

Version 8.6

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Introduction



Whether elegant Gantt charts, waterfalls or bar and line charts – with empower® charts, highly professional PowerPoint charts are created in no time at all.





1.1 System requirements

In order to use empower® charts your system will need to fulfil the following requirements:

- Microsoft Windows XP, Vista, 7, 8, 8.1 or 10
- Microsoft Office 2007, SP3. 2010, 2013 or 2016 with PowerPoint® and Excel® installed
- PowerPoint® may not be run explicitly as administrator

An installation of empower® charts will require about 70MB of hard drive space.

1.2 Initial installation

empower® charts can easily be installed by the user.

1.3 Installation of an update

Updates of empower® charts are initialized via a new installation package, which we will provide for you. If the installation is executed as part of the empower suite installer with user rights (per user), it is also possible to utilize an autoupdate function. This automatically installs updates to empower suite products in the background.

1.4 User settings

The **User Settings** are accessed via the **More** Button in the empower® charts menu **(Figure 1)**.

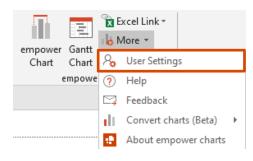


Figure 1: User settings via More button

This section allows a user to configure their installation of empower® charts (Figure 2).

If the corporate design administrator has provided more than one Customizing, you can set a **Default Customizing** from the dropdown menu **(1)**.

In the dropdown menu of **Live Update Mode**, you can set whether the data displayed by an empower chart should update automatically, not at all, or if you prefer to receive an update notification if the underlying data of the chart has changed **(2)**.

The third dropdown menu allows you to choose if **Points** or **Series** should be selected **first (3)**.

The fourth dropdown menu allows you to set the default region format for your Gantt chart (4).

More information can be found in Chapter 4 Gantt Chart.



Figure 2: User settings



Lastly, you can check the box to either Cache chart data, optimize memory usage or Enable Co-Authoring support (5).

1.5 Flexible Customizing

In empower® charts a flexible customizing can be activated additionally during the customizing process. If this function is active, the user has access to a new flexible customizing that adapts to the current PowerPoint master.

When this customizing is used, colors and fonts of newly inserted or existing charts adapt to the current PowerPoint master. Also, the use of a very dark master is possible.

If a customer has several, precisely defined empower® charts customizings and also uses empower® slides, empower charts recognizes the corresponding PowerPoint master and automatically uses the matching empower® charts customizing when inserting new charts.

If this function should be activated, please contact the empower®-Team.

1.6 Troubleshooting

Using the **Feedback** function, you are able to report undesirable behavior of empower® charts directly to our support **(Figure 3)**.

After clicking **Feedback** a new window of your primary email application (Outlook or Lotus Notes) will open, already addressed to the right recipient. This email will contain a text file which specifies technical details of the error. Please add further details in the body of the email, such as what steps you took that led to the issue with empower® charts.

Your descriptions as well as the email's file attachment will aid us in replication of the error, analyze the case to conclusively deliver a near-term solution.

Please note:

In order to guarantee that all functions of empower® charts work without restrictions, please ensure that you have formatted your presentations in a **PPT** or **PPTX** file format.

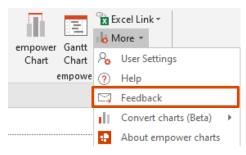


Figure 3: Send feedback





2.1 Inserting charts

All empower® charts functions are accessed via the **Home** or **Insert** tab in the PowerPoint® menu. If you also use empower® you have the possibility to use empower® charts directly from either the **Insert tab** or the empower® menu.

To insert a chart, click on **empower® chart** and select one of the available chart types **(Figure 4)**.

If you have previously selected a placeholder on your slide, empower[®] charts will insert the selected chart directly into the selected placeholder. To edit the chart – either its appearance or data – simply select the chart. An action bar will appear above the chart which will allow you to make the desired changes.

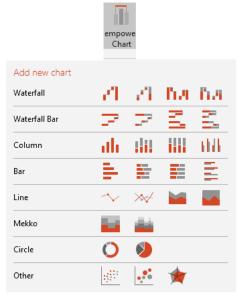


Figure 4: empower® chart types

2.2 Editing chart data

2.2.1 Embedded Excel® table

Similar to editing a standard PowerPoint® chart, you can edit the data of the chart with the aid of an embedded Excel® table.

To do so, click on the action point labeled **Edit Data** in the action bar above the chart **(Figure 5)**. Alternatively, you can also instantly open the Excel® table by performing a double click on the chart in order to edit its contents. The embedded Excel® table will open as you are used to from native PowerPoint® behavior.



Figure 5: Edit excel data

This Excel® has been enhanced to on the one hand load faster, but also offer easy access to functions such as the sorting, formatting and transposing of data, as well as inserting and deleting columns into the table (Figure 6). Position and sizing of this Excel® window will be saved and reapplied when you re-open the Excel®. If you wish to open the standard Excel®, you can do so by clicking on the Excel icon to the top of the window (1). When editing diagram data in the Excel® window, the header row of the table is switched off by default for new data charts. This allows you to format the first row as a date axis or to work with formulas in the first row. The header row can also be switched on again (2).

You can now edit, add and remove data, as well as select the data range that is to be displayed by the chart.

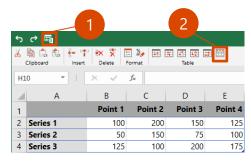


Figure 6: Editing data in integrated empower® charts Excel

In addition, it is possible to reorder the data displayed in the empower® chart data rows by row or column of the embedded Excel® table. The external Excel® window allows you to manipulate data in multiple ways (Figure 7):

- Reverse rows (with formulas) (1)
- Reverse columns (with formulas) (2)



Figure 7: Sort data



- Transpose table (values only) (3)
- Sort rows (4)
- Sort columns (5)

By default, the initial sorting option is **ascending**. Clicking the button, a second time, will perform the opposite action.

Please note:

Where possible formulas contained in the table are preserved. The options for 'transpose' and 'sort' will convert any formulas contained in the table to values.

During a copy or cut procedure (cell contains a selection frame), an insertion of cells or columns is not possible.

2.2.2 External Excel® data

Apart from using embedded data, empower® charts also allows you to access external Excel® data sources. In order to do so, click the action point **Data** and then on **Excel Link (Figure 8)**. A new dialog window will open in which you can either select a local Excel® file or choose a file from your SharePoint.

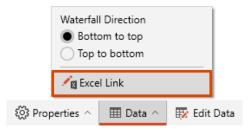


Figure 8: Create Excel® link

If you want to open a local Excel® file, select **Open local file (Figure 9)**. Granted you already have multiple Excel® sheet opened, they will be displayed in a list. From here you can open the table with a single click. If you do not wish to include currently opened Excel® sheets (or do not have any opened) click on **(Browse...)** in the drop-down menu. A Windows Explorer window in which you can select the desired file.

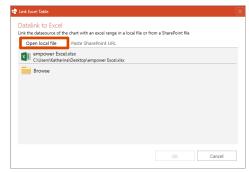


Figure 9: Open local file

To open an Excel file from your SharePoint, select **Paste SharePoint URL (Figure 10).** Paste the link to the file into the entry field. To copy the link, simply click on **Open menu** to the right of the Excel® file (this is the button with three dots) and copy the link from the menu that has opened, or by clicking on **Copy link**. After the insertion, click on the button labelled **Open link**. A connection to the selected file will be established. This may take a short period of time and may also require the entry of your SharePoint credentials.

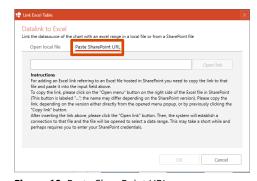


Figure 10: Paste SharePoint URL



empower® charts supports both SharePoint as well as files located on OneDrive or Microsoft Teams. It is recommended that you open the Excel file first, and then link it to the chart.

As soon as you have opened an Excel® sheet it will be positioned to the right of your PowerPoint® window. Now select the data range you wish to include in the chart; empower® charts automatically recognizes data that is to be selected. Use the cursor to adapt the selection if required. A window opens in the Excel® sheet which displays the selected range; a click on **OK** will confirm your selection (**Figure 11**).

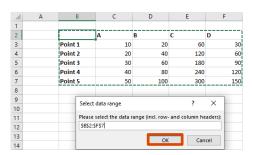


Figure 11: Selecting data range in Excel® source file

You can not only select an entire range, but also connect partial areas with each other (**Figure 12**). By that you can exclude certain columns from the source file from integration in charts. To do this, use your cursor to select a range, then hold down **Ctrl** and select another range. You confirm your selection by clicking on **OK**.

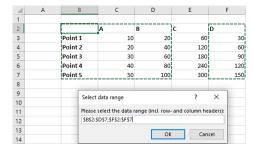


Figure 12: Selecting partial areas

Once you have selected the desired data range, you have the option to have the chart display the data by Series or Column. You have additional options once you have selected the required data range.

To link the chart with the Excel® table, click on **OK** again **(Figure 13)**. The data of the Excel® sheet should now be displayed by the chart.

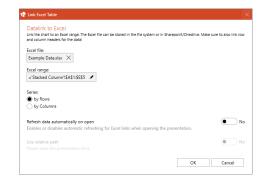


Figure 13: Setup of Excel® link

If you linked a data chart to an Excel table object via an Excel link, the linked data range and thus the chart visualization automatically grows and shrinks as the linked Excel table grows or shrinks. If rows/columns are hidden in linked Excel files, they are transferred to PPT in a hidden form. This means that this data is still available when a link is broken.



2.2.3 Additional Excel® Link Options

With the help of empower® charts, in addition to data charts, tables and text boxes can be linked to Excel® files. This allows you to link entire reports to Excel® files. In principle, the same procedure is followed as with data charts.

To link a table to an Excel® file, you can create similar to data charts a link between your PowerPoint® table and an Excel® file using **Excel Link** and then **Create Excel Link** (**Figure 14**).



Figure 14: Create Excel Link

Here, as with charts, a new window will open where you can open an Excel® file (local or on a network drive) or from an Excel® file from your SharePoint/OneDrive (Figure 15).

Here you can also connect partial areas and exclude certain columns.

>> More information can be found in chapter 2.2.2 External Excel® data.

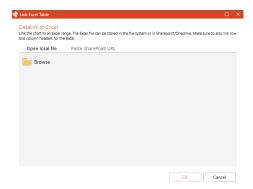


Figure 15: Select file

Please note:

For tables, the data range should always be adjusted to the set of Excel® cells, but there is no automatic adjustment of column widths.

In addition, you also have the option to link text boxes to Excel® files.

To do this, you can use the same procedure as with tables, such as linking a title placeholder to an Excel® cell.

Linked shapes and tables have hover icons on the right side to update the object, edit the link, open the source, and delete the link (**Figure 16**).

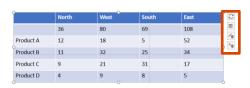


Figure 16: Hover icons



2.2.4 Automatic data refresh after opening

If you have linked a chart with an external source of data you have the ability to set the chart to update its data once its presentation is opened (locally or from empower®). Toggle the switch **Refresh data automatically on open** to either **Yes** or **No** accordingly **(Figure 17)**.

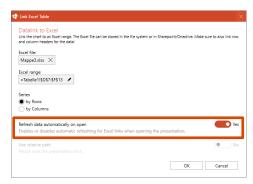


Figure 17: Data refresh settings



2.2.5 Using relative paths

If you have linked a chart with an external data source you can set to use **Relative Paths** (Figure 18). Instead of using an invariable path this setting will allow use of a relative path of the respective PowerPoint® and Excel® file. If you wish to send a PowerPoint® or Excel® file (the charts in the PPT are linked with the Excel® file) as an email attachment, their recipient is able to save these files to their local hard drive. Even though the connection to the chart refers to a path that is inaccessible to this recipient, a link to the Excel® data can be established via the relative path, provided the files are saved in a similar fashion. If, for example, the original files have been placed in the same folder, it is necessary that these files are also placed in the same folder when saved locally.

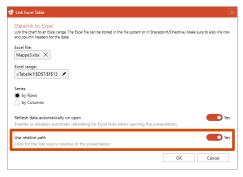


Figure 18: Excel® Link options

Please note:

If you activate the function to use Relative paths you are required to ensure that the path of the Excel® file does not change.

2.2.6 Excel Link Manager

If you use multiple Excel ® links in your presentation, you can click on **Excel Link** and the **Excel Link Manager** in order to manage all links **(Figure 19)**. This button is located on the top right of the empower® charts section.



Figure 19: Open Excel® Links manager

As soon as you have opened the Excel Link manager, you will see an overview of all Excel® files that are linked to elements in your presentation (Figure 20). On the left is listed, on which slide the linked element is located. The save location of the Excel® file is also specified, which you can open by simply clicking on the path. If you select multiple items you are able to update all elements at once or delete their connection.



Figure 20: Excel Link Manager

You can also exchange the original file for single or multiple links at the same time. To do this, simply select the corresponding links and click **Edit Link**. This gives you the option to directly switch links pointing to a particular file to another file if it has the same structure. Simply select the file you want **(Figure 21)**.



Figure 21: Change link source



To maintain consistency, the new Excel Link Manager offers the feature **Rescan Presentation**. This gives you the opportunity to check the currently opened presentation for existing links and displays for instance all linked objects including sketch of their position on the respective slide **(Figure 22)**.



Figure 22: Overview of element and position



2.3 Adapting charts

2.3.1 Data labels

Click on **Data Labels** in the Action Bar in order to change properties as well as data values and labels **(Figure 23)**.

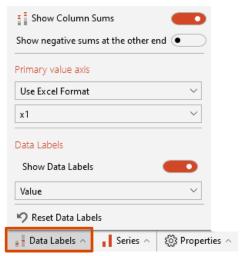


Figure 23: Data labels

When working with column and bar charts, you have the possibility to decide if you wish to display the **column sums** in the chart. When working with grouped charts you can activate **Show data labels outside** instead. Values are then not displayed within the column or bar, but outside of it **(Figure 24)**.



Figure 24: Show data labels outside

Using **Show Data Labels**, the data labels in the chart can be switched on and off globally. If these are turned on, you can set in the drop-down list below what you want the caption to display. If you want to display the values of the chart as percentages or as a combination of value and percentage value, you can select the corresponding entry **(Figure 25)**.

Under the entry **Custom Data Labels,** you can configure the data label even more specifically.

>> More information can be found in **chapter 2.3.2** Custom Data Labels.



Figure 25: Value or percentage



If data points are very small, so that the data label would not be properly readable, data label backgrounds for those particular labels are automatically displayed to allow better readability (Figure 26).

Furthermore, you can reset the settings of the data label to the original format, please click reset **Data Labels**. This resets both formatting and the position of the data labels.

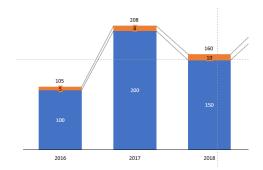


Figure 26: Data label background

When working with column or bar charts, you additionally have the option to display negative column or bar sums at the other end of the column or bar. Just activate **Show negative sums at the other end (Figure 27)**. To do so, you need to activate the option **Show column sums.**



Figure 27: Show negative sums at the other end

By default, the **numeric format** of the chart is based on the Excel® chart it is linked to. Using the respective drop-down menu, you can change the numeric format (e.g. to change from a European to an American radix format) (Figure 29).

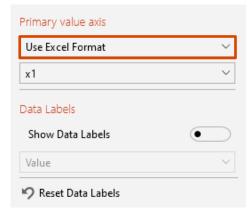


Figure 29: Set number format (1)



You have the option to select predefined formats or create one of your own (Figure 30). If you click on **Custom Number Format** a window will open in which you can select the desired format or define your own in the entry field provided. Here, you are also able to display a specific percentage of a chart.

Finally, you are able to change the scaling of values in order to better display large numbers.

Use Excel Format				
1.000				
1.000,0				
1.000,00				
1.000,000				
1,000				
1,000.0				
1,000.00				
1,000.000				
1234567890 = 1''234'568				
1234567890 = 1''234'57				
1234567890 = 1''234'5				
1234567890 = 1''235				
1234567890 = 1''23				
1234567890 = 1"2				
1234567890 = 1"				
Custom Number Format				

Figure 30: Set number format (2)

2.3.2 Custom Data Labels

The entry **Custom Data Labels** in the drop-down list for data labels can be used to set the data label specifically **(Figure 31)**.

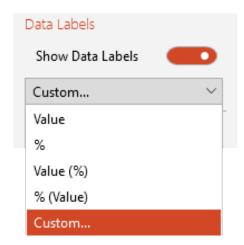


Figure 31: Custom data label



Figure 33: Adjust settings

When selecting this entry, a window appears in which you can set on the left side which information should be displayed in the data labels (value, percent, series) (Figure 33). You can optionally represent the value absolute and with percentage values you can define the number of decimal places. On the right, you define the arrangement of the selected information within a data label. For example, value and percentage value can be displayed one after the other or among themselves.



For percentage values, you can also define the reference for the calculation, e.g. which value/series should correspond to 100%. For example, if you want to create a diagram that should represent a target-actual comparison, this function is very helpful. You can then set the reference for the percentage calculation to the series that represents the target value. In the example, the line is the reference for the percentage calculation in the bars (Figure 34).

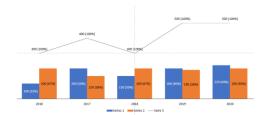


Figure 34: Flexible percentage calculation

2.3.3 Data series

Clicking the **Series** button in the Action Bar allows you to either select the axis, type or color of each series of a chart. In the **Axis** section you are then able to set if the series is to orientate itself to the primary of the secondary axis. When using bar charts, you can also click **Type** to set if the data series is to be displayed as a line or a bar. This way a hybrid chart can be compiled using lines as well as bars. In addition, you have the option to activate or deactivate visibility of a series. If you do not wish to display a certain data series in your chart, simply uncheck the option **Visible**. Additionally, you are able to set not only a different **Fill Color** per series but also a different specific color per series when negative figures are used **(Figure 36)**.

Moreover, a data chart can be configured so that colors will be adopted from Excel (**Figure 37**). The closest CD-compliant color of the current empower charts customizing is used. This also works for any complex conditional formatting in Excel.

For all data charts (except point and bubble charts), a row or column, depending on the series reference corresponds to a series.

For scatter and bubble charts, the series assignment of the points takes place via an extra column (Group/Series). If you click **Edit Data** in such a chart, you can use this column and similar entries to reach a grouping of their data points (**Figure 38**).



Figure 36: Determine series settings



Figure 37: Apply Excel colors

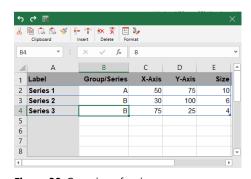


Figure 38: Grouping of series

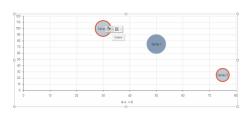


Figure 39: Format grouping

This gives you the opportunity to differentiate the groupings in terms of color and legend (Figure 39).

Please note:

If you want to create a mixed chart (bars and lines) and work with two axes, empower® charts automatically ensures that bars are only on one of the two axes. The bars would otherwise overlap and lead to misinterpreted representations.



2.3.4 Data

When opening the function, **Data** you have the possibility to further customize charts in relation to their series or categories **(Figure 40)**.

Here you can set the serial reference of your chart either by rows or by columns of your Excel® data.

You can keep the series or category order of your chart with the one in Excel® or swap the order.

empower® will automatically apply these adjustments to your chart.

You can also use **Data** to create an **Excel Link**, which automatically adjusts your chart to the data of an external file.

>> More information can be found in Chapter 2.2.2 External Excel® data.

If you wish to remove the link to the external data source, click on the action point **Break link** in the Action Bar above the chart. If you want to edit the Excel® link, select the option **Edit link (Figure 41)**. With a click on **Open link source** you can directly open the linked source and adjust it for the chart.

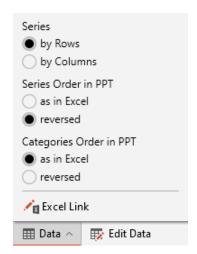


Figure 40: Adjust data

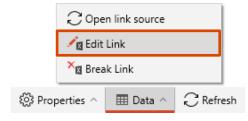


Figure 41: Edit Excel® Link

2.3.5 Editing category labels

For the category labels, you have the option to customize them (Figure 42).

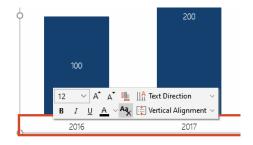


Figure 42: Adjust category label

Long category labels are automatically wrapped **(Figure 43)**. If you want to create text breaks manually, you can do this directly in Excel® by pressing **Alt** and **Fnter**.

You can also change the text orientation or the vertical text orientation, so that the text remains manageable and does not overlap even with longer labels. To avoid such behavior, you can align the text at the top, center, or bottom.

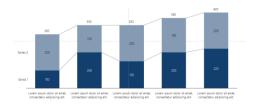


Figure 43: Align text

2.3.6 Adapting data labels

To change the design of data labels in terms of caption or position, please select the desired element.



An overlay will appear in which font size and color may be adapted in accordance to corporate design. You can also select text formatting options such as **Bold**, **Italics**, and **Underlined (Figure 44)**. Multiple elements of data labels can be selected and edited simultaneously. To do so, select the desired elements while holding **Ctrl**.

If you wish to change the position of the element, move it via Drag & Drop. The position of data labels automatically adapts to its environment, e.g. when they would otherwise overlap. To deactivate this automation, you are able to move the data label via Drag & Drop while holding the **Ctrl button** on your keyboard in order to place the element to its desired location. In order to move data labels exclusively horizontally and vertically, hold the **Shift key** while moving the element to the desired location. Even after larger changes to the underlying data displayed by the chart, the relative position of this manually moved data label will remain the same.

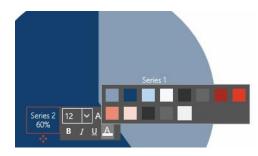


Figure 44: Formatting options

You also have the option to add a prefix before or a postfix after the data labels of a chart. Click on a data label, and the click either the **Prefix** or **Postfix** button (**Figure 45**). You can now enter your text and then click **OK**. For example, should you wish to remove the prefix, you can do so by selecting one of the data labels and after clicking the prefix button select **Clear**. A removal of the postfix is performed in a similar manner.

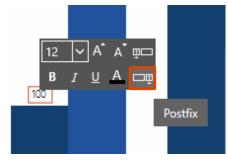


Figure 45: Add prefix or postfix

2.3.7 Changing chart elements

empower® charts allows you to change chart colors of a series as well as of a single element while keeping in line with corporate design. To do so, select the desired element of a series and then click the **Color button** to select a color (**Figure 46**).



Figure 46: Chart colors

If the selected element is part of a series, all elements of this series will adapt automatically. If you wish to change just a single element, do so by selecting the element with a double click and then make the desired changes (**Figure 47**).

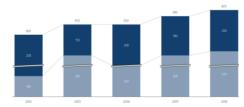


Figure 47: Changing color of series



In addition, you can a shading to empower® charts elements by selecting the element and clicking the **Shading button**. Now you can select a pattern **(Figure 48)**.

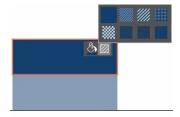


Figure 48: Add or change shading



2.4 Chart properties

2.4.1 Bar Width and Font Size

Click on **Properties** in the Action Bar in order to adjust bar width and font size **(Figure 49)**.

Change the bar width by manipulating the slide bar. Below you have the possibility to change the font size in the same manner. To apply the same font size settings to all charts contained on the slide click **Apply font size to all charts on slide**.

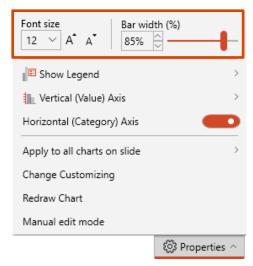


Figure 49: Set bar width and font size

2.4.2 Legend

In order to display a legend for your chart, click on **Properties** in the Action Bar and then on **Show Legend (Figure 50)**.

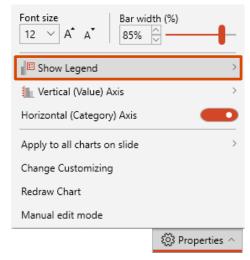


Figure 50: Show legend

Here you can choose if you want the legend to be inserted to the **Right**, **Top**, **Left**, **Bottom**, **In Chart Left** or **In Chart Right** (**Figure 51**). Once you have selected a position, the legend will be inserted accordingly. A click on the legend allows you to adjust the design (font size, font color, etc.) for a uniform appearance. To remove the legend, simply open Properties and in Show Legend select **None**.



Figure 51: Define position of the legend



2.4.3 Manual edit mode

Once you are content with the design of your chart, you can still make manual changes at a later stage. To do so, activate **Manual Edit Mode (Figure 52)**. In doing so all empower® charts functions are deactivated and you can now implement all manual changes to your chart.

Figure 52: Manual edit mode

Please note:

Some formatting may be lost in the process after you have deactivated Manual edit mode.

Manual Edit Mode should not be used for manipulation of the chart in normal use as almost all changes made so far will be reverted; more fundamental changes may lead to empower® charts no longer working correctly for this chart.

In order to gain an overview of the different changes that occur when leaving Manual Edit Mode, it is necessary to distinguish between Gantt charts and data charts:

Gantt charts

After leaving Manual Edit Mode (almost) all changes made by the user are reverted.

Data charts

After leaving Manual Edit Mode all changes made by the user are reverted apart from the following exceptions:

- Changes to color of data points (e.g. a section of a bar)
- Changes to shading of data points
- Any changes to the category axis
- Changes to axis settings (the PPT axis will need to be inserted in manual mode, later the EC axis will need to be toggled on and off in charts mode)
- Changes to gridlines in the chart

Additional shapes in the chart will not be removed; this also applies to chart title, axis title, data table, etc.



2.4.4 Configuring axis

In **Properties** you can insert a primary axis (as well as a secondary axis). Once you have selected an axis, you can either scale it automatically, or enter a value manually for a minimum as well as a maximum for the axis scale **(Figure 53)**.

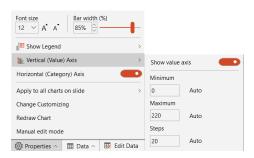


Figure 53: Axis configuration

In addition, you can adjust the text formatting of the axis labelling by clicking on the respective axis. You also have the possibility to change the scaling of the axis (**Figure 54**).

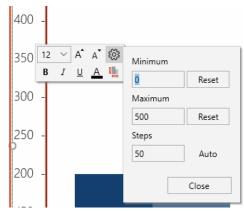


Figure 54: Configuring scaling of axis

With empower® charts, axes can also be designed flexibly. To flip the axis direction, you can simply click **Properties** and **Vertical (Value) Axis**. Here you can set the option **Reverse Axis Direction (Figure 55)**.

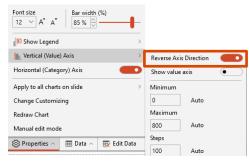


Figure 55: Reverse axis direction

This automatically reverses the axis direction of the chart (Figure 56).

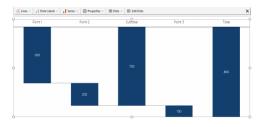


Figure 56: Adjustment of chart

Conversely, the same behavior applies to bar charts and their **Horizontal** (Value) Axis.



empower® charts also allows the use of a date axis. If you aim to use one, select the desired chart and click on **Data** in the action bar and then on **Edit Data**. In the Excel® table that opens you will then have the ability to enter the date values into the corresponding cells for the axis of your choice. It is important that these values have the same date format as Excel® (e.g. 07/01/2018) and that this date does not function as a table header (**Figure 57**).

Δ	Α		
1		Series 1	
2	01.01.2012	100	
3	01.01.2013	200	
4	01.01.2014	250	
5	01.01.2015	200	
6	01.01.2016	150	
7			

Figure 57: Excel® date format

Once you have changed the values of the axis to a date format in the Excel®, you can close the Excel® table. Once you click on the axis labels, you will be provided with further options in **Properties**. You can set the time frame to be displayed on the axis by setting the start and end dates manually or by selecting the dates using the date picker. In addition, select if you want the time steps as days, months, or years. Lastly, you can change the **Date Format** using the relevant dropdown menu **(Figure 58)**.

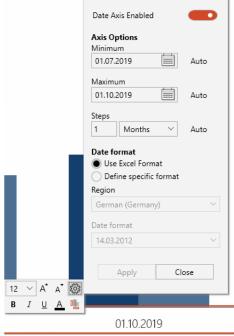


Figure 58: Configuring date axis

2.4.5 Same scale and size for all charts

In order to aid comparison of charts on the same slide, it is possible to match the scale and size of the charts. To do so, select a chart on the slide and click **Properties**. Afterward click **Apply to all charts on slide**. You can then choose between applying the **font size** of the selected charts for all the charts on the slide or applying the **scale and size** of the selected chart for all the charts on the slide **(Figure 59)**. The matching to height orients itself to the highest chart on the slide.

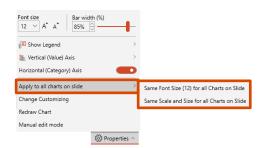


Figure 59: Chart scale settings



Charts with breaks can be matched to other charts with the function **same scaling and size (Figure 60)**. This ensures that the scales of the axes are identical and the charts appear more uniform.

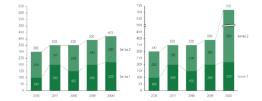


Figure 60: Adjustment of charts with breaks

Tip: Always apply the **same scale and size** function to the chart, which has the smallest scale, i.e. where a certain reference value (e.g. 100) is displayed the smallest.



2.4.6 Change customizing

If there are multiple customizations set up in empower® charts, it is possible to change to a different design or convert individual charts. A customization contains information such as fonts, colors, or even axis settings.

To change to a different customization, click on the chart and then on the **Properties button** and then on **Change customizing.** A new window will open which will provide all available customizations. Select the desired customization and confirm your selection by clicking **OK (Figure 61)**.



Figure 61: Change customizing

To change the whole customization of empower® charts, e.g. to change the appearance of every newly created charts, click on the **More** button in the menu ribbon and then on **User settings (Figure 62)**. A new window with a dropdown menu will open in which you can set the new customization. Confirm your change by clicking **OK**.



Figure 62: User settings

2.5 Chart features

2.5.1 Growth Arrow

A growth arrow displays the growth between two data points. In order to set up a growth arrow, click on **Lines** in the Action Bar and select **Growth Arrow**. A further section will open in which you can select the desired data points **(Figure 63)**. In addition, you can decide, which labelling type you prefer (percentage, absolute, or both) and if an ellipsis is to be placed around the value.

If you want to adjust the settings at a later stage, simply click on the growth arrow and click **Edit**. The same selection window will open in which you can change the growth arrow settings. If you wish to delete the growth arrow from your presentation, select the arrow and click the **Delete button**.

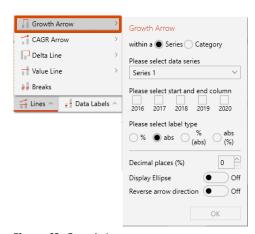


Figure 63: Growth Arrow



2.5.2 CAGR Arrow

A CAGR (Compound Annual Growth Rate) arrow displays the annual average growth rate of the time period between two data points. To add a CAGR arrow click on **Lines** in the Action Bar and then select **CAGR Arrow**. A further window will open in which you can select the two data points (**Figure 64**). Similar to the growth arrow you can make changes or delete the CGR arrow by clicking on the element.

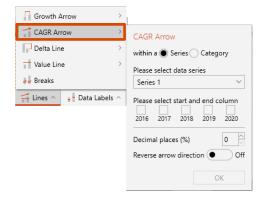


Figure 64: CAGR arrow

2.5.3 Delta Line

The delta line shows the percentage or absolute difference between two data points. To add a delta line, click on **Lines** in the Action Bar and select **Delta Line** (**Figure 65**). Select the data points in the menu that opens. In addition, you can decide, which labelling type you prefer (percentage, absolute, or both). And if an ellipsis is to be placed around the value. In order to delete the delta line, simply select it and click the Delete button.

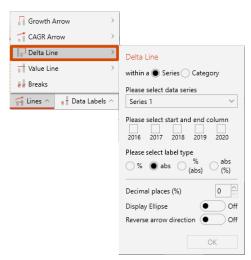


Figure 65: Delta line

2.5.4 Value Line

This feature displays a horizontal value line into your chart. In order to set up a value line, click on **Lines** in the Action Bar and select **Value Line (Figure 66)**. A further section will open in which you can select the desired data points. In addition, you can label the value line. To adjust or delete the value line, simply select it make the appropriate changes or click the Delete button to remove the line from the chart.

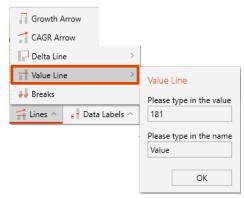


Figure 66: Value line



2.5.5 Insert breaks

Breaks allow you to truncate data segments, e.g. to be able to better display smaller columns.

To add breaks, click on **Lines** in the Action Bar and select **Value Axis** or **Category Break (Figure 67)**.

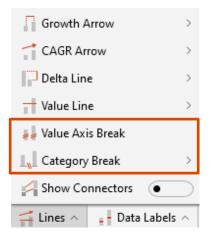


Figure 67: Select Break

A further window will open in which you can set new breaks (**Figure 68**). The width (the hidden value section) of the break can be adjusted automatically or manually.

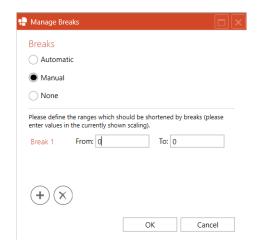


Figure 68: Inserting breaks

If you click on **Automatic**, automatic break logic will be used, which calculates the size of a break so that the expressiveness of the chart is optimally balanced. Individual series can also be explicitly excluded **(Figure 69)**.

Sometimes you may use data in a chart that differs strongly in size. This may result in columns with lower values to be displayed next to columns with a high value which can result in a confusing chart. Breaks can help to maintain readability.

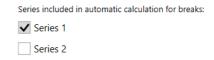
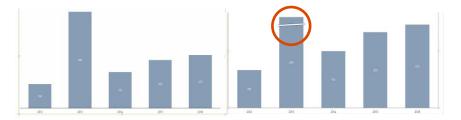


Figure 69: Insert series automatically



To the left is an example of a chart without a break, while the right chart has a break inserted:



Also, when selecting category break, a popup window will open, where you can set appropriate breaks (**Figure 70**).



Figure 70: Set category break

2.6 Converting charts to empower® charts

There is a possibility to convert a native PowerPoint® chart or a chart created with the software think-cell® to an empower® chart.

If you have installed empower® slides additionally, you can also convert a chart by using the **Apply** function if an empower® chart is saved in the chart templates folder of the library. To apply the format of an empower® chart to a regular chart, simply select the chart on the slide, and the select the empower® chart in the library folder. Now click **Apply (Figure 71).**

The same method can be used to convert existing empower® charts to other empower® chart types. Please note that only charts that use a similar data structure in their underlying Excel® tables can be converted. A column chart, for example, can be converted to a stacked bar chart. A stacked column chart, however, cannot be converted to a waterfall chart.

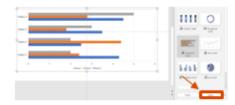


Figure 71: Converting with empower® slides



2.6.1 Native PowerPoint® Charts

To convert a native PowerPoint® chart, simply select the chart you wish to convert, and click on **empower® chart**, the same way you would when inserting an empower® chart. Select the desired chart type, and the chart will convert accordingly (**Figure 72**). The previous chart type is stressed through a border.

Alternatively, you have the possibility to convert a native PowerPoint® chart into an empower® chart by clicking on the empower®-icon which appears in the upper left corner (Figure 73).



Figure 72: Convert diagram



Figure 73: Convert to empower® chart

2.6.2 think-cell®¹ Charts

To convert a chart created with think-cell®, you have multiple options. Firstly, you can select a think-cell® chart and convert it like native PowerPoint® charts, provided that the software think-cell® is not activated (Figure 74). The transfer of colors, percentage values, hatches and broken Excel® links etc. is possible.

It should be noted that the function for converting think-cell^{®1} charts is still in a beta phase and will be further optimized over the next versions.



Figure 74: Convert think-cell® chart

2.6.3 Converting multiple charts

Clicking on **More** and then **Convert charts** you also have the option to convert all the charts on the slide or in the entire presentation at once **(Figure 75)**.

When you convert a slide, it is duplicated first, then the first copy performs the conversion. You have the second copy as a backup to compare whether the conversion worked well. When you convert a presentation, an unsaved copy of the presentation is created and the conversions are performed on that copy. Thus, you have the possibility to check the result and do not have to change the original.

original.

This feature is still in a beta phase and results should be checked manually and optimized if necessary. Therefore, this function to convert multiple charts is helpful (because the original will be kept).

Convert all charts on slide Convert all charts in presentation Convert all charts in presentation Convert all charts in presentation

Figure 75: Convert multiple charts

Please note:

If it comes to problems within the converting process, a warning box will appear.





3.1 Waterfall Chart



Adding a waterfall chart is performed similar to other empower® charts, however its data entry differs slightly.

In an Excel® table a \mathbf{x} is entered into the column that is to correspond to the sum of data of the previous data (in previous columns). To indicate a column sum, the value of one or more series has to be set to \mathbf{x} for this column. If only one series value is set to \mathbf{x} , the overall sum (over all series) is calculated.

Two or more series values set to \mathbf{x} indicate that the per series sums are calculated and displayed. If any row of a column contains the keyword "<new>", a new waterfall starts with the upcoming column. Sum columns are calculated separately for each new waterfall.

In addition, it is also possible to change the direction of your waterfall chart. This way waterfall charts can also be set up in reverse. To change the direction of your chart, simply click in the **Data button** in the action bar and select **Left to right** or **Right to left (Figure 76)**. For laying waterfalls, you can choose between **Bottom to top** or **Top to bottom**.

You can also display multiple waterfalls after one another. To add a new waterfall within a chart, click **Data** in the Action Bar and select **Edit Data**. In the corresponding cell of the Excel® table enter the keyword "<new>". The new waterfall chart will then begin at the next column while the sum starts at zero.

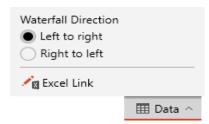


Figure 76: Edit waterfall direction

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3.2 Circle Charts



Insert a circle chart in the same manners as you would insert any other empower® chart. What makes a circle chart different is that its user is unable to use chart features such as Lines; also, other settings such as Data Labels are not possible.

Click on **Data Labels** in the Action Bar in order to activate data labels of the chart. In **Value label** you can activate the value of the circle chart by toggling the **Show Value** slider. You can also set the number format as well as display the percentage of the value. You also have the possibility to set the decimal place of your percentage. Finally, you have the option to display the category names by activating **Show Series Name (Figure 77)**.

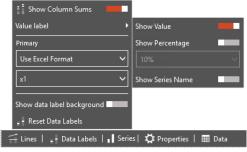


Figure 77: Data label settings

In order to improve legibility of data labels of a background using the same color, you can insert transparent backgrounds for labels by activating **Show data label background**. In addition, you can reset the data labels to their original formatting by clicking **Reset Data Labels (Figure 78)**.



Figure 78: Data label settings

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3.3 Line Charts



Line charts can be inserted analogously to all other charts in empower®. Their difference lies in their ability to allow additional adjustments for lines and markers.

With a single click on the line, you can set a line's color, thickness, and type (Figure 79).

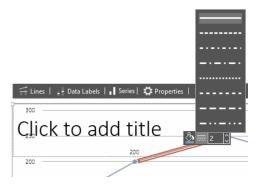


Figure 79: Line formatting

You can also smooth the lines of your charts. To do so, select the line and then click **Properties** in the action bar above the chart, then click **Smooth Line** (Figure 80).

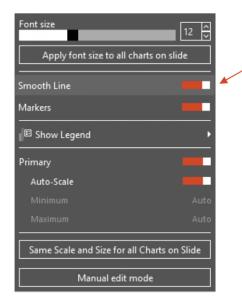


Figure 80: Smooth line setting

In order to edit the markers of data points, simply select a marker. In the overly that opens you can now select from fill colors, type, as well as size of the element (Figure 81).



Figure 81: Marker editing options

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For visualization reasons, you also have the option to freeze the line chart labels below the point **(Figure 82)**. To do this, you can simply select the labels by pressing Shift and drag them to the position below.

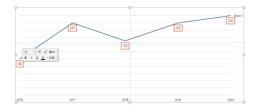


Figure 82: freeze labels



3.4 **Butterfly Chart**

To visually contrast two series, you can use the Butterfly Chart **(Figure 83)**. To do so, complete the following steps.

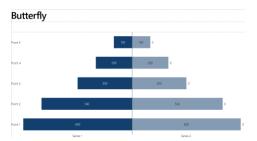


Figure 83: Butterfly Chart

First, click **empower Chart** and select as a base **Stacked Bars** for a vertical Butterfly Chart **(Figure 84)**.



Figure 84: Select the chart

Here, it is important that you enter negative values in the series that you want on the left to achieve the desired shape of the chart **(Figure 85)**.

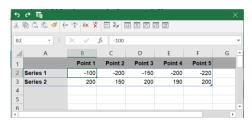


Figure 85: Edit Excel data

Then go to Labels, select the option Show Absolute Values and hide Show Column Sum (Figure 86).

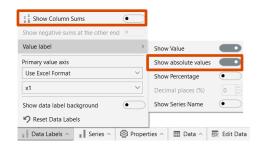


Figure 86: Adjust settings



3.5 Mekko Chart

To illustrate a numerical value depending on at least two dimensions, Mekko charts are particularly suitable.

A distinction is made between two variants.

The **Marimekko** chart is to be understood as a two-axis stacked bar chart in which both axes represent 100% (**Figure 87**).

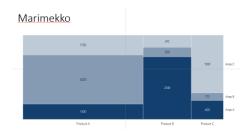


Figure 87: Marimekko diagram

The **Column Mekko**, on the other hand is to be understood as a two-axis stacked bar chart, in which, however, the axes do not represent 100% in contrast to the Marimekko **(Figure 88)**.

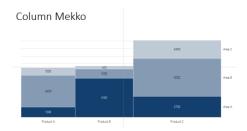


Figure 88: Column Mekko

To create such a chart, follow these steps.

Open empower Chart and select one of the two Mekko charts (Figure 89).



Figure 89: Select Mekko chart



You can then customize the data under **Edit Data (Figure 90)**. The data structure initially corresponds to that of a normal 100% or normal column chart, but with the difference of the additional "width row", which determines the relative width of the individual columns. It is often technically desired that the width is equal to the sum of the column values, so this is already preset.

When using the Transpose button, you have the option to swap rows and columns (Figure 91). Note that the Width line is immutable.

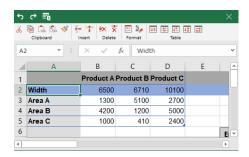


Figure 90: Edit data

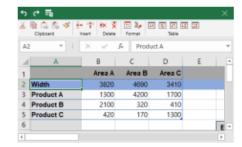


Figure 91: Specifics of the chart

Alternatively, you can link the chart to an Excel® file under **Data** and **Excel Link** (Figure 92).

>> More information can be found in chapter 2.2.2 External Excel® data

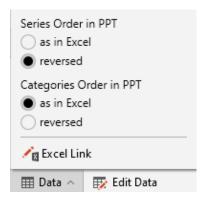


Figure 92: Create Excel Link





4.1 Inserting Gantt charts

To insert a Gantt chart, click on the **Insert** Tab in the PowerPoint® menu, navigate to the empower® charts section and click on the **Gantt chart** button **(Figure 93)**. You can now define the area in you want to insert the Gantt chart by clicking and drawing the cursor across the slide. This step can be interrupted by clicking **Esc**.

If you wish to insert a Gantt chart directly into a placeholder on the slide, select the respective content or chart placeholder and click the **Gantt chart** button.

Once you have set the area in which you wish to insert the Gantt, a settings window will open (**Figure 94**). Here you can set the length of time to be displayed by the chart, as well as header settings and date format, if it is to differ from the default settings (1).

For more details on user settings, please refer to chapter 1.4 User settings.

In addition, you can also set how many phases and rows are to be displayed in the chart. Further phases and rows can be inserted directly in the chart upon requirement (2). In addition, up to 2 note columns are available on the right side. In these, you can insert text as well as interactive symbols (traffic lights, Harvey balls, etc.) (2).

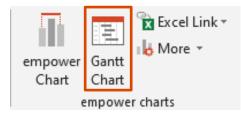


Figure 93: Insert Gantt Chart

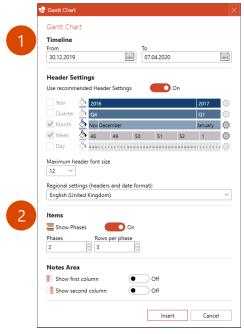


Figure 94: Gantt chart settings

To change the size of the Gantt chart at a later date, select the chart and the click and draw the endpoints to the desired size. Alternatively, you can alter the size via the native PowerPoint® function. To do so, select the chart and navigate to the **Format** tab in the PowerPoint® menu then change the chart's height and width. Once you reduce the size of the Gantt chart you may receive a notification that the font size has been automatically adjusted. If this was not desired, you have the option to simply click on **Undo changes.**



4.2 Adjusting the date section

By default, the Gantt chart displays a period with the current date. To adjust the time period, click on the date above the Gantt chart (**Figure 95**).



Figure 95: Adjusting date section

An integrated selection window will open in which you can adjust the dates for start and end, either by selecting an item in the calendar or by directly entering a specific date (**Figure 96**). Here you can change the date range as desired without losing any data.



Figure 96: Calender view

In addition, you have the possibility to change **Header Settings** on the right. Here you can either use the recommended header settings or define the formatting of the header yourself. Here you have the possibility to activate or deactivate the time specification (day, week, month, year) as well as adapt the settings of the labelling of your Gantt chart individually **(Figure 97)**.

You can choose between **Numbers** and **Week days** to display days in the header, as well as display just the work week (Mo.-Fri.). The labelling of the months can be displayed completely or in truncated form, in either **Letters** or **Numbers**. Setting the labeling option to **Automatic** will choose **long**, **short** or **letters** depending on the size of your Gantt chart. It is possible to display quarters as **Short**, **Number** or **Company**. The latter option is a setting to display the time specification of quarters as defined by your company. It is also possible to display each time unit as vertical lines in the Gantt chart, which are automatically inserted. To do so, simply select **Show vertical lines**.



Figure 97: Adjusting header settings



You can further change the minimal font size of the Gantt chart, the language of the header as well as the date format **(Figure 98)**. A click on **OK** will take you back to your Gantt chart that will then have adapted in accordance to your settings.

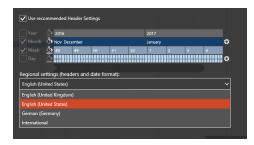


Figure 98: Setting language and date format

4.3 Edit scale

A Gantt chart displays phases on the line level that are divided up into rows. These rows contain **tasks** or **milestones**.

Phases and rows can be renamed, moved according to requirement, and phase arrows can be hidden, revealed or deleted. You can add a new task or milestone to every row. To do so, hover over the row until a +-symbol appears and then select either to add a **Task** or a **Milestone**. Your project plan will then update in accordance to your settings (**Figure 99**).

In addition, you are able to enlarge or shrink the region in which phase and line labels are displayed. To do so, move your cursor to the right of the region until a bilateral arrow. You can then adjust the width of this section while holding the left mouse button.



Figure 99: Adding task or milestone

4.4 Adding phases or rows

A pop-up menu will appear if you hover the cursor over the bottom end of a phase or row. In doing so you will be able to add a further phase or row to your project plan (Figure 100).

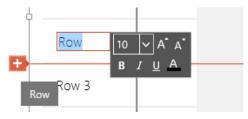


Figure 100: Adding a new row

4.5 Embedded Excel® table

As with empower® charts, you can edit the data of a Gantt chart using an Excel® table embedded in the chart.

To do so, click on **Edit Data** on the action bar above the Gantt chart. As usual, the built-in Excel® table opens and you can edit, add, remove and select the respective ranges (**Figure 101**). If you have a **Notes Area** in PowerPoint® displayed under **Properties** in the empower® action bar, you can edit it from Excel®.

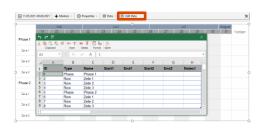


Figure 101: Edit data



4.6 Excel Link

In addition to using integrated data, you can also use external Excel® data sources. To do so, click **Excel Link (Figure 102).** A new window will now open where you can open data from either an Excel® file (local or on a network drive) or from an Excel® file from your SharePoint/OneDrive. Here you can select the desired area that you want to display in the Gantt chart.

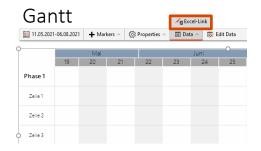


Figure 102: Create Excel Link

A new window opens where you can open data either from an Excel® file (on-premises or on a network drive) or from an Excel® file from your SharePoint/OneDrive (Figure 103)

The easiest way is if you already have the Excel file open. Open files are always offered as the first option in the window.

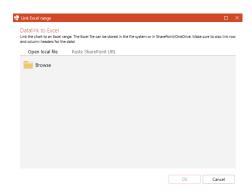


Figure 103: Connect Excel file

After selecting a file, you can select the desired area that you want to display in the Gantt Chart (Figure 104). You can then make further settings in the window for linking.



Figure 104: Select data range

Here you can also select the option **Automatically adjust Gantt period**. When this setting is enabled, the Gantt chart period is automatically adjusted to the earliest and latest dates from the data range **(Figure 105).**

Figure 105: Adjust Gantt period automatically

For more details on Excel Links, please refer to **chapter 2.2.2** External Excel® data

4.7 Multi-Columnity

In the areas left and right within a Gantt chart (task description and notes) tab stops can be used to achieve multi-columnity. A new optional heading line for the task pane has also been added **(Figure 106)**.



Figure 106: Create multi-columnity



These tabs are enabled in the text boxes to the left and right of the Gantt content, wherephase texts also have tabs, but they are indented and not flush with the task tabs.

The textboxes task headings and notes get a left-aligned vs. centered setting.

You can create multi-columnity by dragging the left column wider, then setting headings, and adding the corresponding content within the phases. The tabs must be created using the **Tab key**.

4.8 Editing phase arrows, task bars and milestones

Hover your cursor over a task arrow in order to edit its color or font (**Figure 107**). Several tasks and milestones can also be marked and moved together.



Figure 107: Editing phase arrow

When editing a task or milestone you also have the ability to display the bar as a dashed frame without filling, you can completely delete, move it, as well as change its size. In addition, you can move an item by clicking on the **Date button** and entering a desired time period **(Figure 108)**.



Figure 108: Editing task/milestone

Finally, you have the option to change the shape and color of the symbol used to represent the milestone (**Figure 109**). The labelling of this milestone can be moved with the help of snapping points. To do so, simply click on the milestone to make a snapping point appear. Select it and move it to the desired location while holding the mouse button.



Figure 109: Changing milestone shape

4.9 Add data to the scale indicator

In the calendar view of the Gantt chart you can select different display options. To do so, click **Add** in the Action Bar above the Gantt chart. A drop-down menu will appear offering you different options to choose from **(Figure 110)**:

- Holidays
- Date Line
- Highlight
- Delay



Figure 110: Visualizations



4.10 Adding visualizations

4.10.1 Holidays

If you wish to display school holidays in your calendar click **Add...** in the Action Bar and select **Holiday**. A window will open in which you can select the desired holiday. Clicking **OK** will add the dates of the holiday to the calendar of your project plan which will then be highlighted in color.

In addition, you can add, edit or delete personalized holiday categories and calendars via the menu bar at the bottom left (**Figure 111**). You have the possibility to export the data as an XML file as well as import data of other users.



Figure 111: Setting holiday category

4.10.2 Date line

A further feature of the Gantt chart is the **Date Line**. It can be placed at any location within the project calendar in order to signify that a certain phase, task or milestone needs to be reached or completed by a specific date. In order to add a Date Line, click **Add...** in the Action Bar and select **Date Line**. A vertical dotted line will be inserted into your calendar, which can be moved to any date **(Figure 112)**.



Figure 112: Date line

A text box is located at the bottom of the line, which contains the word **Date** (Figure 113). Click it to change the word to your requirements. Furthermore, the appearance of this text can be changed in terms of font color and size.

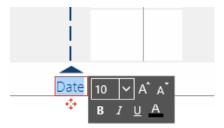


Figure 113: Changing date line label

4.10.3 Highlights

In addition to the options of **Holidays** and **Date Line** empower® charts allows you to **add highlights** to your calendar, e.g. for a specific time period of a project or vacation **(Figure 114)**.

Below the highlight is a text box which provides the same editing options as that of the Date Line. In addition, you can move or extend the highlight manually to any date. To do so, move your cursor below the highlighted section in order to display the context menu that allows you to do so.

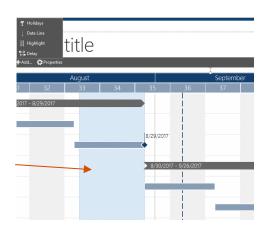


Figure 114: Inserting highlight



4.10.4 Delays

Sometimes a project encounters delay. empower® charts allows you to add delays to your project calendar. Click **Add...** in the Action Bar and select **Delay** to add a delay to your calendar. An entry field will appear in which you can specify the begin and end of a period, alternatively you can enter these dates via the calendar view. Confirm the changes by clicking **OK** (**Figure 115**).

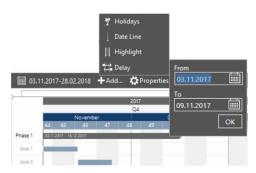


Figure 115: Entering delay dates

The delay in your project plan will be automatically inserted into your Gantt chart. A click on the enlargement arrow allows you to hide or display the hatched area as well as any labelling (**Figure 116**). Here, you also have the ability to change the color as well as completely remove the enlargement from the Gantt chart.

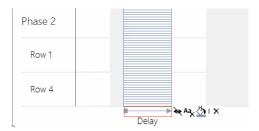


Figure 116: Adapting appearance of the delay

4.11 Properties

In addition to the **Date Range** and the **Add... button**, you can also click on **Properties** in the Action Bar. Doing so will open a drop-down menu which allows you to change a number of settings of your Gantt chart **(Figure 117)**. You can change the font size as well as the height of the bars. A click on **Maximize font size** will automatically select the largest possible font for your Gantt chart. In some cases, it may be necessary to enlarge the bar width of your Gantt chart in order to display larger font sizes.

You can set a **Generic Mode** in order to display days or weeks in the Gantt chart without connection to a specific date format. You also have the option to display the individual phases, phase arrows or the Note Area individually as well as change to **Manual edit mode**. The width of the notes area can be adjusted in the region that displays the phase and line labels. To do so, simply move your cursor to the right until it turns into a bilateral arrow. Change the size of the region while holding the left mouse button.

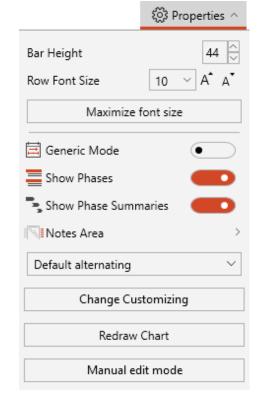


Figure 117: Gantt chart properties



Finally, you have the option to set that the background is colored in alternating colors (alternating colors are set by default) or to highlight weekends in color (Figure 118).

Please note:

All manual changes to a Gantt chart will be lost as soon as you close Manual edit mode. This function should rather be used as a last step in editing a Gantt chart.

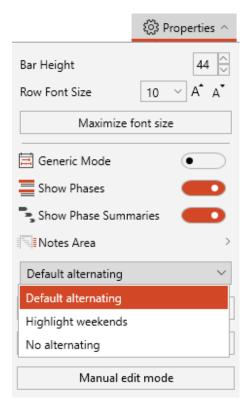


Figure 118: Setting Gantt chart alternation

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