

# TARGIT Visualization Wizard

Level: Intermediate



TARGIT Decision Suite 2019.0 – document version 1.4 US



**Copyright**

No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying or recording, for any purpose, without the express written permission of TARGIT A/S, Denmark.

© 2019 TARGIT A/S, Denmark. All rights reserved, including the right of reproduction in whole or in part, or in any form.

**TARGIT A/S**

Gasværksvej 24

DK-9000 Aalborg

Denmark

Phone: (+45) 9623 1900

Telefax: (+45) 9623 1999

E-mail: [info@targit.com](mailto:info@targit.com)

Internet: <http://www.targit.com>

## Contents

Introduction .....	7
Lesson 1: Preparations, Templates.....	9
Basic Templates .....	9
Templates with Placeholders .....	13
Lesson 1 Exercises.....	15
Lesson 2: Text and KPI objects .....	19
Text box objects.....	19
KPI objects.....	23
Lesson 2 Exercises.....	25
Lesson 3: Menus .....	29
Menu objects for Start pages .....	29
Adding a Menu object .....	29
Menu Item Templates .....	34
Triggers – shortcuts to other documents.....	36
Menus for general navigation .....	37
Working with Stored menus .....	38
Role based menus .....	39
Exercises Lesson 3.....	41
Lesson 4: Trigger behavior .....	45
Exercises Lesson 4.....	46
Lesson 5: Advanced Labels .....	49
General .....	49
Titles.....	49
Labels .....	52
Mouse over .....	55
Conditional axis formatting.....	62
Exercises Lesson 5.....	65
Lesson 6: Drill Downs and Required Criteria .....	67
Drill down objects.....	68
Required criteria .....	72
Criteria ranges with custom values .....	75
Exercises Lesson 6.....	78

Lesson 7: Slideshows.....	83
Exercises Lesson 7.....	86
Appendix.....	87
Selected Visualization Objects .....	87
General chart properties.....	87
Bullet Graph .....	89
Area map chart.....	93
General map options.....	93
Changing the map image .....	95
Mapping of dimension values.....	96
Labels formula syntax .....	99
Column/row and axis calculations .....	99
Gauges – for Dashboards.....	101
Start with a basic crosstab .....	101
Gauge Properties .....	102
General .....	103
Values .....	104
Scale and Labels .....	105
Gauges – build your own .....	109
<i>Gauge Builder App</i> Download .....	110



## Introduction

The purpose of this course is to give you the tools for planning and designing a TARGIT solution with maximum focus on end-user on-boarding and end-user engagement.

You are probably one of the key resources when it comes to building TARGIT analyses, dashboards and reports – not just for yourself, but also for most other TARGIT users within your organization.

When end-users access your TARGIT solution, they should feel that:

- The requested data was easy to find.
- The provided analyses and dashboards was easy to read and understand.

This manual was created with one thought in mind: **To make your TARGIT end-users as engaged as possible.**

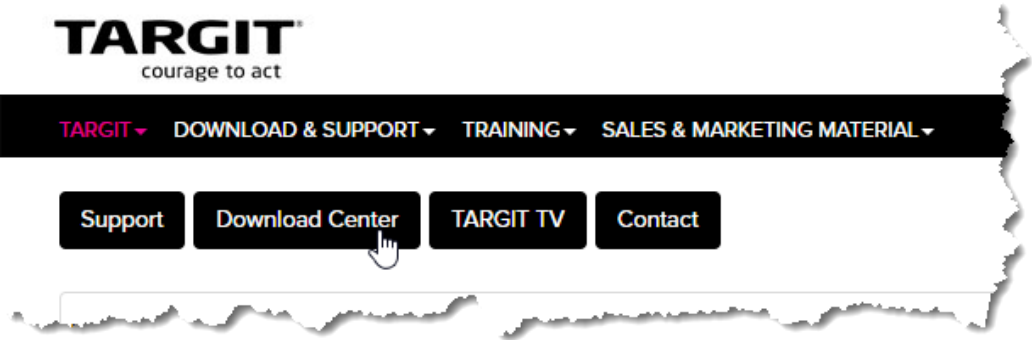
By making a TARGIT solution attractive to your end users, you will raise the chance that your colleagues will accept and start using the solution to its full capabilities earlier than expected – and thus getting full value of the investment quicker than expected.

To make a TARGIT solution as attractive as possible, you should consider:

- A user-friendly approach to navigate TARGIT documents.
- Consistency in how you create and design your TARGIT documents.
- A few tips & tricks that make your analyses and dashboards stand out.

This training manual will teach you all of this – and a lot more.

**Note:** Many of the demos and exercises in this manual work with graphics that can easily be created or downloaded from the Internet. Alternatively, download the graphics directly from [portal.targit.com](http://portal.targit.com), in the *Download Center*.



Go to *Other Downloads*:










### Download center

Welcome to the TARGIT Download Center. Here you can download installation binaries, documentation, samples, etc. for the TARGIT software including the latest release, betas and older versions. Also available is the change log that lists the improvements and changes to each version. Please select a product family below.

<b>TARGIT Decision Suite</b> Download the latest version of TARGIT Decision Suite, TARGIT Web Client, Integration Kits and other tools (including old versions of the TARGIT BI Suite)	>
<b>TARGIT BI Accelerators (BIA)</b> TARGIT BI Accelerator for Dynamics NAV, Dynamics AX and Dynamics GP	>
<b>Other Downloads</b> Everything else	>

In the *TARGIT University* section you may want to download a couple of .ZIP files:

### Other Documents

Miscellaneous		
 Compatibility Overview		>
TARGIT University		
 Graphics Package for TARGIT Visualization Wizard		>
 TFUN Excel Sheets for Data Service Lesson		>
 TARGIT Data Discovery Source Data Files		>
 SVG Navigation Buttons		>



## Lesson 1: Preparations, Templates

One of the corner stones in supplying a consistent and robust experience to the end-users are **templates**.

Without templates, you will most likely end up with a messy looking TARGIT solution where each analysis, report or dashboard that is opened will look fundamentally different from the other ones.

With documents based on the same template(s), end-users will spend less time on figuring out how to use the document in front of them, and more time focusing on the information within the data.

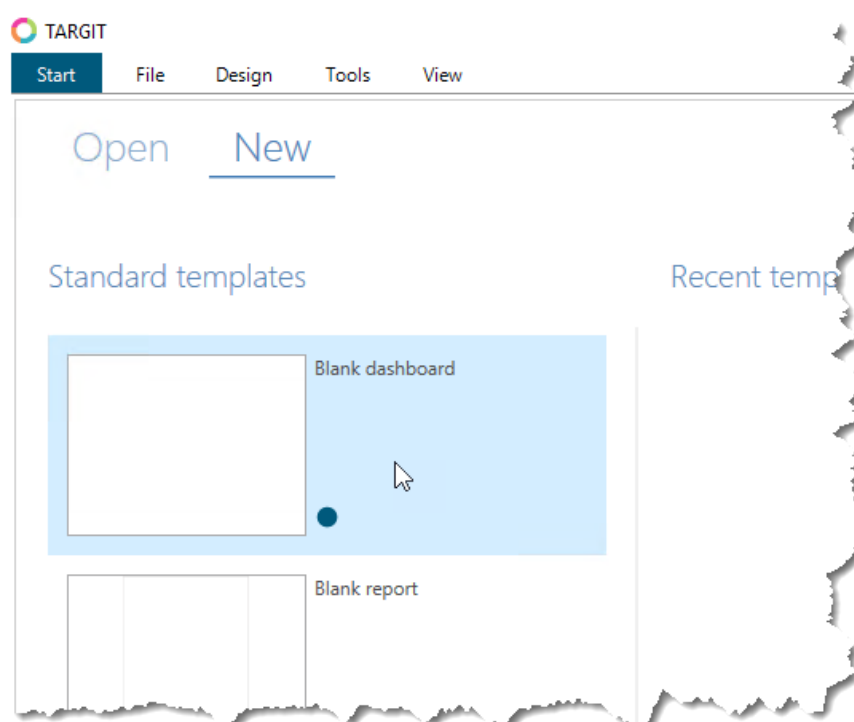
### Basic Templates

When you create a new document in TARGIT you do this on a blank page, a canvas, of a certain size.

This page size would typically be measured in pixels and conform to a 4:3, 16:9 or 16:10 etc. format.

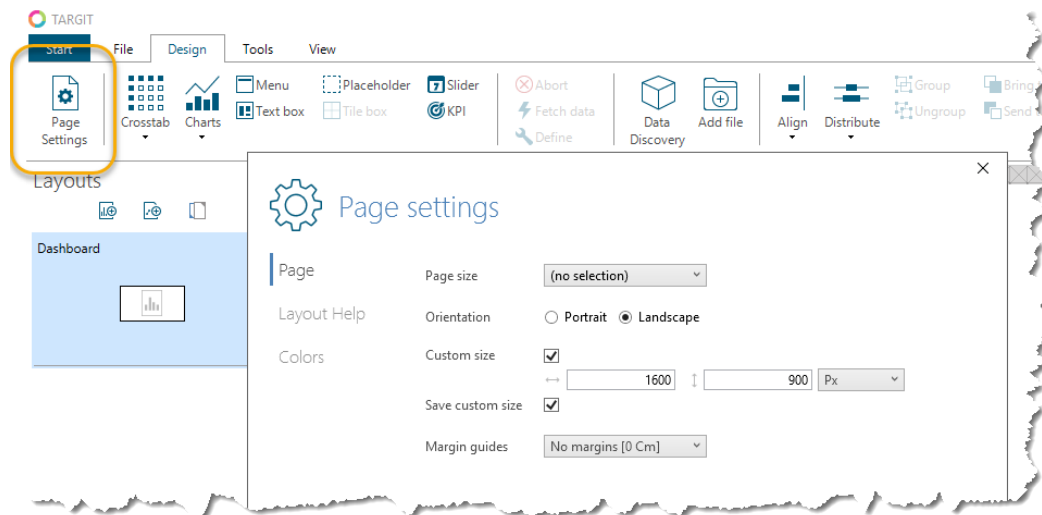
Initially, when you create a new document you may only have a couple of pre-defined templates: "Blank dashboard" and "Blank report". In this manual we will focus on Dashboard documents only, but we will create a few extra templates, in different sizes, ready for use when we create new documents.

Start out by creating a new document with the built-in Blank dashboard template:

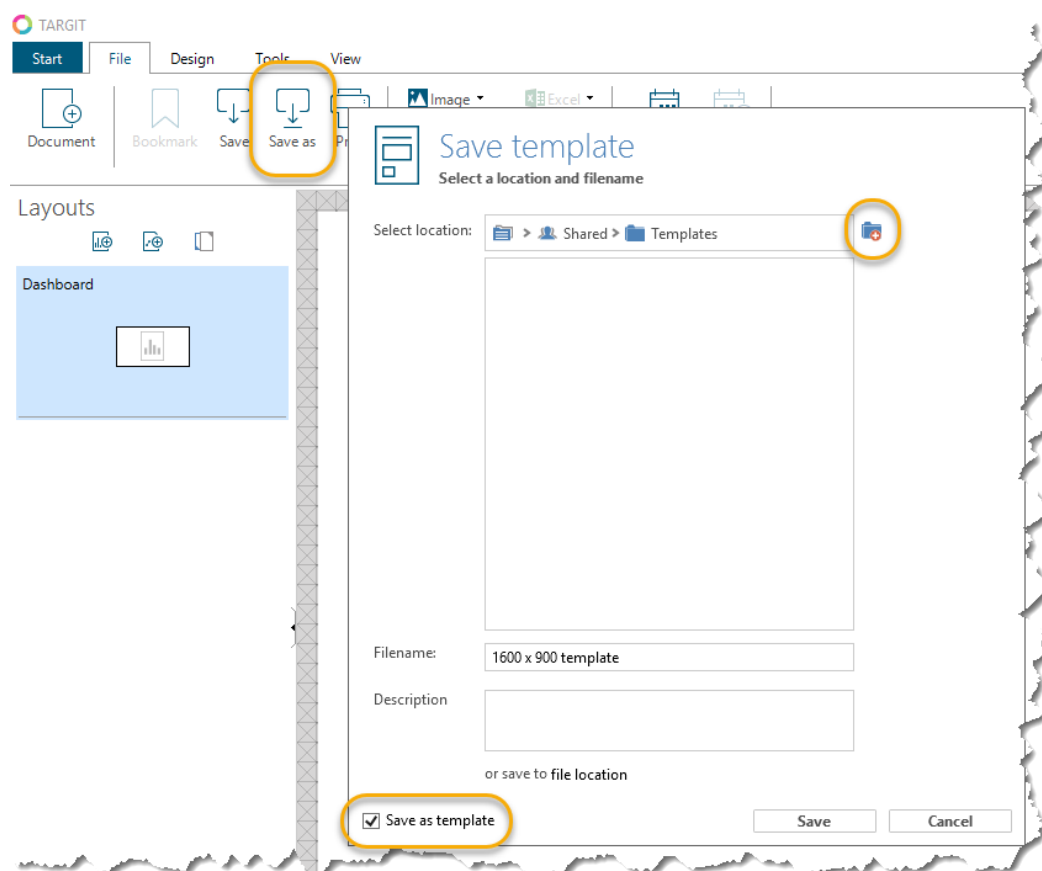




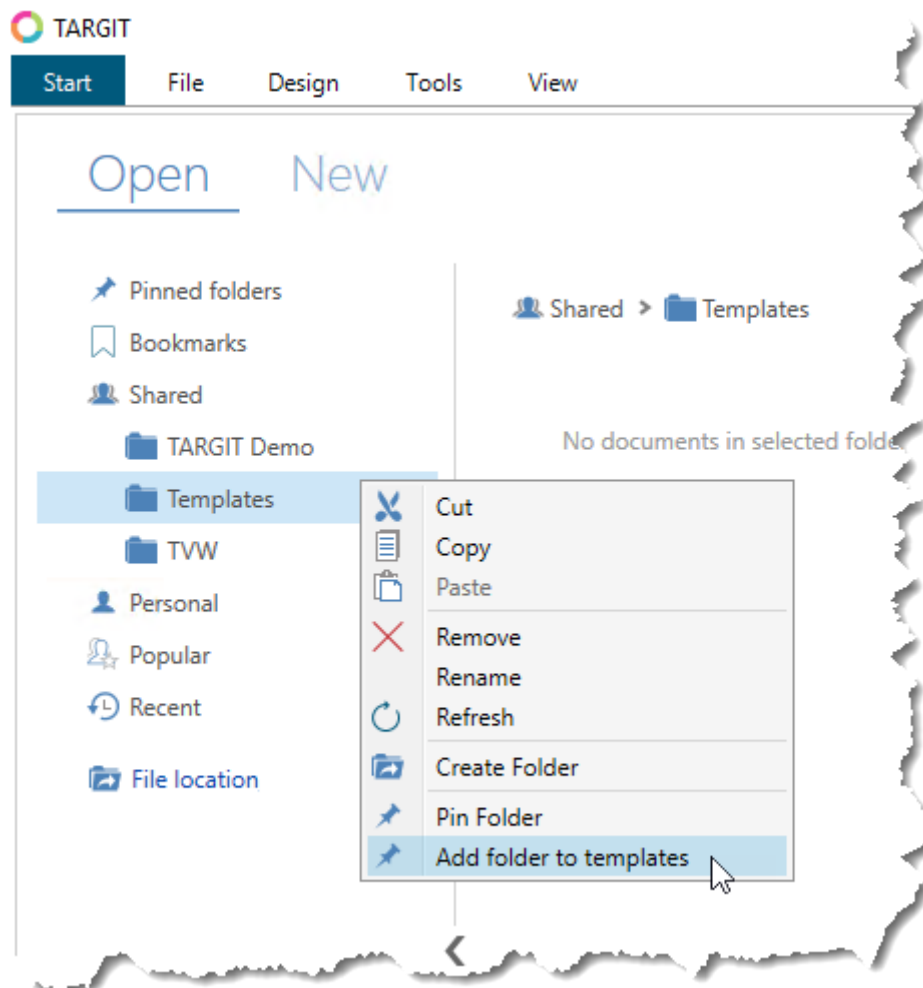
The new blank dashboard will normally have a page setting at 1920 x 1080 pixels, but you can select one of the other pre-defined sizes or even create your own, custom size:



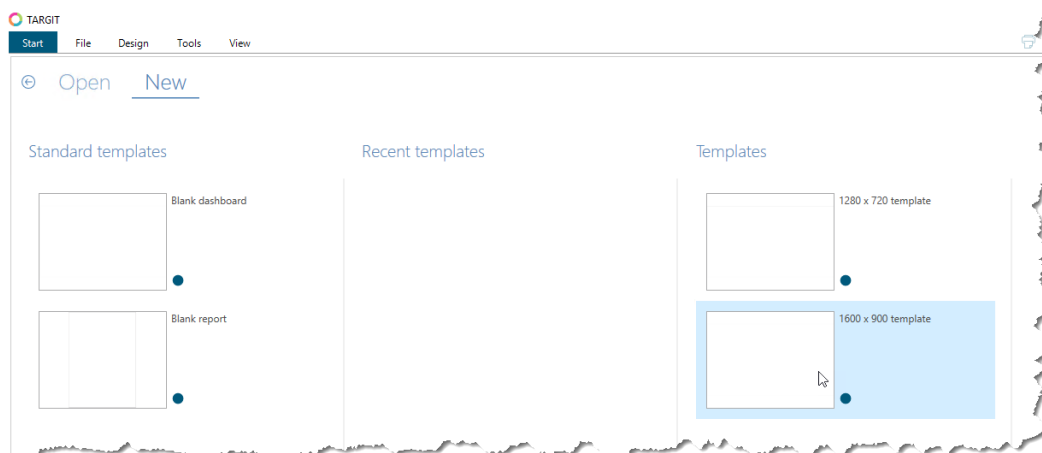
Now, save this new page size as a template in a folder you created for the specific purpose of storing templates:



Go back the Start tab, on the Open tab, to right click the newly created templates folder to “Add folder to templates”.

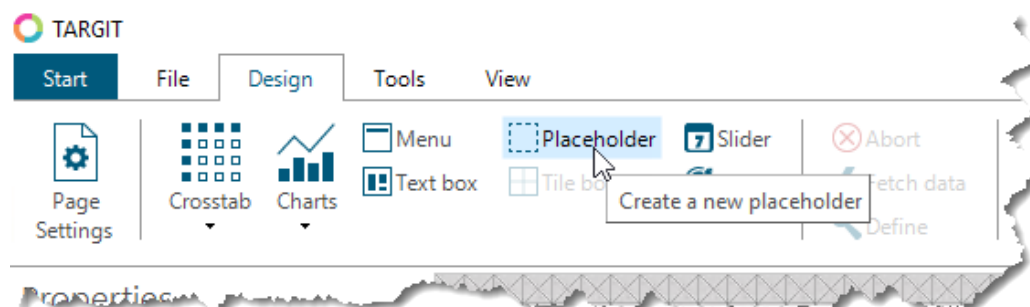


From now on, when you create new documents, the templates that you save in this folder will be available from the Start / New tab.

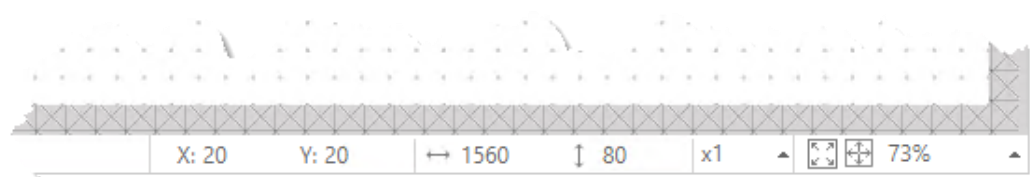


## Templates with Placeholders

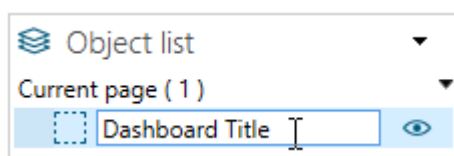
The Placeholder object is very useful in combination with templates. With the Placeholder object you can allocate an area on your canvas that should later be replaced by a "real" object, e.g. a Crosstab, a Bar chart, a KPI object etc.



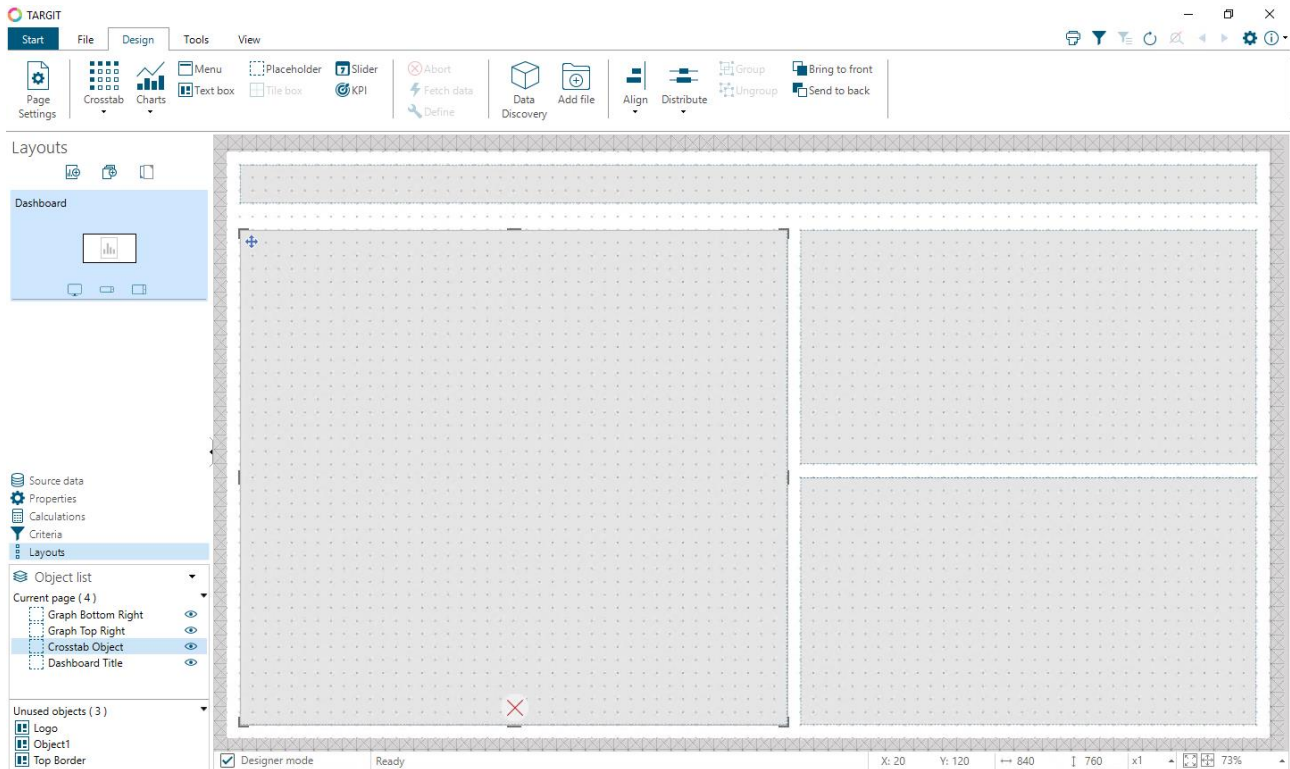
The Placeholder can be placed and resized like any other object. If necessary, you can use the X, Y, Width and Height boxes in the lower right corner to be even more precise about size and placement.



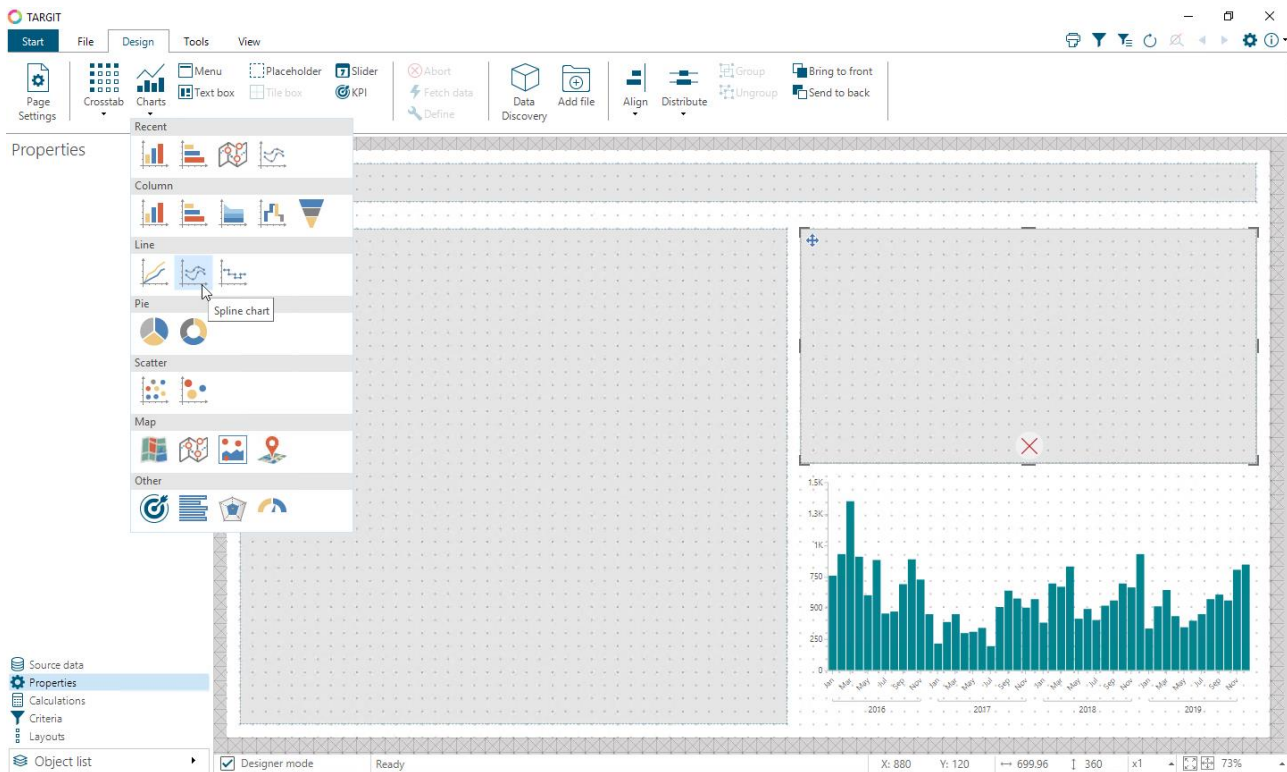
The Placeholder objects will go into your Object list. It is recommended to rename the objects in the object list – especially if you end up with many and overlapping objects on your canvas.



Then, with placeholders, you can create a template where you can ensure consistent placement and sizes of your objects.



When using the template, select a placeholder to replace it with a "real" object.



## Lesson 1 Exercises

(Screenshots and exercises are based on version 2019.0 demo data. If you are working on an earlier or later version you may need to subtract or add 1 year to achieve similar results.)

### Task 1

Prepare your TARGIT solution with a number of basic dashboard templates:

- 1280 x 720 pixels
- 1600 x 900 pixels

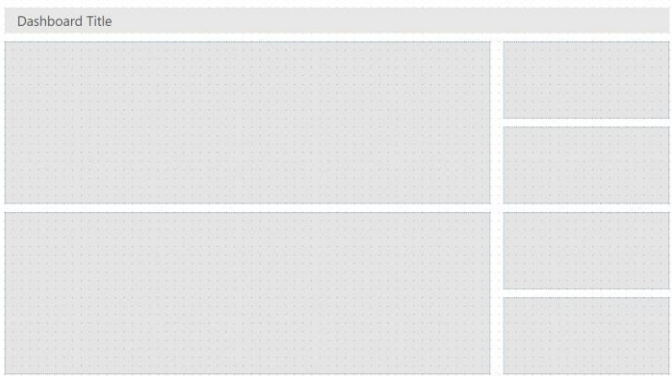
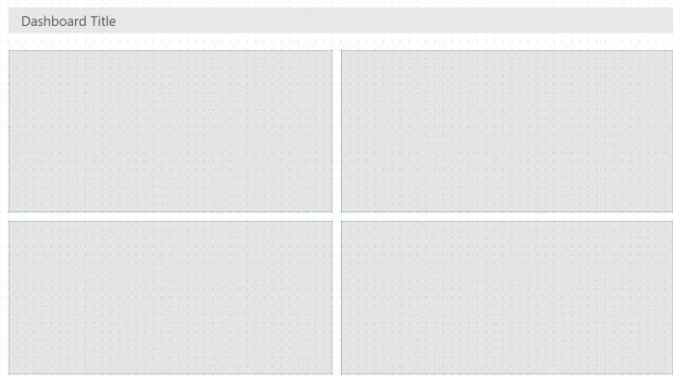
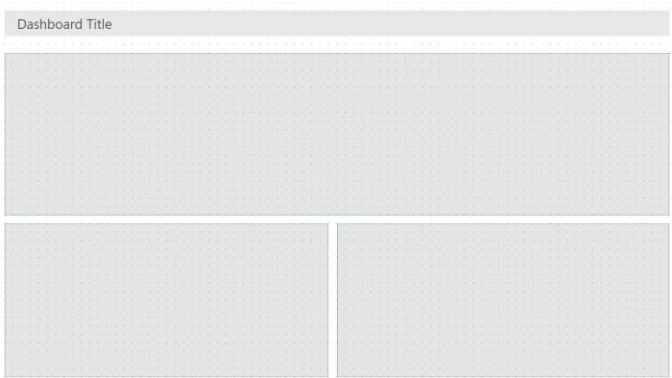
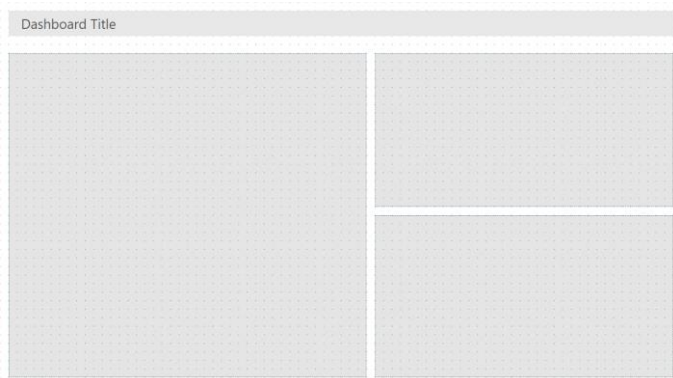
Save these templates in a **Templates** folder in the Shared folder – and make sure that you "Add folder to templates".

### Task 2

Prepare another 3-4 dashboard templates, all 1600 x 900 and all incorporating placeholders.

Notice that the Title placeholder has already been replaced by a real Textbox object in these templates. What are the benefits of including a "real" object in a template?

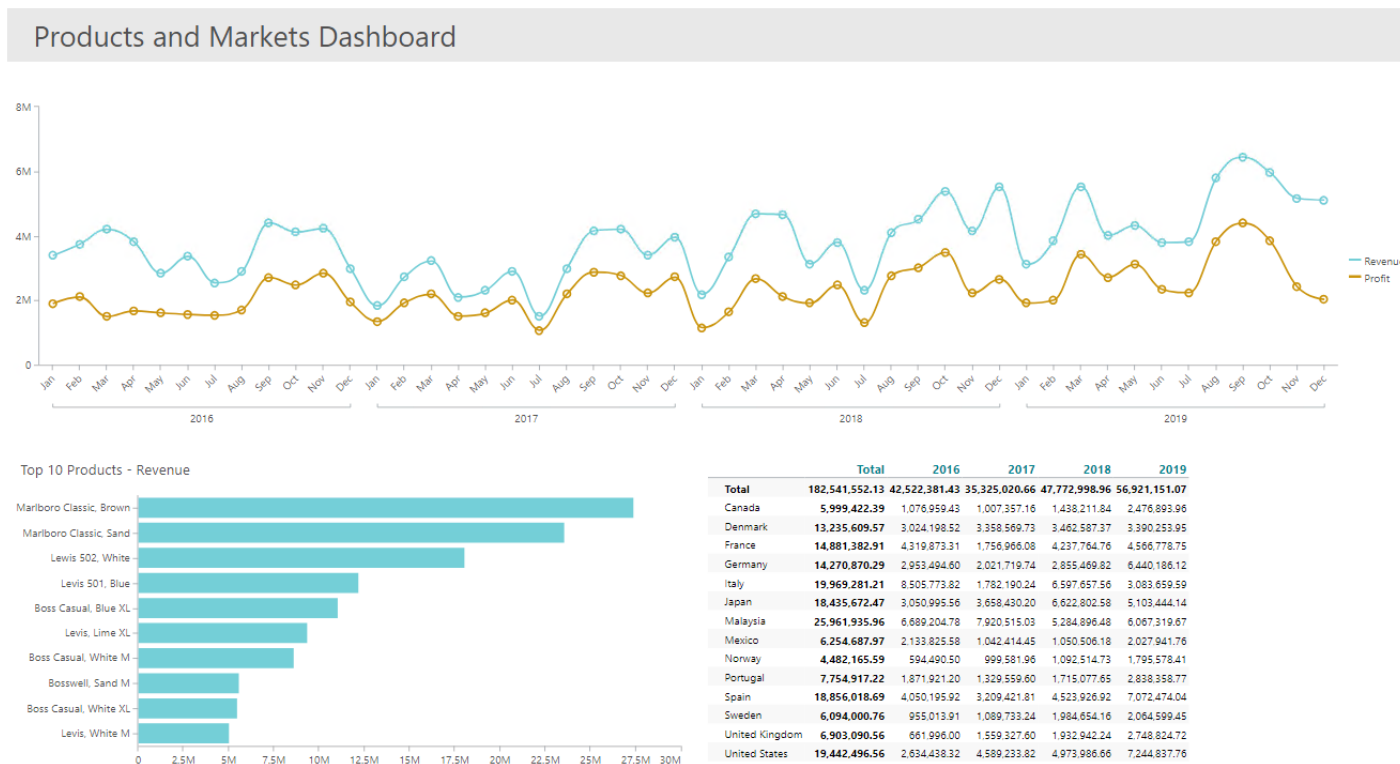
Examples that might try to replicate:





### Task 3

Use one of your templates to create this Dashboard:



Save the Dashboard as **Lesson 1 Products and Markets Dashboard**.

Object definitions:

- **Spline chart:** Revenue and Profit per Time YMD (hierarchy).
- **Bar chart:** Revenue per Product (attribute). Top 10 function applied.
- **Crosstab:** Revenue per Customer Country (attribute) and Time Year (attribute).



## Lesson 2: Text and KPI objects

In this lesson we will focus on two commonly occurring objects in dashboards:  
The Text box object and the KPI object.

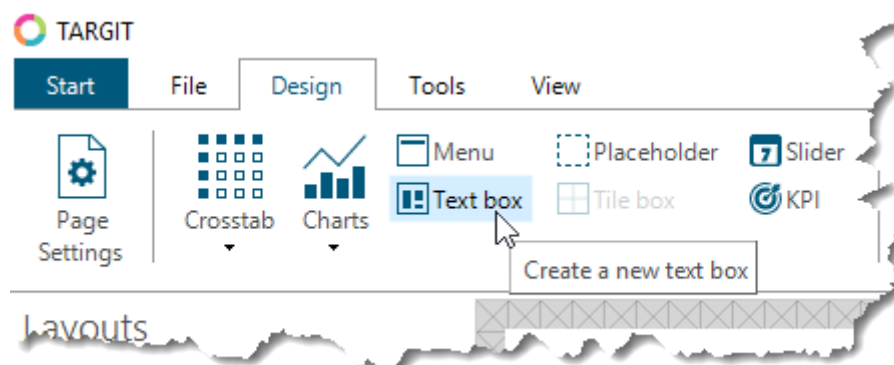
**Note:** The term “Text box” is actually a bit misleading. A Text box object doesn’t necessarily contain text – it may contain an image or a background color, without anything else.

### Text box objects

A Text box object is one of the rare objects that does not hold any data.

Typical use cases for Text box objects are:

- Titles for Analyses, Dashboards and Reports.
- Displaying a company logo or any other kind of image.
- “Explanation boxes” with tips and guidelines on how to best use the analysis.
- “Information boxes” with e.g.:
  - Current criteria
  - Dynamic dates
  - Cube processing date and time
  - Etc.



The Text object has numerous options with regard to Layout types (pure text, pure image, a combo or nothing but a background color) and with regard to formatting of the individual elements.

In this example it is being used as a pure text object:

**Layout**

Properties

Templates

**New Dashboard Analysis**  
- last 12 months

Layout: [Image] [Image] [Image] [Image] [Image]

Trigger: [Add trigger](#)

Caption:  [Dynamic Content Icon] [W]

Caption font: [Segoe UI - 16 pt](#) [Color Picker]

Subcaption:  [Dynamic Content Icon] [W]

Subcaption font: [Segoe UI - 12 pt](#) [Color Picker]

Text scaling: [None](#) [Dropdown Arrow]

Text alignment: [Left] [Center] [Right] [Justify] [Full Width]

Mouse over:  [Dynamic Content Icon] [W]

Mouse over font: [Segoe UI - 9 pt](#) [Color Picker]

[OK](#) [Cancel](#)

A very strong feature of the Text box object is the ability to work with *dynamic content*:

Caption font: [Segoe UI - 16 pt](#) [Color Picker]

Subcaption:  [Dynamic Content Icon] [W]

Subcaption font: [Segoe UI - 12 pt](#) [Color Picker]

**Dynamic content**

*Dynamic content* offers a wide range of useful options. In this example we would like a dynamic expression of the *last 12 months*. We do that by selecting Month and Year members from our Time dimension, and furthermore setting the *Range* property to *First* or *Last*.

**Dynamic content**

Members

Criteria

Dimension Name

Measure name

System variables

Identifier: {MonthMembers}

Range: First

OK Cancel

Having selected, one at a time, Month (first), Year (first), Month (last) and Year (last), we will end up with something like this:

Caption font: Segoe UI - 16 pt

Subcaption: - last 12 months: {MonthMembers} {YearMembers} - {MonthMembers2} {YearMembers2}

Subcaption font: Segoe UI - 12 pt

Eventually, if we apply the *Previous 12 months* dynamic criteria from our Time dimension, the Text object would dynamically display something like this:

Time YMD Previous 12 months (2018 Mar - 2019 Feb)

New Dashboard Analysis

- last 12 months: Mar 2018 - Feb 2019



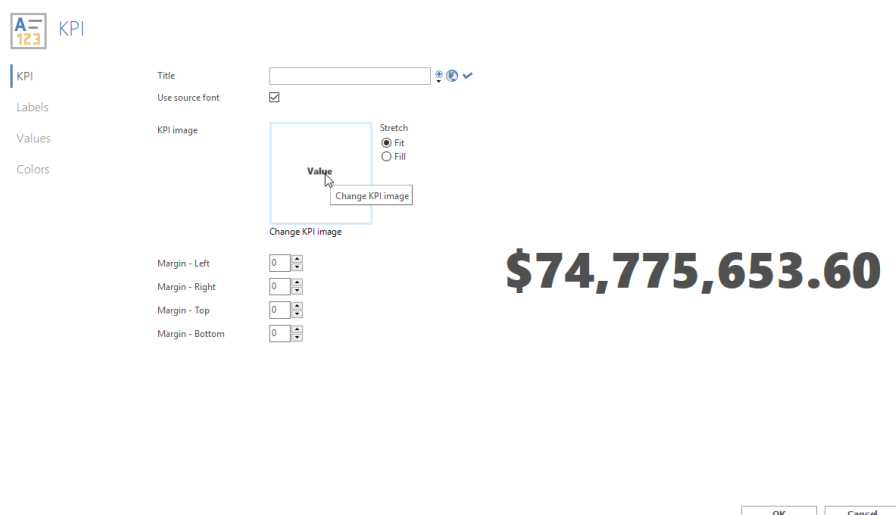
## KPI objects

In general, a KPI object is an object suitable for displaying high level, current values of important measures.

While focus is on the measure value itself, proper use of additional text, images and color could further support the presentation of the value.

A KPI object is limited to a maximum of three measures. However, if more are needed, you would simply insert as many KPI objects to your analysis as you need.

When you start designing a new KPI object, it will default to a single-value KPI object. So, one of the first things you would normally want to do, is to go into *Properties* to change the KPI image:

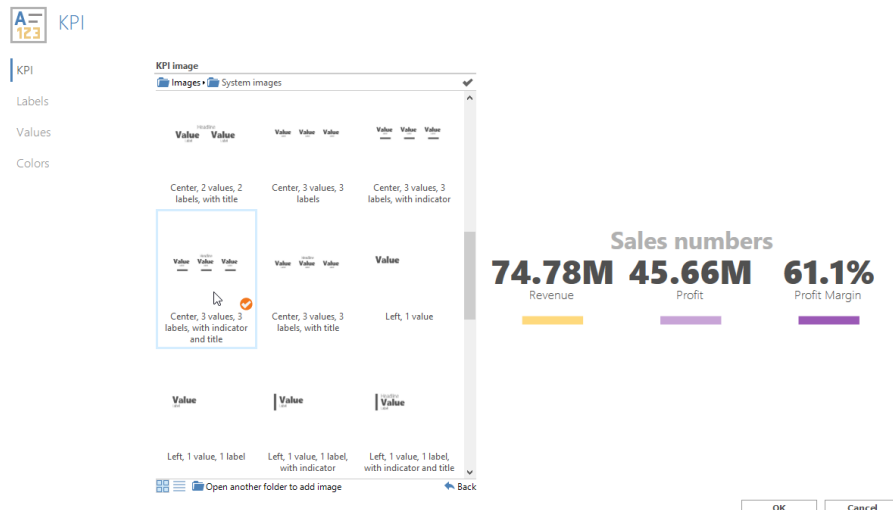


Notice that a TARGIT installation comes with a set of pre-defined KPI images – organized in two folders, *System images* and *System images with icons*. You can in fact add you own images (SVG images) in the Images folder root, or in a new folder you may have created for that purpose.

### KPI image

Images ▸ System images ▸ System images with icons

The pre-defined *System images* folders contains different variations of KPI images that has been designed to show 1, 2 or 3 measure values.



In this example, we have chosen a KPI image with the maximum number and types of elements. Any KPI image can work with maximum:

- One Title
- Three Values
- Three Labels
- Three color indicators – which can be controlled through Color agents.

**Note:** If you need to display multiple KPI values on your dashboard, you may consider to add these as single-value KPI objects rather than multi-value KPI objects. With the ability to freely arrange objects – overlapping and transparent – you can, in many cases, obtain better results with multiple single-value KPI objects.

KPI images works with a default font type, as defined in the source SVG file. However, disable it to select your own custom font:



KPI

Labels

Values

Colors

Value 1

Use source font

Use value color

Value 2

Use source font

Use value color

Value 3

Use source font

Use value color

Measure value

Measure value

Measure value

#

#

#

Segoe UI, 9

74.78M

Revenue

Sales numbers

45.66M

Profit

61.1%

Profit Margin

OK

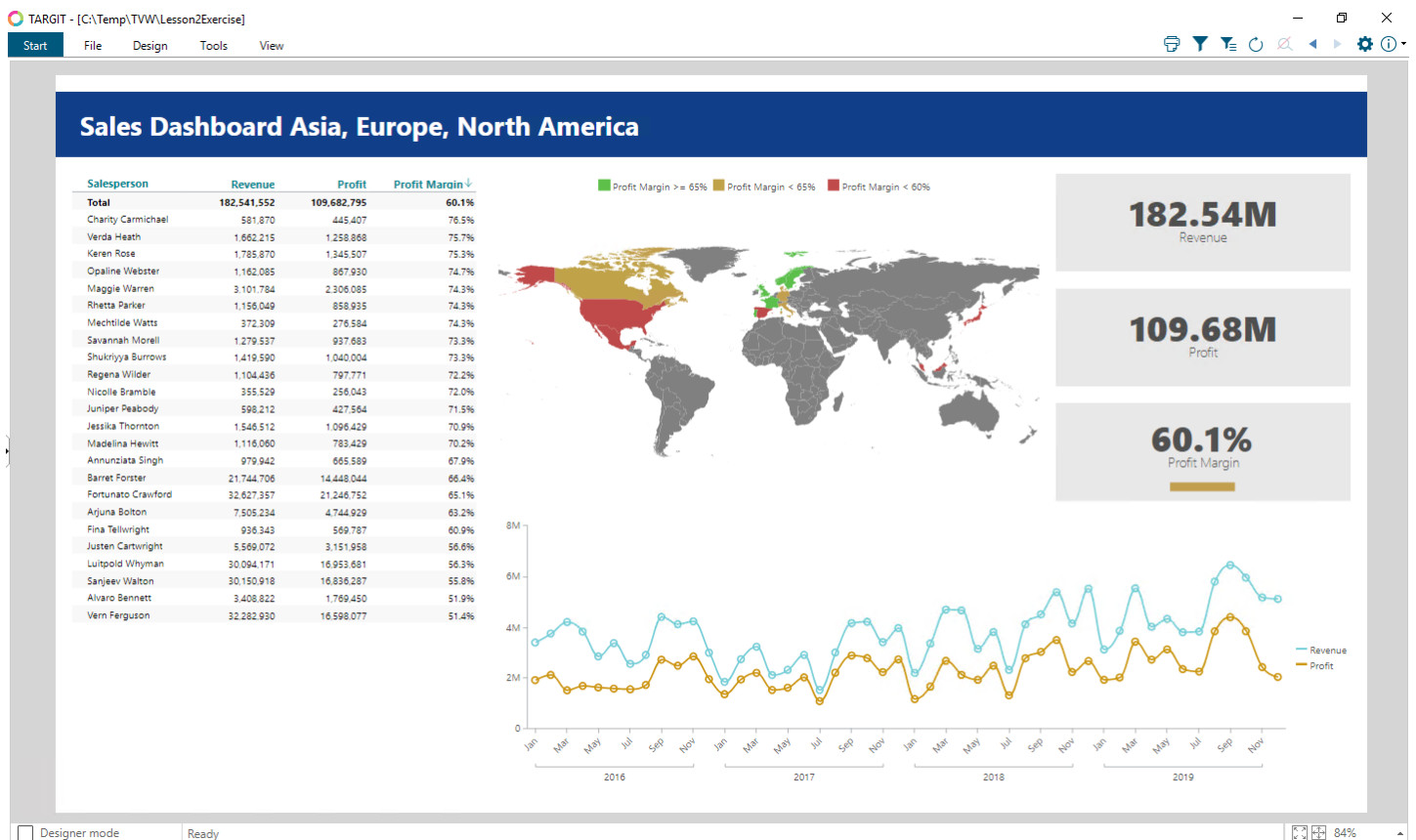
Cancel

## Lesson 2 Exercises

(Screenshots and exercises are based on version 2019.0 demo data. If you are working on an earlier or later version you may need to subtract or add 1 year to achieve similar results.)

### Task 1

Create a Sales Dashboard (based on the Sales cube) that looks like this:



Save the dashboard as **Lesson 2 Sales Dashboard**.

When creating the dashboard, pay attention to these settings:

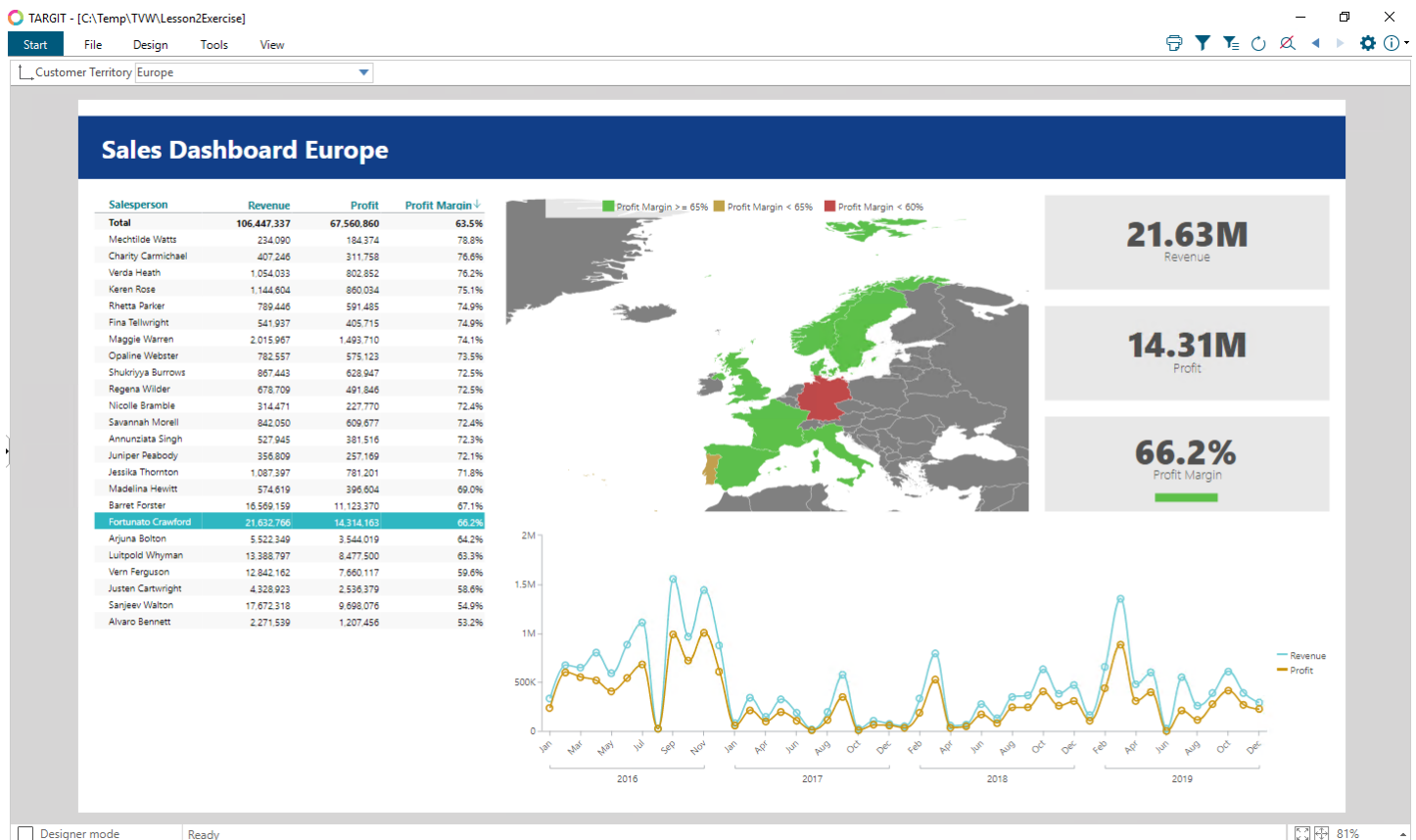
- Page size: **1600 x 900**.
- Add the **Customer Territory** dimension to the **Criteria bar**.
- Dynamic content in text box: Sales Dashboard **{TerritoryMembers}**
- Map is showing Profit Margin per **Customer Country (attribute)**.
- **Color agents** on Profit Margin KPI follow same rules as color agents on map.

## Task 2

Apply filters:

- From Criteria bar: **Customer Territory = Europe**
- Drill down filter: **Fortunato Crawford**

Verify that you get this result:



## Task 3

Save **three** versions of this dashboard, with global criteria corresponding to their names:

- Sales Dashboard **Asia**
- Sales Dashboard **Europe**
- Sales Dashboard **North America**

We will use these three versions in one of the upcoming lessons.



## Lesson 3: Menus

With TARGIT, you can have users to start with a specific document whenever they open the TARGIT app from their Desktop. This is an administrative feature of the *Roles* management within TARGIT, where you can have members of different roles to start on specific documents. Very often, this Start document will be the same document for all users.

Many organizations have implemented a structure of inter-connected documents – from the Start document to one or more levels of details documents, and back. In this way, the end-users will experience that all their data requirements can be answered by the documents within the navigation structure.

TARGIT offers a *Menu object* that has been designed specifically to support such a navigation structure.

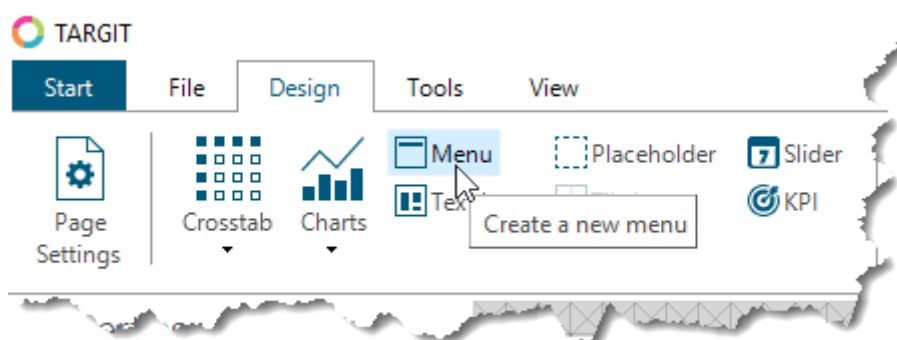
### Menu objects for Start pages

A common Start page is often designed as a document with shortcuts that will navigate end-users to different business and data areas.

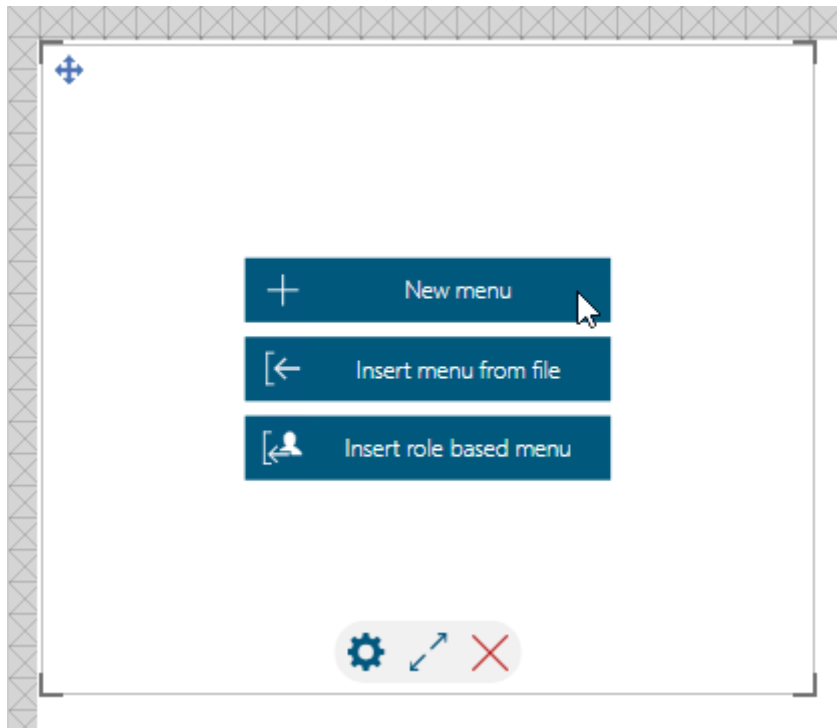
You *may* include data on the Start page, but then as simple KPI objects – and from these KPI objects you will very often include shortcuts to documents with even more detailed data anyway.

### Adding a Menu object

Go to the *Design* tab to add a Menu object:

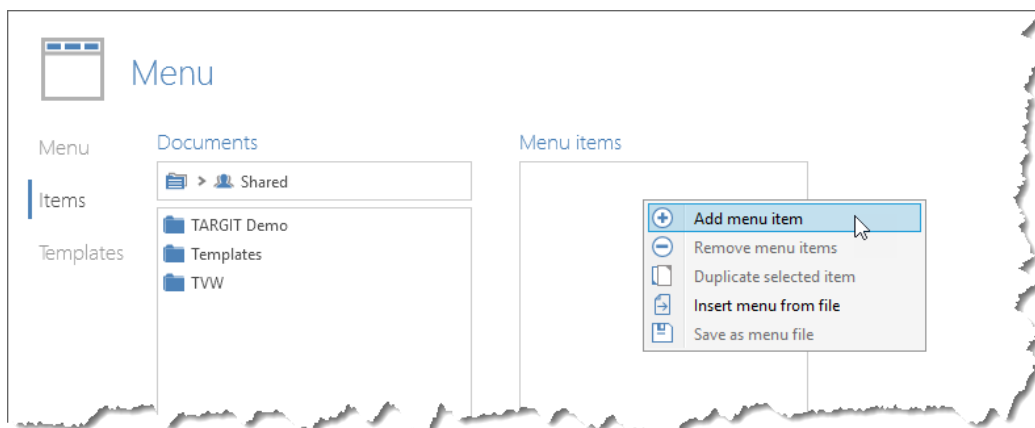


This will insert the Menu object at the top left of your analysis:

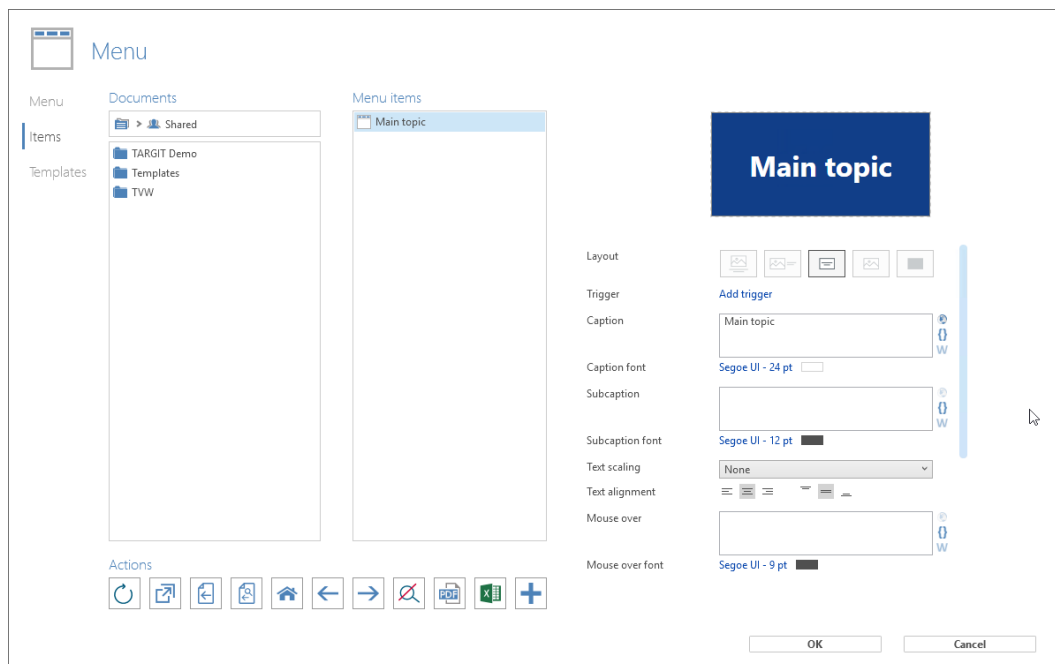


Click "New menu" if indeed it is a new menu you are about to create.

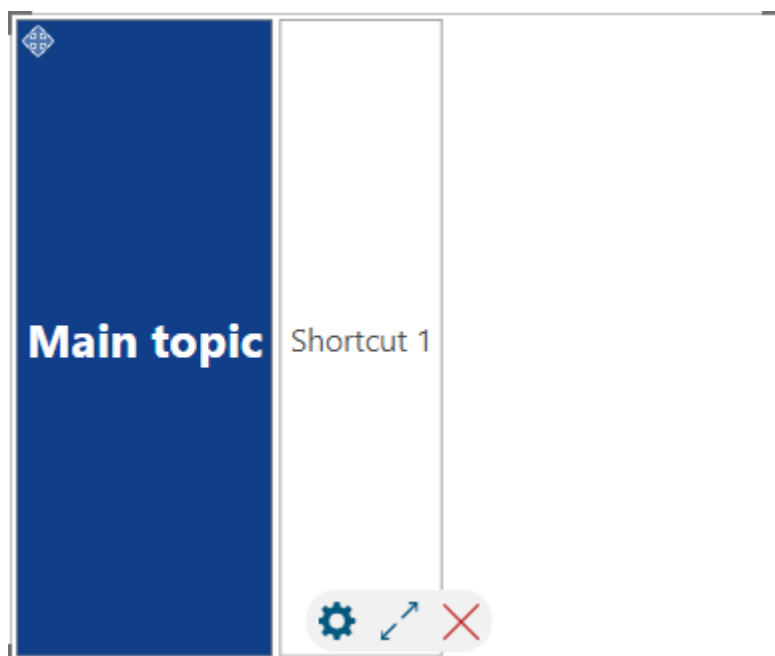
Think of a Menu as a number of buttons. In the dialog, this is called *Menu items*. Right click the Menu items list to add a new menu item:



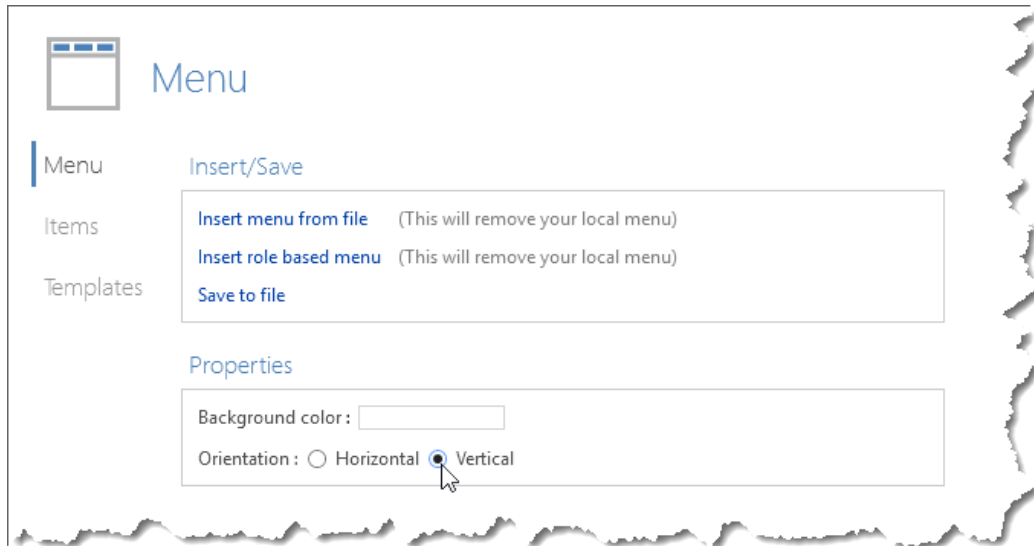
Notice that Menu item properties are identical to Text / Layout object properties:



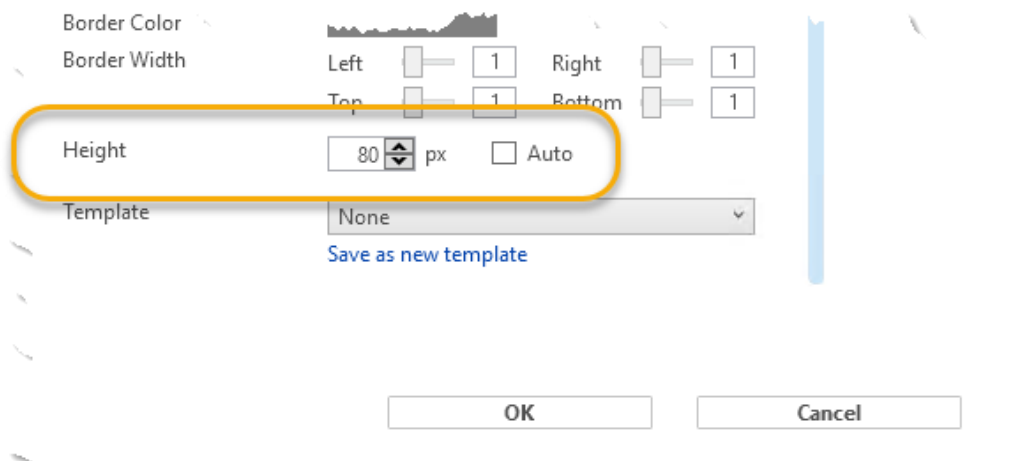
If you just add a couple of menu items with caption text in both and click OK, you may end up with an object like this, where the width of the menu items seem to be determined automatically by the width of the texts inside them:



Going back to the Menu object Properties, we can see that the default orientation is Horizontal – hence why the two Menu items appeared next to each other.

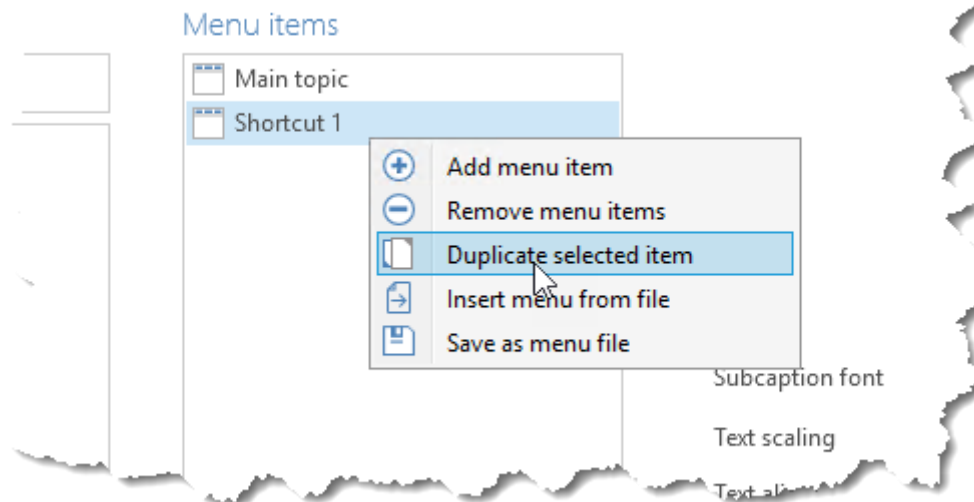


If we change the general Menu property to *Vertical*, and at the same change the *Height* property from *Auto* to a fixed height, we can make the menu look a lot more consistent.





Furthermore, if we need a number of similar menu items, you can easily accomplish this by *duplicating* a menu item as many times as you like.



The result, with a vertical menu and duplicated menu items with fixed heights, may then look like this:

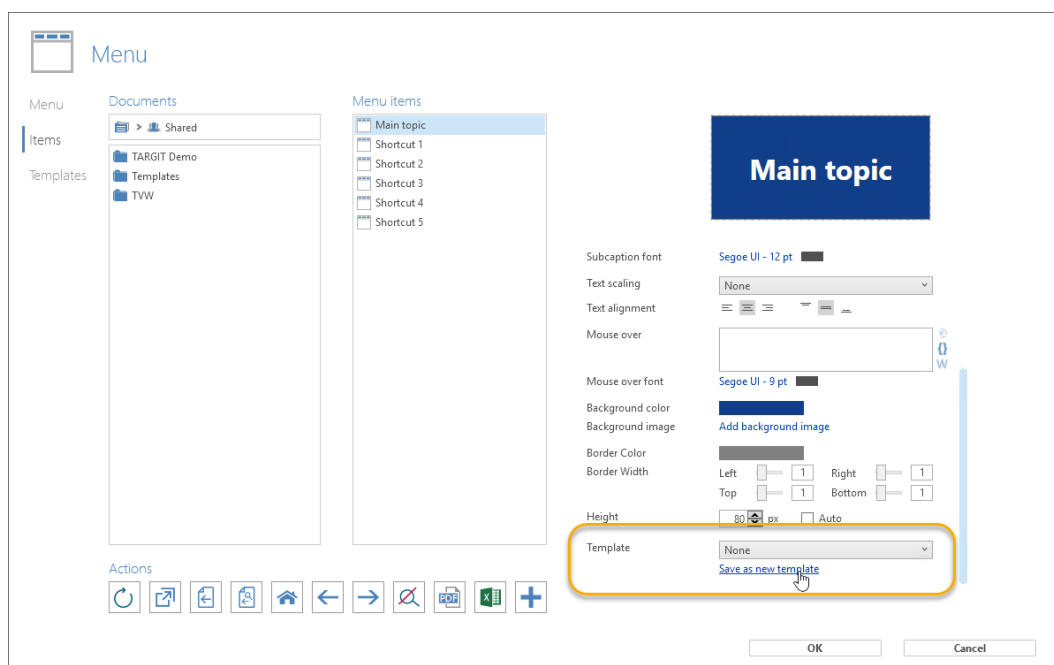


## Menu Item Templates

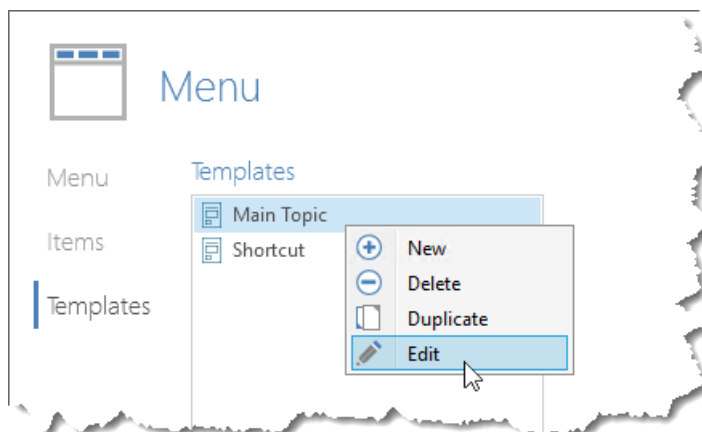
Any menu item's appearance is defined by a *Template*. The advantage of templates becomes clear when at some point you will need to change the general style of your menus.

Let us say that you have designed all of your menu items with a style matching your company's current identity. Now, if that identity should change at some point, all you need to do is to change the template, which will then update all menu items across all your documents.

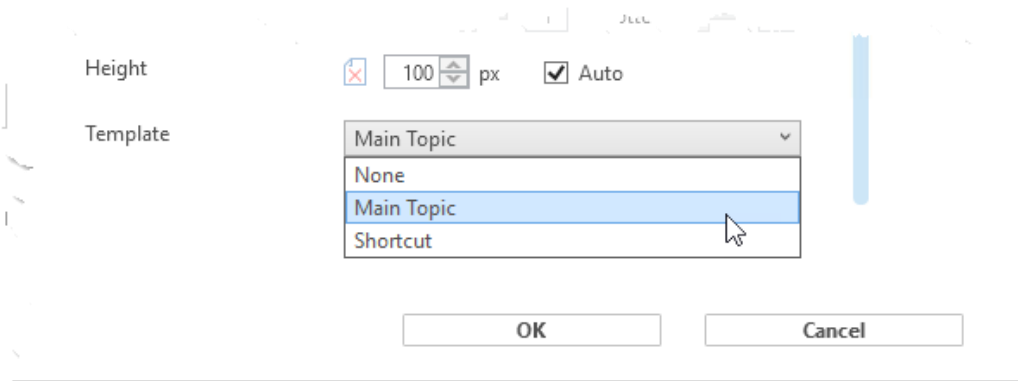
If you already created a number of differently styled menu items, you can then save each of these styles as a new template:



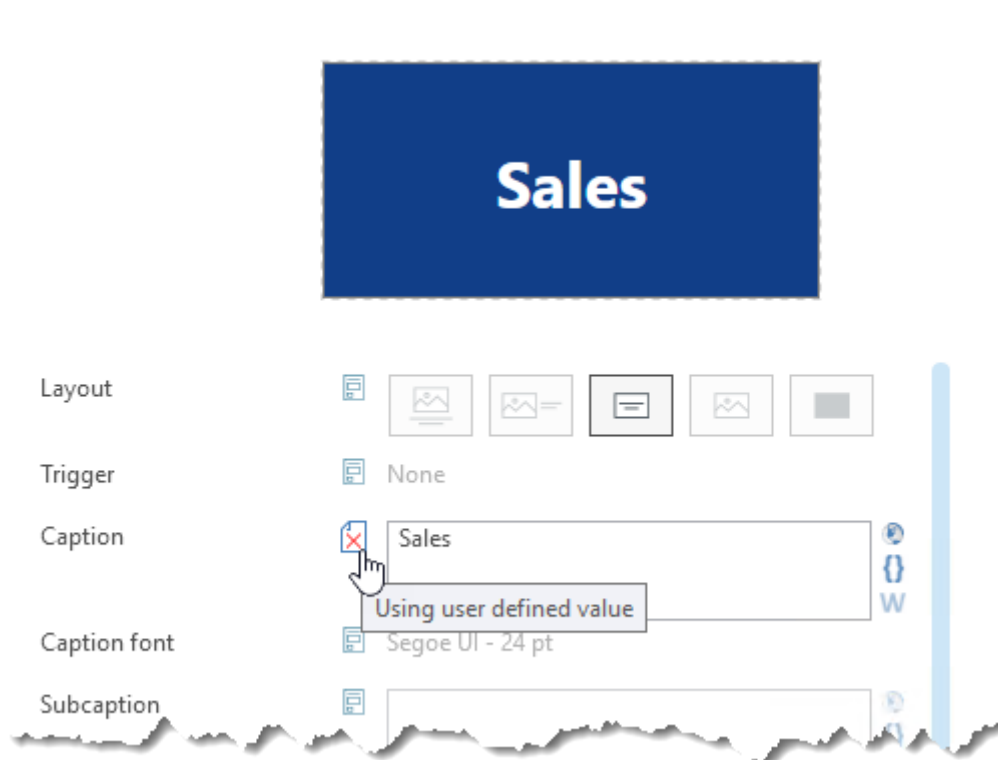
The saved templates are available from the *Templates* tab, from where you can edit existing templates or add new ones.



When you add a new Menu item, you can now apply one of the existing templates:



The new Menu item will then take on all the properties from the template, including text, font style etc. To override a property coming from the template, you must first click the toggle button "Using template value / Using user defined value":

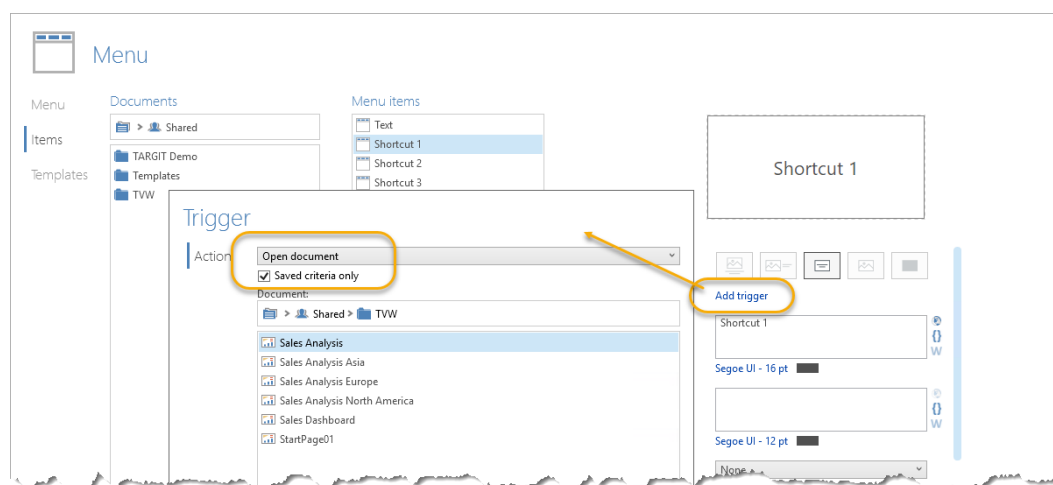


## Triggers – shortcuts to other documents

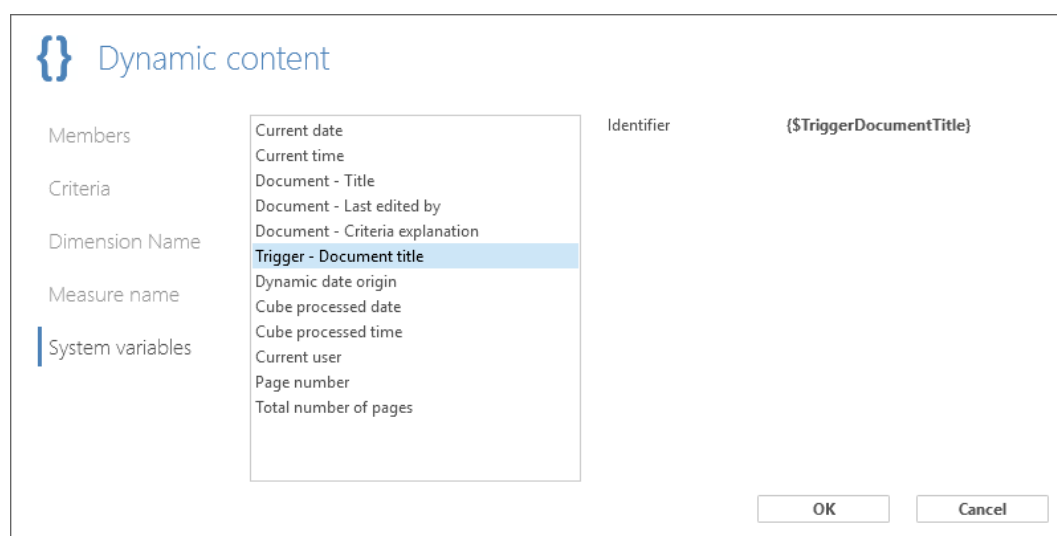
One of the main purposes of a Menu is to provide shortcuts to other documents. When you click a button (a menu item) in a Menu, you will very often want it to open a specific document.

This functionality is handled by *Triggers* in TARGIT.

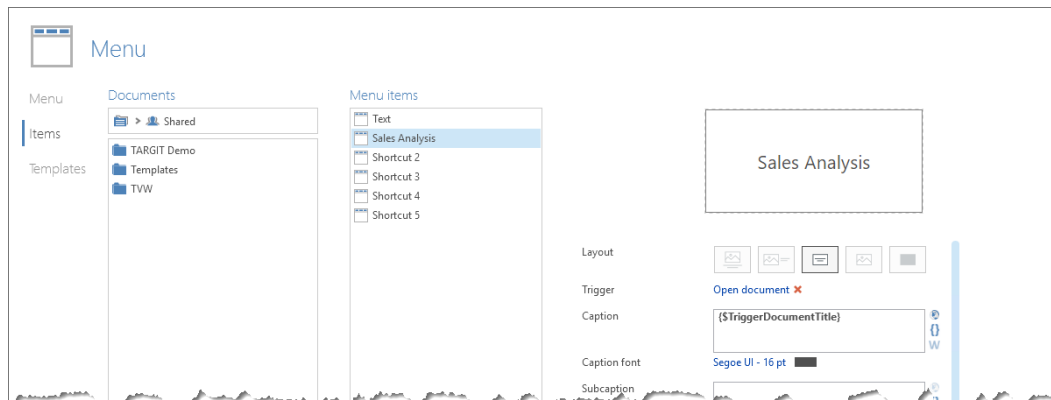
To set up a trigger on a menu item, click the *Add trigger* option and select the document you would like to open with this trigger. Also, consider if the document should be opened with its own saved criteria only.



At this point you could replace the static Caption text with some dynamic content. Click the two curled brackets symbol next to the Caption box. In this case, we could make good use of a System variable, the *Trigger – document title*.



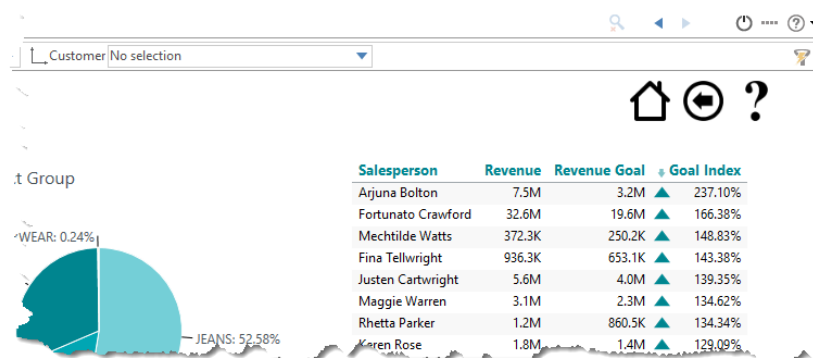
The result is, that the menu item text will automatically reflect the document title of the triggered document.



## Menus for general navigation

When designing a navigation structure, you will probably need a *standard* navigation menu to be added to most of your documents. E.g. you will almost always need buttons for these purposes:

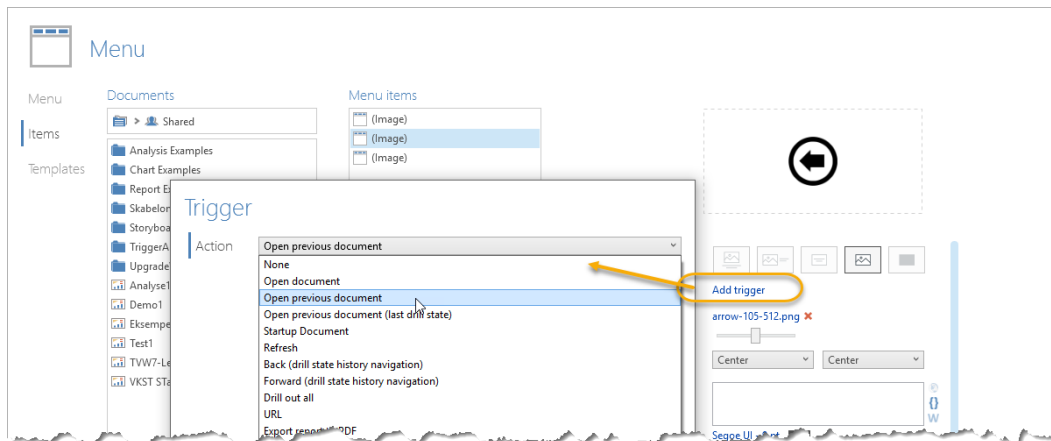
- **Home.** To bring the end-user to the Start analysis.
- **Back.** To bring the end-user back to the previous document.
- **Help.** A link to internal or external documentation on how to use TARGIT within your organization.



These types of menus are often built purely with image buttons as in the example above, which, of course, requires that you have some suitable graphics available.

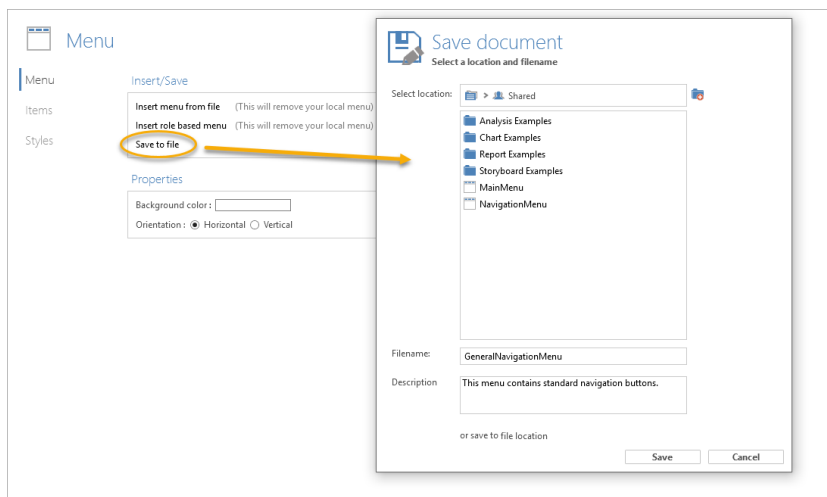
Next thing would be to apply the corresponding trigger options to these buttons, e.g.:

- **Home.** Document trigger to specific analysis.
- **Back.** "Open previous document".
- **Help.** URL link to internal or external documentation on how to use TARGIT within your organization.

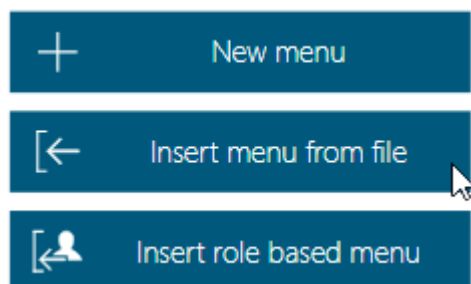


## Working with Stored menus

A menu that is supposed to be inserted in multiple documents, should be stored to a file.



When you want to re-use the stored menu file in another document, simply insert a Menu object and choose the *Insert menu from file* option:



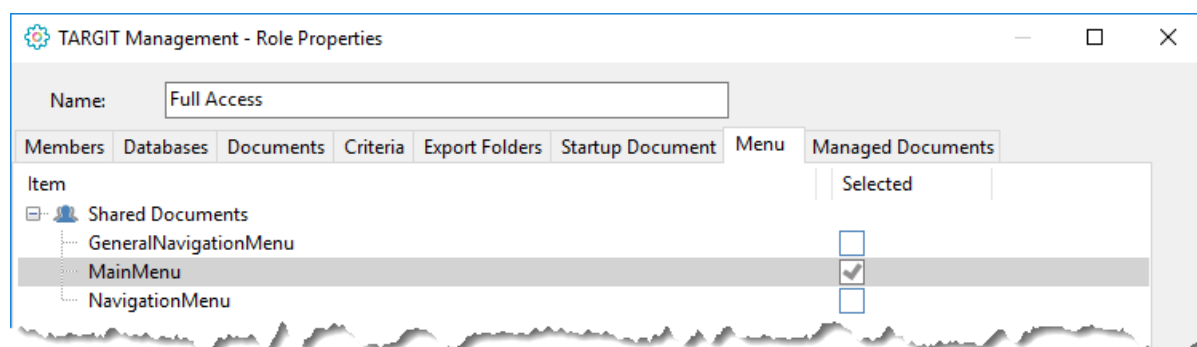
When working with stored menus you will gain a huge advantage when it comes to modifications to the menus across you documents. Now you only need to do the modification in one place: The stored menu. The changes you add to the stored menu will automatically take effect in all documents where the stored menu has been inserted.

## Role based menus

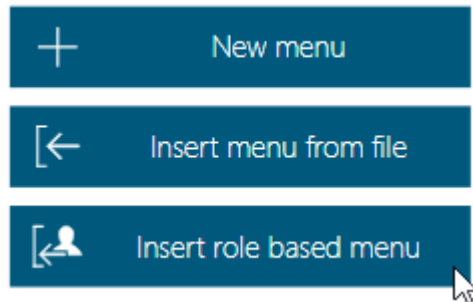
The third and last option when inserting menu objects is to insert a *Role based menu*.

Different end-users can be members of different roles – and for each role, you can define a specific menu to be inserted as the Role based menu. The menu you select, must be one already stored on the system.

Role properties, including assigning specific menus to specific roles, are managed through the TARGIT Management client:



In the TARGIT client, you may now insert a menu as a *Role Based menu* in one or more of your documents. The inserted menu is then automatically selected according to the end-user's role properties.



In other words, when one user (from one role) opens the analysis in which you inserted the role based menu, he or she will see one menu. When another user (from another role) opens the same document, he or she will see another menu.



## Exercises Lesson 3

(Screenshots and exercises are based on version 2019.0 demo data. If you are working on an earlier or later version you may need to subtract or add 1 year to achieve similar results.)

**Notice:** The graphics that have been used in the exercises below can be downloaded from the TARGIT Portal, <http://portal.targit.com>.

Go to the *Download Center / Other Documents / TARGIT University* and look for **SVG Navigation Buttons**.

### Task 1

Create this *Start analysis* from text based menu objects:

Sales	Production	Finance	Inventory
Denmark	Basis components	Monthly report	
Europe	Special items	Quarterly report	
Asia		Yearly report	In-house stock
	Production Errors		Remote stock

### Tips:

- The menus are in fact four vertical menu objects – each with five menu items.
- Create and use two styles: Blue background and text, White background and text. Both with a border.

Save the document as **Start Analysis** in the Shared folder.

## Task 2

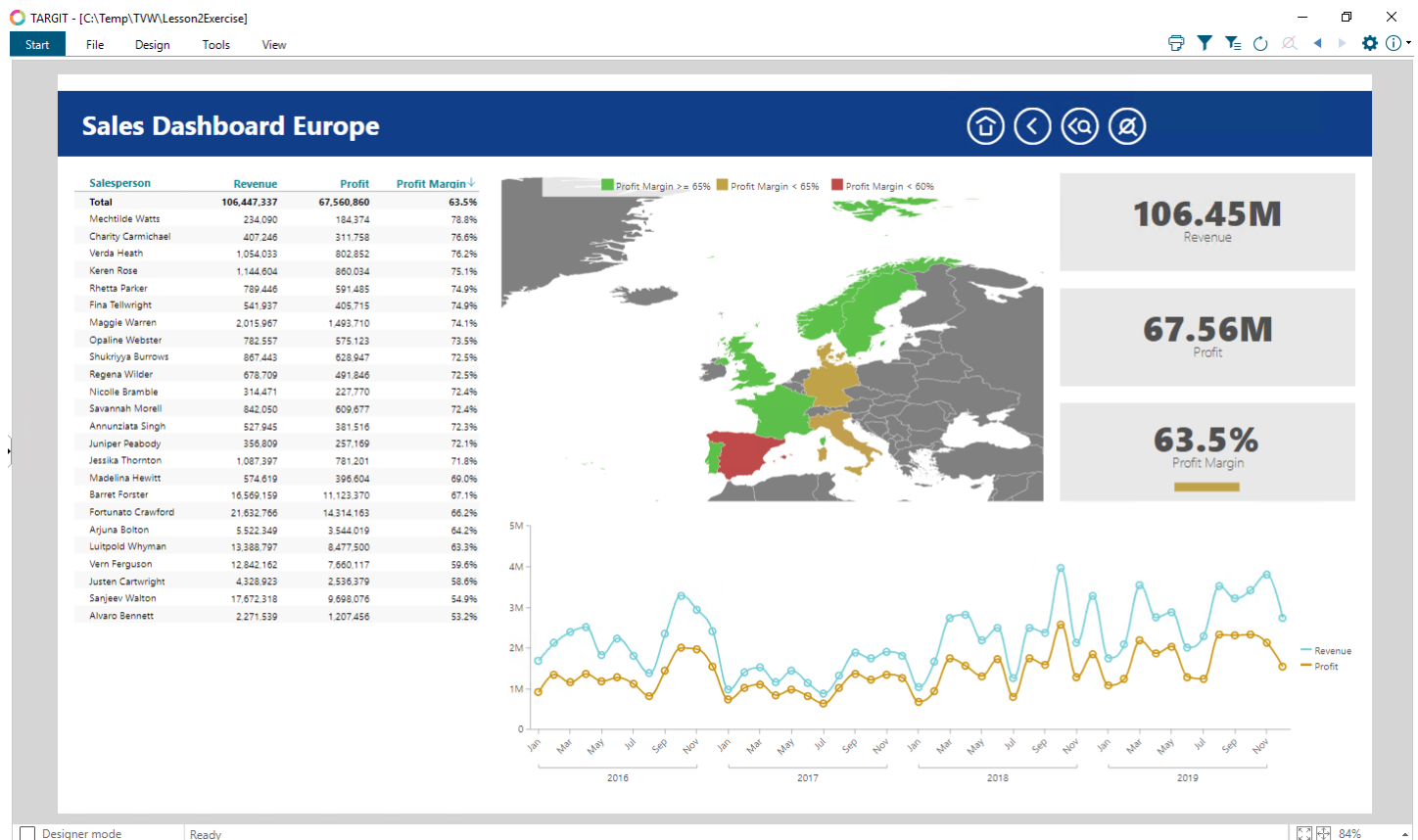
Create a new menu object with some general navigation buttons:



The four buttons:

- **Home.** Go to the Start page.
- **Back.** Go to previous document.
- **Back with drill state.** Go to previous document, and keep its drill state.
- **Remove all drill downs.**

Save the general navigation menu and insert it in the three documents: Asia, Europe and North America.



### Tips:

- It may be necessary to create a new style template for the buttons: Graphics only with background color.
- Save the menu object – in order to re-use it across all three documents.

- Test it: Now, can you navigate from the Start Analysis to each of three documents – and back?



## Lesson 4: Trigger behavior

The default behavior of an *Open document* trigger is to transfer *all* criteria from the first document to the triggered document. The transferred criteria includes Global, Local and Drill Down criteria.

A typical example is when we need to get even more details about data in a dashboard. We may then create a specific trigger button in the dashboard analysis to open the Detail document.

The question is how this trigger should behave when activated? The options are:

- Transfer **all** criteria from the source document to the target document.
- Transfer **selected** criteria from the source document to the target document.
- Open the target document with its own **saved criteria** only.

Furthermore, when criteria are transferred, you can choose between **replacing** the target document criteria or **merging** with the target document criteria.

When you add the trigger, you have an option to include or exclude (whichever is the easiest to administrate) all criteria or criteria from selected dimensions:

### Trigger

Action

Active criteria

☒ Include the following  
☐ Exclude the following

Criteria

All

DemoData

Finance

Inventory

Production

Sales

Company

Customer

Product

Salesperson

Time

Target criteria

Replace

Note that personal documents are not available to other users

OK

Cancel

TARGIT Visualization Wizard

Page 45 of 1

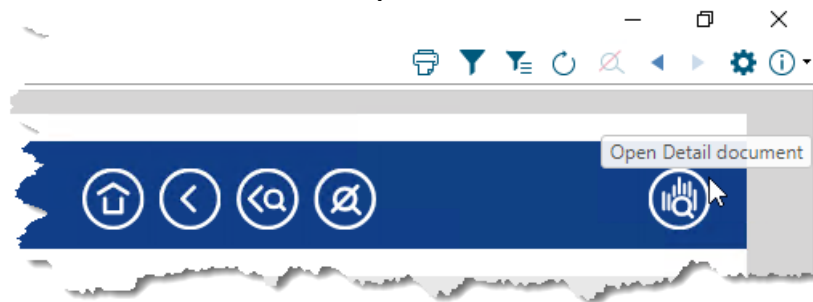
## Exercises Lesson 4

(Screenshots and exercises are based on version 2019.0 demo data. If you are working on an earlier or later version you may need to subtract or add 1 year to achieve similar results.)

### Task 1

Navigate to *Sales Dashboard Asia*, *Sales Dashboard Europe* and *Sales Dashboard North America*.

- Add an extra menu to these analyses. The new menu is just a single button and it must be added individually for each dashboard (i.e. it cannot be saved and re-used).



- The trigger from this button should point to a new Detail document. See below. Save this document as **Sales Details**.
- Insert the General Navigation menu in the new document.

## Sales Details Europe



Product Group	Product	Total	2016			2017			2018			2019				
		Revenue	Profit	Profit Margin	Revenue	Profit	Profit Margin	Revenue	Profit	Profit Margin	Revenue	Profit	Profit Margin			
Total		106,447,337	67,560,860	63.5%	26,936,958	16,038,376	59.5%	17,107,070	12,267,744	71.7%	28,402,595	17,742,255	62.5%	34,000,714	21,511,485	63.3%
JEANS	Total	59,483,070	37,961,229	63.8%	15,611,848	9,426,567	60.4%	9,183,692	6,476,535	70.5%	15,766,952	10,143,134	64.3%	18,920,578	11,914,991	63.0%
	Levis 501, Black	982,838	656,477	66.8%	301,106	153,594	51.0%	183,283	141,779	77.4%	238,966	179,745	75.2%	259,483	181,359	69.9%
	Levis 501, Blue	6,783,844	4,438,856	65.4%	1,649,002	996,014	60.4%	1,359,434	1,000,904	73.6%	1,850,780	1,258,762	68.0%	1,924,628	1,183,175	61.5%
	Levis 501, White	1,076,641	646,579	60.1%	250,740	118,434	47.2%	203,316	153,358	75.4%	327,229	224,180	68.5%	295,355	150,607	51.0%
	Levis, Blue XXL	1,167,736	692,437	59.3%	269,812	130,167	48.2%	141,168	104,439	74.0%	386,666	243,493	63.0%	370,091	214,339	57.9%
	Levis, Lime XL	5,303,327	3,334,150	62.9%	1,542,278	844,340	54.7%	696,467	538,350	77.3%	1,451,410	954,088	65.7%	1,613,171	997,372	61.8%
	Levis 502, White	11,727,698	7,592,288	64.7%	3,286,057	2,030,181	61.8%	1,842,014	1,240,679	67.4%	3,083,467	2,088,290	67.7%	3,516,160	2,233,138	63.5%
	Marlboro Classic, Brown	17,503,997	11,360,467	64.9%	4,997,909	3,174,638	63.5%	2,348,979	1,625,611	69.2%	4,497,632	2,947,818	65.5%	5,659,476	3,612,400	63.8%
	Marlboro Classic, Sand	14,936,989	9,239,974	61.9%	3,314,943	1,979,198	59.7%	2,409,031	1,671,416	69.4%	3,930,801	2,246,759	57.2%	5,282,214	3,342,601	63.3%
	Total	15,939,790	10,126,293	63.5%	3,590,462	2,089,941	58.2%	2,805,241	2,043,845	72.9%	4,553,031	2,761,325	60.6%	4,991,057	3,231,181	64.7%
SHIRTS	Boss Casual, Blue L	29,981	18,702	62.4%	29,981	18,702	62.4%									
	Boss Casual, Blue S	226,798	130,244	57.4%	43,908	35,445	80.7%	57,387	43,259	75.4%	56,311	11,067	19.7%	69,192	40,474	58.5%
	Boss Casual, Blue XL	5,566,892	3,229,634	58.0%	920,986	418,753	45.5%	1,051,226	743,681	70.7%	1,852,638	1,005,332	54.3%	1,742,042	1,061,868	61.0%
	Boss Casual, Sand M	1,660,807	973,448	58.6%	435,370	227,263	52.2%	241,716	171,695	71.0%	437,119	234,427	53.6%	546,602	340,063	62.2%
	Boss Casual, Sand S	216,278	169,546	78.4%	62,663	36,607	58.4%	40,142	49,773	124.0%	48,266	38,059	78.9%	65,206	45,107	69.2%
	Boss Casual, Sand XL	191,411	117,969	61.6%	35,148	13,623	38.8%	35,712	21,634	60.6%	53,427	38,700	72.4%	67,124	44,013	65.6%
	Boss Casual, White M	5,144,645	3,605,328	70.1%	1,396,378	955,683	68.4%	880,989	641,253	72.8%	1,306,350	926,686	70.9%	1,560,929	1,081,706	69.3%
	Boss Casual, White XL	2,902,978	1,881,423	64.8%	666,028	383,866	57.6%	498,068	372,551	74.8%	798,920	507,055	63.5%	939,962	617,951	65.7%
	Total	30,765,884	19,278,607	62.7%	7,587,437	4,411,405	58.1%	5,083,721	3,719,835	73.2%	8,045,586	4,814,334	59.8%	10,049,140	6,333,034	63.0%
	Armani, Sand L	289,011	199,188	68.9%	105,439	76,613	72.7%	52,128	35,129	67.4%	90,638	57,351	63.3%	40,806	30,095	73.8%
T-SHIRTS	Armani, Sand S	2,040,260	1,369,785	67.1%	618,258	421,164	68.1%	225,431	163,086	72.3%	598,571	378,518	63.2%	597,999	407,017	68.1%
	Armani, White L	6,972	2,511	36.0%	6,972	2,511	36.0%									
	Armani, White S	297,827	220,534	74.0%	103,288	81,808	79.2%	73,026	64,990	89.0%	81,656	43,680	53.5%	39,858	30,056	75.4%
	Armani, White XL	260,307	153,170	58.8%	137,786	71,354	51.8%	59,940	45,774	76.4%	29,203	10,163	34.8%	33,378	25,879	77.5%
	Boss Casual, Blue M	14,040	11,477	81.7%							14,040	11,477	81.7%			
	Boss Casual, Grey M	805,971	391,651	48.6%	223,953	77,504	34.6%	116,405	77,737	66.8%	237,663	114,911	48.4%	227,950	121,500	53.3%
	Boss Casual, Grey XL	431,507	278,291	64.5%	130,078	70,581	54.3%	54,035	43,264	80.1%	88,776	62,549	70.5%	158,619	101,897	64.2%
	Boss Casual, White M	178,278	136,474	76.6%				54,456	42,056	77.2%				123,822	94,418	76.3%
	Boss, Black M	18,977	9,856	51.9%	15,468	11,938	77.2%	-8,605	-11,701	136.0%				12,114	9,619	79.4%
	Boss, Black XL	1,744,548	919,146	52.7%	440,580	169,011	38.4%	424,733	301,279	70.9%	382,245	159,784	41.8%	496,990	289,071	58.2%
Boss, Grey M		569,148	358,345	63.0%	117,582	74,424	63.3%	149,582	105,592	70.6%	170,058	103,468	60.8%	131,927	74,861	56.7%
	Boss, Grey XL	588,800	374,658	63.6%	151,204	104,276	69.0%	70,222	44,015	62.7%	183,438	98,591	53.7%	183,936	127,776	69.5%

Designer mode

Ready

84%

## Task 2

Try out some different trigger behaviors from the Details button in the three dashboards:

- From *Sales Dashboard Asia*:
  - Open Sales Details document with **Saved criteria only**.
- From *Sales Dashboard Europe*:
  - Open Sales Details document with **transfer/replace all criteria**.
- From *Sales Dashboard North America*:
  - Open Sales Details document with **transfer/replace all criteria except Salesperson criteria**.

## Task 3

Open the *Sales Dashboard North America* and add a trigger (transfer/replace all criteria) from the crosstab to the Sales Detail document.

Now, what happens when you click one of the Salespersons in this crosstab?



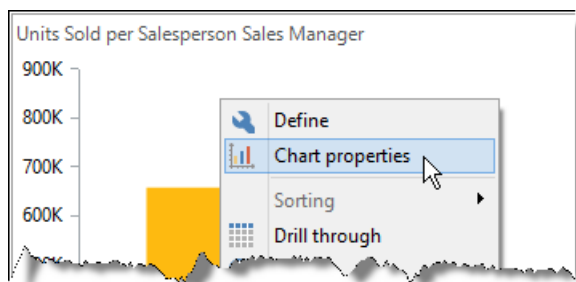


## Lesson 5: Advanced Labels

The formatting options for titles, labels and mouse over allows you to show detailed information about the data behind the objects but still keep a tight analysis design.

### General

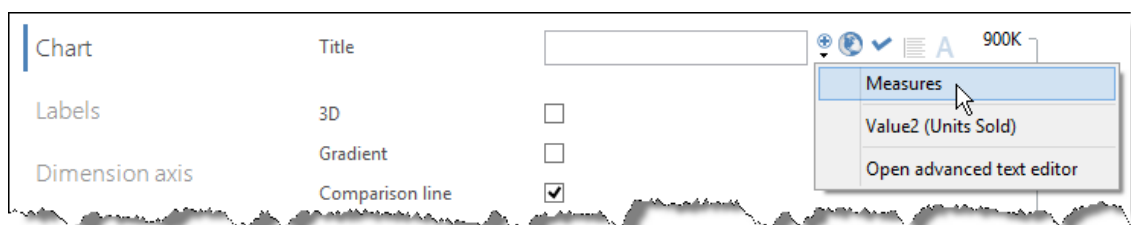
All the formatting options can be found in the properties for the individual object. Right click the object to get access to the properties.



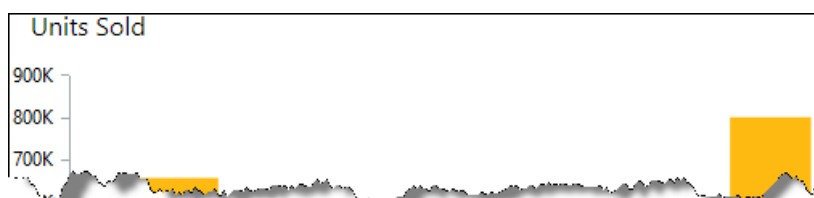
The properties are very similar and uses drop-down menus. The number of "default" options varies from object to object. You can also open a text editor for more advanced formatting. We will walk through all three subjects in this demo.

### Titles

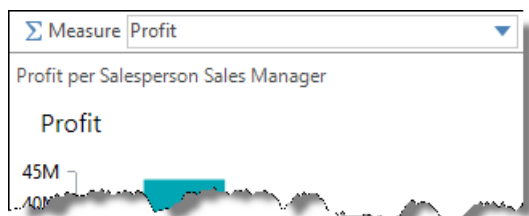
In the object title, you can insert the measure option. This will change the object title dynamically if you use the measure selector in the analysis.



The title can be translated and the font formatted if needed.

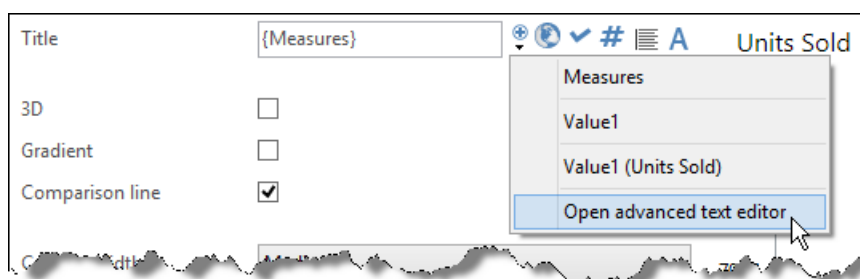


Now, add the measure selector to the criteria bar and see what happens when we change the measure.

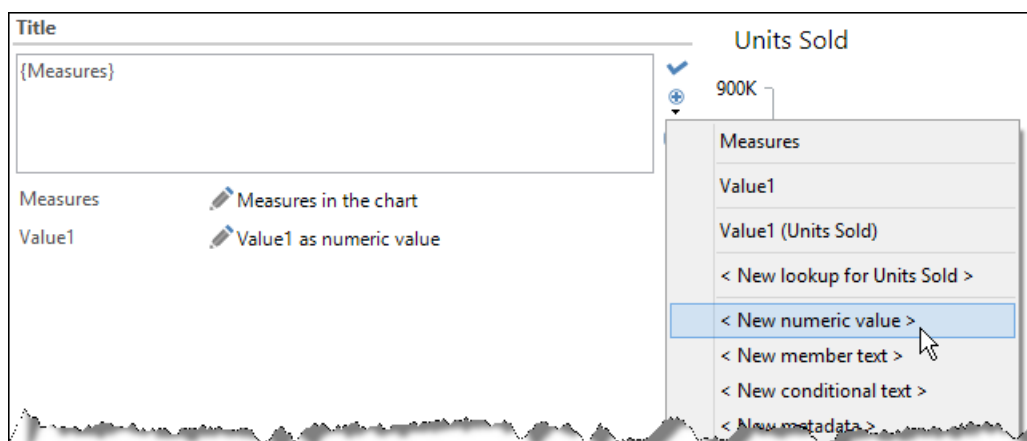


We can refine the title so that it shows the measure name, the grand total for the measure and perhaps an average.

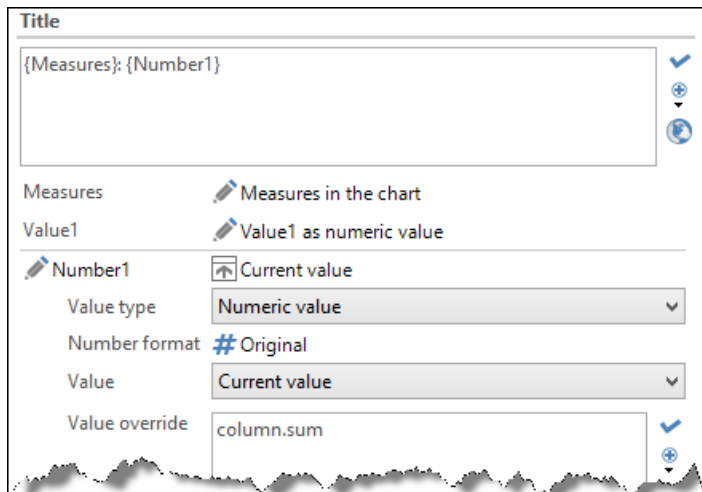
Click the small drop-down arrow to open the advanced text editor.



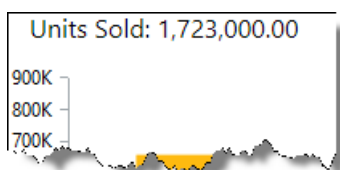
Place the cursor to the right of {Measures} click the drop-down arrow again and select <New numeric value>



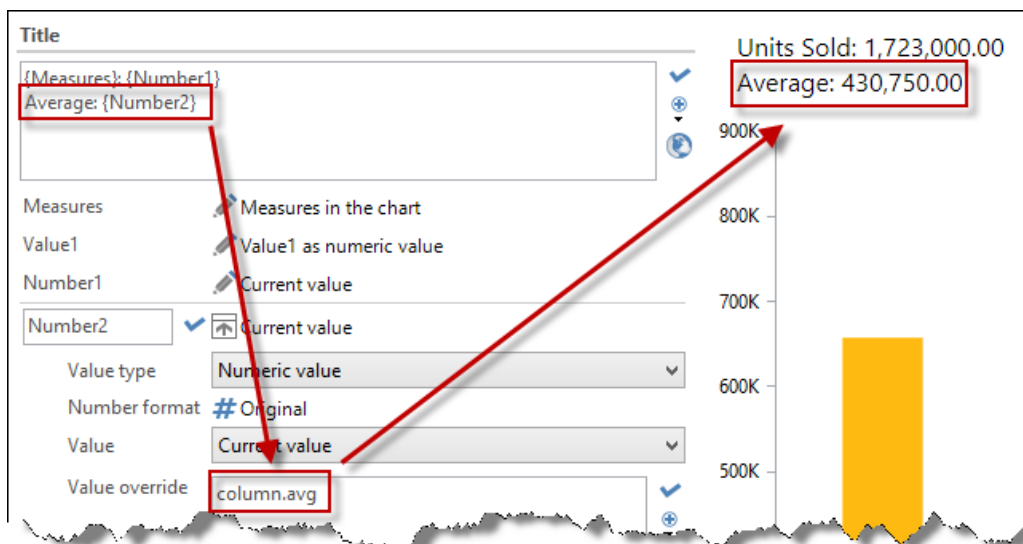
Now we have added a new value to the title. This value can be used in different ways but we just enter a simple calculation **column.sum** that calculates the total units sold.



There are a number of different calculations. The most useful will typically be average (avg), total (sum), minimum (min) and maximum (max) calculations.

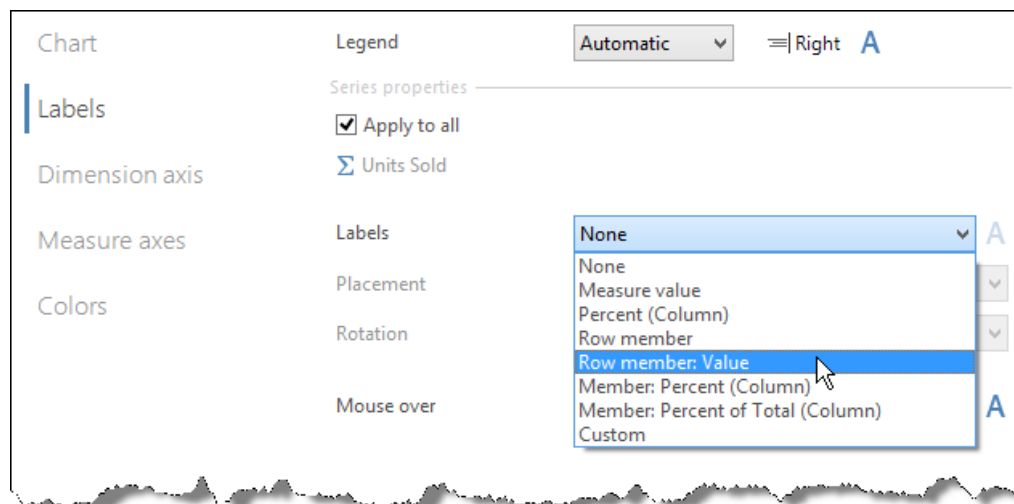


E.g., this is how to add an Average function:

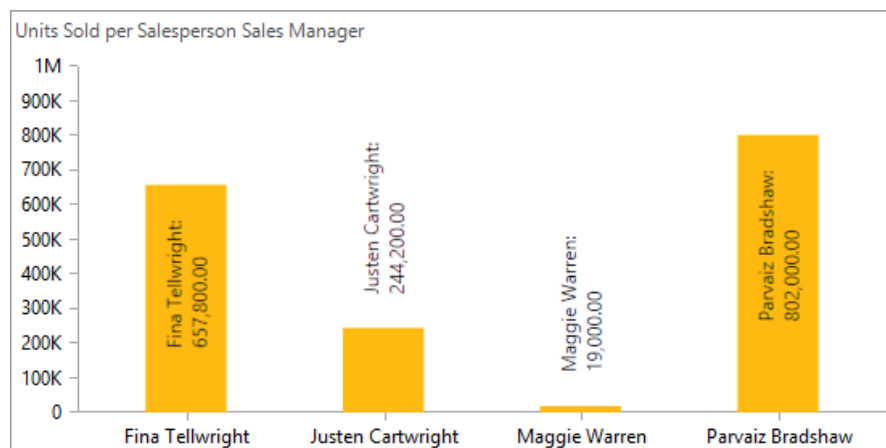


## Labels

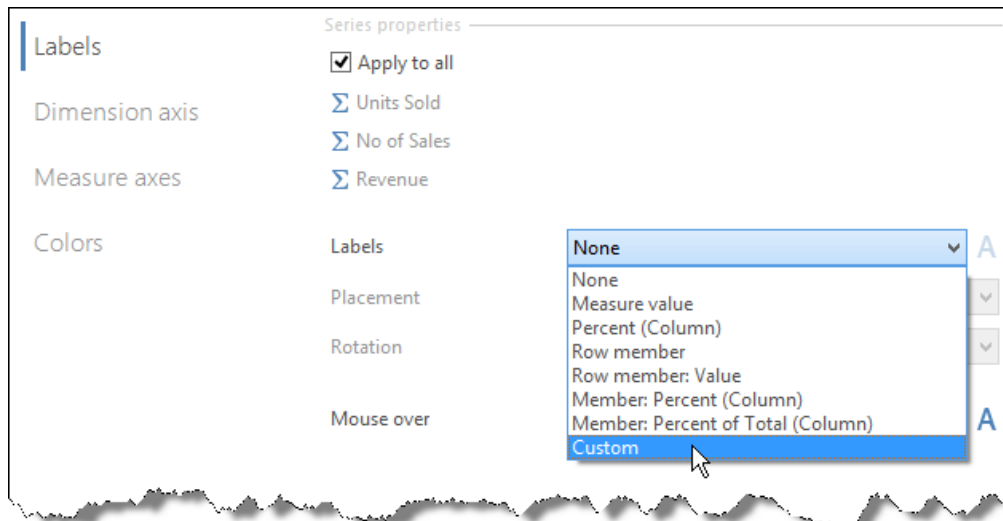
The settings for showing labels are the same apart from the options for placement and rotation.



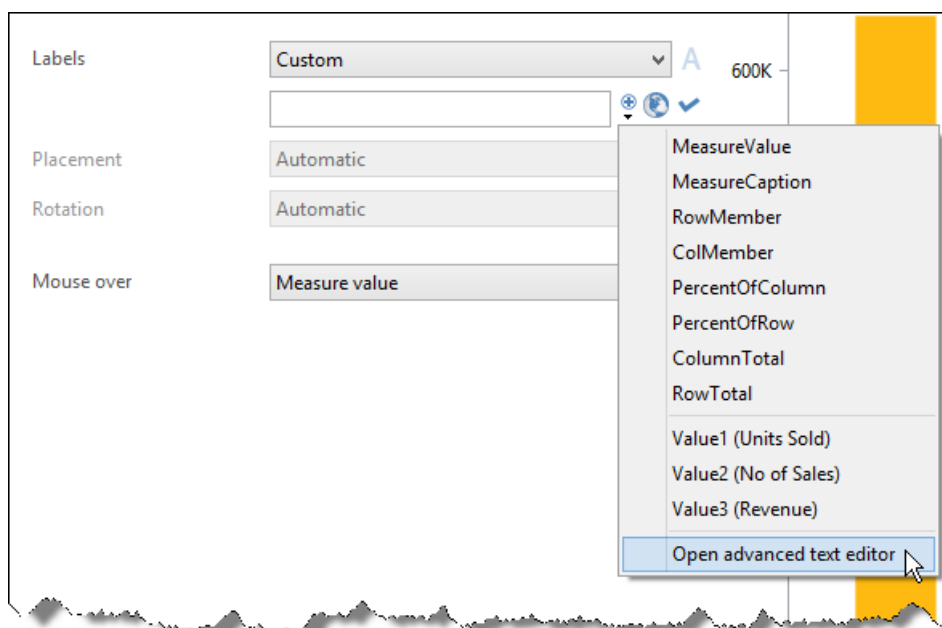
This default option will show the result below. The dimension value and the measure value are shown for each column.



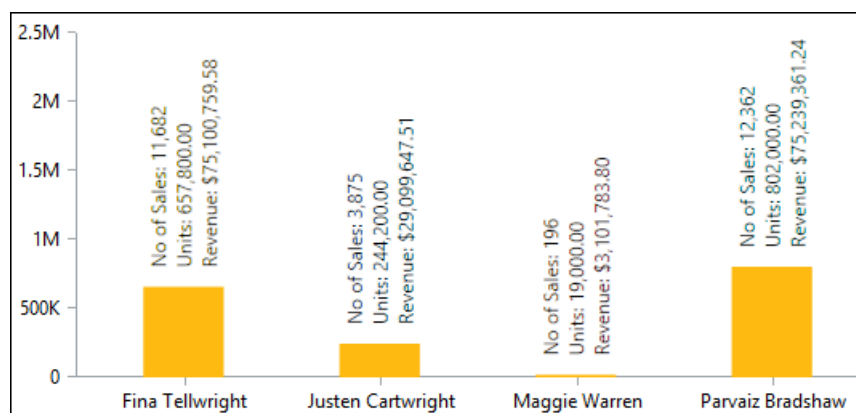
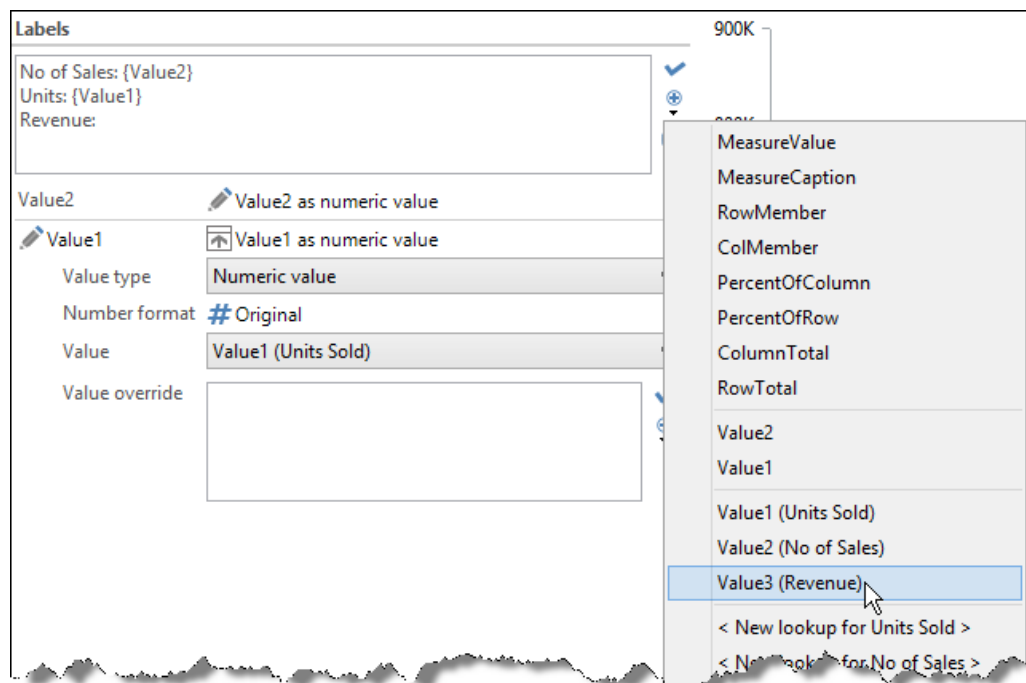
In the next example we add No of Sales and Revenue to our chart. The only reason for this is to be able to show the values in our labels, so we hide these measures through *Properties / Visibility*



In the drop-down, click Custom and then Open advanced text editor.



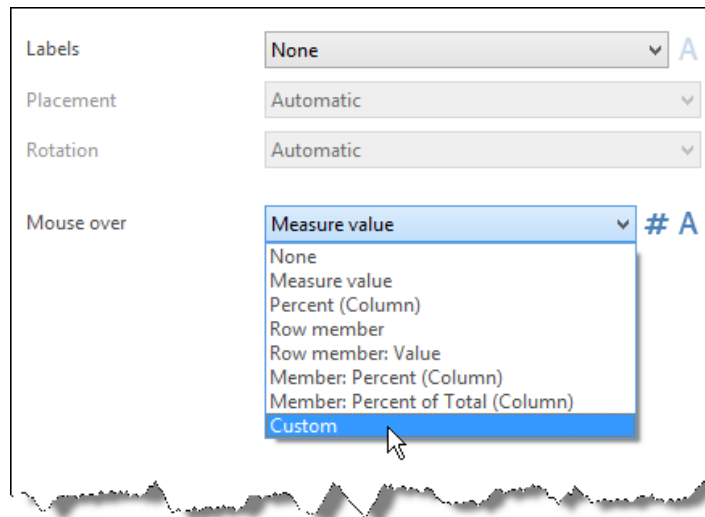
We can use a fixed text as a prefix followed by the appropriate values {Value2}, {Value1} or {Value3} in whatever order you like.



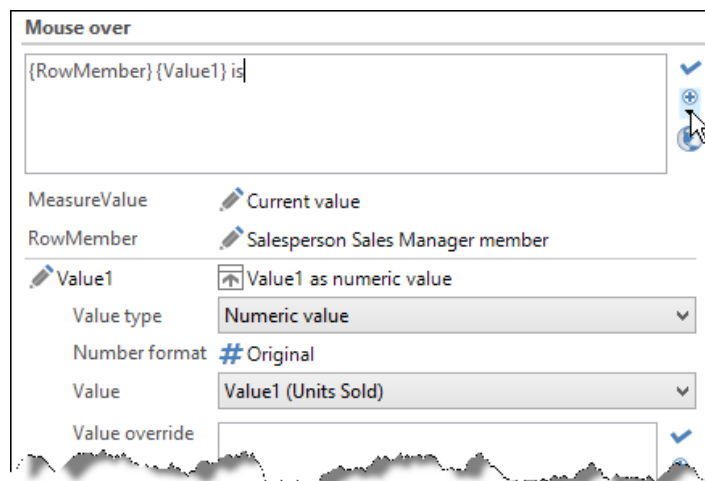
## Mouse over

When you place your mouse on a dimension value in a chart, you can get more or less detailed information as shown above, so we are going to look at a few advanced options.

One option could be to show if Units Sold for the managers is above or below the average Units Sold.

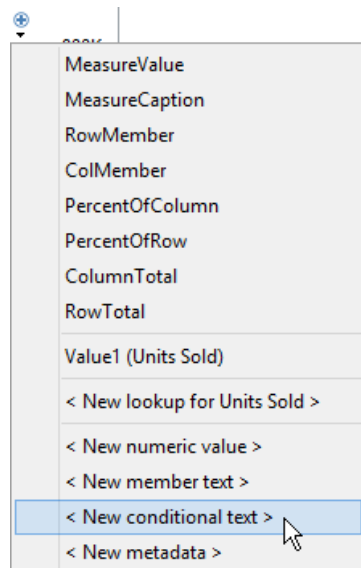


Open the advance text editor again.

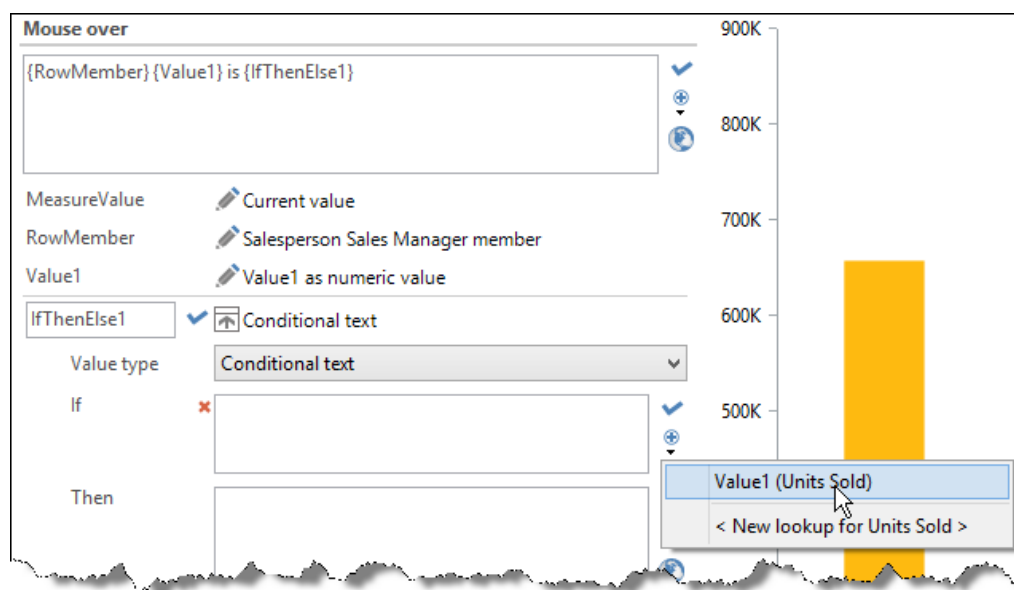


We can combine placeholders for values with fixed text. Here we use two placeholders from the drop-down list, {RowMember} (Sales Manager) and {Value1} (Units Sold) and a fixed "is".

Now we insert a conditional text (If – Then – Else). Click the drop-down arrow and select <New conditional text>



Remove the number 1 in the "if" statement box and select Value1 in the drop down menu.



Then enter the formula for testing if Value1 (Units Sold) is greater than Column.avg (Average). Next, click Apply.





Enter the text in the "Then" box. Click Apply.

Then

above average

Apply

Next, click *Else if* to enter a text for the values that are less than average.

IfThenElse1 ✓ Conditional text

Value type Conditional text

If ✗ Value1 > Column.avg ✓

Then above average ✓

+ Else if ✓

Now enter the text "less than average" and click apply

IfThenElse1 ✓ Conditional text

Value type Conditional text

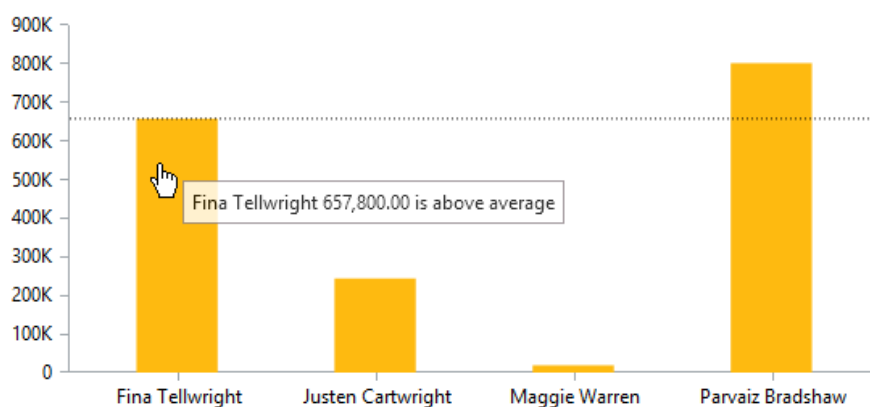
If ✗ Value1 > Column.avg ✓

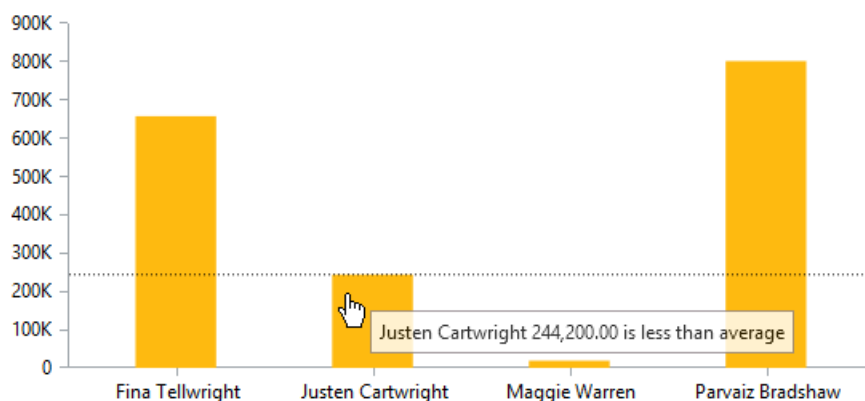
Then above average ✓

Else if ✗ 1 ✓

Then less than average ✓

Apply



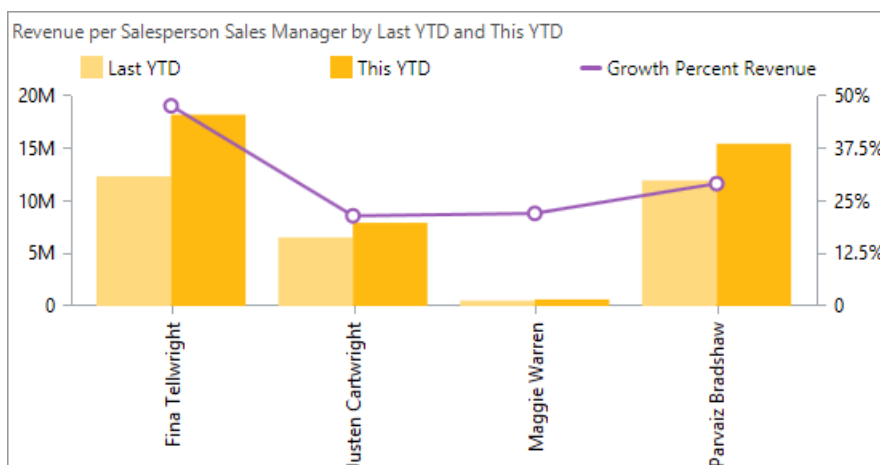


Next, we create a new cross table with a comparison and a calculation in it.

Revenue per Salesperson Sales Manager by Last YTD and This YTD

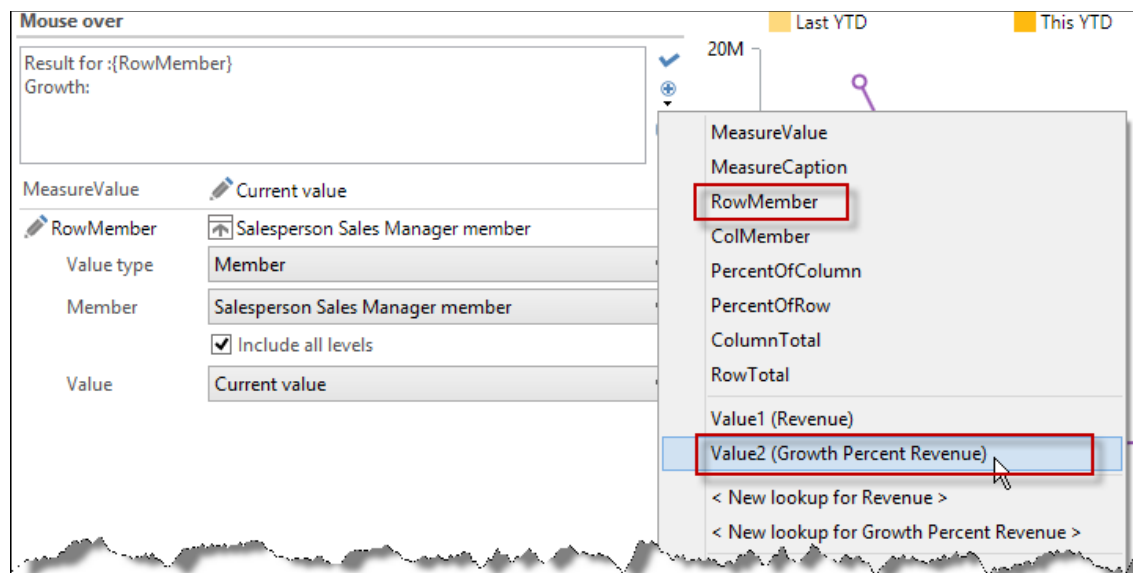
		Last YTD	This YTD	Growth Percent Revenue
<b>Total</b>		<b>\$31,363,900.88</b>	<b>\$42,258,729.98</b>	<b>34.74%</b>
Fina Tellwright	+	\$12,349,736.14	\$18,238,571.22	47.68%
Justen Cartwright	+	\$6,523,526.30	\$7,925,781.19	21.50%
Maggie Warren		\$520,759.80	\$635,684.40	22.07%
Parvaiz Bradshaw	+	\$11,969,878.64	\$15,458,693.18	29.15%

With a few adjustments, we get a result like this:



We want our mouse over to show combinations of fixed text and values for our comparison, our growth calculation and our dimension values.

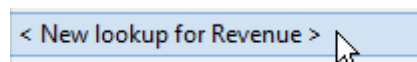
We open the advanced text editor right away:



We type "Result for:" and select {RowMember} (Sales Manager).

Nest, we type "Growth:" and find {Value2}, which we can see from the drop-down, is Growth Percent Revenue.

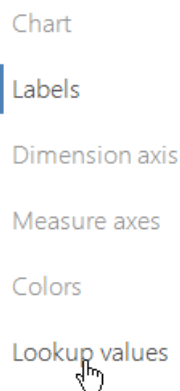
We type some more prefixes "Last year to date:" and "Year to date:" and finally find <New lookup for Revenue>



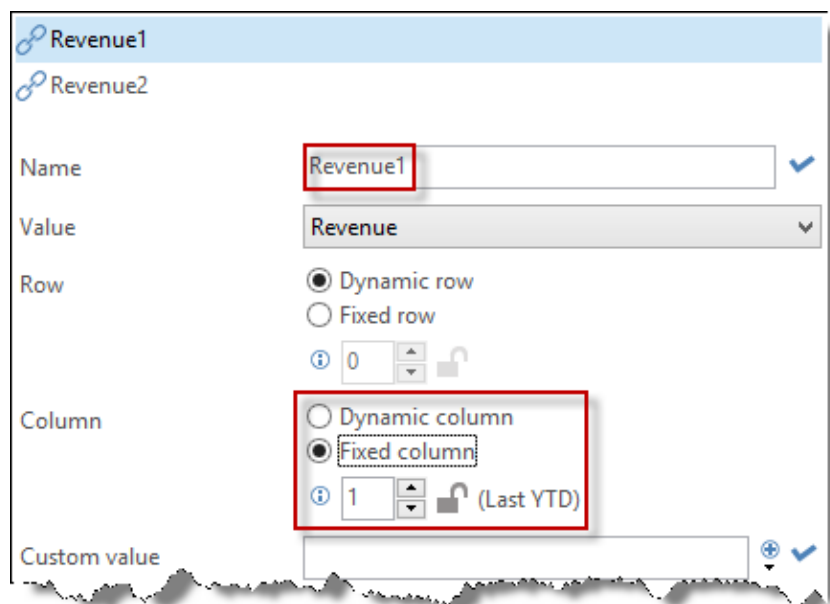
We select this lookup twice and get the following result:

```
Last year to date: {Revenue1}
Year to date: {Revenue2}
```

When we added the first lookup value, we got an extra tab in our diagram menu:

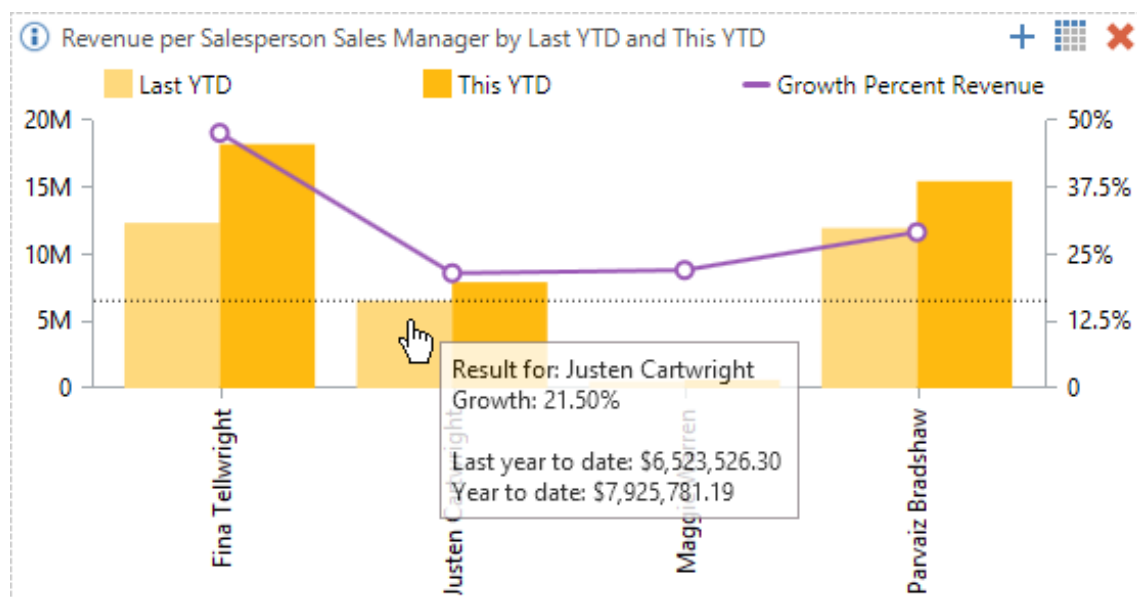


The Revenue1 placeholder should point at the column with data for last year to date. The data is in the first column if we look inside the cross table.



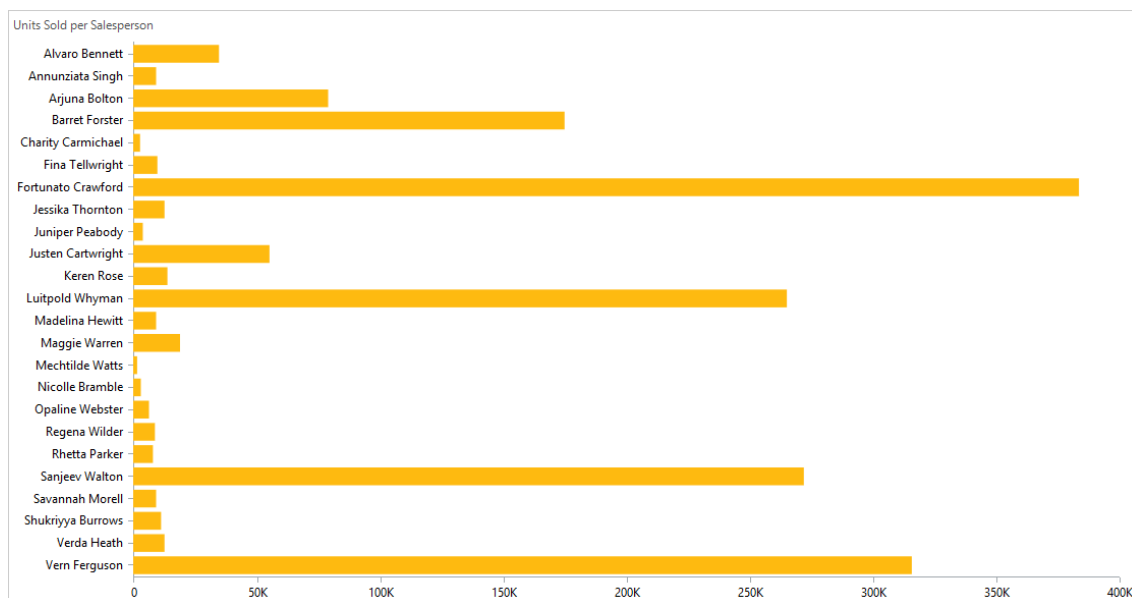
Revenue2 should point at column2 which shows the data for this year to date.

The screenshot shows the configuration for a visualization element named 'Revenue2'. The 'Name' field is set to 'Revenue2'. The 'Value' field is set to 'Revenue'. The 'Row' property is set to 'Dynamic row' with a value of '0'. The 'Column' property is set to 'Fixed column' with a value of '2 (This YTD)'. Red boxes highlight the 'Name' and 'Column' fields.



## Conditional axis formatting

If you have a bar chart like the one below where there is a large difference in the data, then it can be difficult to rank the smallest bars or to be able to use them for drill-down because of their size.



Let us reduce the maximum scale.

Chart

Bottom Top

Labels

Title

None

A

Dimension axis

Axis line

Thin

Solid

Measure axes

Grid line

None

Solid

Colors

Labels

Automatic angle

# A

Minimum

Automatic

✓

Maximum

Custom

50000

✓

Interval

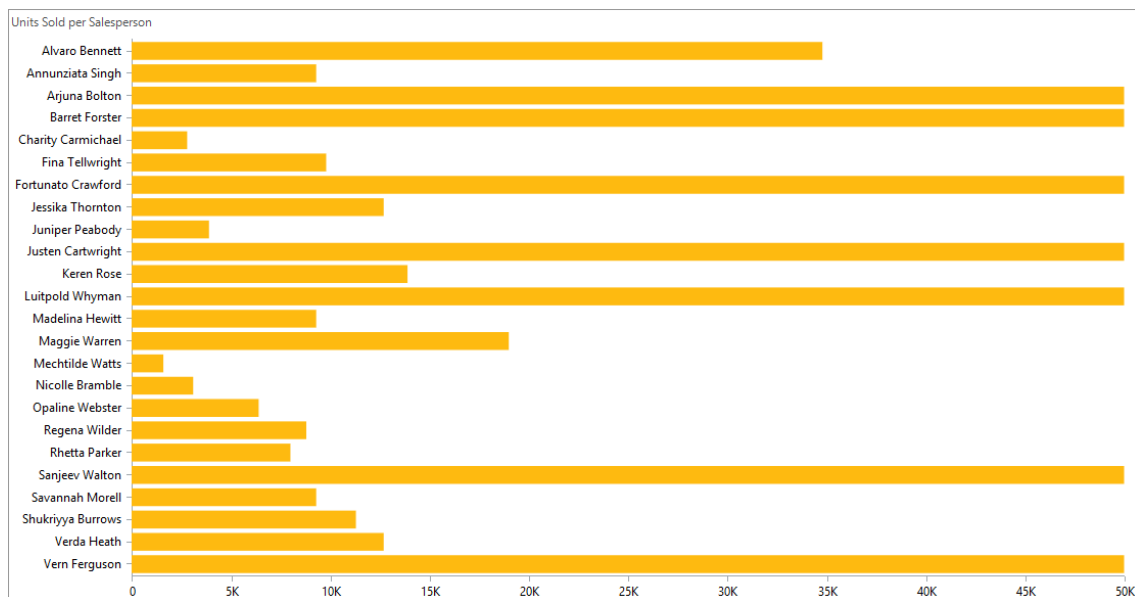
Automatic

✓

Axis area height

0

The bars that shows the lowest values have become more visible.



However, at the same time some bars that “fall over the edge” because they represent values that exceed the axis maximum.

We can clarify this if we add a conditional text for these bars. We grab the advanced text editor once more.

#### Labels

{IfThenElse1}

IfThenElse1

Conditional text

Value type

Conditional text

If

✖ Value1 > 50000

✓

Then

Value exceed max.: {MeasureValue}

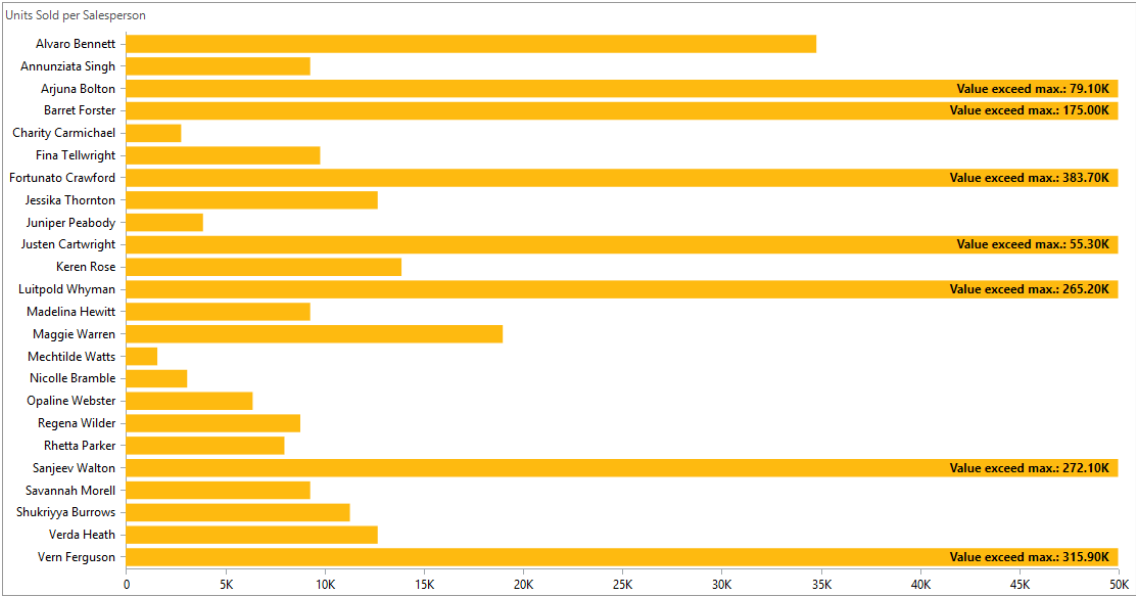
✓

⊕ Else if

MeasureValue

Current value

With additional formatting, we can get this result.





## Exercises Lesson 5

(Screenshots and exercises are based on version 2018.3 demo data. If you working on an earlier or later version you may need to subtract or add 1 year to achieve similar results.)

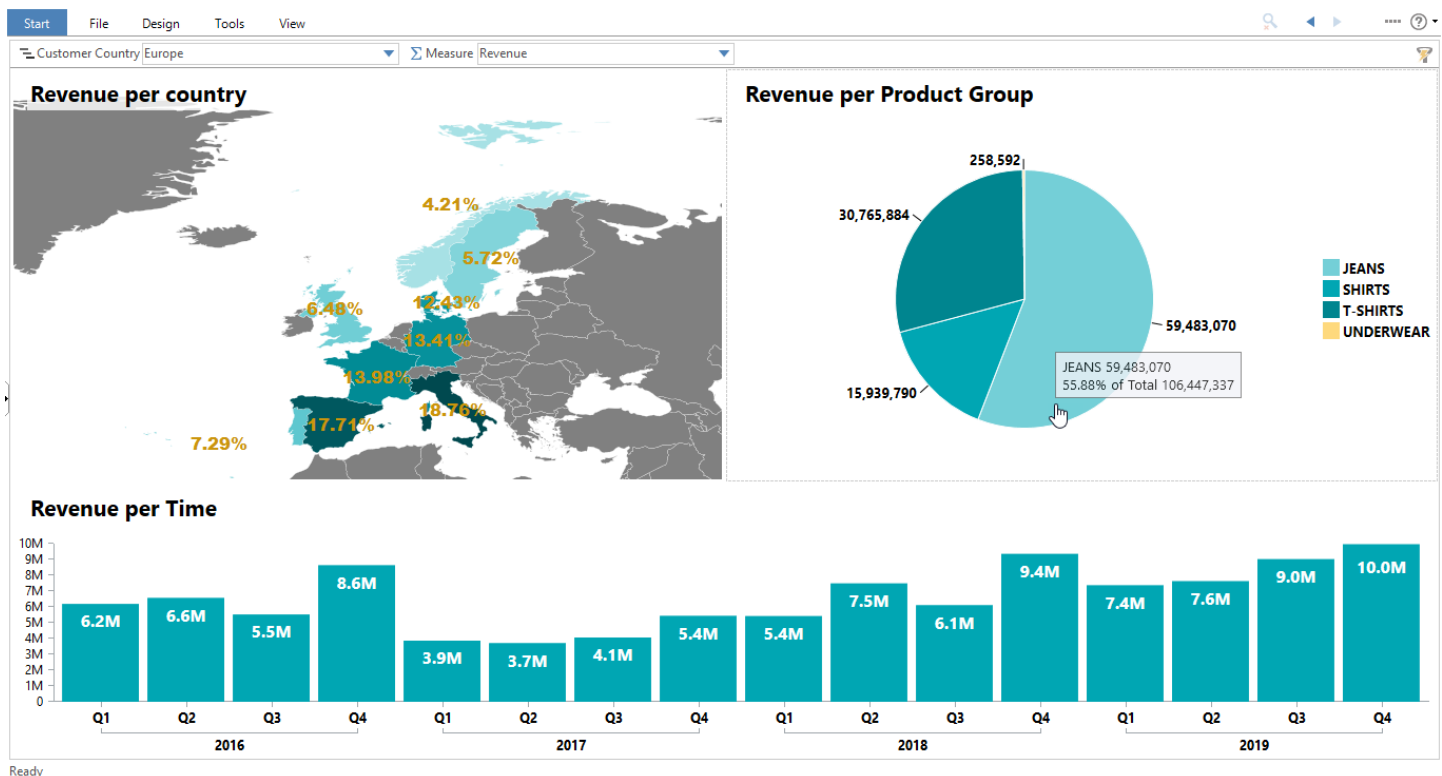
### Task 1

Create an analysis with...

- Area map chart: **Revenue** per **Customer Country (attribute)**.
- Pie chart: **Revenue** per **Product Hierarchy (Product Group)**.
- Column chart: **Revenue** per **Time hierarchy (Quarter)**.

Add the measure selector to the criteria bar and make sure that the object titles reflect the measure selected.

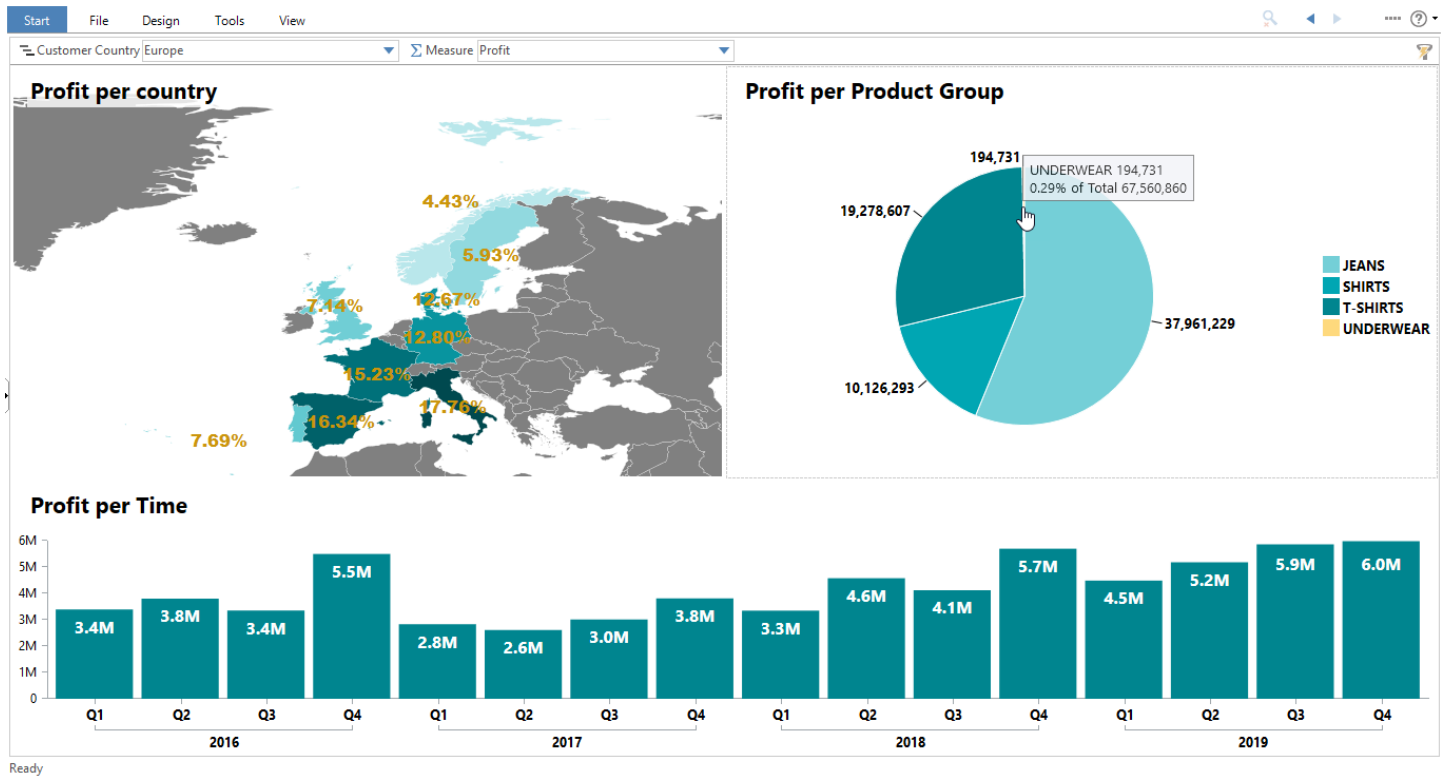
The analysis could look like this. Please notice criteria and selected measure.



Observe the following:

- Labels on all three objects.
- Mouse over on Pie chart.

Moreover, when using the Measure selector to select Profit:



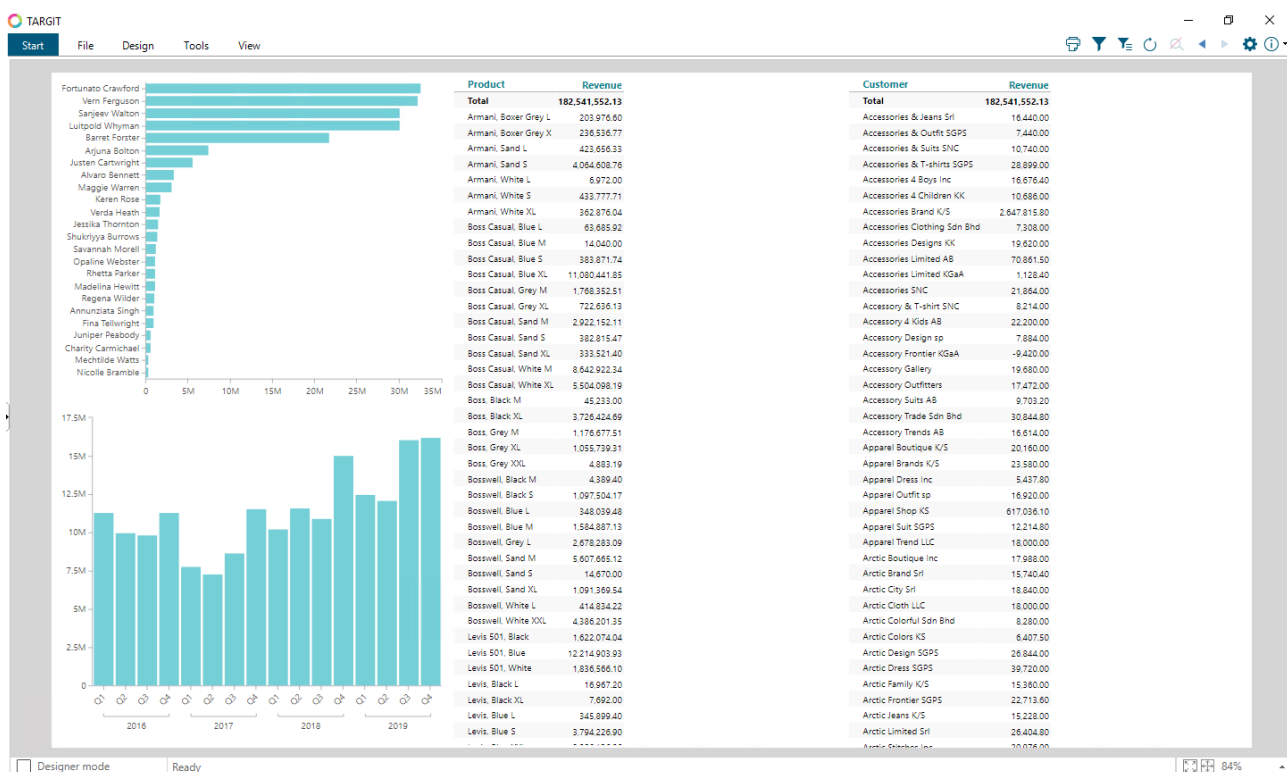
Save the analysis as **Lesson 6 Advanced Labels**.

## Lesson 6: Drill Downs and Required Criteria

You can design your analyses to nudge the end-user through the objects in a desired sequence. You can insert specially designed objects, whose only purpose is to work as a “filter selectors”. These types of objects will often be able to replace the need to work with filters from the Criteria Bar.

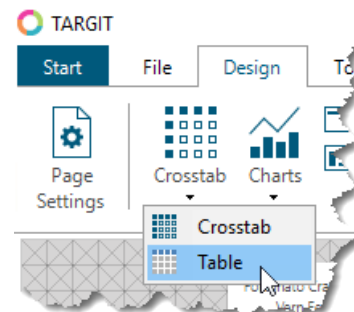
Furthermore, with the concept of *Required Criteria*, you can prevent certain objects to load huge, confusing and time-consuming amounts of data before the end-user have applied the required filters.

The analysis below shows Revenue split on four different dimensions:



## Drill down objects

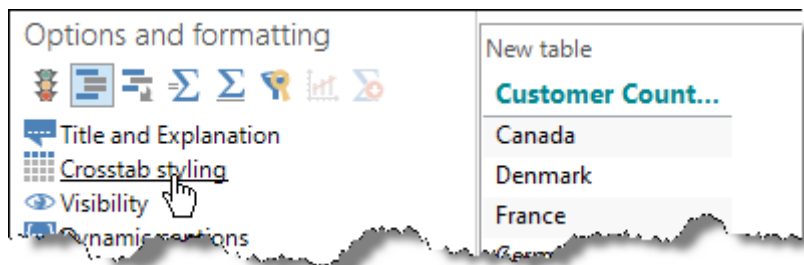
Instead of adding dimensions to the criteria bar, we will add 3 *tables*, containing dimension only. The *simple table* can be found in the Design ribbon in the Charts section.



This table will allow the users to filter the data by drilling down on the countries in the table.



The table uses the standard format defined for all cross tables. You can choose not to re-format but you can change the properties for the crosstab theme.



The dialogue box offers many options for changing / adding various themes. When a new theme has been added, you can save it for later use.

However, this is not a crosstab but the column header has to be changed here. Click the element and choose the property to change. Here we want to change the font size for Column label 1.

**Crosstab Theme**

Theme

Custom

Style

Target

Default theme

Column label 1	http://url.com	Label	Label	Label	Label
Column label 2	http://url.com	1234	1234	1234	1234
Data row 1	http://url.com	1234	1234	1234	1234
Data row 2	http://url.com	1234	1234	1234	1234
Selected row 1	http://url.com	1234	1234	1234	1234
Selected row 2	http://url.com	1234	1234	1234	1234
Data row 1	http://url.com	1234	1234	1234	1234
Data row 2	http://url.com	1234	1234	1234	1234
Text row					

Select theme item in the sample above to edit, or right-click to copy or paste

Column labels

- Left
- Top
- Right
- Background **Segoe UI, 12 (Bold)**
- URL

Stored Themes

Reporting theme

Column label 1	http://url.com	Label	Label	Label	Label
Column label 2	http://url.com	1234	1234	1234	1234
Data row 1	http://url.com	1234	1234	1234	1234
Data row 2	http://url.com	1234	1234	1234	1234
Selected row 1	http://url.com	1234	1234	1234	1234
Selected row 2	http://url.com	1234	1234	1234	1234
Data row 1	http://url.com	1234	1234	1234	1234
Data row 2	http://url.com	1234	1234	1234	1234
Text row					

Default theme

Column label 1	http://url.com	Label	Label	Label	Label
Column label 2	http://url.com	1234	1234	1234	1234
Data row 1	http://url.com	1234	1234	1234	1234
Data row 2	http://url.com	1234	1234	1234	1234
Selected row 1	http://url.com	1234	1234	1234	1234
Selected row 2	http://url.com	1234	1234	1234	1234
Data row 1	http://url.com	1234	1234	1234	1234
Data row 2	http://url.com	1234	1234	1234	1234
Text row					

A simple way of changing the row formats is by right clicking a row

New table

**Customer Country**

- Canada
- Denmark
- France
- Germany
- Italy
- Japan
- Malaysia
- Mexico
- Norway
- Portugal
- Spain
- Sweden
- United Kingdom
- United States

Define

Crosstab styling

Agent

Actions

Sorting

Edit

Data

**Table**

Criteria

Arrange

Totals and Subtotals

Column widths

☒ Word wrap

Text row

☒ Autodetect URLs

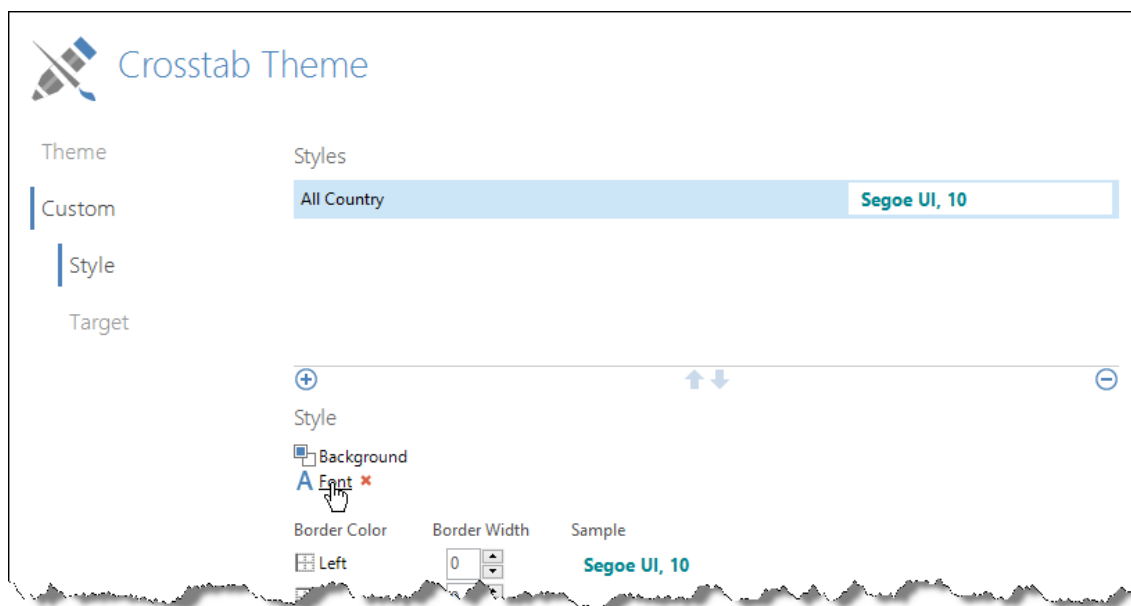
**Format all members on this level**

Format this member

Dynamic captions

☒ Indent hierarchies

And then change the font in the exactly same way



When the first table has been formatted, you can copy it (Ctrl+C -> Ctrl+V) and then re-define the table to change the dimension.

You can clarify the purpose of the table by entering an appropriate dynamic caption.

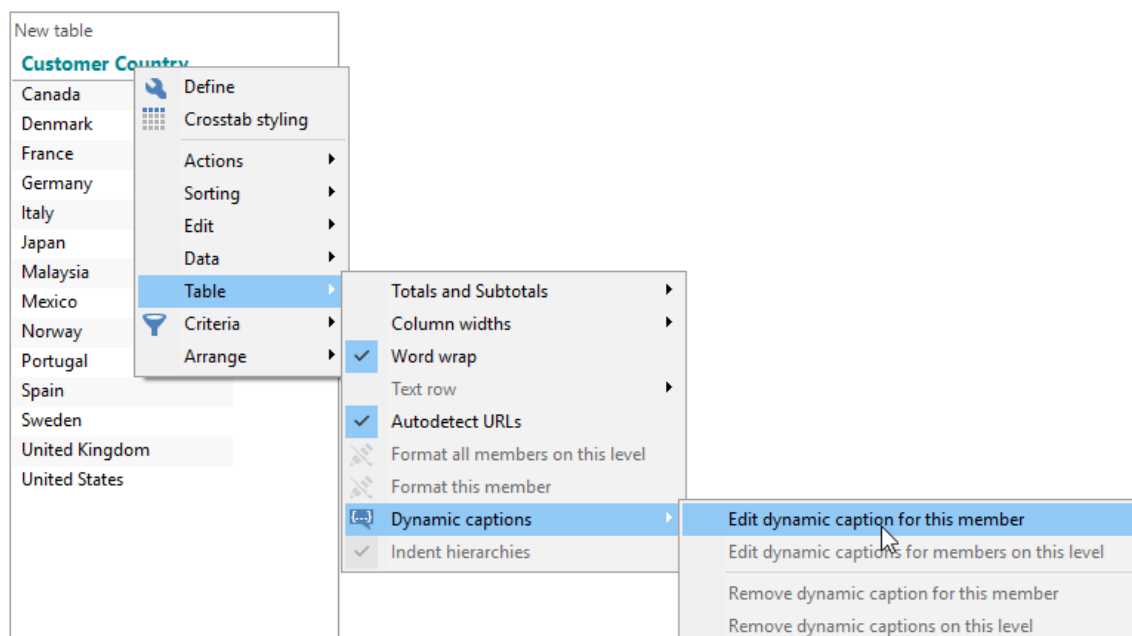
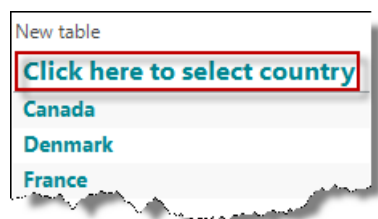
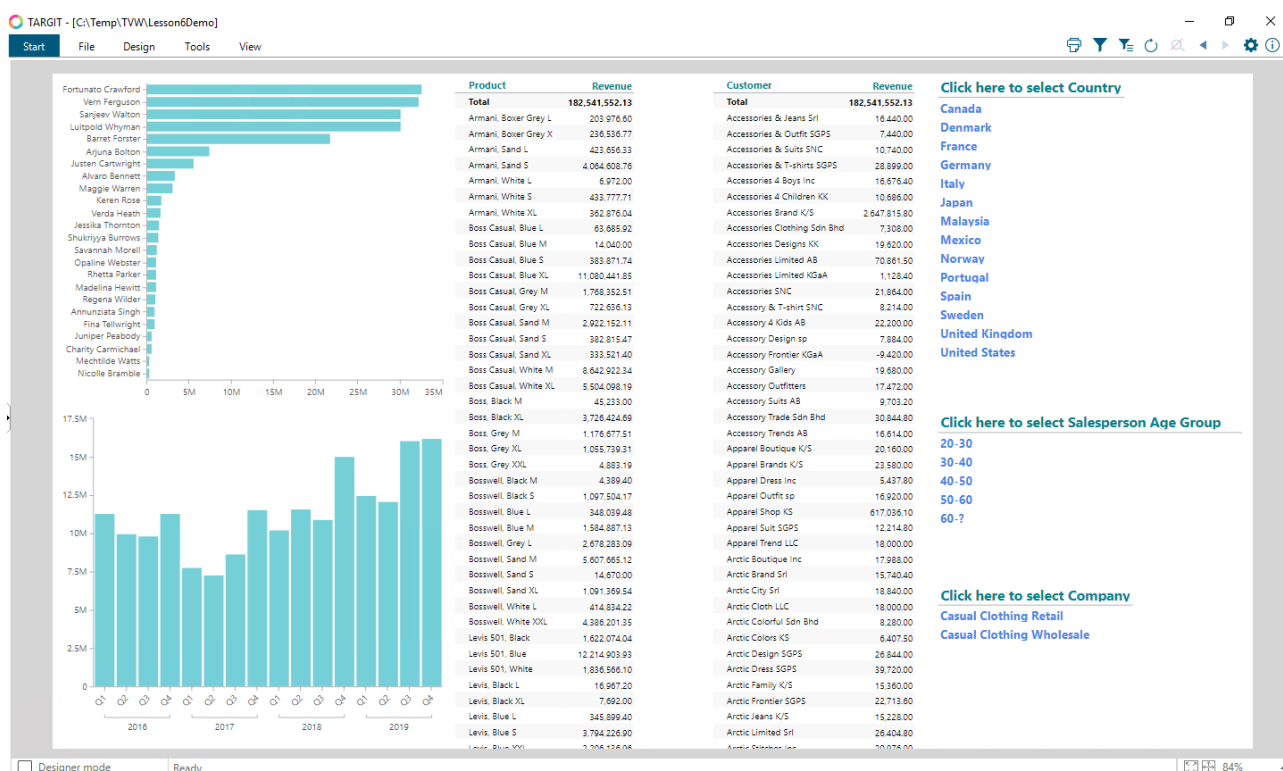


Table header changed with *Dynamic captions*.



The analysis is ready to use. You can experiment with the table placement in order to place them in the right spot and in the right order.



## Required criteria

The analysis has two cross tables with many rows. The amount of data in this demo version is limited, but in a live solution, the large amount of data can influence the load time of data in the analysis.

You can work with *Required criteria* from the right-click context menu.

The screenshot shows the 'Sales Analysis' app interface. The 'Product' column lists various items like 'Armani, Boxer Grey L' and 'Boss Casual, Sand S'. The 'Revenue' column shows values like '182,541,552.13'. The 'Customer' column lists various entities like 'Accessories & Jeans Srl' and 'Apparel Brands K/S'. A context menu is open over the 'Criteria' column header, showing options like 'Define', 'Crosstab styling', 'Agent', 'Actions', 'Sorting', 'Edit', 'Data', 'Table', and 'Criteria'. The 'Criteria' option is selected, and a sub-menu is open showing 'Behavior', 'Show explanation', 'Show criteria', 'Local criteria', 'Required criteria', and 'User dimensions'. The 'Required criteria' option is highlighted by the mouse cursor.

In this example, the Product crosstab should show data only when a country has been selected.

## Required criteria

Only fetch data when criteria are present on given dimensions

Dimensions

- ☒ All
  - ☒ DemoData
    - ☒ Sales
      - ☐ Company
      - ☒ Customer
        - ☐ Country
        - ☒ Country
        - ☐ Customer
        - ☐ Region
        - ☐ Territory
      - ☐ Product

Text to display when required criteria are missing

☐ Automatic    Insufficient criteria to fetch data, please apply criteria to Customer Country  
☐ Blank  
☒ Custom    

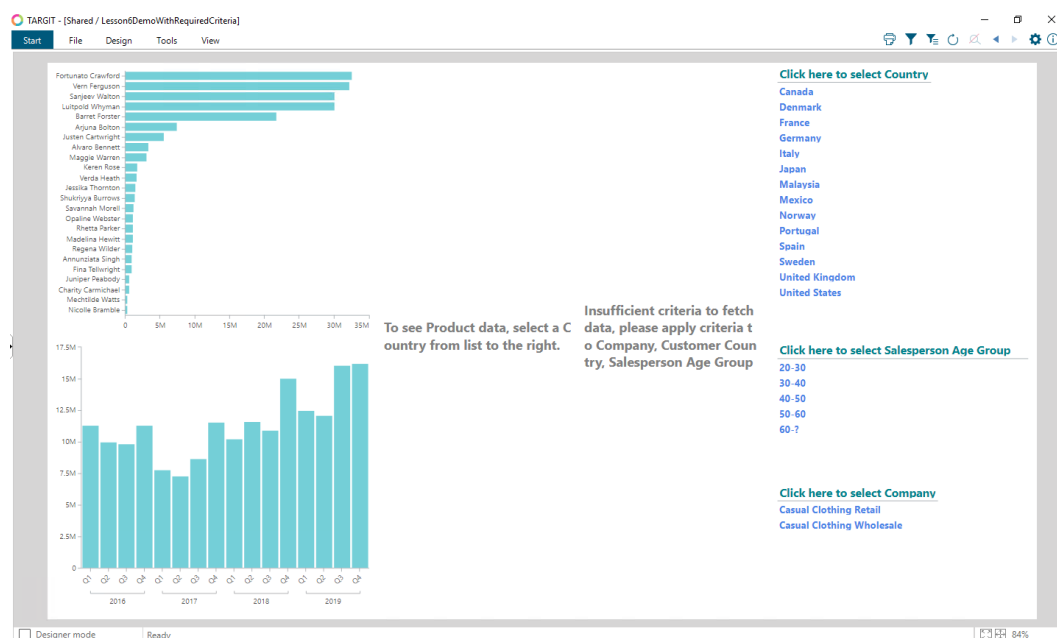
OK Cancel

Notice the *Custom* text option in this example.





In this example, custom text for missing required criteria has been added to the leftmost center table. The rightmost center table is using standard text for missing required criteria.



## Criteria ranges with custom values

Sometimes you need to specify a criteria that should include not only *existing* dimension members, but also *potential future* dimension members within a criteria range.


In the example to the right, we are looking at a long list of current Customers. Currently, there are about 30 customers whose first letter is a 'G', but in future we expect there to be more customers starting with a 'G'.

Customer	No of Sales
Frontier Outfitters KS	1
Frontier Vanity KK	1
Gallery Boutique	1
Gallery Class SNC	1
Gallery Closets LLC	1
Gallery Clothing KGaA	1
Gallery Clothing KS	1
Gallery Cotton K/S	1
Gallery Cotton SNC	1
Gallery Dress	1
Gallery Dresses Sdn Bhd	1
Gallery Limited Srl	1
Gallery Message sp	1
Gallery Tropics Srl	1
Gallery Wear sp	1
Gallery Young Sdn Bhd	1
Girls & Boys K/S	1
Girls Apparel Sdn Bhd	1
Girls Brands Srl	1
Girls City KGaA	1
Girls Clothing KK	1
Girls Color SGPS	1
Girls Design	1
Girls Dress Inc	1
Girls Fashion sp	2
Girls Hot Brand sp	1
Girls Lee's Srl	1
Girls Outfit Sdn Bhd	1
Girls Shirt KGaA	623
Girls Trends LLC	1
Girls Trends Sdn Bhd	1
Girls T-shirt KS	1
Girls T-shirts KS	1
Hip & Fine KGaA	1
Hip Baby Srl	1

The standard criteria search functionality in TARGIT allows you to search for those starting with a 'G', but then you will only be able to select those of the current dimension members that match the search string 'G\*'.

Instead, you can use the *Custom value* option. The *Custom value* option works best with *criteria ranges* – i.e. with use of the *Between* or *Greater than / Less than* operators.

To make sure that we select all Customers starting with a 'G' – current customers **and** future customers – we can set up the criteria range with *Between* operator and custom values like this:



## Global criteria

Select operator and members

Sales

Customer

Customer must be

☐ equal to  
☐ different from  
☐ less than  
☐ less than or equal to  
☐ greater than  
☐ greater than or equal to  
☒ between...  
☐ not between...

From: G

☒ Include

To: H

☐ Include

☐ List
 ☒ Custom value

G

☒ OK
 ☒ Cancel

Input must be text.  
Text must be precise in upper- and lowercase lettering.  
Example:  
Levis 501

☐ Auto-filter member list  
☐ Include empty members

OK

Cancel

Notice the handling of 'Include' on the two range end definitions.

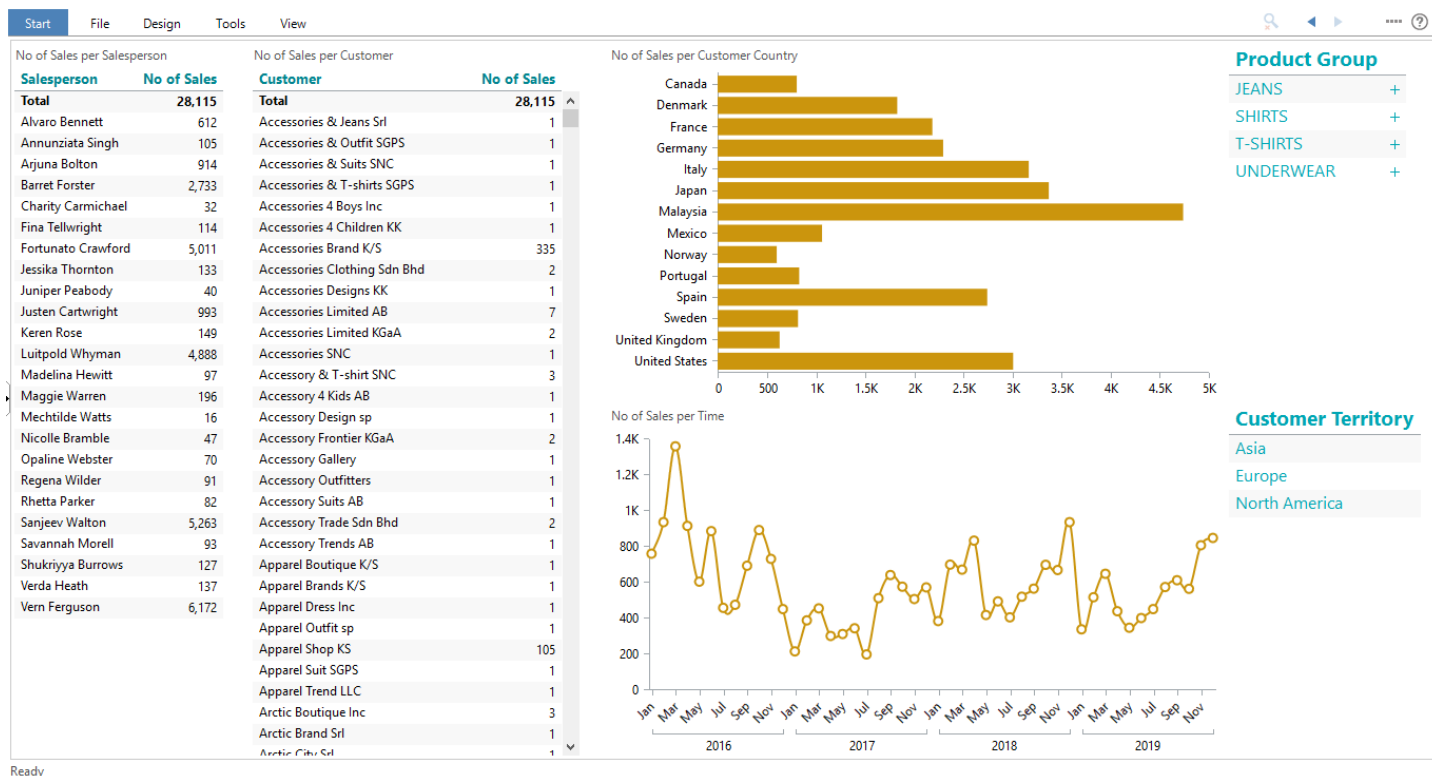
When a document with this type of criteria is opened, it will in fact do an alphabetical search on dimension members within the range. E.g., new customers 'G&D fashion' and 'gZ Style' will be included in this criteria.

## Exercises Lesson 6

(Screenshots and exercises are based on version 2019.0 demo data. If you are working on an earlier or later version you may need to subtract or add 1 year to achieve similar results.)

### Task 1

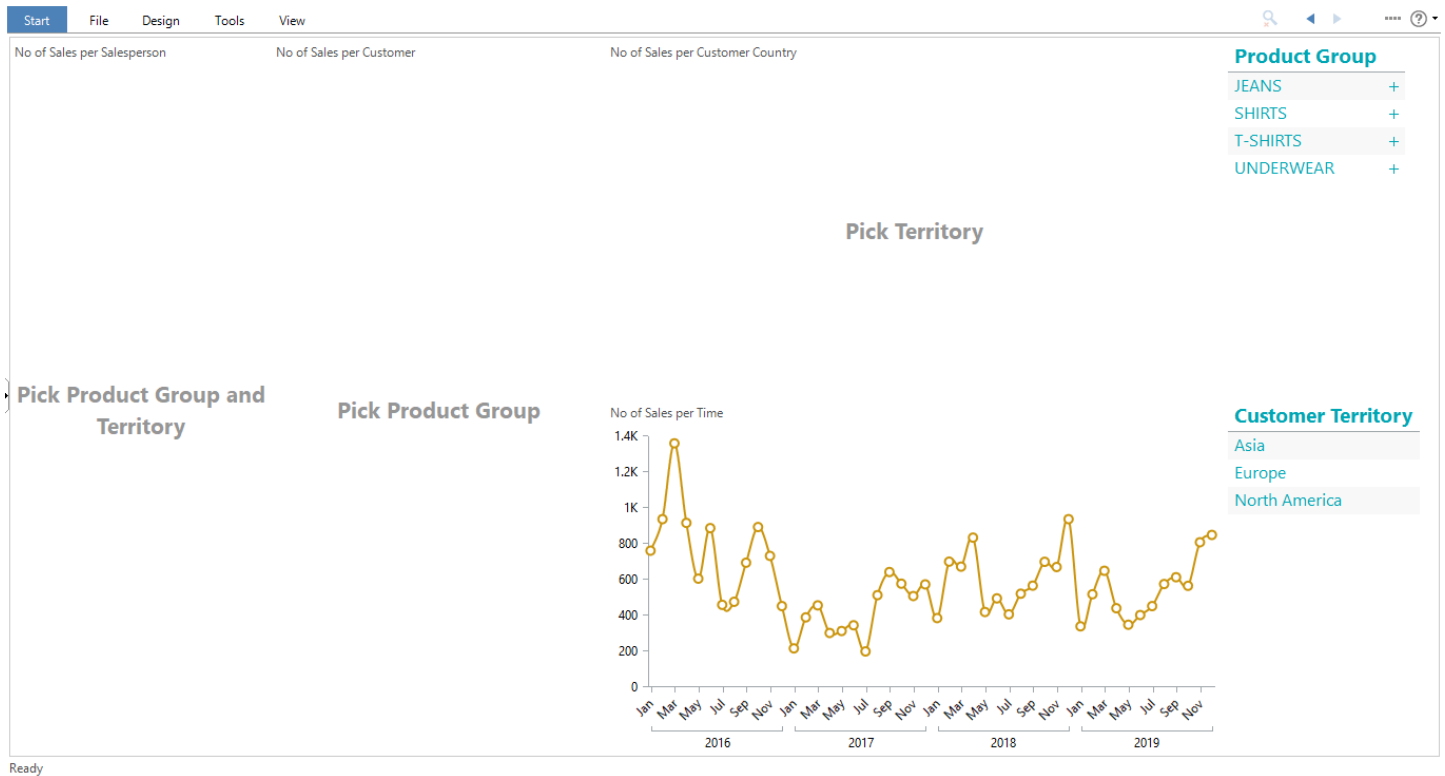
Create a Drill Down analysis as the one below. Data comes from the Sales cube:



Save the analysis as **Lesson 6 Drill Down Analysis**.

## Task 2

Add Required Criteria to three of the objects:

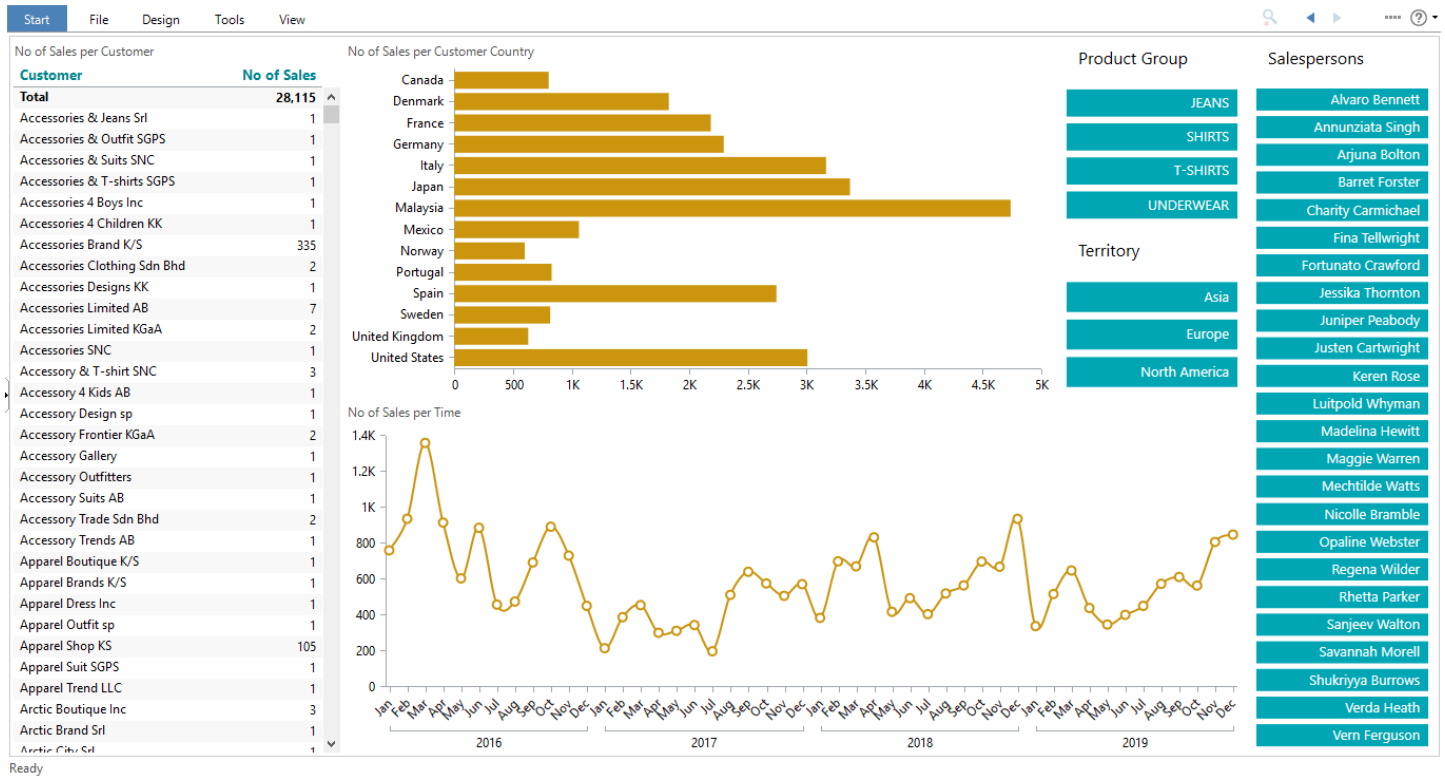


Save the analysis as **Lesson 6 Required Criteria**.

### Task 3

Open **Lesson 6 Drill Down Analysis** and do these modifications:

- Turn the Salespersons cross table into a “Selector object” (which is in fact a horizontal bar chart).
- Do something similar for the other two Selector objects.



Save the analysis as **Lesson 6 Drill Down Analysis with bar chart selectors**.

#### Tips:

- Add a measure to the cross tables and change object type to horizontal bar chart.
- In Chart Properties, these and other settings apply:
  - Add a proper Title.
  - Column width: Very wide.
  - Labels: Row member, inside placement.
  - Measure axes:
    - Maximum: 1.
    - Remove axis line and axis labels.
  - Dimension axis:
    - Remove axis line and axis labels.



## Task 4

From the **Finance cube**, you can create a crosstab showing **Amount per Account**, like the one picture to the right.

Create a criteria, using Custom values ranges that will include:

- All current/future Accounts starting with '2'.
- All current/future Accounts starting with '50'.

The result of current accounts will look like this:

Account	Amount
<b>Total</b>	<b>1,406,772</b>
202000 DEMAND BANK DEBT	-18,158,957
210100 ACCRUED WAGES - STAFF/UNION	8,919
234000 FICA TAX - EMPLOYEE	-157,163
235000 ACCOUNTS PAYABLE	-2,097,293
240100 ACCRUED INTEREST	-23,298
500005 COST OF SALES:	0
500050 COST OF SALES AT STANDARD:	0
503000 COS - RETAIL PRIMARY	21,834,564
503100 COS - WHOLESALE PRIMATY	0

Account	Amount
<b>Total</b>	<b>61,306,040</b>
111100 PETTY CASH - FACTORY	1,078
114100 CHECKING	9,013,699
115200 NET CASH DEFAULT	0
121100 AR - WHOLESALE	3,495,487
121200 AR - RETAIL	742,999
135020 F/G-FINISHED ITEMS	2,880,650
141100 PREPAID INVENTORY	297,660
141200 PREPAID ADVERTISING EXPENSE	44,450
161100 BUILDINGS	26,995,960
162100 MACHINERY & EQUIPMENT-OWNED	3,140,836
162300 COMPUTER EQUIPMENT	4,260,498
202000 DEMAND BANK DEBT	-18,158,957
210100 ACCRUED WAGES - STAFF/UNION	8,919
234000 FICA TAX - EMPLOYEE	-157,163
235000 ACCOUNTS PAYABLE	-2,097,293
240100 ACCRUED INTEREST	-23,298
331000 PAID IN CAPITAL	-30,445,526
400005 REVENUE:	0
400050 GROSS SALES:	0
400500 SALES - RETAIL & WHOLESALE:	0
403000 SALES - RETAIL	-56,921,151
403100 SALES - WHOLESALE	0
490005 DISCOUNTS & ALLOWANCES:	0
500005 COST OF SALES:	0
500050 COST OF SALES AT STANDARD:	0
503000 COS - RETAIL PRIMARY	21,834,564
503100 COS - WHOLESALE PRIMATY	0
513100 COS - WHOLESALE SECONDARY	0
550300 COS - RETURNS - RETAIL	0
551300 COS - RETURNS - WHOLESALE	0
600100 SALARIES - STAFF-REGULAR PAY	-10,257
612100 SALES AIDS EXPENSE	-1,724,519
616100 PROMOTION - PRODUCTION	-2,635,405
622100 INDIRECT MATERIALS	-32,388
624300 SAFETY SUPPLIES	-34,894
630100 LEGAL FEES	-41,143
641000 RENT - PREMISES	2,033,685
641100 RENT - EQUIPMENT	-5,458,492
642100 TELEPHONE & COMMUNICATIONS	-7,714,175
643100 WATER	-27,584

How do you set up such a criteria?

Answer: \_\_\_\_\_

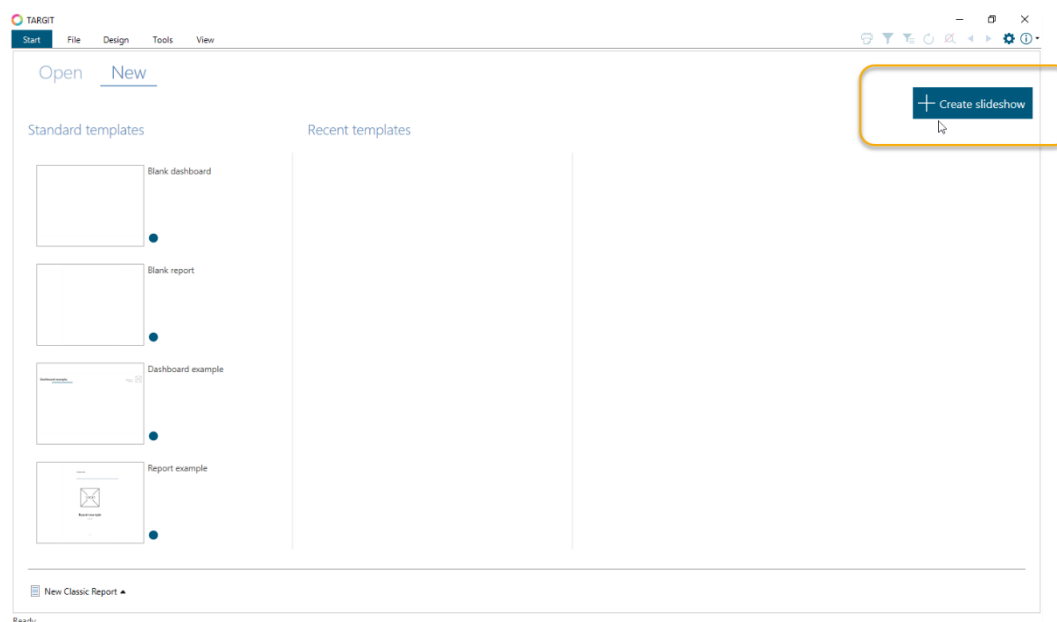


## Lesson 7: Slideshows

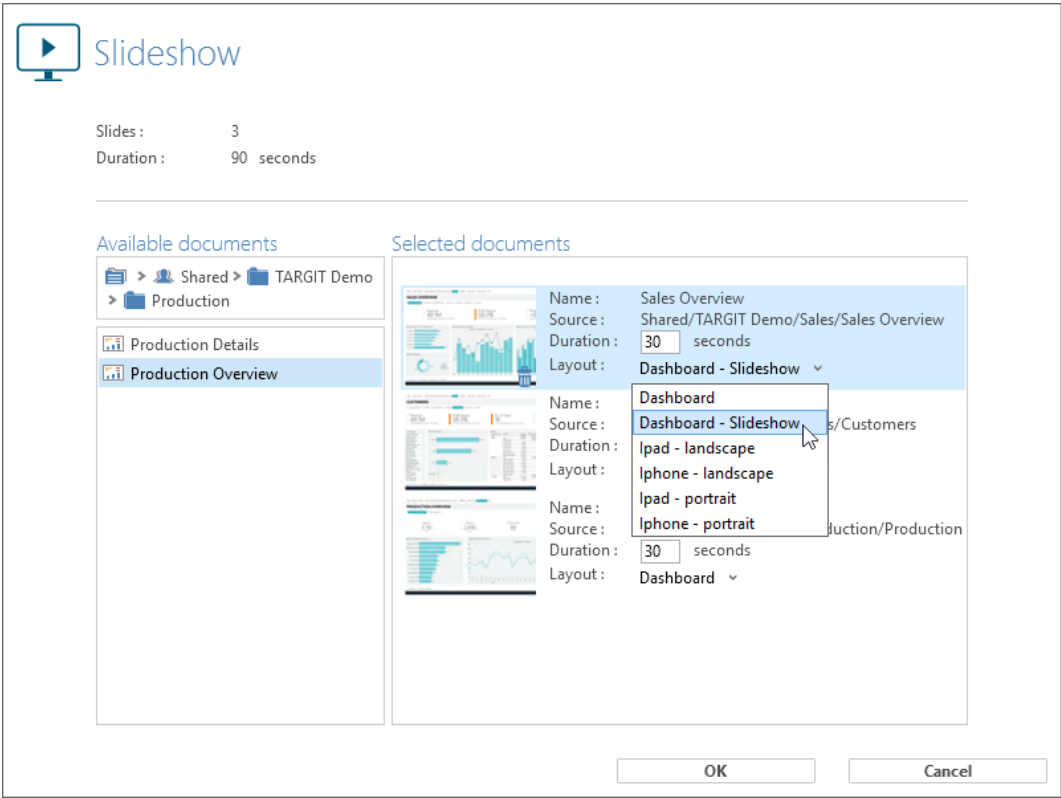
The traditional channels for data distribution include end-users working interactively with TARGIT documents and dashboards and analyses being distributed, via scheduled jobs, as PDF files to external recipients.

With *Slideshow* you can also include **Info screens** in your distribution channel list. Imagine Info screens in your workplace – in the canteen or on the production floor – running frequently updates of selected TARGIT dashboards. In addition to the pure information value, they will often have a motivating effect as well.

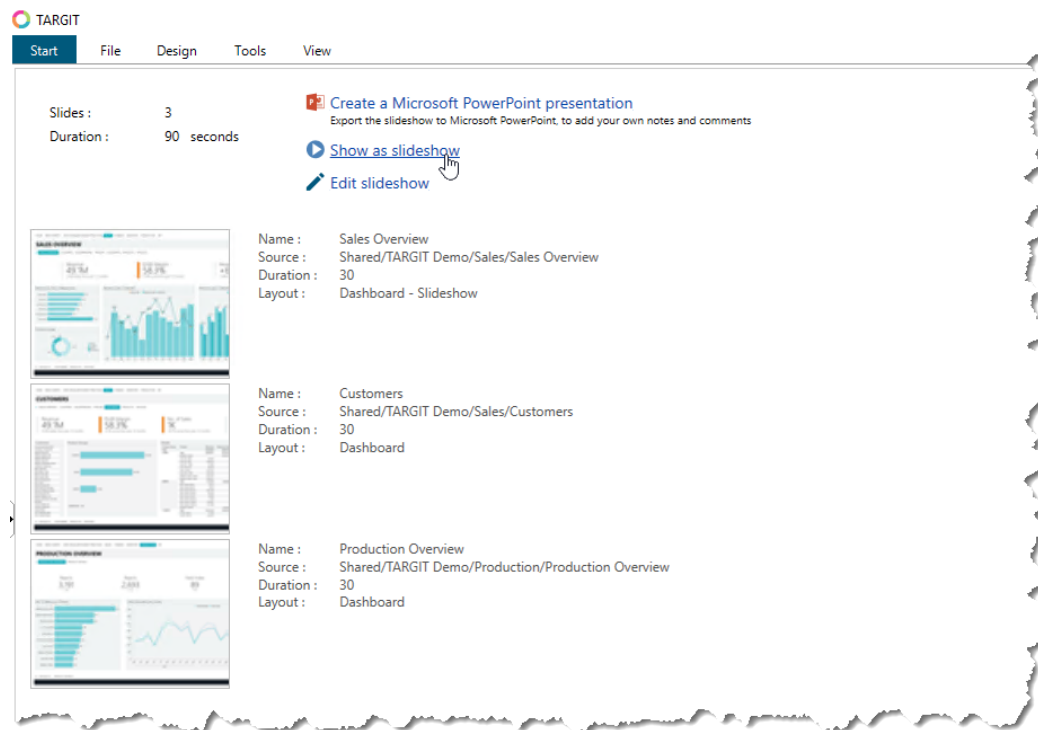
Creation of Slideshows is initiated from the Start page's New tab:



The documents to include in the Slideshow are then selected from the available folders. Please note that you must select a specific layout in case the document holds multiple layouts.



You can then save the Slideshow and have a TARGIT client to run it in a continuous loop on an info screen.



Notice the option for creating a PowerPoint presentation.

**Note:** Dashboard data will update for every loop of the Slideshow. Of course, this will only make sense if the underlying Data Warehouse is frequently updated as well.

## Exercises Lesson 7

(Screenshots and exercises are based on version 2019.0 demo data. If you are working on an earlier or later version you may need to subtract or add 1 year to achieve similar results.)

Try out the Slideshow functionality.

- Add some of the documents you created and saved in the previous lessons.
- Save it as a Slideshow.
- Run it as a slideshow on your own screen.
- Try exporting it as a PowerPoint presentation.

## Appendix

### Selected Visualization Objects

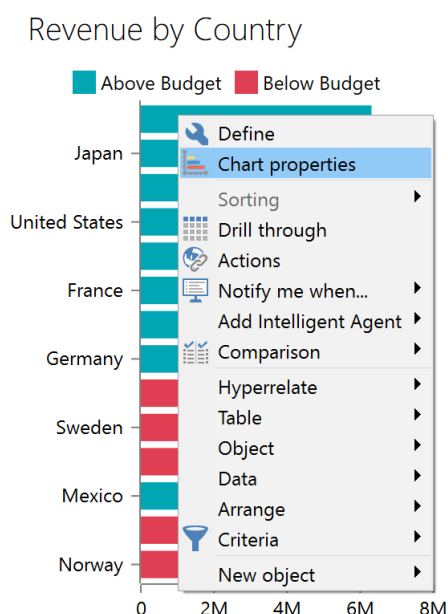
In this lesson, you will learn about some of the different graphical object types and some of their special settings.

The TARGIT client contains quite a comprehensive list of different object types for different visualizations, from which we will pick a few. The list of selected visualization objects will cover most of the standard settings for the most common object types. A few special object types may require additional explanations, and they have been picked as well.

#### General chart properties

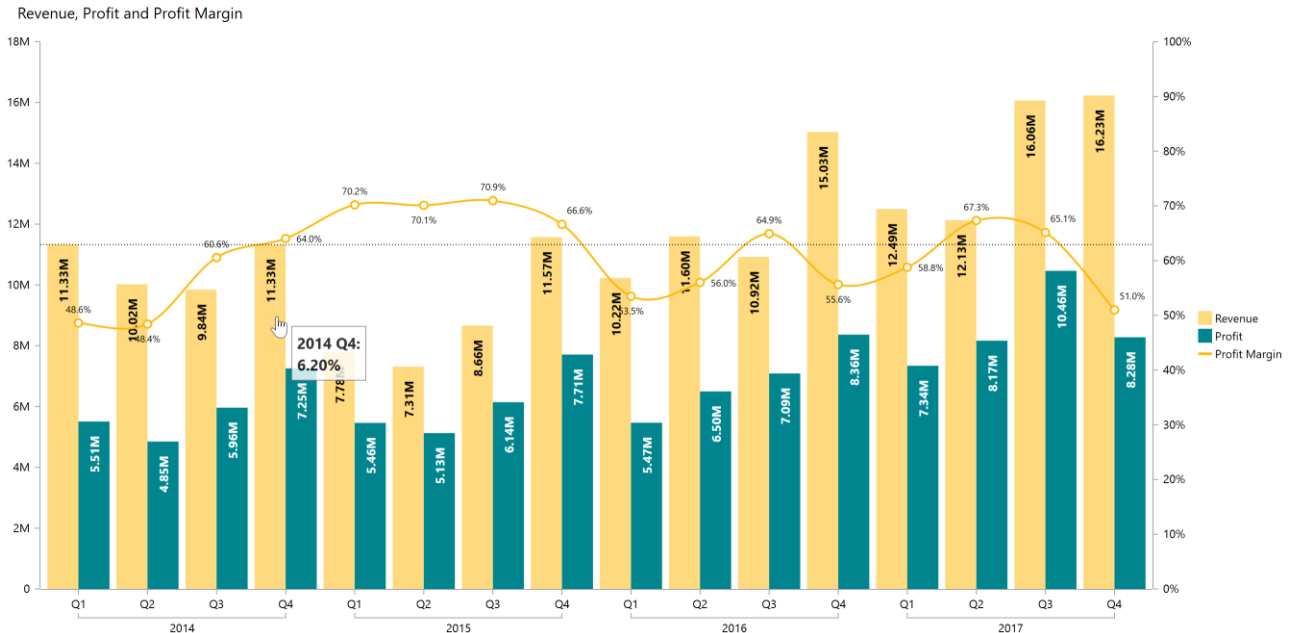
The Column chart, Bar chart, Line chart and Area chart are very closely related and have essentially identical formatting options. On the following pages, you will see an example based on a Column chart.

Right click on a chart to select *Chart properties* – or select it from the Properties Smartpad.



If you select this option, you will open an object type specific formatting dialogue box. Although options may differ slightly from one object type to another, the most common ones are: Chart, Labels, Dimension axis, Measure axis and Colors.

Rather than going through every single chart property, let us have a closer look at this example:



The column chart above has been formatted with these chart property settings (only where settings have been changed from default):

- From the **Chart** tab:
  - The **Title** field has been used to produce the title on top of the chart.
  - The Profit Margin **series** has been moved to the **Right axis** and has taken a **Spline visualization**.
- From the **Labels** tab:
  - Revenue and Profit **labels** are showing **Measure value** and have **Placement Inside**.
  - Mouse over** for Revenue has been set to **Member: Percent (column)**.
  - Furthermore, labels have been formatted with regard to **Number format, Font size and Font color**.
- From the **Measure axes** tab:
  - The Right axis **Maximum** has been set to **100**, with an **Interval** of **10**.



## Bullet Graph

The Bullet Graph is a special visualization object that can be used to monitor a KPI against a Goal, while at the same time displaying intervals for e.g. *below expectations*, *within accepted range* and *above expectations*.

If you add a dimension to a Bullet graph, the visualization of the Bullet graph will repeat itself as many times as you have dimension members.

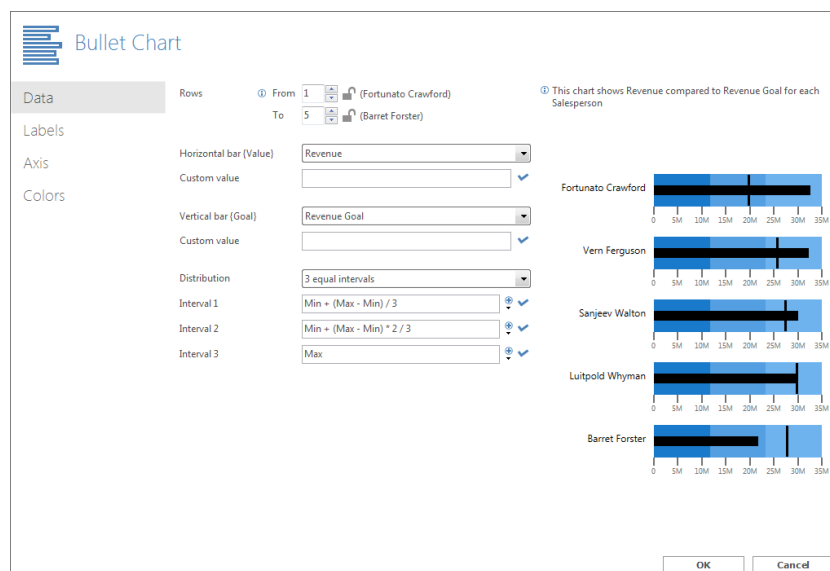
The **Data** tab of the Bullet Chart dialogue box will allow you to select what data to display in the graphs.

The term **Rows** refer to rows of dimension members in the underlying crosstable. "1" means the *first* row, while "-1" means the *last* row. E.g. From "2" to "-3" means from second row to third last row. The locker symbols can be used to lock the range to specific members, e.g. from "Product C" to "Product K".

The **Horizontal bar** setting should usually contain the KPI measure you would like to monitor in the Bullet graph.

The **Vertical bar** setting determines the position of the goal bar in the Bullet graph. This is usually related to a second measure, but it could also be a fixed, custom value. Sometimes, the goal bar is not needed at all and can be left out if desired.

The **Distribution** option offers six different predefined distribution intervals. It will color the background of the Bullet graphs accordingly.



Note: In this screenshot, the data in underlying crosstab has had a descending sort order applied to Revenue.

The **Labels** tab of the Bullet Chart dialogue box contain options for displaying text with the Bullet graph:

- **Leading text:** The text in front of each Bullet graph.
- **Lower text:** The text below each Bullet graph.
- **Mouse over:** The text that displays when you hold your mouse cursor on top of one of the graphs.

All three labels' font settings can be formatted individually.

**Bullet Chart**

**Data**

☒ Leading text

Text: Member

Font: Segoe UI, 9

☒ Lower text

Text: Measure Name: Value

Font: Segoe UI, 9

Mouse over: Deviation

Font: Segoe UI, 9

**Axis**

**Colors**

This chart shows Revenue compared to Revenue Goal for each Salesperson

Fortunato Crawford  
Revenue: 32.63M

Vern Ferguson  
Revenue: 32.28M

Sanjeev Walton  
Revenue: 30.15M

Luitpold Whyman  
Revenue: 30.09M

Barret Forster  
Revenue: 30.09M  
Deviation: -5.71M

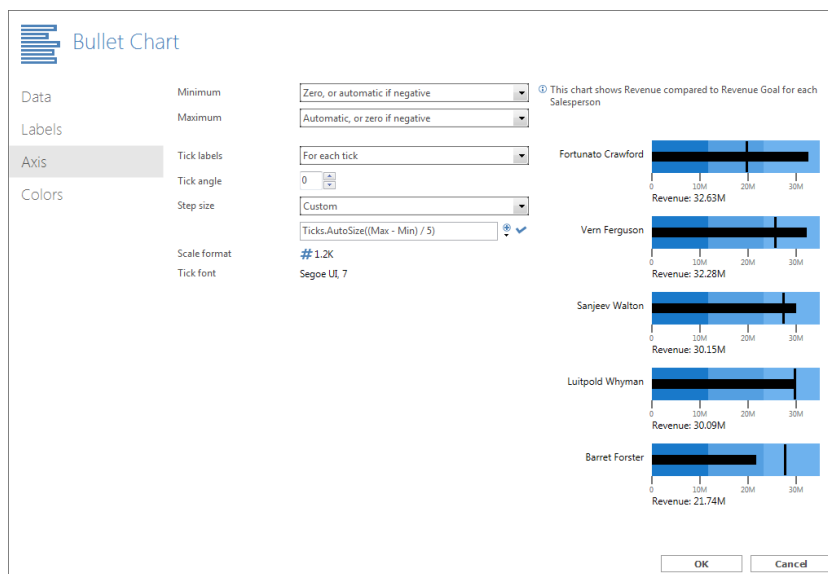
OK Cancel

Note: Number formatting is done with the standard Number formatting option from the Properties Smartpad.

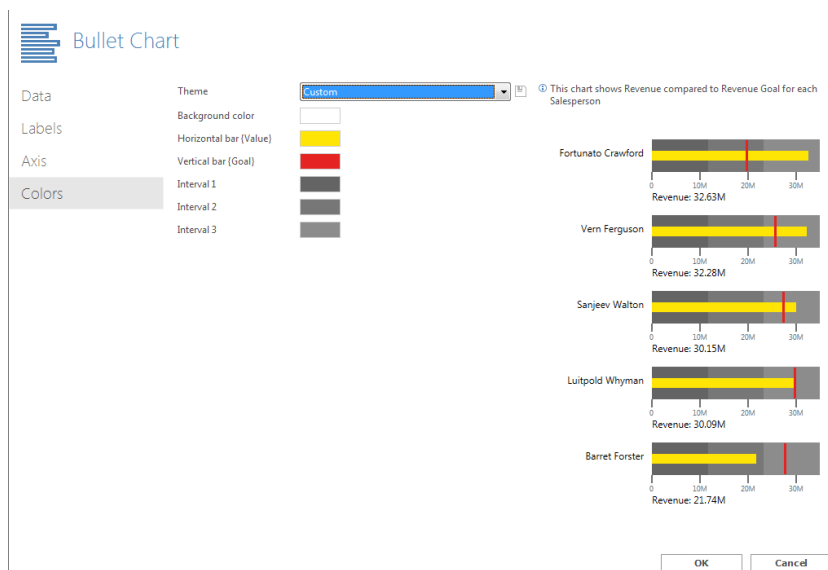
The **Axis** tab is where you control the appearance of the horizontal axis of the Bullet graph.

- **Minimum / Maximum:** The range of the graph. Choose from a number of predefined settings or enter your own custom value.
- **Ticks:** These are the numbers along the axis. Can also be set to none.

- **Step size:** The range between each tick. Apart from the Automatic step size, you can also define your own, custom step size – either by modifying the auto setting or by entering a fixed value.



The **Colors** tab offers a number of predefined themes for coloring the various elements of the Bullet Chart, but you can also select your own, custom colors.

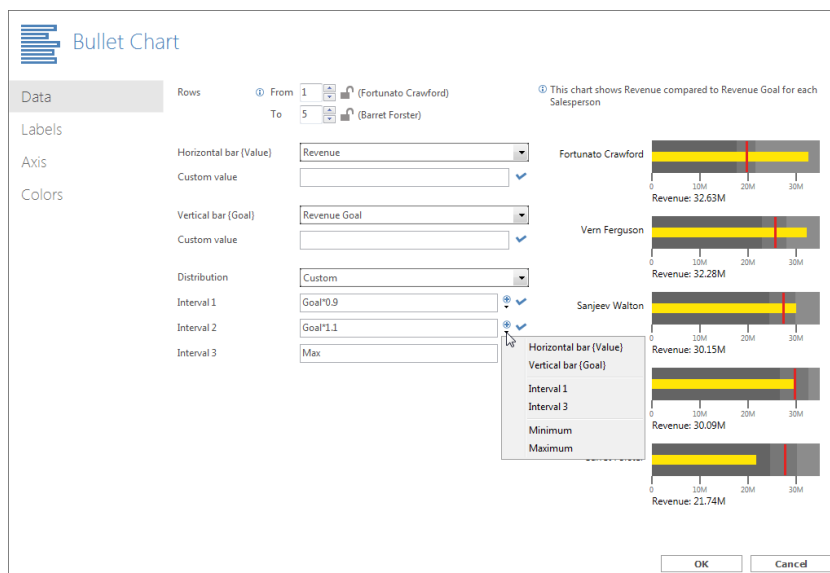


In many of the Custom fields, you can actually make small calculations based on some of the other settings in the Bullet Graph dialogue box. These settings are referred to as *value placeholders*.

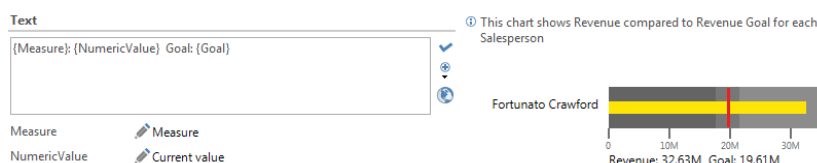
The value placeholders you can use are:

- **Value** – the value of the measure you selected for the Horizontal bar on the Data tab.
- **Goal** – the value (measure or custom) you selected for the Vertical bar on the Data tab.
- **Min** – the value specified as the range minimum on the Axis tab.
- **Max** – the value specified as the range maximum on the Axis tab.
- **Interval1, Interval2, etc.** – the values specified for each interval on the Data tab.

As an example, the interval limits of Interval 1 and Interval 2 has been set as Goal plus/minus 10 percent respectively:



In fact, the Bullet Chart offers many customizable options, e.g. here, the Lower Text option has been customized to show data for both measures:



## Area map chart

In TARGIT Decision Suite 2017, objects got a big boost in terms of visualization options.

Two of these are maps based on the scalable vector graphics, also known as SVG files. They are available as two new object types: area map chart or Image chart.

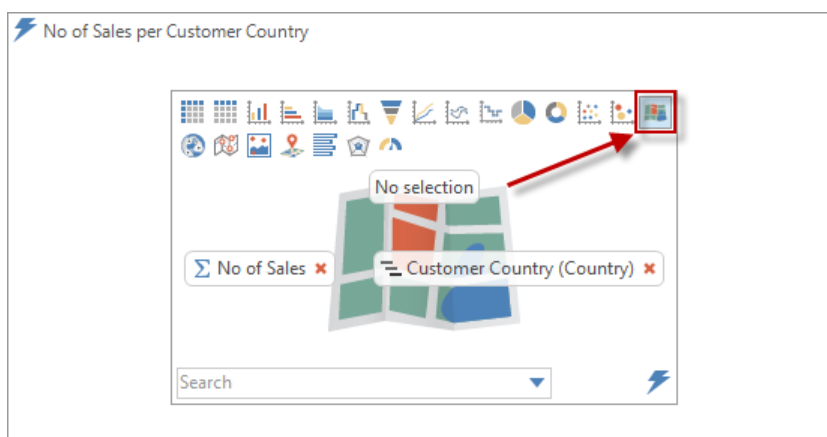
TARGIT client offers a number of geographical maps upon installation. These maps are designed so that they show a colored area and not just a colored dot.

It is, however, not limited to the geographical map. You can use pictures of just about anything you want to use for displaying data.

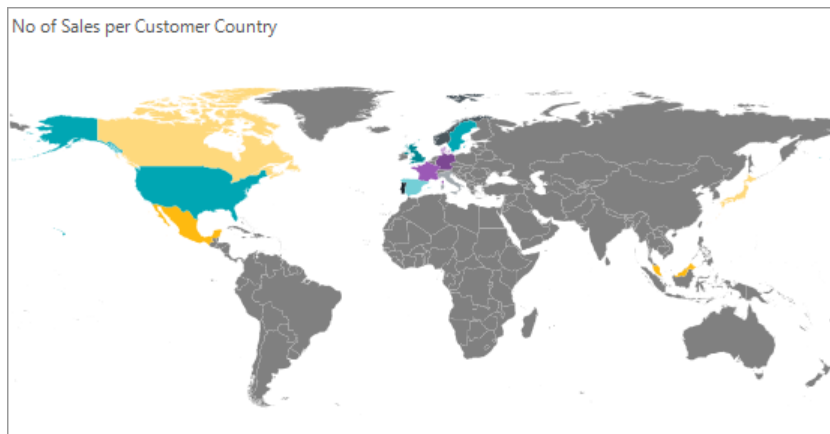
For detailed instructions on how to download and edit the map on this blog:  
<https://www.targit.com/en/blog/2016/11/data-visualization-with-svg-files>

### General map options

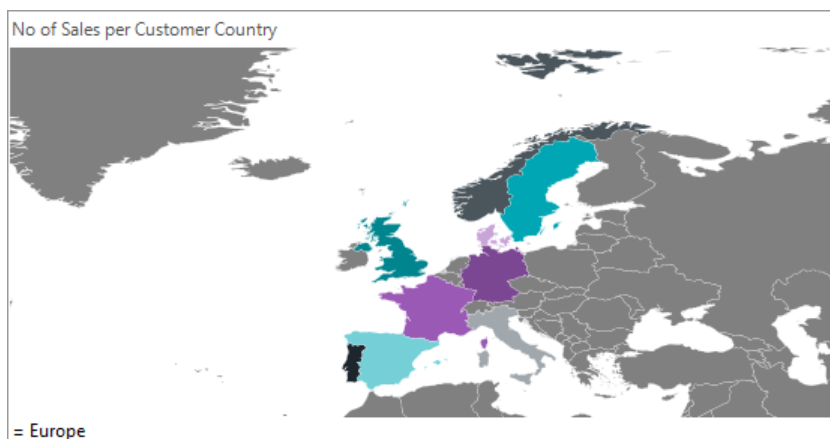
Create an area map chart showing No of Sales per Customer hierarchy on the Country level.



When we fetch data, the default setting is to show the world map, where the countries are marked by individual colored areas.

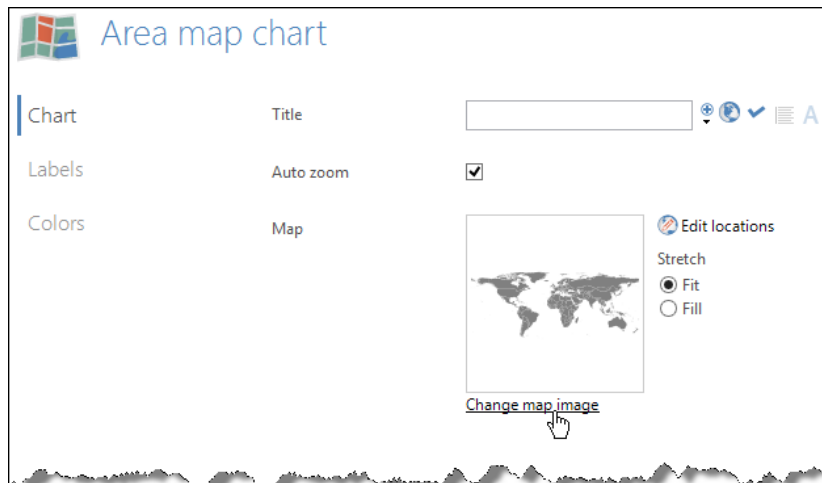


Another default setting is "Auto-zoom" that automatically zooms in to a specific area of the world map if you filter the data on i.e. Europe.

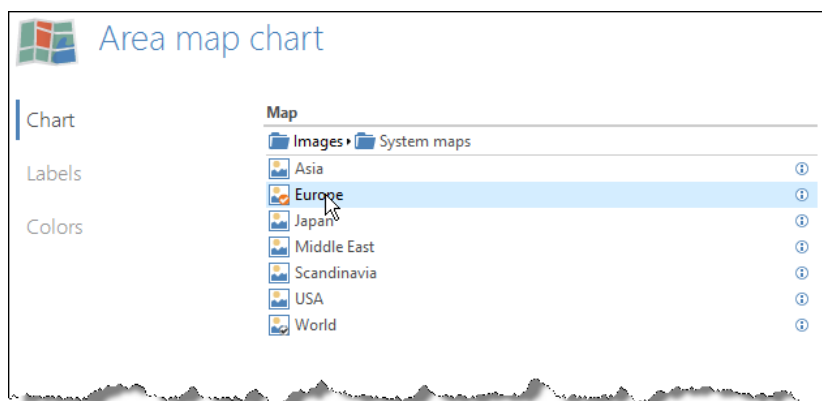


## Changing the map image

Since we only show data for Europe or if we only had data from Europe, we might want to change the map image. To change the image, simply change the *Chart properties*. Click "Change map image"



And select the new map.



It is possible to add new images. Click...



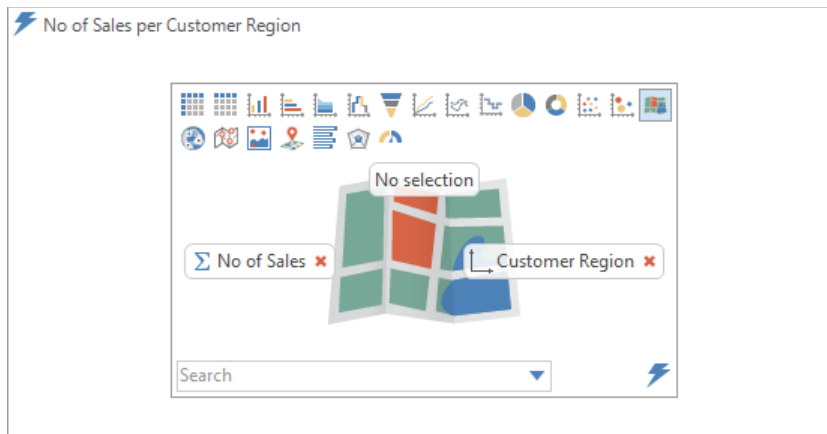
... and then



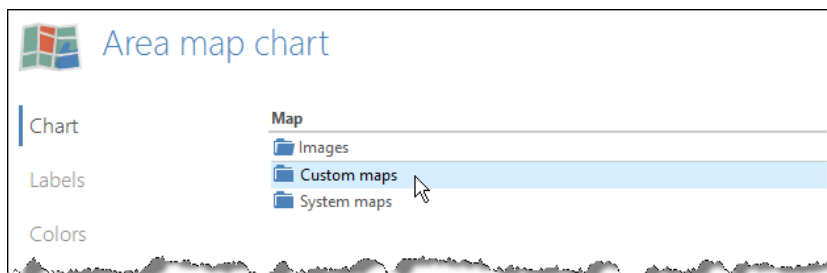
## Mapping of dimension values

The first time you use an image the dimension values must be mapped.

Create a new Area map chart showing *No of Sales per Customer Region (attribute)*. Add a criterion to show data for *Germany* only.

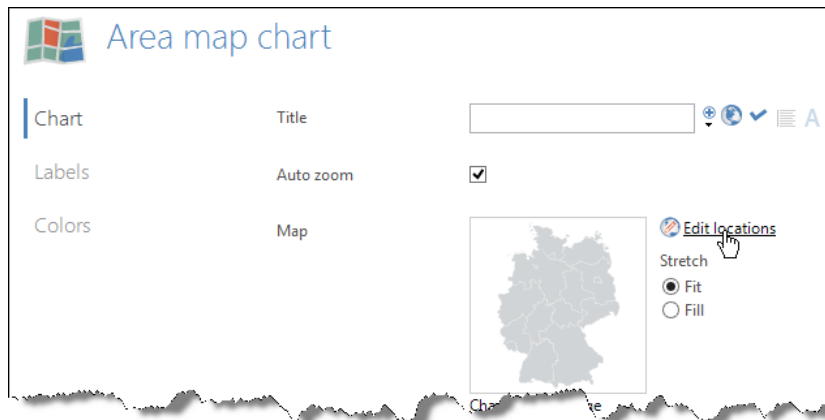


When we fetch data the default world map is shown. To change the map to Germany, navigate to the chart properties and open the Custom maps folder.



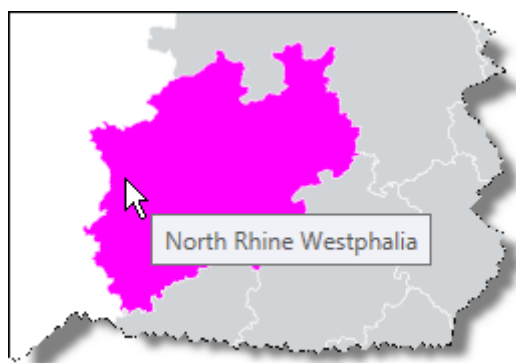


At first the map will be empty with no locations mapped. In the chart properties click Edit locations.

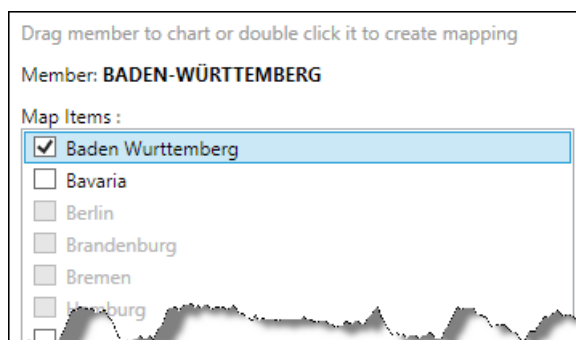


The unmapped dimension values are shown in the dialog box. If we click *Auto Map* TARGIT will match the dimension values up with the individual areas on the map and apply the locations. There might be dimension values left that have not been mapped. These values can be mapped manually by using drag and drop.

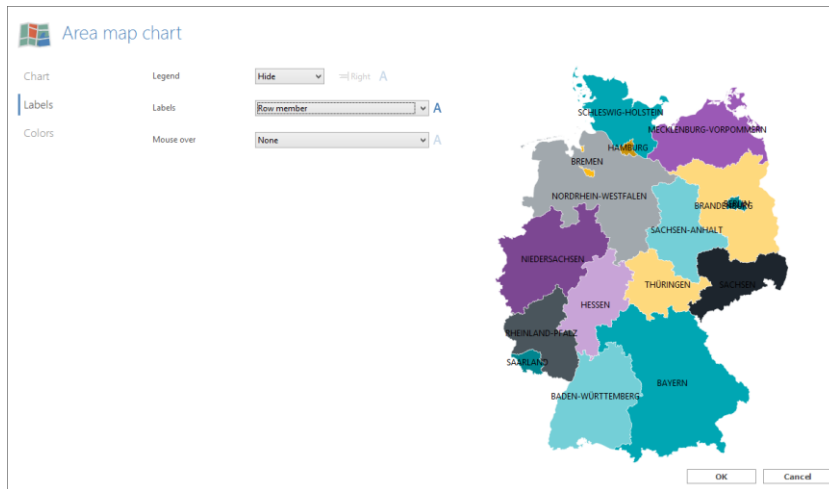
On this map, you can identify locations with mouse over on the area.



You can also double click an element if you want to see a list of the locations.



Once you are done mapping all you have to do is to save the locations.



## Labels formula syntax

### Column/row and axis calculations

#### *List of column calculations*

These refer by default to column 1 in your crosstab – note that you can work with lookup values to point to a particular column or row.

column calculations	Description
<b>column.sum</b>	Sums up the total of the column
<b>column.avg</b>	Calculates the average of the column
<b>column.min</b>	Returns the minimum value of the column
<b>column.max</b>	Returns the maximum value of the column
<b>column.stdev</b>	Returns the standard deviation of the column
<b>column.median</b>	Returns the median of the column
<b>column.percentile(pct)</b>	E.g. column.percentile(0,25) returns 25% percentile
<b>column.count</b>	Returns number of values in the column
<b>column.membercount</b>	Returns numbers of members in the column

row calculations	Description
<b>row.sum</b>	Sums up the total of the row
<b>row.avg</b>	Calculates the average of the row
<b>row.min</b>	Returns the minimum value of the row
<b>row.max</b>	Returns the maximum value of the row
<b>row.stdev</b>	Returns the standard deviation of the row
<b>row.median</b>	Returns the median of the row
<b>row.percentile(pct)</b>	E.g. row.percentile(0,25) returns 25% percentile
<b>row.count</b>	Returns number of values in the row
<b>row.membercount</b>	Returns numbers of members in the row

axis calculations	Description
<b>axis.sum</b>	Sums up the total of the axis
<b>axis.avg</b>	Calculates the average of the axis
<b>axis.min</b>	Returns the minimum value of the axis
<b>axis.max</b>	Returns the maximum value of the axis
<b>axis.stdev</b>	Returns the standard deviation of the axis
<b>axis.median</b>	Returns the median of the axis
<b>axis.percentile(pct)</b>	E.g. axis.percentile(0,25) returns 25% percentile
<b>axis.count</b>	Returns number of values in the axis



## Gauges – for Dashboards

A *Dashboard* is an analysis like any other analysis in the TARGIT Decision Suite. However, it is an analysis that has been *designed* to give a very high-level overview of your KPIs (Key Performance Indicators).

Some object types are better at showing high-level information than others, and quite often, you will see the *gauge* object type being used in dashboard analyses.

### Start with a basic crosstab




Even though you *can* create a gauge on top of a very complex crosstab, it is rarely necessary to do so. If the gauge is supposed to show three KPIs – then, why not let the basic crosstab reflect the same simplicity?

The shown simple crosstab is based on the Revenue measure and a comparison of LYTD and YTD:

Revenue by LYTD and YTD			
LYTD	YTD	Growth Percent Profit	
17,685,378	23,175,452		31.04%

The Growth Percent calculation comes from the list of predefined calculations.

Furthermore, three color agents have been added to the calculation:

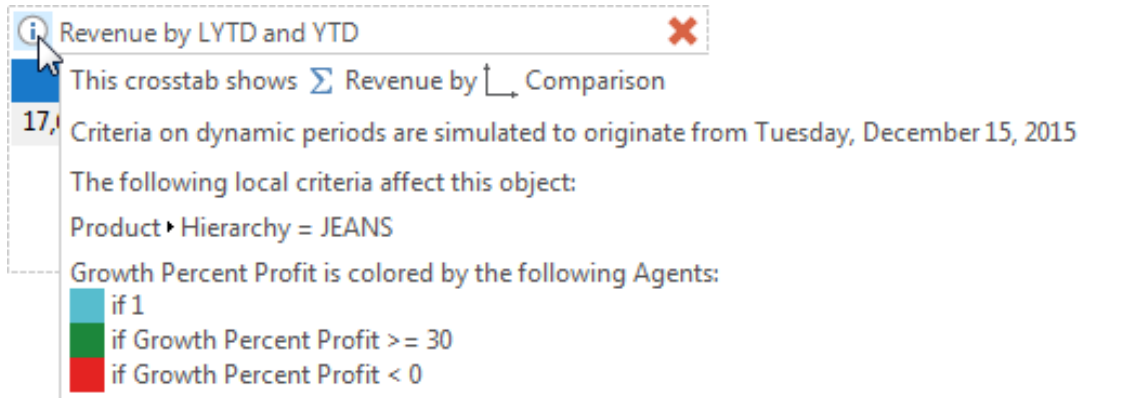
Color and Gauge Agents		
	Growth Percent Pro...	All values
	Growth Percent Pro...	value >= 30
	Growth Percent Pro...	Negative values

The blue color agent have been selected carefully to match the gauge object we are going to apply in a minute:

Colors

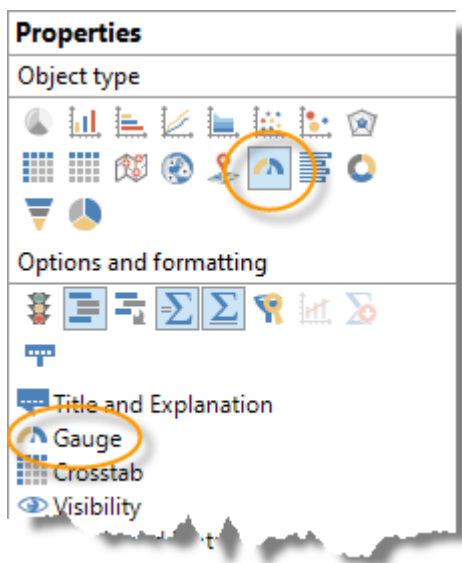
	57BDCE
---	--------

As we are going to create a complete Dashboard with these KPIs – one gauge per Product Group – we will need to add Local Criteria to each object:



### Gauge Properties

At this point, we may change the crosstab to a Gauge object type, and open the Gauge Properties dialogue box.




The Gauge Properties dialogue box has three tabs on the left hand side: General, Scale & Labels and Values.

## General

The first thing to do is to select the proper visualization type, in this case the *Icon – Sq Banner Blue Selected*.

### Gauge properties

Edit graphics, labels and values for the gauge



Simple/Advanced

General

Icon - Sq Banner Blue Selected

Scale & Labels

Min/Max - Automatic/Automatic

Values

+

Σ

Growth Percent

Revenue

\$31.04

-

Title

A

Hyperrelate

☐ Enable automatic hyperrelate

Rotation

Default

▼

Graphics

Icon - Rejects1

Icon - Speed

Icon - Sq Banner Blue

Icon - Sq Banner Blue Selected

Icon - Thumbs

Icon - Trend

27.94	
27.94	31.04
27.94	31.04
27.94	31.04

OK

Cancel

## Values

Next, we should jump to the *Values* tab. Initially, we can only see the last value from the crosstab, the Growth Percent. While this is one of the KPIs we would like to see in the gauge, we would also like to see the Revenue values of YTD and LYTD.

Click the '+' button twice to add Revenue twice.

**Gauge properties**  
Edit graphics, labels and values for the gauge

Simple/Advanced

**General**  
Icon - Sq Banner Blue Selected

**Scale & Labels**  
Min/Max - Automatic/Automatic

**Values** +

- Growth Percent -
- Revenue \$31.04
- Revenue \$23,175,452.29
- Revenue \$17,685,377.81

**Value** The value of a cell

**Member** Revenue

2 Columns from the right

-1 Levels in

[LYTD] = 17,685,378

**Interval** ☐ Use Custom Interval

**Icon Intervals**

0 - 100 ☒ Inclusive

27.94	
27.94	31.04
27.94	31.04
27.94	31.04

OK Cancel

Notice: To make the Revenue value show YTD and LYTD respectively, we will need to adjust column reference for one of the entries: "2 columns from the right".



## Scale and Labels

Now, let us turn the attention to the *Scale & Label* tab. At this point, ignore the *Minimum* and *Maximum* settings.

The selected gauge visualization has been designed to hold seven separate values – as can be seen from the small preview on the left hand side of the Gauge Properties dialogue box.

These seven values corresponds to the seven Labels entries on the Scale & Labels tab – from Header 01 and down to Value 03 Label.

Make sure that the Value 02 and Value 03 reflects the two YTD and LYTD values of Revenue.

Gauge properties  
Edit graphics, labels and values for the gauge

Simple/Advanced

General  
Icon - Sq Banner Blue Selected

Scale & Labels  
Min/Max - Automatic/Automatic

Values +

- Growth Percent Revenue - \$31.04
- Revenue - \$23,175,452.29
- Revenue - \$17,685,377.81

Maximum: Automatic

Labels:

- ☒ Header 01 A#
- ☐ Only min/max
- ☒ Value 01 A#
- ☒ Value 01 Label A#
- ☒ Value 02 A#
- ☒ Value 02 Label A#
- ☒ Value 03 A#
- ☒ Value 03 Label A#

Value 03 dropdown options: Revenue, Growth Percent Revenue, Revenue, Revenue

Preview table:

27.94	
27.94	31.04
27.94	23,175,452.29
27.94	17,685,377.81

OK Cancel

To make text appear in the places where we are currently seeing "27.94", we will have to tweak the number format a bit.

To access number format for Header 01, click the hash mark:

Labels

- ☒ Header 01 A#
- ☐ Only min/max



For this gauge, due to the JEANS local criteria, we would like the header to be "JEANS":

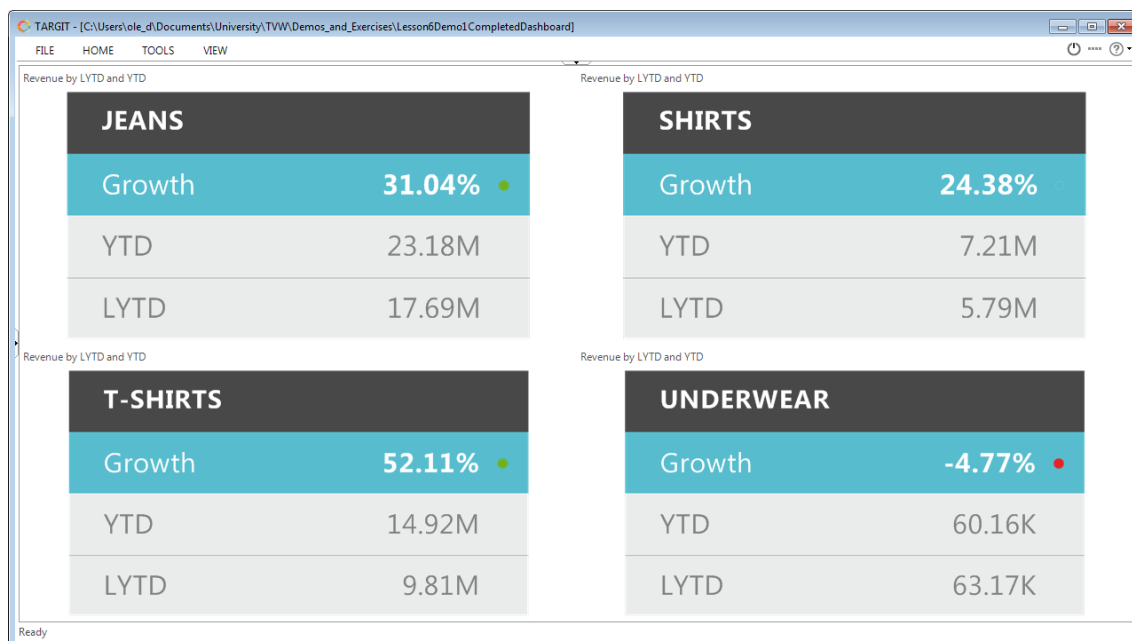
Notice: The double syntax of "&quot;JEANS&quot;,&quot;JEANS&quot;" is necessary to avoid undesired minus signs in front of this text.

Likewise, we can change number formatting of Value 01 Label, Value 02 Label and Value 03 Label to display the text we would like to see:

Configuration Item	Value
Header 01	JEANS
Value 01	Growth Percent Revenue
Value 01 Label	Growth Percent Revenue
Value 02	Revenue
Value 02 Label	Revenue
Value 03	Revenue
Value 03 Label	Revenue

Notice: It really does not matter what value has been selected for these labels as they are going to be overwritten by pure text anyway.

Now, by copying the gauge and modifying the local criteria and the Header text, we can get a complete dashboard like this:



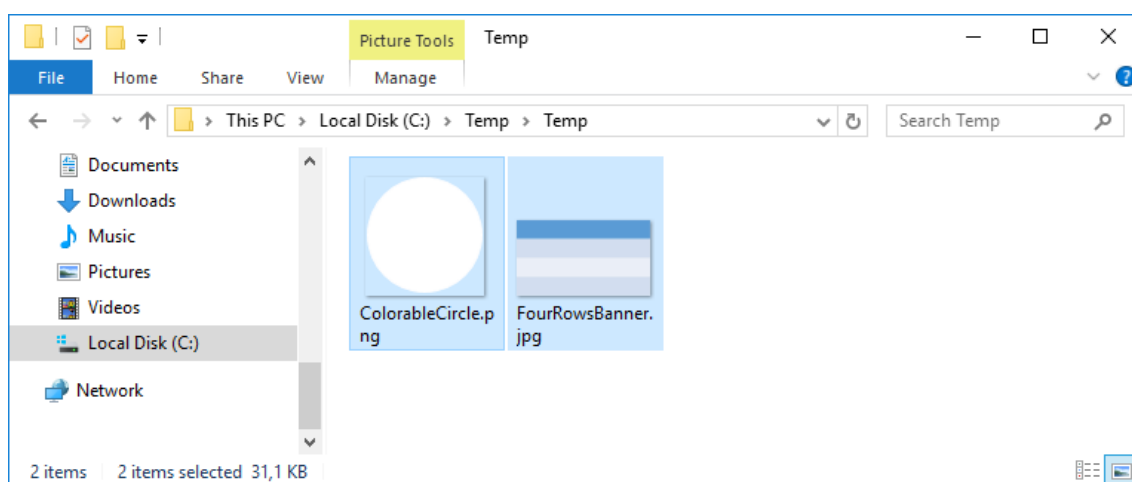
## Gauges – build your own

Of course, you are not limited to the set of built-in gauges – you can build your own gauge as well.

To prepare yourself for building your own gauge, you must first consider which graphics you will need to include in the gauge.

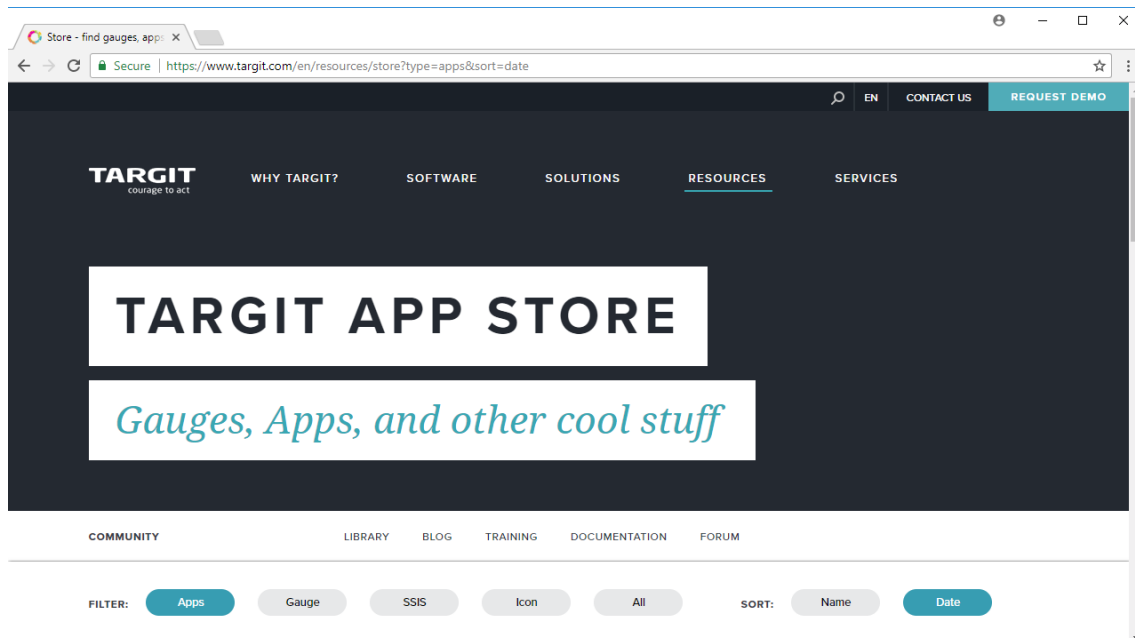
The following example is using two separate graphics:

- One is a background “wallpaper” – in this case a four-rowed banner, each row in different colors. By the way, this type of graphics is easily made as a table in PowerPoint, which is then exported to a graphics format, e.g. a .png file.
- The other is a white circle. The white circle (with transparent background color) will work as an indicator in my new gauge. It will change color according to data values.

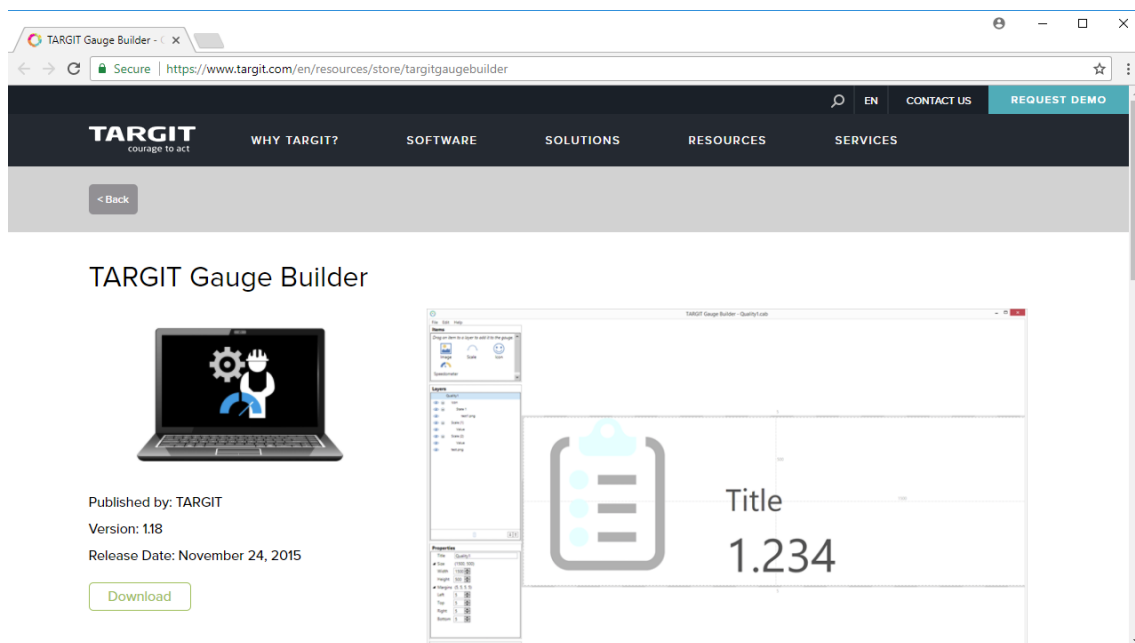


## Gauge Builder App Download

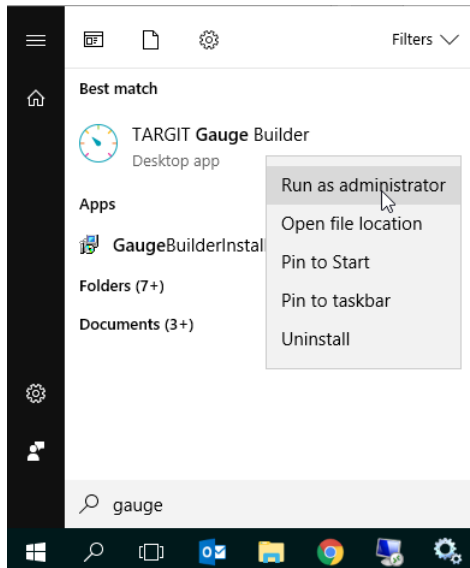
You will need TARGIT's *Gauge Builder App* to create new, custom gauges. Download and install it from <http://appstore.targit.com>.



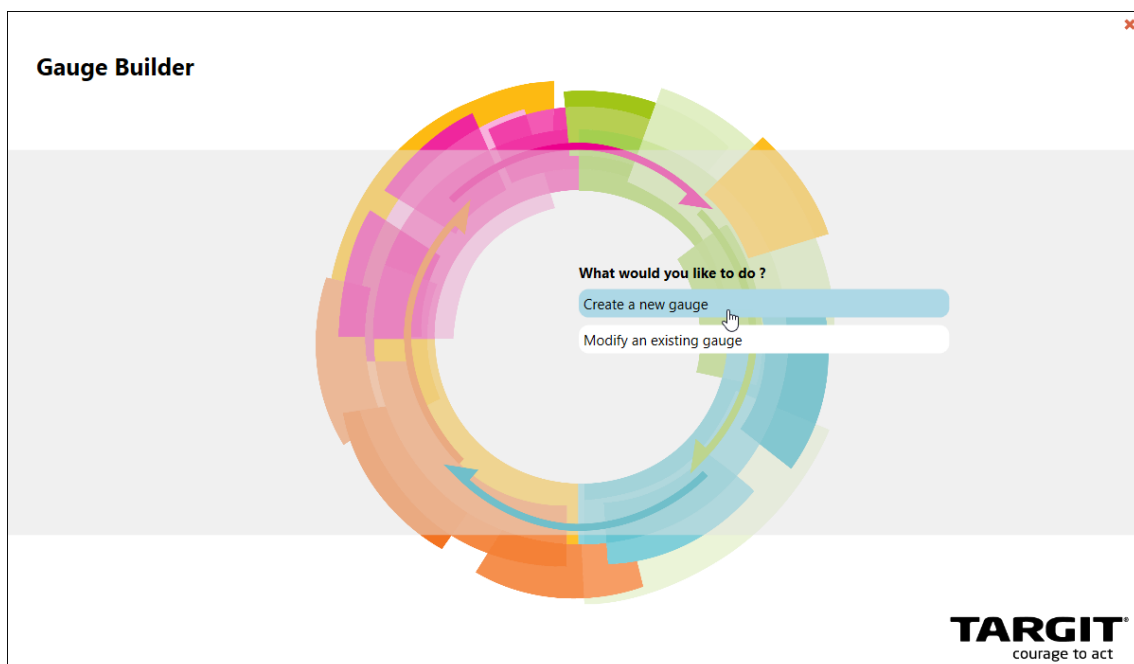
This is the app you will need to download and install:



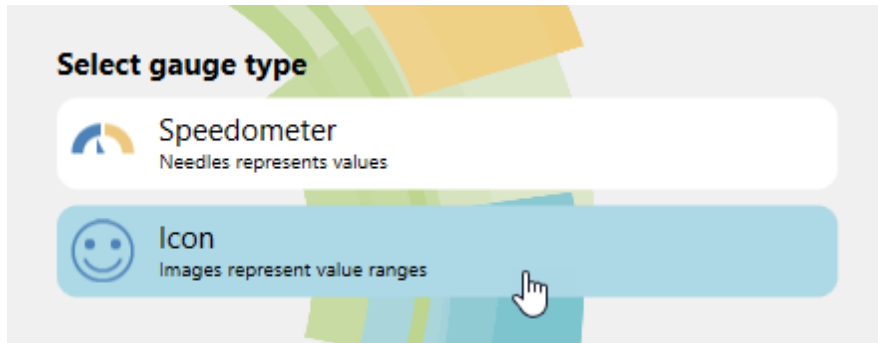
After installation, it is recommended to run the TARGIT Gauge Builder in Administrator mode:



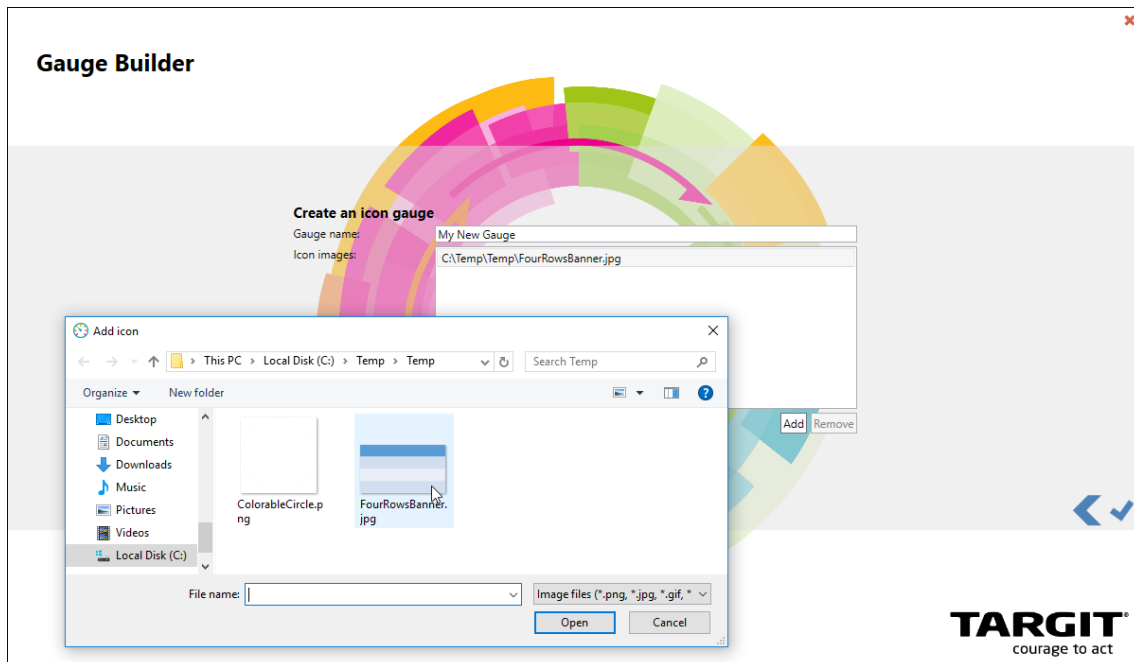
Use the app to create a new gauge:



Choose the *Icon* type. The Speedometer type should be picked only if a speedometer with moving needles is specifically needed.

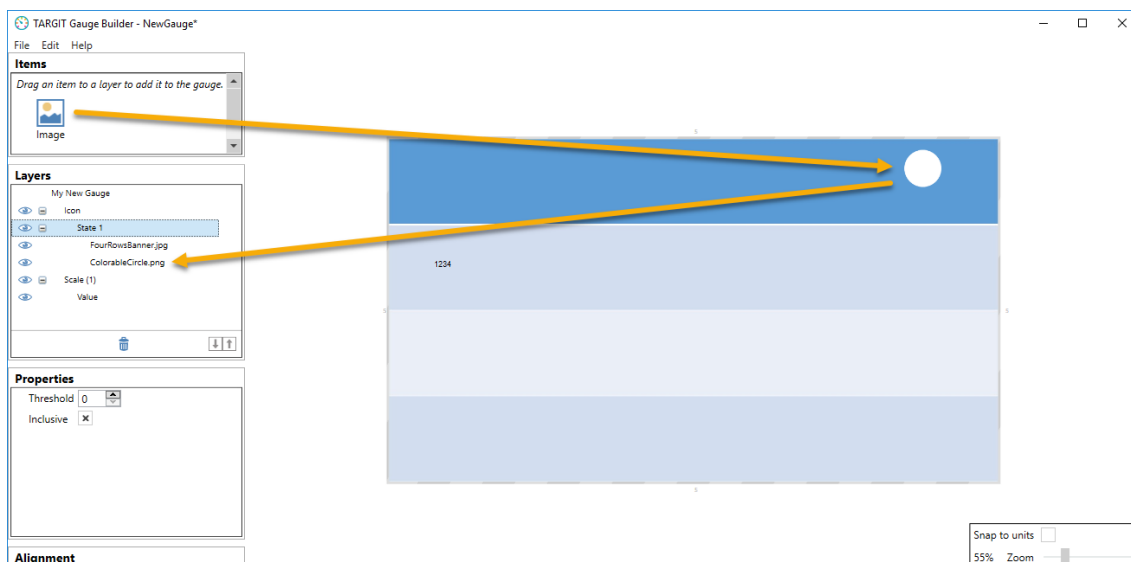


If you add your background image at this point, you will get a nice starting point once you get into the app.

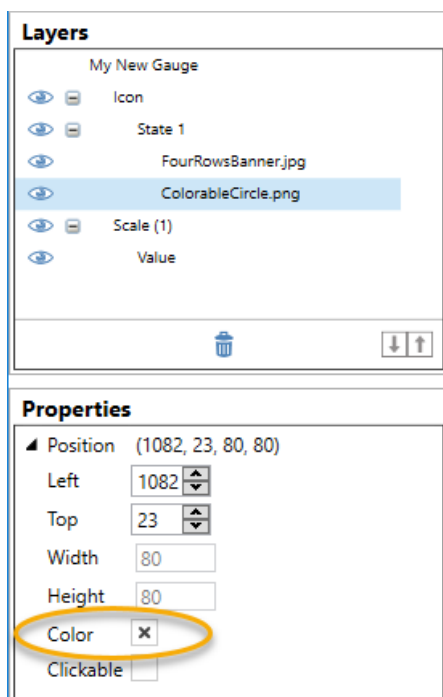




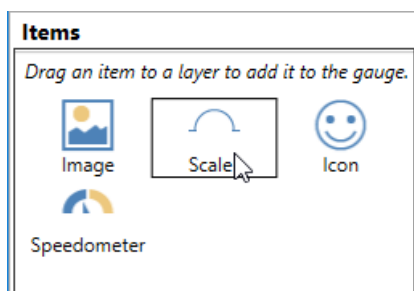
As soon as you get into the app, you may want to add extra images as the first thing. The colorable circle must be added while standing on the "State 1" Layer.



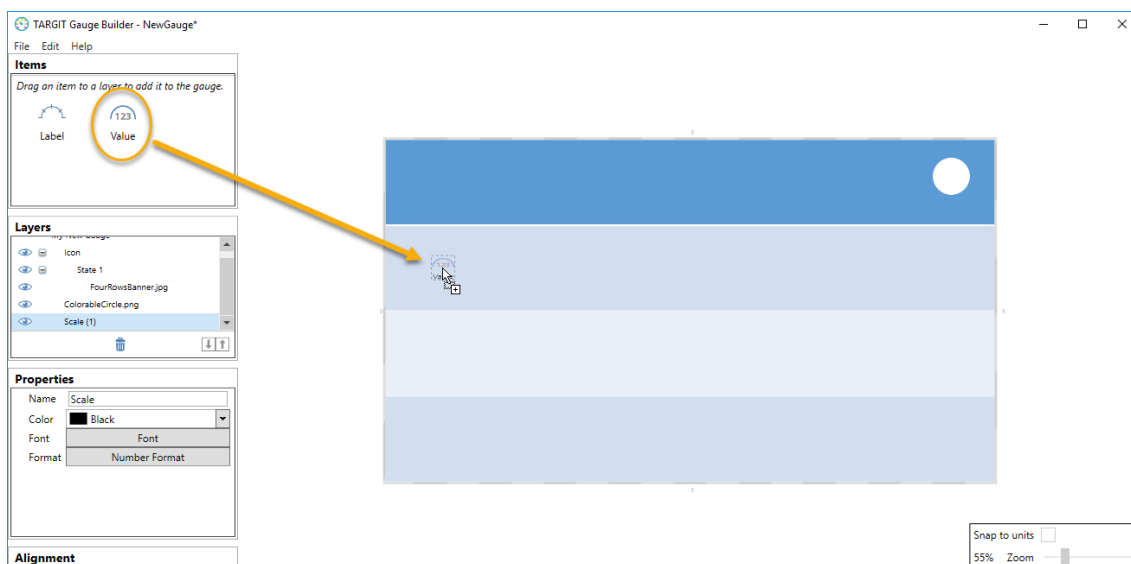
Make sure that the "Color" property for the circle is enabled.



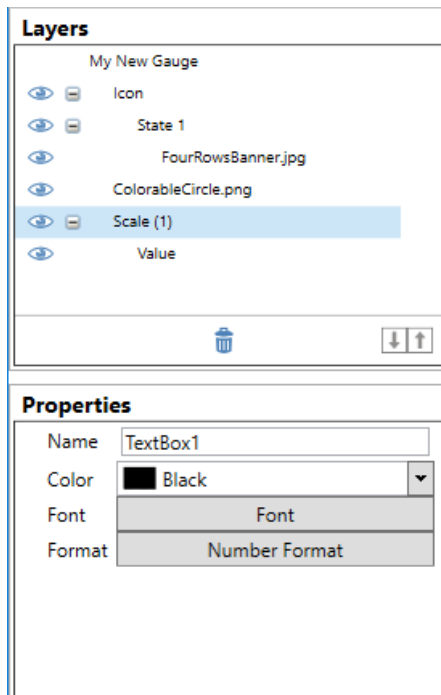
Next, drag a *Scale* onto your background image.



A Scale comes in two flavors: *Labels* or *Values*. In this case, pick *Value*. *Label* is intended for labels along a speedometer perimeter only.



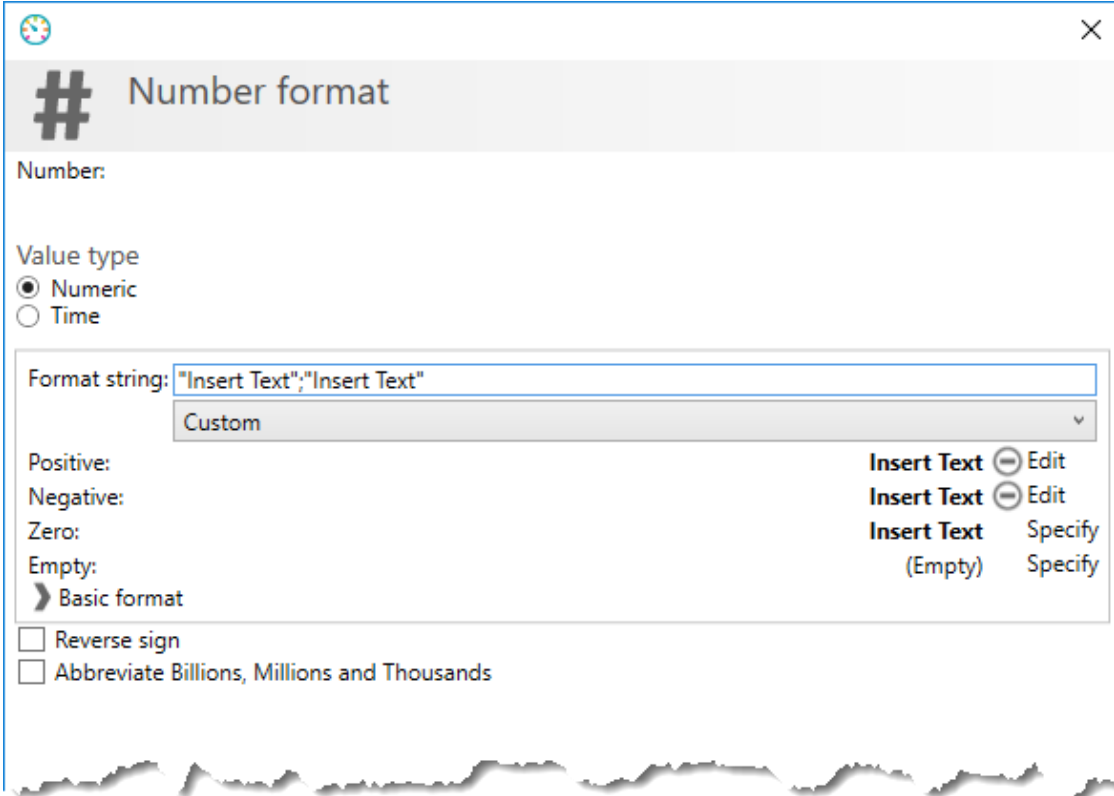
Choose *Name*, *Font* and *Number Format* for the inserted Scale. You should consider selecting some settings that you think will cover most end-user needs, as this will become the default formatting for the gauge when used in the TARGIT client. Of course, in the client, you can overwrite these default settings with settings of your own, if necessary.



Furthermore, consider if the inserted scale is supposed to show a value (number) or a text.

For numbers, simply pick a suitable default number format.

For texts, you may need to pre-format it in this way:



**# Number format**

Number:

Value type

☒ Numeric

☐ Time

Format string: "Insert Text";"Insert Text"

Custom

Positive: **Insert Text** Edit

Negative: **Insert Text** Edit

Zero: **Insert Text** Specify

Empty: (Empty) Specify

> Basic format

☐ Reverse sign

☐ Abbreviate Billions, Millions and Thousands

The same text is inserted twice. This is necessary in order to prevent texts to become pre-fixed with a minus sign.

As texts or numbers may grow in size (due to number of characters or changed font size), you can set their growth directions:

