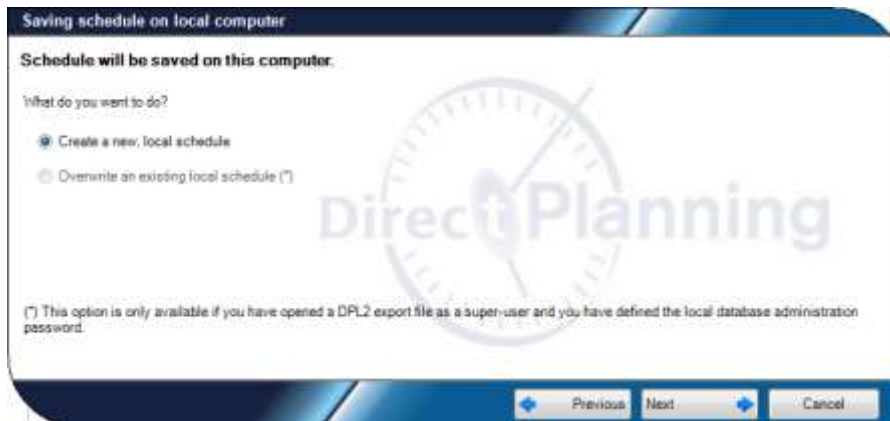
- You can access it from this machine or another one, with your administrator's privileges
- The other users can remotely access it, with their own privileges.
Those who have the right to can modify and save it.

Info

Instead of using the **Save** command of the **File** menu, you can use the usual Windows shortcuts, the diskette in the toolbar, or the **Ctrl S** key.

To save your schedule for the very first time, select **Save this schedule on this computer.** (①).
To save it onto another

Saving a schedule



As the schedule is currently being created, please select **Create a new local schedule**.

We'll see the other possibility later (**Overwrite an existing local schedule**).

Figure 46 – Creating a new schedule

You are invited to enter a name for your schedule. By default, it is the name that you specified on page 47.

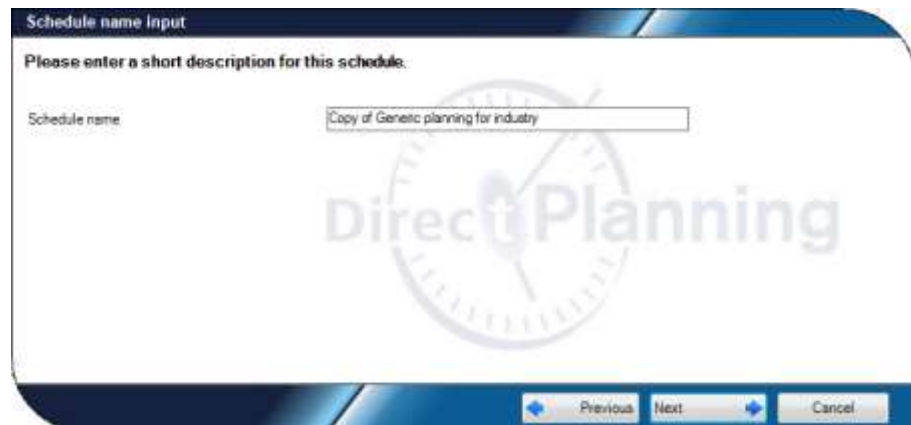


Figure 47 – Saving a schedule: choosing a name for the schedule



Again, enter the administrator's password.

Figure 48 - Saving a schedule: administrator's password

Saving a schedule

Click **Next** to confirm saving the schedule.

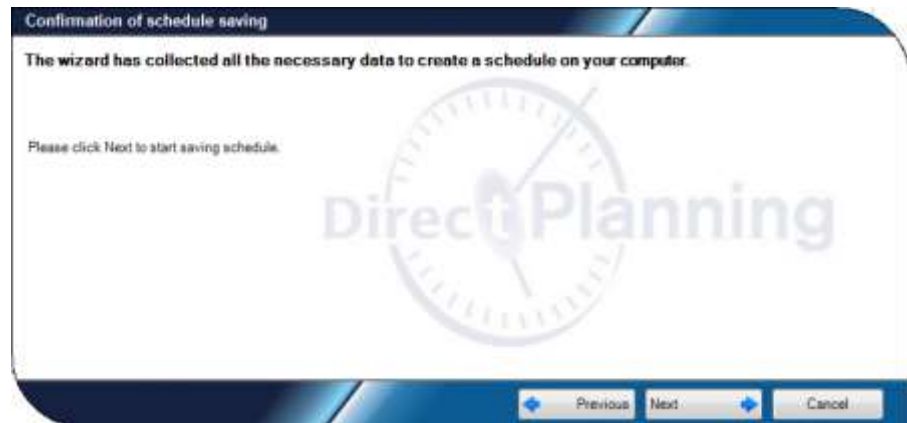


Figure 49 - Saving a schedule: confirming



The network name of the local computer and the ID of the schedule are displayed.

Thus, you can share this information with the users who will need it remotely.


Figure 50 - Saving a schedule: summary and end

Section 25 Saving an export file

The feature **Create an export file (.dpl2)** lets you save the current schedule in a “portable” file which you can easily archive or transmit to a 3rd-party. This file has the **dpl2** extension.

To create an export file: **File → Save as**

Then, choose **Create an export file for this schedule (.dpl2)** (🔗) on page 48.

Click  to specify the path and name of the export file.

The path is defaulted to the one of the last export and the name is defaulted to the schedule name


The button  lets you display the directory contents.



Figure 51 – Saving a schedule into an export file

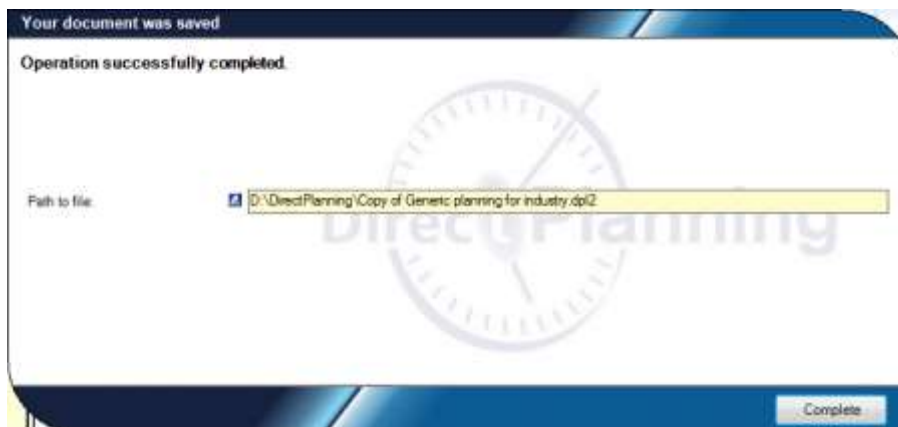


Figure 52 - Saving a schedule into an export file

The information you specified at the previous stage are recalled here.

The export is over.

Remark

The DPL2 format is widely used to create easily portable files:

- page 81
- page 114
- page 126 (🔗 restore a database from a DPL2 file).

Saving a schedule

Section 26 Creating a schedule template

Creating a schedule template gives you the possibility to create other schedules based on the same template, later on.

The schedule templates may be compared to the templates you use in your word-processing software.

When you save a template from an opened schedule, you save some data such as:

- The whole configuration (except the users – only the administrator is saved).
- The resources and the resource families (Project and Service modes)
- The sections, the machines and the technical data (Industry mode)
- The calendars

The following information is not saved in a template:

- The users
- The entities
- The jobs

However, if you want to keep some data in your template, there's a possibility:


1. You don't create a template.
2. Instead of a template, you save your schedule with another name.
3. In the new schedule, remove what you don't want to keep (users, jobs, ...)

Remark | A schedule template is saved in a file with the **mdpl2** extension.
| This is a portable file that you can easily copy/paste, send, etc.


To create a schedule template, select **File** → **Save as** and choose **Create a template from this schedule** (🔗) on page 48.

See next page for the screenshots.

Saving a schedule

Click  to specify the path and name of the template file.

The path is defaulted to the one of the last saved template and the name is defaulted to the schedule name.

The button  lets you display the directory contents.

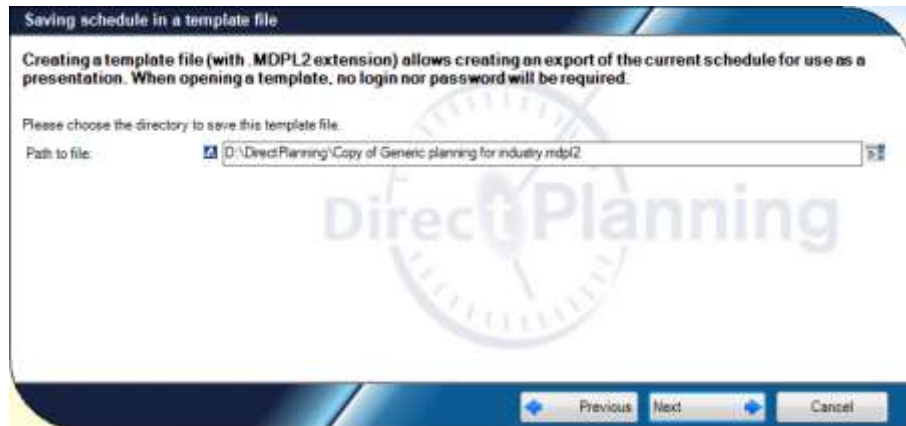


Figure 53 – Saving a schedule template

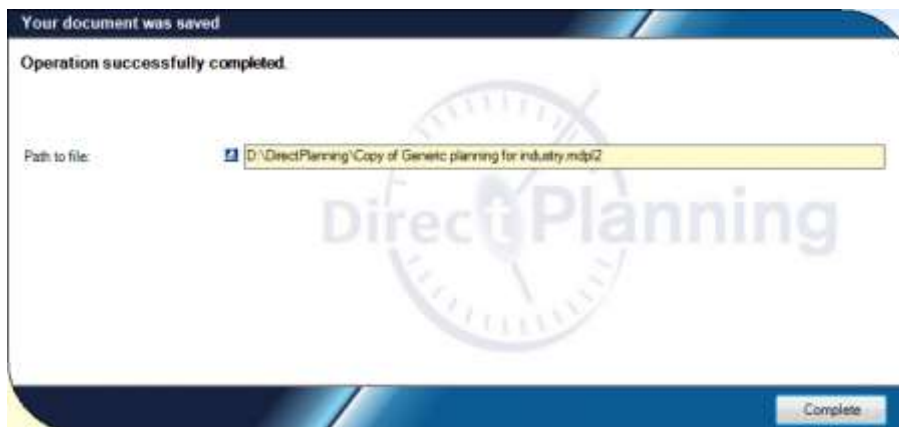


Figure 54 – Saving a schedule template


The information you specified at the previous stage are recalled here.

The template saving is over.

Opening a schedule

CHAPTER 13 OPENING A SCHEDULE

To open a schedule, there are 3 methods, following the Windows standard:

- Clicking the  icon
- **File → Open**
- **File → Recent** (page 61)

Upon starting, Direct Planning proposes to open the most recently used schedule (if it has been configured in the user preferences).

You can cancel if you want to open another schedule.

See below
page 55
page 56
page 58




Figure 55 – Schedule opening wizard

Section 27 Opening a schedule

To open a schedule: **File → Open**

Then, select **Open a schedule** (1) on page 54.

You can open a schedule on your computer or another one. Select  the relevant option.

To look for a computer on the network, open the scroll list and select the deired computer.

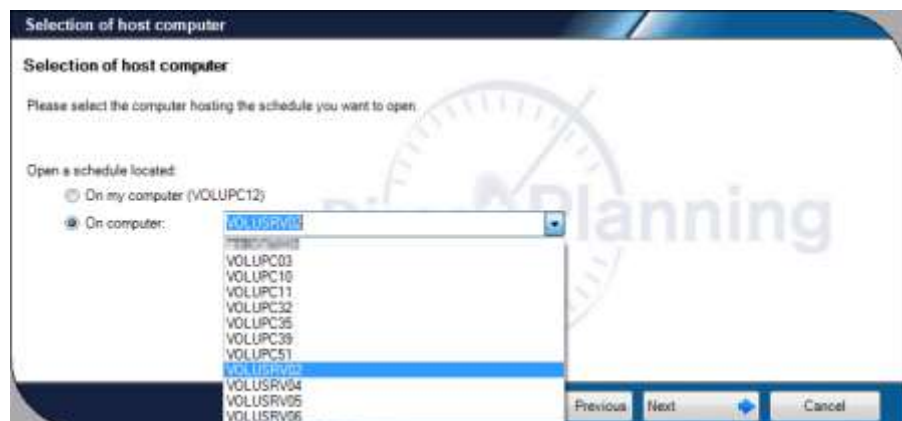
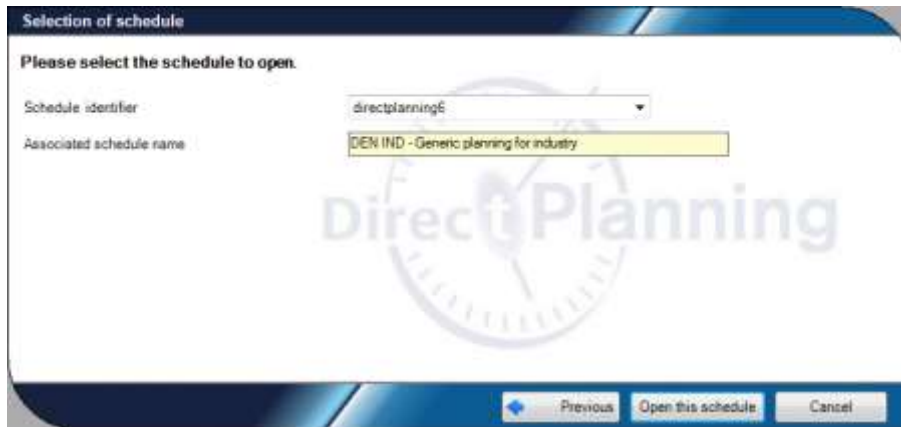


Figure 56 – Opening a schedule: selecting the computer

Opening a schedule



Each schedule is identified in the form *directplanningN*, where **N** represents a serial number attributed upon creation. Open the scroll list **Schedule ID** to choose one.

When you choose a schedule, its name is displayed below.

Figure 57 – Opening a schedule: selecting the schedule

Section 28 Opening a demonstration schedule

Direct Planning offers a few demonstration databases to show you the product features..

To open a demonstration schedule: **File** → **Open**
Then, select **Open a demonstration schedule** (🔗) on page 54.

First, select the type of schedule.



Figure 58 – Opening a demonstration schedule: selection of the type

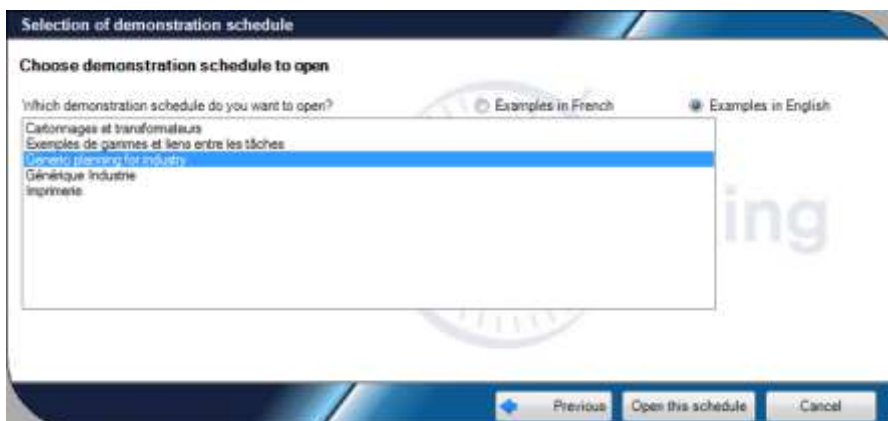


Figure 59 - Opening a demonstration schedule: selection of schedule

Opening a schedule

Section 29 Opening a Direct Planning 2 file (DPL2 or MDPL2)

This lets you open:

- A schedule that has been exported in the DPL2 format (page 51)
- A schedule template with the MDPL2 format (page 52)

More information on these formats in their respective sections.

To open a Direct Planning 2 file: **File** → **Open**

Then, select **Open a Direct Planning 2 file** (🔍) on page 54.

This opens the Windows explorer and lets you browse files with .dpl2 et .mdpl2 extension to open one of them. ↓

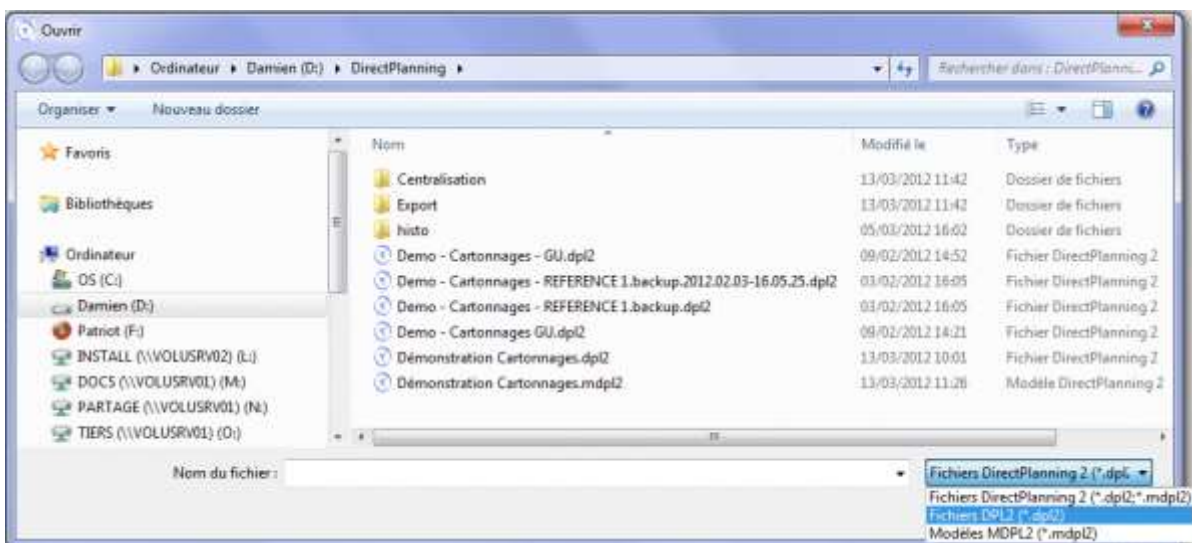


Figure 60 – Opening a Direct Planning 2 file

You can filter the file types displayed in the explorer: dpl2, mdpl2, or both.

Once you've opened a .dpl2 file, you can save it (in a local database on the machine running Direct Planning).

In that case, and if you are the administrator, an additional option is proposed in the wizard: overwriting a local, existing schedule.

More information on the next page

Overwriting a local, existing schedule

When the administrator opens an export file with the .dpl2 format, he may save it, overwriting an existing schedule.

You can create a new, local schedule: in that case, you save the schedule for the first time (so far, it was only a dpl2 file, not yet a database): follow the step explained on page 48.

Otherwise, you can overwrite a local, existing schedule. ↓



Figure 61 – Overwriting a local, existing schedule

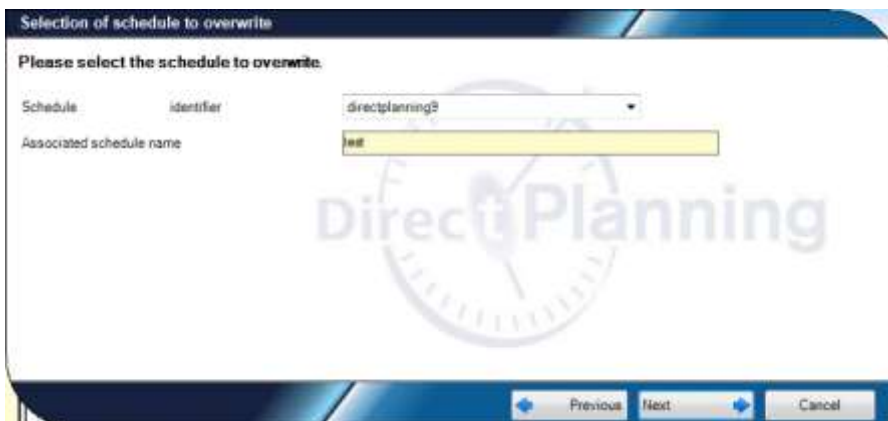
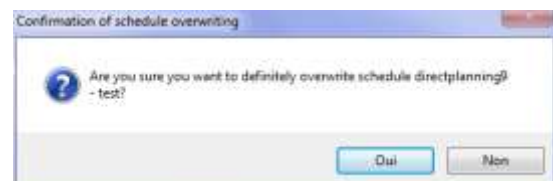


Figure 62 - Overwriting an existing schedule: selection of schedule

Each schedule is identified in the form *directplanningN*, where **N** represents a serial number attributed upon creation. Open the scroll list **Schedule ID** to choose the schedule to overwrite.

When you choose a schedule, its name is displayed below.

You will have to confirm. If you do so, the saving process goes on as described on page 50 and 50.



Opening a schedule

Section 30 Migrating a file from Direct Planning 1 format to a Direct Planning 2 database

Migrating a file from Direct Planning 1.2 format to version 2 is the same as creating a new schedule.

The former schedule (V.1.2) is not modified during this operation.

As a consequence, the rule for creating a new schedule applies:

To create a new schedule, you have to connect to the machine that will host this schedule.

As a matter of fact, any newly created schedule is necessarily saved in a local database on the machine that is running Direct Planning.

Once the schedule is saved, other users will be able to access it remotely.

To migrate a Direct Planning 1.2 file to a Direct Planning 2 database: **File** → **Open**

Then, select **Import a Direct Planning 1.2 schedule** (4) on page 54.

This opens the Windows explorer and lets you open a file with the **dpl** extension.

Select a **dpl** file and confirm.

Open the scrolling list to choose the default display mode of your schedule.



Figure 63 - Default display mode



Figure 64 – Selecting the type of target schedule

Select the type of schedule you want to create.

Your choice may be restricted by the type of migrated schedule.

The type of schedule is directly related to the license you have purchased.

Please select the right type before starting the migration.

Once the schedule is opened, you can save it as you would do with any newly created schedule: please go to page 48 to check the steps for saving a schedule for the first time. The initial schedule (version 1.2) stays unchanged.

What you should know when you migrate a schedule from 1.2 to 2

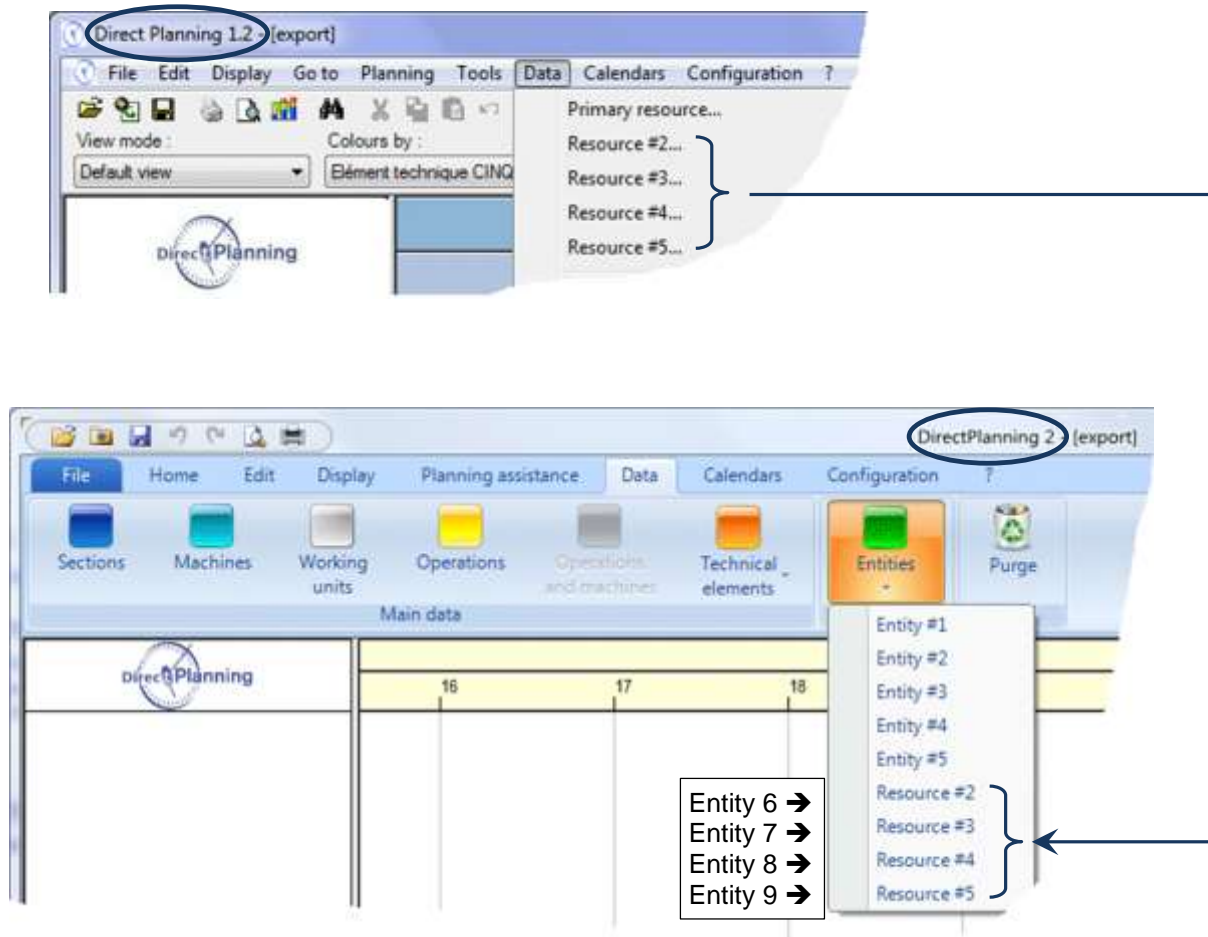
Particularity #1

The primary resource (or machine) is maintained as is.
The secondary resources 2, 3, 4 and 5 are converted to entities 6, 7, 8 and 9.

Explanation | In Direct Planning 1, we had 5 resources.
In Direct Planning 2, we have 1 resource (or machine).

In Direct Planning 1, we had 5 entities.
In Direct Planning 2, we have 10 entities.

This lets us convert resources 2, 3, 4 and 5 in entities 6, 7, 8 and 9.



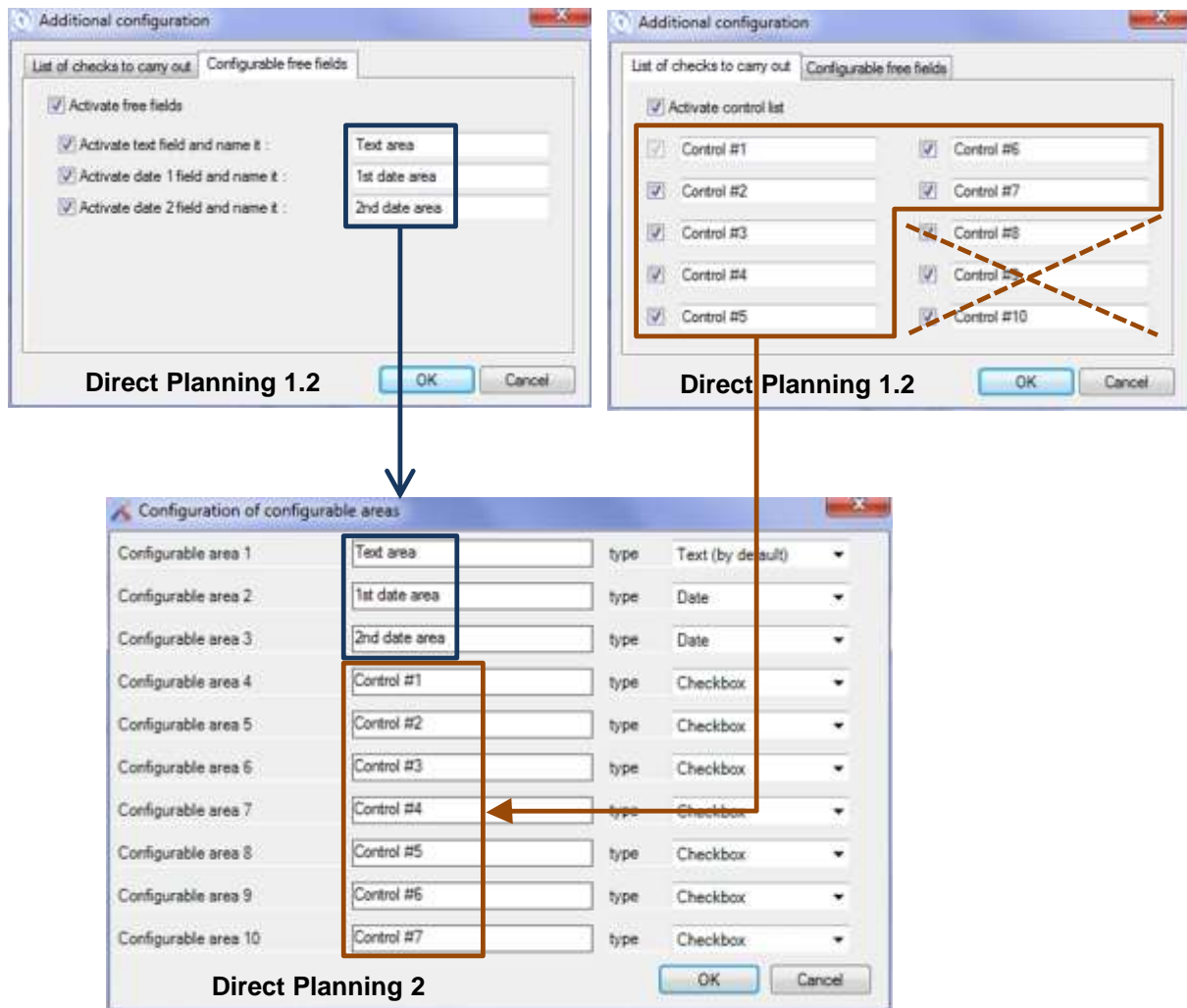
Note | According to your configuration, some options in the above menu may not feature in your menu.

Opening a schedule

Particularity #2

If a flag was using the 3 configurable areas (1 text-type area + 2 date-type areas) as well as the 10 controls (10 checkboxes), then the last 3 controls are not kept in Direct Planning 2.

In most of the cases, this constraint should not be an issue: as a matter of fact, it is highly unlikely that you use all of the 10 controls.



Particularity #3

The configurable lists of a 1.2 file are not maintained in Direct Planning 2.

Section 31 Opening a recent schedule

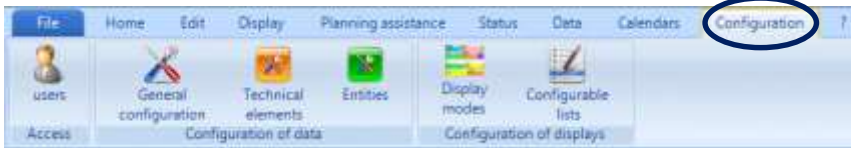
Menu **File** → **Recent**



The left part of this window lets you open one of the recently used schedules.

The right part lets you open one of the recently used files, whether they are DPL2 (page 51) or MDPL2 (page 52) files.

CONFIGURING DIRECT PLANNING



The *Configuration* lets you configure all the items of Direct Planning.

CHAPTER 14 GENERAL CONFIGURATION

This is where the administrator configures the general options of the schedule. These are operating options directly linked with the schedule itself.

Section 32 General tab

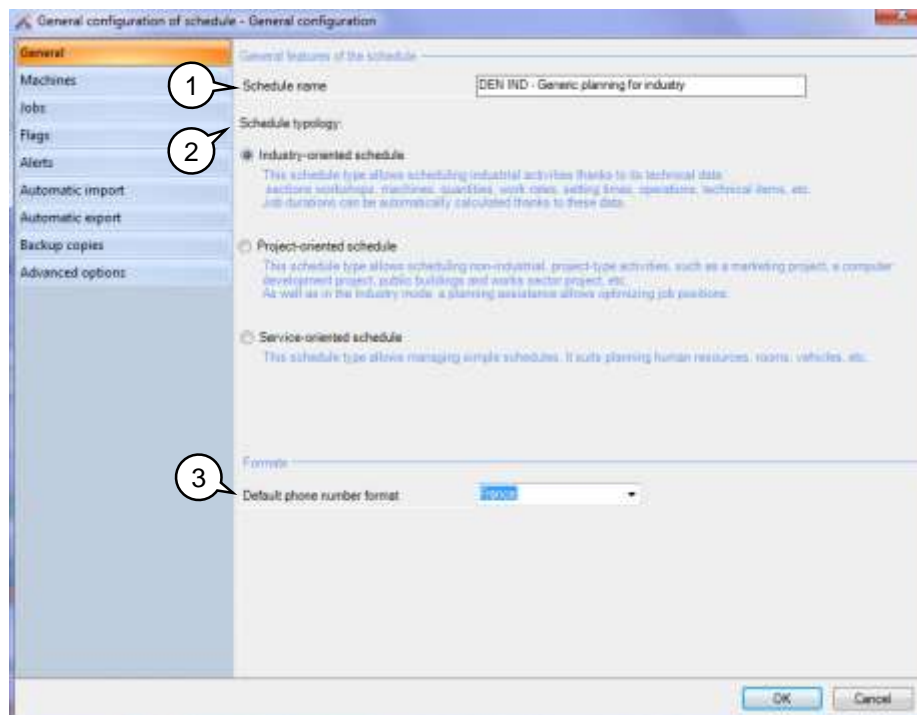


Figure 65 – General configuration

1) In this screen, you can change the name you gave your schedule upon creation.



2) As specified at the beginning of this document (page 7), there are three types of schedule:

- The Industry mode
- The Project mode
- The Service mode

The type of schedule is directly related to the license you have purchased.
Please select the right type before starting the configuration.

Note | You may create a schedule of a lower type than the purchased license type.
Example: you have a Project-type license: you may create Project-type schedules or Service-type schedules, but you can't create Industry-type schedules.

You can upgrade your type of schedule: Service → Project → Industry (provided that you have the required license)

But sometimes, it will be impossible to downgrade a type of schedule, particularly if you have already specific data for that kind of schedule.

3) Default phone number format: thanks to this feature, your phone numbers will be automatically formatted upon entry.

General Configuration

Section 33 Machines or Resources

The wording and the layout of this tab depend upon your type of schedule.

Industry Mode → Machines

The machines are the key piece of information of your schedule: each job that you schedule “occupies” a machine. One job = the activity of a machine at a given time.

Examples of machines

Cardboarding: Flexo Folder Gluer, Platen, Cutting machine

Machines are grouped by **sections** (or Workshops).

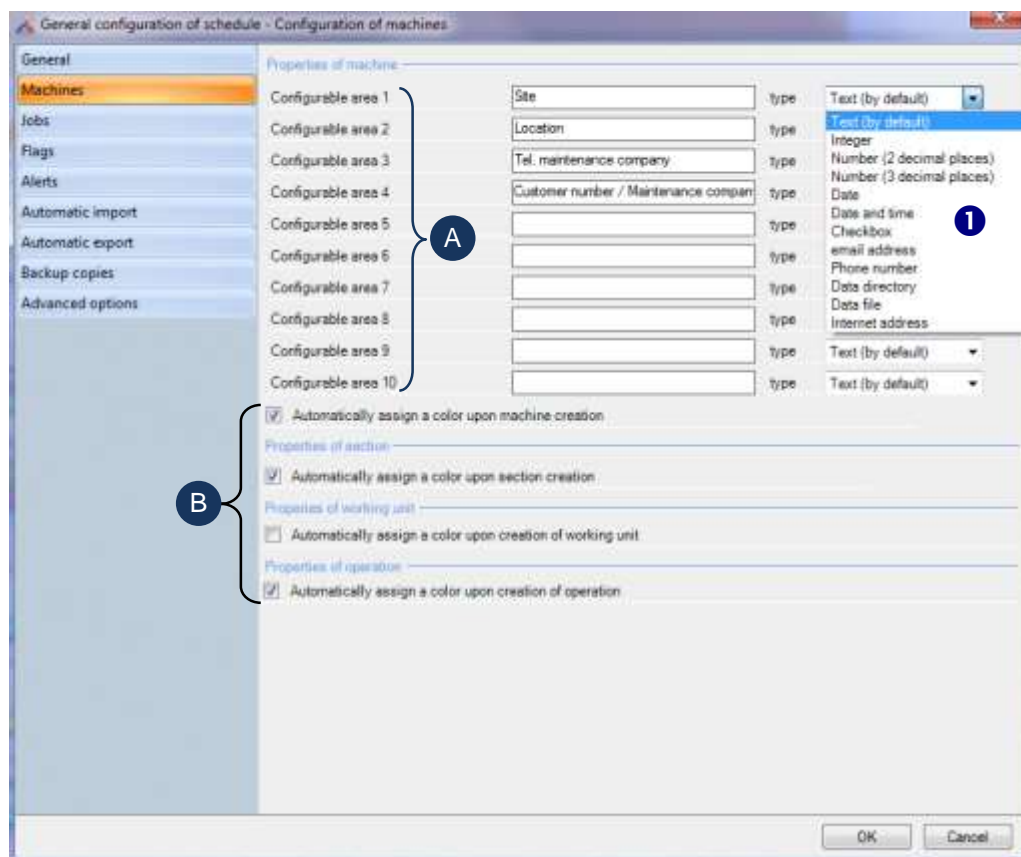


Figure 66 - Configuring machines (Industry mode)

- A** You can enrich the machine form, adding up to 10 configurable areas. These areas can be displayed in the schedule or in the lists. In the above example, we have defined 2 configurable areas. Each configurable area has its wording and type. The list **1** shows the different types available (text, numver, date, etc.) More information on the configurable areas and their types on page 106. Most of the data of Direct Planning allow configurable areas.
- B** When you create a machine, it can be automatically assigned a color, unless you decide to assign it a particular color.

General Configuration

Colors are very frequent in Direct Planning. Configuring the display modes (page 85), you can color jobs according to the machine, for example, or any other kind of data.

Most of the data of Direct Planning allow the management of colors.

This is how the authorized users will see the machine entry form. →

Code, Designation and Section are the basic information of a machine.

The technical data are explained in the following sections.

Some technical items are not involved in some machines: thus, in the technical item tab, you can uncheck those that are not relevant for this machine. ↘

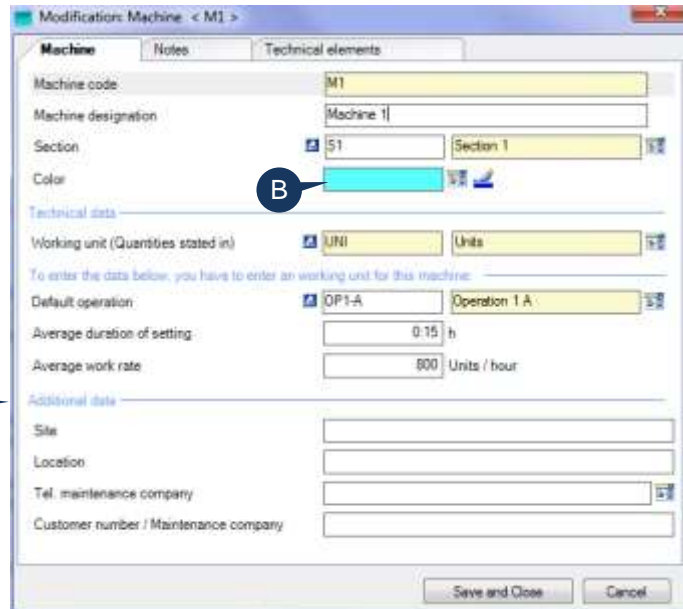


Figure 67 – Entering a machine (Industry mode)

In the opposite example, we declared that the *PANOTEC* machine is not concerned by the fold type. →



Service & Project Modes → Resources

The resources are the key piece of information of your schedule: each job that you schedule “occupies” a resource. One job = the activity of a resource at a given time.

The **ressources** are grouped by **resource families**.

The first step for customizing your software consists in naming your resource ❶. Please refer to page 66.

Each resource is characterized by a unique identifier ❷ and a designation ❸.

You can enrich the resource form, adding up to 10 configurable areas ❹.

They can be seen in the schedule or in the lists

The entry of the users will be checked against the selected data type.

Most of the data of Direct Planning allow configurable areas

When you create a resource, it can be automatically assigned a color ❺, unless you decide to assign it a particular color.

Colors are very frequent in Direct Planning. Configuring the display modes (page 85), you can color jobs according to the resource, for example, or any other kind of data.

Most of the data of Direct Planning allow the management of colors.

General Configuration

A resource belongs to a family, which you also name ⑥. Example *Site*.

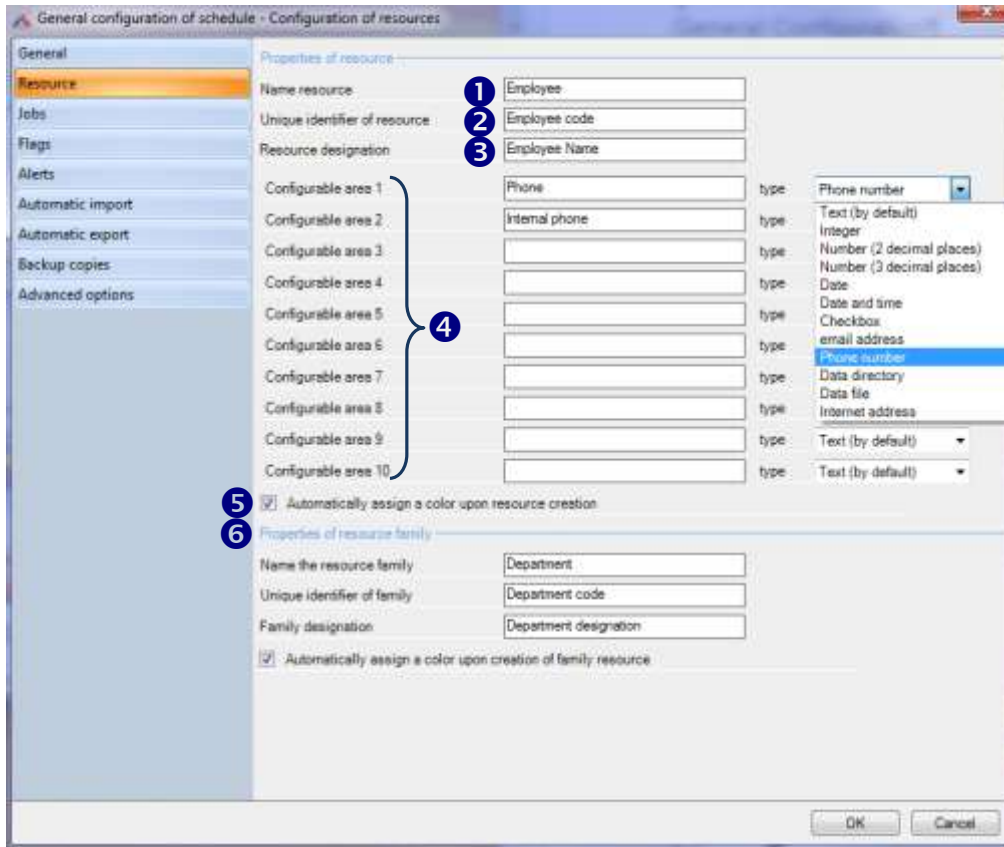


Figure 68 – Configuring a resource ↑

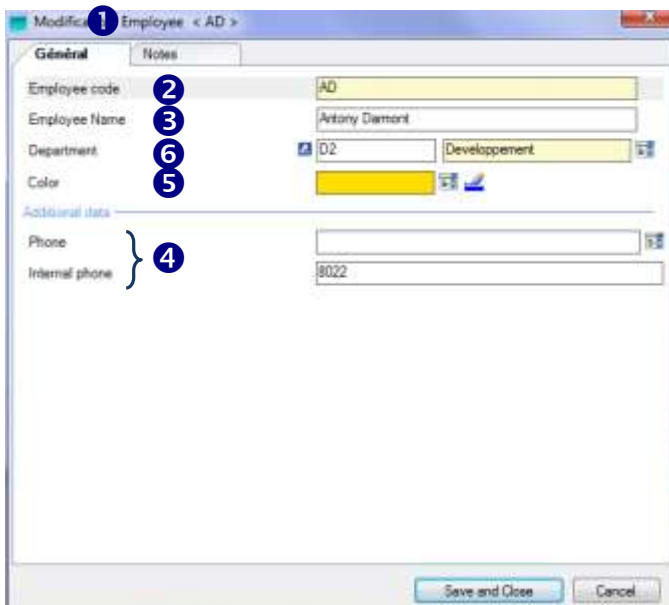


Figure 69 – Entering a resource

When you're done configuring the resource as shown on page 66, here's how the authorized users will see the resource entry form.



Section 34 Jobs

In Direct Planning, the job represents the item schedules on a machine (in **Industry** mode) or a resource (**Project** or **Service** modes).
 A rectangle in the schedule = a job

- 1 You can enrich the entry of a job, adding up to 10 configurable areas. These areas can be displayed in the schedule or in the lists. The entry of the users will be checked against the selected data type. Most of the data of Direct Planning allow configurable areas.

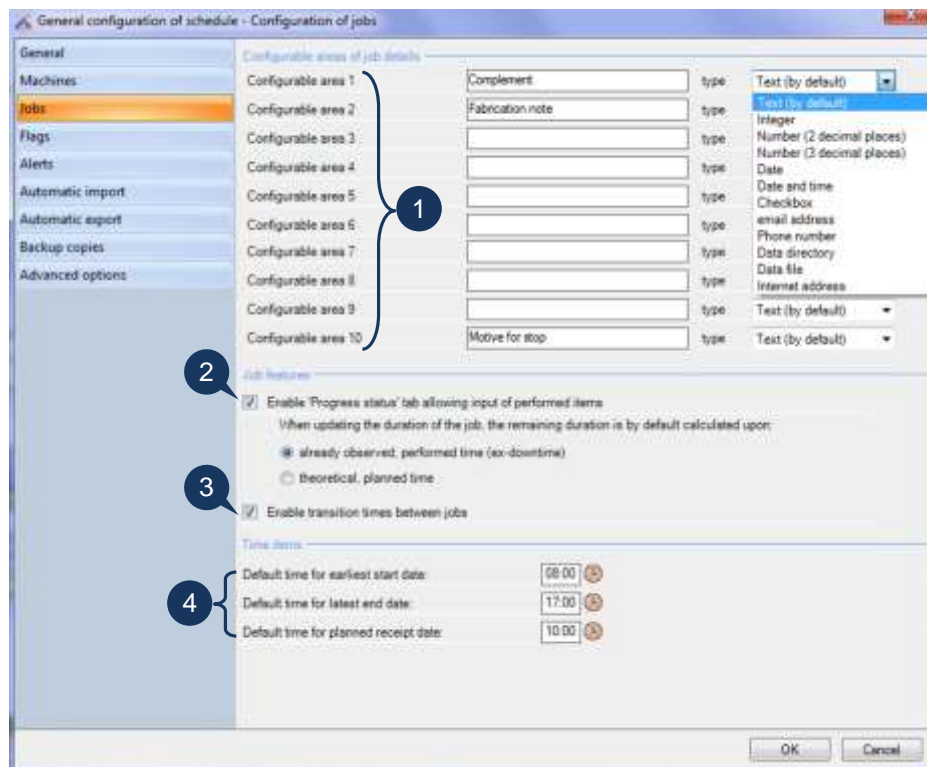



Figure 70 – Configuring jobs in Industry mode

- 3 Using transition times (Industry mode , Integral offer)

A *transition time between two jobs* is the required time to change the machine configuration between two jobs (changing tools, mounting, dismounting, sizing...)

It is an additional notion to the traditional “Setup time” that exists on any job.
 In Direct Planning 2, the transition times can be automatically determined according to a change in a technical item between 2 jobs.
 They can also be modified or manually imposed.
 More details about transition times on page 44.
 Tick the box if you want to manage transition times.

General Configuration

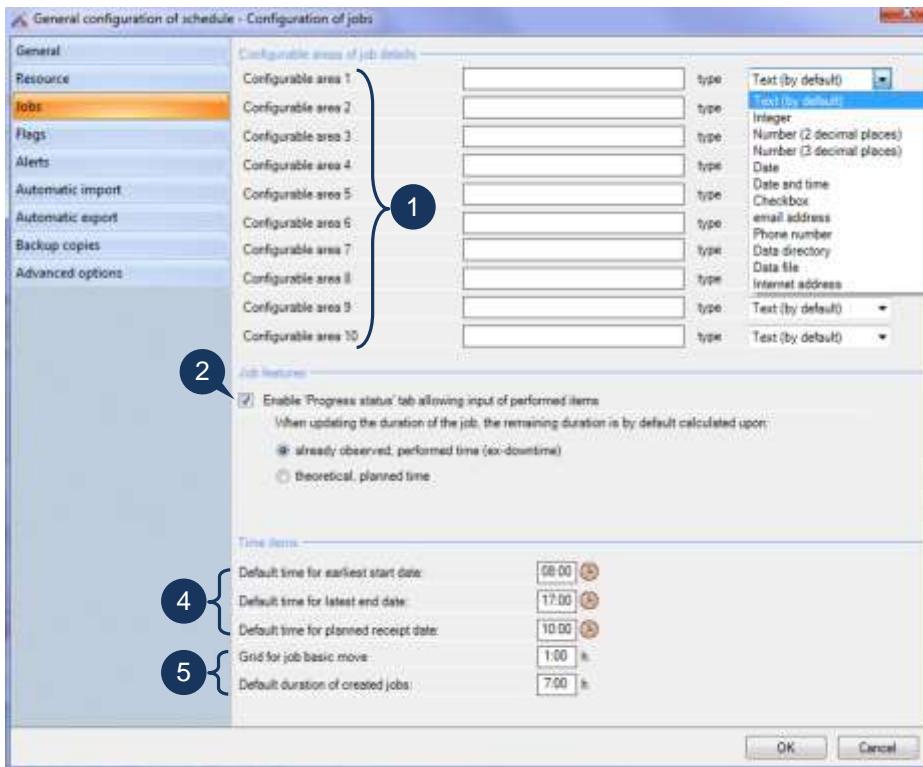


Figure 71 - Configuring jobs in Project mode ↑

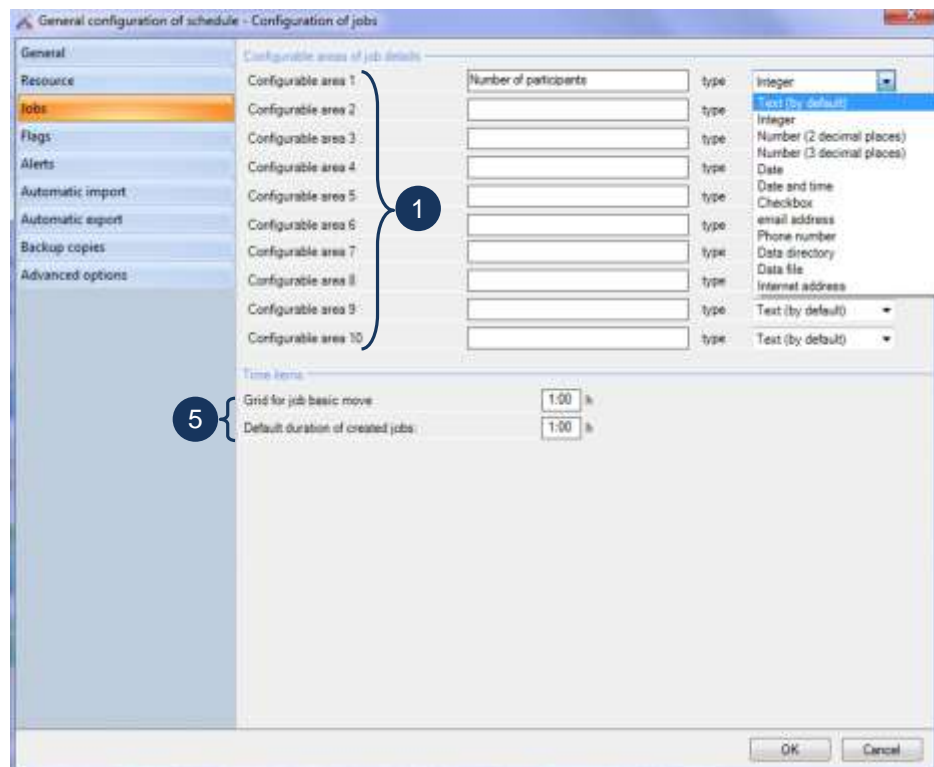


Figure 72 - Configuring jobs in Service mode ↑

2 Enable Progress status tab (Industry and Project modes)

In the job detail window, the Progress status tab lets you enter performed quantities and durations. Check this box if you want to use this feature.

If you manage performed quantities and durations, you have to select the calculation mode or the remaining duration of a job. By default, it is calculated according to a realization speed in relation with:

- The already observed, performed time
- The theoretical, planned time

4 Default times... (Industry and Project modes)

In the job detail window, you can specify:

- An earliest start date (time constraints)
- A latest end date (time constraints)
- A planned receipt date (multi-status flag, pending item receipt)

In that case, Direct Planning will propose a default time.

You define these defaults times here.

Of course, these are default values, which you can still modify upon job entry.

5 Grid for job basic moves (Project and Service modes)

This function is intended to ease moving job in the schedule.

The value you enter here is used when you move a job in the schedule: the job will automatically align on this “pace”.

Example | You specify a pace of one hour.
| You want to move a job that currently starts at 10 o'clock.
| You can move it to 11 o'clock, 12 o'clock, 9 o'clock, 8 o'clock...
| But you can't move it to 11:15, 12:35, 09:20, 08:50...

However, you can still override this setting in the job detail window.

5 Default duration of created jobs (Project and Service modes)

This function is intended to ease creating jobs in the schedule.

It lets you specify a minimum duration of the jobs that you create or resize in the *Job creation* mode, in the planning area.

Example | You specify a pace of one hour.
| You create a job with a mouse movement, in the planning area.
| The duration of the created job is necessarily a multiple of one hour.

However, you can still override this setting in the job detail window.

General Configuration

Section 35 Flags

Flags are coloured, possibly hatched bullets, located above or on the right side of the jobs. They allow the planner to instantly view the various status of the job. They may be compared to clips and stickers attached to index cards on traditional wall schedules.

Examples

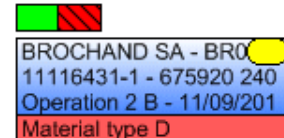
Schedules, Available material, Received order, Ready for printing
Confirmation of course, Computer maintenance, Pending receipt
Stereos, Die-cutting forms, Orther items, Customer dispute

You can configure up to 10 flags

- 5 horizontal flags, located on top of a job
- 5 vertical flags, located on the right side of the job

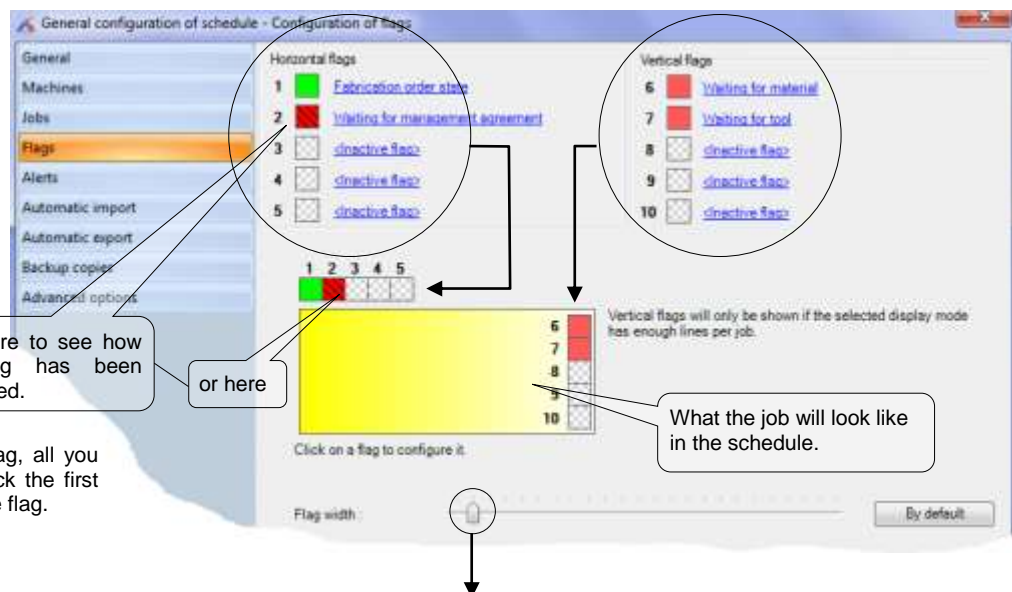
A flag is characterized by:

- Its position: on top of the job or on the right side
- Its type: indicative, multi-state flag (maxi 5 states) or multi-state flag pending item receipt. An indicative flag has 2 states. A multi-status flag can have up to 5 states.
- Its visual layout according to its type and whether it's active or not
- Its scope (local or extended)
- Possible complements, for the multi-state flags.



Job with 2 horizontal flags and one vertical flag

Figure 73 – Configuring flags ↓



In the opposite example, 4 flags have been enabled.

Click here to see how this flag has been configured.

or here

To add a new flag, all you have to do is click the first available, inactive flag.

Vertical flags will only be shown if the selected display mode has enough lines per job.

What the job will look like in the schedule.

Click on a flag to configure it.

Flag width: [Slider] [By default]

Move the cursor to the left or to the right to decrease or increase the value for the width of the flags. Click the **Default** button to get back to the initial settings.

Remark | In fact, it is a maximum width: if required by the selected display mode, the flag width may be smaller than the one you have set.

Clicking on an activated flag (already configured) or an inactive flag (not yet used) opens the flag configuration window (following pages).

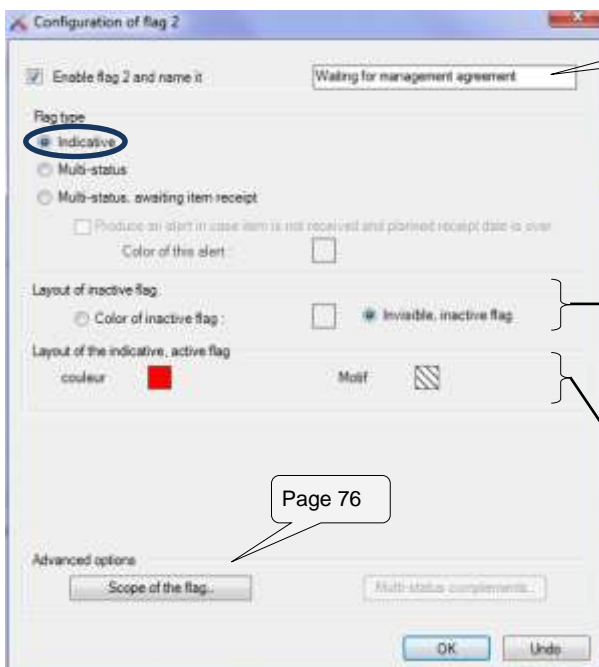
Configuring an indicative flag

This is the simplest case: an indicative flag has 2 states: active, or inactive. It can be assimilated to a flag that is raised or lowered, or to a simple on/off switch.

Creating or modifying a job, a user can activate or inactivate each flag for each job.

Select the button next to **Indicative**.

- Color of the inactive flag: if you select this button, you have to choose a color, clicking the small colored square on the right. The inactive flag will be displayed in this color (which is not the case in our example).
- Invisible, inactive flag: if you select this button, the inactive flag won't be displayed (which is the case in our example).



Tick this box to activate a flag, and then give it a name.

When the flag is inactive, you are given 2 visual possibilities:

- It has a color (so it is visible).
For example:
Green flag → agreement
Red flag → no agreement
- It is invisible.
In other words, in our example: no flag, no agreement

Click the small square on the left side (red, in our example) to choose a color. Click the small square on the right side to choose a pattern.

Figure 74 – Configuring an indicative flag

General Configuration

Configuring a multi-status flag

A multi-status flag can take one out of 5 status, which you can configure here.

For each status, you can specify the designation, the color and the pattern.

Upon job creation or modification, the user can activate the flag (ticking the relevant status) or deactivate it.

Moreover, the multi-status flags have additional characteristics that are discussed further in this section (multi-status complements).

When the flag is inactive, you are given 2 visual possibilities:

1. Either it has a color (so it is visible).
2. Or it is invisible.

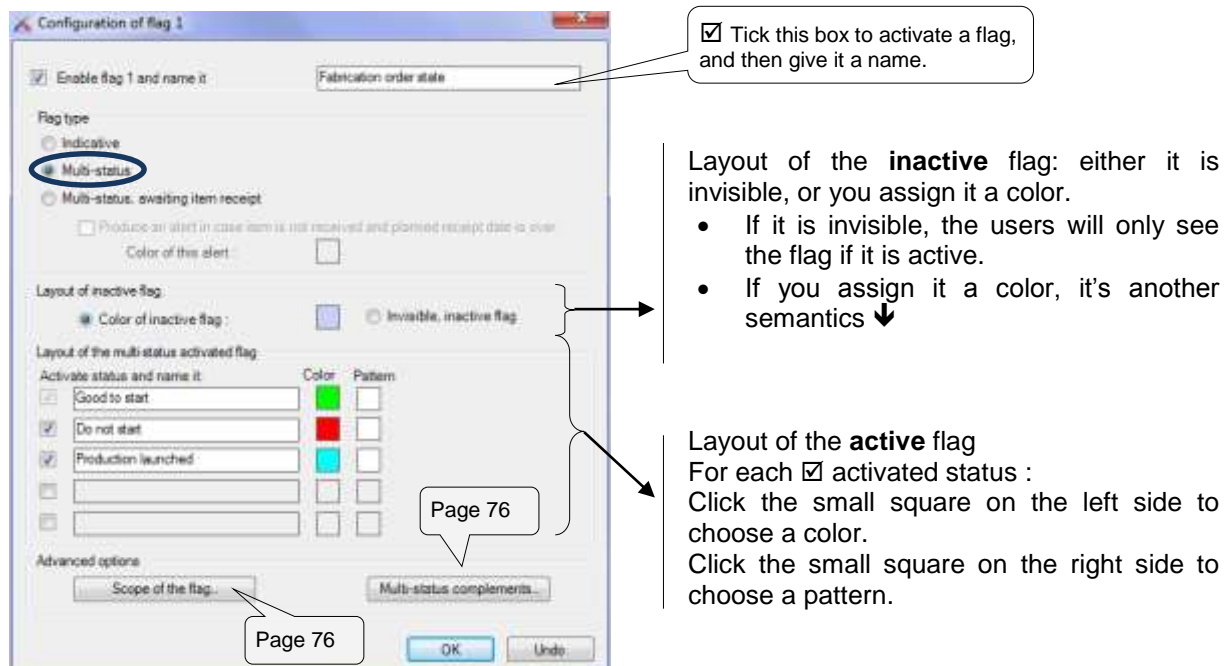
When the flag is active, you can specify a color and a pattern for each of the 5 available states (you don't have to use them all, which is the case in our example).

In the general configuration window of the flags (page 70), choose an inactive flag (or one of the flags 1 to 3 of our example).

Select the button next to the **Multi-status** flag.

- Color of the inactive flag: if you select this button, you have to choose a color, clicking the small colored square on the right.
The inactive flag will be displayed in this color (which is the case in our example).
- Invisible, inactive flag: if you select this button, the inactive flag won't be displayed (which is not the case in our example).

Choose a color and a pattern, clicking the relevant squares.



Tick this box to activate a flag, and then give it a name.

Layout of the **inactive** flag: either it is invisible, or you assign it a color.

- If it is invisible, the users will only see the flag if it is active.
- If you assign it a color, it's another semantics ↓

Layout of the **active** flag
For each activated status :
Click the small square on the left side to choose a color.
Click the small square on the right side to choose a pattern.

Figure 75 – Configuring a multi-status flag

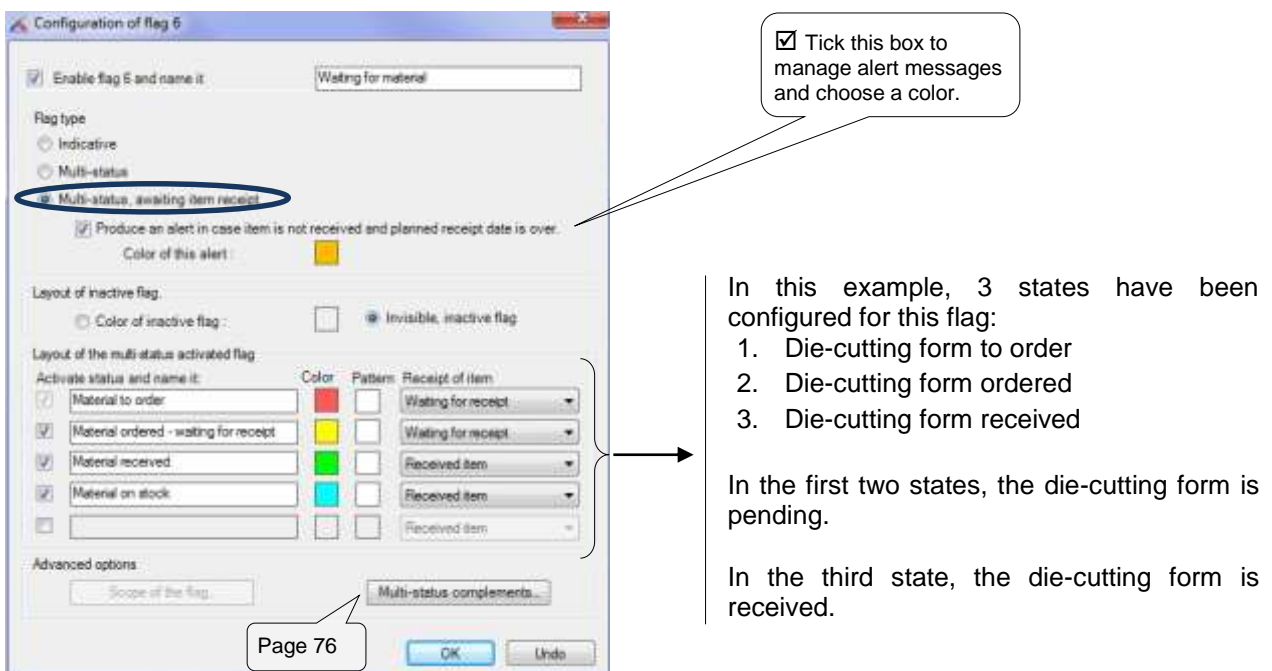
Configuring a multi-status flag pending item receipt

This flag has the same characteristics as the ones described on the previous page, but it has an additional feature.

Before starting a job, some prerequisites may have to be completed. For example, a tool is expected, making it possible to start the job.

This flag is assigned a date of expected receipt: for example, the tool is expected on such a date. Upon tool receipt, it is reported on the flag, and the job can start on time.

On the expected date, if the tool has not been received, a message will warn about the delay.



Tick this box to manage alert messages and choose a color.

In this example, 3 states have been configured for this flag:

1. Die-cutting form to order
2. Die-cutting form ordered
3. Die-cutting form received

In the first two states, the die-cutting form is pending.

In the third state, the die-cutting form is received.

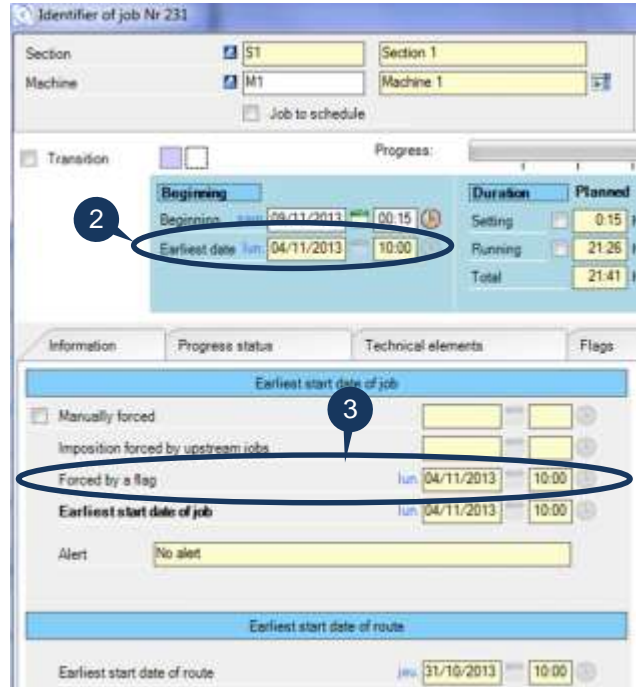
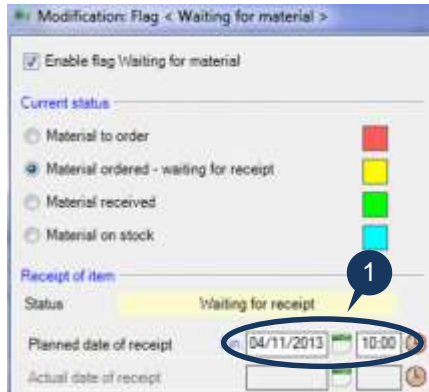
Figure 76 – Configuring a multi-status flag pending item receipt.

The following pages explain how the users see this flag.

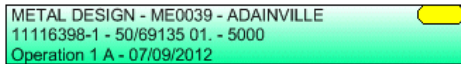
General Configuration

In the job detail window, in the flag tab, you set the flag **Material**. You specify that the material is expected on November 4th, 2013 at 10:00 am (❶).

This date is recalled in the main part of the job window (❷) and in the tab **Time impositions** (❸).

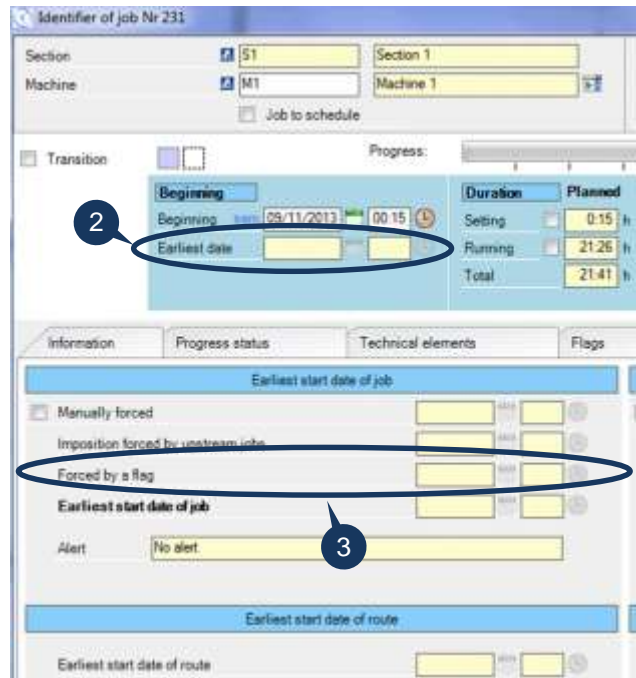


In the schedule, the job is displayed with the flag in yellow. ↓

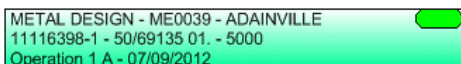


Upon receipt of the material, you inform Direct Planning, selecting the button (❹) and entering the date (❺).

The constraint is lifted in the main part of the job window (❷) and in the tab **Time constraints** (❸).

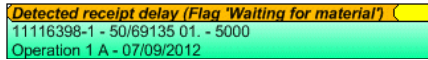


In the schedule, the job is displayed with the flag in green. ↓



What happens if the material is late? You'll know it on the next page. ⇨⇨⇨

The die-cutting form is late: an alert (warning) is displayed on the job →



Double-clicking the job opens the job detail window, where the **Flags** tab is highlighted to draw your attention ↓

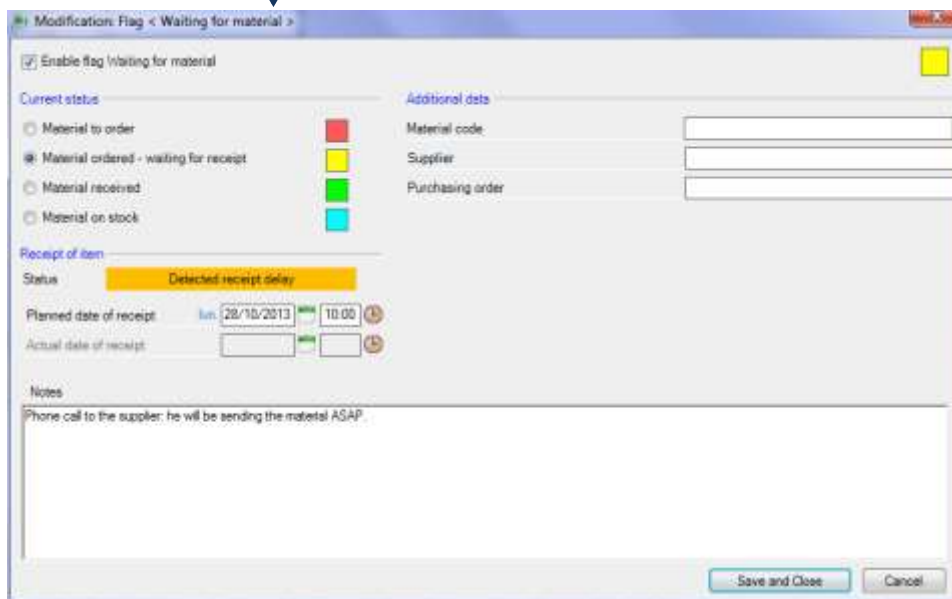


Figure 77 – Details of a flag pending item receipt

In the above screenshot, we have entered a short comment saying that an action has been taken.

General Configuration

Scope of the flag

The scope of the flag may be local or extended.

- ⊙ If you select **Local scope** (default value), only the flag of the current job will be changed when the user assigns this flag to a job.
- ⊙ If you select **Extended scope**, changing this flag will be spread to all the jobs with the entity.



In the second case, you have to select the entity in the scrolling list.

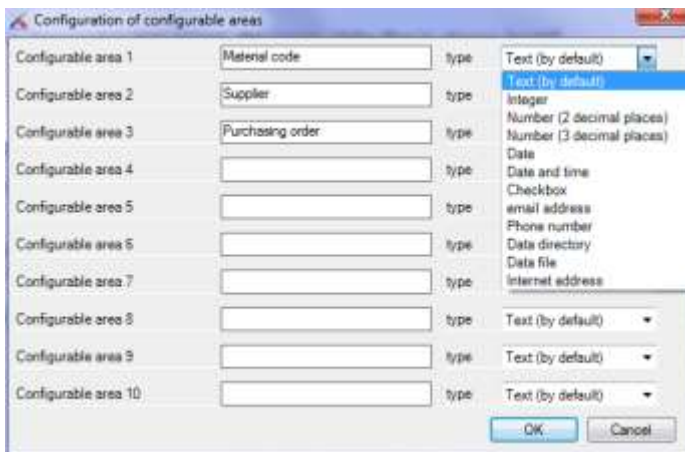
In this example, we chose to spread the modification of this flag to all the jobs with the same work order.

For a multi-state flag pending item receipt, **the scope of the flag is always local**.

Multi-status complements

These are configurable areas, just for additional information, that you can implement for each multi-status flag.

In the job detail window, in the flag tab, the end user will have the possibility to enter these customizable areas in a format that you configure here.



For each flag, you can specify up to 10 configurable areas.

For each configurable area, you specify a wording and an entry format.

In the opposite example, we declared 4 configurable areas:

- The stereo number will have to be entered in the form of an integer.
- The order and availability dates will have to be entered in the form of a date.
- The compliance will have to be entered in the form of a checkbox.

Figure 78 – Configurable areas of multi-status flags

Section 36 Alerts (warning messages)

Direct Planning can automatically warn you in case of a date-related problem on a job.

These alerts will be automatically displayed on the first line of any involved job, if you have asked for it (page 89, bullet 5) et and if the user has not disabled them.

On the other hand, they will automatically disappear if a job move solves the problem.

The job starts too early.


- A** The job starts **N** hour(s) before its earliest start date. **N** is defaulted to zero.
The planning assistance always complies with the earliest start date of a job.
This warning message will be displayed only if the planning assistance is disabled.

The job is late.

- B** The job ends **N** hour(s) after its latest end date. **N** is defaulted to zero.
You can specify a safety period before the alert is displayed, thus having the alert displayed only if the latest end date has been expired for more than **N** hours.

The job may encounter delay.

- C** The job ends **N** hour(s) before its latest end date. **N** is defaulted to 4.
This is a convenient alert to warn you when uncompleted jobs are “dangerously” getting close to their latest end date.

For each of these 3 alerts, you can specify the background color of the message: just click  on the right of the rectangle to open the color selection window.

- D** Occasionally, you can create manual alerts (job detail window, **Alerts** tab).
You can configure the background color of these alerts.

- E** Last, you can also choose the color of the jobs that are involved in a cycle.

When the planning assistance is enabled, the program may be unable to automatically move jobs in order to comply with all the constraints (earliest start date and route precedence). In that case, the planning assistance is disabled and the involved jobs are identified by this alert.

Examples of cycles

Trying to move a job, you create a paradox situation called cycle.
The following 2 examples illustrate this case:



Let's say we have a route made of 3 jobs A, B and C.
If you move the job C before the job A, you create an impossible case, since the job C is supposed to be after the job B, which in turn is after the job A.



Let's say we have a route made of jobs D and E, and another route made of jobs F and G.
If you move the job G before the job D, you create another impossible case.
Although the jobs E and F are not linked, the job F is after the job E.

General Configuration

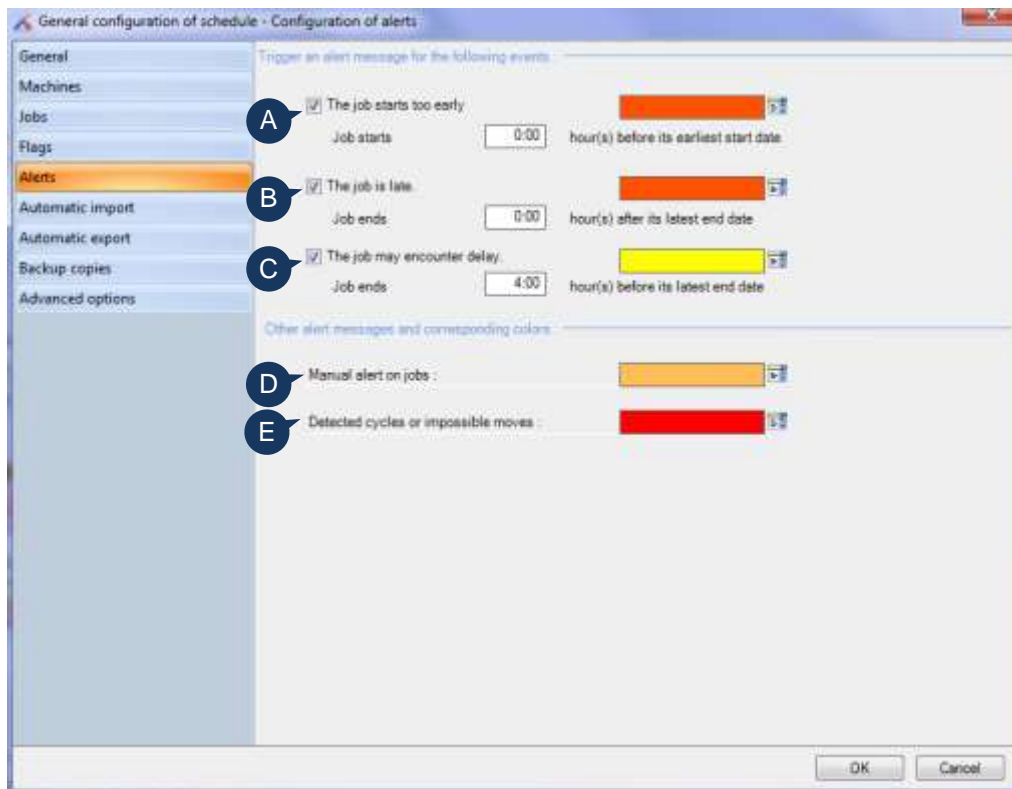


Figure 79 - Configuring alerts in Industry and Project modes

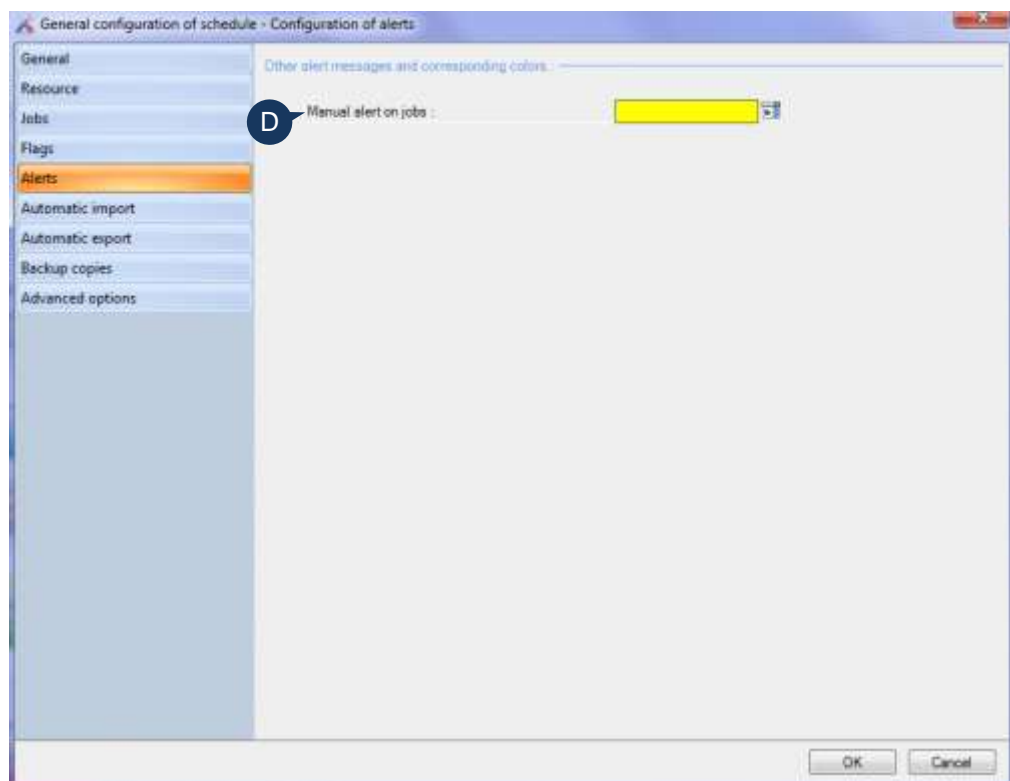



Figure 80 - Configuring alerts in Service mode

Section 37 Automatic Import

In order to save you re-keying of data, Direct Planning is able to automatically import data from you information system (ERP, CAPM, Excel® ...), provided they are in the expected CSV format. The technical elements, the entities (orders, customers, etc.), the jobs and the links can thus be automatically created in the schedule.



Figure 81 – Configuring import

- 1** Tick the box to enable automatic import (page 114).
Once the box is ticked, you can enter the information regarding the importation.
As shown in the screen, the automatic import is required if some users are connected with restricted rights (page 103).
- 2** To specify the folder containing the files to import, click  on the right, then browse the file system of your server to reach the relevant folder.
You have to specify a shared folder so that any workstation can have access to it.
You can also click the button below to check you really have the write access in this folder.
- 3** Tick this box if you don't want the imported jobs to be positioned earlier than the date of import. This prevents from positioning jobs "in the past" in case the ERP has set a wrong start date for a job.
- 4** Leave this bock unchecked if you want a backup to be performed after an error-free import.
If you tick this box, NO BACKUP will be performed.
In a classic operating mode, it is normal to automatically backup the schedule after a successful import.
- 5** Tick this box to automatically purge the imported items that are no longer up to date.
The age of imports can be configured: it is defaulted to 60 days.
The import log is recorded in the **histo** sub-folder of the folder specified in (2).
The detail of the files that are saved in this folder is given on page 114.

General Configuration

Section 38 Automatic export

Similarly, in order to inform your information system of the current status of the schedule, Direct Planning is able to produce export files with the CSV format.

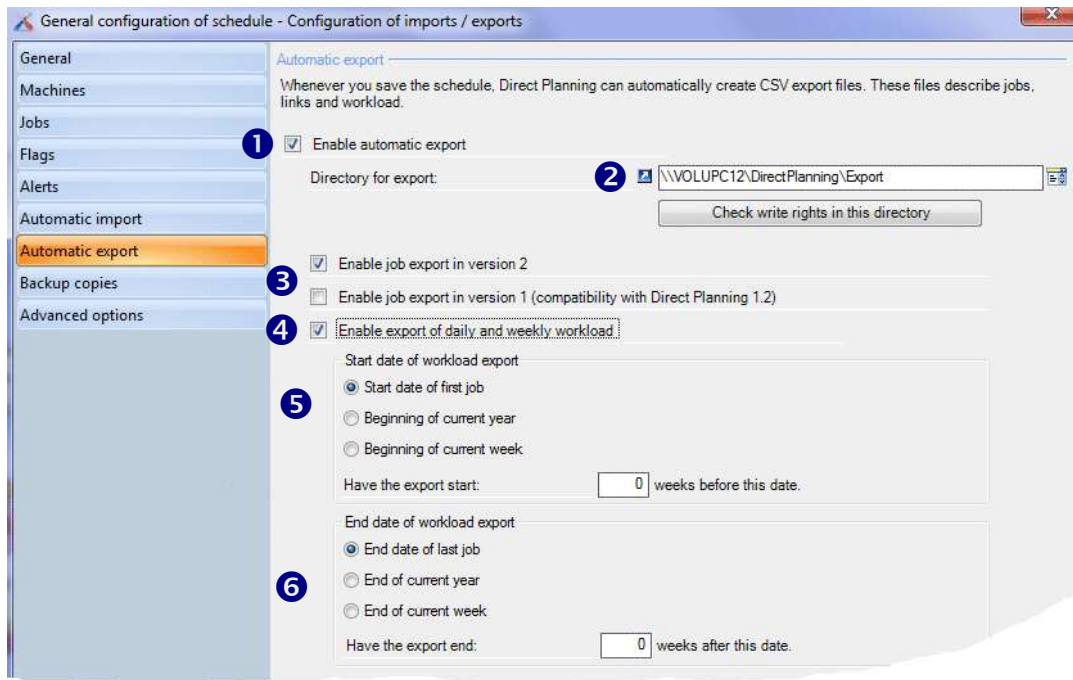



Figure 82 - Configuring export

- 1** Tick the box to enable automatic export.
Once the box is ticked, you can enter the information regarding the exportation.
- 2** To specify the folder containing the files to export, click  on the right, then browse the file system of your server to reach the relevant folder.
You have to specify a shared folder so that any workstation can have access to it.
You can also click the button below to check you really have the write access in this folder.
- 3** Tick the box *version 2* to have the export be performed in the most recent version.
Tick the box *version 1* so that the export is compatible with the older versions of Direct Planning (1.x).
- 4** Tick this box to enable the export of the daily and weekly workload.
This lets you choose the start and end dates of the workload export.
- 5** As regards the start date of the workload export, you are offered 3 possibilities.
Select the relevant button .
- 6** As regards the end date of the workload export, you are offered 3 possibilities.
Select the relevant button .

Section 39 Backup copies

The backup copies are made in the DPL2 format.

What is the DPL2 format?

A schedule is saved in an SQL Server database.

Thus, it is not materialized by a file that you can copy via the explorer or any backup management tool.

However, you can export a schedule in a DPL2 format file: this kind of file can be copied or saved with any tool running on Windows.

Local backup

The automatic backup of Direct Planning provides a basic safety.

It is performed every hour, even if the user has not deliberately performed any backup.


Thus, further to a problem, you can always rely on a recent backup copy.

Backup is performed in the following folder:

C:\Users\[user]\AppData\Roaming\Volume Software\DirectPlanning 2\backup

You can directly access this folder, clicking the button (1).

Centralized backup (network)

An additional security consists in saving your schedule on another machine, in a shared, centralized directory. To do so, tick the relevant box (2) and specify the backup folder, clicking  on the right.

This folder centralizes all the backups performed by all the workstations.

It can be included in the backup procedure of your enterprise.

Click the button below to check that you have the required rights to write in this folder.

Purging the backups

Finally, you can ask for an automatic purge of the expired backups, ticking the relevant box (3).

The age of backups can be configured: it is defaulted to 60 years.

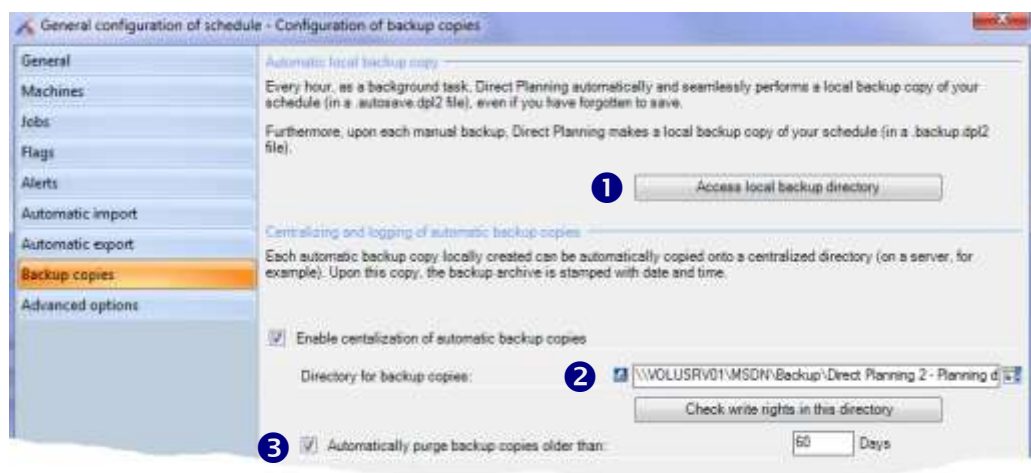


Figure 83 – Configuring backup copies

General Configuration

Summary of backups

In this chart

- The manual backup is launched by the user.
- The automatic backup is automatically performed by Direct Planning.
- The critical backup is automatically performed upon a crash.
It may let you retrieve critical information.
You can also send it to us for a diagnosis.

Backups	Répertoire local	Répertoire de centralisation (si activé <input checked="" type="checkbox"/> ②)
Manual	[Schedule name].[Num].backup.dpl2	[Schedule name].[Num].backup.dpl2 [Schedule name].[Num].backup.[date].dpl2
Automatic	[Schedule name].[Num].autosave.dpl2	[Schedule name].autosave.[date].dpl2
Critical	[Schedule name].autosave-error.[date].dpl2	

[Num] indicates the database number, in order to distinguish the different databases having the same schedule name.

[date] indicates that the file is time and date stamped.

Section 40 Advanced options



Figure 84 – Configuring advanced options

- ① When a user logs in to Direct Planning, he may tick the box *Remember my user name*. This prevents him from having to enter his name each time he logs in.

Uncheck this box if, as a security measure, you don't want the user to save his user name. This is recommended in the case of a shared computer, and, more generally speaking, to comply with the security rules of your enterprise.

- ② Similarly, a user may tick the box *Remember my password*. This prevents him from having to enter his password each time he logs in.

Uncheck this box if, as a security measure, you don't want the user to save his password. This is recommended in the case of a shared computer, and, more generally speaking, to comply with the security rules of your enterprise.

CHAPTER 15 TECHNICAL ELEMENTS

 This feature is only available in industry mode.

The technical elements play an important role in determining the setup time and the work rate. They may also be used to determine the transition times (page 44). Finally, their colorization allows highlighting them according to the display mode (page 85).

Their names are varied and depend on your business and/or your corporate terminology.

Each technical element is characterized by:

- Its name
- Its unique identifier
- Its designation

Moreover, you can have Direct Planning automatically assign a color each time a user creates a technical element.

The user can still change the color, whether it has been automatically assigned or not.

You can configure up to 20 technical elements.

For each machine, you can disable the technical elements that make no sense (for example, you can disable the **Print type** for a machine that doesn't print) (page 64).

To enable a technical element, tick the box and name it.

Then, specify its properties: unique identifier and designation.

If you wish, let Direct Planning automatically assign a color upon creation of a technical element.

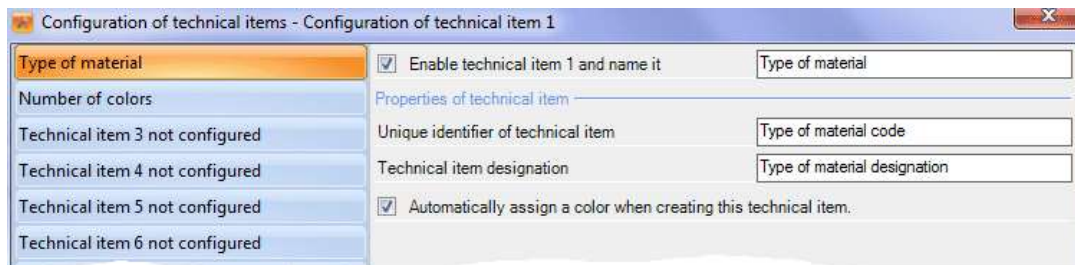


Figure 85 – Configuring a technical element

In this example, 2 technical elements have been declared:

Type of material
Number of colors

Entities

CHAPTER 16 ENTITIES

The entities correspond to data lists that evolve with your activity (customers, orders, articles, projects...).

Configuring an entity lets you have a list for each of these data.

You can create up to 10 entities and customize them to meet your needs.
A few examples...

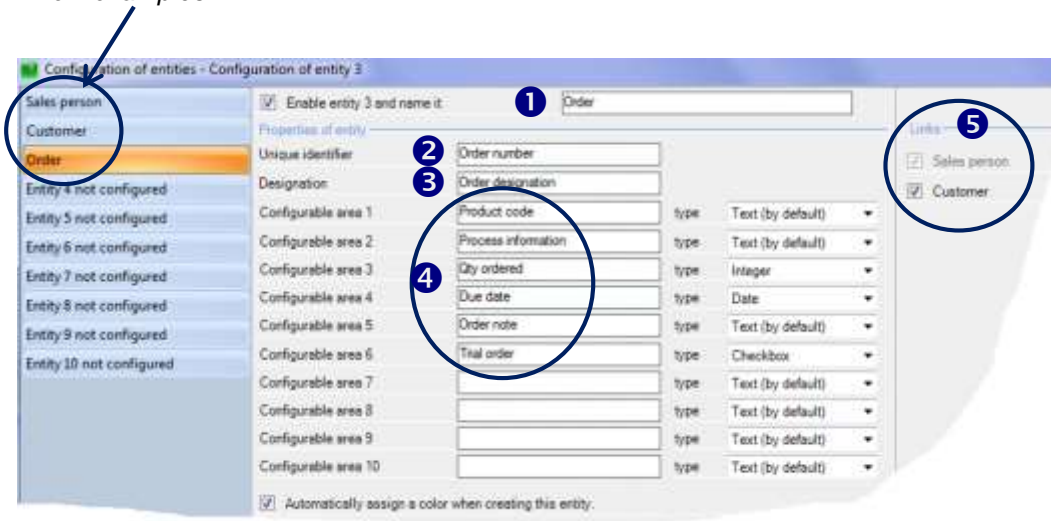


Figure 86 – Configuring an entity ↑

First, you have to enable and name your entities (1).
 Each entity is characterized by a unique identifier (2), a designation (3) and configurable areas (4):
 you customize these configurable areas according to your needs.

↑ Once you've configured the entity **Orders**, for example, this is how the users will see the entry screen →

Entities can be ranked. (5)
 The **Order** entity as been linked to the **Customer** entity, which in turn is linked to the **Sales person** entity.
 In our example, when we enter the **BA0452** customer code, the **COG** sales person code is automatically recalled.

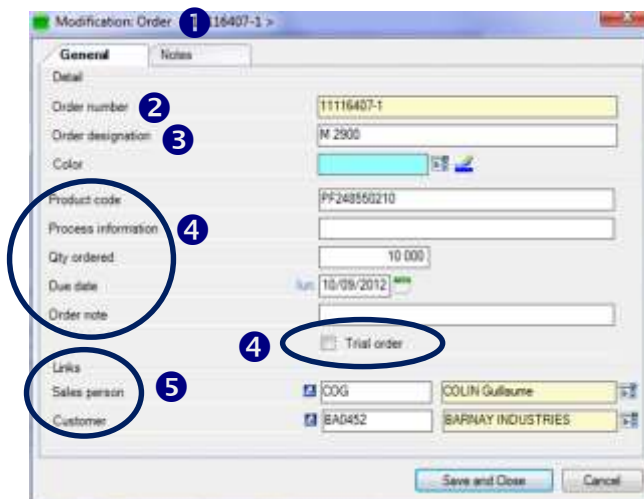


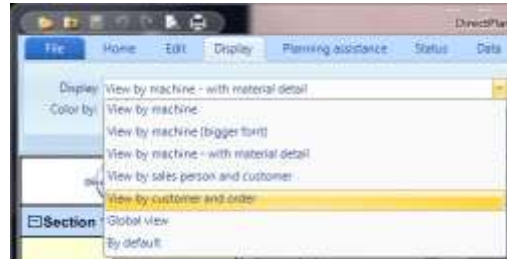
Figure 87 – Entering an entity

CHAPTER 17 DISPLAY MODES

This is an original and important feature of Direct Planning: it lets you define as many display modes as you wish according to each user's profile and requirement.

The display mode can be changed in the Display tab. There can also be a default value for each user.

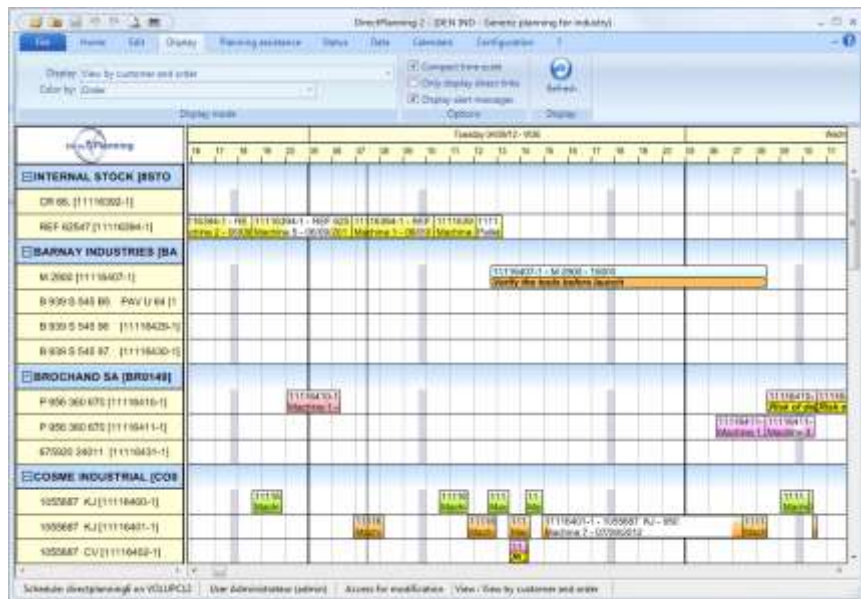
Below, you can see 2 different display modes for the same schedule. The displayed items, the projection of the schedule, the time scale, the colorization and many other things can be defined in the display modes.



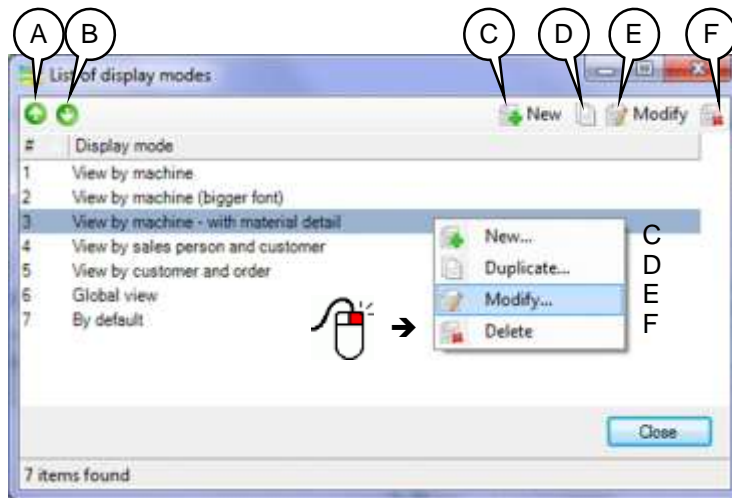
← Display mode by machines and sections (or resources and resource families)

The same schedule, seen from another angle:

Display mode by customers and orders →



Display modes



When you select **Display modes** in the **Configuration** menu, the list of the display modes already created is displayed

The default display mode (which is on top of the list) is always there and cannot be deleted.

This ensures that there's always an available display mode to use the schedule.

Figure 88 – List of display modes

- A You can change the order in which the display modes are shown in the list.
To move a display mode up, select it and click this button.
- B To move a display mode down, select it and click this button.
- C Create a new display mode
- D Duplicate the selected display mode to create a new one (almost) identical.
Don't forget to assign the new display mode a new name.
- E Modify the selected display mode.
Also available by double-clicking the display mode.
If you don't have the required rights, the wording of this button is Consultation.
- F Delete the selected display mode.

The screenshots of the following pages refer to the display mode *By Section / Machine* which is selected in the above screen.

Section 41 Schedule display

This first tab lets you change the way the schedule is displayed.

Amongst others, it lets you manage the **projection** of the schedule.

The display modes of the jobs themselves will be discussed on page 89.

The bullets ① to ⑨ are explained on page 88.

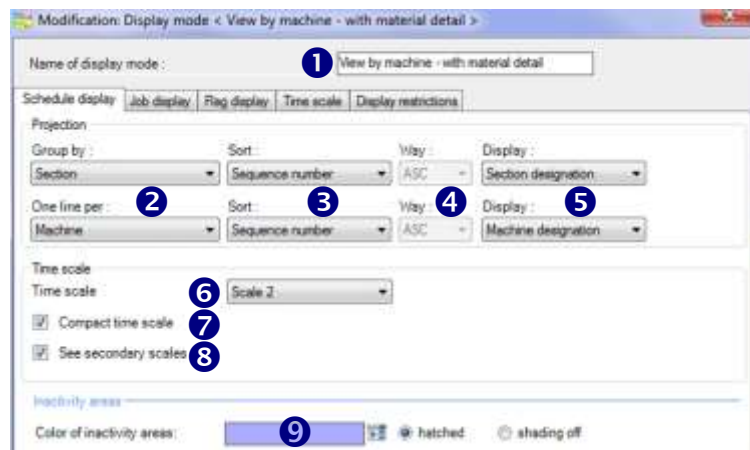


Figure 89 – Configuring the schedule display

What is the projection?

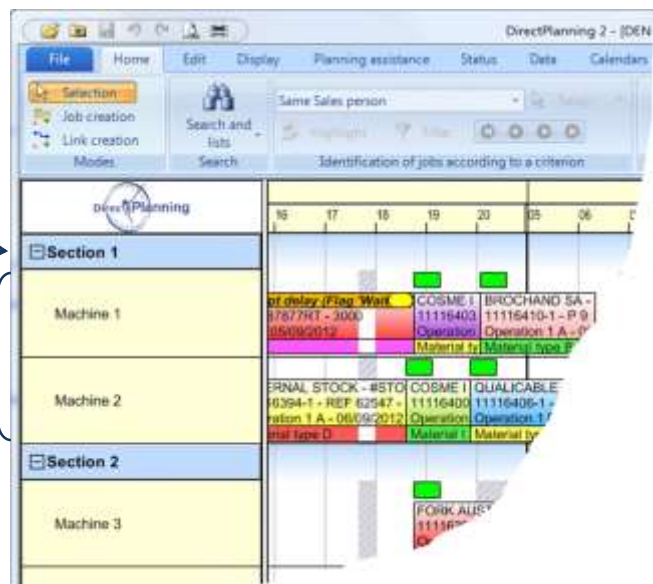
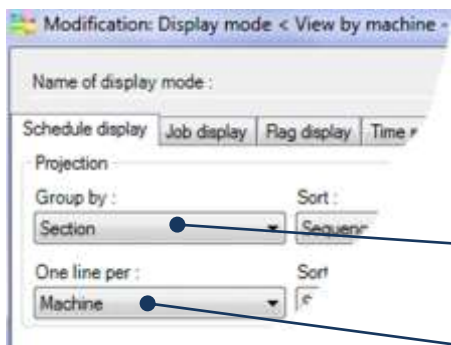
A schedule is displayed on 2 axes:

- ⌚ Horizontally, the time scale is always displayed.
- ⌚ Vertically, you configure the information to display: we call **Projection** the data that are vertically displayed and their grouping.

Any kind of data can feature in the projection: resources, machines, entities, technical elements (industry mode)...

You configure this ↓

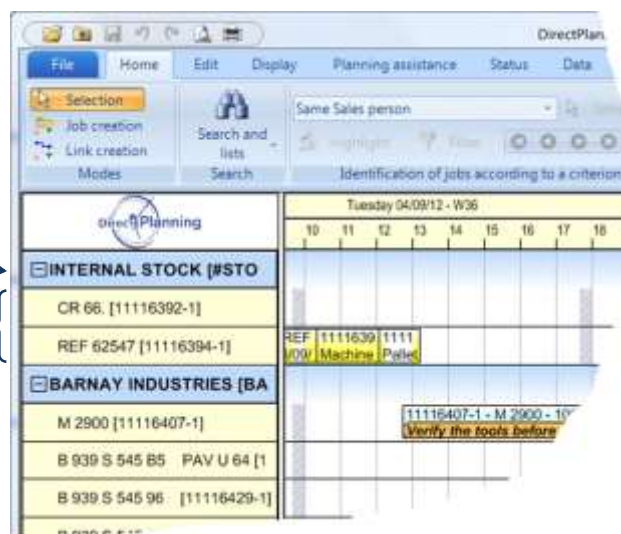
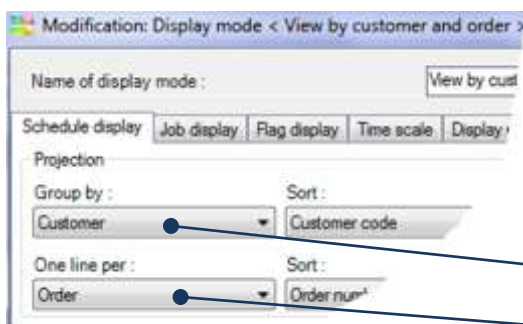
The users see this ↓



*Example 1 ↗
Machines, grouped by sections.*

You configure this ↓

The users see this ↓

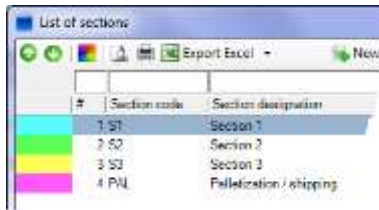


*Example 2 ↗
Orders, grouped by customers.*


Display modes



Captions of the page 86

- 1 Give this display mode a name.
- 2 Choose the wished piece of data.
As said before, the piece of data may be a machine, a section, a technical element or an entity.
- 3 Select the sort order of the data.
The serial number, not applicable to entities, shows the order in which the piece of data appears in the list. Using the green arrows, you can change this order to meet your needs:



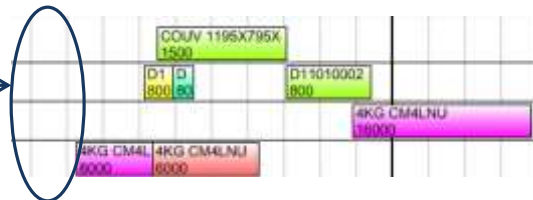
#	Section code	Section designation
1	ST	Section 1
2	SP	Section 2
3	SD	Section 2
4	PL	Palletization / shipping

Point an item in the list and click the arrows  to move it. Here, the selected item is numbered 3 (column #).

-  If you move it up, it will take the value #2.
-  If you move it down, it will take the value #4.

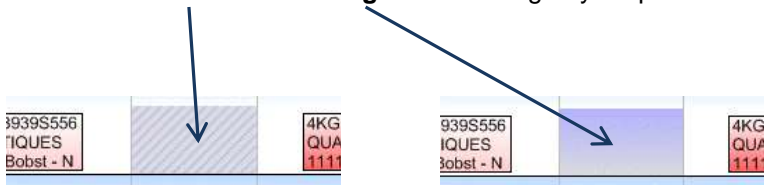
- 4 Select the sort order (not applicable if the list is sorted by serial number).
- 5 Select the information that will be displayed in the projection.
In the example 2 above, we chose to display the customer's name in the grouping and the description of the order in each line.
- 6 Time scale: shows the zoom level associated to the display mode (page 94).
Choose the **scale** (from 1 to 5).
- 7 **Condense** the time scale , if you wish.
This lets you hide the weekends, for example, when they are not worked: this allows for more room on the schedule.

- 8 Display the **secondary scales** , if you wish.
These are vertical, grey lines.
This grid can facilitate the reading of the schedule.



- 9 *Inactivity areas*. These are regular or occasional periods during which the resource or the machine doesn't work (apart from working hours, weekends, maintenance periods of the material, public holidays, vacation days, sick leaves...)

Select **hatched** or **shading off** according to your preference.



Section 42 Job display

This second tab lets you change the way the jobs are displayed in the schedule.

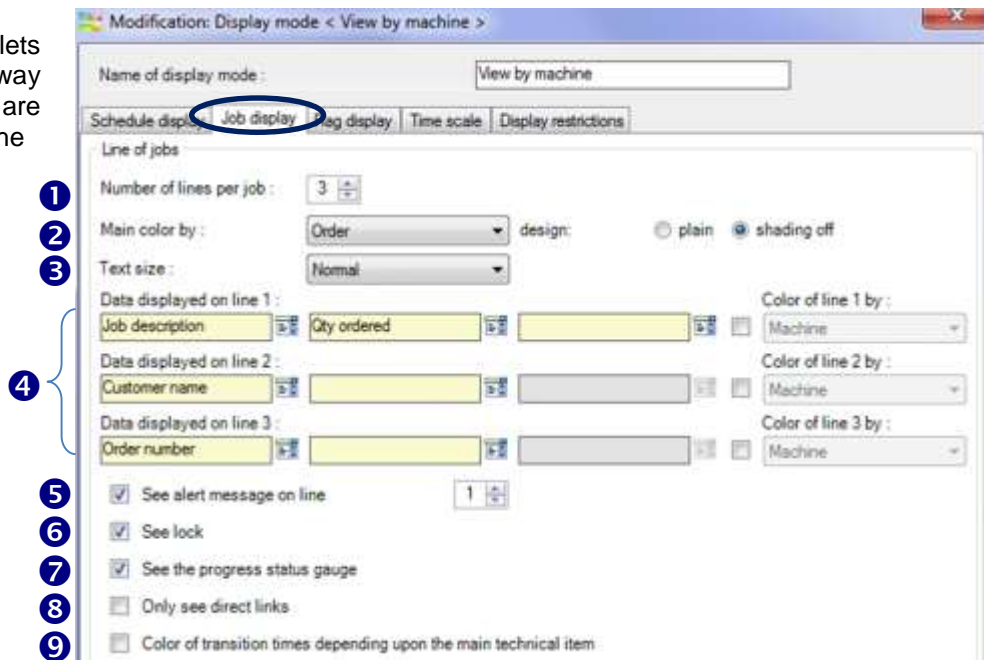


Figure 90 – Configuring job display

This configuration produces the following result.

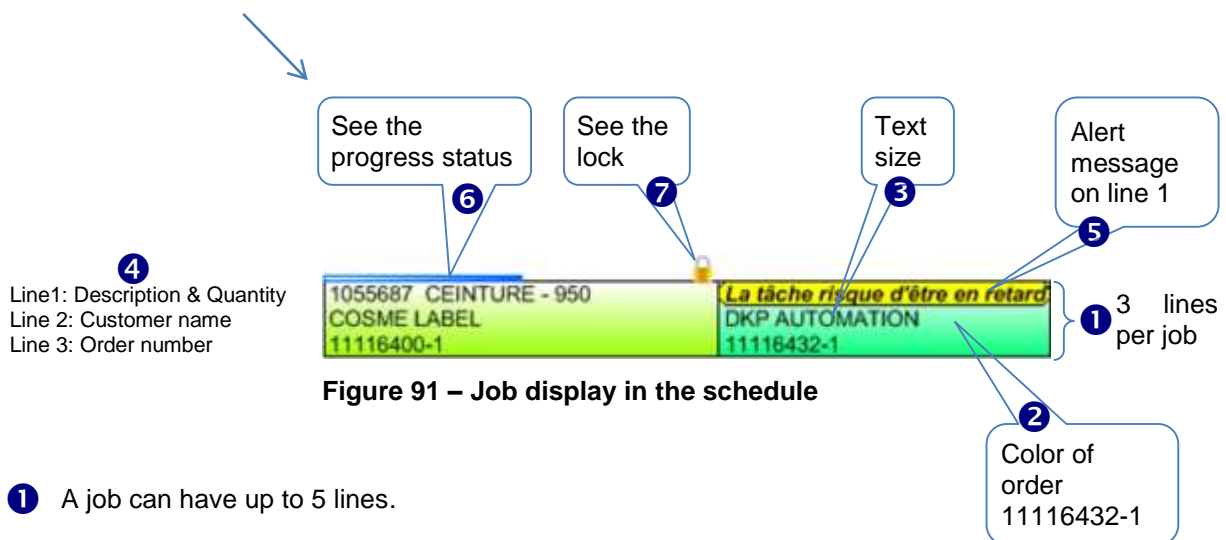


Figure 91 – Job display in the schedule

- 1 A job can have up to 5 lines.
- 2 Which data can influence the color of a job?
 - Machines (🏭) or resources (👥)
 - Technical elements (🏭)
 - Entities (🏭)

Choose the desired piece of data and specify if you want a solid color or a “shading off” color.
- 3 The size of the text can be chosen from: *Very small, Small, Normal, Large, Very large.*

Display modes

4 Data displayed on line *n*

In both following examples, we chose to display 3 data on the first line.

Example 1

Your configuration

Data displayed on line 1 :
 Job description | Machine code | Order number

Color of line 1 by :
 Machine

What the user will see in the schedule

4KG CMLNU - BOBST - 11116500-1
 QUALICABLE SA
 11116500-1

Example 2

Your configuration

Data displayed on line 1 :
 Job description | Machine code | Order number

Color of line 1 by :
 Machine

What the user will see in the schedule

4KG CMLNU - BOBST - 11116500-1
 QUALICABLE SA
 11116500-1

The color assigned to the Bobst machine is green.

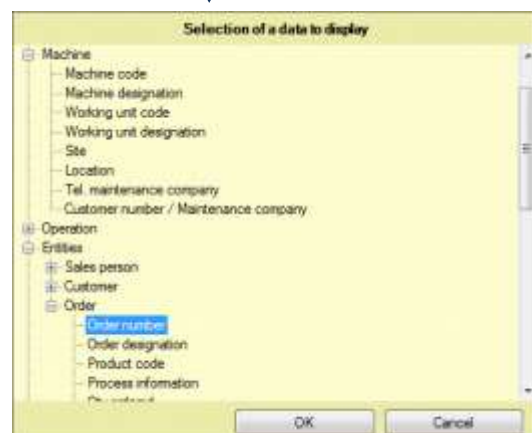
You can even change the color line by line. Tick the box and select an item that will determine the color.

Which data can be displayed?

Click to open the selection window.

This window proposes all the data that can be displayed, according to your type of schedule (Industry, Project, Service) and the customized data you have configured.

The data are grouped by theme.



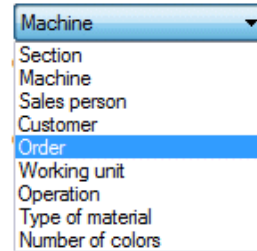
Display modes

4 Color of line n by

You can select the color of each line. The color that you specify here takes priority over the one you set at the point 2

To do so, you have to tick the relevant box, and then select a color like you did at the point 2.

Color of line 1 by :



5 See the alert messages on line n

The alert messages (warning) of the jobs can be displayed on the line you choose.

Tick the box that says you want to see the alert messages in the schedule. Specify the line where the messages should be displayed.

If you don't want to see the alert messages in the schedule, remember that you'll still have the possibility to see them in the job detail window, and that the alert tab will be colored to warn you.

Triggering alert messages has been seen on page 77, together with the colors.



The same job with alert displayed



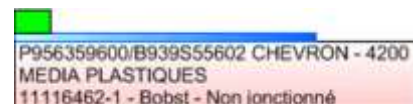
6 See the progress status gauge

The job progression is represented by a blue bar located on top of the job.

In the opposite example, 75 % of the job has been completed.

When the job is completed (100 %), the progress bar is gray and occupies the full width of the job.

The text of the job is displayed in gray on a white background.



The progress status is described with many more details in the job detail window, in a dedicated tab. Please refer to the user's guide.

7 See the lock

In the schedule, when a small padlock is show on top of a job, on the right, it means that the job has been locked by a user. The job can no longer be moved, changed or deleted.

Display modes

8 Only see direct links

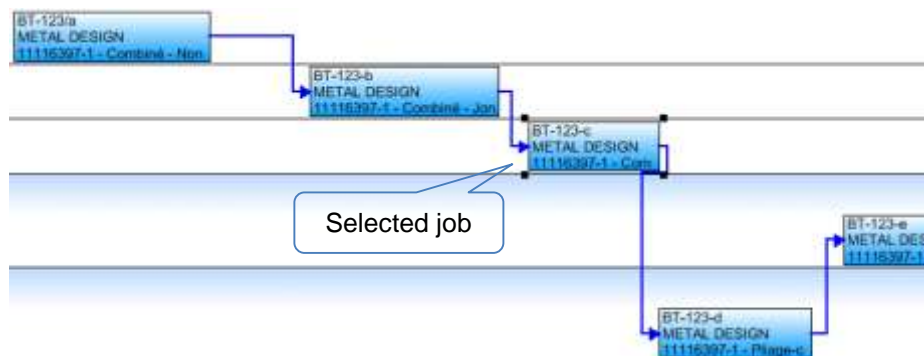
Only in Project (🏠) or Industry (🏭) modes.

Selecting a job in the schedule automatically displays the links of this job, upstream and downstream. Links are materialized by blue arrows.

Select this option in case of a complex schedule, with a large number of jobs and links, if you experience large delays upon job selection

Example

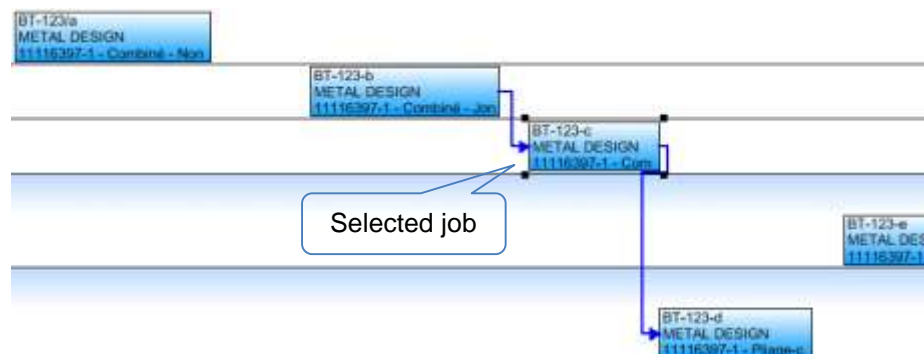
For a better visibility of this example, we have selected a job and applied a filter.



The box **Only see direct links** is not ticked .

All the links are displayed, upstream as well as downstream ↑

If you tick the box **Only see direct links**, you'll only see the links that are directly connected to the selected job, as shown below. ↓



The box **Only see direct links** is ticked .

9 Colour of transition depending upon the main technical item.

Only in industry mode (🏭)

The transition times have been explained on page 44.

The transition time is a period of time between two jobs to perform some setting, mouting, sizing... on the machine (resource).

It is materialized by a triangle between the involved jobs.

- If you don't tick the box , the triangle will be colored according to the job coloring you chose (see above **Main color by**).
- If you tick the box , the triangle will be colored according to the technical element that have triggered the transition time (for the automatic transition times).

Section 43 Flag display

In a given display mode, you can wish to hide some flags.

This is useful when you create a display mode for a user and you want him to only see those flags that may be of interest to him.

Flags and their configuration have been discussed on page 70.

In some display modes, you may wish to see no flag, or to focus on a particular flag.

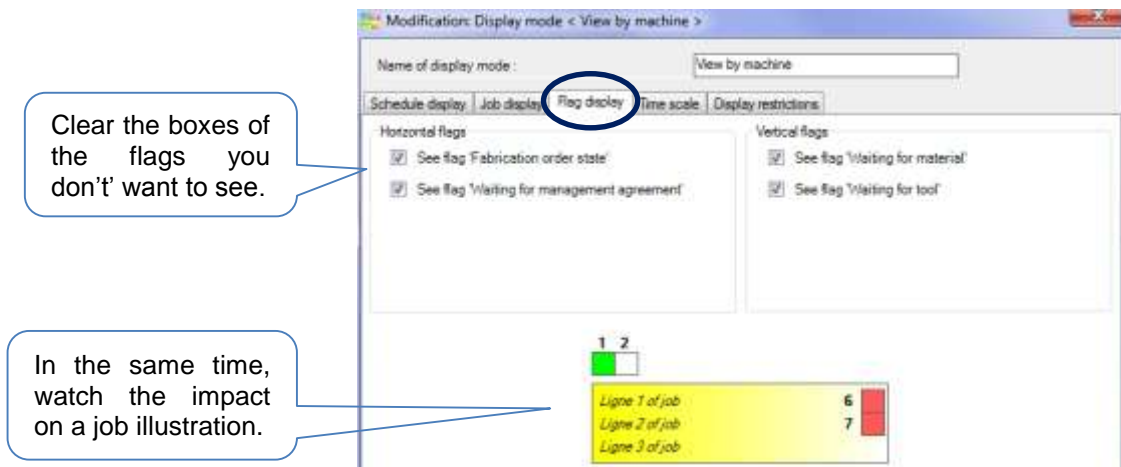


Figure 92 – Configuring flag display

Display modes

Section 44 Time scale

This window lets you define the different zoom levels linked with a display mode.

First, change the zoom level of the **scale1**.

With a **large zoom** level, less hours will be displayed across the screen width.

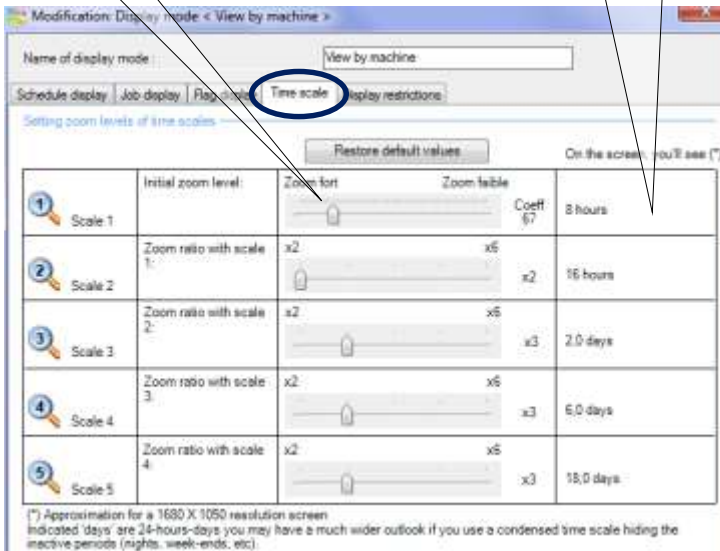
This may be convenient when you schedule jobs with a small duration (less than one hour).

On the contrary, a **smaller zoom** level will allow more room on the screen.

Then, you enter a multiplying factor, which is applied to the scale 1 to get the scale 2, and so forth...

Move the cursor of each level to change the scale.

In the same time, observe the time interval that will be displayed on the screen.



	Initial zoom level:	Zoom fort	Zoom table	Coeff:	On the screen, you'll see (*)
1 Scale 1		<input type="text" value="x2"/>	<input type="text" value="x6"/>	67	8 hours
2 Scale 2	Zoom ratio with scale 1:	<input type="text" value="x2"/>	<input type="text" value="x6"/>	x2	16 hours
3 Scale 3	Zoom ratio with scale 2:	<input type="text" value="x2"/>	<input type="text" value="x6"/>	x3	2,0 days
4 Scale 4	Zoom ratio with scale 3:	<input type="text" value="x2"/>	<input type="text" value="x6"/>	x3	6,0 days
5 Scale 5	Zoom ratio with scale 4:	<input type="text" value="x2"/>	<input type="text" value="x6"/>	x3	18,0 days

(*) Approximation for a 1680 X 1050 resolution screen. Indicated 'days' are 24-hours-days you may have a much wider outlook if you use a condensed time scale hiding the inactive periods (nights, week-ends, etc).

Figure 93 – Configuring time scale

Section 45 Display restrictions

This tab lets you filter jobs for the current display mode.

There are two types of filters:

- Filter by date (upstream and downstream)
This lets you limit the number of displayed dates.
This can improve the response times in case of large schedules.
- Filter by
 machines / sections (industry mode)
 resources / resource families (Project and Service modes)
This lets you only show the user the machines / resources he is involved in.

We'll see further (page 105) that it's possible to specify the authorized display modes by user.

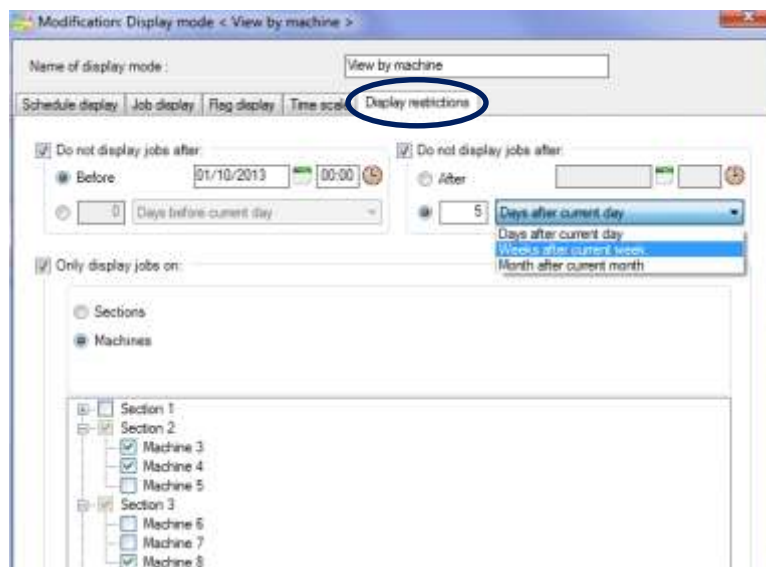


Figure 94 – Configuring the display restrictions

To filter by date or by a number of days (upstream or downstream):

Tick the box *Do not display jobs*:

Before such date, **After** such date: specify a date (and an hour, if necessary).
You can directly key it in or use the provided calendar
The jobs before and / or after won't be displayed in the schedule.

If you prefer specifying a time interval before or after, use the other method:

Specify a number of days / weeks / or months before or after.
This lets you have a constant time interval, as it is based on the current date.
The jobs outside this interval won't be displayed in the schedule.

To filter by machines / sections or ressources / resource families:

Tick the box *Only display jobs on*:
Then choose to filter by *Sections* or *Machines* (or *Ressources / Familles*, according to the type of your schedule).

Configurable lists

CHAPTER 18 CONFIGURABLE LISTS

The configurable lists let you create job lists.

You can configure customized lists to meet the requirements of each user, then save them to allow later usage.

The lists can be viewed on screen, printed or exported to Excel®.

C

To produce configurable lists, choose **Configurable lists** in the **Configuration** menu.

You are presented with this window, showing the already configured lists.

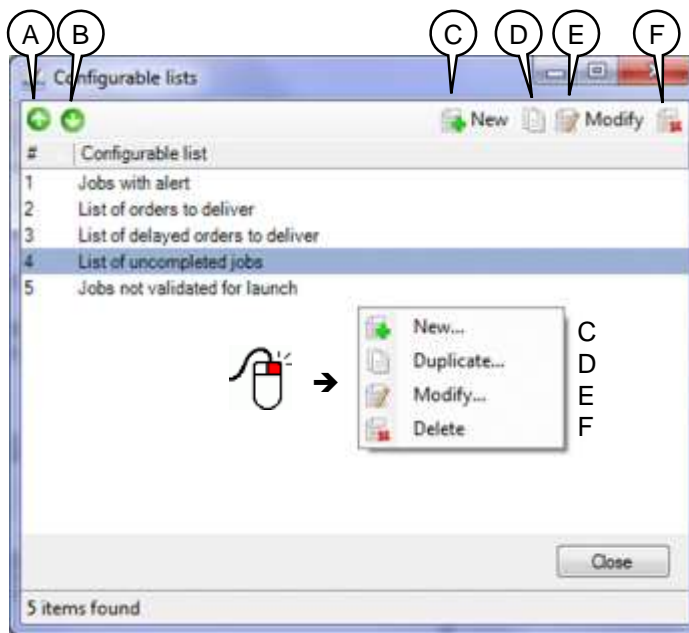




Figure 95 – List of configurable lists

- A You can change the order in which the configurable lists are shown in the list.
To move a configurable list up, select it and click .
- B To move a configurable list down, select it and click .
- C Create a new configurable list.
- D Duplicate the selected configurable list to create a new one (almost) identical.
Don't forget to assign the new configurable list a new name.
- E Modify the selected configurable list.
Also available by double-clicking the configurable list.
If you don't have the required rights, the wording of this button is *Consultation*.
- F Delete the selected configurable list.

Section 46 Basic criteria

Choosing **New** or **Modify**, you are presented with this window.

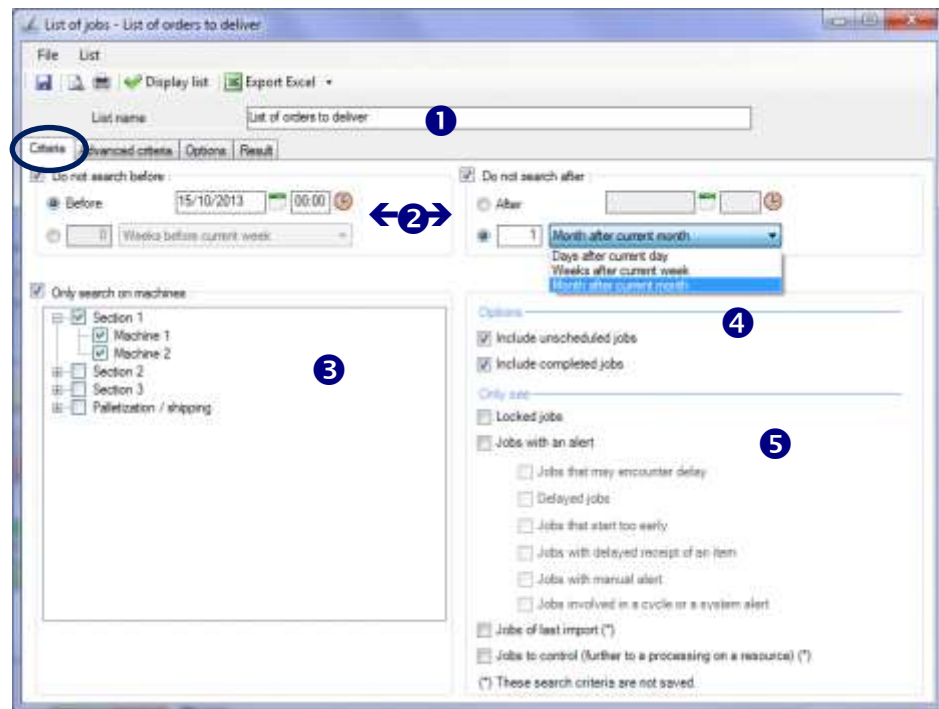


Figure 96 – Specifying basic criteria of a list

- 1 Give your list a name.
This will allow the users to easily retrieve it in the list.
- 2 To filter by date or a number of days (upstream or downstream):
Tick one of the boxes *Do not search before* / *Do not search after*.

 Before such date, **After** such date: specify a date (and an hour, if necessary).
You can directly key it in or use the provided calendar.
The jobs before and / or after won't be displayed in the schedule.

 If you prefer specifying a time interval before or after, use the other method:

 Specify a number of days / weeks / or months before or after.
This lets you have a constant time interval, as it is based on the current date.
The jobs outside this interval won't be displayed in the schedule.
- 3 To filter by machines / sections or resources / resource families:

 Tick the box *Only display jobs on:*
Then choose to filter by *Sections* or *Machines* (or *Ressources* / *Familles*, according to the type of the schedule).
In the above example, the cutting machines have been excluded.
- 4 You can include or exclude the unscheduled / completed jobs.
- 5 You can restrict the list to locked jobs and / or jobs with alert.

Configurable lists

Section 47 Advanced criteria

The advanced criteria tab lets you create fine-tuned selections, using any piece of data configured in your schedule.

Your selection can concern up to 10 different categories of data of your database

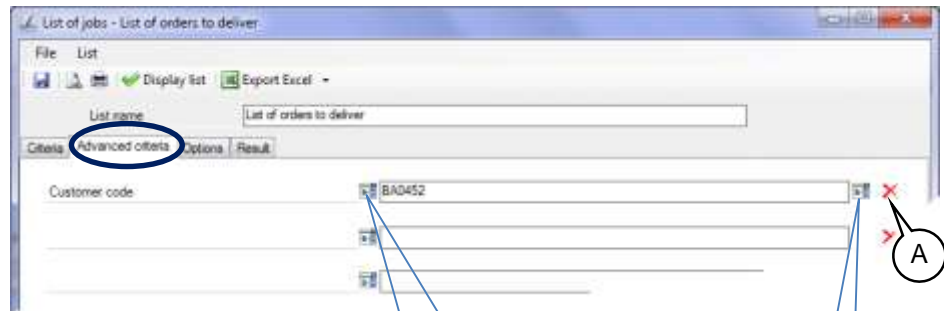


Figure 97 – Defining the advanced criteria of a list

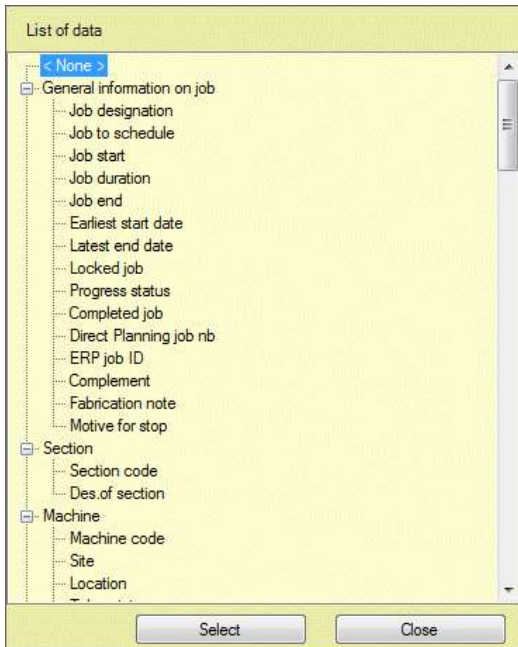


Figure 98 ↑ Field selector

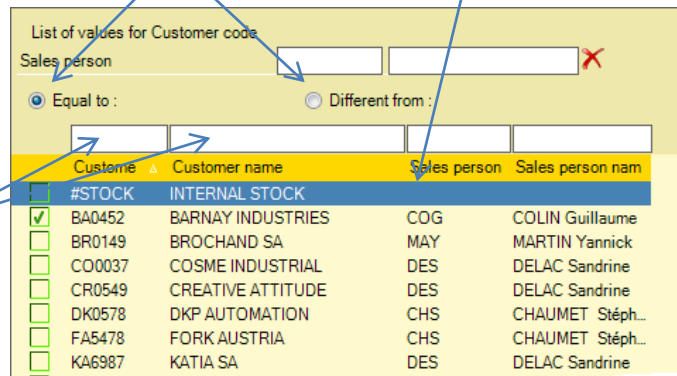
First, click here to choose a piece of data from this list.

Then, click here to select one or more value(s) for this piece of data.

Type of comparison

You can filter the list, entering characters in these areas.

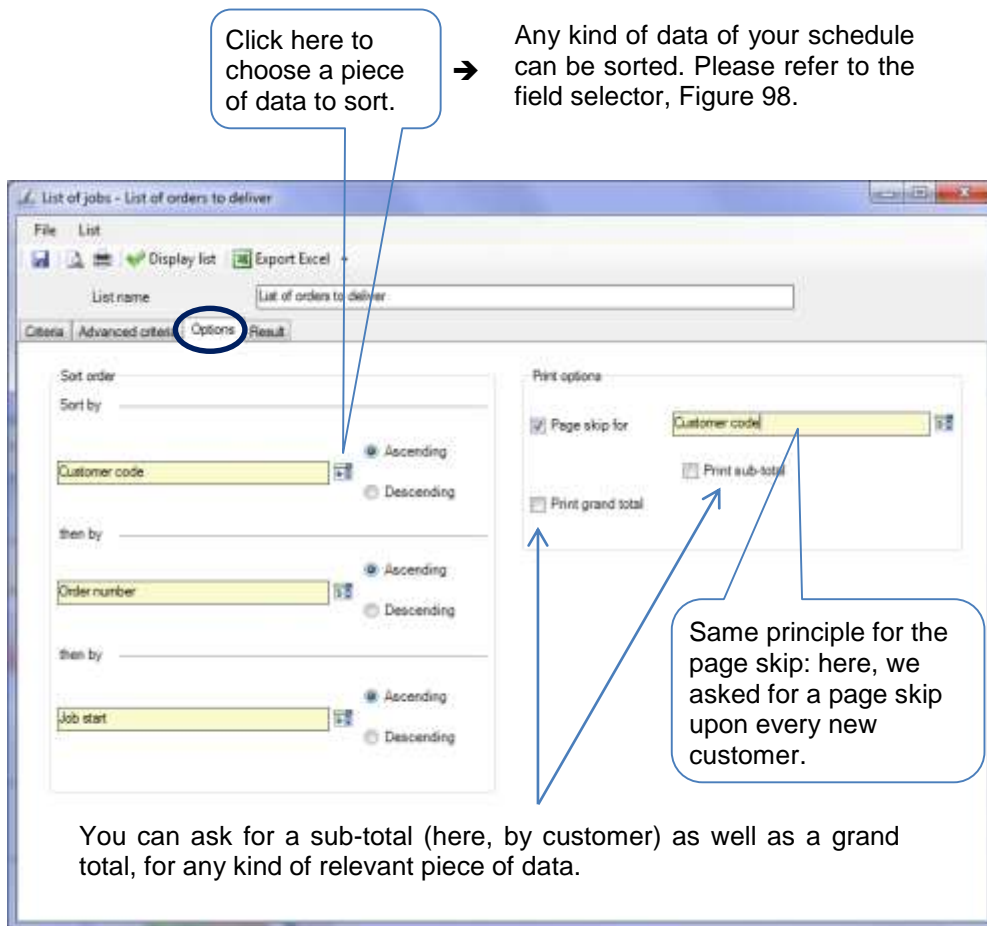
Click one of these crosses **X** to remove the corresponding criterion.



Section 48 Options

The option tab lets you specify the sort order as well as print options

In the example below, there's a sort by customer, order and start date of the job. For each piece of data, the sort may be ascending or descending.



Click here to choose a piece of data to sort. → Any kind of data of your schedule can be sorted. Please refer to the field selector, Figure 98.

Sort order:
 Sort by: Customer code (Ascending)
 then by: Order number (Ascending)
 then by: Job start (Ascending)

Print options:
 Page skip for: Customer code
 Print sub-total
 Print grand total

Same principle for the page skip: here, we asked for a page skip upon every new customer.

You can ask for a sub-total (here, by customer) as well as a grand total, for any kind of relevant piece of data.

Figure 99 – Configuring the options of a list

There's only one step left: configuring the layout of the list. → Next page

Configurable lists

Section 49 Choosing the columns

This last section explains how to configure the layout of your configurable lists. In the configurable list building window, click **Display list**.

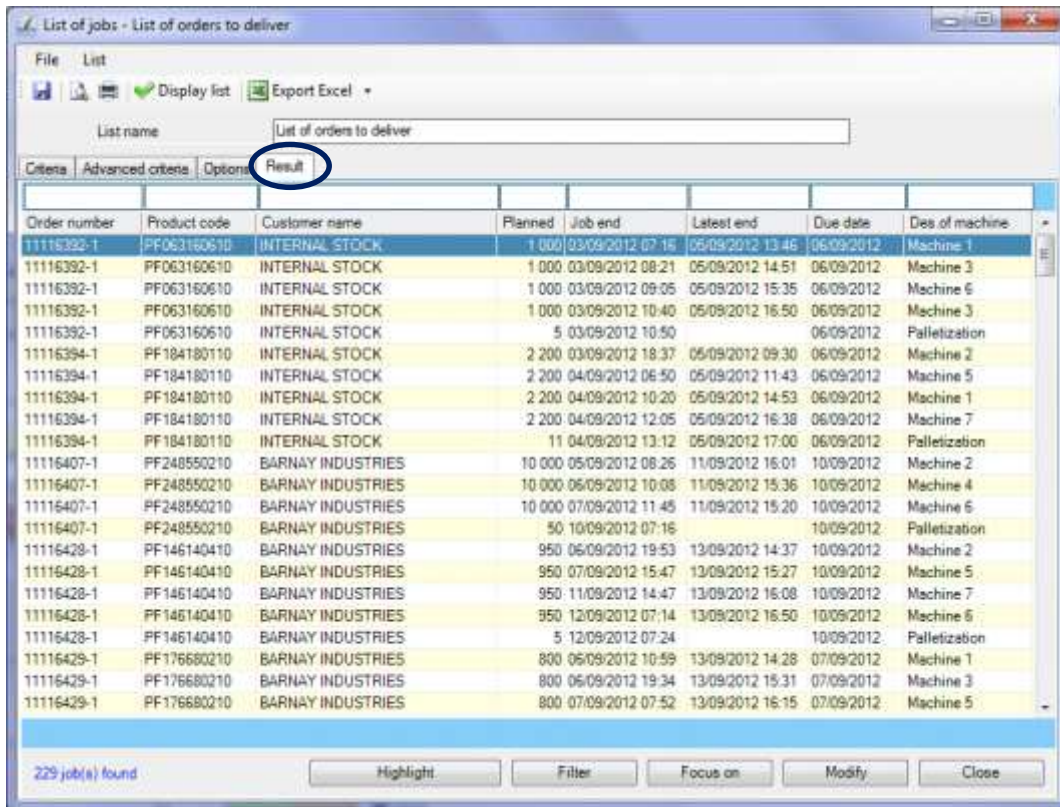
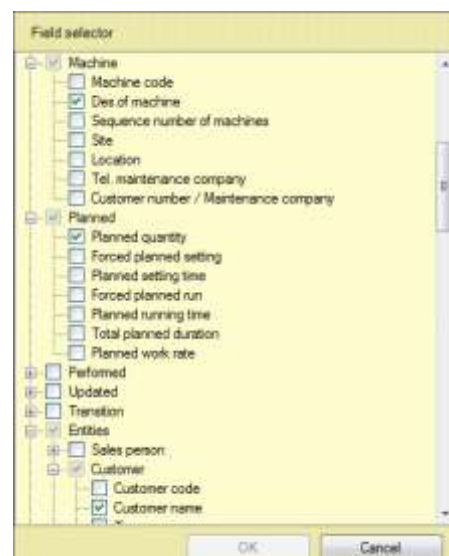


Figure 100 – Customizing a configurable list

Adding / Deleting columns

Right-click a column header
 This displays the field selector. →
 Select the fields that should appear in the list and unselect the other one.





Moving columns

If you want to move the **C** column before the **X** column:

Left-click the header of the **C** columns and move the mouse over the header of the **X** column.

Release the mouse button.

Resizing columns

Left-click the separator between 2 columns and move the mouse to the left or to the right.

You can also double-click the separator to automatically adjust the column with to its contents.

Resizing the window

Resize the window as you do with any window. The new size will be saved.

Saving your list

Save all you settings, clicking the disk icon on the upper left corner of the screen

The users can now use the lists that you created, starting from the Home menu → Search & Lists.

We'll see later (page 105) that you can specify a per-user setting for the allowed lists.

Users

CHAPTER 19 USERS

This chapter explains how to configure the users and their rights.

Section 50 The list of users

In the *Configuration* tab, choose *Users*.

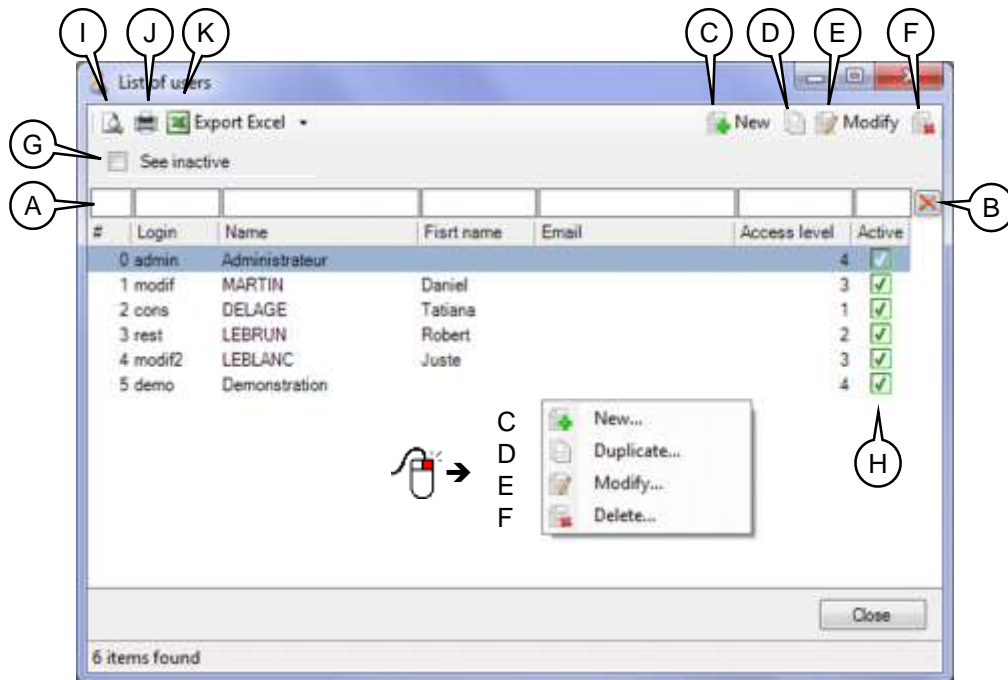


Figure 101 - The list of users

- A Quick filters: enter one or more characters, then hit Enter.
- B Click the cross **x** to delete filters.
- C Create a new user (next page).
- D Duplicate the selected user to create another one (almost) identical. Don't forget to give the new user a new name.
- E Modify the selected user (next page).
Also available by double-clicking the selected user.
- F Deactivate the selected user: the user is not deleted, he is just deactivated. He can't open the schedule. The administrator can't be deactivated. A deactivated user can be reactivated afterwards (next page).
- G If the box is ticked , you'll see all the users, even the deactivated. Otherwise, you'll only see the active users.
- H Displays the status of the users. Ticked box = active user
Cleared box = inactive user
- I Print preview of the list of the users
- J Print the list of the users
- K Export to Excel of the list of the users. The passwords are not exported.

Section 51 Creating / Modifying a user

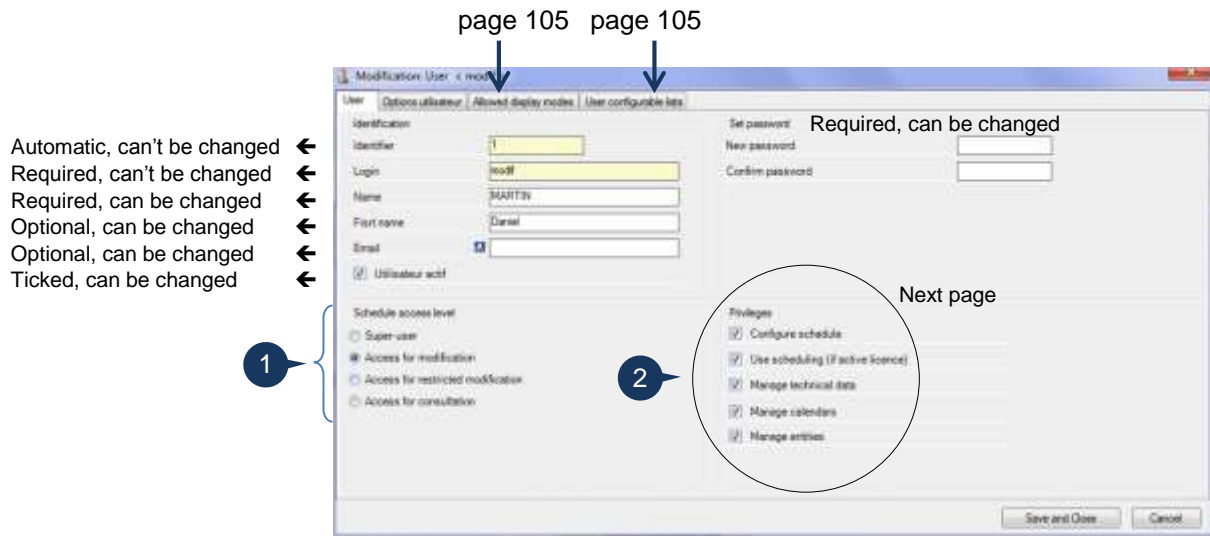


Figure 102 – The user record

1 Access levels to the schedule

1) The **super-user** “admin” is systematically and automatically created upon any schedule creation. He cannot be deleted. We strongly advise you to modify his default password (admin) once the schedule has been created. He has all the privileges (2), and none of the privileges can be denied. Only the super-user can grant the same right to another user.

2) A user with **Access for modification** can schedule jobs and modify the schedule. He has the privileges (2) that the administrator has given him.

3) A user with **Access for restricted modification** has no privilege (2). With this type of access, he can change:

- The job progress report (completed quantity and duration)
- The flags
- The entities of the jobs
- Link manual alerts to the jobs
- The jobs description and configurable areas
- The time constraints

He cannot change (amongst others):

- The position of the jobs in the schedule
- The planned quantity and duration
- The technical elements

Attention | If you want to configure users with access for restricted modification, you have to first enable automatic import (page 79, bullet 1).

4) A user with **Access for consultation** can only view the schedule.



Users

Section 52 Privileges of the users

The super-user and the users who have access for modification have the following privileges, when the box is ticked :

Configure the schedule







Allows the user to open the *Configuration* tab, and particularly to manage the users.

Use the scheduling module  

If you clear this box, the user won't be able to use the scheduling module.

Manage technical data

If you clear this box, the user won't be able to change the following data, he will only view them:

- resources 
- sections, machines 
- working units 
- operations 
- technical elements 
- transition times 

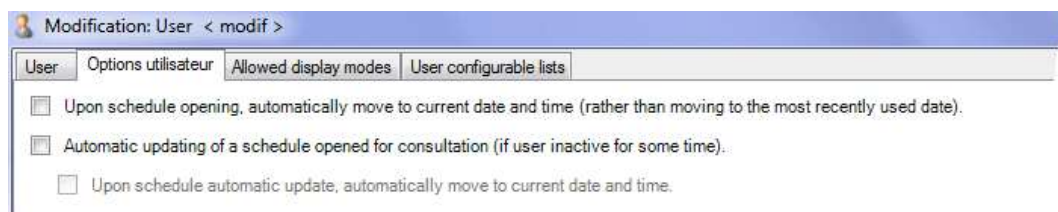
Manage calendars: if you clear this box, the users will only be able to view the characteristics of the calendars, they won't be able to change them.

Manage entities: if you clear this box, the users will only be able to view the entities, he won't be able to change them.

To complete the creation (or modification) of the user, just click *Save and Close*.
You are back to the list of the users.

(If you don't want to save this user, click the *Cancel* button.).

Section 53 User options



The user can change the following settings : File → Users options → For this schedule

1. Upon schedule opening, automatically move to current date and time (rather than moving to the most recently used date).
2. Automatic updating of a schedule opened for consultation (if user inactive for som time).
3. Upon schedule automatic update, automatically move to current date and time. This option may be used only if option 2 is enabled.

Section 54 Deleting a user

A user is never deleted: it is simply deactivated, and can no longer connect to the schedule. There are two ways to perform this “deletion”:

- In the list of the users, select the user, then click the deletion button.
- When you’re modifying a user, you can simply clear the box *Active user* and save.

Similarly, it is possible to reactivate a user, ticking the box again.

In the list of users, the “deleted” users are only visible if the box *See inactive* is ticked .

By default, the box is not ticked.

Section 55 Allowed display modes per user

The display modes (page 85) let you create various customized views of the schedule.

Thus, each user can have his own view(s) of the schedule that meet(s) his needs.

From the list of the display modes that you created, you specify which ones this user can use.

In the user form, select the *Allowed display modes* tab.

Initially, all the existing display modes are ticked, thus available to all users. →



Here, you can clear the display modes that this user doesn’t need.

The default display mode (which appears on top of the list) is always proposed and cannot be cleared. Thus it is impossible to delete all the display modes for a user: he always has his default display mode.

Section 56 Allowed configurable lists for a user

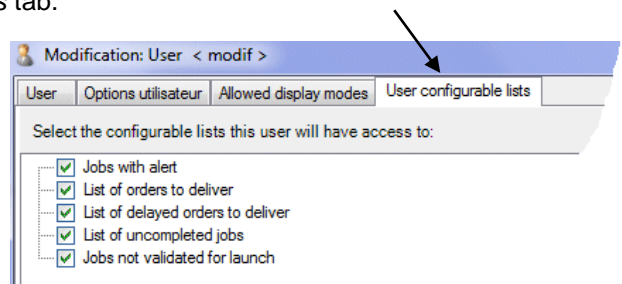
The configurable lists (page 96) let you create various customized lists of the schedule.

Thus, each user can have his own lists of the schedule that meet his needs.

From the list of the configurable lists that you created, you specify which ones this user can use.

In the user form, select the *User configurable lists* tab.

Initially, all the existing configurable lists are ticked, thus available to all users. →



Here, you can clear the configurable lists that this user doesn’t need.

Configurable areas

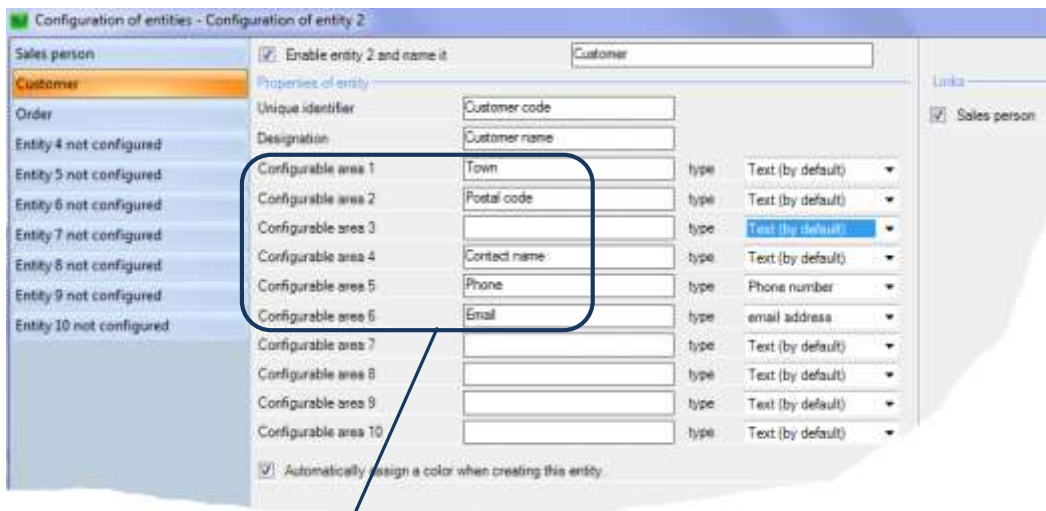
CHAPTER 20 CONFIGURABLE AREAS

Some “standard” data of Direct Planning can be completed with configurable areas that you can customize according to your needs.

The following data can be completed with configurable areas:

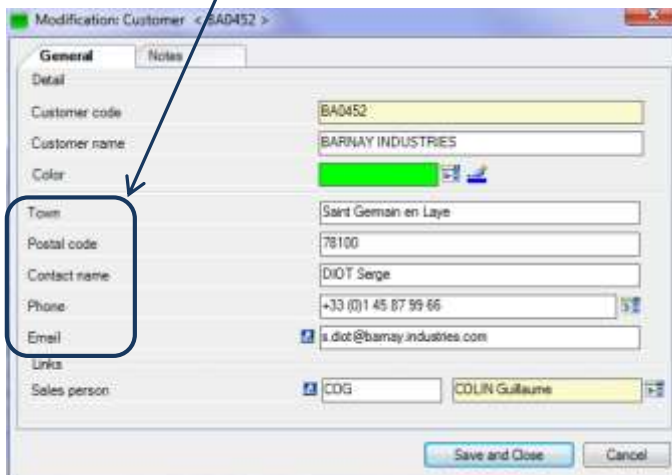
- Resources / Machines
- Jobs
- Multi-status flags
- Entities

Here’s an example in the configuration of entities ↓



You configure this ↑

↙ The users see this.



For each customer, besides his code and name, we added the following areas :

- Town
- Zip code
- Contact name
- Contact phone number
- Contact email

More details on the following page.



Configurable areas

For each configurable area, you select one of the following types:

Data type	Observations
Text	Unchecked entry (by default)
Integer	Entry is checked against the type.
Number with 2 decimal places	
Number with 3 decimal places	
Date	
Date and time	
Checkbox	<input checked="" type="checkbox"/> or <input type="checkbox"/>
Email address	Let you save someone's email address. A simple click lets you then send an email.
Phone number	The number will be formatted depending upon the country.
Directory (folder)	For example, this lets you associate a directory with a <i>Customer</i> entity. A simple click lets you then open this directory.
File	Lets you store the path of a file. A simple click lets you then open the file (PDF, Word, Excel, etc.) provided that the file is on a shared resource and the required software can be run on your machine.
Internet address	Lets you store the address of an internet site. A simple click lets you then open this site in your browser.

IMPORTING – EXPORTING DATA

CHAPTER 21 GENERAL PRINCIPLES OF IMPORTS - EXPORTS

Importing

If you have an application managing jobs, you can get this information in your schedule: indeed, Direct Planning provides a feature that imports the technical elements, the entities, the jobs (with their flags) and the links.

Thus, the jobs are automatically inserted in the schedule, eliminating re-entering, and ensuring data integrity.

The imported data may come from an ERP, a spreadsheet like Microsoft Excel® or any other application able to create CSV data files.

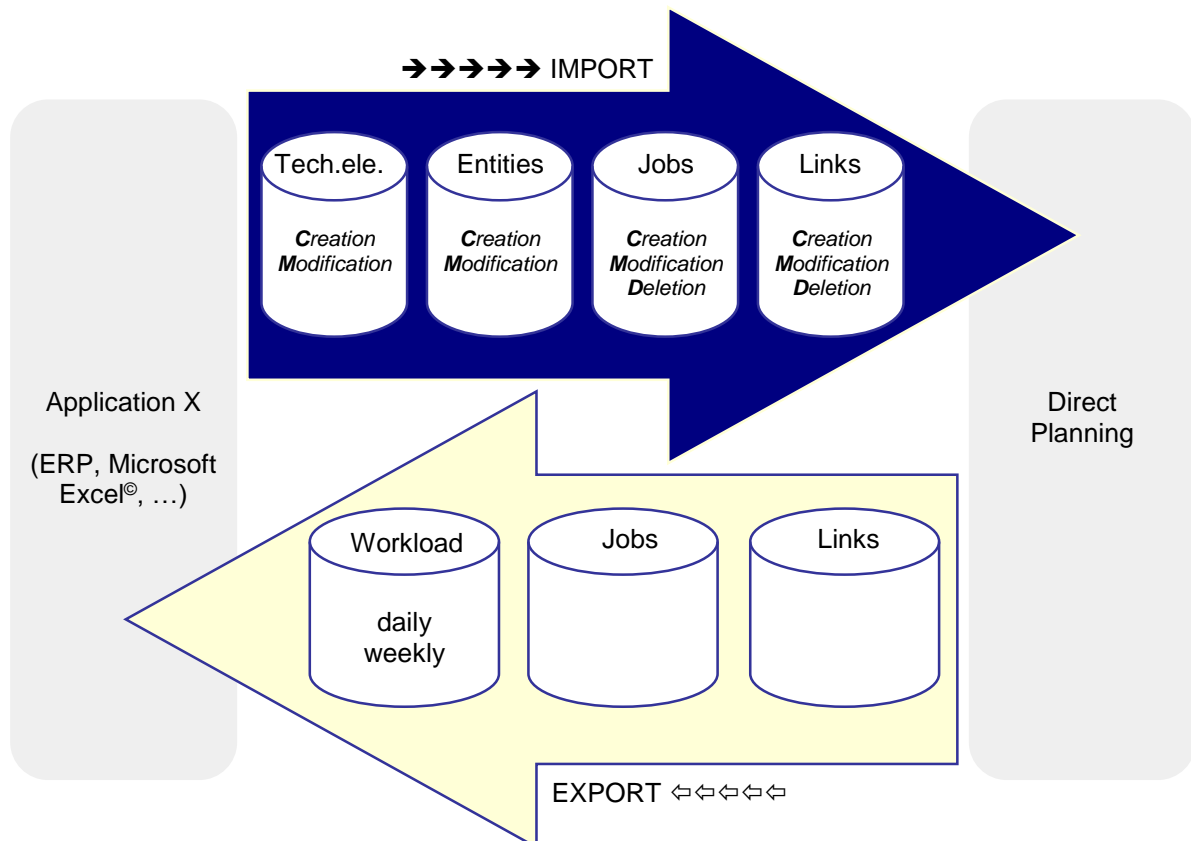
The CSV format is one of the most commonly used exchange formats : the data are saved in a txt file and separated by semicolons.

Exporting

Further to the import feature, Direct Planning can send planning data to another application that can receive and import CSV data.

You may use the export feature without configuring import.

When the export is used in addition to the import, it can send back to the external software the planning information about the data that were previously imported into Direct Planning.



CHAPTER 22 THE MECHANISMS OF IMPORT / EXPORT

In order to better understand the path of a job during the successive imports / exports, let's recall a few basic notions.

The internal identifier (Direct Planning)

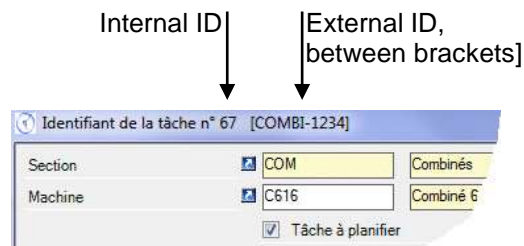
Any created or imported job has a number, automatically assigned. This automatic numbering starts with 1. It is Direct Planning internal identifier: we call it **internal ID**. The internal ID is single. It can never be modified.

The external identifier (Application X)

Any job coming from an application X has an external identifier. This identifier is assigned by the application X in the case of a job created upon import. Its role: let the application X recognize a job it had previously transmitted to Direct Planning. We call it **external ID**.

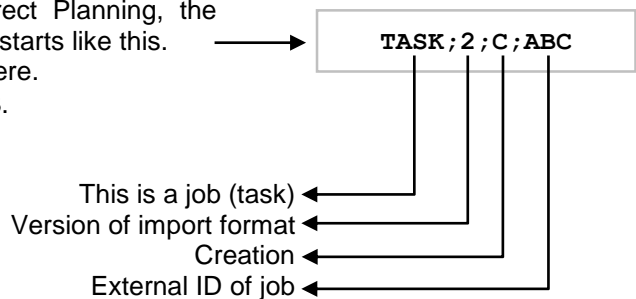
- Summary*
- A job may have 2 IDs:
 - The internal ID, systematic, cannot be modified.
 - The external ID, only in case of import, can be modified.

The job identifiers can be seen upon double-clicking a job in the schedule to display the details.



Case 1: The job is created in the external application.

In the file that will be imported in Direct Planning, the external application creates one line that starts like this. Only the beginning of the line is shown here. The other fields are detailed on page 133.



Upon import into Direct Planning, this job will be created and will be assigned an ID (120 in the opposite example).





The mechanisms of import / export

When Direct Planning exports the schedule to the external application, the latter receives the job with its 2 IDs.



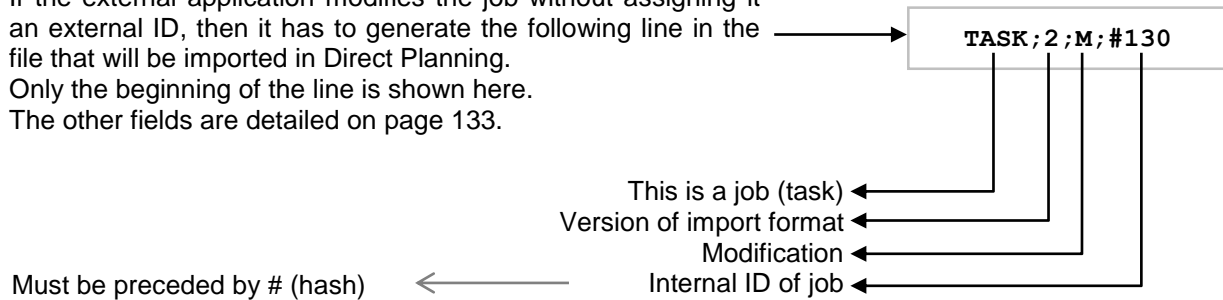
Case 2: The job is created in Direct Planning, and then exported to the external application. The external application modifies the job without assigning it an external ID.

This job is assigned an ID (130, in the example below). It has no external ID yet, thus the external ID is zero.

When Direct Planning exports the job to the external application, this latter receives the job without external ID.

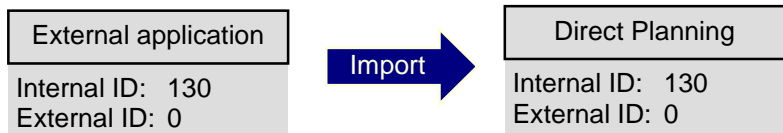


If the external application modifies the job without assigning it an external ID, then it has to generate the following line in the file that will be imported in Direct Planning. Only the beginning of the line is shown here. The other fields are detailed on page 133.



This syntax specifies that the job with internal ID 130 will be modified, yet without being assigned a new external ID (see page 139 for the job modification rules).

Upon import in Direct Planning, this job will be modified, but its external ID will remain zero.



The mechanisms of import / export

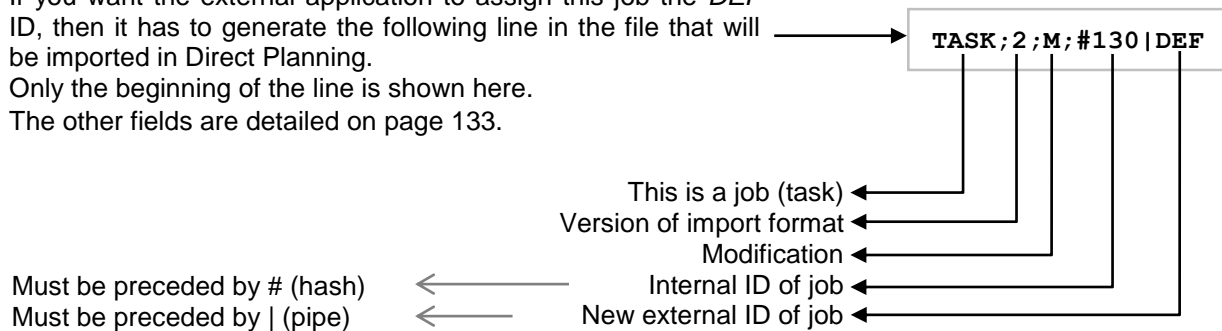
Case 3: The job is created in Direct Planning, and then exported to the external application.
The external application modifies the job, assigning it an external ID.

This job is assigned an ID (130, in the example below).
It has no external ID yet, thus the external ID is zero.

When Direct Planning exports the job to the external application, this latter receives the job without external ID.



If you want the external application to assign this job the *DEF* ID, then it has to generate the following line in the file that will be imported in Direct Planning.
Only the beginning of the line is shown here.
The other fields are detailed on page 133.



This syntax specifies that the job whose internal ID is 130 will see its external ID changed to *DEF* (see page 139 for the job modification rules).

Upon import into Direct Planning, this job will be modified, with the new *DEF* external ID.



Case 4: The job is created in Direct Planning or in the external application.
The external application modifies the job, changing the external ID.

It is quite possible that the external application changes its own ID (which it had previously transmitted to Direct Planning).

Let's go back to the case 3, where the external application had assigned the job the *DEF* external ID.
Now assume that it decides to change the external ID from *DEF* to *GHI*.
There are 2 ways it can perform this change:

1. Referring to the internal ID, preceded by hash →
(or)
2. Referring to the external ID, not preceded by hash →

`TASK;2;M;#130|GHI`

`TASK;2;M;DEF|GHI`

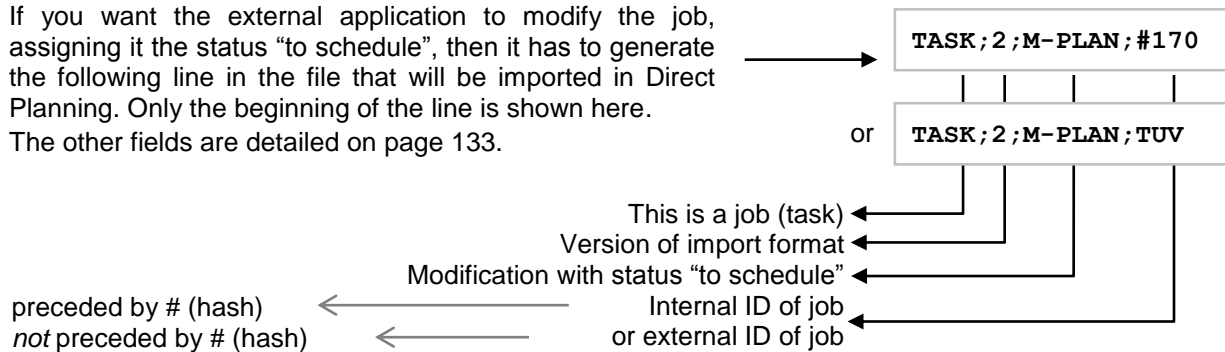
In both cases, the external ID changes to *GHI*.



The mechanisms of import / export

Case 5: The job is created in Direct Planning or in the external application.
The external application modifies the job, changing the status “to schedule”.

If you want the external application to modify the job, assigning it the status “to schedule”, then it has to generate the following line in the file that will be imported in Direct Planning. Only the beginning of the line is shown here.
The other fields are detailed on page 133.



In that case, the job is modified and assigned the status **to schedule**.
This lets the external application decide on the impact of a modification on the planning status change: thus, further to an import, scheduled jobs in Direct Planning can switch to *to schedule* because of significant changes made by the external application.

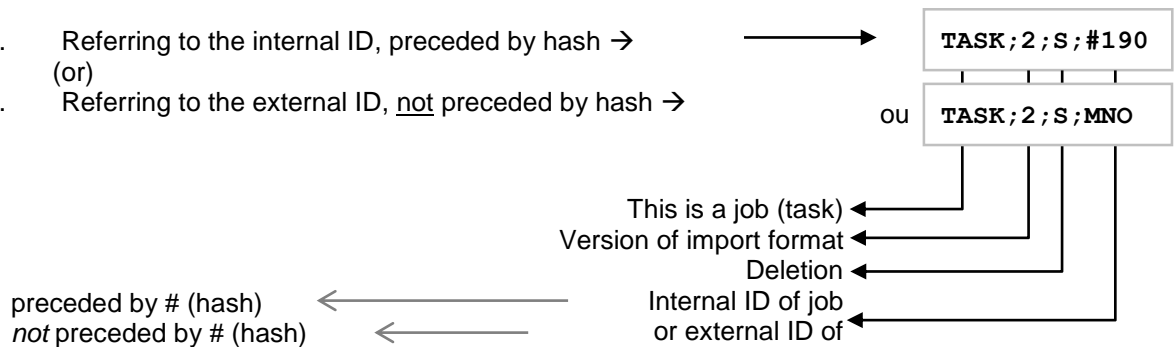
Upon import in Direct Planning, this job will have the status *to schedule*.



Case 6: The job is created in Direct Planning or in the external application.
The external application deletes the job.

The external application may decide that a job has to be deleted.
There are 2 ways it can perform this change:

1. Referring to the internal ID, preceded by hash →
(or)
2. Referring to the external ID, not preceded by hash →



In both cases, the job is deleted.



To delete several jobs, the following syntax may also be used. ⇨
In that case, only the external ID can be used.

This lets the external application simply perform a regeneration of the “cancels and replaces” type: for example, all the operations of one production order are deleted in just one instruction, then the production order is re-created.

TASK ; 2 ; S ; MNO*

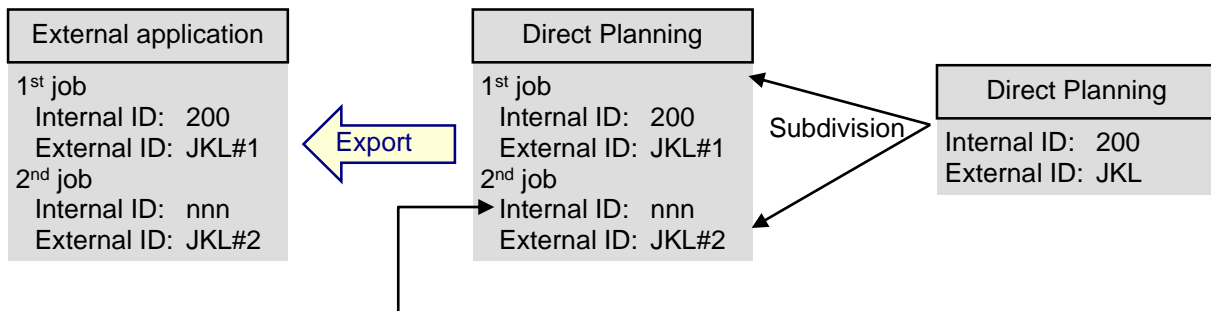
The mechanisms of import / export

Case 7: The job is created in Direct Planning or in the external application.
Direct Planning subdivides the job.

Now, let's say that a user subdivides a job in Direct Planning.
There may be 2 possibilities:

⇒ First possibility: the subdivided job already has an external ID, for example *JKL*.
The subdivision creates 2 separate jobs, each one with the original external ID followed by a # and a sequence number. In our example: *JKL#1* and *JKL#2*.

Thus, when the information is sent back to the external application, it will be informed of the subdivision.



One of the 2 jobs has a new internal ID, automatically assigned.
As a matter of fact, this is a new job, which complies with the same rules as for the automatic job numbering. We do not care about this number here.

⇒ Second possibility: the subdivided job has been created in Direct Planning and has not been exported to the external application yet (or, at least, it has not been assigned an ID by the external application): each job is individually processed in accordance with the case 2.

Importing data

CHAPTER 23 IMPORTING DATA

A third-party application (ERP, CAPM, specific program, or an Excel® macro) can produce job description files for Direct Planning. These CSV files can be automatically integrated into the schedule. To achieve this, they have to be copied in an import directory configured on page 79.

What is imported?

The jobs (with their flags), the links, the entities and the technical elements.

The job to be imported may have two origins:

1. It may be produced by a third-party application.
2. It may have been generated by a user who has opened the schedule with restricted rights to make slight changes without impact on scheduling.

The import directory is checked upon launching Direct Planning, then every 2 minutes. Moreover, the planner can occasionally trigger an import “on request” when a visual signal warns him that a new file is ready for import.

The structure of files to import is given on page 130.

Section 57 Progress of the import

Reminder: the import directory is specified on page 79.

Let our import file be `D:\DirectPlanning\import_001.csv`

During the import process, the following operations are performed:

- A time and date stamped log directory is created, for example:
`D:\DirectPlanning\histo\2012.02.01-12:00`
(in this example, the import is performed at 12 o'clock).
- A backup of the schedule before the import is performed in this directory.
Reminder: a schedule saved with the `dpl2` format is a file that can be copied / saved with any tool running under Windows.
- The import itself is performed.
- A detailed log of the import is created: `D:\DirectPlanning\histo\journal.log`
as well as `D:\DirectPlanning\journal.log`.
- Every import file is moved to the time and date stamped directory and renamed with the **.ok** extension if all the records have been successfully processed.
Example: `D:\DirectPlanning\histo\import_001.csv.ok`
- Every import file is moved to the time and date stamped directory and renamed with the **.err** extension if there is at least one record with an error in this file.
Example: `D:\DirectPlanning\histo\import_001.csv.err`
- A backup of the schedule after the import is performed, if there has been no error during the import and if you have not disabled the automatic backup on page 79.

These transactions are performed:

- As a security measure (to prevent a file from being imported more than once)
- For traceability purposes (to keep a log of the various imports and their results).

The log files of the schedule can quickly take up space on your hard drive. Please, don't forget to check the configuration of the import automatic purge (page 79, bullet 5).

Section 58 At the end of the import

There may be 3 possibilities:



Case 1
No error has occurred.



Case 2
There are warnings that do not necessarily require the import to be resumed.



Case 3
There are errors that require the import to be resumed.

The import does the same controls as upon keyboard entry.

In order to preserve the existing schedule, the imported jobs are **to schedule**.

Data import: interpreting the errors

The errors can be of several kinds:

- Warnings: errors that do not necessarily require the import to be resumed.
- Critical errors: require the import to be resumed.

A simple error on a level-1 entity can lead to a series of errors.

A forgotten or misspelled entity will generate the following errors:

- All the directly or indirectly linked entities will be refused.
- All the jobs referring to this entity will be refused.
- All the corresponding links will be refused.

Data import: recovery procedure

At the end of the import, if you close the schedule without saving it, there are 2 possibilities:

- Situation 1*
 - You make the the necessary changes in the program that creates the import files,
 - you regenerate the files to import,
 - you start the import again.
- Situation 2*
 - You move the relevant files to the import directory and you remove the **.err** extension,
 - you make changes directly in the involved **.csv** files,
 - you start the import again.



Importing data

Section 59 Security of import

In order to maintain data integrity, Direct Planning offers a lock management to secure the imports.

Security of import - Principle

An external application is *writing* import files while Direct Planning is *reading* them.

If both actions take place at the same time, there's a conflict.

This conflict can be solved with lock files the following way:

- When Direct Planning is reading an import file, it creates a lock file named **directplanning_read.lck** in the import directory.
 - ☞ The external application *must not* try to write in this file as long as the lock exists.
- When the external application is writing in the import file, it must create a lock file called **external_write.lck** in the import directory.
 - ☞ Direct Planning *won't try* to read the file if the lock exists.

Remark

This lock management is at your disposal but it is not mandatory.

If you know that the generation of import files is performed at a time when no one is using Direct Planning (for example, at night), you do not have to implement this security.

Security of import – Detail of operation

When Direct Planning tries to import:

- It first checks that the external application is not writing an import file (presence of the **external_write.lck** file).
- If **external_write.lck** is found, the import is not performed this time, there will be a new attempt next time the schedule is opened.
 - If **external_write.lck** is not found, Direct Planning creates the **directplanning_read.lck** file to notify the external application that it starts reading the file for import.
- At the end of the import, Direct Planning deletes **directplanning_read.lck**.

When the external application wants to write an import file:

- It must first check that Direct Planning is not reading the file (presence of the **directplanning_read.lck** file).
- If **directplanning_read.lck** is found, it must wait before writing.
 - If **directplanning_read.lck** is not found, it can create the **external_write.lck** file to notify Direct Planning that it starts writing the file.
- When it is done writing the import file, the external application deletes **external_write.lck**.

CHAPTER 24 EXPORTING DATA

Direct Planning can produce files for third-party applications (ERP, CAPM, dedicated program, or Excel© macro).

What is exported?

The jobs (with their flags), the links, and possibly the daily and weekly workload.

The export is automatically generated upon each backup of the schedule.

What are the characteristics of the exported files?

- They are in CSV format.
- They are dropped in the export directory configured on page 80.
- The structure of the exported files is given on page 142.
- They contain all the changes made since the last backup.
- The exported files are named:
 - **export_task.csv** for the jobs in v1 format.
 - **export_task_v2.csv** for the jobs in v2 format.
 - **export_link.csv** for the links in v1 format (there is no v2 format for the links).
 - **export_calendar_day.csv** for the calendars and the daily workload.
 - **export_calendar_week.csv** for the weekly workload.

The configuration of export is described on page 80.

Notes

In all text areas, the semicolon is replaced by a colon in the exported file.
The formatted notes are exported in plain text format without any formatting nor line feed. The line feeds are replaced by the string %/ % (percent slash percent).

Scenarios of access to the schedule

SCENARIOS OF ACCESS TO THE SCHEDULE

CHAPTER 25 SCENARIOS OF ACCESS TO THE SCHEDULE

Basic principle: a schedule cannot be simultaneously modified by 2 workstations.
This is to maintain the integrity of the database.

Let's take a simple case. We have 4 users:

- U1, the planner
- U2, another user who also has access for modification
- U3, a user who has access for restricted modification
- U4, a user who has access for consultation

Reminder: the user rights are explained on page 103.

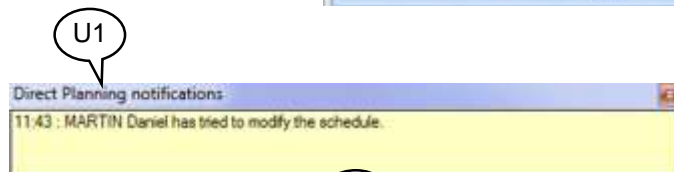
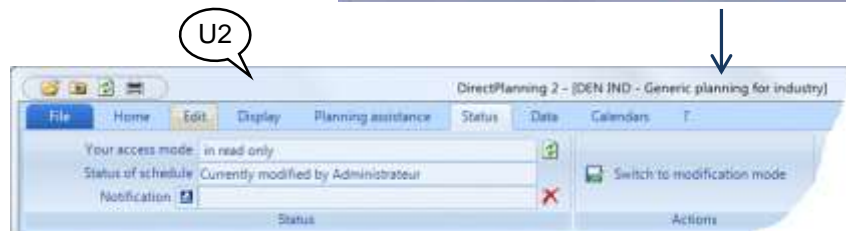
Section 60 Two users are trying to modify the schedule at the same time

- The planner (U1) opens the schedule.
- U2 tries to open the schedule to make changes.

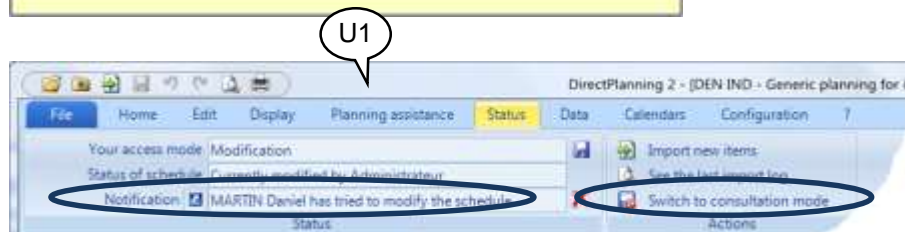
This attempt is denied to him, and he gets the following error message. →

At that point, if he answers *No*, he doesn't open the schedule and nothing happens.

If he answers *Yes*, he agrees to open the schedule for consultation. Here's what he sees ↘



← At the same time, U1 is notified that U2 has tried to modify the schedule. This notification is recalled in the **Status** tab. ↙

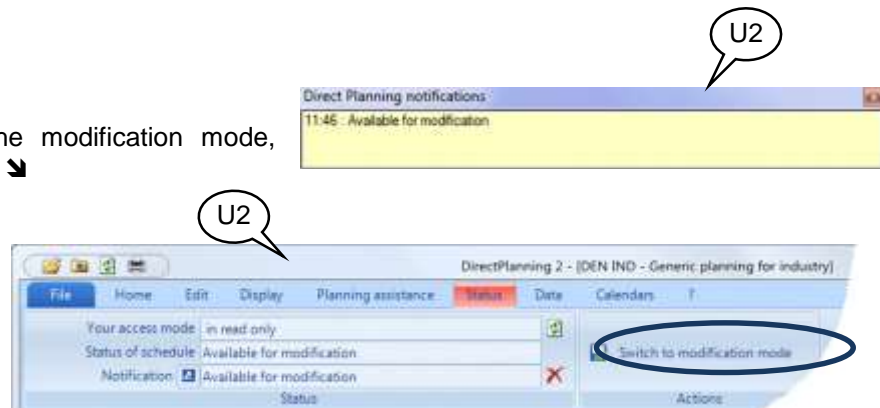


U1 can then switch to the consultation mode (or even close the schedule, which is the same).

This lets U2 switch to the modification mode (next page).

Scenarios of access to the schedule

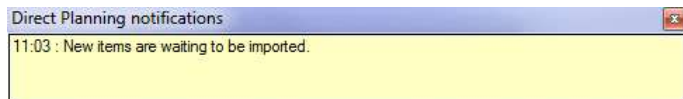
U2 is notified.
He can now switch to the modification mode, clicking the relevant button. ➡



Section 61 Importing data from a third-party software

Reminder | The import directory is configured on page 79.
A third-party application that generates files for Direct Planning must drop them in this directory.
More details on data import on page 114.

Any user with access for modification (U1 or U2 in our example) will be notified of the presence of a file containing data to import.

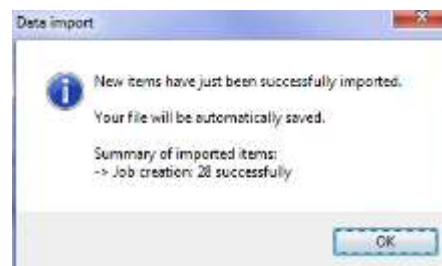


Through its color, the **Status** tab reminds the presence of files to import.
The user can click this button to start the import process.



At the end of the import, this message is displayed. ➡
The other possibilities are described on page 115.

In all cases, the users are notified that there are changes (page 122).



Scenarios of access to the schedule

Visually checking imported jobs

The planner has a powerful tool to see the recently imported jobs: the **highlighting**.

All the jobs of the last import are displayed in a colour that make them stand out, while the other jobs are displayed in gray.

Clicking the *Filter* button lets you go further: the jobs of the last import may be the only ones displayed on the schedule, the other jobs being hidden.

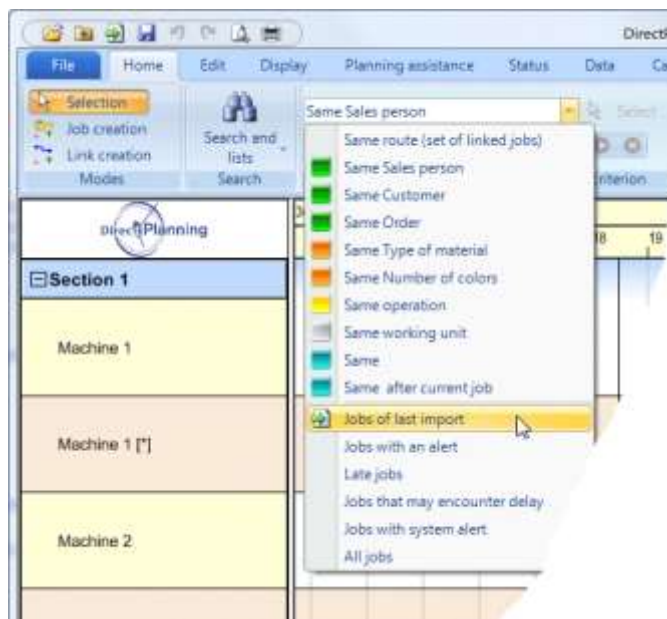


Figure 103 – Highlighting the imported jobs

Scenarios of access to the schedule

Section 62 A user with restricted rights notifies the planner of changes.

Reminder: a user who has access for restricted modification (page 103) can modify the progress report and the flags of the jobs.

The planner (U1) opens the schedule to make changes (it doesn't matter whether he actually makes changes or not, the schedule is opened for modification anyway).

The user with the restricted rights opens the schedule and changes the progress of a job.

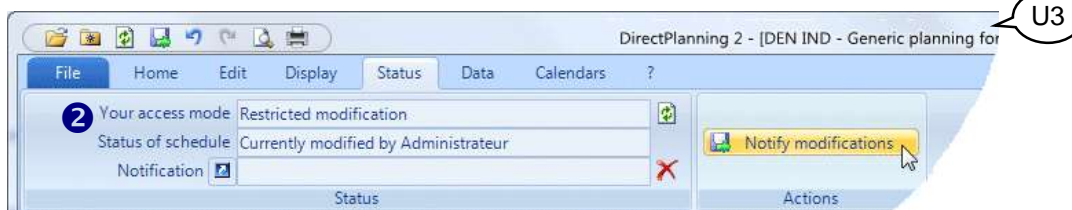


Figure 104 – A user notifies the planner of changes

- 1 In the *Status* tab, the button *Notify modifications* is colored to draw the users' attention.
- 2 This user's access mode is recalled as a reminder.
- 3 The status of the schedule is also recalled.

The user notifies the planner of his changes, clicking the button 1.

He receives a message telling him that his notification has been sent to the planner.

The button 1 is grayed out again since there's nothing left to notify of.

The planner is informed of the presence of items to import, in the Windows notification area, in the lower left corner of the the screen. This notification can always be seen, even if the window of Direct Planning is not in the foreground.



Figure 105 – The planner is informed.

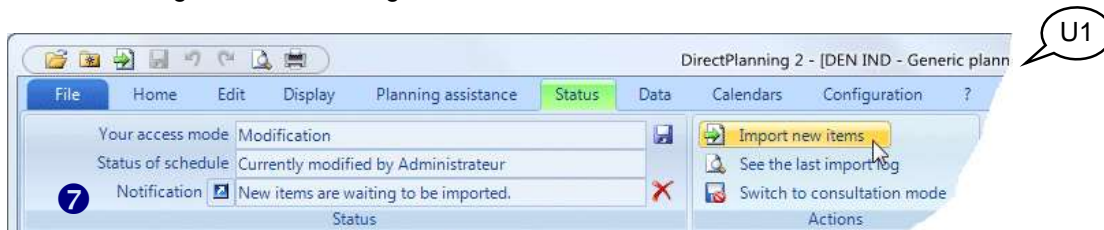


Figure 106 – The planner is informed of the presence of changes to import.

- 4 The planner is also informed in the *Status* tab: the button *Import new items* is colored to draw his attention.
- 5 The planner's access mode is recalled.
- 6 The status of the schedule is also recalled.
- 7 The last notification is recalled.
- 8 The planner can click here to view the import log.

The planner imports these new items, clicking the button 4.

He receives a message confirming that the new items have been imported.

The button 4 is grayed out again since there's nothing left to import.

Scenarios of access to the schedule

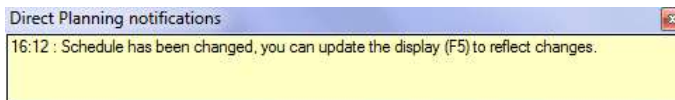
Section 63 The planner modifies the schedule: the other users are notified.

There are several ways the planner can modify the schedule:

- Creating, changing, moving jobs.
- Importing jobs from a third-party software
- Importing changes notified by a user with restricted rights.

Once he has achieved the modifications, he saves the schedule and all the other users are notified. This mainly concerns the users who have a read-only access, but also those who with restricted modification.

The users may then update their schedule, pressing the F5 key, or via the *Status* tab. This lets them have the most up-to-date version of the schedule before them.



All the connected users are informed that there have been changes in the schedule.

This notification is not only displayed after importing new items: it is also displayed upon any change performed and saved by the planner.

The users can then press F5 or click this button to refresh the schedule and take account of the latest changes.

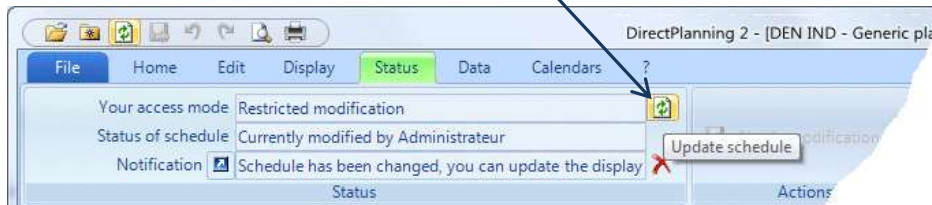
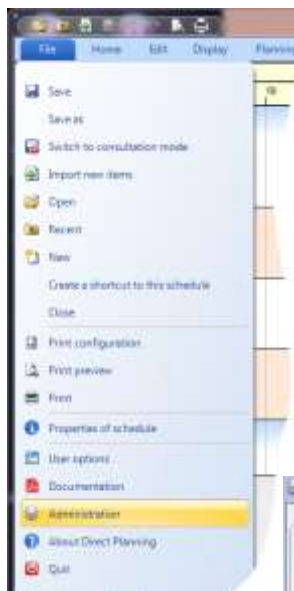


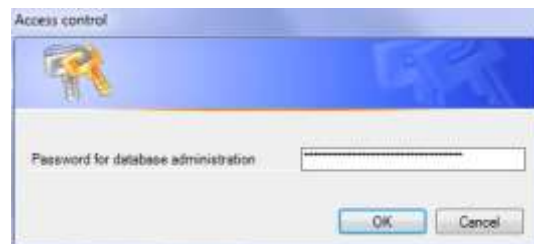
Figure 107 – Refreshing the schedule after importing jobs or after the planner has made changes.

ADMINISTRATION MODULE

CHAPTER 26 ADMINISTRATION MODULE



The administration module lets you manage the bases of Direct Planning. Upon the first access, you have to create a password that will be required upon each access to the administration module.



You'll have the possibility to change it afterwards (button 5).

WARNING: this password is different from the the admin user's one (Section 51).

Choose a base from the list

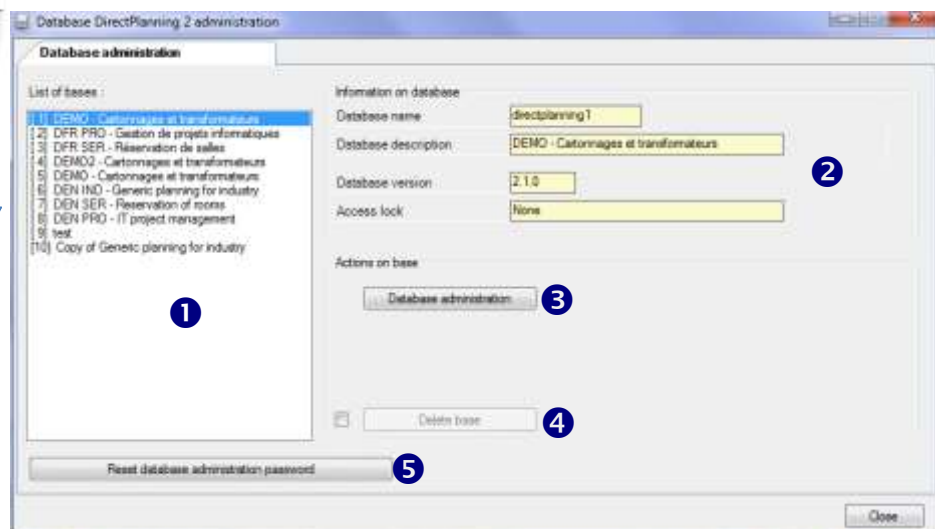


Figure 108 – The list of databases in the administration module

- 1 List of bases. First, select a database.
- 2 The information of the database is recalled here.
- 3 This button lets you manage the selected database: see next page
- 4 To delete a database, first tick the checkbox on the left, then click this button.
- 5 This button lets you define a new password for the database administration.

Administration module

Figure 109 Database administration: *General* tab

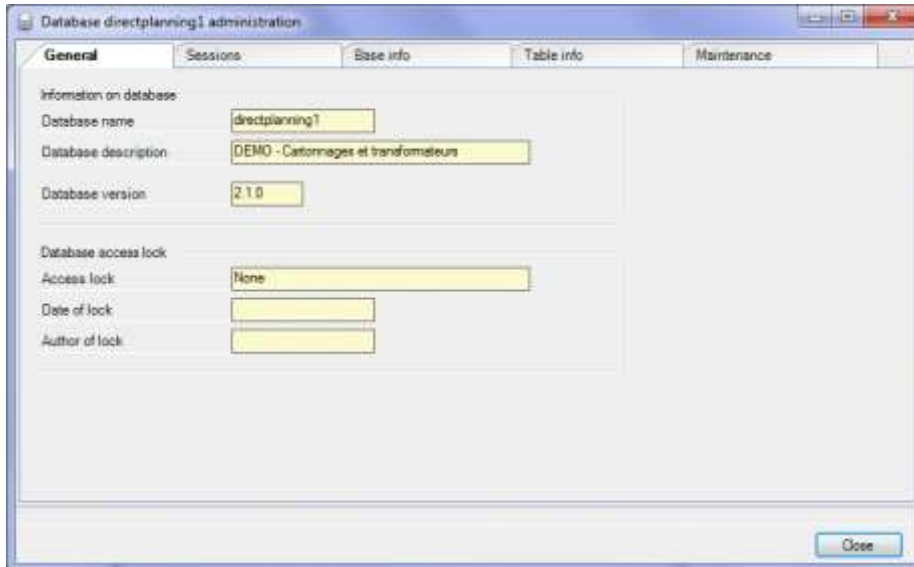


Figure 110 Database administration: *Session* tab

This window lets you have a look on the current sessions.

Double-click a session to see its details (next page).

To limit the number of sessions displayed in this window, you can filter, keying in a session identifier (1) or specifying the start (2) and end (3) dates.

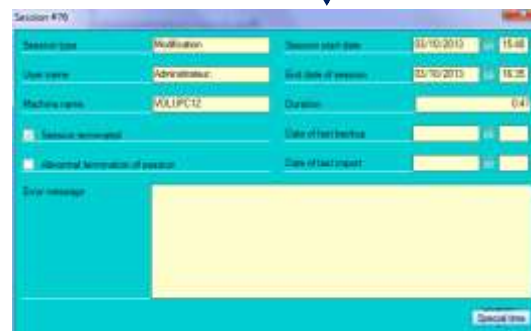


Figure 111 - Detail of a session

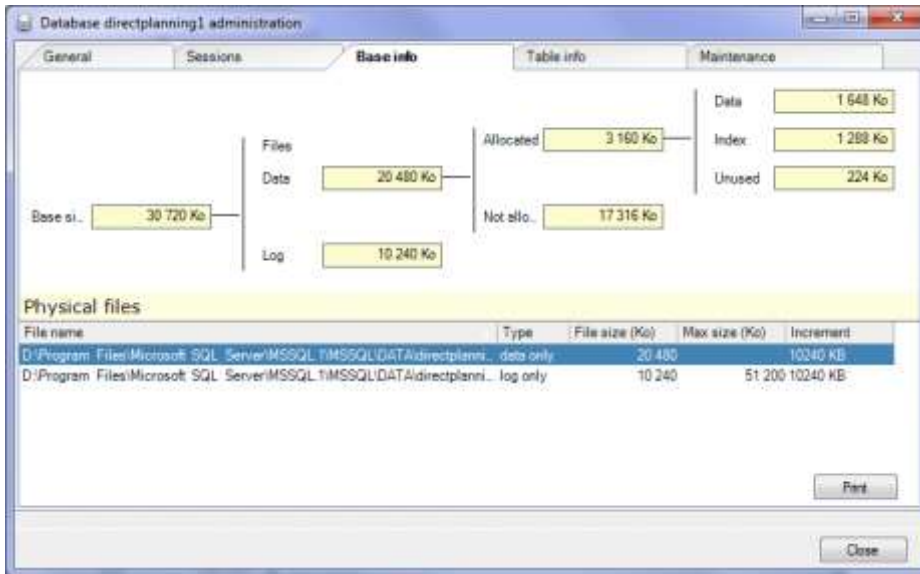


Figure 112 - Database administration: *Base info* tab

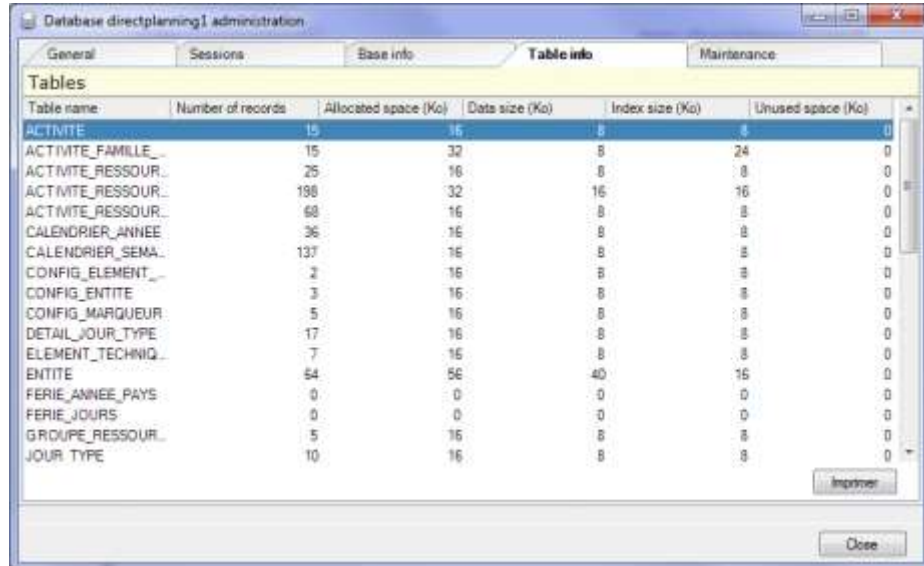


Figure 113 - Database administration: *Table info* tab

Administration module

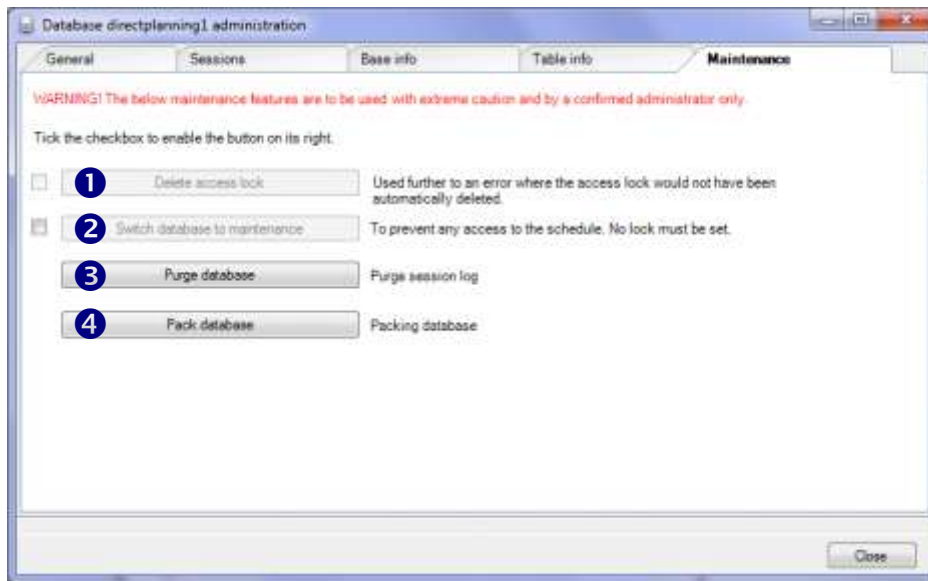


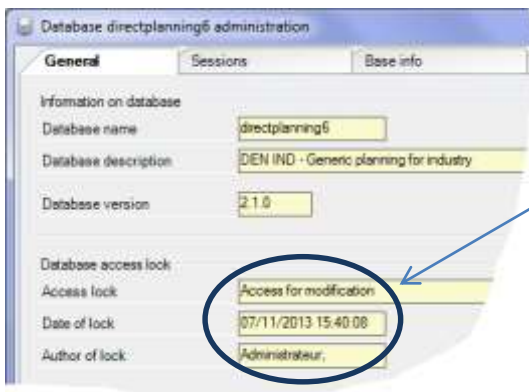
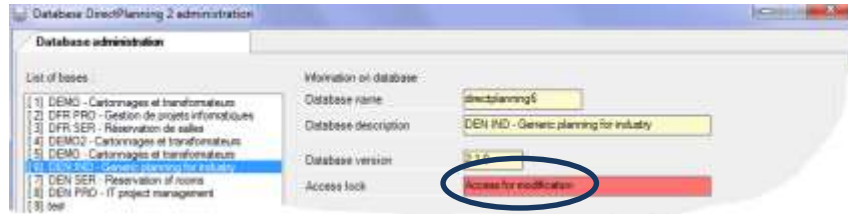
Figure 114 - Database administration: *Maintenance* tab

- 1 Explanations on the next page
- 2 The administrator may have to perform maintenance operations on a database. In that case, no user should connect to the database as long as the maintenance operations are in progress.
For this purpose, you can press this button to switch to the maintenance mode. First, you have to tick the box on the left.
- 3 Click this button to purge the session log (page 124).
- 4 Click this button to pack the database.

Removing the access lock 1

A lock prevents two workstations from simultaneously performing changes on the same schedule. Normally, the lock is automatically removed upon closing the schedule. In case of an abnormal termination of Direct Planning, the lock is not removed and prevents any further modification of the schedule.

This can be seen in the list of the database (page 123), partially shown here: the database *directplanning3* has a lock.



In the *General* tab of this database, you get more information on the date of the lock, and on the user who was running Direct Planning upon the incident.

To solve this problem, click the button **1** *Remove the lock*. To do so, you have to tick the box on the left.

WARNING: Don't try to remove this lock if other users are working on this base: in that case, the presence of the lock is normal.

Displaying files with the .DPL2 format

FILE VIEWER

CHAPTER 27 DISPLAYING FILES WITH THE .DPL2 FORMAT

There is a tool that lets you view, and possibly modify, the contents of .DPL2 files.

The .DPL2 files are export files of a Direct Planning database.

This tool is located in the installation directory of Direct Planning.

Its name: DPL2_File_Viewer.exe

It is reserved for the administrator.

When you use it to modify a .DPL2 file, you have to be very careful.

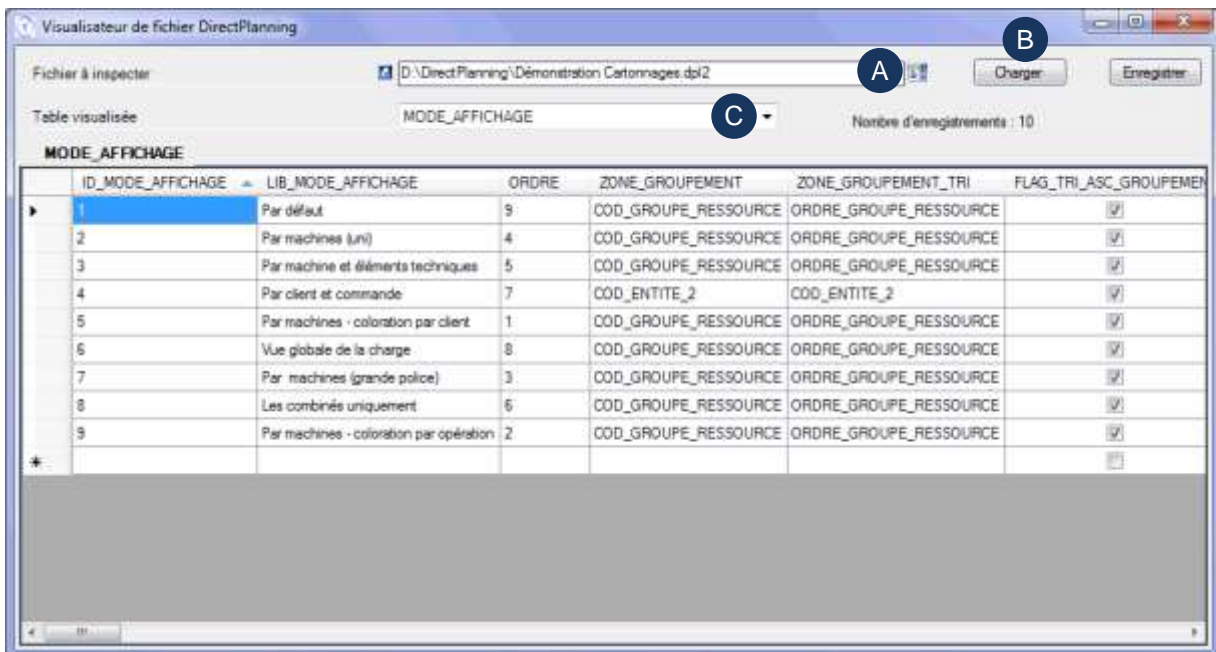
It is very important that you make a copy of the .DPL2 file before.

Modifying a .DPL2 file should only be done under the supervision of a technician of Volume Software.

Reminders

- Saving an export file with the .DPL2 extension: page 51
- Directory of .DPL2 backup copies: page 81
- Backing up a database in a .DPL2 file: page 114
- Restoring a database from a .DPL2 file: page 126
- Opening a .DPL2 file: page 56

Start the DPL2_File_Viewer.exe program.



A First, select the .DPL2 file, clicking 

B Once the file is selected, click **Load**.

C Select the table to view.



Displaying files with the .DPL2 format

The names of the tables and the columns are internal names of the database.

Click a column header to sort.

To modify a piece of data, first click the relevant cell.
Then, click a second time to switch to edit mode.

When you are done editing, click the **Save** button.

ANNEXES

CHAPTER 28 THE DATA IMPORT FORMATS

This annexe describes the specifications of data import into Direct Planning. The implementation is explained on page 114.

Importing data: Directory and name of the import files

The files to import have to be saved in an import directory specified on page 79.

This allows a different import directory per schedule.

The files to import have to be encoded in UTF-8.

The prefix and the file extension of the files to import are imposed.

prefix: `import_` extension: `.csv`

This allows as many import files as needed.

Examples

`import_001.csv`

`import_section01.csv`

Importing data: Structure of a file to import

The file to import must have the CSV format: the field separator is the semicolon.

Each line of a file to import consists of a record and must end with a carriage return (CR LF).

A file to import may contain 4 types of record:

- The technical elements (TEC1, TEC2, ..., TEC20)
6 fields that can be imported, thus 5 semicolons
- The entities (ENT1, ENT2, ..., ENT10)
25 fields that can be imported, thus 24 semicolons
- The jobs (TASK) : 192 fields that can be imported, thus 191 semicolons
- The links (LINK) : 6 fields that can be imported, thus 5 semicolons

The lines starting with a # are ignored: this lets you avoid importing some lines, but without removing them from the file, in particular for test purposes.

The order of the lines in the file is not important.

The data will be imported in the following order.

- The entities of type 1 of each file to import
- The entities of type 2 of each file to import
- ...
- The entities of type 10 of each file to import
- The technical elements of each file to import
- The jobs of each file to import
- The links of each file to import

Upon creating (entities, jobs, and links), the **Req.** indicates that the area is required.

IMPORTANT : Provisionnally, you may continue import your jobs with the format 1 (Direct Planning V.1.2).

The data import formats

Section 64 The technical elements

#	Area	Format	Req.	Notes
1	Type of data	alpha	Req.	Possible values: TEC1 , TEC2 , ... TEC20 corresponding to the 20 technical elements
2	Version of import format	alpha	Req.	Value: 2
3	Action	alpha	Req.	C (Creation) CM (Creation if technical element doesn't exist, Modification if it already exists).
4	Identifier of technical element	alpha	Req.	
5	Designation of technical element	alpha		
6	Color	alpha		The color can be stated in 3 different ways: <ul style="list-style-type: none"> • RGB: (3 values, comma-separated) • html name (page 141) • The RANDOM keyword specifies a random color upon creating a technical element.

Remarks

- There may be **no duplicate**, neither in the identifiers, nor in the designations of the technical items.
- Should there be a duplicate in the identifier of a technical item, a warning message would be displayed. This situation may be normal when importing a job involving an already existing technical element: the technical element is imported again in the same time as the new job, which triggers a normal warning message.
- Should there be a duplicate in the designation of a technical item (a different identifier but an identical designation), then the following would occur: the identifier (in brackets) would be appended at the end of the description.

The data import formats

Section 65 The entities

N°	Area	Format	Req.	Notes
01	Type of data	alpha	Req.	Possible values: ENT1, ENT2 ... ENT10 corresponding to the 10 types of entities
02	Version of import format	alpha	Req.	Value: 2
03	Action	alpha	Req.	C (Creation) CM (Creation si entity doesn't exist, Modification if it already exists).
04	Identifier	alpha	Req.	
05	Designation	alpha		
06	Configurable area 1	alpha		The configurable areas are now typed in Direct Planning 2. If the value in the import file does not match the type of the area, it will be ignored. Example : the "ABC" string imported to a numerical area.
07	Configurable area 2	alpha		
08	Configurable area 3	alpha		
09	Configurable area 4	alpha		
10	Configurable area 5	alpha		
11	Configurable area 6	alpha		
12	Configurable area 7	alpha		
13	Configurable area 8	alpha		
14	Configurable area 9	alpha		
15	Configurable area 10	alpha		
16	Color	alpha		The color can be stated in 3 different ways: <ul style="list-style-type: none"> • RGB: (3 values, comma-separated) • html name (page 141) • The RANDOM keyword specifies a random color upon creating an entity.
17	Identifier of linked entity 1	alpha		The links between the entities are not mandatory. If they feature in the import file, the existence of the linked entities will be checked.
18	Identifier of linked entity 2	alpha		
19	Identifier of linked entity 3	alpha		
20	Identifier of linked entity 4	alpha		
21	Identifier of linked entity 5	alpha		
22	Identifier of linked entity 6	alpha		
23	Identifier of linked entity 7	alpha		
24	Identifier of linked entity 8	alpha		
25	Identifier of linked entity 9	alpha		

Remarques

- The **notes** you enter in Direct Planning 2 cannot be imported.
- A **link** between entities is always stated "upstream": for example, if the entities 2 and 3 are linked, you have to declare the link from the entity 3 to the entity 2, not the opposite.
- There may be no **link** for the entity 1, which is on top of the hierarchy.
- The **links** must comply with hierarchy: for example, if the entity 3 is linked with the entity 2, and the entity 2 is linked with the entity 1, then the entity 3 has to be linked with the entity 1.
- There may be **no duplicate**, neither in the identifiers, nor in the designations of the entities.
- Should there be a duplicate in the identifier of an entity, a warning message would be displayed. This situation may be normal when importing a job involving an already existing customer: the customer is imported again in the same time as the new job, which triggers a normal warning message.
- Should there be a duplicate in the designation of an entity (a different identifier but an identical designation), then the following would occur: the identifier (in brackets) would be appended at the end of the description.

Section 66 The jobs









Formats

- **Duration:** the durations may be stated in 2 different ways:
 - "120": an integer containing the number of minutes
 - "137:50": a number of hours and a number of minutes separated by a colon
- **Quantity:** integers >= 0.
- **Datetime :** possible format:
 - **DD.MM.YYYY hh:mm** (with a space between the year and the time)
 - **DD/MM/YYYY hh:mm** (with a space between the year and the time)
 - **DD.MM.YYYY**
 - **JJ/MM/YYYY**
 - « **NOW** » : converts the current date & time to the date & time of the import

Notes

- **Planned durations:** you may let Direct Planning fully calculate these durations. In that case, you will leave the **Planned durations** areas blank (setting and running). However, if Direct Planning determines that both durations are zero, **then the job will be refused with an error message upon import.**

Note: the gray / yellow alternations are just intended to ease the reading.

N°	Area	Format	Req.	Notes
01	Type of data	alpha	Req.	Value: TASK
02	Version of import format	alpha	Req.	Value: 2
03	Action	alpha	Req.	Possible values: see footnote ①
04	External, unique identifier for this job (ERP ID)	alpha	Req.	Your unique identifier for this job
05	Job description	alpha		
06	Resource identifier	alpha	Req.	
07	Operation identifier	alpha		If #DEF, the job operation will be initialized with the default machine operation. If blank, it is initialized with a blank string. Reserved  Industry mode
08	Start date and time	datetime		Start time or end time must be specified, but not both. If none is specified, the start date & time are initialized with the current date & time.
09	End date and time	datetime		
10	Planned quantity	Qty		Reserved  Industry mode
11	Performed quantity	Qty		Will only be specified if the ERP has to impose this performed quantity. Imposing this value results in automatically calculating the progress percentage. Reserved  Industry mode
12	Progress percentage	Integer		Value: from 0 to 100. Not to be specified if performed quantity is specified. If planned quantity is specified, it will allow calculating the performed quantity. Reserved  Project &  Industry modes
13	Imposed transition time	Duration		To be specified if you want to impose a transition time (warning, 0 is a value). Otherwise, leave blank. The value will be ignored if the management of transition times is not enabled. Reserved  Industry mode + integral offer
14	Imposed, planned setting time	Duration		To be specified if you want to impose the planned setting time. If blank, the setting time will be calculated by Direct Planning. Reserved  Industry mode
15	Performed setting time	Duration		To be entered if the ERP knows the performed setting time. Reserved  Industry mode



The data import formats

16	Completed setting	Flag	Lets you specify if setting is completed. Y/N or O/N or 0/1 Reserved Industry mode
17	Industry mode: Imposed, planned running time Project Mode: Planned time Service Mode: Time	Duration	Industry mode: to be specified if you want to impose the planned running time. If blank, Direct Planning will calculate the running time. Required in Project & Service modes
18	Industry mode: Performed running time Mode Project: Performed time	Duration	To be specified if the ERP knows the performed running time. Reserved Project & Industry modes
19	Duration of performed downtimes	Duration	To be specified if the ERP knows the downtime during the running time. Reserved Project & Industry modes
20	Earliest start date & time	datetime	
21	Latest end date & time	datetime	
22	Manual alert message	alpha	Lets you impose a manual alert message on the job.
23	Identifier of entity 1	alpha	
24	Identifier of entity 2	alpha	
25	Identifier of entity 3	alpha	
26	Identifier of entity 4	alpha	
27	Identifier of entity 5	alpha	
28	Identifier of entity 6	alpha	
29	Identifier of entity 7	alpha	
30	Identifier of entity 8	alpha	
31	Identifier of entity 9	alpha	
32	Identifier of entity 10	alpha	
33	Configurable area 1	alpha	
34	Configurable area 2	alpha	
35	Configurable area 3	alpha	
36	Configurable area 4	alpha	
37	Configurable area 5	alpha	
38	Configurable area 6	alpha	
39	Configurable area 7	alpha	
40	Configurable area 8	alpha	
41	Configurable area 9	alpha	
42	Configurable area 10	alpha	
43	Identifier of technical element 1	alpha	Reserved Industry mode
44	Identifier of technical element 2	alpha	
45	Identifier of technical element 3	alpha	
46	Identifier of technical element 4	alpha	
47	Identifier of technical element 5	alpha	
48	Identifier of technical element 6	alpha	
49	Identifier of technical element 7	alpha	
50	Identifier of technical element 8	alpha	
51	Identifier of technical element 9	alpha	
52	Identifier of technical element 10	alpha	
53	Identifier of technical element 11	alpha	
54	Identifier of technical element 12	alpha	
55	Identifier of technical element 13	alpha	
56	Identifier of technical element 14	alpha	
57	Identifier of technical element 15	alpha	
58	Identifier of technical element 16	alpha	
59	Identifier of technical element 17	alpha	
60	Identifier of technical element 18	alpha	
61	Identifier of technical element 19	alpha	
62	Identifier of technical element 20	alpha	

The data import formats

63	Status of flag 1 (see footnote ②)	num		0 to 5
64	Planned receipt date (flag 1)	datetime		Only for flags <i>Pending item receipt</i>
65	Actual receipt date (flag 1)	datetime		Only for flags <i>Pending item receipt</i> Will only be considered if the flag status corresponds to a received item.
66	Configurable area 1 (flag 1)	alpha		
67	Configurable area 2 (flag 1)	alpha		
68	Configurable area 3 (flag 1)	alpha		
69	Configurable area 4 (flag 1)	alpha		
70	Configurable area 5 (flag 1)	alpha		
71	Configurable area 6 (flag 1)	alpha		
72	Configurable area 7 (flag 1)	alpha		
73	Configurable area 8 (flag 1)	alpha		
74	Configurable area 9 (flag 1)	alpha		
75	Configurable area 10 (flag 1)	alpha		
76	Status of flag 2 (see footnote ②)	num		0 to 5
77	Planned receipt date (flag 2)	datetime		Only for flags <i>Pending item receipt</i>
78	Actual receipt date (flag 2)	datetime		Only for flags <i>Pending item receipt</i> Will only be considered if the flag status corresponds to a received item.
79	Configurable area 1 (flag 2)	alpha		
80	Configurable area 2 (flag 2)	alpha		
81	Configurable area 3 (flag 2)	alpha		
82	Configurable area 4 (flag 2)	alpha		
83	Configurable area 5 (flag 2)	alpha		
84	Configurable area 6 (flag 2)	alpha		
85	Configurable area 7 (flag 2)	alpha		
86	Configurable area 8 (flag 2)	alpha		
87	Configurable area 9 (flag 2)	alpha		
88	Configurable area 10 (flag 2)	alpha		
89	Status of flag 3 (see footnote ②)	num		0 to 5
90	Planned receipt date (flag 3)	datetime		Only for flags <i>Pending item receipt</i>
91	Actual receipt date (flag 3)	datetime		Only for flags <i>Pending item receipt</i> Will only be considered if the flag status corresponds to a received item.
92	Configurable area 1 (flag 3)	alpha		
93	Configurable area 2 (flag 3)	alpha		
94	Configurable area 3 (flag 3)	alpha		
95	Configurable area 4 (flag 3)	alpha		
96	Configurable area 5 (flag 3)	alpha		
97	Configurable area 6 (flag 3)	alpha		
98	Configurable area 7 (flag 3)	alpha		
99	Configurable area 8 (flag 3)	alpha		
100	Configurable area 9 (flag 3)	alpha		
101	Configurable area 10 (flag 3)	alpha		
102	Status of flag 4 (see footnote ②)	num		0 to 5
103	Planned receipt date (flag 4)	datetime		Only for flags <i>Pending item receipt</i>
104	Actual receipt date (flag 4)	datetime		Only for flags <i>Pending item receipt</i> Will only be considered if the flag status corresponds to a received item.
105	Configurable area 1 (flag 4)	alpha		

The data import formats

106	Configurable area 2 (flag 4)	alpha	
107	Configurable area 3 (flag 4)	alpha	
108	Configurable area 4 (flag 4)	alpha	
109	Configurable area 5 (flag 4)	alpha	
110	Configurable area 6 (flag 4)	alpha	
111	Configurable area 7 (flag 4)	alpha	
112	Configurable area 8 (flag 4)	alpha	
113	Configurable area 9 (flag 4)	alpha	
114	Configurable area 10 (flag 4)	alpha	
115	Status of flag 5 (see footnote ②)	num	0 to 5
116	Planned receipt date (flag 5)	datetime	Only for flags <i>Pending item receipt</i>
117	Actual receipt date (flag 5)	datetime	Only for flags <i>Pending item receipt</i> Will only be considered if the flag status corresponds to a received item.
118	Configurable area 1 (flag 5)	alpha	
119	Configurable area 2 (flag 5)	alpha	
120	Configurable area 3 (flag 5)	alpha	
121	Configurable area 4 (flag 5)	alpha	
122	Configurable area 5 (flag 5)	alpha	
123	Configurable area 6 (flag 5)	alpha	
124	Configurable area 7 (flag 5)	alpha	
125	Configurable area 8 (flag 5)	alpha	
126	Configurable area 9 (flag 5)	alpha	
127	Configurable area 10 (flag 5)	alpha	
128	Status of flag 6 (see footnote ②)	num	0 to 5
129	Planned receipt date (flag 6)	datetime	Only for flags <i>Pending item receipt</i>
130	Actual receipt date (flag 6)	datetime	Only for flags <i>Pending item receipt</i> Will only be considered if the flag status corresponds to a received item.
131	Configurable area 1 (flag 6)	alpha	
132	Configurable area 2 (flag 6)	alpha	
133	Configurable area 3 (flag 6)	alpha	
134	Configurable area 4 (flag 6)	alpha	
135	Configurable area 5 (flag 6)	alpha	
136	Configurable area 6 (flag 6)	alpha	
137	Configurable area 7 (flag 6)	alpha	
138	Configurable area 8 (flag 6)	alpha	
139	Configurable area 9 (flag 6)	alpha	
140	Configurable area 10 (flag 6)	alpha	
141	Status of flag 7 (see footnote ②)	num	0 to 5
142	Planned receipt date (flag 7)	datetime	Only for flags <i>Pending item receipt</i>
143	Actual receipt date (flag 7)	datetime	Only for flags <i>Pending item receipt</i> Will only be considered if the flag status corresponds to a received item.
144	Configurable area 1 (flag 7)	alpha	
145	Configurable area 2 (flag 7)	alpha	
146	Configurable area 3 (flag 7)	alpha	
147	Configurable area 4 (flag 7)	alpha	
148	Configurable area 5 (flag 7)	alpha	
149	Configurable area 6 (flag 7)	alpha	
150	Configurable area 7 (flag 7)	alpha	
151	Configurable area 8 (flag 7)	alpha	

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152	Configurable area 9 (flag 7)	alpha		
153	Configurable area 10 (flag 7)	alpha		
154	Status of flag 8 (see footnote ②)	num		0 to 5
155	Planned receipt date (flag 8)	datetime		Only for flags <i>Pending item receipt</i>
156	Actual receipt date (flag 8)	datetime		Only for flags <i>Pending item receipt</i> Will only be considered if the flag status corresponds to a received item.
157	Configurable area 1 (flag 8)	alpha		
158	Configurable area 2 (flag 8)	alpha		
159	Configurable area 3 (flag 8)	alpha		
160	Configurable area 4 (flag 8)	alpha		
161	Configurable area 5 (flag 8)	alpha		
162	Configurable area 6 (flag 8)	alpha		
163	Configurable area 7 (flag 8)	alpha		
164	Configurable area 8 (flag 8)	alpha		
165	Configurable area 9 (flag 8)	alpha		
166	Configurable area 10 (flag 8)	alpha		
167	Status of flag 9 (see footnote ②)	num		0 to 5
168	Planned receipt date (flag 9)	datetime		Only for flags <i>Pending item receipt</i>
169	Actual receipt date (flag 9)	datetime		Only for flags <i>Pending item receipt</i> Will only be considered if the flag status corresponds to a received item.
170	Configurable area 1 (flag 9)	alpha		
171	Configurable area 2 (flag 9)	alpha		
172	Configurable area 3 (flag 9)	alpha		
173	Configurable area 4 (flag 9)	alpha		
174	Configurable area 5 (flag 9)	alpha		
175	Configurable area 6 (flag 9)	alpha		
176	Configurable area 7 (flag 9)	alpha		
177	Configurable area 8 (flag 9)	alpha		
178	Configurable area 9 (flag 9)	alpha		
179	Configurable area 10 (flag 9)	alpha		
180	Status of flag 10 (see footnote ②)	num		0 to 5
181	Planned receipt date (flag 10)	datetime		Only for flags <i>Pending item receipt</i>
182	Actual receipt date (flag 10)	datetime		Only for flags <i>Pending item receipt</i> Will only be considered if the flag status corresponds to a received item.
183	Configurable area 1 (flag 10)	alpha		
184	Configurable area 2 (flag 10)	alpha		
185	Configurable area 3 (flag 10)	alpha		
186	Configurable area 4 (flag 10)	alpha		
187	Configurable area 5 (flag 10)	alpha		
188	Configurable area 6 (flag 10)	alpha		
189	Configurable area 7 (flag 10)	alpha		
190	Configurable area 8 (flag 10)	alpha		
191	Configurable area 9 (flag 10)	alpha		
192	Configurable area 10 (flag 10)	alpha		

The data import formats

Footnotes (imported jobs)

① The possible action codes are as follows:

C	Job creation
C-NOWARNING	Job creation without warning message
C-NOERROR	Job creation without error message
M	Job modification
M-NOWARNING	Job modification without warning message
M-NOERROR	Job modification without error message
M-PLAN	Job modification, assigning the job the To schedule status. This lets the external software decide the effect a modification has on the planning status: thus, further to an import, some scheduled jobs in Direct Planning may switch to the To schedule status because of significant changes occurred in the external software.
M-PLAN-NOWARNING	idem M-PLAN without warning message
M-PLAN-NOERROR	idem M-PLAN without error message
S	Job deletion
S-NOWARNING	Job deletion without warning message
S-NOERROR	Job deletion without error message


② Status of flag n.

If this area is not specified, it is defaulted to zero; in other words, it is an inactive flag.

If it is an indicative flag, this area can take the values **0** (inactive) or **1** (active).

If it is a multi-status flag, this area can take the values **0** (inactive) to **5**.

Flags are described on page 70.

③ This footnote is about Industry  and Project  modes for the following fields:

- The job earliest start date
- The job latest end date
- The Planned receipt date of the 10 flags of a flag

If the passed format for these fields is short (DD/MM/YYYY), the program will automatically initialize the time with the default time configured on page 67, bullet 4.

In the other cases, the passed time will be used, even if it is 00:00.

The data import formats

Importing data: Rules for job modifications

Note | In Direct Planning, each job has an internal identifier, named internal ID.
This internal ID is automatically attributed by Direct Planning.
It can be seen in the header of the job detail window.
This internal ID of Direct Planning is different from the ID provided by the ERP.

1. The first 4 areas are required because they make up the key that specifically identify a job and the action to perform. These areas are as follows:
 - 01-Type of data
 - 02-Version of import format
 - 03-Action
 - 04- External, unique identifier (ERP) for this job.
2. The areas that should not be modified must just contain the @ character.
3. The areas 08 and 09 (start and end date and time) can only be modified if you assign the job the **To schedule** status (M-PLAN action code, see above).
4. The areas that should be modified must contain the new value; if an area is empty in the import file, this amounts to delete its contents.
5. To modify a job on the basis of the internal ID of Direct Planning (not the external ID), you have to put a # (hash) at the very beginning of the 04 area (external ID) in the import file, on a line where the action code = **M** (Modification).
For example, if you specify **#120**, this means you modify the job whose Direct Planning internal ID is **120**. This is practical to modify jobs created in Direct Planning.
6. You may also need modify the external ID.
As a matter of fact, in case of a job created by Direct Planning and having no external ID yet, the ERP ID is zero.
You can assign the job an external ID, putting a | (pipe) at the very beginning of the line.
Examples:
#120|ABC to search for the job with the internal ID **120** and assign it the external ID **ABC**.
TUV|ABC to search for the job with the external ID **TUV** and change it to **ABC**.
7. If you modify a job that has an external ID and that has been subdivided into several jobs, the modifications apply to all the subdivided jobs (only the modification of duration is not allowed).

Importing data: Rules for job deletions

1. Action code **S** indicates that the job is to be deleted.
2. Job deletion results in link deletion, but the linked jobs are not deleted.
3. You can specify an asterisk as a generic character in the 04 area (external ID).
For example, if you specify **05116001-1-***, all the jobs whose external ID starts with **05116001-1-** will be deleted.
This point is interesting because it lets the ERP (VoluPack, for example) simply perform a regeneration (cancel and replace): for example, you delete all the operations of a Work Order in one operation, and then you re-create the WO.

The data import formats

Section 67 The links

N°	Area	Format	Req.	Notes
1	Type of data	alpha	Req.	Value: LINK
2	Version of import format	alpha	Req.	Value: 2
3	Action	alpha	Req.	C (Creation) M (Modification) S (Deletion)
4	External, unique identifier for the source job	alpha	Req.	
5	External, unique identifier for the target job	alpha	Req.	
6	Duration of the link	num	Req.	See below

Duration of the link:

- 0** for a simple start-end link
- n** if **n > 0** : link with **n** minutes **shifting**.
- if **n < 0** : link with **n** minutes **overlapping**.

Importing data: Rules for link modifications

- The action code **M** specifies that a link is modified.
- The first 5 fields are required because they make up the key that specifically identity a link and the action to perform.
- As a consequence, only the field 6 (Link duration) can be modified.
- If the field 6 contains the @ symbol, this means that you don't want to change the existing value.

Importing data: Rules for link deletions

- The action code **S** specifies that a link is deleted.
- Deleting a link doesn't delete the linked jobs.
- Deleting a link doesn't delete the other links of the route.

Section 68 Colors codes

html name	Code RVB
AliceBlue	240,248,255
AntiqueWhite	250,235,215
Aqua	0,255,255
Aquamarine	127,255,212
Azure	240,255,255
Beige	245,245,220
Bisque	255,228,196
Black	0,0,0
BlanchedAlmond	255,235,205
Blue	0,0,255
BlueViolet	138,43,226
Brown	165,42,42
BurlyWood	222,184,135
CadetBlue	95,158,160
Chartreuse	127,255,0
Chocolate	210,105,30
Coral	255,127,80
CornflowerBlue	100,149,237
Cornsilk	255,248,220
Crimson	237,164,61
Cyan	0,255,255
DarkBlue	0,0,139
DarkCyan	0,139,139
DarkGoldenRod	184,134,11
DarkGray	167,167,167
DarkGreen	0,100,0
DarkKhaki	189,183,107
DarkMagenta	139,0,139
DarkOliveGreen	85,107,47
Darkorange	255,140,0
DarkOrchid	153,50,204
DarkRed	139,0,0
DarkSalmon	233,150,122
DarkSeaGreen	143,188,143
DarkSlateBlue	72,61,139
DarkSlateGray	47,79,79
DarkTurquoise	0,206,209
DarkViolet	148,0,211
DeepPink	255,20,147
DeepSkyBlue	0,191,255
DimGray	105,105,105
DodgerBlue	30,144,255
Feldspar	209,146,117
FireBrick	178,34,34
FloralWhite	255,250,240
ForestGreen	34,139,34
Fuchsia	255,0,255
Gainsboro	220,220,220

html name	Code RVB
GhostWhite	248,248,255
Gold	255,215,0
GoldenRod	218,165,32
Gray	190,190,190
Green	0,128,0
GreenYellow	173,255,47
HoneyDew	240,255,240
HotPink	255,105,180
IndianRed	205,92,92
Indigo	75,0,130
Ivory	255,255,240
Khaki	240,230,140
Lavender	230,230,250
LavenderBlush	255,240,245
LawnGreen	124,252,0
LemonChiffon	255,250,205
LightBlue	173,216,230
LightCoral	240,128,128
LightCyan	224,255,255
LightGoldenRodYellow	250,250,210
LightGreen	144,238,144
LightGrey	211,211,211
LightPink	255,182,193
LightSalmon	255,160,122
LightSeaGreen	32,178,170
LightSkyBlue	135,206,250
LightSlateBlue	132,112,255
LightSlateGray	119,136,153
LightSteelBlue	176,196,222
LightYellow	255,255,224
Lime	0,255,0
LimeGreen	50,205,50
Linen	250,240,230
Magenta	255,0,255
Maroon	128,0,0
MediumAquaMarine	102,205,170
MediumBlue	0,0,205
MediumOrchid	186,85,211
MediumPurple	147,112,219
MediumSeaGreen	60,179,113
MediumSlateBlue	123,104,238
MediumSpringGreen	0,250,154
MediumTurquoise	72,209,204
MediumVioletRed	199,21,133
MidnightBlue	25,25,112
MintCream	245,255,250
MistyRose	255,228,225
Moccasin	255,228,181

html name	Code RVB
NavajoWhite	255,222,173
Navy	0,0,128
OldLace	253,245,230
Olive	128,128,0
OliveDrab	107,142,35
Orange	255,165,0
OrangeRed	255,69,0
Orchid	218,112,214
PaleGoldenRod	238,232,170
PaleGreen	152,251,152
PaleTurquoise	175,238,238
PaleVioletRed	219,112,147
PapayaWhip	255,239,213
PeachPuff	255,218,185
Peru	205,133,63
Pink	255,192,203
Plum	221,160,221
PowderBlue	176,224,230
Purple	128,0,128
Red	255,0,0
RosyBrown	188,143,143
RoyalBlue	65,105,225
SaddleBrown	139,69,19
Salmon	250,128,114
SandyBrown	244,164,96
SeaGreen	46,139,87
SeaShell	255,245,238
Sienna	160,82,45
Silver	192,192,192
SkyBlue	135,206,235
SlateBlue	106,90,205
SlateGray	112,128,144
Snow	255,250,250
SpringGreen	0,255,127
SteelBlue	70,130,180
Tan	210,180,140
Teal	0,128,128
Thistle	216,191,216
Tomato	255,99,71
Turquoise	64,224,208
Violet	238,130,238
VioletRed	208,32,144
Wheat	245,222,179
White	255,255,255
WhiteSmoke	245,245,245
Yellow	255,255,0
YellowGreen	154,205,50

The data export formats

CHAPTER 29 THE DATA EXPORT FORMATS

Provisionnally, you can still export jobs using format 1.

The links and the workload (daily & weekly) are still exported in format 1, since there's been no change in the export format.

Section 69 The jobs

Note: the gray / yellow alternations are just intended to ease the reading.

N°	Area	Format	Notes
001	Type of data	alpha	Valeurs : TASK or TITLE
002	Version of export format	alpha	Value: 2
003	Unique ERP identifier for this job ③	alpha	
004	Unique Direct Planning identifier for this job ⁽⁴⁾	alpha	
005	Name of job	alpha	
006	Identifier of resource	alpha	
007	Designation of resource	alpha	
008	Identifier of operation	alpha	
009	Designation of operation	alpha	
010	Identifier of working unit	alpha	
011	Designation of working unit	alpha	
012	Start date and time	datetime ①	
013	End date and time	datetime ①	
014	Entered earliest start date and time	datetime ①	
015	Earliest start date and time determined by flags (awaiting item receipt)	datetime ①	
016	Earliest start date and time imposed by upstream jobs in the route	datetime ①	
017	Actual earliest start date and time	datetime ①	
018	Route earliest start date and time	datetime ①	
019	Entered latest end date and time	datetime ①	
020	Latest end date and time, imposed by downstream jobs in the route	datetime ①	
021	Actual latest end date and time	datetime ①	
022	Route latest end date and time	datetime ①	
023	Planned quantity	Qty	
024	Performed quantity		
025	Progress percentage	num	Value: 0 to 100
026	Duration of transition time	Duration	
027	Planned setting time	Duration	
028	Performed setting time	Duration	
029	Setting completed?	O/N	O for yes, N for No
030	Scheduled setting time	Duration	
031	Planned running time	Duration	
032	Performed running time	Duration	
033	Performed downtime	Duration	
034	Scheduled running time	Duration	
035	Planned total time	Duration	

The data export formats

036	Performed total time	Duration	
037	Scheduled total time (excluding transition time)	Duration	
038	Scheduled total time (including transition time)	Duration	
039	Locked job	alpha	Value: O/N
040	Job to schedule	alpha	Value: O/N
041	Job alert code	Num	0: No alert 1: The job starts too early. 2: The job may encounter delay. 3: The job ends too late.
042	Cycle alert code	Num	0: No cycle 1: Cycle ??? 2: Detected cycle ??? 3: Impossible move
043	Alert code of multi-status flag <i>awaiting receipt</i>	Num	0: No flag in alert 1: At least one flag of type <i>Item not received</i> in alert.
044	Manual alert code	Num	0: No manual aler 1: Manual aler
045	Manual alert message	alpha	
046	Identifier of entity 1	alpha	
047	Designation of entity 1	alpha	
048	Identifier of entity 2	alpha	
049	Designation of entity 2	alpha	
050	Identifier of entity 3	alpha	
051	Designation of entity 3	alpha	
052	Identifier of entity 4	alpha	
053	Designation of entity 4	alpha	
054	Identifier of entity 5	alpha	
055	Designation of entity 5	alpha	
056	Identifier of entity 6	alpha	
057	Designation of entity 6	alpha	
058	Identifier of entity 7	alpha	
059	Designation of entity 7	alpha	
060	Identifier of entity 8	alpha	
061	Designation of entity 8	alpha	
062	Identifier of entity 9	alpha	
063	Designation of entity 9	alpha	
064	Identifier of entity 10	alpha	
065	Designation of entity 10	alpha	
066	Free area 1	alpha	
067	Free area 2	alpha	
068	Free area 3	alpha	
069	Free area 4	alpha	
070	Free area 5	alpha	
071	Free area 6	alpha	
072	Free area 7	alpha	
073	Free area 8	alpha	
074	Free area 9	alpha	
075	Free area 10	alpha	
076	Identifier of technical element 1	alpha	
077	Designation of technical element 1	alpha	
078	Identifier of technical element 2	alpha	

The data export formats

079	Designation of technical element 2	alpha	
080	Identifier of technical element 3	alpha	
081	Designation of technical element 3	alpha	
082	Identifier of technical element 4	alpha	
083	Designation of technical element 4	alpha	
084	Identifier of technical element 5	alpha	
085	Designation of technical element 5	alpha	
086	Identifier of technical element 6	alpha	
087	Designation of technical element 6	alpha	
088	Identifier of technical element 7	alpha	
089	Designation of technical element 7	alpha	
090	Identifier of technical element 8	alpha	
091	Designation of technical element 8	alpha	
092	Identifier of technical element 9	alpha	
093	Designation of technical element 9	alpha	
094	Identifier of technical element 10	alpha	
095	Designation of technical element 10	alpha	
096	Identifier of technical element 11	alpha	
097	Designation of technical element 11	alpha	
098	Identifier of technical element 12	alpha	
099	Designation of technical element 12	alpha	
100	Identifier of technical element 13	alpha	
101	Designation of technical element 13	alpha	
102	Identifier of technical element 14	alpha	
103	Designation of technical element 14	alpha	
104	Identifier of technical element 15	alpha	
105	Designation of technical element 15	alpha	
106	Identifier of technical element 16	alpha	
107	Designation of technical element 16	alpha	
108	Identifier of technical element 17	alpha	
109	Designation of technical element 17	alpha	
110	Identifier of technical element 18	alpha	
111	Designation of technical element 18	alpha	
112	Identifier of technical element 19	alpha	
113	Designation of technical element 19	alpha	
114	Identifier of technical element 20	alpha	
115	Designation of technical element 20	alpha	
116	Status of flag 1 ②	Num	0 to 5
117	Status of receipt 1 (For flags <i>Pending item receipt</i>)	Num	0: The flag is not of type <i>Awaiting item</i> . 1: Awaiting item receipt 2: Item received
118	Alert code on this flag		0: No alert on this flag 1: Planned receipt date exceeded for a flag awaiting item receipt.
119	Planned receipt date (flag 1)	datetime ①	
120	Actual receipt date (flag 1)	datetime ①	
121	Configurable area 1 (flag 1)	alpha	
122	Configurable area 2 (flag 1)	alpha	
123	Configurable area 3 (flag 1)	alpha	

The data export formats

124	Configurable area 4 (flag 1)	alpha	
125	Configurable area 5 (flag 1)	alpha	
126	Configurable area 6 (flag 1)	alpha	
127	Configurable area 7 (flag 1)	alpha	
128	Configurable area 8 (flag 1)	alpha	
129	Configurable area 9 (flag 1)	alpha	
130	Configurable area 10 (flag 1)	alpha	
131	Status of flag 2 ☺	Num	0 to 5
132	Status of receipt 2 (For flags <i>Pending item receipt</i>)	Num	0: The flag is not of type <i>Awaiting item</i> . 1: Awaiting item receipt 2: Item received
133	Alert code on this flag		0: No alert on this flag 1: Planned receipt date exceeded for a flag awaiting item receipt.
134	Planned receipt date (flag 2)	datetime ①	
135	Actual receipt date (flag 2)	datetime ①	
136	Configurable area 1 (flag 2)	alpha	
137	Configurable area 2 (flag 2)	alpha	
138	Configurable area 3 (flag 2)	alpha	
139	Configurable area 4 (flag 2)	alpha	
140	Configurable area 5 (flag 2)	alpha	
141	Configurable area 6 (flag 2)	alpha	
142	Configurable area 7 (flag 2)	alpha	
143	Configurable area 8 (flag 2)	alpha	
144	Configurable area 9 (flag 2)	alpha	
145	Configurable area 10 (flag 2)	alpha	
146	Status of flag 3 ☺	Num	0 to 5
147	Status of receipt 3 (For flags <i>Pending item receipt</i>)	Num	0: The flag is not of type <i>Awaiting item</i> . 1: Awaiting item receipt 2: Item received
148	Alert code on this flag		0: No alert on this flag 1: Planned receipt date exceeded for a flag awaiting item receipt.
149	Planned receipt date (flag 3)	datetime ①	
150	Actual receipt date (flag 3)	datetime ①	
151	Configurable area 1 (flag 3)	alpha	
152	Configurable area 2 (flag 3)	alpha	
153	Configurable area 3 (flag 3)	alpha	
154	Configurable area 4 (flag 3)	alpha	
155	Configurable area 5 (flag 3)	alpha	
156	Configurable area 6 (flag 3)	alpha	
157	Configurable area 7 (flag 3)	alpha	
158	Configurable area 8 (flag 3)	alpha	
159	Configurable area 9 (flag 3)	alpha	
160	Configurable area 10 (flag 3)	alpha	
161	Status of flag 4 ☺	Num	0 to 5
162	Status of receipt 4 (For flags <i>Pending item receipt</i>)	Num	0: The flag is not of type <i>Awaiting item</i> . 1: Awaiting item receipt 2: Item received
163	Alert code on this flag		0: No alert on this flag 1: Planned receipt date exceeded for a flag awaiting item receipt.



The data export formats

164	Planned receipt date (flag 4)	datetime ①	
165	Actual receipt date (flag 4)	datetime ①	
166	Configurable area 1 (flag 4)	alpha	
167	Configurable area 2 (flag 4)	alpha	
168	Configurable area 3 (flag 4)	alpha	
169	Configurable area 4 (flag 4)	alpha	
170	Configurable area 5 (flag 4)	alpha	
171	Configurable area 6 (flag 4)	alpha	
172	Configurable area 7 (flag 4)	alpha	
173	Configurable area 8 (flag 4)	alpha	
174	Configurable area 9 (flag 4)	alpha	
175	Configurable area 10 (flag 4)	alpha	
176	Status of flag 5 ②	Num	0 to 5
177	Status of receipt 5 (For flags <i>Pending item receipt</i>)	Num	0: The flag is not of type <i>Awaiting item</i> . 1: Awaiting item receipt 2: Item received
178	Alert code on this flag		0: No alert on this flag 1: Planned receipt date exceeded for a flag awaiting item receipt.
179	Planned receipt date (flag 5)	datetime ①	
180	Actual receipt date (flag 5)	datetime ①	
181	Configurable area 1 (flag 5)	alpha	
182	Configurable area 2 (flag 5)	alpha	
183	Configurable area 3 (flag 5)	alpha	
184	Configurable area 4 (flag 5)	alpha	
185	Configurable area 5 (flag 5)	alpha	
186	Configurable area 6 (flag 5)	alpha	
187	Configurable area 7 (flag 5)	alpha	
188	Configurable area 8 (flag 5)	alpha	
189	Configurable area 9 (flag 5)	alpha	
190	Configurable area 10 (flag 5)	alpha	
191	Status of flag 6 ②	Num	0 to 5
192	Status of receipt 6 (For flags <i>Pending item receipt</i>)	Num	0: The flag is not of type <i>Awaiting item</i> . 1: Awaiting item receipt 2: Item received
193	Alert code on this flag		0: No alert on this flag 1: Planned receipt date exceeded for a flag awaiting item receipt.
194	Planned receipt date (flag 6)	datetime ①	
195	Actual receipt date (flag 6)	datetime ①	
196	Configurable area 1 (flag 6)	alpha	
197	Configurable area 2 (flag 6)	alpha	
198	Configurable area 3 (flag 6)	alpha	
199	Configurable area 4 (flag 6)	alpha	
200	Configurable area 5 (flag 6)	alpha	
201	Configurable area 6 (flag 6)	alpha	
202	Configurable area 7 (flag 6)	alpha	
203	Configurable area 8 (flag 6)	alpha	
204	Configurable area 9 (flag 6)	alpha	
205	Configurable area 10 (flag 6)	alpha	
206	Status of flag 7 ②	Num	0 to 5

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207	Status of receipt 7 (For flags <i>Pending item receipt</i>)	Num	0: The flag is not of type <i>Awaiting item</i> . 1: Awaiting item receipt 2: Item received
208	Alert code on this flag		0: No alert on this flag 1: Planned receipt date exceeded for a flag awaiting item receipt.
209	Planned receipt date (flag 7)	datetime ①	
210	Actual receipt date (flag 7)	datetime ①	
211	Configurable area 1 (flag 7)	alpha	
212	Configurable area 2 (flag 7)	alpha	
213	Configurable area 3 (flag 7)	alpha	
214	Configurable area 4 (flag 7)	alpha	
215	Configurable area 5 (flag 7)	alpha	
216	Configurable area 6 (flag 7)	alpha	
217	Configurable area 7 (flag 7)	alpha	
218	Configurable area 8 (flag 7)	alpha	
219	Configurable area 9 (flag 7)	alpha	
220	Configurable area 10 (flag 7)	alpha	
221	Status of flag 8 ②	Num	0 to 5
222	Status of receipt 8 (For flags <i>Pending item receipt</i>)	Num	0: The flag is not of type <i>Awaiting item</i> . 1: Awaiting item receipt 2: Item received
223	Alert code on this flag		0: No alert on this flag 1: Planned receipt date exceeded for a flag awaiting item receipt.
224	Planned receipt date (flag 8)	datetime ①	
225	Actual receipt date (flag 8)	datetime ①	
226	Configurable area 1 (flag 8)	alpha	
227	Configurable area 2 (flag 8)	alpha	
228	Configurable area 3 (flag 8)	alpha	
229	Configurable area 4 (flag 8)	alpha	
230	Configurable area 5 (flag 8)	alpha	
231	Configurable area 6 (flag 8)	alpha	
232	Configurable area 7 (flag 8)	alpha	
233	Configurable area 8 (flag 8)	alpha	
234	Configurable area 9 (flag 8)	alpha	
235	Configurable area 10 (flag 8)	alpha	
236	Status of flag 9 ②	Num	0 to 5
237	Status of receipt 9 (For flags <i>Pending item receipt</i>)	Num	0: The flag is not of type <i>Awaiting item</i> . 1: Awaiting item receipt 2: Item received
238	Alert code on this flag		0: No alert on this flag 1: Planned receipt date exceeded for a flag awaiting item receipt.
239	Planned receipt date (flag 9)	datetime ①	
240	Actual receipt date (flag 9)	datetime ①	
241	Configurable area 1 (flag 9)	alpha	
242	Configurable area 2 (flag 9)	alpha	
243	Configurable area 3 (flag 9)	alpha	
244	Configurable area 4 (flag 9)	alpha	
245	Configurable area 5 (flag 9)	alpha	
246	Configurable area 6 (flag 9)	alpha	



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247	Configurable area 7 (flag 9)	alpha	
248	Configurable area 8 (flag 9)	alpha	
249	Configurable area 9 (flag 9)	alpha	
250	Configurable area 10 (flag 9)	alpha	
251	Status of flag 10 ②	Num	0 to 5
252	Status of receipt 10 (For flags <i>Pending item receipt</i>)	Num	0: The flag is not of type <i>Awaiting item</i> . 1: Awaiting item receipt 2: Item received
253	Alert code on this flag		0: No alert on this flag 1: Planned receipt date exceeded for a flag awaiting item receipt.
254	Planned receipt date (flag 10)	datetime ①	
255	Actual receipt date (flag 10)	datetime ①	
256	Configurable area 1 (flag 10)	alpha	
257	Configurable area 2 (flag 10)	alpha	
258	Configurable area 3 (flag 10)	alpha	
259	Configurable area 4 (flag 10)	alpha	
260	Configurable area 5 (flag 10)	alpha	
261	Configurable area 6 (flag 10)	alpha	
262	Configurable area 7 (flag 10)	alpha	
263	Configurable area 8 (flag 10)	alpha	
264	Configurable area 9 (flag 10)	alpha	
265	Configurable area 10 (flag 10)	alpha	

Footnotes ①②③④ See next page.

Footnotes (exported jobs)

- ① The columns with **datetime** type comply with the format **DD.MM.YYYY hh:mm** (with a space between the year and the time).
- ② The area **Status of flag n** can take the following values:

Value	Signification
-1	Flag not configured
0	Inactive flag
1	Indicative, active flag, or multi-status, with status 1
2	Multi-status flag with status 2
3	Multi-status flag with status 3
4	Multi-status flag with status 4
5	Multi-status flag with status 5

Flags are explained on page 70.

- ③ The area **003-Unique ERP identifier for this job** lets the external software recognize a job it had previously transmitted to Direct Planning.
 For the imported jobs, it contains the number assigned by the external software.
 For the jobs created in Direct Planning, it is zero except if you assign it a value upon import (page 139).
 When a job has been subdivided, both resulting jobs are spotted by the #1 and #2 suffixes.
 Example: if the job external ID was **05116001-1-10**, then the two resulting jobs will respectively have the external IDs **05116001-1-10#1** and **05116001-1-10#2**.
 This always lets the ERP know of the original operation upon import.
- ④ The area **004-Unique Direct Planning identifier for this job** contains the internal, unique number assigned by Direct Planning.

Section 70 The links

N°	Area	Format	Notes
1	Type of data	alpha	Value: LINK (or TITLE)
2	Version of export format	alpha	Value: 1 (no format 2)
3	Direct Planning identifier of source job	alpha	
4	Direct Planning identifier of target job	alpha	
5	External identifier of source job	alpha	Only specified for imported jobs.
6	External identifier of target job	alpha	
7	Duration of the link	num	See below

The data export formats

Section 71 The calendars and the daily workload

The exported file only contains one record type:

- The worked hours per day and per resource (DAILY)
17 exported fields, thus 16 semicolons.

The first line of the exported file is a header line to ease spotting the columns (Type of data = TITLE).

N°	Zone	Format	Notes
01	Type of data	alpha	Value: DAILY (or TITLE)
02	Version of export format	alpha	Value: 1 (no format 2)
03	Date	jj/mm/aaaa	
04	Direct Planning identifier of resource	alpha	
05	Working capacity of this resource on that date	num	in minutes
06	Actual workload of this resource on that date	num	in minutes
07	Workload percentage of this resource on that date	num	= 06 / 05 X 100
08	Start of range 1	hh:mm	00:00 in the start time means midnight of the d day. 00:00 in the end time means midnight of the d+1 day. Start and end times not entered: unused time slot
09	End of range 1	hh:mm	
10	Start of range 2	hh:mm	
11	End of range 2	hh:mm	
12	Start of range 3	hh:mm	
13	End of range 3	hh:mm	
14	Start of range 4	hh:mm	
15	End of range 4	hh:mm	
16	Start of range 5	hh:mm	
17	End of range 5	hh:mm	

Warning

If you open the **export_calendar_day.csv** file using Microsoft Excel® with a configuration that prevents the zero values from being displayed, there is a risk of confusion because the 00:00 are not displayed: you could mistake the days with 24 hours of workload capacity for days with 0 hour of workload capacity!

Section 72 The weekly workload

This file specifies the workload and the capacity per week and resource.

The exported file only contains one record type:

- The worked hours per week and per resource (WEEKLY)
8 exported fields, thus 7 semicolons.

The first line of the exported file is a header line to ease spotting the columns (Type of data = TITLE).

N°	Zone	Format	Notes
1	Type of data	alpha	Value: WEEKLY (or TITLE)
2	Version of export format	alpha	Value: 1 (no format 2)
3	Week number	num	
4	Date of beginning of week	jj/mm/aaaa	
5	Direct Planning identifier of the resource	alpha	
6	Working capacity of this resource on this week	num	in minutes
7	Actual workload of this resource on this week	num	in minutes
8	Workload percentage of this resource on this week	num	= 7 / 6 X 100

Note | The week is defined as 'from Monday to Sunday'.