

# SAP® Analytics Cloud

**SAP Analytics Cloud (SAC) live connectivity to SAP BW**

Release Date: July 5<sup>th</sup>, 2021

Date Last Updated	6 <sup>th</sup> July 2021
Revision	

## Introduction

SAP Analytics Cloud (SAC) is a new generation of Software-as-a-Service (SaaS) that is built on the SAP HANA Cloud Platform which provides business intelligence, planning, and predictive capabilities for all users in one solution. In the boardroom, at the office, or in front of a customer, you can discover, analyze, plan, predict, and collaborate in one integrated experience designed expressly for the cloud. Access all data and embed analytics directly into business processes to turn instant insight into quick action.

In this hands-on exercise, you will learn how SAP Analytics Cloud connects to SAP BW by using the live data connection. Any changes made to your data in the source system are reflected immediately. The benefit of connecting to data this way is that the data stays in the source system so large amounts of data do not need to be transferred. The existing models in the source system can also be used directly by SAP Analytics Cloud to build story and visualization on that model and perform online analysis without data replication . SAP Analytics Cloud can consume the SAP BW queries with all their elements (e.g. structures, hierarchies, variables, variants, global key figures) considering the underlying authorizations & roles concept. There is no need to change the SAP BW queries for special reporting purposes as you can leave them as is on your SAP BW backend side. This helps IT & Business Departments to consume all existing SAP BW content without changes – no data extraction, no data silos, just plug & play.

## BEFORE YOU START

SAP Analytics Cloud requires Google Chrome for designing its Stories. If you discover any issues with chrome, disable Third-Party cookies in your Chrome Settings:

- Type “cookies” in the Windows or Mac search box and then click “Block or Allow Third-Party Cookies”
- Then navigate to Content settings → Cookies
- Unselect “Block third-party cookies and site data”

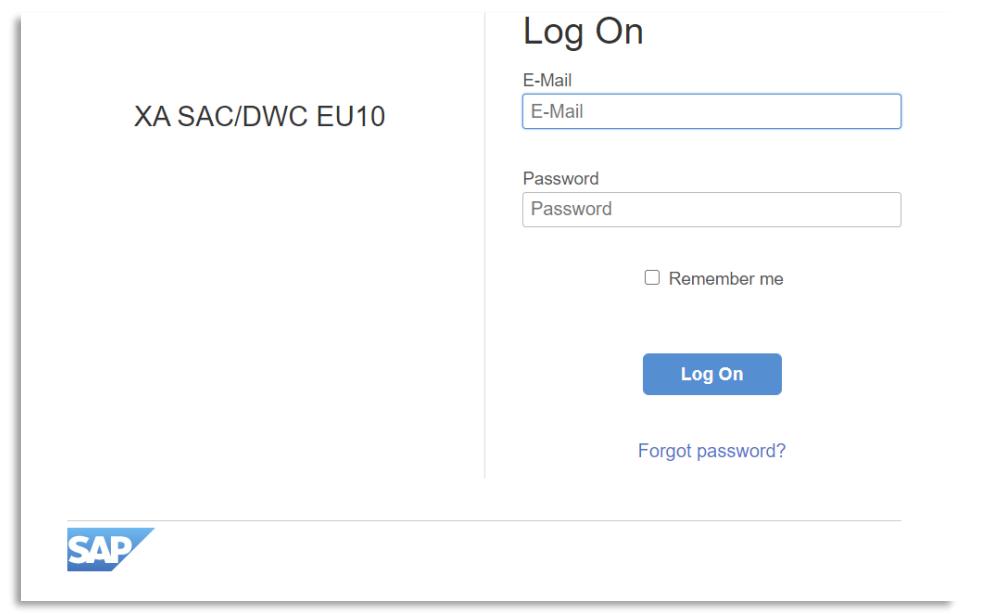
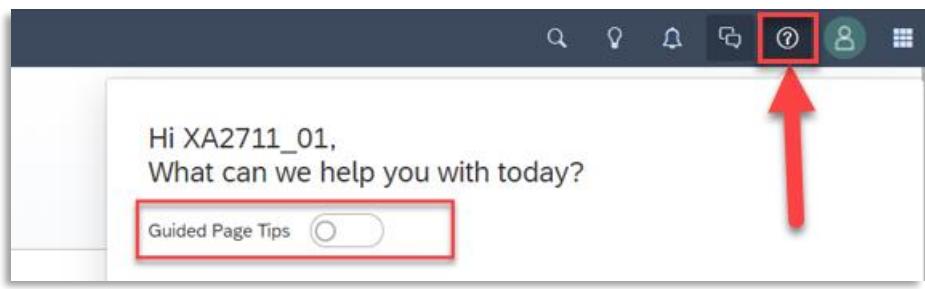
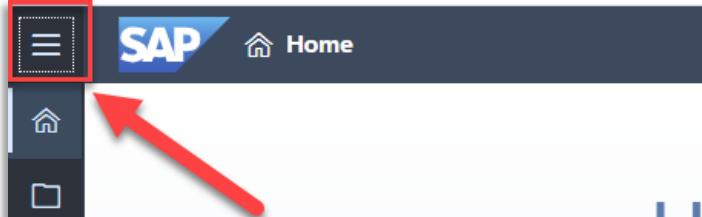
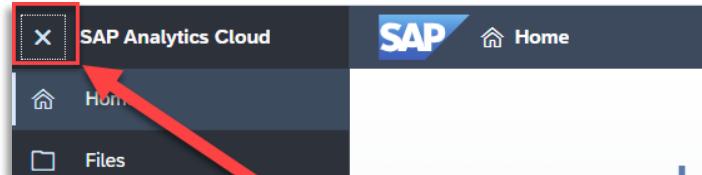
**Access the SAP Analytics cloud system via the URL provided by the instructor.**

**System URL, Username and Password will be provided during the session.**

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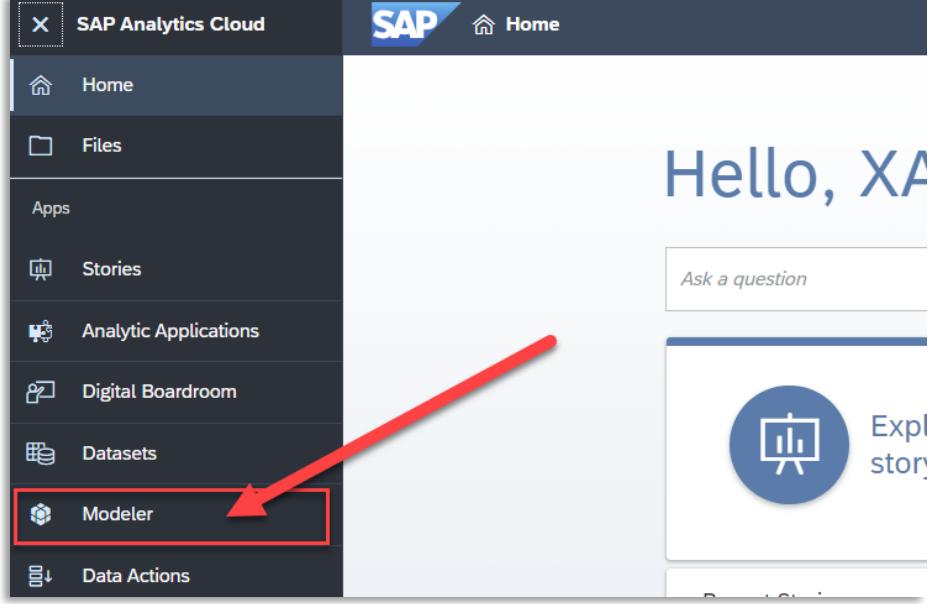
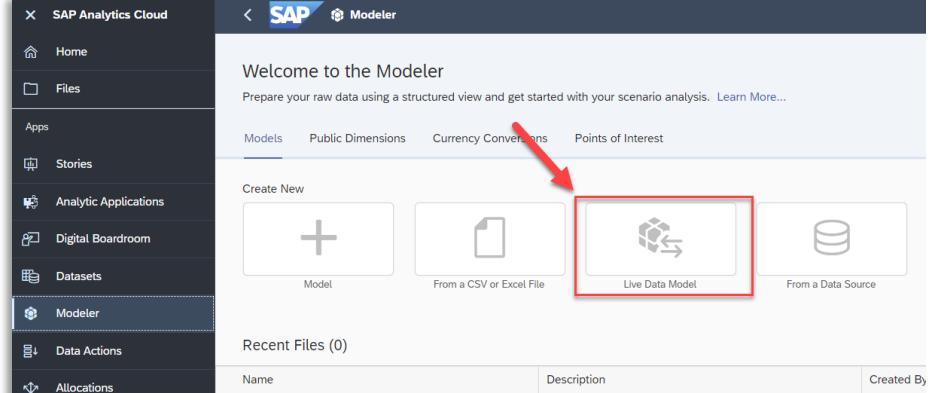
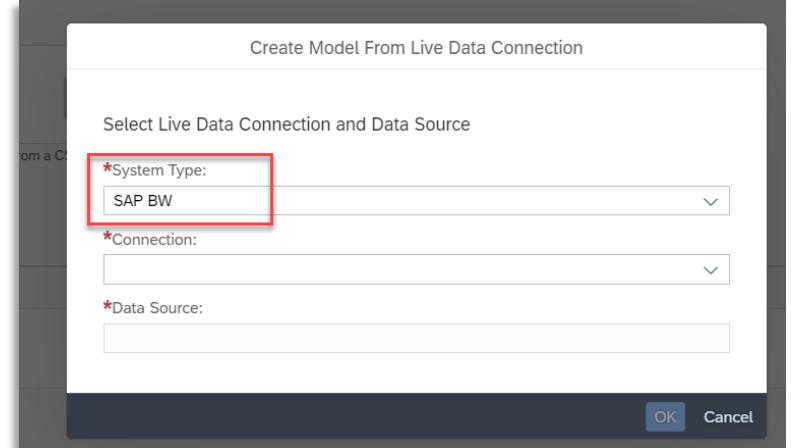
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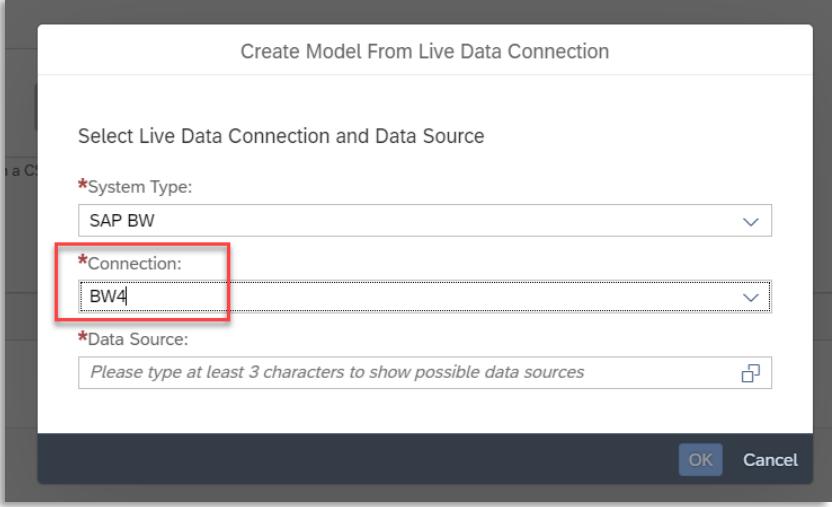
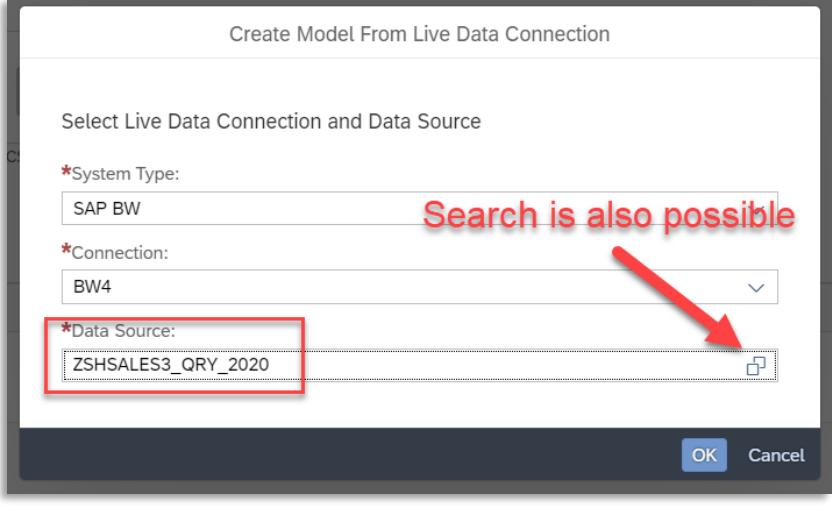
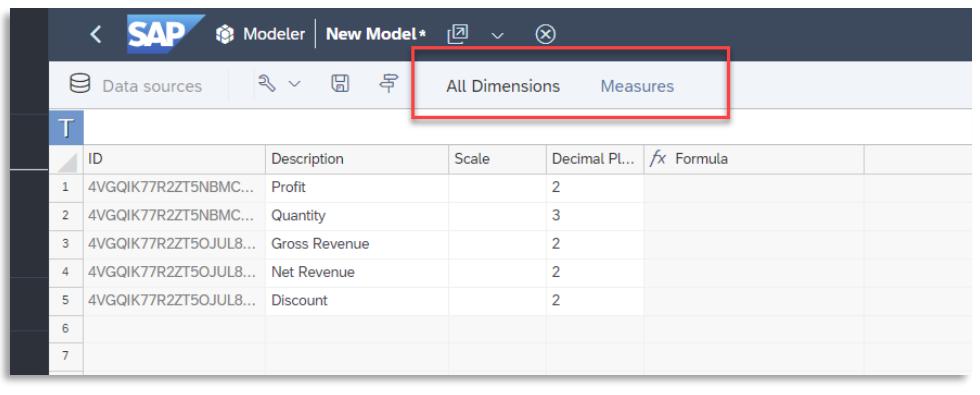
## EXERCISE 1 - LOG IN [5 MINUTES]

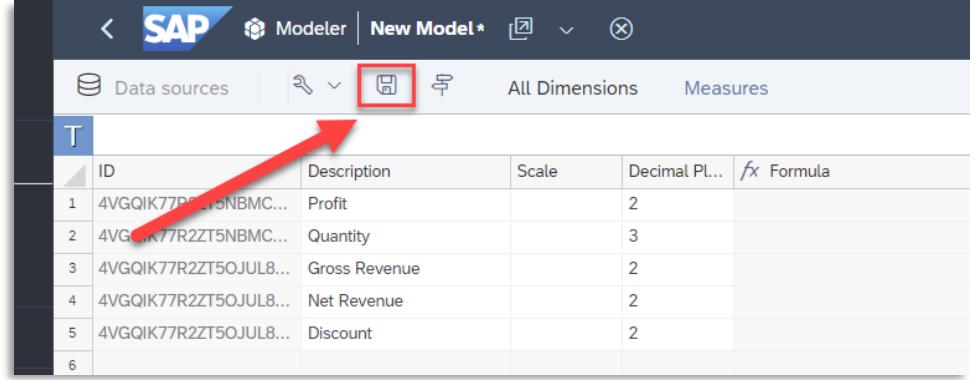
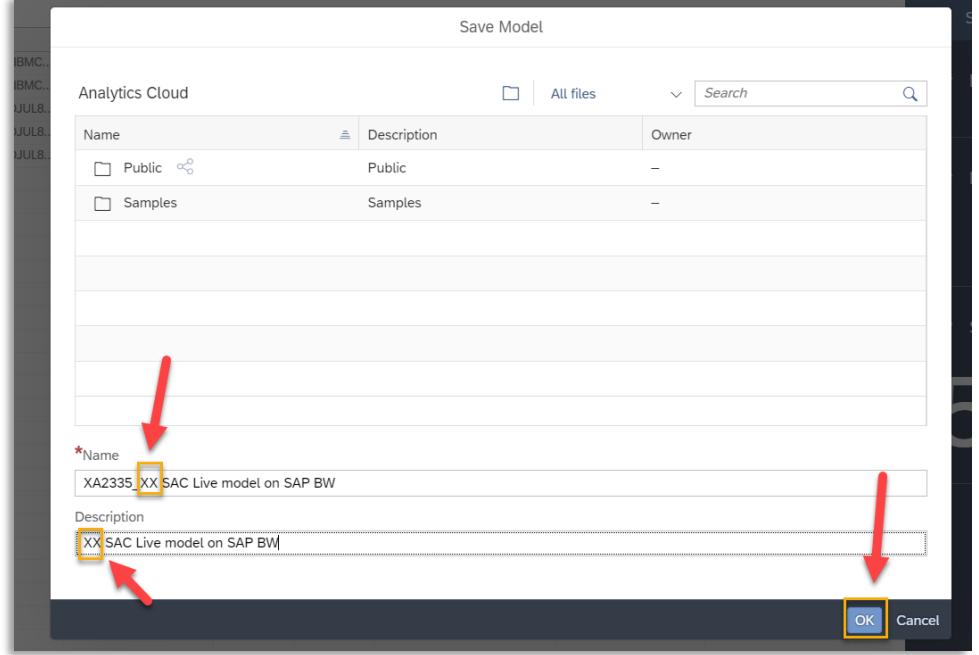
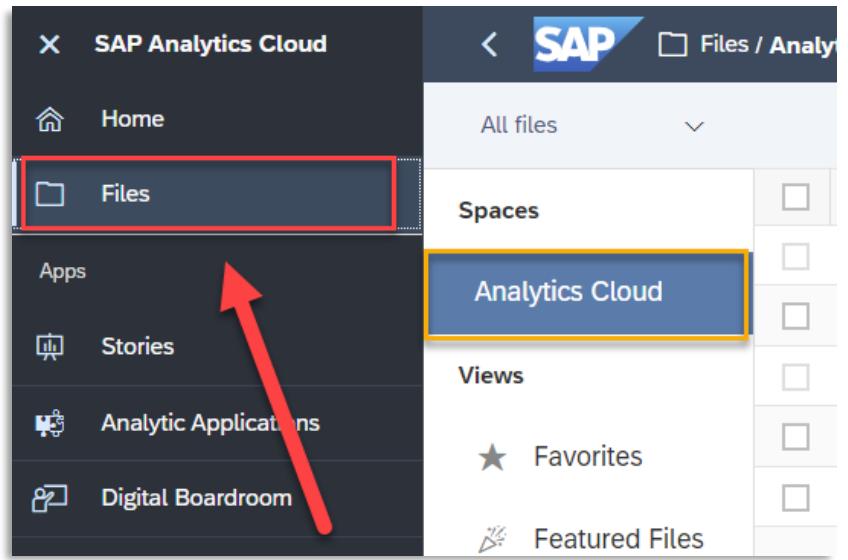
Explanation	Screenshot
<p>Launch Analytics Cloud in Chrome</p> <p>You will receive the login URL along with your assigned username and password ahead of time.</p>	
<p>Analytics Cloud will prompt you with tooltips to help guide you through the application. You may find it distracting.</p> <p>If this pops up when you logon you can turn these off by doing the following:</p> <p><b>Click the question mark</b> on the top right of your window  <b>Click the toggle off</b> for 'Guided Page Tips'</p>	
<p>SAC has now received with QRC Q3.2021 a new "Navigation Bar" on the left side. You can always expand or hide the side navigation if needed. For the next step you need to expand it.</p>	<p><b>"Expand" Navigation Bar</b></p>  <p><b>"Hide" Navigation Bar</b></p> 

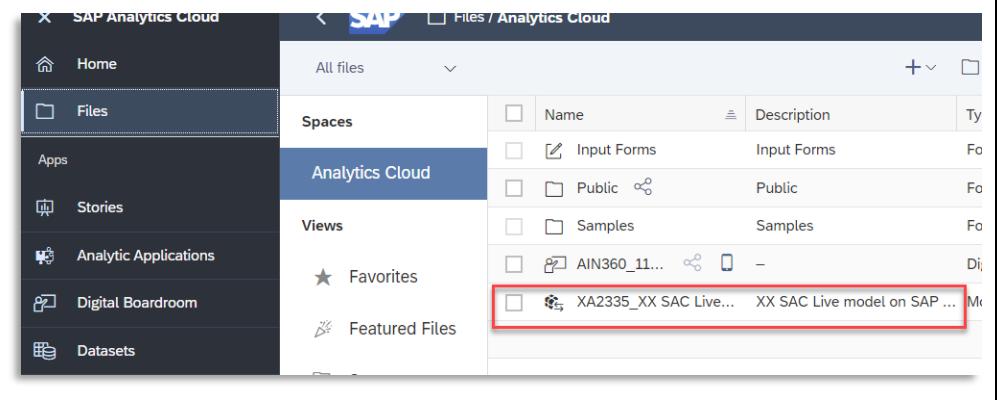
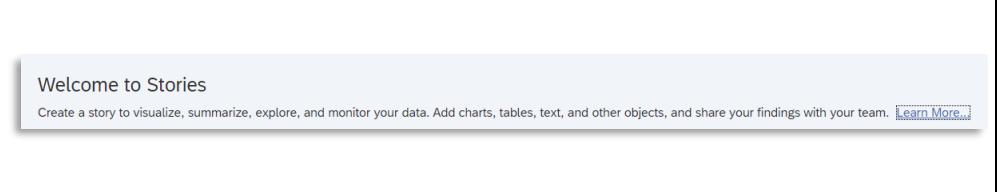
## EXERCISE 2 - CREATE A LIVE MODEL BASED ON A SAP BW QUERY [10 MINUTES]

In this exercise, we will create a live model based on a SAP BW query. As mentioned in the introduction we don't need to touch the SAP BW queries on the backend side. Please note that you can create several SAC stories based on one SAC live model.

<p>Click in the side bar on the left on &gt; Modeler</p>	
<p>Click on the symbol “Live Data Model”</p>	
<p>A live connection to a SAP BW/4HANA system is already available on this SAP Analytics Cloud tenant. To use the live system connection, select system type “SAP BW” first.</p>	

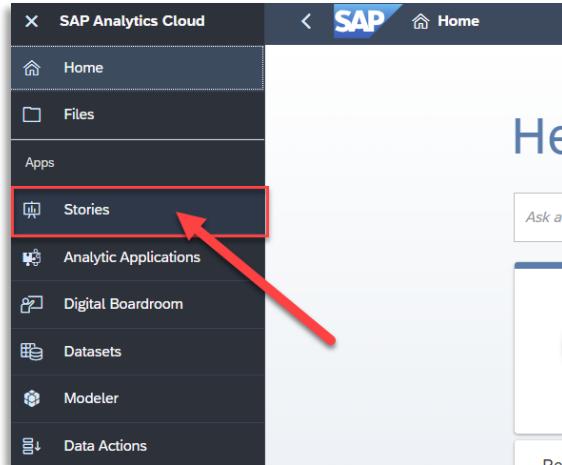
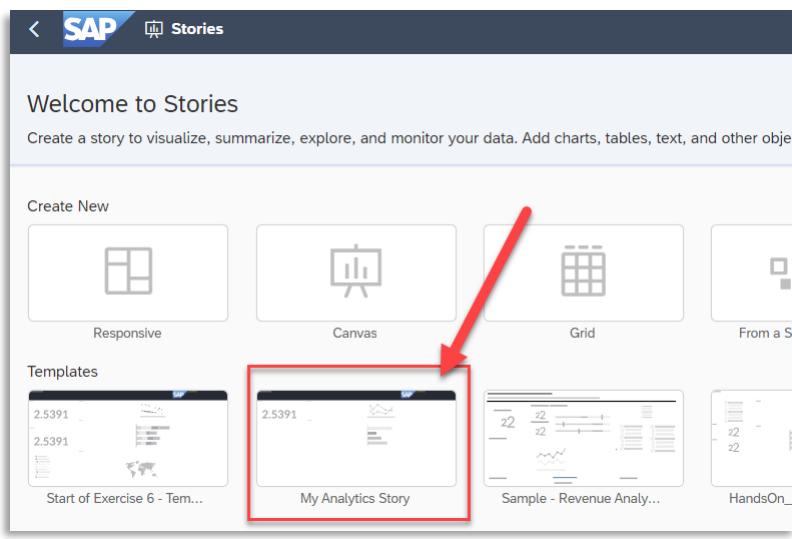
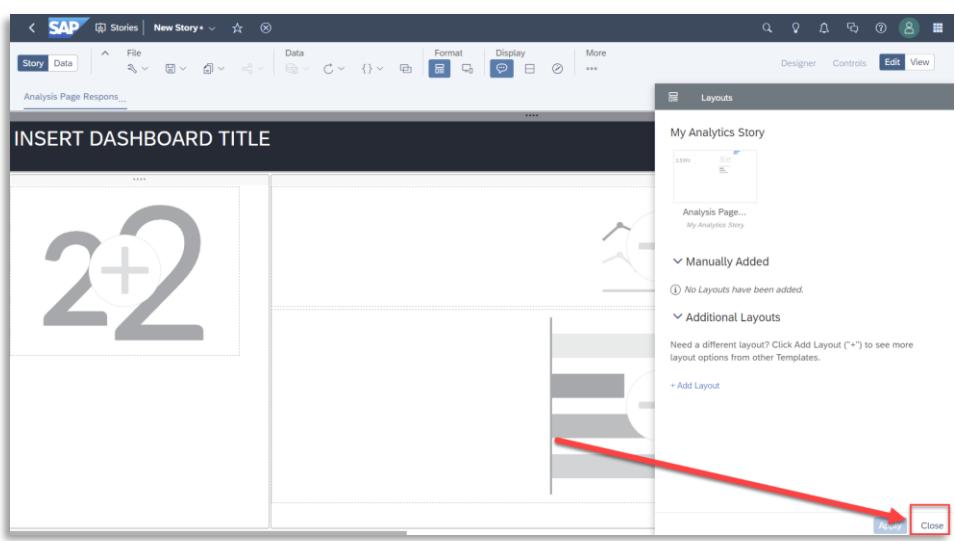
<p>The SAP BW system we want to connect in a live mode has the ID “BW4”. This ID has been used during the creation of the connection by the SAC administrator.</p>																																									
<p>If the connection is selected, you need to finally enter the <b>technical name</b> of the SAP BW query.</p> <p>We will use the SAP BW query “ZSHSALES3_QRY_2020” which contains some sales data.</p> <p>If you start to enter the ID, SAC will start showing possible BW queries. If needed you can also search for the SAP BW Query (by description &amp; ID).</p>																																									
<p>You will see a draft of the live model which is currently not saved. You can see all <b>dimensions</b> (<b>characteristics</b> from the SAP BW query) and all <b>measures</b> (<b>key figures</b> from the SAP BW query).</p> <p>There are also settings available, but we don't need them for the exercise. Proceed with the next step.</p>	 <table border="1"> <thead> <tr> <th>ID</th> <th>Description</th> <th>Scale</th> <th>Decimal Pl...</th> <th>Formula</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Profit</td> <td></td> <td>2</td> <td></td> </tr> <tr> <td>2</td> <td>Quantity</td> <td></td> <td>3</td> <td></td> </tr> <tr> <td>3</td> <td>Gross Revenue</td> <td></td> <td>2</td> <td></td> </tr> <tr> <td>4</td> <td>Net Revenue</td> <td></td> <td>2</td> <td></td> </tr> <tr> <td>5</td> <td>Discount</td> <td></td> <td>2</td> <td></td> </tr> <tr> <td>6</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>7</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	ID	Description	Scale	Decimal Pl...	Formula	1	Profit		2		2	Quantity		3		3	Gross Revenue		2		4	Net Revenue		2		5	Discount		2		6					7				
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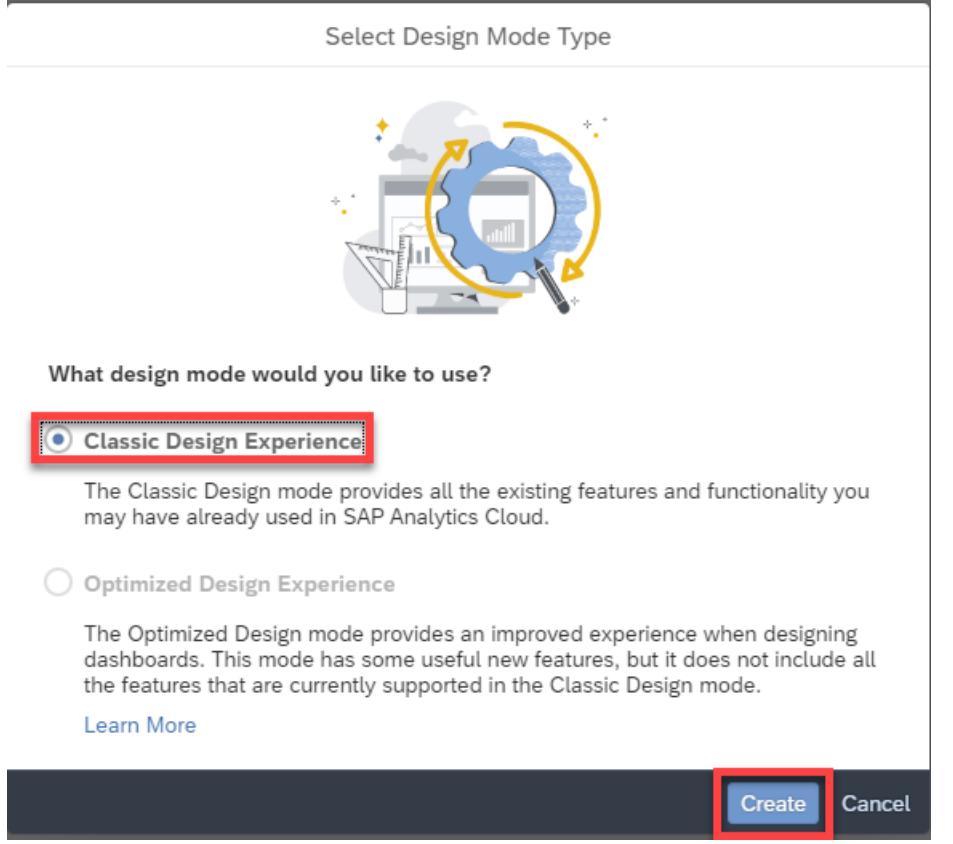
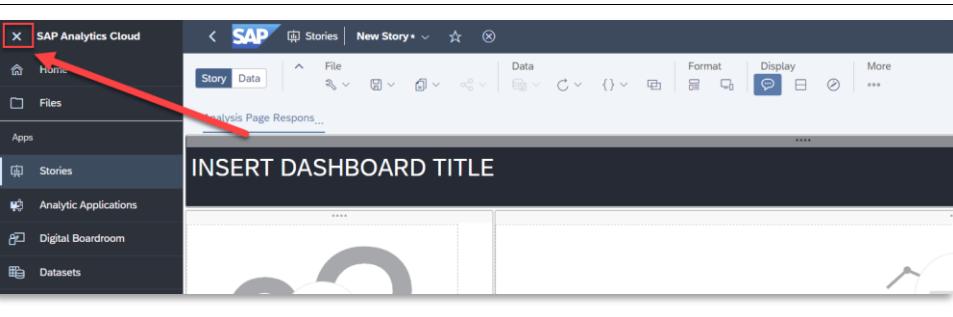
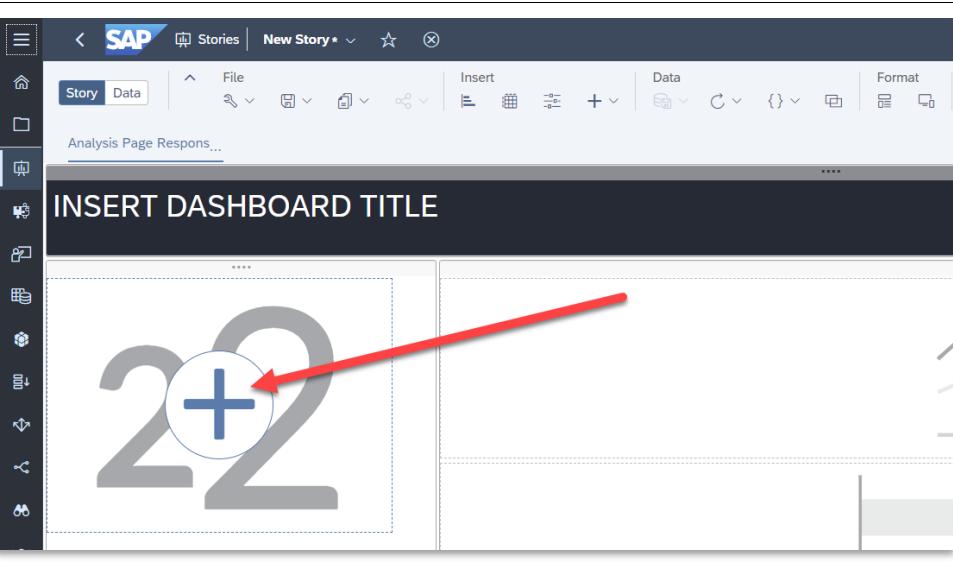
<p>As we are in a live mode and we only want to access the SAP BW query data, you only must save the SAC live model. Click on the “Save” symbol.</p>	
<p>You will now see your personal folder in SAP Analytics Cloud. We will <u>not use</u> the public folder. Just save the SAC model here in your personal folder use the following Name &amp; Description:</p> <p>Please put your User number where you see XX.</p> <p><b>Name:</b> XA2335_XX SAC Live model on SAP BW</p> <p><b>Description:</b> XX SAC Live model on SAP BW</p>	
<p>Leave the SAC live model and check your folder. You need to switch to the “Files” folder by using the menu.</p>	

<p>That's it. You have successfully created a SAC live model based on a SAP BW query and now can start to create your SAC stories based on the SAP BW data live. Please note that this SAC live model can be reused as source in several SAC stories as data source. In other words – you can create many stories based on this one SAC live model.</p>	
<p>In the next exercise you will use this SAC live model in a SAC story template.</p> <p><b>Proceed with exercise 3.</b></p>	

## EXERCISE 3 - CREATE SAC STORY BASED ON SAC LIVE MODEL [30 MINUTES]

In this exercise you will create a SAC Story based on your SAC live model created in exercise 2.

<p>Click in the side bar on the left on &gt; Home &gt; Stories</p>	
<p>Of course, you can create a SAC story from scratch but for the hands-on workshop we will use a SAC template with the name "<b>My Analytics Story</b>". Click on the template to initiate the story creation process.</p> <p>Hint: Any SAC story can be saved as a SAC template. Once you've built a story with all needed colours, fonts, and settings the story can be used as a template. But we will use an existing one.</p>	
<p>The story template will be opened. As a template can contain different pages which can be used, normally you need to select one of them via the apply button.</p> <p>But in this case, there is only one page available in the template with the name "<b>Analysis Page Responsive</b>".</p> <p>Just <u>click</u> on "<b>Close</b>" to use this template as is.</p>	

<p>In this case confirm that you will use the Classic Design Experience and <b>Create</b></p>	 <p>Select Design Mode Type</p> <p>What design mode would you like to use?</p> <p><input checked="" type="radio"/> <b>Classic Design Experience</b></p> <p>The Classic Design mode provides all the existing features and functionality you may have already used in SAP Analytics Cloud.</p> <p><input type="radio"/> Optimized Design Experience</p> <p>The Optimized Design mode provides an improved experience when designing dashboards. This mode has some useful new features, but it does not include all the features that are currently supported in the Classic Design mode.</p> <p><a href="#">Learn More</a></p> <p><b>Create</b> <b>Cancel</b></p>
<p>The template will be applied to your story. To have more space available in the story designer you can now close the navigation panel on the left side by clicking the “X” at the top left.</p>	 <p>SAP Analytics Cloud</p> <p>Home</p> <p>Files</p> <p>Stories</p> <p>Analytic Applications</p> <p>Digital Boardroom</p> <p>Datasets</p> <p>INSERT DASHBOARD TITLE</p>
<p>Click on the “+” symbol to connect the widget with your SAC live model. In the next step you will select your model.</p>	 <p>INSERT DASHBOARD TITLE</p> <p>22</p>

<p>Select your SAC live model you have created in the last exercise.</p>	
<p>This is now your first interaction with the SAP BW query. You will see a variable popup. Please note that this is the same variable popup you would see e.g. in Analysis Office or BEx Analyzer. If you would create variants for your BW query (created in Analysis Office) you would be also able to select them in this popup. Currently this SAP BW query has no variants. If yes, you can even use them. But for the moment we just will leave the variable popup as is.</p> <p>To continue just click on “<b>Set</b>”.</p>	
<p>The widget will give you the information that measures are required to build this numeric point chart.</p> <p>On the right side you will see the SAC Designer and its “<b>Builder</b>” panel where we will add the relevant measures. <b>Go to the next step and you will see how to add these measures.</b></p>	

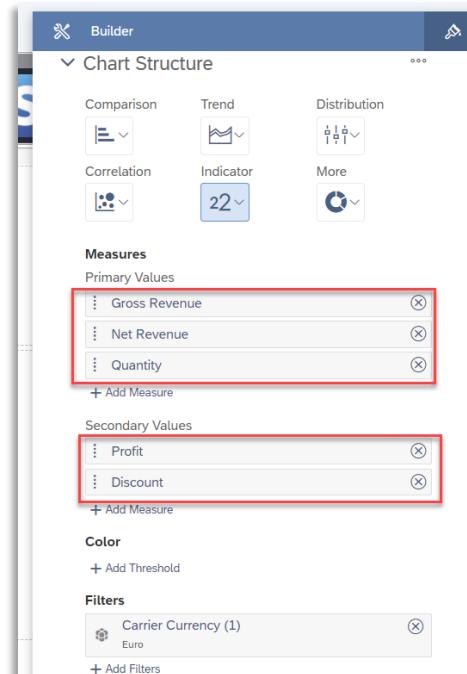
Now add the following Measures as Primary & Secondary Values.

Just use the “+ Add Measure” function to do this.



**Primary Values:**  
Gross Revenue,  
Net Revenue, Quantity  
Quantity

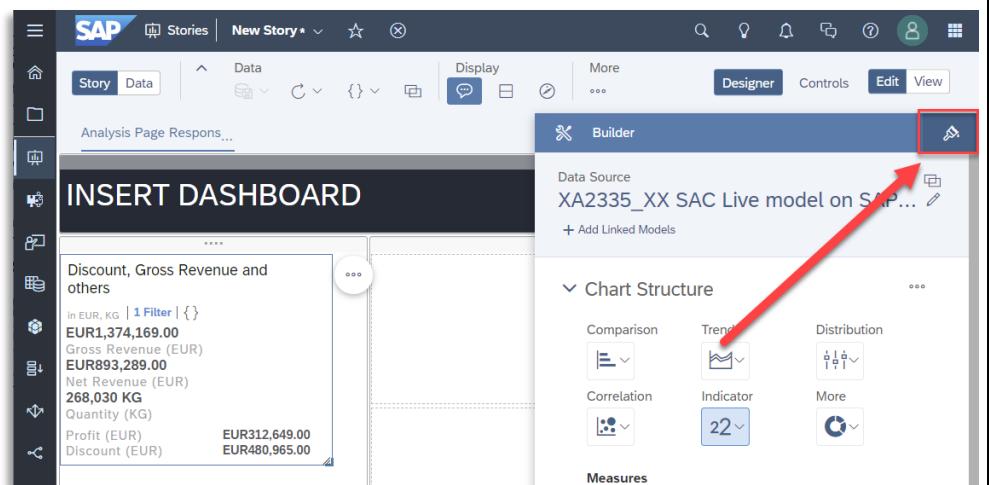
**Secondary Values:**  
Profit, Discount



Now you will see your data live from SAP BW in your Story. You will notice that the currency & unit will be shown next to the measure value and in the measure description.

Let's change that in the “**Styling**” panel which is part of the SAC Story Designer.

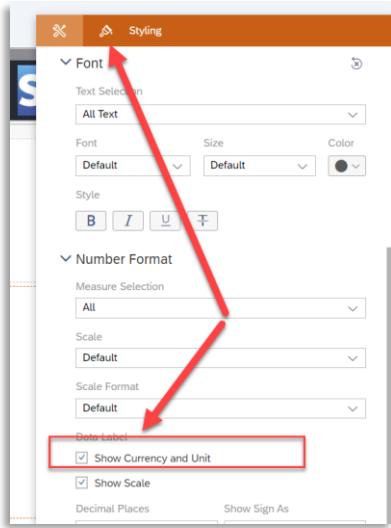
You can reach the “**Styling**” pane on the right side where you can see already the “**Builder**” panel. The symbol for the Styling settings is

After activating the “**Styling**” panel you can see all options which are related to the design of the current SAC story widget.

Whenever you click on a SAC story widget, you will see the corresponding “**Builder**” and “**Styling**” settings on the right side.

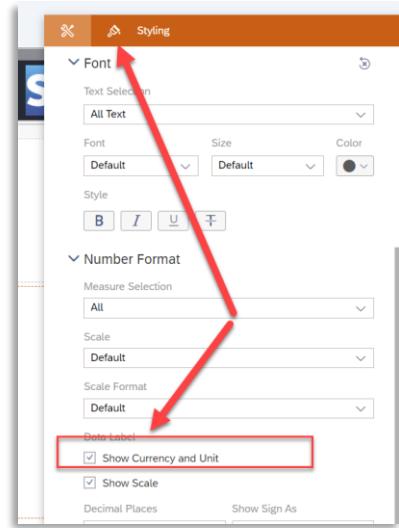
Now **disable** that the currencies and units are shown:

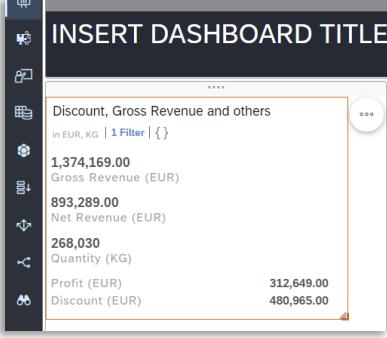
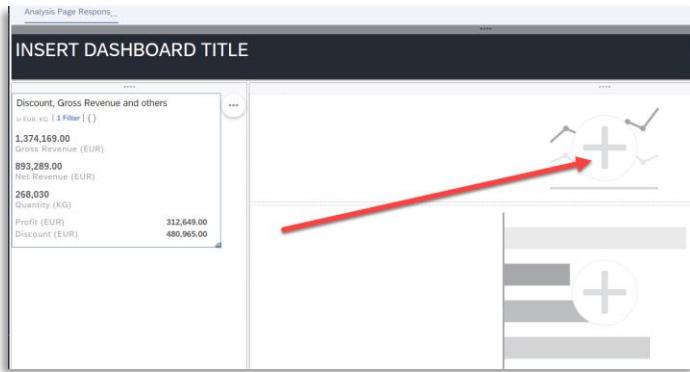
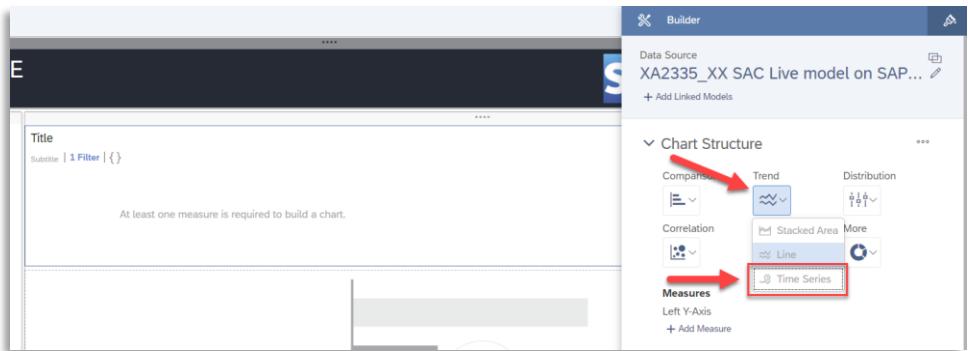
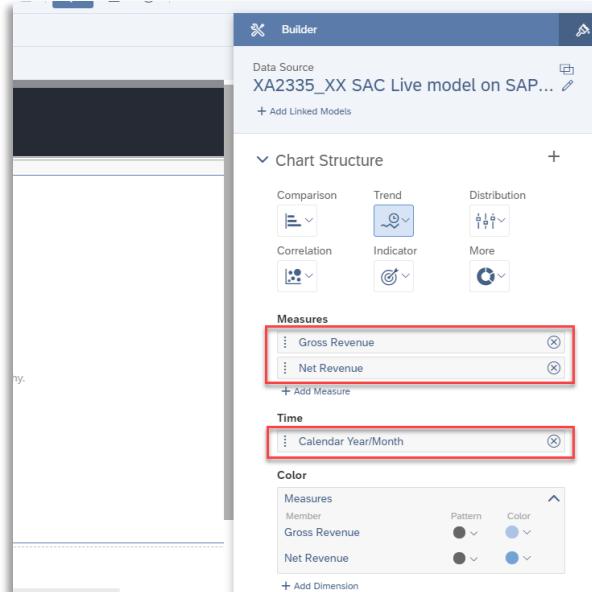


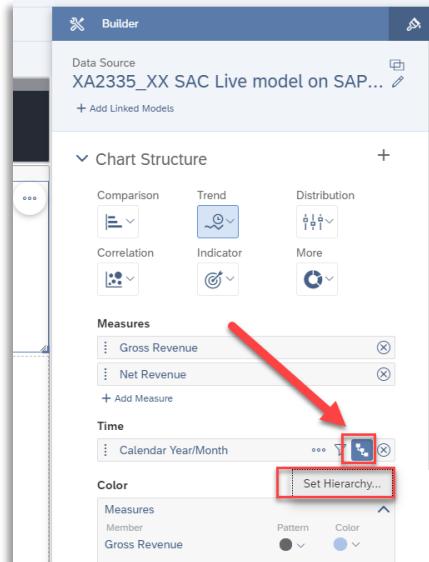
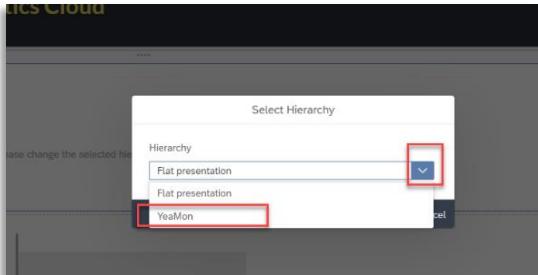
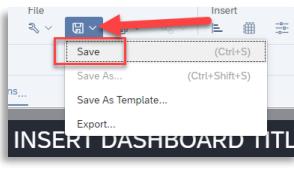
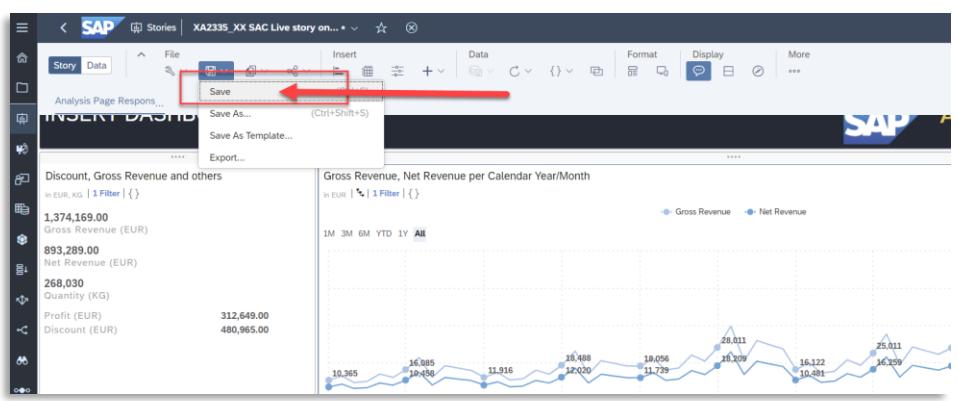
**Data Label**

Show Currency and Unit

Show Scale



<p>You will notice that your chart will be updated immediately. You can change more settings but let's leave this for the moment as is.</p>	 <p>Discount, Gross Revenue and others in EUR, KG   1 Filter   {}</p> <p>1,374,169.00 Gross Revenue (EUR) 893,289.00 Net Revenue (EUR) 268,030 Quantity (KG) Profit (EUR) 312,649.00 Discount (EUR) 480,965.00</p>
<p>Now let's continue with the line chart in the centre of your story template. Click on the “+” symbol.</p>	
<p>What we will do now is to switch the “line chart” to a “time series chart”. You can do this directly in the “Builder” panel on the right side.</p>	 <p>Builder</p> <p>Data Source XA2335_XX SAC Live model on SAP...</p> <p>+ Add Linked Models</p> <p>Chart Structure</p> <ul style="list-style-type: none"> <li>Comparison</li> <li>Trend</li> <li>Distribution</li> <li>Correlation</li> <li>Indicator</li> <li>More</li> <li>Measures</li> <li>Time</li> <li>Color</li> </ul> <p>Time Series</p>
<p>As measures add the “Gross Revenue” and the “Net Revenue” to the chart. As this is a time series chart, we need to add a time dimension. Add the “Calendar Year / Month” to the chart.</p>	 <p>Builder</p> <p>Data Source XA2335_XX SAC Live model on SAP...</p> <p>+ Add Linked Models</p> <p>Chart Structure</p> <p>Measures</p> <ul style="list-style-type: none"> <li>Gross Revenue</li> <li>Net Revenue</li> </ul> <p>Time</p> <ul style="list-style-type: none"> <li>Calendar Year/Month</li> </ul> <p>Color</p> <p>Measures</p> <ul style="list-style-type: none"> <li>Gross Revenue</li> <li>Net Revenue</li> </ul> <p>Pattern</p> <p>Color</p>

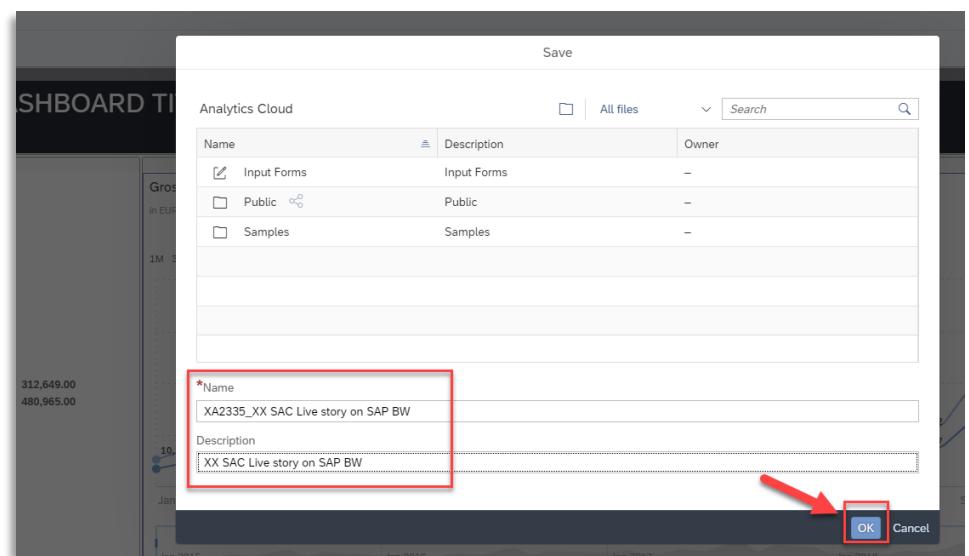
<p>You will notice that SAC will ask you to add a SAP BW hierarchy for the <b>Calendar Year/Month</b> dimension.</p> <p>There is a hierarchy symbol next to the description of the dimension. If you click on it, you will see the “<b>Set Hierarchy...</b>” function.</p>	
<p>Select the SAP BW hierarchy “<b>YeaMon</b>” and click on “<b>Set</b>” to leave the settings.</p>	
<p>As the time series chart is too small, we can make it bigger by using the symbol in the bottom right corner. You can close the Story builder panel by clicking on the symbol:</p> <p></p> <p>And then you can change the size of the time series chart.</p>	
<p>Before we continue with the next step let's save our SAC story in our personal folder. You can use the “<b>Save</b>” function in the menu.</p> <p></p>	

You will now see your personal folder in SAP Analytics Cloud. We **will not use** the public folder. Just save the SAC story here in your personal folder using the following “**Name**” & “**Description**”:

Please put your User number where you see **XX**.

**Name:**  
XA2335\_XX SAC Live story on SAP BW

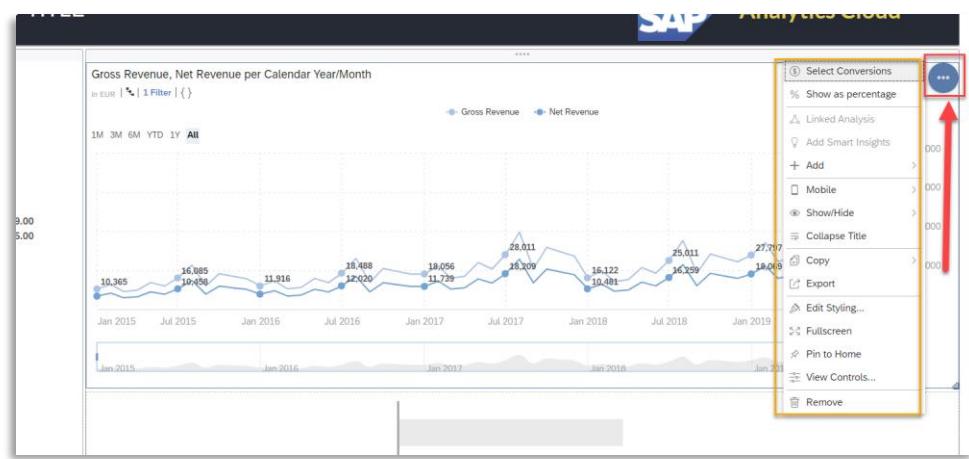
**Description:**  
XX SAC Live story on SAP BW



Each SAC chart or table has a context menu with several SAC features you activate & deactivate.

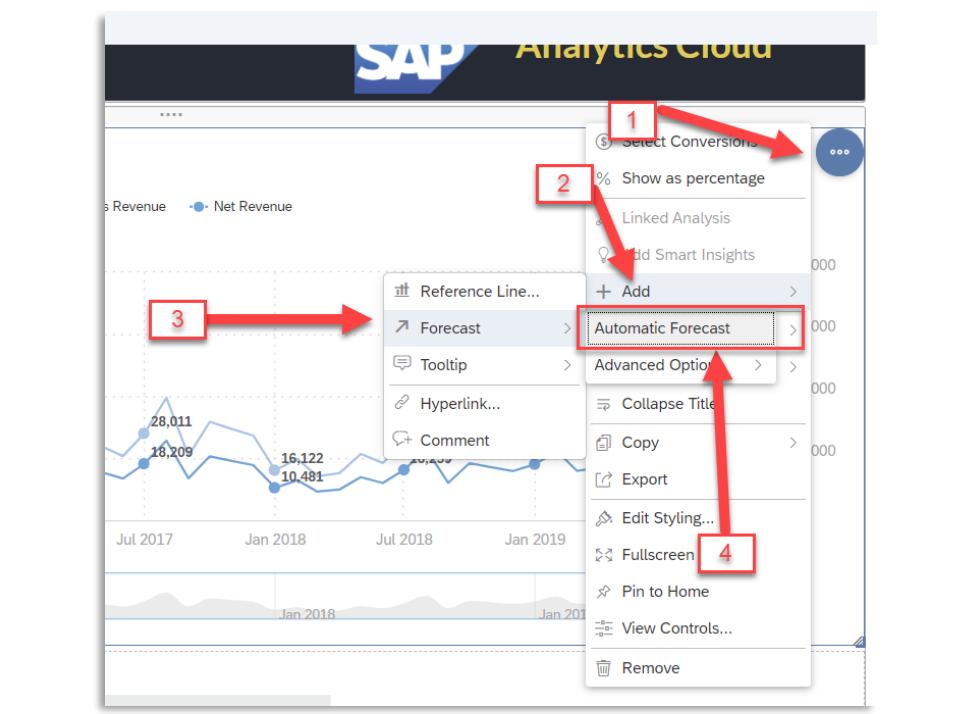
The menu can be opened via **right click** directly on the corresponding item or via a symbol on the top right corner of your chart (•••).

We will use the symbol to open the context menu in this exercise.

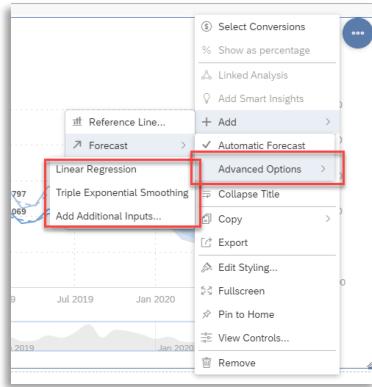


In time series charts you can make use of the **automatic time series forecasting** feature on your SAP BW Query live data.

Click on the symbol “•••”, select “+ Add” → select “Forecast” → select “Automatic Forecast”



Now you can see a timeseries forecast which has been created automatically. If needed you can check the quality of the prediction and you can change the forecasting periods. Please note that you have some more “**Advanced Options**” you can set, but this is not required in the exercise.



Let's continue with the **bar chart** below and click on the “+” symbol.



Add the **measures**

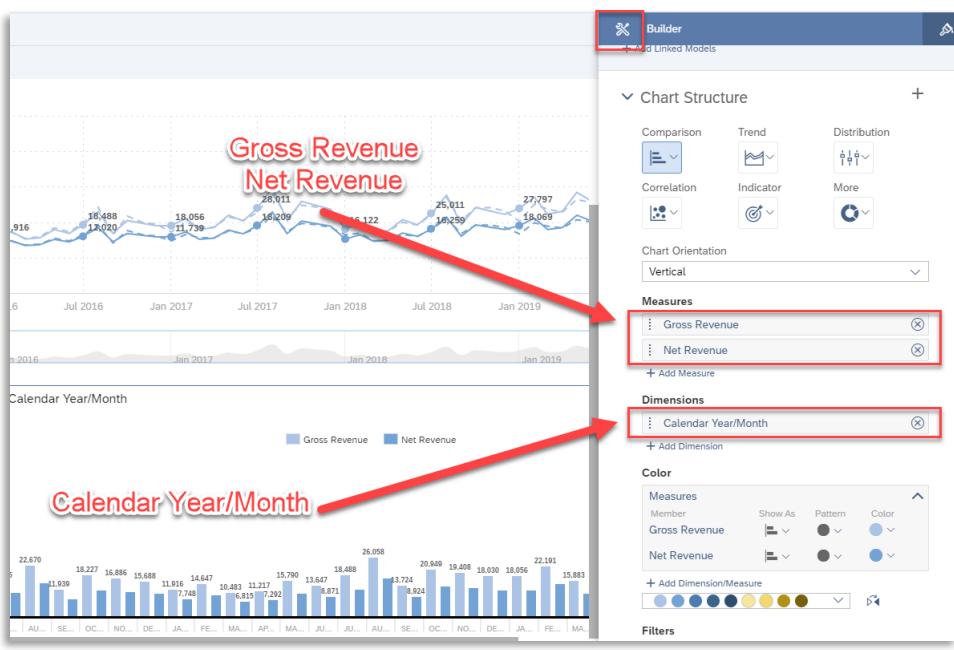
**“Gross Revenue”** and **“Net Revenue”**

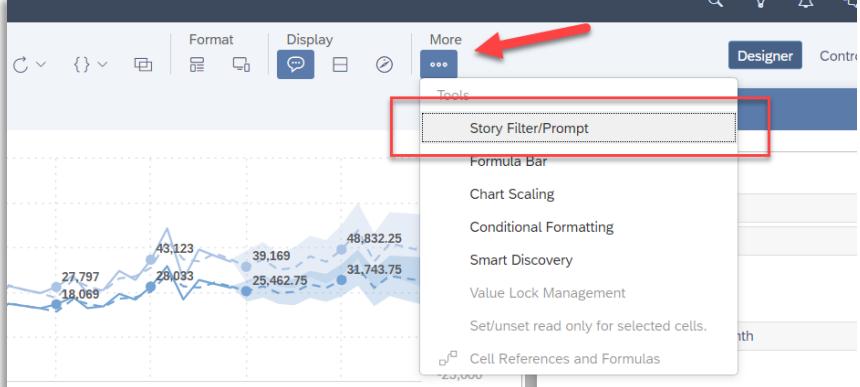
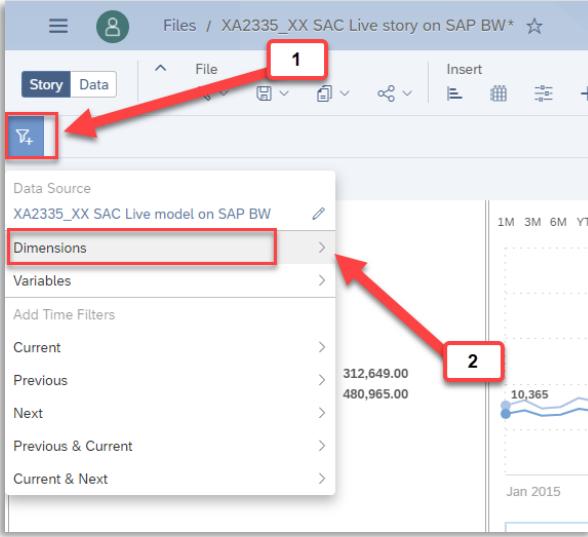
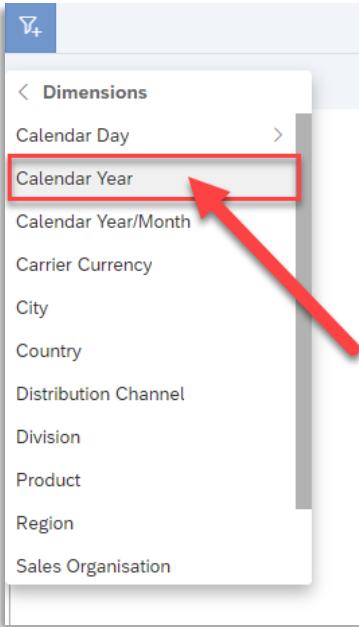
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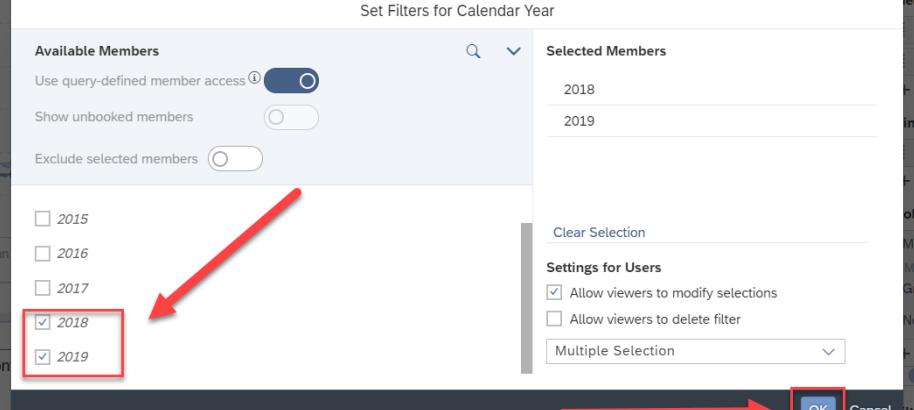
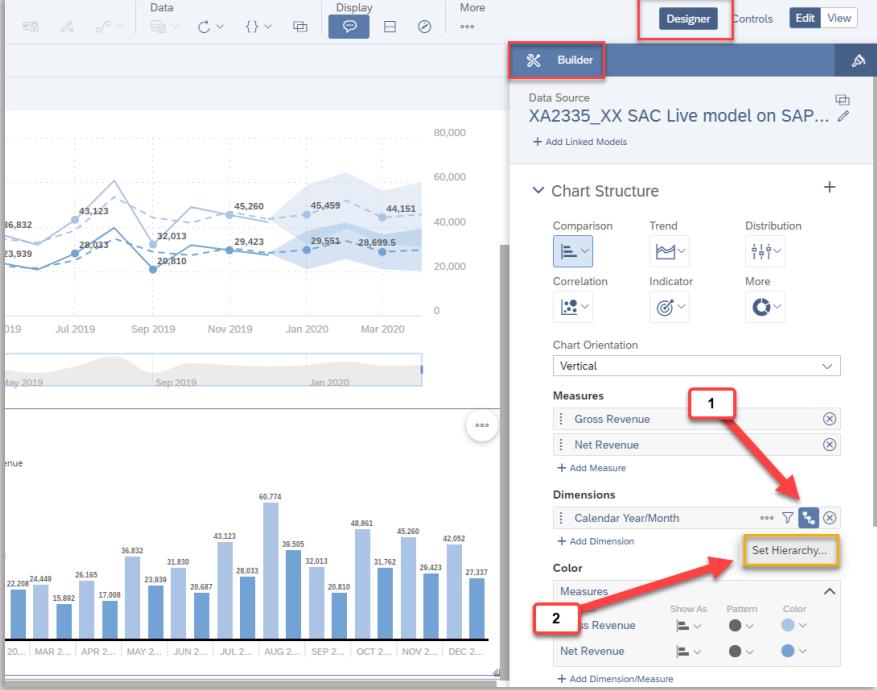
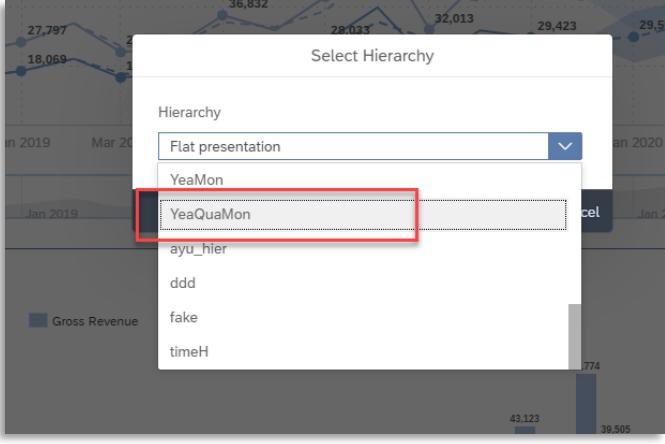
**dimension**

**“Calendar Year/Month”**

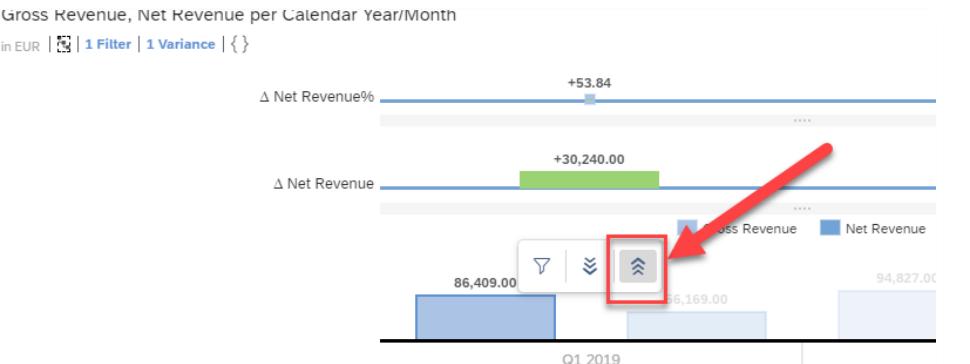
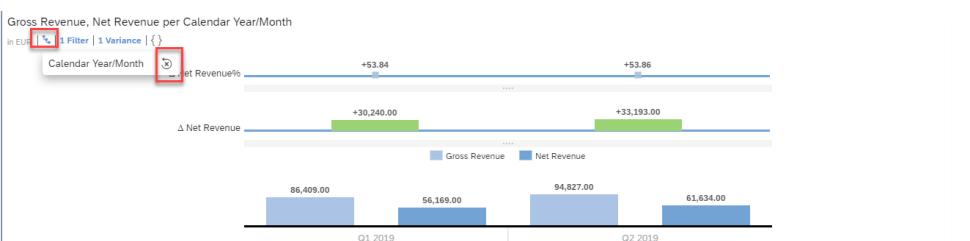
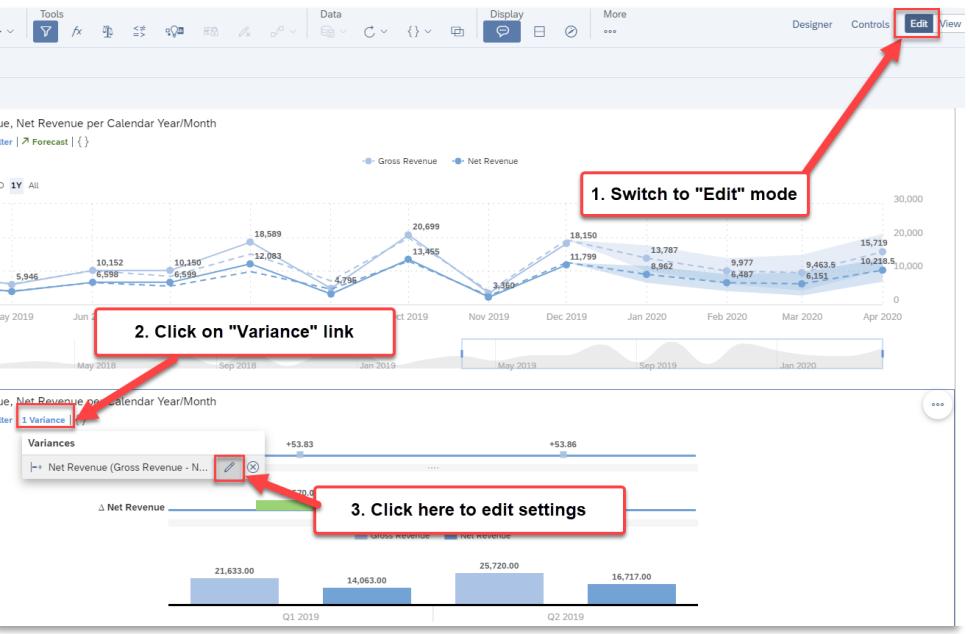
to the chart.



<p>Before we continue with the chart set a story filter on the calendar year.</p> <p>Enable the Story Filter.</p>	 <p>The screenshot shows the SAP BW Story Filter/Prompt dialog. A red arrow points from the top right towards the 'More' button. Another red box highlights the 'Story Filter/Prompt' option in the list.</p>
<p>You can click on the filter symbol “” in the menu on the top and then select “Dimensions”.</p>	 <p>The screenshot shows the SAP BW Story Dimensions dialog. A red arrow labeled '1' points to the filter icon in the top menu bar. A red box highlights the 'Dimensions' option in the list. A red arrow labeled '2' points to the 'Dimensions' section in the main content area, which displays numerical values: 312,649.00 and 480,965.00.</p>
<p>Select “Calendar Year” in the menu.</p>	 <p>The screenshot shows a sub-menu of the 'Dimensions' dialog. A red arrow points to the 'Calendar Year' option, which is highlighted with a red box.</p>

<p>Select “<b>2018</b>” and “<b>2019</b>” as filter values and leave the filter popup with “<b>OK</b>”.</p>	
<p>As the page is now filtered for calendar years <b>2018</b> and <b>2019</b> let's enable the hierarchy for the dimension “<b>Calendar Year/Month</b>”.</p> <p>Make sure that the <b>Designer</b> is active, and you are in the “<b>Builder</b>” panel.</p> <p>Then click on the hierarchy symbol next to the dimension description</p> <p><b>Calendar Year/Month</b> </p> <p>and then click on “Set Hierarchy”</p>	
<p>Select the hierarchy “<b>YeaQuaMon</b>” to show the Year/Quarter/Month.</p> <p>Click on “<b>Set</b>” to apply the settings and leave the popup.</p>	

<p>Change the size of the bar chart if needed.</p>	
<p>Now we want to apply a dynamic variance (<b>IBCS/Hichert</b>) feature into the chart. To achieve this, just select the “” symbol and select “<b>Add Variance...</b>”.</p> <p>The features can also be reached via the context menu, but we can activate this also in the Builder. This feature will allow you to compare measures (also actual vs. plan if you have the value type or version in your SAP BW query which you can link in your SAC Live model to the actual/plan/forecast dimension values).</p>	
<p>Select - Measure A (<b>Gross Revenue</b>) - Measure B (<b>Net Revenue</b>) to compare them.</p> <p>Activate the following display options: - <b>“Percentage”</b> - <b>“Bar”</b></p> <p>Finally click on “”.</p>	
<p>You will see the comparison (the variance calculations) directly in the chart and if needed you can change the <b>Variance</b> on the right sight in the Builder. But let's leave it as is for the moment.</p>	

<p>If you use a SAP BW hierarchy in your SAC story, then you can <b>drill down/up</b> in <b>charts and tables</b> (also end users can do this). Just click on a bar and use the drill down symbol.</p>	
<p>You can also <b>drill up</b> if needed.</p>	
<p>Whenever you use SAC features in the story, charts or tables will show additional interaction ways. You can use the hierarchy symbol also to <b>reset the hierarchy</b> or select <b>hierarchy levels</b> if maintained.</p>	
<p>As we use a variance in our bar chart, you can also interact with the variance settings (also as an end-user).</p> <ol style="list-style-type: none"> <li>1. Switch to the “Edit” mode</li> <li>2. Then click on the “Variance” link in the header of the chart.</li> <li>3. Click on the edit symbol to edit the variance settings.</li> </ol> 	

Now you can switch to a different variance setting.

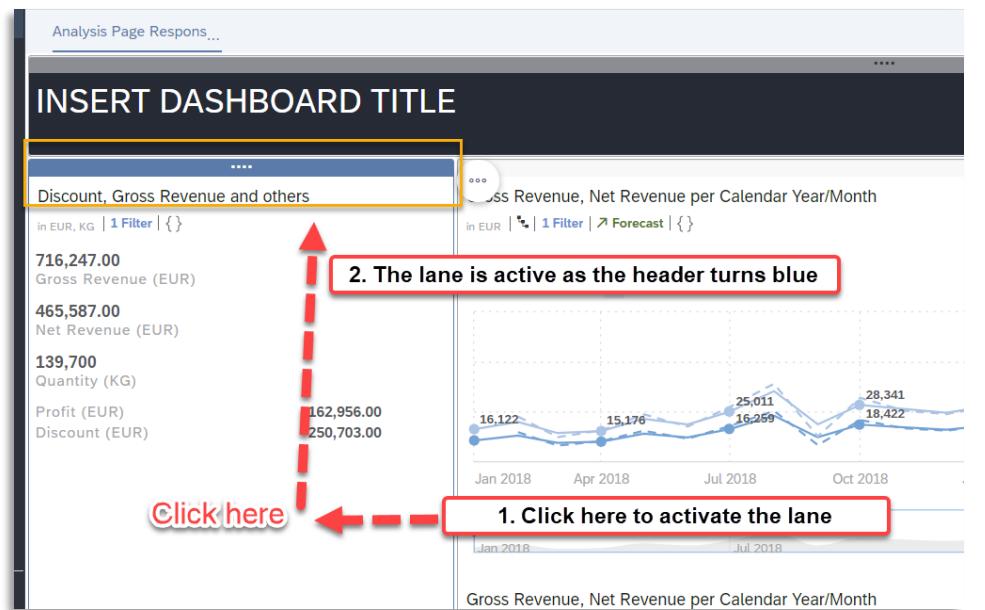
As an example, you can see the “**Integrated**” version of the variance in the screenshot.

Click somewhere in the chart to leave this setting.

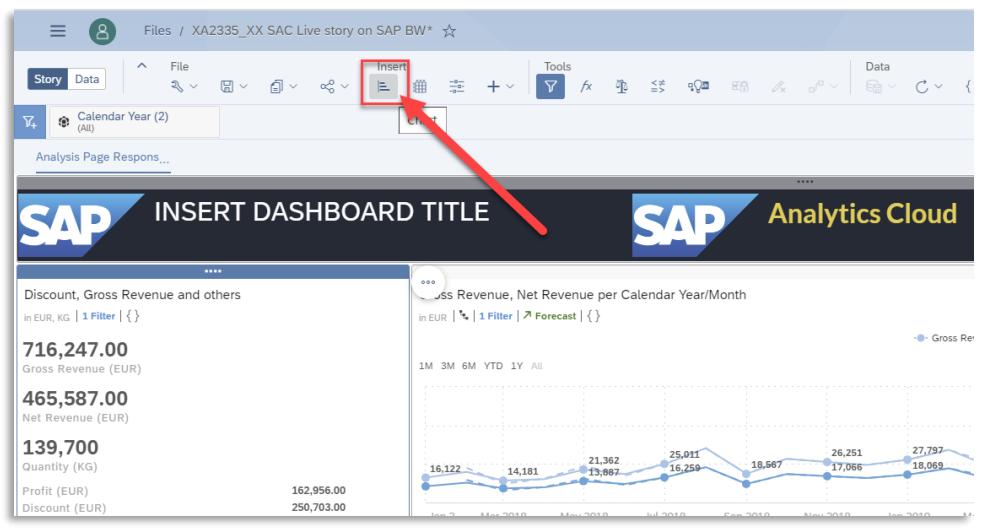


In this step we will add a new chart and will activate a “**linked analysis**” (the chart will filter the page).

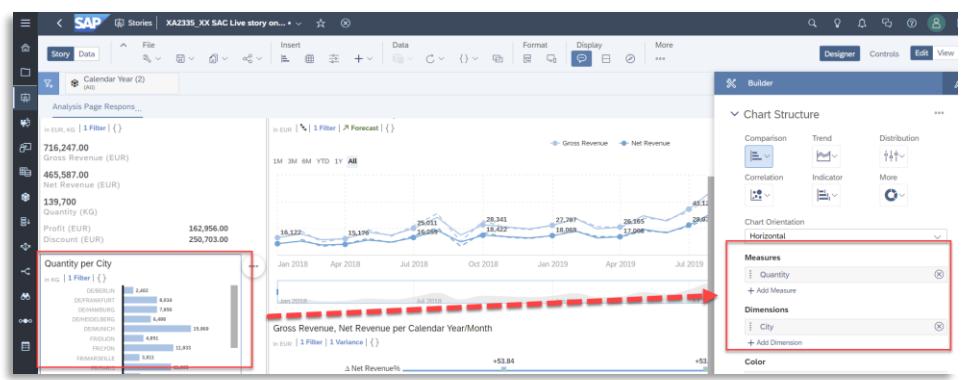
We will add a new bar chart to the lane on the left side, where the Numeric Point chart is already included. Just click in the lane and it will become active.



Include a new chart into your story by clicking on the chart symbol in the menu on the top:



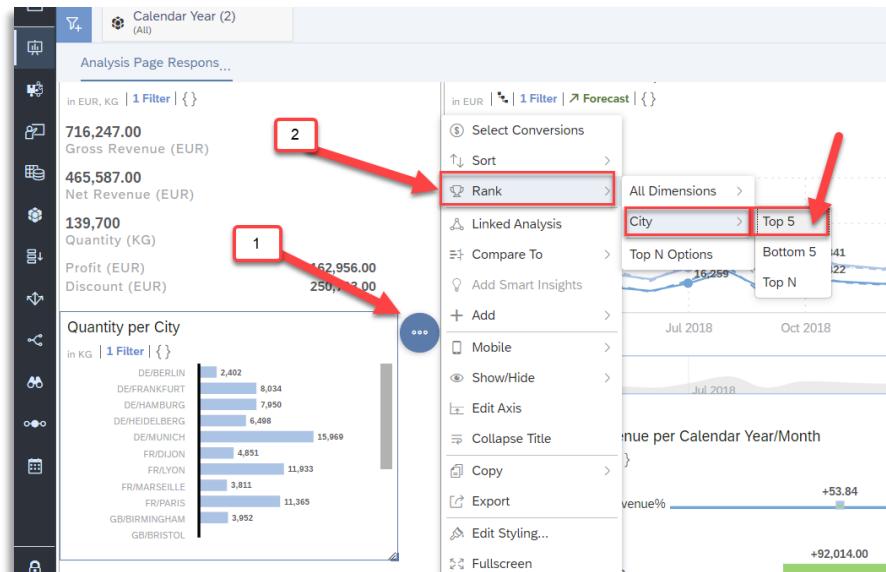
A new bar chart will be included into your story. Now put the “Quantity” into the Measures section and “City” into the Dimensions section in the chart settings.



We want to insert a “Top 5” ranking by city on the chart.

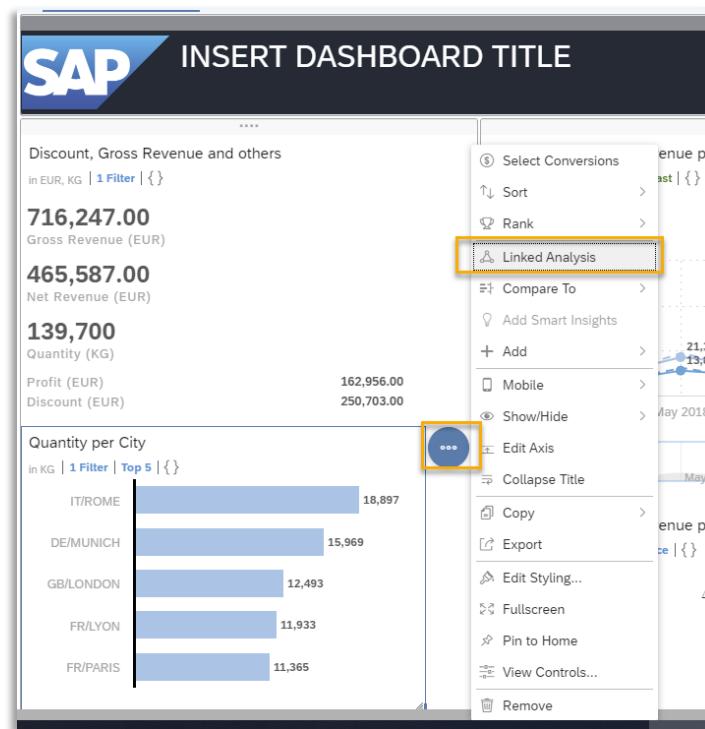
Just click on the chart and then on the symbol on the top right corner to open the context menu.

Select “Rank” in the menu and then “Top 5” to create.



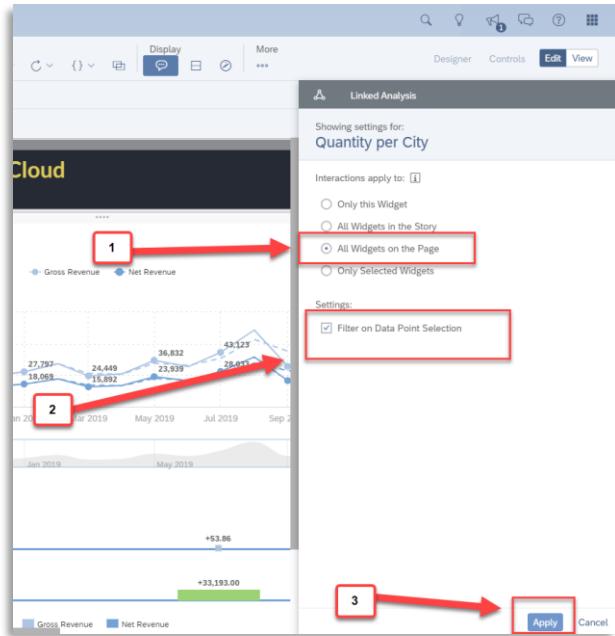
The chart shows the top 5 cities. Now we want to add a “Linked Analysis” to your story by using the context menu.

Linked Analysis means that this chart can control all or some items on the same page or the whole story.

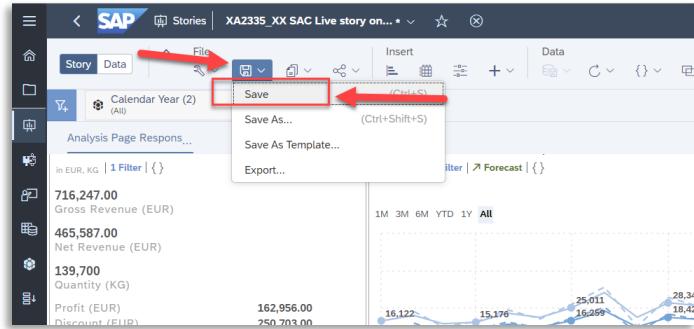


In the “**Linked Analysis**” settings select “**All Widgets on the Page**” and “**Filter on Data Point Selection**”.

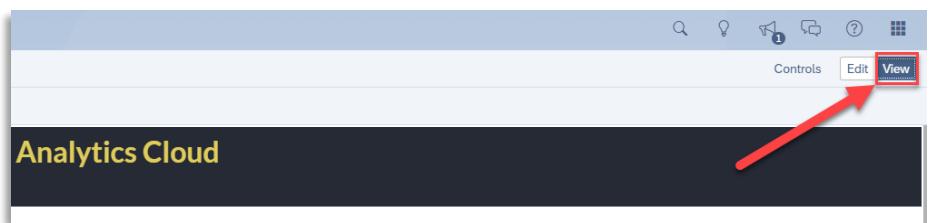
As a last step click on “**Apply**”.



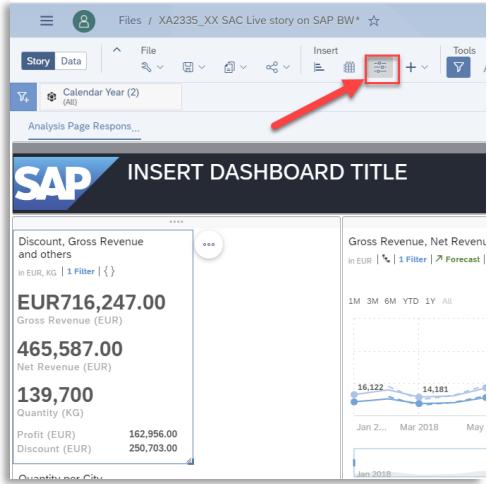
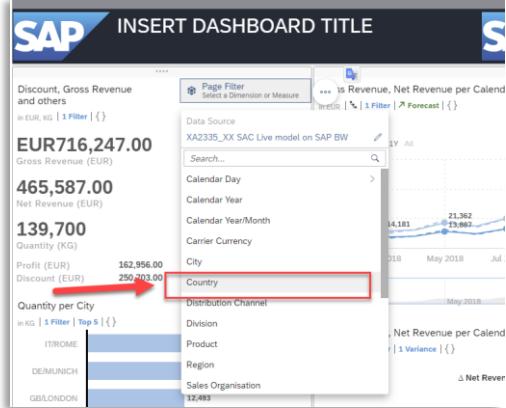
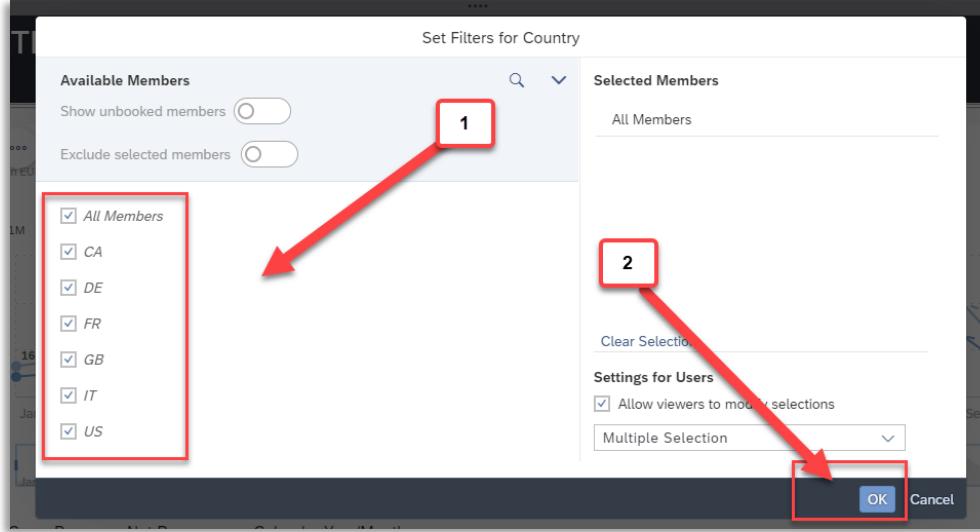
Before we continue with the next step let's save our SAC story again. You can use the “**Save**” function in the menu.



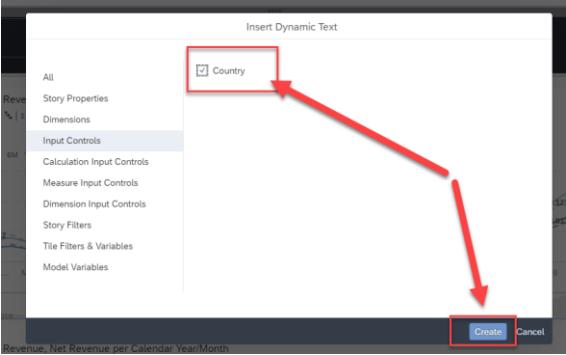
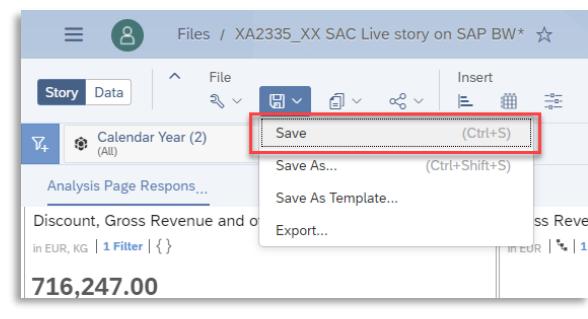
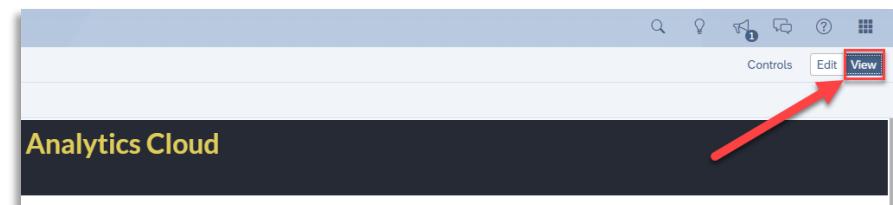
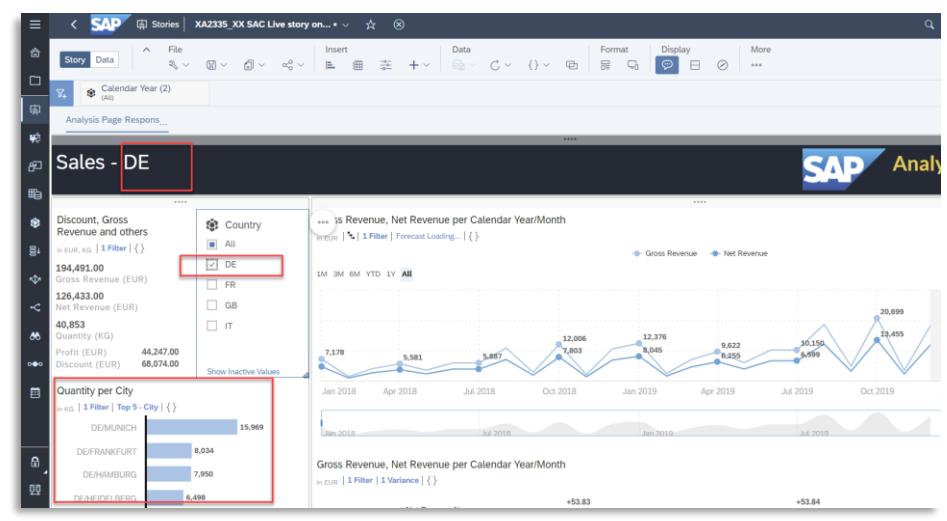
Let's test your SAC story now in a way, how end users would see it. Switch to the “**View**” mode by clicking on the top right “**View**” icon.

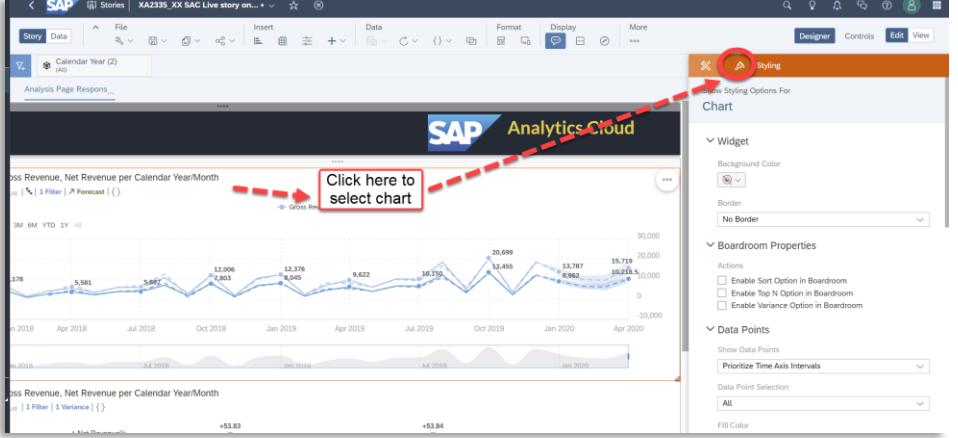
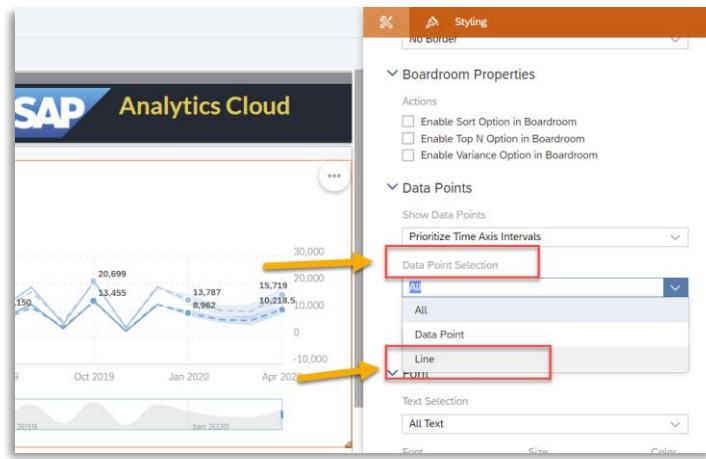
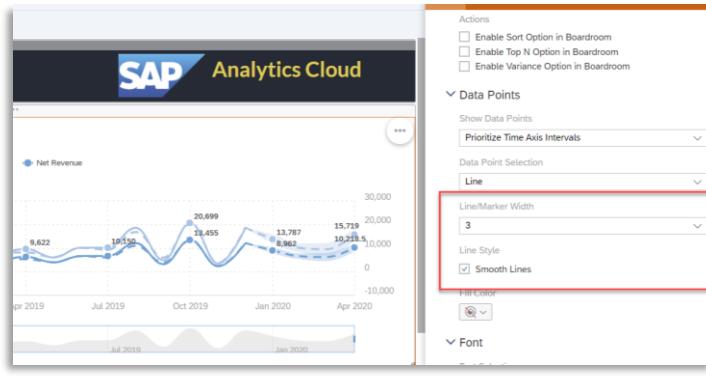
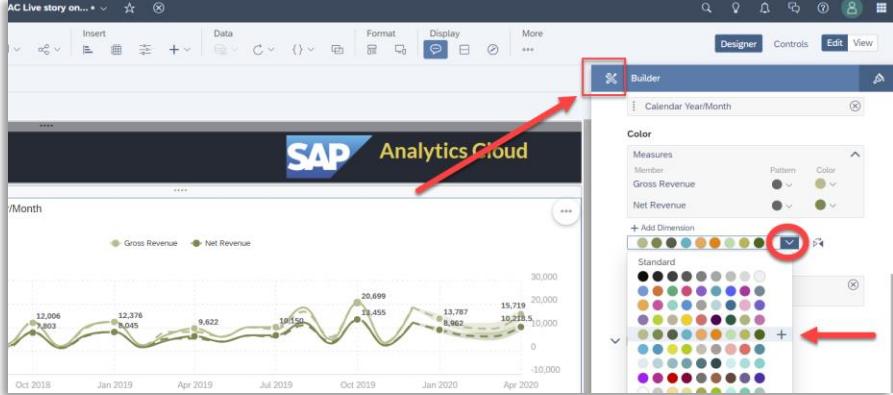


<p>Now click on a city in the bar chart - e.g." <b>ROME</b>".</p> <p>What happens? Click again on "<b>ROME</b>". What happens?</p> <p>Right - the chart controls the full dashboard.</p>	
<p>Now switch back to the "Edit" mode to finalize the SAC story.</p>	
<p>Make the numeric point chart smaller by using the symbol in the <b>bottom right</b> of the corner. The place right from the chart will be empty. Here we will include an input control in the next step.</p>	

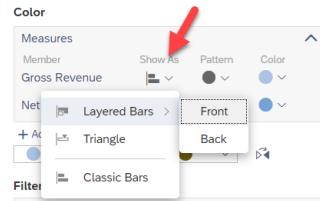
<p>Now click on the “<b>Input Control</b>” symbol in the menu to include one.</p>	
<p>Select “Country” dimension.</p>	
<p>Select “All Members” and click on “<b>OK</b>”.</p>	

<p>Make the import control bigger by using the symbol in the bottom right corner of the input control.</p>	
<p>The result should look like this.</p>	
<p>Save your story by just clicking on the “Save” command in the menu.</p>	
<p>Double click in the header as we want to change the title of our SAC story and will also use dynamic text to parametrize the title using filter values.</p>	
<p>Enter “Sales - “ and then do a right click in the text and select “+ Add”→ “Dynamic Text” If you did a mistake just refresh the story.</p>	

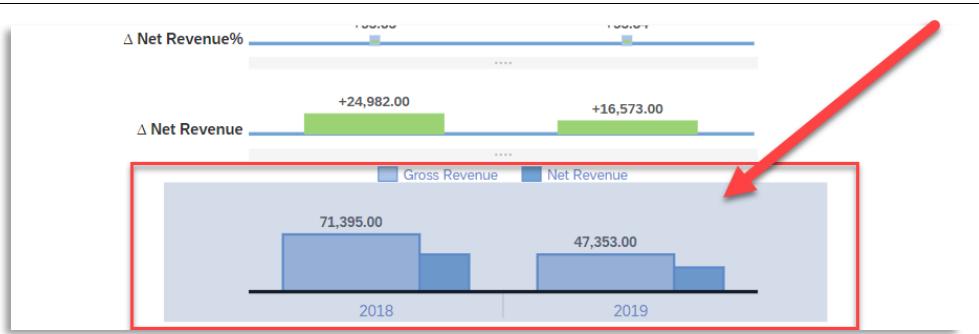
<p>Select “Input Controls” and then select “Country”. Click on “Create” to leave the popup window.</p>	
<p>Save again your story by just clicking on the “Save” command in the menu.</p>	
<p>Let's finally test your SAC story now in a way, how end users would see it. Switch to the “View” mode by clicking on the top right “View” icon.</p>	
<p>If you now filter a country ID - e.g. “DE” for Germany, the page will be filtered, and the Title of the story will show “DE” as you have maintained a dynamic text.</p>	

<p>Now let's do a few design changes in your story. Switch back to the "Edit" mode, click on the time series chart, and open the "Styling" panel.</p>	
<p>We want to change the "Data Point Selection" visualization. Selection "Line" from the dropdown box.</p>	
<p>Set the "Line/Marker Width" to "3". Activate "Smooth Lines".</p>	
<p>Switch to the "Builder" and select one of the existing color palettes in the "Color" section.</p>	

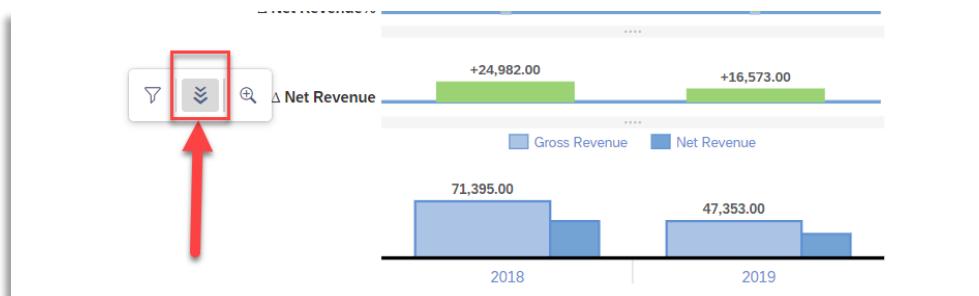
Click on the bar chart to activate it. In the “Color” section click on the bar chart under “Show as” and select “Layered Bars” -> “Front”.



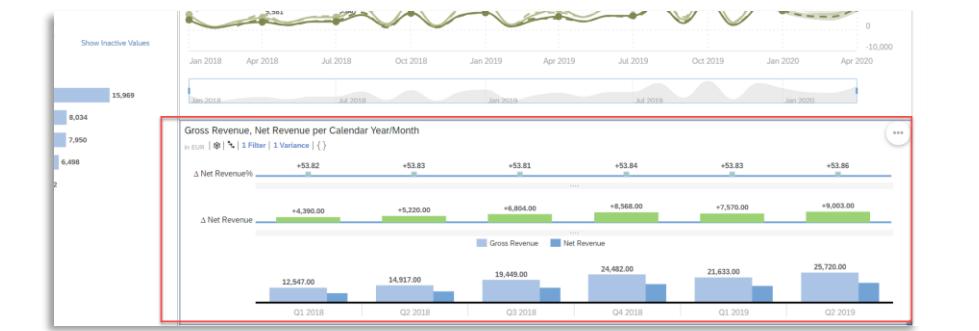
Now select the bars at the bottom of your bar chart with your mouse.

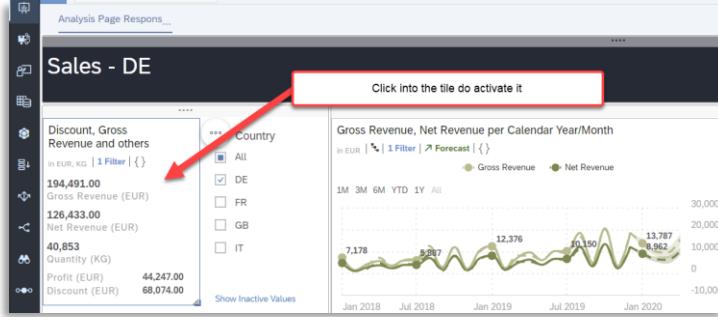
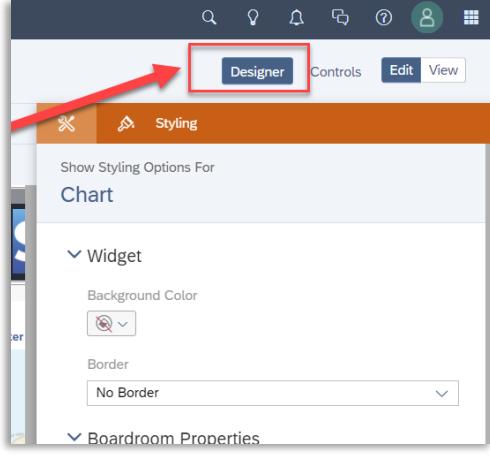
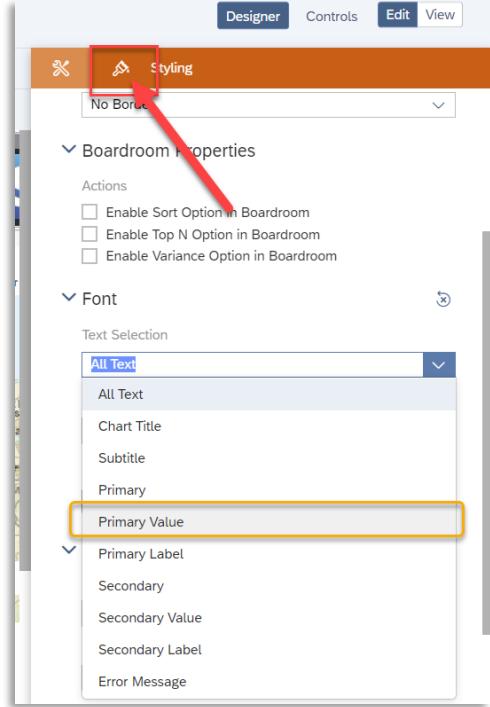


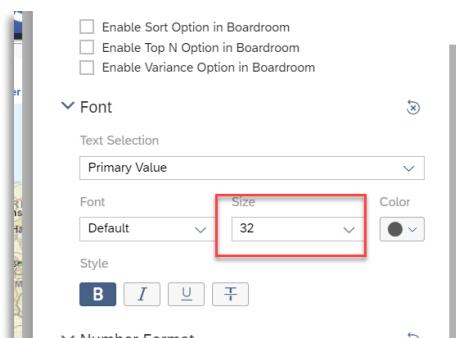
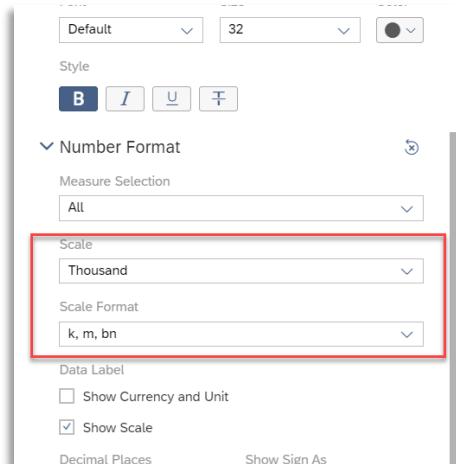
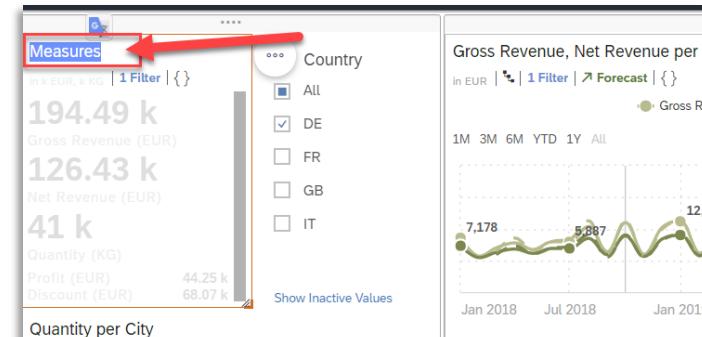
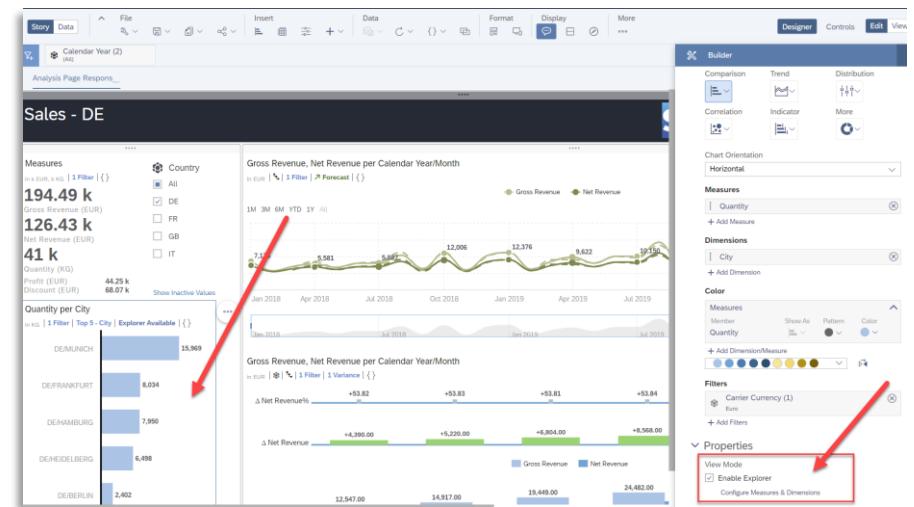
Select the **drill down** symbol to drill down into the next level of your BW hierarchy.

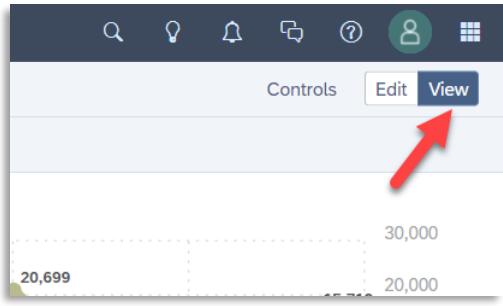
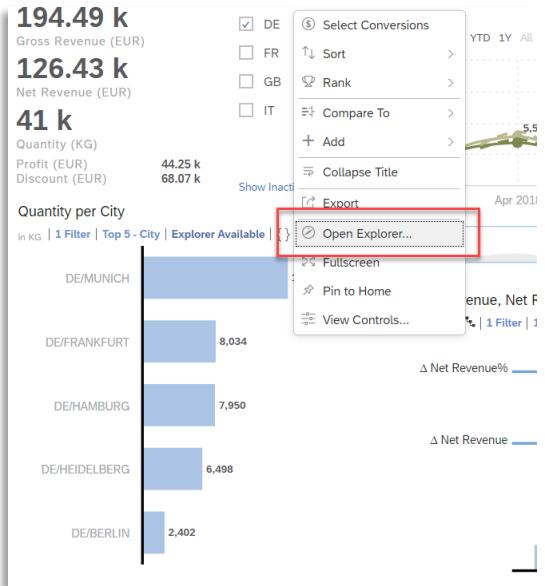
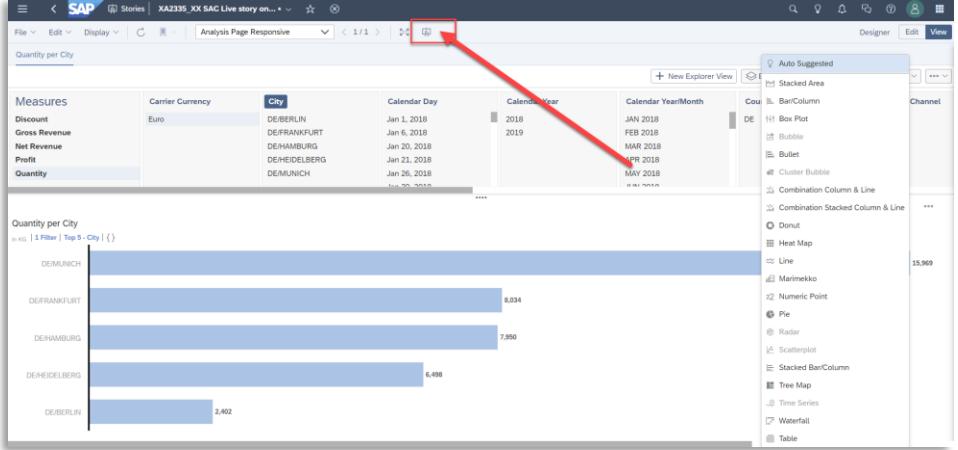


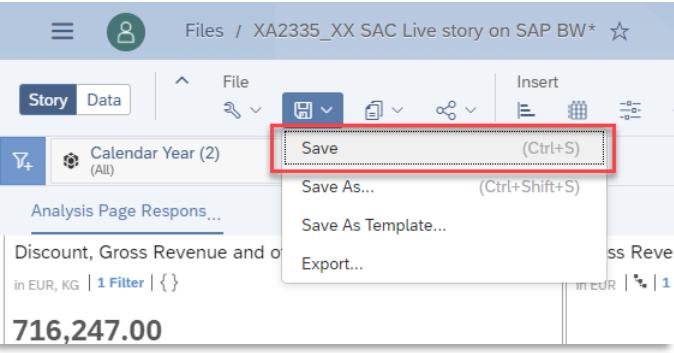
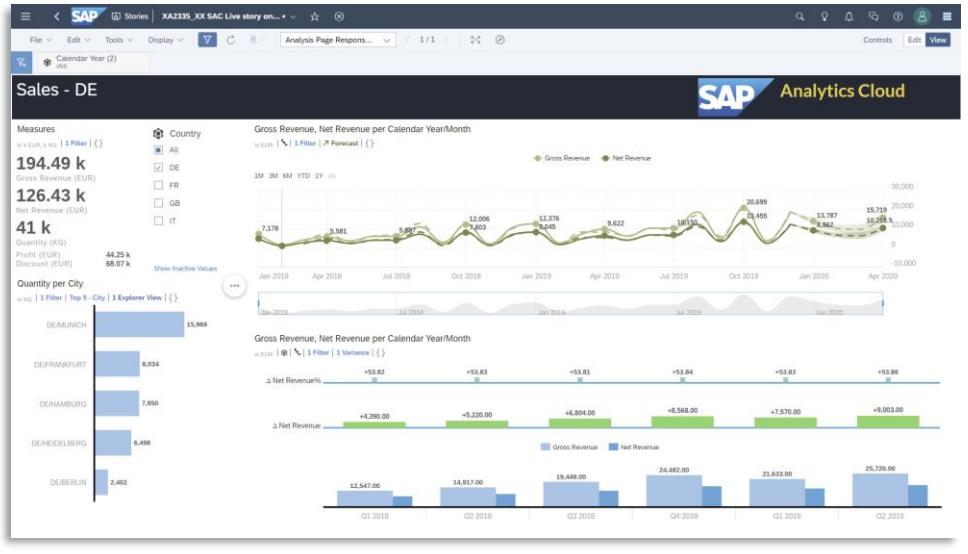
Now the bar chart shows you the comparison for the quarters.



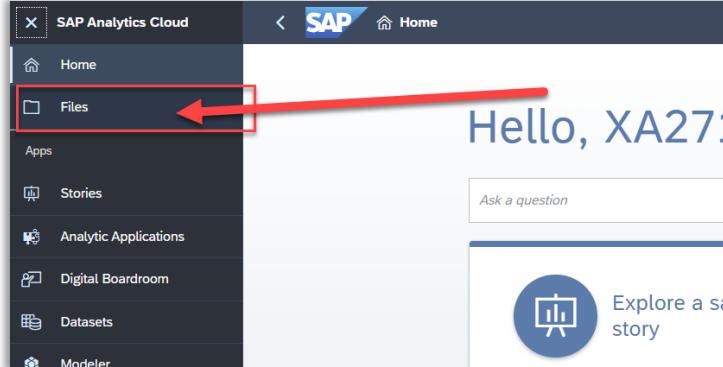
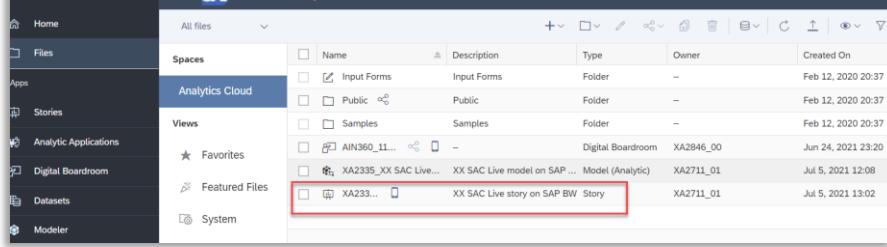
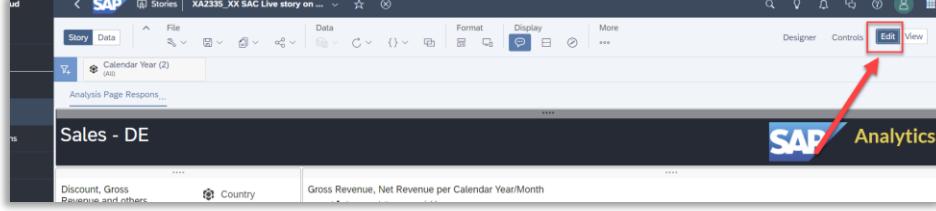
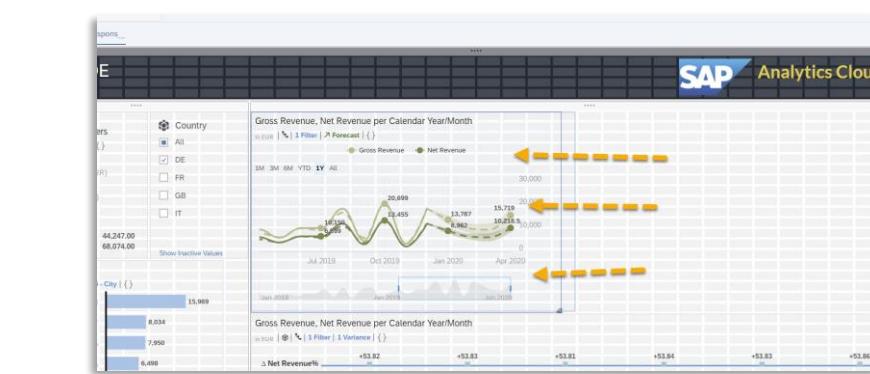
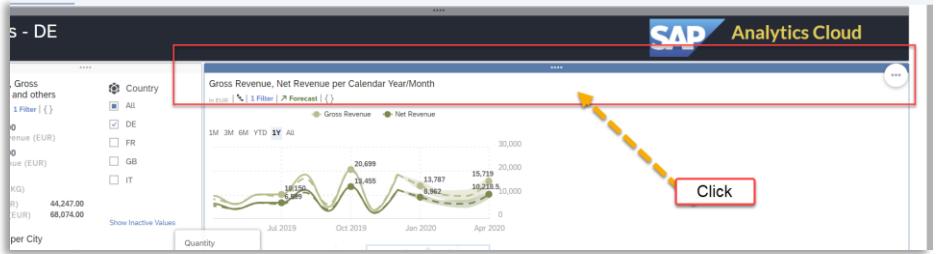
<p>Let's change the KPI tile widget. Click on it.</p>	
<p>Make sure that you are in the “Designer” view.</p>	
<p>Switch to the “Styling” settings. Scroll down to “Font”. Select “Primary Value”</p>	

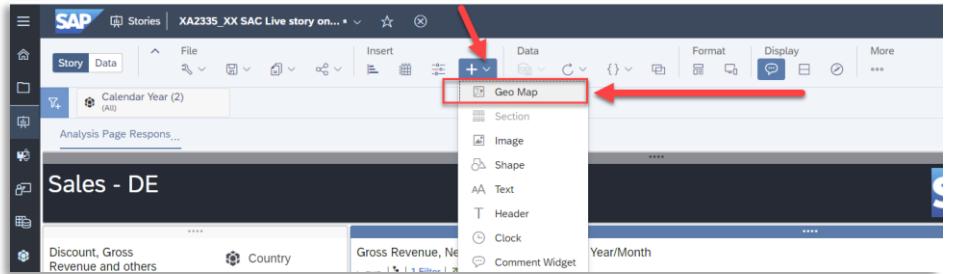
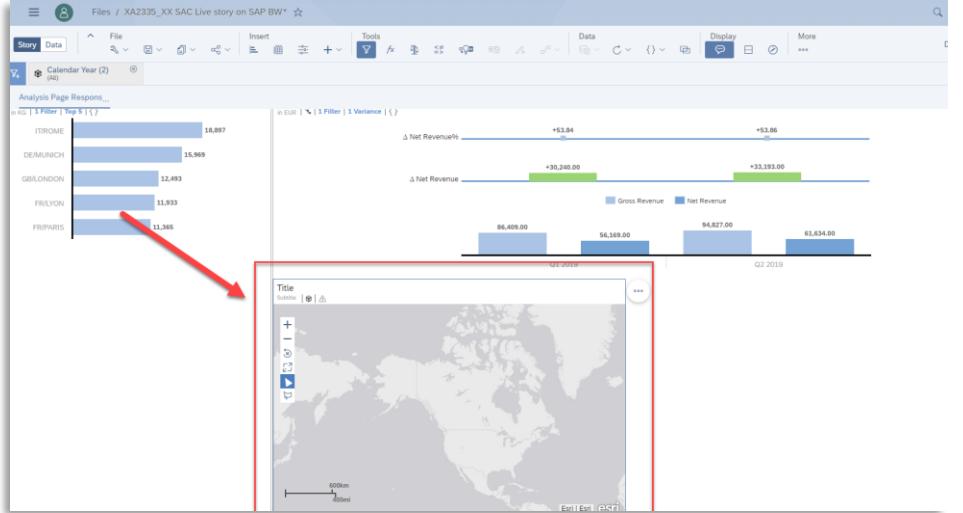
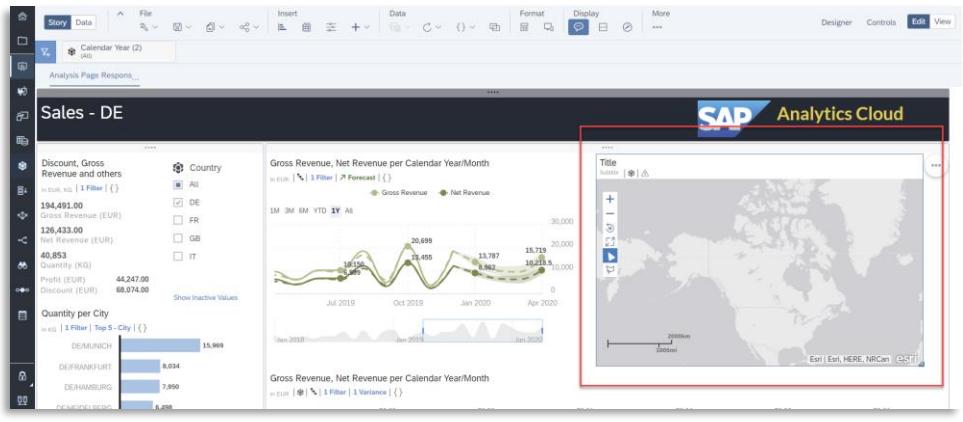
	<p>Select “32” as font size.</p> 
Scroll down a little bit and	<ul style="list-style-type: none"> <li>select “<b>Thousand</b>” as scale.</li> <li>select “<b>k,m,bn</b>” as scale format.</li> </ul> 
Double click on the title of your KPI widget and change it to “ <b>Measures</b> ”.	
In the last step let's add an explorer view to the bar chart which shows the Quantity by city. You can make the size of the chart a little bit bigger if needed.	<p>Then switch to the “<b>Designer</b>”, scroll down in the “<b>Builder</b>” and activate the checkbox “<b>Enable Explorer</b>”.</p> 

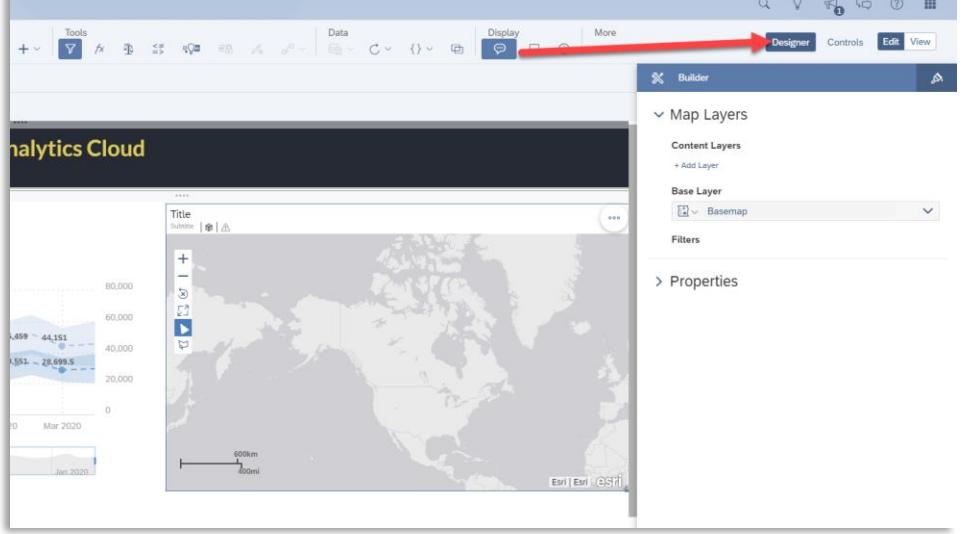
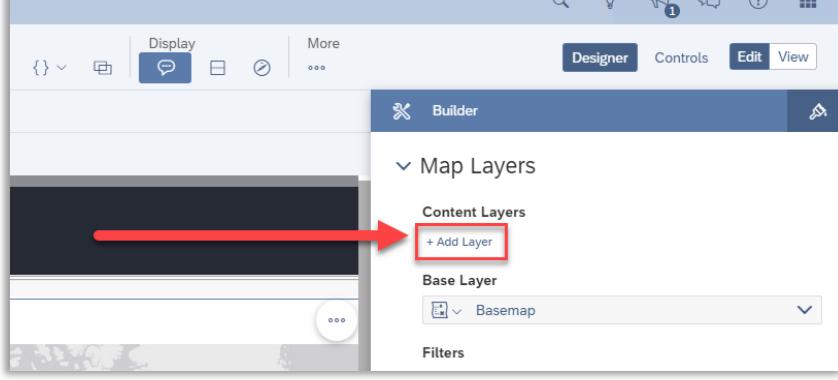
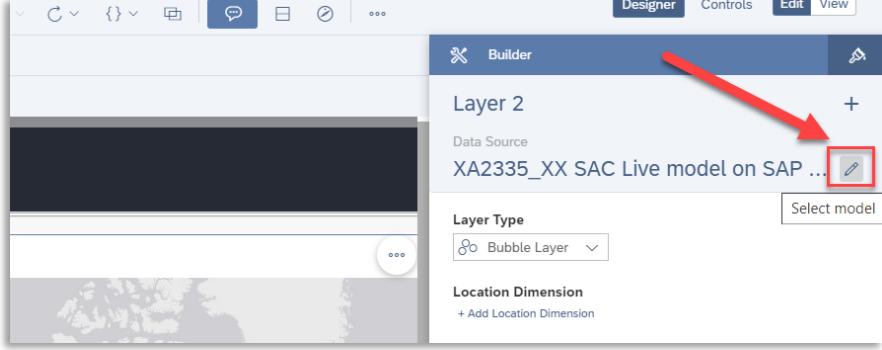
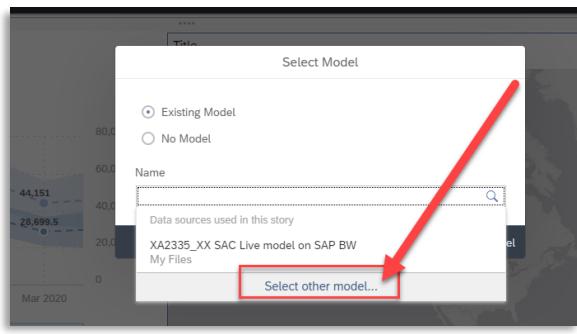
<p>Switch to the “View” mode and test your story.</p>	
<p>If you right click on the bar chart or if you use the settings (three dots if you click on a widget) you can select the “Open Explorer” command.</p>	
<p>In the explorer view the end users can change the view according to their needs (e.g. use a different dimension, use a different chart widget).</p> <p>Just leave the <u>explorer</u> with the story symbol “” on the top.</p>	

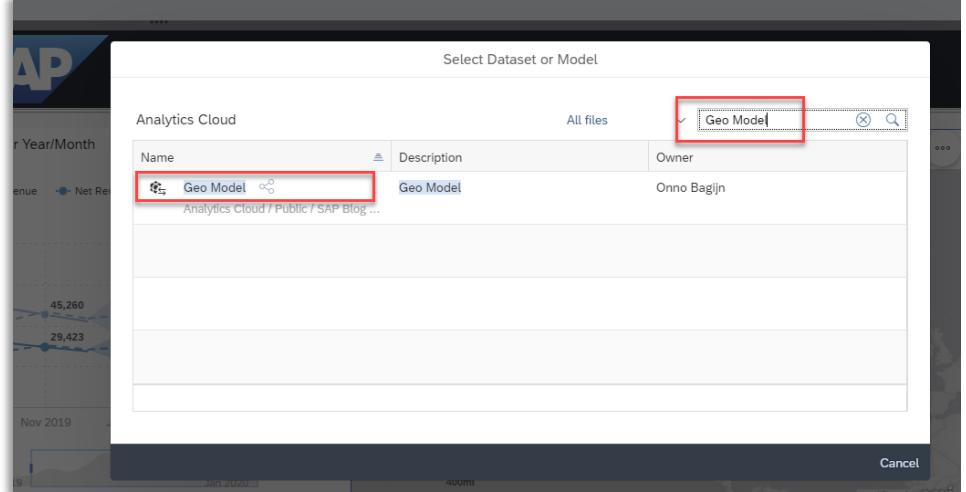
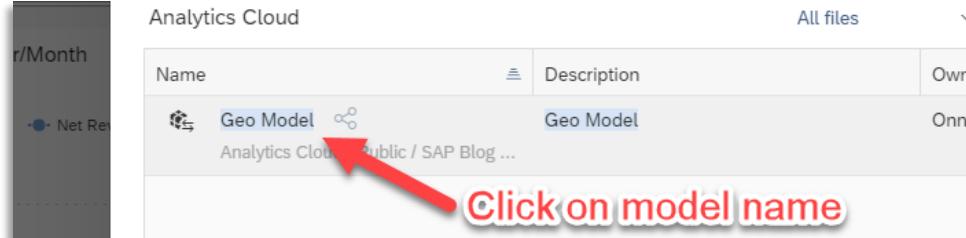
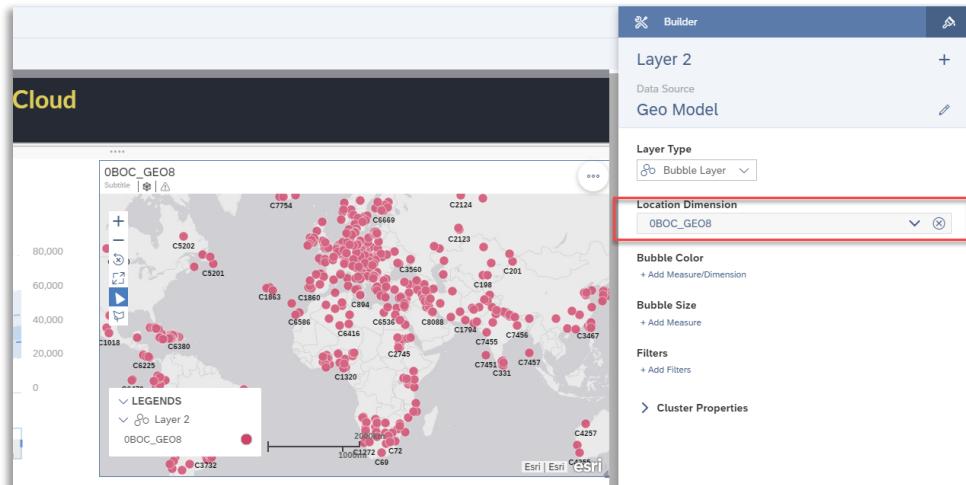
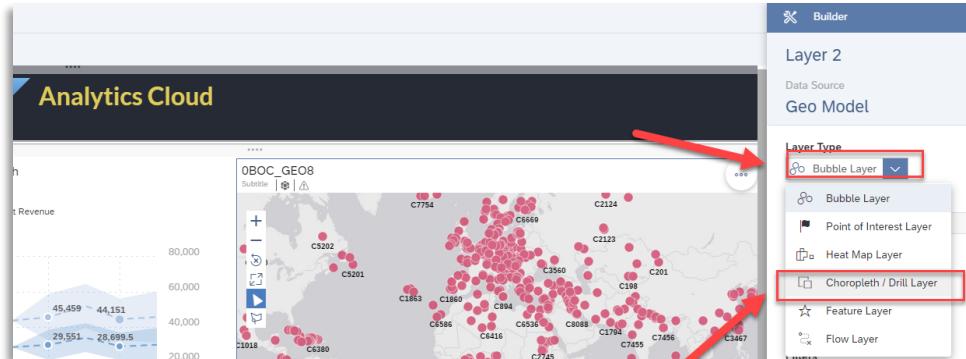
<p>Save your story by just clicking on the “Save” command in the menu.</p>	
<p>Finally, your dashboard should look like this. Please note that you are fully live on SAP BW. No data duplication, no data replication. The data is safe in the SAP BW backend. In a live customer environment, the SAP BW server would communicate directly with the internet browser (within your network &amp; behind your firewall). Data will not leave your network. To make this training possible for you, we used a secured live tunnel connection to the SAP BW. In your environment you would setup a direct live connection to your SAP BW!</p>	
<p>You have successfully finished the exercise. There is much more to explore with SAP Analytics Cloud live on SAP BW and this was a brief introduction into the topic. Please visit our Best Practice Guides, Trainings and SAP Blogs for more information.</p>	

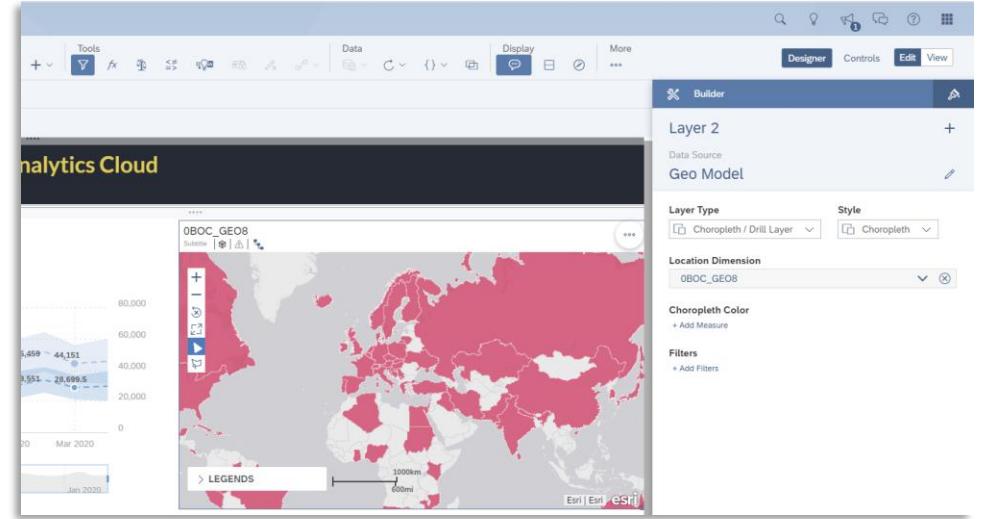
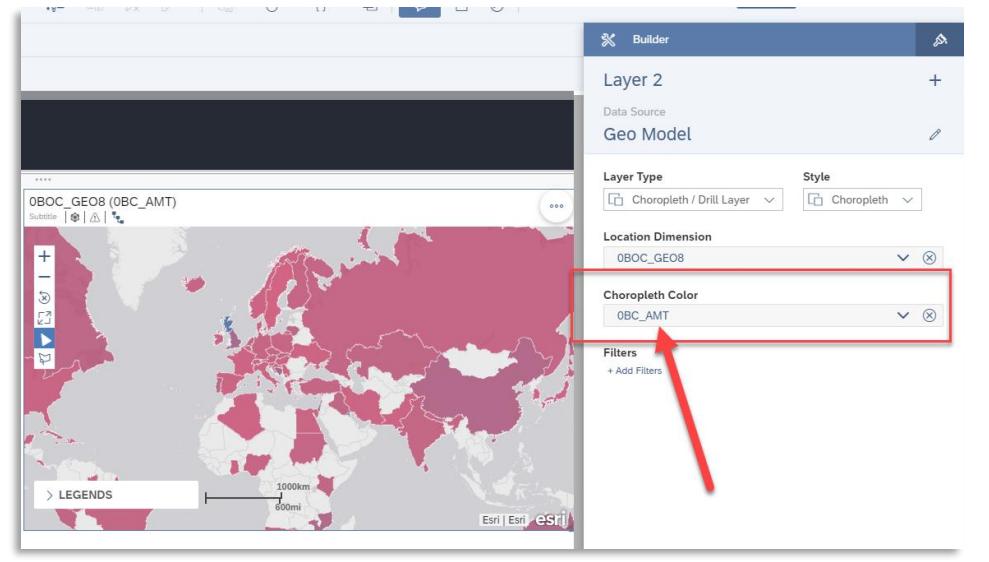
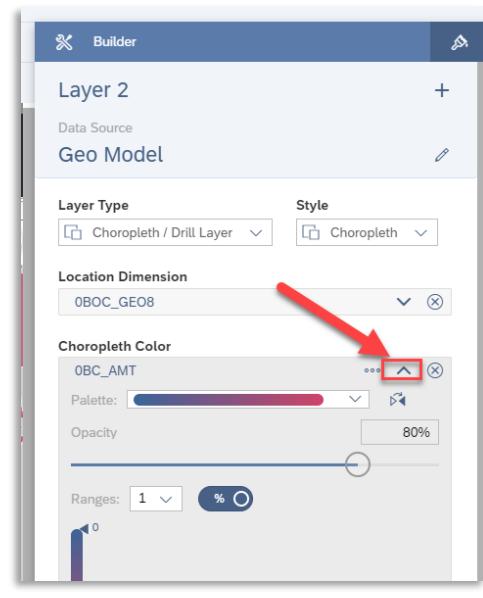
## EXERCISE 4 - OPTIONAL: INCLUDE A GEO MAP IN YOUR STORY [10 MINUTES]

Explanation	Screenshot
<p>If you don't have it open already, just open your SAC story created in the exercise 1 to 3.</p> <p>Click "Files" in the navigation panel on the left side.</p>	
<p>Click on your story to open it.</p>	
<p>Click on "Edit" to enter the edit mode.</p>	
<p>Reduce the width of the time series chart to make more space available for the Geo Map.</p>	
<p>Click on the lane to activate it. We are going to include the geo map widget here.</p>	

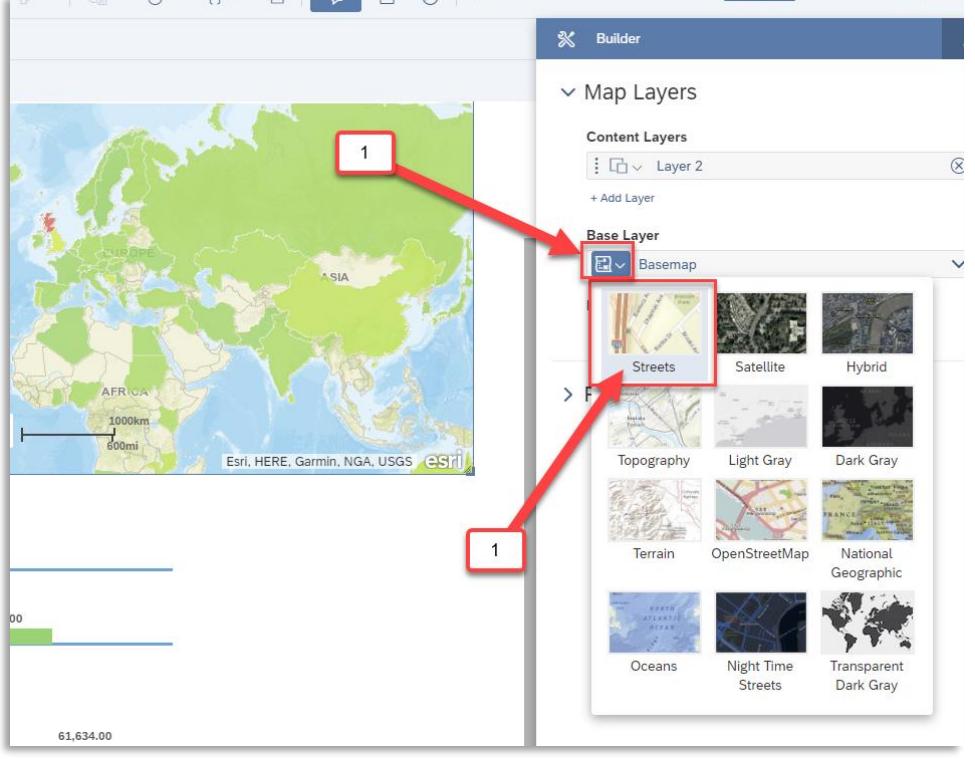
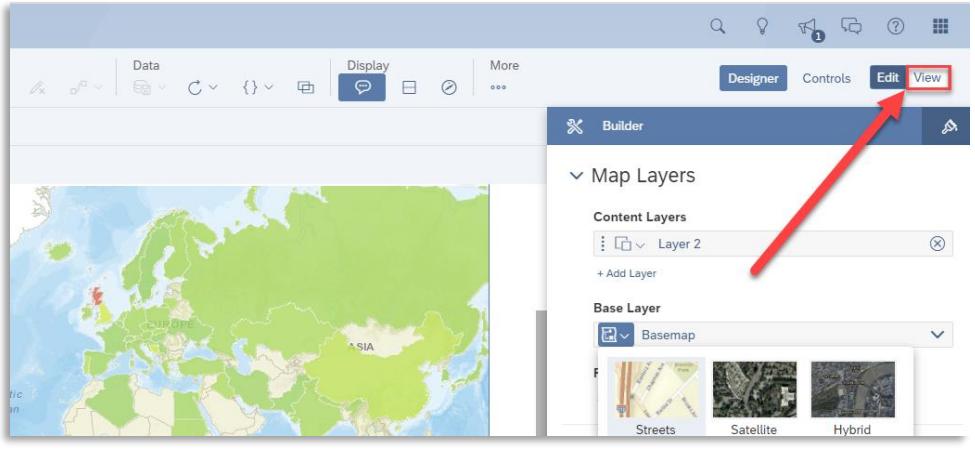
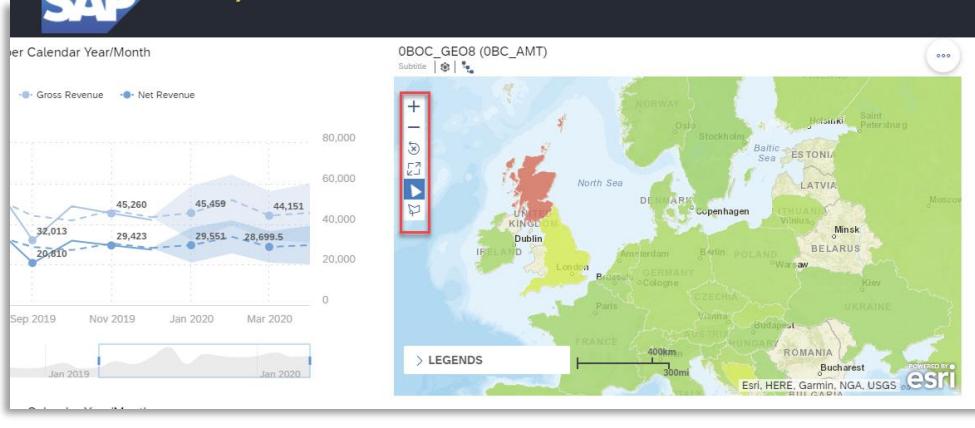
Explanation	Screenshot
<p>Insert a “Geo Map” widget by using the menu in the top.</p>	 <p>The screenshot shows the SAP Analytics Cloud interface. In the top right corner, there is a toolbar with various icons. A red arrow points to the 'Geo Map' icon, which is highlighted with a red box. The main workspace displays a story titled 'Sales - DE' with some data filters and charts.</p>
<p>You will see an empty Geo Map in your SAC story.</p>	 <p>The screenshot shows the SAP Analytics Cloud interface with an empty 'Geo Map' placeholder in the workspace. A red arrow points from the previous step's 'Geo Map' icon to this placeholder area. The workspace also contains other charts and filters.</p>
<p>Move the Geo Map with your mouse (<b>drag &amp; drop</b>) next to the time series chart. Adjust the width/size if needed.</p>	 <p>The screenshot shows the SAP Analytics Cloud interface with the 'Geo Map' widget moved and resized next to a time series chart. The workspace now includes both the Geo Map and the time series chart side-by-side.</p>

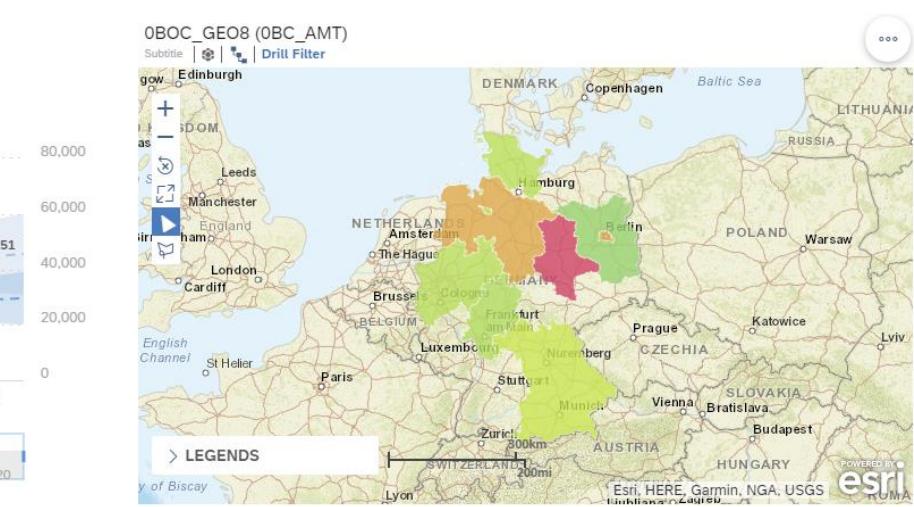
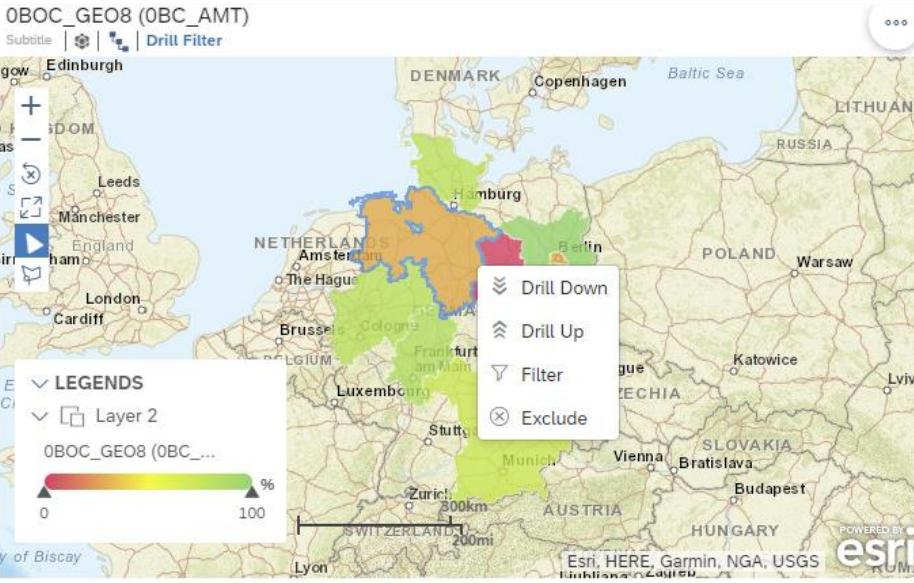
Explanation	Screenshot
<p>Click on the <b>Geo Map</b> to activate it and activate the “<b>Designer</b>” view.</p>	
<p>You can have several layers on a Geo Map, but we need only one for the moment.</p> <p>Click on “<b>+ Add Layer</b>”</p>	
<p>The current SAP BW query has no geo information – to be more precise, it doesn't use Info Objects (<b>dimensions</b>) with geo information. We need to select a new one.</p> <p>Click on the pen next to the data source name to select a new model.</p>	
<p>Click on “<b>Select other model</b>”.</p>	

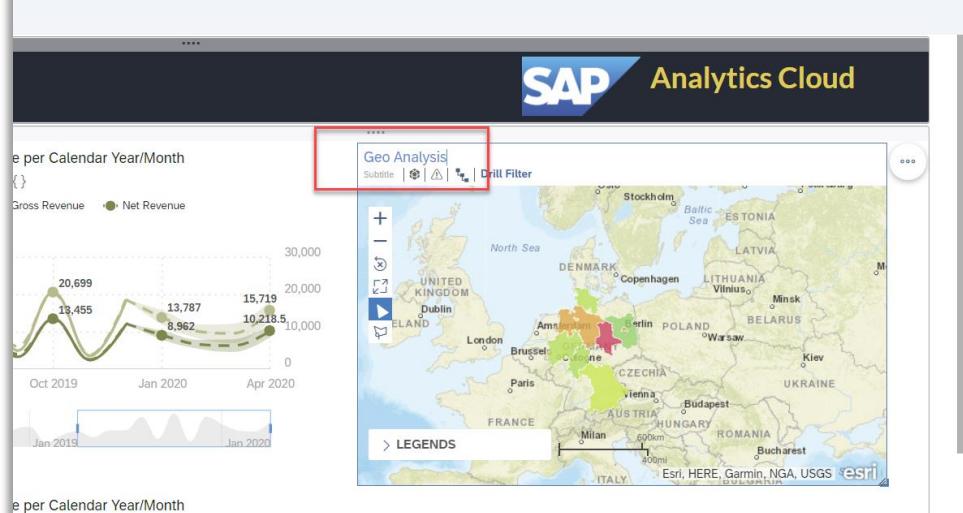
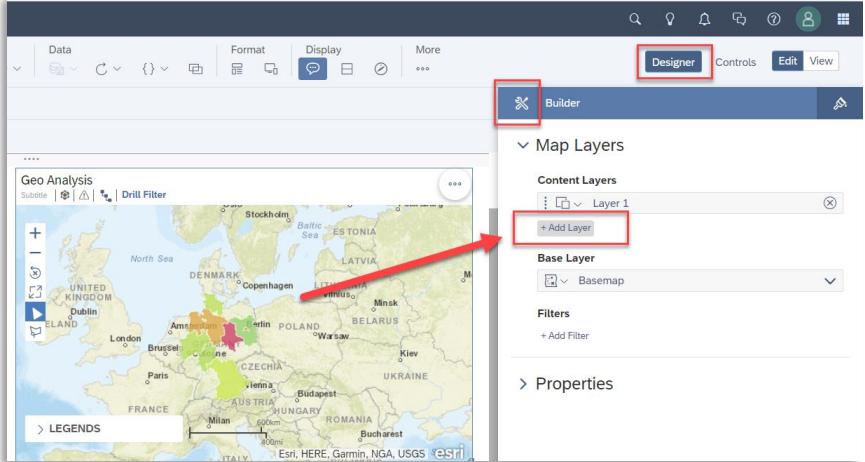
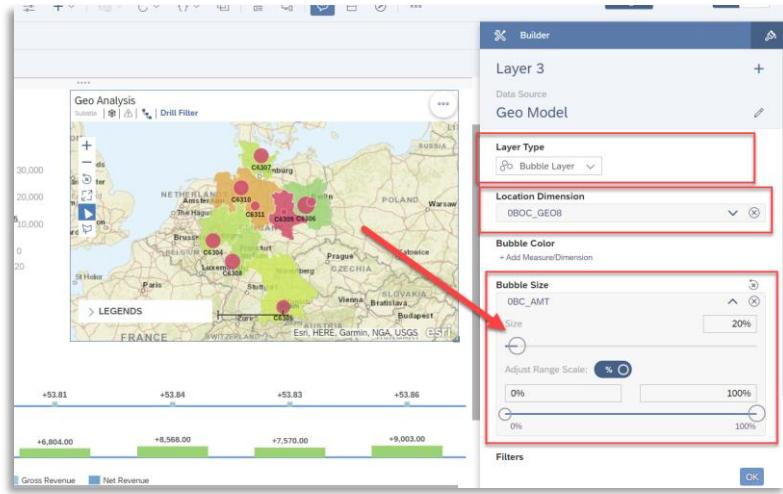
Explanation	Screenshot
Now search for a SAC live model called "Geo Model"	
Click on the model name.	
Add the dimension "0BOC_GEO8" as "Location Dimension". There are many options available for the Geo Map but what we want to show is a choropleth chart with drill down.	
Switch the Layer Type to "Choropleth / Drill Layer".	

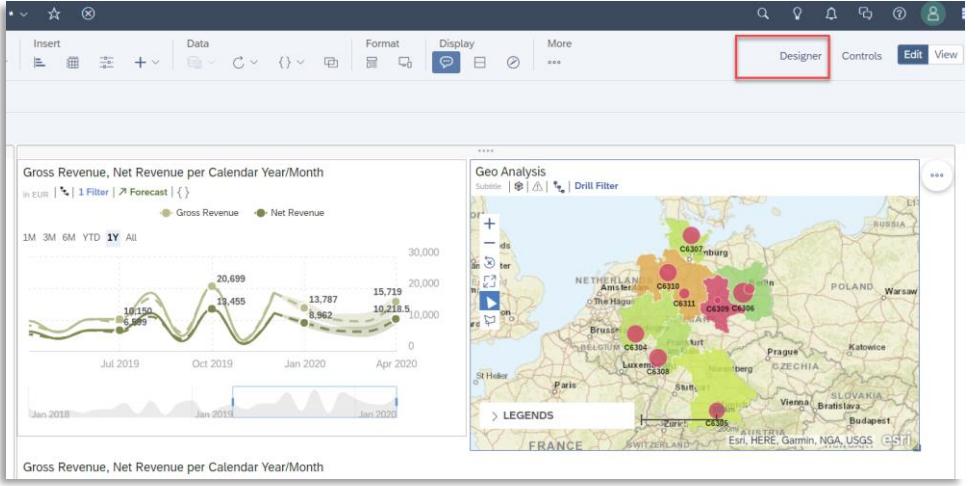
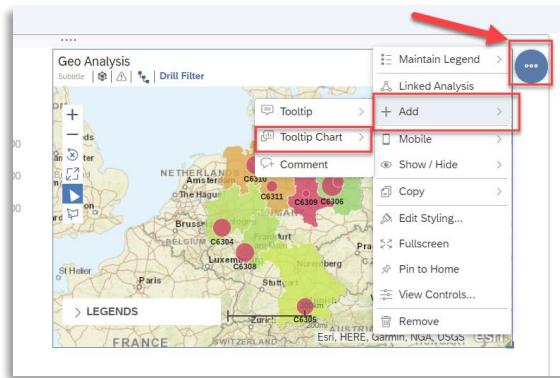
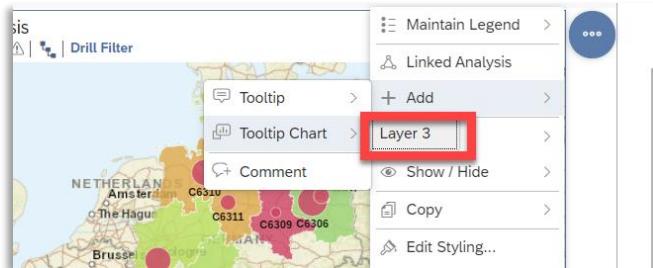
Explanation	Screenshot
<p>You will notice that the map changes the coloring. Proceed with the next step.</p>	
<p>Add the measure “<b>OBC_AMT</b>” as “<b>Choropleth Color</b>”.</p>	
<p>Use the <b>arrow</b> to expand the Choropleth Color settings.</p>	

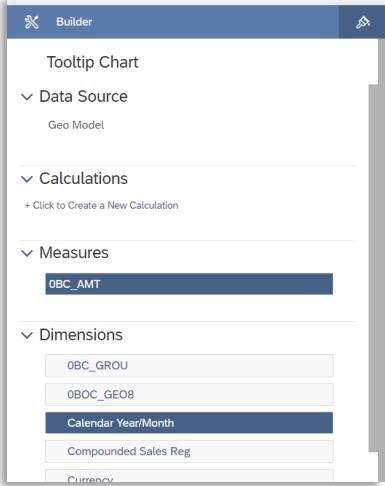
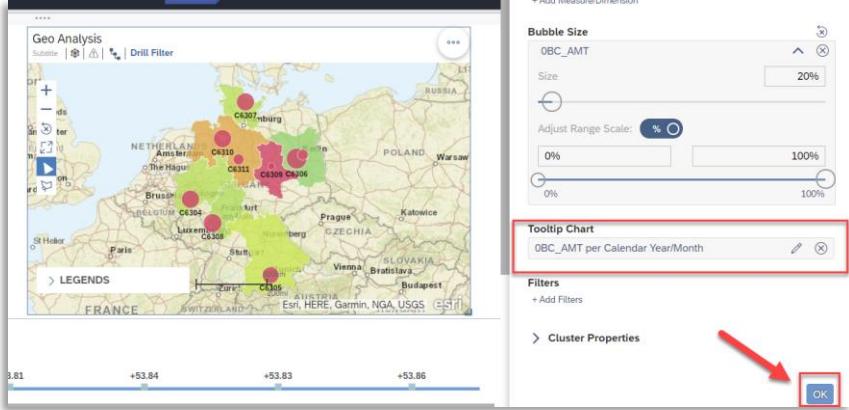
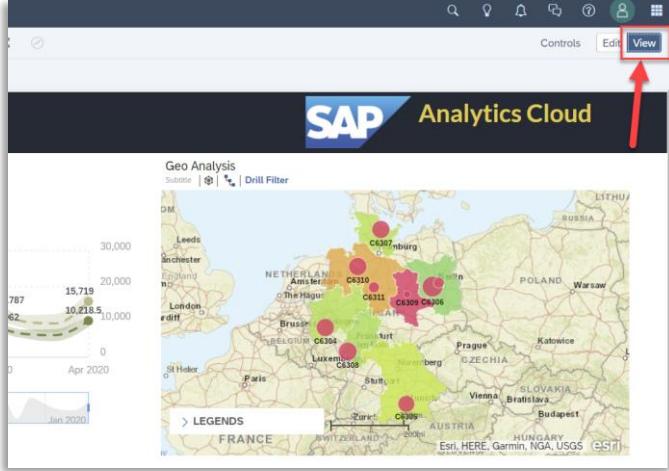
Explanation	Screenshot
<p>Change the palette to show the amount values in red &amp; green.</p>	
<p>As the map is now ready, leave the settings with “OK”.</p>	

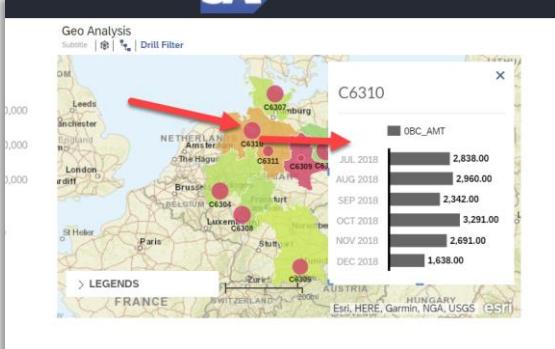
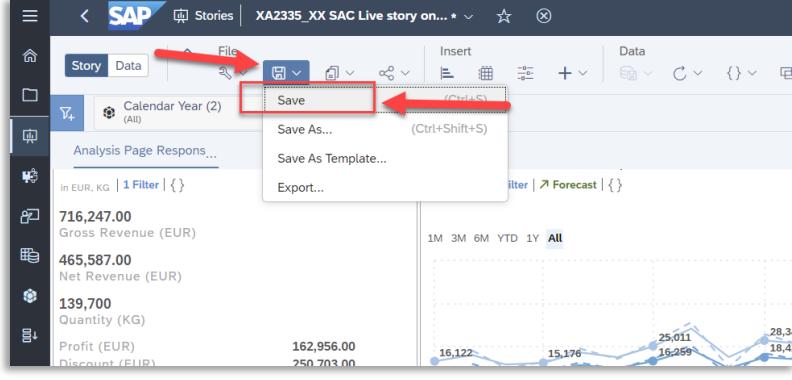
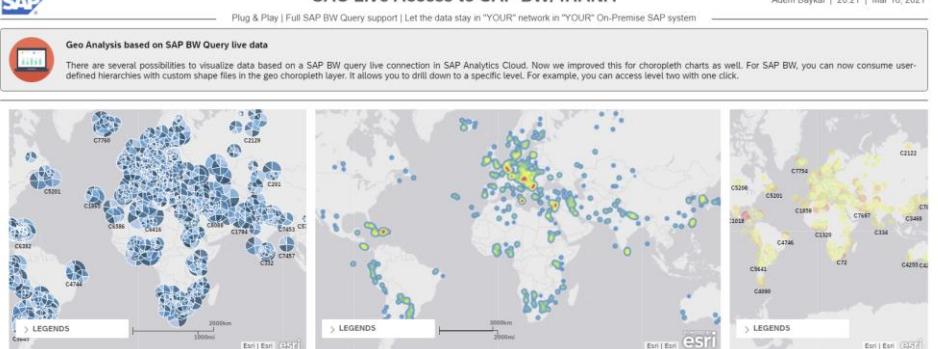
Explanation	Screenshot
<p>Use the <b>icon</b> with the map to switch the “Basemap”. Select “<b>Streets</b>”.</p>	
<p>Switch to the “<b>View</b>” mode to see your map in action.</p>	
<p>In the view mode you can zoom into your map by using the mouse or the symbols in the map. Custom hierarchies are also possible. Let's do something interesting. What about a drill down into the map data?</p>	

Explanation	Screenshot
<p>Click on Germany. SAC will give you the possibility to filter or to drill up and down into your data. Select the drill down symbol.</p>	
<p>Now you did a drill down into Germany.</p>	
<p>You can click on an item in the map to perform an activity. Or you can use the context menu (right click).</p>	

Explanation	Screenshot
<p>Now change the title of the Geo Widget to “Geo Analysis”. Just double click on the title and change it.</p>	
<p>Let's add a new layer with bubbles into the geo map. Switch to the designer, click on the map and click on “+Add Layer”.</p>	
<p>Select... ...as “Layer Type” the “Bubble Layer ...as “Location Dimension” the dimension “0BOC_GEO8” ...for the Bubble size select measure “OBC_AMT”. As “Bubble Size” just use “20%” Finally click on “OK” to leave the Builder.</p>	

Explanation	Screenshot
<p>Close the Designer. Your SAC story should look like this.</p>	
<p>Now we want to add a nice feature in the BW live mode on the bubbly geo layer. We want to add a "Tooltip Chart".</p> <p>Go into the widget settings. Click: "+Add"-&gt; "Tooltip Chart".</p>	
<p>Select your layer. Of course, we can give layers a name but, in this case, we use the system generated name. In my case it is "Layer3". That is the name of the Bubble Layer.</p>	

Explanation	Screenshot
<p>Select the <b>measure “0BC_AMT”</b> which delivers us the amount from the SAP BW query.</p> <p>In addition, select the <b>dimension “Calendar Year/Month”</b>.</p> <p>Scroll down and click on “<b>OK</b>” to leave the window!</p>	
<p>Your Tooltip Chart is now part of the geo map. Click on “<b>OK</b>” to leave the settings for this widget.</p>	
<p>Switch to the “<b>View</b>” mode to test your SAC story.</p>	

Explanation	Screenshot
<p>If you now click on a bubble in the geo map, it should show you a tooltip chart with the details. In this case we can see the sales amount of the calendar year months.</p>	
<p><b>Save</b> your SAC Story.</p>	
<p>Of course, there are several more settings &amp; features available within SAC on top of live SAP BW data to show them on geo maps. This was just a quick introduction into the topic.</p>	
<p>You have successfully finished this exercise. There is much more to explore with SAP Analytics Cloud live on SAP BW and this was a brief introduction into the topic. Please visit our Best Practice Guides, Trainings and SAP Blogs for more information.</p>	

