

7. Use Excel Links

In addition to using integrated data, you can also use external Excel data sources.

To do so, you can link Excel ranges to charts, tables, pictures or text.

Create Excel Links from PowerPoint

At best, you open the external Excel file before creating the Excel link. The file must be saved already.

The file can either be saved locally on your device or on a network drive.

If a SharePoint, OneDrive or Teams file has also been synchronized locally, you can also select this file from your file explorer.

To create an Excel link, click on the button **Data** in the action bar of your chart (Figure 41).

A drop-down menu opens.

Then choose the option **Excel Link** (Figure 42).

A dialog box opens.



Figure 41. Button **Data**

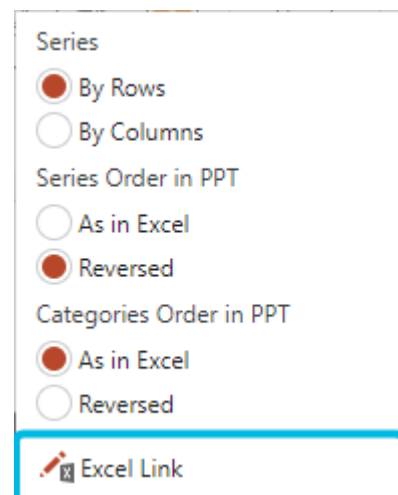


Figure 42. Option **Excel Link**

In this dialog box, you can choose an Excel file with content you want to link to your chart (Figure 43).

Open files are always shown on the top of the list.

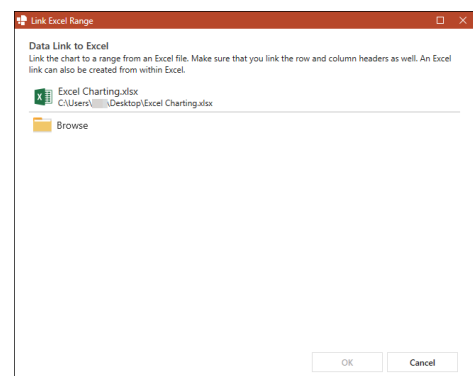


Figure 43. Dialog Box **Link Excel Range**

If you want to use an Excel file that is already open, select it from the list

To select a file that is not currently opened, click on the button **Browse** (Figure 44).

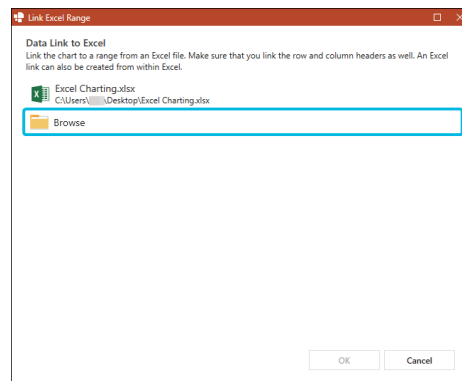


Figure 44. Button **Browse**

After you have selected the file, you can define what range you want to link. The Excel window opens on the right-hand side of your screen (Figure 45).

The range to be selected is usually detected automatically. However, you can always make changes.

Select the range by dragging your mouse from one edge to the other.

Alternatively, enter the range manually.

If you have named a range, you can also enter the name of this range.

Make sure the worksheet is defined in the input field. Otherwise the input is invalid.

Then, click on the button **OK** in the Excel dialog box.

You cannot only select an entire range, but also connect partial areas with each other (Figure 46).

Doing so, you can exclude certain columns from the source file from charts. To do so, use your mouse cursor to select a range, then press the key **Ctrl** and select another range. You confirm your selection by clicking on the button **OK**.

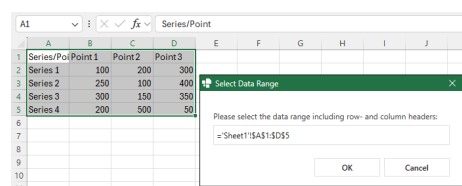


Figure 45. Select Excel Range

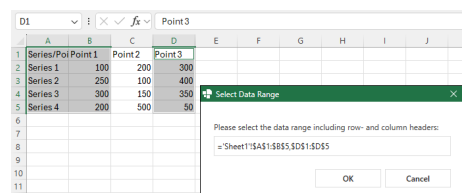


Figure 46. Select Partial Excel Range

You can also link Excel files which contain merged cells.

If you are creating an Excel link for a data chart, make sure the Excel range to be linked only contains numeric values. If a cell contains text, the cell is ignored and the data is not transferred to the respective data chart.

Alternatively, you can link an Excel range to a chart using Copy & Paste. To do so, copy the Excel range using **Ctrl + C** and then select your chart and press **Ctrl + V**.

If you use this shortcut on charts created with empower®, the Excel link is created automatically and a notification bar appears.

To edit the default settings, click on the button **Edit Settings** (Figure 47).

The Excel link settings open.

After creating the Excel link via the user interface, the Excel link settings open as well. These settings depend on the chart type you are using the Excel link for.

Further information regarding the settings can be found in the following chapters.



Figure 47. Notification Bar for Pasted Excel Link

If you have created an Excel link for your chart, you can edit or break it any time.

To edit the Excel link, click on the button **Data** in the action bar and then choose the option **Edit Excel Link** (Figure 48). The Excel link settings open.

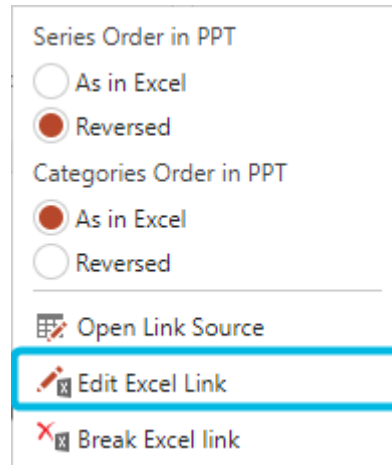


Figure 48. Option **Edit Excel Link**

To break the Excel link, click on the button **Data** in the action bar and then choose the option **Break Excel Link** (Figure 49).

A dialog box opens.

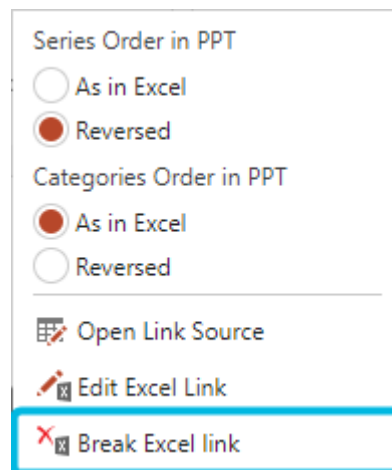


Figure 49. Option **Break Excel Link**

To confirm the process, click on the button **Yes** (Figure 50).

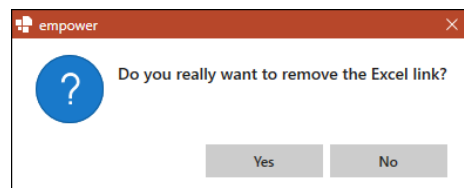


Figure 50. Dialog Box for Excel Link Removal

In addition, you can open the linked Excel file using the button **Open Link Source** (Figure 51).
The Excel file opens in a new window.

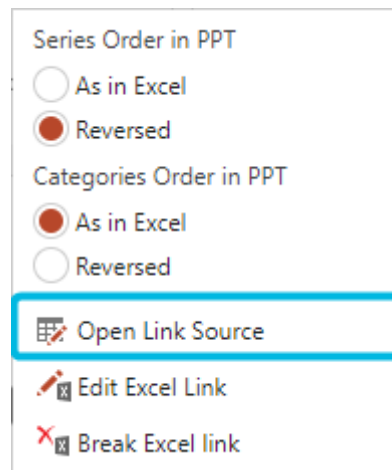


Figure 51. Option **Open Link Source**

To refresh and reload your chart to display changes that have been made to the Excel range, click on the button **Refresh** in the action bar (Figure 52).



Figure 52. Button **Refresh**

If there are updates, a dialog box opens (Figure 53).
Here, confirm if you want to apply the changes.

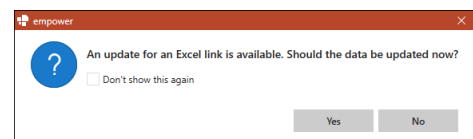


Figure 53. Update Notification

If the Excel range in the linked Excel file changes in terms of size, the chart shrinks or grows accordingly.



To find the linked Excel file, empower® refers to the file path. Therefore, you must not delete or move the file. If the linked file cannot be found anymore, a dialog box opens.

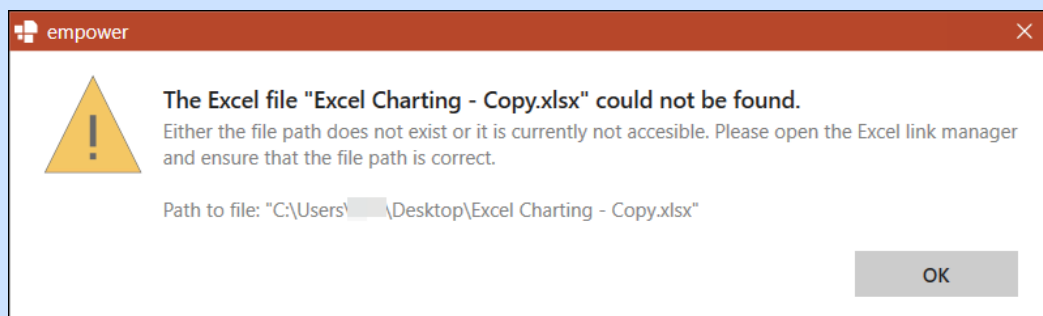


Figure 54. File Cannot Be Found



If you edit a Gantt chart which is linked to Excel, all changes such as added chart objects, added label texts and text changes are revoked after the next Excel link update. If you only edit the formatting inside a label, these changes are not revoked.

If you want to keep your changes, either make the changes in the linked Excel file or break the Excel link.



If you link an Excel range with hidden rows or columns to a chart, the data is hidden in the chart as well. If you break the Excel link, this data is still available.



Always remember to include column and/or row headers in your selection.

In PowerPoint, you can also link tables and text to Excel ranges.

To create an Excel link for a table, follow the following steps:

1. Insert a table into your slide and select it.
2. Navigate to the group empower.
3. Click on the button **Excel Link** (Figure 55).
A drop-down menu opens.
4. Choose the option **Create Excel Link (Table)** (Figure 56).
A dialog box opens.
5. Choose the Excel file you want to use.
The Excel window opens on the right-hand side of your screen.
6. Select the range by dragging your mouse from one edge to the other.
7. Then, click on the button **OK** in the Excel dialog box.
The Excel link settings open.

Alternatively, you can use Copy & Paste to create an Excel link.

To do so, refer to the instructions for Excel links for charts above.

In addition to those instructions, click on the button **Link Table with Pasted Data** after inserting the data (Figure 57).
Otherwise the table will not be linked.

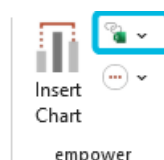


Figure 55. Button **Excel Link**

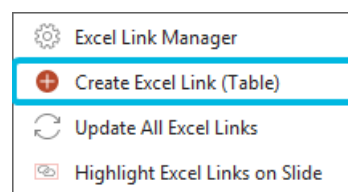


Figure 56. Option **Create Excel Link (Table)**



Figure 57. Button **Link Table with Pasted Data**



The PowerPoint table will always be adjusted to match the Excel cells, but there is no automatic adjustment of column widths or cell formats.

To create an Excel link for text, follow the following steps:

1. Insert a text placeholder into your slide and select it.
Alternatively, you can use an existing placeholder.
2. Navigate to the group empower.
3. Click on the button **Excel Link**.
A drop-down menu opens.

4. Choose the option **Create Excel Link (Text)** (Figure 58). A dialog box opens.

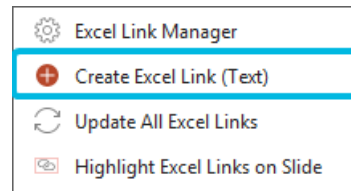


Figure 58. Option **Create Excel Link (Text)**


5. Choose the Excel file you want to use. The Excel window opens on the right-hand side of your screen.
6. Select the range by dragging your mouse from one edge to the other.
7. Then, click on the button **OK** in the Excel dialog box. The Excel link settings open.


Alternatively, you can use Copy & Paste to create an Excel link.


To do so, refer to the instructions for Excel links for charts above.

In addition to those instructions, click on the button **Convert Linked Data to Excel Link** after inserting the data.

Otherwise the text will not be linked.

 You can create multiple Excel links for text in one placeholder.

 If an Excel link to a PowerPoint table is created, text that is formatted with superscript or subscript is taken over and displayed correctly in the chart. If an Excel link to a PowerPoint text is created, text that is formatted with superscript or subscript is not displayed with superscript or subscript due to a technical limitation in PowerPoint.

 For tables and text linked to an Excel range, you can access the options **Refresh**, **Open Link Source**, **Edit Excel Link** and **Break Excel Link** via their own action bar (Figure 59).




Figure 59. Action Bar for Linked Objects

General Excel Link Settings

In the Excel link settings for data charts, Gantt charts, tables and text, you can adjust the link source (file and range) and make further changes.

To change the linked Excel file or the Excel range, click on the **pen** symbols next to the input fields (**Figure 60**).

If you click on the **pen** symbol to change the file, you can browse your files.

If you click on the **pen** symbol to change the range, the currently linked Excel file opens and you can select a new range.

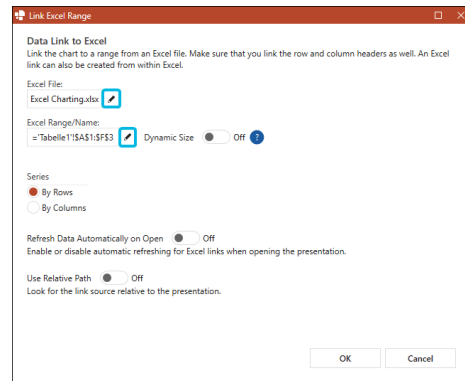


Figure 60. Pen Symbols in Excel Link Settings

In addition, decide if you want to use the dynamic range adaption or not.

If you choose to resize your Excel range dynamically, empower® always starts in the upper left corner of your range and expands to the right and below until it detects empty cells.

To enable the dynamic range adaption, switch the toggle button for **Dynamic Size** to *On* (**Figure 61**).

This way, the data range will automatically be extended if you add a column or row to the data source in the Excel file.

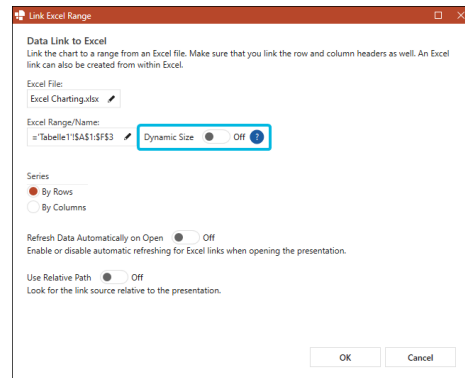


Figure 61. Enable Dynamic Size

To refresh your chart each time you open the presentation, switch the toggle button for **Refresh Data Automatically on Open** to *On* (**Figure 62**).

If this setting is enabled, empower® checks the linked Excel file for updates each time you open the presentation.

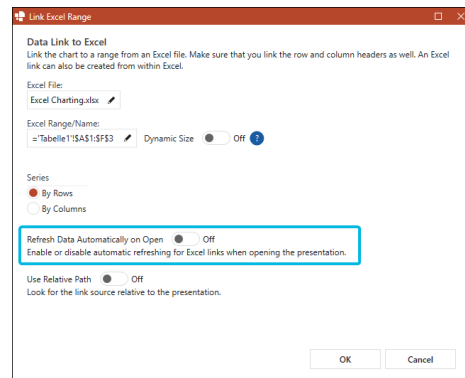


Figure 62. Enable Automatic Refresh

To use a relative path, you need to first save your presentation.

Then, switch the toggle button for **Use Relative Path** to *On* (**Figure 63**).

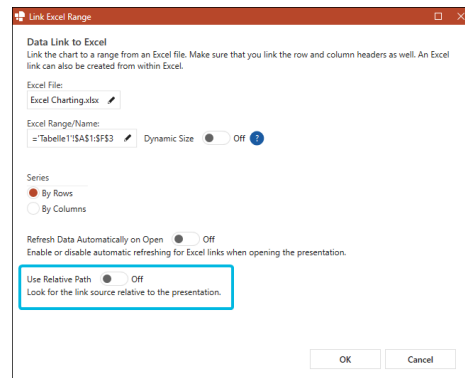



Figure 63. Enable Relative Path

Instead of using an absolute path, this setting will allow you to use a relative path of the respective PowerPoint and Excel file.

If you wish to send a PowerPoint or Excel file as an e-mail 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 range can be established via the relative path, provided the files are saved in a similar way.

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.

 Dynamic size mode is not supported when partial areas of an Excel file are selected.

Settings for Data Charts

For data charts, there are specific settings.

To use the rows in the Excel range as series, choose the option **By Rows** (Figure 64).

To use the columns in the Excel range as series, choose the option **By Columns** (Figure 64).

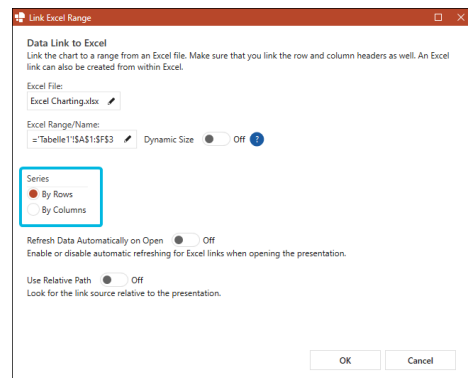


Figure 64. Series Options

If you link an invalid Excel range for a data chart, a note is displayed. This note tells you which columns or rows are missing (Figure 65).

You cannot apply the Excel link unless it is valid.

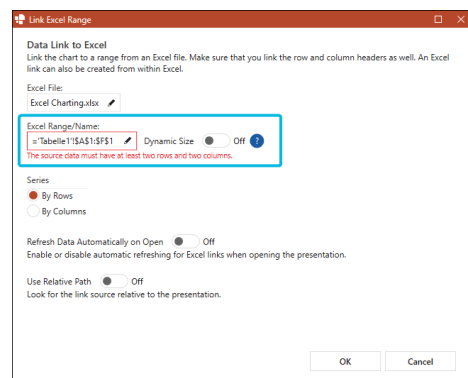


Figure 65. Invalid Data Range Note

Settings for Gantt Charts

For Gantt charts, there are specific settings.

To adjust the time period displayed in your Gantt chart automatically to the Excel range you want to link, switch the toggle button for **Automatically Adjust Gantt Period** to *On* (Figure 66).

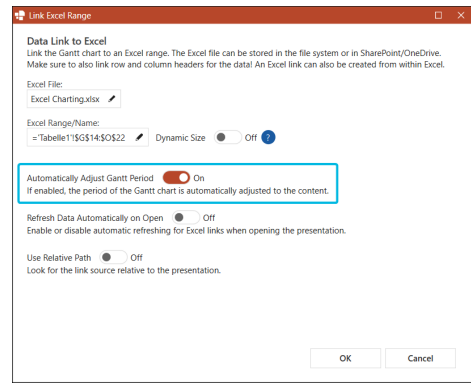


Figure 66. Enable Automatic Adjustments

If you link an invalid Excel range for a Gantt chart, you can apply the Excel link nonetheless.

A dialog box opens (Figure 67).

After the dialog box closes, a notification bar is displayed, telling you that there are issues in your linked Excel file.

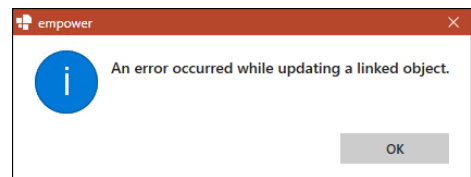


Figure 67. Error Message

Click on the button **Open Link Source** to examine and adjust the Excel range again (Figure 68).

Click on the button **Show Details** to open an error list (Figure 69).



Figure 68. Notification Bar for Invalid Gantt Excel Range – Button **Open Link Source**

In the error list, you can see if there are missing or invalid columns (Figure 70).

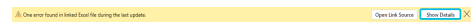


Figure 69. Notification Bar for Invalid Gantt Excel Range – Button **Show Details**

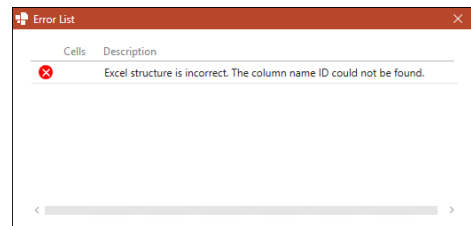


Figure 70. Error List

Settings for Tables

For tables, there are specific settings.

To apply the colors you have used in Excel to the table in PowerPoint, switch the toggle button for **Use Excel Colors** to *On* (Figure 71).

Your table will then be colored the same way the Excel range is colored.

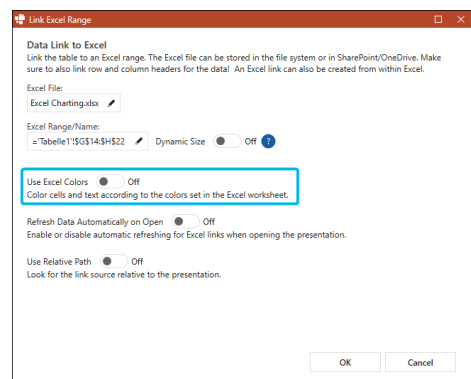


Figure 71. Enable Excel Colors

Highlight and Update All Excel Links

If you have opened a PowerPoint file and want to know if there are any Excel links on your current slide, click on the button **Excel Link** and then choose the option **Highlight Excel Links on Slide** (Figure 72).

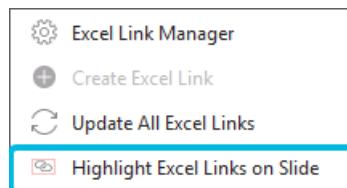


Figure 72. Option **Highlight Excel Links on Slide**

All objects with Excel links will be marked with an orange frame.

To update all Excel links at once instead of refreshing them one by one, click on the button **Excel Link** and then choose the option **Update All Excel Links** (Figure 73).

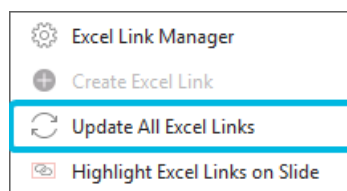


Figure 73. Option **Update all Excel Links**

If there are any updates, a dialog box opens (Figure 74). Here, confirm if you want to apply the changes.

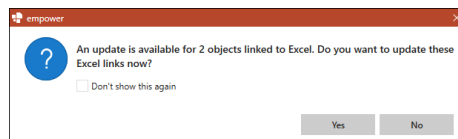


Figure 74. Update Notification for Entire Presentation

Create Excel Links from Excel File

Instead of creating the Excel Link from PowerPoint, you can also create an Excel Link from an Excel file.

Here, you have two options:

- Link the Excel range to an existing object in PowerPoint
- Link the Excel range to a new object in PowerPoint

For both actions, the PowerPoint file must already be opened. Otherwise, the buttons will be grayed out.

To link an Excel range to an existing PowerPoint object, follow the following steps:

1. Select the Excel range.
2. Navigate to the tab Insert and then to the group empower.
3. Click on the button **Link to Existing PPT Object** (Figure 75).

The last opened PowerPoint file opens.

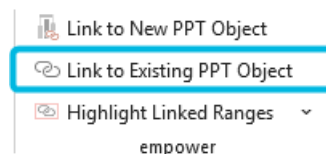


Figure 75. Button **Link to Existing PPT Object**

4. Here, navigate through the presentation to find the object you want to link the Excel range to.
5. Click on the button **Create Link** (Figure 76).
A notification bar appears.
6. To edit the default settings, click on the button **Edit Settings** (Figure 47).
The Excel link settings open.



Figure 76. Button Create Link

Alternatively, you can also replace an existing Excel link. In this case, the button is called **Replace Link** instead of **Create Link** (Figure 77).

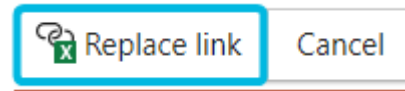


Figure 77. Button Replace Link

To abort the process, click on the button **Cancel** above an object (Figure 78).

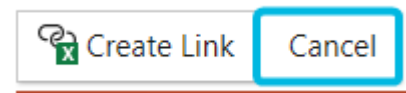


Figure 78. Button Cancel

To link an Excel range to a new PowerPoint object, follow the following steps:

1. Select the Excel range.
2. Navigate to the tab Insert and then to the group empower.
3. Click on the button **Link to New PPT Object** (Figure 79).

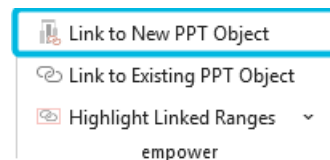


Figure 79. Button Link to New PPT Object

4. Choose the chart type you want to use (Figure 80).
Alternatively, you can link the Excel range as an image.
The last opened PowerPoint file opens.







Figure 80. Chart Type Selection

5. Either drag and drop your mouse cursor to define the object's size or click into a placeholder.
The object is inserted into your slide and a notification bar appears.
6. To edit the default settings, click on the button **Edit Settings** (Figure 47).
The Excel link settings open.

An Excel object that is inserted as an image to PowerPoint can be a range or a table, an Excel chart or a shape.

Excel ranges and tables that are linked as pictures to PowerPoint are also compatible with the live update mode. The picture on the slide will be updated according to the linked Excel data.

The live update does not work for Excel charts or shapes that are linked as pictures to PowerPoint due to technical limitations of Excel.

-  If you link an Excel range as a picture, make sure the content of the Excel range is displayed completely in the Excel file. Otherwise, it will also be cropped in the picture in PowerPoint.
-  If you link an Excel range as a picture, the picture is automatically locked in aspect ratio and will not be distorted if its size is being adapted manually.
-  For pictures linked to an Excel range, you can access the options **Refresh**, **Open Link Source**, **Edit Excel Link** and **Break Excel Link** via their own action bar.
-  For further information regarding the Excel link settings, see [General Excel Link Settings](#). For further information regarding the live update mode, see [Live Update Mode](#).

Highlight Linked Ranges

If you have opened an Excel File and you are unsure which ranges in the file have already been linked to PowerPoint, you can highlight linked ranges in Excel.

To do so, navigate to the group **empower** in the tab **Insert** and click on the button **Highlight Linked Ranges** (Figure 81).

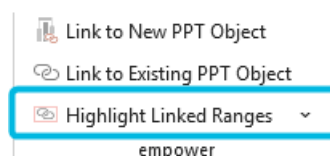


Figure 81. Button **Highlight Linked Ranges**

The ranges which have been linked to PowerPoint will be highlighted.

Click on the edge of such a range to display the link information.

A dialog box opens.

Here, you can see all Excel links that have been created for the selected Excel range (Figure 82).

In the table, you can view the file path, slide number, Excel range and status of the Excel link.

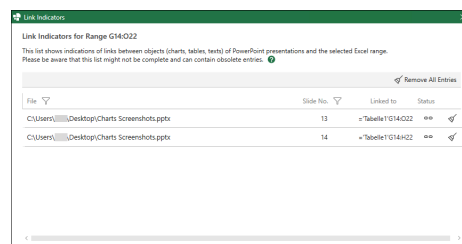


Figure 82. Excel Link Overview

To open the PowerPoint file with the linked chart, select the entry from the list and click on the button **Open** (Figure 83).

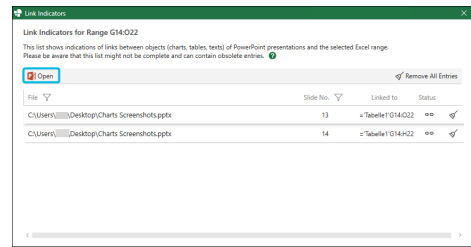


Figure 83. Button Open

If PowerPoint is already open, click on the button **Jump to Slide** (Figure 84 (1)).

In this case, you can also refresh all Excel links at once, using the button **Refresh** (Figure 84 (2)).

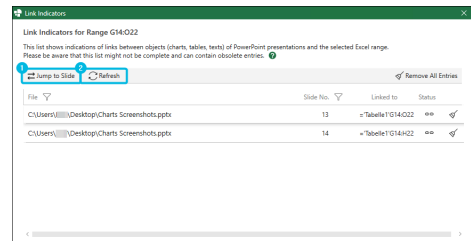


Figure 84. Buttons Jump to Slide and Refresh

To remove an entry from the list, click on the **broom** symbol (Figure 85).

This action does not remove the Excel link but only the list entry.

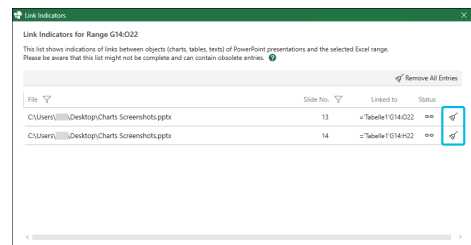


Figure 85. Broom Symbols for Single Entries

You can also remove all entries at once by clicking on the button **Remove All Entries** (Figure 86).

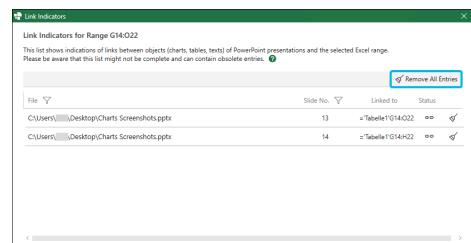


Figure 86. Button Remove All Entries

To view the link overview of all links in the current Excel file, you expand the drop-down menu for the button **Highlight Linked Ranges** and then choose the option **Manage Links** (Figure 87).

Here, you have the same options as for single ranges.

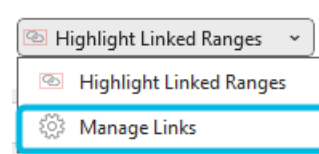


Figure 87. Option Manage Links