NETRONIC

DOCUMENTATION

Visual Jobs Scheduler (VJS)

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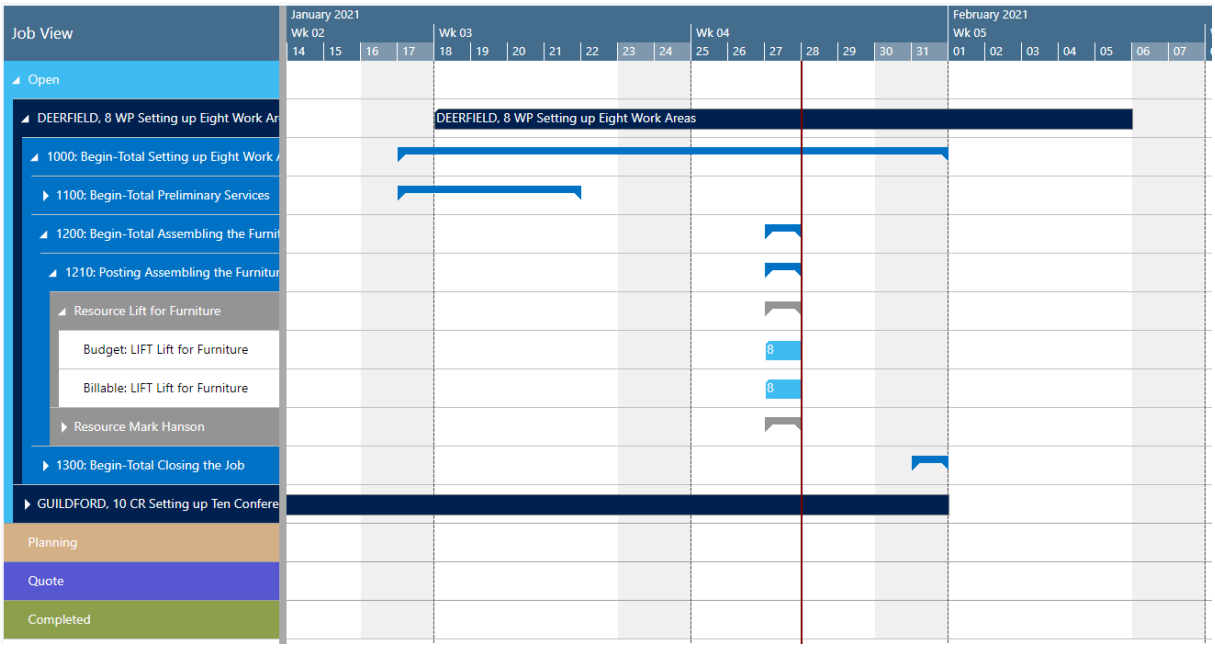
1. Technical requirements

Microsoft Dynamics 365 Business Central

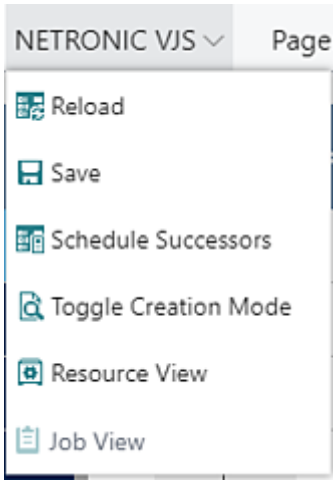
2. Understanding the VJS

Since the VJS is a Gantt chart, it naturally has all its characteristics:

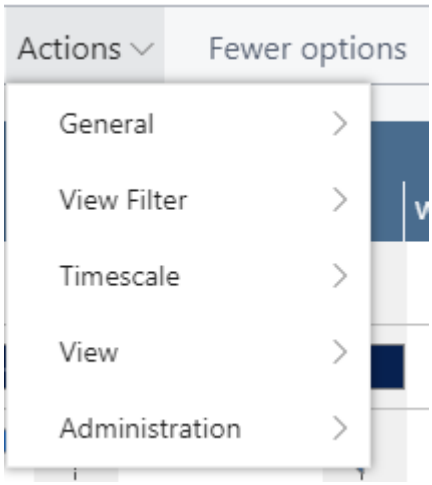


- A **timescale** at the top.
- A **table** at the left, listing jobs (in the Job View) or resource groups/resources in the Resource View
- On the right below the time scale, a **chart** displaying the job schedule with a **calendar** in the background indicating work free periods in grey while working times appear in white.
- A menu ribbon allowing to make basic settings that will be explained in detail in the following.

The item “NETRONIC VJS” summarizes all options that we think are the most frequently used ones:

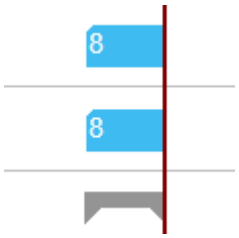


All options of the VJS can be found under “Actions”:

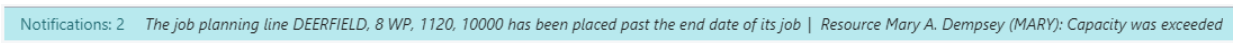


In case the “Actions” item is not visible in the menu ribbon, click “More options”. To hide it, click “Fewer options”.

- A vertical line in the chart indicates the **work date** as having been set in Dynamics 365 Business Central.

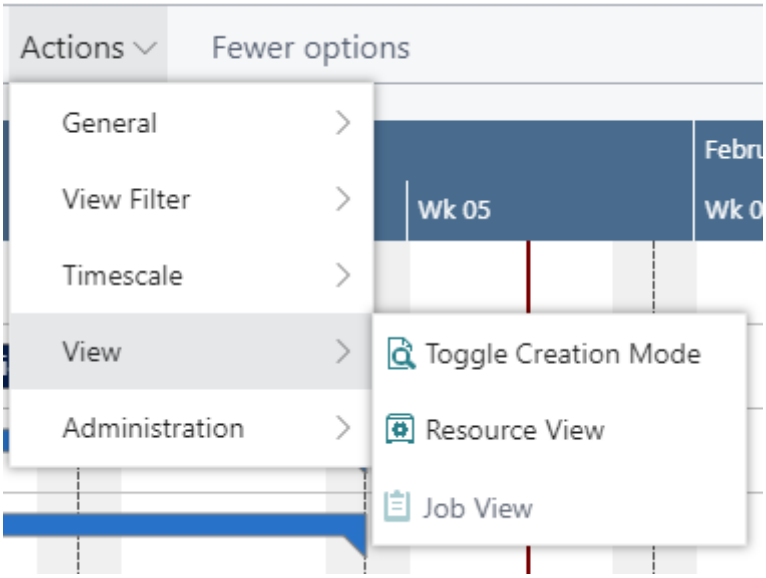


- **Notifications** appear below the menu ribbon in case
  - a job planning line gets moved behind the job’s end date
  - a resource overload occurs

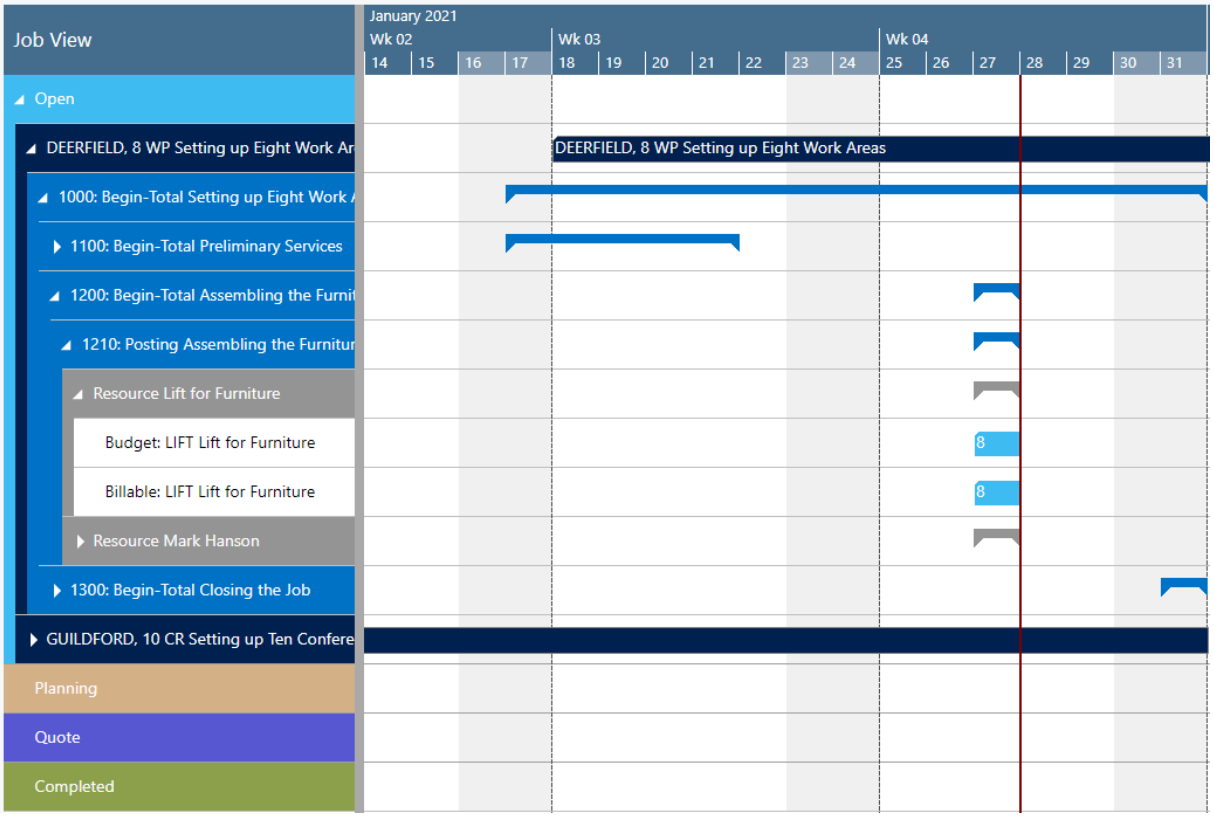


3. Two different views

There are two different views in the VJS: the Job View, and the Resource View. You can switch between them by using the corresponding menu items:



3.1. The Job View

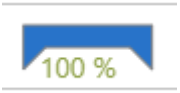


The Job View shows jobs categorized by their status. Each job, job task and job planning line is represented by a bar, the color of the job planning line bars depending on the job's category.

Elements and symbols in the Job View:

- Job – the green line beneath the bar showing the job's progress

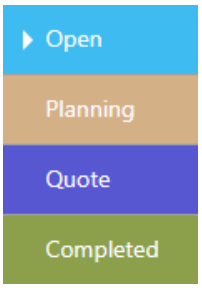
- Job Task Line - the number beneath the bar showing the task's progress



- Job Planning Line - the grey dot indicating a change not having been saved yet, the orange frame highlighting the currently marked task.

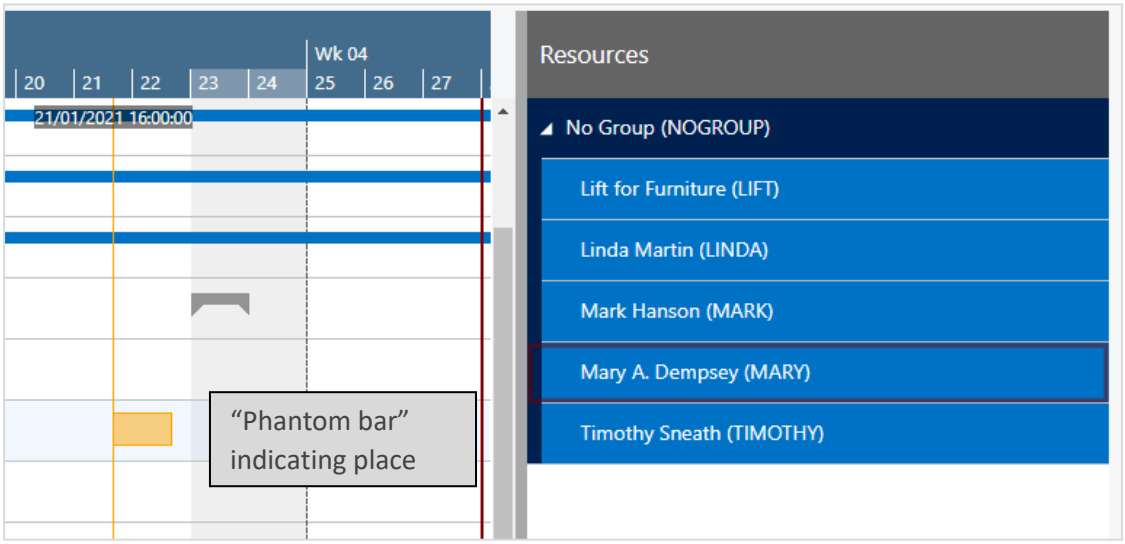
- Resource summary bar – can be hidden by the according option in the "User setup" dialog

- The different colors of the categories:

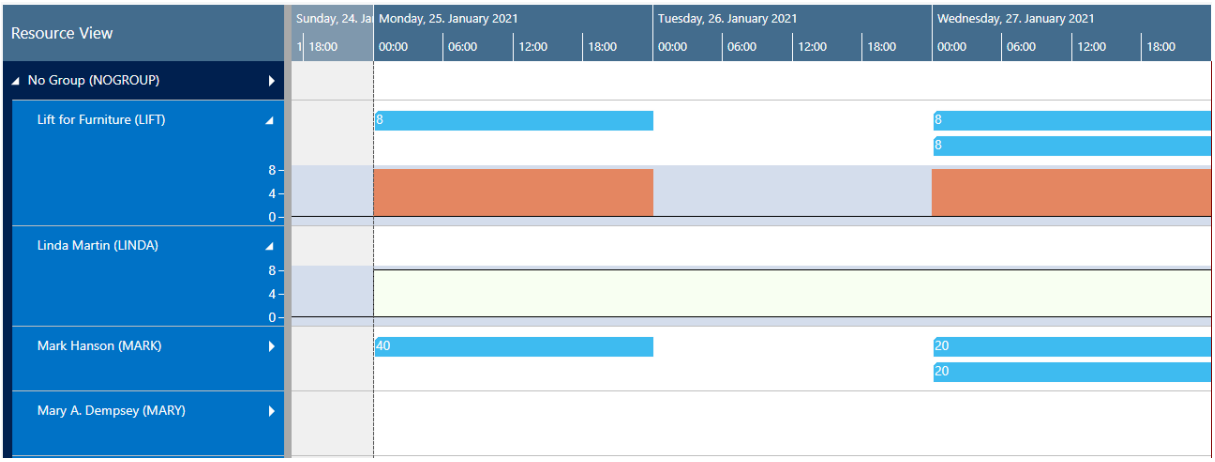


- Within a category, jobs and their belonging tasks are sorted in ascending numerical order, within jobs the task numbers are sorted the same.

By switching on the “Creation Mode” the VJS displays a list with your resources. You can interactively allocate a resource by dragging it from the list to the chart. An orange “phantom” bar and an info window indicate where and when the new job planning line will be placed if you release the mouse button.

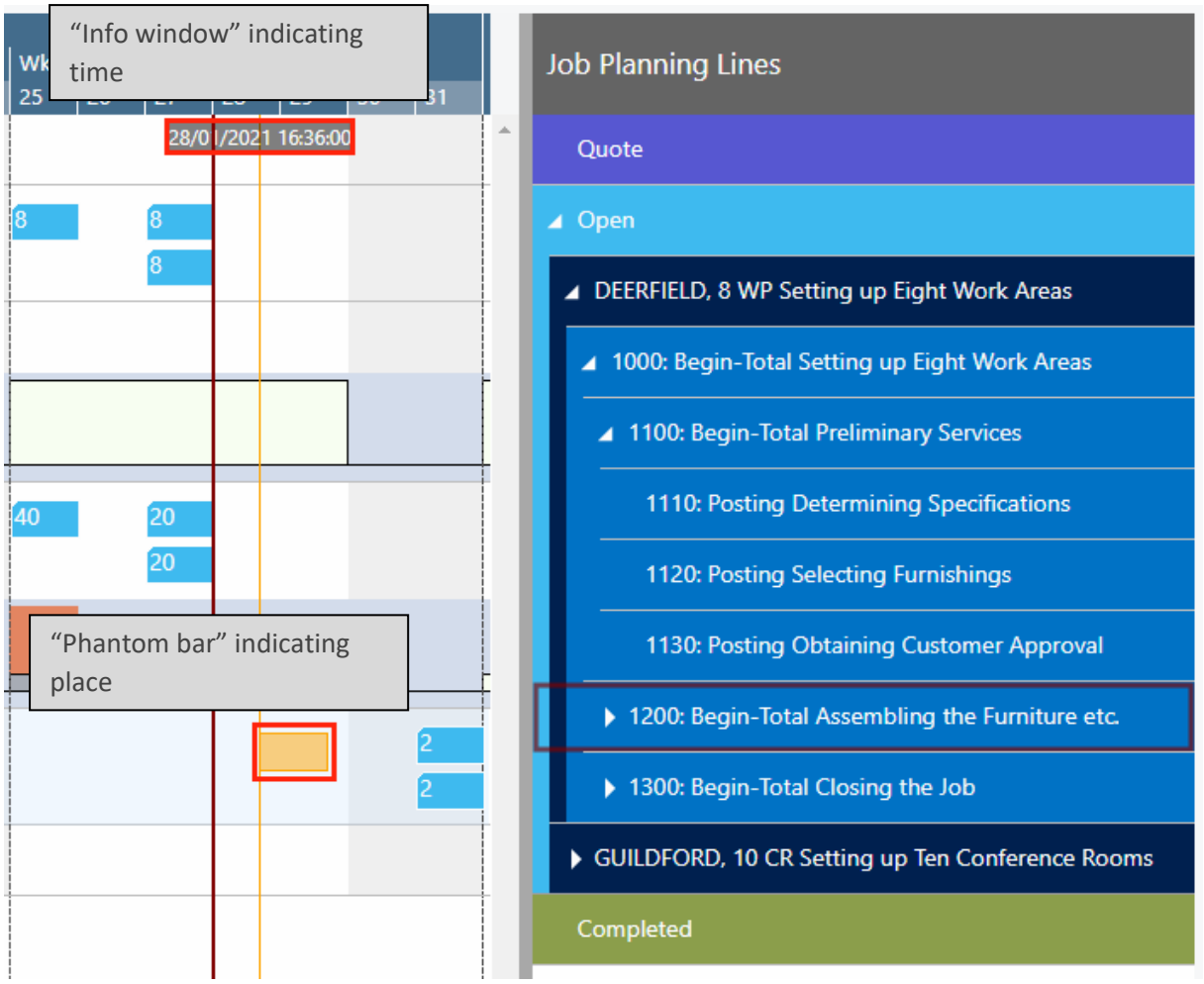


3.2. The Resource View



The resource view shows resource groups and their respective resources.

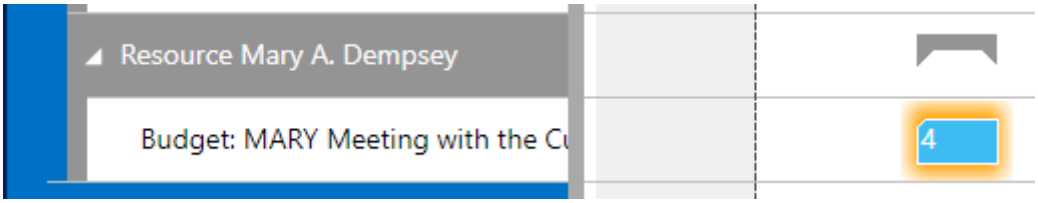
- It visualizes capacity bottlenecks and date conflicts.
- The different category colors are applied as in the Job View
- By switching on the “Creation Mode” the VPS displays a list with all your jobs, job planning lines and job tasks. You can interactively allocate a job task to a resource by dragging it from the list to the chart. An orange “phantom” bar and an info window indicate where and when the new job planning line will be placed if you release the mouse button.


"Info window" indicating time
"Phantom bar" indicating place
Job Planning Lines
Quote
Open
DEERFIELD, 8 WP Setting up Eight Work Areas
1000: Begin-Total Setting up Eight Work Areas
1100: Begin-Total Preliminary Services
1110: Posting Determining Specifications
1120: Posting Selecting Furnishings
1130: Posting Obtaining Customer Approval
1200: Begin-Total Assembling the Furniture etc.
1300: Begin-Total Closing the Job
GUILDFORD, 10 CR Setting up Ten Conference Rooms
Completed

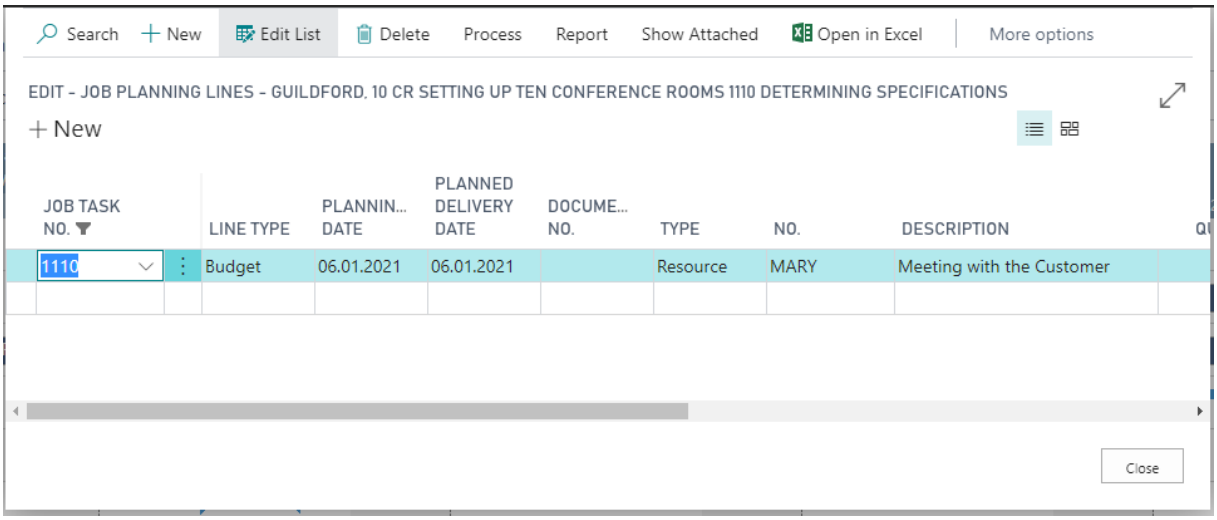
4. Open Microsoft Dynamics 365 Business Central dialogs

The VJS fully integrates with Microsoft Dynamics 365 Business Central. This means that by double-clicking the according element (job, job planning line, resource etc.) either in the table area or in the Gantt area, you'll directly switch to the according Dynamics 365 Business Central dialogs where you can navigate and make changes as usual:

Double-clicking a job planning line…



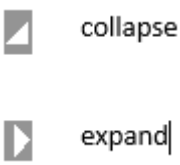
…will call the according dialog:



5. Collapsing and expanding

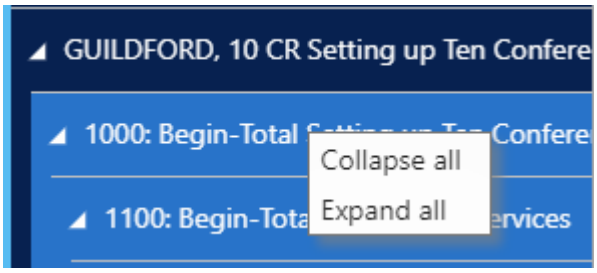
The VJS allows viewing your data from different angles easily and quickly. Collapse and expand jobs, resource groups, groups etc. There are two ways how to collapse/expand the above described elements of your plan:

5.1. Collapsing/expanding by clicking the corresponding symbols

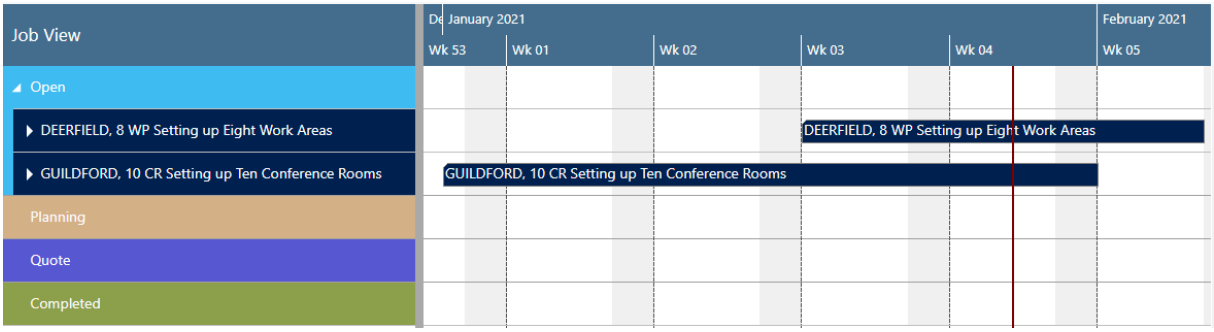


5.2. Collapsing/expanding by context menu

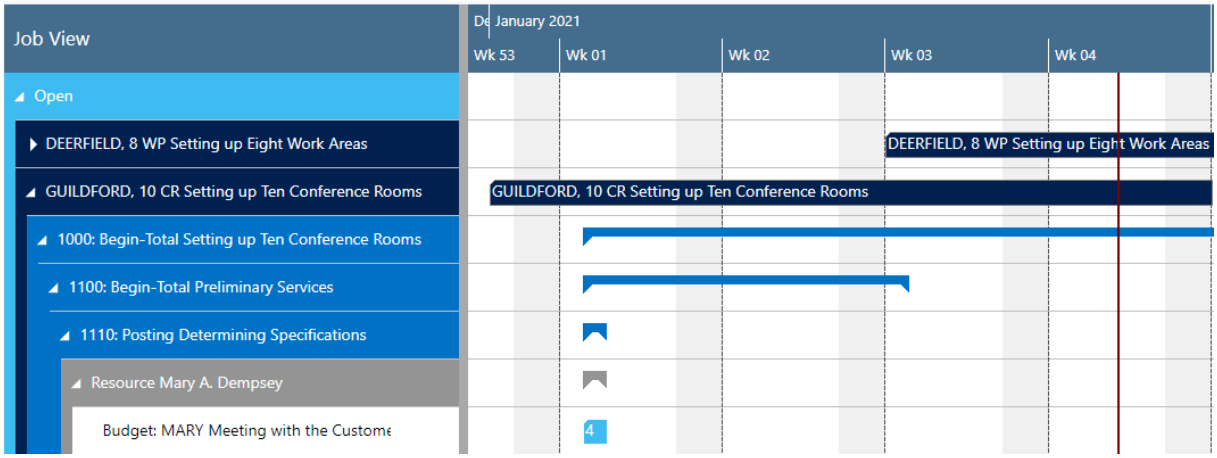
By opening the context menu either in the table or on the bar you collapse/expand all levels below the current one in one go.



All projects **collapsed**:



After having expanded parts of project “GUILDFORD, 10”:



6. Progress information

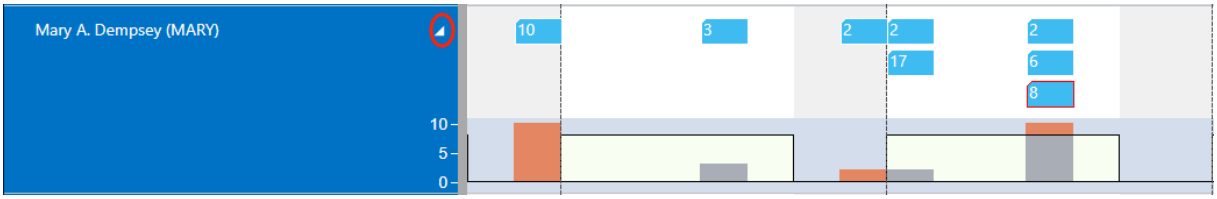
The VJS provides overview of a Job's or a Job Task's progress:

- The Job's progress is shown as a green line in the lower part of the Job bar.

- The progress of a Job Task is shown as number below the Job Task bar.

7. Capacity information

In the VJS, you can show a capacity curve in the Resource View, to see free and exceeded capacities, a red box indicating an overload:

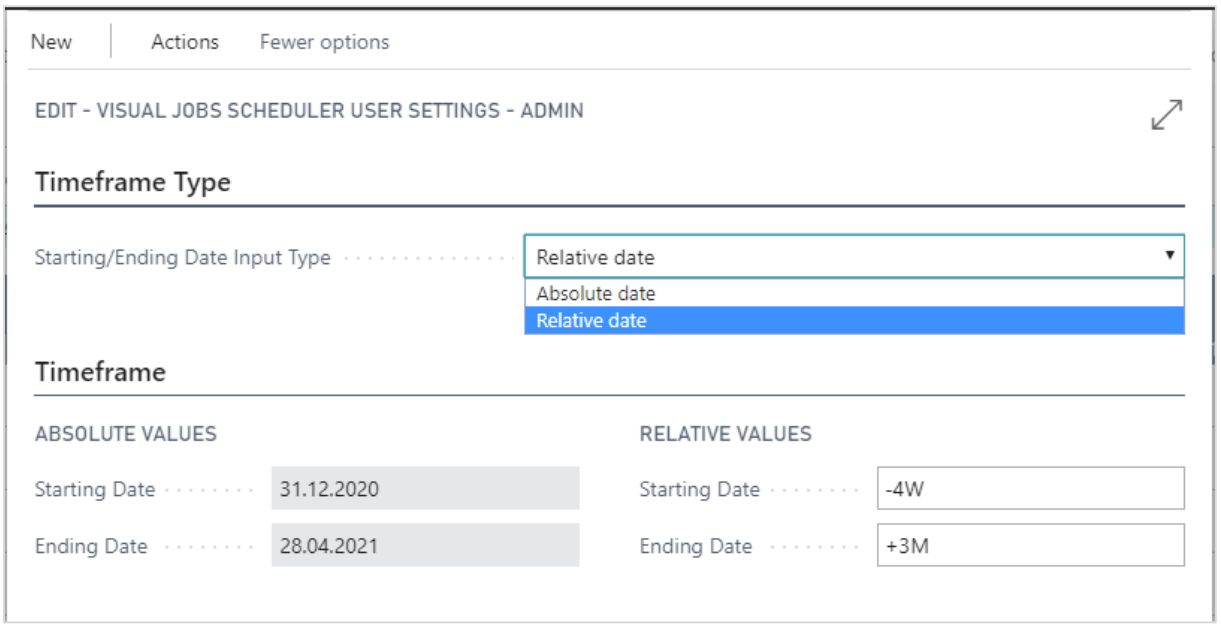


8. Navigation in the VJS

Navigating in the VJS largely comprises setting the time range for which parts of your plan are shown, modifying the timescale solution and quickly scrolling to certain parts of your plan.

8.1. Setting the timeframe

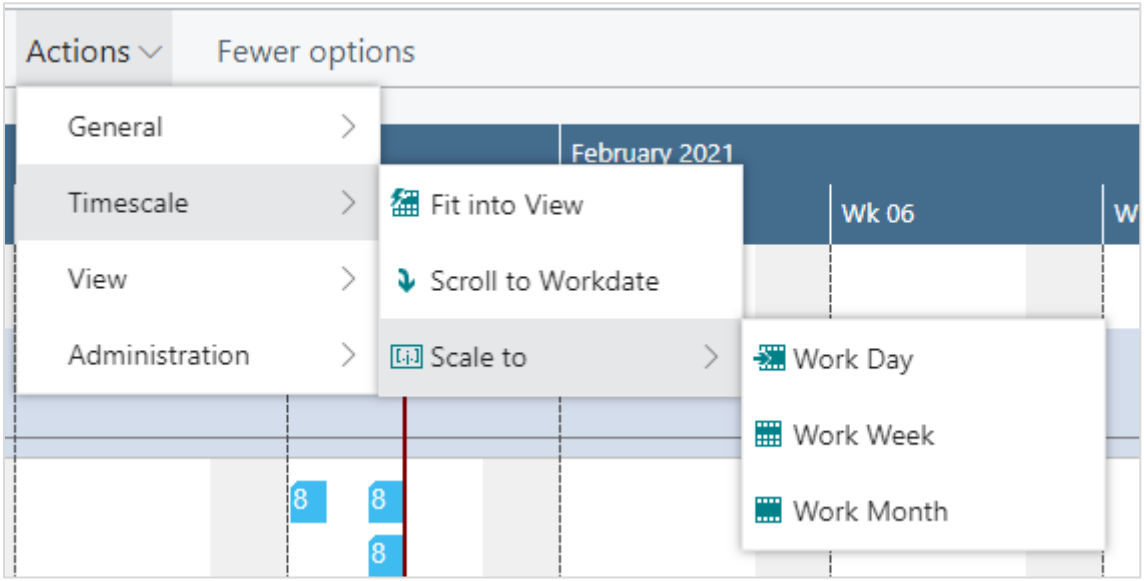
The timeframe specifies the time range covered by the timescale, either fixed by absolute values or relative to the workday. This is done in the "Setup" dialog, to be reached by clicking the "General" item in the "Actions" ribbon.



8.2. Change the timescale resolution

For zooming in a certain area of your plan or to zoom out for a better overview, you can change the timescale resolution either by

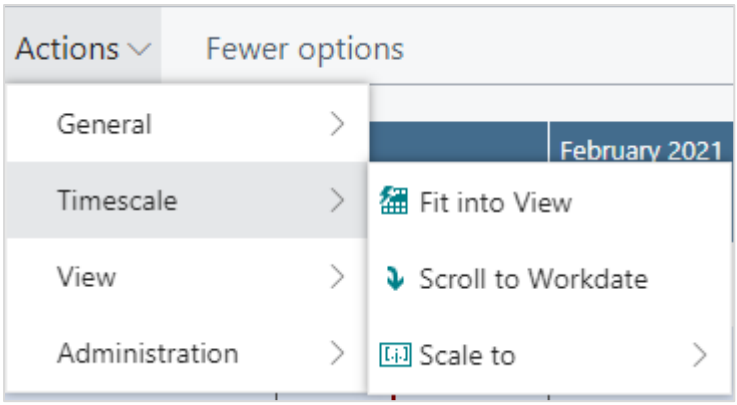
- scrolling the mouse wheel in the timescale area
- or, more specifically, by the corresponding items of the “Actions” menu, based on the work date as having been specified in the settings of Dynamics 365 Business Central.



8.3. Scrolling

The VJS offers the following options for quickly navigating to certain positions in the diagram:

- the common scrolling options by vertical and/or horizontal scrollbar
- dragging the timescale either right or left
- Scroll directly to the Dynamics 365 Business Central work date by selecting the corresponding item from the “Actions” menu.

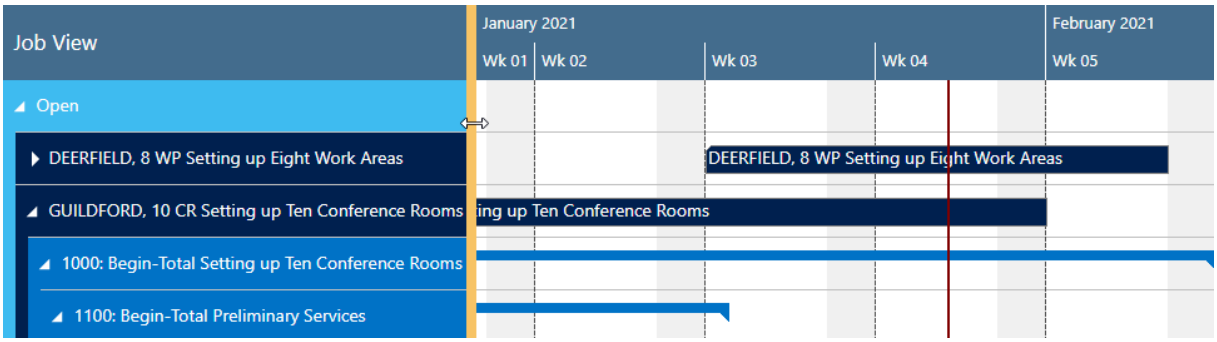


8.4. Fit into view

Select this item from the “Timescale” item in the “Actions” menu to switch directly to the timescale as defined in the “Setup” dialog.

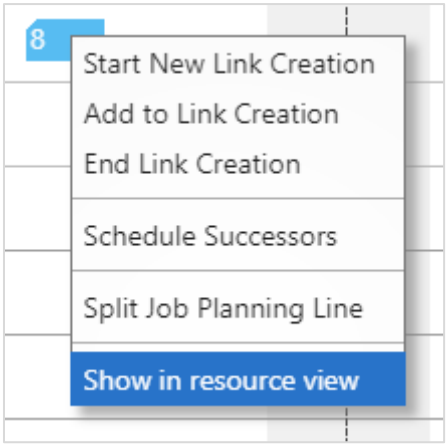
8.5. Adjust the width ratio between table and diagram

For adjusting the width ration between table and diagram, put the mouse cursor on the sash between the two parts and drag the double arrow appearing then.



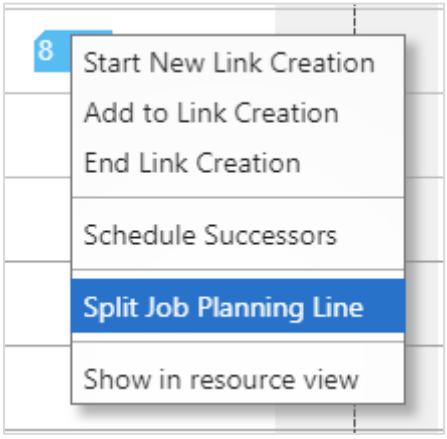
8.6. Show job planning line in other view

Show the currently marked job planning line in the respective other view while it gets highlighted by a blinking frame.



9. Split job planning lines

By splitting a job planning line, you will add a new job planning line to your plan. Click the according context menu item on the job planning line you want to split and a new job planning line will be added, distributing the quantity evenly to both job planning lines.

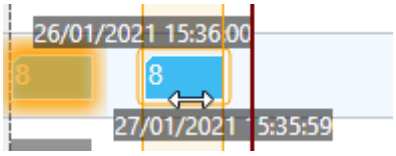


10. Move operations

You can move operations by mouse either horizontally or vertically, either way having a different impact.

10.1. Move operations horizontally by drag & drop

To schedule an operation, you can move it horizontally along the time scale both in the Job View and in the Resource View: as a consequence, the operation will be worked off at a different time.
If in the Job View a job task or job planning line is moved, every subordinate operation will shift as well.



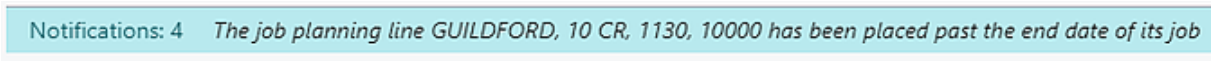
10.2. Assign an Operation to another resource

In the Resource View, an operation can also be moved vertically when scheduled – to a different resource. As a consequence, the operation will be worked off by the resource it was moved to.

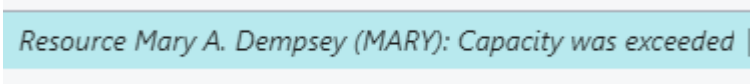
10.3. Notifications

Notifications appear in a window below the menu ribbon and alert you to possible problems. They pop up in the following cases:

- when a job planning line gets moved behind the job's end date



- when a resource's capacity gets exceeded



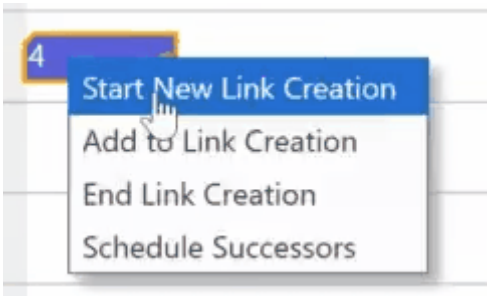
11. Create links between job planning lines

The VJS enables creating links between job planning lines by a context menu. According to your needs and planning situation, you can select between two possible relations:

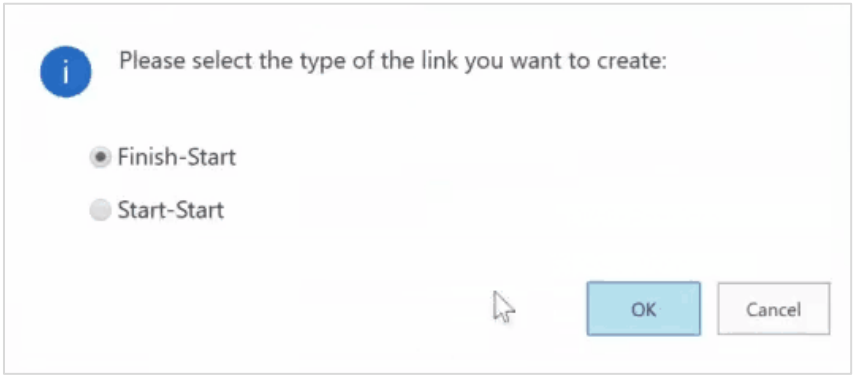
- Start-Start (the successor must not start before the predecessor)
- Finish-Start

11.1. How to proceed

Click “Start New Link Creation” on the job planning line you want to start with and “End Link Creation” on the job planning line you want the link chain to end.



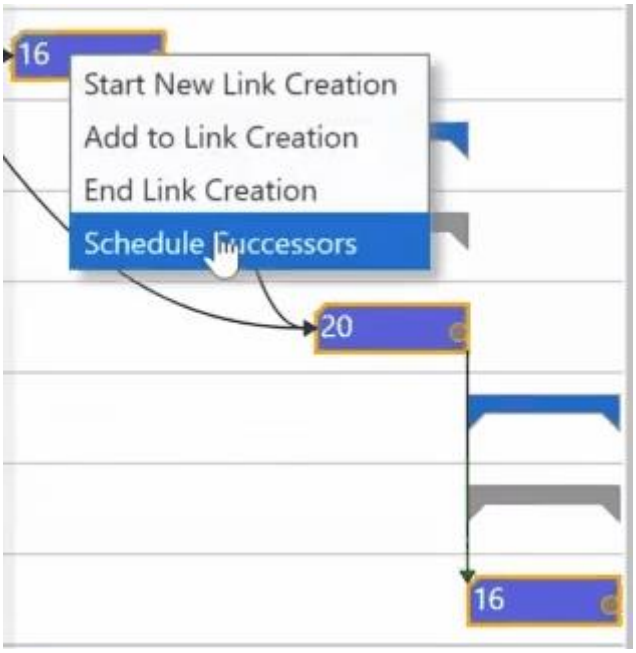
After having ended the link creation, you have to select the desired relation type:



The link structure you build this way, will be taken into account, when a job planning line in this chain is moved so that all job planning lines of the chain are moved according to their position, or remain where they are.

11.2. Schedule successors

This option that can be found in the menu ribbon ensures that the link structure is taken into account with no buffer time, i.e. linked operations are processed without temporal offset. This applies for the selected node and all its successors.



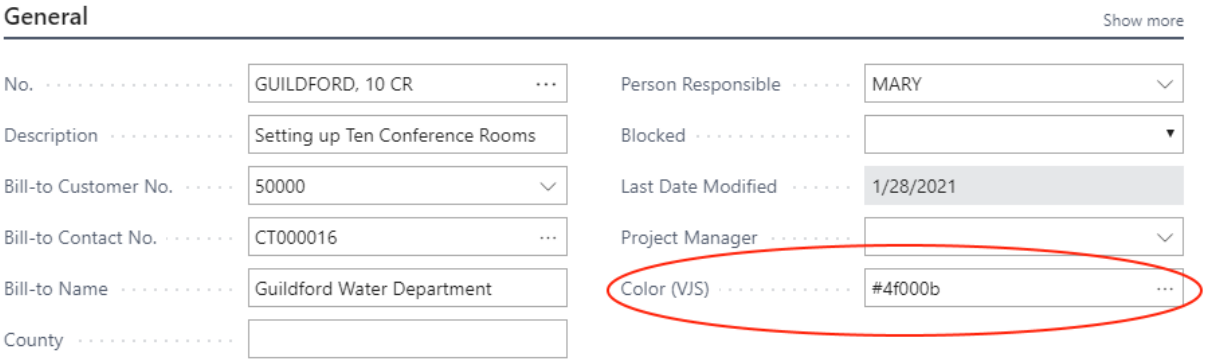
11.3. Violated link orders appear in red

If the link order within a link structure gets violated, the according link(s) appear in red.

12. Apply individual colors to jobs

You can define individual colors for jobs that are then used for the job line and all of its job planning lines. Thus you can very easily highlight certain jobs, e.g. the most important one.

The job color gets changed on the job card. If you want to switch to the standard VJS color again, you only need to delete the hex code from the color field on the job card.



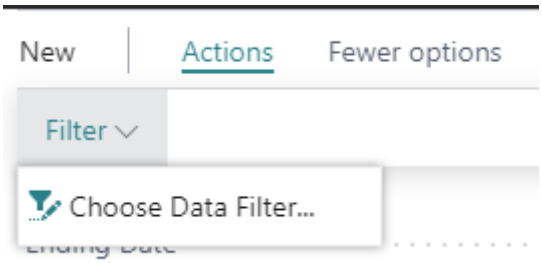
13. Use filters

13.1. Data filters

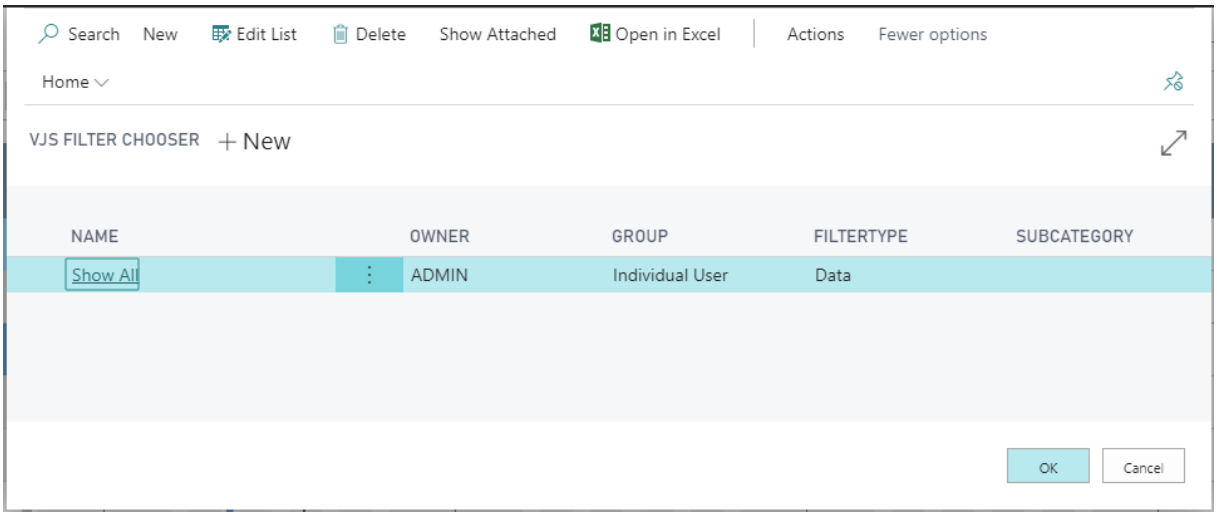
Data filters work as Dynamics 365 BC filter on reading the data (either when the VJS is started or on reloading) so that they are already effective at the data interface to make sure that only filtered data are handed over from Dynamics 365 BC to the VJS.

13.1.1. Create and edit data filters

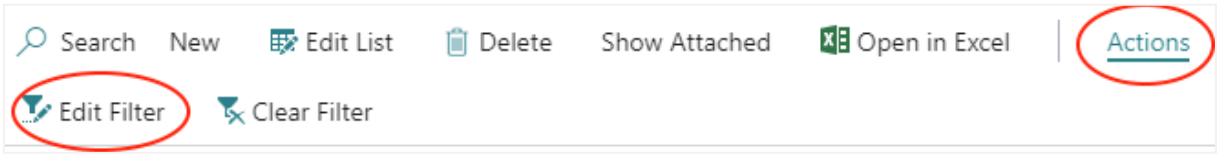
First, you have to open the according dialog by clicking "Choose Data Filter" in the "Setup" dialog:



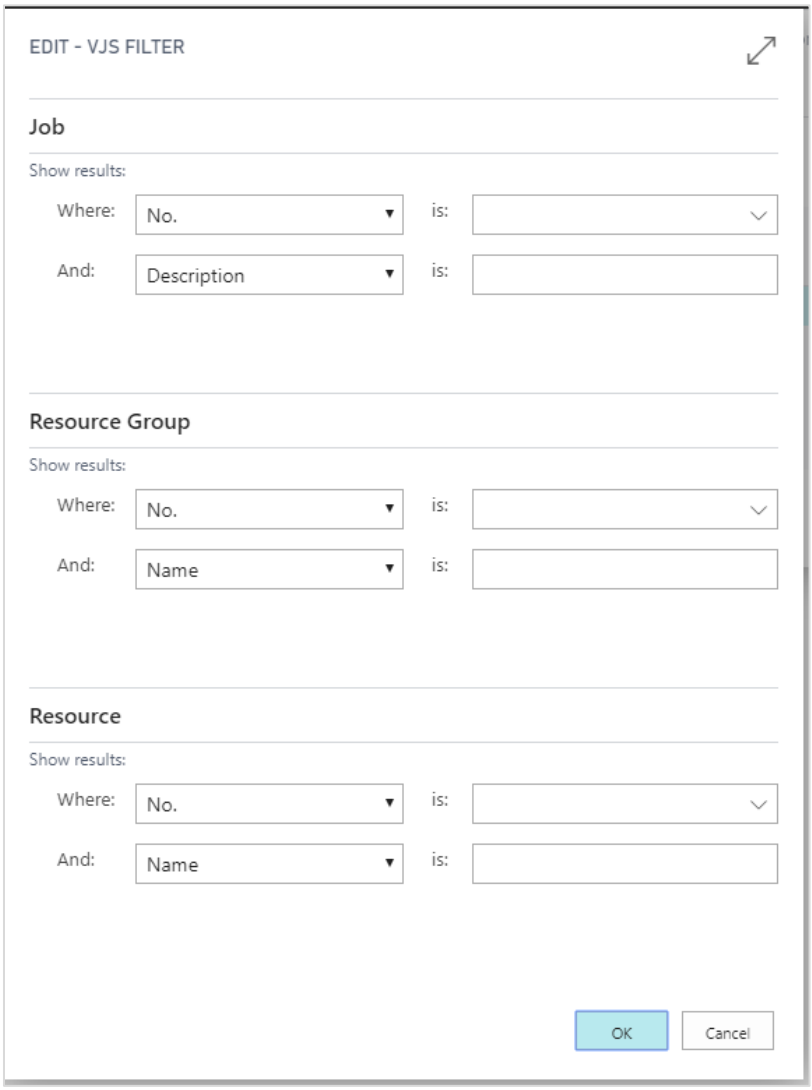
In the dialog, you can edit, create and apply not only one but multiple data filters.



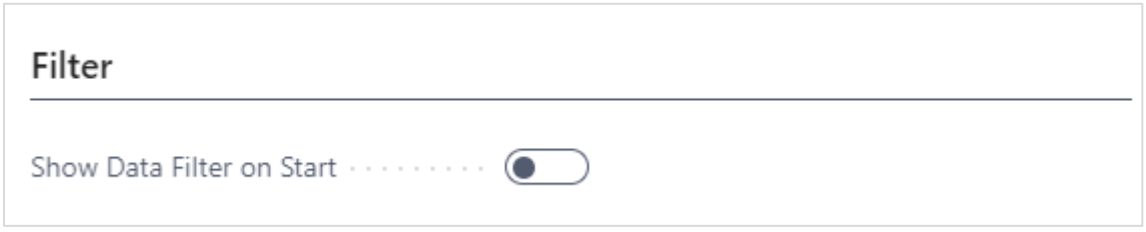
To create a data filter, click “+New” and then enter the name of the new filter. To specify the filter settings, click “Actions” “Edit Data Filter”.



You can filter by jobs, resource groups and resources:

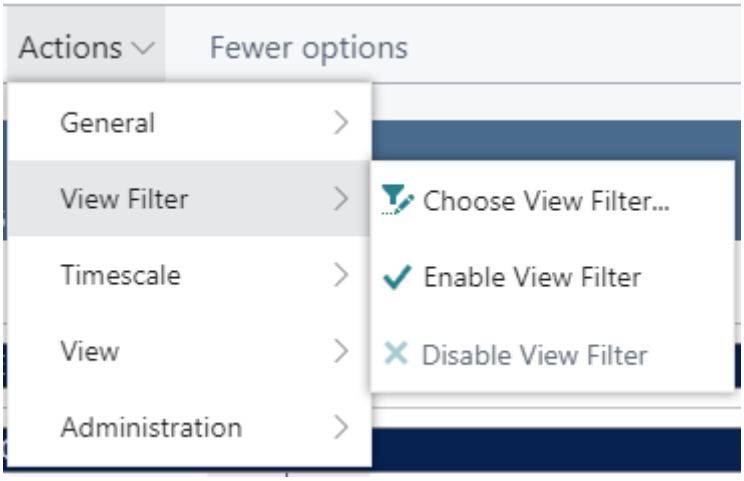


If you want to make sure that the "Edit Data Filter“ dialog pops up when you start the VJS, tick the according option in the "Setup" dialog:



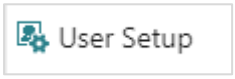
13.2. View filters

View filters are applied to data already having been loaded into the VJS. Accordingly, only the capacity utilization by the visible activities are shown in the histograms. To work with the filters, the "Actions" menu offers three according options:



Click “Choose View Filter” to open the list of existing filters where you can create, delete and edit filters as described in the “Data filters” section.

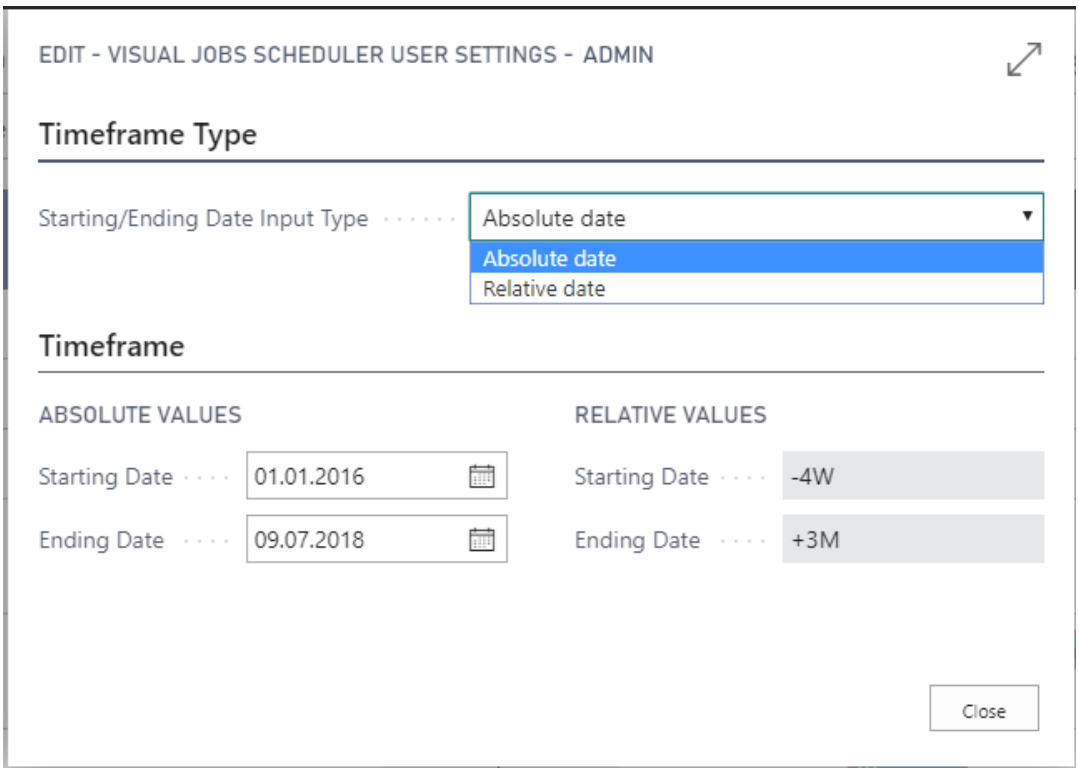
14. The User Setup dialog



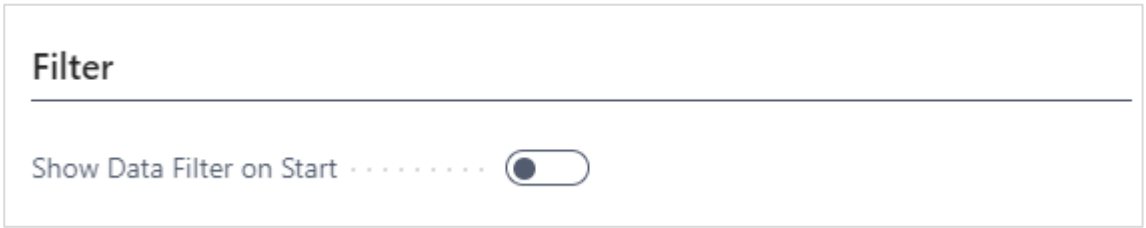
The “User Setup” dialog allows customizing basic settings of the Visual Jobs Scheduler. You reach it via “Actions” -> “Administration

Here you can make or see the basic settings for:

- **Timeframe**:
  - Specify the timeframe that sets the time range covered by the timescale, either fixed by absolute values or relative to the workday (see also 7.1., “Setting the timeframe).



  - **Filter**
    - Decide whether the "Edit Data Filter “dialog pops up when you start the VPS.

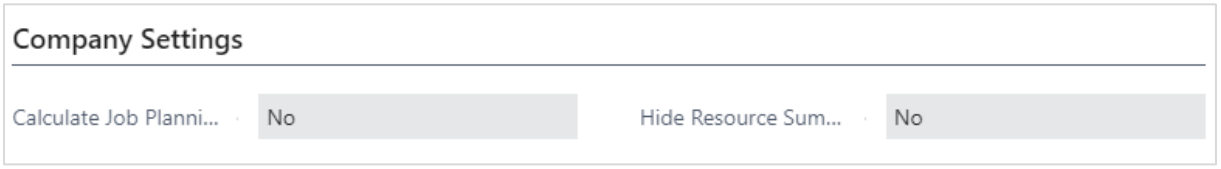


- **Data Filter**
  - See which data filter is currently active.

- **Company settings**

  This section of the „User Setup dialog" gives you an overview of settings being applied company-wide. See

  - which way of calculating the quantity of job planning lines is activated. In standard Dynamics 365 Business Central the quantity of job planning lines is calculated independent of the resource's capacity. The VJS allows to bypass this way of visualizing the quantity by activating "Calculate Job Planning Line Duration" in the "Company Setup" dialog.
  - whether the resource summary bar gets displayed or not



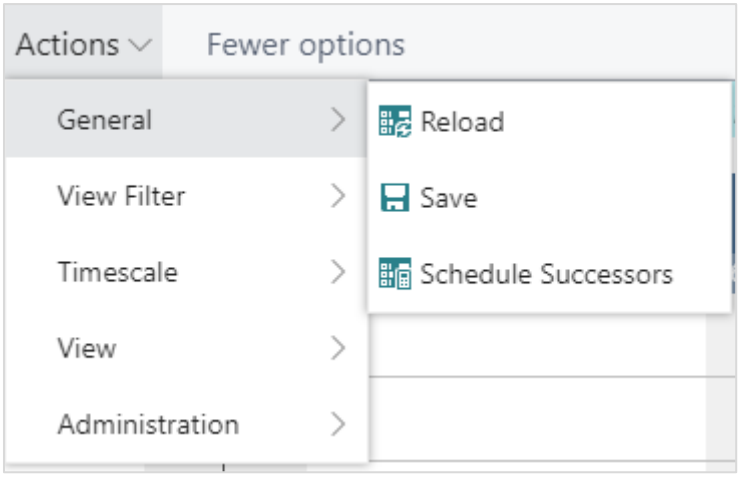
15. The Company Setup dialog

The settings in this dialog are applied company-wide. Here you can

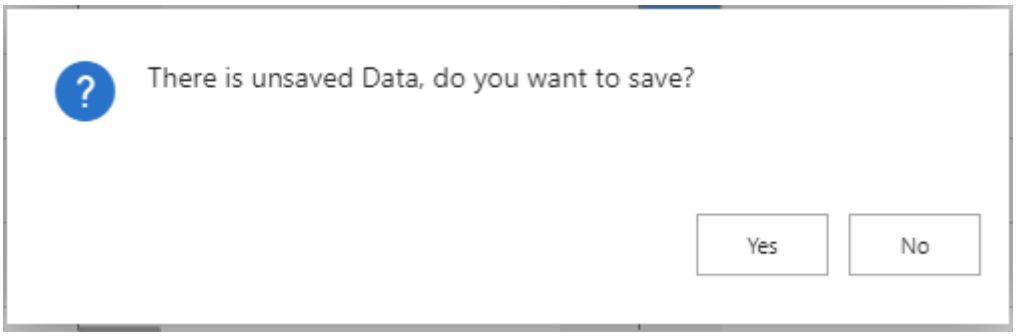
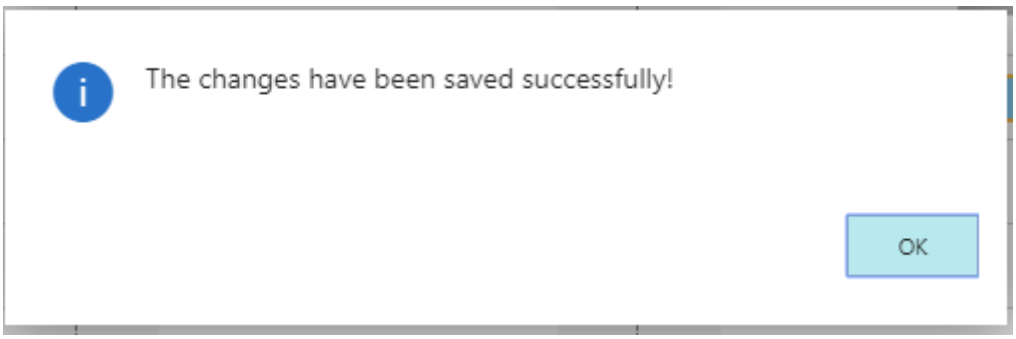
- determine whether the quantity of job planning lines is calculated independent of the resource's capacity. In standard Dynamics 365 Business Central the quantity of job planning lines is calculated independent of the resource's capacity. The VJS allows to bypass this way of visualizing the quantity
- hide or show the resource summary bar: some companies' processes include either several allocations per resource for one job task or considerably more than two resources per job task. These processes are much better visualized without a summary bar for the resources and so we created an option for hiding it.

16. Reload and save data

You can always reload data, thus discarding your changes as well as getting the latest status of your NAV data. The “General” items allow reloading or saving.



If there are unsaved changes in your plan when you click “Reload”, a dialog pops up where you can decide whether to save these changes or discard them.



After having saved your changes, a confirmation message pops up: