Version 9.1

Contents

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.

Installation, updates & troubleshooting

1.1 System requirements

In order to use empower Charts your system will need to fulfill the following requirements:

- Microsoft Windows 8, 8.1 or 10
- Microsoft Office 2013 or 2016, 2019, Office 365 Pro Plus and Enterprise E3 and E5 with PowerPoint and Excel installed
- .NET Framework (at least version 4.6.2 is required)
- PowerPoint may not be run explicitly as administrator

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

empower Charts support the following User Interface languages: German, English, as well as Spanish, French, Italian, Japanese, Dutch, Portuguese, Russian and Chinese (simplified) via machine translation. The language adapts to the system language of PowerPoint. In case the required language is not supported by PowerPoint, the default language is English.

1.2 Initial installation

empower Charts can easily be installed by the user. If required, we can also provide a *per machine* installation package for software distribution.

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 auto-update 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)**. This ribbon group can be found on the Insert Ribbon tab and on the Start or empower Tab.

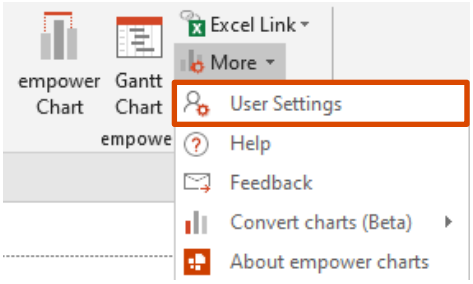

Figure 1: User settings via button **More**

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)**.

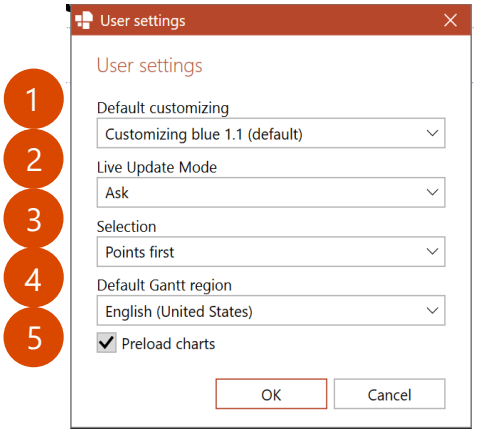

Figure 2: User settings

More information can be found in **Chapter 4 Gantt chart.**

Check the Checkbox **Preload charts** in case you want to use the Preload-Function for all your charts per default **(5)**.

More information regarding this function can be found in **Chapter 2.2.1 Edit Charts**

1.5 Flex-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.

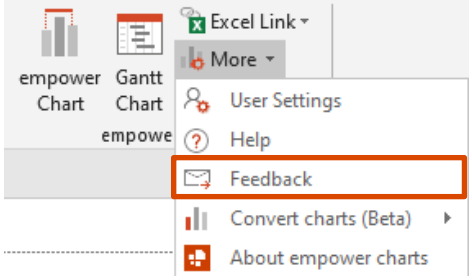

Figure 3: Send feedback

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.

empower charts

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® Slides you have the possibility to use empower Charts directly from either the **Insert tab** or directly via the empower® Slides ribbon tab. Depending on the empower® Slides version, there is either a normal button or a split button on the ribbon. In the case of a split button, clicking on the lower half of the split button will open the window with the chart types.

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. Many formatting can also be done directly in the chart, e.g., coloring elements or moving data labels.

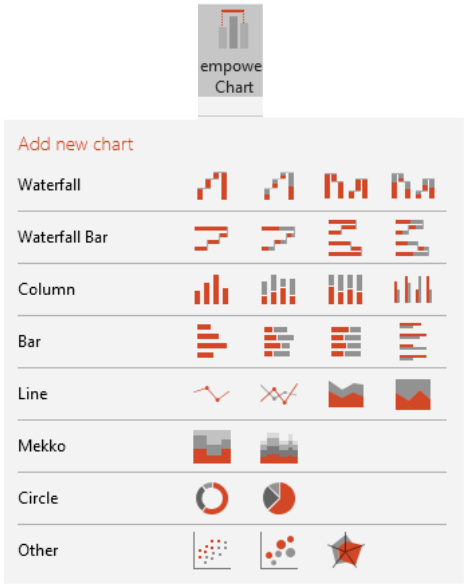

Figure 4: empower Chart types

2.2 Editing chart data

2.2.1 Edit Charts

The Preload-Function loads charts as soon as you enter a slide, which significantly increases the performance around the selection of charts. Furthermore, charts and their elements already shine at Mouse-Over. This also speeds up the processing, as the desired element in the chart can be selected directly. If an element is placed above a chart, the use of it is only possible if the preload function is deactivated. Otherwise, the element disappears in the layer behind the chart and can therefore not be used or edited. The preload function can be deactivated and activated for a single chart via the eye symbol next to the upper right corner of a chart. Via the user settings, the preload function can also be switched off all together, but this is not recommended (loss of performance). **(Figure 5).**

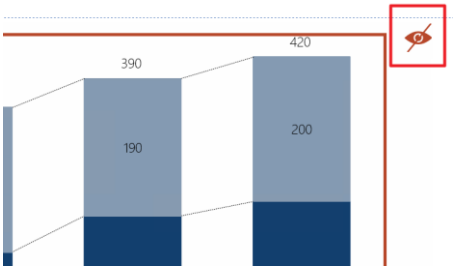

Figure 5: Preload-Function

2.2.2 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 6)**. 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 6: 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 7)**. 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.

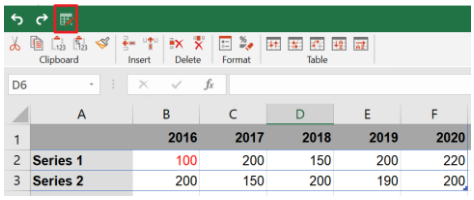

Figure 7: Editing data in integrated empower charts Excel

Additional information on the characteristics of mekko and waterfall charts and their mini-Excel is accessible via a Help symbol. If you click on the Help symbol, a new separate window opens up. The information can be copied out if needed. **(Figure 8).**

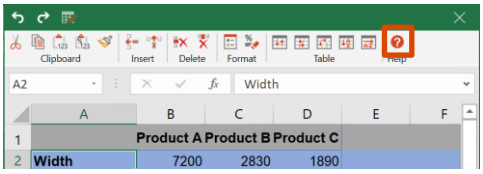

Figure 8: help symbol

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

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 9)**:

- Reverse rows (with formulas) **(1)**
- Reverse columns (with formulas) **(2)**
- Transpose table (values only) **(3)**
- Sort rows **(4)**
- Sort columns **(5)**

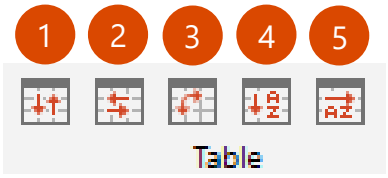

Figure 9: Sort data

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.

2.2.3 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 10)**. A new dialog window will open in which you can either select a local Excel file or choose a file from your SharePoint.

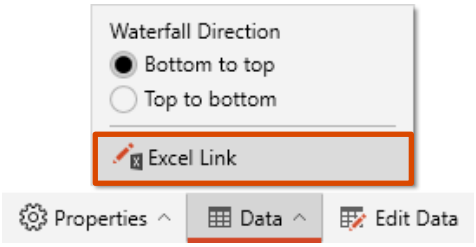

Figure 10: Create Excel-link

Excel files, that are stored in SharePoint or OneDrive but have been as well synchronized locally can be linked locally. This mode is called the hybrid mode. It increases the performance of the links and enables relative paths. Furthermore, online available, linked files can also be opened from PowerPoint. In addition, the Open Link Sources feature is now available for all Excel files.

If you want to open a local Excel file, select **Open local file (Figure 11)**. 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.

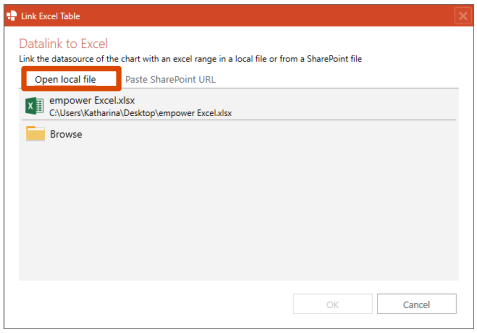

Figure 11: Open local file

To open an Excel file from your SharePoint, select **Paste SharePoint URL (Figure 12).** 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.

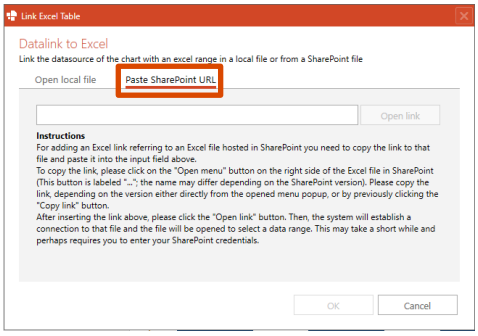

Figure 12: Paste SharePoint URL

MFA (Multifactor Authentication) is also supported in empower Charts. If you create an Excel-link with data from an MFA protected SharePoint location, a login window for entering your login data opens after selecting and opening the SharePoint URL **(Figure 13)**.

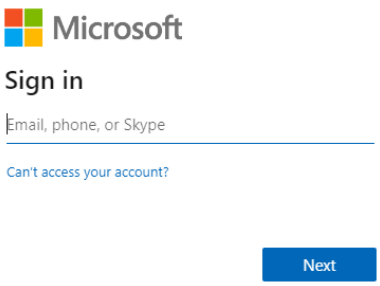

Figure 13: Entering login data

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. The hybrid mode makes it possible not only to link files stored online. This makes it easier to work with locally stored files, as they do not have to be uploaded to process them as a 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 14)**.

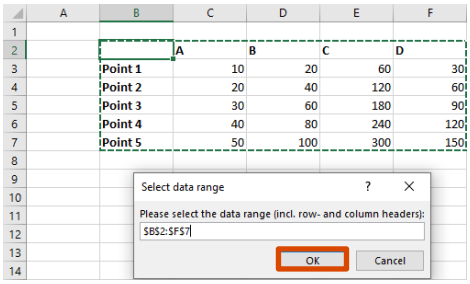

Figure 14: Selecting data range in Excel source file

You can not only select an entire range, but also connect partial areas with each other (**Figure 15**). 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**.

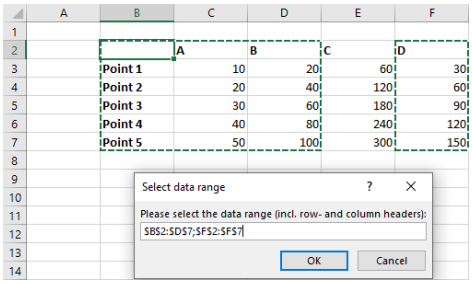

Figure 15: Selecting partial areas

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 16)**. The data of the Excel sheet should now be displayed by the chart.

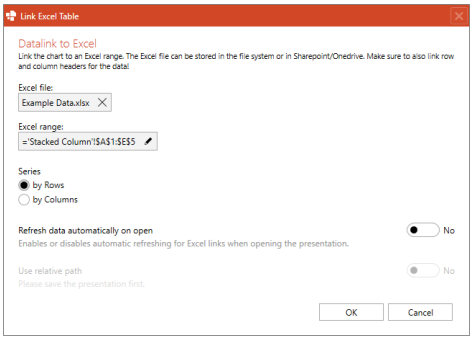

Figure 16: Setup of Excel-Link

The desired range in the Excel table can also be copied using the keyboard shortcut **Ctrl C** and added to a native PowerPoint chart using **Ctrl V**. A window will appear where you can confirm that the previously native PowerPoint chart will be converted to an empower Chart and the copied data area will be applied **(Figure 17)**. If the selected chart is already an empower Chart, the Copy & Paste function can be used as well. Areas copied by keyboard shortcut can also be copied to a table. For all variants, the Excel-Link is created automatically.

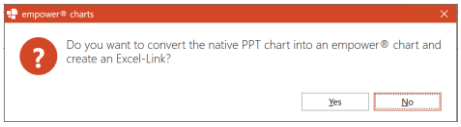

Figure 17: Link through shortcut

If you are unsure which areas of an Excel table have a link, you can select the option **Highlight linked ranges** in the ribbon under insert in the part empower Charts. This function highlights the linked range in the Excel table via a dashed border. Clicking on the border of this area opens a new window called **Link indicators**. This shows where the present Excel table is linked (**Figure 18**). However, it is important that both linked files, the Excel file and the PowerPoint file, must be saved. If a link has been made and the files have been saved, the highlight function can be used by clicking **Refresh**.

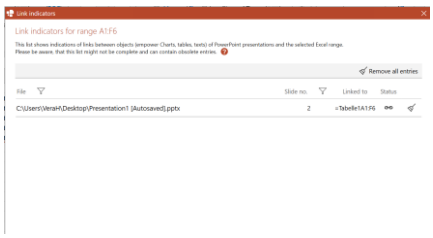

Figure 18: Link indicators

Links to shapes can be established as well. To do this, insert the desired shapes into your presentation. Then you can select the desired cells in the Excel table to link to the presentation. These cells can then be copied to the shapes using **Ctrl C** and **Ctrl V**. Once you have inserted the desired cells, it is possible to create Excel-Links by clicking on the button next to it **(Figure 19).** This process creates multiple links at the same time and each shape gets its own link. This function can also be used if the fields selected in the Excel table contain text only.

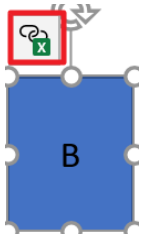

Figure 19: Excel-Link at shape

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Alternatively, Excel-Links can also be created directly from Excel. To do so, there are ribbon buttons in Excel on the Insert tab **(Figure 20)**. It can be both a new and an existing PPT target object linked. Native PPT charts can also serve as a target and are directly targeted when linked converted.

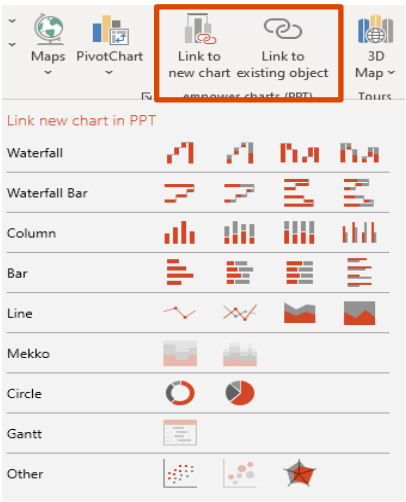


Figure 20: Create link in Excel

To create a link to a PPT object, simply click **Link to existing object** and select the desired object in PowerPoint **(Figure 21).**

empower automatically recognizes whether a chart or only a table or text can be linked based on the data selection in the Excel file.

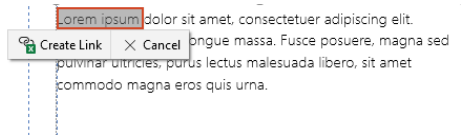


Figure 21: Link to PPT object

More information can be found in **Chapter 2.2.4 Additional Excel-Link Options.**

If you have linked a data chart to an Excel table object via an Excel-Link, the linked data range and thus also the chart automatically grow and shrink when the linked Excel table becomes larger or smaller. If rows/columns are hidden in linked Excel files, they are transferred hidden to PPT. Thus, this data is still available when breaking a link.

2.2.4 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 22)**.

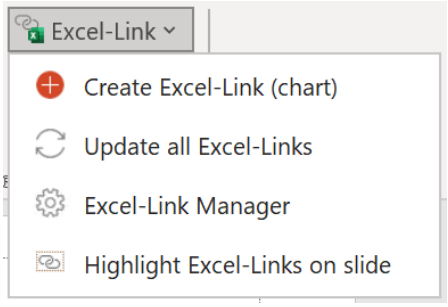


Figure 22: Create Excel-Link

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 23)**.

Here you can also connect partial areas and exclude certain columns. Files with merged cells can be opened and linked as well.

More information can be found in **Chapter 2.2.3 External Excel data.**

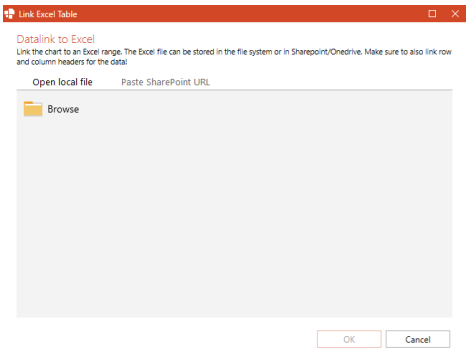


Figure 23: Select file

When linking tables, formatting (text color, cell fill color) can optionally be adopted. To do this, you can simply **right-click** or click on the **Create Excel-Link (table)** option via **Excel-Link**. Once the file is linked, you can copy the colors from Excel **(Figure 24).**

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.

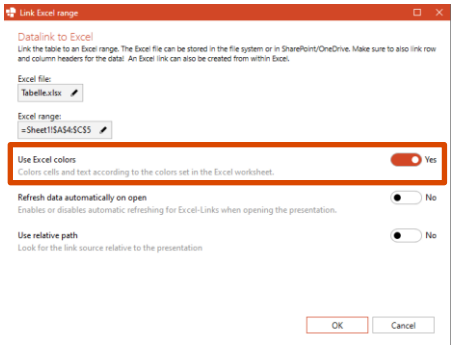


Figure 24: Maintain colors from Excel

In addition to tables, you also have the option of linking any text boxes as well as individual words or text passages with Excel files.

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

To link individual words or longer text passages, you can select the desired area and click on **Create Excel-Link (text)** or via **Excel-Link (Figure 25).**

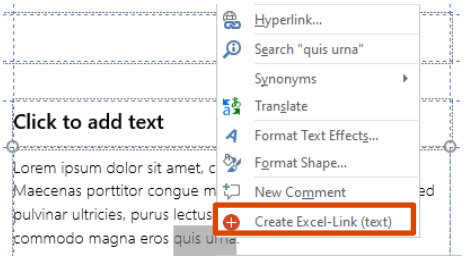
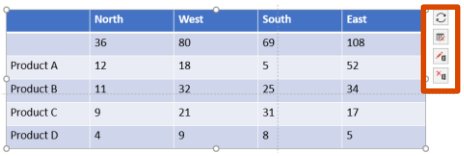


Figure 25: Link text

Linked shapes, tables and texts have hover icons on the right side to update the object, edit the link, open the source, and delete the link **(Figure 26)**.



	North	West	South	East
	36	80	69	108
Product A	12	18	5	52
Product B	11	32	25	34
Product C	9	21	31	17
Product D	4	9	8	5

Figure 26: Hover icons

In the **Excel-Link Manager**, you can define the desired decimal separator and the thousands separator when linking tables and texts. To do this, you can simply click on the **Excel-Link Manager** and use the **Configure Separators** to change the separators by clicking on **Manual** so that they are displayed differently from the Excel table **(Figure 27).** If these are set to **Automatic**, the settings are taken from Excel.

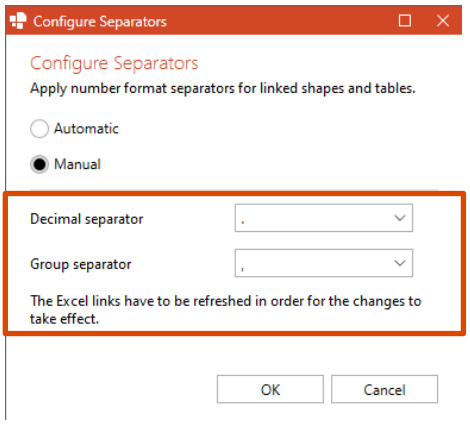


Figure 27: Configure Separators

2.2.5 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 28)**.

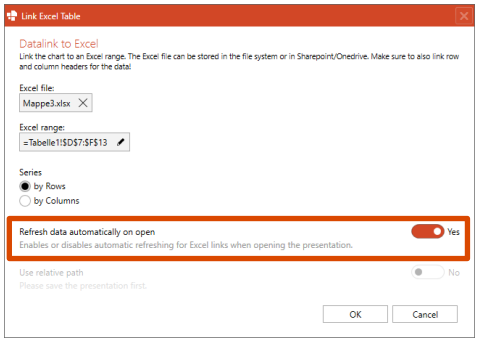


Figure 28: Data refresh settings

2.2.6 Using relative paths

If you have linked a chart with an external data source you can set to use **Relative Paths (Figure 29)**. 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.

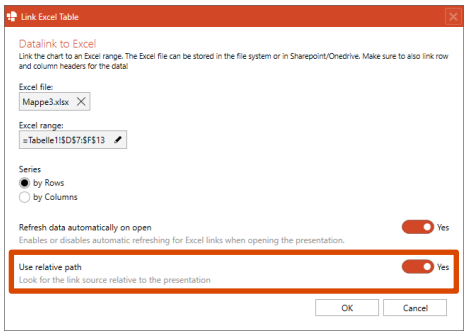


Figure 29: Excel-Link options

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.

2.2.7 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 30)**. This button is located on the top right of the empower Charts section. Excel-Links can be highlighted here as well. There is a new window opening up, when hovering through the Icons in the Excel-Link Manager.

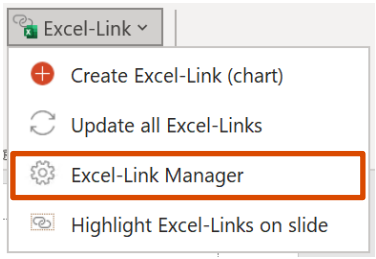


Figure 30: Open Excel-Link Manager

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 31)**. On the left is listed, on which slide the linked element is located. In addition, the linked element is highlighted on the respective slide. 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.

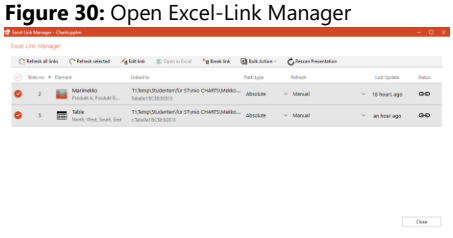


Figure 31: Excel-Link Manager

Conversely, you can also go to a slide, select via the Excel-Link manager **Highlight Excel-Links on slide**. This will show you all the objects that are linked **(Figure 32)**.

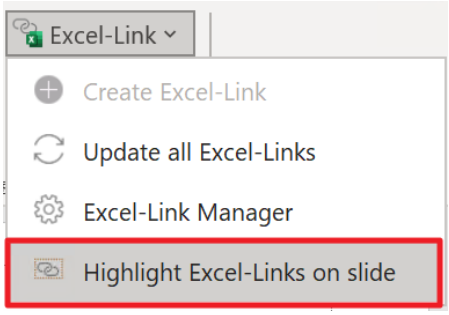


Figure 32: Show Excel-Links on slide

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 33)**.

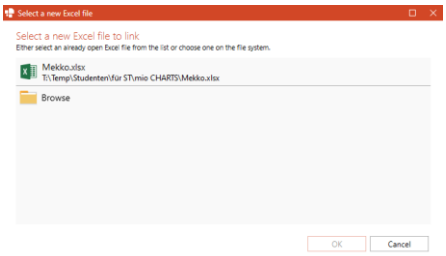


Figure 33: Change link source

This works even if the Excel files are stored in OneDrive or SharePoint.

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 34)**.

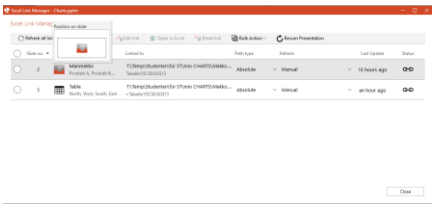


Figure 34: Overview of element and position

Depending on the type of linked source, different icons are displayed in the Excel-Link Manager **(Figure 35)**.

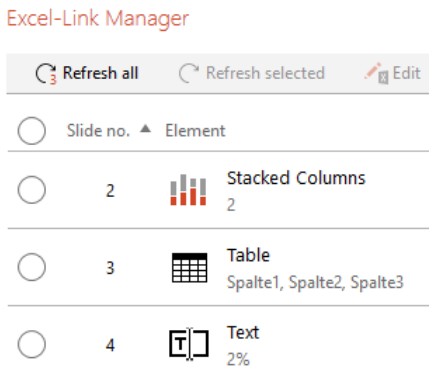


Figure 35: Different icons

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 36)**.

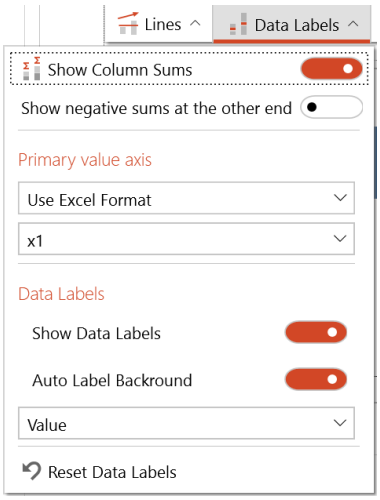


Figure 36: Data labels

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 37)**.

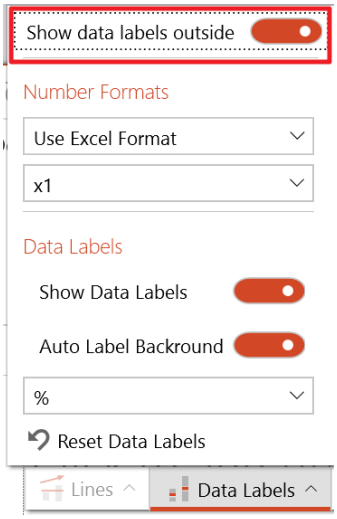


Figure 37: Show data labels outside

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 38)**.

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.**

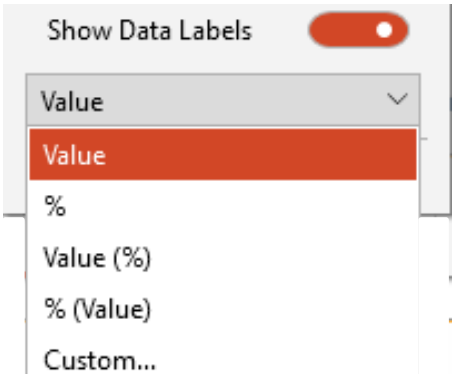


Figure 38: Value or percentage

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 39)**.

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.

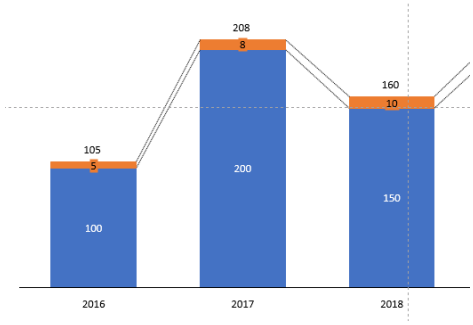


Figure 39: Data label background

Background visibility for data labels can be controlled manually if required in a chart. By default, **Auto Label Background** is enabled, but can be disabled if necessary **(Figure 40)**. If the automatic data label is deactivated, you can select individually for each data label whether a background should be displayed or not. This setting does not have to be applied for an entire chart.

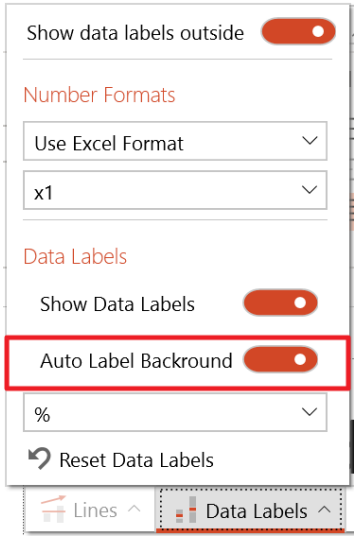


Figure 40: Auto Label Background

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 41)**. To do so, you need to activate the option **Show column sums.**

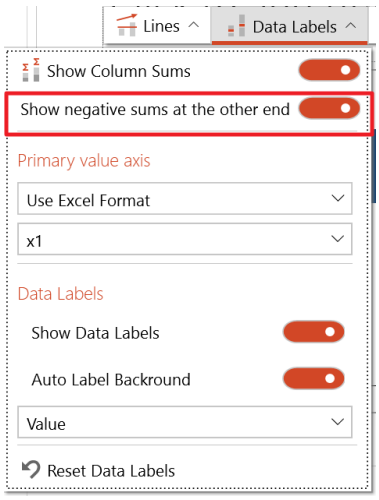


Figure 41: Show negative sums at the other end

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 42)**.

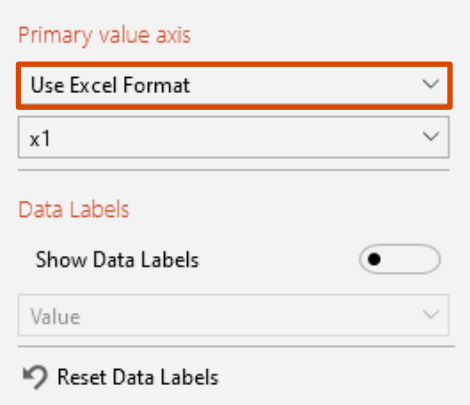


Figure 42: Set number format (1)

You have the option to select predefined formats or create one of your own **(Figure 43)**. 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.

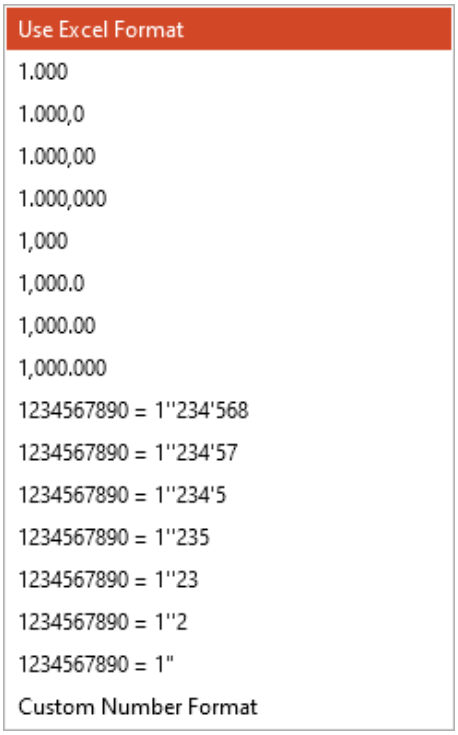


Figure 43: Set number format (2)

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 44)**.

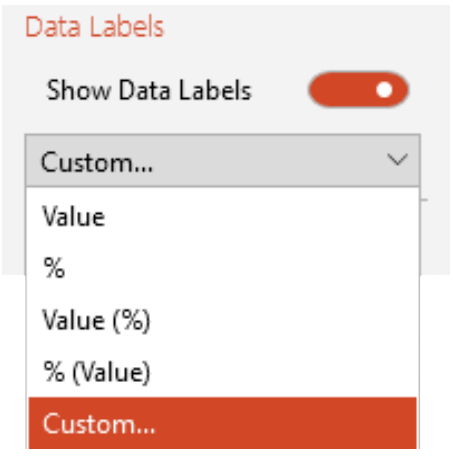


Figure 44: Custom data label

When you select this entry, a window appears in which you can set which information should be displayed in the data labels (value, percent, series name). Optionally, you can display the value absolutely, and for percentages you can define the number of decimal places.

For percentages, you can also define the reference for the calculation, which value/series should correspond to 100%. For example, if you want to create a chart 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 45)**.

Figure 45: target-actual comparison

For this purpose, the type of the target can be changed to line within the Series function. This line must now be displayed on its own axis, which has the same parameters as the other. The axis can also be selected under Series. The value of the data labels must then be adjusted manually. This is done via data labels (Value - Custom) **(Figure 46).** Here, the percentage value can be determined by adding and selecting the percentage value to what extent the goal has been achieved. All you have to do is adjust the reference. The result is a chart by representing a target-actual comparison.

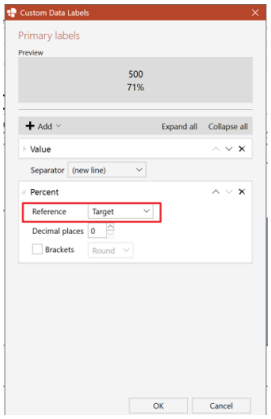


Figure 46: Custom Data Labels

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 47)**.

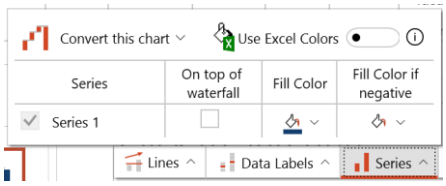


Figure 47: Determine series settings

Moreover, a data chart can be configured so that colors will be adopted from Excel **(Figure 48)**. The closest CD-compliant color of the current empower Charts customizing is used. This also works for any complex conditional formatting in Excel.

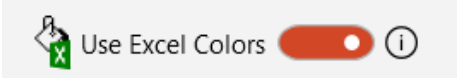
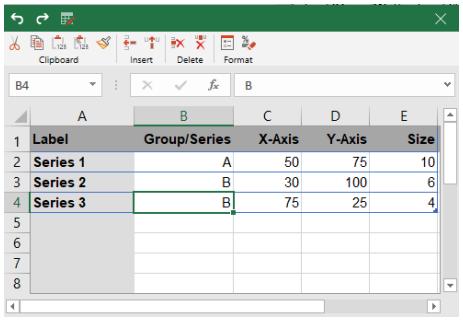


Figure 48: Apply Excel colors

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 49).**



	A	B	C	D	E
1	Label	Group/Series	X-Axis	Y-Axis	Size
2	Series 1	A	50	75	10
3	Series 2	B	30	100	6
4	Series 3	B	75	25	4
5					
6					
7					
8					

Figure 49: Grouping of series

This gives you the opportunity to differentiate the groupings in terms of color and legend **(Figure 50)**.

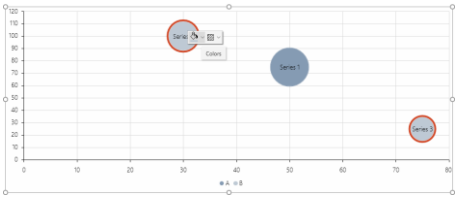


Figure 50: Format grouping

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 51)**.

The direction of the waterfall bar can be set up individually. You can choose If the chart should start from the left or right.

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

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. You can also delete an used Excel-Link. If you click on **Excel-Link** you will get to the source of the chart and can adjust the table instead of just adjusting the chart in the presentation.

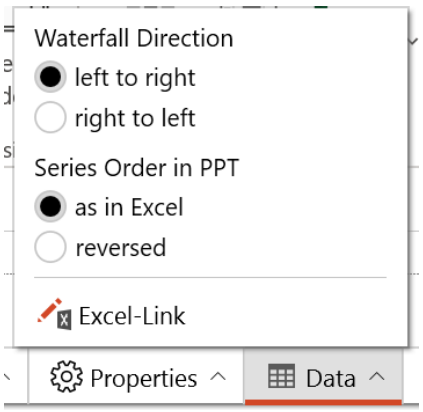


Figure 51: Adjust data

More information can be found in **Chapter 2.2.3 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 52)**. With a click on **Open link source** you can directly open the linked source and adjust it for the chart.

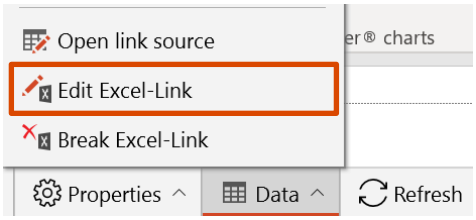


Figure 52: Edit Excel-Link

2.3.5 Editing category labels

For the category labels, you have the option to customize them **(Figure 53)**.

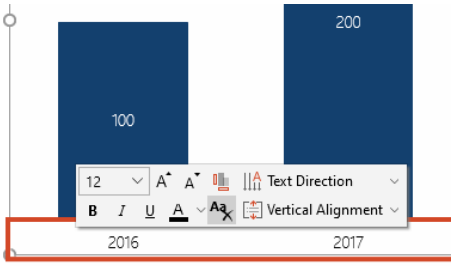


Figure 53: Adjust category label

Long category labels are automatically wrapped **(Figure 54)**. If you want to create text breaks manually, you can do this directly in Excel by pressing **Alt** and **Enter**.

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.

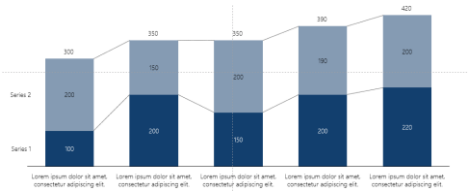


Figure 54: Align text

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 55)**. 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.

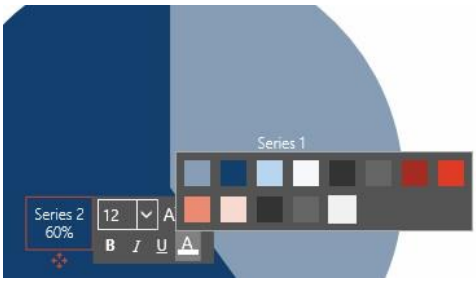


Figure 55: Formatting options

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 56)**. 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.

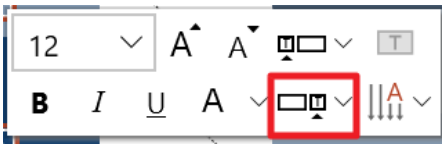


Figure 56: Add prefix or postfix

The data labels can also be adjusted in their arrangement. To do this, the labels in the desired empower chart must be selected. By clicking on **Change Text Direction** the orientation of the label can then be adjusted. Individual labels within a chart can also be changed via this function **(Figure 57).**

Individual data and arrow labels within a chart can also be changed via this function. The adjustments can be customized in a differentiated way for each individual label, independent of the other labels within a chart.

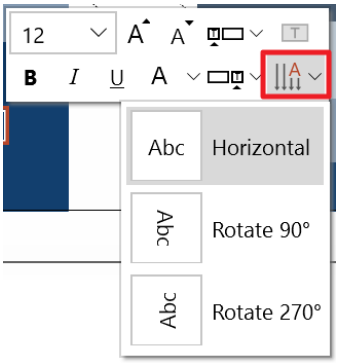


Figure 57: Change text direction

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 58**).

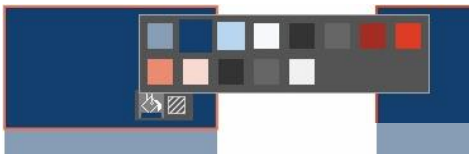


Figure 58: chart colors

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 59)**.

Figure 59: 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 60)**.

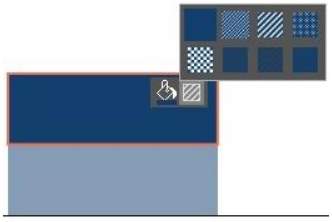


Figure 60: Add or change shading

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 61)**.

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**.

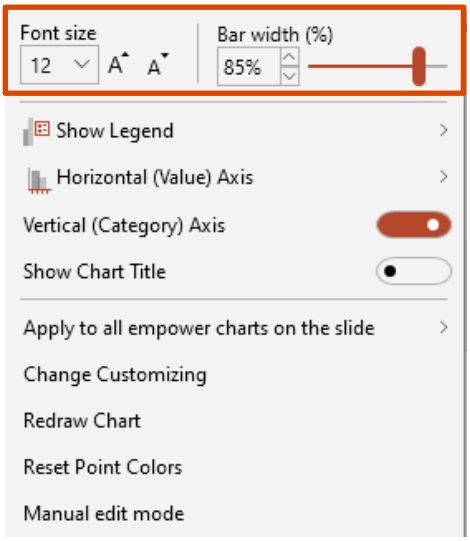


Figure 61: Set bar width and font size

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 62)**.

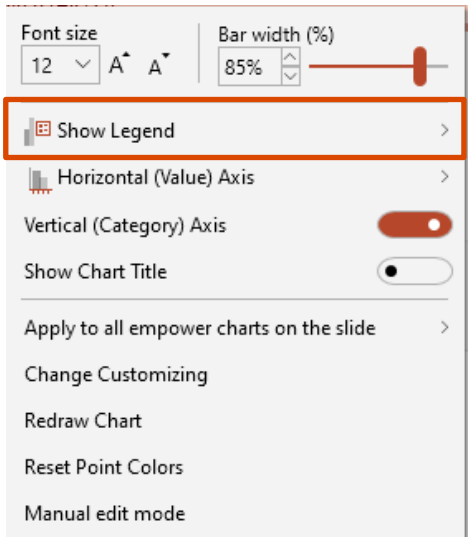


Figure 62: Show legend

Here you can choose if you want the legend to be inserted to the **Right**, **Top**, **Left**, **Bottom**, **In Chart Left**, **In Chart Right** or **Outside Chart (Figure 63)**. 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**.

You can move and adjust the legend at any time. You can also change the area where the legend is to be displayed by dragging with the mouse. The legend can also be placed outside the chart. Furthermore, you can extend the legend to show all series in a row or customize, how many series shall be displayed in a row. In addition, you can also change the order of the series items as desired.

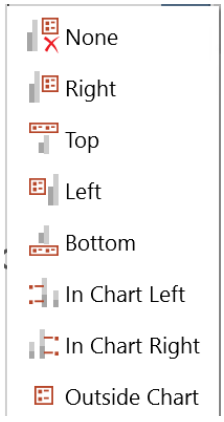


Figure 63: Define position of the legend

To change the horizontal orientation of the texts of the In-Chart legend (left, center, right), you can simply click on the legend and arrange the contents accordingly **(Figure 64)**.

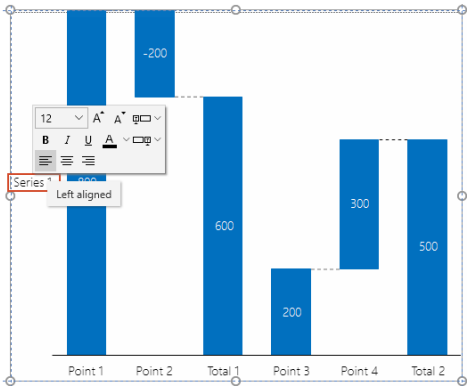


Figure 64: Horizontal alignment

2.4.3 Chart Title

There is the possibility to enter a title to a chart. This can be activated or deactivated individually for each chart as required **(Figure 65).** The keyboard can also be used by pressing the key **Del** to delete the title. If the title is activated for a chart, the default settings of the formatting are used. Nevertheless, the title can be formatted individually. For this purpose, the manual editing mode (seen in **2.4.5 Manual edit mode**) can be used. The editing of the text via the keyboard is possible with the usual key combinations, for example to display the title bold or italic.

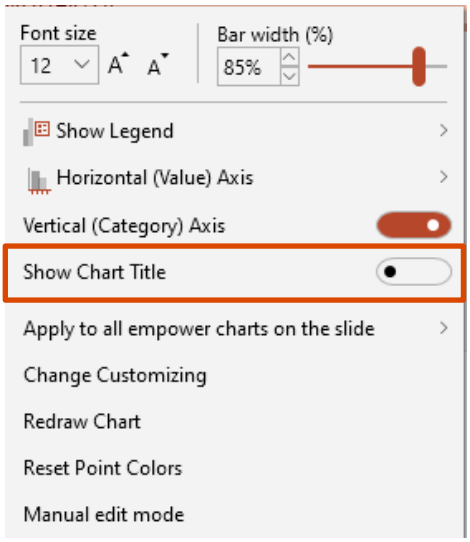


Figure 65: Show Chart Title

Displaying the title in multiple lines is also supported **(Figure 66).** The title can be moved and positioned freely via Drag & Drop. If the selected chart is to receive a legend, it is inserted next to the title, but can be positioned independently as described in **2.4.2 Legend**.

The setting to give the chart a title is supported by all chart types.

Figure 66: Chart Title longer than one row

2.4.4 Performance Mode

Basically, when working with empower Charts, a good performance is ensured, so that the user can efficiently create and edit charts. The performance mode is therefore only triggered if individual data charts have a lot of content or if the loading of the data chart takes longer for technical reasons. The message to be able to switch to performance mode therefore only appears in some data charts. Excluded from this are data charts that are located on the first slide of a presentation. By clicking on **Switch to performance mode** in the navigation bar you can switch to the same **(Figure 687).** In this mode, individual data is then scaled down, which means, for example, that oblique texts can be distorted.

Figure 67: Performance Mode

If you do not want to switch to performance mode and do not want to be asked for it for this data chart in the future, click **Do not show again**. The performance mode is used for better and faster processing of these data charts. After editing the data chart in this mode, however, it should be left again. This works via the **properties** in the action bar by clicking **Leave Performance Mode** (**Figure 68**).

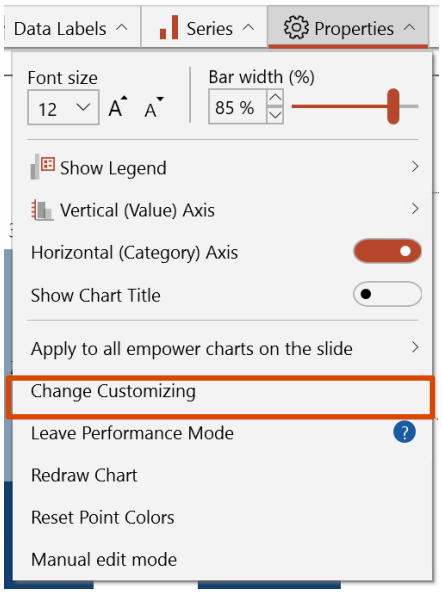


Figure 68: Leave Performance mode

2.4.5 Manual edit mode

Once you are content with the design of your chart, you can still make manual changes at a later stage if absolutely necessary. To do so, activate **Manual edit Mode (Figure 69)**. In doing so all empower Charts functions are deactivated and you can now implement all manual changes to your chart.

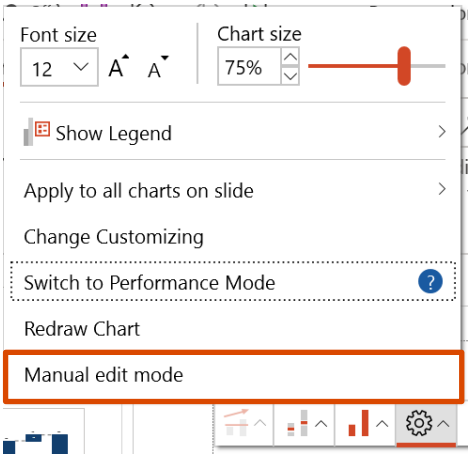


Figure 69: Manual edit mode

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 edit mode, later the EC axis will need to be toggled on and off in charts mode)
- Changes to gridlines in the chart.

2.4.6 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 70)**.

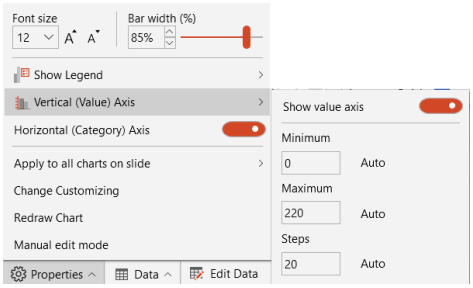


Figure 70: Axis configuration

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. The labelling can be shown in multi lines. **(Figure 71)**.

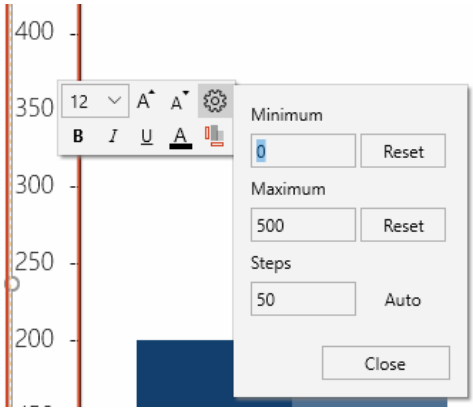


Figure 71: Configuring scaling of axis

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 72)**.

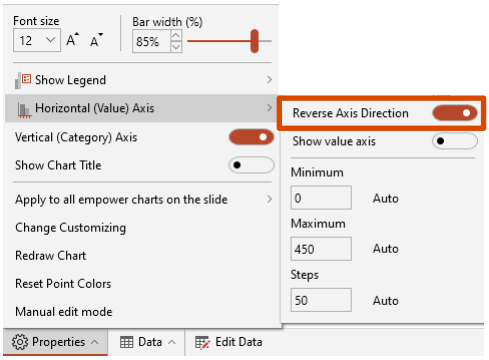


Figure 72: Reverse axis direction

This automatically reverses the axis direction of the chart **(Figure 73)**.

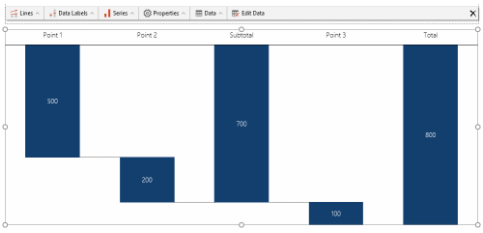


Figure 73: Adjustment of chart

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 74)**.

	A	B
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 74: 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 75)**.

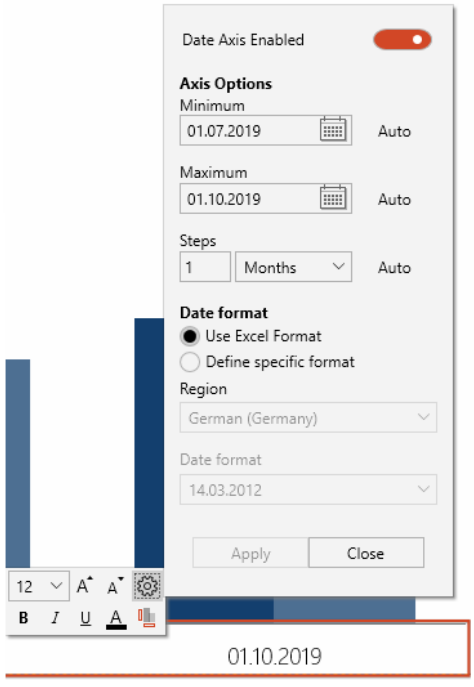


Figure 75: Configuring date axis

2.4.7 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 76)**. The matching to height orients itself to the highest chart on the slide.

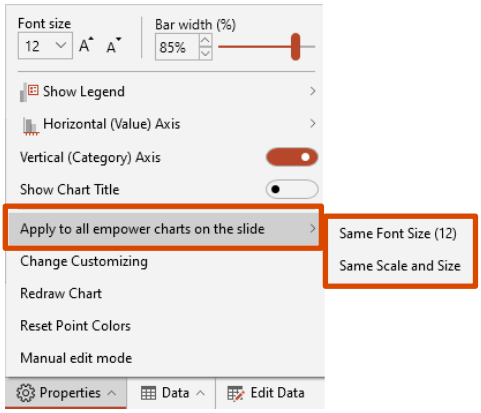


Figure 76: Chart scale settings

Charts with breaks can be matched to other charts with the function **same scaling and size (Figure 77)**. This ensures that the scales of the axes are identical and the charts appear more uniform.

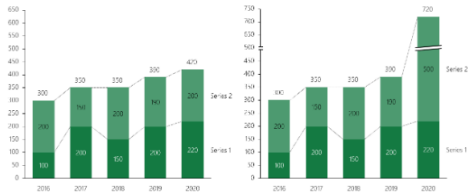


Figure 77: Adjustment of charts with breaks

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.

2.4.8 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 button **Properties** 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 78)**.

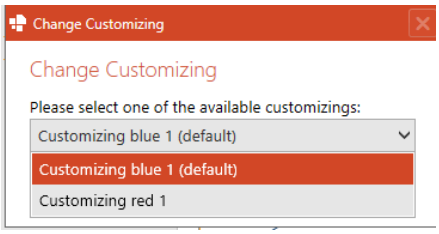


Figure 78: Change customizing

To change the whole customization of empower Charts, e.g. to change the appearance of every newly created charts, click on the button **More** in the menu ribbon and then on **User Settings (Figure 79)**. A new window with a dropdown menu will open in which you can set the new customization. Confirm your change by clicking **OK**.

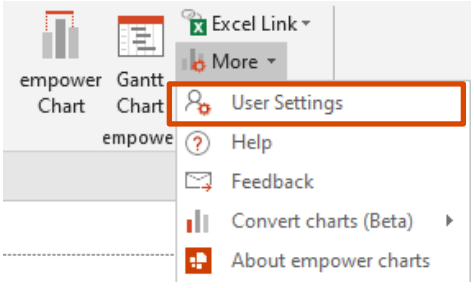


Figure 79: User Settings

2.4.9 Reset Point Color

Under the **Properties**, the **Reset Point Color** function can be selected (**Figure 80**). If you select this function, the colors of the current chart are reset to the default colors set in the customizing.

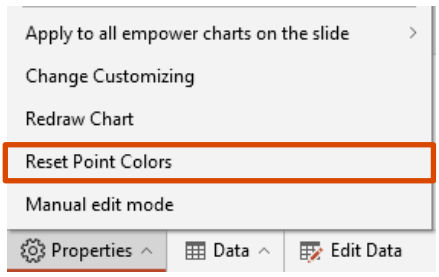


Figure 80: Button **Reset Point Colors**

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**. **(Figure 81)**.

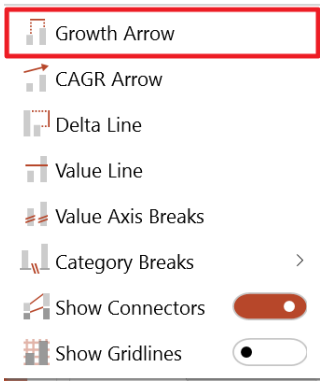


Figure 81: Growth Arrow

In addition, an extra window opens with a mouse click on the growth arrow, **(Figure 82),** by displaying and changing additional settings. These settings can be made and adjusted at any time. 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. You can also drag and drop the growth arrow to the desired data points. Via **Esc**, you can exit and close the arrow settings windows at any time.

If you would like to make adjustments at a later stage, simply go to the settings and click on the growth arrow. The selection area is now displayed again, where you can change the settings of the growth arrow. If you want to delete the arrow from the presentation, select the arrow here as well and use the key **Del** or click **Delete.**

Figure 82: Growth Arrow

You can also influence the height of the arrows by holding and moving the desired arrows with the mouse. As a result, two overarching growth arrows can also be fused into each other **(Figure 83).**

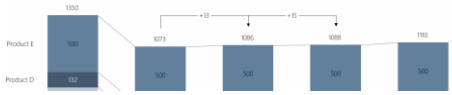


Figure 83: Owerarching growth arrows

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**. Now a selection window opens again where settings can be made and you can simultaneously select the two desired data points via Drag & Drop **(Figure 84)**. Similar to the growth arrow you can make changes or delete the CAGR arrow by clicking on the element.

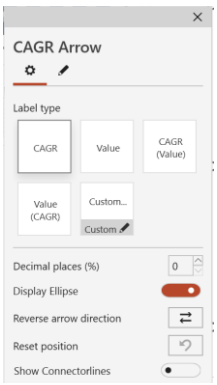


Figure 84: CAGR arrow settings

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 85)**. Now a selection window opens again where settings can be made and you can simultaneously select the two desired data points via Drag & Drop. 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.

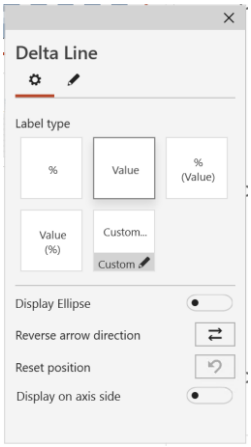


Figure 85: Delta line

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 86)**. Now a selection window opens again where settings can be made and you can simultaneously select the two desired data points via Drag & Drop. 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.

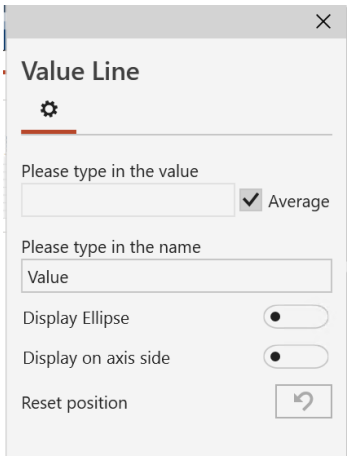


Figure 86: Value line

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 87)**.

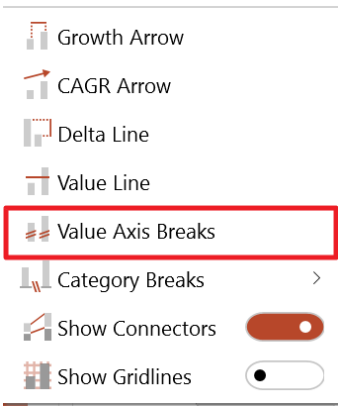


Figure 87: Select Break

A further window will open in which you can set new breaks **(Figure 88)**. The width (the hidden value section) of the break can be adjusted automatically or manually.

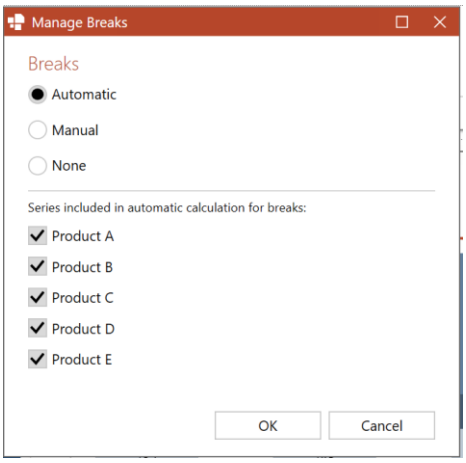


Figure 88: Inserting breaks

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 89)**.

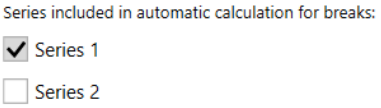
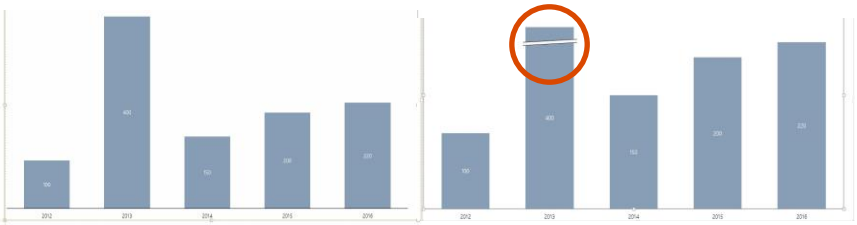


Figure 89: Insert series automatically

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.

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 90)**.

Figure 90: Set category break

2.5.6 Gridlines

The editing of the gridlines is only possible in Manual edit mode. This can be activated as described in 2.4.6. If the Manual edit mode is activated, all settings of the lines, such as color or width, can be set manually. When you exit Manual edit mode, all settings are applied. However, if the gridlines are disabled and re-enabled, the settings are reset to Default **(Figure 91).**

The manual editing of the gridlines does only work for charts which have value axes.

The gridlines can also be set manually in Flex-Customizing. This is where the PowerPoint logic regarding light background and dark font applies, and the other way around.

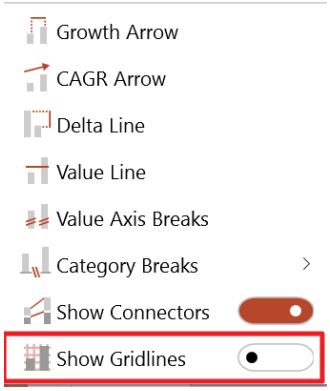


Figure 91: Show Gridlines

2.6 Converting native PPT charts into 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 92).**

Figure 92: Converting with empower® Slides

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.

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 93)**. The previous chart type is stressed through a border.

Figure 93: Convert diagram

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 94)**.

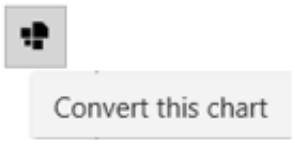


Figure 94: Convert to empower chart

2.6.2 think-cell® charts

To convert a chart created with think-cell®[1], you have multiple options. Firstly, you can select a think-cell® chart and convert it like native PPT charts, provided that the software think-cell® is not activated **(Figure 95)**. 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® charts is still in a beta phase and will be further optimized over the next versions.

Figure 95: 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 96)**.

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.

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).

Figure 96: Convert multiple charts

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

2.7 DeepL Translation

If empower® Slides is installed and the empower® Slides function is activated for DeepL[2] translations, the translation will also translate empower charts accordingly. However, no data in linked Excel files is changed.

To translate charts, you can simply click on the **Translate** option in the empower Ribbon, which translates the corresponding slide **(Figure 97)**.

Figure 97: Translate empower charts

[1] think-cell® is a registered trademark of think-cell Software GmbH.

[2] DeepL is a registered trademark of DeepL GmbH.

Special Charts

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 **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 **x** for this column. If only one series value is set to **x**, the overall sum (over all series) is calculated.

Two or more series values set to **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 button **Data** in the Action Bar and select **Left to right** or **Right to left (Figure 98)**. For laying waterfalls, you can choose between **Bottom to top** or **Top to bottom**.

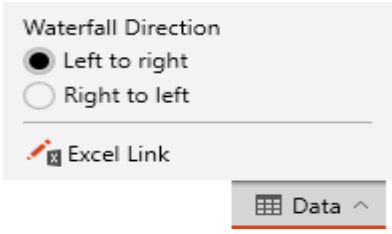


Figure 98: Edit waterfall direction

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.

In waterfall charts, series can be set to or below the regular waterfall levels (e.g. to indicate a possible deviation or in order to take out not yet final numbers of a sum). To set this, a check mark can be set under the item **Series** in the Action Bar at on the waterfall **(Figure 99).** The corresponding chart is thus directly adjusted.

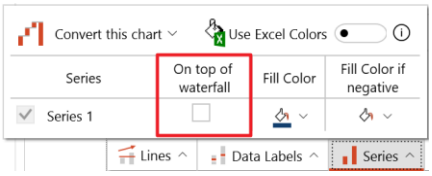


Figure 99: On top of waterfall

There is now also the possibility to adjust the orientation of the label, e.g. a horizontal chart **(Figure 100).** This can make reading easier, especially for multi-line labels

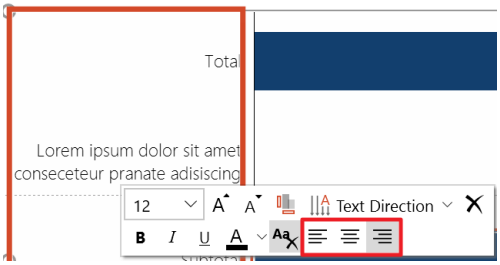


Figure 100: Text orientation

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 101)**.

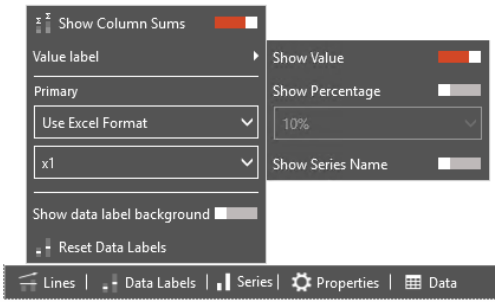


Figure 101: Data label settings

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 102)**.

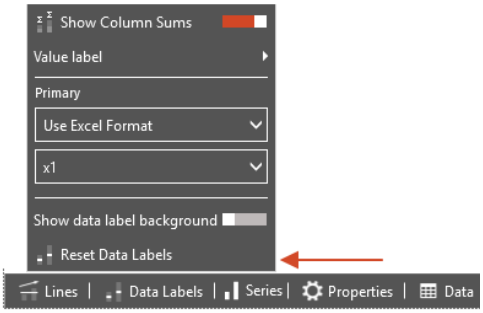


Figure 102: Data label settings

Pie charts can be rotated. This is done by moving the rotation symbol **(Figure 103)**, which appears independently in a created chart. The chart can be rotated in any direction.

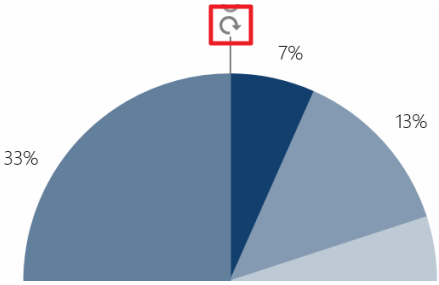


Figure 103: Pie chart rotation

In addition, individual pieces can be pulled out of the pie chart **(Figure 104)**. This works by clicking and dragging with a mouse.

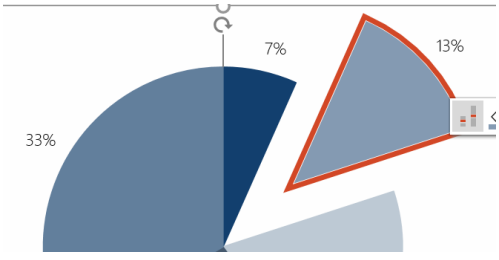
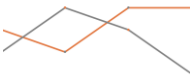


Figure 104: Pull out a piece

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 105)**.

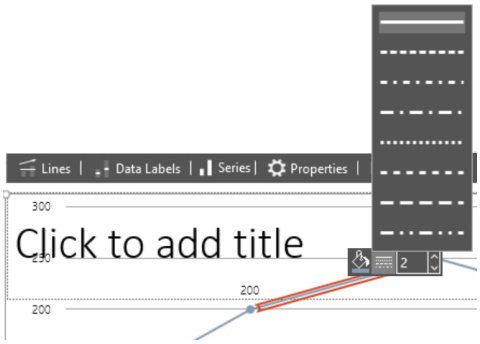


Figure 105: Line formatting

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 106)**.

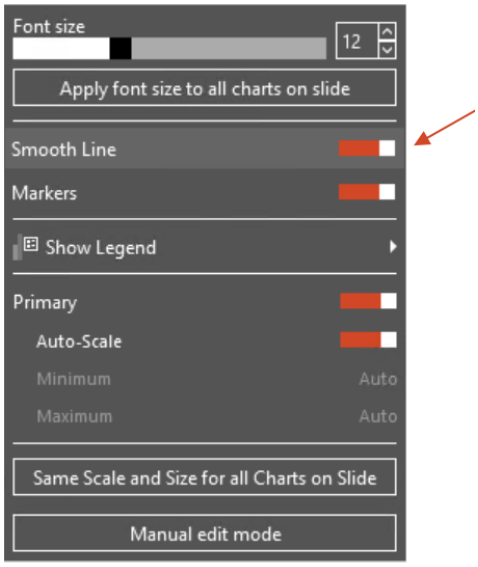


Figure 106: Smooth line setting

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 107)**.

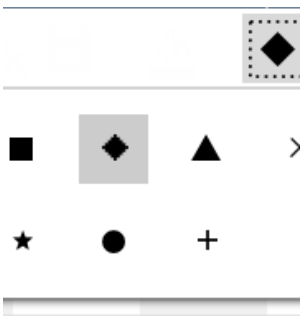


Figure 107: Marker editing options

For visualization reasons, you also have the option to freeze the line chart labels below the point **(Figure 108)**. To do this, you can simply select the labels by pressing **Shift** and drag them to the position below.

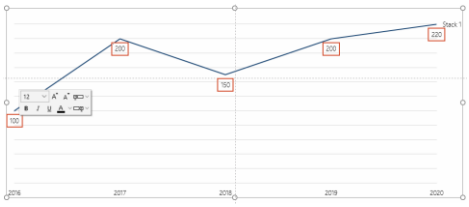


Figure 108: freeze labels

3.4 Butterfly chart

To visually contrast two series, you can use the Butterfly chart **(Figure 109)**. To do so, complete the following steps.

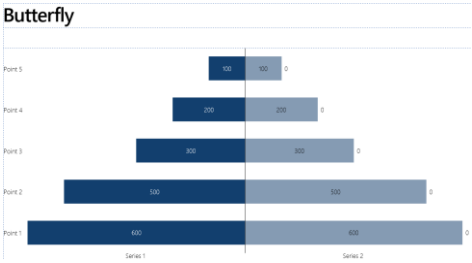
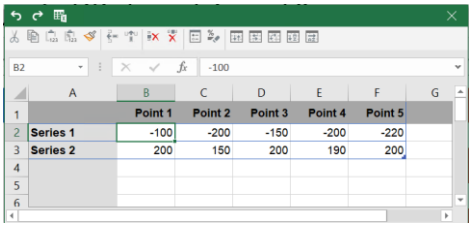


Figure 109: Butterfly chart

First, click **empower Chart** and select as a base **Stacked Bars** for a vertical Butterfly chart **(Figure 110)**.

Figure 110: 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 111)**.



	A	B	C	D	E	F	G
1		Point 1	Point 2	Point 3	Point 4	Point 5	
2	Series 1	-100	-200	-150	-200	-220	
3	Series 2	200	150	200	190	200	
4							
5							
6							

Figure 111: Edit Excel data

Then go to **Labels**, select the option **Show Absolute Values** and hide **Show Column Sum (Figure 112)**.

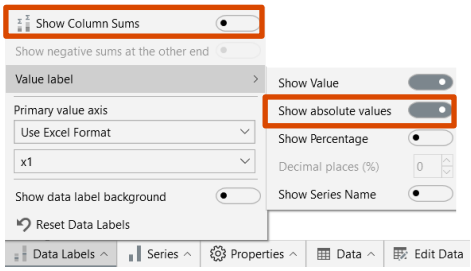


Figure 112: Adjust settings

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 113)**.

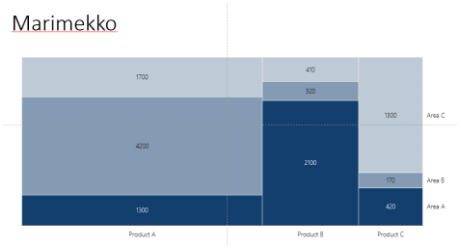


Figure 113: Marimekko chart

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 114)**.

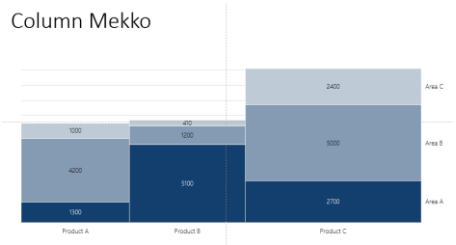


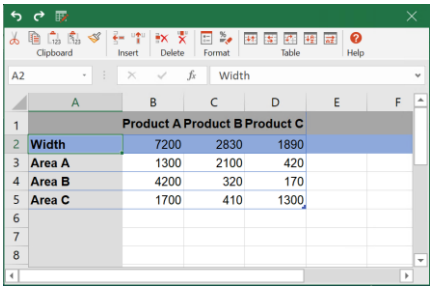
Figure 114: Column Mekko

To create such a chart, follow these steps.

Open **empower Chart** and select one of the two Mekko charts **(Figure 115)**.

Figure 115: Select Mekko chart

You can then customize the data under **Edit Data (Figure 116)**. 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.



	A	B	C	D	E	F
1		Product A	Product B	Product C		
2	Width	7200	2830	1890		
3	Area A	1300	2100	420		
4	Area B	4200	320	170		
5	Area C	1700	410	1300		
6						
7						
8						

Figure 116: Edit data

When using the button **Transpose**, you have the option to swap rows and columns **(Figure 117)**. Note that the Width line is immutable.

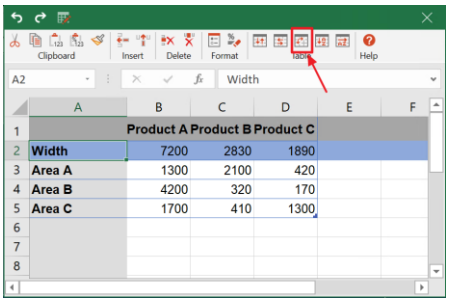


Figure 117: Specifics of the chart

Alternatively, you can link the chart to an Excel file under **Data** and **Excel-Link (Figure 118)**.

More information can be found in **Chapter 2.2.3 External Excel data.**

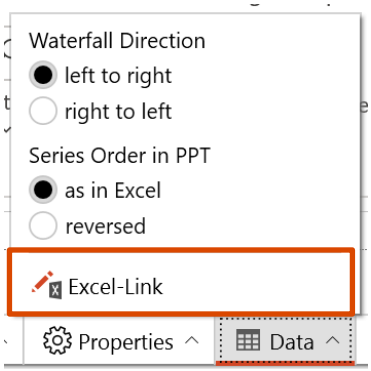


Figure 118: Create Excel-Link

Gantt chart

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 button **Gantt chart (Figure 119)**. 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 button **Gantt chart**.

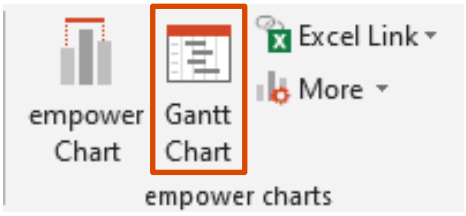


Figure 119: Insert Gantt chart

Once you have set the area in which you wish to insert the Gantt chart, a settings window will open **(Figure 120)**. 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)**.

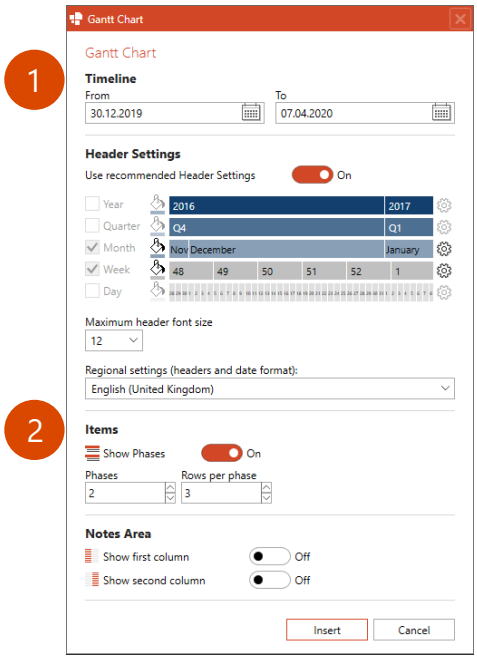


Figure 120: Gantt chart settings

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 121)**.

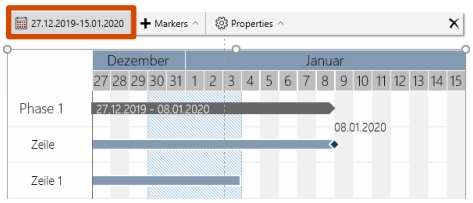


Figure 121: Adjusting date section

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 122)**. Here you can change the date range as desired without losing any data.

Figure 122: Calendar 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 123)**.

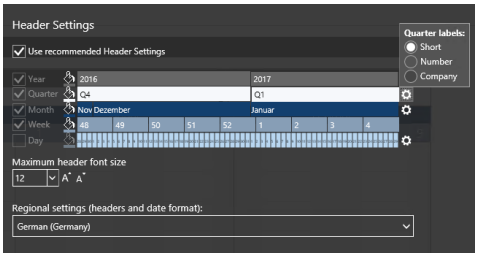


Figure 123: Adjusting header settings

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**.

You can further change the minimal font size of the Gantt chart, the language of the header as well as the date format **(Figure 124)**. A click on **OK** will take you back to your Gantt chart that will then have adapted in accordance to your settings.

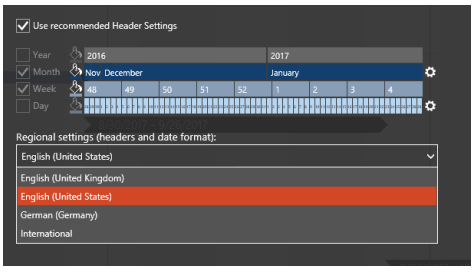


Figure 124: Setting language and date format

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 **plus** symbol (add) appears and then select either to add a **Task** or a **Milestone**. Your project plan will then update in accordance to your settings **(Figure 125)**.

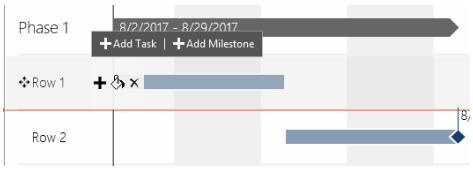


Figure 125: Adding task or milestone

The height of the task blocks, as well as milestones, is set automatically. However, changes can be always done via the action item **Properties (Figure 126)**.

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.

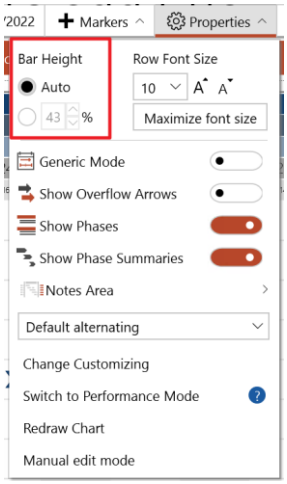


Figure 126: Task blocks height

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 127)**.

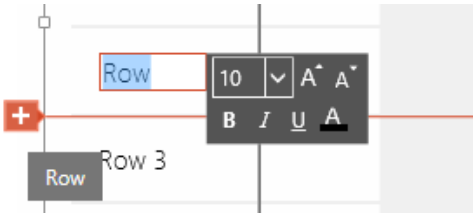


Figure 127: Adding a new row

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 128)**. If you have a **Notes Area** in PowerPoint displayed under **Properties** in the empower Action Bar, you can edit it from Excel.

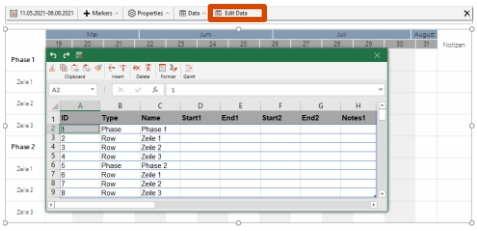
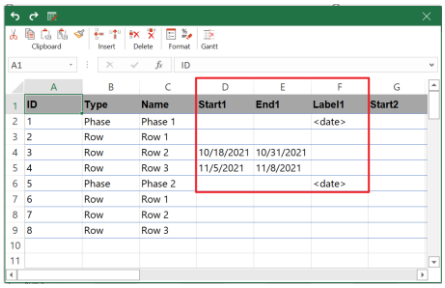


Figure 128: Edit data

In the Excel table of Gantt charts are datalables of phases, bars, milestones as well as highlights and datelines organized. If the inserted task should have a text and date, it will be visible in the Excel table **(Figure 129).** The Date can also be generated automatically, if you enter **<date>** to the related field in the Excel. The beginning and end date of the task are also shown in the Excel table.



ID	Type	Name	Start1	End1	Label1	Start2
1	Phase	Phase 1			<date>	
2	Row	Row 1				
3	Row	Row 2	10/18/2021	10/31/2021		
4	Row	Row 3	11/5/2021	11/8/2021		
5	Phase	Phase 2			<date>	
6	Row	Row 1				
7	Row	Row 2				
8	Row	Row 3				

Figure 129: New Excel Format

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 130).** 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.

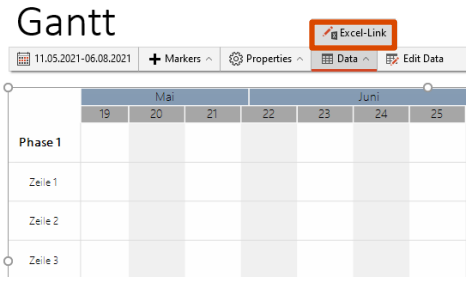


Figure 130: Create Excel-Link

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 131).**

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

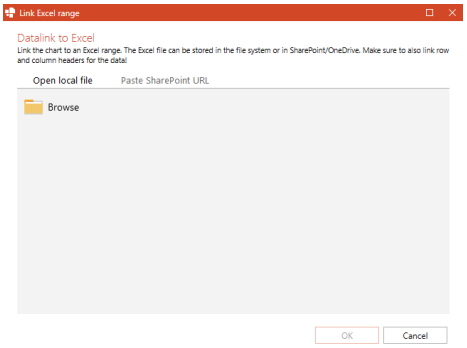


Figure 131: Connect Excel file

After selecting a file, you can select the desired area that you want to display in the Gantt chart **(Figure 132).** You can then make further settings in the window for linking.

As with the other charts, the Gantt chart also offers the possibility to copy and paste selected areas of the Excel table.

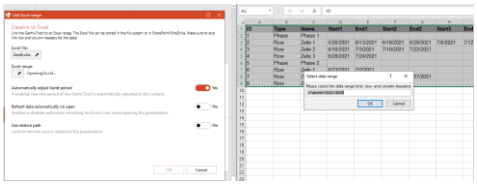


Figure 132: Select data range

For more details on how the Copy & Paste function works, see **Chapter 2.2.2 External Excel Data**.

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 133).**

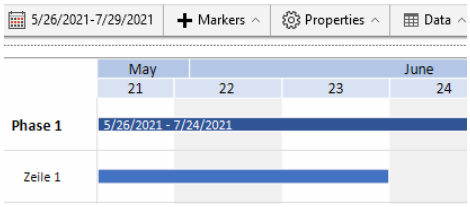


Figure 133: Adjust Gantt period automatically

For more details on Excel-Links, please refer to **Chapter 2.2.3 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 134)**.

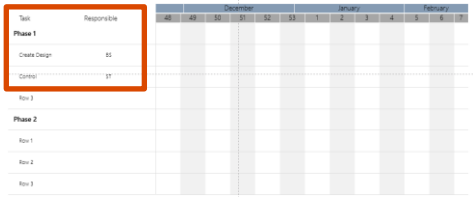


Figure 134: Create multi-columnity

These tabs are enabled in the text boxes to the left and right of the Gantt content, whereas 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 135)**. Several tasks and milestones can also be marked and moved together. When drawing task blocks, the details of the current block (start, end, duration) are displayed. It is also possible to move labels of multiple tasks at the same time. If a task extends beyond the displayed data area, the item **Show overflow arrows** can be selected under **Properties**.

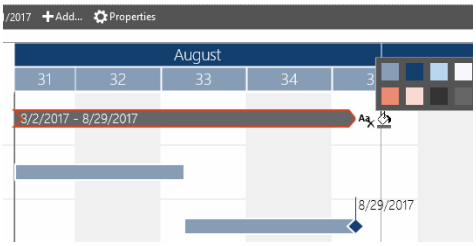


Figure 135: Editing phase arrow

Objects in the Gantt chart can be copied and moved individually (**Figure 136**). You can move them Right-Angled by pressing **Shift**. In addition, objects dock to each other when moving by default, unless you press **Alt**. Objects can be moved freely by pressing **Alt** or using the cursor keys.

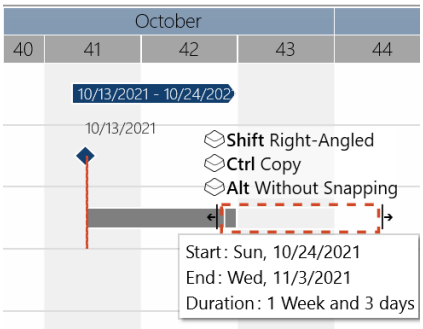


Figure 136: Move Objects

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 choose between different shapes **(Figure 137)**.

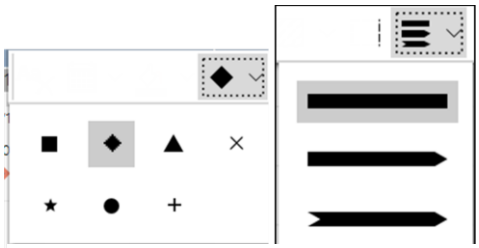


Figure 137: Editing task/milestone

Finally, you have the option to change the shape and color of the symbol used to represent the milestone **(Figure 138)**. 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.

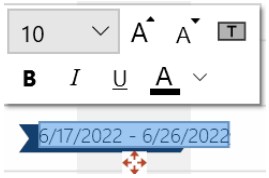


Figure 138: Changing milestone shape

If the labeling of the phase goes beyond the limitation of the Gantt chart, it may be that the legibility is impaired. For this purpose, the background of the label can be adjusted by means of the button **Show label background (Figure 139).**

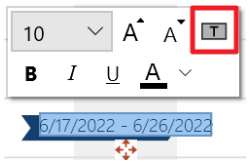


Figure 139: Background of the label

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 140)**:

- Holidays
- Date Line
- Highlight
- Delay
- Connector.

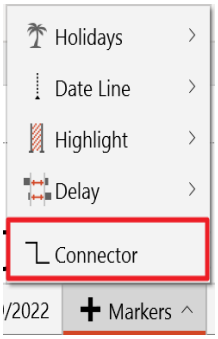


Figure 140: Markers

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 141)**. You have the possibility to export the data as an XML file as well as import data of other users.

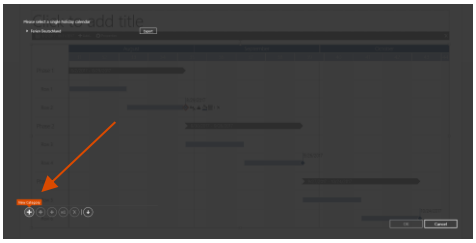


Figure 141: Setting holiday category

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 142)**.

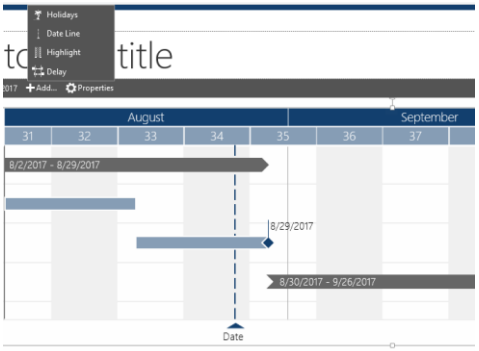


Figure 142: Date line

A text box is located at the bottom of the line, which contains the word **Date (Figure 143)**. 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.

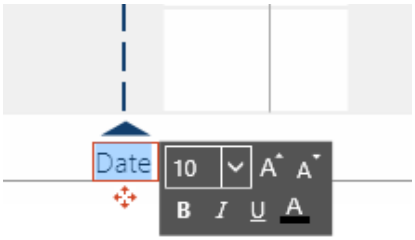


Figure 143: Changing date line label

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 144)**.

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.

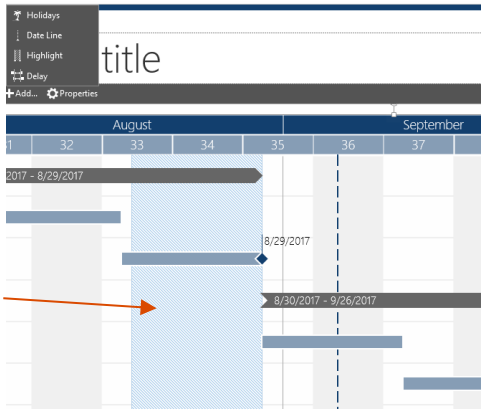


Figure 144: Inserting highlight

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 145**).

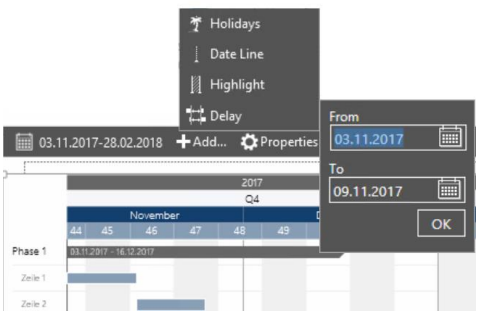


Figure 145: Entering delay dates

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 146**). Here, you also have the ability to change the color as well as completely remove the enlargement from the Gantt chart.

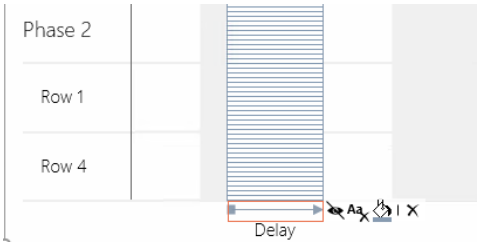


Figure 146: Adapting appearance of the delay

4.10.5 Connector

Various tasks can be connected using the Connector. Select this feature via **Add** in the action bar **(Figure 147).**

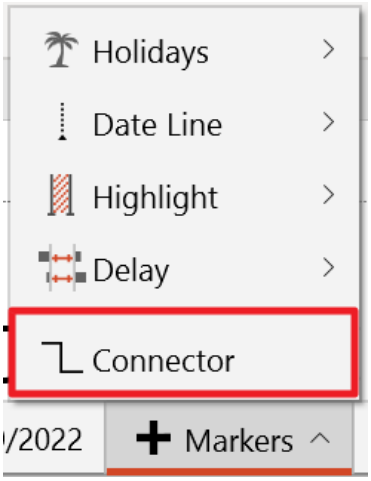


Figure 147: Create Connector

This will cause circles to appear at the start & end points of each task you have already inserted **(Figure 148).** You can then choose which tasks you want to connect. Multiple connection of tasks is also possible.

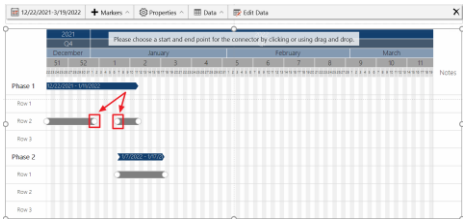


Figure 148: Place Connector

If you have inserted a Connector, you can adjust it as you like. The connection can be secured via **lock connector (Figure 149).** This also moves the tasks that are connected by lock connectors when you move a task. Also, the color, as well as the dash style of the connector can be adjusted.

Figure 149: Lock Connector

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 150)**. 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 can also select **Show Overflow Arrows** and the task fields that go beyond the set range are supplemented by an arrow on the applicable task fields. 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. If you want to make manual changes to the Gantt chart, you can switch to **Manual edit mode**. Please note, however, that such manual modifications are usually lost when returning from manual mode.

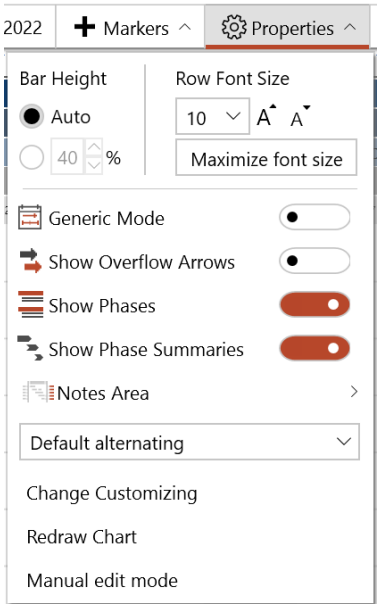


Figure 150: Gantt chart properties

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 151)**.

Gantt charts are fully translated when a translation is initiated via empower® Slides. (e.g. headings like month names).

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.

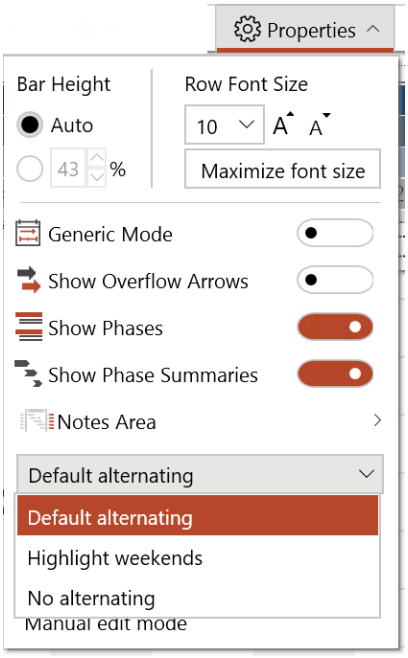


Figure 151: Setting Gantt chart alternation