

The Ultimate Deep Dive into SAP Analytics Cloud

ANA 161

Exercises / Solutions

Christina Obry / SAP Analytics Cloud

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Connect to SAP Analytics Cloud

Welcome to the **ANA161** Hands-On Session. Please listen carefully to the instructions provided by your session presenters.

Please use Google Chrome to access your SAP Analytics Cloud. Login details and credentials to SAP Analytics Cloud will be provided by your session presenters. Please **do not** distribute these login credentials as access to the tenant is available only to **TechED ANA161** participants.

For questions or improvements regarding SAP Analytics Cloud, please contact the session presenters.

Workshop Description

You are a business analyst for a BestRun company that produces sports apparel. BestRun is a B2B business, where product is sold and shipped to retail stores and sport studios across the world.

Your manager has asked you to prepare a report on company's performance and an executive overview of your findings to be presented at the annual board meeting at the end of the month.

You decided to go a step further and create an exhaustive report that is interactive and can be rolled out to different departments after the annual meeting. You will be using SAP Analytics Cloud to create interactive dashboards using your company's latest data and a Digital Boardroom to leave the board impressed with the executive presentation.

Creating Your First Story



Objective: Develop a basic understanding on how to create visualizations within SAP Analytics Cloud.

Estimated Time: 20 mins

Exercise Description: You want to get an understanding about what data is available to you and based on your finance data find your first insights about company's performance over time.

Key Features:

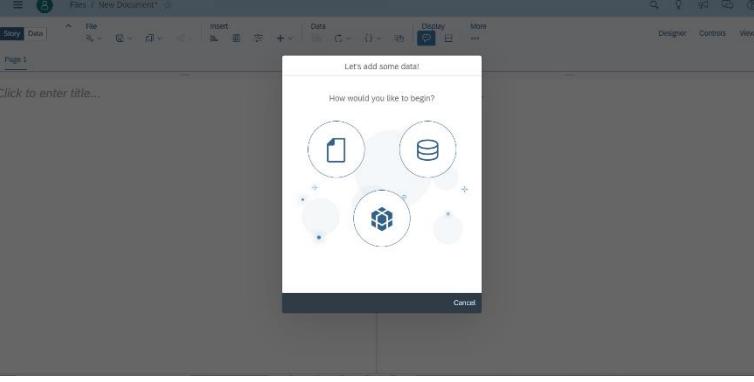
- Interact with Explorer to create dynamic visualization and understand your data better
- Copy and paste widgets from explorer to an existing dashboard
- Understand how to use the Builder Panel
- Create a variety of different charts to illustrate key relationships within your data

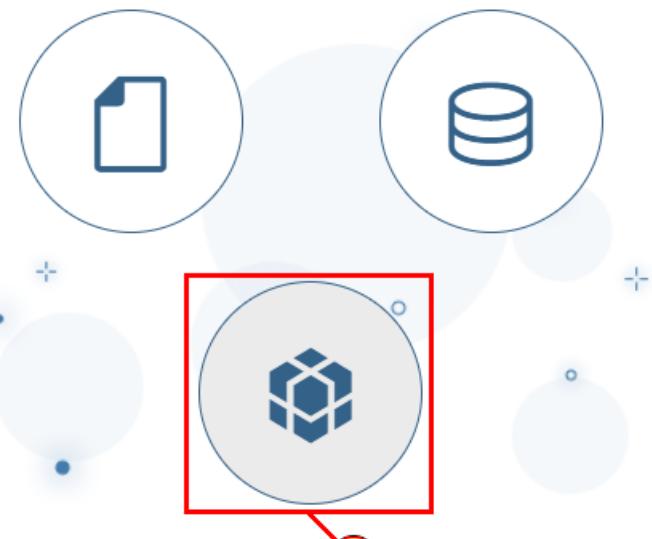


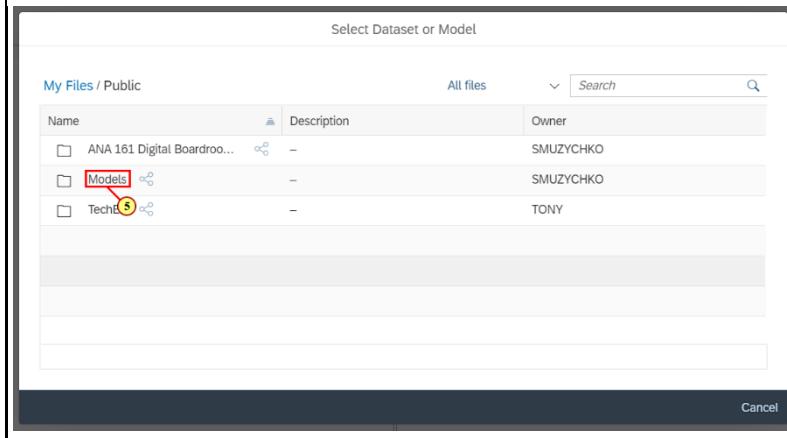
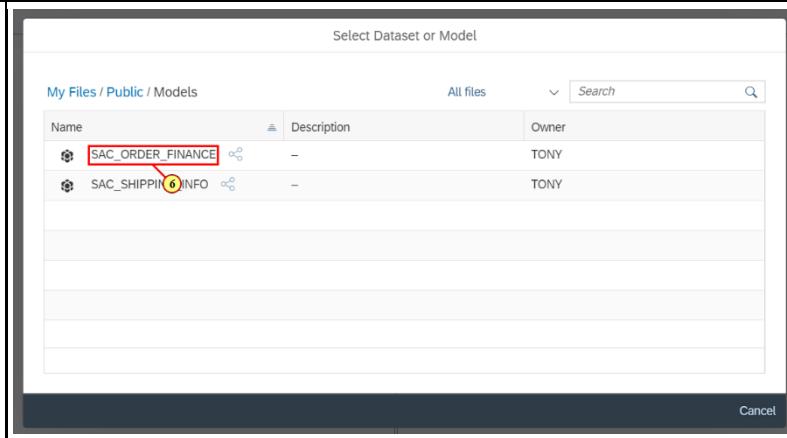
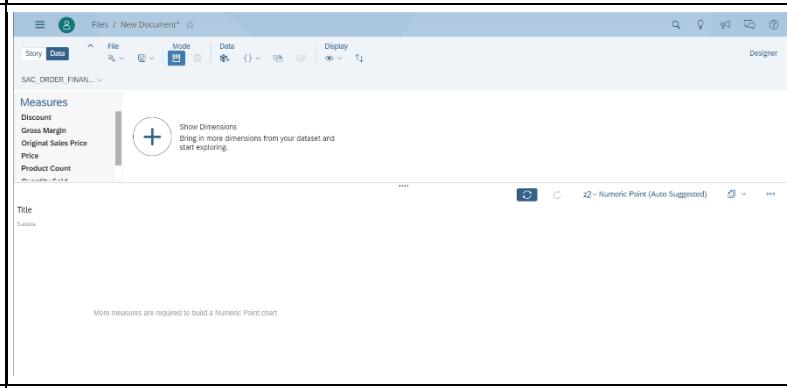
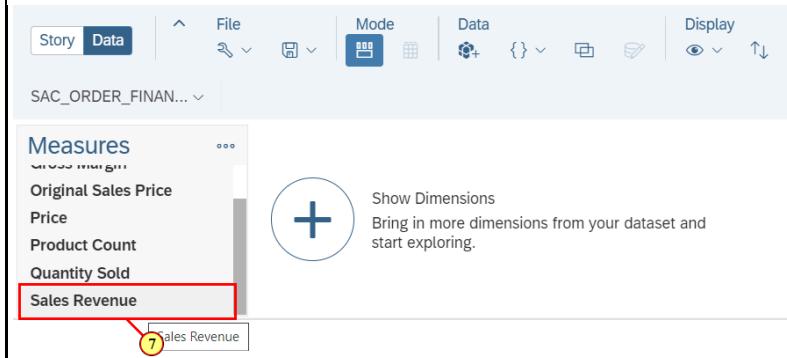
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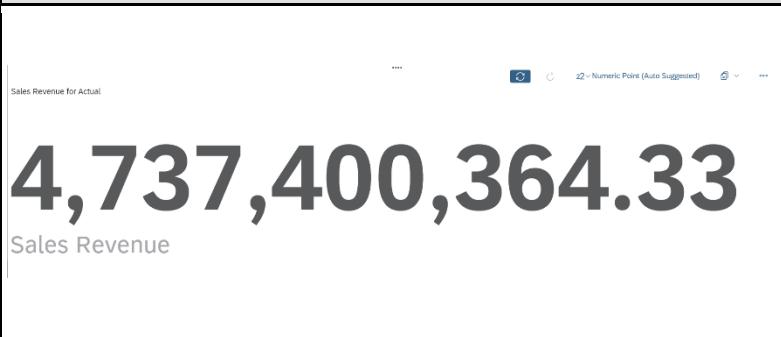
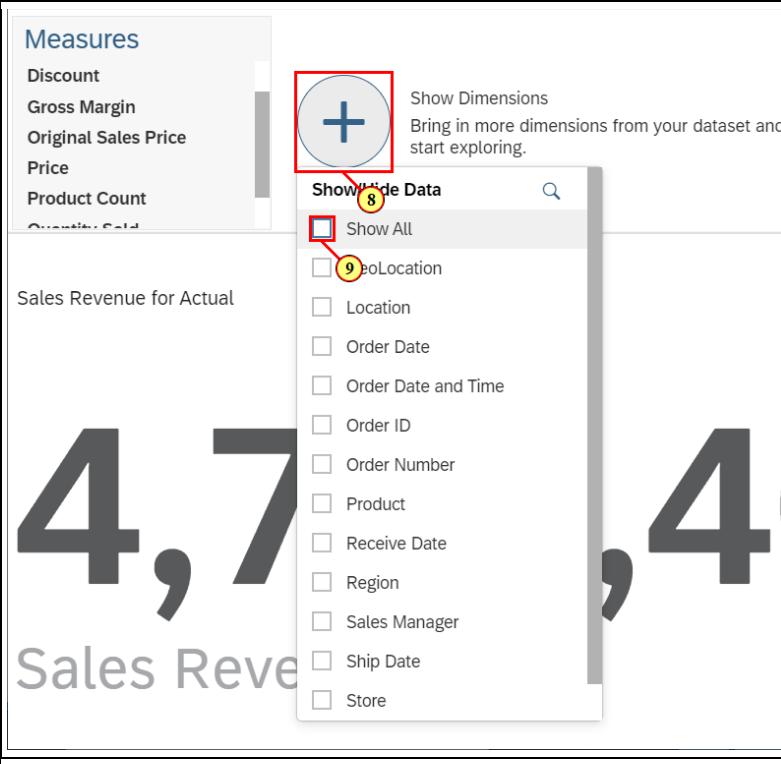
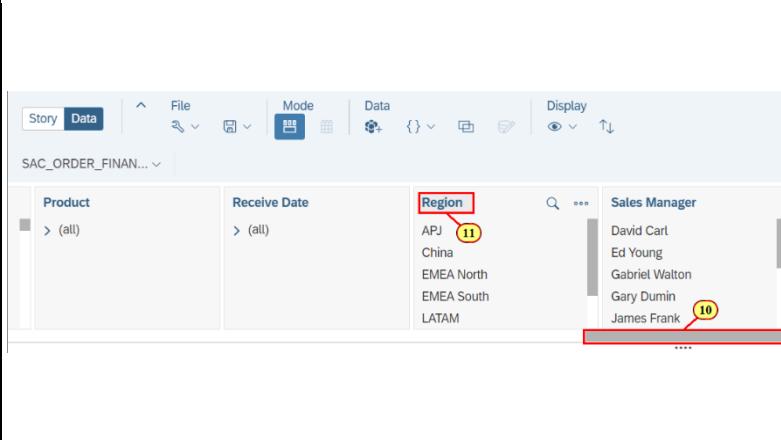
When completing exercises, some data values in the screenshots may not match what you see on your screen. This is because the dynamic time filters that were applied at the time the screenshots were taken is different from the current system date.

Explanation	Screenshot
<p> Welcome to SAP Analytics Cloud!</p> <p>On the Home Page, we provide end users the ability to Explore a Sample Story, create a Story, and Learn More in the Help Center. Users can also choose to view Recent Stories and Boardrooms or use natural language search with Search to Insight.</p>	
<p> As a business analyst for the BestRun company, we are interested in a business intelligence dashboard to utilize our finance and shipping data to guide business decision making. We can do this by creating a story.</p> <p>1. Click Create Your First Story</p>	

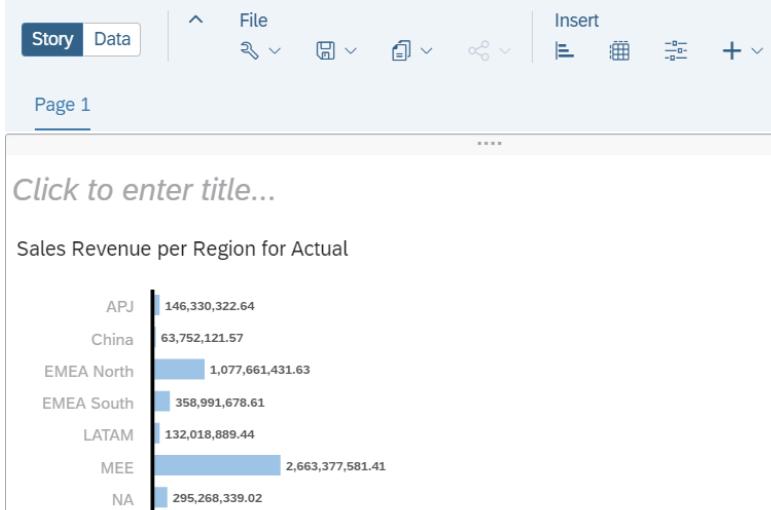
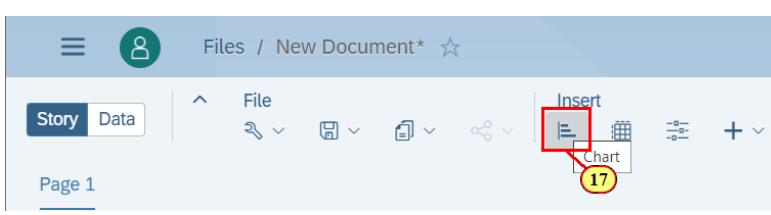
Explanation	Screenshot
<p> Welcome to Start Your Story Page!</p> <p>On this page, users can choose to import their own data, run a smart discovery on their data, add a responsive, canvas, or grid page, or start their story using a template. We are interested in exploring our data and the dimensions and measures we can analyze before we create a dashboard.</p> <p>2. Click Access & Explore Data</p>	<p>Choose how you'd like to start your story.</p>  <p>Access & Explore Data Bring in data from CSV, Excel, and other data sources to explore and create visualizations.</p> <p>Run a Smart Discovery Explore your data using machine learning algorithms to discover key influencers, unexpected values and more.</p> <p>Add a Responsive Page Create flexible dashboards that can be presented on any device or screen size.</p> <p>Add a Canvas Page Create pixel perfect reports or presentations.</p> <p>Add a Grid Page A traditional spreadsheet page allowing users the full power of your</p>
<p></p> <p>Users may choose to import data from a file, acquire data from a data source/connection, or use data acquired from an existing model or dataset.</p>	

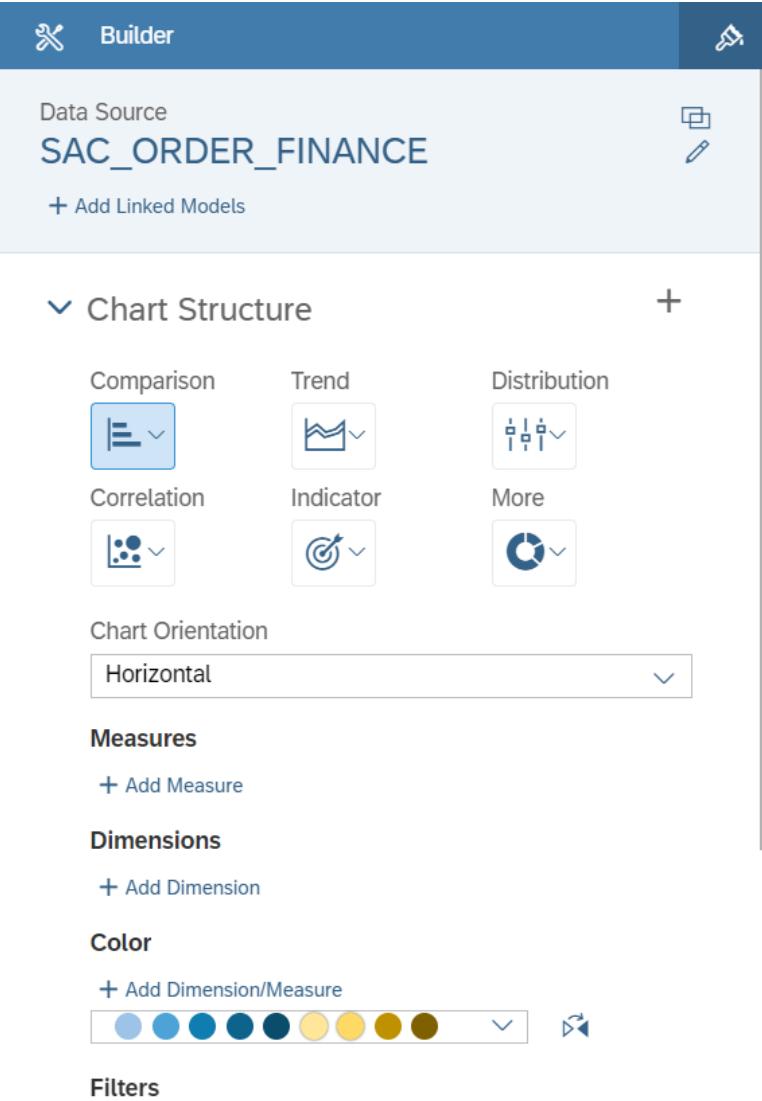
Explanation	Screenshot									
<p>👉 In our case, the data we will be using was already uploaded by a colleague in the Finance department. Let us access this model from the Public/Models folder in our tenant.</p> <p>3. Click Data acquired from an existing dataset or model</p>	<p>Let's add some data!</p> <p>How would you like to begin?</p>  <p>3. Data acquired from an existing dataset or model</p> <p>Cancel</p>									
<p>4. Click Public</p>	<p>Select Dataset or Model</p> <table border="1"> <thead> <tr> <th>Name</th> <th>Description</th> <th>Owner</th> </tr> </thead> <tbody> <tr> <td>Public</td> <td>Public</td> <td>-</td> </tr> <tr> <td>Samples</td> <td>Samples</td> <td>-</td> </tr> </tbody> </table> <p>Cancel</p>	Name	Description	Owner	Public	Public	-	Samples	Samples	-
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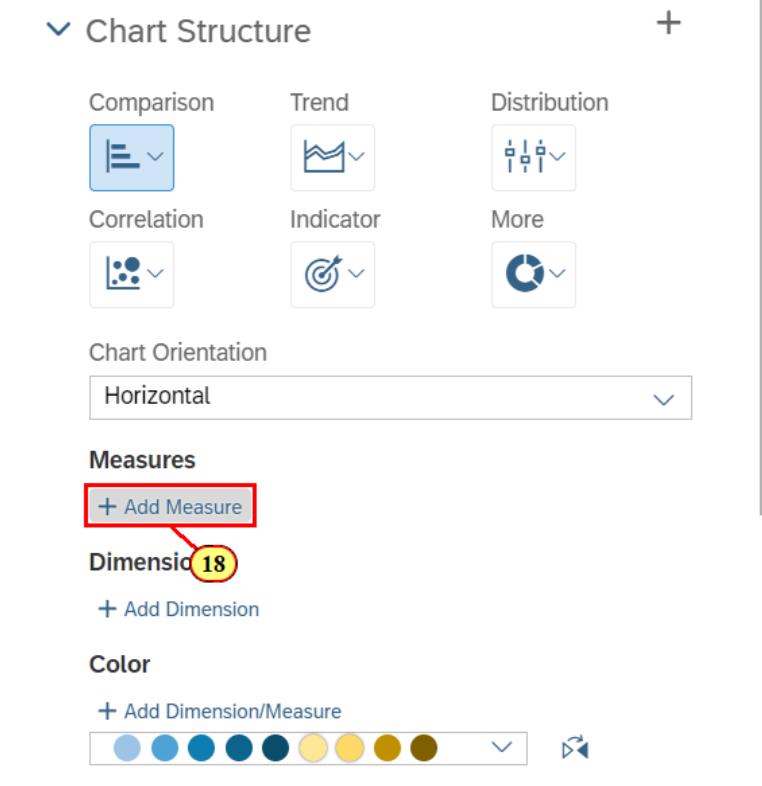
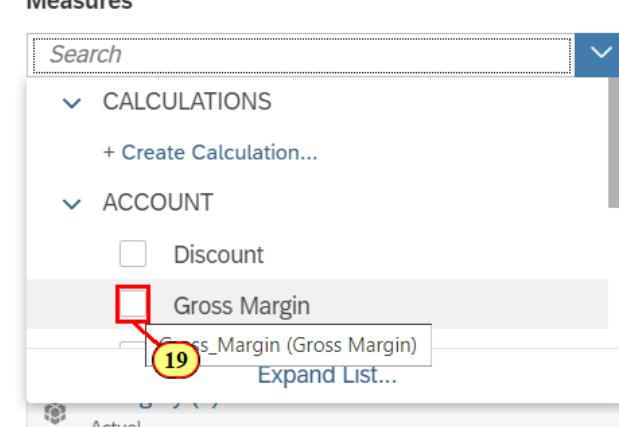
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5. Click Models	 <p>Select Dataset or Model</p> <p>My Files / Public</p> <table border="1"> <thead> <tr> <th>Name</th> <th>Description</th> <th>Owner</th> </tr> </thead> <tbody> <tr> <td>ANA 161 Digital Boardroo...</td> <td>-</td> <td>SMUZYCHKO</td> </tr> <tr> <td>Models</td> <td>-</td> <td>SMUZYCHKO</td> </tr> <tr> <td>TechE</td> <td>-</td> <td>TONY</td> </tr> </tbody> </table> <p>Cancel</p>	Name	Description	Owner	ANA 161 Digital Boardroo...	-	SMUZYCHKO	Models	-	SMUZYCHKO	TechE	-	TONY
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6. Click SAC_ORDER_FINANCE	 <p>Select Dataset or Model</p> <p>My Files / Public / Models</p> <table border="1"> <thead> <tr> <th>Name</th> <th>Description</th> <th>Owner</th> </tr> </thead> <tbody> <tr> <td>SAC_ORDER_FINANCE</td> <td>-</td> <td>TONY</td> </tr> <tr> <td>SAC_SHIPPING_INFO</td> <td>-</td> <td>TONY</td> </tr> </tbody> </table> <p>Cancel</p>	Name	Description	Owner	SAC_ORDER_FINANCE	-	TONY	SAC_SHIPPING_INFO	-	TONY			
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 Welcome to Explorer! <p>In Explorer, you see a faceted view of your data, which you can manipulate to generate charts for your story pages. When you select measures and dimensions in the upper pane, the visualization in the lower pane updates in real time. You can filter dimensions by selecting individual members, and the visualization changes immediately to show you the filtered result.</p>	 <p>Files / New Document</p> <p>SAC_ORDER_FINANCE</p> <p>Measures</p> <p>Discount Gross Margin Original Sales Price Price Product Count</p> <p>Show Dimensions Bring in more dimensions from your dataset and start exploring.</p> <p>More measures are required to build a Numeric Point chart</p>												
 <p>Let's start with getting an overview of our Sales Revenue.</p> <p>7. Scroll down the Measures. Click on Sales Revenue. You have selected your first measure to explore upon!</p>	 <p>Story Data File Mode Data Display</p> <p>SAC_ORDER_FINANCE</p> <p>Measures</p> <p>Original Sales Price Price Product Count Quantity Sold Sales Revenue</p> <p>Show Dimensions Bring in more dimensions from your dataset and start exploring.</p>												

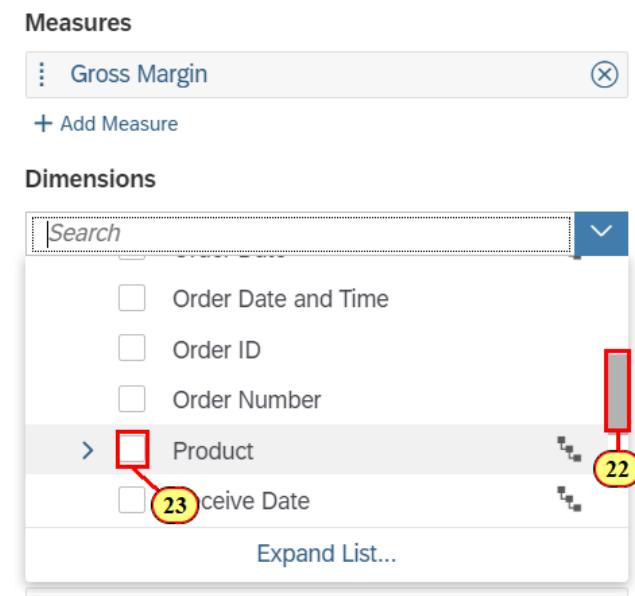
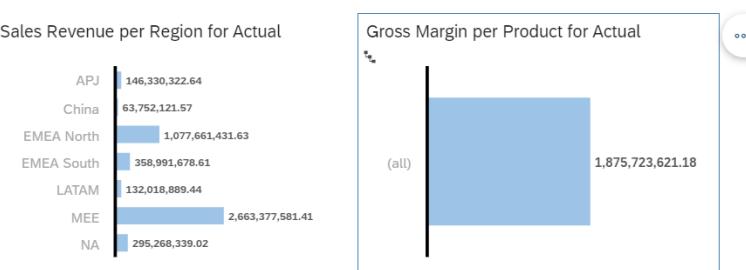
Explanation	Screenshot
<p>👉 We can see that Explorer has dynamically updated to show us a numeric point chart of our sales revenue measure. Based on the measures and dimensions that we select in Explorer, SAP Analytics Cloud will automatically display the best possible visualization to represent our data. We are interested in further exploring our data especially how our Sales Revenue has been performing by region.</p>	 <p>The screenshot shows a large, bold numeric value of 4,737,400,364.33, representing Sales Revenue. Below it, the text "Sales Revenue" is displayed. The top right corner of the screen shows a status bar with "12 - Numeric Point (Auto Suggested)" and other icons.</p>
<p>👉 Let us see what other visualizations we can create in Explorer. We want to show the dimensions in our data so that we can start slicing and dicing our measure.</p> <p>8. Click Show Dimensions 9. Click Show All</p>	 <p>The screenshot shows a modal dialog titled "Show Dimensions". It contains a list of dimensions: Show All (selected), GeoLocation (highlighted with a yellow circle labeled 8), Location, Order Date, Order Date and Time, Order ID, Order Number, Product, Receive Date, Region, Sales Manager, Ship Date, and Store. A large numeric point chart for Sales Revenue is visible in the background.</p>
<p>👉 We have populated our Explorer with multiple different dimensions. We can choose to click on any Dimension to create an auto generated chart to explore our data. Let us examine the regional breakdown of Sales Revenue. We can click the Region dimension header rather than a dimension member like EMEA South to show a visualization that displays Sales Revenue for each region.</p> <p>10. Use the Horizontal Scroll Bar to Locate the Region Dimension 11. Click Region</p>	 <p>The screenshot shows the Data view of SAP Analytics Cloud. The "Region" dimension is highlighted with a red box and a yellow circle labeled 11. The "Sales Manager" dimension is also highlighted with a red box and a yellow circle labeled 10. The horizontal scroll bar is visible at the bottom of the dimension list.</p>

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<p>👉 We can see that as soon as we added our Region Dimension, Explorer dynamically switch the chart type from Numeric to Bar Column. We can easily see our Sales Revenue per Region. Let's further explore how our company has been performing especially for the clothing product category.</p>	<table border="1"> <thead> <tr> <th>Region</th> <th>Sales Revenue</th> </tr> </thead> <tbody> <tr><td>APJ</td><td>146,330,322.64</td></tr> <tr><td>China</td><td>63,752,121.57</td></tr> <tr><td>EMEA North</td><td>1,877,461,421.83</td></tr> <tr><td>EMEA South</td><td>208,995,678.81</td></tr> <tr><td>LATAM</td><td>132,018,889.44</td></tr> <tr><td>MEE</td><td>2,663,377,581.41</td></tr> <tr><td>NA</td><td>295,268,339.02</td></tr> </tbody> </table>	Region	Sales Revenue	APJ	146,330,322.64	China	63,752,121.57	EMEA North	1,877,461,421.83	EMEA South	208,995,678.81	LATAM	132,018,889.44	MEE	2,663,377,581.41	NA	295,268,339.02																																										
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<p>12. Expand All for the Product Dimension 13. Select Clothing</p>	<table border="1"> <thead> <tr> <th>Product</th> <th>Receive Date</th> <th>Region</th> </tr> </thead> <tbody> <tr><td>(all)</td><td>(all)</td><td>APJ</td></tr> <tr><td>Accessories</td><td>(all)</td><td>China</td></tr> <tr><td>Clothing</td><td>(all)</td><td>EMEA North</td></tr> <tr><td>Footwear</td><td>(all) / Clothing</td><td>EMEA South</td></tr> <tr><td>(all) / Clothing</td><td>(all)</td><td>LATAM</td></tr> </tbody> </table>	Product	Receive Date	Region	(all)	(all)	APJ	Accessories	(all)	China	Clothing	(all)	EMEA North	Footwear	(all) / Clothing	EMEA South	(all) / Clothing	(all)	LATAM																																								
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<p>👉 We can see that our Bar / Column Chart now reflects the Sales Revenue per Region for the Clothing Category. We can confirm this by seeing that we have a 1 Filter in the Chart Subtitle. Let's revert our Chart back to Sales Revenue by Region and add it to a dashboard. 14. Deselect Clothing</p>	<table border="1"> <thead> <tr> <th>Product</th> <th>Receive Date</th> <th>Region</th> <th>Sales Manager</th> <th>Ship Date</th> <th>Store</th> <th>Workout Usage</th> </tr> </thead> <tbody> <tr><td>(all)</td><td>(all)</td><td>APJ</td><td>David Carl</td><td>(all)</td><td>1,800 Reunion</td><td>Biking</td></tr> <tr><td>Accessories</td><td>(all)</td><td>China</td><td>Ed Young</td><td>(all)</td><td>110% Effort Studio</td><td>High Intensity</td></tr> <tr><td>Clothing</td><td>(all)</td><td>EMEA North</td><td>Gabriel Walton</td><td>(all)</td><td>22 Steps</td><td>Outdoors</td></tr> <tr><td>Footwear</td><td>(all)</td><td>EMEA South</td><td>Gerry Dunnin</td><td>(all)</td><td>360 Mobility Aline</td><td>Sport</td></tr> <tr><td>(all) / Clothing</td><td>(all)</td><td>LATAM</td><td>James Frank</td><td>(all)</td><td>360 Mountain Climbing</td><td>Yoga/Pilates</td></tr> </tbody> </table> <p>1 Filter</p> <table border="1"> <thead> <tr> <th>Region</th> <th>Sales Revenue</th> </tr> </thead> <tbody> <tr><td>APJ</td><td>65,452,599.37</td></tr> <tr><td>China</td><td>28,541,996.68</td></tr> <tr><td>EMEA North</td><td>488,968,556.06</td></tr> <tr><td>EMEA South</td><td>160,164,350.33</td></tr> <tr><td>LATAM</td><td>59,035,207.35</td></tr> <tr><td>MEE</td><td>1,360,189,415.77</td></tr> <tr><td>NA</td><td>132,891,313.34</td></tr> </tbody> </table>	Product	Receive Date	Region	Sales Manager	Ship Date	Store	Workout Usage	(all)	(all)	APJ	David Carl	(all)	1,800 Reunion	Biking	Accessories	(all)	China	Ed Young	(all)	110% Effort Studio	High Intensity	Clothing	(all)	EMEA North	Gabriel Walton	(all)	22 Steps	Outdoors	Footwear	(all)	EMEA South	Gerry Dunnin	(all)	360 Mobility Aline	Sport	(all) / Clothing	(all)	LATAM	James Frank	(all)	360 Mountain Climbing	Yoga/Pilates	Region	Sales Revenue	APJ	65,452,599.37	China	28,541,996.68	EMEA North	488,968,556.06	EMEA South	160,164,350.33	LATAM	59,035,207.35	MEE	1,360,189,415.77	NA	132,891,313.34
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<p>👉 Our current chart looks like a good starting point for our dashboard. We can copy our chart from Explorer now to our story. We want to choose a Responsive Page as we know that the dashboard that we will be creating may be consumed across multiple devices. 15. Click Copy Icon 16. Click Copy to New Responsive Page</p>																																																											

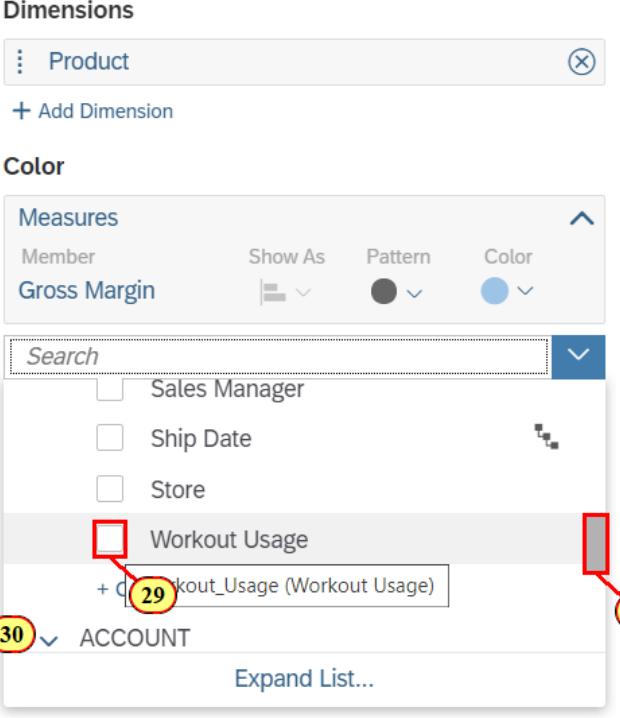
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<p> Quality Check! Does our story page look like the screenshot?</p>	 <p>Sales Revenue per Region for Actual</p> <table border="1"> <thead> <tr> <th>Region</th> <th>Revenue</th> </tr> </thead> <tbody> <tr> <td>APJ</td> <td>146,330,322.64</td> </tr> <tr> <td>China</td> <td>63,752,121.57</td> </tr> <tr> <td>EMEA North</td> <td>1,077,661,431.63</td> </tr> <tr> <td>EMEA South</td> <td>358,991,678.61</td> </tr> <tr> <td>LATAM</td> <td>132,018,889.44</td> </tr> <tr> <td>MEE</td> <td>2,663,377,581.41</td> </tr> <tr> <td>NA</td> <td>295,268,339.02</td> </tr> </tbody> </table>	Region	Revenue	APJ	146,330,322.64	China	63,752,121.57	EMEA North	1,077,661,431.63	EMEA South	358,991,678.61	LATAM	132,018,889.44	MEE	2,663,377,581.41	NA	295,268,339.02
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<p> Let's start adding in some additional charts. First, we are interested in the gross margin breakdown across our different products.</p> <p>17. Click Insert Chart</p>	 <p>Files / New Document* ☆</p> <p>Story Data</p> <p>Page 1</p>																

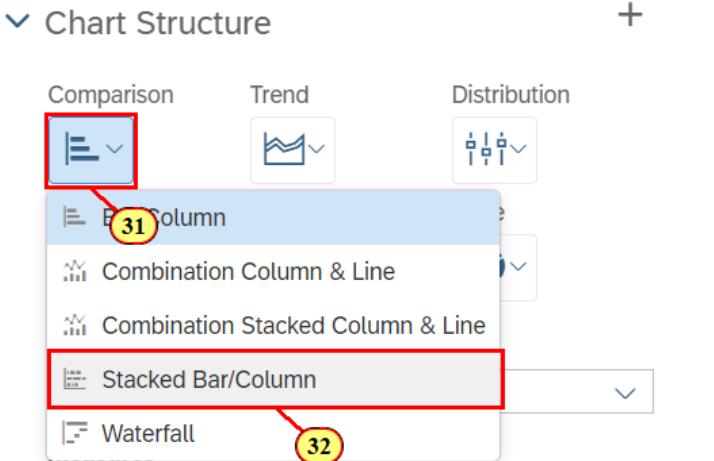
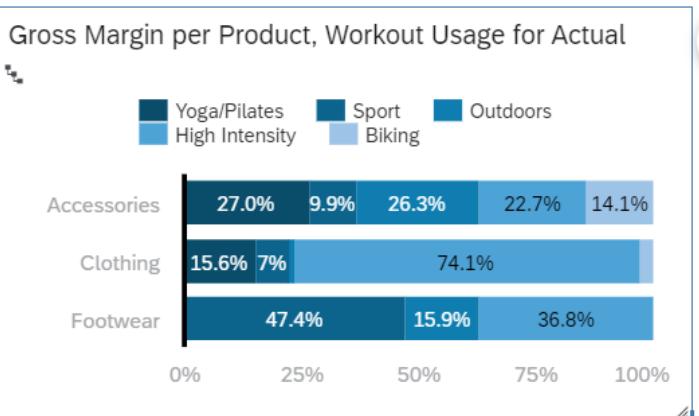
Explanation	Screenshot
<p> Welcome to the Builder Panel!</p> <p>The Builder Panel is a place where you can create your visualizations. The chart area on your responsive page will remain empty until a measure and dimension are selected from the Builder Panel. It will dynamically update depending on the visualization that you are trying to create.</p> <p>We have just added an empty chart to our story and now we want to start adding measures and dimensions to build our chart into a visualization for business insights!</p>	 <p>Builder</p> <p>Data Source SAC_ORDER_FINANCE</p> <p>+ Add Linked Models</p> <p>Chart Structure</p> <ul style="list-style-type: none"> Comparison Trend Distribution Correlation Indicator More <p>Chart Orientation Horizontal</p> <p>Measures + Add Measure</p> <p>Dimensions + Add Dimension</p> <p>Color + Add Dimension/Measure</p> <p>Filters</p>

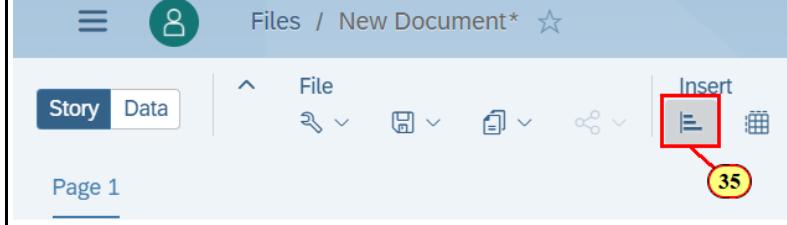
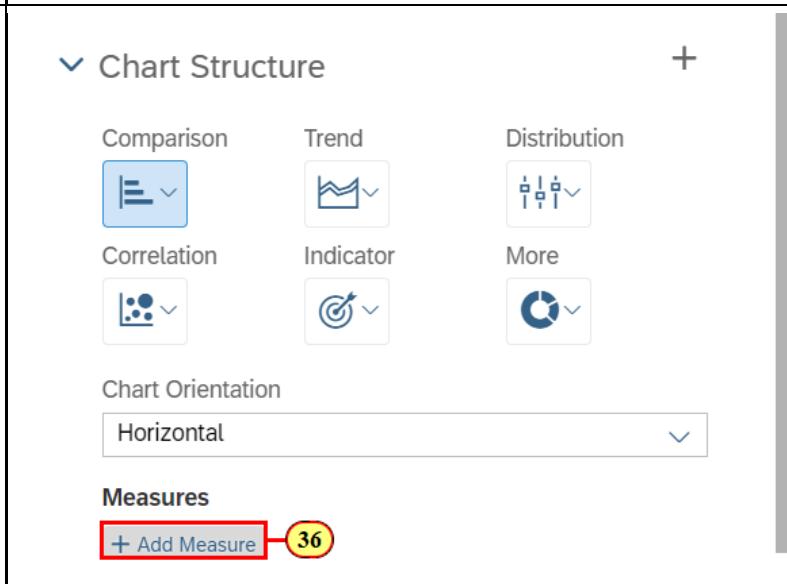
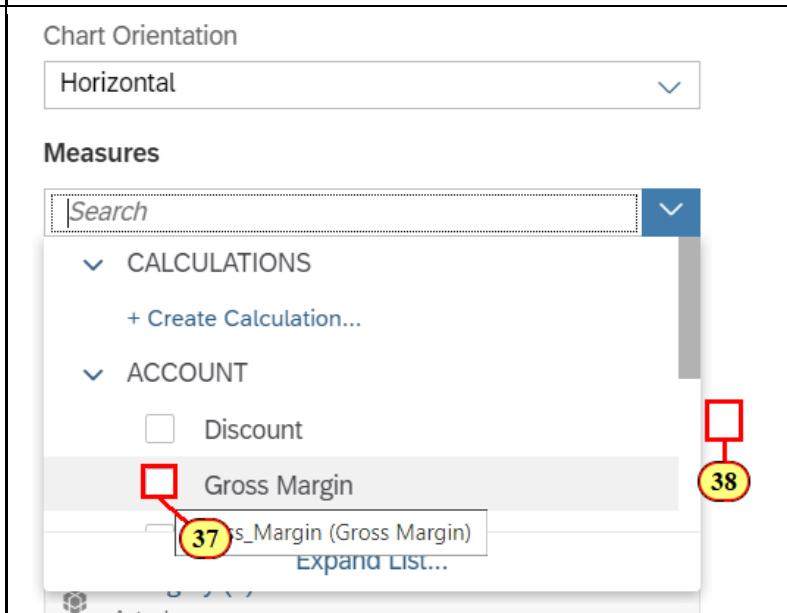
Explanation	Screenshot
18. Click + Add Measure	 <p>+ Add Measure</p> <p>Dimension 18</p> <p>+ Add Dimension</p> <p>Color</p> <p>+ Add Dimension/Measure</p> <p>Horizontal</p>
<p>19. Click Gross Margin</p> <p>20. Click Inside the Builder Panel to Collapse the Measure Selection Drop Down Menu</p>	 <p>Search</p> <p>CALCULATIONS</p> <p>+ Create Calculation...</p> <p>ACCOUNT</p> <p>Discount</p> <p>Gross Margin</p> <p>Gross Margin (Gross Margin)</p> <p>Expand List...</p> <p>Actual</p> <p>19</p> <p>20</p>

Explanation	Screenshot																				
21. Click + Add Dimension																					
<p>22. Scroll till Product is Visible</p> <p> Within the Dimension Selection Menu, a hierarchy icon is displayed next to hierarchical dimensions. Dimensions with attributes can be further expanded within the menu.</p> <p>23. Click Product</p> <p>24. Click Insider the Builder Panel to Collapse the Dimension Selection Drop Down Menu</p>																					
<p> We have now created our first bar chart using the Builder Panel. However, our data can be further transformed to extract more valuable business insights. Let's change the hierarchy level so we can see gross margin for different Product categories.</p>	 <table border="1"> <caption>Sales Revenue per Region for Actual</caption> <thead> <tr> <th>Region</th> <th>Revenue</th> </tr> </thead> <tbody> <tr><td>APJ</td><td>146,330,322.64</td></tr> <tr><td>China</td><td>63,752,121.57</td></tr> <tr><td>EMEA North</td><td>1,077,661,431.63</td></tr> <tr><td>EMEA South</td><td>358,991,678.61</td></tr> <tr><td>LATAM</td><td>132,018,889.44</td></tr> <tr><td>MEE</td><td>2,663,377,581.41</td></tr> <tr><td>NA</td><td>295,268,339.02</td></tr> </tbody> </table> <table border="1"> <caption>Gross Margin per Product for Actual</caption> <thead> <tr> <th>Category</th> <th>Gross Margin</th> </tr> </thead> <tbody> <tr><td>(all)</td><td>1,875,723,621.18</td></tr> </tbody> </table>	Region	Revenue	APJ	146,330,322.64	China	63,752,121.57	EMEA North	1,077,661,431.63	EMEA South	358,991,678.61	LATAM	132,018,889.44	MEE	2,663,377,581.41	NA	295,268,339.02	Category	Gross Margin	(all)	1,875,723,621.18
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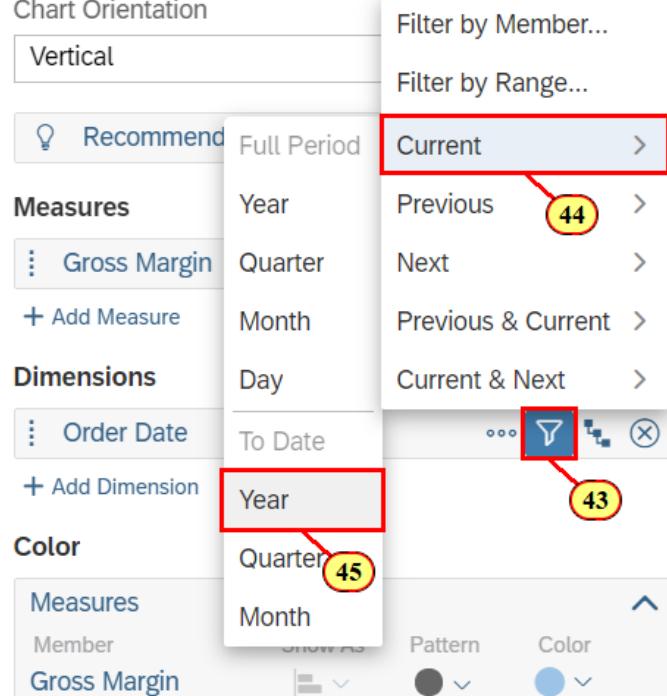
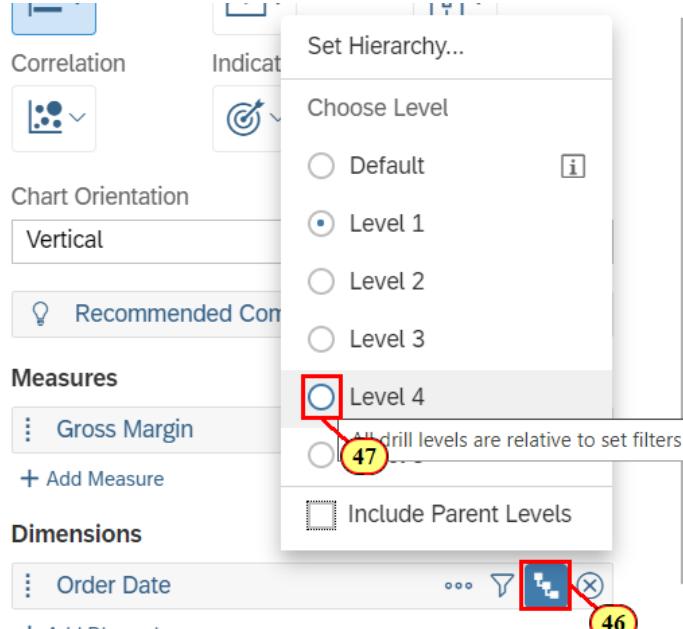
Explanation	Screenshot										
<p>👉 We can drill down on the Product dimension to get more information from our bar chart. You can also drill down on charts via the Builder Panel as a designer or by clicking on the bar and drilling down.</p> <p>25. Click Set Drill 26. Click Level 2</p>											
<p>👉 We can now see gross margin by each product category (Accessories, Clothing, Footwear), but we want to explore our data further and generate insights from the additional Workout Usage dimension in our model.</p>	<table border="1"> <thead> <tr> <th>Category</th> <th>Gross Margin</th> </tr> </thead> <tbody> <tr> <td>Accessories</td> <td>548,534,703.11</td> </tr> <tr> <td>Clothing</td> <td>720,508,736.91</td> </tr> <tr> <td>Footwear</td> <td>606,680,181.16</td> </tr> </tbody> </table>	Category	Gross Margin	Accessories	548,534,703.11	Clothing	720,508,736.91	Footwear	606,680,181.16		
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<p>27. Under Color Click + Add Dimension / Measure</p>	<table border="1"> <thead> <tr> <th>Measures</th> <th>Member</th> <th>Show As</th> <th>Pattern</th> <th>Color</th> </tr> </thead> <tbody> <tr> <td>Gross Margin</td> <td>---</td> <td>---</td> <td>---</td> <td>---</td> </tr> </tbody> </table>	Measures	Member	Show As	Pattern	Color	Gross Margin	---	---	---	---
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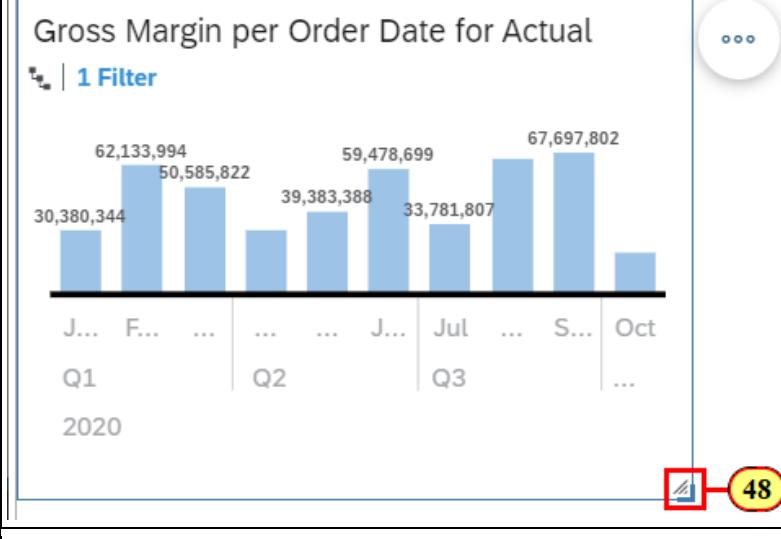
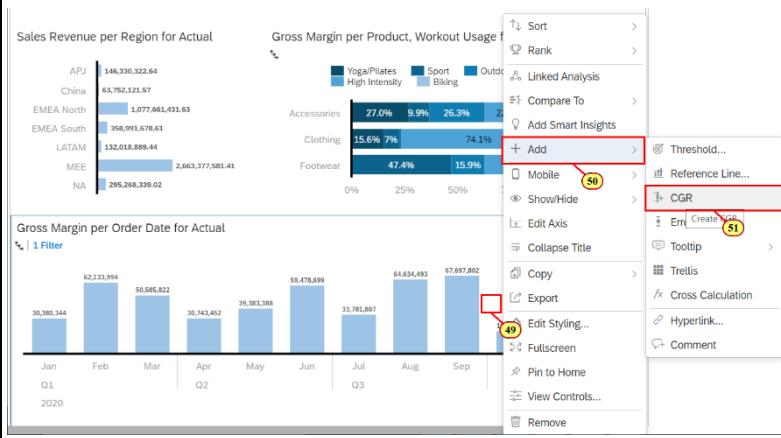
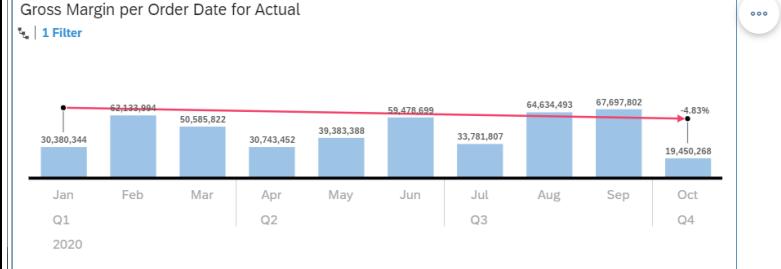
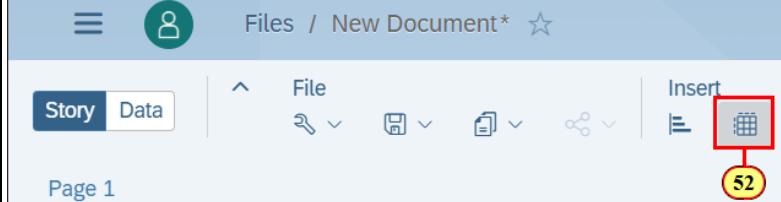
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<p>28. Scroll till Workout Usage is Visible</p> <p>29. Click Workout Usage</p> <p>30. Click Inside the Builder Panel to Collapse the Color Selection Drop Down Menu</p>																									
<p>👉 Our bar chart is now divided in each product category by its Workout Usage. Using Color in charts is an effective way of mapping additional dimensions into a visualization. We can change our Chart Type to better visualize the dimensions we have selected.</p>	 <table border="1"> <thead> <tr> <th>Category</th> <th>Workout Usage</th> <th>Gross Margin</th> </tr> </thead> <tbody> <tr> <td rowspan="5">Accessories</td> <td>1</td> <td>77,151,010.32</td> </tr> <tr> <td>2</td> <td>124,748,200.21</td> </tr> <tr> <td>3</td> <td>144,444,537.47</td> </tr> <tr> <td>4</td> <td>54,212,269.17</td> </tr> <tr> <td>5</td> <td>147,978,685.93</td> </tr> <tr> <td rowspan="2">Clothing</td> <td>1</td> <td>18,557,433.73</td> </tr> <tr> <td>2</td> <td>534,115,133.48</td> </tr> <tr> <td rowspan="2">Clothing</td> <td>1</td> <td>5,781,278.76</td> </tr> <tr> <td>2</td> <td>49,992,713.45</td> </tr> </tbody> </table>	Category	Workout Usage	Gross Margin	Accessories	1	77,151,010.32	2	124,748,200.21	3	144,444,537.47	4	54,212,269.17	5	147,978,685.93	Clothing	1	18,557,433.73	2	534,115,133.48	Clothing	1	5,781,278.76	2	49,992,713.45
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Explanation	Screenshot
<p>31. Click Bar/Column Tile</p> <p>32. Click Stacked Bar/Column</p>	 <p>The screenshot shows the 'Chart Structure' section of a visualization tool. At the top, there are three tabs: 'Comparison', 'Trend', and 'Distribution'. Below them is a dropdown menu with several options: 'Bar/Column' (highlighted with a red box and yellow circle labeled 31), 'Combination Column & Line', 'Combination Stacked Column & Line', 'Stacked Bar/Column' (highlighted with a red box and yellow circle labeled 32), and 'Waterfall'.</p>
<p> We want to scale our chart so that the distribution of workout usage in each product category is easily comparable in percentages of the total.</p> <p>33. Click Show Chart as 100%</p>	 <p>The screenshot shows the 'Chart Orientation' section. It has a dropdown set to 'Horizontal' and a checkbox labeled 'Show Chart as 100%' which is checked (highlighted with a red box and yellow circle labeled 32). Below it is a 'Measures' section with a dropdown containing 'Gross Margin' and a 'Add Measure' button.</p>
<p>34. Resize the Chart to be Wider</p>	 <p>The screenshot shows two charts side-by-side. On the left is a bar chart titled 'Sales Revenue per Region for Actual' showing revenue for APJ, China, EMEA North, EMEA South, LATAM, MEE, and NA. On the right is a stacked bar chart titled 'Gross Margin per Product, Workout Usage for Actual' showing the percentage distribution of gross margin for Accessories, Clothing, and Footwear across categories like Yoga/Pilates, Sport, Outdoors, High Intensity, and Biking.</p>
<p> Quality Check! Does the Stacked Bar Chart in your story show up like this?</p> <p> Our chart visualization now displays for us the proportional distribution of gross margins in each Product Category based on their Workout Usage. This enables us to quickly analyze the contribution of the Workout Usage dimension within a Product Category.</p>	 <p>The screenshot shows the final visualization of the Stacked Bar Chart. It displays the Gross Margin per Product, Workout Usage for Actual. The chart is a horizontal stacked bar chart with five segments per category (Accessories, Clothing, Footwear) representing different workout usage dimensions. The segments are color-coded and labeled with their respective percentages: 27.0%, 9.9%, 26.3%, 22.7%, and 14.1% for Accessories; 15.6%, 7%, and 74.1% for Clothing; and 47.4%, 15.9%, and 36.8% for Footwear. The x-axis is scaled from 0% to 100%.</p>

Explanation	Screenshot
<p> We now want to analyze how our gross margin has been performing over time. Let us build a chart with a time dimension to display this data.</p> <p>35. Click Insert Chart</p>	
<p>36. Click + Add Measure</p>	
<p>37. Click Gross Margin</p> <p>38. Click Inside the Builder Panel to Collapse the Measure Selection Drop Down Menu</p>	

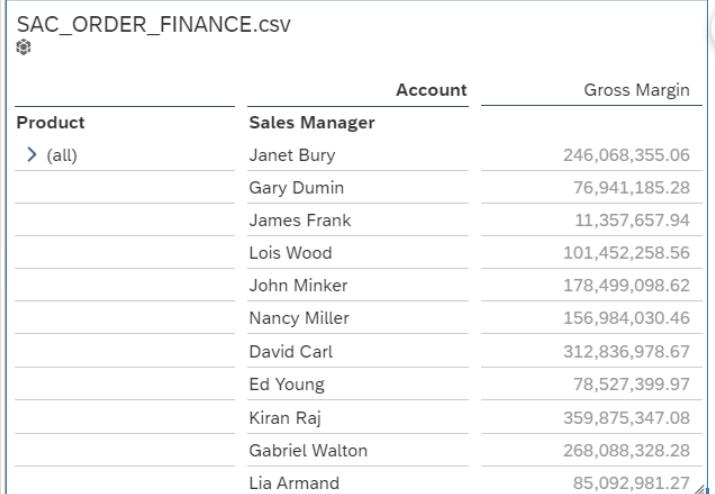
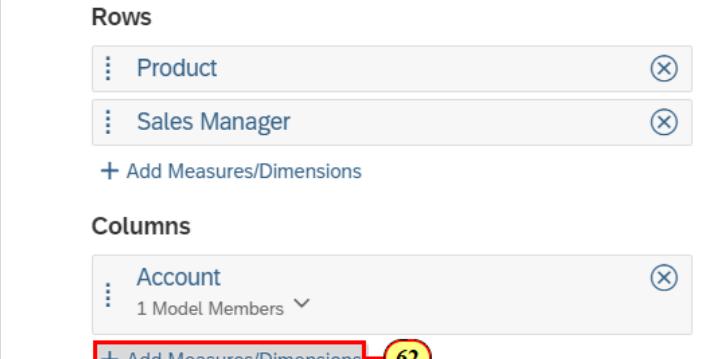
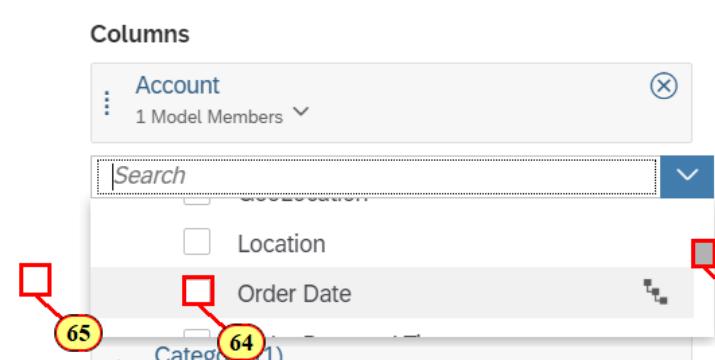
Explanation	Screenshot
39. Click Add Dimension	<p>Measures</p> <p>Gross Margin (X)</p> <p>+ Add Measure</p> <p>Dimensions</p> <p>+ Add Dimension 39</p>
<p>40. Scroll till Order Data is Visible</p> <p>41. Click Order Date</p> <p>42. Click Inside the Builder Panel to Collapse the Dimension Selection Drop Down Menu</p>	<p>Measures</p> <p>Gross Margin (X)</p> <p>+ Add Measure</p> <p>Dimensions</p> <p>Search</p> <p><input type="checkbox"/> Category</p> <p><input type="checkbox"/> GeoLocation</p> <p><input type="checkbox"/> Location</p> <p><input checked="" type="checkbox"/> Order Date 41</p> <p>40 Expand List...</p> <p>Category (1)</p>
<p> SAP Analytics Cloud immediately recognized our time dimension and created an upright chart orientation as per best practices. However, our chart currently shows an aggregation of all gross margins in our data set. Next, we want to apply a dynamic time filter for the year to date range and change the drill level to show months as the granularity of bars.</p>	<p>Gross Margin per Order Date for Actual</p> <p>1,875,723,621.18</p> <p>(all)</p>

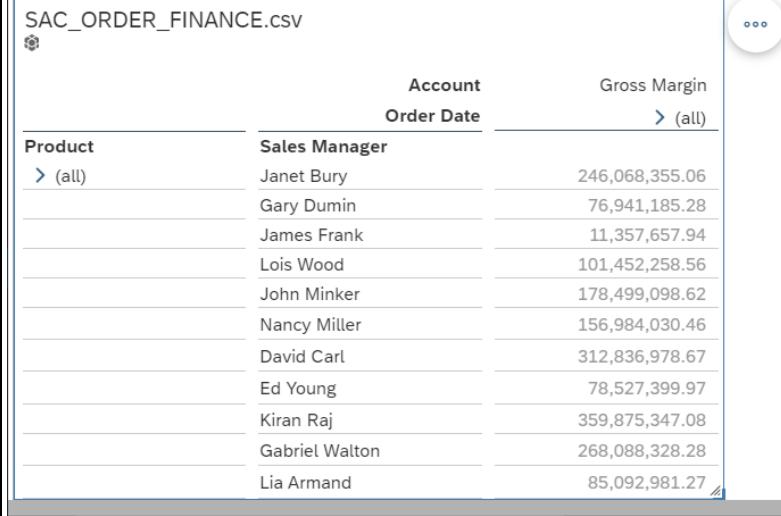
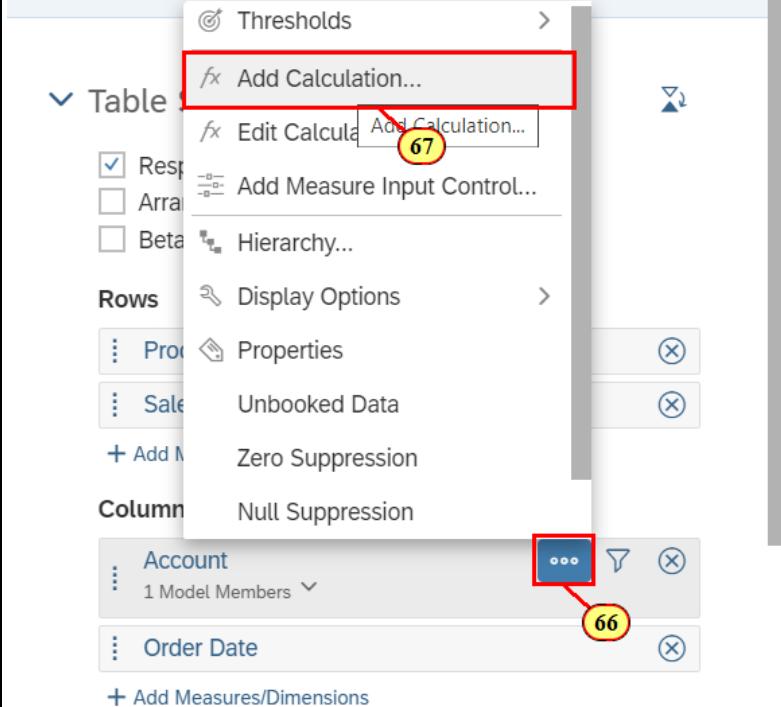
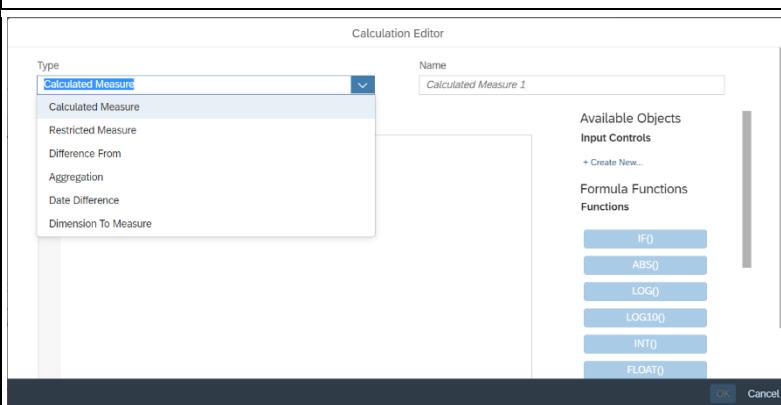
Explanation	Screenshot
<p>👉 We have many options on filtering or drilling down on a dimension simply by hovering over the dimension in builder panel.</p> <p>43. Click Filter 44. Click Current 45. Click Year Under To Date</p> <p>👉 SAP Analytics Cloud offers users the ability to choose from a variety of dynamic time filters to quickly customize their charts to their business needs. We are using a year to date filter on our chart, so our data is filtered to begin on the start of the year 2020 until today.</p>	
<p>👉 Let us Set Drill on our dimension. Currently our bar chart is aggregating data over all time, however we are more interested in seeing performance per month for the current year.</p> <p>46. Click Set Drill</p> <p>👉 Our hierarchy levels correspond to levels of granularity. In SAP Analytics Cloud, we dynamically provide various levels of time granularity (i.e. YQM, YHQM, YM). Currently, this chart is set to a YQM hierarchy with the first level set to aggregate over all time, so we want to select level 4 to reach monthly granularity.</p> <p>47. Click Level 4</p>	

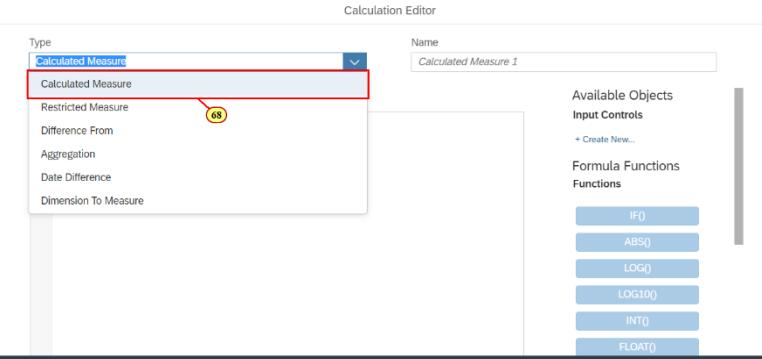
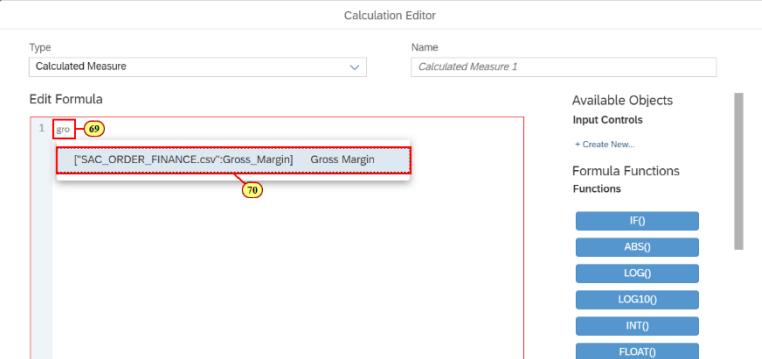
Explanation	Screenshot																						
<p>👉 We have just created a chart with a time dimension using a Year to Date filter to organize our visualization. Next, we want to learn more about the trend of Gross Margin from our chart.</p> <p>⚠️ Please note your data will look different from this chart's values due to the dynamic date filter.</p> <p>48. Resize the Chart to be Wider</p>	 <table border="1"> <thead> <tr> <th>Month</th> <th>Gross Margin</th> </tr> </thead> <tbody> <tr><td>Jan Q1 2020</td><td>30,380,344</td></tr> <tr><td>Feb</td><td>62,133,994</td></tr> <tr><td>Mar</td><td>50,585,822</td></tr> <tr><td>Apr Q2</td><td>30,743,452</td></tr> <tr><td>May</td><td>39,383,388</td></tr> <tr><td>Jun</td><td>59,478,699</td></tr> <tr><td>Jul Q3</td><td>33,781,807</td></tr> <tr><td>Aug</td><td>64,634,493</td></tr> <tr><td>Sep</td><td>67,697,802</td></tr> <tr><td>Oct</td><td>19,450,268</td></tr> </tbody> </table>	Month	Gross Margin	Jan Q1 2020	30,380,344	Feb	62,133,994	Mar	50,585,822	Apr Q2	30,743,452	May	39,383,388	Jun	59,478,699	Jul Q3	33,781,807	Aug	64,634,493	Sep	67,697,802	Oct	19,450,268
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<p>👉 We can look at the trend of Gross Margin from our chart by adding a trendline by using the context menu.</p> <p>49. Right Click on the Chart to Open the Context Menu</p> <p>💡 Welcome to the Context Menu!</p> <p>Users can use this menu to change chart properties like adding additional information or hiding chart features, sort and rank data, add linked analysis, and copy or delete the chart.</p> <p>50. Click Add</p> <p>51. Click CGR (Compound Growth Rate)</p>																							
<p>👉 We use the CGR added to the chart that compared to look at our compound growth rate in the year. If the CGR is negative it could be alarming information for the business user.</p>																							
<p>👉 Let us add a table to our story to examine our Gross Margin contribution by each Sales Manager. Since Sales Manager is a high cardinality dimension with a lot of members, it is recommended to view this data in a table.</p>																							

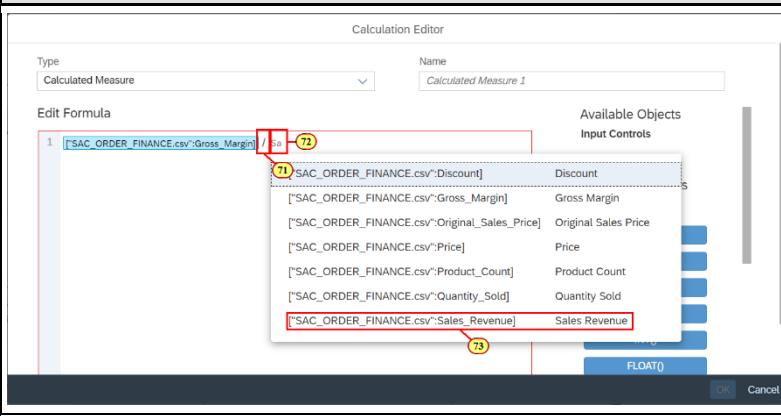
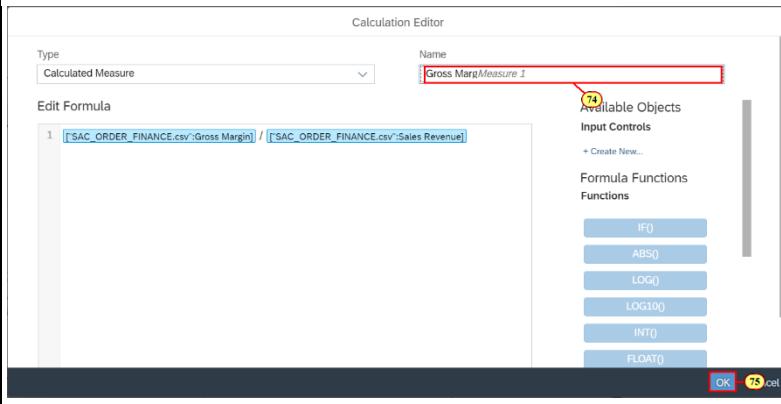
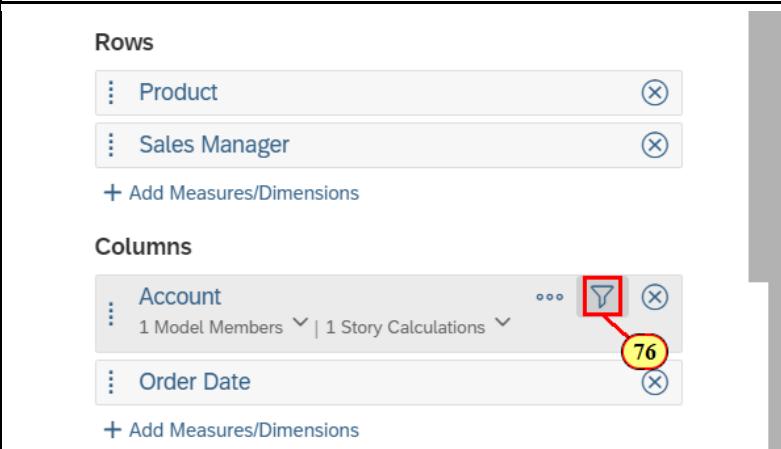
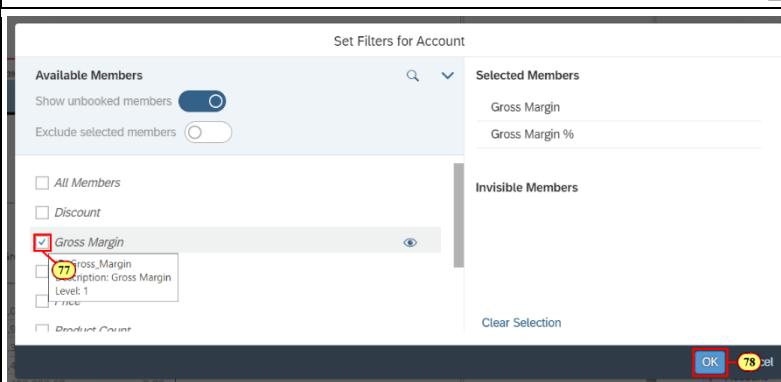
Explanation	Screenshot																		
52. Click Insert Table																			
53. Under Rows Click + Add Measures / Dimensions	<p>Table Structure</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Responsive / flexible column width <input type="checkbox"/> Arrange totals / parent nodes below <input type="checkbox"/> Beta table <small>i</small> <p>Rows</p> <p>+ Add Measures/Dimensions 53</p> <p>Columns</p> <table border="1" style="width: 100%;"> <tr> <td style="padding: 5px; vertical-align: top;"> Account 1 Model Members <small>v</small> </td> <td style="padding: 5px; text-align: right;"> X </td> </tr> </table> <p>+ Add Measures/Dimensions</p>	Account 1 Model Members <small>v</small>	X																
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54. Scroll till Product and Sales Manager is Visible 55. Click Product 56. Click Sales Manager 57. Click Inside the Builder Panel to Collapse the Measure / Dimension Selection Drop Down Menu	<p>Rows</p> <div style="border: 1px solid #ccc; padding: 5px; background-color: #f9f9f9;"> <p style="margin: 0;">Search ▼</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10px; text-align: right; padding-right: 5px;"><input type="checkbox"/></td> <td style="padding-left: 5px;">Order ID</td> </tr> <tr> <td style="text-align: right; padding-right: 5px;"><input type="checkbox"/></td> <td style="padding-left: 5px;">Order Number</td> </tr> <tr> <td style="text-align: right; padding-right: 5px;"><input checked="" type="checkbox"/> 55</td> <td style="padding-left: 5px;">Product</td> </tr> <tr> <td style="text-align: right; padding-right: 5px;"><input type="checkbox"/></td> <td style="padding-left: 5px;">Receive Date</td> </tr> <tr> <td style="text-align: right; padding-right: 5px;"><input type="checkbox"/></td> <td style="padding-left: 5px;">Region</td> </tr> <tr> <td style="text-align: right; padding-right: 5px;"><input type="checkbox"/> 56</td> <td style="padding-left: 5px;">Sales Manager</td> </tr> <tr> <td style="text-align: right; padding-right: 5px;"><input type="checkbox"/></td> <td style="padding-left: 5px;">Manager</td> </tr> <tr> <td style="text-align: right; padding-right: 5px;"><input type="checkbox"/></td> <td style="padding-left: 5px;">Store</td> </tr> <tr> <td style="text-align: right; padding-right: 5px;"><input type="checkbox"/></td> <td style="padding-left: 5px;">Workout Usage</td> </tr> </table> </div> 57 54	<input type="checkbox"/>	Order ID	<input type="checkbox"/>	Order Number	<input checked="" type="checkbox"/> 55	Product	<input type="checkbox"/>	Receive Date	<input type="checkbox"/>	Region	<input type="checkbox"/> 56	Sales Manager	<input type="checkbox"/>	Manager	<input type="checkbox"/>	Store	<input type="checkbox"/>	Workout Usage
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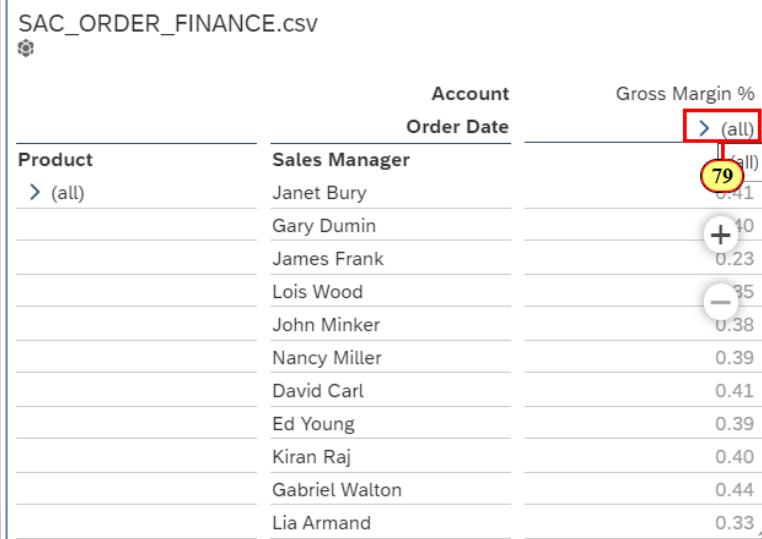
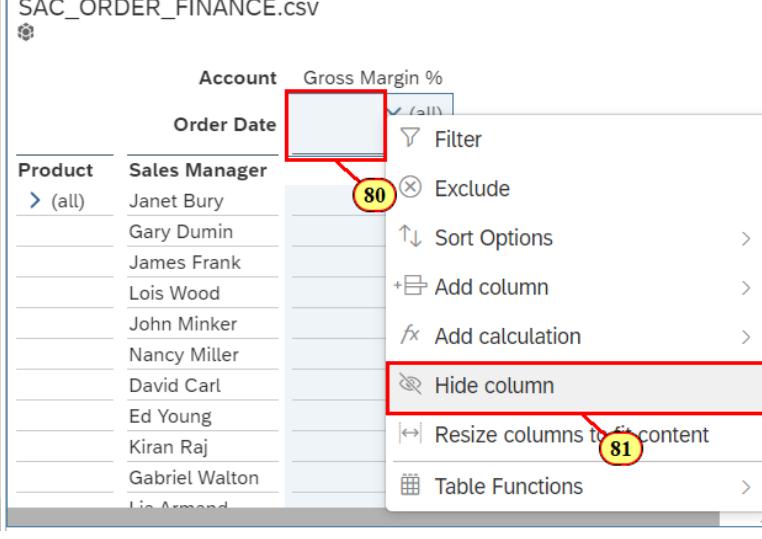
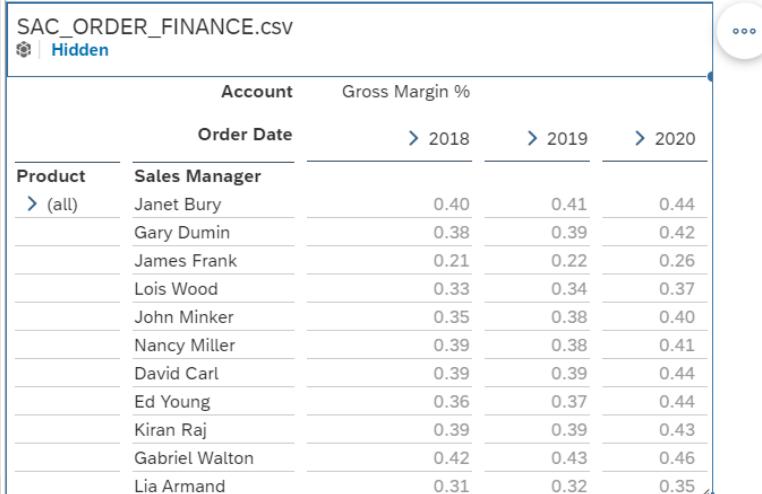
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<p>👉 We can see that a table has been created to track Sales Managers. We can choose to expand the Product column to sort our table by Product Category contributions by each Manager. However, our table measure is currently set to Discount. Let's change it to Gross Margin.</p>	<table border="1"> <thead> <tr> <th>Product</th> <th>Sales Manager</th> <th>Discount</th> </tr> </thead> <tbody> <tr><td>> (all)</td><td>Janet Bury</td><td>234,951,906.94</td></tr> <tr><td></td><td>Gary Dumin</td><td>75,469,672.06</td></tr> <tr><td></td><td>James Frank</td><td>24,419,962.51</td></tr> <tr><td></td><td>Lois Wood</td><td>124,822,556.77</td></tr> <tr><td></td><td>John Minker</td><td>199,831,608.73</td></tr> <tr><td></td><td>Nancy Miller</td><td>163,106,933.45</td></tr> <tr><td></td><td>David Carl</td><td>308,129,458.34</td></tr> <tr><td></td><td>Ed Young</td><td>83,946,335.81</td></tr> <tr><td></td><td>Kiran Raj</td><td>348,463,611.97</td></tr> <tr><td></td><td>Gabriel Walton</td><td>235,562,564.74</td></tr> <tr><td></td><td>Lia Armand</td><td>113,153,117.33</td></tr> </tbody> </table>	Product	Sales Manager	Discount	> (all)	Janet Bury	234,951,906.94		Gary Dumin	75,469,672.06		James Frank	24,419,962.51		Lois Wood	124,822,556.77		John Minker	199,831,608.73		Nancy Miller	163,106,933.45		David Carl	308,129,458.34		Ed Young	83,946,335.81		Kiran Raj	348,463,611.97		Gabriel Walton	235,562,564.74		Lia Armand	113,153,117.33
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<p>58. Return to the Builder panel. Click Filter on Account Column</p>	<p>Rows</p> <ul style="list-style-type: none"> Product Sales Manager <p>+ Add Measures/Dimensions</p> <p>Columns</p> <ul style="list-style-type: none"> Account <p>+ Add Measures/Dimensions</p>																																				
<p>59. Deselect Discount 60. Select Gross Margin 61. Click OK</p>	<p>Set Filters for Account</p> <p>Available Members</p> <ul style="list-style-type: none"> Show unbooked members <input checked="" type="checkbox"/> Exclude selected members <input type="checkbox"/> <p>Selected Members</p> <ul style="list-style-type: none"> Invisible Members All Members Discount 59 Gross Margin 60 Total Sales Price Price Direct Cost <p>Clear Selection</p> <p>OK 61</p>																																				

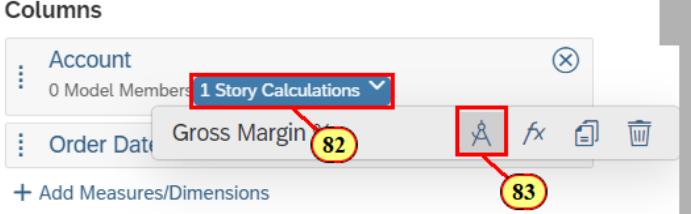
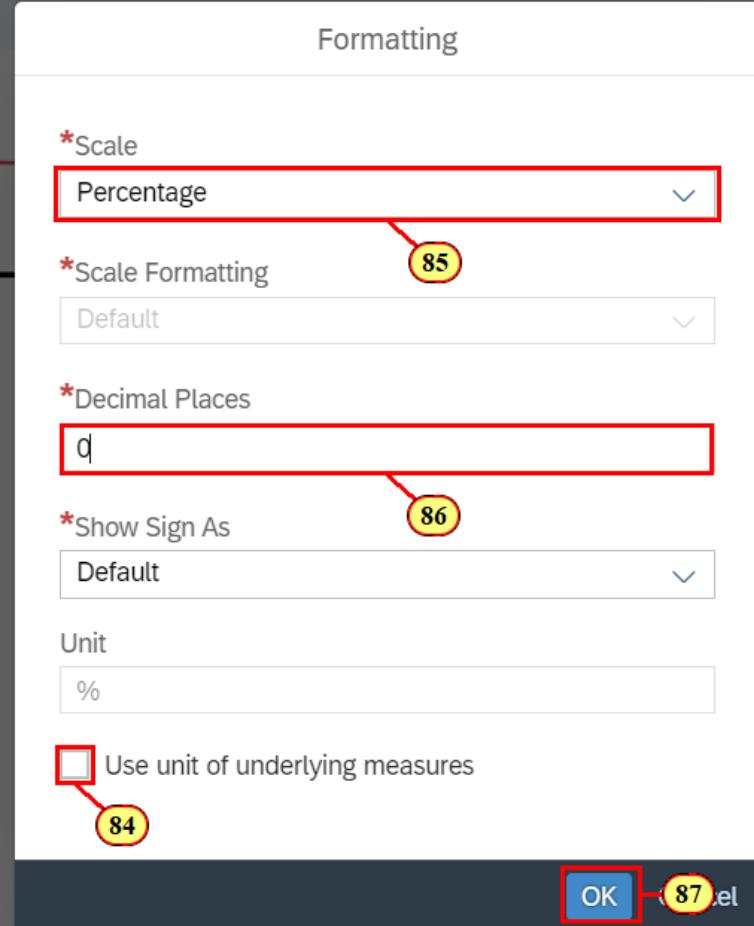
Explanation	Screenshot																																							
 <p>We have created a table to show contributions of Sales Manager to Gross Margin; however, this value is an aggregate over the entire period spanning the model. We would like to breakdown on Order Date to better interpret the yearly contributions of each Sales Manager to Gross Margin</p>	 <table border="1"> <thead> <tr> <th>Product</th> <th>Account</th> <th>Gross Margin</th> </tr> </thead> <tbody> <tr> <td>> (all)</td> <td>Sales Manager</td> <td></td> </tr> <tr> <td></td> <td>Janet Bury</td> <td>246,068,355.06</td> </tr> <tr> <td></td> <td>Gary Dumin</td> <td>76,941,185.28</td> </tr> <tr> <td></td> <td>James Frank</td> <td>11,357,657.94</td> </tr> <tr> <td></td> <td>Lois Wood</td> <td>101,452,258.56</td> </tr> <tr> <td></td> <td>John Minker</td> <td>178,499,098.62</td> </tr> <tr> <td></td> <td>Nancy Miller</td> <td>156,984,030.46</td> </tr> <tr> <td></td> <td>David Carl</td> <td>312,836,978.67</td> </tr> <tr> <td></td> <td>Ed Young</td> <td>78,527,399.97</td> </tr> <tr> <td></td> <td>Kiran Raj</td> <td>359,875,347.08</td> </tr> <tr> <td></td> <td>Gabriel Walton</td> <td>268,088,328.28</td> </tr> <tr> <td></td> <td>Lia Armand</td> <td>85,092,981.27</td> </tr> </tbody> </table>	Product	Account	Gross Margin	> (all)	Sales Manager			Janet Bury	246,068,355.06		Gary Dumin	76,941,185.28		James Frank	11,357,657.94		Lois Wood	101,452,258.56		John Minker	178,499,098.62		Nancy Miller	156,984,030.46		David Carl	312,836,978.67		Ed Young	78,527,399.97		Kiran Raj	359,875,347.08		Gabriel Walton	268,088,328.28		Lia Armand	85,092,981.27
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<p>62. Under Columns Click + Add Measures/Dimensions</p>	 <p>Rows</p> <ul style="list-style-type: none"> Product Sales Manager <p>+ Add Measures/Dimensions</p> <p>Columns</p> <ul style="list-style-type: none"> Account <ul style="list-style-type: none"> 1 Model Members <p>+ Add Measures/Dimensions 62</p>																																							
<p>63. Scroll till Order Date is Visible 64. Click Order Date 65. Click Inside the Builder Panel to Collapse the Measure / Dimension Selection Drop Down Menu</p>	 <p>Columns</p> <ul style="list-style-type: none"> Account <ul style="list-style-type: none"> 1 Model Members <p>Search</p> <p>Location</p> <p>Order Date</p> <p>Categories (1)</p>																																							

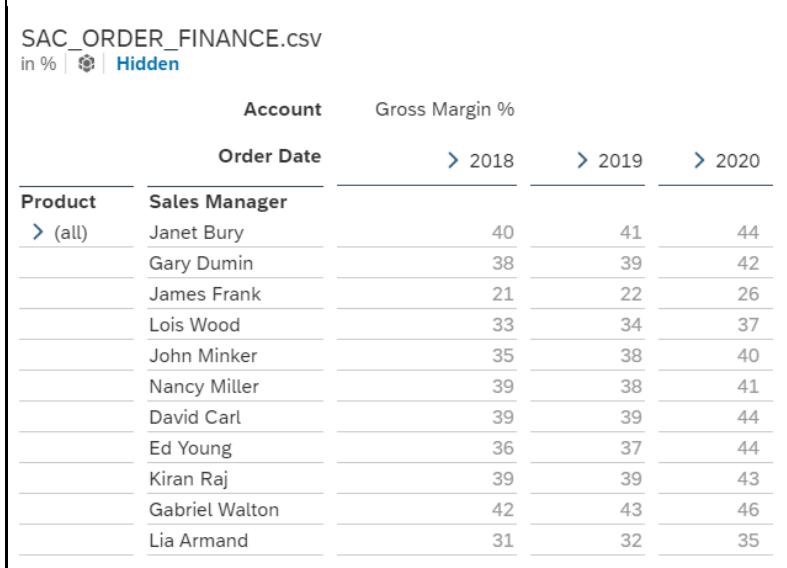
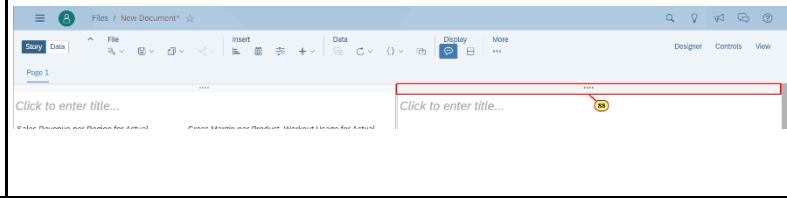
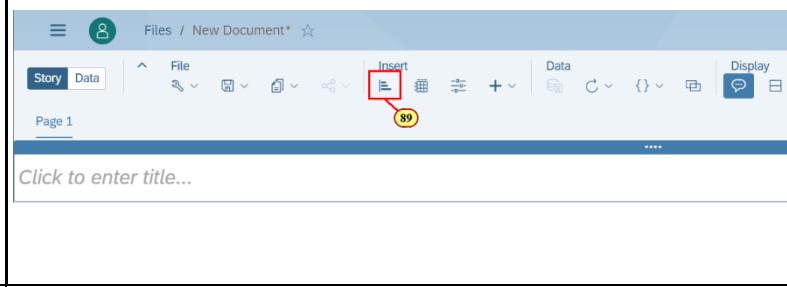
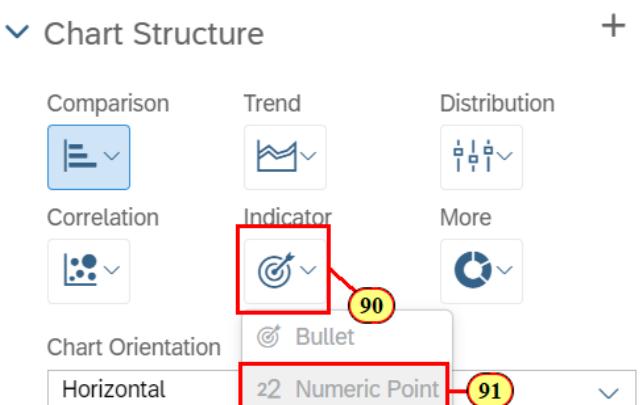
Explanation	Screenshot																																							
<p>⚠️ Quality Check! Does your table have the Product, Sales Manager, and Gross Margins columns?</p> <p>👉 There has been an Order Date field added to our table. If we expand on all, Gross Margin will be separated into yearly sums. We want to see our Gross Margin % in our table but we currently do not have that measure in our data model. We can create the Gross Margin % measure as a calculation with the Sales Revenue and Gross Margin measures.</p>	 <table border="1"> <thead> <tr> <th>Account</th> <th>Order Date</th> <th>Gross Margin</th> </tr> </thead> <tbody> <tr><td>Product</td><td>Sales Manager</td><td>> (all)</td></tr> <tr><td>> (all)</td><td>Janet Bury</td><td>246,068,355.06</td></tr> <tr><td></td><td>Gary Dumin</td><td>76,941,185.28</td></tr> <tr><td></td><td>James Frank</td><td>11,357,657.94</td></tr> <tr><td></td><td>Lois Wood</td><td>101,452,258.56</td></tr> <tr><td></td><td>John Minker</td><td>178,499,098.62</td></tr> <tr><td></td><td>Nancy Miller</td><td>156,984,030.46</td></tr> <tr><td></td><td>David Carl</td><td>312,836,978.67</td></tr> <tr><td></td><td>Ed Young</td><td>78,527,399.97</td></tr> <tr><td></td><td>Kiran Raj</td><td>359,875,347.08</td></tr> <tr><td></td><td>Gabriel Walton</td><td>268,088,328.28</td></tr> <tr><td></td><td>Lia Armand</td><td>85,092,981.27</td></tr> </tbody> </table>	Account	Order Date	Gross Margin	Product	Sales Manager	> (all)	> (all)	Janet Bury	246,068,355.06		Gary Dumin	76,941,185.28		James Frank	11,357,657.94		Lois Wood	101,452,258.56		John Minker	178,499,098.62		Nancy Miller	156,984,030.46		David Carl	312,836,978.67		Ed Young	78,527,399.97		Kiran Raj	359,875,347.08		Gabriel Walton	268,088,328.28		Lia Armand	85,092,981.27
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<p>👉 We may be looking for more insights from our data and can do so by creating a calculation!</p> <p>66. Click the More Icon for Account</p> <p>67. Click Add Calculation</p>	 <p>Table > Add Calculation...</p> <p>Rows > Display Options</p> <p>Columns > Null Suppression</p> <p>Account > ... (highlighted with a red box and circled with a yellow circle labeled 66)</p> <p>Order Date > (highlighted with a red box and circled with a yellow circle labeled 66)</p>																																							
<p>💡 Welcome to the Calculation Editor!</p> <p>The Calculation Editor allows you to create calculations for use in a chart or table. There are various types of calculations that a user can create which include:</p> <ol style="list-style-type: none"> 1. Calculated Measures: Perform a calculation on one or more measures 2. Restricted Measures: Restrict the data from a measure so that it excludes certain members of one or more dimensions 	 <p>Type: Calculated Measure</p> <p>Name: Calculated Measure 1</p> <p>Available Objects</p> <p>Input Controls</p> <p>+ Create New...</p> <p>Formula Functions</p> <p>Functions</p> <p>IF()</p> <p>ABS()</p> <p>LOG()</p> <p>LOG10()</p> <p>INT()</p> <p>FLOAT()</p>																																							

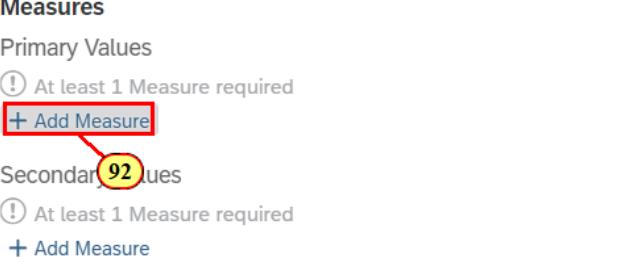
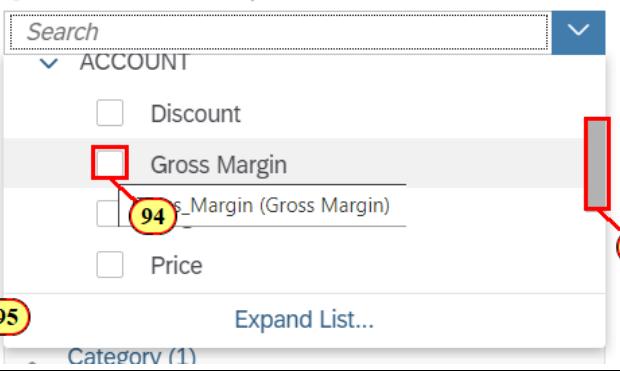
Explanation	Screenshot
<p>3. Difference From: Find the difference in a measure's value between two points in time for a single time dimension</p> <p>4. Aggregation: Create an aggregation such as sum, count, count dimensions, max, and max</p> <p>5. Date Difference: Calculate the difference between two-time dimensions</p> <p>6. Dimension to Measure: Create a measure by converting a dimension to measure.</p> <p>We will cover calculations in more detail for business analytics use cases in our Section 7 - Calculations and Blending Deep Dive. You can jump off to this section to learn more.</p>	
<p>68. Click Calculated Measure</p>	
<p>69. Click the formula field and enter "gro"</p> <p>70. Click ["SAC_ORDER_FINANCE":Gross_Margin]</p>	

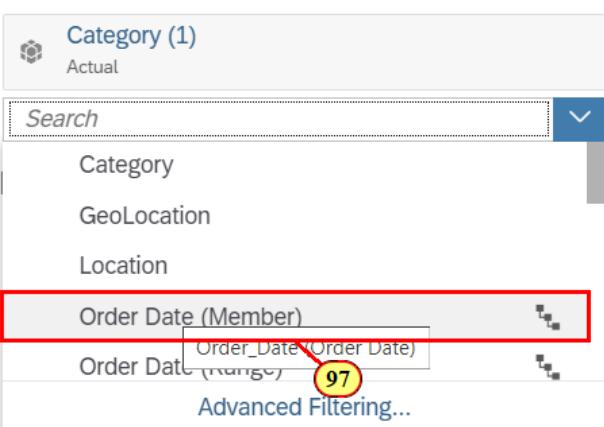
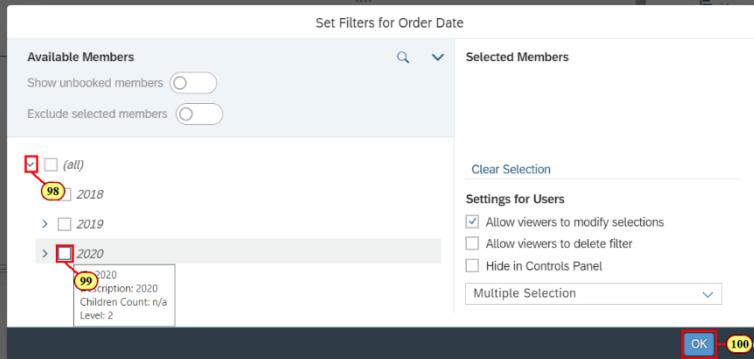
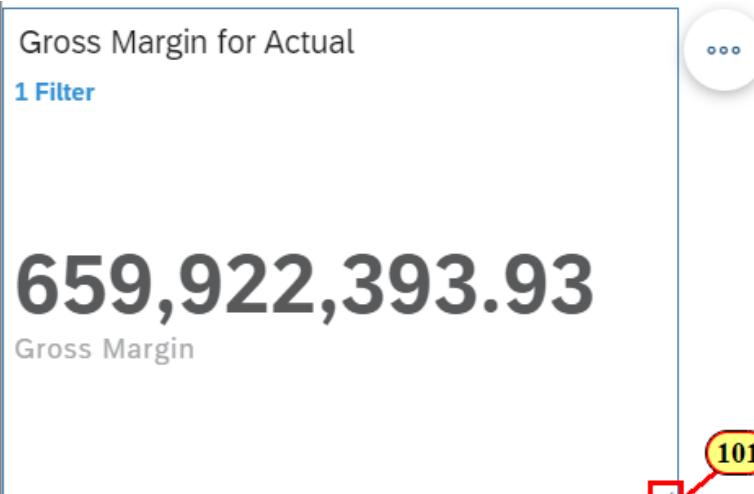
Explanation	Screenshot
<p>71. Type in "/" to indicate we want to divide in our calculation.</p> <p>72. Type in "Sal"</p> <p>73. Click [SAC_ORDER_FINANCE]:Sales_Revenue</p>	
<p>74. Name the measure Gross Margin %</p> <p>75. Click OK</p>	
<p> Now let's use our newly made calculation in our table and remove the previous measure.</p> <p>76. Click Filter on Account in Columns.</p>	
<p>77. Deselect Gross Margin</p> <p>78. Click OK</p>	

Explanation	Screenshot																																																																								
<p>Now that we have our desired measure, let's expand the Order Date column to see our values on a yearly basis.</p> <p>79. Click > (All) to Expand the Order Date Dimension</p>	 <table border="1"> <thead> <tr> <th>Product</th> <th>Sales Manager</th> <th>Order Date</th> <th>Gross Margin %</th> </tr> </thead> <tbody> <tr><td>> (all)</td><td>Janet Bury</td><td></td><td>0.41</td></tr> <tr><td></td><td>Gary Dumin</td><td></td><td>0.40</td></tr> <tr><td></td><td>James Frank</td><td></td><td>0.23</td></tr> <tr><td></td><td>Lois Wood</td><td></td><td>0.35</td></tr> <tr><td></td><td>John Minker</td><td></td><td>0.38</td></tr> <tr><td></td><td>Nancy Miller</td><td></td><td>0.39</td></tr> <tr><td></td><td>David Carl</td><td></td><td>0.41</td></tr> <tr><td></td><td>Ed Young</td><td></td><td>0.39</td></tr> <tr><td></td><td>Kiran Raj</td><td></td><td>0.40</td></tr> <tr><td></td><td>Gabriel Walton</td><td></td><td>0.44</td></tr> <tr><td></td><td>Lia Armand</td><td></td><td>0.33</td></tr> </tbody> </table>	Product	Sales Manager	Order Date	Gross Margin %	> (all)	Janet Bury		0.41		Gary Dumin		0.40		James Frank		0.23		Lois Wood		0.35		John Minker		0.38		Nancy Miller		0.39		David Carl		0.41		Ed Young		0.39		Kiran Raj		0.40		Gabriel Walton		0.44		Lia Armand		0.33																								
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<p>We want to hide the all column that aggregates Gross Margin %.</p> <p>80. Right Click the All Order Date Column</p> <p>81. Click Hide column</p>																																																																									
<p>Our table should look like this screenshot now. Since our calculation is a percentage, we will now change the formatting of our values to improve our table visualization.</p>	 <table border="1"> <thead> <tr> <th>Product</th> <th>Sales Manager</th> <th>Order Date</th> <th>> 2018</th> <th>> 2019</th> <th>> 2020</th> </tr> </thead> <tbody> <tr><td>> (all)</td><td>Janet Bury</td><td></td><td>0.40</td><td>0.41</td><td>0.44</td></tr> <tr><td></td><td>Gary Dumin</td><td></td><td>0.38</td><td>0.39</td><td>0.42</td></tr> <tr><td></td><td>James Frank</td><td></td><td>0.21</td><td>0.22</td><td>0.26</td></tr> <tr><td></td><td>Lois Wood</td><td></td><td>0.33</td><td>0.34</td><td>0.37</td></tr> <tr><td></td><td>John Minker</td><td></td><td>0.35</td><td>0.38</td><td>0.40</td></tr> <tr><td></td><td>Nancy Miller</td><td></td><td>0.39</td><td>0.38</td><td>0.41</td></tr> <tr><td></td><td>David Carl</td><td></td><td>0.39</td><td>0.39</td><td>0.44</td></tr> <tr><td></td><td>Ed Young</td><td></td><td>0.36</td><td>0.37</td><td>0.44</td></tr> <tr><td></td><td>Kiran Raj</td><td></td><td>0.39</td><td>0.39</td><td>0.43</td></tr> <tr><td></td><td>Gabriel Walton</td><td></td><td>0.42</td><td>0.43</td><td>0.46</td></tr> <tr><td></td><td>Lia Armand</td><td></td><td>0.31</td><td>0.32</td><td>0.35</td></tr> </tbody> </table>	Product	Sales Manager	Order Date	> 2018	> 2019	> 2020	> (all)	Janet Bury		0.40	0.41	0.44		Gary Dumin		0.38	0.39	0.42		James Frank		0.21	0.22	0.26		Lois Wood		0.33	0.34	0.37		John Minker		0.35	0.38	0.40		Nancy Miller		0.39	0.38	0.41		David Carl		0.39	0.39	0.44		Ed Young		0.36	0.37	0.44		Kiran Raj		0.39	0.39	0.43		Gabriel Walton		0.42	0.43	0.46		Lia Armand		0.31	0.32	0.35
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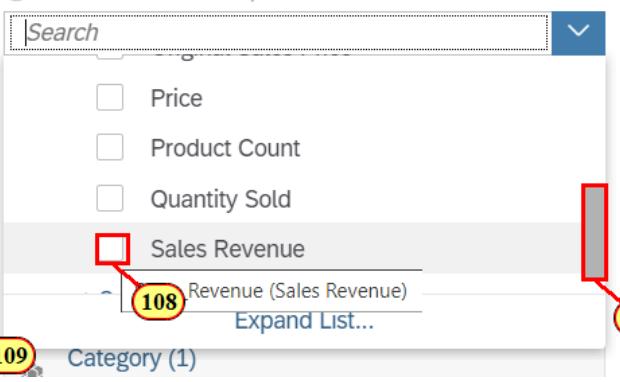
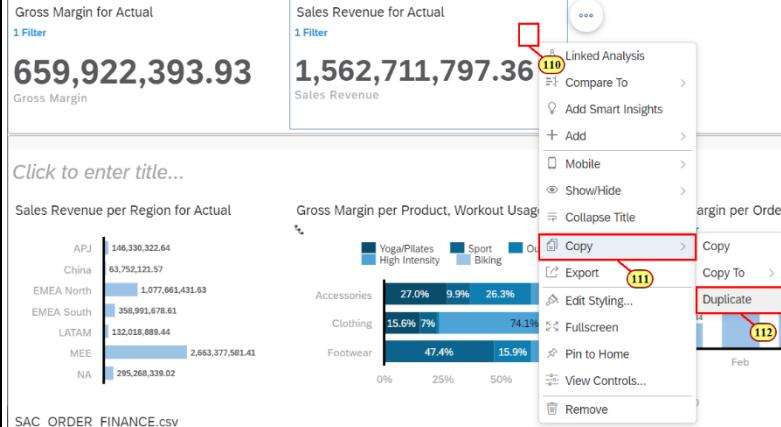
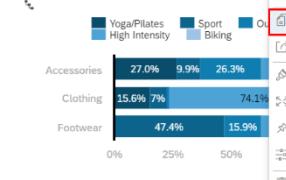
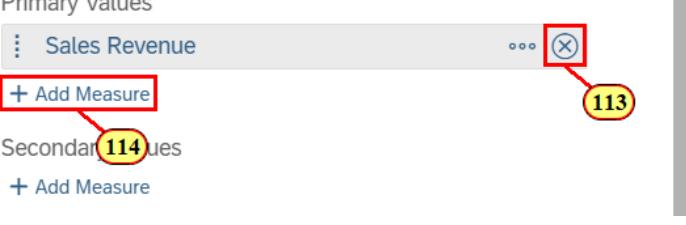
Explanation	Screenshot
<p>👉 We can easily change the formatting and representation of our measures and calculations.</p> <p>82. Click Story Calculations</p> <p>83. Click Formatting</p>	
<p>84. Deselect Use Unit of Underlying Measures</p> <p>85. Change Scale to Percentage</p> <p>86. Change Decimal Places to 0</p> <p>87. Click OK</p>	

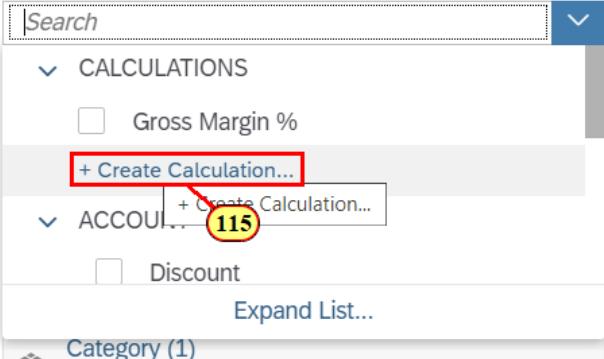
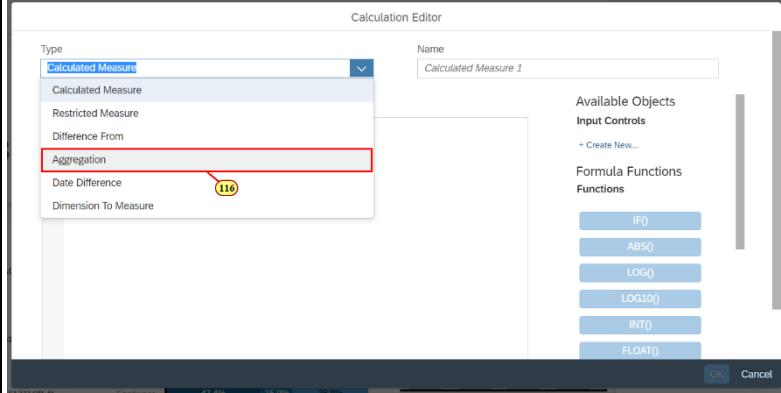
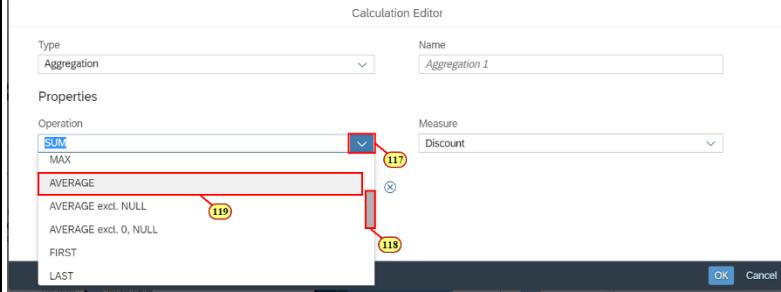
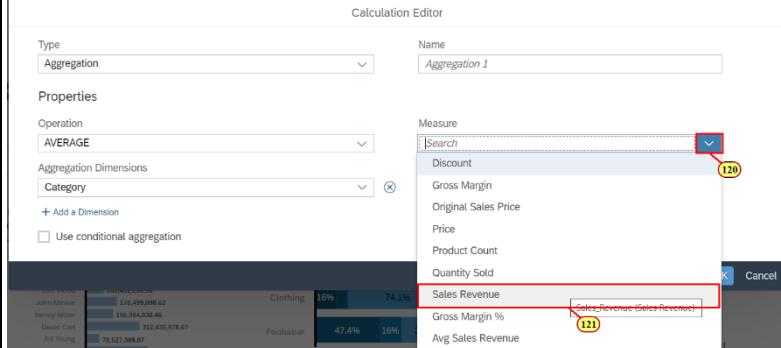
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<p> Let us shift our focus back to our dashboard layout. We want to now add some KPIs that stand out for story viewers.</p> <p>88. We can easily change the layout of our story page. Drag the Right Lane to the Top</p>																																																																	
<p> Since this lane is in now at the top of our dashboard, let us add some easily viewable KPIs as numeric point charts in our story. Numeric point charts are a chart visualization that display the total of a measure and are best suited for highlighting key business KPIs. They can be filtered so the KPI describes a specific context relevant to the business user.</p> <p>89. Click Insert Chart</p>																																																																	
<p>90. Click Target</p> <p>91. Select Numeric Point Chart</p>																																																																	

Explanation	Screenshot
92. Click Add Measure	<p>Measures</p> <p>Primary Values</p> <p>! At least 1 Measure required</p> <p>+ Add Measure</p> <p>Secondary Values</p> <p>! At least 1 Measure required</p> <p>+ Add Measure</p>
<p>Let us use Gross Margin as our first KPI.</p> <p>93. Scroll till Gross Margin is Visible</p> <p>94. Click Gross Margin</p> <p>95. Click Inside the Builder Panel to Collapse the Measure Selection Drop Down Menu</p>	 <p>Measures</p> <p>Primary Values</p> <p>! At least 1 Measure required</p> <p>+ Add Measure</p> <p>Secondary Values</p> <p>! At least 1 Measure required</p> <p>+ Add Measure</p>
<p>96. Click Add Filters</p>	 <p>Measures</p> <p>Primary Values</p> <p>! At least 1 Measure required</p> <p>Search</p> <p>ACCOUNT</p> <p>Discount</p> <p>Gross Margin</p> <p>Gross Margin (Gross Margin)</p> <p>Price</p> <p>Expand List...</p> <p>Category (1)</p> <p>Filters</p> <p>Category (1) Actual</p> <p>+ Add Filters</p> <p>Properties</p> <p>View Mode</p> <p>Enable Explorer</p> <p>Configure Measures & Dimensions</p>

Explanation	Screenshot
97. Click Order Date (Member)	 <p>The screenshot shows the 'Filters' dialog with the 'Category (1)' node expanded. Under 'Actual', the 'Search' field contains 'Category'. Below it, 'GeoLocation' and 'Location' are listed. The 'Order Date (Member)' option is highlighted with a red box and a yellow circle containing the number 97.</p>
98. Click the Expand Icon 99. Click 2020 100. Click OK	 <p>The screenshot shows the 'Set Filters for Order Date' dialog. In the 'Available Members' list, the '2020' option is selected and highlighted with a red box and a yellow circle containing the number 99. The 'OK' button at the bottom right is also highlighted with a red box and a yellow circle containing the number 100.</p>
 <p>You have now created a numeric point chart that displays Gross Margin filtered for only data in 2020.</p> <p>101. Decrease the Size of the Numeric Point Chart</p>	 <p>The screenshot shows the dashboard with a large numeric point chart titled 'Gross Margin for Actual' displaying the value '659,922,393.93'. A yellow circle containing the number 101 points to the edit icon (pencil) located in the bottom right corner of the chart area.</p>

Explanation	Screenshot
<p>👉 Let us use SAP Analytics Cloud's duplicate chart functionality to easily create our other KPIs.</p> <p>102. Click the More Icon</p> <p>103. Click Copy</p> <p>104. Click Duplicate</p>	
<p>⚠️ Quality check! Has your dashboard updated with a copied KPI chart like this screenshot?</p>	
<p>👉 We want to create a new KPI of Sales Revenue like our first chart of Gross Margins. Since we duplicated the KPI, our previously applied date filter will be automatically applied to our new KPI. Let us now change the measure of our second KPI.</p> <p>105. Deselect the Gross Margin measure for your new chart by clicking on Remove</p> <p>106. Click Add Measure</p>	

Explanation	Screenshot																
<p>107. Scroll until Sales Revenue is visible</p> <p>108. Click Sales Revenue</p> <p>109. Click Inside the Builder Panel to Collapse the Measure Selection Drop Down Menu</p>	 <p>Measures Primary Values ! At least 1 Measure required</p> <p>Search</p> <ul style="list-style-type: none"> <input type="checkbox"/> Price <input type="checkbox"/> Product Count <input type="checkbox"/> Quantity Sold <input checked="" type="checkbox"/> Sales Revenue <p>Revenue (Sales Revenue) Expand List... Category (1)</p>																
<p></p> <p>Now that we are satisfied with our second KPI for Sales Revenue, let us duplicate this chart again to create a KPI that calculates average sales revenue.</p> <p>110. Right Click within the Sales Revenue for Actual Chart</p> <p>111. Click Copy</p> <p>112. Click Duplicate</p>	 <p>Gross Margin for Actual 1 Filter 659,922,393.93 Gross Margin</p> <p>Sales Revenue for Actual 1 Filter 1,562,711,797.36 Sales Revenue</p> <p>Click to enter title...</p> <p>Sales Revenue per Region for Actual</p> <table border="1"> <thead> <tr> <th>Region</th> <th>Value</th> </tr> </thead> <tbody> <tr><td>APJ</td><td>146,330,322.64</td></tr> <tr><td>China</td><td>63,752,121.57</td></tr> <tr><td>EMEA North</td><td>1,077,661,431.63</td></tr> <tr><td>EMEA South</td><td>358,991,678.61</td></tr> <tr><td>LATAM</td><td>132,018,889.44</td></tr> <tr><td>MEE</td><td>2,663,377,581.41</td></tr> <tr><td>NA</td><td>295,268,339.02</td></tr> </tbody> </table> <p>Gross Margin per Product, Workout Usage</p>  <p>Accessories: 27.0% 9.9% 26.3% Clothing: 15.6% 7% 74.1% Footwear: 47.4% 15.9%</p> <p>SAC ORDER FINANCE.csv</p>	Region	Value	APJ	146,330,322.64	China	63,752,121.57	EMEA North	1,077,661,431.63	EMEA South	358,991,678.61	LATAM	132,018,889.44	MEE	2,663,377,581.41	NA	295,268,339.02
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<p></p> <p>Quality check! Does your dashboard have a duplicated chart of your Sales Revenue KPI?</p>	 <p>Gross Margin for Actual 1 Filter 659,922,393.93 Gross Margin</p> <p>Sales Revenue for Actual 1 Filter 1,562,711,797.36 Sales Revenue</p> <p>Sales Revenue for Actual 1 Filter 1,562,711,797.36 Sales Revenue</p>																
<p></p> <p>We currently do not have a measure for our average sales revenue by store in our model. Hence, let us create a calculation to track this metric on our dashboard.</p> <p>113. Remove Sales Revenue as a Measure.</p> <p>114. Click Add Measure</p>	 <p>Measures Primary Values Sales Revenue</p> <p>+ Add Measure</p> <p>Secondary Values</p> <p>+ Add Measure</p>																

Explanation	Screenshot
115. Click Create Calculation in Add Measure	<p>Measures</p> <p>Primary Values</p> <p>! At least 1 Measure required</p> 
<p>👉 We want to calculate the average sales revenue by store for our company. This will require an aggregation of all sales revenue averaged by number of stores. We can create this in the Aggregation Calculation Type.</p> <p>116. Select Aggregation as Calculation Type</p>	
<p>117. Click Expand for Operation</p> <p>118. Scroll till AVERAGE is Visible</p> <p>119. Click AVERAGE</p>	
<p>120. Click Expand for Measure</p> <p>121. Click Sales Revenue</p>	

Explanation	Screenshot
<p>👉 Here we are selecting the aggregation dimension that will be used to calculate our average. Since we want average sales revenue by store, we should change this dimension to Store.</p> <p>122. Click Expand for Aggregation Dimensions</p> <p>123. Scroll till Store is Visible</p> <p>124. Click Store</p> <p>125. Rename the Calculation to Avg Sales Revenue</p> <p>126. Click OK</p>	
<p>⚠️ Quality Check! Do your numeric point charts have these values and measures on your story? Please note that your time chart may look different from this screenshot due to the dynamic date filter on YTD.</p>	<h3>Avg Sales Revenue for Actual</h3> <p>1 Filter</p> <p>3,449,694.92</p> <p>Avg Sales Revenue</p>
<p>👉 At this stage, you should save your first story. Press Ctrl + S on your keyboard to save your story!</p>	
<p>💡 You have completed Creating Your First Story!</p> <p>Please continue with the next section Linked Analysis and Input Controls. We will also improve the styling of this dashboard in Section 4 - Theme and Style!</p>	

Summary

You have completed the entire Create Your First Story section!

You are now able to:

- Interact with Explorer to create dynamic visualization and understand your data better
- Copy and paste widgets from explorer to an existing dashboard
- Understand how to use the Builder Panel
- Create a variety of different charts to illustrate key relationships within your data

Linked Analysis and Input Controls



This section builds on top of another section. If you did not complete the previous section, please select “**Section 1 – Creating Your First Story**” from the “**Public/TechEd**” folder and click **Copy To** your directory. You will then be able to edit this story to complete the following exercise.



Objective: Develop a basic understanding on how to make a dashboard more dynamic for your viewers to draw insights between multiple visualizations.

Estimated Time: 15 mins

Exercise Description: In the last section, we created our first story and added new visualizations. However, currently our dashboard is quite static. In this section, we want to add interactive capabilities to the dashboard by adding new filters and input controls. This way our dashboard can be easily used by a number of different employees at the company - each user will be able to easily manipulate the dashboard view and only see what is important to them.

Key Features:

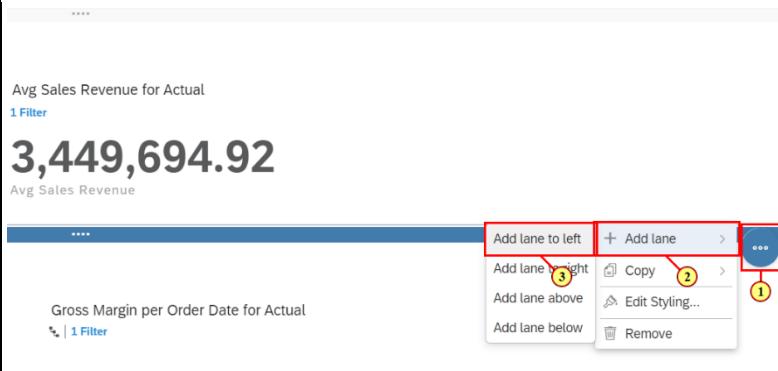
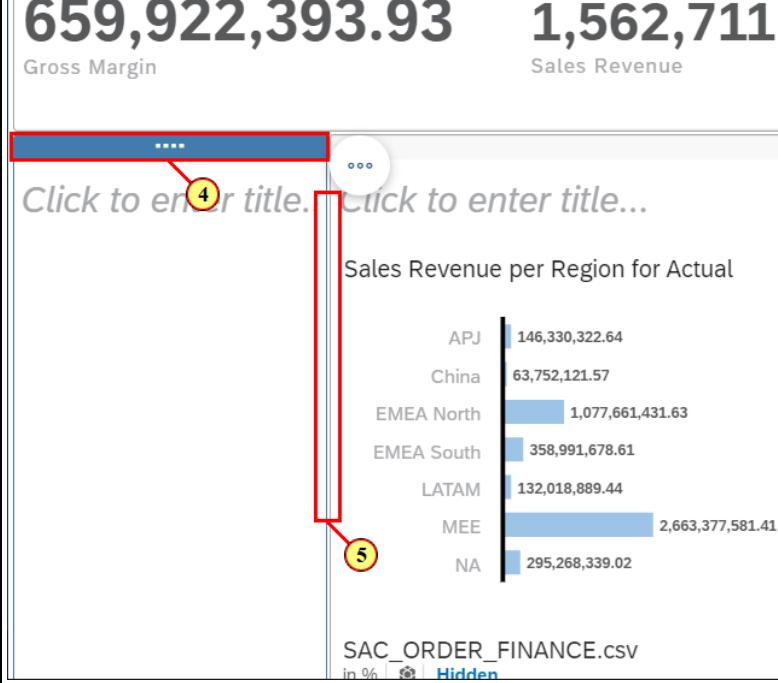
- Learn about page filters and how to apply them to a subset of widgets only
- Understand how to add a measure and dimension input control to dynamically change the context of your data visualization
- Understand how to set up linked analysis to drive filters via widget interaction



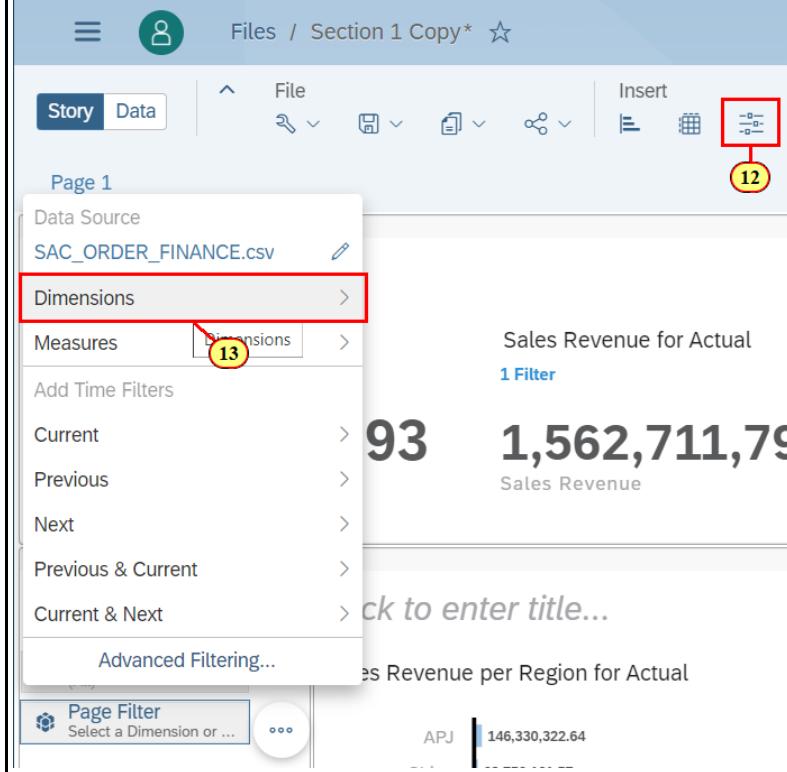
Disclaimer

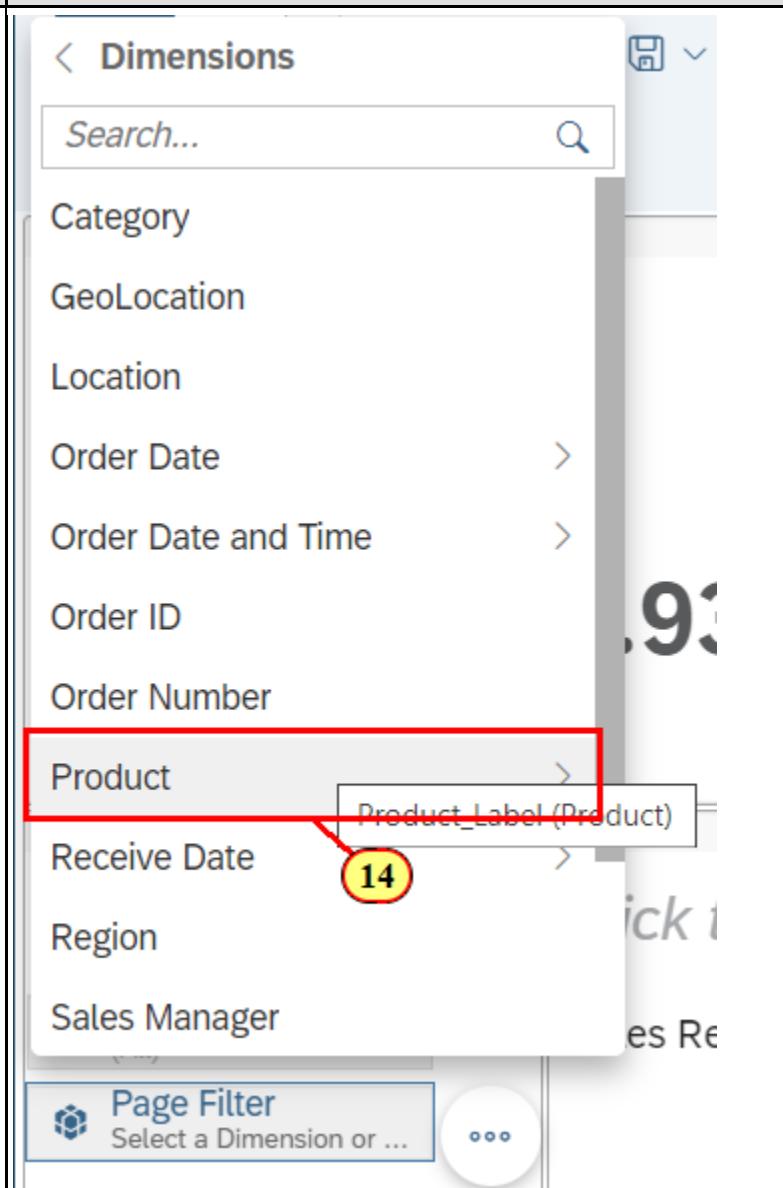
When completing exercises, some data values in the screenshots may not match what you see on your screen. This is because the dynamic time filters that were applied at the time the screenshots were taken is different from the current system date.

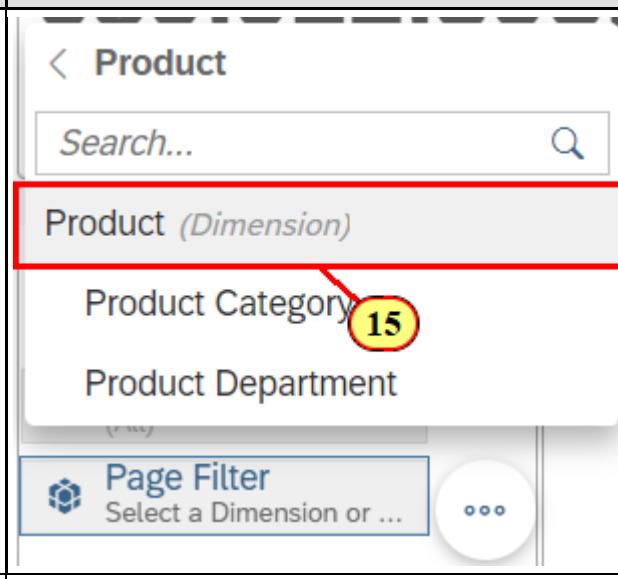
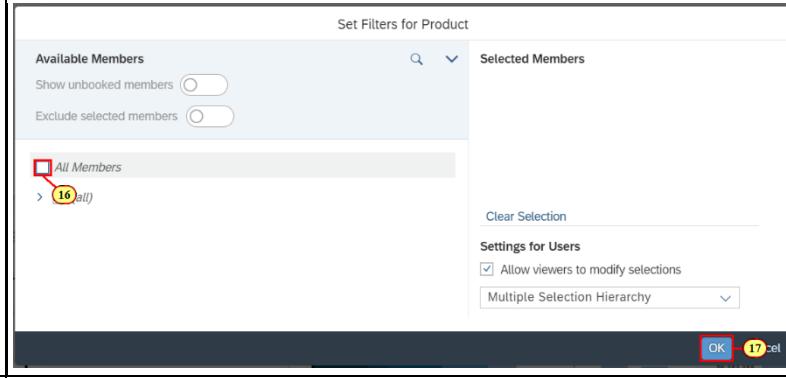
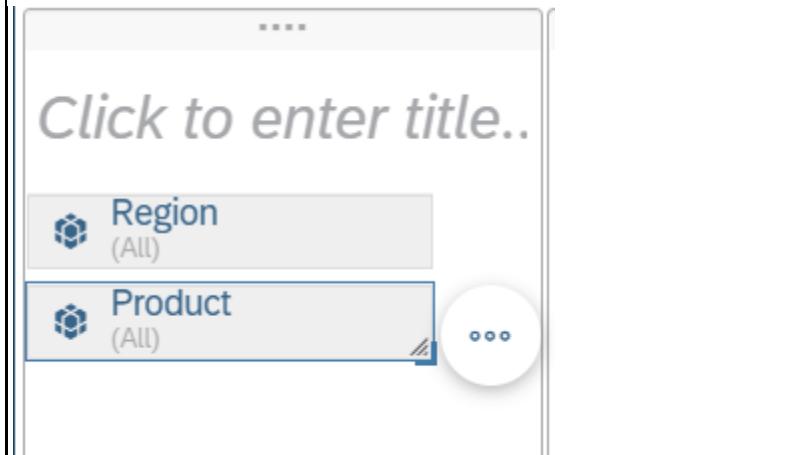
Explanation	Screenshot
<p>👉 Welcome to Section 2 - Linked Analysis and Input Controls</p> <p>⚠️ Exercise Check! Does your dashboard look like this? Are you in Edit mode?</p>	<p>The screenshot shows a Power BI dashboard in Edit mode. At the top, there are three cards: "Sales Revenue for Actual" (value: 1,562,711,797.36), "Gross Margin per Product" (value: 3,449,694.92), and "Avg Sales Revenue for Actual" (value: 659,922,393.93). Below these cards are three charts: "Sales Revenue per Region for Actual" (Region: APJ, China, EMEA North, EMEA South, LATAM, MFG, NA), "Gross Margin per Product, Workout Usage for Actual" (Product: YogaWear, Sport, Outdoors), and "Gross Margin per Order Date for Actual" (Order Date: Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct). The bottom left corner shows the file name "SAC_ORDER_FINANCE.csv".</p>

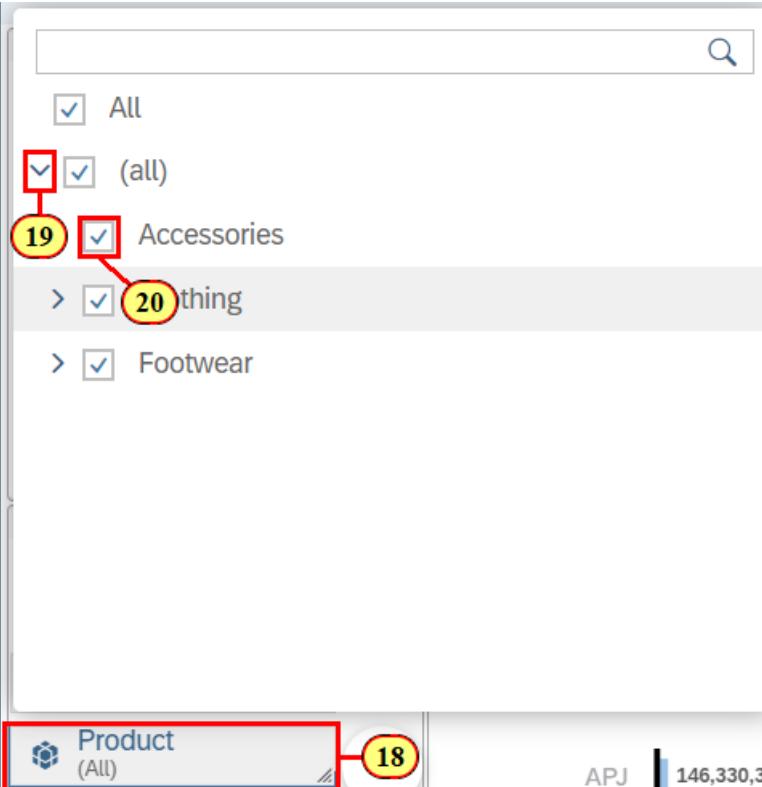
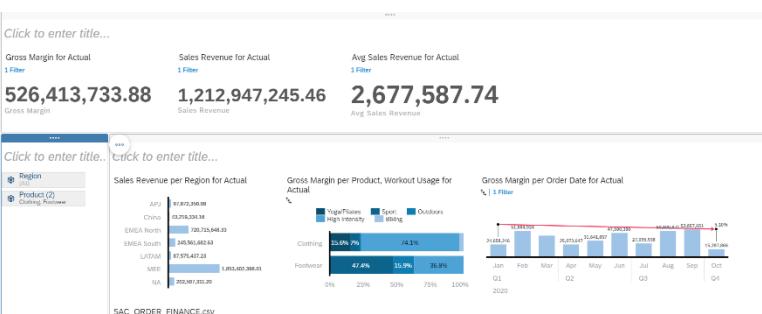
Explanation	Screenshot														
<p>👉 To start off, we want to add another lane to our story where viewers can choose specific filters to apply to the page and even change measures and dimensions in charts.</p> <ol style="list-style-type: none"> 1. Click the More Action on the Lane 2. Click Add Lane 3. Click Add Lane to Left 	 <p>Avg Sales Revenue for Actual 1 Filter</p> <p>3,449,694.92</p> <p>Avg Sales Revenue</p> <p>Gross Margin per Order Date for Actual 1 Filter</p>														
<ol style="list-style-type: none"> 4. Click the New Lane Header 5. Click and Drag the Lane to the Left 	 <p>659,922,393.93 Gross Margin 1,562,711, Sales Revenue</p> <p><i>Click to enter title... Click to enter title...</i></p> <p>Sales Revenue per Region for Actual</p> <table border="1"> <tbody> <tr> <td>APJ</td> <td>146,330,322.64</td> </tr> <tr> <td>China</td> <td>63,752,121.57</td> </tr> <tr> <td>EMEA North</td> <td>1,077,661,431.63</td> </tr> <tr> <td>EMEA South</td> <td>358,991,678.61</td> </tr> <tr> <td>LATAM</td> <td>132,018,889.44</td> </tr> <tr> <td>MEE</td> <td>2,663,377,581.41</td> </tr> <tr> <td>NA</td> <td>295,268,339.02</td> </tr> </tbody> </table> <p>SAC_ORDER_FINANCE.csv in % Hidden</p>	APJ	146,330,322.64	China	63,752,121.57	EMEA North	1,077,661,431.63	EMEA South	358,991,678.61	LATAM	132,018,889.44	MEE	2,663,377,581.41	NA	295,268,339.02
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Explanation	Screenshot
<p>👉 The first tool we will add to our story are page filter input controls. These allow viewers to easily change the dimensions driving the data in our visualizations on the page.</p> <p>Let's create filters on Region and Product as these are two important dimensions that businesses use to analyze performance.</p> <p>6. Click Insert Input Control</p> <p>7. Click Page Filter</p> <p>8. Click Dimensions</p> <p>9. Click Region</p>	
<p>👉 Selecting All Members in the Filter dialogue populates the input control with all members of the region dimension. This gives the person interacting with the input control the option of choosing any subset of regions.</p> <p>10. Click All Members</p> <p>11. Click OK</p>	
<p>⚠️ Quality Check! This is what your dashboard should look like after creating the input control.</p>	

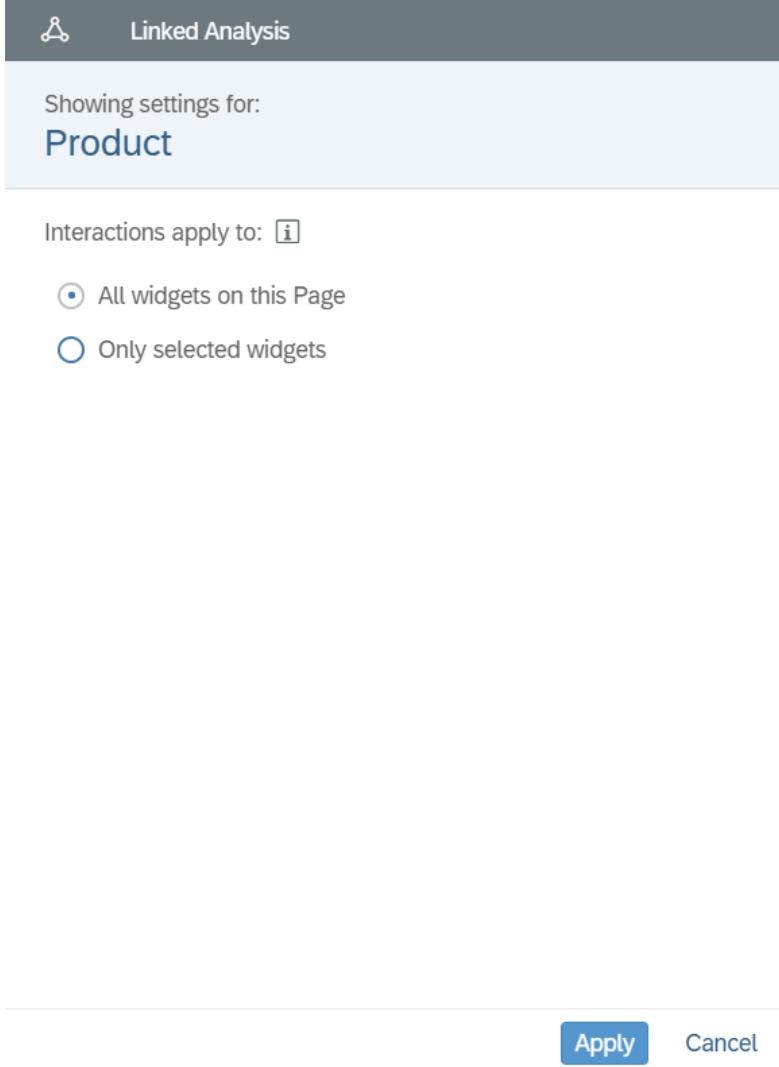
Explanation	Screenshot
<p> You have just made a Page Filter Input Control for Region. Let us make another Page Filter for Product.</p> <p>12. Click Insert Input Control</p> <p>13. Click Dimensions</p>	

Explanation	Screenshot
14. Click Product	 <p>The screenshot shows the 'Dimensions' pane in Power BI. A red box highlights the 'Product' dimension, which is currently selected. A yellow circle with the number '14' is placed over the 'Product_Label (Product)' button. The pane also lists other dimensions: Category, GeoLocation, Location, Order Date, Order Date and Time, Order ID, Order Number, Receive Date, Region, and Sales Manager. At the bottom, there is a 'Page Filter' button with the placeholder 'Select a Dimension or ...'.</p>

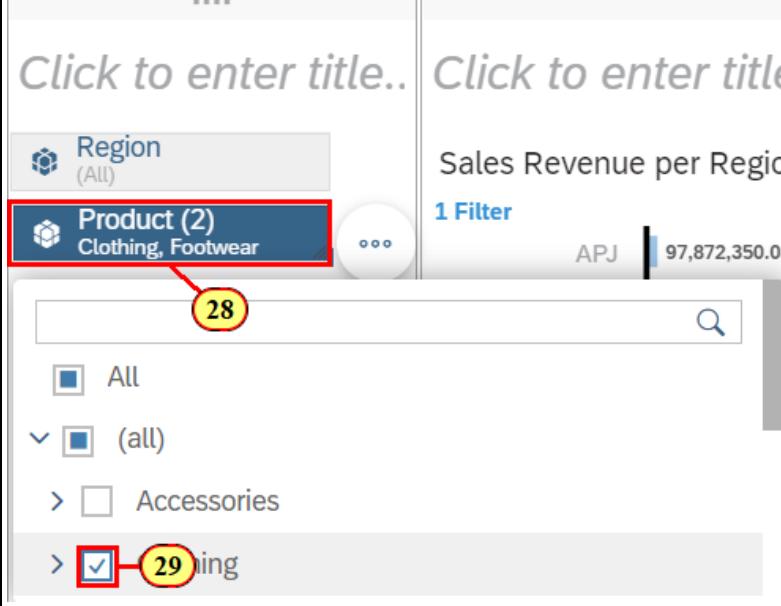
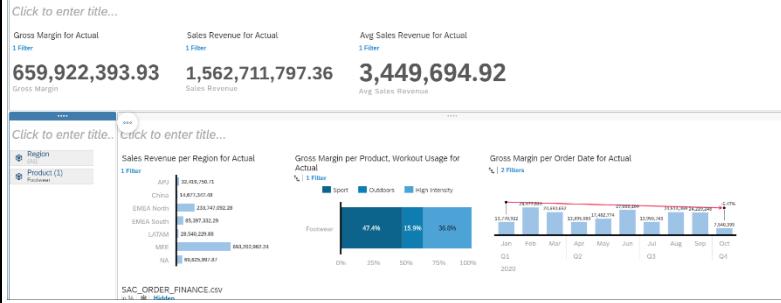
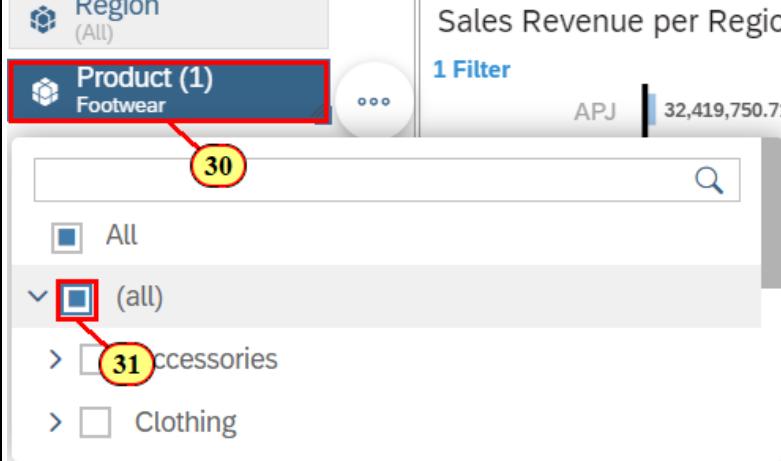
Explanation	Screenshot
<p>👉 Unlike Region, Product has additional properties attached to it. We're interested in filtering out the product itself, so we must now select it.</p> <p>15. Click Product (Dimension)</p>	
<p>16. Click All Members</p> <p>17. Click OK</p>	
<p>⚠️ Quality Check! Do our Page Filter Input Controls look like this?</p> <p>👉 Now that we have a Product input control, lets focus the entire dashboard to see how we are performing when it comes to Footwear and Clothing.</p>	

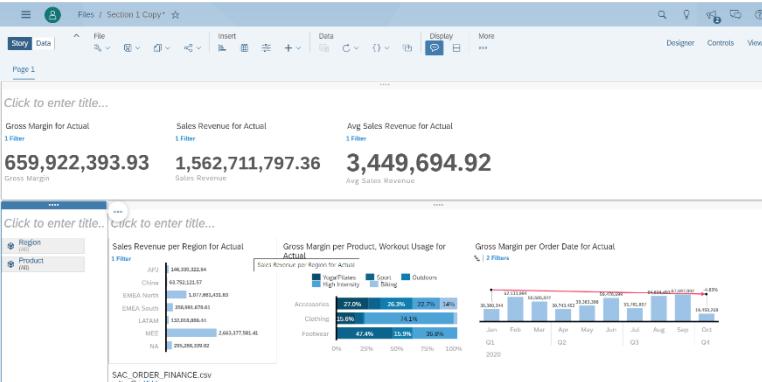
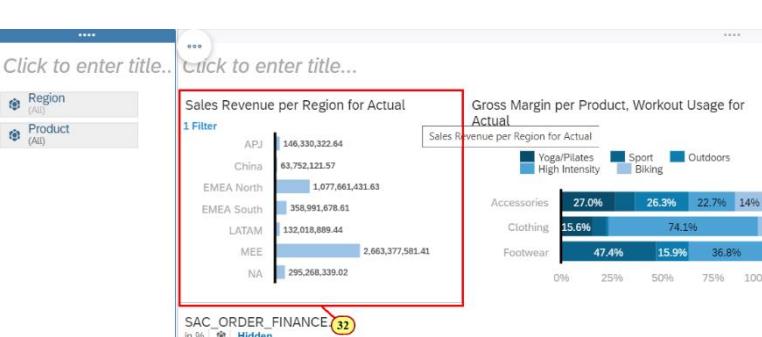
Explanation	Screenshot
<p>18. Click Product</p> <p>19. Expand (All)</p> <p>20. Deselect Accessories. So only Clothing and Footwear are selected.</p>	
<p>👉</p> <p>Changing the Product Input Control applies a filter to all charts and tables on the page. Now all our charts only include data for products in Clothing or Footwear. However, this behavior may be different from what we want. If we only want to change a few charts on the dashboard in response to the input control, we can do this by adding scope to our Page Filter. This is done via Linked Analysis.</p>	

Explanation	Screenshot
<p>21. Right Click the Product Input Control</p> <p>22. Click Linked Analysis</p>	<p>The screenshot shows a business intelligence dashboard with a main report area and a sidebar. In the main report area, there is a large value '526,4' and a 'Gross Margin' section. A context menu is open over a 'Product' input control. The menu items are:</p> <ul style="list-style-type: none">Mobile >Linked Analysis (highlighted with a red box and yellow circle labeled 22)Edit (highlighted with a red box and yellow circle labeled 21)Convert to Story FilterCascading EffectShow/Hide >Display As... >CopyEdit Styling...View Controls...Remove <p>The 'Product' input control in the sidebar is also highlighted with a red box and yellow circle labeled 21.</p>

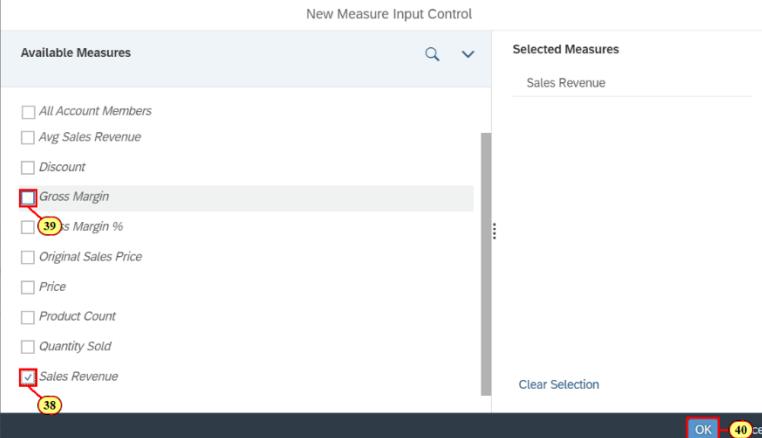
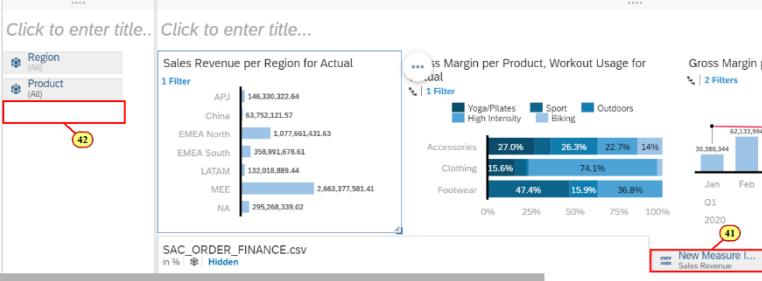
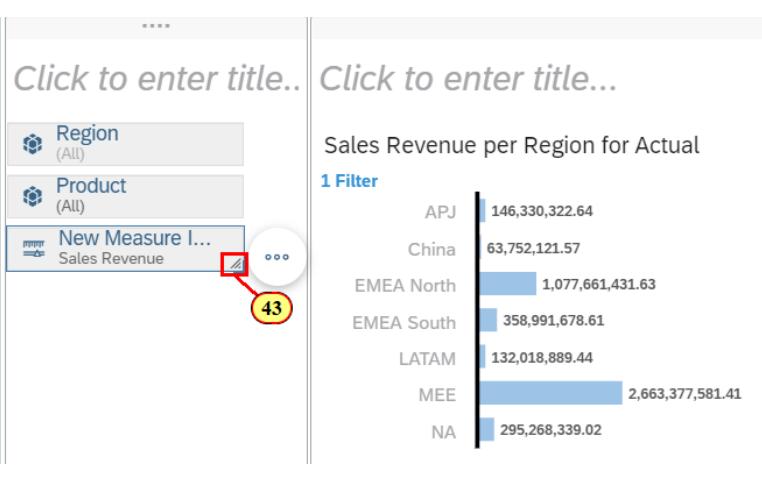
Explanation	Screenshot
<p> Welcome to Linked Analysis!</p> <p>Linked Analysis allows the user to define which widgets will be affected when interacting with the input control. By default an input control will be applied to all widgets on the page, but a story designer can also choose to only apply the input control to a selected set of widgets. This is often done when one wants to compare difference slices of the data side by side.</p>	 <p>The screenshot shows the 'Linked Analysis' settings dialog. At the top, there's a title bar with a gear icon and the text 'Linked Analysis'. Below it, it says 'Showing settings for: Product'. A note below the title indicates that interactions apply to all widgets on the page by default. There are two radio buttons: one selected ('All widgets on this Page') and one unselected ('Only selected widgets'). At the bottom right are 'Apply' and 'Cancel' buttons.</p>

Explanation	Screenshot
<p>👉 We only want our page filter to apply to select charts. We can select these in the Linked Analysis Panel.</p> <p>23. Click Only Selected Widgets</p> <p>24. Click Sales Revenue per Region for Actual</p> <p>25. Click Gross Margin per Product, Workout Usage for Actual</p> <p>26. Click Gross Margin per Order Date for Actual</p> <p>27. Click Apply</p>	<p>Interactions apply to: ⓘ</p> <p><input type="radio"/> All widgets on this Page</p> <p><input checked="" type="radio"/> Only selected widgets 23</p> <p>Settings:</p> <p><input type="checkbox"/> Automatically connect newly created widgets</p> <p>Select widgets to connect to widget:</p> <p><input type="checkbox"/> Select All</p> <p><input type="checkbox"/> 22 Gross Margin for Actual</p> <p><input type="checkbox"/> 22 Sales Revenue for Actual</p> <p><input type="checkbox"/> 22 Avg Sales Revenue for Actual</p> <p><input type="checkbox"/> 24 Sales Revenue per Region for Actual 24</p> <p><input type="checkbox"/> 25 Gross Margin per Product, Workout Usage for Actual 25</p> <p><input type="checkbox"/> 26 Gross Margin per Order Date for Actual 26</p> <p><input type="checkbox"/> SAC_ORDER_FINANCE.csv</p> <p>Apply 27 Cancel</p>

Explanation	Screenshot
<p>👉 We can test the Linked Analysis behavior by deselecting Clothing and seeing which charts change.</p> <p>28. Click Product</p> <p>29. Deselect Clothing</p>	
<p>👉 Only data in the three charts we selected has changed. All other charts and tables on the page remain un-affected.</p>	
<p>👉 Let's revert to selecting all products.</p> <p>30. Click the Product Input Control</p> <p>31. Click (All)</p>	

Explanation	Screenshot																																
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<p></p> <p>We can provide end users the flexibility to analyze various measures (i.e. sales revenue, gross margin, etc.) with Measure Input Controls. This eliminates the need to duplicate charts and allows users to dynamically change the measures each chart consumes. Let's create a Measure Input Control and direct our chart to use that instead of a single measure.</p> <p>32. Select the Sales Revenue per Region for Actual Chart</p>	 <p>Sales Revenue per Region for Actual</p> <table border="1"> <thead> <tr> <th>Region</th> <th>Value</th> </tr> </thead> <tbody> <tr><td>APJ</td><td>146,330,322.64</td></tr> <tr><td>China</td><td>63,752,121.57</td></tr> <tr><td>EMEA North</td><td>1,077,661,431.63</td></tr> <tr><td>EMEA South</td><td>358,991,678.61</td></tr> <tr><td>LATAM</td><td>132,018,889.44</td></tr> <tr><td>MEE</td><td>2,663,377,581.41</td></tr> <tr><td>NA</td><td>295,268,339.02</td></tr> </tbody> </table> <p>Gross Margin per Product, Workout Usage for Actual</p> <table border="1"> <thead> <tr> <th>Product</th> <th>Yoga/Pilates</th> <th>Sport</th> <th>Biking</th> </tr> </thead> <tbody> <tr><td>Accessories</td><td>27.0%</td><td>26.3%</td><td>22.7%</td></tr> <tr><td>Clothing</td><td>15.6%</td><td>74.1%</td><td>14%</td></tr> <tr><td>Footwear</td><td>47.4%</td><td>15.9%</td><td>36.8%</td></tr> </tbody> </table>	Region	Value	APJ	146,330,322.64	China	63,752,121.57	EMEA North	1,077,661,431.63	EMEA South	358,991,678.61	LATAM	132,018,889.44	MEE	2,663,377,581.41	NA	295,268,339.02	Product	Yoga/Pilates	Sport	Biking	Accessories	27.0%	26.3%	22.7%	Clothing	15.6%	74.1%	14%	Footwear	47.4%	15.9%	36.8%
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Explanation	Screenshot
<p>33. Click Designer</p> <p>34. Remove Sales Revenue from Measures</p> <p>35. Click + Add Measure</p>	
<p>36. Scroll till + Create Measure Input Control is Visible</p> <p>37. Click + Create Measure Input Control</p>	

Explanation	Screenshot
<p> Welcome to Measure Input Controls!</p> <p>Measure Input Controls are a great way to change the Measure that is represented on a chart at view time. If your viewer would rather see Gross Margin in the regional breakdown than Sales Revenue, a Measure Input Control provides this functionality.</p> <p>38. Click Sales Revenue</p> <p>39. Click Gross Margin</p> <p>40. Click OK</p>	
<p>41. Click and Drag the New Measure Input Control to the Left Lane</p> <p>42. Drop the Measure Input Control Here</p>	
<p>43. Resize the Measure Input Control to see all members.</p> <p> Please note: These input controls can be renamed; this functionality will be shown later in the styling section.</p> <p> This measure input control now drives our first chart in the right lane.</p> <p>It is possible to add more than one chart to a measure input control to drive synced behavior in your story. Let's do this now and add a second chart that is controlled by this Measure Input Control.</p>	

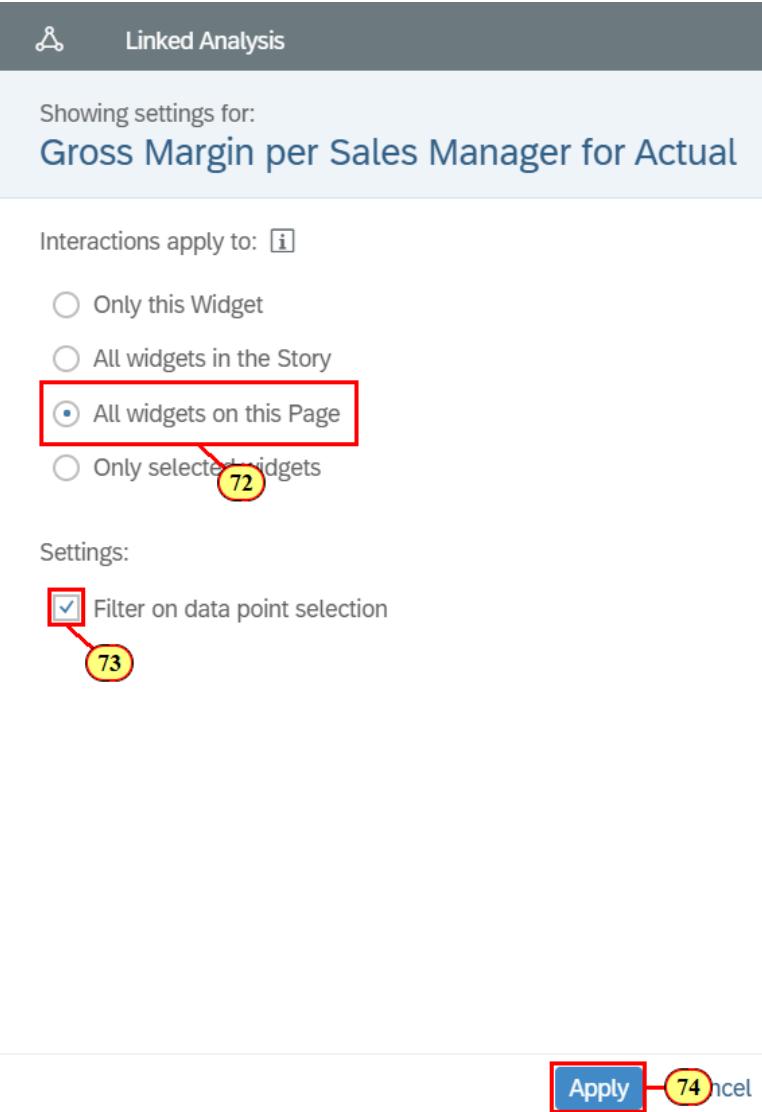
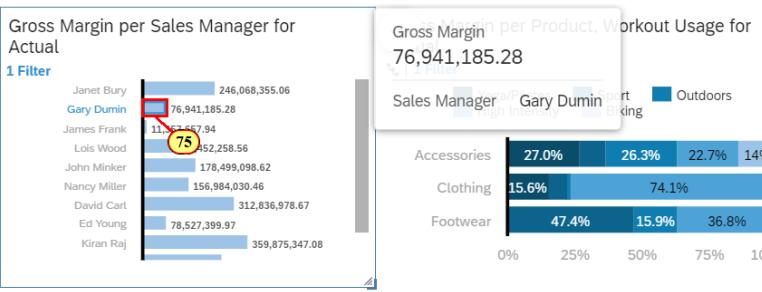
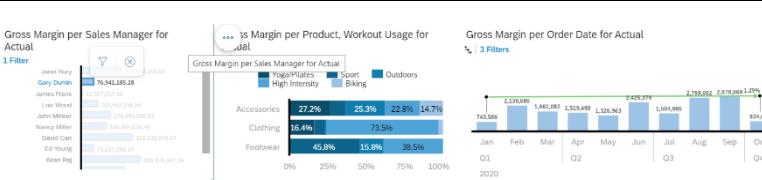
Explanation	Screenshot																								
<p>⚠️ Quality Check! This is what your dashboard should look like. Take a minute and save your work using Ctrl + S.</p>	<p>Click to enter title...</p> <p>Gross Margin per Actual 1 Filter</p> <p>659,922,393.93</p> <p>Sales Revenue per Actual 1 Filter</p> <p>1,562,711,797.36</p> <p>Avg Sales Revenue per Actual 1 Filter</p> <p>3,449,694.92</p> <p>SAC_ORDER_FINANCE.csv in % ⚡ Hidden</p> <p>Region (All) Product (All) New Measure... Sales Revenue Gross Margin</p> <p>Sales Revenue per Region for Actual 1 Filter</p> <p>APJ 146,330,322.64 China 63,752,121.57 EMEA North 1,077,661,431.63 EMEA South 358,991,678.61 LATAM 132,018,889.44 MEE 2,663,377,581.41 NA 295,268,339.02</p> <p>Gross Margin per Product, Workout Usage for Actual 1 Filter</p> <p>Yoga/Pilates High Intensity Sport Outdoors Biking</p> <table border="1"> <thead> <tr> <th>Category</th> <th>Yoga/Pilates</th> <th>High Intensity</th> <th>Sport</th> <th>Outdoors</th> <th>Biking</th> </tr> </thead> <tbody> <tr> <td>Accessories</td> <td>27.0%</td> <td>26.3%</td> <td>22.7%</td> <td>14%</td> <td></td> </tr> <tr> <td>Clothing</td> <td>15.6%</td> <td></td> <td>74.1%</td> <td></td> <td></td> </tr> <tr> <td>Footwear</td> <td>47.4%</td> <td>15.9%</td> <td>36.8%</td> <td></td> <td></td> </tr> </tbody> </table> <p>0% 25% 50% 75% 100%</p> <p>Jan Feb Q1 2020</p>	Category	Yoga/Pilates	High Intensity	Sport	Outdoors	Biking	Accessories	27.0%	26.3%	22.7%	14%		Clothing	15.6%		74.1%			Footwear	47.4%	15.9%	36.8%		
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<p>44. Click the Gross Margin per Product, Workout Usage for Actual Chart</p>	<p>Click to enter title...</p> <p>Sales Revenue per Region for Actual 1 Filter</p> <p>APJ 146,330,322.64 China 63,752,121.57 EMEA North 1,077,661,431.63 EMEA South 358,991,678.61 LATAM 132,018,889.44 MEE 2,663,377,581.41 NA 295,268,339.02</p> <p>Gross Margin per Product, Workout Usage for Actual 1 Filter</p> <p>Yoga/Pilates High Intensity Sport Outdoors Biking</p> <table border="1"> <thead> <tr> <th>Category</th> <th>Yoga/Pilates</th> <th>High Intensity</th> <th>Sport</th> <th>Outdoors</th> <th>Biking</th> </tr> </thead> <tbody> <tr> <td>Accessories</td> <td>27.0%</td> <td>26.3%</td> <td>22.7%</td> <td>14%</td> <td></td> </tr> <tr> <td>Clothing</td> <td>15.6%</td> <td></td> <td>74.1%</td> <td></td> <td></td> </tr> <tr> <td>Footwear</td> <td>47.4%</td> <td>15.9%</td> <td>36.8%</td> <td></td> <td></td> </tr> </tbody> </table> <p>0% 25% 50% 75% 100%</p> <p>Jan Feb Q1 2020</p>	Category	Yoga/Pilates	High Intensity	Sport	Outdoors	Biking	Accessories	27.0%	26.3%	22.7%	14%		Clothing	15.6%		74.1%			Footwear	47.4%	15.9%	36.8%		
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<p>45. Remove Gross Margin 46. Click + Add Measure</p>	<p>Measures</p> <p>Gross Margin X 45</p> <p>+ Add Measure</p> <p>Dimension 46</p> <p>Product X</p> <p>+ Add Dimension</p>																								
<p>47. Scroll till New Measure Input Control is Visible 48. Click New Measure Input Control 49. Click Inside the Builder Panel to Collapse the Measure Selection Drop Down</p>	<p>Measures</p> <p>! At least 1 Measure required</p> <p>Search</p> <p>New Measure Input Control 48</p> <p>Original Sales Price 49</p> <p>Price</p> <p>Product Count</p> <p>Quantity Sold</p> <p>Expand List...</p>																								

Explanation	Screenshot
<p>50. Click the Gross Margin per Order Date for Actual Chart</p>	<p>The screenshot shows three charts side-by-side. The first chart is a bar chart titled "Sales Revenue per Region for Actual" with a single filter. The second chart is a stacked bar chart titled "Sales Revenue per Product, Workout Usage for Actual" with a single filter. The third chart is a line chart titled "Gross Margin per Order Date for Actual" with two filters. A red box highlights the third chart, and a yellow circle with the number 50 is placed near its bottom right corner.</p>
<p>51. Remove the Gross Margin measure. 52. Click Add Measure</p>	<p>The screenshot shows the "Measures" panel. It lists "Gross Margin" with a delete icon (51) and "Order Date". Below these are buttons for "+ Add Measure" and "+ Add Dimension". A yellow circle with the number 52 is placed near the "+ Add Measure" button.</p>
<p>53. Scroll till New Measure Input Control is Visible 54. Click New Measure Input Control 55. Click Inside the Builder Panel to Collapse the Measure Selection Drop Down</p>	<p>The screenshot shows a dropdown menu titled "New Measure Input Control" with several options: "Measure Input Control" (54), "Price", "Product Count", and "Quantity Sold". A yellow circle with the number 53 is placed near the bottom right corner of the menu. A red box highlights the "New Measure Input Control" option.</p>
<p>⚠️ Quality Check! Do your story's charts use the same measures as this screenshot? 👉 Since the measure input control is currently on Sales Revenue selection, all three of our charts are using Sales Revenue as the measure displayed in the visualization. Changing the measure input control to Gross Margin would update all 3 charts to display Gross Margin instead.</p>	<p>The screenshot shows three charts with Sales Revenue selected as the measure. The first chart is "Gross Margin for Actual" with a single filter. The second chart is "Sales Revenue for Actual" with a single filter. The third chart is "Avg Sales Revenue for Actual" with a single filter. A yellow circle with the number 52 is placed at the bottom center of the visualization area.</p>

Explanation	Screenshot																
<p>👉 Similar to how we gave end users the ability to dynamically change measures and analyze several measures in one chart, we can change the context of the variables we're analyzing via Dimension Input Controls.</p> <p>56. Click on Sales Revenue per Region for Actual Chart</p>	<p>Click to enter title... Click to enter title...</p> <p>Region (All) Product (All)</p> <p>New Measure... Sales Revenue Gross Margin</p> <p>Sales Revenue per Region for Actual</p> <p>1 Filter</p> <table border="1"> <thead> <tr> <th>Region</th> <th>Revenue</th> </tr> </thead> <tbody> <tr><td>APJ</td><td>146,330,322.64</td></tr> <tr><td>China</td><td>63,752,121.57</td></tr> <tr><td>EMEA North</td><td>1,077,661,431.63</td></tr> <tr><td>EMEA South</td><td>358,991,678.61</td></tr> <tr><td>LATAM</td><td>132,018,889.44</td></tr> <tr><td>MEE</td><td>2,663,377,581.41</td></tr> <tr><td>NA</td><td>295,268,339.02</td></tr> </tbody> </table> <p>SAC_ORDER_FINANCE 56</p> <p>in % ⚙️ Hidden</p>	Region	Revenue	APJ	146,330,322.64	China	63,752,121.57	EMEA North	1,077,661,431.63	EMEA South	358,991,678.61	LATAM	132,018,889.44	MEE	2,663,377,581.41	NA	295,268,339.02
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<p>57. Remove the Region dimension.</p> <p>58. Click Add Dimension</p>	<p>Measures</p> <ul style="list-style-type: none"> New Measure Input Control + Add Measure <p>Dimensions</p> <ul style="list-style-type: none"> Region + Add Dimension 58 <p>57</p>																
<p>59. Scroll till Create Dimension Input Control is Visible</p> <p>60. Click Create Dimension Input Control</p>	<p>Dimensions</p> <p>Search</p> <ul style="list-style-type: none"> Receive Date Region Sales Manager Ship Date Store Workout Usage <p>+ Create Dimension Input Control... 60</p> <p>+ Create Dimension Input Control... 59</p>																
<p>61. Click Product</p> <p>62. Click Region</p> <p>63. Click Sales Manager</p> <p>64. Click OK</p>	<p>New Dimension Input Control</p> <p>Available Dimensions</p> <ul style="list-style-type: none"> All Dimensions GeoLocation Location Order Date Order ID Order Number Product 61 Region 62 Sales Manager 63 <p>Selected Dimensions</p> <p>Clear Selection</p> <p>Settings</p> <p>Reset Display Settings</p> <p>OK 64</p>																

Explanation	Screenshot
<p>65. Click and Drag the New Dimension Input Control to the Left Lane</p> <p>66. Drop the Dimension Input Control Here</p>	
<p>67. Resize the Dimension Input Control to View All Members</p> <p>68. Click Gross Margin</p> <p>69. Click Sales Manager</p>	
<p>⚠️ Quality Check! Test out the effects of measure and dimension input controls in your story.</p> <p>👉 After changing both input controls, Gross Margin should be the measure displayed in every chart. The first chart now visualizes a breakdown of Gross Margin across Sales Managers rather than region.</p>	

Explanation	Screenshot																								
<p>There is still more dynamic functionality available within Sap Analytics Cloud. We can use additional functionality within Linked Analysis to link two charts so that if a data point is clicked on one chart, the other chart will update by creating a filter on that data point. Let's do this now and we'll get a better idea of what this means.</p> <p>70. Right Click on the Gross Margin per Sales Manager per Actual Chart to Open the Context Menu.</p> <p>71. Click Linked Analysis</p>	<p>3.93 1,562,711, Sales Revenue</p> <p>Click to enter title...</p> <p>Gross Margin per Sales Manager for Actual</p> <p>1 Filter</p> <table border="1"> <thead> <tr> <th>Sales Manager</th> <th>Gross Margin</th> </tr> </thead> <tbody> <tr><td>Janet Bury</td><td>246,068,355.06</td></tr> <tr><td>Gary Dumin</td><td>76,941,185.28</td></tr> <tr><td>James Frank</td><td>11,357,657.94</td></tr> <tr><td>Lois Wood</td><td>101,452,258.56</td></tr> <tr><td>John Minker</td><td>178,499,098.62</td></tr> <tr><td>Nancy Miller</td><td>156,984,030.46</td></tr> <tr><td>David Carl</td><td>312,836,978.67</td></tr> <tr><td>Ed Young</td><td>78,527,399.97</td></tr> <tr><td>Kiran Raj</td><td>359,875,347.08</td></tr> </tbody> </table> <p>SAC_ORDER_FINANCE.csv in % Hidden</p> <table border="1"> <thead> <tr> <th>Product</th> <th>Account</th> <th>Order Date</th> <th>Sales Manager</th> </tr> </thead> </table> <p>Sort</p> <p>Rank</p> <p>Linked Analysis</p> <p>Compare Analysis</p> <p>Add Smart Insights</p> <p>Add</p> <p>Mobile</p> <p>Show/Hide</p> <p>Edit Axis</p> <p>Collapse Title</p> <p>Copy</p> <p>Export</p> <p>Edit Styling...</p> <p>Fullscreen</p> <p>Pin to Home</p> <p>View Controls...</p> <p>Remove</p>	Sales Manager	Gross Margin	Janet Bury	246,068,355.06	Gary Dumin	76,941,185.28	James Frank	11,357,657.94	Lois Wood	101,452,258.56	John Minker	178,499,098.62	Nancy Miller	156,984,030.46	David Carl	312,836,978.67	Ed Young	78,527,399.97	Kiran Raj	359,875,347.08	Product	Account	Order Date	Sales Manager
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Explanation	Screenshot
<p> Remember we're now adding linked analysis on a chart as opposed to an Input Control. This provides us with a few more options.</p> <p>72. Click All widgets on this Page</p> <p>73. Click Filter on data point selection</p> <p>74. Click Apply</p>	
<p> Let's test Linked Analysis and get some more insight on how Gary Dumin is performing.</p> <p>75. Click Gary Dumin</p>	
<p> Do you see your linked charts change when highlighting a Sales Manager? Notice how the CGR in our time dimension chart is positive under this filter (Note this data may be different due to the dynamic time filter).</p>	

Explanation	Screenshot
<p>76. Click within the Chart to Deselect Gary Dumin</p> <p>77. Save your story.</p>	
<p>⚠️ Quality Check! Does your dashboard look like this screenshot?</p> <p>💡 You have now completed the Linked Analysis and Input Controls section! In this section, you have learned how to dynamically change page filters with an input control, add interactive measures and dimensions to charts also with input controls, and create powerful analytics between the charts in your story using linked analysis and data point filtering.</p> <p>We're going to add some styling to this dashboard later on.</p>	

Summary

You have completed the entire **Linked Analysis and Input Controls** section!

You are now able to:

- Create page filters and apply them to a subset of widgets only
- Add a measure and dimension input control to dynamically change the context of your data visualization
- Set up linked analysis to drive filters via widget interaction

Geo Maps, Thresholds, and Variances



This section builds on top of another section. If you did not complete the previous section, please select “**Section 2 – Linked Analysis and Input Controls**” from the “**Public/TechEd**” folder and click **Copy To** your directory. You will then be able to edit this story to complete the following exercise.



Objective: Create a Geo Visualization with location data and use variances and thresholds to draw attention to what is important in your dashboard by highlighting where to focus on.

Estimated Time: 20 mins

Exercise Description: In previous sections we added charts, tables and made the dashboard interactive with input controls and linked analysis. You now need to include geographical data as part of your analysis as well as ensuring other employees can quickly draw conclusions when looking at the dashboard you created. This can be achieved with thresholds and variances.

Key Features:

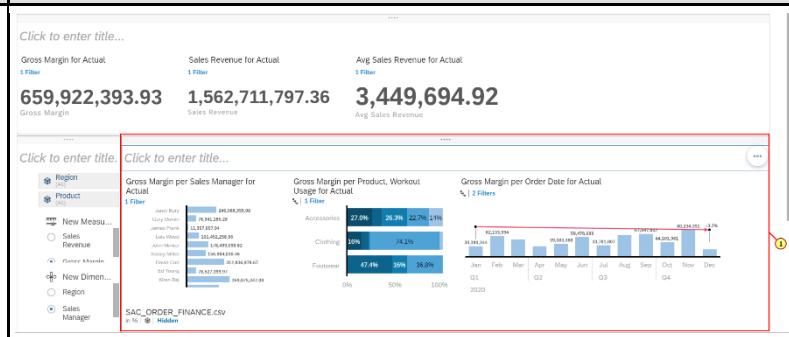
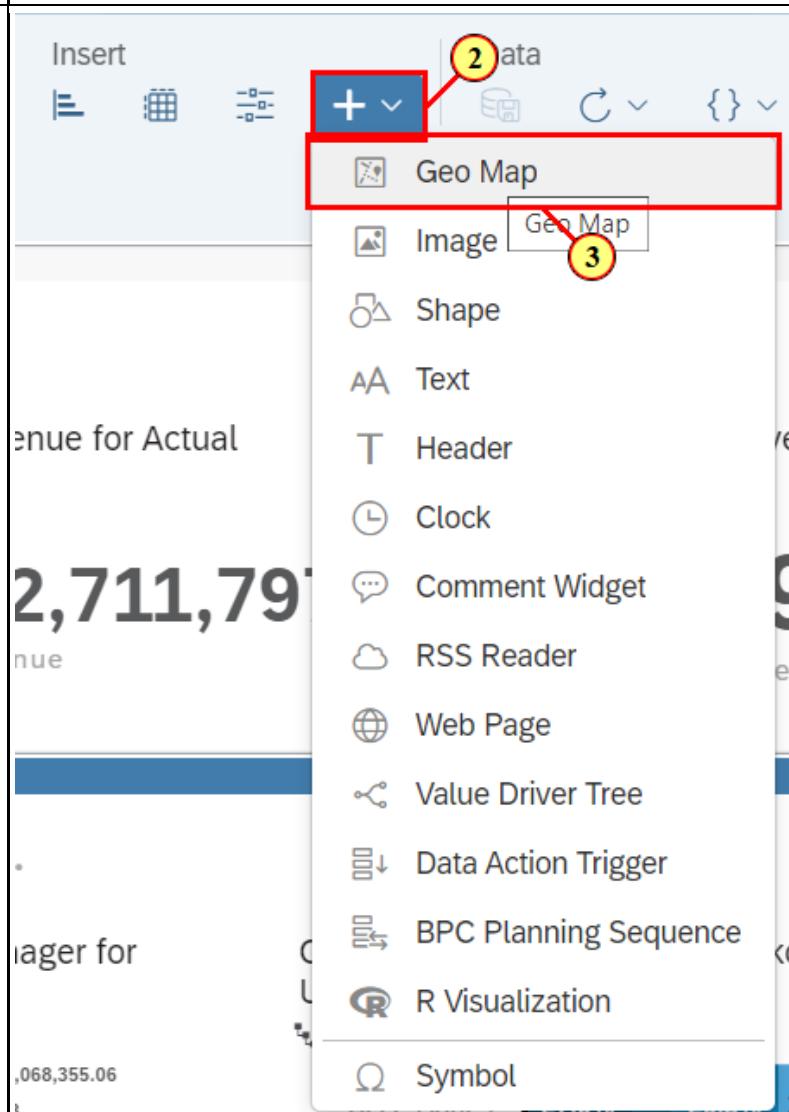
- Create Geo Visualization
- Learn about Bubble and Choropleth layers and drill down a geographical hierarchy
- Use recommended comparison to quickly add variances to a chart
- Learn how to add a dynamic reference lines and sort a chart
- Understand how to add a threshold to a table

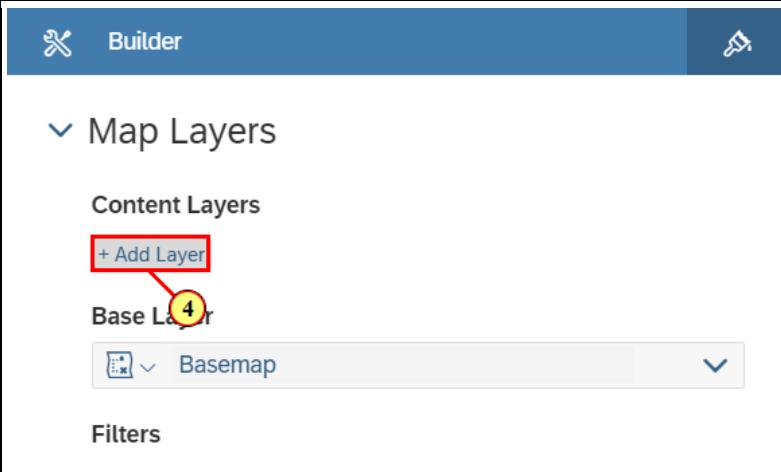
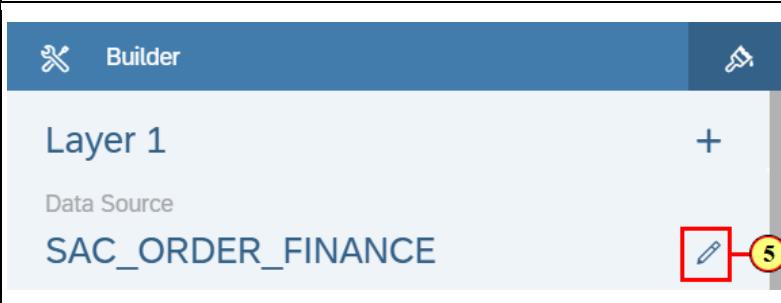


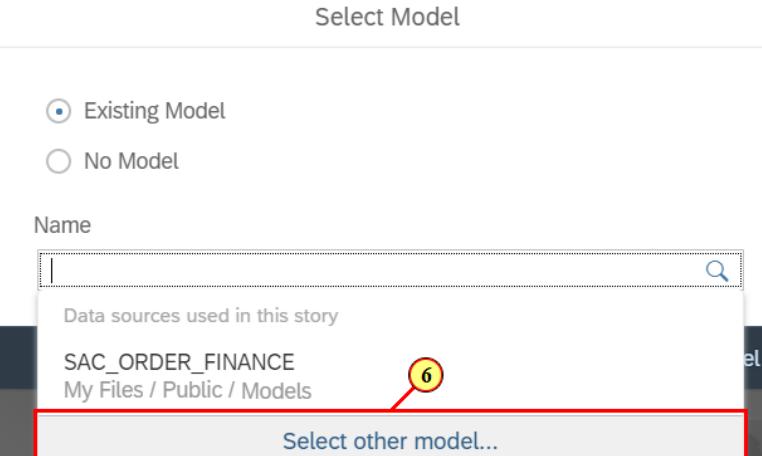
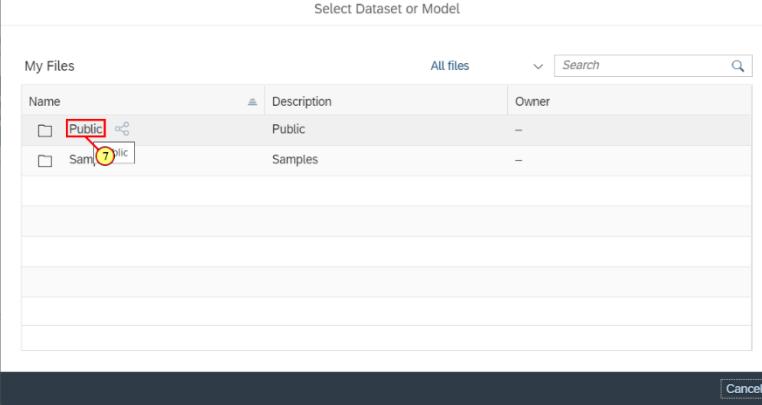
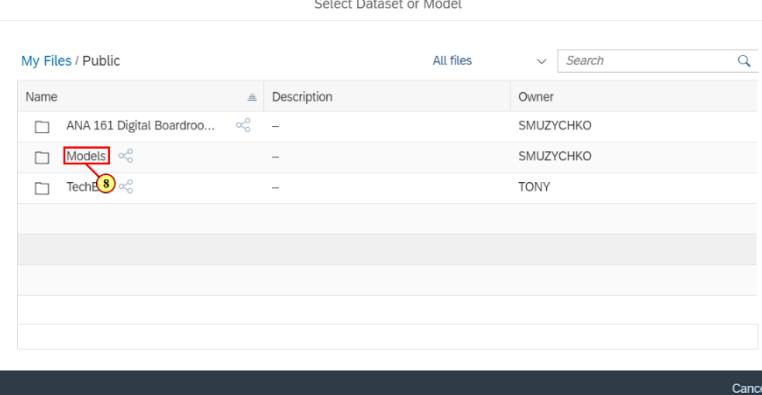
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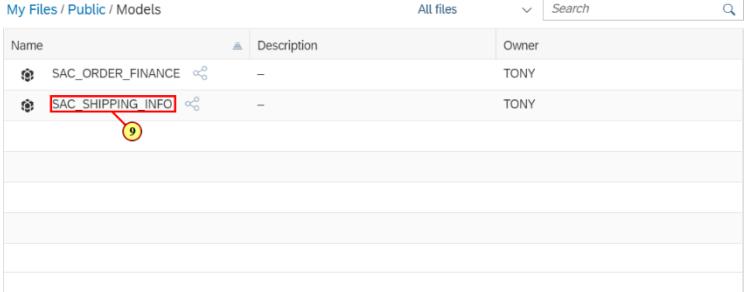
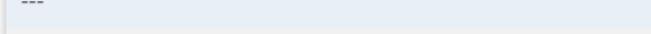
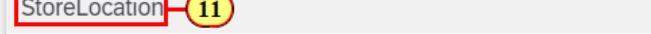
When completing exercises, some data values in the screenshots may not match what you see on your screen. This is because the dynamic time filters that were applied at the time the screenshots were taken is different from the current system date.

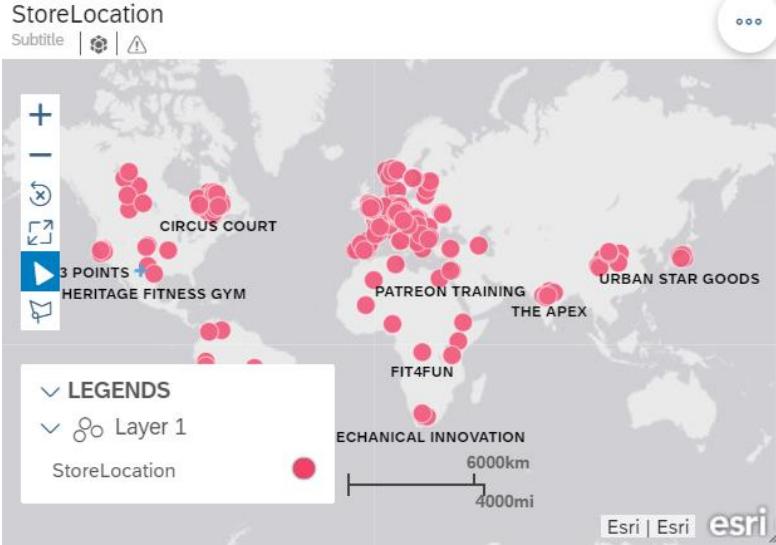
Explanation	Screenshot																																	
<p> Welcome to the Geo Maps, Thresholds and Variance section! We will also go into greater detail on the analytic capabilities available to story creators with geo maps and geo-enriched data in our Section 8 - Geo Visualizations Deep Dive.</p> <p>Exercise check! Does your dashboard look like this screenshot?</p>	<table border="1"> <thead> <tr> <th>Product</th> <th>Sales Manager</th> <th>Gross Margin %</th> </tr> </thead> <tbody> <tr> <td>Accessories</td> <td>Jeanette</td> <td>27.0%</td> </tr> <tr> <td>Clothing</td> <td>James</td> <td>26.3%</td> </tr> <tr> <td>Footwear</td> <td>John</td> <td>22.7%</td> </tr> <tr> <td>Accessories</td> <td>Gary</td> <td>21.6%</td> </tr> <tr> <td>Clothing</td> <td>Laura</td> <td>17.1%</td> </tr> <tr> <td>Footwear</td> <td>Mike</td> <td>15.9%</td> </tr> <tr> <td>Accessories</td> <td>David</td> <td>15.8%</td> </tr> <tr> <td>Clothing</td> <td>Steve</td> <td>13.9%</td> </tr> <tr> <td>Footwear</td> <td>John</td> <td>13.8%</td> </tr> <tr> <td>Accessories</td> <td>Nancy</td> <td>13.8%</td> </tr> </tbody> </table>	Product	Sales Manager	Gross Margin %	Accessories	Jeanette	27.0%	Clothing	James	26.3%	Footwear	John	22.7%	Accessories	Gary	21.6%	Clothing	Laura	17.1%	Footwear	Mike	15.9%	Accessories	David	15.8%	Clothing	Steve	13.9%	Footwear	John	13.8%	Accessories	Nancy	13.8%
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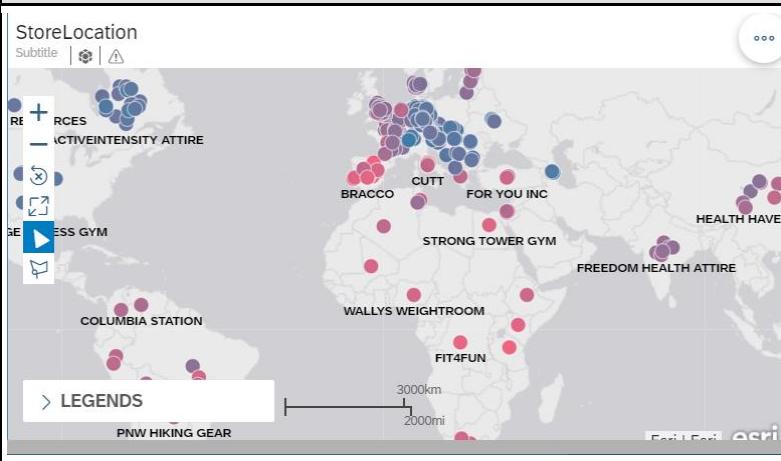
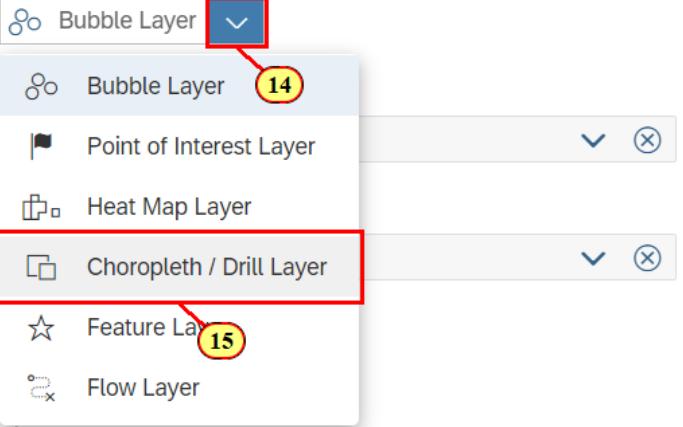
Explanation	Screenshot
<p>👉 Let us start by adding some geographical information into our dashboard.</p> <p>1. Click on the Right Lane with the Charts</p>	
<p>2. Click Add</p> <p>3. Click Geo Map</p>	

Explanation	Screenshot
<p> Quality check! Does a geo map appear at the bottom right of your dashboard like this screenshot? Does the Builder panel open with your geo map selected?</p>	
<p> Geo visualizations consist of one or multiple layers which can be sourced from different data sets. For our purposes, we will be using a bubble layer to individually represent measure values at store coordinates.</p> <p>4. Click + Add Layer</p>	
<p> We are going to be using a secondary model in this exercise. SAP Analytics Cloud supports using multiple models in a dashboard to best represent your story. Let us swap to our shipping model so we can display average delivery times by country in our geo map.</p> <p>5. Click Select Model</p>	

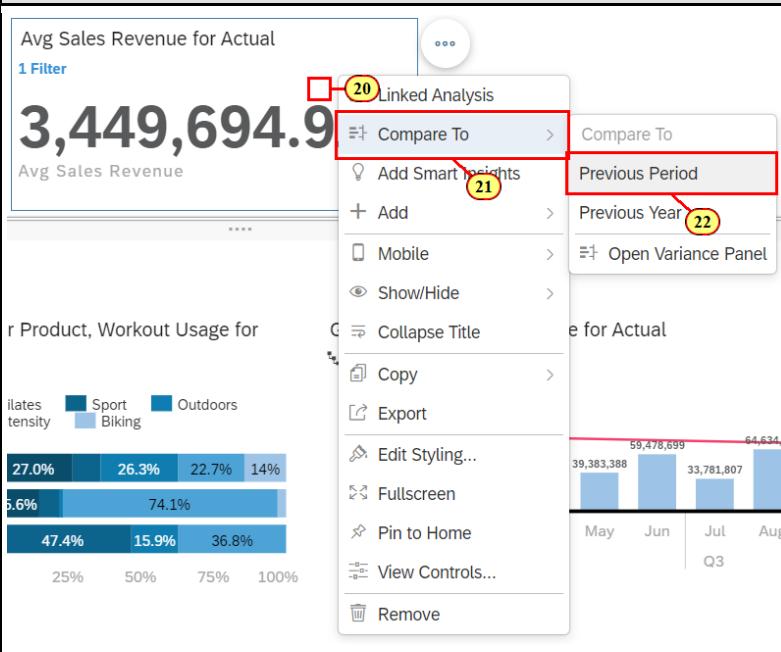
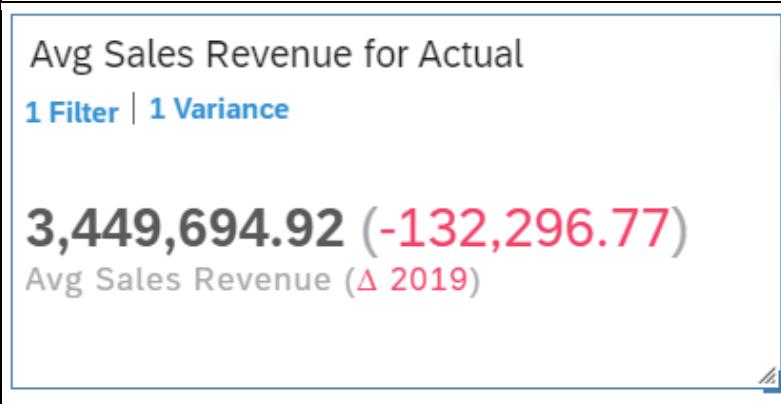
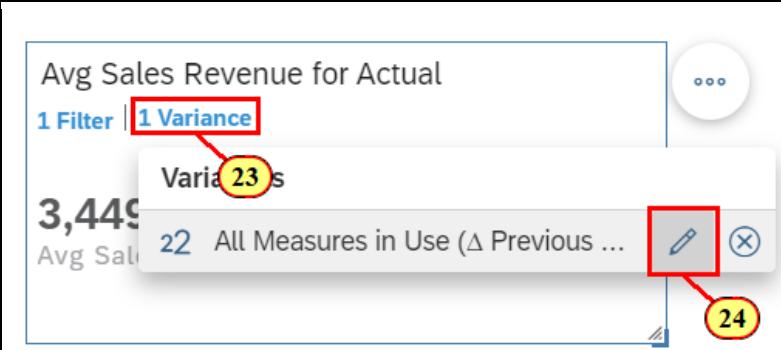
Explanation	Screenshot												
6. Click Select Other Model...	<p>Select Model</p> <p><input checked="" type="radio"/> Existing Model <input type="radio"/> No Model</p> <p>Name</p> <input type="text"/> <p>Data sources used in this story</p> <p>SAC_ORDER_FINANCE My Files / Public / Models</p> <p>Select other model...</p> 												
7. Click Public	<p>Select Dataset or Model</p> <p>My Files</p> <table border="1"> <thead> <tr> <th>Name</th> <th>Description</th> <th>Owner</th> </tr> </thead> <tbody> <tr> <td>Public</td> <td>Public</td> <td>-</td> </tr> <tr> <td>Samples</td> <td>Samples</td> <td>-</td> </tr> </tbody> </table> 	Name	Description	Owner	Public	Public	-	Samples	Samples	-			
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8. Click Models	<p>Select Dataset or Model</p> <p>My Files / Public</p> <table border="1"> <thead> <tr> <th>Name</th> <th>Description</th> <th>Owner</th> </tr> </thead> <tbody> <tr> <td>ANA 161 Digital Boardro...</td> <td>-</td> <td>SMUZYCHKO</td> </tr> <tr> <td>Models</td> <td>-</td> <td>SMUZYCHKO</td> </tr> <tr> <td>Tech1</td> <td>-</td> <td>TONY</td> </tr> </tbody> </table> 	Name	Description	Owner	ANA 161 Digital Boardro...	-	SMUZYCHKO	Models	-	SMUZYCHKO	Tech1	-	TONY
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Explanation	Screenshot
9. Click SAC_SHIPPING_INFO	<p>Select Dataset or Model</p>  <p>Cancel</p>
10. Click Add Location Dimension	<p>Builder</p> <p>Layer 1 +</p> <p>Data Source SAC_SHIPPING_INFO </p> <p>Layer Type  Bubble Layer </p> <p>Location Dimension  + Add Location Dimension </p>
 <p>The dimension displayed in Location Dimension is a geo-enriched dimension that can be built in your dataset from location names or latitude/longitude coordinates.</p> <p>11. Click StoreLocation</p>	<p>Builder</p> <p>Layer 1 +</p> <p>Data Source SAC_SHIPPING_INFO </p> <p>Layer Type  Bubble Layer </p> <p>Location Dimension      StoreLocation </p>

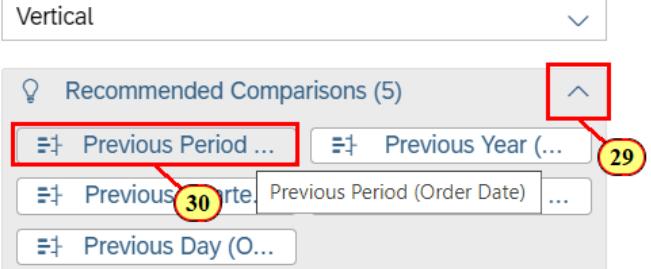
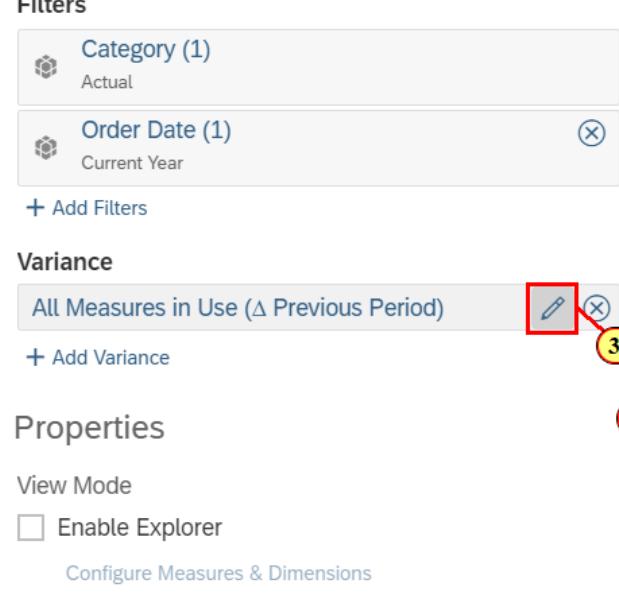
Explanation	Screenshot
<p> Quality Check! Does your Geo Map populate with stores like this screenshot?</p> <p> Let us color our bubbles based on average delivery time so we can easily see which locations are taking longer to receive deliveries.</p>	 <p>StoreLocation Subtitle ⚙️ ⚠️</p> <p>+ - ⌛️ ⌂ ⌃</p> <p>3 POINTS HERITAGE FITNESS GYM</p> <p>CIRCUS COURT</p> <p>LEGENDS</p> <p>Layer 1</p> <p>StoreLocation</p> <p>6000km 4000mi</p> <p>Esri Esri esri</p>
<p>12. Click + Add Measure/Dimension</p>	<p>Layer Type</p> <p>Bubble Layer</p> <p>Location Dimension</p> <p>StoreLocation</p> <p>Bubble Color</p> <p>+ Add Measure/Dimension</p> <p>Bubble Size 12</p> <p>+ Add Measure</p>
<p> Let us select average delivery time to color code our bubbles so we can identify which stores are receiving deliveries slower.</p> <p>13. Click Avg Delivery Time</p>	<p>Bubble Color</p> <p>Search</p> <p>---</p> <p>CALCULATIONS</p> <p>+ Click to Create a New Calculation</p> <p>MEASURES</p> <p>Avg Delivery Time 13</p> <p>Days Order to Shipment</p> <p>Days Shipment to Receive</p>

Explanation	Screenshot
<p> Quality check! Does your geo map look like this screenshot? Next, we will look at using a different layer type to represent our data.</p>	
<p> There are other layers applicable to our Geo Map. Let us look at average delivery time aggregated based on location rather than an individual store level. We can do this by choosing to add a choropleth layer. We will go into further detail on the other layer types available in SAP Analytics Cloud in our Section 8 - Geo Visualizations Deep Dive section.</p> <p>14. Click Expand for Layer Type 15. Click Choropleth / Drill Layer</p>	<p>Layer Type</p>  <p>Filters</p>
<p> A choropleth layer aggregates values in the Geo Map, making it easier for a user to discover outliers and trends. As we can see in the geo visualization, Spain appears to have higher than average delivery times on orders. Let's drill down on this layer to understand the data.</p> <p>16. Click on Spain</p>	

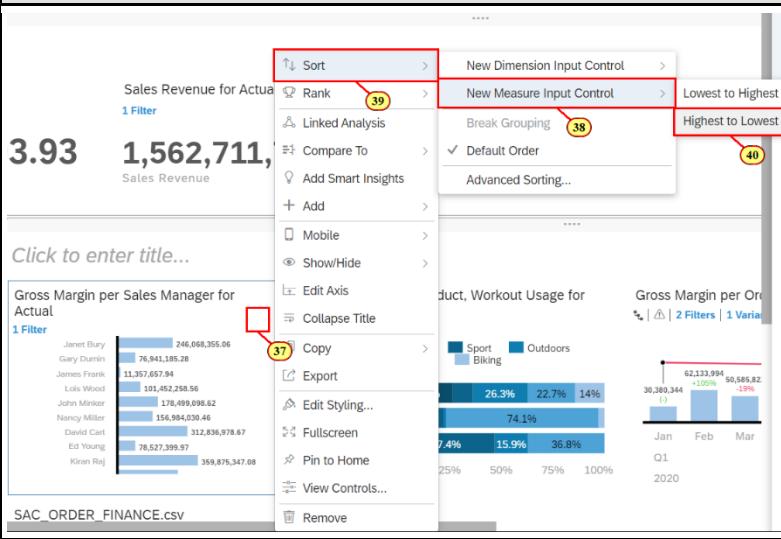
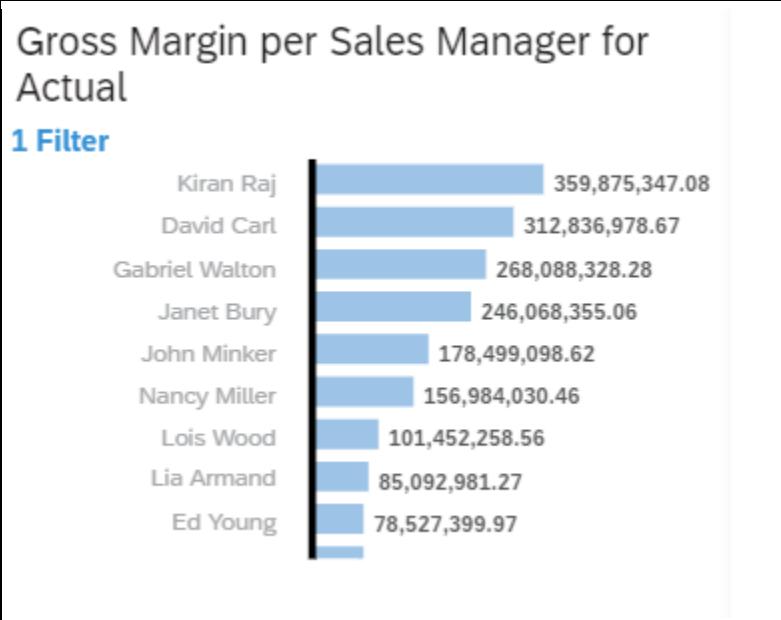
Explanation	Screenshot
<p>👉 When we click on Spain, we get a context menu with options to Drill down or up on the hierarchy level as well as filter on or exclude Spain's data from the geo map. We want to look at regional average delivery times in Spain so let us drill down on this hierarchy.</p> <p>17. Click Drill down</p>	
<p>💡 From drilling down on our country layer, we are now able to see the distribution of average delivery times in the regions of Spain. It appears only one region is doing poorly and may require further business action. Let's return to our country layer.</p> <p>18. Click Drill Filter</p> <p>19. Click Remove</p>	
<p>⚠️ Quality check! Does your geo map now look like this screenshot?</p>	
<p>💡 Up to this point, we have created a lot of visualizations. For us to easily draw conclusions and highlight key insights, we should add variances and thresholds on our charts in our dashboard so we can draw attention to changes and outliers.</p>	

Explanation	Screenshot
<p>👉 First, let us add a variance to our KPI for average sales revenue in stores so we can compare if average sales revenue has dropped this year relative to our previous year's performance. If you can recall, our KPIs currently have a 2020 time filter applied on them.</p> <p>20. Right Click on the Avg Sales Revenue Chart to Open the Context Menu</p> <p>21. Click Compare To</p> <p>22. Click Previous Period</p> <p>👉 We want to compare our data in 2020 year to date with the calculation for the previous year. By comparing to previous period, SAC will automatically calculate this variance for us.</p>	
<p>👉 After creating our variance, the absolute value may still be hard to contextually understand. We want to know the percentage difference so let us edit this variance.</p>	
<p>23. Click 1 Variance</p> <p>24. Click Edit All Measures in Use</p>	

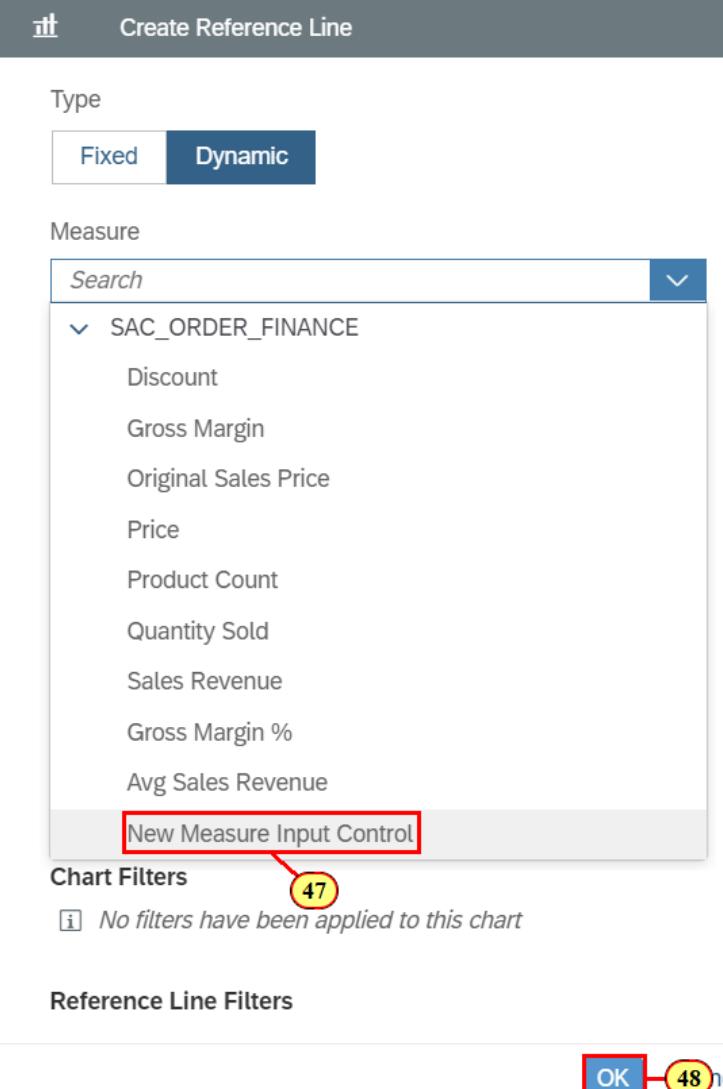
Explanation	Screenshot						
<p>👉 In this panel, users can choose how they want to format their variances to best fit their data. We are comparing a KPI across two periods using a single number. In this instance, a percentage would be easier to understand for an end user.</p> <p>25. Click Percentage 26. Deselect Numbers 27. Click on Avg Sales Revenue for Actual to Collapse the Variance Panel</p>							
<p>👉 The new variance looks great! We can now clearly see that average sales revenue in our stores has experienced a 3.7% drop from the last period.</p>	<table border="1"> <thead> <tr> <th>Gross Margin for Actual</th> <th>Sales Revenue for Actual</th> <th>Avg Sales Revenue for Actual</th> </tr> </thead> <tbody> <tr> <td>1 Filter 659,922,393.93</td> <td>1 Filter 1,562,711,797.36</td> <td>1 Filter 1 Variance 3,449,694.92 (-3.69%)</td> </tr> </tbody> </table>	Gross Margin for Actual	Sales Revenue for Actual	Avg Sales Revenue for Actual	1 Filter 659,922,393.93	1 Filter 1,562,711,797.36	1 Filter 1 Variance 3,449,694.92 (-3.69%)
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<p>👉 Now let's add more variances to our chart. A good candidate to track change in data over time is our chart using a time dimension. SAC offers recommended comparisons in the builder panel as a suggestion for easy creation of variances.</p> <p>28. Select your Gross Margin per Order Date for Actual chart</p>	<table border="1"> <thead> <tr> <th>Gross Margin per Product, Workout Usage for Actual</th> <th>Gross Margin per Order Date for Actual</th> </tr> </thead> <tbody> <tr> <td>1 Filter 97.36</td> <td>1 Filter 2 Filters 3,449,694.92</td> </tr> </tbody> </table>	Gross Margin per Product, Workout Usage for Actual	Gross Margin per Order Date for Actual	1 Filter 97.36	1 Filter 2 Filters 3,449,694.92		
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<p>👉 We want to select Previous Period because it will dynamically change the variance based on the granularity in the chart.</p> <p>29. Expand Recommended Comparisons</p> <p>30. Click Previous Period</p>																							
<p>👉 Our variances show the delta to the period before, in this case the last month's gross margin. We want to know the percentage difference instead of absolute difference. Let us change the formatting of our variance values.</p>	 <table border="1"> <thead> <tr> <th>Month</th> <th>Gross Margin</th> </tr> </thead> <tbody> <tr><td>Jan</td><td>62,133,994</td></tr> <tr><td>Feb</td><td>+31,753,650</td></tr> <tr><td>Mar</td><td>30,743,452</td></tr> <tr><td>Apr</td><td>-19,842,370</td></tr> <tr><td>May</td><td>59,478,699</td></tr> <tr><td>Jun</td><td>+20,095,311</td></tr> <tr><td>Jul</td><td>67,697,802</td></tr> <tr><td>Aug</td><td>+3,063,310</td></tr> <tr><td>Sep</td><td>-4.83%</td></tr> <tr><td>Oct</td><td></td></tr> </tbody> </table>	Month	Gross Margin	Jan	62,133,994	Feb	+31,753,650	Mar	30,743,452	Apr	-19,842,370	May	59,478,699	Jun	+20,095,311	Jul	67,697,802	Aug	+3,063,310	Sep	-4.83%	Oct	
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<p>31. Scroll to the Bottom of the Builder Panel</p> <p>32. Click Edit for the Variance All Measure in Use (Previous Period)</p>	 <p>Filters</p> <ul style="list-style-type: none"> Category (1) Actual Order Date (1) Current Year <p>Add Filters</p> <p>Variance</p> <p>All Measures in Use (Δ Previous Period)</p> <p>Add Variance</p> <p>Properties</p> <p>View Mode</p> <p>Enable Explorer</p> <p>Configure Measures & Dimensions</p>																						

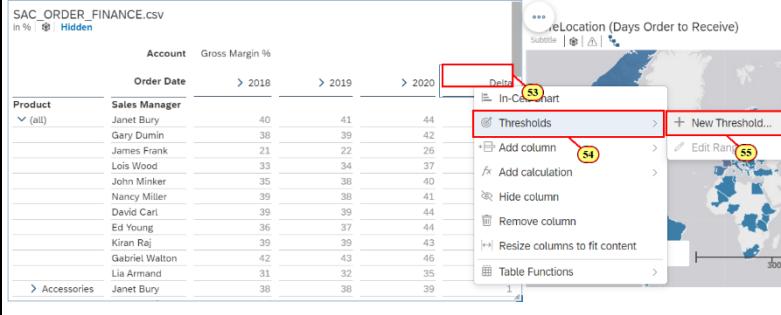
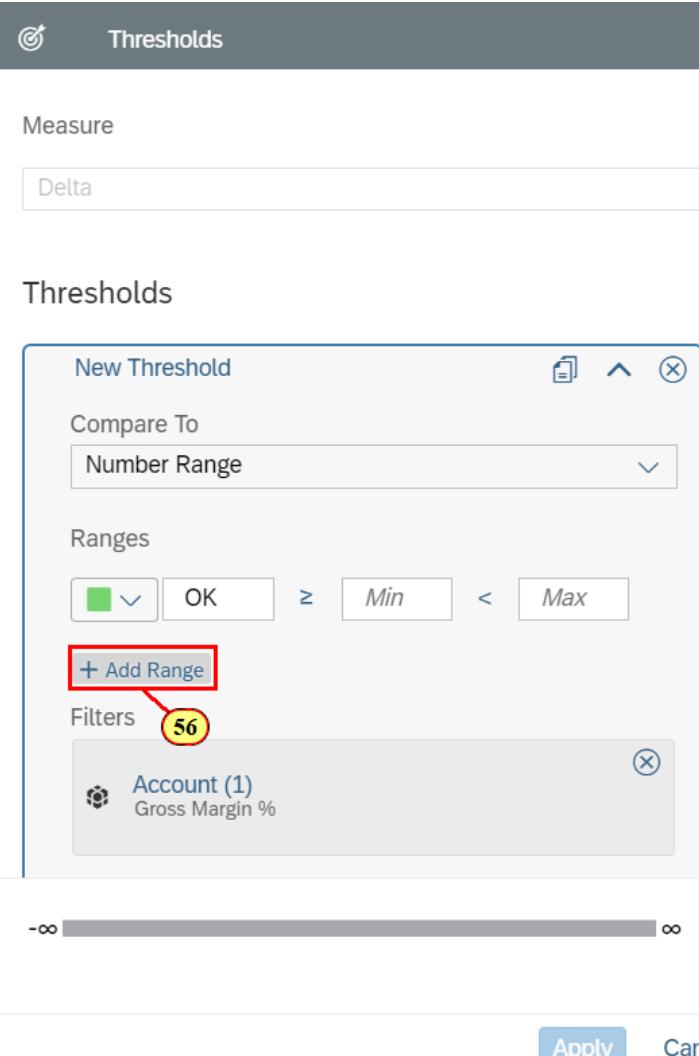
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<p>33. Expand Display Options</p> <p>34. Click Percentage</p> <p>35. Deselect Numeric</p> <p>36. Click OK</p>																																		
<p>⚠️ Quality check! Have your variances in the chart updated to percentage values? Please note your data will look different due to the dynamic time filter on the chart.</p>	<p>Gross Margin per Order Date for Actual</p> <p>2020 ▲ 2 Filters 1 Variance</p> <table border="1"> <thead> <tr> <th>Month</th> <th>Value</th> <th>Variance</th> </tr> </thead> <tbody> <tr><td>Jan</td><td>30,380,344</td><td>(-)</td></tr> <tr><td>Feb</td><td>62,133,994</td><td>+105%</td></tr> <tr><td>Mar</td><td>50,585,822</td><td>-19%</td></tr> <tr><td>Apr</td><td>30,743,452</td><td>-39%</td></tr> <tr><td>May</td><td>39,383,388</td><td>+28%</td></tr> <tr><td>Jun</td><td>59,478,699</td><td>+51%</td></tr> <tr><td>Jul</td><td>33,781,807</td><td>-43%</td></tr> <tr><td>Aug</td><td>64,634,493</td><td>+91%</td></tr> <tr><td>Sep</td><td>67,697,802</td><td>+5%</td></tr> <tr><td>Oct</td><td>19,450,268</td><td>-71%</td></tr> </tbody> </table>	Month	Value	Variance	Jan	30,380,344	(-)	Feb	62,133,994	+105%	Mar	50,585,822	-19%	Apr	30,743,452	-39%	May	39,383,388	+28%	Jun	59,478,699	+51%	Jul	33,781,807	-43%	Aug	64,634,493	+91%	Sep	67,697,802	+5%	Oct	19,450,268	-71%
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<p>👉 Let's alter this chart so it is easier to compare Sales Managers. We can sort the chart and create a dynamic reference line to benchmark individual Sales Managers against the average.</p> <p>37. Right Click the Gross Margin per Sales Manager per Actuals Chart to Open the Context Menu</p> <p>38. Click Sort</p> <p>39. Click New Measure Input Control</p> <p>40. Click Highest to Lowest</p>	 <p>Sales Revenue for Actual 1 Filter</p> <p>3.93 1,562,711, Sales Revenue</p> <p>Click to enter title...</p> <p>Gross Margin per Sales Manager for Actual 1 Filter</p> <table border="1"> <thead> <tr> <th>Sales Manager</th> <th>Gross Margin</th> </tr> </thead> <tbody> <tr><td>Janet Bury</td><td>246,068,355.06</td></tr> <tr><td>Gary Duren</td><td>76,941,185.28</td></tr> <tr><td>James Frank</td><td>11,357,657.94</td></tr> <tr><td>Lois Wood</td><td>101,452,258.56</td></tr> <tr><td>John Minker</td><td>178,499,098.62</td></tr> <tr><td>Nancy Miller</td><td>156,984,030.46</td></tr> <tr><td>David Carl</td><td>312,836,978.67</td></tr> <tr><td>Ed Young</td><td>78,527,399.97</td></tr> <tr><td>Kiran Raj</td><td>359,875,347.08</td></tr> </tbody> </table> <p>SAC_ORDER_FINANCE.csv</p>	Sales Manager	Gross Margin	Janet Bury	246,068,355.06	Gary Duren	76,941,185.28	James Frank	11,357,657.94	Lois Wood	101,452,258.56	John Minker	178,499,098.62	Nancy Miller	156,984,030.46	David Carl	312,836,978.67	Ed Young	78,527,399.97	Kiran Raj	359,875,347.08
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<p>⚠️ Quality check! Is your chart now sorted in descending order for the selected measure? If we chose to swap gross margin for sales revenue in the measure input control, our chart would re-sort itself in descending order corresponding to the new measure.</p>	<h3>Gross Margin per Sales Manager for Actual</h3> <p>1 Filter</p>  <table border="1"> <thead> <tr> <th>Sales Manager</th> <th>Gross Margin</th> </tr> </thead> <tbody> <tr><td>Kiran Raj</td><td>359,875,347.08</td></tr> <tr><td>David Carl</td><td>312,836,978.67</td></tr> <tr><td>Gabriel Walton</td><td>268,088,328.28</td></tr> <tr><td>Janet Bury</td><td>246,068,355.06</td></tr> <tr><td>John Minker</td><td>178,499,098.62</td></tr> <tr><td>Nancy Miller</td><td>156,984,030.46</td></tr> <tr><td>Lois Wood</td><td>101,452,258.56</td></tr> <tr><td>Lia Armand</td><td>85,092,981.27</td></tr> <tr><td>Ed Young</td><td>78,527,399.97</td></tr> </tbody> </table>	Sales Manager	Gross Margin	Kiran Raj	359,875,347.08	David Carl	312,836,978.67	Gabriel Walton	268,088,328.28	Janet Bury	246,068,355.06	John Minker	178,499,098.62	Nancy Miller	156,984,030.46	Lois Wood	101,452,258.56	Lia Armand	85,092,981.27	Ed Young	78,527,399.97
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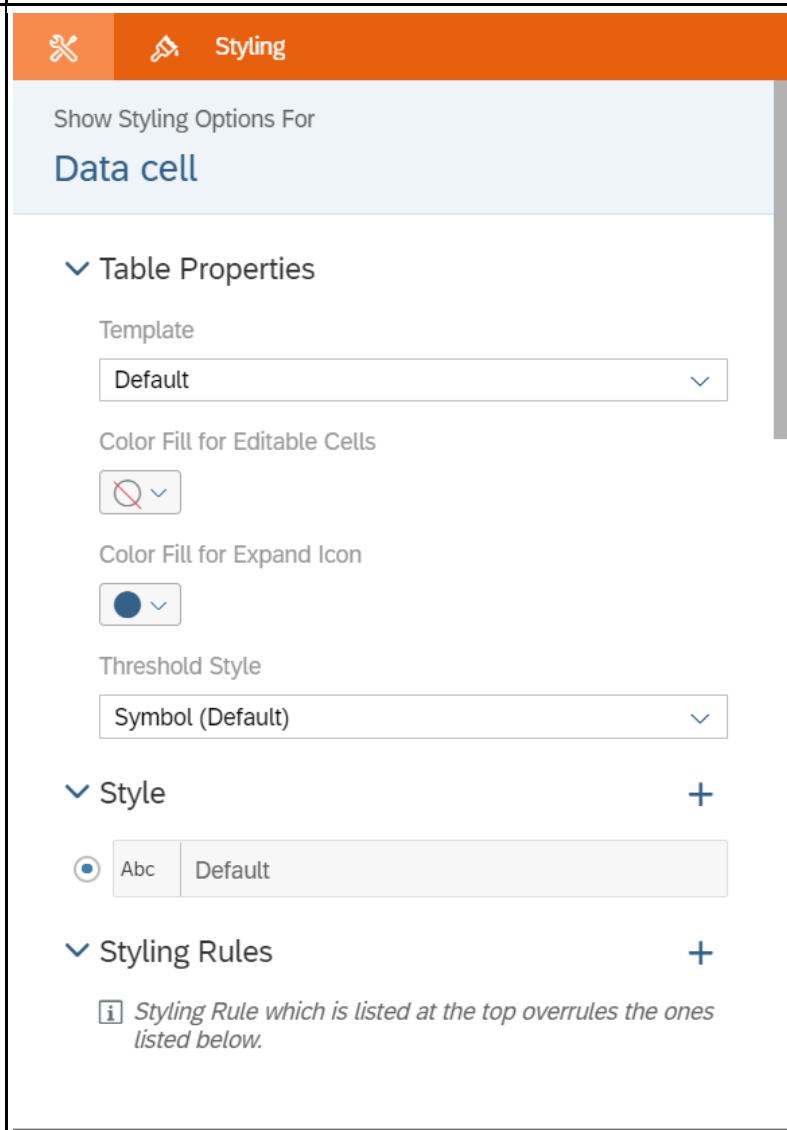
Explanation	Screenshot
<p>Let us add a benchmark to compare our sales manager performances with the average gross margin per sales manager.</p> <p>41. Right Click the Gross Margin per Sales Manager per Actuals Chart to Open the Context Menu</p> <p>42. Click Add</p> <p>43. Click Reference Line</p>	
<p>We want to create a dynamic reference line so that our benchmark will update with the selected measure given by our measure input control.</p> <p>44. Click Dynamic in the Panel for Create Reference Line</p> <p>45. Expand Select Measure</p> <p>46. Expand SAC_ORDER_FINANCE</p>	

Explanation	Screenshot
<p> By choosing a Measure Input Control as the measure for the reference line, any changes to the input control will be reflected in a new reference line.</p> <p>47. Click Measure Input Control as measure for calculating reference line</p> <p>48. Click OK</p>	

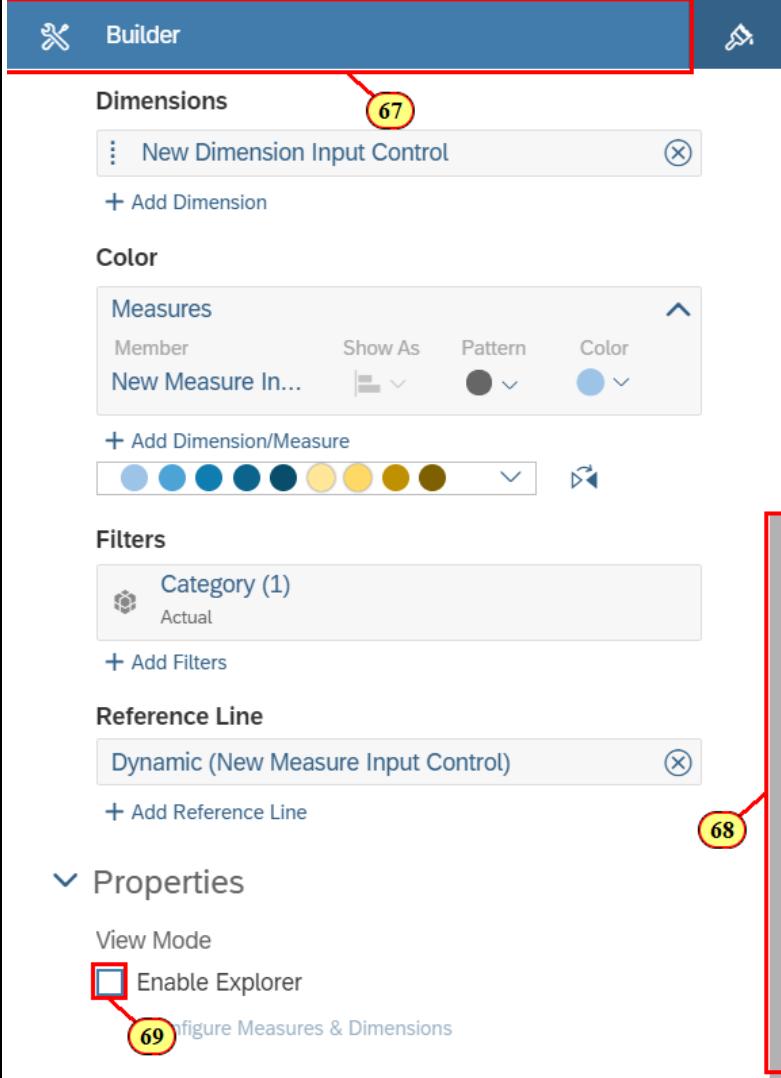
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<p>👉 We would like to now add a variance in our table to easily highlight the change in gross margin % between years. This can be done automatically through the context menu.</p> <p>49. Select the Columns 2019 and 2020 in the Table</p>	<p>SAC_ORDER_FINANCE.csv in % ⚙️ Hidden</p> <table border="1"> <thead> <tr> <th>Product</th> <th>Sales Manager</th> <th>Order Date</th> <th>> 2018</th> <th>> 2019</th> <th>> 2020</th> </tr> </thead> <tbody> <tr><td>▼ (all)</td><td>Janet Bury</td><td></td><td>40</td><td>41</td><td>44</td></tr> <tr><td></td><td>Gary Dumin</td><td></td><td>38</td><td>39</td><td>42</td></tr> <tr><td></td><td>James Frank</td><td></td><td>21</td><td>22</td><td>26</td></tr> <tr><td></td><td>Lois Wood</td><td></td><td>33</td><td>34</td><td>37</td></tr> <tr><td></td><td>John Minker</td><td></td><td>35</td><td>38</td><td>40</td></tr> <tr><td></td><td>Nancy Miller</td><td></td><td>39</td><td>38</td><td>41</td></tr> <tr><td></td><td>David Carl</td><td></td><td>39</td><td>39</td><td>44</td></tr> <tr><td></td><td>Ed Young</td><td></td><td>36</td><td>37</td><td>44</td></tr> <tr><td></td><td>Kiran Raj</td><td></td><td>39</td><td>39</td><td>43</td></tr> <tr><td></td><td>Gabriel Walton</td><td></td><td>42</td><td>43</td><td>46</td></tr> <tr><td></td><td>Lia Armand</td><td></td><td>31</td><td>32</td><td>35</td></tr> </tbody> </table>	Product	Sales Manager	Order Date	> 2018	> 2019	> 2020	▼ (all)	Janet Bury		40	41	44		Gary Dumin		38	39	42		James Frank		21	22	26		Lois Wood		33	34	37		John Minker		35	38	40		Nancy Miller		39	38	41		David Carl		39	39	44		Ed Young		36	37	44		Kiran Raj		39	39	43		Gabriel Walton		42	43	46		Lia Armand		31	32	35
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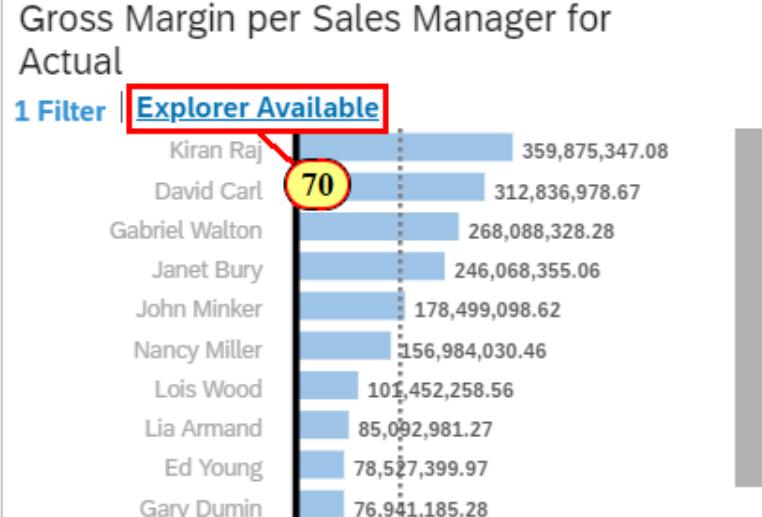
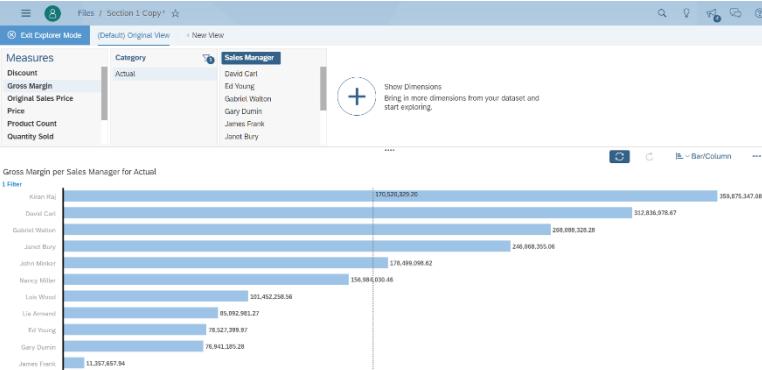
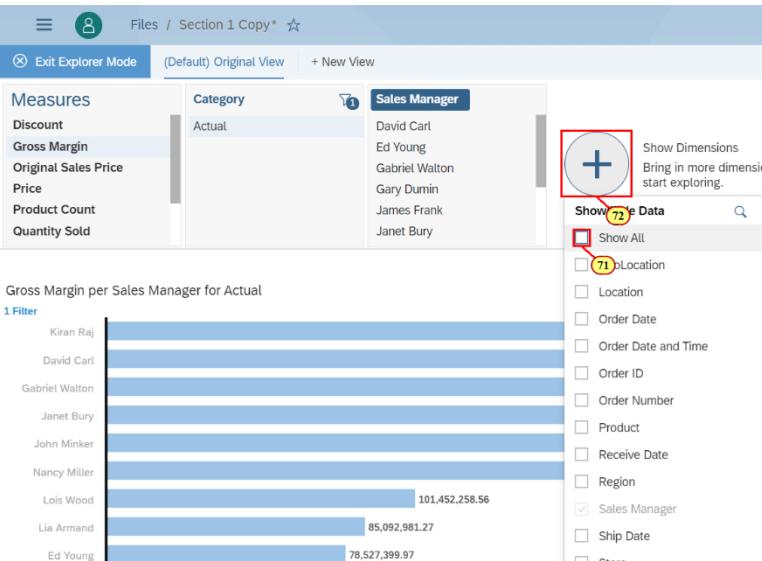
Explanation	Screenshot
<p>👉 A new column has been created that represents the differences in values between 2019 and 2020. We want to add a visual indicator to see whether our delta is below or above the previous year.</p> <p>53. Right Click on Delta to Open the Context Menu</p> <p>54. Click Thresholds</p> <p>55. Click New Threshold...</p>	
<p>💡 Welcome to the Thresholds panel.</p> <p>Within Thresholds, you can create a threshold based on a number range or against another measure. In our case, we are interested in a number range.</p> <p>56. In Threshold Panel, Click Add Range</p>	

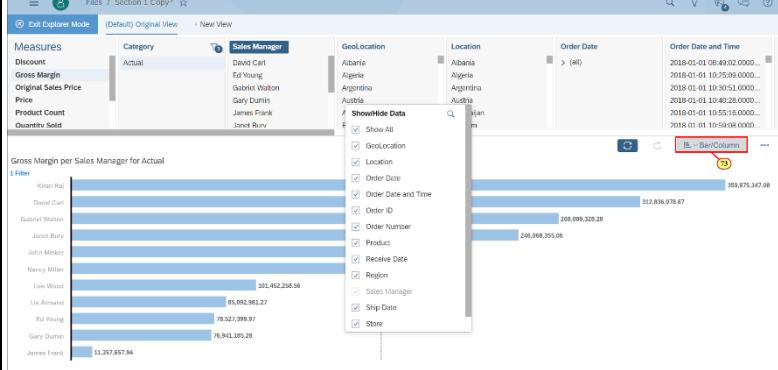
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<p>57. Enter 0 for the OK (Green) Min Range</p> <p>58. Enter 0 for the Warning (Yellow) Max Range</p> <p>59. Expand the Orange Indicator</p> <p>60. Choose the Red Indicator</p> <p>61. Click Apply</p>	<p>Thresholds</p>																																																																																																									
<p>👉</p> <p>Users can see by scrolling through the table that an appropriate indicator has been given to values in each threshold in the Delta column.</p> <p>We would like to change how this value is displayed to only highlight the number rather than adding an indicator.</p>	<table border="1"> <thead> <tr> <th></th> <th>Accessories</th> <th>Clothing</th> <th>Footwear</th> <th>Delta</th> </tr> </thead> <tbody> <tr> <td>Lia Armand</td> <td>32</td> <td>32</td> <td>25</td> <td>28</td> </tr> <tr> <td>Janet Bury</td> <td>36</td> <td>35</td> <td>55</td> <td>53</td> </tr> <tr> <td>Gary Dumin</td> <td>33</td> <td>32</td> <td>53</td> <td>52</td> </tr> <tr> <td>James Frank</td> <td>12</td> <td>13</td> <td>40</td> <td>41</td> </tr> <tr> <td>Lois Wood</td> <td>27</td> <td>26</td> <td>50</td> <td>50</td> </tr> <tr> <td>John Minker</td> <td>30</td> <td>32</td> <td>52</td> <td>50</td> </tr> <tr> <td>Nancy Miller</td> <td>34</td> <td>32</td> <td>54</td> <td>51</td> </tr> <tr> <td>David Carl</td> <td>35</td> <td>34</td> <td>54</td> <td>53</td> </tr> <tr> <td>Ed Young</td> <td>31</td> <td>31</td> <td>50</td> <td>50</td> </tr> <tr> <td>Kiran Raj</td> <td>34</td> <td>34</td> <td>52</td> <td>52</td> </tr> <tr> <td>Gabriel Walton</td> <td>39</td> <td>39</td> <td>52</td> <td>52</td> </tr> <tr> <td>Lia Armand</td> <td>25</td> <td>24</td> <td>52</td> <td>53</td> </tr> <tr> <td>Janet Bury</td> <td>55</td> <td>54</td> <td>52</td> <td>52</td> </tr> <tr> <td>Gary Dumin</td> <td>53</td> <td>52</td> <td>54</td> <td>53</td> </tr> <tr> <td>James Frank</td> <td>40</td> <td>40</td> <td>50</td> <td>50</td> </tr> <tr> <td>Lois Wood</td> <td>50</td> <td>49</td> <td>52</td> <td>52</td> </tr> <tr> <td>John Minker</td> <td>52</td> <td>52</td> <td>53</td> <td>53</td> </tr> <tr> <td>Nancy Miller</td> <td>54</td> <td>52</td> <td>54</td> <td>54</td> </tr> <tr> <td>David Carl</td> <td>54</td> <td>53</td> <td>52</td> <td>51</td> </tr> <tr> <td>Ed Young</td> <td>52</td> <td>52</td> <td>52</td> <td>52</td> </tr> </tbody> </table>		Accessories	Clothing	Footwear	Delta	Lia Armand	32	32	25	28	Janet Bury	36	35	55	53	Gary Dumin	33	32	53	52	James Frank	12	13	40	41	Lois Wood	27	26	50	50	John Minker	30	32	52	50	Nancy Miller	34	32	54	51	David Carl	35	34	54	53	Ed Young	31	31	50	50	Kiran Raj	34	34	52	52	Gabriel Walton	39	39	52	52	Lia Armand	25	24	52	53	Janet Bury	55	54	52	52	Gary Dumin	53	52	54	53	James Frank	40	40	50	50	Lois Wood	50	49	52	52	John Minker	52	52	53	53	Nancy Miller	54	52	54	54	David Carl	54	53	52	51	Ed Young	52	52	52	52
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Explanation	Screenshot
<p>62. Click Designer to Open Builder Panel (in case not already open)</p> <p>63. Click Styling</p>	
<p>Welcome to the Styling Panel!</p> <p>The Styling Panel displays options available for the selected tile type. Some options may not be available to all users.</p> <p>For widget, you see only the styling options for the specific area that you have highlighted. The heading in the Styling Panel identifies the area. For example, it may show Title, Data Cell, Axis Labels, and so on. Selecting a different part of the widget changes the heading and the styling options.</p>	 <p>Show Styling Options For Data cell</p> <p>Table Properties</p> <p>Template: Default</p> <p>Color Fill for Editable Cells: (Color swatch with a minus sign)</p> <p>Color Fill for Expand Icon: (Color swatch with a dot)</p> <p>Threshold Style: Symbol (Default)</p> <p>Style</p> <p>Abc (radio button) Default (text input)</p> <p>Styling Rules</p> <p><i>[Info icon] Styling Rule which is listed at the top overrules the ones listed below.</i></p>

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<p>64. Expand Threshold Style</p> <p>65. Click Color Values</p>																																																																																				
<p> Thresholds in the table are now color coded instead of representation by a symbol indicator.</p>	<p>SAC_ORDER_FINANCE.csv in % </p> <table border="1"> <thead> <tr> <th rowspan="2">Product</th> <th rowspan="2">Sales Manager</th> <th colspan="4">Account Gross Margin %</th> <th rowspan="2">Delta</th> </tr> <tr> <th>Order Date</th> <th>> 2018</th> <th>> 2019</th> <th>> 2020</th> </tr> </thead> <tbody> <tr> <td>▼ (all)</td> <td>Janet Bury</td> <td>40</td> <td>41</td> <td>44</td> <td>3</td> </tr> <tr> <td></td> <td>Gary Dumin</td> <td>38</td> <td>39</td> <td>42</td> <td>4</td> </tr> <tr> <td></td> <td>James Frank</td> <td>21</td> <td>22</td> <td>26</td> <td>4</td> </tr> <tr> <td></td> <td>Lois Wood</td> <td>33</td> <td>34</td> <td>37</td> <td>3</td> </tr> <tr> <td></td> <td>John Minker</td> <td>35</td> <td>38</td> <td>40</td> <td>2</td> </tr> <tr> <td></td> <td>Nancy Miller</td> <td>39</td> <td>38</td> <td>41</td> <td>3</td> </tr> <tr> <td></td> <td>David Carl</td> <td>39</td> <td>39</td> <td>44</td> <td>4</td> </tr> <tr> <td></td> <td>Ed Young</td> <td>36</td> <td>37</td> <td>44</td> <td>7</td> </tr> <tr> <td></td> <td>Kiran Raj</td> <td>39</td> <td>39</td> <td>43</td> <td>4</td> </tr> <tr> <td></td> <td>Gabriel Walton</td> <td>42</td> <td>43</td> <td>46</td> <td>3</td> </tr> <tr> <td></td> <td>Lia Armand</td> <td>31</td> <td>32</td> <td>35</td> <td>4</td> </tr> <tr> <td>➤ Accessories</td> <td>Janet Bury</td> <td>38</td> <td>38</td> <td>39</td> <td>1</td> </tr> </tbody> </table>	Product	Sales Manager	Account Gross Margin %				Delta	Order Date	> 2018	> 2019	> 2020	▼ (all)	Janet Bury	40	41	44	3		Gary Dumin	38	39	42	4		James Frank	21	22	26	4		Lois Wood	33	34	37	3		John Minker	35	38	40	2		Nancy Miller	39	38	41	3		David Carl	39	39	44	4		Ed Young	36	37	44	7		Kiran Raj	39	39	43	4		Gabriel Walton	42	43	46	3		Lia Armand	31	32	35	4	➤ Accessories	Janet Bury	38	38	39	1
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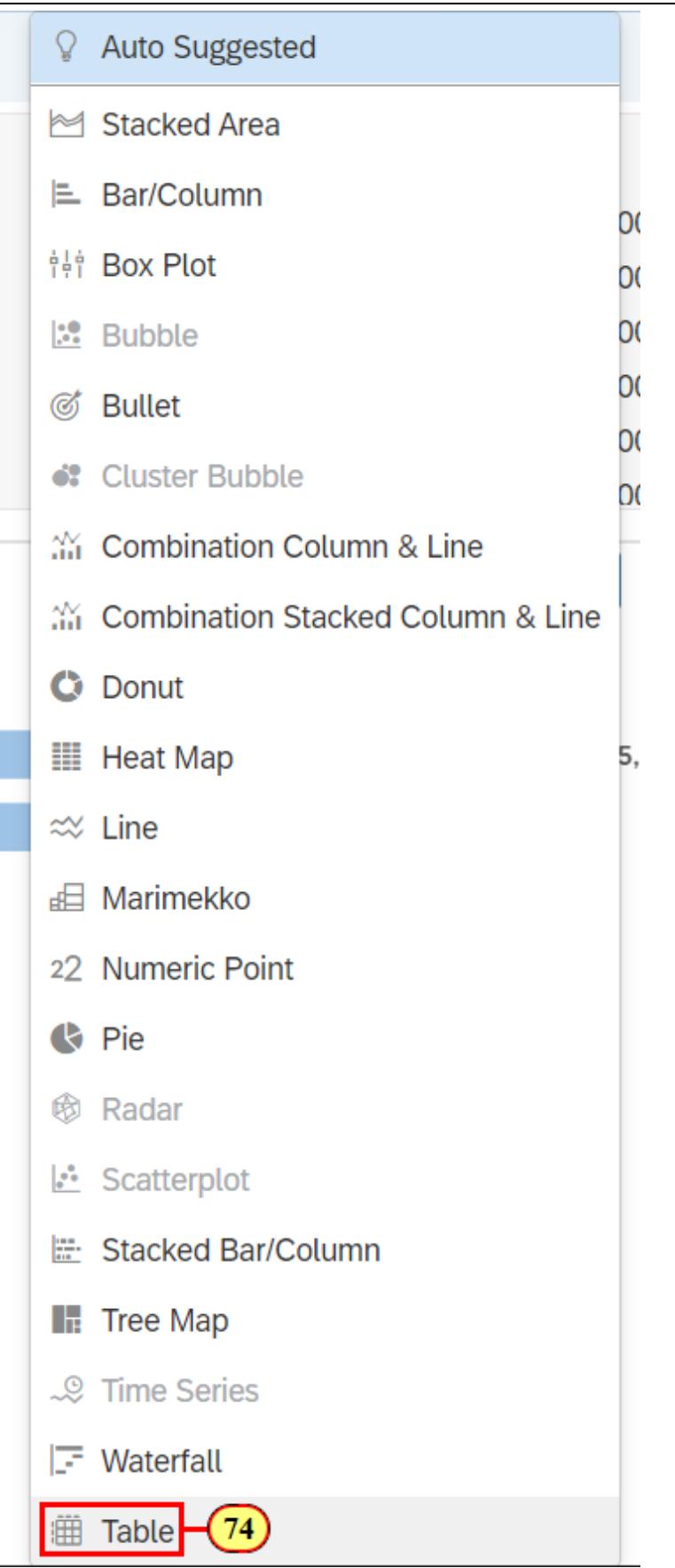
Explanation	Screenshot
<p>👉 If the charts in a story are insufficient for elaborating a business insight, SAP Analytics Cloud enables designers to curate a customized Explorer View for end users. This allows story viewers to further analyze the data on their own, in case not all questions were answered in the original dashboard.</p> <p>66. Click the Gross Margin per Sales Manager for Actual chart</p>	
<p>67. Switch from the Styling Panel to the Builder Panel</p> <p>68. Scroll to Properties</p> <p>69. Click Enable Explorer in Properties</p>	

Explanation	Screenshot																						
<p>70. Click Explorer Available in the Gross Margin per Sales Manager for Actual Chart</p>	 <table border="1"> <thead> <tr> <th>Sales Manager</th> <th>Gross Margin</th> </tr> </thead> <tbody> <tr><td>Kiran Raj</td><td>359,875,347.08</td></tr> <tr><td>David Carl</td><td>312,836,978.67</td></tr> <tr><td>Gabriel Walton</td><td>268,088,328.28</td></tr> <tr><td>Janet Bury</td><td>246,068,355.06</td></tr> <tr><td>John Minker</td><td>178,499,098.62</td></tr> <tr><td>Nancy Miller</td><td>156,984,030.46</td></tr> <tr><td>Lois Wood</td><td>101,452,258.56</td></tr> <tr><td>Lia Armand</td><td>85,092,981.27</td></tr> <tr><td>Ed Young</td><td>78,527,399.97</td></tr> <tr><td>Gary Dumin</td><td>76,941,185.28</td></tr> </tbody> </table>	Sales Manager	Gross Margin	Kiran Raj	359,875,347.08	David Carl	312,836,978.67	Gabriel Walton	268,088,328.28	Janet Bury	246,068,355.06	John Minker	178,499,098.62	Nancy Miller	156,984,030.46	Lois Wood	101,452,258.56	Lia Armand	85,092,981.27	Ed Young	78,527,399.97	Gary Dumin	76,941,185.28
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<p> Welcome to the Explorer View!</p> <p>Story creators can customize viewable measures and dimensions as well as create default visualizations for story viewers when they access Explorer.</p>																							
<p>71. Click Show All</p> <p>72. Click Show Dimensions</p>																							

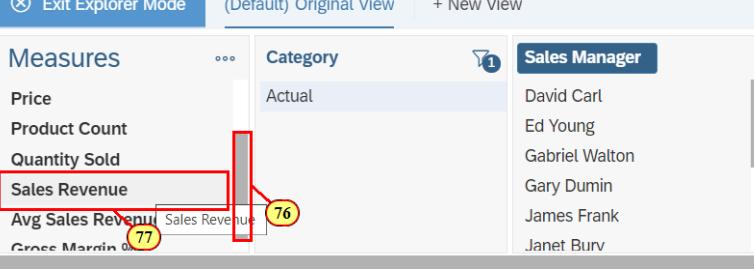
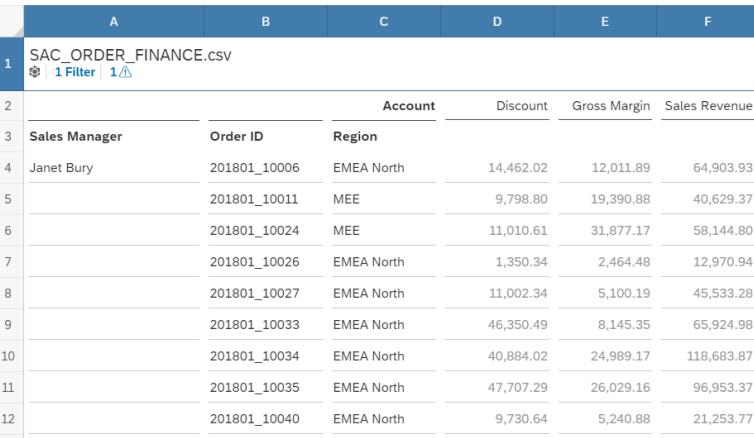
Explanation	Screenshot
<p> In Explorer view, we want to present the data in additional detail for the exploratory use of our story viewers. Let us change our chart type from a bar chart to a table.</p> <p>73. Click Bar / Column</p>	 <p>The screenshot shows the Tableau Explorer interface. On the left, there's a sidebar with 'Measures' (Discount, Gross Margin, Original Sales Price, Price, Product Count, Quantity Sold) and 'Dimensions' (Category, Sales Manager). The main area displays a bar chart titled 'Gross Margin per Sales Manager for Actual'. The bars represent the gross margin for each sales manager. A context menu is open over the chart, with the 'Change to Rows/Columns' option highlighted with a red box. Other options in the menu include 'Show All', 'Geolocation', 'Location', 'Order Date', 'Order Date and Time', 'Order ID', 'Order Number', 'Product', 'Receive Date', 'Region', 'Sales Manager', 'Ship Date', and 'Store'.</p>

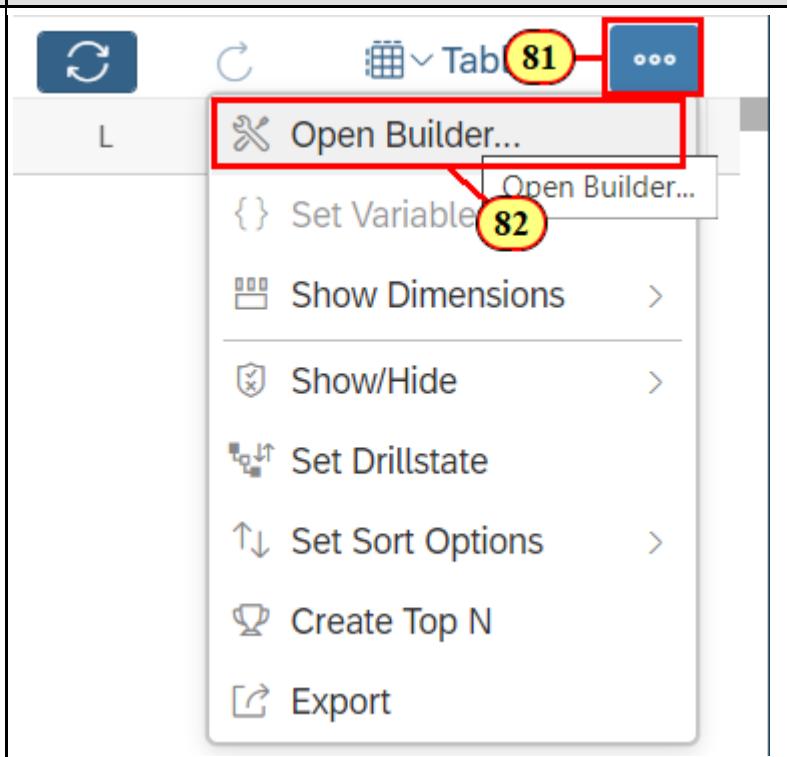
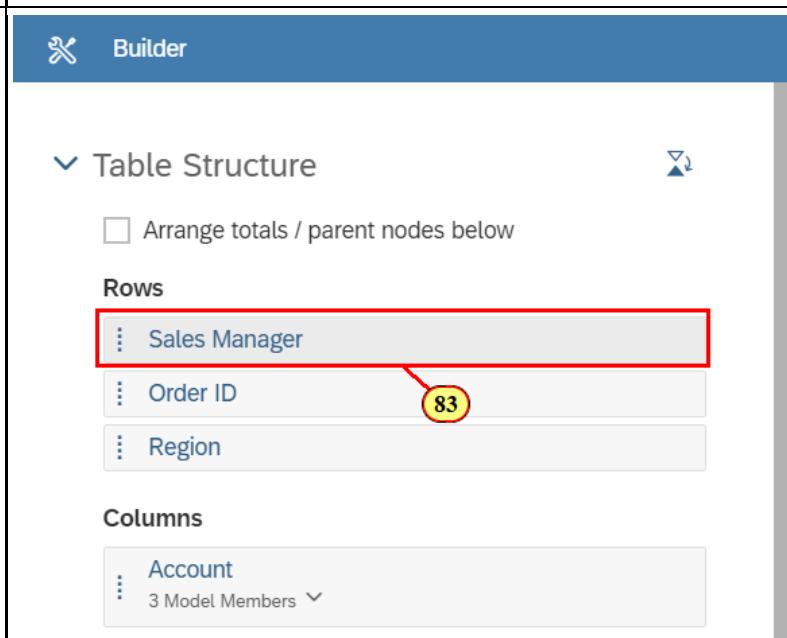
 Let's present our dimensions and measures in a detailed visualization to start off our Explorer View for story viewers. Using a larger table as an Explorer View instead of having it on the page is a general best practice as it can reduce the complexity and loading time of the initial dashboard.

74. Click **Table**

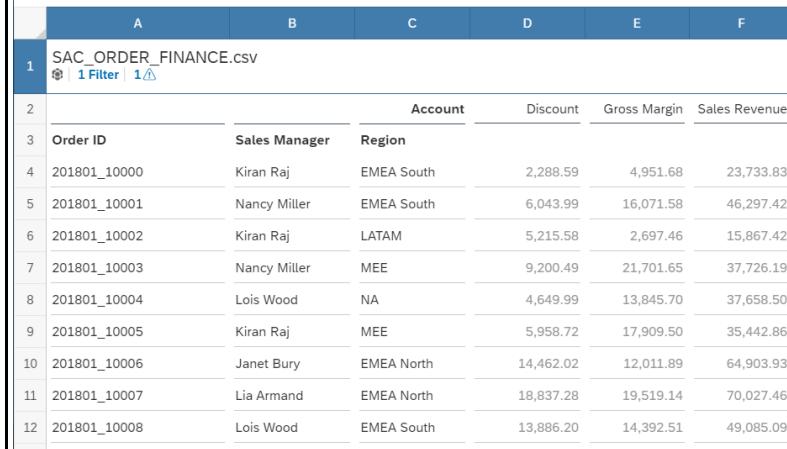
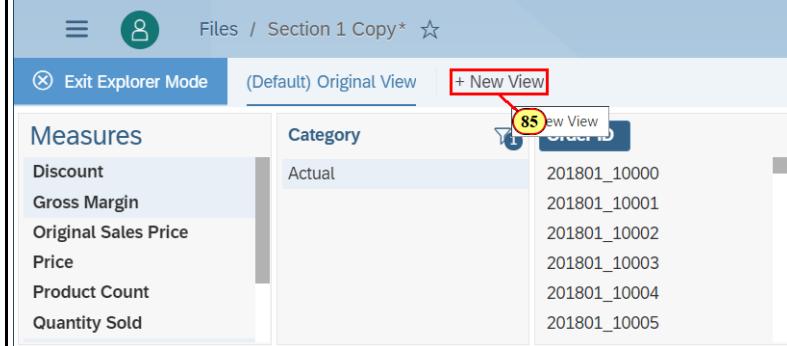
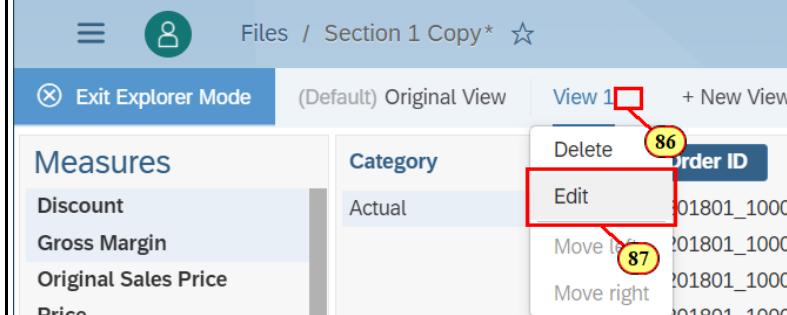
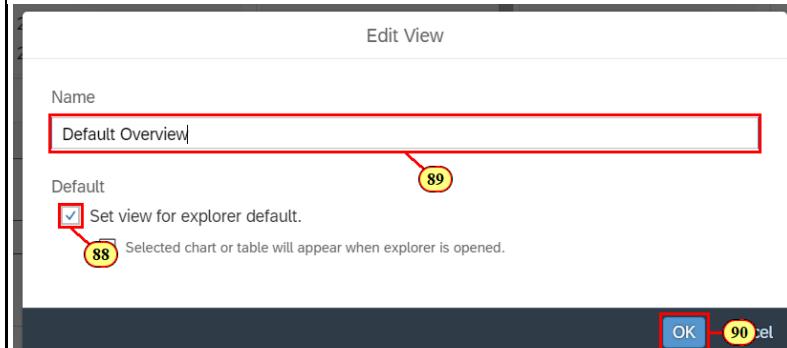


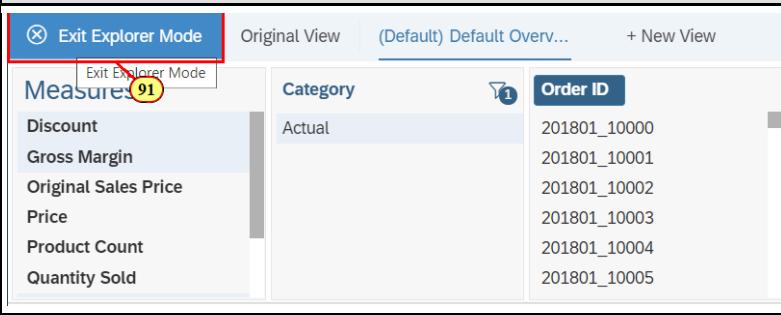
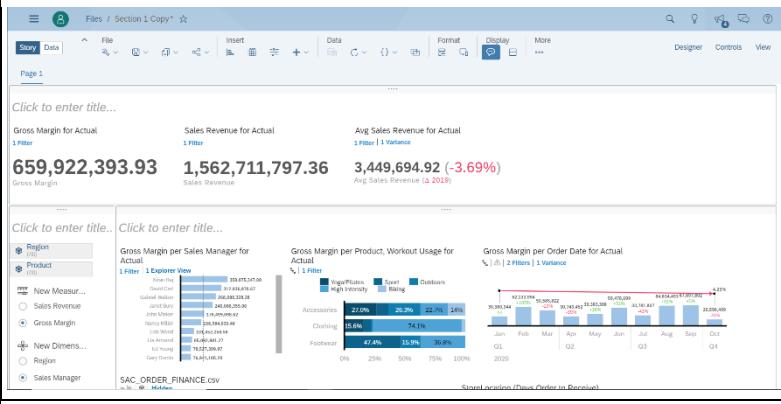
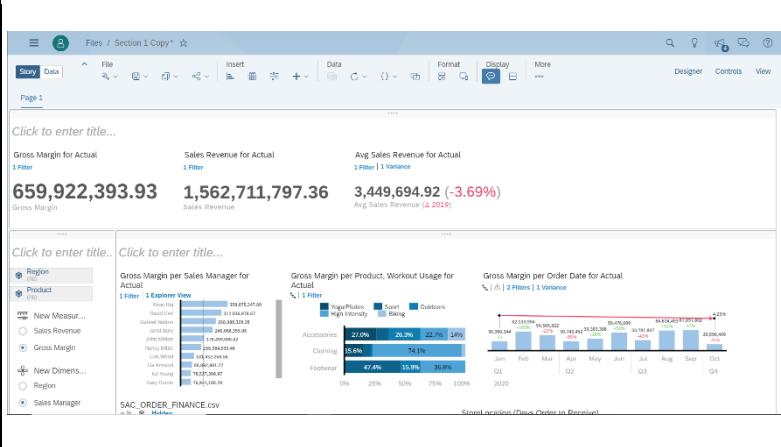
The screenshot shows the Tableau visualization selector. A red box highlights the 'Table' option at the bottom, which is circled in yellow and labeled '74'. Other options visible include Auto Suggested, Stacked Area, Bar/Column, Box Plot, Bubble, Bullet, Cluster Bubble, Combination Column & Line, Combination Stacked Column & Line, Donut, Heat Map, Line, Marimekko, Numeric Point, Pie, Radar, Scatterplot, Stacked Bar/Column, Tree Map, Time Series, Waterfall, and Table.

Explanation	Screenshot																																																																																																		
75. In Measures selection, select Discount	 <p>The screenshot shows the Power BI 'Measures' pane with several options listed: Discount (selected and highlighted with a red box), Gross Margin (highlighted with a yellow circle labeled 75), Original Sales Price, Price, Product Count, and Quantity Sold.</p>																																																																																																		
76. Scroll till Sales Revenue is Visible 77. Click Sales Revenue	 <p>The screenshot shows the Power BI 'Measures' pane with several options listed: Price, Product Count, Quantity Sold, Sales Revenue (selected and highlighted with a red box), Avg Sales Revenue (highlighted with a yellow circle labeled 76), and Gross Margin (highlighted with a yellow circle labeled 77).</p>																																																																																																		
78. Scroll till Order ID and Region is Visible 79. Click Order ID 80. Click Region	 <p>The screenshot shows the Power BI Data View pane with a table of data. The columns are: Order Date and Time, Order ID (selected and highlighted with a red box), Order Number, Product, Receive Date, and Region (highlighted with a red box). A scroll bar at the bottom right is highlighted with a yellow circle labeled 78.</p>																																																																																																		
 We have now created a table that shows our three financial metrics for orders by each Sales Manager. Instead of seeing the order per sales manager, we want to see each order and the corresponding metrics per order. Let us do this by changing the order of our columns	 <p>The screenshot shows a CSV file named 'SAC_ORDER_FINANCE.csv'. The data is organized into columns: Account, Discount, Gross Margin, and Sales Revenue. The rows show data for various sales managers and their corresponding order details like Order ID and Region.</p> <table border="1"> <thead> <tr> <th></th> <th>A</th> <th>B</th> <th>C</th> <th>D</th> <th>E</th> <th>F</th> </tr> </thead> <tbody> <tr> <td>1</td> <td colspan="6">SAC_ORDER_FINANCE.csv</td> </tr> <tr> <td>2</td> <td></td> <td>Account</td> <td>Discount</td> <td>Gross Margin</td> <td>Sales Revenue</td> <td></td> </tr> <tr> <td>3</td> <td>Sales Manager</td> <td>Order ID</td> <td>Region</td> <td></td> <td></td> <td></td> </tr> <tr> <td>4</td> <td>Janet Bury</td> <td>201801_10006</td> <td>EMEA North</td> <td>14,462.02</td> <td>12,011.89</td> <td>64,903.93</td> </tr> <tr> <td>5</td> <td></td> <td>201801_10011</td> <td>MEE</td> <td>9,798.80</td> <td>19,390.88</td> <td>40,629.37</td> </tr> <tr> <td>6</td> <td></td> <td>201801_10024</td> <td>MEE</td> <td>11,010.61</td> <td>31,877.17</td> <td>58,144.80</td> </tr> <tr> <td>7</td> <td></td> <td>201801_10026</td> <td>EMEA North</td> <td>1,350.34</td> <td>2,464.48</td> <td>12,970.94</td> </tr> <tr> <td>8</td> <td></td> <td>201801_10027</td> <td>EMEA North</td> <td>11,002.34</td> <td>5,100.19</td> <td>45,533.28</td> </tr> <tr> <td>9</td> <td></td> <td>201801_10033</td> <td>EMEA North</td> <td>46,350.49</td> <td>8,145.35</td> <td>65,924.98</td> </tr> <tr> <td>10</td> <td></td> <td>201801_10034</td> <td>EMEA North</td> <td>40,884.02</td> <td>24,989.17</td> <td>118,683.87</td> </tr> <tr> <td>11</td> <td></td> <td>201801_10035</td> <td>EMEA North</td> <td>47,707.29</td> <td>26,029.16</td> <td>96,953.37</td> </tr> <tr> <td>12</td> <td></td> <td>201801_10040</td> <td>EMEA North</td> <td>9,730.64</td> <td>5,240.88</td> <td>21,253.77</td> </tr> <tr> <td>13</td> <td></td> <td>201801_10049</td> <td>MEE</td> <td>27,329.60</td> <td>41,726.33</td> <td>73,229.20</td> </tr> </tbody> </table>		A	B	C	D	E	F	1	SAC_ORDER_FINANCE.csv						2		Account	Discount	Gross Margin	Sales Revenue		3	Sales Manager	Order ID	Region				4	Janet Bury	201801_10006	EMEA North	14,462.02	12,011.89	64,903.93	5		201801_10011	MEE	9,798.80	19,390.88	40,629.37	6		201801_10024	MEE	11,010.61	31,877.17	58,144.80	7		201801_10026	EMEA North	1,350.34	2,464.48	12,970.94	8		201801_10027	EMEA North	11,002.34	5,100.19	45,533.28	9		201801_10033	EMEA North	46,350.49	8,145.35	65,924.98	10		201801_10034	EMEA North	40,884.02	24,989.17	118,683.87	11		201801_10035	EMEA North	47,707.29	26,029.16	96,953.37	12		201801_10040	EMEA North	9,730.64	5,240.88	21,253.77	13		201801_10049	MEE	27,329.60	41,726.33	73,229.20
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Explanation	Screenshot
<p> We have now created a table that shows our three financial metrics for orders by each Sales Manager. Instead of seeing the order per sales manager, we want to see each order and the corresponding metrics per order. Let us do this by changing the order of our columns</p> <p>81. Click More</p> <p>82. Click Open Builder</p>	
<p>83. Drag Sales Manager Below Order ID</p>	

Explanation	Screenshot
84. Click Done	<p>The screenshot shows the 'Table Structure' builder interface. It includes sections for 'Rows' (Order ID, Sales Manager, Region) and 'Columns' (Account). Under 'Filters', there are dropdowns for Region (All), Product (All), Account (3) (Gross Margin, Discount, Sales Revenue), and Category (1) (Actual). A red box highlights the 'Done' button at the bottom right.</p>

Explanation	Screenshot
<p> Quality Check! Does your table in Explorer look like this screenshot?</p> <p> Now that we can see this additional information, we want to capture this view and set it as the default view upon entering Explorer View for the benefit of our end users.</p>	
<p>85. Click New View</p>	
<p>86. Click Expand on View 1</p> <p>87. Click Edit</p>	
<p> Let us set this new table view as the landing page for story viewers who enter explorer view from our chart.</p> <p>88. Click Set view for explorer default</p> <p>89. Rename the view Default Overview</p> <p>90. Click OK</p>	

Explanation	Screenshot
<p>👉 Our default Explorer view is now a great way for story viewers to navigate to a more detailed breakdown of their business data.</p> <p>91. Click Exit Explorer Mode</p>	 <p>The screenshot shows the SAP Analytics Cloud interface. A red box highlights the 'Exit Explorer Mode' button in the top left corner of the main content area. Below it, a sidebar titled 'Measures' lists various metrics like Discount, Gross Margin, Original Sales Price, Price, Product Count, and Quantity Sold. To the right, there's a 'Category' section with 'Actual' selected and a table of 'Order ID' values from 201801_10000 to 201801_10005.</p>
<p>⚠️ Quality Check! Does your dashboard with thresholds and variances look like this screenshot?</p> <p>👉 Please save your story by pressing Ctrl + S on your keyboard!</p>	 <p>The screenshot displays a dashboard with three main charts: 'Gross Margin for Actual', 'Sales Revenue for Actual', and 'Avg Sales Revenue for Actual'. Each chart includes a threshold bar and a variance percentage. Below the charts is a filter sidebar and a table labeled 'SAC_ORDER_FINANCE.csv'.</p>
<p>💡 You have now completed the Geo Maps, Thresholds, and Variances section! In this section we learned how to create geo visualizations to populate our dashboard, add thresholds, dynamic reference lines, and variances to our charts to highlight key insights, and utilize Explorer View to create detailed enhancements to the story viewing experience.</p> <p>To explore more of SAP Analytics Cloud's capabilities in analyzing geo enriched data, you can jump off to Section 8 - Geo Visualizations Deep Dive.</p>	 <p>The screenshot shows a second instance of the same dashboard, identical to the one in the previous row, displaying the same three charts and data.</p>

Summary

You have completed the entire **Geo Maps, Thresholds and Variances** section!

You are now able to:

- Create Geo Visualization
- Create Bubble and Choropleth layers and drill down a geographical hierarchy
- Use recommended comparison to quickly add variances to a chart
- Add reference lines and sort a chart
- Add a threshold to a table

Theme and Style



This section builds on top of another section. If you did not complete the previous section, please select “**Section 3 – Geo Maps, Thresholds and Variances**” from the “**Public/TechEd**” folder and click **Copy To** your directory. You will then be able to edit this story to complete the following exercise.



Objective: Style and theme a dashboard for easier readability and a better look and feel.

Estimated Time: 25 mins

Exercise Description: You have created an analytics dashboard with visualizations that show variances and thresholds, you added interaction for our viewers, but before you share the dashboard with your colleagues at BestRun, you need to make sure your dashboard is not only insightful but also looks visually appealing.

Key Features:

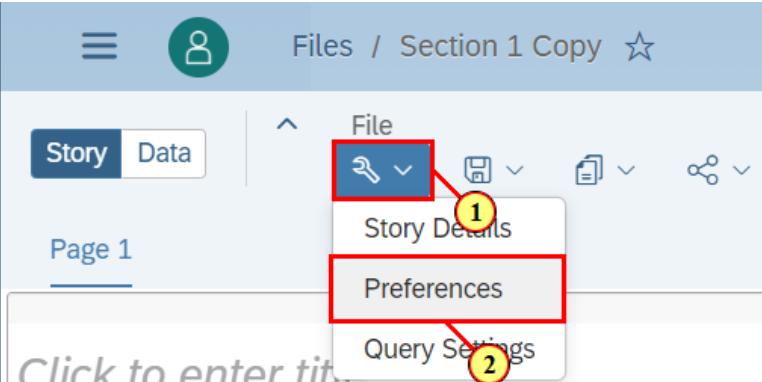
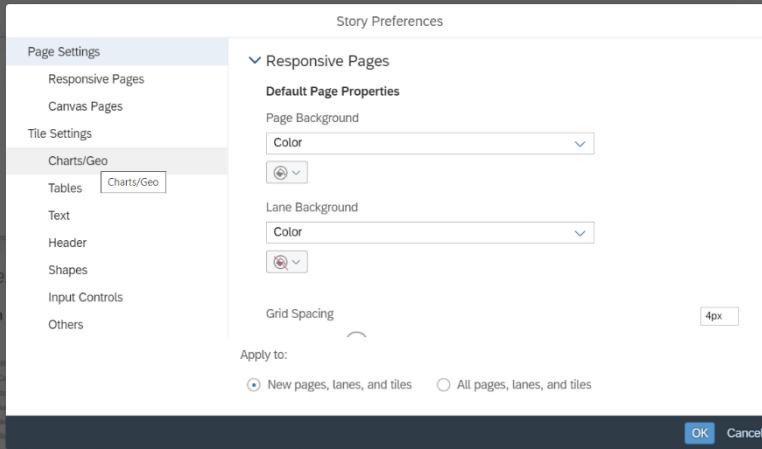
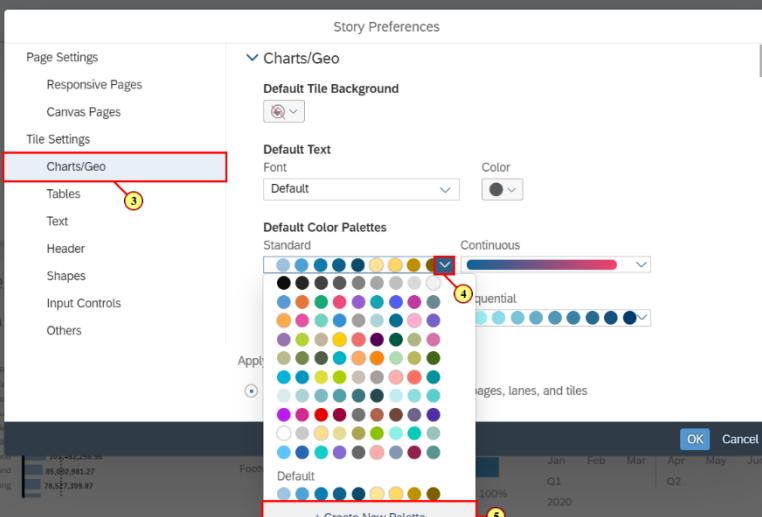
- Learn about the styling panel and how to format your visualizations
- Learn how to simplify your visualisations by hiding unnecessary information
- Learn how to add an image or a logo to your dashboard
- Use Device Preview to preview your analytical content across various devices and screen sizes (i.e. Laptop, Tablet, Phone)

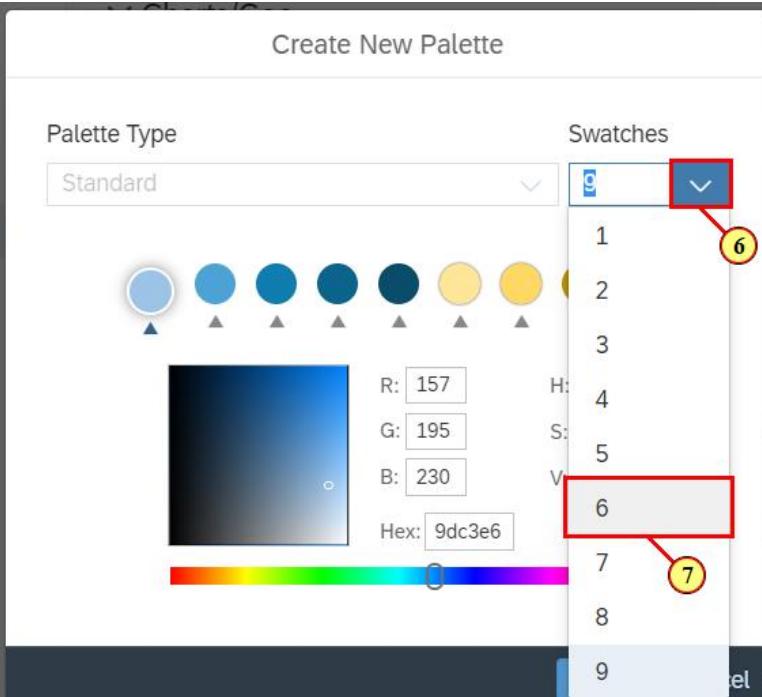
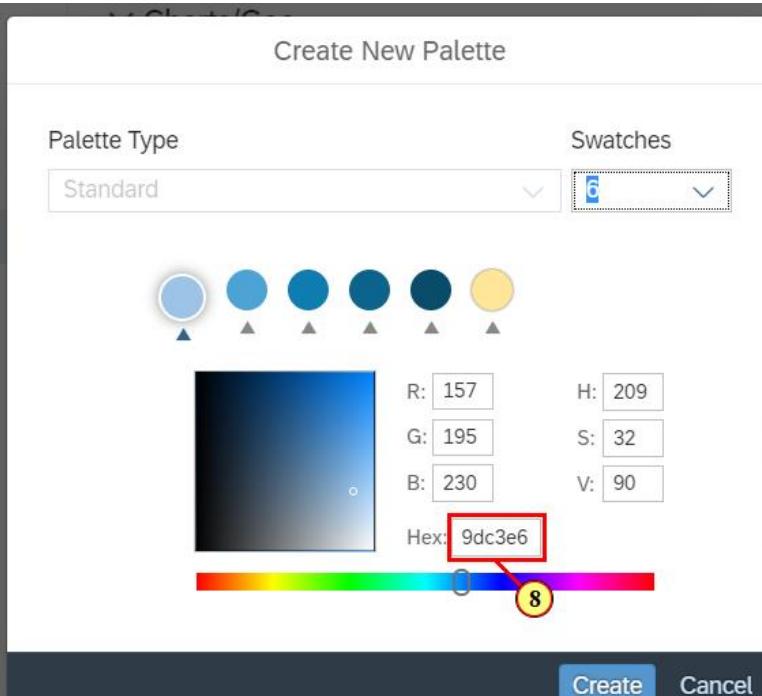


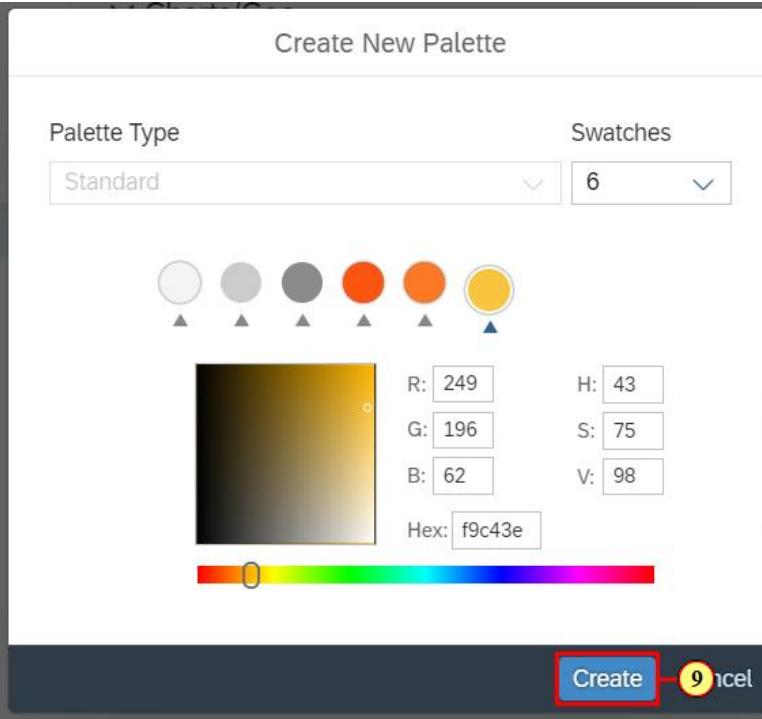
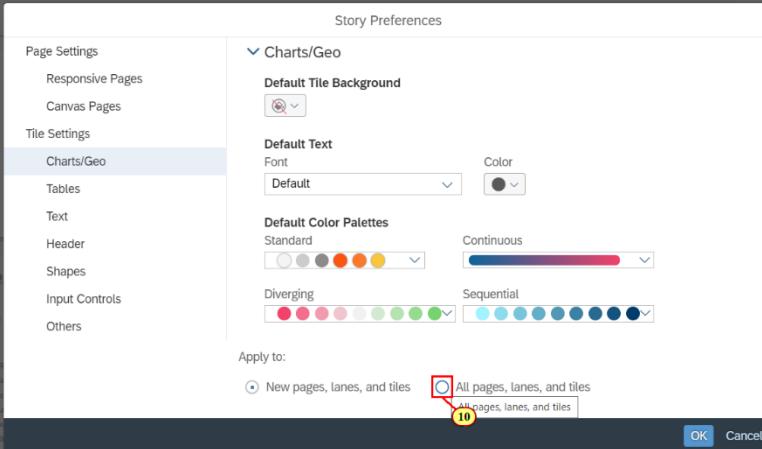
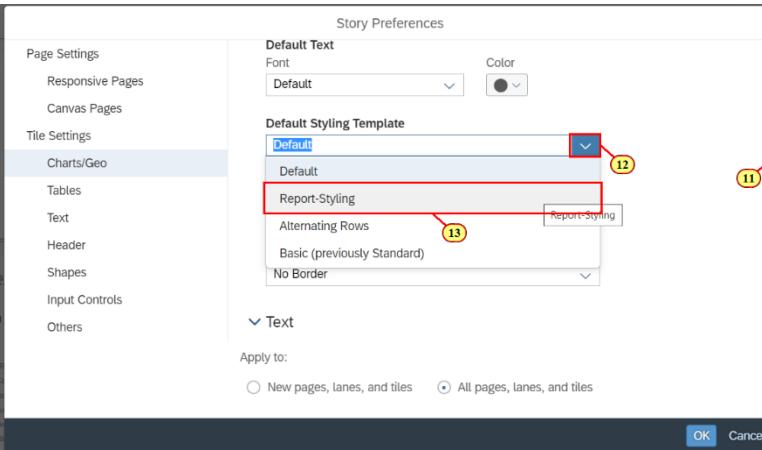
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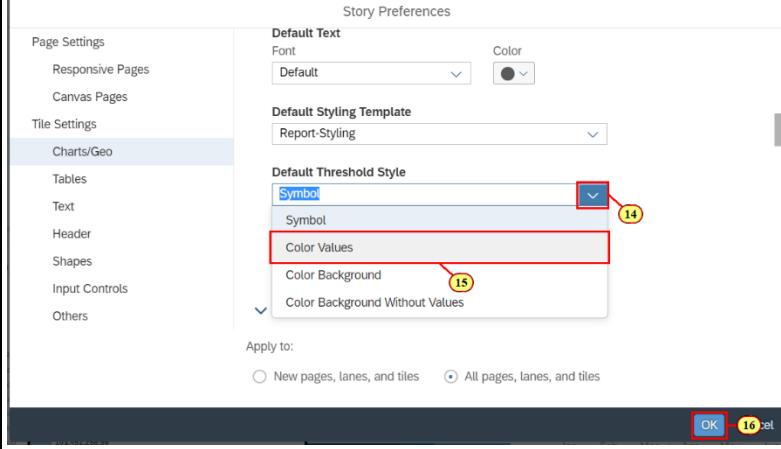
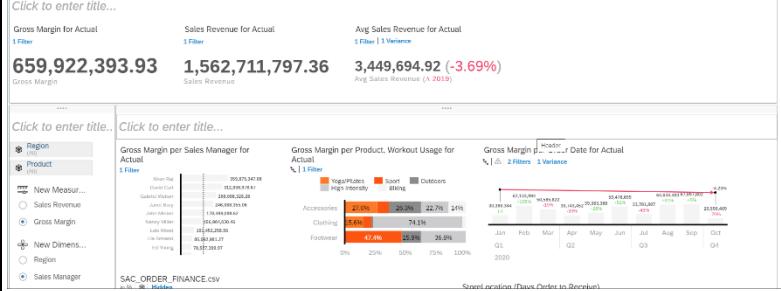
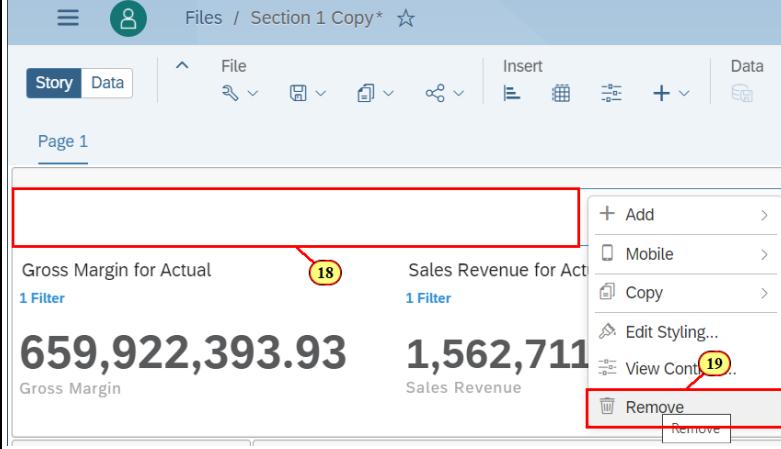
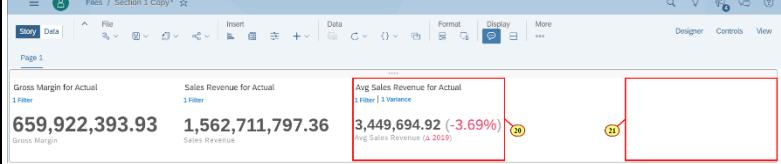
When completing exercises, some data values in the screenshots may not match what you see on your screen. This is because the dynamic time filters that were applied at the time the screenshots were taken is different from the current system date.

Explanation	Screenshot
<p></p> <p>Exercise check! Does your dashboard look like this screenshot?</p> <p>In this section we will cover theme and styling options in SAP Analytics Cloud to tweak your story into a professional dashboard.</p>	<p>The screenshot shows a SAP Analytics Cloud Story view with the following details:</p> <ul style="list-style-type: none"> Top Bar: Story, Data, File, Insert, Data, Format, Display, More, Designer, Controls, View. Page 1: <ul style="list-style-type: none"> Left Panel: Click to enter title...; Filter dropdown set to Product (1 Filter). Visualizations: <ul style="list-style-type: none"> Gross Margin for Actual: 1 Filter, Value: 659,922,393.93. Sales Revenue for Actual: 1 Filter, Value: 1,562,711,797.36. Avg Sales Revenue for Actual: 1 Filter 1 Variance, Value: 3,449,694.92 (-3.69%). Gross Margin per Product, Workout Usage for Actual: 1 Filter, showing a stacked bar chart for Accessories (27.0%), Clothing (26.9%), Sport (22.7%), and Others (14%). Gross Margin per Order Date for Actual: 2 Filters 3 Variance, showing a line chart with data points for Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec. Bottom Panel: SAC_ORDER_FINANCE.csv, Filtered by Month.

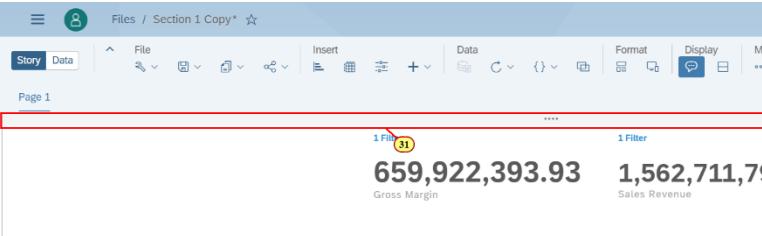
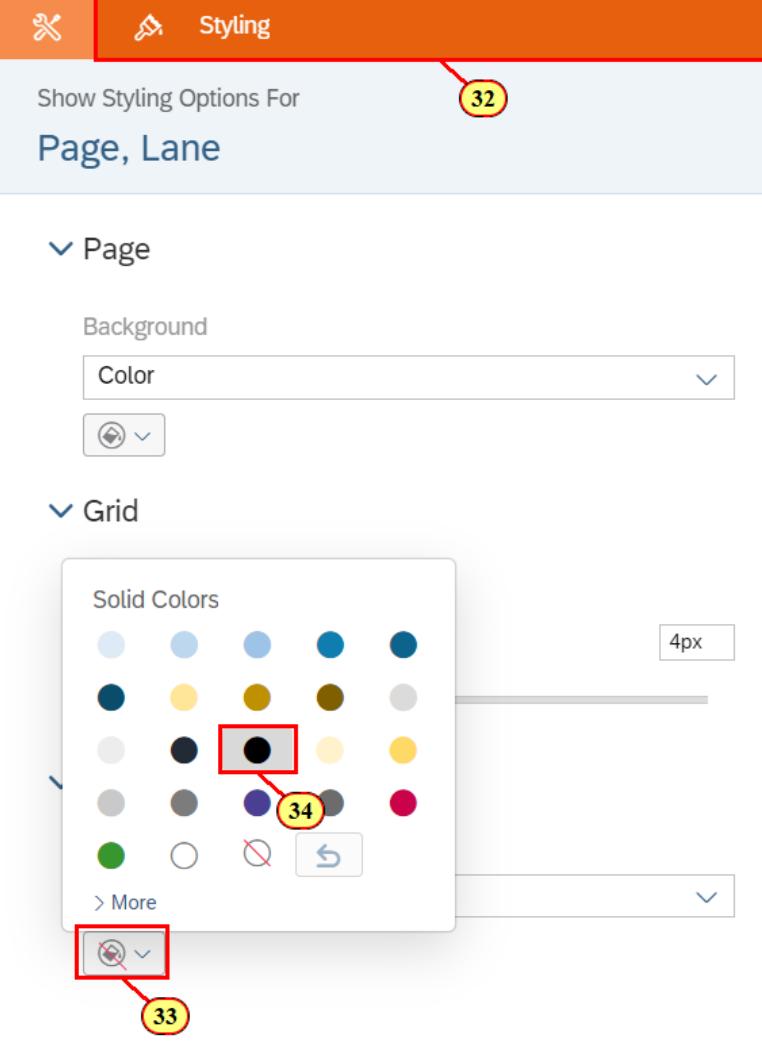
Explanation	Screenshot
<p>👉 Story creators can quickly change styling options for an entire story in the story preferences. This enables users to quickly apply corporate themes and sync their styling across different dashboards. We will first apply color and table preferences in this menu.</p> <ol style="list-style-type: none"> 1. Click Edit Story 2. Click Preferences 	
<p>💡 Welcome to Story Preferences!</p> <p>In story preferences, story creators can choose to set standard theme and styling options for their entire story. This enables the business user with ease in quickly styling their entire story. Creators can choose to apply story preference changes to all pages, lanes, and tiles or only to newly created pages, lanes, and tiles.</p>	
<ol style="list-style-type: none"> 3. Click Charts/Geo 4. Expand Standard Color Palettes 5. Click Create New Palette <p>👉 Let us apply a custom color palette to our story that is based on our corporate colors.</p>	

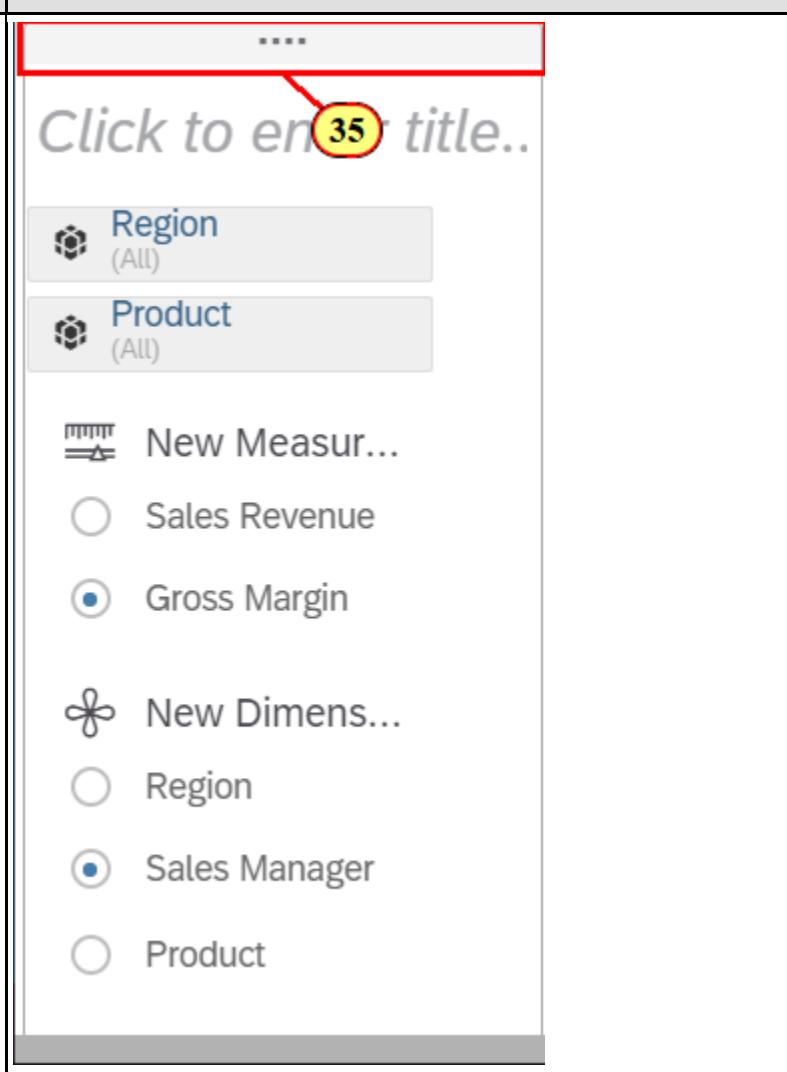
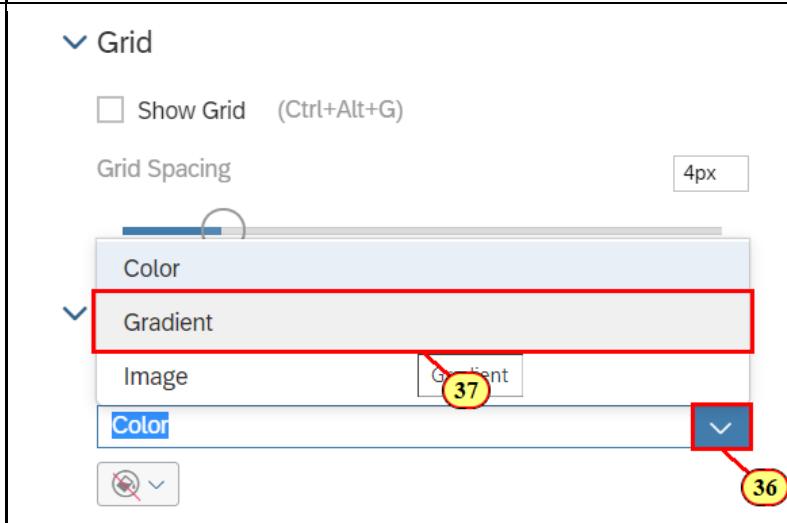
Explanation	Screenshot
<p>6. Expand number of swatches.</p> <p>7. Change Number of Swatches to 6</p>	 <p>The screenshot shows the 'Create New Palette' dialog. In the 'Swatches' section, a dropdown menu is open, showing the number '6' highlighted with a red box and a yellow circle numbered 6. A color palette below shows a blue gradient with hex code 9dc3e6.</p>
<p>i SAP Analytics Cloud offers a variety of color entry options to maximize your ability to stylize your story.</p> <p>8. Change each swatch's hexcode. Swatch 1: f4f4f4 Swatch 2: cccce Swatch 3: 8c8a8a Swatch 4: fc5411 Swatch 5: fc7928 Swatch 6: f9c43e</p>	 <p>The screenshot shows the 'Create New Palette' dialog with the 'Swatches' dropdown set to 6. The 'Hex' field for the first swatch is highlighted with a red box and a yellow circle numbered 8. The color palette below shows a blue gradient with hex code 9dc3e6.</p>

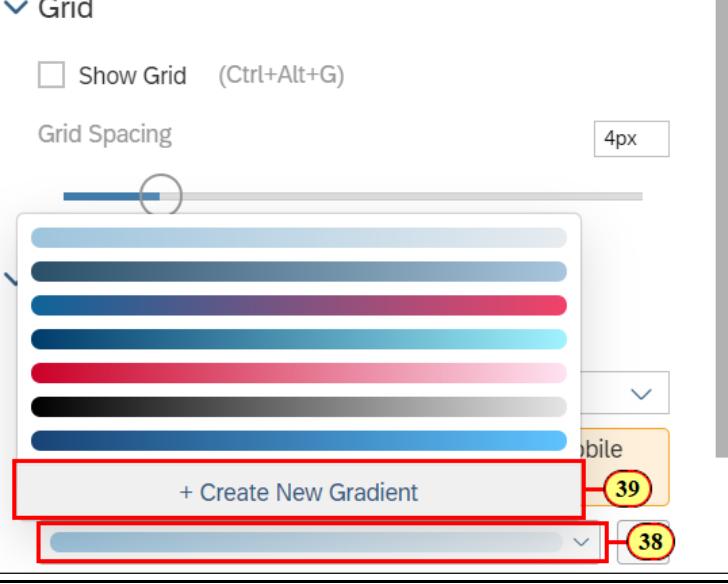
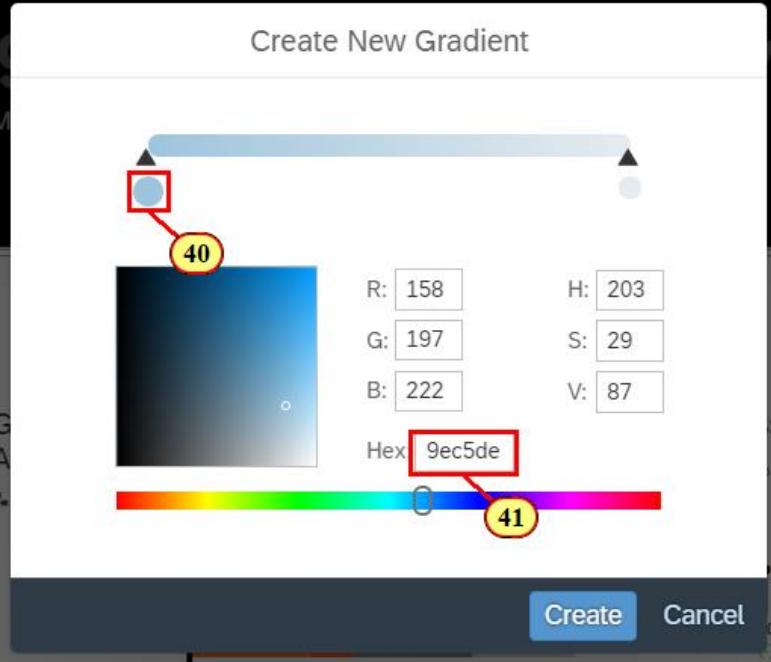
Explanation	Screenshot
<p>⚠️ Quality Check! Do your swatches look like these colors after changing the hexcodes?</p> <p>9. Click Create</p>	
<p>👉 We want to apply this color palette to everything on our story, so we change the option to All.</p> <p>10. Click All pages, lanes and tiles</p>	
<p>11. Scroll till Default Styling Template is Visible</p> <p>👉 We can choose different styling templates for our charts and tables based on dashboard needs. In this instance, we want our tables to appear in report-styling.</p> <p>12. Expand Default Styling Template</p> <p>13. Click Report-Styling</p>	

Explanation	Screenshot
<p>👉 In the previous section we manually changed the format of thresholds for an individual chart. In story preferences we can choose to sync apply this format across our entire story.</p> <p>14. Expand Default Threshold Style</p> <p>15. Click Color Values</p> <p>16. Click OK</p>	
<p>17. Click Apply</p>	<p>⚠ Warning</p> <p>The Story Preferences will be applied to all pages and tiles. Any custom styling you have done will be overwritten.</p> <p>Do you want to continue and apply these settings?</p> <p>Apply 17</p>
<p>⚠ Quality Check! Does your story look like this after Styling Preference changes? Next let's change the overall view of our story.</p>	
<p>👉 We want to remove the empty header in our top lane and create a summary lane with KPIs for our story that stands out.</p> <p>18. Right click the Title field in our top lane.</p> <p>19. Click Remove</p>	
<p>20. Click and Drag the Numeric Point Chart to the Right</p> <p>21. Drop the Numeric Point Chart Here</p>	

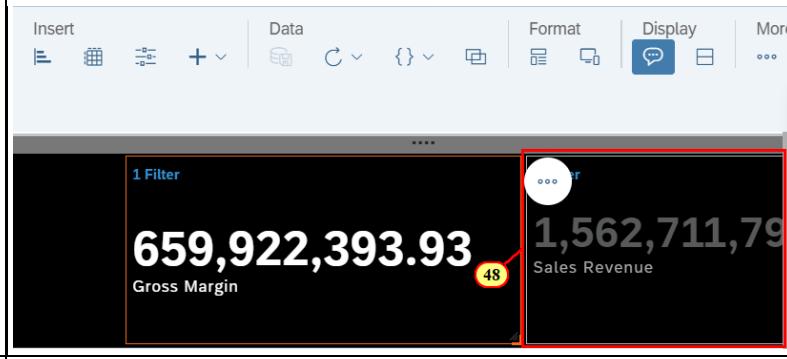
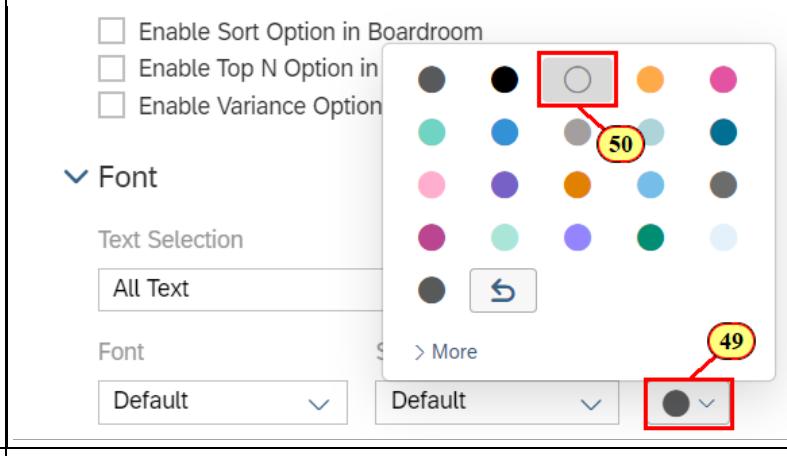
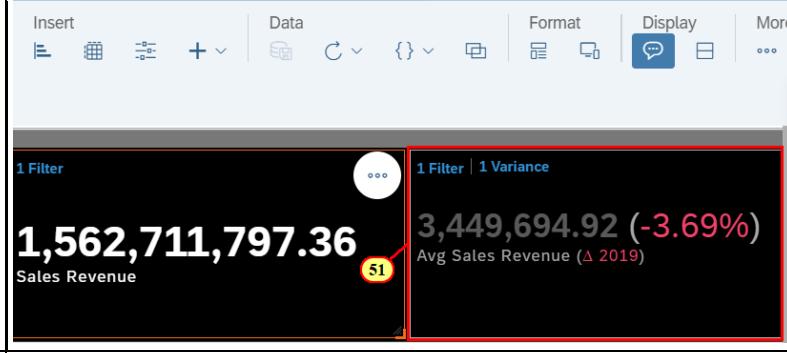
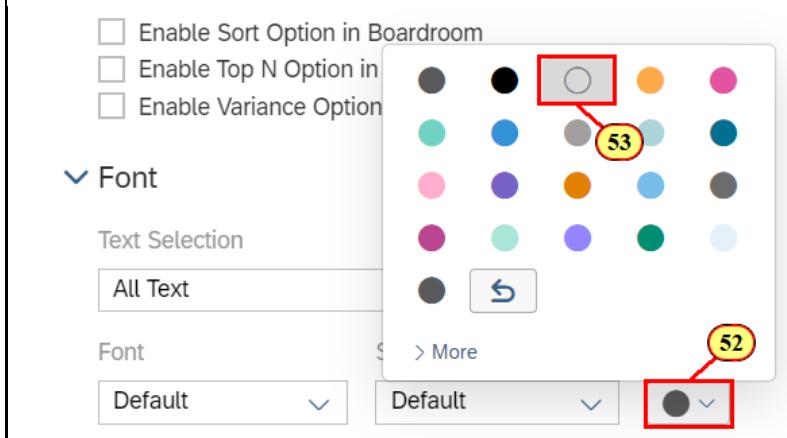
Explanation	Screenshot
<p>22. Click and Drag the Numeric Point Chart to the Right</p> <p>23. Drop the Numeric Point Chart Here</p>	
<p>24. Click and Drag the Numeric Point Chart to the Right</p> <p>25. Drop the Numeric Point Chart Here</p>	
<p></p> <p>We have created some space on the left of our top lane for corporate branding covered later in this section. Let's edit the charts on our dashboard to declutter the view.</p>	
<p>26. Hold Shift and Left Click the Three Numeric Point Charts</p>	
<p>27. Click More</p> <p></p> <p>We can choose to hide a variety of different details on our charts so only the important elements are visible. Let's hide the chart title for now.</p>	
<p>28. Click Show/Hide</p>	
<p>29. Deselect Chart Title</p>	
<p></p> <p>We can also easily customize the backgrounds of each lane to section our dashboard into logical segments. Let's accent our top lane to highlight the KPIs.</p> <p>30. Click Designer to Open the Styling Panel</p>	

Explanation	Screenshot
<p>31. Click the Top Lane with the Numeric Point Charts</p>	 <p>A screenshot of a data visualization interface. At the top, there's a toolbar with various icons. Below it is a header bar with 'Page 1' and some filters. The main area shows two large numerical values: '659,922,393.93' and '1,562,711,79'. Below these values are the labels 'Gross Margin' and 'Sales Revenue'. A red box highlights the top lane of the chart.</p>
<p>32. Click Styling Panel (in case not already selected)</p> <p>33. Click the Paint Bucket for Lane Styling Options</p> <p>34. Choose Black Color</p>	 <p>A screenshot of the 'Styling' panel. It has tabs for 'Page' and 'Lane'. Under 'Page', there's a 'Background' section with a 'Color' dropdown and a paint bucket icon. Under 'Lane', there's a 'Grid' section with a 'Solid Colors' palette. A red box highlights the paint bucket icon in the palette. A yellow circle with the number 32 points to the 'Styling' tab. A yellow circle with the number 33 points to the paint bucket icon. A yellow circle with the number 34 points to the black color swatch in the palette.</p>

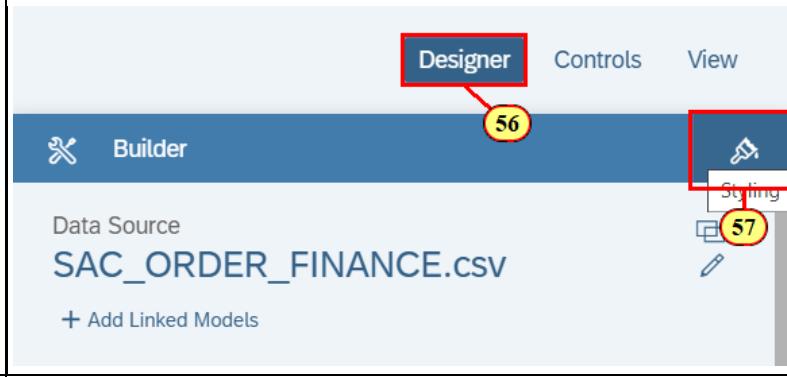
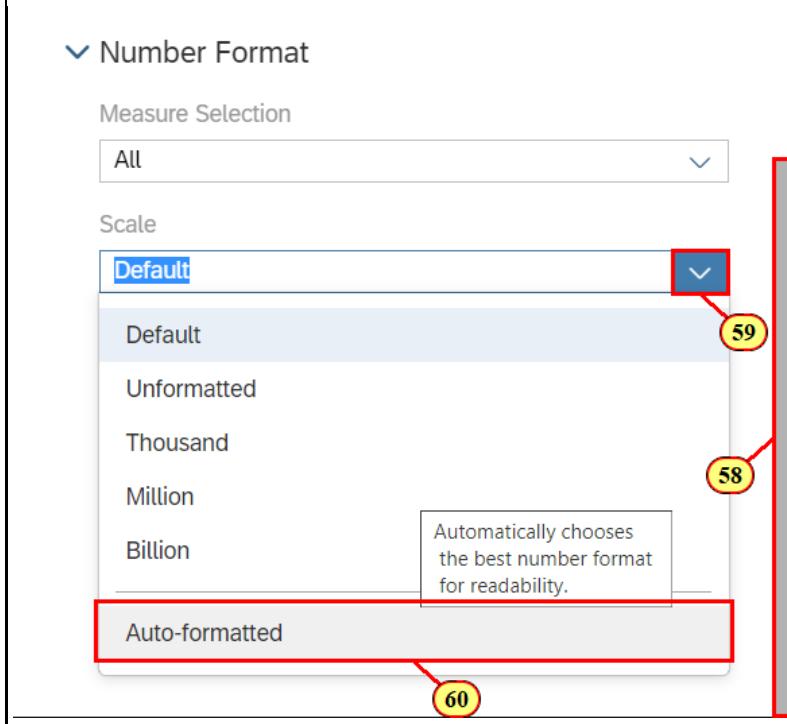
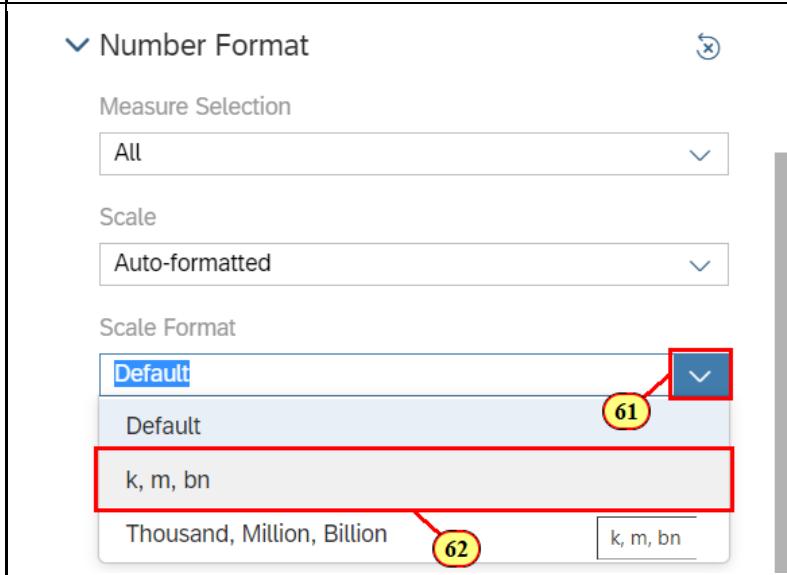
Explanation	Screenshot
<p> We can also change the background of the left lane to separate the input controls from visualizations.</p> <p>35. Click Left Lane</p>	
<p> Instead of using a solid color, we can apply a custom gradient to our story.</p> <p>36. Expand Lane Background Color</p> <p>37. Click Gradient</p>	

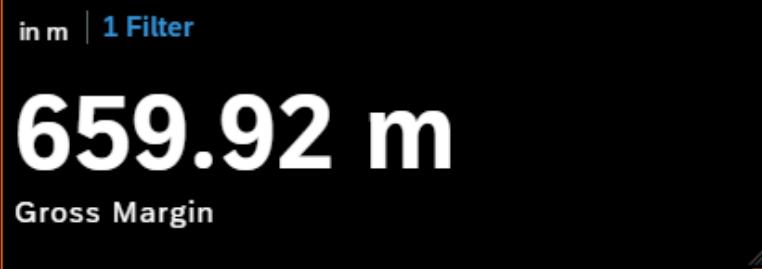
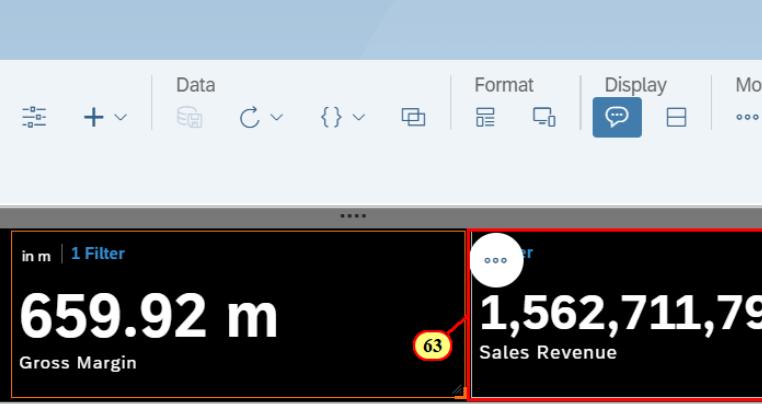
Explanation	Screenshot
<p>38. Click Gradients to expand</p> <p>39. Click Create New Gradient</p>	
<p>👉 In the gradient creation menu, users can apply specific colors on the gradient range or add additional swatches within the gradient.</p> <p>40. Click on first swatch</p> <p>41. Change hex to ccccce</p>	

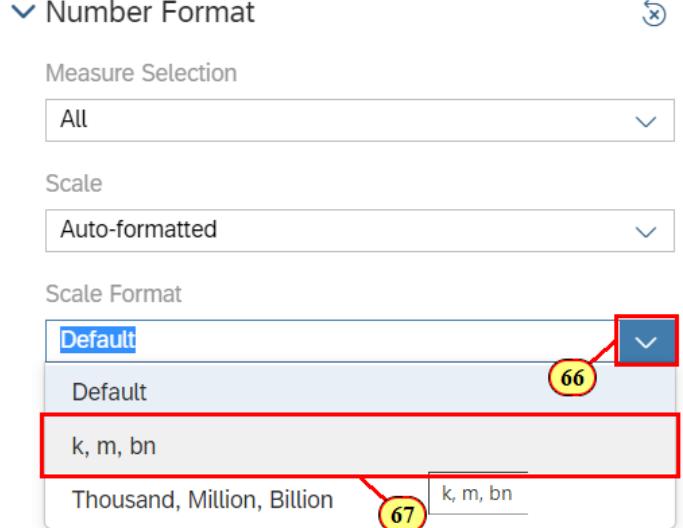
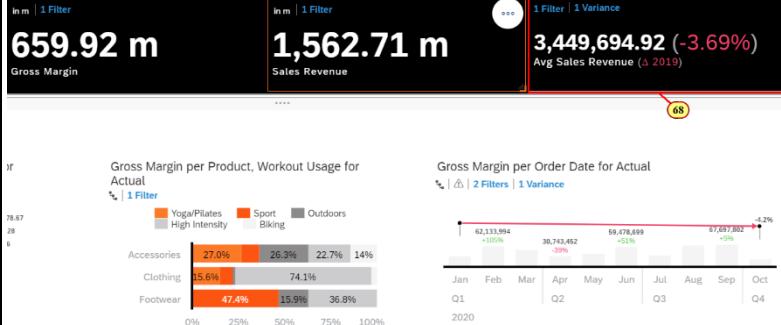
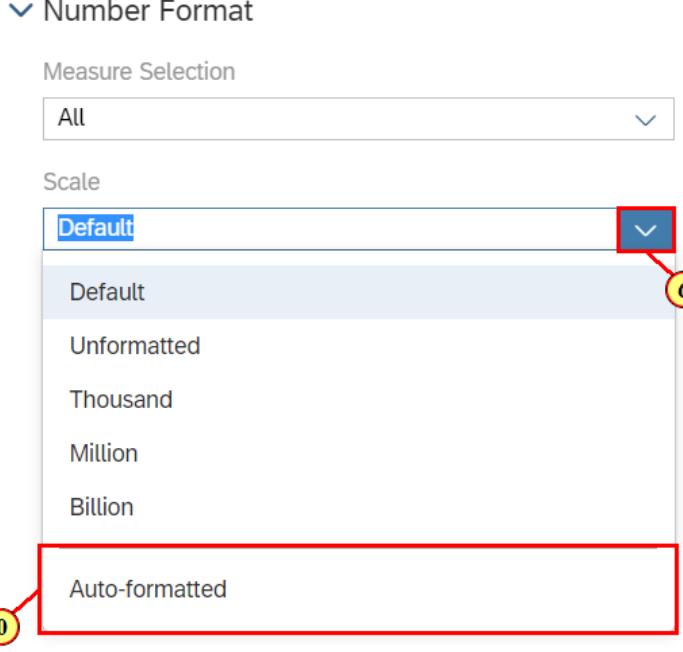
Explanation	Screenshot
<p>42. Click on second swatch</p> <p>43. Change hex to f2f2f2</p> <p>44. Click Create</p>	
<p>👉 Now our story has lanes that are clearly differentiated into logical segments. Utilizing background is a great way to enhance your dashboard for clarity. We can notice that the color of our KPIs do not stand out against the dark background. Let's change the font color so they are accented appropriately.</p> <p>45. Click on Gross Margin Numeric Point Chart</p>	
<p>46. Expand Font Colors</p> <p>47. Select the White Swatch</p>	

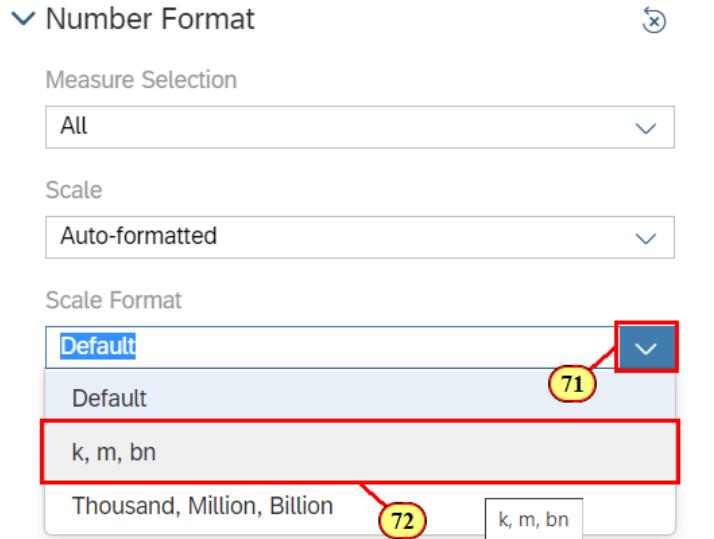
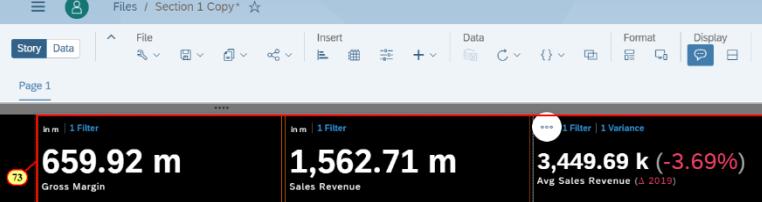
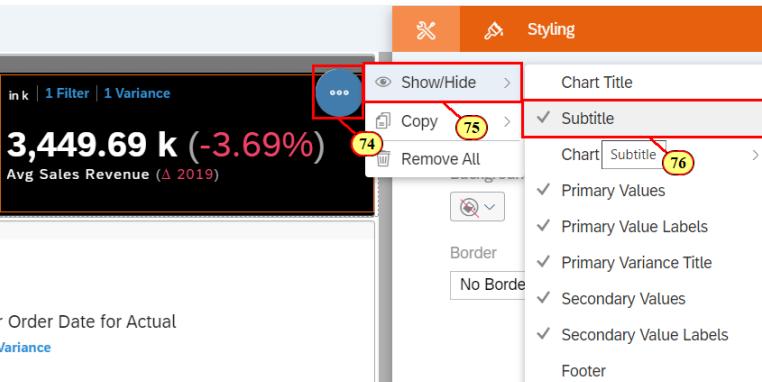
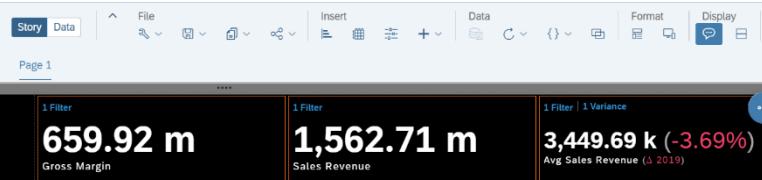
Explanation	Screenshot
48. Click on Sales Revenue numeric point chart	
49. Expand Font Colors 50. Select the White Swatch	
51. Click on Avg Sales Revenue numeric point chart	
52. Expand Font Colors 53. Select the White Swatch	

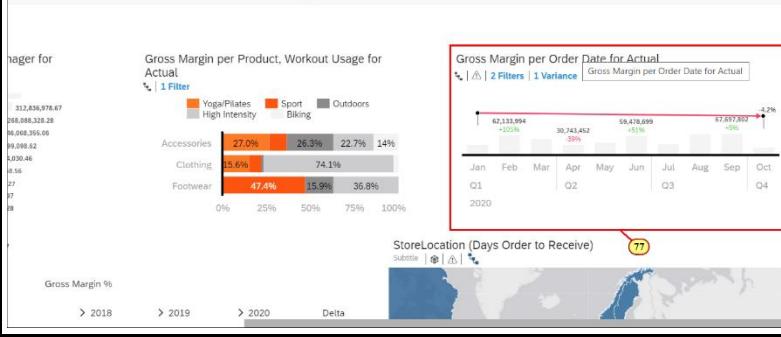
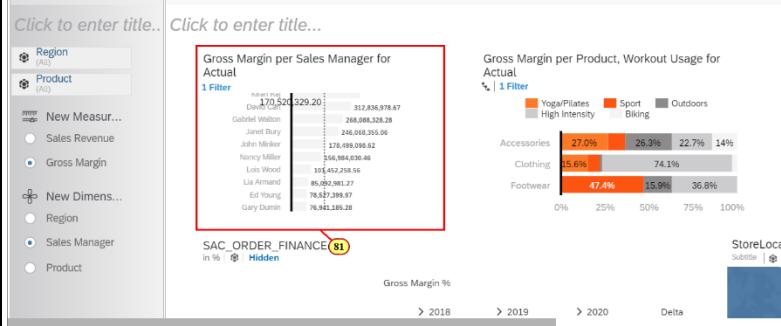
Explanation	Screenshot
<p>54. Resize your numeric point charts so they are smaller.</p>	
<p> In responsive pages, the story is divided into cells that are used to format the placement and size of all elements on the story. This enables the story view to be easily converted for viewing on a variety of device formats, including mobile. Users can choose to change the size and spacing between cells.</p>	
<p> Quality Check! Is your top lane more compact?</p> <p> We will also now resize the other charts in our story. It is recommended to leave white space in between charts for better visual clarity.</p>	
<p> After some resizing and moving charts, our story looks like this! There are still some details we can polish in our charts.</p>	
<p> Currently our KPIs are showing granular information. For better readability, we should reduce the number of significant digits. Let us format these numbers in our dashboard.</p> <p>55. Click the Gross Margin numeric point chart</p>	

Explanation	Screenshot
<p>56. Click Designer to Open the Builder Panel (in case it not already open)</p> <p>57. Switch to Styling Panel (in case not already open)</p>	 <p>The screenshot shows the SAC Builder interface. At the top, there's a navigation bar with 'Designer' (highlighted with a red box and yellow circle 56), 'Controls', and 'View'. Below the navigation is a toolbar with icons for 'Builder' (highlighted with a red box and yellow circle 57), 'Data Source' (SAC_ORDER_FINANCE.csv), and 'Add Linked Models'. The main area is titled 'Number Format' under 'Measure Selection' (set to 'All').</p>
<p>58. Scroll to the Bottom of the Styling Panel to Number Format</p> <p>👉 It is recommended to use auto-formatted scale for numbers in your dashboard as SAC will automatically adjust the scale based on the context of your data.</p> <p>59. Expand Scale</p> <p>60. Click Auto-formatted</p>	 <p>The screenshot shows the 'Number Format' settings. Under 'Scale', the 'Default' option is selected (highlighted with a red box and yellow circle 59). A tooltip explains: 'Automatically chooses the best number format for readability.' Below the dropdown, the 'Auto-formatted' option is highlighted with a red box and yellow circle 60.</p>
<p>👉 We also want to change the units of how our numbers are displayed in the chart. This will ensure that is easily readable for other story viewers in our company and keep the focus on the significant digits of our measures.</p> <p>61. Expand Scale Format</p> <p>62. Click k, m, bn</p>	 <p>The screenshot shows the 'Number Format' settings. Under 'Scale Format', the 'Default' option is selected (highlighted with a red box and yellow circle 61). Below it, the 'k, m, bn' option is highlighted with a red box and yellow circle 62.</p>

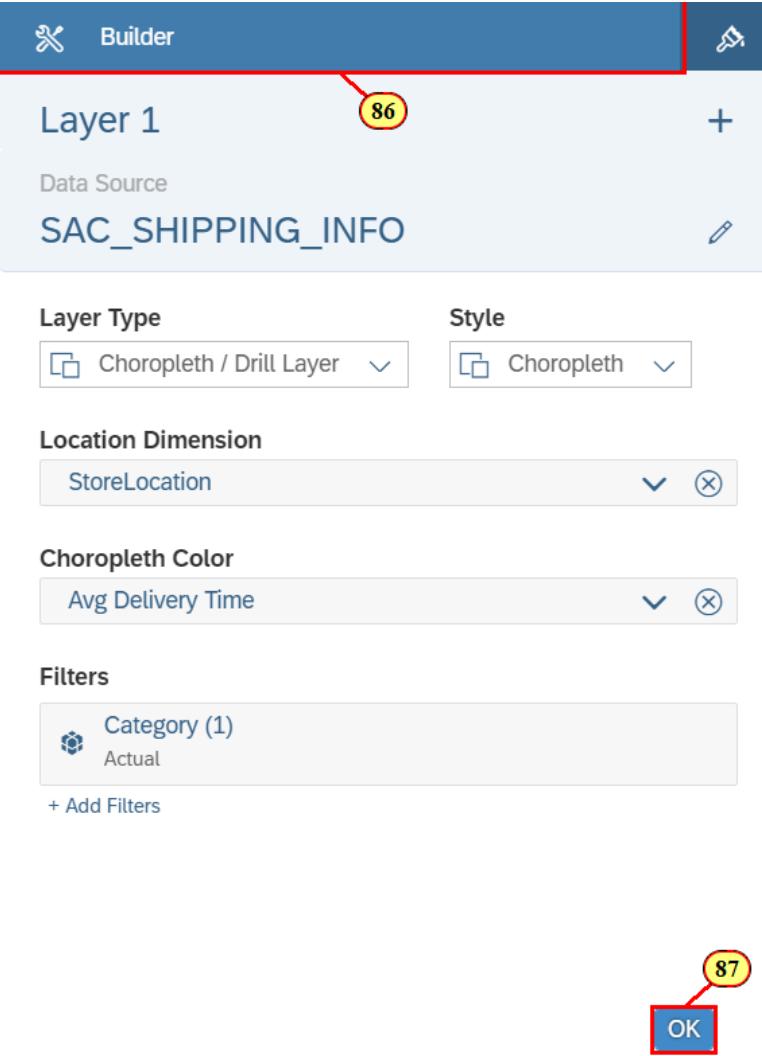
Explanation	Screenshot
<p> Quality check! Does your gross margin numeric point chart look like this after formatting changes?</p>	
<p>63. Click the Sales Revenue numeric point chart.</p>	
<p>64. Expand Scale 65. Click Auto-formatted</p>	<p>Number Format</p> <p>Measure Selection: All</p> <p>Scale:</p> <ul style="list-style-type: none"> Default (highlighted) Unformatted Thousand Million Billion Auto-formatted (highlighted with a red box) <p>Annotations: Red circle '63' points to the Sales Revenue chart; red circle '64' points to the 'Default' scale option; yellow circle '65' points to the 'Auto-formatted' scale option.</p>

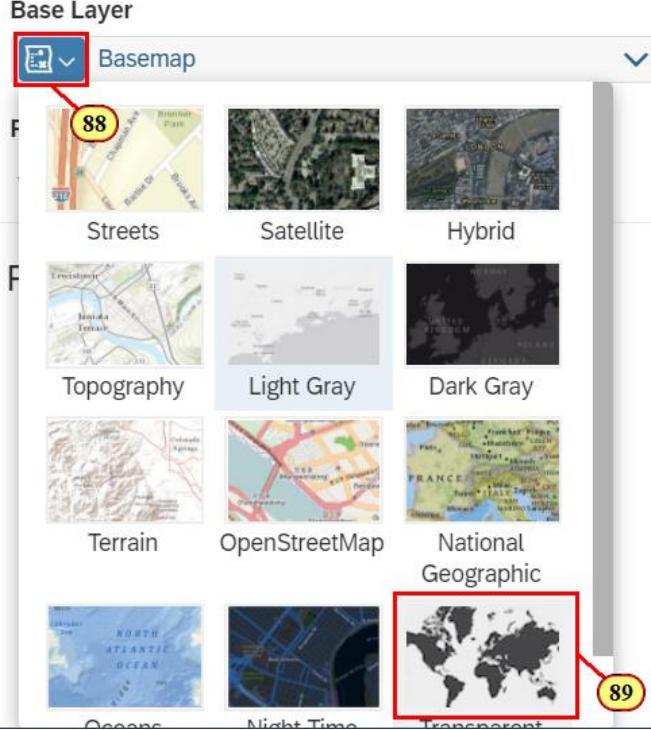
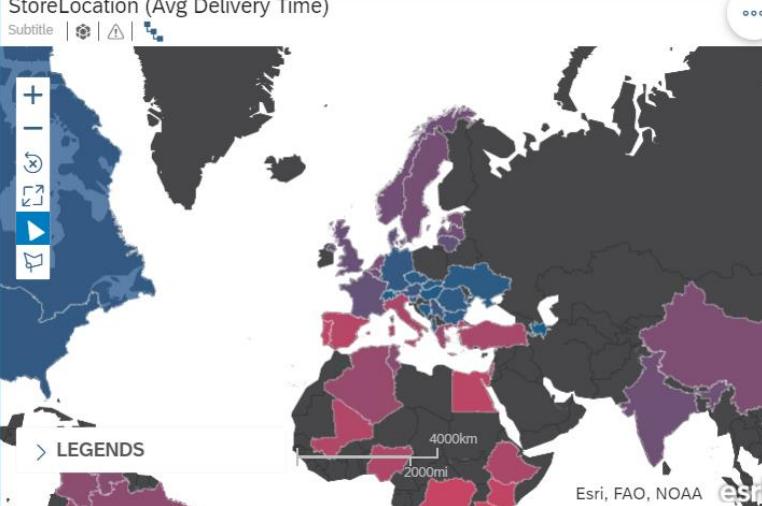
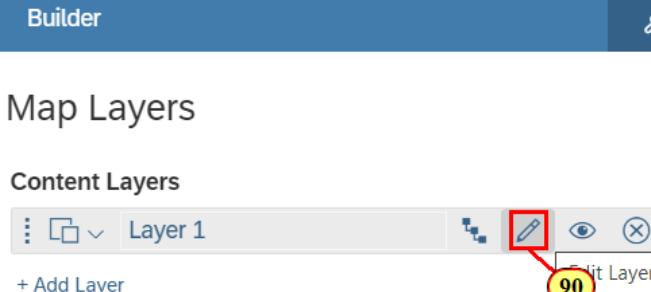
Explanation	Screenshot
<p>66. Expand Scale Format</p> <p>67. Click k, m, bn</p>	
<p>68. Click the Avg Sales Revenue numeric point chart</p>	
<p>69. Expand Scale</p> <p>70. Click Auto-formatted</p>	

Explanation	Screenshot
<p>71. Expand Scale Format</p> <p>72. Click k, m, bn</p>	
<p>Now that we have formatted our KPIs, we can hide any redundant information in our charts.</p> <p>73. Hold Shift and Left Click the Three Numeric Point Charts</p>	
<p>74. Click More Actions</p> <p>75. Click Show/Hide</p> <p>76. Deselect Subtitle</p>	
<p>⚠️ Quality check! Do your numeric point charts look like this screenshot?</p>	

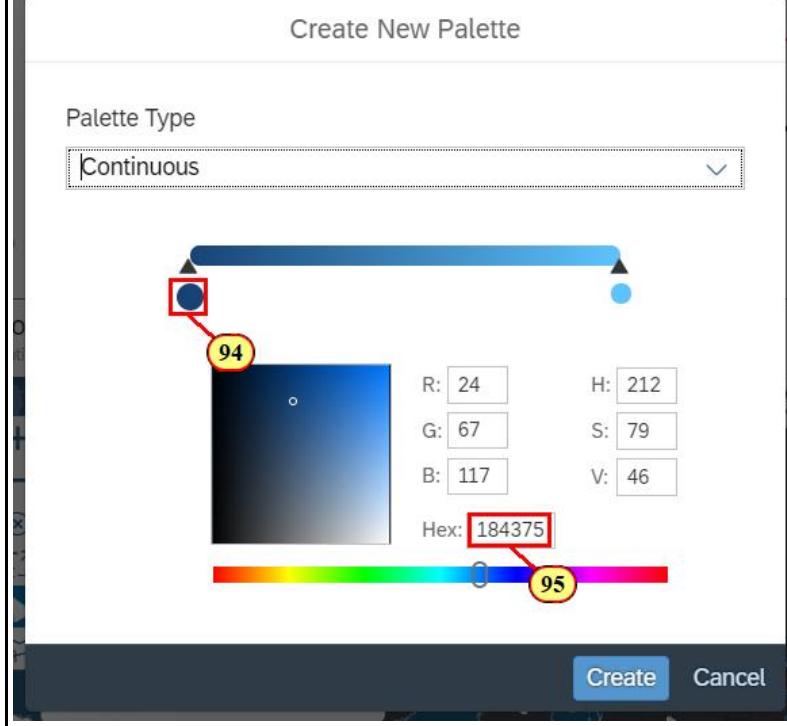
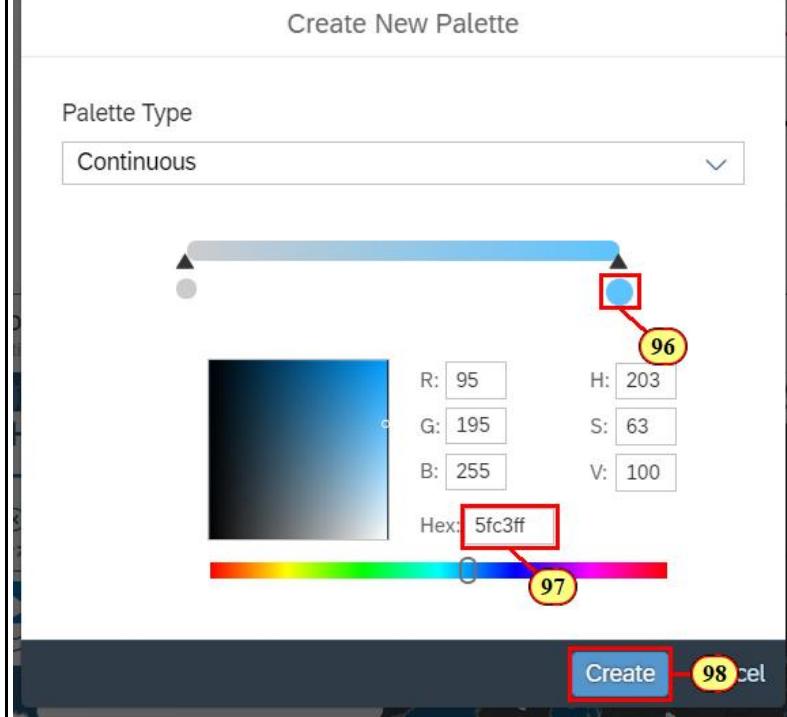
Explanation	Screenshot																				
<p></p> <p>Let us now improve the number formatting for our other charts to improve the readability for our story viewers. First, change the formatting for our time series chart.</p> <p>77. Click Gross Margin per Order Date for Actual Chart</p>																					
<p>78. Scroll till Number Format is Visible</p> <p>79. Expand Scale</p> <p>80. Click Auto-formatted</p>	<p>▼ Number Format</p> <p>Scale</p> <p>Unformatted 77</p> <p>Unformatted 79</p> <p>Thousand</p> <p>Million</p> <p>Billion</p> <p>Auto-formatted 80</p> <p>Automatically chooses the best number format for readability.</p> <p>▼ Legend 78</p>																				
<p></p> <p>Next, change the formatting on our bar chart for sales manager metrics.</p> <p>81. Click Gross Margin per Sales Manager chart.</p>	 <table border="1"> <caption>Gross Margin per Sales Manager for Actual</caption> <thead> <tr> <th>Sales Manager</th> <th>Gross Margin</th> </tr> </thead> <tbody> <tr><td>Daniel Wilson</td><td>120,520,329.20</td></tr> <tr><td>Gabriel Walton</td><td>312,836,978.67</td></tr> <tr><td>Jane May</td><td>268,088,328.28</td></tr> <tr><td>John Miller</td><td>264,060,355.06</td></tr> <tr><td>Honey Miller</td><td>176,491,462.62</td></tr> <tr><td>Lois Wood</td><td>356,884,336.46</td></tr> <tr><td>Lis Armand</td><td>85,920,961.77</td></tr> <tr><td>Ed Young</td><td>76,827,399.97</td></tr> <tr><td>Gary Dunn</td><td>76,942,186.28</td></tr> </tbody> </table>	Sales Manager	Gross Margin	Daniel Wilson	120,520,329.20	Gabriel Walton	312,836,978.67	Jane May	268,088,328.28	John Miller	264,060,355.06	Honey Miller	176,491,462.62	Lois Wood	356,884,336.46	Lis Armand	85,920,961.77	Ed Young	76,827,399.97	Gary Dunn	76,942,186.28
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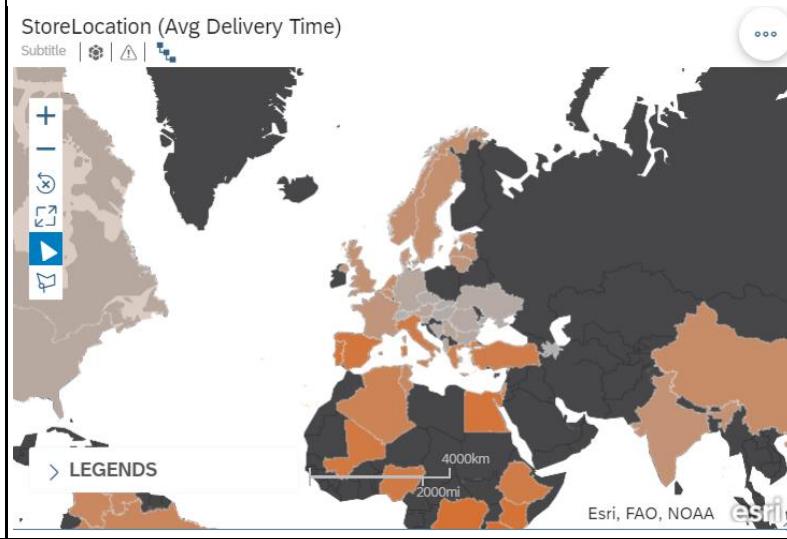
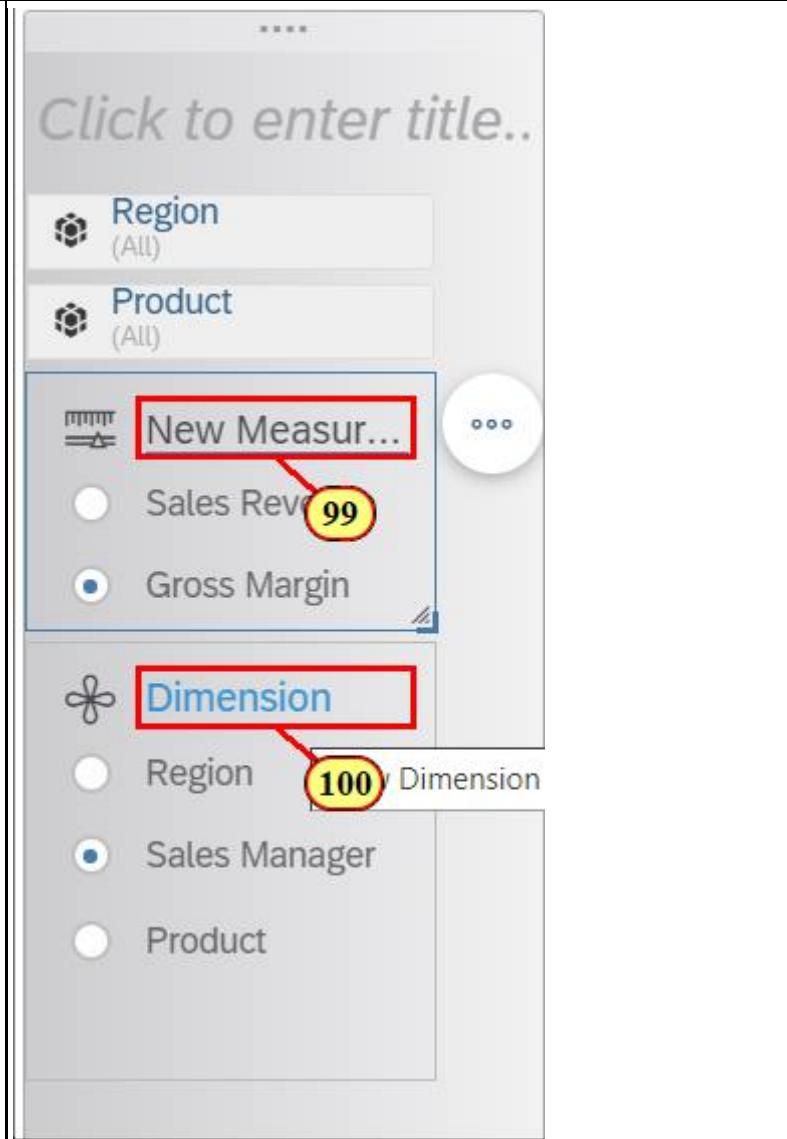
Explanation	Screenshot																																																																											
<p>82. Scroll till Number Format is Visible</p> <p>83. Expand Scale</p> <p>84. Click Auto-formatted</p>	<p>▼ Number Format</p> <p>Scale</p> <p>Unformatted</p> <p>Unformatted</p> <p>Thousands</p> <p>Millions</p> <p>Billions</p> <p>Auto-formatted</p> <p>Automatically chooses the best number format for readability.</p> <p>83</p> <p>84</p> <p>82</p> <p>▼ Legend</p>																																																																											
<p>👉 We will now look at editing our Geo Map visualization to fit the styling of the rest of our story.</p> <p>85. Click the Geo Map</p>	<p>CE.csv</p> <table border="1"> <thead> <tr> <th></th> <th>> 2018</th> <th>> 2019</th> <th>> 2020</th> <th>Delta</th> </tr> </thead> <tbody> <tr><td>net Bury</td><td>38</td><td>38</td><td>39</td><td>1</td></tr> <tr><td>Jerry Dumin</td><td>37</td><td>37</td><td>38</td><td>1</td></tr> <tr><td>James Frank</td><td>23</td><td>24</td><td>26</td><td>2</td></tr> <tr><td>Wes Wood</td><td>32</td><td>33</td><td>35</td><td>1</td></tr> <tr><td>Inn Minker</td><td>34</td><td>36</td><td>37</td><td>1</td></tr> <tr><td>Andy Miller</td><td>37</td><td>36</td><td>37</td><td>1</td></tr> <tr><td>David Carl</td><td>38</td><td>37</td><td>39</td><td>2</td></tr> <tr><td>J Young</td><td>35</td><td>35</td><td>40</td><td>5</td></tr> <tr><td>Ian Raj</td><td>37</td><td>37</td><td>39</td><td>2</td></tr> <tr><td>Sabriel Walton</td><td>40</td><td>40</td><td>41</td><td>1</td></tr> <tr><td>Is Armand</td><td>32</td><td>32</td><td>33</td><td>1</td></tr> <tr><td>net Bury</td><td>36</td><td>35</td><td>39</td><td>4</td></tr> <tr><td>Jerry Dumin</td><td>33</td><td>32</td><td>37</td><td>5</td></tr> <tr><td>James Frank</td><td>12</td><td>13</td><td>16</td><td>3</td></tr> </tbody> </table> <p>Accessories</p> <p>Clothing</p> <p>Footwear</p> <p>StoreLocation (Avg Delivery Time)</p> <p>LEGENDS</p> <p>85</p>		> 2018	> 2019	> 2020	Delta	net Bury	38	38	39	1	Jerry Dumin	37	37	38	1	James Frank	23	24	26	2	Wes Wood	32	33	35	1	Inn Minker	34	36	37	1	Andy Miller	37	36	37	1	David Carl	38	37	39	2	J Young	35	35	40	5	Ian Raj	37	37	39	2	Sabriel Walton	40	40	41	1	Is Armand	32	32	33	1	net Bury	36	35	39	4	Jerry Dumin	33	32	37	5	James Frank	12	13	16	3
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Explanation	Screenshot
<p>86. Switch to Builder Panel</p> <p>87. Click OK to move out of Builder for Layer 1.</p>	 <p>The screenshot shows the Tableau Builder interface. At the top, there's a blue header bar with the 'Builder' tab selected. Below it, the main area is titled 'Layer 1'. To the right of the title is a small yellow circle containing the number '86'. Underneath the title, it says 'Data Source' followed by 'SAC_SHIPPING_INFO' with a pencil icon. In the center, there are two dropdown menus: 'Layer Type' set to 'Choropleth / Drill Layer' and 'Style' set to 'Choropleth'. Below these are sections for 'Location Dimension' (set to 'StoreLocation') and 'Choropleth Color' (set to 'Avg Delivery Time'). At the bottom, there's a 'Filters' section with a single item 'Category (1) Actual' and a '+ Add Filters' link. Finally, at the bottom right is a blue 'OK' button with a yellow circle containing the number '87' pointing to it.</p>

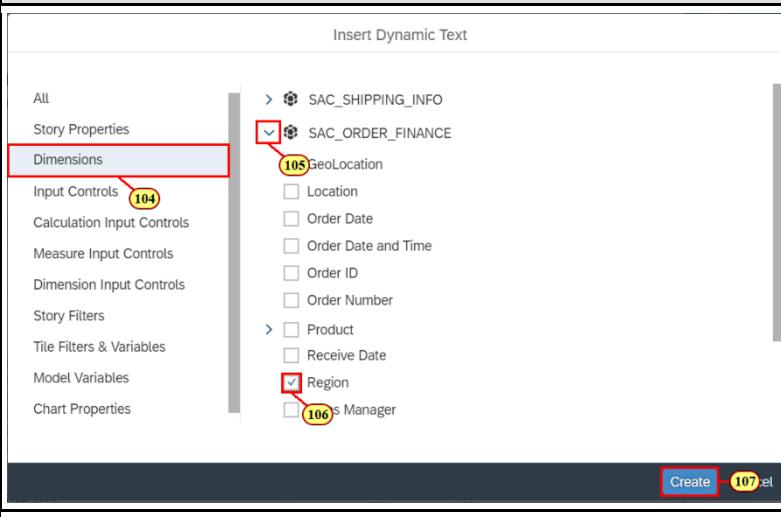
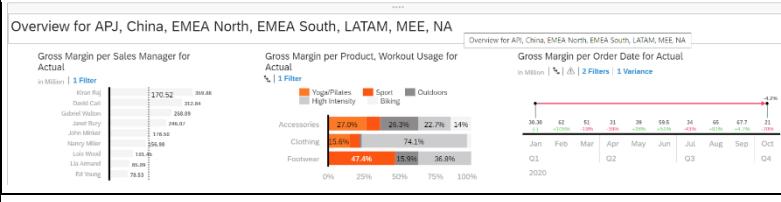
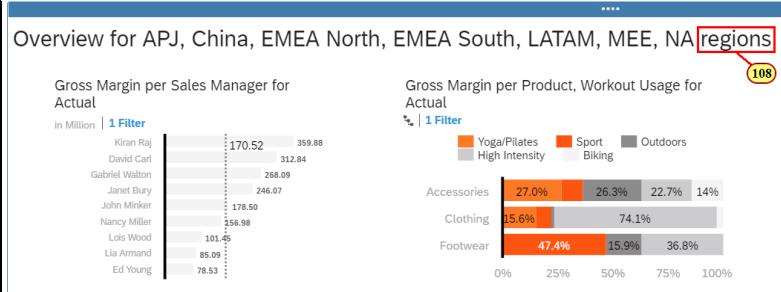
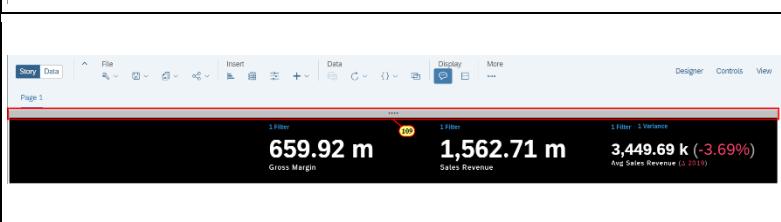
Explanation	Screenshot
<p>Depending on the geo visualization layer and your data, there are a variety of different basemap types that can be applied to your geo map to best represent your data. We will choose a darker layout.</p> <p>88. Expand Basemap Options 89. Click Transparent Dark Gray</p>	
<p>⚠️ Quality check! Our geo map should look like this screenshot after the basemap change.</p> <p>👉 Let us theme the choropleth layer data to be colored with a more accurate gradient.</p>	
<p>90. Click Edit Layer</p>	

Explanation	Screenshot
<p>Let's create a custom gradient for the choropleth colors that matches the corporate colors we chose for our story.</p> <p>91. Click Expand on Avg Delivery Time</p> <p>92. Click Expand Palette</p> <p>93. Click Add New Gradient</p>	<p>The screenshot shows the ArcGIS Pro ribbon with the 'Builder' tab selected. A context menu is open over a layer named 'Layer 1'. The menu includes options for 'Controls', 'View', and a 'Choropleth' button. A red box highlights the 'Choropleth' button with the number 93. Below the menu, a palette is open for 'Avg Delivery Time'. The palette shows a color bar labeled 'Palette:' with a gradient from blue to red. A red box highlights the '80%' opacity slider with the number 92. Another red box highlights the 'Add New Gradient' button in the palette with the number 91. The palette also includes a 'Ranges:' dropdown set to '1', a percentage input field, and an 'OK' button at the bottom.</p>

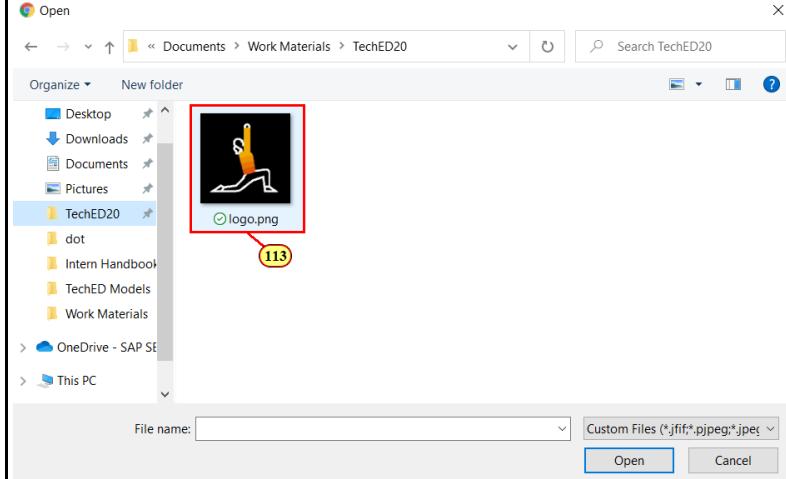
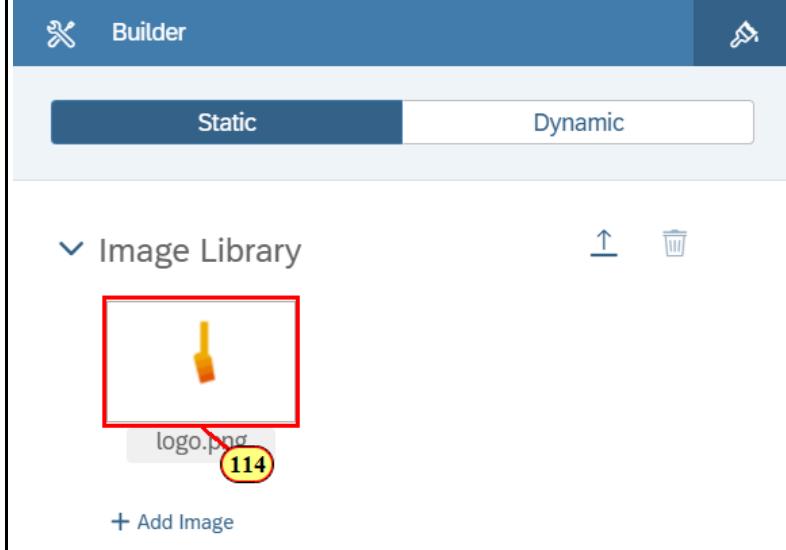
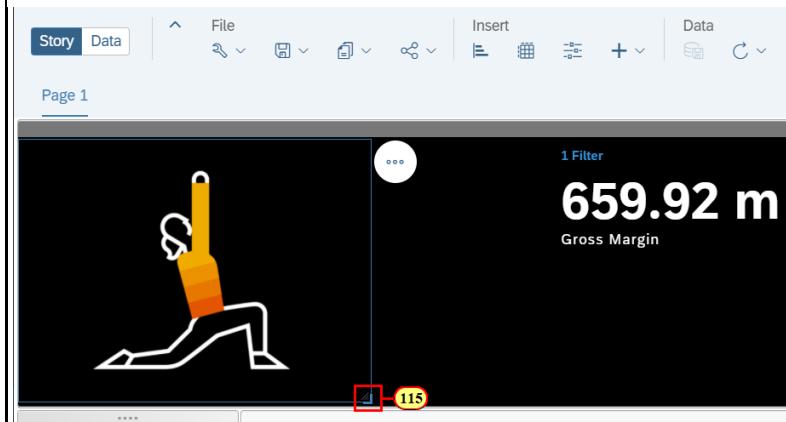
Explanation	Screenshot
<p>94. Click the first swatch 95. Change the hex to ccccce</p>	 <p>Create New Palette</p> <p>Palette Type: Continuous</p> <p>R: 24 H: 212 G: 67 S: 79 B: 117 V: 46</p> <p>Hex: 184375</p> <p>Create Cancel</p>
<p>96. Click the second swatch 97. Change the hex to fc7928 98. Click Create</p>	 <p>Create New Palette</p> <p>Palette Type: Continuous</p> <p>R: 95 H: 203 G: 195 S: 63 B: 255 V: 100</p> <p>Hex: 5fc3ff</p> <p>Create Cancel</p>

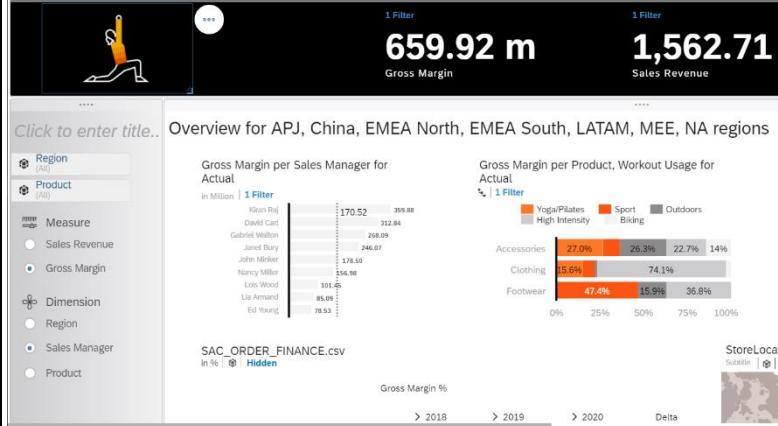
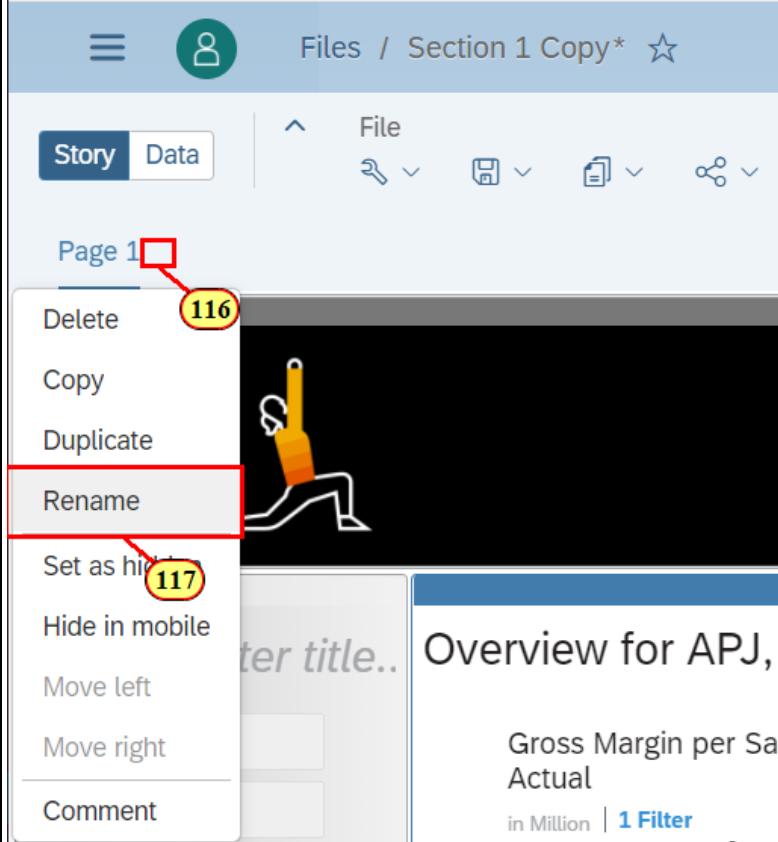
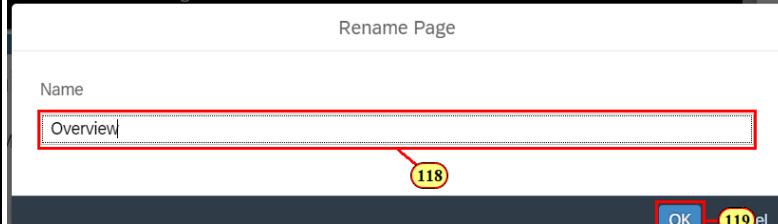
Explanation	Screenshot
<p>⚠️ Quality Check! Does your Geo Map look like this screenshot?</p>	
<p>👉 Next, we will look at formatting text and titles on our story. Let us first rename our input controls by double-clicking on their name.</p> <p>99. Rename New Measure Input Control to Measure</p> <p>100. Rename New Dimension Input Control to Dimension</p>	

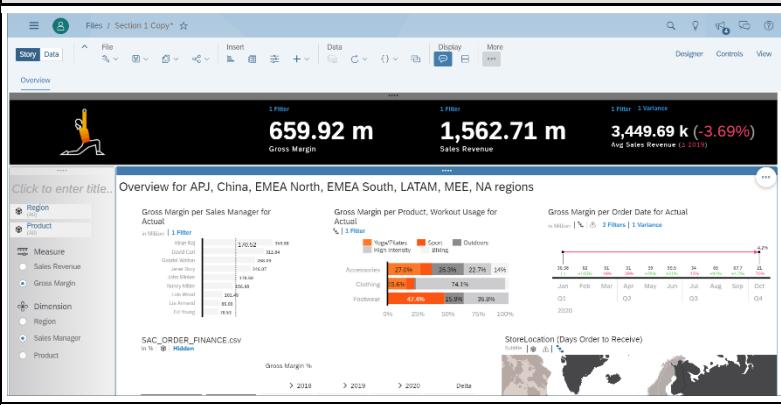
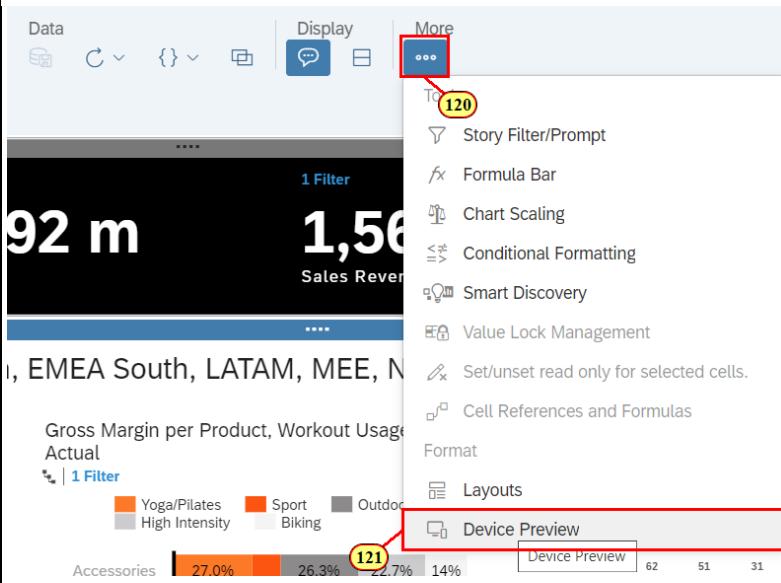
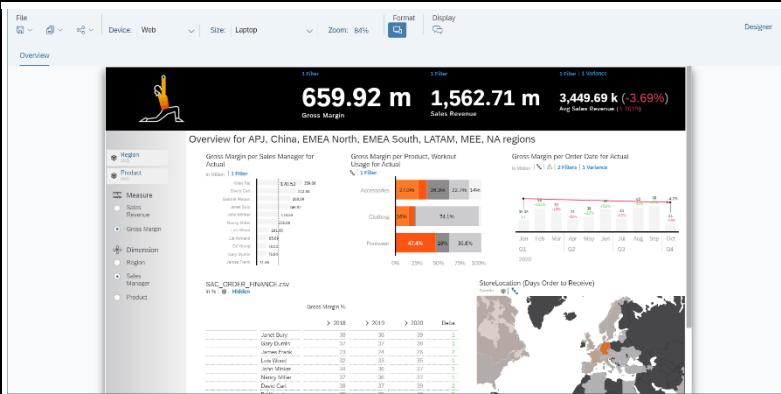
Explanation	Screenshot
<p>👉 We can add a dynamic text title for our lane of charts so other analysts viewing our story can quickly understand the context of our visualizations. Let us add a title for the chart section that dynamically represents the data presented.</p> <p>101. Rename Click to Enter Title... to Overview for</p>	
<p>👉 We can now create a dynamic text field that updates with input control selection.</p> <p>102. Right Click Inside the Header to Open the Context Menu</p> <p>103. Click Dynamic Text</p>	
<p>👉 Welcome to Dynamic Text!</p> <p>Dynamic text can be created in your story and are automatically updated based on the selected filters or input controls specified in this menu. This means that your story dashboard will automatically update with headers and titles suited to the context of your data.</p> <p>Let us create a dynamic text based on the region filter we have applied on the page.</p>	

Explanation	Screenshot
<p>104. Click Dimensions</p> <p>105. Expand SAC_ORDER_FINANCE</p> <p>106. Select Region</p> <p>107. Click Create</p>	
<p>👉 You have just created your first Dynamic Text. This text field will automatically update with the Page Filters applied on Region.</p>	
<p>108. Add Regions at the End of the Header</p>	
<p>💡 Let's add a corporate logo to finalize the look of our dashboard!</p> <p>109. Click the Top Lane with the Numeric Point Charts</p>	

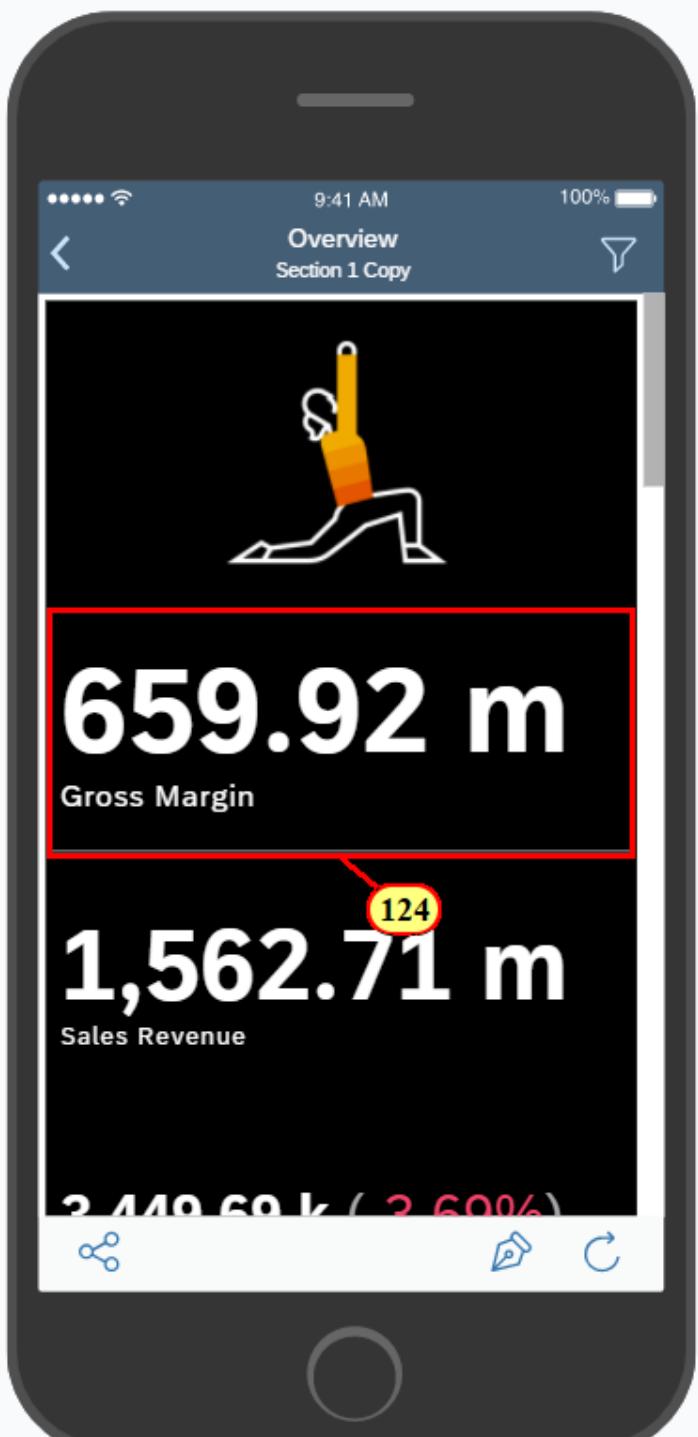
Explanation	Screenshot
<p>110. Click Add</p> <p>111. Click Image</p>	<p>The screenshot shows the 'Insert' menu open. The 'Add' button is highlighted with a red box and a yellow circle containing the number 110. A red box highlights the 'Image' option in the dropdown menu, which is also circled with a yellow 111. Other options visible include Geomap, Text, Header, Clock, Comment Widget, RSS Reader, Web Page, Value Driver Tree, Data Action Trigger, BPC Planning Sequence, R Visualization, and Symbol.</p>
<p> We want to upload a company logo from local files to our story. For best performance, it is recommended to use vector images.</p> <p>112. Click Upload in the Builder panel.</p>	<p>The screenshot shows the 'Builder' panel with the 'Image Library' section expanded. A red box highlights the 'Upload' button, which is circled with a yellow 112. Below the library, there is a '+ Add Image' button.</p>

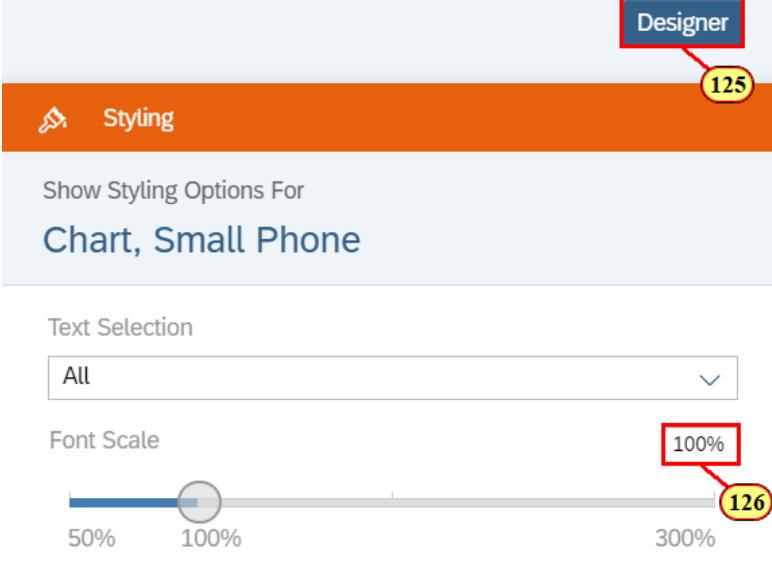
Explanation	Screenshot
<p>113. Select logo.png. You can find this file on the GitHub page for this workshop under teched2020-ANA161 / exercises /</p>	
<p>114. Click logo.png</p>	
<p>115. Resize the Image as Tall as the Numeric Point Charts</p>	

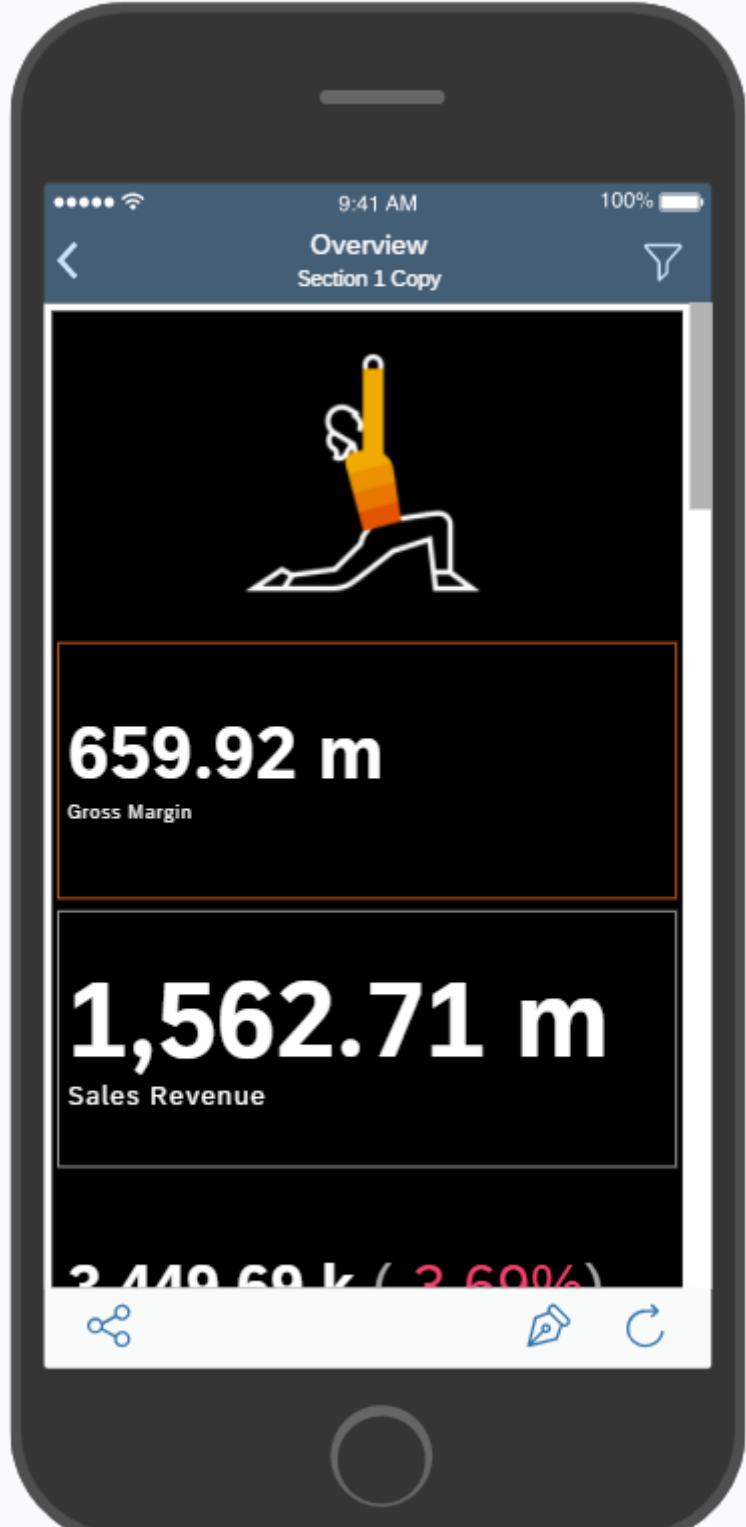
Explanation	Screenshot
<p>Our page looks great with all the styling changes we have made. We should now rename the page in our story accordingly.</p> 	
<p>116. Click Expand on Page 1</p> <p>117. Click Rename</p>	
<p>118. Rename the story page Overview</p> <p>119. Click OK</p>	

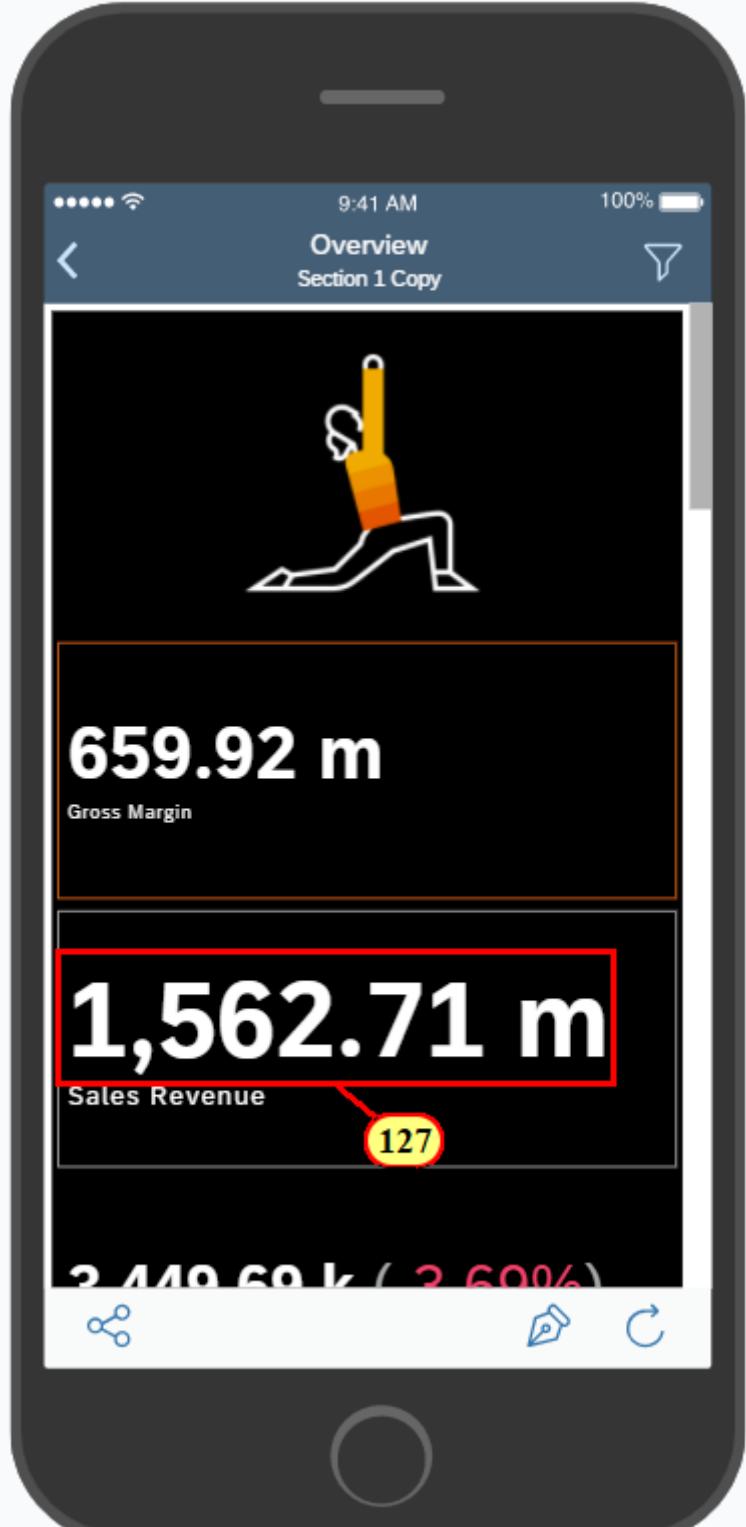
Explanation	Screenshot
<p>👉 Now that we have stylized our story, users can choose to preview their responsive page in a variety of device formats. We know that our executives will be consuming this dashboard on multiple devices. Thus, we want to make sure the dashboard looks great when displayed on mobile.</p>	
<p>120. Click More</p> <p>121. Click Device Preview</p>	
<p>💡 Welcome to Device Preview!</p> <p>From the preview screen, you can change the device or size to see how your page looks. In some cases, tiles resize and flow to fit smaller resolution screens when space becomes limited.</p>	

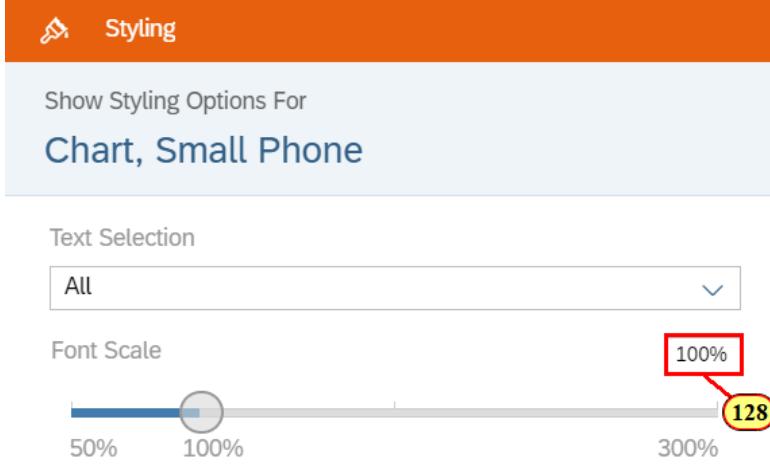
Explanation	Screenshot
<p>👉 Let us test our dashboard on an iOS device.</p> <p>122. Click Expand Device</p> <p>123. Click iOS</p>	 <p>The screenshot shows a user interface for testing a dashboard across different devices. At the top, there's a 'Device' dropdown menu set to 'Web'. To its right is a 'Size' dropdown set to 'Laptop'. Below these are three options: 'Web', 'iOS', and 'Android'. The 'iOS' option is highlighted with a red box and a yellow circle containing the number '122'. The 'Android' option is also highlighted with a red box and a yellow circle containing the number '123'. The background of the interface features a stylized illustration of a person's legs and feet.</p>

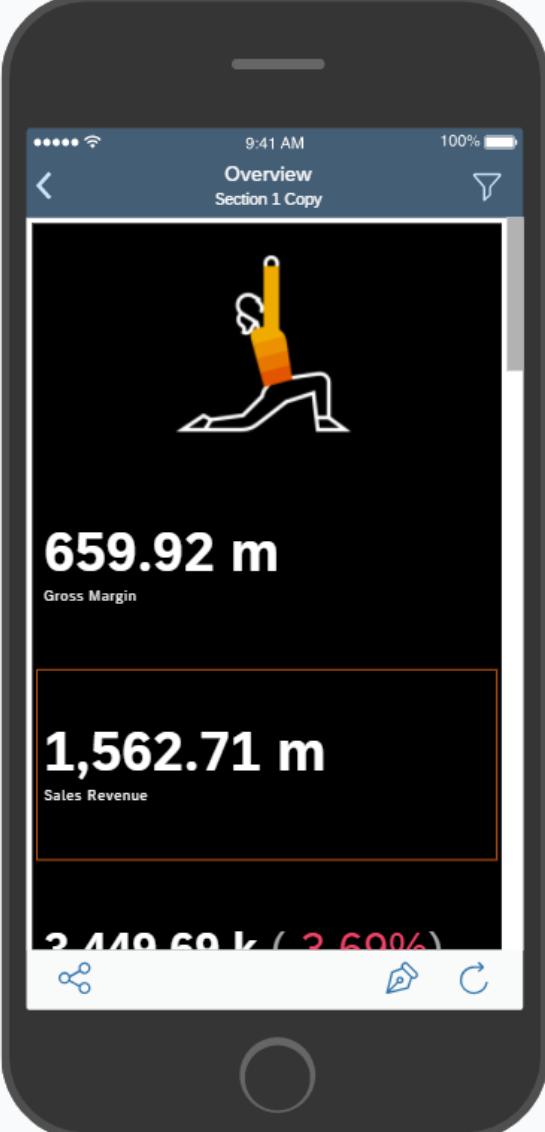
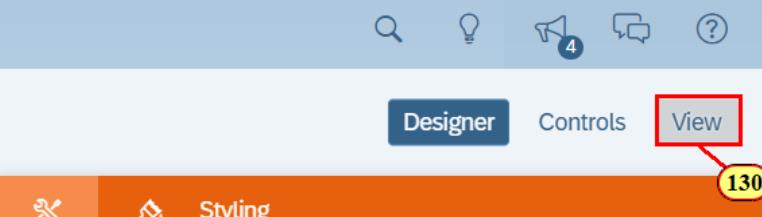
Explanation	Screenshot
<p>👉 We can see that the numeric point charts on iOS are larger than necessary. Let's fix the size in the Designer panel.</p> <p>124. Click the numeric point chart.</p>	

Explanation	Screenshot
<p>125. Click Designer</p> <p>👉 We can change the font scaling for individual charts. All changes will only be reflected in the specified device format and do not change the original story.</p> <p>126. Change the Font Scale from 100% to 80%</p>	 <p>The screenshot shows the 'Styling' interface for a chart on a small phone. At the top, there's a blue 'Designer' button with a red box and yellow circle labeled 125. Below it, the text 'Show Styling Options For Chart, Small Phone' is displayed. Under 'Text Selection', there's a dropdown menu set to 'All'. In the 'Font Scale' section, a slider is positioned at 100%, which is highlighted with a red box and yellow circle labeled 126. The slider scale also includes 50% and 300%.</p>

Explanation	Screenshot
<p> Quality check! Has your numeric point chart become downscaled to better fit the mobile view?</p>	 <p>The screenshot shows a mobile application interface. At the top, the status bar displays signal strength, 9:41 AM, and 100% battery. Below the status bar, the navigation bar reads "Overview" and "Section 1 Copy". The main content area features a small graphic of a person running. Below the graphic, the value "659.92 m" is displayed in large white text, with "Gross Margin" written in smaller text below it. Further down, another large value "1,562.71 m" is shown in white text, with "Sales Revenue" written in smaller text below it. At the bottom of the screen, there is a partially visible red text "2,449.69 k (-2.60%)". The bottom of the phone shows standard iOS-style icons for sharing, editing, and deleting.</p>

Explanation	Screenshot
127. Click the second numeric point chart.	 <p>659.92 m Gross Margin</p> <p>1,562.71 m Sales Revenue</p> <p>127</p>

Explanation	Screenshot
128. Change the Font Scale from 100% to 80%	 <p>Show Styling Options For Chart, Small Phone</p> <p>Text Selection</p> <p>Font Scale</p> <p>100% 128</p> <p>50% 100% 300%</p>

Explanation	Screenshot
<p>👉 We have now customized the scaling of our story for a specific platform (Small iOS Phones). Does your story look like this screenshot in Device Preview?</p>	
<p>129. Click Device Preview to leave this view.</p>	
<p>👉 Story creators can also easily swap to view mode on the top right. This enables the user to see what viewer behavior is like on the story page with input controls and Explorer view.</p> <p>130. Click View Mode</p>	

Explanation	Screenshot
<p>⚠️ Quality Check! Does your dashboard look like this screenshot after theme and styling?</p> <p>⚠️ Please save your story by pressing Ctrl + S on your keyboard!</p>	
<p>💡 You have now completed Theme and Style section! In this section, we have learned how to apply overall style changes in story preferences, hide and show chart features, change lane and font colors, auto format numbers, apply visual changes to geo maps, create dynamic text in our story, add external images, and edit the scaling of our story on different device formats.</p>	

Summary

You have completed the entire **Theme and Style** section!

You should now be able to:

- Use the styling panel
- Simplify your visualisations by hiding unnecessary information
- Add an image or a logo to your dashboard
- Use Device Preview to preview your analytical content across various devices and screen sizes (i.e. Laptop, Tablet, Phone)

Bookmarking and Sharing of a Story



This section builds on top of another section. If you did not complete the previous section, please select “**Section 4 – Theme and Style**” from the “**Public/TechEd**” folder and click **Copy To** your directory. You will then be able to edit this story to complete the following exercise.



Objective: Collaborate with your colleagues by sharing your dashboard and setting up discussion points within SAP Analytics Cloud.

Estimated Time: 12 mins

Exercise Description: As a business analyst and content creator, you have finished creating your dashboard. You now need to share your dashboard with your colleagues. To help your colleagues be effective from the moment you share the dashboard, you can customize their view via bookmarks. Make sure to collect feedback from your colleagues about the dashboard before the executive meeting!

Key Features:

- Create global and private bookmarks to create alternate views of the Story
- Share a Story with other users
- Learn how to create comments and @mentions
- Start a discussion with your colleagues to track key decisions



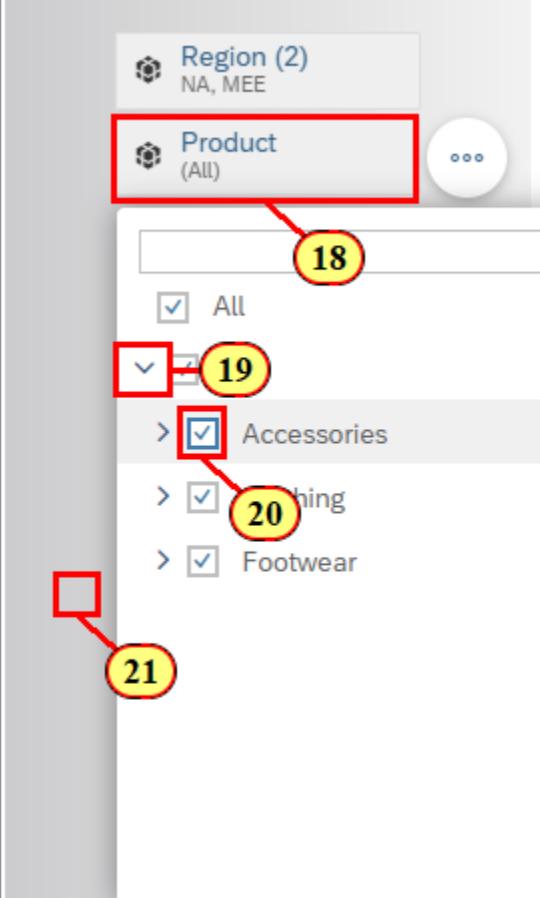
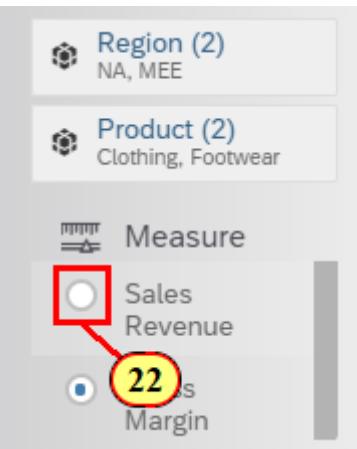
Disclaimer

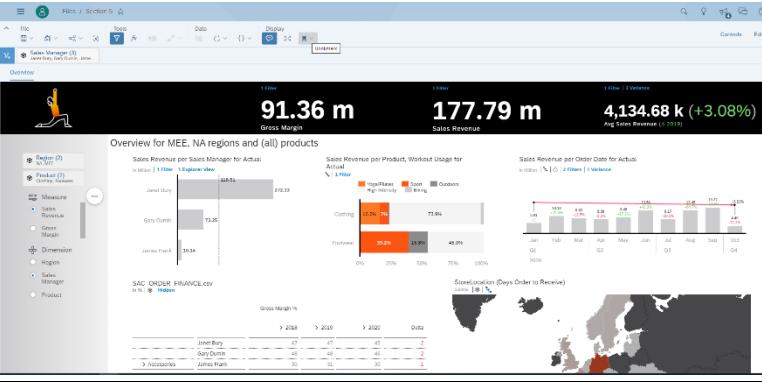
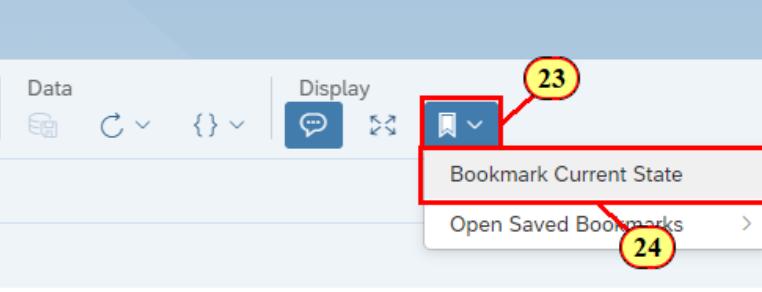
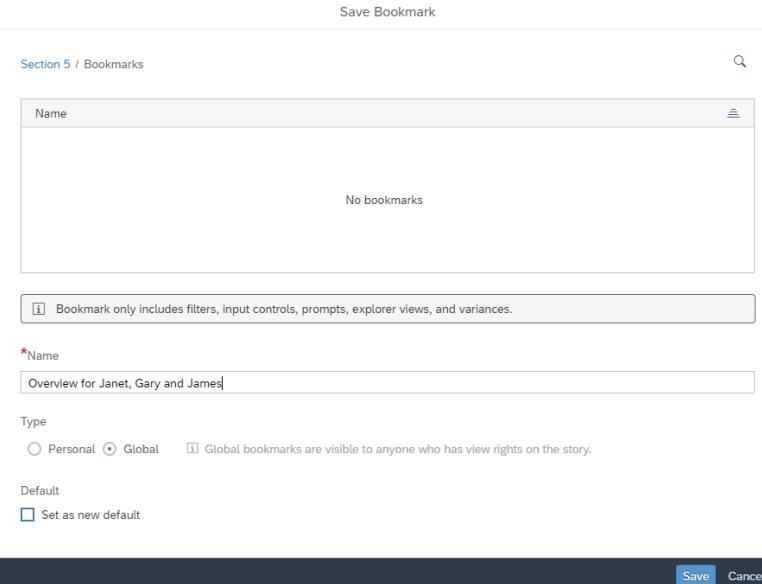
When completing exercises, some data values in the screenshots may not match what you see on your screen. This is because the dynamic time filters that were applied at the time the screenshots were taken is different from the current system date.

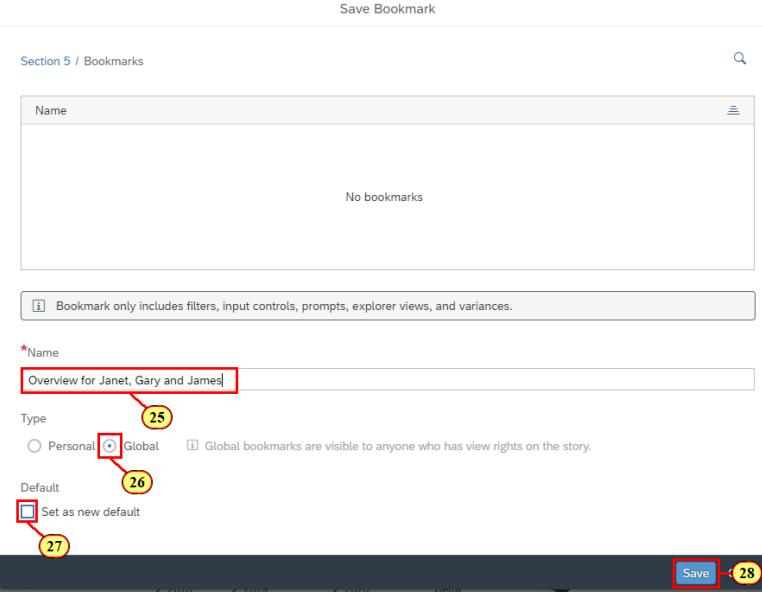
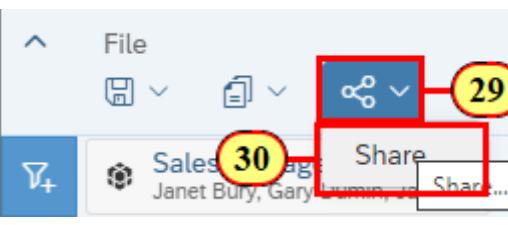
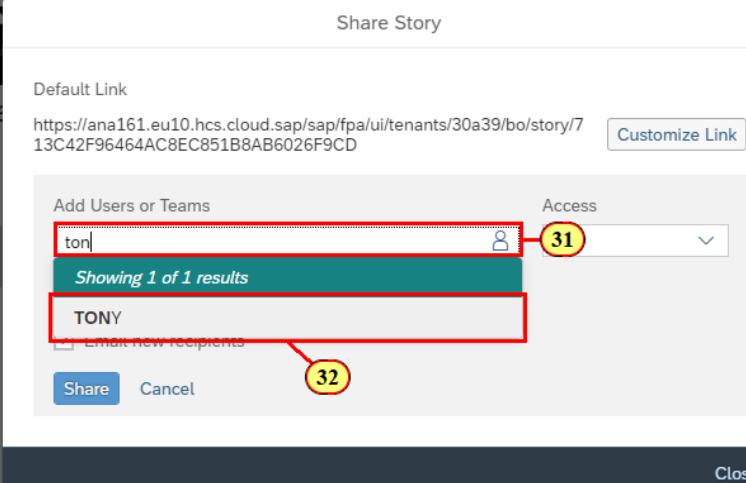
Explanation	Screenshot
<p> Welcome to the Bookmarking and Sharing section. In this section, we're going to learn how to bookmark states, share stories, add comments and have discussions with our colleagues.</p> <p>Bookmarks allow us to save the story in our preferred view. To showcase this, let's zoom in and analyze the performance of three Sales Managers.</p> <p>Compare your story with your screenshot, this is what it should look like at the start.</p>	

Explanation	Screenshot																
<p>First, we're going to create a Story Filter for Sales Managers.</p> <ol style="list-style-type: none"> 1. Click Story Filter/Prompt 2. Click Add 3. Click Dimensions 4. Select Sales Manager 	<p>Overview for APJ, China, EMEA North, EMEA</p> <p>Gross Margin per Sales Manager for Actual in Million 1 Filter 1 Explorer View</p> <table border="1"> <thead> <tr> <th>Sales Manager</th> <th>Gross Margin</th> </tr> </thead> <tbody> <tr> <td>Kiran Raj</td> <td>170.52</td> </tr> <tr> <td>David Carl</td> <td>312.84</td> </tr> <tr> <td>Gabriel Walton</td> <td>268.09</td> </tr> <tr> <td>Janet Bury</td> <td>246.07</td> </tr> <tr> <td>John Minker</td> <td>178.50</td> </tr> <tr> <td>Nancy Miller</td> <td>156.98</td> </tr> <tr> <td>Lois Wood</td> <td>101.45</td> </tr> </tbody> </table>	Sales Manager	Gross Margin	Kiran Raj	170.52	David Carl	312.84	Gabriel Walton	268.09	Janet Bury	246.07	John Minker	178.50	Nancy Miller	156.98	Lois Wood	101.45
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<p>We want the ability to filter by all the Sales Managers.</p> <ol style="list-style-type: none"> 5. Click All Members 6. Click OK 	<p>Available Members</p> <p>Show unbooked members <input type="radio"/> Exclude selected members <input type="radio"/></p> <p>All Members</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Janet Bury <input type="checkbox"/> Gary Dumin <input type="checkbox"/> James Frank <input type="checkbox"/> Lois Wood <input type="checkbox"/> John Minker <input type="checkbox"/> Nancy Miller <p>Selected Members</p> <p>Clear Selection</p> <p>Settings for Users</p> <p><input checked="" type="checkbox"/> Allow viewers to modify selections <input type="checkbox"/> Allow viewers to delete filter Multiple Selection</p> <p>OK</p>																
<ol style="list-style-type: none"> 7. Click Save. 8. Save the story 	<p>Files / Section 5* ★</p> <p>Story Data</p> <p>Sales Manager (All)</p> <p>Save (Ctrl+S) 7</p> <p>Save As... (Ctrl+Shift+S) 8</p> <p>Save As Template...</p> <p>Export...</p>																
<p>Now that we've created the filters. We're going to be interacting with them. This can be done in View Mode.</p> <ol style="list-style-type: none"> 9. To enter view mode. Click View. 	<p>More ...</p> <p>Designer Controls View 9</p>																

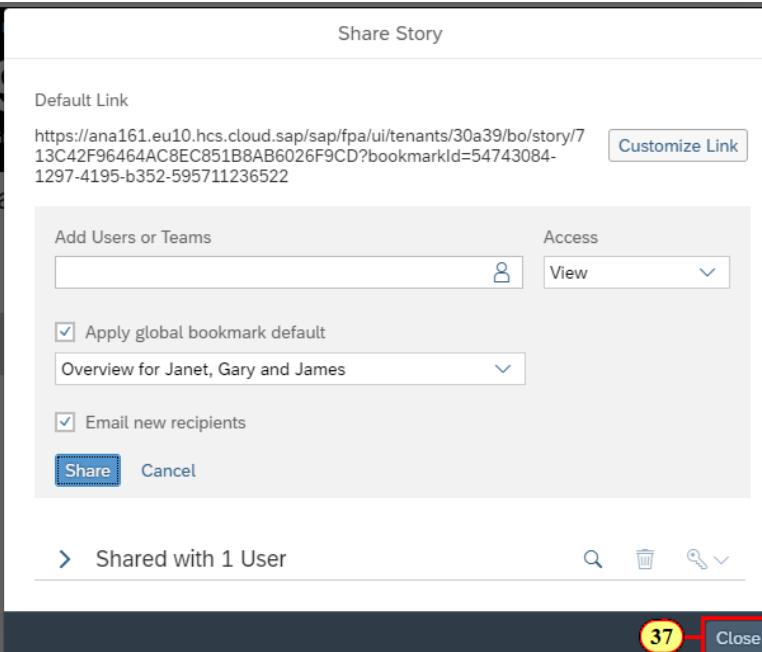
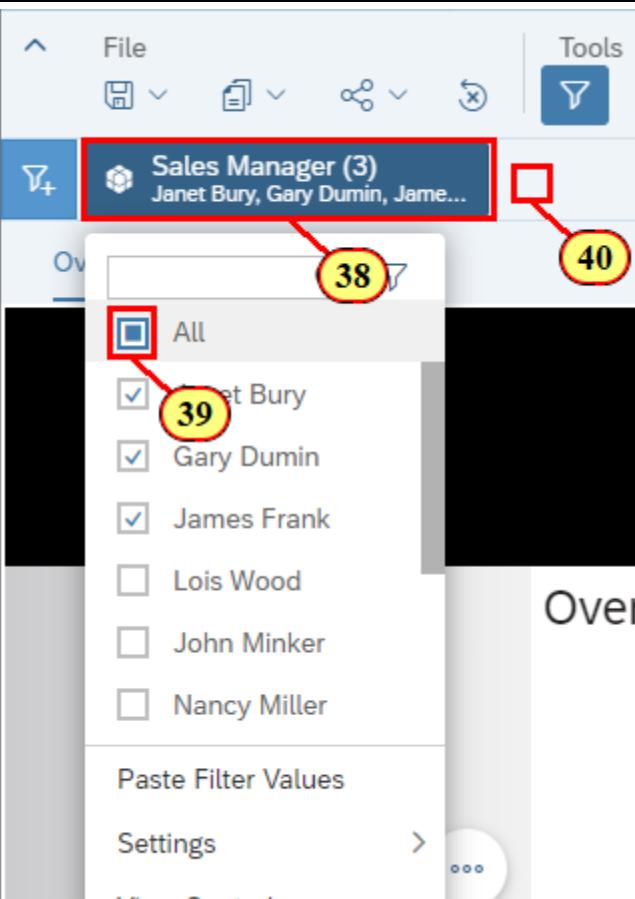
Explanation	Screenshot
<p>👉 Now that we're in View mode, let's change the state of the story. Remember, we wanted to analyze the performance of specific sales managers?</p> <p>10. Click Sales Manager</p> <p>11. Deselect All</p> <p>12. Select three managers - Janet Bury, Gary Dumin and James Frank</p>	
<p>👉 To gain better insights, we can narrow down the region and see what the performance for these Sales Managers was in the specified regions we're interested in.</p> <p>13. Click Region</p> <p>14. Deselect All</p> <p>15. Select MEE</p> <p>16. Select NA</p> <p>17. Click Outside the Input control to Collapse</p>	

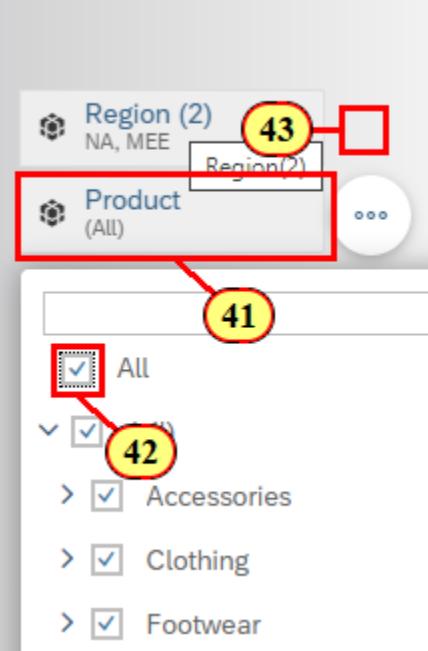
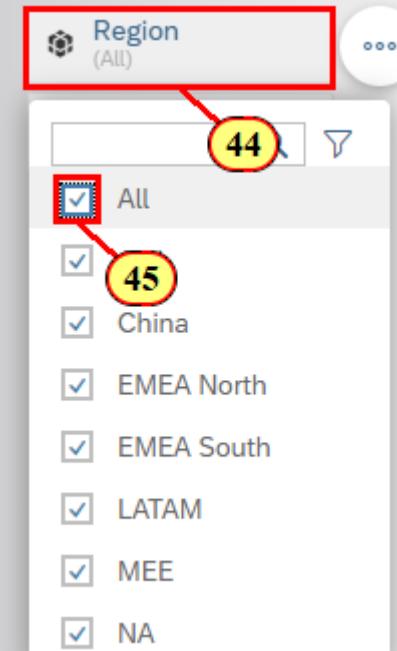
Explanation	Screenshot
<p>👉 Let's narrow down the Product filter and see if performance is affected.</p> <p>18. Click Product 19. Expand All 20. Deselect Accessories 21. Click Outside the Input control to Collapse</p>	
<p>👉 We've seen the performance based on Gross Margin, but what about Sales Revenue? Are the managers performing differently based on that measure? Let's find out.</p> <p>22. Click Sales Revenue in the Measure Input Control</p>	

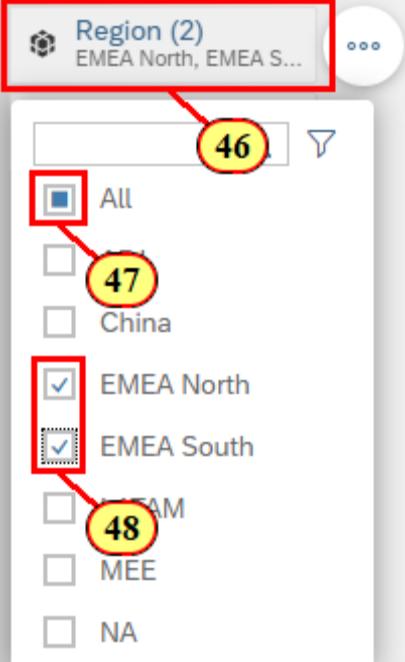
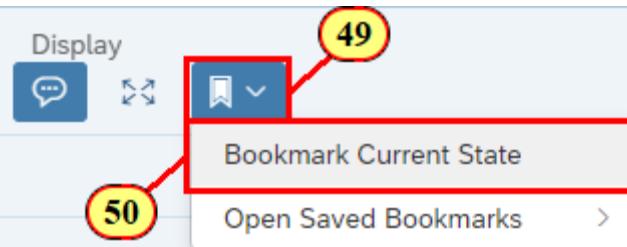
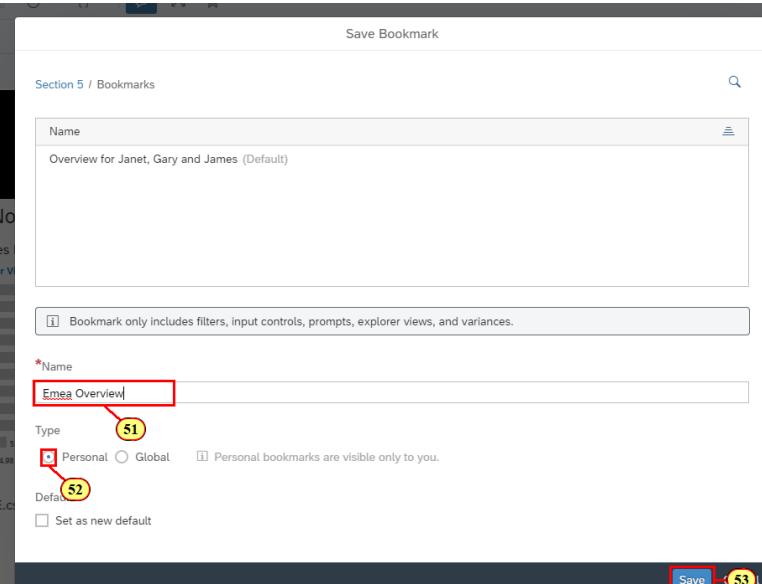
Explanation	Screenshot
<p> Quality Check! Does your dashboard look like this?</p>	
<p> Now that we have our story in a modified state, let's bookmark it so the state can be recalled later.</p> <p>23. Click Bookmark.</p> <p>24. Click Bookmark Current State.</p>	
<p> Welcome to Bookmarking! Bookmarking allows content consumers to have a customized view saved so that they can simply consume the saved state later. Designers can create global bookmarks that are visible to anyone with access to the story. When sharing a story, a designer can also assign a default global bookmark. Viewers also can create private bookmarks that are only visible to them or if they choose to share with others then they are visible to the shared group as well.</p>	

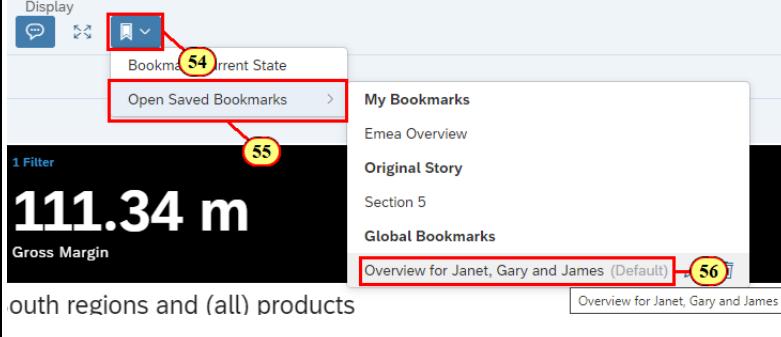
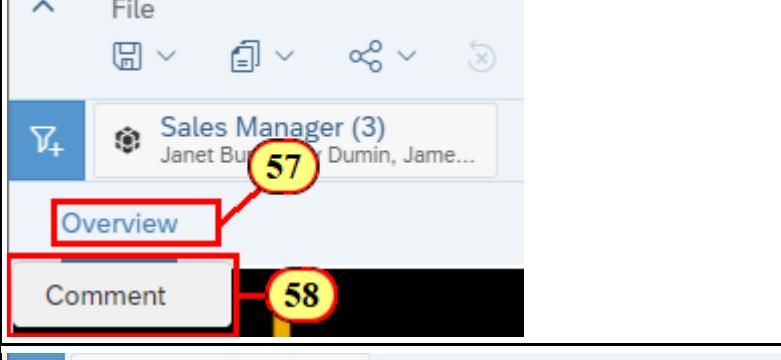
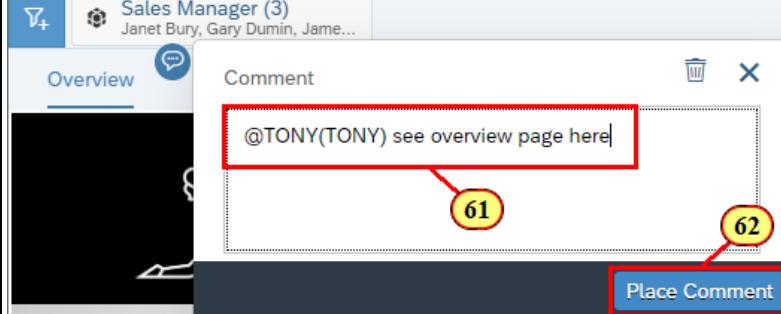
Explanation	Screenshot
<p>25. Let's name our bookmark Overview for Janet, Gary and James.</p> <p>26. Select Global so this bookmark can be visible to any team members we choose to collaborate with.</p> <p>27. Click Set as new default.</p> <p>28. Click Save.</p>	
<p>Info Let's share this story with our colleague Tony and see if he agrees with our analysis.</p> <p>29. Click the Share icon</p> <p>30. Click Share</p>	
<p>31. Type in Tony</p> <p>32. Select TONY</p>	

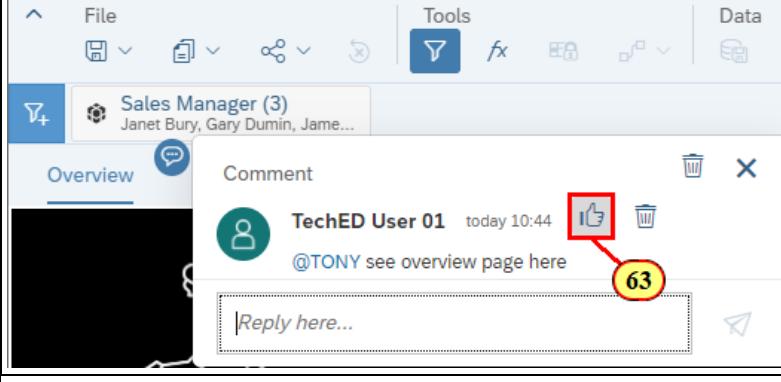
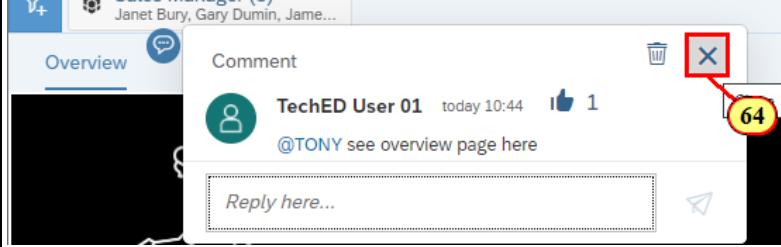
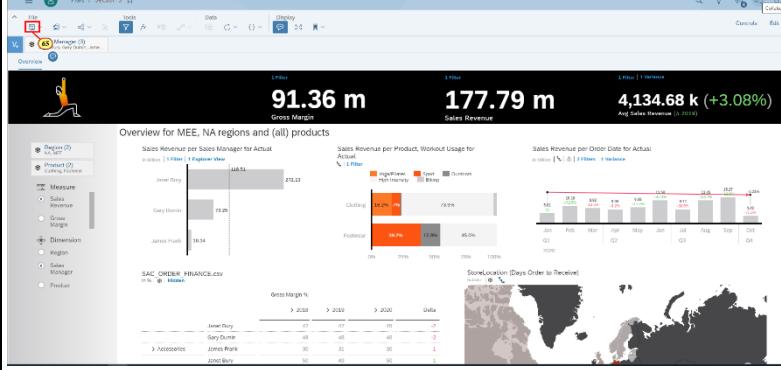
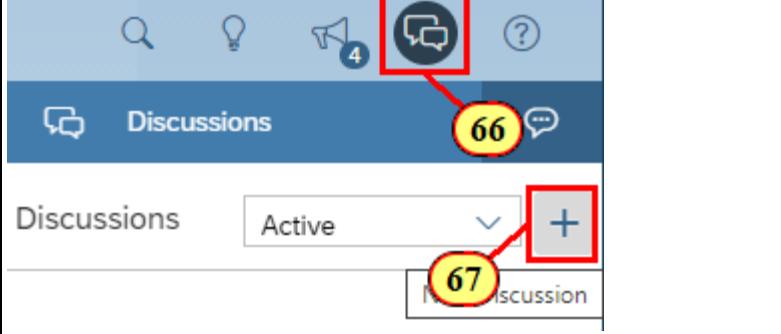
Explanation	Screenshot
<p>We want Tony to see the story in the bookmarked state by default.</p> <p>33. Expand Bookmark</p> <p>34. Select Overview for Janet, Gary and James</p> <p>35. Select Apply Global Bookmark Default</p>	
<p>These selections will apply the bookmarked state to the story as soon as Tony opens it. Allowing him to view the insights on Sales Manager performance we were looking at.</p> <p>36. Click Share</p>	

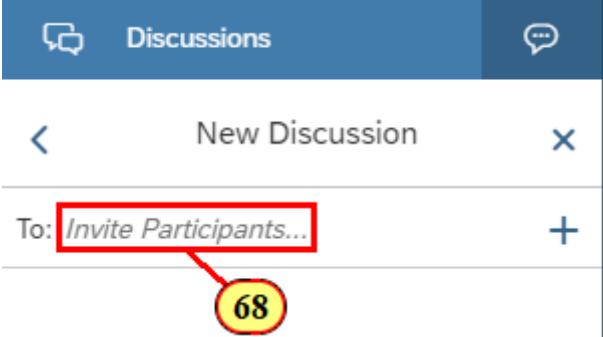
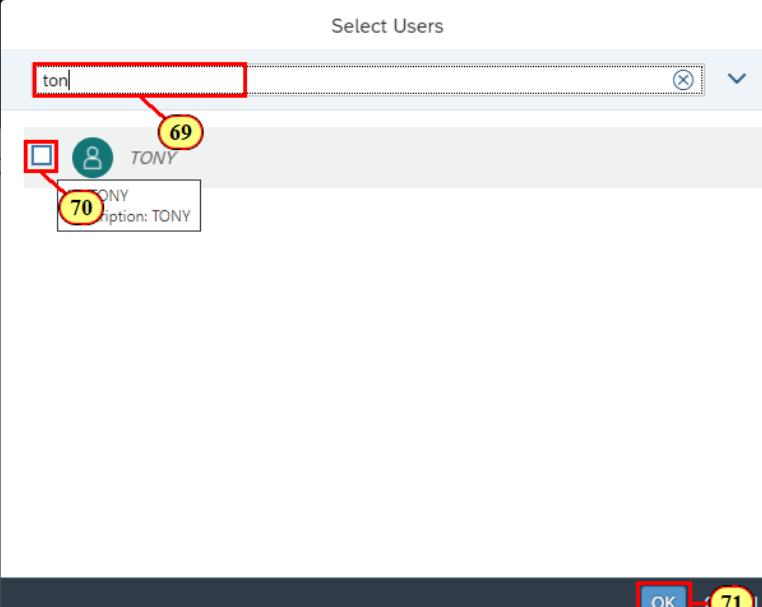
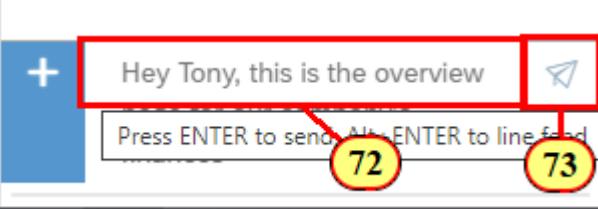
Explanation	Screenshot
<p>37. Click Close</p>	 <p>Share Story</p> <p>Default Link https://ana161.eu10.hcs.cloud.sap/sap/fpa/ui/tenants/30a39/bo/story/713C42F96464AC8EC851B8AB6026F9CD?bookmarkId=54743084-1297-4195-b352-595711236522 <input type="button" value="Customize Link"/></p> <p>Add Users or Teams <input type="button" value="User"/> Access <input type="button" value="View"/></p> <p><input checked="" type="checkbox"/> Apply global bookmark default <input type="button" value="Overview for Janet, Gary and James"/></p> <p><input checked="" type="checkbox"/> Email new recipients <input type="button" value="Share"/> <input type="button" value="Cancel"/></p> <p>> Shared with 1 User <input type="button" value="Search"/> <input type="button" value="Delete"/> <input type="button" value="Share"/></p> <p>37 <input type="button" value="Close"/></p>
<p>⚠ Take a minute to save your work by using the Save Icon or pressing Ctrl + S.</p> <p>👉 Now that we have created and shared the bookmark, we can return to this state at any time. Let's revert the changes and go back to our original Overview Dashboard.</p> <p>38. Click Sales Manager Story Filter</p> <p>39. Select All</p> <p>40. Click Outside the Sales Manager Drop Down Menu</p>	 <p>Sales Manager (3) Janet Bury, Gary Dumin, Jame...</p> <p>38 <input type="checkbox"/> All 39 <input checked="" type="checkbox"/> Janet Bury <input checked="" type="checkbox"/> Gary Dumin <input checked="" type="checkbox"/> James Frank <input type="checkbox"/> Lois Wood <input type="checkbox"/> John Minker <input type="checkbox"/> Nancy Miller</p> <p>Paste Filter Values Settings > View Controls...</p> <p>40 <input type="checkbox"/></p>

Explanation	Screenshot
<p>41. Click Product Page Filter</p> <p>42. Click All</p> <p>43. Click Outside the Input Control to Collapse</p>	 <p>Region (2) NA, MEE Region(2)</p> <p>Product (All)</p> <p>All</p> <p>Accessories</p> <p>Clothing</p> <p>Footwear</p>
<p>44. Click Region.</p> <p>45. Select All Regions.</p> <p> We're back to the original state.</p>	 <p>Region (All)</p> <p>All</p> <p>China</p> <p>EMEA North</p> <p>EMEA South</p> <p>LATAM</p> <p>MEE</p> <p>NA</p>

Explanation	Screenshot
<p>We now want to analyze the performance of all our Sales Managers in the EMEA North and EMEA South Regions. Let's create this filter and bookmark it for our personal use so we can refer to it later.</p> <p>46. Click the Region Page Filter 47. Deselect All 48. Select EMEA North and EMEA South.</p>	
<p>49. Click Bookmark. 50. Click Bookmark Current State</p>	
<p>51. Name the Bookmark EMEA Overview</p> <p>This time we're going to make it a personal bookmark for use by ourselves only.</p> <p>52. Click Personal 53. Click Save</p>	

Explanation	Screenshot
<p>👉 Now that we have a bookmark, we can easily come back to this state. Let's go back to our global bookmark and notify our colleague Tony by leaving him a comment.</p> <p>54. Click Bookmark</p> <p>55. Expand Open Saved Bookmarks</p> <p>56. Click Overview for Janet, Gary and James</p>	
<p>⚠️ Quality Check! Let's make sure we're back in the state we had bookmarked.</p>	
<p>👉 Once we're back in the bookmarked state, we can add a comment.</p> <p>57. Expand Overview</p> <p>58. Click Comment.</p>	
<p>59. Search for Tony by typing "@" before tony.</p> <p>60. Once the desired person shows up, click their name so they can be notified.</p>	
<p>61. Type @Tony Please see overview page here.</p> <p>62. Click Place Comment</p>	

Explanation	Screenshot
<p>Once the comment is placed, you can interact with it further. For example, you can click the like icon. This can be done for your own or someone else comment and they will see this interaction.</p> <p>63. Click the Like Icon</p>	
<p>64. Click Exit to close the comment dialogue.</p>	
<p>⚠️ Quality Check! Does your dashboard look like this? This is also a good time to Save your Story.</p> <p>65. Use the Save icon or press Ctrl + S.</p>	
<p>👉 SAP Analytics Cloud allows users to collaborate on stories. This can be done via discussions.</p> <p>66. Click Collaborate.</p> <p>67. Click New Discussion.</p>	

Explanation	Screenshot
<p> Welcome to the Discussion Panel! This is where we can collaborate with our colleagues and discuss the story.</p> <p>Let's start by inviting someone to the discussion.</p> <p>68. Click Invite Participants</p>	
<p>69. Search for Tony</p> <p>70. Select Tony</p> <p>71. Click OK.</p>	
<p> In the discussion panel, we're going to point Tony towards a specific story, and we're going to link it, so he knows which story we're talking about.</p> <p>72. Write Tony a message: i.e. Hey Tony, this is the overview page for our company's finances.</p> <p>73. Press ENTER or click the send icon to send.</p>	

Explanation	Screenshot
<p>👉 Now let's link the story so Tony knows what we're talking about.</p> <p>74. Click New.</p> <p>75. Select Link Story and the story we have open will be linked.</p>	
<p>⚠️</p> <p>Quality Check! This is what your screen should look like once you've linked the story.</p> <p>This is the end of the section! You've learned how to create global and personal bookmarks, how to share stories in bookmarked states, comment on pages (and tag people in comments) and start discussions.</p> <p>Make sure to Save your story before moving on to the next section.</p>	

Summary

You have completed the entire Collaboration and Bookmarking section!

You are now able to:

- Create global and private bookmarks to create alternate views of the Story
- Share a Story with other users
- Create comments and @mentions
- Start a discussion with your colleagues to track key decisions

Related Sections:

There are no related sections to Collaboration and Bookmarking.

Augmented Analytics: Smart Assist Features



Objective: Use Natural Language Search (Search to Insight) to translate your questions into visualizations and understand how to run a Smart Discovery within SAP Analytics Cloud. Develop an understanding and purpose of the various pages that are created by Smart Discovery.

Estimated Time: 15 mins

Exercise Description: After hearing back from your colleagues about the dashboard you shared, you have a few quick questions regarding the company's financial. You can quickly find answers for your questions via Search to Insight, leveraging SAC's natural language processing capabilities. Once you try Search to Insight for yourself, you can tell your colleagues all about it and they will no longer need to come to you with their questions about data.

Once SAP Analytics Cloud found the answer to your questions you want to use other smart features such smart insight and time series forecast to enhance the result. Finally, you want to use Smart Discovery to have SAP Analytics Cloud investigate Gross Margin at BestRun and automatically built a story for you.

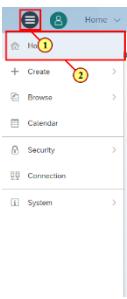
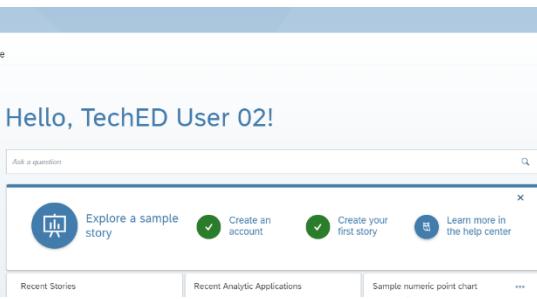
Key Features:

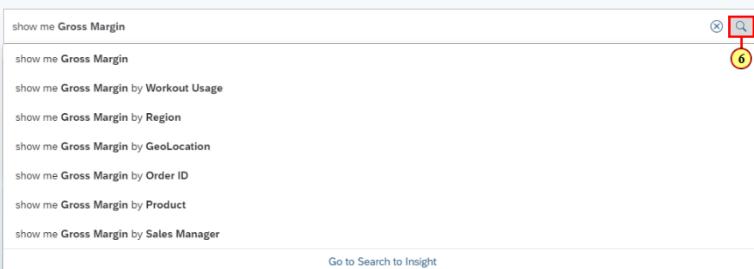
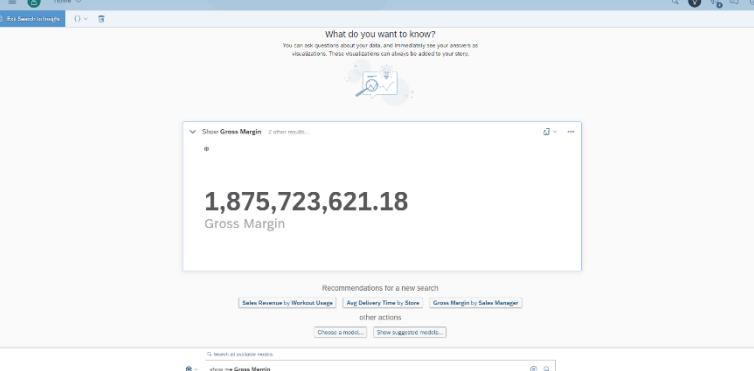
- Use Search to Insight to find answers for your questions with natural language
- Have SAP Analytics Cloud investigate one of the measures and build a dashboard for you with Smart Discovery
- Understand how Smart Insights can help you explain more of your data

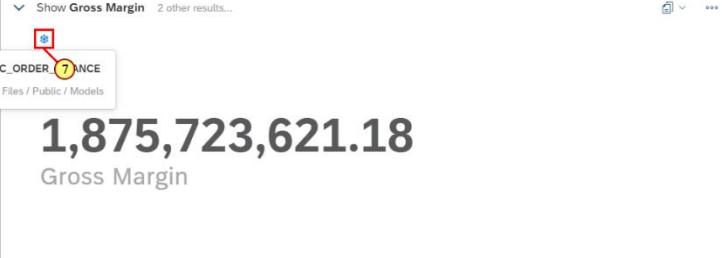
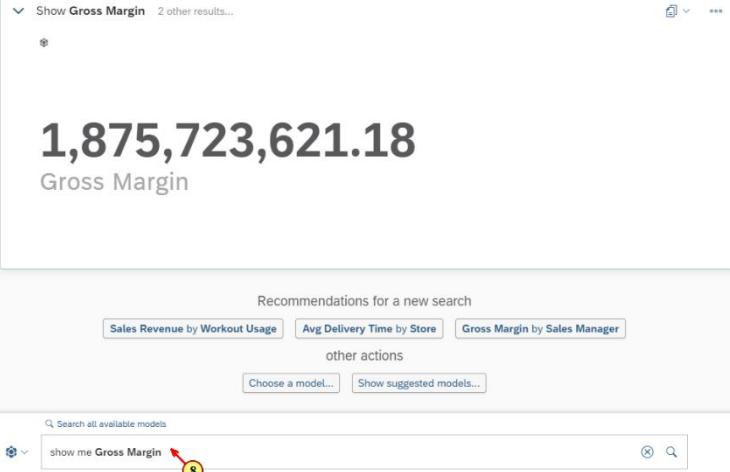
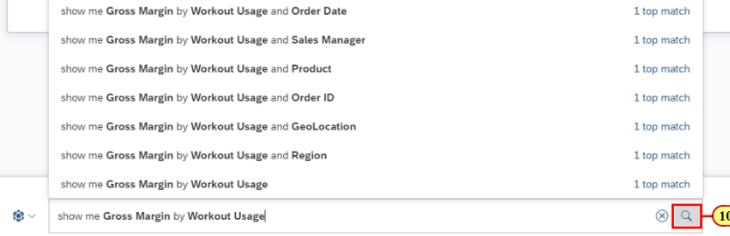


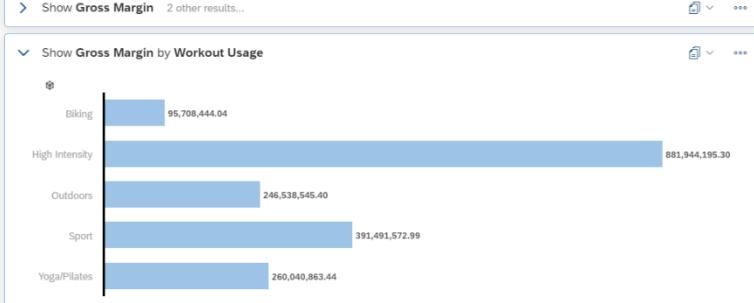
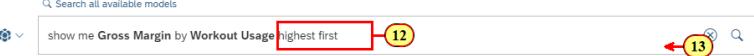
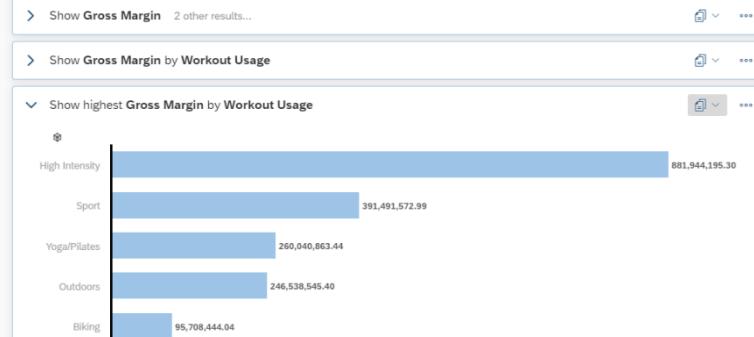
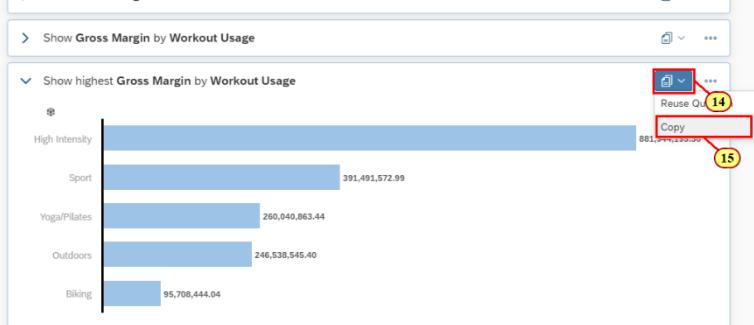
Disclaimer

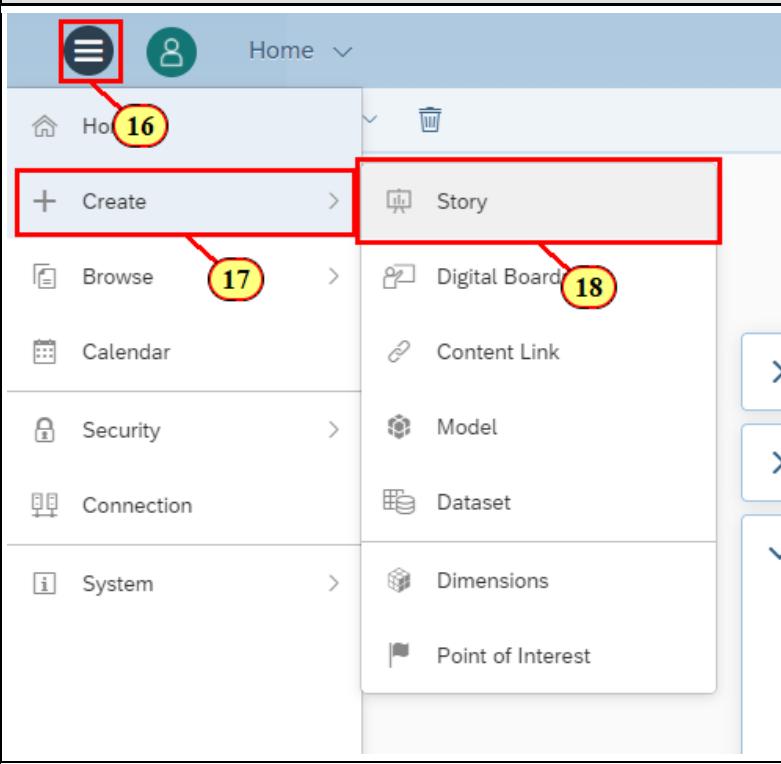
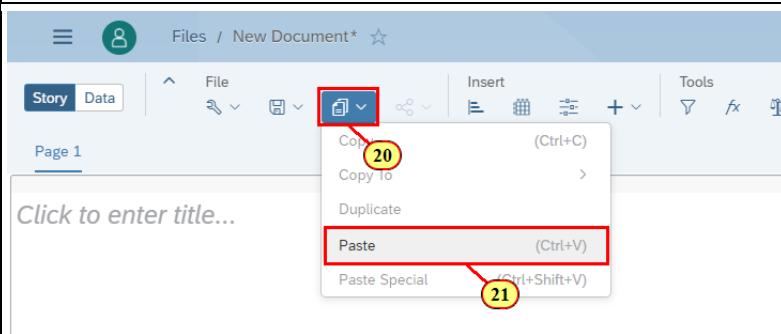
When completing exercises, some data values in the screenshots may not match what you see on your screen. This is because the dynamic time filters that were applied at the time the screenshots were taken is different from the current system date.

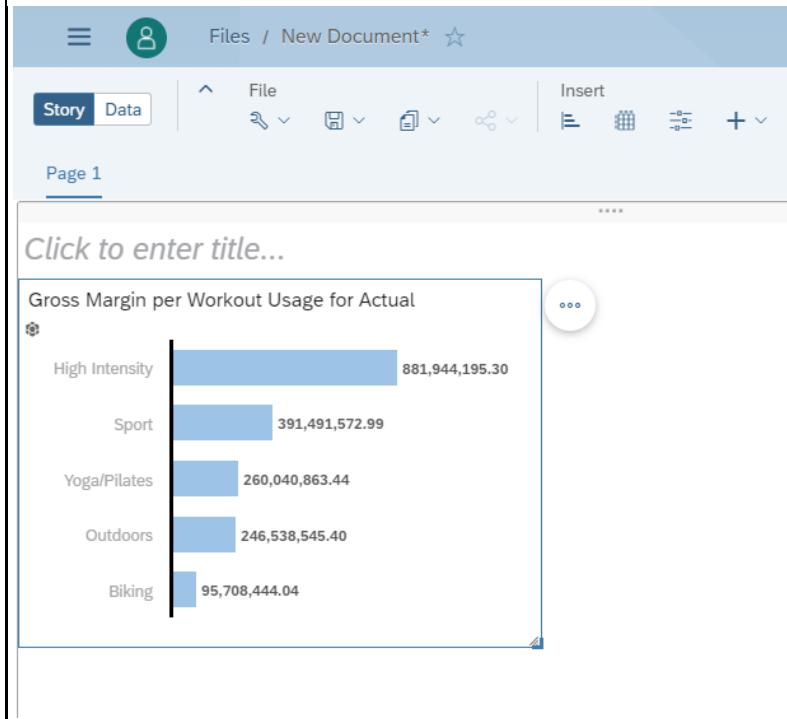
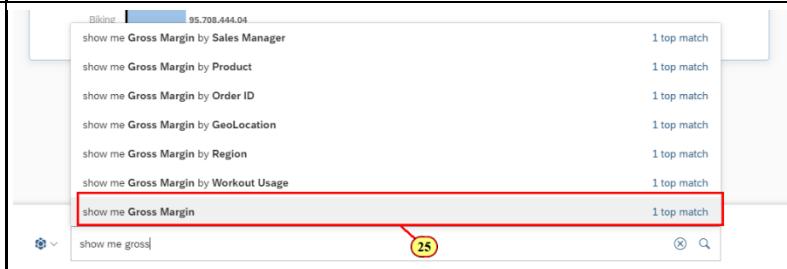
Explanation	Screenshot
<p>⚠ Exercise Check! Are you on the homepage?</p> <p>If not, then navigate to the homepage.</p> <ol style="list-style-type: none"> 1. Click Home icon 2. Click Home 	 

Explanation	Screenshot
<p>👉 First you want to find out more about your Gross Margin, but you don't really know which model Gross Margin contains. As you start typing the search goes across all models and suggests you the best results for measure, dimension as well as dimension members related to what you're asking for.</p> <p>3. Click the Search to Insight Textbox to start asking your data related questions</p> <p>4. Enter "show me Gro" into the Textbox</p> <p>5. Click show me Gross Margin</p>	
<p>💡 Welcome to Search to Insight (Natural Language Search)!</p> <p>Drive conversational artificial intelligence forward by asking questions about your data as simple as if you were asking your colleague. Understanding natural language, Search to Insight allows you to get the information you need, instantly.</p>	
<p>6. Click Search icon</p>	
<p>💡 The Search to Insight page is now providing you a chart showing you the value for Gross Margin.</p>	

Explanation	Screenshot
<p>👉 You can see which model the Gross Margin comes from by selecting the model icon of the chart details.</p> <p>7. Click Model icon</p>	
<p>👉 You now want to know more about the Gross Margin per Workout.</p> <p>8. Click at the end of the search box.</p>	
<p>👉 You can see that several suggestions for questions are provided as part of the type ahead.</p> <p>9. Select show me Gross Margin by Workout Usage</p>	
<p>10. Click search icon</p>	

Explanation	Screenshot												
 <p>The chart now shows the breakdown of Gross Margin by Workout Usage. However, you want to see the chart sorted.</p>	 <table border="1"> <thead> <tr> <th>Workout Usage</th> <th>Gross Margin</th> </tr> </thead> <tbody> <tr> <td>Biking</td> <td>95,708,444.04</td> </tr> <tr> <td>High Intensity</td> <td>881,944,195.30</td> </tr> <tr> <td>Outdoors</td> <td>246,538,545.40</td> </tr> <tr> <td>Sport</td> <td>391,491,572.99</td> </tr> <tr> <td>Yoga/Pilates</td> <td>260,040,863.44</td> </tr> </tbody> </table>	Workout Usage	Gross Margin	Biking	95,708,444.04	High Intensity	881,944,195.30	Outdoors	246,538,545.40	Sport	391,491,572.99	Yoga/Pilates	260,040,863.44
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<p>11. Click at the end of the search box.</p>													
<p>12. Type "highest first"</p> <p>13. Press Enter</p>													
 <p>The chart is now sorted. You find the chart useful and want to copy it to a new story.</p>	 <table border="1"> <thead> <tr> <th>Workout Usage</th> <th>Gross Margin</th> </tr> </thead> <tbody> <tr> <td>High Intensity</td> <td>881,944,195.30</td> </tr> <tr> <td>Sport</td> <td>391,491,572.99</td> </tr> <tr> <td>Yoga/Pilates</td> <td>260,040,863.44</td> </tr> <tr> <td>Outdoors</td> <td>246,538,545.40</td> </tr> <tr> <td>Biking</td> <td>95,708,444.04</td> </tr> </tbody> </table>	Workout Usage	Gross Margin	High Intensity	881,944,195.30	Sport	391,491,572.99	Yoga/Pilates	260,040,863.44	Outdoors	246,538,545.40	Biking	95,708,444.04
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<p>14. Click Copy icon</p> <p>15. Click Copy</p>													

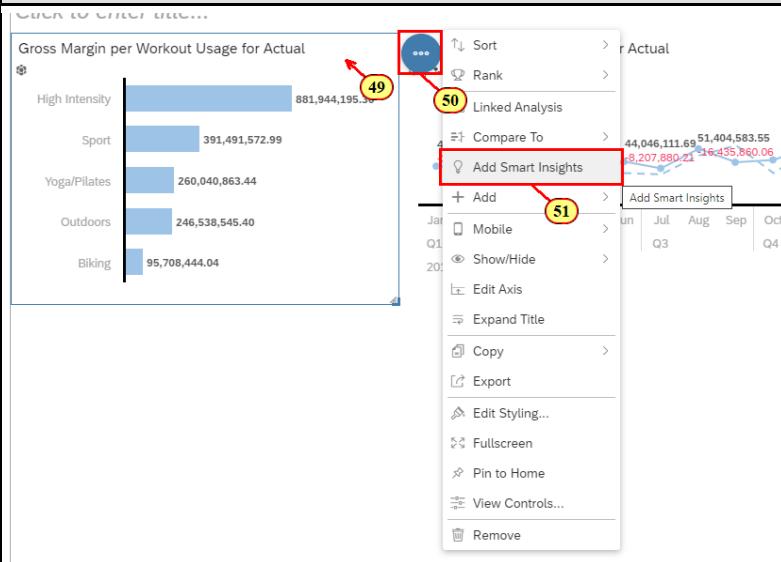
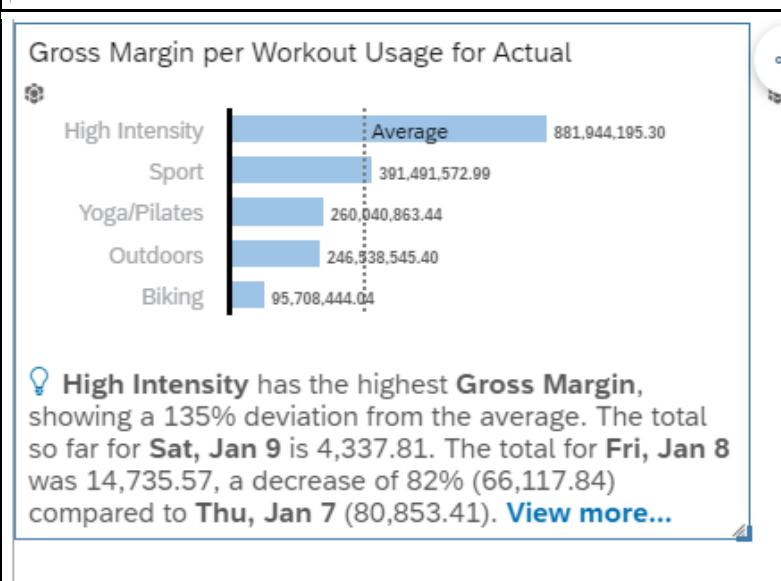
Explanation	Screenshot
<p>16. Click Home icon</p> <p>17. Click Create</p> <p>18. Click Story</p>	 <p>The screenshot shows the SAP Analytics Cloud interface. At the top left is the Home icon (a house). To its right is the user profile icon. Below them is the 'Home' button. A red box highlights the 'Create' button, which has a yellow circle with the number 16. A red box also highlights the 'Story' option in the dropdown menu, which has a yellow circle with the number 18. Other options in the dropdown include 'Digital Board' (with a yellow circle 17), 'Content Link', 'Model', 'Dataset', 'Dimensions', and 'Point of Interest'.</p>
<p>19. Click Add a Responsive Page</p> <p> You want to create a responsive story.</p>	<p>Choose how you'd like to start your story.</p> <p>SAP Analytics Templates</p> <ul style="list-style-type: none"> Presentation - Responsive Report Dashboard <p>See more...</p> <p>Access & Explore Data</p> <p>Run a Smart Discovery</p> <p>Add a Responsive Page</p> <p>Add a Canvas Page</p> <p>Add a Grid Page</p>
<p>20. Click the Copy icon</p> <p>21. Click Paste</p>	 <p>The screenshot shows the SAP Analytics Cloud interface with a context menu open. The 'Copy' icon has a yellow circle with the number 20. A red box highlights the 'Paste' option, which has a yellow circle with the number 21. Other options in the menu include 'Copy To', 'Duplicate', 'Paste Special', and keyboard shortcuts '(Ctrl+C)' and '(Ctrl+Shift+V)'.</p>

Explanation	Screenshot
<p>👉 The chart was added to the story.</p>	
<p>👉 You have more questions about your data. Move back to Search to Insight.</p> <p>22. Click the Search to Insight Icon</p>	
<p>👉 Next you want to know how the Gross Margin performs over time.</p> <p>23. Click inside the search box.</p>	
<p>24. Type "show me gross"</p> <p>25. Select "show me Gross Margin"</p>	
<p>26. add "by month" at the end of the search term</p> <p>27. Press Enter</p>	

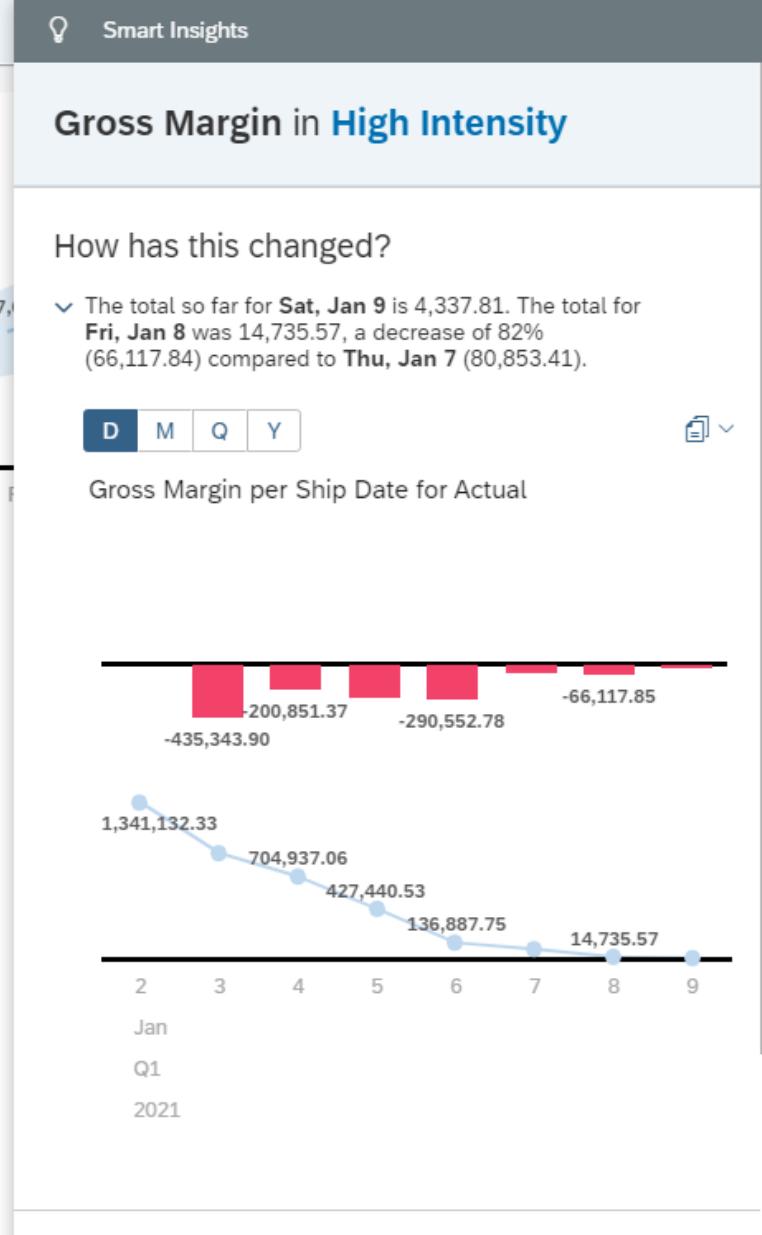
Explanation	Screenshot
<p>👉 You can see that Search to Insight recognized the time reference and automatically generated a line chart on month granularity. However, you only want to look at the last 2 years. Let's adjust the question.</p>	
<p>28. Click inside the search box.</p>	
<p>29. Add "for last year and this year" to the question 30. Press Enter</p>	
<p>👉 The new chart has been filtered on the last year and this year. You can see this on the filter token. Note, that your data may vary based on the current year.</p> <p>31. Click Filter token to see the filter values 32. Click outside the filter box to close the menu</p>	
<p>👉 You wonder how the business performed compared to the previous periods. Search to Insight also allows to interact with the charts directly. You can for example add recommended comparisons.</p> <p>33. Right click on the chart 34. Click Compare To 35. Click Previous Period</p>	
<p>👉 The variance was added providing additional insights.</p>	

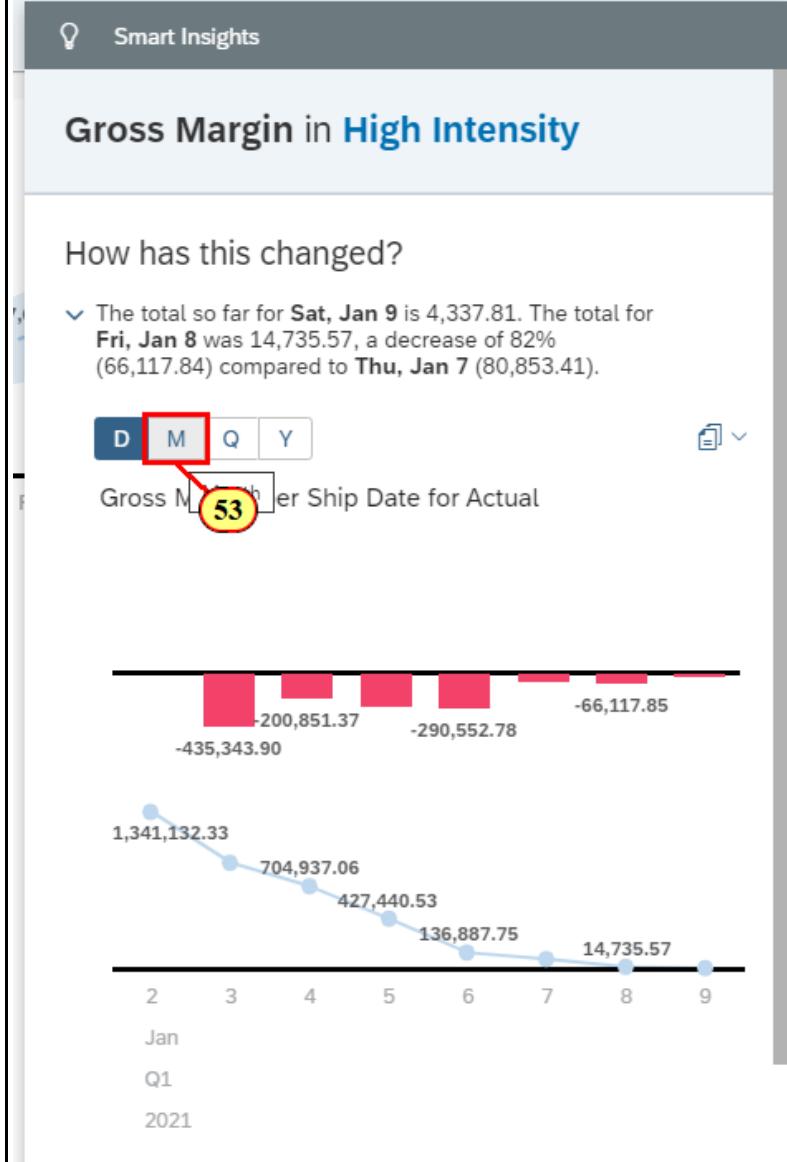
Explanation	Screenshot
<p>👉 Let's copy the chart to the story.</p> <p>36. Click the Copy Icon</p> <p>37. Click Copy To</p> <p>38. Click Page 1</p>	<p>Show Gross Margin by Month on Order Date for 2019 and 2020 in Order Date 1 Filter Variance</p> <p>Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4</p> <p>43,200,309.27 +649,520.61 52,253,991.90 +10,800,731.41 -1,404,580.55 -16,420,860.06 69,605,390.86 +15,352,767.96 +31,753,649.51 62,133,993.57 +20,059,310.87 59,478,088.69 +3,063,309.52 67,697,802.05 +4,010,083.33 2019 2020</p>
<p>👉 Exit Search to Insight in navigate back to the story.</p> <p>39. Click Exit Search to Insight</p>	<p>Files / New Document* ⚡</p> <p>Exit Search to Insight { } ⚡</p> <p>... Q1 Q2 2018</p> <p>Show Gross Margin 1 Filter</p>
<p>👉 You can see the chart was also added to the page. Let's resize the chart to make it more readable.</p>	<p>Gross Margin per Workout Usage for Actual 1 Filter</p> <p>High Intensity 881,544,195.30 Sport 391,491,572.99 Yoga/Pilates 260,040,063.44 Outdoors 246,538,545.40 Biking 95,708,444.04</p> <p>Gross Margin per Order Date for Actual 1 Filter</p> <p>43,762,702.19 +515,392.92 67,840,443.62 +23,704,331.83 52,133,993.57 +31,753,649.51 64,634,492.53 +30,802,520.46 2019 2020</p>
<p>40. Click empty right lane</p> <p>41. Click Menu icon</p> <p>42. Click Remove</p>	<p>Click to enter title...</p> <p>Gross Margin per Order Date for Actual 1 Filter</p> <p>43,762,702.19 +515,392.92 67,840,443.62 +23,704,331.83 52,133,993.57 +31,753,649.51 64,634,492.53 +30,802,520.46 2019 2020</p> <p>Click to enter title...</p> <p>40 41 42</p>

Explanation	Screenshot
<p>43. Select the chart</p> <p>44. Resize it to the right</p>	
<p>⚠️ Quality Check! Does your story look like this?</p>	
<p>👉 You wonder how Gross Margin will perform in future. SAP Analytics Cloud can run automatic time series forecasts to provide you with this useful information.</p> <p>45. Click Menu icon</p> <p>46. Click Add</p> <p>47. Click Forecast</p> <p>48. Click Automatic Forecast</p>	
<p>⚠️ You can see a forecast has been added to the chart giving you a prediction of the future performance.</p>	

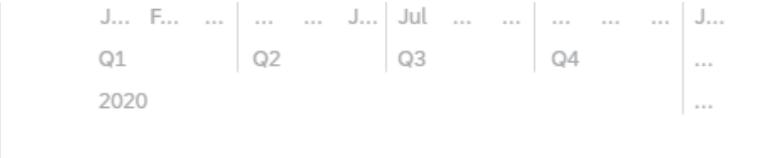
Explanation	Screenshot																		
<p>👉 You wonder what other insights SAP Analytics Cloud can provide. Specifically, you're interested in finding out more about the Gross Margin in relation to the Workout Usage. Let's add some Smart Insight to the bar chart.</p> <p>49. Select the Gross Margin per Workout Usage chart</p> <p>50. Click Menu icon</p> <p>51. Click Add Smart Insights</p>	 <p>The chart displays the following data:</p> <table border="1"> <thead> <tr> <th>Workout Category</th> <th>Gross Margin</th> </tr> </thead> <tbody> <tr> <td>High Intensity</td> <td>881,944,195.30</td> </tr> <tr> <td>Sport</td> <td>391,491,572.99</td> </tr> <tr> <td>Yoga/Pilates</td> <td>260,040,863.44</td> </tr> <tr> <td>Outdoors</td> <td>246,538,545.40</td> </tr> <tr> <td>Biking</td> <td>95,708,444.04</td> </tr> </tbody> </table>	Workout Category	Gross Margin	High Intensity	881,944,195.30	Sport	391,491,572.99	Yoga/Pilates	260,040,863.44	Outdoors	246,538,545.40	Biking	95,708,444.04						
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<p>💡 Welcome to Smart Insights! in the chart footer.</p> <p>Smart Insights lets you gain more intrinsic information about a data the data in your visualization. As you apply filters, your data updates the insights are being re-evaluated keeping your insights context aware.</p>	 <p>The chart now shows the following data with an average value:</p> <table border="1"> <thead> <tr> <th>Workout Category</th> <th>Gross Margin</th> <th>Average</th> </tr> </thead> <tbody> <tr> <td>High Intensity</td> <td>881,944,195.30</td> <td>Average</td> </tr> <tr> <td>Sport</td> <td>391,491,572.99</td> <td></td> </tr> <tr> <td>Yoga/Pilates</td> <td>260,040,863.44</td> <td></td> </tr> <tr> <td>Outdoors</td> <td>246,538,545.40</td> <td></td> </tr> <tr> <td>Biking</td> <td>95,708,444.04</td> <td></td> </tr> </tbody> </table> <p>💡 High Intensity has the highest Gross Margin, showing a 135% deviation from the average. The total so far for Sat, Jan 9 is 4,337.81. The total for Fri, Jan 8 was 14,735.57, a decrease of 82% (66,117.84) compared to Thu, Jan 7 (80,853.41). View more...</p>	Workout Category	Gross Margin	Average	High Intensity	881,944,195.30	Average	Sport	391,491,572.99		Yoga/Pilates	260,040,863.44		Outdoors	246,538,545.40		Biking	95,708,444.04	
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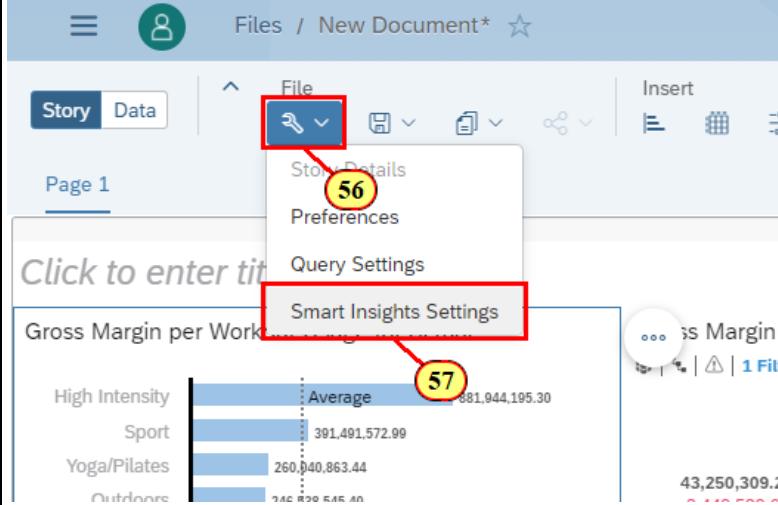
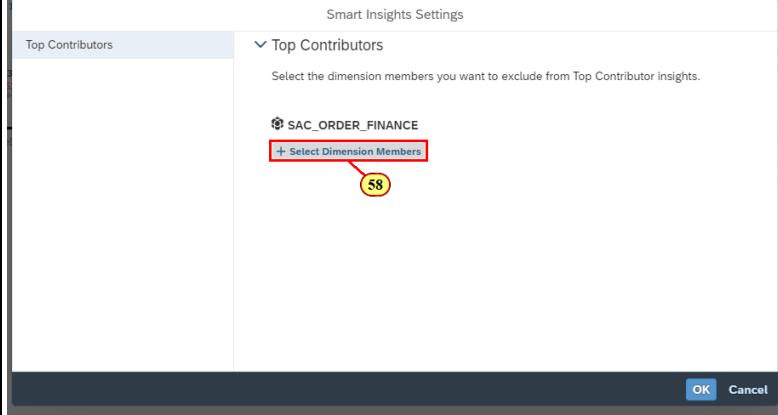
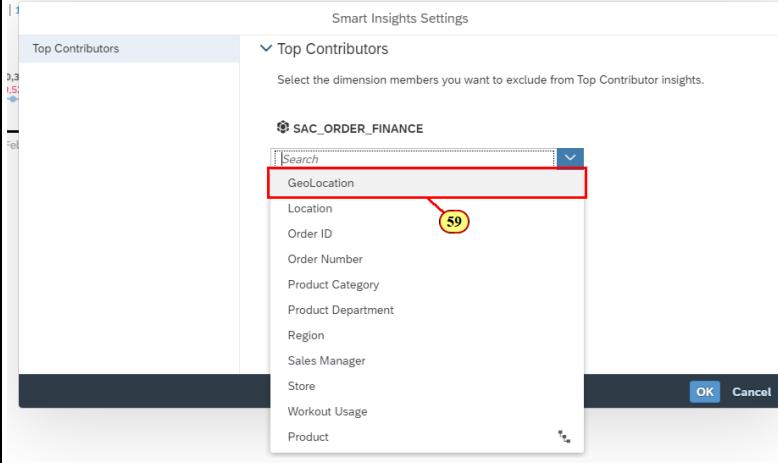
Explanation	Screenshot														
<p>👉 Smart Insights show us how Gross Margin for High Intensity workout usage has been performing overtime. Let's find out more.</p> <p>52. Click View more</p>	<p>Gross Margin per Workout Usage for Actual</p> <table border="1"> <thead> <tr> <th>Workout Usage</th> <th>Gross Margin</th> </tr> </thead> <tbody> <tr> <td>High Intensity</td> <td>881,944,195.30</td> </tr> <tr> <td>Sport</td> <td>301,491,572.09</td> </tr> <tr> <td>Yoga/Pilates</td> <td>260,040,863.44</td> </tr> <tr> <td>Outdoors</td> <td>246,338,545.40</td> </tr> <tr> <td>Biking</td> <td>95,708,444.04</td> </tr> <tr> <td>Average</td> <td>881,944,195.30</td> </tr> </tbody> </table> <p>💡 High Intensity has the highest Gross Margin, showing a 135% deviation from the average. The total so far for Sat, Jan 9 is 4,337.81. The total for Fri, Jan 8 was 14,735.57, a decrease of 82% (66,117.84) compared to Thu, Jan 7 (80,853.41). View more...</p> <p style="text-align: right;">52</p>	Workout Usage	Gross Margin	High Intensity	881,944,195.30	Sport	301,491,572.09	Yoga/Pilates	260,040,863.44	Outdoors	246,338,545.40	Biking	95,708,444.04	Average	881,944,195.30
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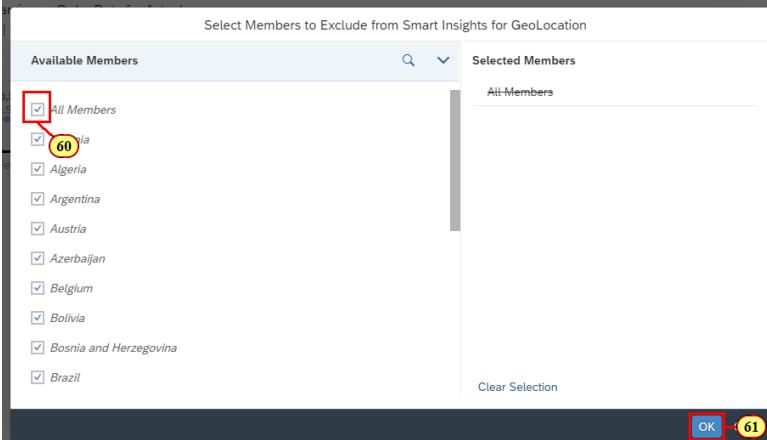
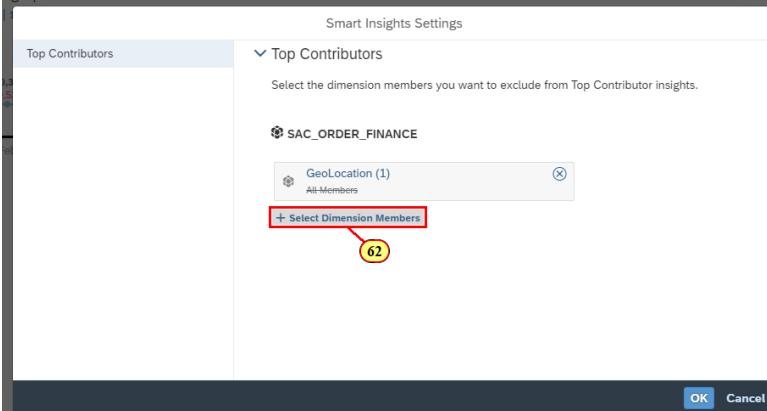
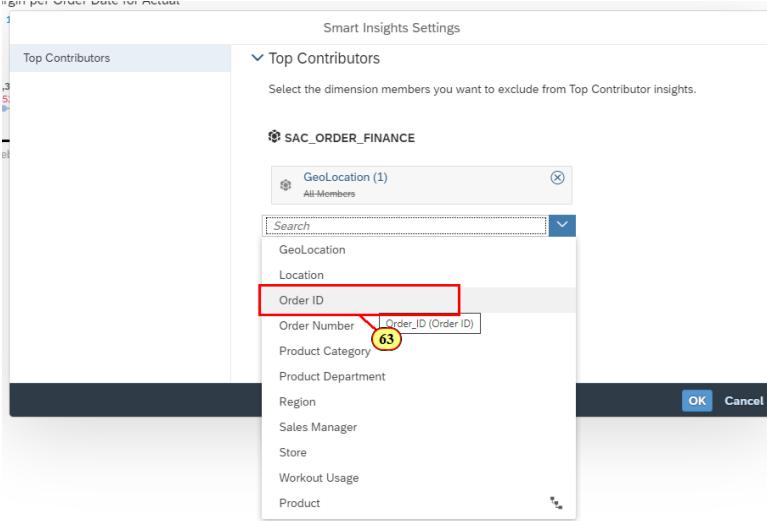
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<p>Welcome to Smart Insights! side panel</p> <p>The side panel appears visual insights on that chart or data point.</p> <ol style="list-style-type: none"> 1. The upper pane shows how the information has changed over time. 2. The lower pane shows information that highlights contributing factors for the data <p>Did you know Smart Insights can also be triggered by user who do not have edit right to a story?</p> <p>Note: different charts and data may provide different insights.</p>	 <p>Gross Margin in High Intensity</p> <p>How has this changed?</p> <ul style="list-style-type: none"> The total so far for Sat, Jan 9 is 4,337.81. The total for Fri, Jan 8 was 14,735.57, a decrease of 82% (66,117.84) compared to Thu, Jan 7 (80,853.41). <p>Gross Margin per Ship Date for Actual</p> <p>A line chart showing Gross Margin per Ship Date for Actual from Jan 2 to Jan 9, 2021. The Y-axis ranges from -435,343.90 to 1,341,132.33. The X-axis shows dates 2 through 9. The chart shows a general downward trend with significant drops at each data point.</p> <table border="1"> <thead> <tr> <th>Date</th> <th>Gross Margin</th> </tr> </thead> <tbody> <tr><td>2</td><td>1,341,132.33</td></tr> <tr><td>3</td><td>704,937.06</td></tr> <tr><td>4</td><td>427,440.53</td></tr> <tr><td>5</td><td>136,887.75</td></tr> <tr><td>6</td><td>14,735.57</td></tr> <tr><td>7</td><td>-290,552.78</td></tr> <tr><td>8</td><td>-200,851.37</td></tr> <tr><td>9</td><td>-66,117.85</td></tr> </tbody> </table> <p>What are the top contributors?</p> <p>> Germany is the top GeoLocation contributor. The top</p>	Date	Gross Margin	2	1,341,132.33	3	704,937.06	4	427,440.53	5	136,887.75	6	14,735.57	7	-290,552.78	8	-200,851.37	9	-66,117.85
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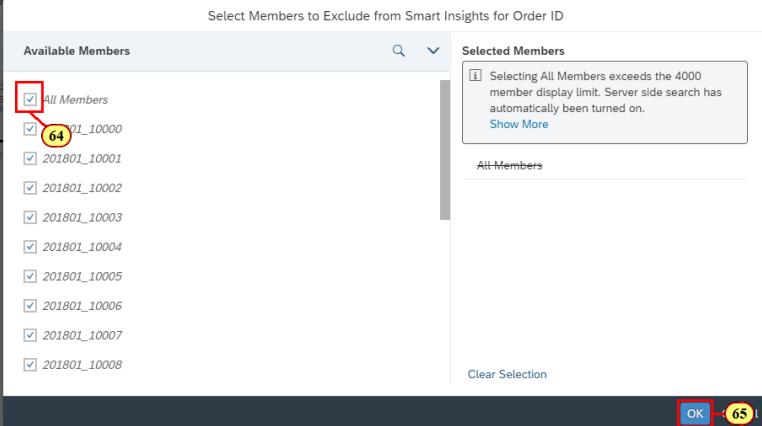
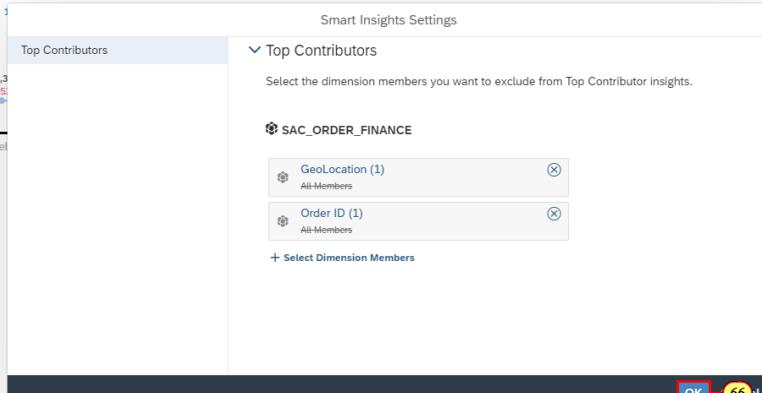
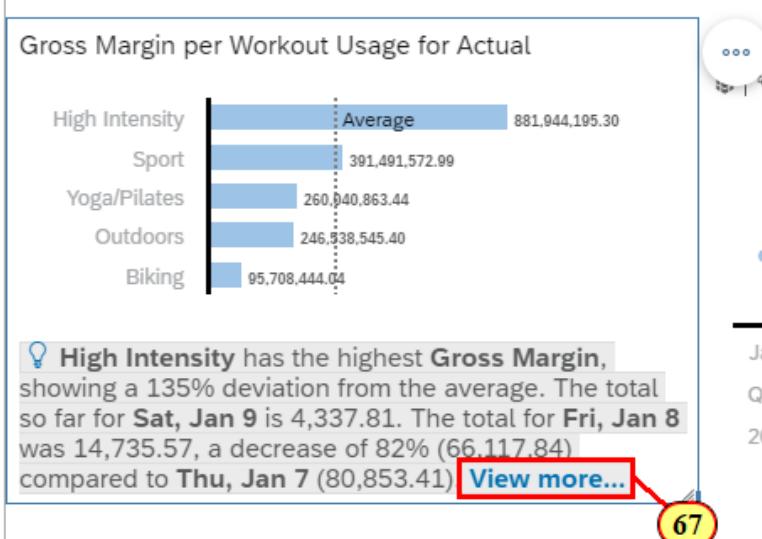
Explanation	Screenshot
<p>While Smart Insight shows the data, change based on day granularity, you're more interested in the monthly data change. Switch to month view.</p> <p>53. Click M</p>	 <p>The screenshot shows the Smart Insights interface with the title "Gross Margin in High Intensity". Below it, a section asks "How has this changed?". A callout points to the "M" button in the top navigation bar, which is highlighted with a red box and a yellow circle containing the number "53". The main area features a chart with two horizontal bars. The top bar shows negative values: -200,851.37, -290,552.78, and -66,117.85. The bottom bar shows positive values: 1,341,132.33, 704,937.06, 427,440.53, 136,887.75, and 14,735.57. The x-axis represents months from 2 to 9, with "Jan 2021" labeled below. The chart is overlaid with a blue line connecting circular markers at each data point.</p>

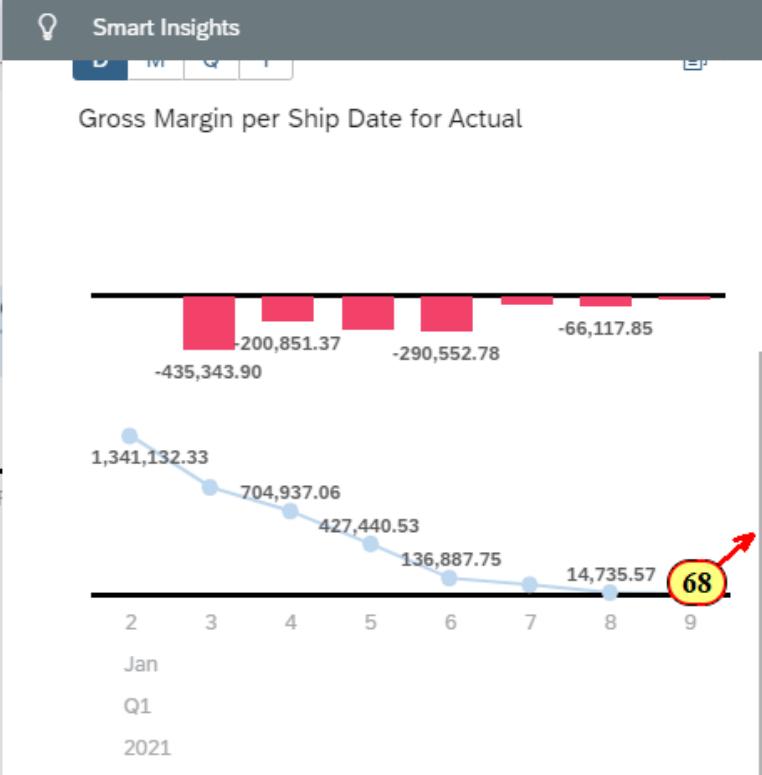
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<p>👉 You can now see the change per month.</p>	<p>💡 Smart Insights</p> <h2>Gross Margin in High Intensity</h2> <p>How has this changed?</p> <ul style="list-style-type: none"> The total so far for Sat, Jan 9 is 4,337.81. The total for Fri, Jan 8 was 14,735.57, a decrease of 82% (66,117.84) compared to Thu, Jan 7 (80,853.41). <p>D M Q Y</p> <p>Gross Margin per Ship Date for Actual</p> <table border="1"> <thead> <tr> <th>Month</th> <th>Change</th> </tr> </thead> <tbody> <tr> <td>Jan 2020</td> <td>+12,554,010.62</td> </tr> <tr> <td>Feb 2020</td> <td>-9,271,887.43</td> </tr> <tr> <td>Mar 2020</td> <td>+3,272,108.81</td> </tr> <tr> <td>Apr 2020</td> <td>-8,473,313.59</td> </tr> <tr> <td>May 2020</td> <td>+13,188,415.26</td> </tr> <tr> <td>Jun 2020</td> <td>-10,082,738.12</td> </tr> <tr> <td>Jul 2020</td> <td>+16,291,552.40</td> </tr> <tr> <td>Aug 2020</td> <td></td> </tr> <tr> <td>Sep 2020</td> <td></td> </tr> <tr> <td>Oct 2020</td> <td></td> </tr> <tr> <td>Nov 2020</td> <td></td> </tr> <tr> <td>Dec 2020</td> <td></td> </tr> <tr> <td>Jan 2021</td> <td></td> </tr> </tbody> </table> <p>28,207,744.69 15,653,734.07 18,170,185.04 31,116,349.00 41,919,282.67 4,675,415.97</p> <p>J... F... J... Jul J... Q1 Q2 Q3 Q4 ... 2020</p>	Month	Change	Jan 2020	+12,554,010.62	Feb 2020	-9,271,887.43	Mar 2020	+3,272,108.81	Apr 2020	-8,473,313.59	May 2020	+13,188,415.26	Jun 2020	-10,082,738.12	Jul 2020	+16,291,552.40	Aug 2020		Sep 2020		Oct 2020		Nov 2020		Dec 2020		Jan 2021	
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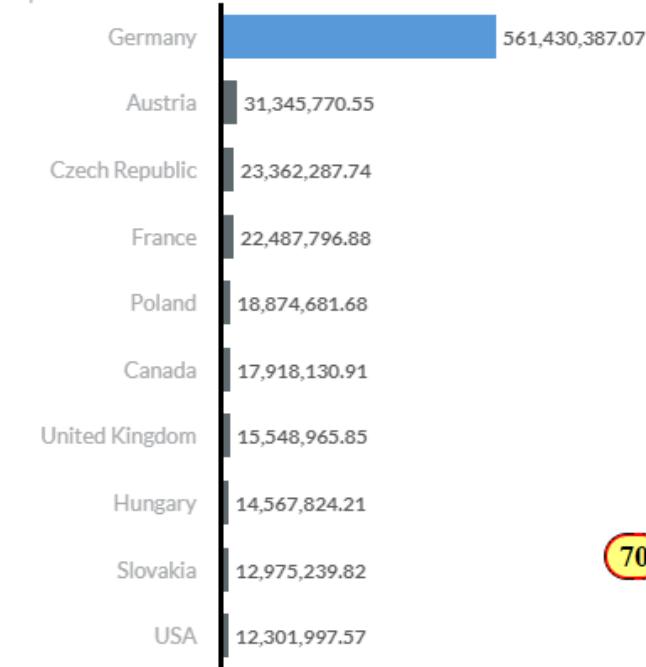
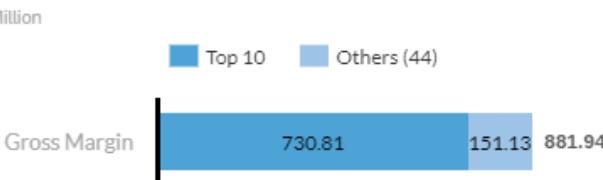
Explanation	Screenshot
<p>👉 Let's have a look at the top contributors</p> <p>54. Scroll to the bottom</p>	 <p>What are the top contributors? 54</p> <ul style="list-style-type: none"> ➤ Germany is the top GeoLocation contributor. The top 10 values contribute 730,813,082.28 (83%) overall. ➤ Germany is the top Location contributor. The top 10 values contribute 730,813,082.28 (83%) overall. ➤ 202012_55703 is the top Order ID contributor. The top 10 values contribute 2,388,000.83 (0%) overall. ➤ 55703 is the top Order Number contributor. The top 10 values contribute 2,388,000.83 (0%) overall. ➤ MEE is the top Region contributor, 475% above average. <p>< Close</p>
<p>👉 There seem to be 2 identical location dimensions in the data model as well as 2 dimensions for Order IDs. This results in redundant insights. A story designer can configure whether certain dimension will be excluded from Smart Insight in order to provide better results. Let's exclude the redundant dimensions.</p> <p>55. Click Close</p>	<p>What are the top contributors?</p> <ul style="list-style-type: none"> ➤ Germany is the top GeoLocation contributor. The top 10 values contribute 730,813,082.28 (83%) overall. ➤ Germany is the top Location contributor. The top 10 values contribute 730,813,082.28 (83%) overall. ➤ 202012_55703 is the top Order ID contributor. The top 10 values contribute 2,388,000.83 (0%) overall. ➤ 55703 is the top Order Number contributor. The top 10 values contribute 2,388,000.83 (0%) overall. ➤ MEE is the top Region contributor, 475% above average. <p>< 55 Close</p>

Explanation	Screenshot
<p>56. Click Preference icon</p> <p>57. Click Smart Insight Settings</p>	
<p>58. Click + Select Dimension Members</p>	
<p>59. Click GeoLocation</p>	

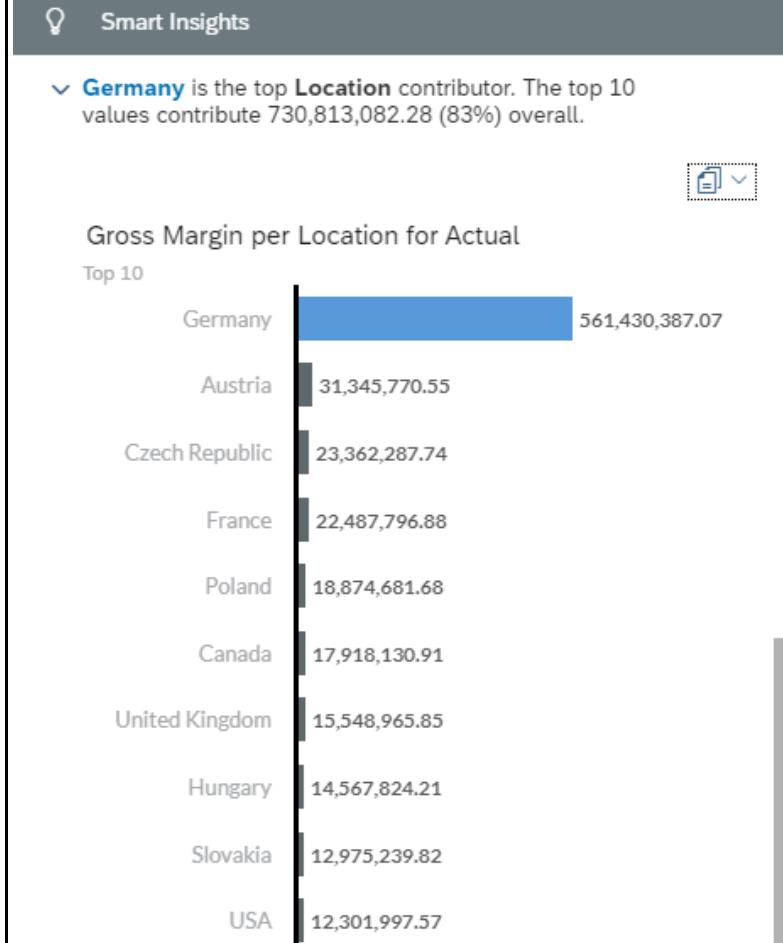
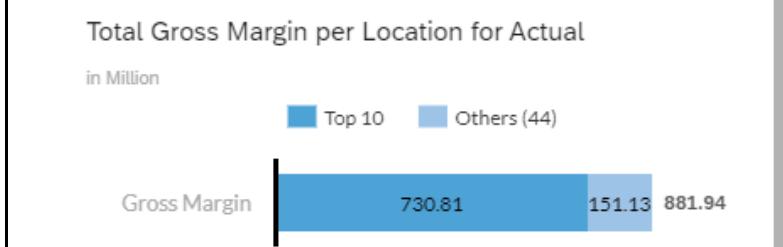
Explanation	Screenshot
<p>60. Click All Members</p> <p>61. Click OK</p>	
<p>62. Click + Select Dimension Members</p>	
<p>63. Click Order ID</p>	

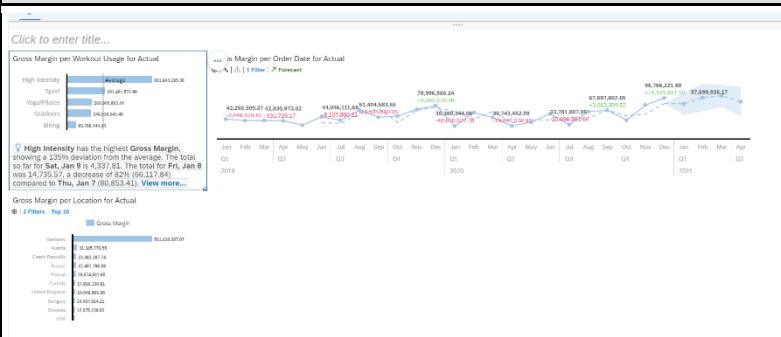
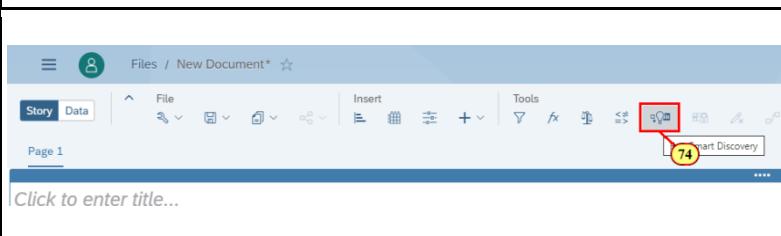
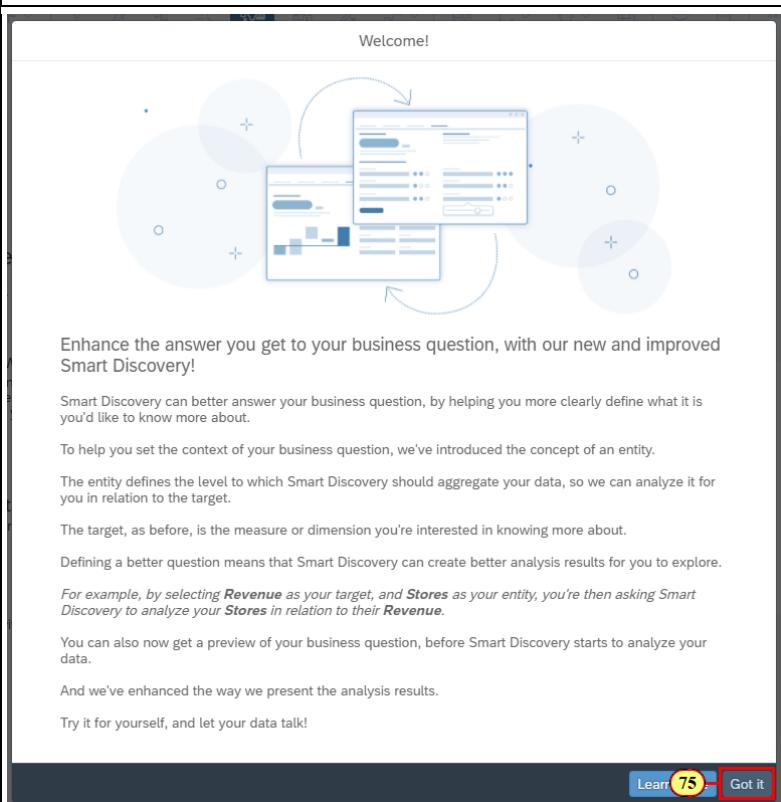
Explanation	Screenshot
<p>64. Click All Members</p> <p>65. Click OK</p>	
<p>66. Click OK</p>	
<p>👉 Let's Open the Smart Insight Panel again and see how the configuration influenced the top contributor results.</p> <p>67. Click View More</p>	

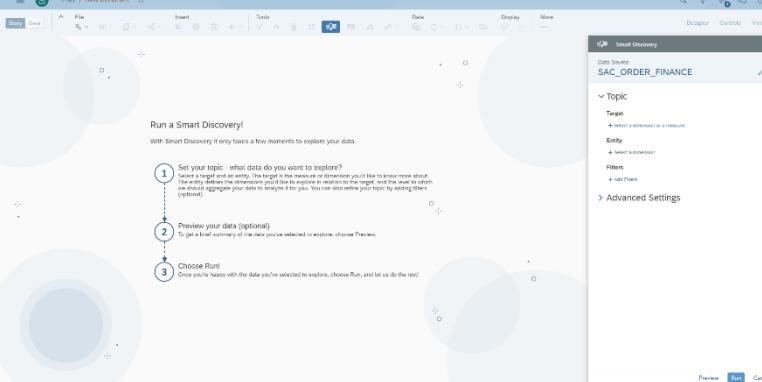
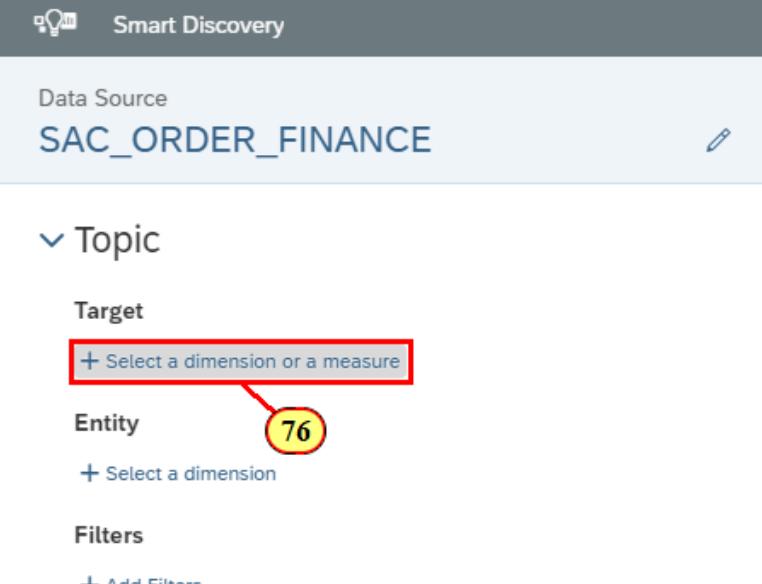
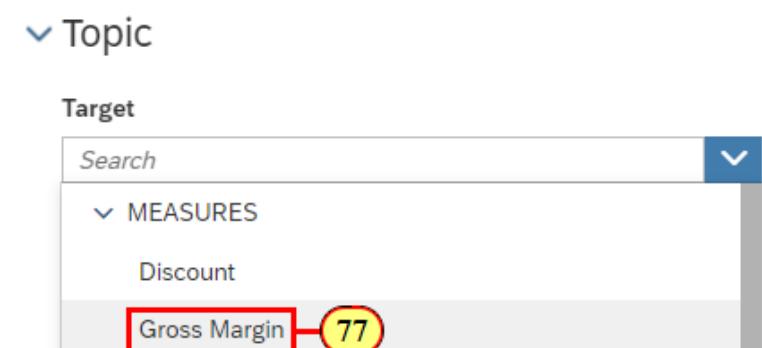
Explanation	Screenshot																		
<p>68. Scroll to the bottom</p> <p>👉 You can see there are no more redundant insights. Let's look at the location contributor.</p> <p>69. Expand the Germany insight</p>	 <table border="1"> <caption>Gross Margin per Ship Date for Actual</caption> <thead> <tr> <th>Ship Date</th> <th>Gross Margin</th> </tr> </thead> <tbody> <tr><td>Jan 2021</td><td>1,341,132.33</td></tr> <tr><td>Feb 2021</td><td>704,937.06</td></tr> <tr><td>Mar 2021</td><td>427,440.53</td></tr> <tr><td>Apr 2021</td><td>136,887.75</td></tr> <tr><td>May 2021</td><td>14,735.57</td></tr> <tr><td>Jun 2021</td><td></td></tr> <tr><td>Jul 2021</td><td></td></tr> <tr><td>Aug 2021</td><td></td></tr> </tbody> </table>	Ship Date	Gross Margin	Jan 2021	1,341,132.33	Feb 2021	704,937.06	Mar 2021	427,440.53	Apr 2021	136,887.75	May 2021	14,735.57	Jun 2021		Jul 2021		Aug 2021	
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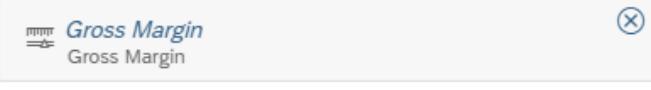
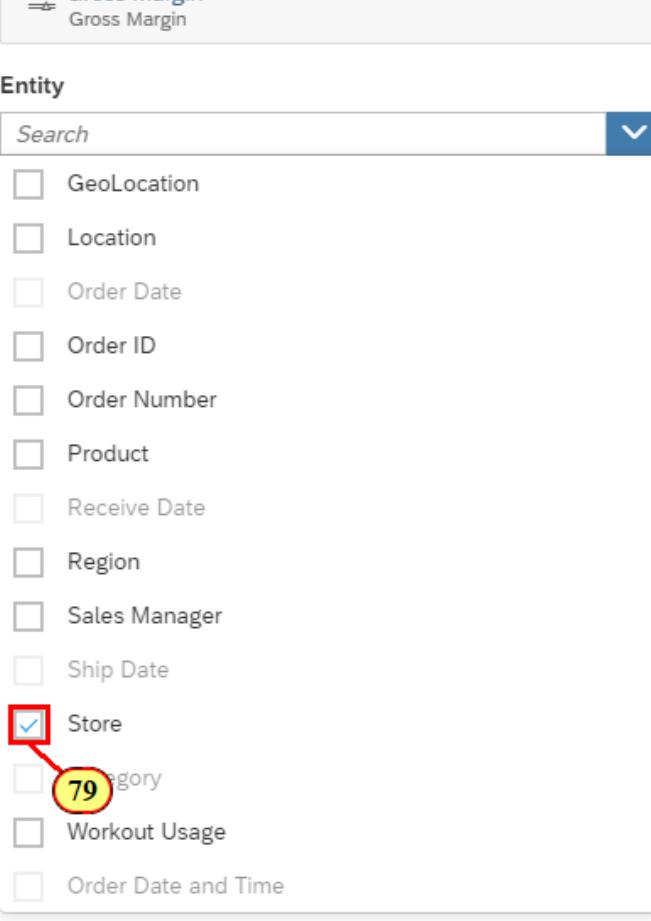
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<p>70. Scroll to the bottom</p> <p> You can see now the top 10 location contributors. You like to add this chart to the page.</p>	<p>Smart Insights</p> <p>Germany is the top Location contributor. The top 10 values contribute 730,813,082.28 (83%) overall.</p> <p> </p> <p>Gross Margin per Location for Actual</p> <p>Top 10</p>  <table border="1"> <thead> <tr> <th>Location</th> <th>Gross Margin (in Millions)</th> </tr> </thead> <tbody> <tr><td>Germany</td><td>561,430,387.07</td></tr> <tr><td>Austria</td><td>31,345,770.55</td></tr> <tr><td>Czech Republic</td><td>23,362,287.74</td></tr> <tr><td>France</td><td>22,487,796.88</td></tr> <tr><td>Poland</td><td>18,874,681.68</td></tr> <tr><td>Canada</td><td>17,918,130.91</td></tr> <tr><td>United Kingdom</td><td>15,548,965.85</td></tr> <tr><td>Hungary</td><td>14,567,824.21</td></tr> <tr><td>Slovakia</td><td>12,975,239.82</td></tr> <tr><td>USA</td><td>12,301,997.57</td></tr> </tbody> </table> <p>Total Gross Margin per Location for Actual</p> <p>in Million</p>  <table border="1"> <thead> <tr> <th>Category</th> <th>Gross Margin (in Millions)</th> </tr> </thead> <tbody> <tr><td>Top 10</td><td>730.81</td></tr> <tr><td>Others (44)</td><td>151.13</td></tr> <tr><td>Gross Margin</td><td>881.94</td></tr> </tbody> </table> <p>> 55703 is the top Order Number contributor. The top 10 values contribute 2,388,000.83 (0%) overall.</p> <p> </p>	Location	Gross Margin (in Millions)	Germany	561,430,387.07	Austria	31,345,770.55	Czech Republic	23,362,287.74	France	22,487,796.88	Poland	18,874,681.68	Canada	17,918,130.91	United Kingdom	15,548,965.85	Hungary	14,567,824.21	Slovakia	12,975,239.82	USA	12,301,997.57	Category	Gross Margin (in Millions)	Top 10	730.81	Others (44)	151.13	Gross Margin	881.94
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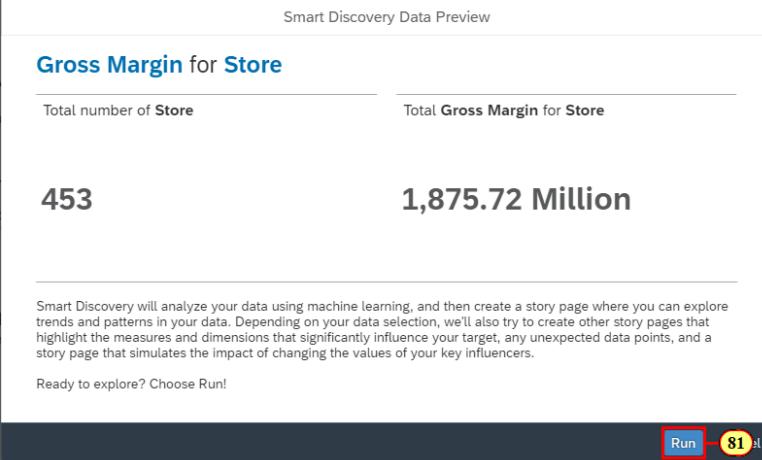
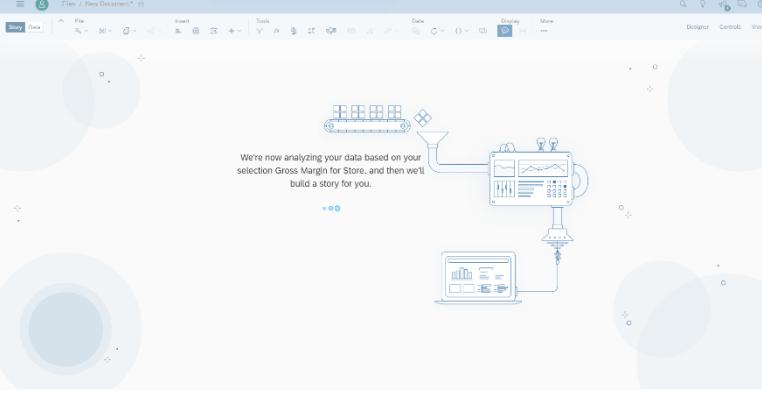
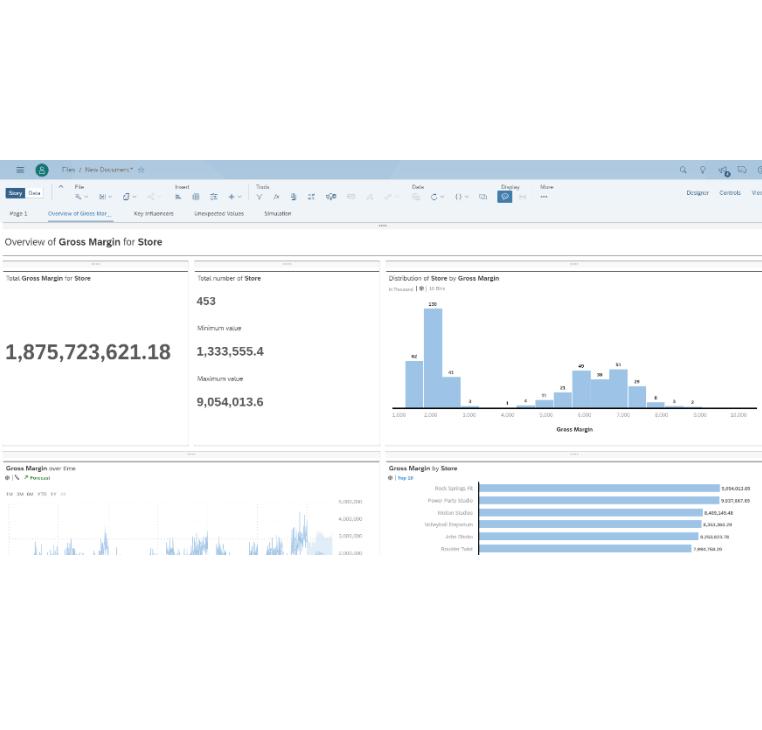
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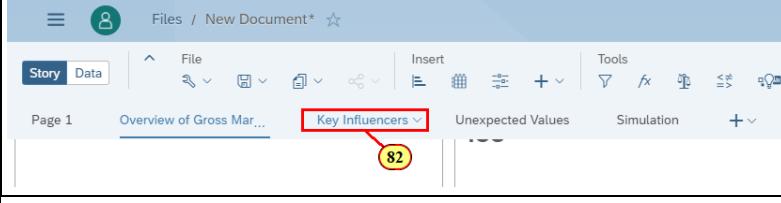
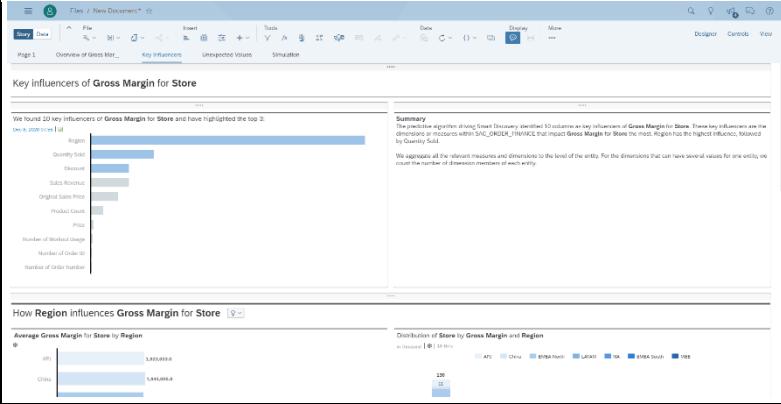
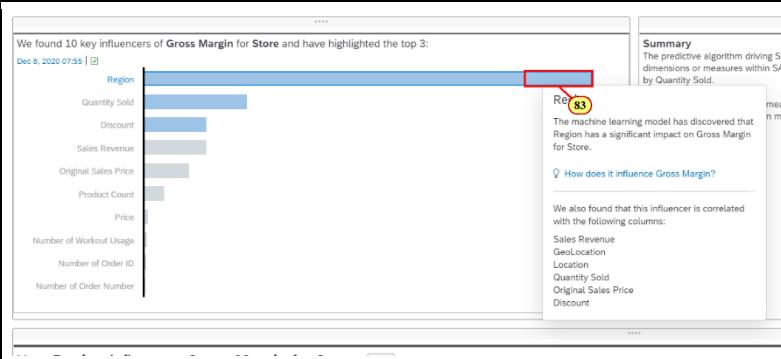
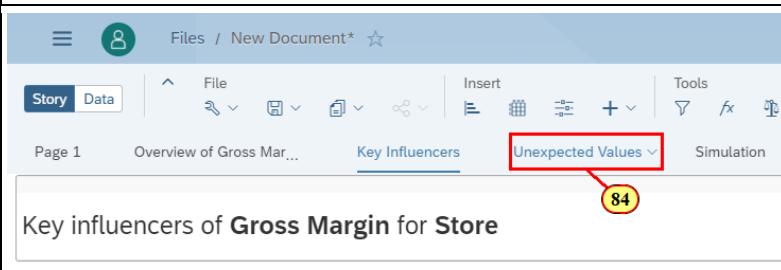
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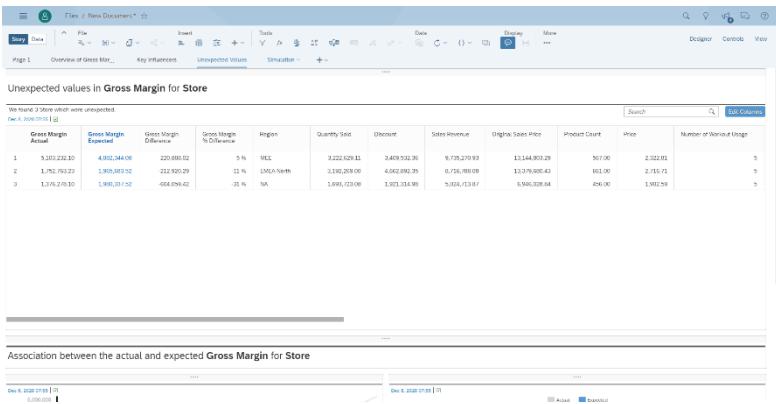
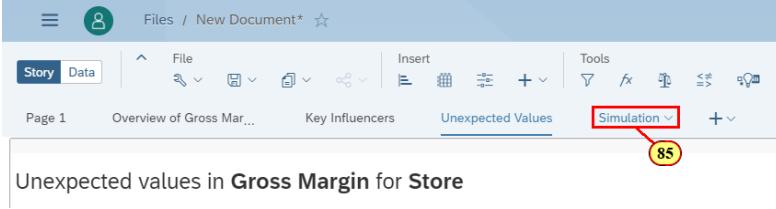
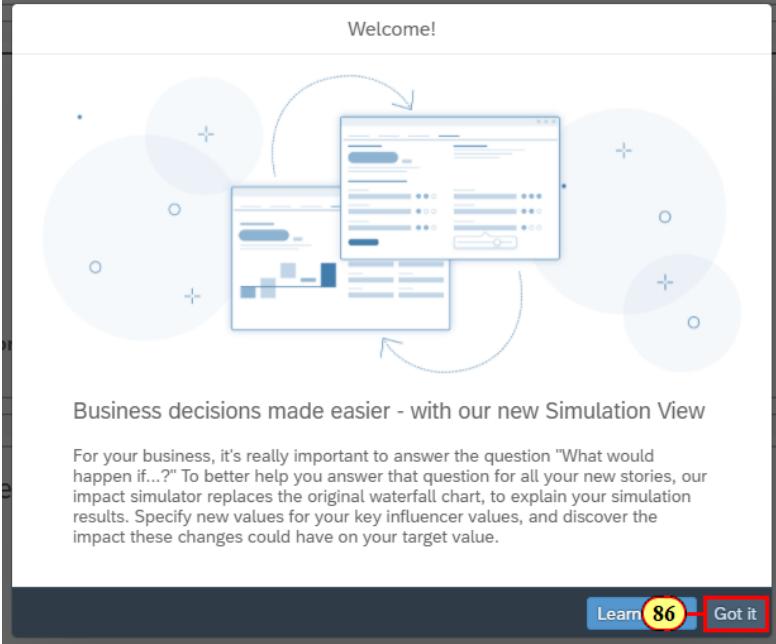
Explanation	Screenshot
<p>⚠️ Quality Check! Does your story look like this?</p>	
<p>👉 Besides Search to Insight and Smart Insight, SAP Analytics Cloud can also generate an entire story for you using Smart Discovery. Let's try that out.</p> <p>74. Click the Smart Discovery Icon</p>	
<p>👉 If your user enters Smart Discovery for the first time this dialog may appear.</p> <p>75. Click Got it</p>	

Explanation	Screenshot
<p> Welcome to Smart Discovery!</p> <p>Smart Discovery helps gain insights on how underlying variables influence a given dimension or measure within a dataset in a story using machine learning algorithms.</p>	
<p> You are interested in the Gross Margin and Stores insights.</p> <p>76. Click + Select a dimension or measure</p>	
<p>77. Click Gross Margin</p>	

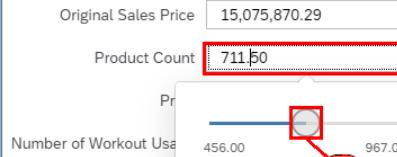
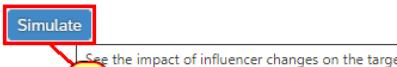
Explanation	Screenshot
78. Click + select Dimension	<p>▼ Topic</p> <p>Target</p>  <p>Entity</p> <p>+ Select a dimension</p> <p>Filters 78</p> <p>+ Add Filters</p>
79. Select Store Before running the Smart Discovery, we can preview it and see what macro's we're going to be running the discovery on 80. Click Preview	 <p>Search</p> <ul style="list-style-type: none"> <input type="checkbox"/> GeoLocation <input type="checkbox"/> Location <input type="checkbox"/> Order Date <input type="checkbox"/> Order ID <input type="checkbox"/> Order Number <input type="checkbox"/> Product <input type="checkbox"/> Receive Date <input type="checkbox"/> Region <input type="checkbox"/> Sales Manager <input type="checkbox"/> Ship Date <input checked="" type="checkbox"/> Store 79 <input type="checkbox"/> Category <input type="checkbox"/> Workout Usage <input type="checkbox"/> Order Date and Time <p>Preview 80 Cancel</p>

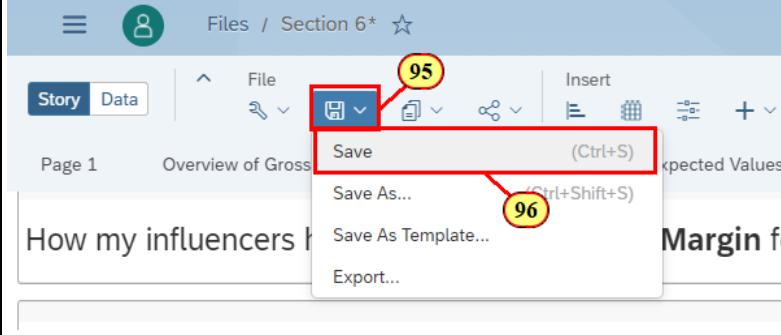
Explanation	Screenshot
<p>👉 The Preview opens a dialogue which shows you high level information about the measure and entity selected. Once you've seen the info, you can run the Smart Discovery.</p> <p>81. Click Run</p>	
<p>⚠ Wait for Smart Discovery to Build the Story!</p>	
<p>💡 Smart Discovery Creates up to Four Pages:</p> <ol style="list-style-type: none"> Overview: illustrates visualizations that help understand how the data is distributed and what factors contribute to the total aggregated value. Key Influencers: shows the list of dimensions and measures (ranked from highest to lowest contribution) that have been identified by the underlying machine learning algorithm as top influencers. The included visualizations are displayed to understand how the impact of the influencer on your target (Annual Salary) Unexpected Values: contains a table with the records that have been identified by the underlying machine learning model as unexpected. The table shows the actual and the predicted values along with the other corresponding dimensions. Simulation: it contains a listing of the key influencers and their corresponding values. You can simulate an impact by selecting 	

Explanation	Screenshot
values for each key influencer. The impact of the value is reflected on the chart.	
<p>👉 While the overview page provides great insights, you are less interested in these rights now. Let's look at the key influencers.</p> <p>82. Click Key Influencers</p>	
<p>👉 Here we can see that the tool has identified 10 things that influence Gross Margin the most. There is an informative summary on the right and you can scroll down to see more information charted for the top 3 key influencers.</p> <p>It seems like region has the greatest influence on Gross Margin. Scroll down to see more info.</p>	
<p>👉 Selecting one of the key influencers provides additional details.</p> <p>83. Click Region bar</p>	
<p>👉 Let's look at the Unexpected Values</p> <p>84. Click Unexpected Values</p>	

Explanation	Screenshot																																																
<p> Looks like we only have a few unexpected values. Let's move to the simulation page</p>	 <p>We found 3 stores which were unexpected.</p> <table border="1"> <thead> <tr> <th></th> <th>Gross Margin Actual</th> <th>Gross Margin Expected</th> <th>Gross Margin Difference</th> <th>Region</th> <th>Quantity Sold</th> <th>Discount</th> <th>Sales Revenue</th> <th>Digital Sales Rate</th> <th>Product Count</th> <th>Price</th> <th>Number of Visitors Unique</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>5,373,232.10</td> <td>4,932,344.08</td> <td>220,889.02</td> <td>5 % MLE</td> <td>3,222,629.11</td> <td>3,479,532.35</td> <td>9,739,270.93</td> <td>13,144,303.29</td> <td>567.00</td> <td>2,322.01</td> <td>5</td> </tr> <tr> <td>2</td> <td>1,781,793.23</td> <td>1,369,263.52</td> <td>212,920.29</td> <td>11 % LMEA North</td> <td>3,190,269.00</td> <td>4,042,592.35</td> <td>6,736,980.08</td> <td>13,379,305.43</td> <td>651.00</td> <td>2,115.71</td> <td>5</td> </tr> <tr> <td>3</td> <td>1,374,270.10</td> <td>1,369,231.52</td> <td>-554,894.42</td> <td>-1% NA</td> <td>3,695,720.00</td> <td>3,021,154.90</td> <td>5,702,123.87</td> <td>5,360,326.84</td> <td>496.00</td> <td>1,502.59</td> <td>5</td> </tr> </tbody> </table> <p>Association between the actual and expected Gross Margin for Store</p>		Gross Margin Actual	Gross Margin Expected	Gross Margin Difference	Region	Quantity Sold	Discount	Sales Revenue	Digital Sales Rate	Product Count	Price	Number of Visitors Unique	1	5,373,232.10	4,932,344.08	220,889.02	5 % MLE	3,222,629.11	3,479,532.35	9,739,270.93	13,144,303.29	567.00	2,322.01	5	2	1,781,793.23	1,369,263.52	212,920.29	11 % LMEA North	3,190,269.00	4,042,592.35	6,736,980.08	13,379,305.43	651.00	2,115.71	5	3	1,374,270.10	1,369,231.52	-554,894.42	-1% NA	3,695,720.00	3,021,154.90	5,702,123.87	5,360,326.84	496.00	1,502.59	5
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<p> If your user enters simulations for the very first time you may see this dialog.</p>	 <p>Welcome!</p> <p>Business decisions made easier - with our new Simulation View</p> <p>For your business, it's really important to answer "What would happen if...?" To better help you answer that question for all your new stories, our impact simulator replaces the original waterfall chart, to explain your simulation results. Specify new values for your key influencer values, and discover the impact these changes could have on your target value.</p> <p>Learn 86 Got it</p>																																																

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<p>👉 You have completed the Smart Assist section. Please save your document.</p> <p>95. Click Save icon</p> <p>96. Click Save</p>																															

Summary

You have completed the entire Augmented Analytics: Smart Assist Features section!

You are now able to:

- Use Search to Insight to find answers for your questions with natural language
- Use Smart Discovery to investigate your data and build a dashboard for your
- Use Smart Insights can help you explain more of your data

Calculations and Blending: Deep Dive



Objective: Use the latest calculations available in SAP Analytics Cloud to expose additional information that was not available in your original data model. Understand the potential and workflow of blending models and creating cross calculations in our story.

Estimated Time: 25 mins

Exercise Description: You have access to shipping information and financial sales data that with some common dimensions, including Order Number and Store Name. You need to create various calculated dimensions, statistical aggregations, and blended visualizations to understand the effects of shipping times and impact of delivery delays on BestRun's sales revenue.

Key Features:

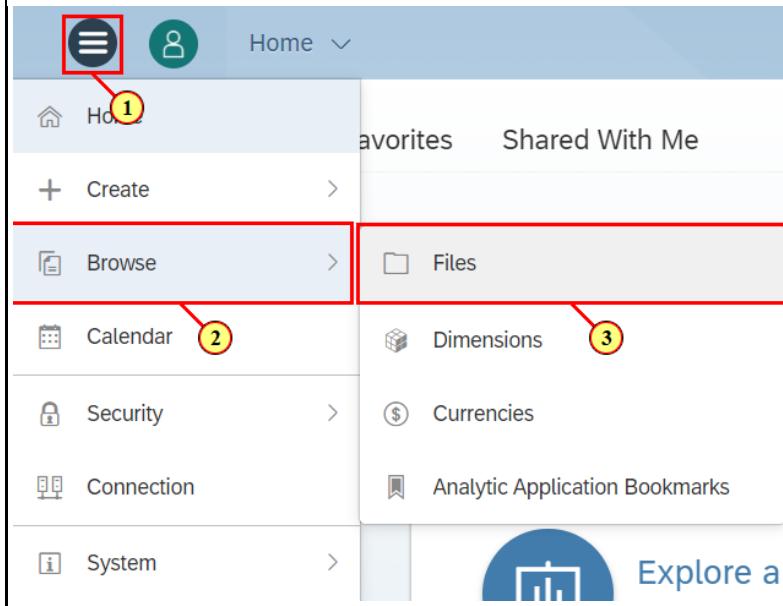
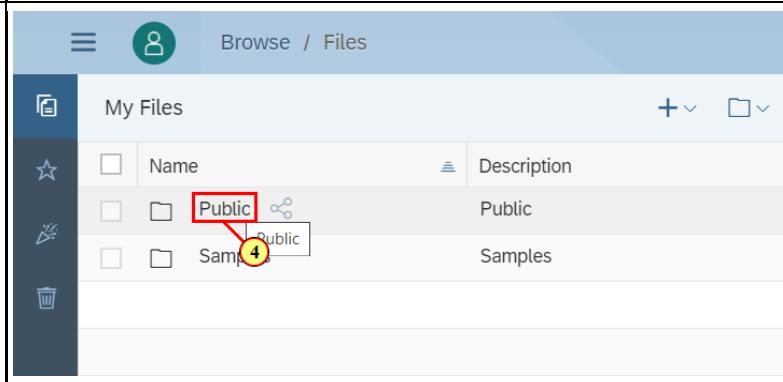
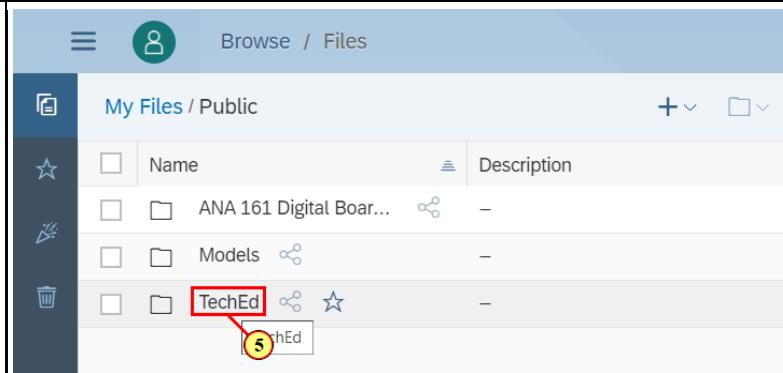
- Create calculated dimensions with string functions to enhance your data
- Understand how to blend data models by linking on common dimensions
- Utilize cross calculations with measures from different models
- Employ statistical calculations in aggregations of your data
- Integrate calculation input controls to simulate values in your visualizations

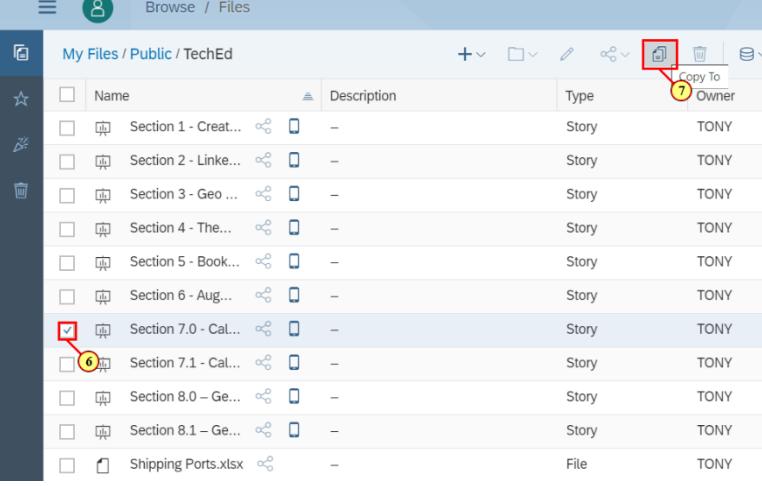
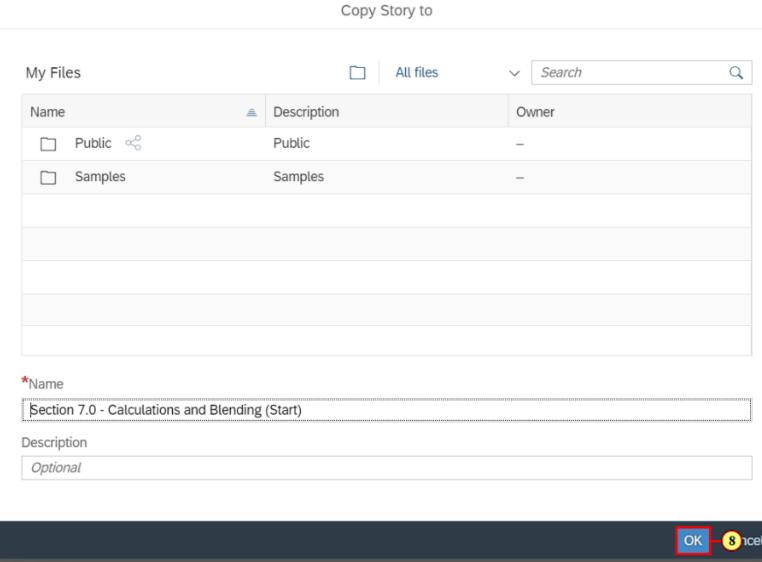
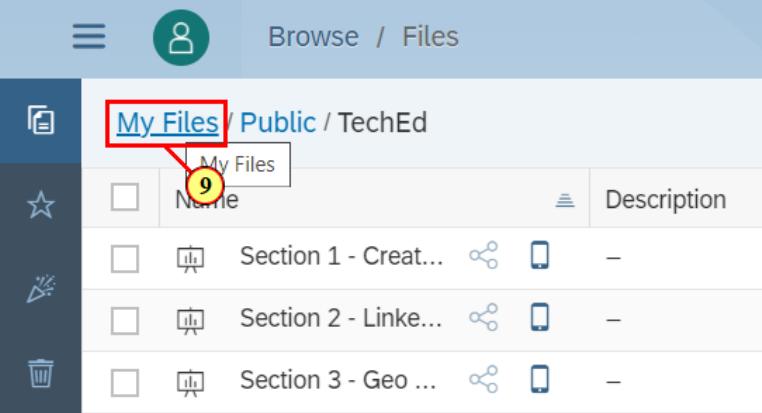


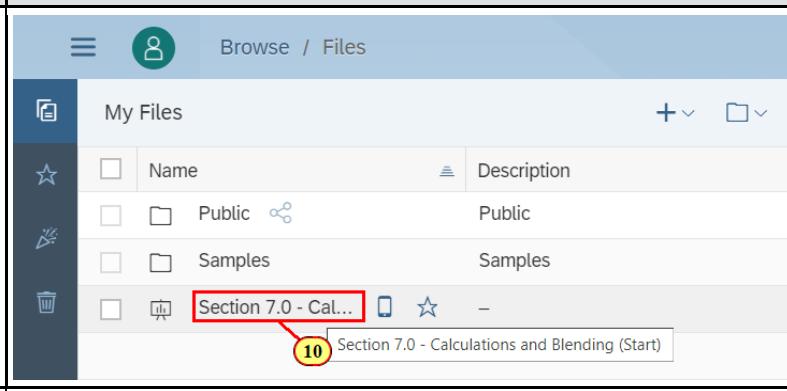
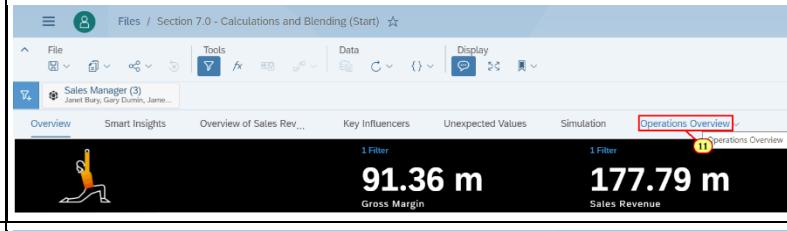
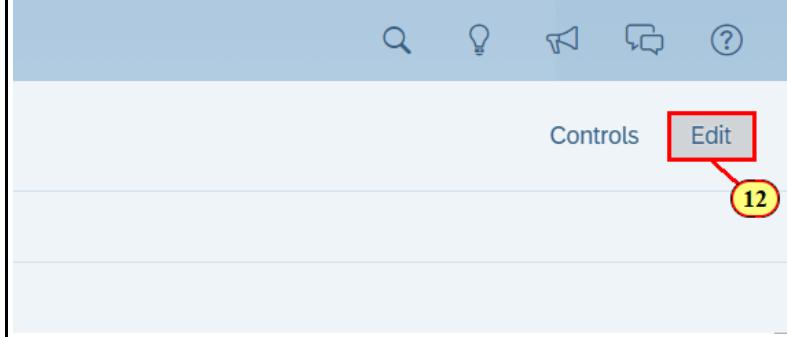
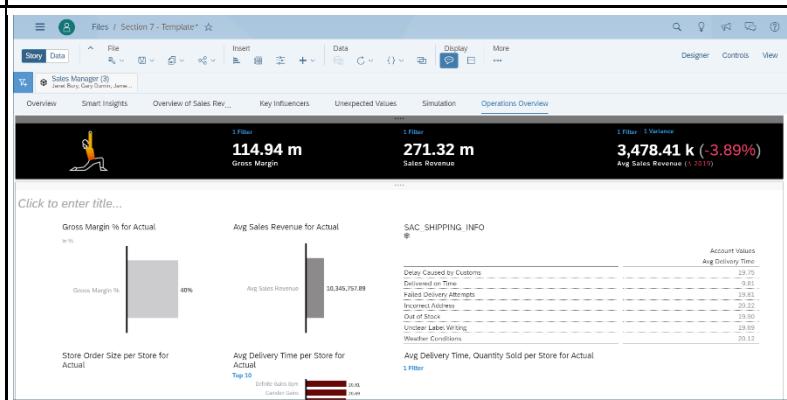
Disclaimer

When completing exercises, some data values in the screenshots may not match what you see on your screen. This is because the dynamic time filters that were applied at the time the screenshots were taken is different from the current system date.

Explanation	Screenshot
<p></p> <p>In this jump off section, we undertake a detailed exploration of the Calculations and Blending features in SAP Analytics Cloud. To start, let us duplicate a story in our tenant created by a business analyst colleague.</p>	<p>The screenshot shows the SAP Analytics Cloud home page. At the top, there is a navigation bar with 'Home' and other options like 'Main Menu', 'Today', 'Catalog', 'Favorites', and 'Shared With Me'. Below the navigation is a search bar with placeholder text 'Ask a question'. Underneath the search bar are several interactive buttons: 'Explore a sample story' (with a blue icon), 'Create an account' (with a green checkmark icon), 'Create your first story' (with a plus sign icon), and 'Learn more in the help center' (with a blue info icon). The main content area is divided into three sections: 'Recent Stories' (listing 'Sample - Revenue Analysis The Best Run Juice Company'), 'Recent Analytic Applications' (noting 'There are no recent applications yet. Open one to start this list.'), and a large 'Sample numeric point chart' showing a value of '28.47' in a green box with the text 'Gross Margin %' below it.</p>

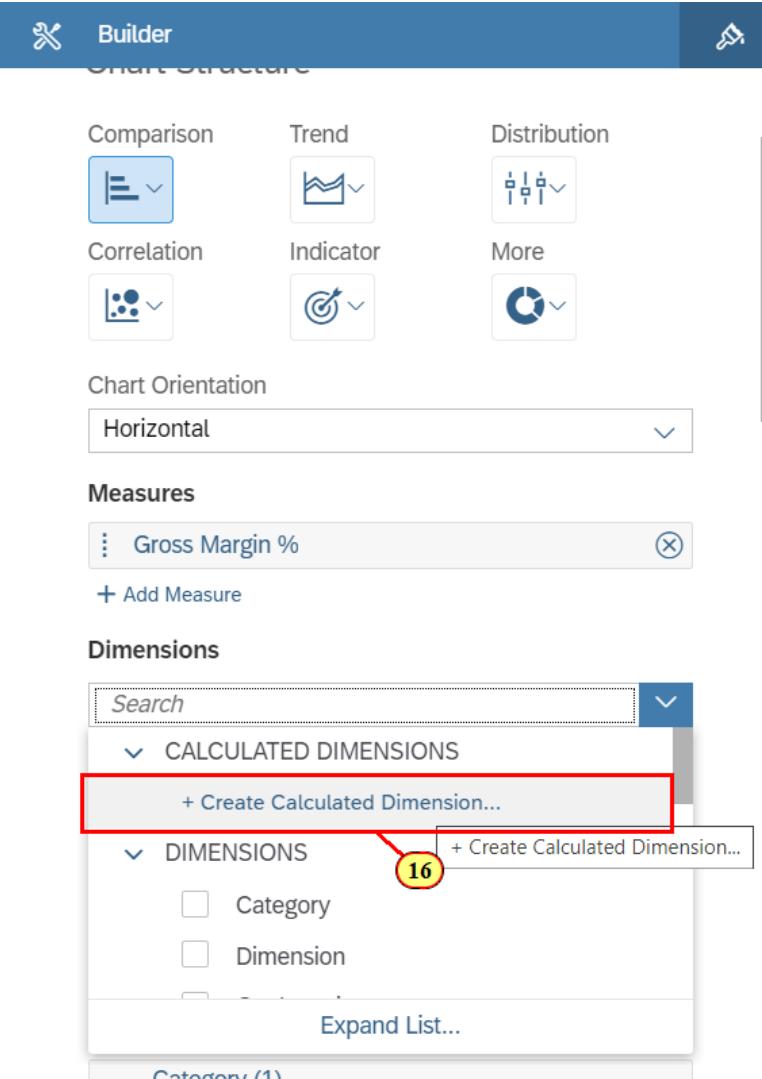
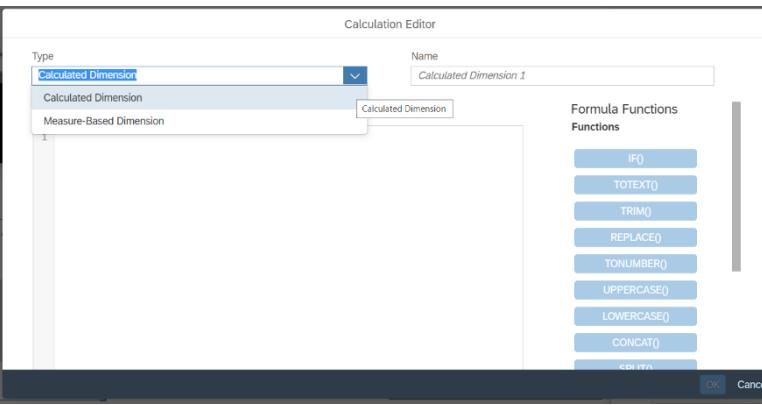
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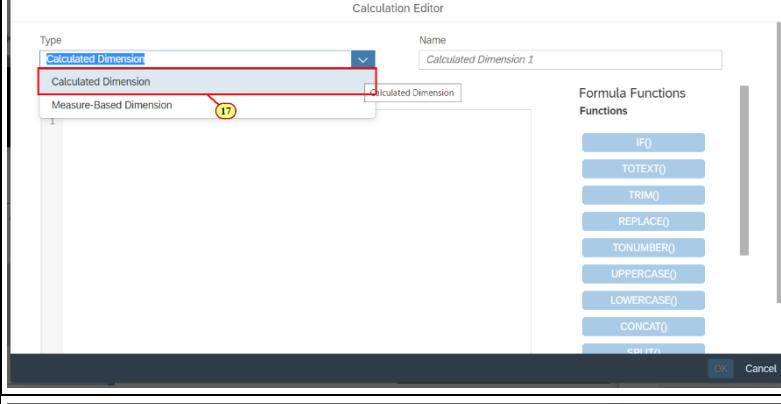
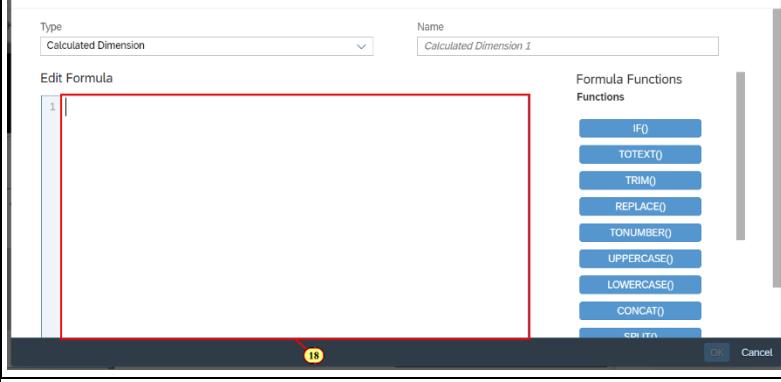
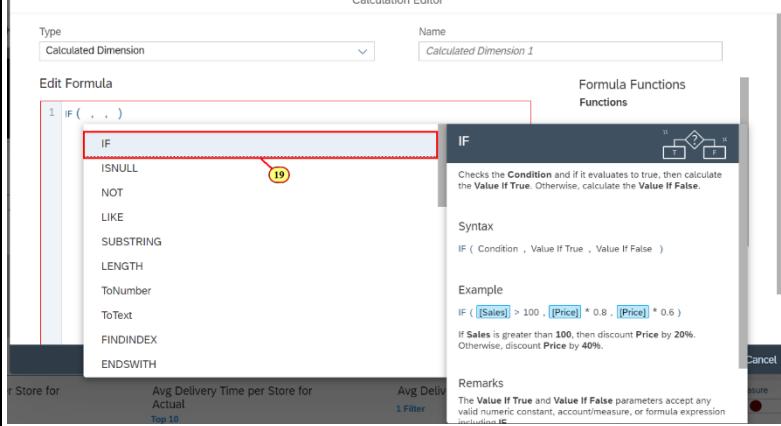
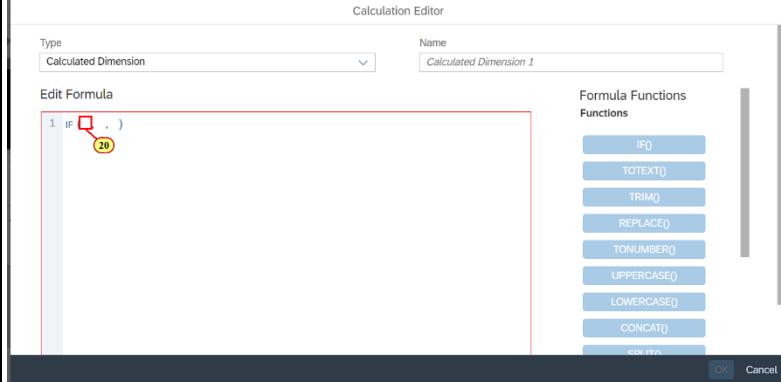
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<p>8. Click OK</p>	 <p>Copy Story to</p> <p>My Files</p> <table border="1"> <thead> <tr> <th>Name</th> <th>Description</th> <th>Owner</th> </tr> </thead> <tbody> <tr> <td>Public</td> <td>Public</td> <td>-</td> </tr> <tr> <td>Samples</td> <td>Samples</td> <td>-</td> </tr> </tbody> </table> <p>*Name Section 7.0 - Calculations and Blending (Start)</p> <p>Description Optional</p> <p>OK 8</p>	Name	Description	Owner	Public	Public	-	Samples	Samples	-																																							
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<p>9. Click My Files</p>	 <p>Browse / Files</p> <p>My Files / Public / TechEd</p> <table border="1"> <thead> <tr> <th>Name</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Section 1 - Creat...</td> <td>-</td> </tr> <tr> <td>Section 2 - Linke...</td> <td>-</td> </tr> <tr> <td>Section 3 - Geo ...</td> <td>-</td> </tr> </tbody> </table>	Name	Description	Section 1 - Creat...	-	Section 2 - Linke...	-	Section 3 - Geo ...	-																																								
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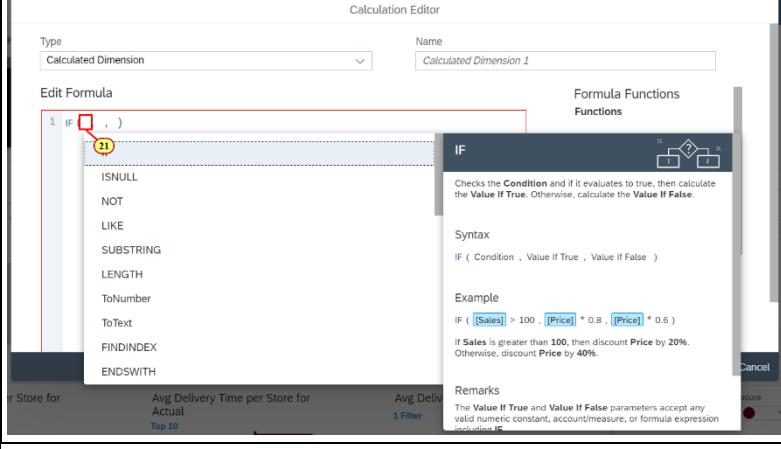
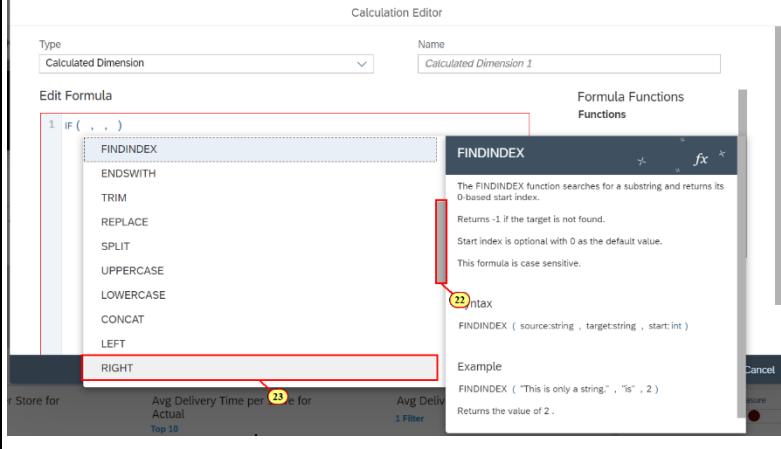
Explanation	Screenshot
10. Click Section 7.0 - Calculations and Blending (Start)	
11. Select Operations Overview page.	
12. Switch to Edit Mode	
<p>⚠️ Exercise check! Does your dashboard look like this screenshot in Edit mode?</p>	

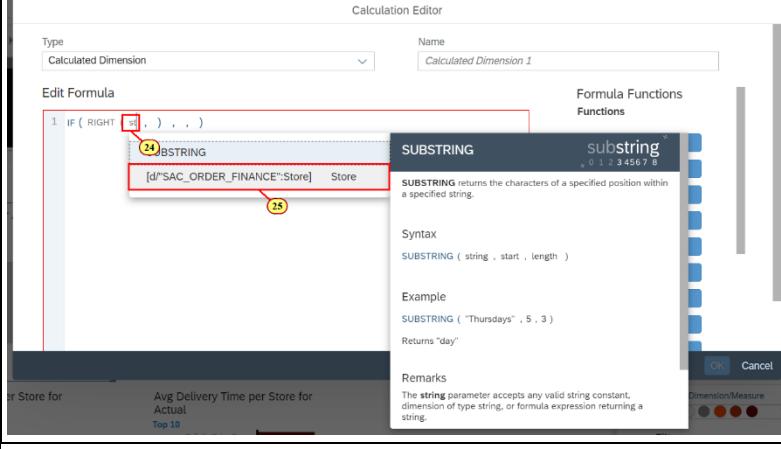
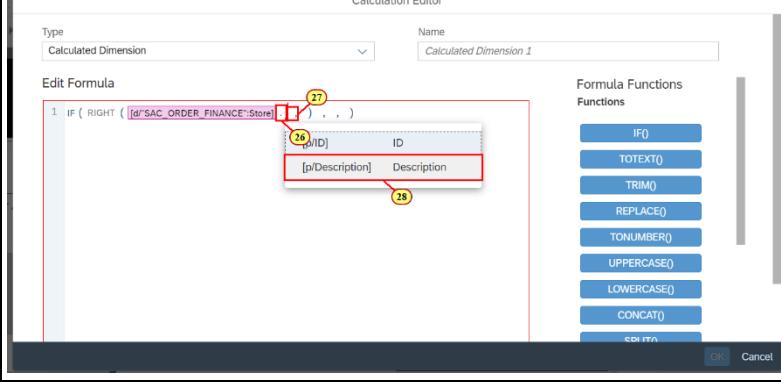
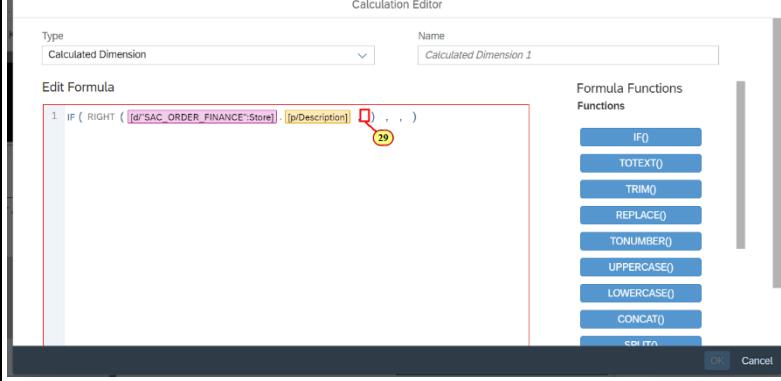
Explanation	Screenshot
<p>When working with your data in SAP Analytics Cloud, you may find that you want to look at additional components to your data that are currently not captured by the existing measures and dimensions in the model. Luckily, story designers can extend the data models with additional calculated measures and dimensions. This enables the story creator to delve into further insights from their data. Let us start by creating a calculated dimension that divides the Store dimension in our data into Studios and Non-Studios.</p> <p>13. Click Gross Margin % for Actual Chart</p>	<p>The screenshot shows a SAP Analytics Cloud Story interface. At the top, there's a navigation bar with 'Story' selected. Below it, a dashboard card displays the value '114.94 m' for 'Gross Margin'. The main content area contains two charts. The first chart, highlighted with a red box, is a bar chart titled 'Gross Margin % for Actual' with a single bar reaching 40%. The second chart is a bar chart titled 'Avg Sales Revenue for Actual' with a single bar reaching 10,345,757.89. A yellow circle with the number '13' points to the title of the first chart.</p>

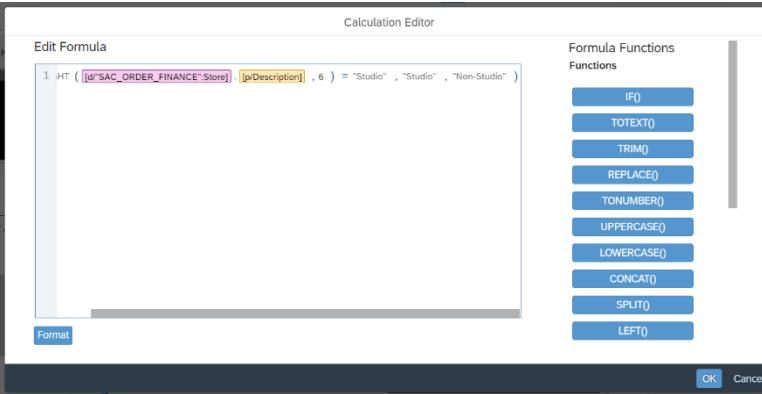
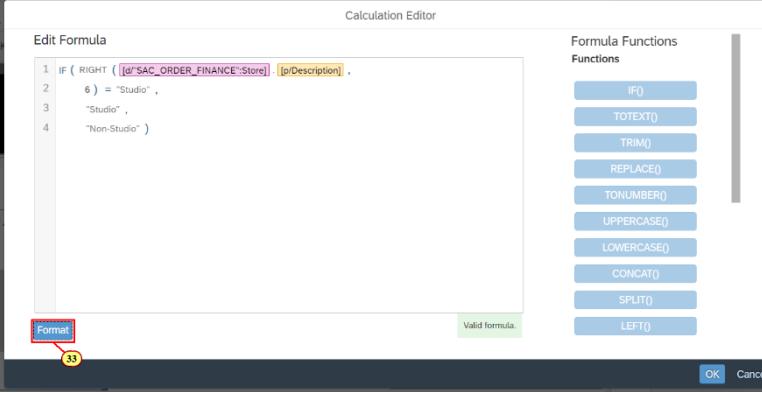
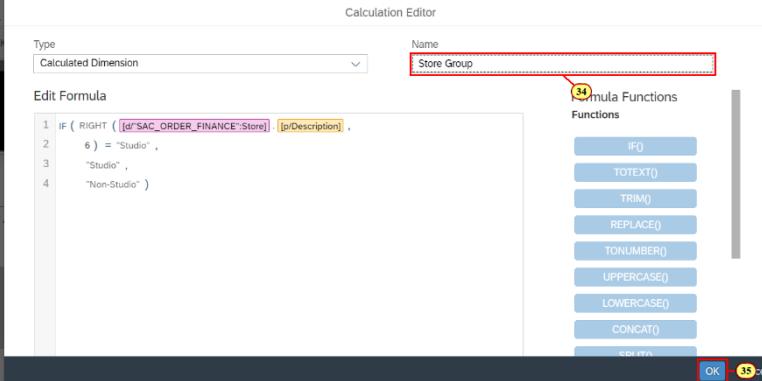
Explanation	Screenshot
<p>14. Click Designer to Open the Builder Panel</p> <p>15. Click + Add Dimension</p>	<p>The screenshot shows the SAP Analytics Cloud interface. At the top, there's a navigation bar with icons for search, idea, message, and help. Below it is a secondary navigation bar with 'Designer' (highlighted with a red box and labeled '14'), 'Controls', and 'View'. The main area is titled 'Builder' and displays a 'Data Source' named 'SAC_ORDER_FINANCE'. There are buttons for '+ Add Linked Models' and edit icons. A large '+' icon is on the right. Below this, under 'Chart Structure', are several categories: 'Comparison' (bar chart icon), 'Trend' (line chart icon), 'Distribution' (histogram icon), 'Correlation' (scatter plot icon), 'Indicator' (target icon), and 'More' (gauge icon). Under 'Chart Orientation', a dropdown menu is set to 'Horizontal'. In the 'Measures' section, 'Gross Margin %' is listed with a delete icon. A '+ Add Measure' button is below it. The 'Dimensions' section contains a '+ Add Dimension' button (highlighted with a red box and labeled '15') and a 'Color' section. At the bottom, a 'Measures' button is shown.</p>

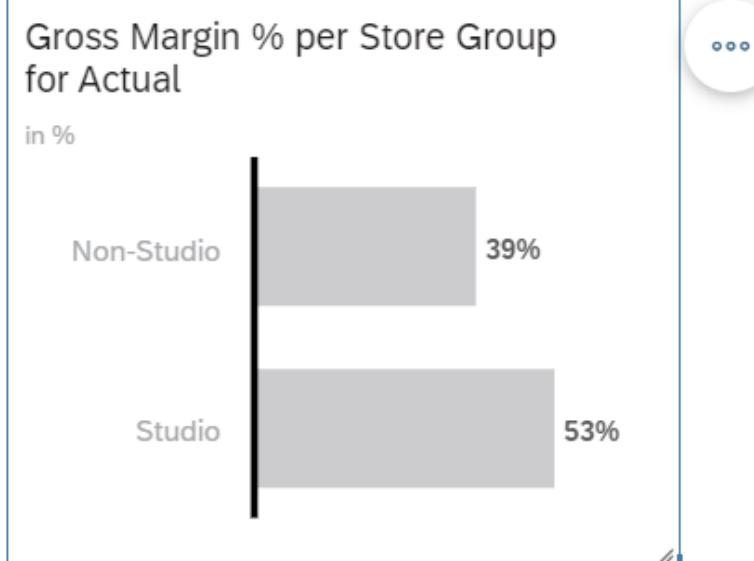
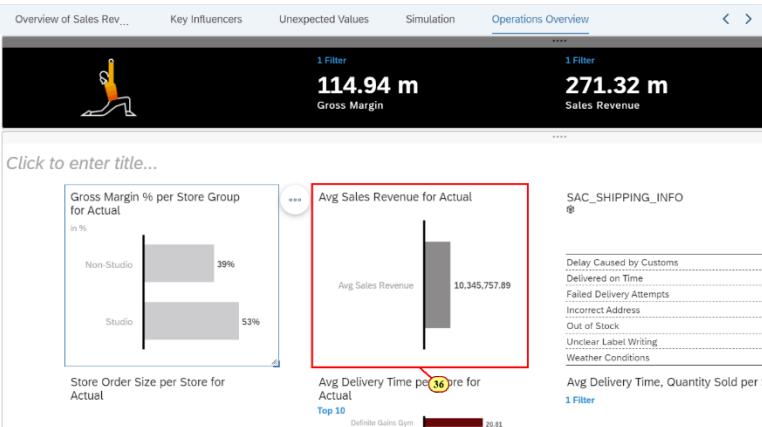
Explanation	Screenshot
<p>16. Click + Create Calculated Dimension</p>	 <p>The screenshot shows the 'Builder' interface with 'Chart Structure' selected. In the 'Dimensions' section, there are two expandable categories: 'CALCULATED DIMENSIONS' and 'DIMENSIONS'. Under 'CALCULATED DIMENSIONS', a red box highlights the '+ Create Calculated Dimension...' button. Under 'DIMENSIONS', a yellow circle with the number 16 points to the '+ Create Calculated Dimension...' button.</p>
<p> Welcome to Calculated Dimensions!</p> <p>Calculated Dimensions are useful when you want to enrich your dimension if your model does not have the needed format.</p> <p>You can choose to combine existing dimensions to create your own dimensions. There are two calculated dimensions that can be created:</p> <ul style="list-style-type: none"> Calculated Dimension: Use formulas to create new dimension members Measure Based Dimension: Use ranges within an existing measure to determine how to group dimension members together 	 <p>The screenshot shows the 'Calculation Editor' dialog box. The 'Type' dropdown is set to 'Calculated Dimension'. The 'Name' field contains 'Calculated Dimension 1'. On the right, a list of 'Formula Functions' is shown, including IF(), TOTEXT(), TRIM(), REPLACE(), TONUMBER(), UPPERCASE(), LOWERCASE(), and CONCAT().</p>

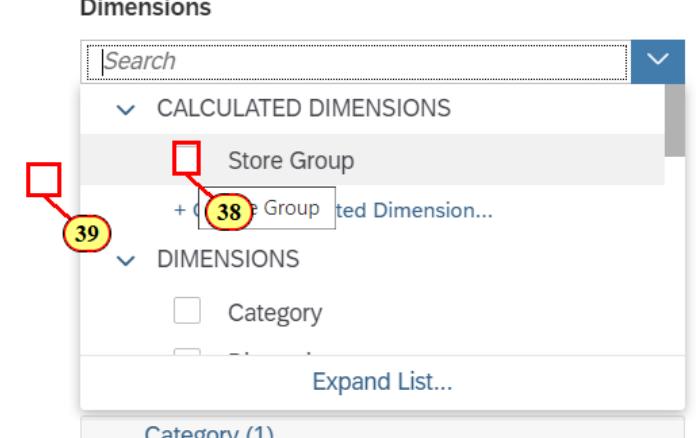
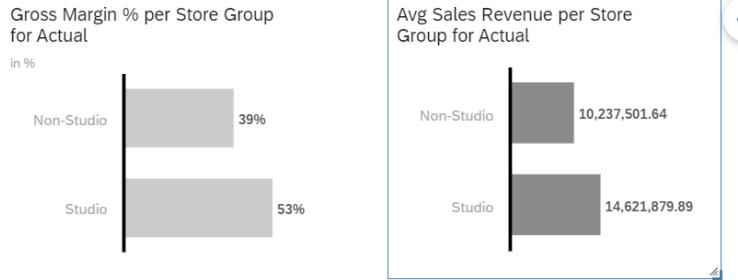
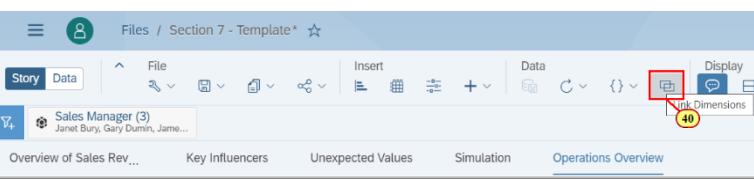
Explanation	Screenshot
<p>As we want to identify the stores that are studios, we will use the regular calculated dimension.</p> <p>17. Click Calculated Dimension</p>	
<p>The formula field for Calculated Dimensions uses conditional logic and function formulas to create the Dimension rules. This offers the business analyst great flexibility in defining new calculated dimensions.</p> <p>18. Press Ctrl + Space on the Keyboard</p>	
<p>19. Click IF</p> <p>The IF statement has three fields. The first field is used as a condition that evaluates to true or false. The second field is the Dimension value if True and the third field is the Dimension value if False.</p>	
<p>20. Click the Condition (First Field) in the IF Formula</p>	

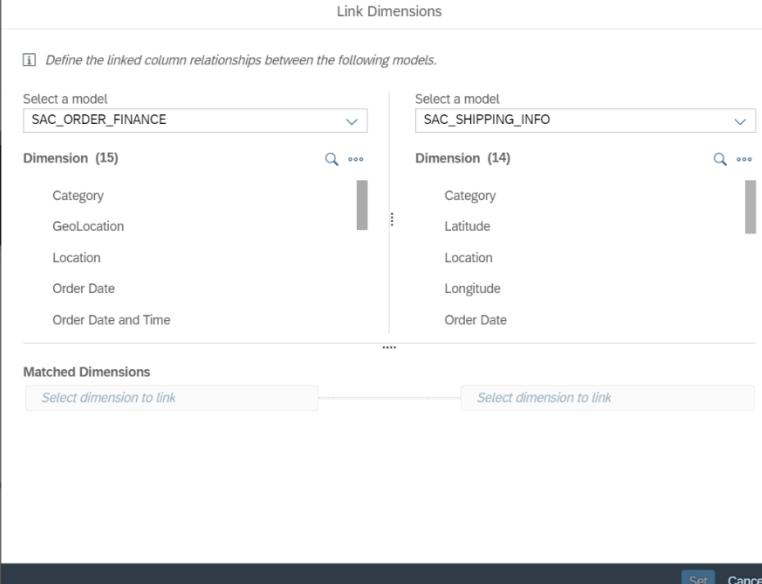
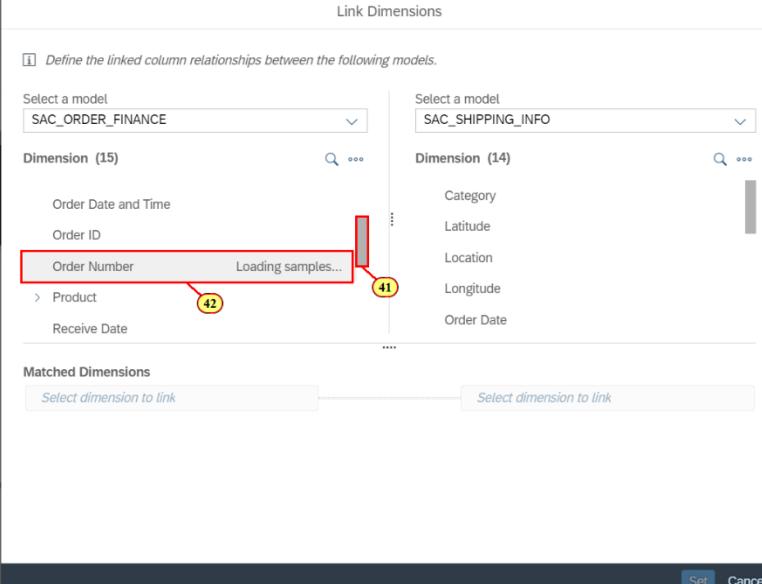
Explanation	Screenshot
<p>21. Press Ctrl + Space on the Keyboard</p>  <p>Using Ctrl + Space is a great way to learn how to use the Calculation Editor. Using this hotkey combination will always bring up all possible functions and measures/dimensions that can be typed into the according field for the ease of the user.</p>	
 <p>Welcome to String Functions in the Calculation Editor! There are a variety of different String Functions that can be used to transform the Dimension values to a specific use case.</p> <p>FINDINDEX: Search for a substring and return its 0 based index ENDSWITH: Returns True if given string ends with user given substring TRIM: Removes unwanted leading and trailing spaces REPLACE: Replace characters in a string with a specified replacement SPLIT: Returns substring from a string using a specified divider UPPERCASE/LOWERCASE: Convert a string to all Lower or all Upper case CONCAT: Combine two strings together LEFT/RIGHT: Returns the specified number of characters from the beginning or end of a string</p> <p>Let us use RIGHT function to categorize Stores by if they are a Studio.</p> <p>22. Scroll till RIGHT is Visible</p> <p>23. Click RIGHT</p>	

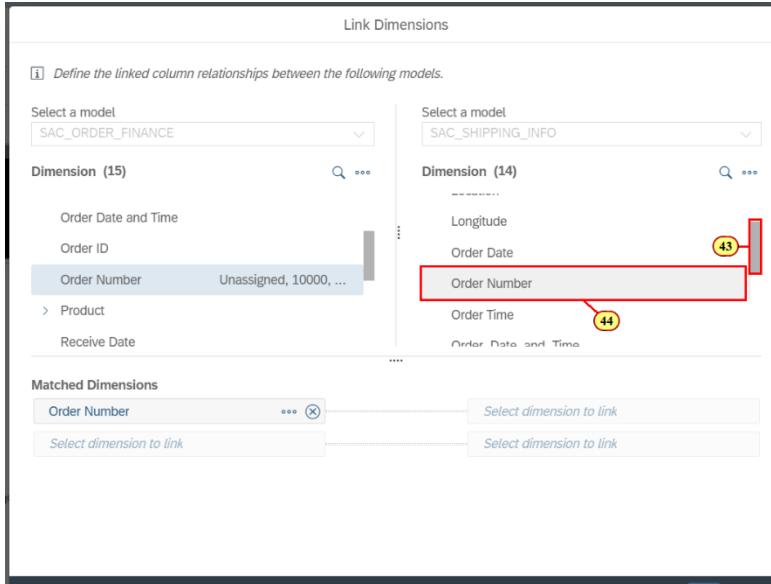
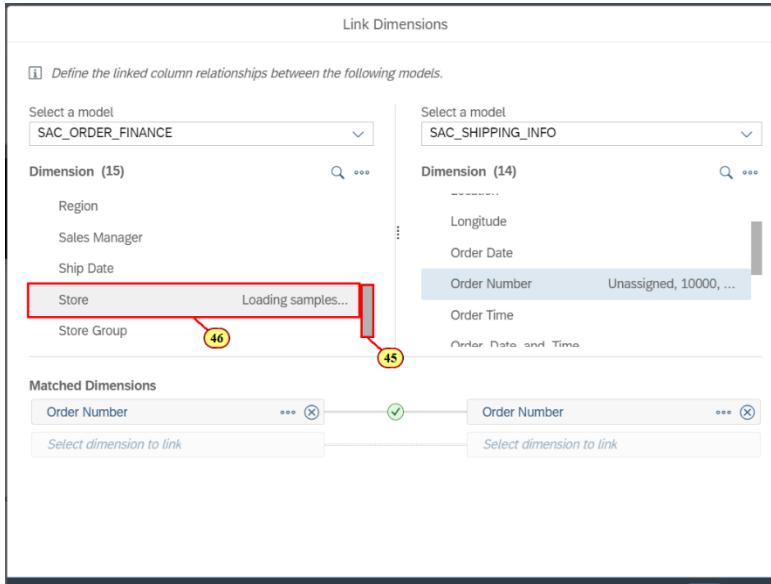
Explanation	Screenshot
<p>👉 Here we are specifying the Dimension we are reading our string from.</p> <p>24. Type St in the First Input Field for RIGHT</p> <p>25. Click Store</p>	
<p>💡 Since Dimensions often have an ID and Description, it is important to clarify that we are looking to parse the Store name from description here.</p> <p>26. Type in a Period ."</p> <p>27. Press Ctrl + Space on the Keyboard</p> <p>28. Click Description</p>	
<p>👉 We know we are trying to divide our Store dimension into Studios and Non-Studio. Since we are looking for "Studio" at the end of store name, we know we should filter on 6 characters using our RIGHT string function.</p> <p>29. Type "6" in the Second Input Field for the RIGHT Function</p>	
<p>👉 Let us compare the last 6 letters of our store name with Studio to group them into two Store Groups.</p> <p>30. Type in = "Studio" following the RIGHT formula.</p> <p>31. Type in "Studio" in the TRUE Field for the IF Function</p> <p>32. Type in "Non-Studio" in the FALSE Field for the IF Function</p>	

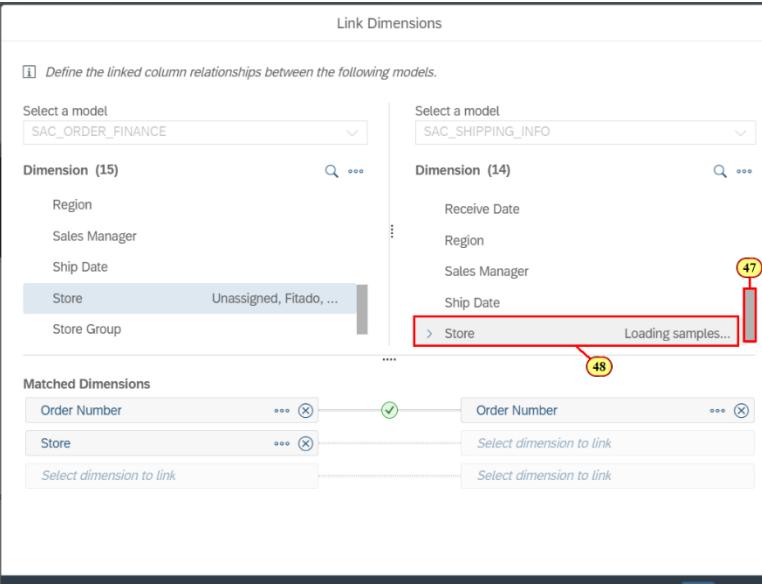
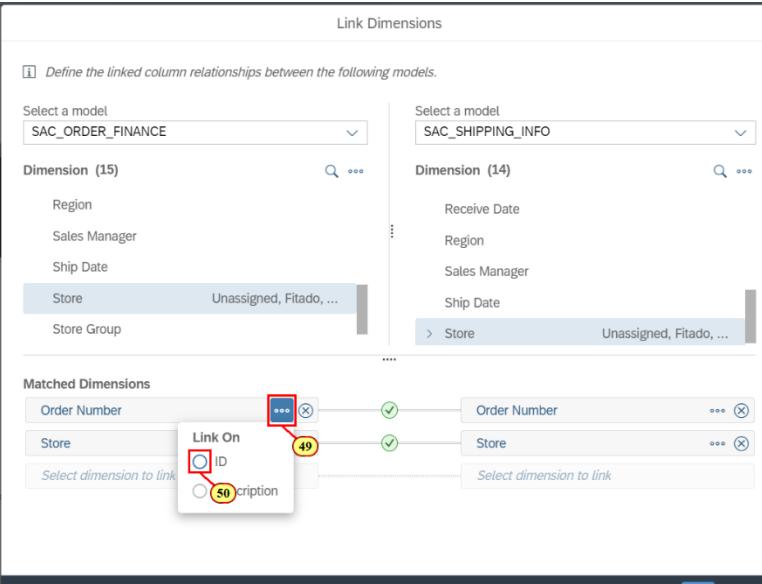
Explanation	Screenshot
<p> Quality Check! Does the end of your formula look like this?</p>	 <p>The screenshot shows the Calculation Editor with the following formula:</p> <pre>1 IF (RIGHT ([d"SAC_ORDER_FINANCE":Store] , [p>Description] , 6) = "Studio" , "Studio" , "Non-Studio")</pre> <p>The formula ends with a closing parenthesis ')' which is unnecessary. The 'Format' button is highlighted.</p>
<p> Format will parse your Formula and identify if there are any problems with the input parameters.</p> <p>33. Click Format to Validate the Formula</p> <p> Great! Our formula is valid and good for use in defining a new Calculated Dimension. Let us name this Dimension and use it in our charts.</p>	 <p>The screenshot shows the Calculation Editor with the same formula, but now it is highlighted in green, indicating it is valid. The 'Format' button is highlighted.</p>
<p>34. Name the Calculated Dimension as Store Group</p> <p>35. Click OK</p>	 <p>The screenshot shows the Calculation Editor with the 'Name' field set to 'Store Group'. The 'OK' button is highlighted.</p>

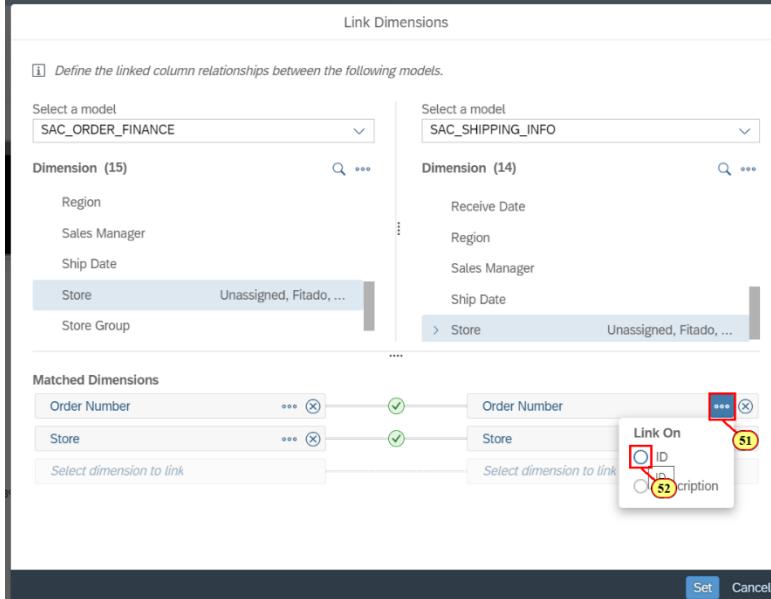
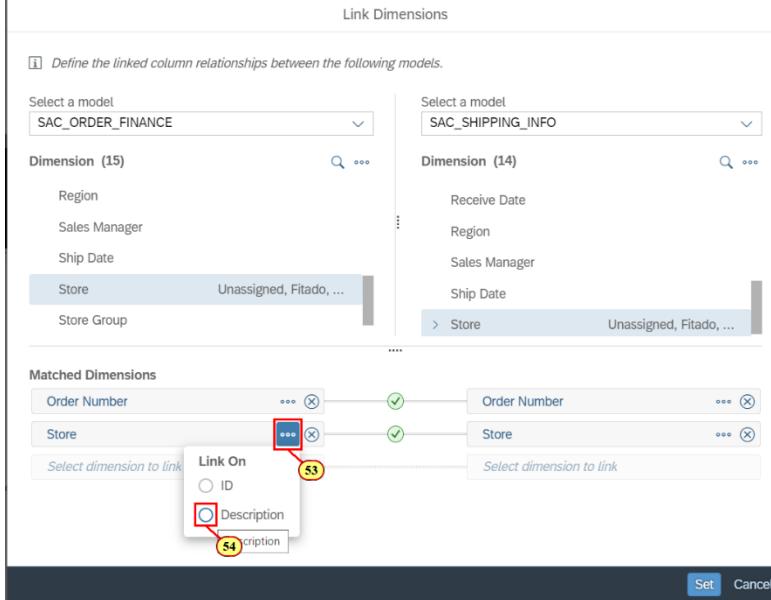
Explanation	Screenshot						
<p> Quality check! Does your chart look like this after including your Calculated Dimension?</p> <p> By creating a Calculated Dimension, we are able to extract further insights from our data. We can now see that Gross Margin % is higher for Studios than other stores. This could be of interest to us for further financial analysis and investments.</p>	 <p>Gross Margin % per Store Group for Actual in %</p> <table border="1"> <thead> <tr> <th>Store Group</th> <th>Gross Margin %</th> </tr> </thead> <tbody> <tr> <td>Non-Studio</td> <td>39%</td> </tr> <tr> <td>Studio</td> <td>53%</td> </tr> </tbody> </table>	Store Group	Gross Margin %	Non-Studio	39%	Studio	53%
Store Group	Gross Margin %						
Non-Studio	39%						
Studio	53%						
<p> Let us use our new Calculated Dimension to find out the split of Average Sales Revenue by Store Group.</p> <p>36. Click Avg Sales Revenue for Actual Chart</p>	 <p>Click to enter title...</p> <table border="1"> <thead> <tr> <th>Measure</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>Gross Margin % per Store Group for Actual in %</td> <td>39% (Non-Studio)</td> </tr> <tr> <td>Avg Sales Revenue for Actual</td> <td>10,345,757.89</td> </tr> </tbody> </table>	Measure	Value	Gross Margin % per Store Group for Actual in %	39% (Non-Studio)	Avg Sales Revenue for Actual	10,345,757.89
Measure	Value						
Gross Margin % per Store Group for Actual in %	39% (Non-Studio)						
Avg Sales Revenue for Actual	10,345,757.89						
<p>37. Click + Add Dimension</p>	<p>Chart Orientation Horizontal</p> <p>Measures <input type="button" value="Avg Sales Revenue"/> <input type="button" value="X"/></p> <p>Dimensions <input type="button" value="+ Add Dimension"/> 37</p>						

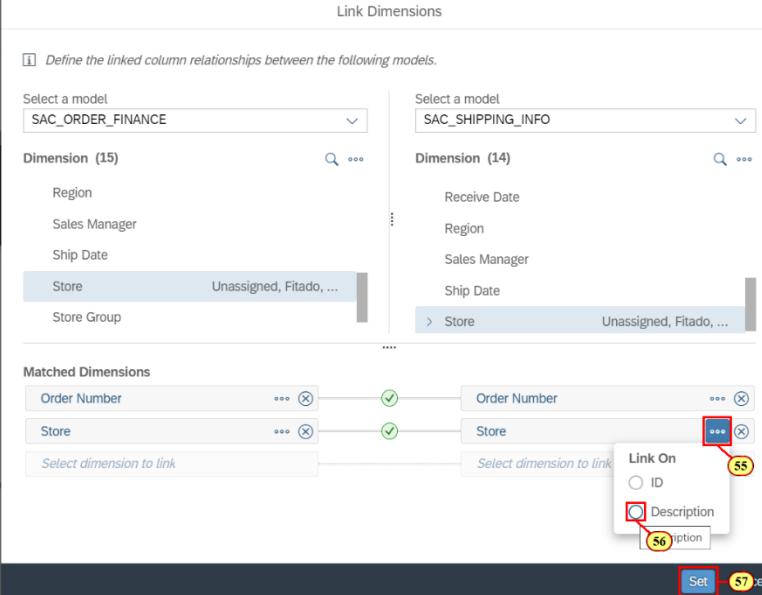
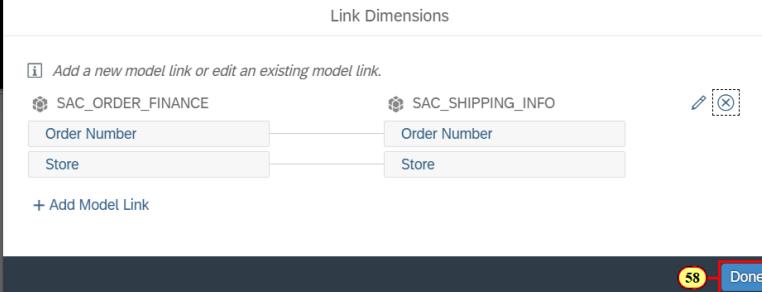
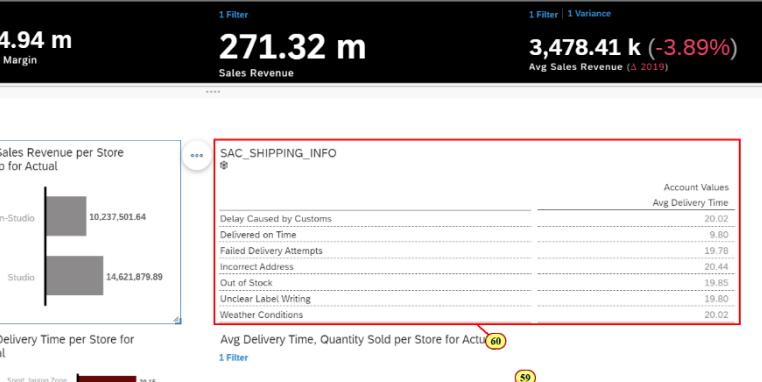
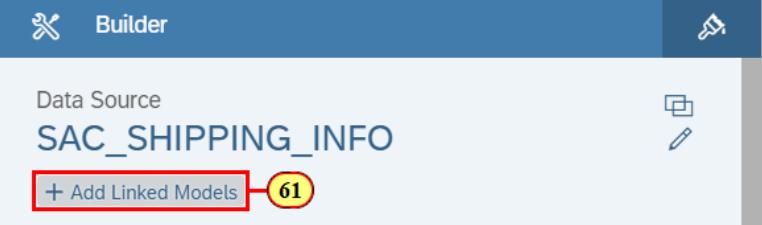
Explanation	Screenshot												
<p>38. Click Store Group</p> <p>39. Click Inside the Builder Panel to Collapse the Dimension Selection Drop Down Menu</p>													
<p>⚠️ Quality check! Do your charts look like this screenshot?</p> <p>👉 We can now see that Avg Sales Revenue is also higher for Studio Stores. It could be a good business decision to change our contract structure with our Studio Stores!</p>	 <table border="1"> <caption>Gross Margin % per Store Group for Actual</caption> <thead> <tr> <th>Store Group</th> <th>Gross Margin %</th> </tr> </thead> <tbody> <tr> <td>Non-Studio</td> <td>39%</td> </tr> <tr> <td>Studio</td> <td>53%</td> </tr> </tbody> </table> <table border="1"> <caption>Avg Sales Revenue per Store Group for Actual</caption> <thead> <tr> <th>Store Group</th> <th>Avg Sales Revenue</th> </tr> </thead> <tbody> <tr> <td>Non-Studio</td> <td>10,237,501.64</td> </tr> <tr> <td>Studio</td> <td>14,621,879.89</td> </tr> </tbody> </table>	Store Group	Gross Margin %	Non-Studio	39%	Studio	53%	Store Group	Avg Sales Revenue	Non-Studio	10,237,501.64	Studio	14,621,879.89
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Store Group	Avg Sales Revenue												
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Studio	14,621,879.89												
<p>👉 Up until this point, we have been working with visualizations built from measures and dimensions spanning a single model. Now, we can improve the value of our analysis through Blending to combine data sources. We can accomplish this by linking dimensions across models so we can compare and analyze the relationship between measures and dimensions across multiple models.</p> <p>💡 If you are missing the icon for Link Dimensions in your toolbar, click on ... under More to surface this option.</p> <p>40. Click Link Dimensions</p>													

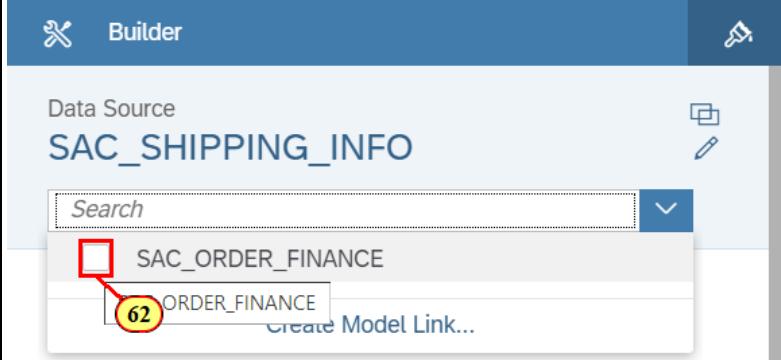
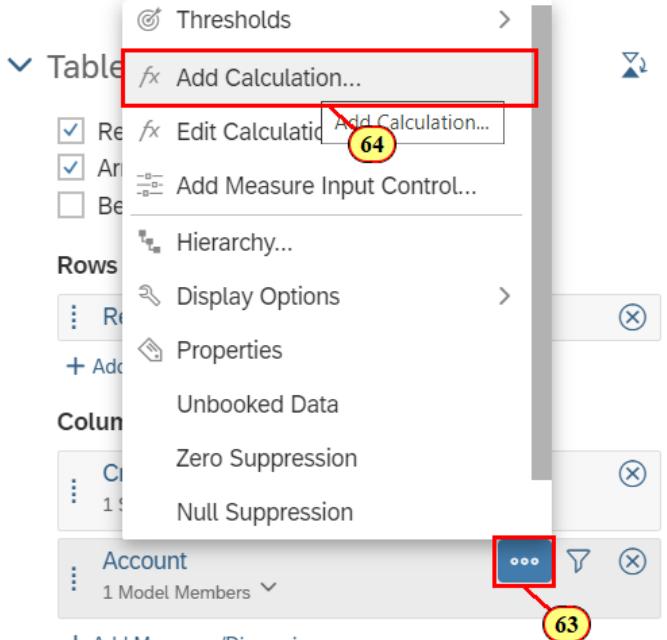
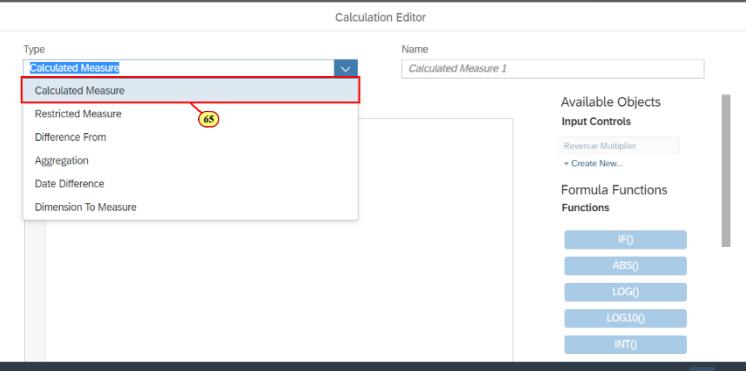
Explanation	Screenshot
<p> Welcome to Link Dimensions!</p> <p>Link Dimensions allow you to create blended visualizations that display data from multiple models. It also allows you to create filters that simultaneously update all visualization that include linked data regardless of the model.</p> <p>By default, the ID attribute is used to match members between the linked dimensions. However, for non-hierarchy dimensions it is possible to change the description that is used for linking.</p> <p>We can utilize Linked Dimensions in our data by linking across the Finance and Shipping models by connecting dimensions that are identical across our two models.</p>	
<p></p> <p>Let us link the Order Number and Store dimensions between our two models. Both these dimensions are identical across our models and have independent members that we can gather insights from. By linking on Store and Order Number we can look at analyses that target Store entities or individual orders.</p> <p>41. Scroll till Order Number is Visible</p> <p>42. Click Order Number</p>	

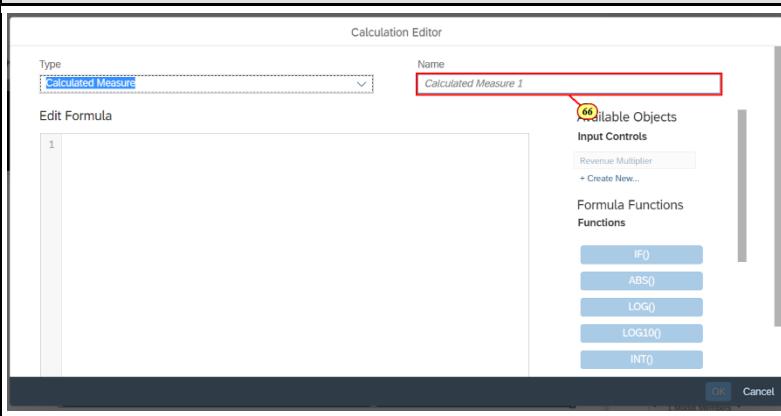
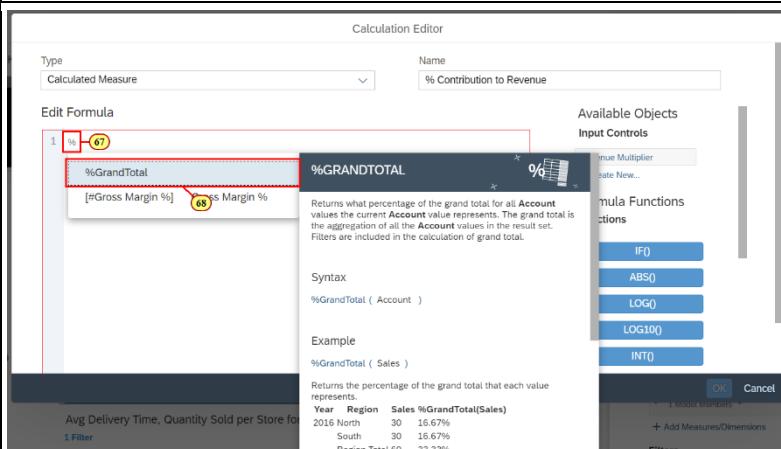
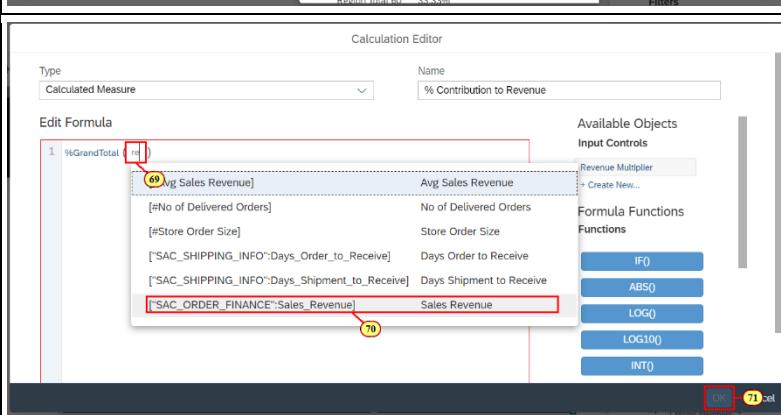
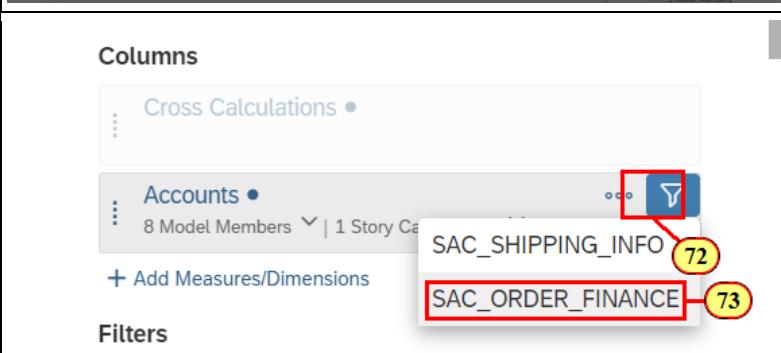
Explanation	Screenshot
<p>43. Scroll till Order Number is Visible</p> <p>44. Click Order Number</p>	
<p>45. Scroll till Store is Visible</p> <p>46. Click Store</p>	

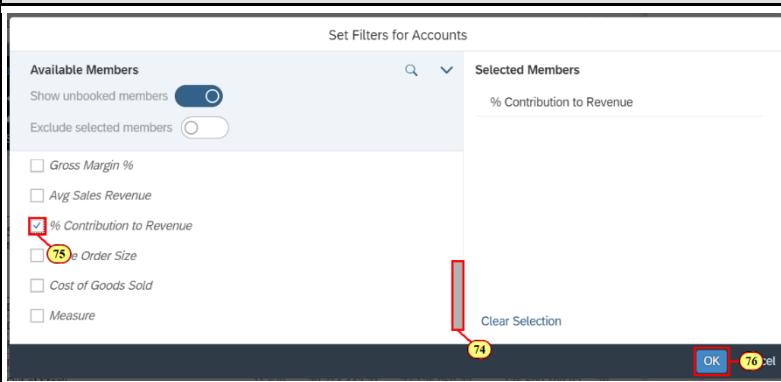
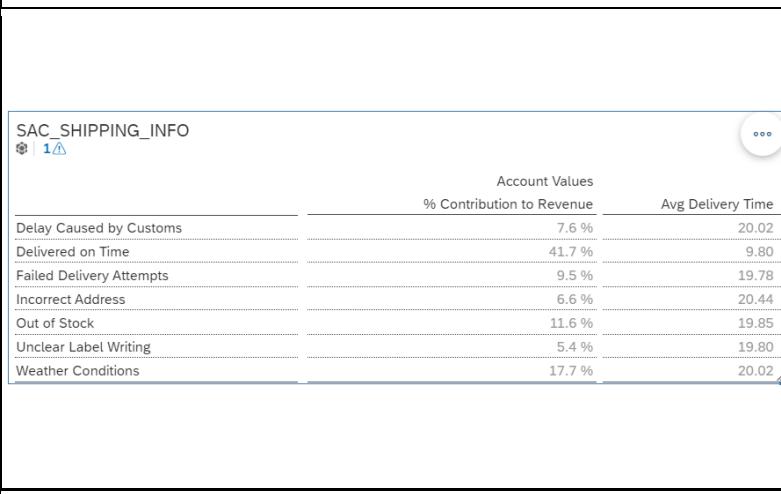
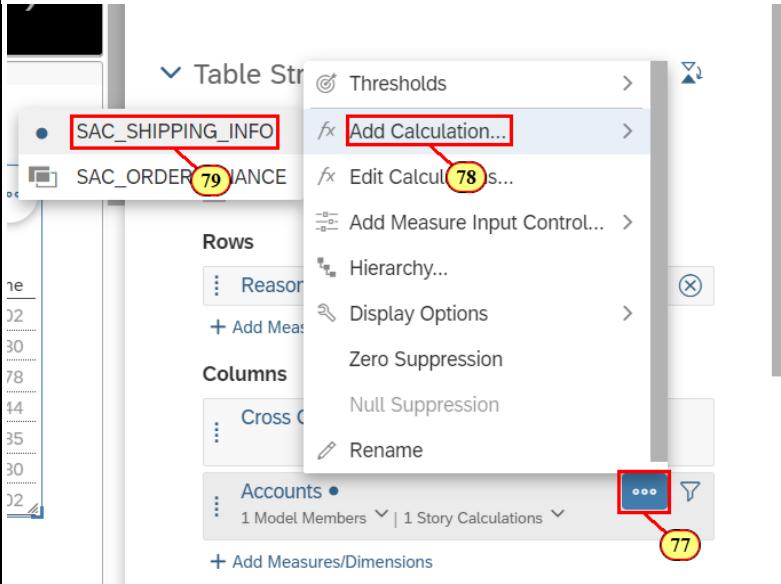
Explanation	Screenshot
<p>47. Scroll till Store is Visible</p> <p>48. Click Store</p>	
<p> It is important to specify the Dimension Attribute we are linking across. Order Number in our models is common on the Dimension ID whereas Store is common on the Dimension Description (the store name). Let us make sure that Order Number is linked by IDs between the models and Store is linked by Description or Store Names between the models.</p> <p>49. Click Link Attribute</p> <p>50. Click ID</p>	

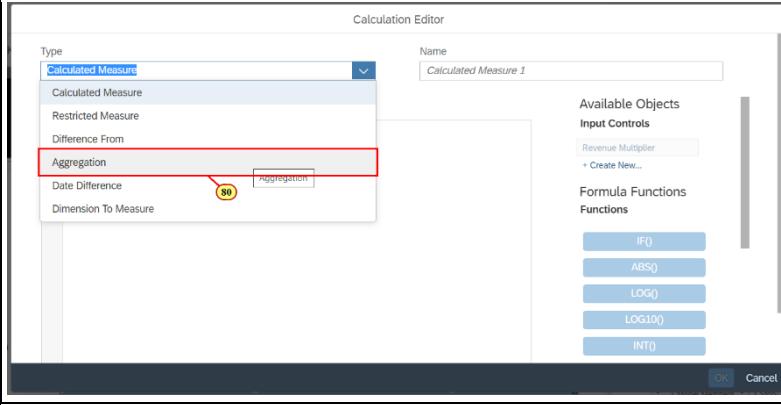
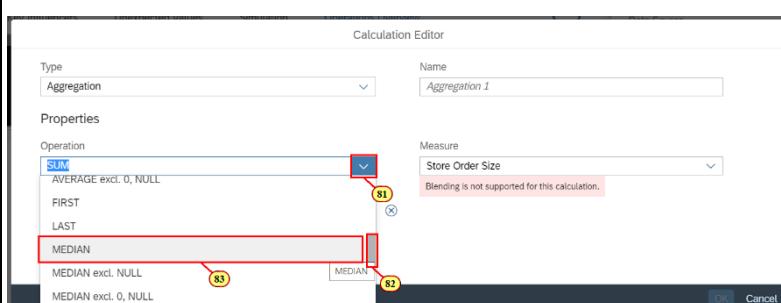
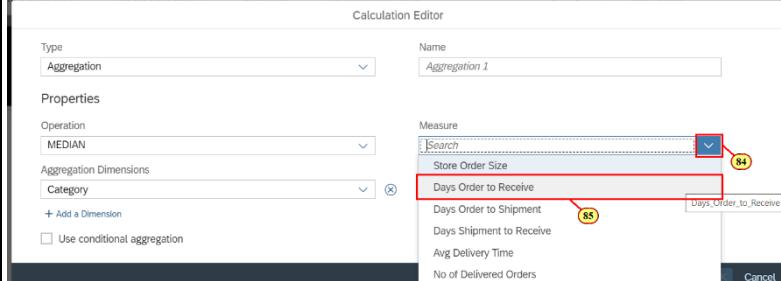
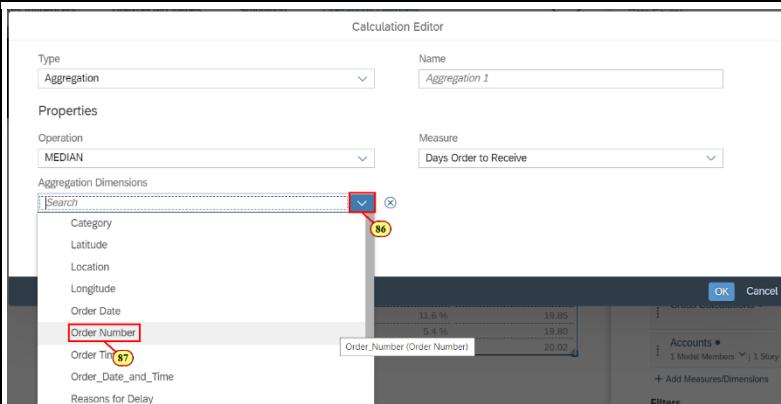
Explanation	Screenshot
<p>51. Click Link Attribute</p> <p>52. Click ID</p>	
<p>53. Click Link Attribute</p> <p>54. Click Description</p>	

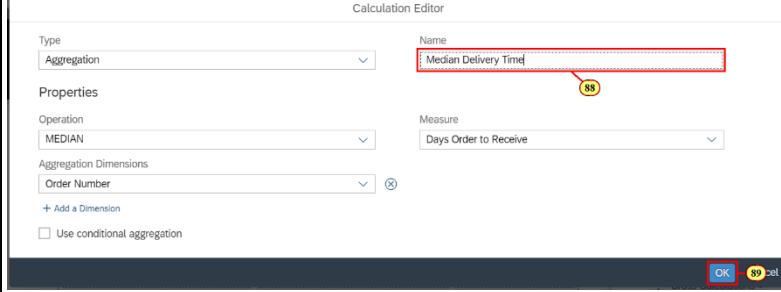
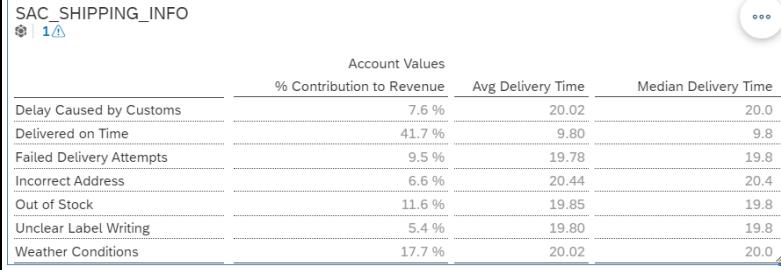
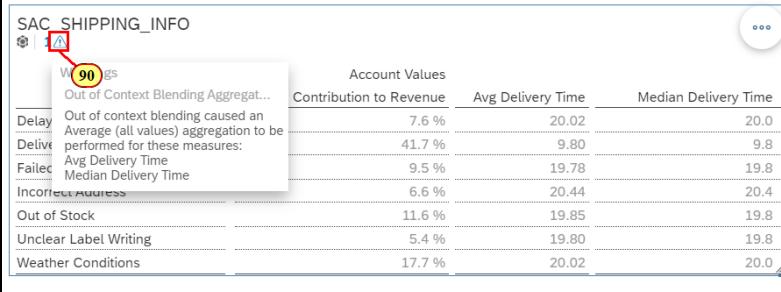
Explanation	Screenshot
<p>55. Click Link Attribute</p> <p>56. Click Description</p> <p>57. Click Set</p>	
<p> SAP Analytics Cloud will display the model links you have created to link dimensions. We could choose to edit these links or add more linked dimensions.</p> <p>58. Click Done</p>	
<p> Now that we have Linked Dimensions, we can create blended visualizations to look at correlations in our data. As a business analyst, we may be concerned about shipping delays and how it affects our company revenue. Let us look at a blended table to display information that would help this analysis.</p> <p>59. Scroll to the Right of the Dashboard</p> <p>60. Click the SAC_SHIPPING_INFO Table</p>	
<p>61. Click Add Linked Models</p>	

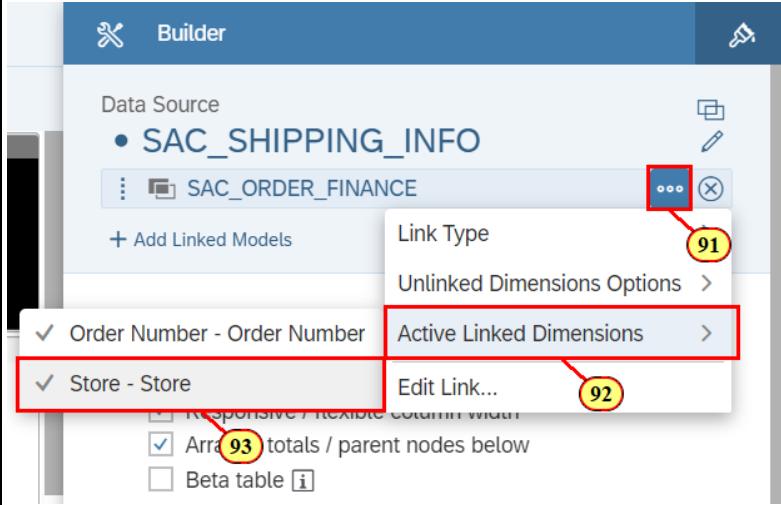
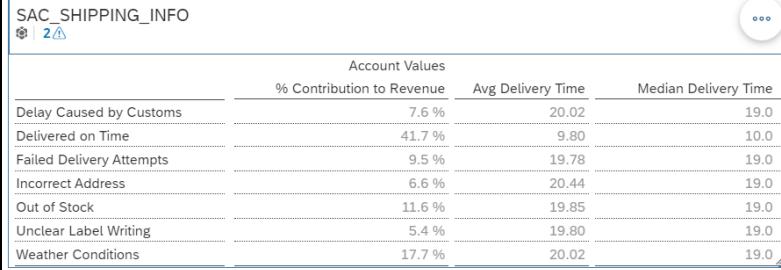
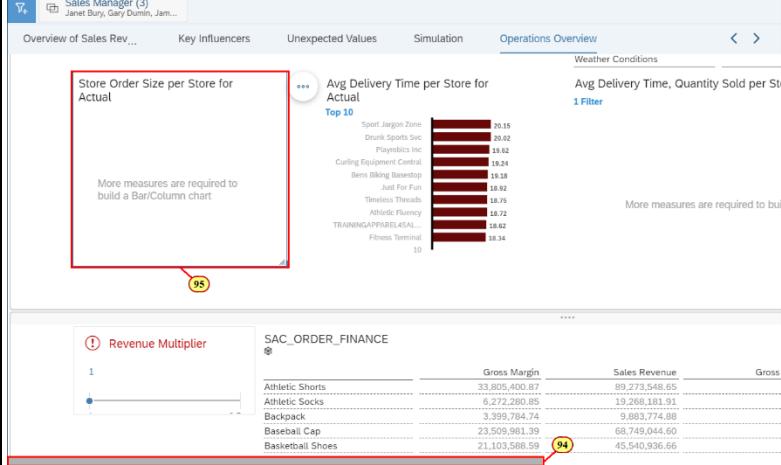
Explanation	Screenshot
<p>62. Click SAC_ORDER_FINANCE</p>  <p>We are now able to see SAC_ORDER_FINANCE as a linkable model to this table because we have linked it to our Shipping model on Order Number and Store dimensions.</p> <p>We can choose to display measures and calculations across our columns from both models to look at the relationships in the data.</p> <p>In this table, we have specified Reasons for Delay as our Row dimension. We can look at how our Finance data is affected in each of these delay members.</p>	
 <p>Let us create a calculation using Finance data to see how much of our product revenue falls under each of the Reasons for Delay categories.</p> <p>63. Click the More Action Icon for the Account Dimension</p> <p>64. Click Add Calculation</p>	
<p>65. Click Calculated Measure</p>	

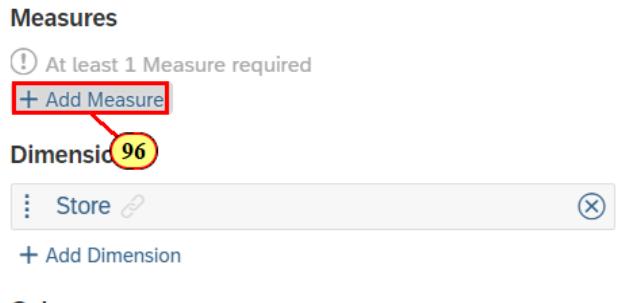
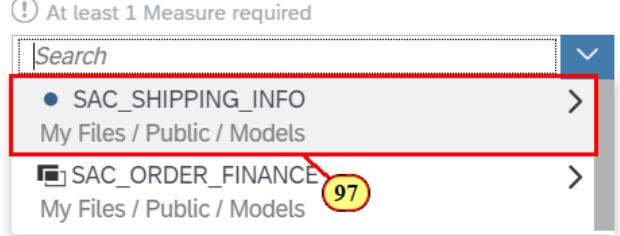
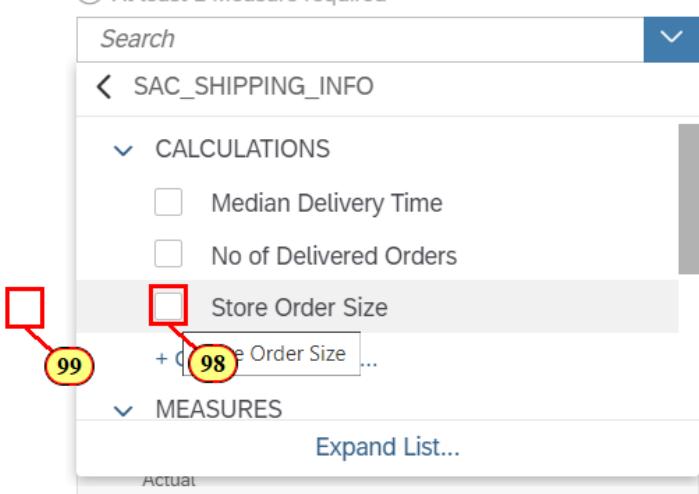
Explanation	Screenshot
66. Rename the Calculation to % Contribution to Revenue	
67. Type in "%" in Edit Formula 68. Select %GrandTotal	
69. Type in "Re" in the %GrandTotal Field 70. Click ["SAC_ORDER_FINANCE":Sales_Revenue] 71. Click OK	
<p>👉 Our table has updated with this calculation, but it has also included many other measures from the Finance model. First, we need to filter what columns are included in the table.</p> <p>72. Click Filter 73. Click SAC_ORDER_FINANCE</p>	

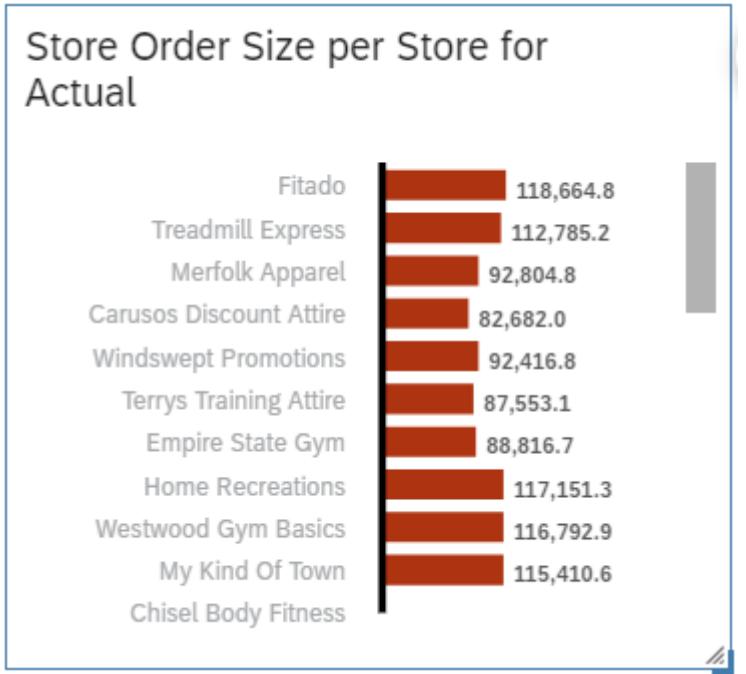
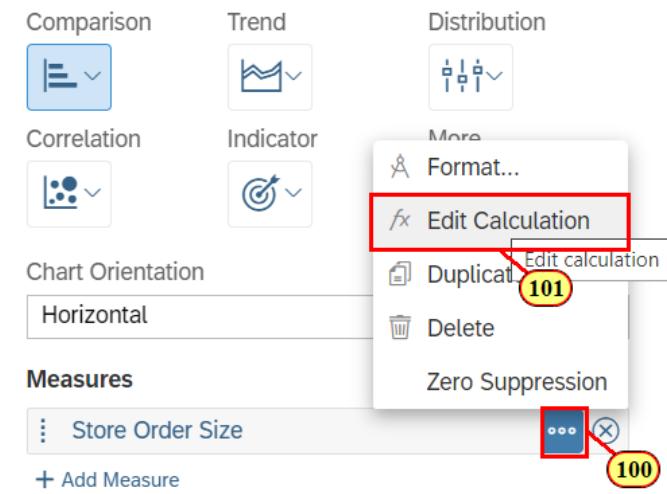
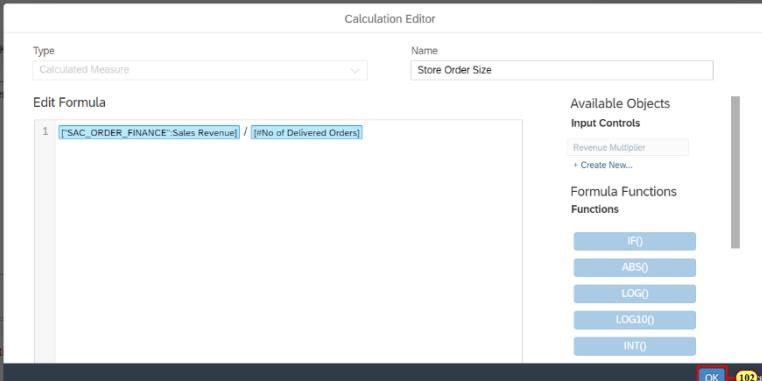
Explanation	Screenshot																
<p>74. Scroll till % Contribution to Revenue is Visible</p> <p>75. Click % Contribution to Revenue</p> <p>76. Click OK</p>																	
<p>⚠️ Quality Check! Does your table look like this screenshot?</p> <p>👉 We can see how useful blended visualizations can be with multiple data sets. From this table, we can see that around 42% of our revenue ships on time. However, weather conditions and out of stock also have relatively high % contributions to revenue. We should probably consider inventory management improvements as over 11% of our revenue in shipments are delayed due to being Out of Stock.</p>	 <table border="1"> <thead> <tr> <th>Reason</th> <th>Account Values</th> </tr> </thead> <tbody> <tr> <td>Delay Caused by Customs</td> <td>% Contribution to Revenue 7.6 % Avg Delivery Time 20.02</td> </tr> <tr> <td>Delivered on Time</td> <td>41.7 % 9.80</td> </tr> <tr> <td>Failed Delivery Attempts</td> <td>9.5 % 19.78</td> </tr> <tr> <td>Incorrect Address</td> <td>6.6 % 20.44</td> </tr> <tr> <td>Out of Stock</td> <td>11.6 % 19.85</td> </tr> <tr> <td>Unclear Label Writing</td> <td>5.4 % 19.80</td> </tr> <tr> <td>Weather Conditions</td> <td>17.7 % 20.02</td> </tr> </tbody> </table>	Reason	Account Values	Delay Caused by Customs	% Contribution to Revenue 7.6 % Avg Delivery Time 20.02	Delivered on Time	41.7 % 9.80	Failed Delivery Attempts	9.5 % 19.78	Incorrect Address	6.6 % 20.44	Out of Stock	11.6 % 19.85	Unclear Label Writing	5.4 % 19.80	Weather Conditions	17.7 % 20.02
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<p>💡 Let us create another calculation from the Shipping model to see if there are any major outliers affecting the average delivery time in each of these Delay categories. We will need to select the model we are creating the calculation on since we have two linked models in this visualization.</p> <p>77. Click the More Action Icon for the Account Dimension</p> <p>78. Click Add Calculation</p> <p>79. Click SAC_SHIPPING_INFO</p>																	

Explanation	Screenshot
<p>80. Click Aggregation</p>	
<p>81. Expand Operation</p> <p>82. Scroll till MEDIAN is Visible</p> <p>83. Click MEDIAN</p>	
<p>84. Expand Measure</p> <p>85. Click Days Order to Receive</p>	
<p>86. Expand Aggregation Dimensions</p> <p>87. Click Order Number</p>	

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<p>90. Click Warning</p> <p>⚠️ Blending calculations can become complex, especially if a non-common dimension is used. Always remember to click the Warning tag on charts to understand what is happening in your data.</p> <p>This warning tells us that our blending is out of context, meaning a non-common dimension is used. Both Avg Delivery Time and Median Delivery Time are being calculated as average aggregations based on how SAP Analytics Cloud is interpreting our linked dimensions in context to the calculations.</p> <p>This happened because the blend used both linked dimensions to connect the data models. However, in this example, we only need the order numbers. Let us fix Median Delivery Time so the blending context is correct.</p>	 <table border="1"> <thead> <tr> <th></th> <th>Contribution to Revenue</th> <th>Avg Delivery Time</th> <th>Median Delivery Time</th> </tr> </thead> <tbody> <tr> <td>Delay</td> <td>7.6 %</td> <td>20.02</td> <td>20.0</td> </tr> <tr> <td>Deliver</td> <td>41.7 %</td> <td>9.80</td> <td>9.8</td> </tr> <tr> <td>Failed</td> <td>9.5 %</td> <td>19.78</td> <td>19.8</td> </tr> <tr> <td>Incorrect Address</td> <td>6.6 %</td> <td>20.44</td> <td>20.4</td> </tr> <tr> <td>Out of Stock</td> <td>11.6 %</td> <td>19.85</td> <td>19.8</td> </tr> <tr> <td>Unclear Label Writing</td> <td>5.4 %</td> <td>19.80</td> <td>19.8</td> </tr> <tr> <td>Weather Conditions</td> <td>17.7 %</td> <td>20.02</td> <td>20.0</td> </tr> </tbody> </table>		Contribution to Revenue	Avg Delivery Time	Median Delivery Time	Delay	7.6 %	20.02	20.0	Deliver	41.7 %	9.80	9.8	Failed	9.5 %	19.78	19.8	Incorrect Address	6.6 %	20.44	20.4	Out of Stock	11.6 %	19.85	19.8	Unclear Label Writing	5.4 %	19.80	19.8	Weather Conditions	17.7 %	20.02	20.0
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<p>👉 When Linking Models, it is important to specify which blending link is used in a visualization. Having multiple active links can cause out of context warnings like above.</p>																																	
<p>👉 We can see that we have been linking both Dimensions. Here we only need to blend on unique Order Numbers so we will remove the link on Store names for this table.</p>																																	
<p>91. Click the More Action Icon for SAC_ORDER_FINANCE 92. Click Active Linked Dimensions 93. Deselect Store</p>																																	
<p>⚠️ Quality check! Does your final table look like this? It is great our Median Delivery Time is accurate now! Next, let us look at other functionality we can take advantage of with blending.</p>	 <table border="1"> <thead> <tr> <th>Account Values</th> <th>% Contribution to Revenue</th> <th>Avg Delivery Time</th> <th>Median Delivery Time</th> </tr> </thead> <tbody> <tr> <td>Delay Caused by Customs</td> <td>7.6 %</td> <td>20.02</td> <td>19.0</td> </tr> <tr> <td>Delivered on Time</td> <td>41.7 %</td> <td>9.80</td> <td>10.0</td> </tr> <tr> <td>Failed Delivery Attempts</td> <td>9.5 %</td> <td>19.78</td> <td>19.0</td> </tr> <tr> <td>Incorrect Address</td> <td>6.6 %</td> <td>20.44</td> <td>19.0</td> </tr> <tr> <td>Out of Stock</td> <td>11.6 %</td> <td>19.85</td> <td>19.0</td> </tr> <tr> <td>Unclear Label Writing</td> <td>5.4 %</td> <td>19.80</td> <td>19.0</td> </tr> <tr> <td>Weather Conditions</td> <td>17.7 %</td> <td>20.02</td> <td>19.0</td> </tr> </tbody> </table>	Account Values	% Contribution to Revenue	Avg Delivery Time	Median Delivery Time	Delay Caused by Customs	7.6 %	20.02	19.0	Delivered on Time	41.7 %	9.80	10.0	Failed Delivery Attempts	9.5 %	19.78	19.0	Incorrect Address	6.6 %	20.44	19.0	Out of Stock	11.6 %	19.85	19.0	Unclear Label Writing	5.4 %	19.80	19.0	Weather Conditions	17.7 %	20.02	19.0
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<p>👉 We can create calculations with measures from both models for visualization purposes. Let us look at the relationship between average order size from our stores and the delivery time.</p> <p>94. Scroll to the Left of the Dashboard 95. Click the Store Order Size per Store for Actual Chart</p>	 <table border="1"> <thead> <tr> <th></th> <th>Gross Margin</th> <th>Sales Revenue</th> <th>Gross</th> </tr> </thead> <tbody> <tr> <td>Athletic Shorts</td> <td>33,805,400.87</td> <td>89,273,548.65</td> <td></td> </tr> <tr> <td>Athletic Socks</td> <td>6,272,280.85</td> <td>19,268,181.91</td> <td></td> </tr> <tr> <td>Backpack</td> <td>3,399,784.74</td> <td>9,883,774.88</td> <td></td> </tr> <tr> <td>Baseball Cap</td> <td>23,509,981.39</td> <td>68,749,044.60</td> <td></td> </tr> <tr> <td>Basketball Shoes</td> <td>21,103,588.59</td> <td>45,540,936.66</td> <td></td> </tr> </tbody> </table>		Gross Margin	Sales Revenue	Gross	Athletic Shorts	33,805,400.87	89,273,548.65		Athletic Socks	6,272,280.85	19,268,181.91		Backpack	3,399,784.74	9,883,774.88		Baseball Cap	23,509,981.39	68,749,044.60		Basketball Shoes	21,103,588.59	45,540,936.66									
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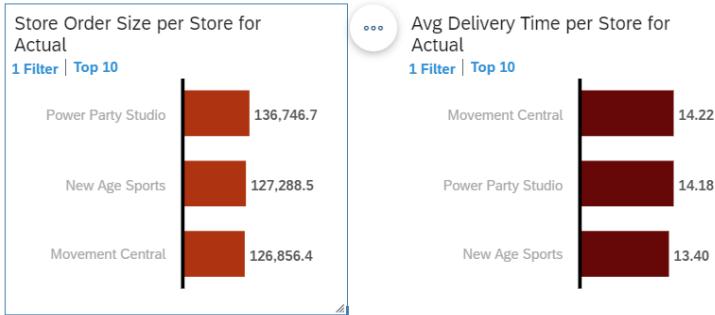
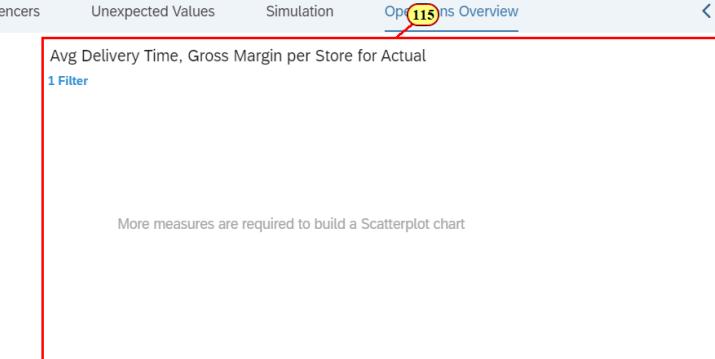
Explanation	Screenshot
<p>Once again, our visualization has a linked model for Finance. Let us add a new measure for Store Order Size.</p> <p>96. Click Add Measure</p>	 <p>Measures</p> <p>! At least 1 Measure required</p> <p>+ Add Measure</p> <p>Dimension 96</p> <p>Store  </p> <p>+ Add Dimension</p> <p>Color</p>
<p>97. Click SAC_SHIPPING_INFO</p>	 <p>Measures</p> <p>! At least 1 Measure required</p> <p>Search</p> <ul style="list-style-type: none"> ● SAC_SHIPPING_INFO > My Files / Public / Models <input type="checkbox"/> SAC_ORDER_FINANCE 97 > My Files / Public / Models <p>Color</p>
<p>98. Click Store Order Size</p> <p>99. Click Inside the Builder Panel to collapse the Measure Selection drop - down menu</p>	 <p>Measures</p> <p>! At least 1 Measure required</p> <p>Search</p> <p>< SAC_SHIPPING_INFO</p> <p>CALCULATIONS</p> <ul style="list-style-type: none"> <input type="checkbox"/> Median Delivery Time <input type="checkbox"/> No of Delivered Orders <input checked="" type="checkbox"/> Store Order Size 98 + Create Order Size ... <p>MEASURES</p> <p>Actual</p> <p>Expand List...</p>

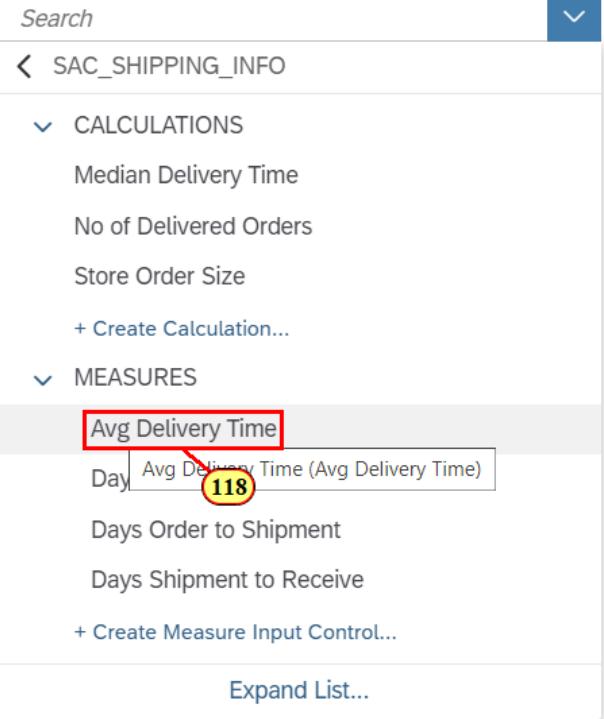
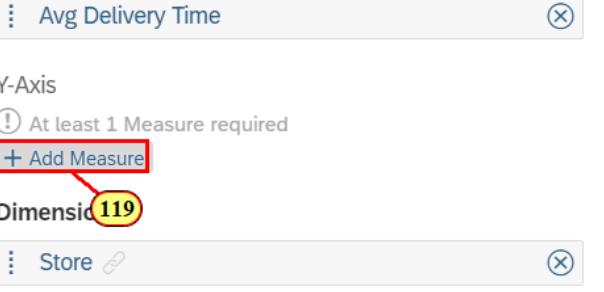
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<p> Let us look at how this calculation was created. We can easily examine the formula by going into the options.</p> <p>100. Click More Action Icon for Store Order Size</p> <p>101. Click Edit Calculation</p>																									
<p> Here is the formula for Store Order Size. It is a calculation using Sales Revenue from the Finance model and a Count Aggregation from the Shipping Model for the Number of Delivered Orders. Since we are blending on Store name, our chart will understand this context for our Shipping aggregation.</p> <p>102. Click OK</p>	 <p>The formula is: <code>["SAC_ORDER_FINANCE":Sales Revenue] / [No of Delivered Orders]</code></p>																								

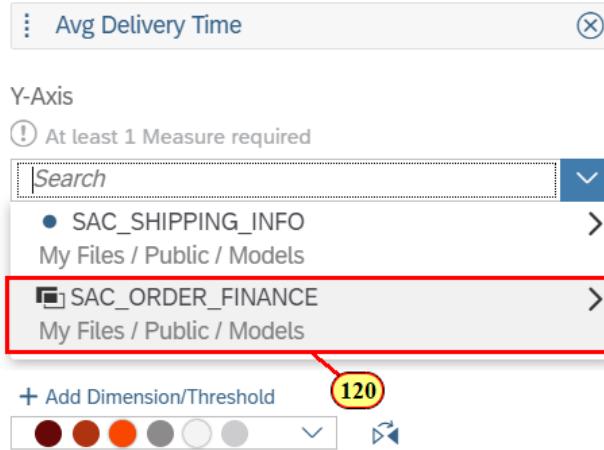
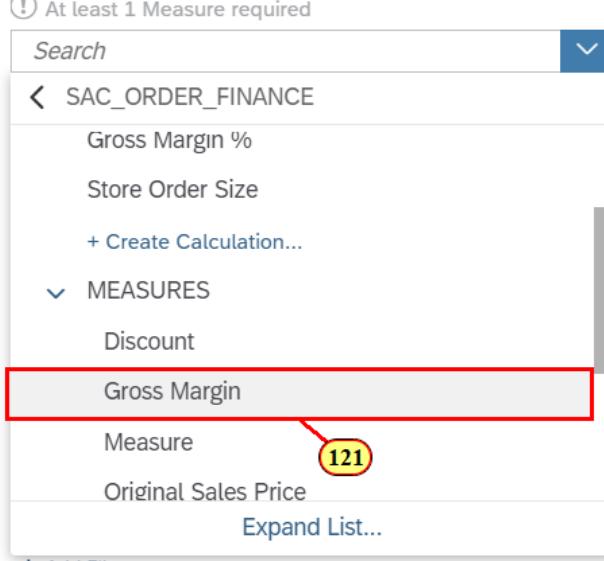
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<p>Let us use a Top N ranking to sort our chart data since we are interested in analyzing our top performing stores rather than all our stores.</p> <p>103. Click More Actions</p> <p>104. Click Rank</p> <p>105. Click Top N Options</p>	<p>Store Order Size per Store for Actual</p> <table border="1"> <thead> <tr> <th>Store</th> <th>Order Size</th> </tr> </thead> <tbody> <tr><td>Fitado</td><td>118,664.8</td></tr> <tr><td>Treadmill Express</td><td>112,785.2</td></tr> <tr><td>Merfolk Apparel</td><td>92,804.8</td></tr> <tr><td>Carusos Discount Attire</td><td>82,682.0</td></tr> <tr><td>Windswept Promotions</td><td>92,416.8</td></tr> <tr><td>Terry's Training Attire</td><td>87,553.1</td></tr> <tr><td>Empire State Gym</td><td>88,816.7</td></tr> <tr><td>Home Recreations</td><td>117,151.3</td></tr> <tr><td>Westwood Gym Basics</td><td>116,792.9</td></tr> <tr><td>My Kind Of Town</td><td>115,410.6</td></tr> <tr><td>Chisel Body Fitness</td><td></td></tr> </tbody> </table>	Store	Order Size	Fitado	118,664.8	Treadmill Express	112,785.2	Merfolk Apparel	92,804.8	Carusos Discount Attire	82,682.0	Windswept Promotions	92,416.8	Terry's Training Attire	87,553.1	Empire State Gym	88,816.7	Home Recreations	117,151.3	Westwood Gym Basics	116,792.9	My Kind Of Town	115,410.6	Chisel Body Fitness	
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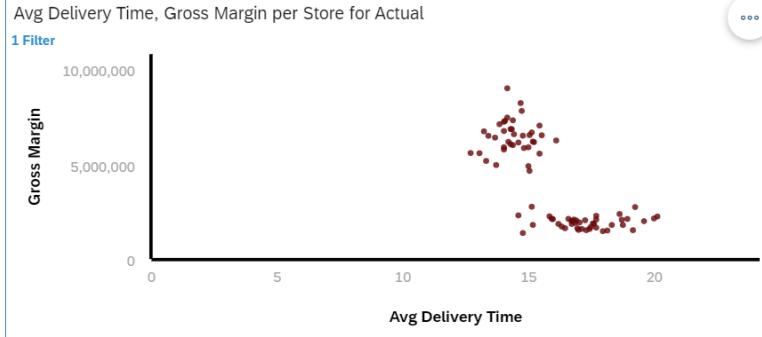
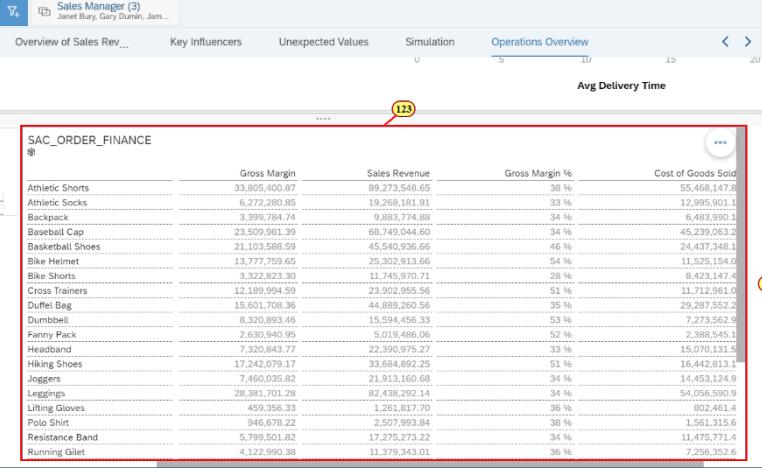
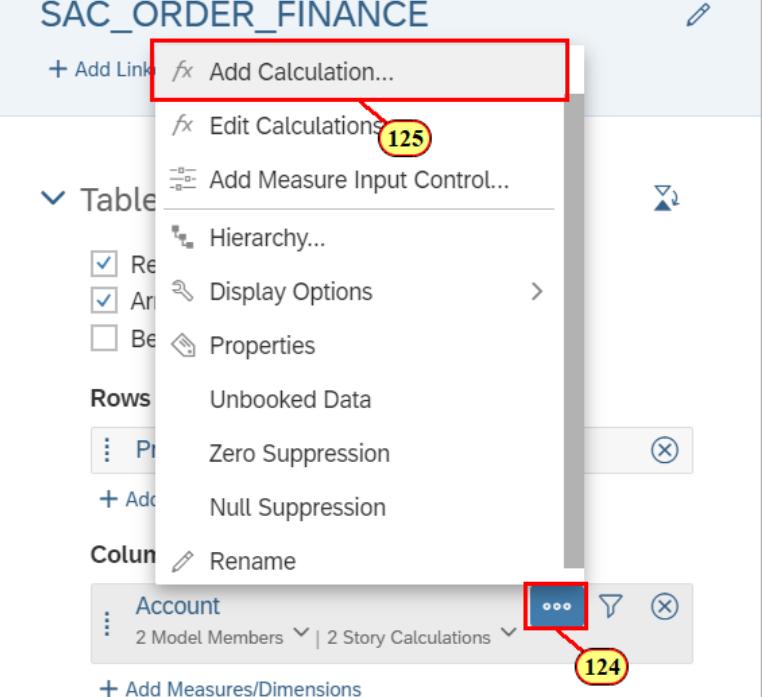
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<p>👉 We want to use this chart to drive our analysis to be able to filter on a top performing store. Let us use Linked Analysis from this chart to filter other visualizations.</p> <p>108. Click More Actions</p> <p>109. Click Linked Analysis</p>	<p>Store Order Size per Store for Actual</p> <p>Top 10</p> <p>The context menu for the chart includes the following items:</p> <ul style="list-style-type: none"> Sort Rank Linked Analysis (highlighted) Compare (highlighted) Add Smart Insights Add Mobile Show/Hide Edit Axis Collapse Title Copy Export Edit Styling... Fullscreen Pin to Home View Controls... Remove <p>Below the chart, a slider control is set to 1, with a red exclamation mark icon and the text 'Revenue Multiplier'.</p>																						

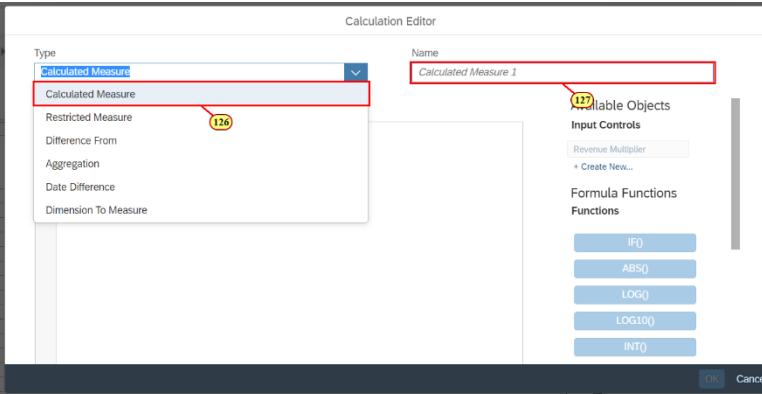
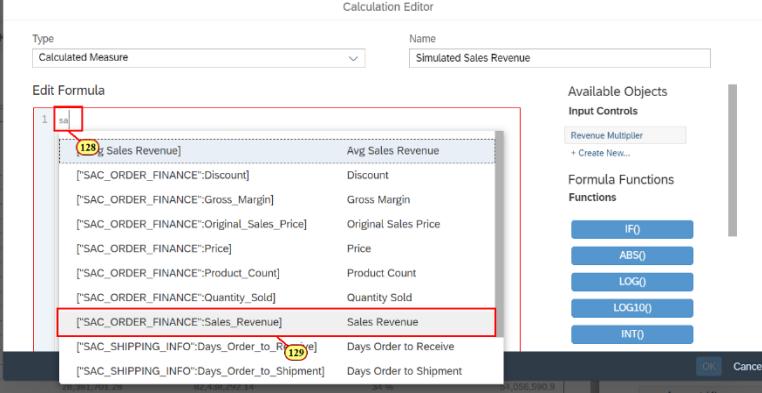
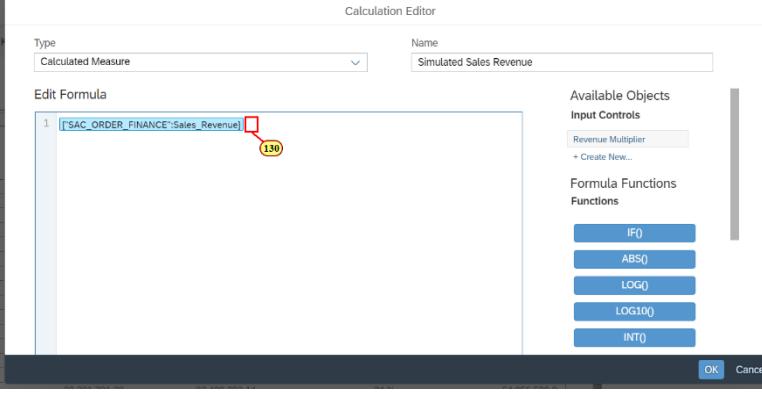
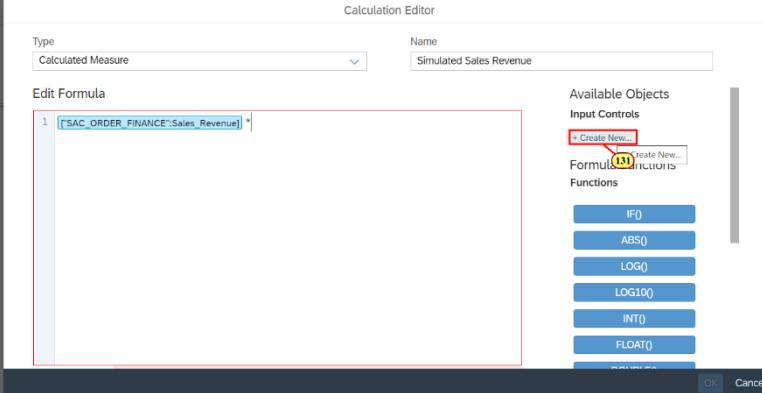
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<p>👉 We want to select which visualizations are impacted by filtering when we select a top performing store. Let us choose only selected widgets for Linked Analysis.</p> <p>110. Click Only selected widgets</p> <p>👉 Let us link our blended chart to a chart that only uses the Shipping model. Any selections on our original chart will filter to the secondary chart via Store name.</p> <p>111. Click Avg Delivery Time per Store for Actual</p> <p>112. Click Apply</p>																																													
<p>113. Click the First Three Entries in the Store Order Size per Store Chart</p> <p>114. Click Filter</p>	<table border="1"> <caption>Store Order Size per Store for Actual</caption> <thead> <tr> <th>Store</th> <th>Order Size</th> </tr> </thead> <tbody> <tr><td>Power Party Studio</td><td>126,856.4</td></tr> <tr><td>New Age Sports</td><td>126,671.9</td></tr> <tr><td>Movement Central</td><td>126,081.6</td></tr> <tr><td>Bust a Move Studio</td><td>125,600.3</td></tr> <tr><td>John Shoko</td><td>125,326.0</td></tr> <tr><td>Republic Fitness</td><td>124,847.2</td></tr> <tr><td>Boulder Twist</td><td>124,656.7</td></tr> <tr><td>Zeiglers Store</td><td>124,225.8</td></tr> <tr><td>Masonry Classics</td><td></td></tr> <tr><td>Flying Jumper</td><td></td></tr> </tbody> </table> <table border="1"> <caption>Avg Delivery Time per Store for Actual</caption> <thead> <tr> <th>Store</th> <th>Avg Delivery Time</th> </tr> </thead> <tbody> <tr><td>Sport Jargon Zone</td><td>20.15</td></tr> <tr><td>Drunk Sports Svc</td><td>20.02</td></tr> <tr><td>Playrobics Inc</td><td>19.62</td></tr> <tr><td>Curling Equipment Central</td><td>19.24</td></tr> <tr><td>Bens Biking Basestop</td><td>19.18</td></tr> <tr><td>Just For Fun</td><td>18.92</td></tr> <tr><td>Timeless Threads</td><td>18.75</td></tr> <tr><td>Athletic Fluency</td><td>18.72</td></tr> <tr><td>TRAININGAPPAREL4SAL...</td><td>18.62</td></tr> <tr><td>Fitness Terminal</td><td>18.34</td></tr> </tbody> </table>	Store	Order Size	Power Party Studio	126,856.4	New Age Sports	126,671.9	Movement Central	126,081.6	Bust a Move Studio	125,600.3	John Shoko	125,326.0	Republic Fitness	124,847.2	Boulder Twist	124,656.7	Zeiglers Store	124,225.8	Masonry Classics		Flying Jumper		Store	Avg Delivery Time	Sport Jargon Zone	20.15	Drunk Sports Svc	20.02	Playrobics Inc	19.62	Curling Equipment Central	19.24	Bens Biking Basestop	19.18	Just For Fun	18.92	Timeless Threads	18.75	Athletic Fluency	18.72	TRAININGAPPAREL4SAL...	18.62	Fitness Terminal	18.34
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<p> Quality check! Do your two charts look like this screenshot?</p> <p></p> <p>It looks as if there is a relationship between larger average order size and a faster average delivery. We have filtered using Linked Analysis from our Finance model with Store Order Size to our Shipping model with Avg Delivery Time based on the linking of dimensions we have created previously.</p> <p>Let us now look at a scatterplot to see if Average Delivery Time is affecting our Gross Margin.</p>	 <table border="1"> <caption>Store Order Size per Store for Actual</caption> <thead> <tr> <th>Store</th> <th>Order Size</th> </tr> </thead> <tbody> <tr> <td>Power Party Studio</td> <td>136,746.7</td> </tr> <tr> <td>New Age Sports</td> <td>127,288.5</td> </tr> <tr> <td>Movement Central</td> <td>126,856.4</td> </tr> </tbody> </table> <table border="1"> <caption>Avg Delivery Time per Store for Actual</caption> <thead> <tr> <th>Store</th> <th>Avg Delivery Time</th> </tr> </thead> <tbody> <tr> <td>Movement Central</td> <td>14.22</td> </tr> <tr> <td>Power Party Studio</td> <td>14.18</td> </tr> <tr> <td>New Age Sports</td> <td>13.40</td> </tr> </tbody> </table>	Store	Order Size	Power Party Studio	136,746.7	New Age Sports	127,288.5	Movement Central	126,856.4	Store	Avg Delivery Time	Movement Central	14.22	Power Party Studio	14.18	New Age Sports	13.40
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<p>115. Click the Avg Delivery Time, Gross Margin per Store for Actual chart.</p>																	
<p></p> <p>Scatterplots are a great way to look at the correlation between two measures in our blended data. We will be comparing the average delivery time and gross margin for each store. Let us move to the Builder panel.</p> <p>116. Click Add Measure</p>	<p>Measures</p> <p>X-Axis</p> <p> At least 1 Measure required</p> <p>+ Add Measure</p> <p>Y-Axis </p> <p> At least 1 Measure required</p> <p>+ Add Measure</p>																
<p>117. Click SAC_SHIPPING_INFO</p>	<p>Measures</p> <p>X-Axis</p> <p> At least 1 Measure required</p> <p><input type="text" value="Search"/> </p> <p><input checked="" type="radio"/> SAC_SHIPPING_INFO My Files / Public / Models </p> <p><input type="checkbox"/> SAC_ORDER_FINANCE My Files / Public / Models  </p> <p>DIMENSIONS</p> <p><input type="text" value="Store"/> </p>																

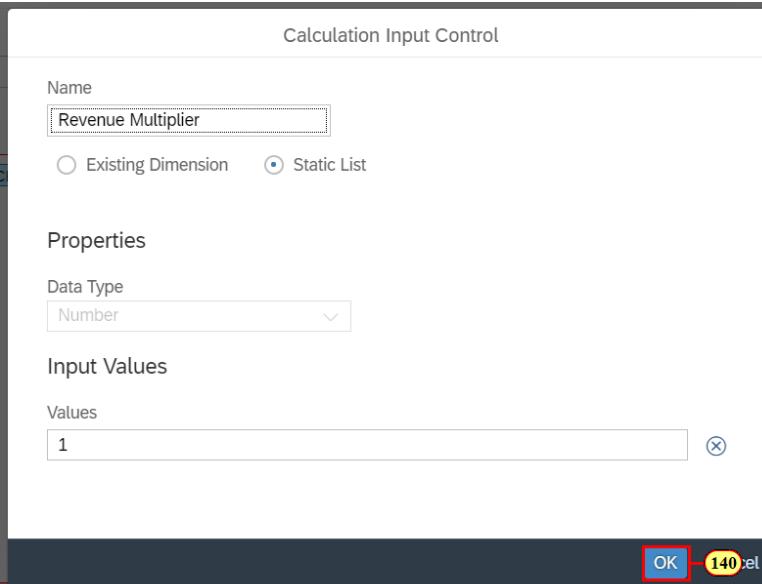
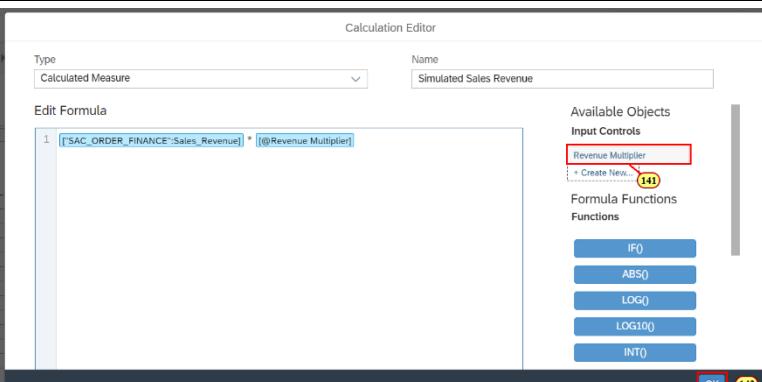
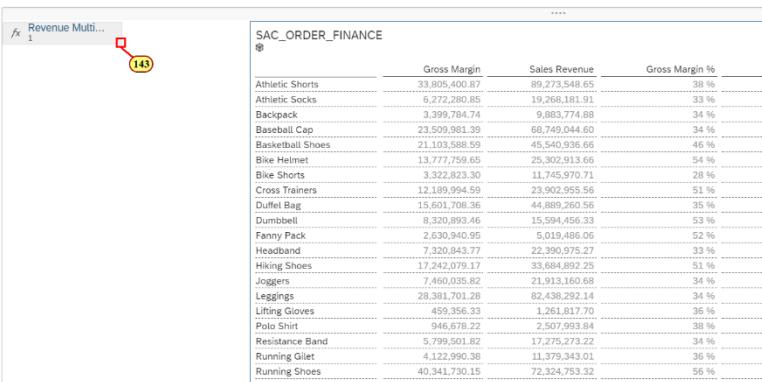
Explanation	Screenshot
118. Click Avg Delivery Time	<p>Measures</p> <p>X-Axis</p> <p>! At least 1 Measure required</p>  <p>The screenshot shows the 'Measures' dialog box. At the top, there's a note: 'At least 1 Measure required'. Below it is a search bar with 'Search' placeholder text. A dropdown menu is open, showing two sections: 'CALCULATIONS' and 'MEASURES'. Under 'MEASURES', the 'Avg Delivery Time' measure is listed. It has a red box around it, and a yellow circle highlights the number '118' next to the measure name. Other measures listed include 'Day', 'Days Order to Shipment', and 'Days Shipment to Receive'. There are also buttons for '+ Create Calculation...' and '+ Create Measure Input Control...'. At the bottom right of the dialog is a link 'Smart Grouping' with an info icon.</p>
119. Click Add Measure	<p>Measures</p> <p>X-Axis</p>  <p>The screenshot shows the 'Measures' dialog box. The 'Avg Delivery Time' measure is now listed under the 'X-Axis' section. A red box highlights the 'Avg Delivery Time' entry. Below it, there's a note: 'At least 1 Measure required' and a button '+ Add Measure' with a red box around it. A dimension 'Store' is listed under 'Dimensions' with a yellow circle around the number '119'. There are also buttons for '+ Create Calculation...' and '+ Create Measure Input Control...'. At the bottom right of the dialog is a link 'Smart Grouping' with an info icon.</p>

Explanation	Screenshot
120. Click SAC_ORDER_FINANCE	<p>Measures</p> <p>X-Axis</p> <p>Avg Delivery Time</p> <p>Y-Axis</p> <p>! At least 1 Measure required</p> <p>Search</p> <ul style="list-style-type: none"> ● SAC_SHIPPING_INFO > My Files / Public / Models SAC_ORDER_FINANCE > My Files / Public / Models <p>+ Add Dimension/Threshold 120</p> <p>● ● ● ● ●</p> 
121. Click Gross Margin	<p>Measures</p> <p>X-Axis</p> <p>Avg Delivery Time •</p> <p>Y-Axis</p> <p>! At least 1 Measure required</p> <p>Search</p> <p>< SAC_ORDER_FINANCE</p> <ul style="list-style-type: none"> Gross Margin % Store Order Size + Create Calculation... MEASURES Discount Gross Margin > Measure 121 Original Sales Price Expand List... <p>+ Add Filters</p> 

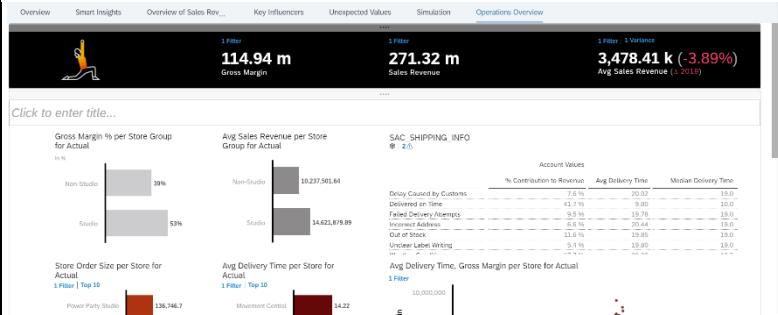
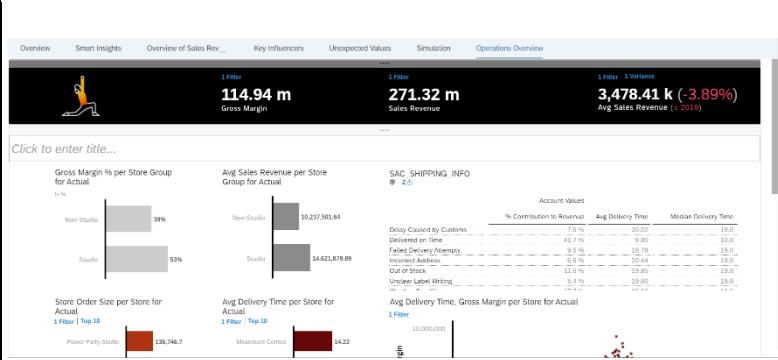
Explanation	Screenshot
<p> Quality check! Does your scatterplot look like this screenshot? We can see that stores with higher avg delivery time seem to also have lower gross margin.</p>	
<p> Let us now test out Calculation Input Controls and simulating values. Here we have a basic financial statement of gross margin, sales revenue, and cost of goods sold calculated by the difference between sales revenue and gross margin. We want to simulate what our gross margin % on each product would be given a simulated sales revenue increase.</p> <p>122. Scroll to the Bottom of the Dashboard</p> <p>123. Click the SAC_ORDER_FINANCE Table</p>	
<p> Let us add a calculation for simulated sales revenue.</p> <p>124. Click More Action Icon for the Account Dimension</p> <p>125. Click Add Calculation</p>	

Explanation	Screenshot
<p>126. Click on Calculated Measure</p> <p>127. Rename the Calculation to Simulated Sales Revenue</p>	
<p>128. Type in "Sa"</p> <p>129. Click Sales Revenue</p>	
<p>130. Type in ** (Multiplication Sign)</p>	
<p> We are using a calculation input control in this calculation. Calculation input controls allow the viewer of the story to adjust the value in the formula through a widget on the page. This interactivity is key to our simulated financial statement.</p> <p>131. Click + Create New</p>	

Explanation	Screenshot
<p>Calculation input controls can be created using values in Existing Dimensions or through values defined in a Static List. We want to create a static list of Revenue Multiplier values.</p> <p>132. Rename the Calculation Input Control to Revenue Multiplier</p> <p>133. Click Static List</p> <p>134. Expand Values</p>	
<p>Let us define a range of possible values to multiply our simulated sales revenue by.</p> <p>135. Click Select by Range</p>	
<p>136. Input 1 as the Min Value</p> <p>137. Input 2.5 as the Max Value</p> <p>138. Input 0.1 as the Increment Value</p> <p>139. Click OK</p>	

Explanation	Screenshot
<p>140. Click OK</p>	
<p>141. Click Revenue Multiplier 142. Click OK</p>	
<p>Now we can test to see how our Revenue Multiplier input control can help simulate values in our table. 143. Resize the Revenue Multiplier Calculation Input Control</p>	

Explanation	Screenshot																																																																																																																								
<p>⚠️ Quality check! Does your revenue multiplier and table look like this screenshot? Let us try simulating some values.</p>	<p>The screenshot shows a dashboard with a 'Revenue Multiplier' input control set to 2.5. To the right is a table titled '_ORDER_FINANCE' with columns: Gross Margin, Sales Revenue, Gross Margin %, Cost of Goods Sold, and Simulated Sales Revenue. The table lists various products with their respective values.</p> <table border="1"> <thead> <tr> <th></th> <th>Gross Margin</th> <th>Sales Revenue</th> <th>Gross Margin %</th> <th>Cost of Goods Sold</th> <th>Simulated Sales Revenue</th> </tr> </thead> <tbody> <tr><td>Athletic Shorts</td><td>33,805,400.87</td><td>89,273,548.65</td><td>38 %</td><td>55,468,147.8</td><td>89,273,548.6</td></tr> <tr><td>Athletic Socks</td><td>6,272,280.85</td><td>19,268,181.91</td><td>33 %</td><td>12,995,901.1</td><td>19,268,181.9</td></tr> <tr><td>Backpack</td><td>3,399,784.74</td><td>9,883,774.88</td><td>34 %</td><td>6,483,990.1</td><td>9,883,774.88</td></tr> <tr><td>Baseball Cap</td><td>23,509,981.39</td><td>68,749,044.60</td><td>34 %</td><td>45,239,063.2</td><td>68,749,044.6</td></tr> <tr><td>Basketball Shoes</td><td>21,103,598.59</td><td>55,302,913.66</td><td>46 %</td><td>24,127,346.1</td><td>55,302,913.66</td></tr> <tr><td>Bike Helmet</td><td>13,777,709.65</td><td>25,302,913.66</td><td>54 %</td><td>11,927,154.0</td><td>25,302,913.67</td></tr> <tr><td>Bike Shorts</td><td>3,322,823.30</td><td>11,745,970.71</td><td>28 %</td><td>8,423,147.4</td><td>11,745,970.7</td></tr> <tr><td>Cross Trainers</td><td>12,189,994.59</td><td>23,902,955.56</td><td>51 %</td><td>11,712,961.0</td><td>23,902,955.6</td></tr> <tr><td>Duffel Bag</td><td>15,601,708.36</td><td>44,889,260.56</td><td>35 %</td><td>29,287,552.2</td><td>44,889,260.6</td></tr> <tr><td>Fanny Pack</td><td>2,630,940.95</td><td>8,094,456.33</td><td>53 %</td><td>2,273,562.9</td><td>8,094,456.3</td></tr> <tr><td>Headband</td><td>7,322,843.77</td><td>22,990,970.27</td><td>33 %</td><td>15,070,131.5</td><td>22,990,970.3</td></tr> <tr><td>Hiking Gloves</td><td>17,242,079.17</td><td>33,684,892.25</td><td>51 %</td><td>16,442,813.1</td><td>33,684,892.3</td></tr> <tr><td>Joggers</td><td>7,490,039.82</td><td>21,913,160.88</td><td>34 %</td><td>14,453,124.9</td><td>21,913,160.7</td></tr> <tr><td>Leggings</td><td>28,381,701.31</td><td>82,438,292.14</td><td>34 %</td><td>54,056,500.9</td><td>82,438,292.1</td></tr> <tr><td>Lifting Gloves</td><td>459,256.33</td><td>1,261,817.70</td><td>36 %</td><td>802,461.4</td><td>1,261,817.7</td></tr> <tr><td>Polo Shirt</td><td>946,678.22</td><td>2,507,993.84</td><td>38 %</td><td>1,561,315.6</td><td>2,507,993.8</td></tr> <tr><td>Resistance Band</td><td>8,799,501.82</td><td>17,275,273.22</td><td>34 %</td><td>11,475,771.4</td><td>17,275,273.2</td></tr> <tr><td>Running Gilet</td><td>4,122,990.38</td><td>11,379,343.01</td><td>36 %</td><td>7,256,352.6</td><td>11,379,343.0</td></tr> <tr><td>Running Shoes</td><td>40,341,730.15</td><td>72,324,753.32</td><td>56 %</td><td>31,983,023.2</td><td>72,324,753.3</td></tr> </tbody> </table>		Gross Margin	Sales Revenue	Gross Margin %	Cost of Goods Sold	Simulated Sales Revenue	Athletic Shorts	33,805,400.87	89,273,548.65	38 %	55,468,147.8	89,273,548.6	Athletic Socks	6,272,280.85	19,268,181.91	33 %	12,995,901.1	19,268,181.9	Backpack	3,399,784.74	9,883,774.88	34 %	6,483,990.1	9,883,774.88	Baseball Cap	23,509,981.39	68,749,044.60	34 %	45,239,063.2	68,749,044.6	Basketball Shoes	21,103,598.59	55,302,913.66	46 %	24,127,346.1	55,302,913.66	Bike Helmet	13,777,709.65	25,302,913.66	54 %	11,927,154.0	25,302,913.67	Bike Shorts	3,322,823.30	11,745,970.71	28 %	8,423,147.4	11,745,970.7	Cross Trainers	12,189,994.59	23,902,955.56	51 %	11,712,961.0	23,902,955.6	Duffel Bag	15,601,708.36	44,889,260.56	35 %	29,287,552.2	44,889,260.6	Fanny Pack	2,630,940.95	8,094,456.33	53 %	2,273,562.9	8,094,456.3	Headband	7,322,843.77	22,990,970.27	33 %	15,070,131.5	22,990,970.3	Hiking Gloves	17,242,079.17	33,684,892.25	51 %	16,442,813.1	33,684,892.3	Joggers	7,490,039.82	21,913,160.88	34 %	14,453,124.9	21,913,160.7	Leggings	28,381,701.31	82,438,292.14	34 %	54,056,500.9	82,438,292.1	Lifting Gloves	459,256.33	1,261,817.70	36 %	802,461.4	1,261,817.7	Polo Shirt	946,678.22	2,507,993.84	38 %	1,561,315.6	2,507,993.8	Resistance Band	8,799,501.82	17,275,273.22	34 %	11,475,771.4	17,275,273.2	Running Gilet	4,122,990.38	11,379,343.01	36 %	7,256,352.6	11,379,343.0	Running Shoes	40,341,730.15	72,324,753.32	56 %	31,983,023.2	72,324,753.3
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<p>144. Drag the Revenue Multiplier to 1.5</p>	<p>The screenshot shows a dashboard with a 'Revenue Multiplier' input control set to 1.5. A red box highlights the input field, and a red circle with the number '144' is placed below it. To the right is a table titled '_ORDER_FINANCE' with columns: Gross Margin, Sales Revenue, Gross Margin %, Cost of Goods Sold, and Simulated Sales Revenue. The table lists various products with their respective values.</p> <table border="1"> <thead> <tr> <th></th> <th>Gross Margin</th> <th>Sales Revenue</th> <th>Gross Margin %</th> <th>Cost of Goods Sold</th> <th>Simulated Sales Revenue</th> </tr> </thead> <tbody> <tr><td>Athletic Shorts</td><td>33,805,400.87</td><td>89,273,548.65</td><td>38 %</td><td>55,468,147.8</td><td>89,273,548.6</td></tr> <tr><td>Athletic Socks</td><td>6,272,280.85</td><td>19,268,181.91</td><td>33 %</td><td>12,995,901.1</td><td>19,268,181.9</td></tr> <tr><td>Backpack</td><td>3,399,784.74</td><td>9,883,774.88</td><td>34 %</td><td>6,483,990.1</td><td>9,883,774.88</td></tr> <tr><td>Baseball Cap</td><td>23,509,981.39</td><td>68,749,044.60</td><td>34 %</td><td>45,239,063.2</td><td>68,749,044.6</td></tr> <tr><td>Basketball Shoes</td><td>21,103,598.59</td><td>55,302,913.66</td><td>46 %</td><td>24,127,346.1</td><td>55,302,913.66</td></tr> <tr><td>Bike Helmet</td><td>13,777,709.65</td><td>25,302,913.66</td><td>54 %</td><td>11,927,154.0</td><td>25,302,913.67</td></tr> <tr><td>Bike Shorts</td><td>3,322,823.30</td><td>11,745,970.71</td><td>28 %</td><td>8,423,147.4</td><td>11,745,970.7</td></tr> <tr><td>Cross Trainers</td><td>12,189,994.59</td><td>23,902,955.56</td><td>51 %</td><td>11,712,961.0</td><td>23,902,955.6</td></tr> <tr><td>Duffel Bag</td><td>15,601,708.36</td><td>44,889,260.56</td><td>35 %</td><td>29,287,552.2</td><td>44,889,260.6</td></tr> <tr><td>Fanny Pack</td><td>2,630,940.95</td><td>8,094,456.33</td><td>53 %</td><td>2,273,562.9</td><td>8,094,456.3</td></tr> <tr><td>Headband</td><td>7,322,843.77</td><td>22,990,970.27</td><td>33 %</td><td>15,070,131.5</td><td>22,990,970.3</td></tr> <tr><td>Hiking Gloves</td><td>17,242,079.17</td><td>33,684,892.25</td><td>51 %</td><td>16,442,813.1</td><td>33,684,892.3</td></tr> <tr><td>Joggers</td><td>7,490,039.82</td><td>21,913,160.88</td><td>34 %</td><td>14,453,124.9</td><td>21,913,160.7</td></tr> <tr><td>Leggings</td><td>28,381,701.31</td><td>82,438,292.14</td><td>34 %</td><td>54,056,500.9</td><td>82,438,292.1</td></tr> <tr><td>Lifting Gloves</td><td>459,256.33</td><td>1,261,817.70</td><td>36 %</td><td>802,461.4</td><td>1,261,817.7</td></tr> <tr><td>Polo Shirt</td><td>946,678.22</td><td>2,507,993.84</td><td>38 %</td><td>1,561,315.6</td><td>2,507,993.8</td></tr> <tr><td>Resistance Band</td><td>8,799,501.82</td><td>17,275,273.22</td><td>34 %</td><td>11,475,771.4</td><td>17,275,273.2</td></tr> <tr><td>Running Gilet</td><td>4,122,990.38</td><td>11,379,343.01</td><td>36 %</td><td>7,256,352.6</td><td>11,379,343.0</td></tr> <tr><td>Running Shoes</td><td>40,341,730.15</td><td>72,324,753.32</td><td>56 %</td><td>31,983,023.2</td><td>72,324,753.3</td></tr> </tbody> </table>		Gross Margin	Sales Revenue	Gross Margin %	Cost of Goods Sold	Simulated Sales Revenue	Athletic Shorts	33,805,400.87	89,273,548.65	38 %	55,468,147.8	89,273,548.6	Athletic Socks	6,272,280.85	19,268,181.91	33 %	12,995,901.1	19,268,181.9	Backpack	3,399,784.74	9,883,774.88	34 %	6,483,990.1	9,883,774.88	Baseball Cap	23,509,981.39	68,749,044.60	34 %	45,239,063.2	68,749,044.6	Basketball Shoes	21,103,598.59	55,302,913.66	46 %	24,127,346.1	55,302,913.66	Bike Helmet	13,777,709.65	25,302,913.66	54 %	11,927,154.0	25,302,913.67	Bike Shorts	3,322,823.30	11,745,970.71	28 %	8,423,147.4	11,745,970.7	Cross Trainers	12,189,994.59	23,902,955.56	51 %	11,712,961.0	23,902,955.6	Duffel Bag	15,601,708.36	44,889,260.56	35 %	29,287,552.2	44,889,260.6	Fanny Pack	2,630,940.95	8,094,456.33	53 %	2,273,562.9	8,094,456.3	Headband	7,322,843.77	22,990,970.27	33 %	15,070,131.5	22,990,970.3	Hiking Gloves	17,242,079.17	33,684,892.25	51 %	16,442,813.1	33,684,892.3	Joggers	7,490,039.82	21,913,160.88	34 %	14,453,124.9	21,913,160.7	Leggings	28,381,701.31	82,438,292.14	34 %	54,056,500.9	82,438,292.1	Lifting Gloves	459,256.33	1,261,817.70	36 %	802,461.4	1,261,817.7	Polo Shirt	946,678.22	2,507,993.84	38 %	1,561,315.6	2,507,993.8	Resistance Band	8,799,501.82	17,275,273.22	34 %	11,475,771.4	17,275,273.2	Running Gilet	4,122,990.38	11,379,343.01	36 %	7,256,352.6	11,379,343.0	Running Shoes	40,341,730.15	72,324,753.32	56 %	31,983,023.2	72,324,753.3
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<p>⚠️ Quality check! Does your dashboard look like this screenshot?</p>	<p>The screenshot shows a dashboard with several sections: Overview, Smart Insights, Overview of Sales Rev., Key Influencers, Unexpected Values, Simulation, and Operations Overview. The 'Smart Insights' section has a title 'Click to enter title...'. Below it are three cards: 'Gross Margin % Store Group for Actual' (Non-Studio: 39%, Studio: 53%), 'Avg Sales Revenue per Store Group for Actual' (Non-Studio: 10,297,501.64, Studio: 14,621,879.89), and 'SAC_SHIPPING_INFO' (2: 2). The 'Key Influencers' section shows 'Avg Delivery Time per Store for Actual' (Power Party Studio: 136,746.7, Movement Control: 14.22) and 'Avg Delivery Time, Gross Margin per Store for Actual' (1 Filter Top 10). The 'Operations Overview' section shows a table with columns: Account Values, % Contribution to Revenue, Avg Delivery Time, and Median Delivery Time. The table includes rows for 'Delayed Caused by Customs', 'Delivered in Time', 'Failure to Ship Products', 'Incorrect Address', 'Out of Stock', 'Unknown Label Writing', and 'Unknown Label Writing'.</p>																																																																																																																								

Explanation	Screenshot
<p> Please save your story by pressing Ctrl + S on your keyboard!</p>	 <p>The screenshot shows the Power BI Operations Overview page. At the top, there are three main metrics: Gross Margin (114.94 m), Sales Revenue (271.32 m), and Avg Sales Revenue (-3.89%). Below these are several charts and tables. One chart shows Gross Margin % per Store Group for Actual, with Non-Studio at 39% and Studio at 53%. Another chart shows Avg Sales Revenue per Store Group for Actual, with Non-Studio at 10,237,501.64 and Studio at 14,621,878.89. A third chart shows Store Order Size per Store for Actual, with Power Party Studio at 136,746.7. On the right, there is a table titled 'SAC SHIPPING INFO' with various shipping delay categories and their percentages. At the bottom, there is a section for 'Avg Delivery Time, Gross Margin per Store for Actual'.</p>
<p> You have now completed the Calculations and Blending Jump Off. In this section we have covered how to create a calculated dimension with string functions, how to link dimensions and use blending for visualizations, how to create calculations with measures across models, how to apply linked analysis between charts with different models, how to use median and quartile aggregations, and how to use calculation input controls to create simulated calculations.</p>	 <p>This screenshot is identical to the one above, showing the same key metrics, charts, and tables related to operations and shipping information.</p>

Summary

You have completed the entire **Calculations and Blending** section!

You should now be able to:

- Create calculated dimensions with string functions to enhance your data
- Understand how to blend data models by linking on common dimensions
- Utilize cross calculations with measures from different models
- Employ statistical calculations in aggregations of your data
- Integrate calculation input controls to simulate values in your visualizations

Geo Visualizations: Deep Dive



Objective: Use Geo Maps in SAP Analytics Cloud to interpret geo-enriched models and enhance your dashboard's analytic capabilities. Develop an understanding of the various features available in geo visualizations to customize your insights.

Estimated Time: 20 mins

Exercise Description: You need to do a deeper analysis on BestRun's regions and understand what drives geographical differences in the company's performance. You need to leverage geo-spatial analytic capabilities of SAP Analytics Cloud to create new geo maps for your analysis.

Key Features:

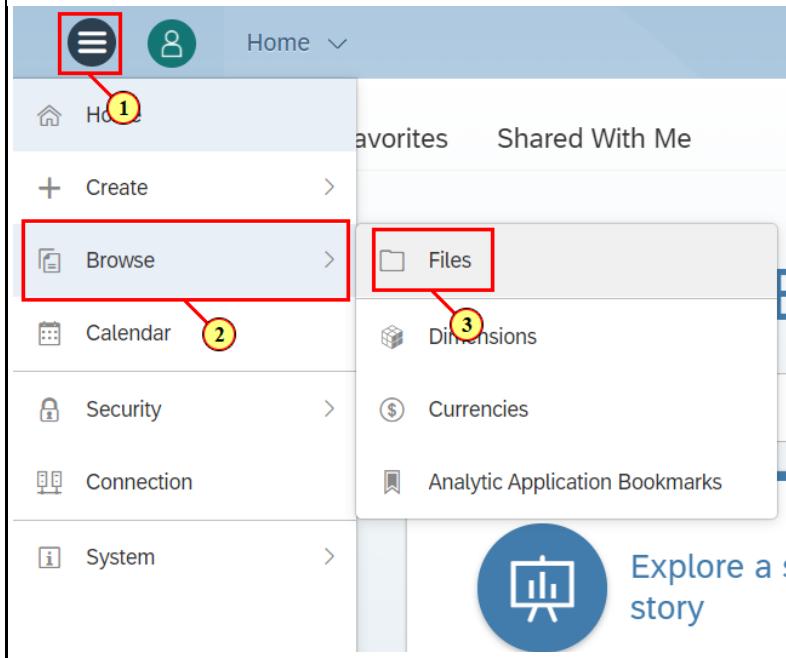
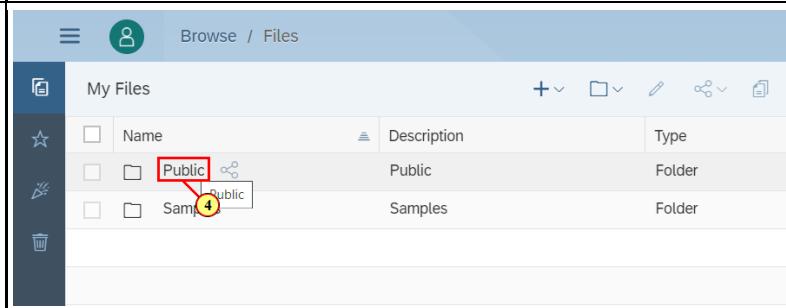
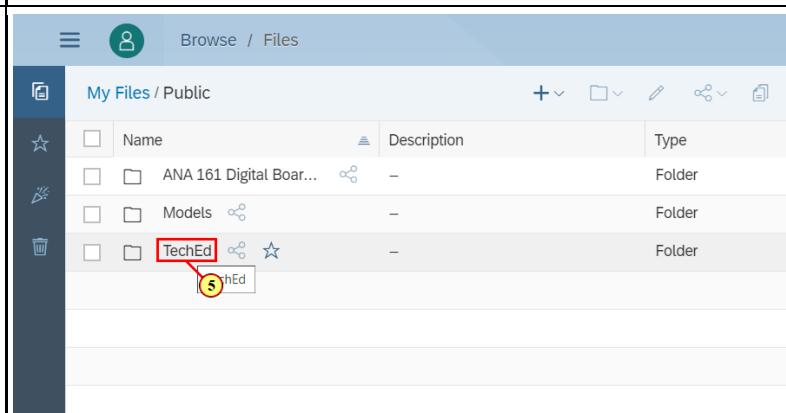
- Create your own geo-enriched models with acquired data
- Employ heat maps to gather insights on geo data density
- Understand the use of distance filters and the lasso tool in analyzing your hypotheses
- Use tooltips, labels, and overlapping points to enhance the insights in your geo map
- Change your basemap layer to view your geo enriched data in different contexts
- Style your geo map for clear and informative visualizations

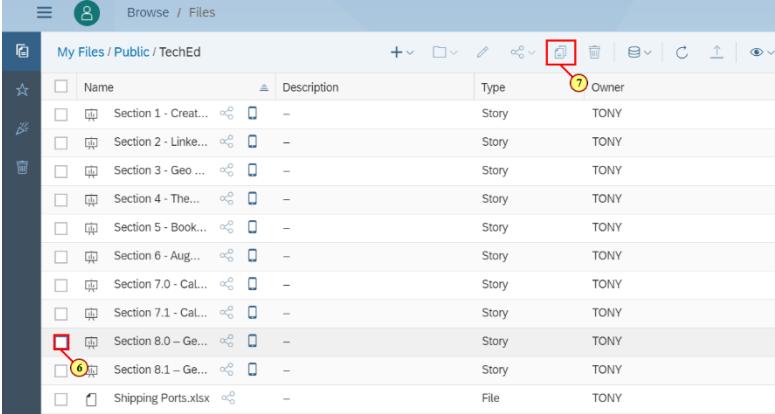
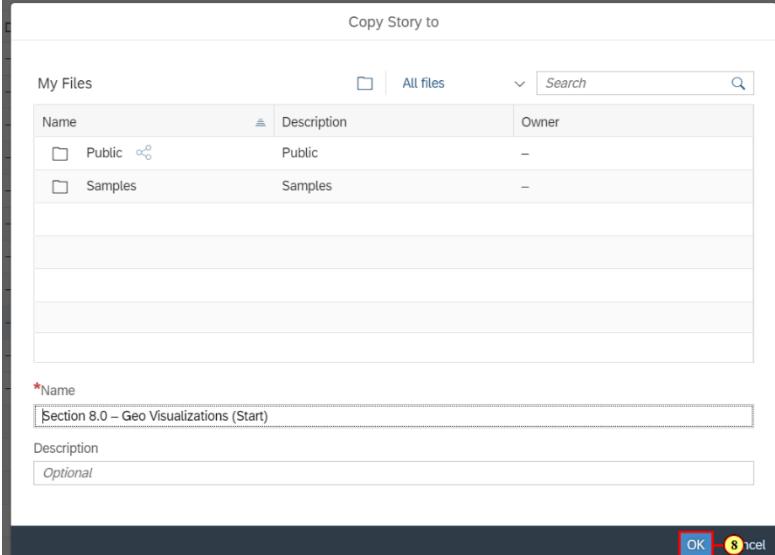
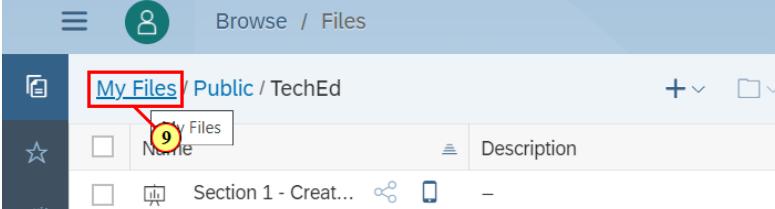


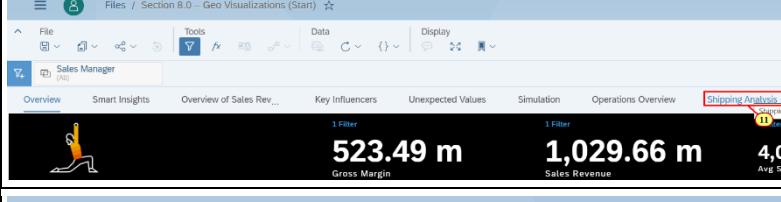
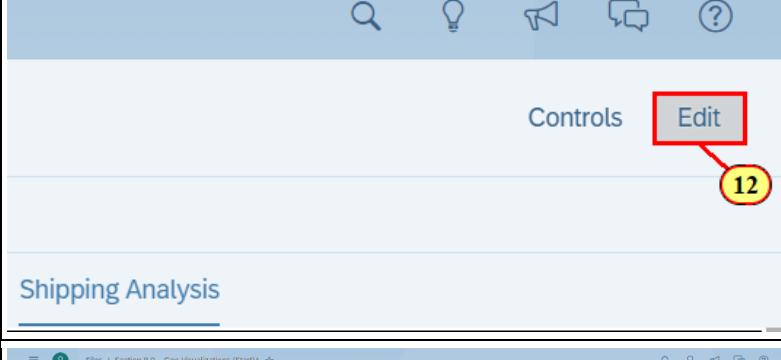
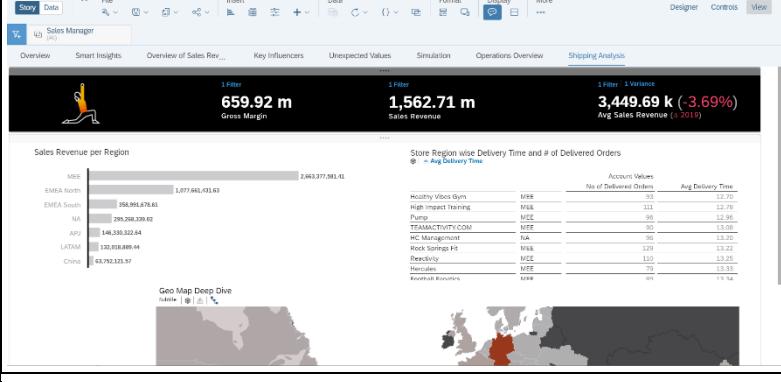
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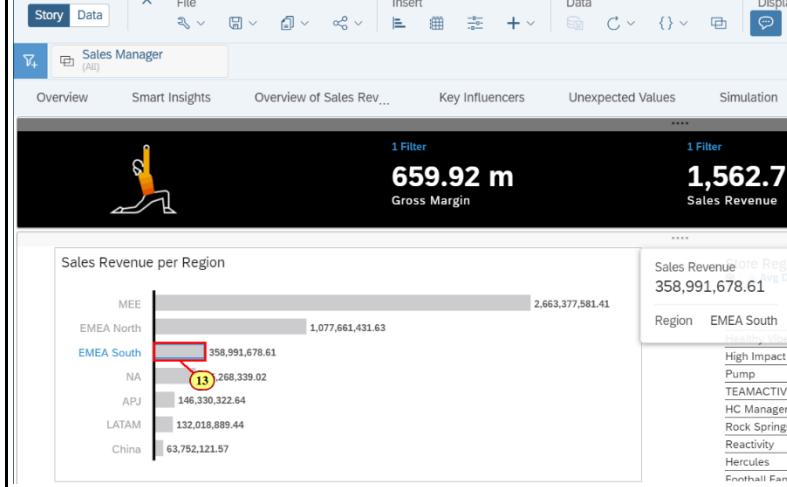
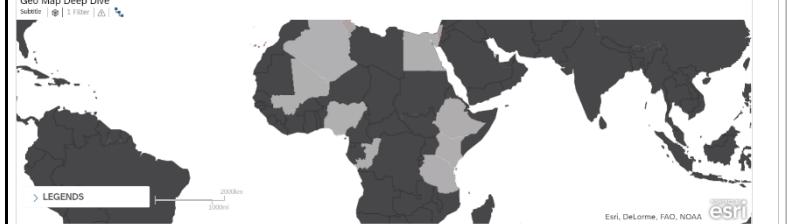
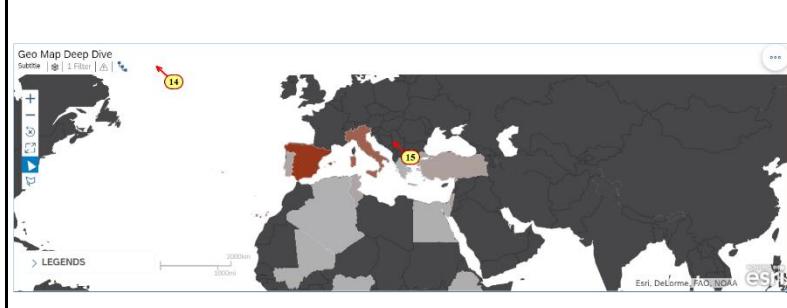
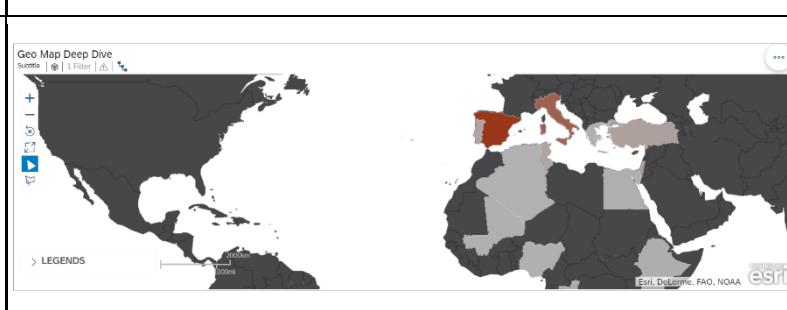
When completing exercises, some data values in the screenshots may not match what you see on your screen. This is because the dynamic time filters that were applied at the time the screenshots were taken is different from the current system date.

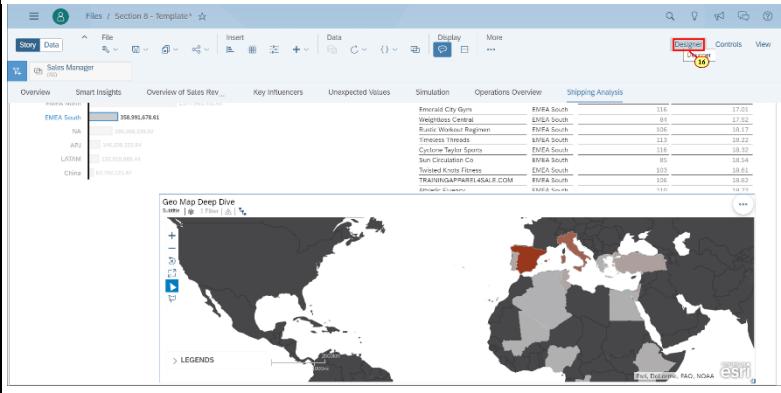
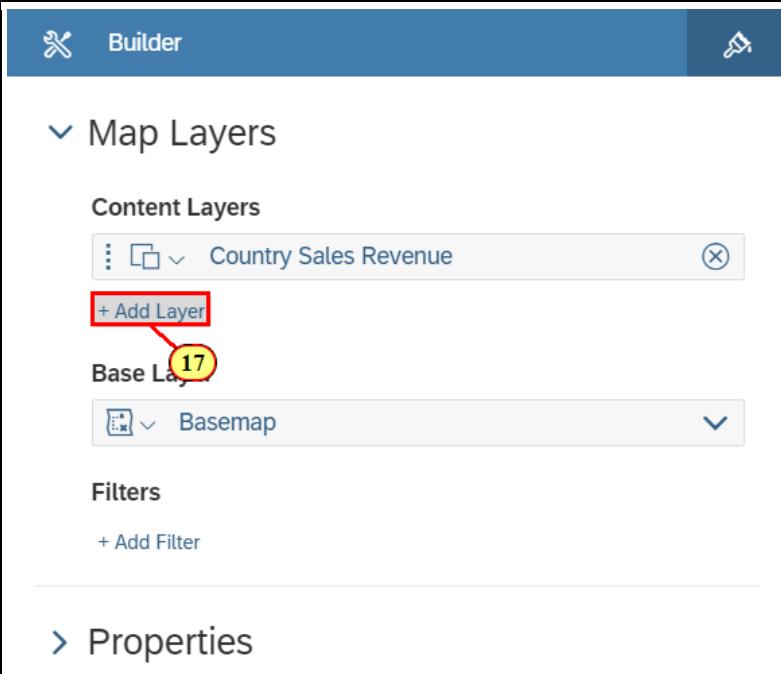
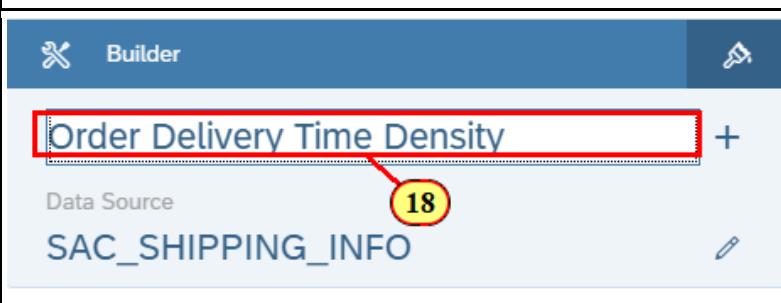
Explanation	Screenshot
<p> Welcome to the Geo Visualizations Deep Dive. In this section, we will cover the breadth of tools available to story creators to enhance their geo analytics capabilities. To start, let us copy a story built by a colleague.</p>	

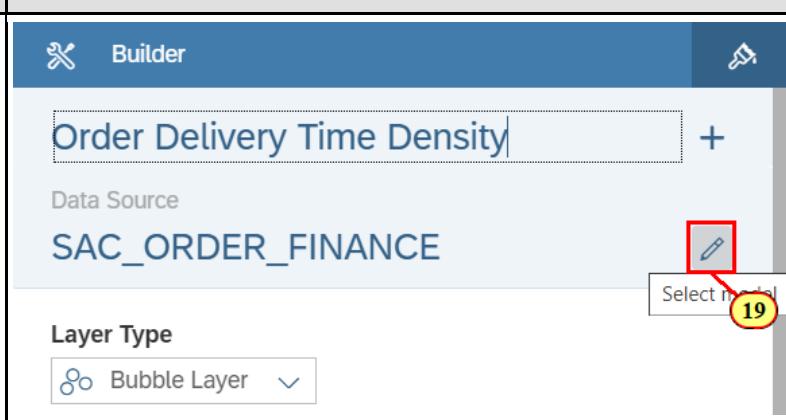
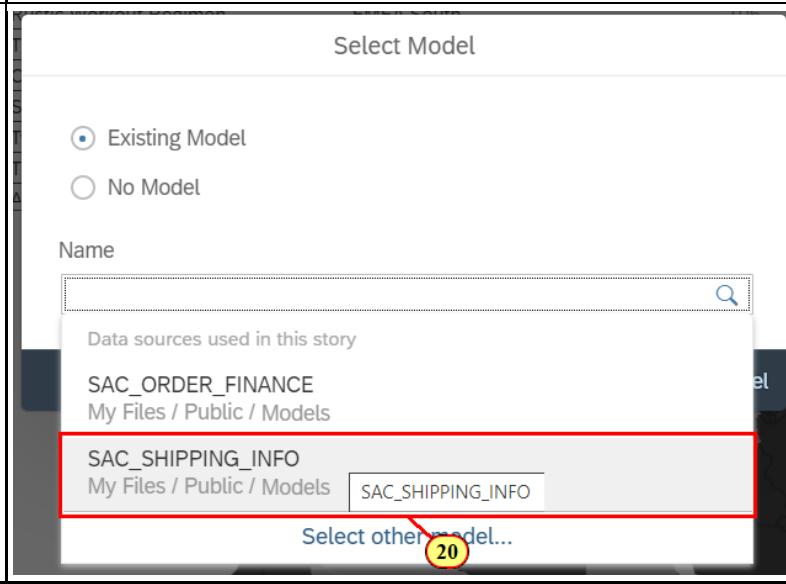
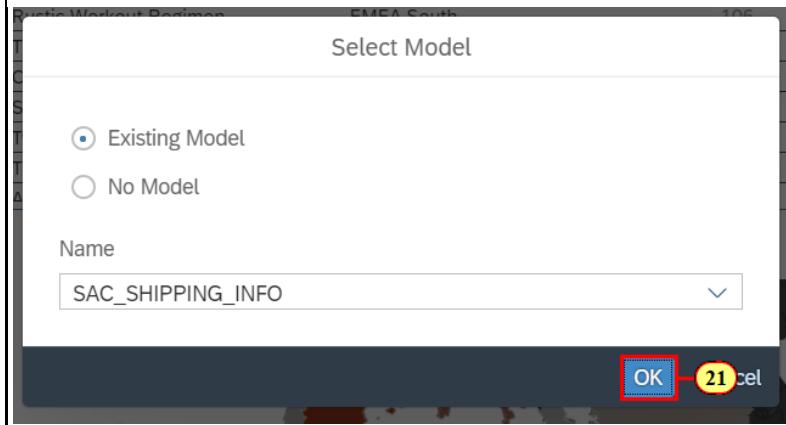
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<p>4. Click Public folder</p>	 <table border="1"> <thead> <tr> <th>Name</th> <th>Description</th> <th>Type</th> </tr> </thead> <tbody> <tr> <td>Public</td> <td>Public</td> <td>Folder</td> </tr> <tr> <td>Samples</td> <td>Samples</td> <td>Folder</td> </tr> </tbody> </table>	Name	Description	Type	Public	Public	Folder	Samples	Samples	Folder			
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<p>5. Click TechEd folder</p>	 <table border="1"> <thead> <tr> <th>Name</th> <th>Description</th> <th>Type</th> </tr> </thead> <tbody> <tr> <td>AN 161 Digital Boar...</td> <td>-</td> <td>Folder</td> </tr> <tr> <td>Models</td> <td>-</td> <td>Folder</td> </tr> <tr> <td>TechEd</td> <td>-</td> <td>Folder</td> </tr> </tbody> </table>	Name	Description	Type	AN 161 Digital Boar...	-	Folder	Models	-	Folder	TechEd	-	Folder
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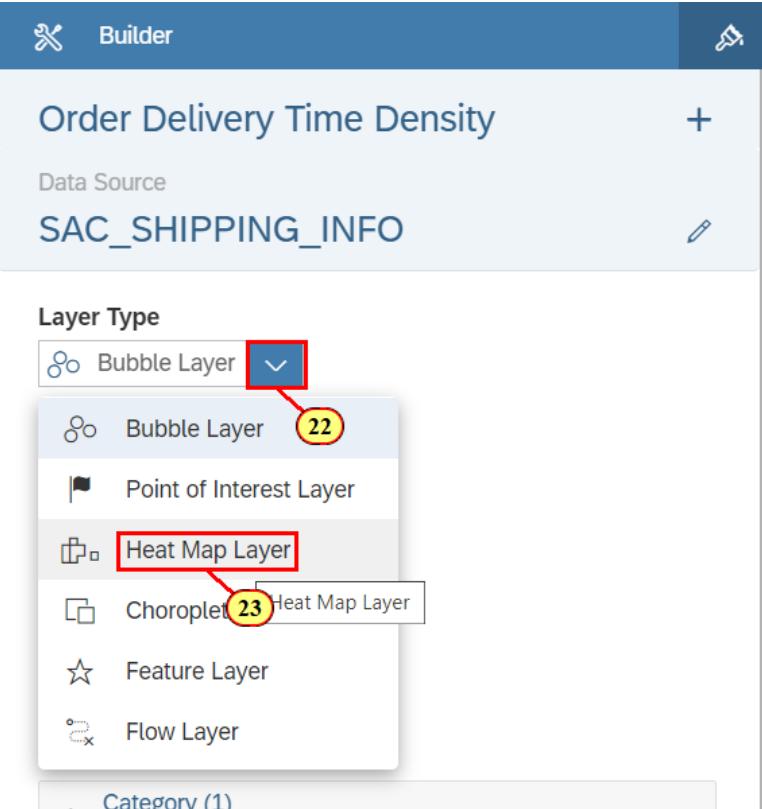
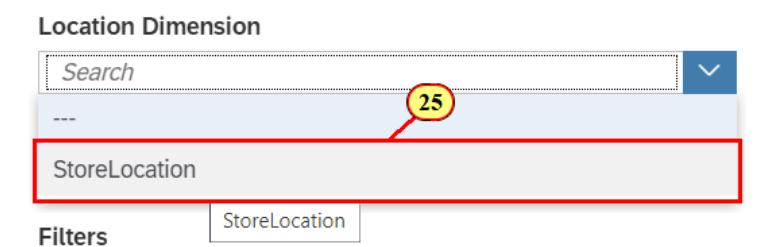
Explanation	Screenshot
<p>6. Select Section 8.0 - Geo Visualizations (Start)</p> <p>7. Click Copy To</p>	
<p>8. Click OK</p>	
<p>9. Click My Files</p>	
<p>10. Click Section 8.0 - Geo Visualizations (Start)</p>	

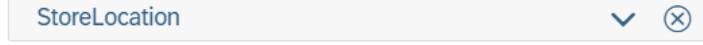
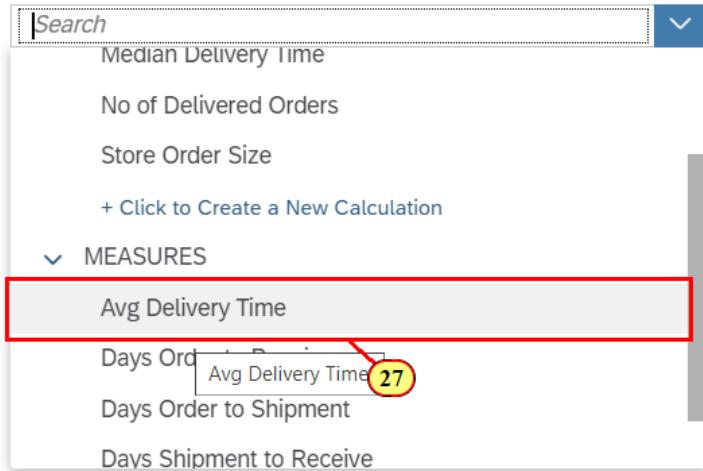
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<p>11. Click Shipping Analysis page.</p>																															
<p>12. Switch to Edit Mode</p>																															
<p>⚠️ Exercise check! Does your dashboard look like this screenshot?</p>																															
<p>👉 In our Shipping Analysis page, we prepared a variety of visualizations that will be used conjunctly with our geo map in analysis. The first chart is a bar graph of sales revenue per region. This chart is linked to our geo map and will filter regions on the geo map based on chart selection.</p>	<p>Sales Revenue per Region</p> <table border="1"> <thead> <tr> <th>Region</th> <th>Sales Revenue</th> </tr> </thead> <tbody> <tr> <td>MEE</td> <td>2,663,377,581.41</td> </tr> <tr> <td>EMEA North</td> <td>1,077,661,431.63</td> </tr> <tr> <td>EMEA South</td> <td>358,991,678.61</td> </tr> <tr> <td>NA</td> <td>295,268,339.02</td> </tr> <tr> <td>APJ</td> <td>146,330,322.64</td> </tr> <tr> <td>LATAM</td> <td>132,018,889.44</td> </tr> <tr> <td>China</td> <td>63,752,121.57</td> </tr> </tbody> </table>	Region	Sales Revenue	MEE	2,663,377,581.41	EMEA North	1,077,661,431.63	EMEA South	358,991,678.61	NA	295,268,339.02	APJ	146,330,322.64	LATAM	132,018,889.44	China	63,752,121.57														
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<p>👉 The second visualization is a table displaying the No of Delivered Orders and Avg Delivery Times for stores in our shipping model. This chart has linked analysis filtering applied from our geo map and will filter entries based on selections made on our geo map.</p>	<p>Store Region wise Delivery Time and # of Delivered Orders</p> <table border="1"> <thead> <tr> <th>Store</th> <th>No of Delivered Orders</th> <th>Avg Delivery Time</th> </tr> </thead> <tbody> <tr> <td>Healthy Vibes Gym</td> <td>93</td> <td>12.70</td> </tr> <tr> <td>High Impact Training</td> <td>111</td> <td>12.78</td> </tr> <tr> <td>Pump</td> <td>96</td> <td>12.96</td> </tr> <tr> <td>TEAMACTIVITY.COM</td> <td>90</td> <td>13.08</td> </tr> <tr> <td>HC Management</td> <td>96</td> <td>13.20</td> </tr> <tr> <td>Rock Springs Fit</td> <td>129</td> <td>13.22</td> </tr> <tr> <td>Reactivity</td> <td>110</td> <td>13.25</td> </tr> <tr> <td>Hercules</td> <td>79</td> <td>13.33</td> </tr> <tr> <td>Earthlink Solutions</td> <td>00</td> <td>13.24</td> </tr> </tbody> </table>	Store	No of Delivered Orders	Avg Delivery Time	Healthy Vibes Gym	93	12.70	High Impact Training	111	12.78	Pump	96	12.96	TEAMACTIVITY.COM	90	13.08	HC Management	96	13.20	Rock Springs Fit	129	13.22	Reactivity	110	13.25	Hercules	79	13.33	Earthlink Solutions	00	13.24
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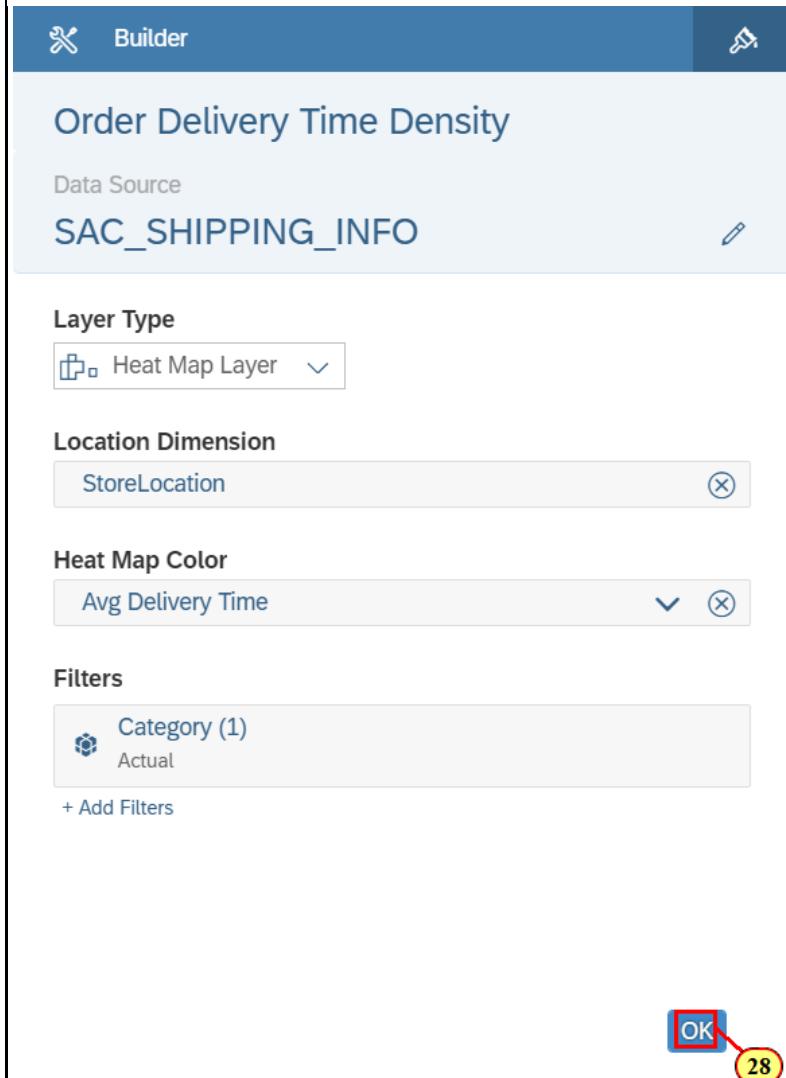
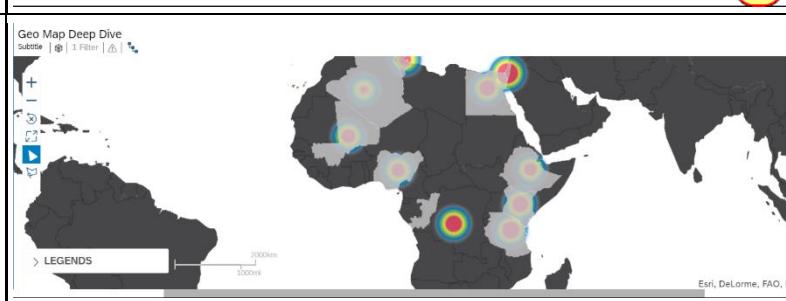
Explanation	Screenshot																
<p> Finally, we land on our geo map on this page! This geo map has a choropleth layer displaying sales revenue for countries in our finance model. We will begin our analysis on this layer and explore further insights we can draw from our data.</p>																	
<p> Let us start our analysis on our sales revenue chart. As the persona of a European business analyst for our sports apparel company, we are interested to discover why EMEA South has the lowest total sales revenue in our regions of interest. Let us filter our geo map by selecting this region on our chart.</p> <p>13. Click EMEA South</p>	 <table border="1"> <caption>Sales Revenue per Region</caption> <thead> <tr> <th>Region</th> <th>Sales Revenue</th> </tr> </thead> <tbody> <tr> <td>MEE</td> <td>2,663,377,581.41</td> </tr> <tr> <td>EMEA North</td> <td>1,077,661,431.63</td> </tr> <tr> <td>EMEA South</td> <td>358,991,678.61</td> </tr> <tr> <td>NA</td> <td>131,268,339.02</td> </tr> <tr> <td>APJ</td> <td>146,330,322.64</td> </tr> <tr> <td>LATAM</td> <td>132,018,889.44</td> </tr> <tr> <td>China</td> <td>63,752,121.57</td> </tr> </tbody> </table>	Region	Sales Revenue	MEE	2,663,377,581.41	EMEA North	1,077,661,431.63	EMEA South	358,991,678.61	NA	131,268,339.02	APJ	146,330,322.64	LATAM	132,018,889.44	China	63,752,121.57
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<p> Quality check! Does your geo map look like this screenshot after selecting EMEA South region?</p>																	
<p> Let us navigate around our geo map and examine what our choropleth layer can tell us about the distribution of sales revenue in this region.</p> <p>14. Select the Geo Map</p> <p>15. Zoom into the map by click, hold and dragging to see other countries in EMEA South.</p>																	
<p> Quality check! Does your geo map look like this screenshot after re-centering?</p> <p> We can see that the largest share of our company's sales revenue in this region comes from Spain. We know from previous sections that average delivery time is correlated with sales revenue in our</p>																	

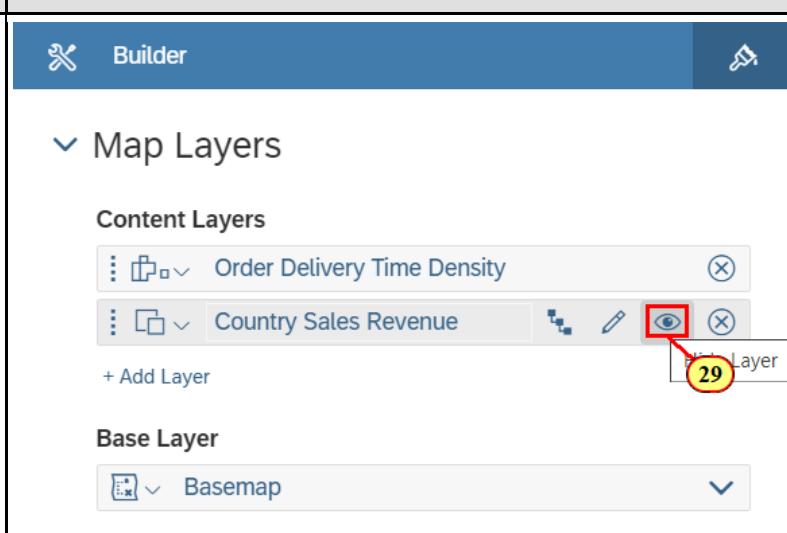
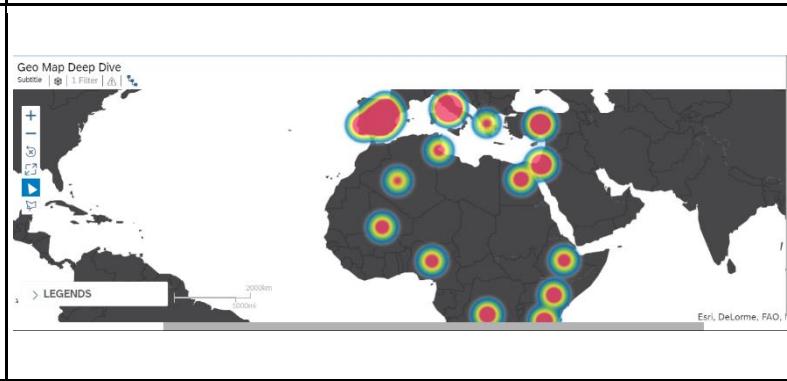
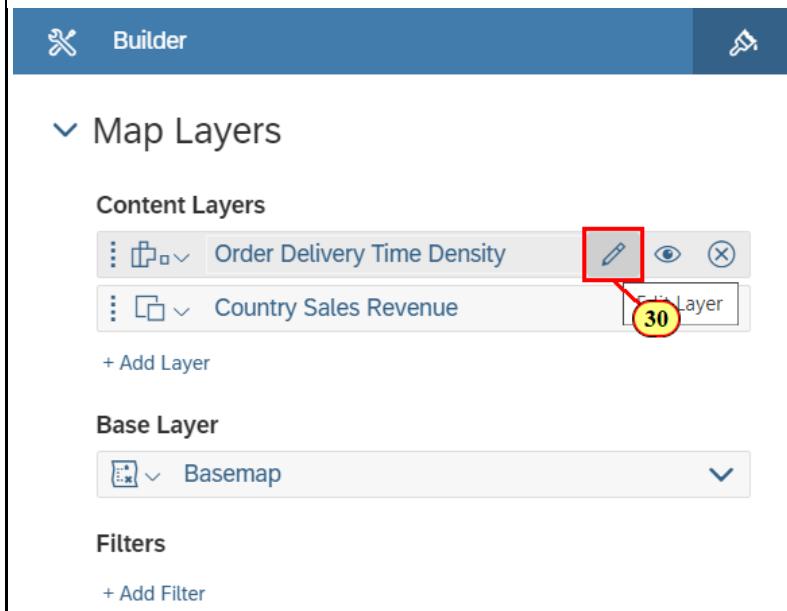
Explanation	Screenshot
company data. Let us investigate the delivery times in Spain to gather insights.	
16. Click Designer	
<p>👉 We want to choose a layer that will help us visualize the distribution of our measure, Average Delivery Time, in our geo visualization. The Heat Map Layer is a good way to visualize the data density of a measure on our map. Let us create this layer in our geo map.</p> <p>17. Click Add Layer</p>	
18. Rename the layer to Order Delivery Time Density	

Explanation	Screenshot
<p> Let us change the model for this layer to the shipping model which contains our desired measures. You can add layers sourcing measures and dimensions from multiple models on a single geo visualization, enhancing your ability to compare data.</p> <p>19. Click Select Model</p>	
<p>20. Click SAC_SHIPPING_INFO</p>	
<p>21. Click OK</p>	

Explanation	Screenshot
<p> SAP Analytics Cloud offers a variety of layers for geographical visualizations. The most common used ones are</p> <ul style="list-style-type: none"> • Bubble Layer, which show each location as a bubble. Using color and size of the bubble allows to see correlation between different measures • Choropleth Layer, shows the shape of a geo location and allows drilling from aggregated levels such as country into smaller areas such as regions • Heat Map Layer, allows to show the concentration of geographical locations <p>For your next step you like to view your data in a heat map.</p> <p>22. Click Choose Layer Type 23. Click Heat Map Layer</p>	
<p> Let us add our geo enriched dimension to this geo map.</p> <p>24. Click Add Location Dimension</p>	
<p>25. Click StoreLocation</p>	

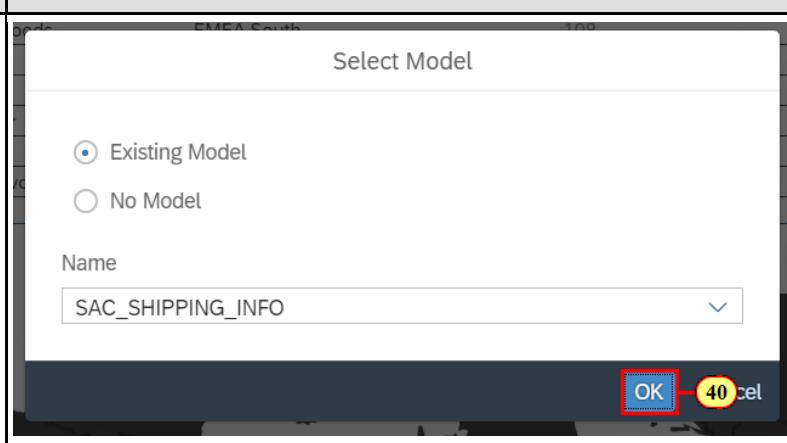
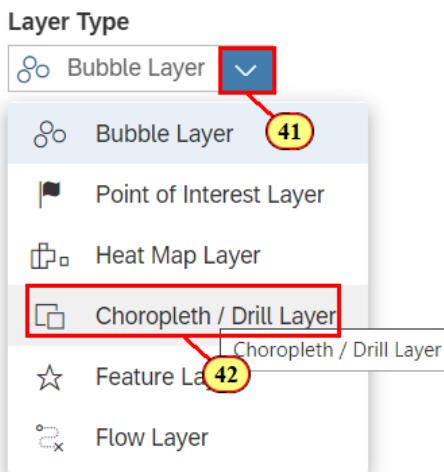
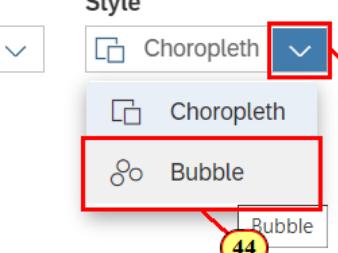
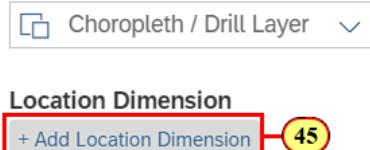
Explanation	Screenshot
 We want to look at Avg Delivery Time, a calculated measure in our model, to look at the density of delivery times in our heat map layer. 26. Click Add Measure	Location Dimension  Heat Map Color 
27. Scroll and click Avg Delivery Time	Heat Map Color 

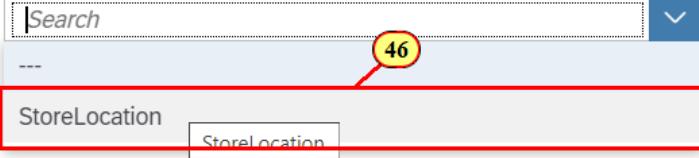
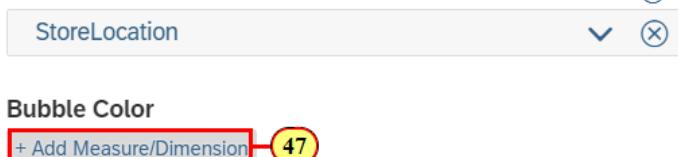
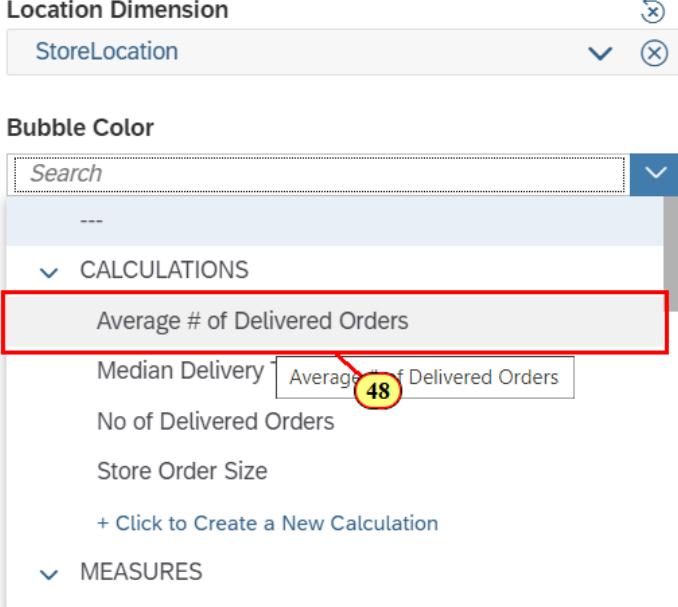
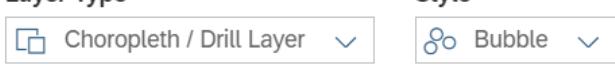
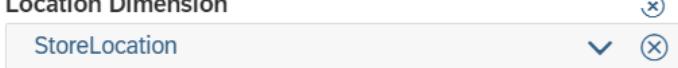
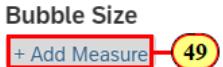
Explanation	Screenshot
28. Click OK	 <p>Order Delivery Time Density</p> <p>Data Source SAC_SHIPPING_INFO</p> <p>Layer Type Heat Map Layer</p> <p>Location Dimension StoreLocation</p> <p>Heat Map Color Avg Delivery Time</p> <p>Filters Category (1) Actual</p> <p>+ Add Filters</p> <p>OK (highlighted)</p>
<p>⚠️ Quality check! Does your geo map look like this screenshot after applying the heat map layer?</p>	 <p>Geo Map Deep Dive</p> <p>LEGENDS</p> <p>2000km 2000ml</p> <p>Esri, DeLorme, FAO,</p>

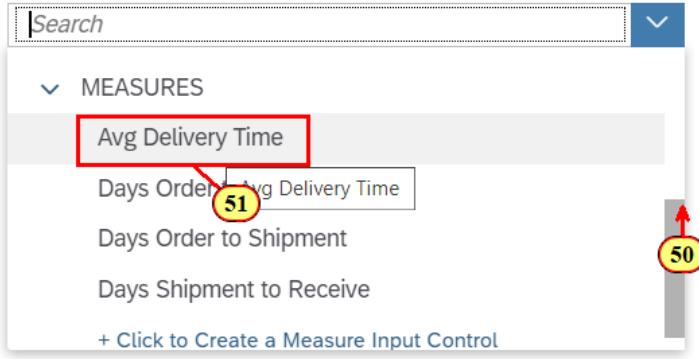
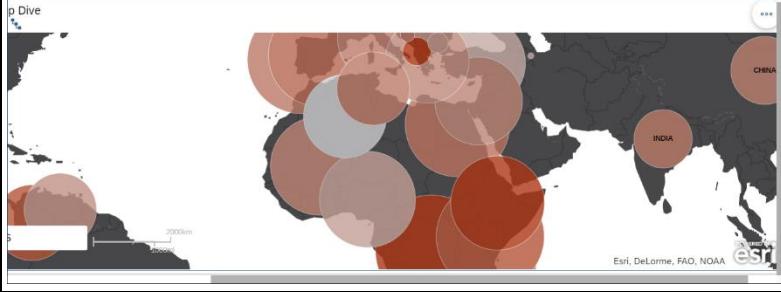
Explanation	Screenshot
<p>👉 Let us hide our choropleth layer on sales revenue for now to simplify our visualization. This action can also be done with the map legend and is available for story viewers as well, which enabled them to focus on the layer they are most interested in.</p> <p>You want to focus on the delivery times in Spain.</p> <p>29. Click Hide Layer for Country Sales Revenue</p>	
<p>⚠️ Quality check! Does your geo map look like this screenshot after hiding the choropleth layer?</p> <p>👉 Our Heat Map layer looks great, but the scale may be too large for our desired purpose. We can change the gradient properties of our heatmap to improve our visualization and make it easier to discover clusters of outlier delivery times.</p>	
<p>30. Click Edit Layer</p>	

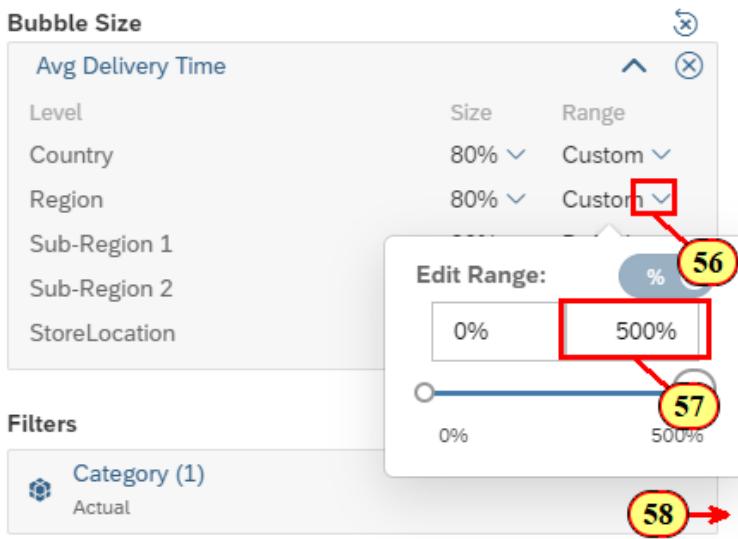
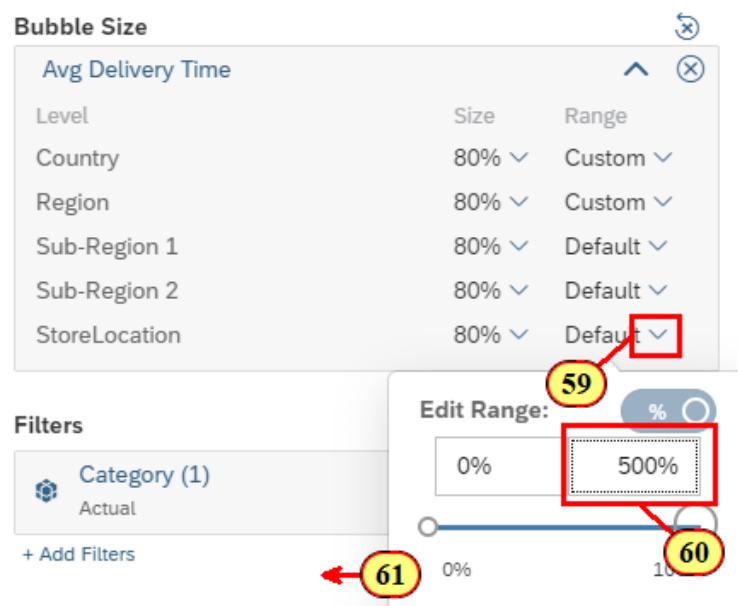
Explanation	Screenshot
<p>👉 Let us reduce the blur radius so it is clearer where our high and low average delivery times are present in Spain. The blur radius determines the size of each data point and how it overlaps with other values. We can improve the definition between points by reducing the blur radius.</p> <p>31. Click Expand on Avg Delivery Time</p> <p>32. Change the Blur Radius from 40% to 20%</p>	
<p>⚠️ Quality check! Does your geo map look like this screenshot after changing the blur radius?</p>	
<p>👉 Let us move our geo map back to look at delivery times in Spain.</p> <p>33. Click into our Geo Map, hold and drag to be looking at Spain</p> <p>34. Zoom into the cluster in Spain by scrolling your mouse wheel up.</p>	
<p>👉 You can change the appearance of the heat map layer as well by zooming in and out of the geo map and focusing on areas of interest. When we zoom into Spain, we notice there are some distinct clusters of higher average delivery times. Let us investigate this further.</p>	

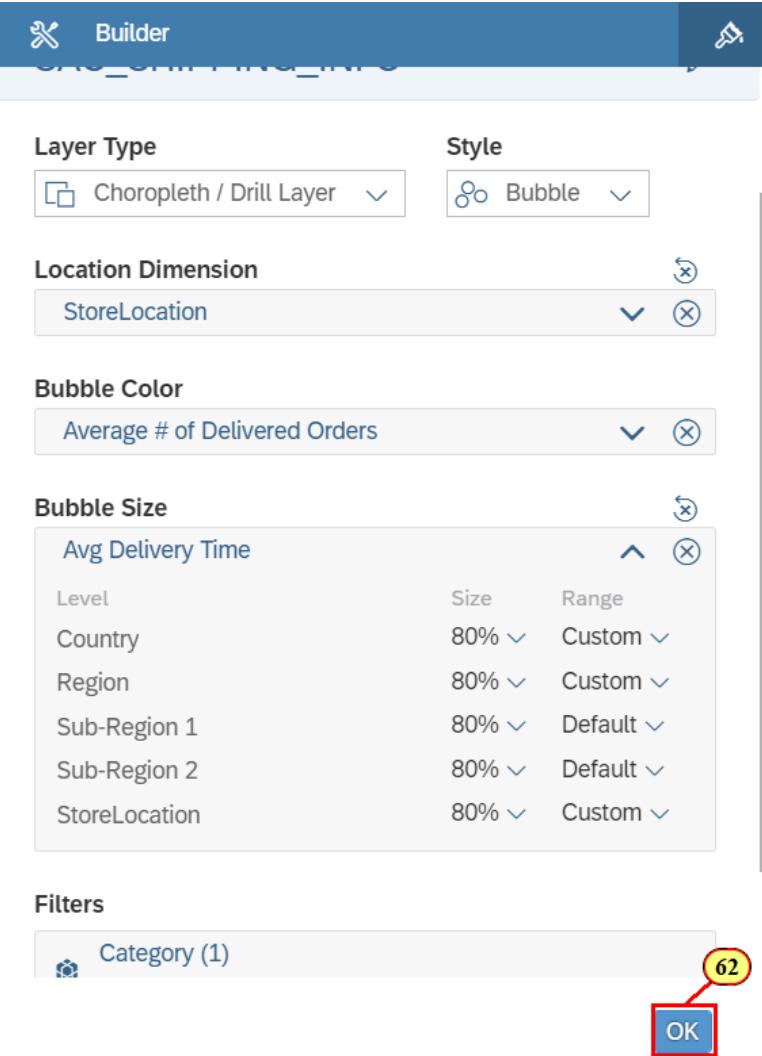
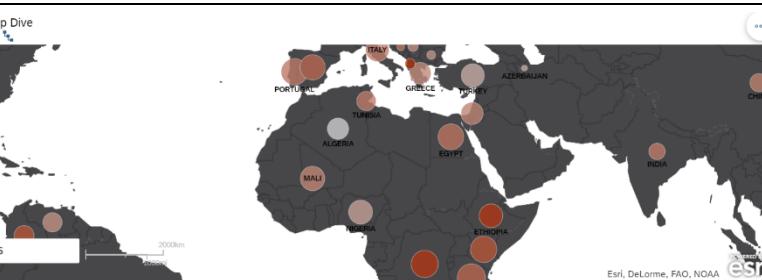
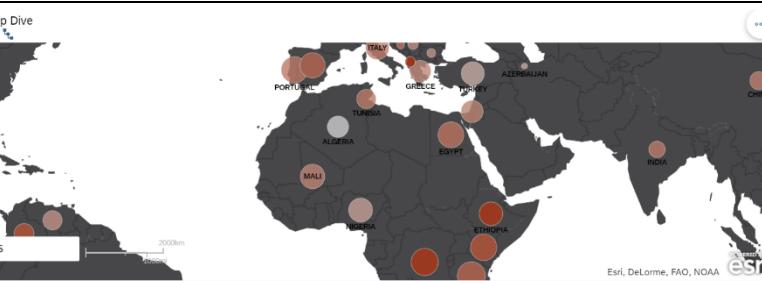
Explanation	Screenshot
<p>👉 Let us create a new layer that looks at our delivery time measures at a store level. First, let us hide our heat map layer.</p> <p>35. Click Hide on Order Delivery Time Density</p> <p>36. Click Add Layer</p>	
<p>👉 We are going to create a layer that shows our delivery measures on a store by store basis to further our analysis.</p> <p>37. Rename the layer to Store Location Analysis</p> <p>38. Click Select Model</p>	
<p>39. Click SAC_SHIPPING_INFO</p>	

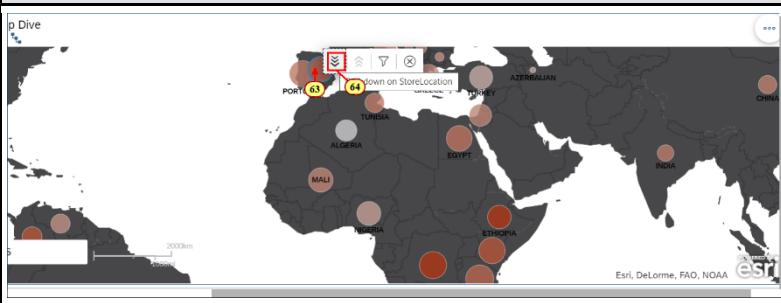
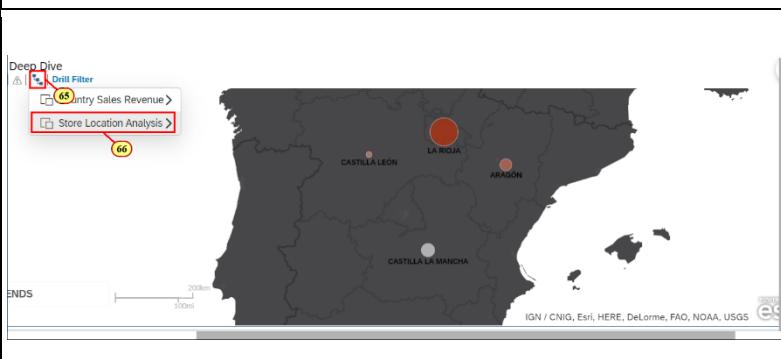
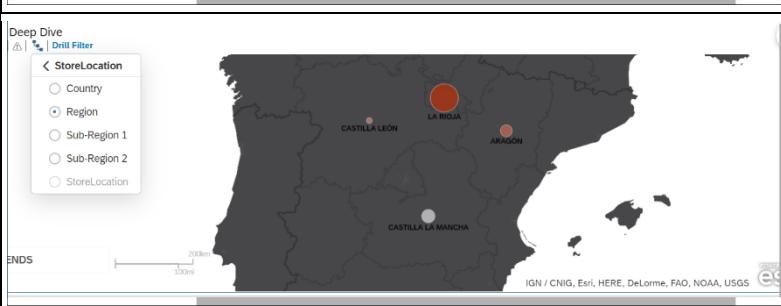
Explanation	Screenshot
40. Click OK	
<p>👉 We want the ability to drill up and down in our layer from a store level to an aggregated country level (i.e. Spain). Let us choose to create a choropleth layer.</p> <p>41. Click Choose Layer Type</p> <p>42. Click Choropleth / Drill Layer</p>	
<p>👉 We can choose to use bubble instead of choropleth in the style of our drill down layer. This will represent our hierarchy members in the form of bubbles on the geo map. Since we want to look at individual stores, this is preferred!</p> <p>43. Click Choose Style</p> <p>44. Click Bubble</p>	
45. Click Add Location Dimension	

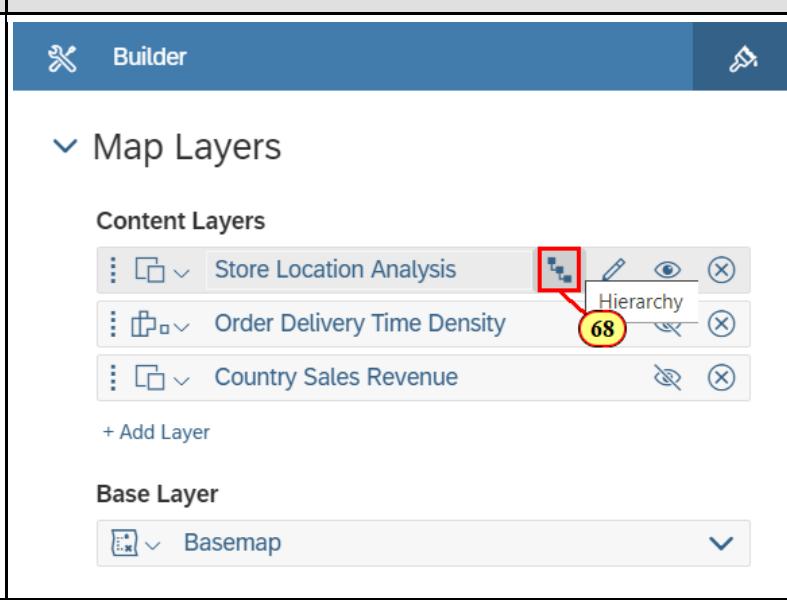
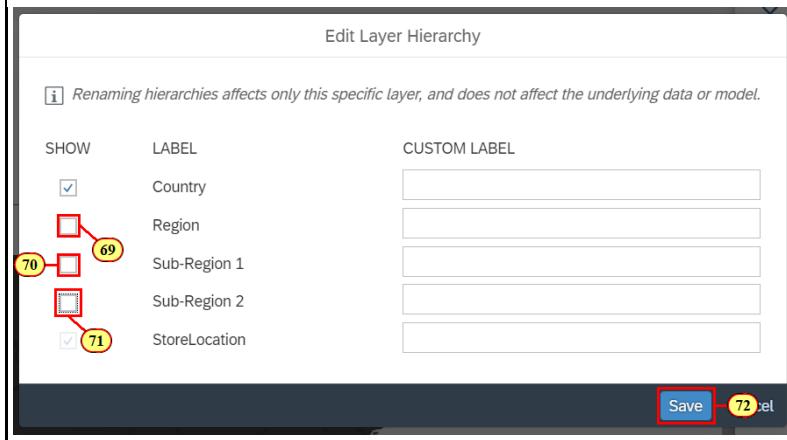
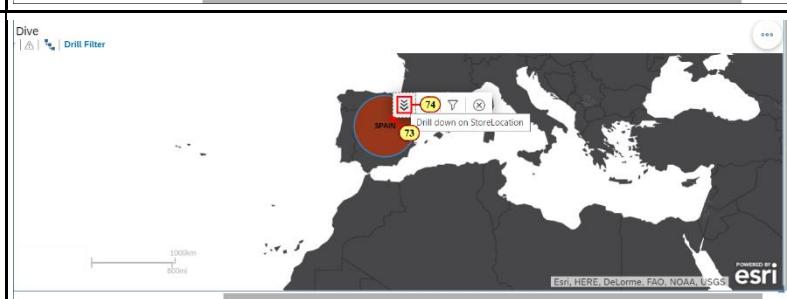
Explanation	Screenshot
46. Click StoreLocation	<p>Location Dimension</p> 
47. Click Add Measure/Dimension	<p>Location Dimension</p> 
<p>👉 Let us add additional measures into our analysis. We can choose to color code our bubbles with the Average # of Delivered Orders to see if this measure is related to our delivery times.</p> <p>48. Click Average # of Delivered Orders</p>	<p>Location Dimension</p> 
49. Click Add Measure	<p>Layer Type</p>  <p>Location Dimension</p>  <p>Bubble Color</p>  <p>Bubble Size</p> 

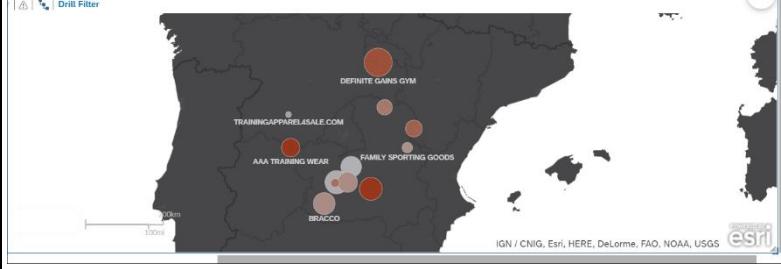
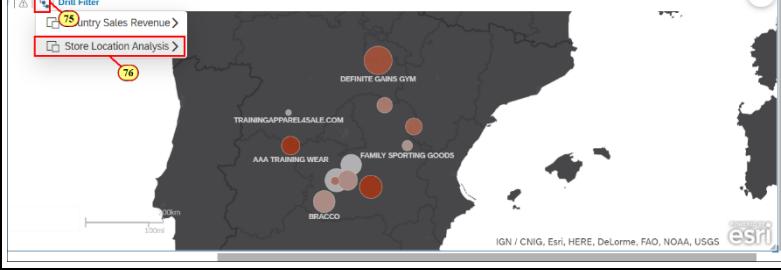
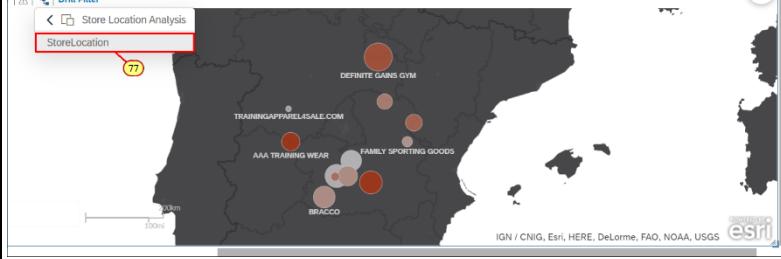
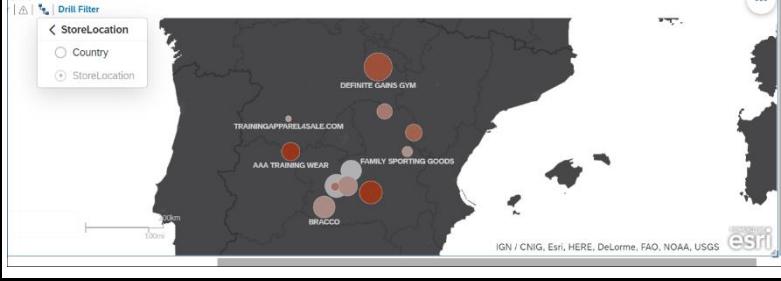
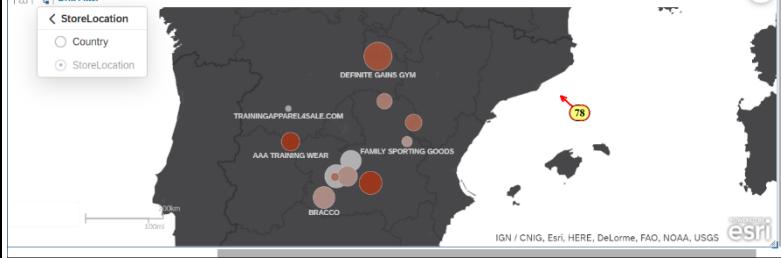
Explanation	Screenshot																		
<p>👉 We are choosing average delivery time as our bubble size, so it is easy to pinpoint which stores are outliers in our modeled data.</p> <p>50. Scroll</p> <p>51. Click Avg Delivery Time</p>	<p>Bubble Size</p> 																		
<p>⚠️ Quality check! Does your geo map look like this screenshot after adding the new choropleth layer?</p>																			
<p>👉 Based on our current geo map, the sizing of our bubbles does not suit our analysis of delivery times. We can customize how our measure is translated into bubble size to improve our visualization.</p> <p>52. Click Expand on Avg Delivery Time</p> <p>👉 Changing the range for our bubbles will help us identify outliers in our geo map based on our measure, Avg Delivery Time. Let us change these ranges for the hierarchy levels we are interested in: Country, Region, and StoreLocation.</p> <p>53. Expand Range for Country</p> <p>54. Change upper range from 100% to 500%</p> <p>55. Click outside the pop-up.</p>	<p>Bubble Color</p> <p>Average # of Delivered Orders</p> <p>Bubble Size</p> <p>Avg Delivery Time</p> <table border="1"> <tr> <td>Level</td> <td>Size</td> <td>Range</td> </tr> <tr> <td>Country</td> <td>80%</td> <td>Custom</td> </tr> <tr> <td>Region</td> <td colspan="2">Edit Range:</td> </tr> <tr> <td>Sub-Region 1</td> <td>0%</td> <td>500%</td> </tr> <tr> <td>Sub-Region 2</td> <td colspan="2">%</td> </tr> <tr> <td>StoreLocation</td> <td>0%</td> <td>500%</td> </tr> </table> <p>Filters</p> <p>Yellow circles labeled 52 through 55 point to various controls: the 'Range' dropdown, the 'Edit Range' input field, the '500%' value, and the '500%' value again.</p>	Level	Size	Range	Country	80%	Custom	Region	Edit Range:		Sub-Region 1	0%	500%	Sub-Region 2	%		StoreLocation	0%	500%
Level	Size	Range																	
Country	80%	Custom																	
Region	Edit Range:																		
Sub-Region 1	0%	500%																	
Sub-Region 2	%																		
StoreLocation	0%	500%																	

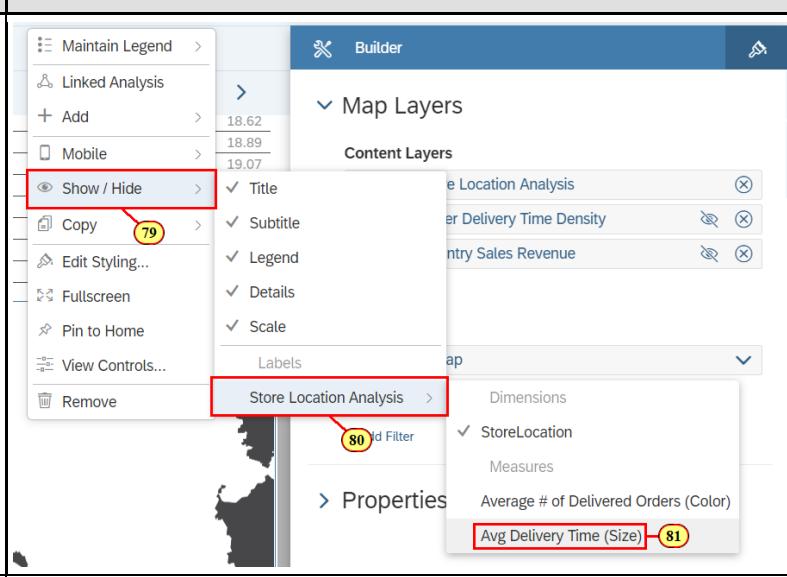
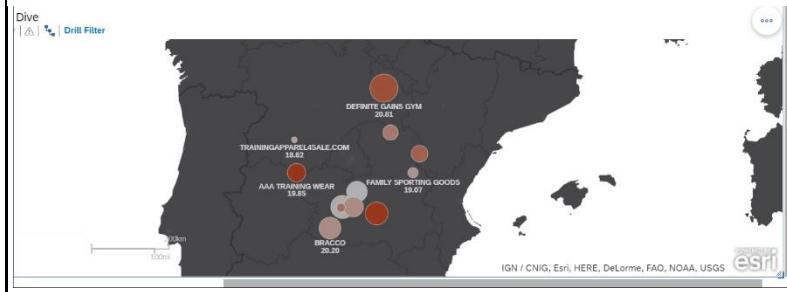
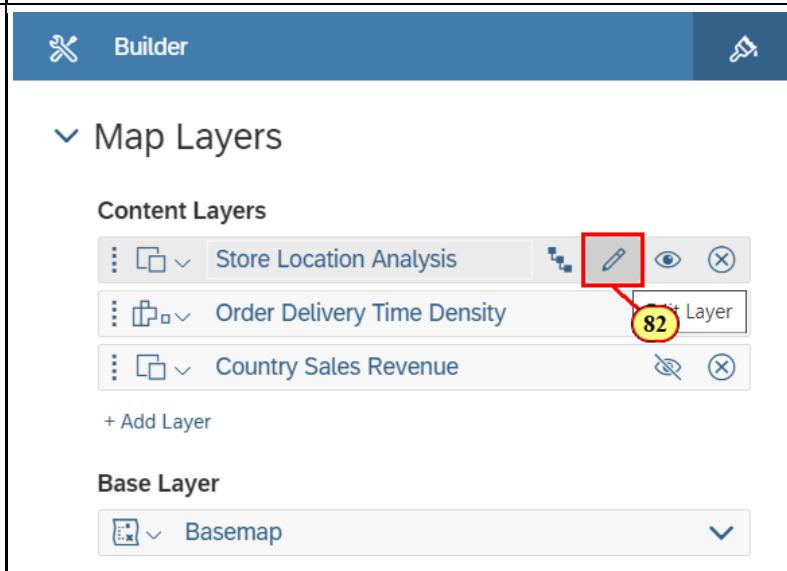
Explanation	Screenshot
<p>56. Expand Range for Region</p> <p>57. Change upper range from 100% to 500%</p> <p>58. Click outside the pop-up.</p>	
<p>59. Expand Range for StoreLocation</p> <p>60. Change upper range from 100% to 500%</p> <p>61. Click outside the pop-up.</p>	

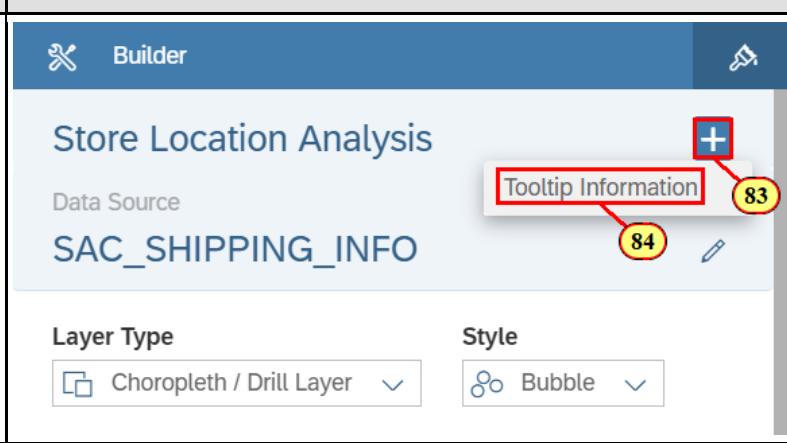
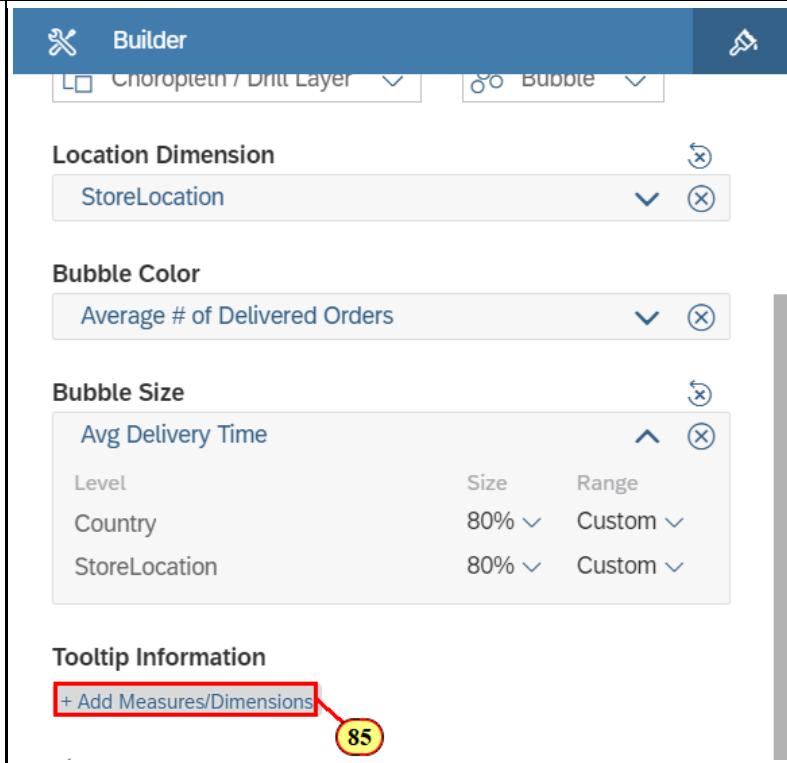
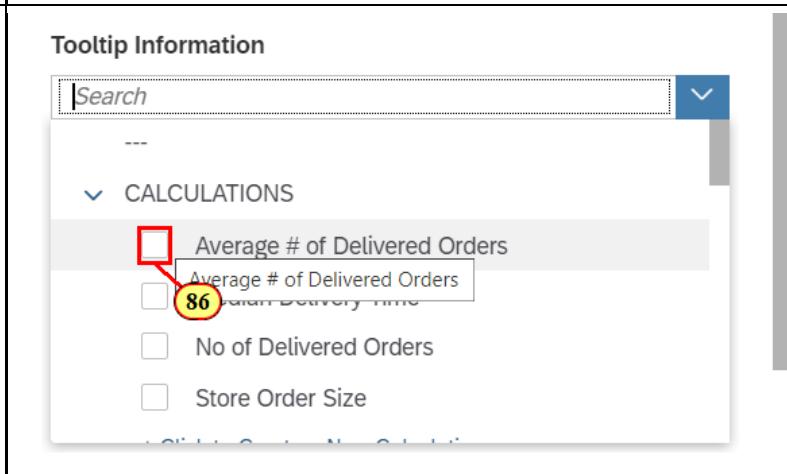
Explanation	Screenshot
62. Click OK	 <p>The screenshot shows the 'Builder' interface for creating a geo map. Under 'Layer Type', it's set to 'Choropleth / Drill Layer' and 'Style' is 'Bubble'. In the 'Location Dimension' section, 'StoreLocation' is selected. The 'Bubble Color' is set to 'Average # of Delivered Orders'. The 'Bubble Size' section is expanded, showing 'Avg Delivery Time' as the size variable across five hierarchy levels: Country, Region, Sub-Region 1, Sub-Region 2, and StoreLocation, all set to 80% of the custom range. Below this is a 'Filters' section with a 'Category (1)' dropdown. The 'OK' button at the bottom right is highlighted with a red box and circled with a yellow '62'.</p>
<p>⚠️ Quality check! Does our geo map look like this screenshot after Bubble Size changes? It is now much easier to differentiate the hierarchy level members on our geo map.</p>	 <p>This screenshot shows a world map where the size of the bubbles represents the average delivery time. The map clearly distinguishes between different geographical regions based on the bubble size, making it easier to compare delivery times across countries and continents.</p>
<p>⚠️ Quality check! Does our geo map look like this screenshot after Bubble Size changes? It is now much easier to differentiate the hierarchy level members on our geo map.</p>	 <p>This screenshot shows a world map with bubble sizes representing delivery times, similar to the one above. The visual representation of hierarchy levels through bubble size is consistent with the configuration shown in the builder interface.</p>

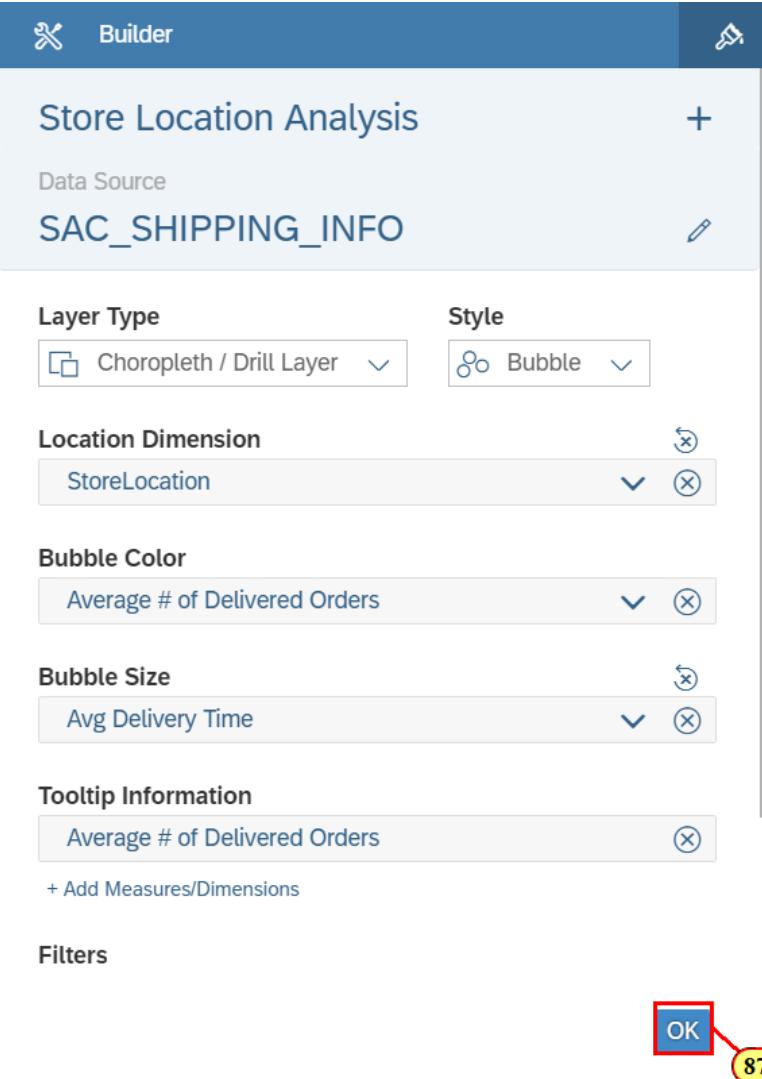
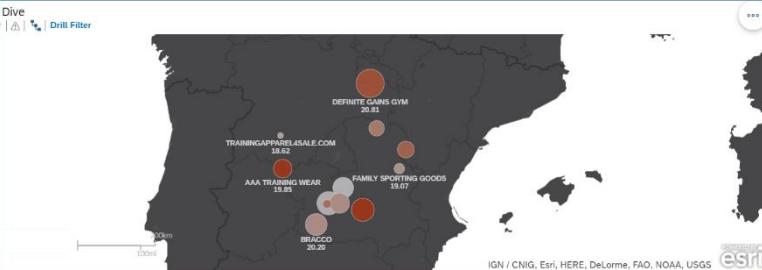
Explanation	Screenshot
<p>👉 Let us drill down into our choropleth layer and examine our data from a different hierarchy level.</p> <p>63. Click on Spain</p> <p>64. Click Drill Down</p>	
<p>👉 Quality check! Does your geo map look like this screenshot after drilling down?</p> <p>👉 We can see that the La Rioja region in Spain seems to have high average delivery times (with its large bubble) and high numbers of delivered orders. On the other hand, Castilla Leon has very low average delivery times. This is very informative, and we should look at this layer on an individual store level.</p>	
<p>👉 Before we drill down again, let us check to see how our hierarchy is defined.</p> <p>65. Click Navigate Up/Down the Hierarchy</p> <p>👉 Let us choose the hierarchy for the current map layer we are looking at.</p> <p>66. Click Store Location Analysis</p>	
<p>67. Click StoreLocation</p>	
<p>👉 As we can see, there are 2 additional hierarchy layers, Sub-Region 1 and Sub-Region 2, before we reach our desired StoreLocation level. Let us simplify our hierarchy to two levels, Country and StoreLocation, for efficiency purposes</p>	

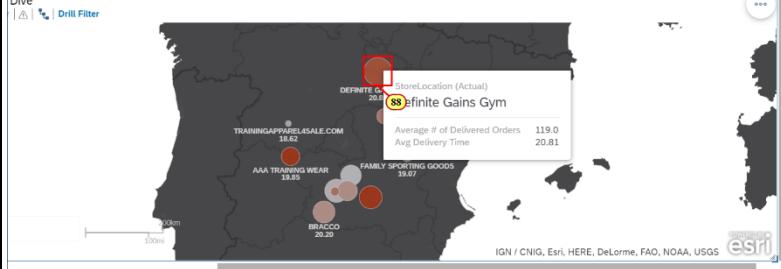
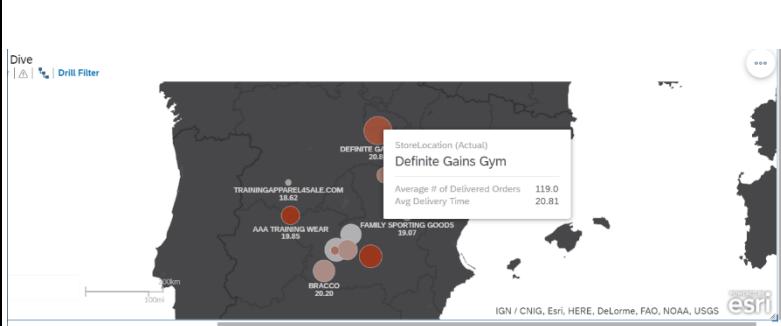
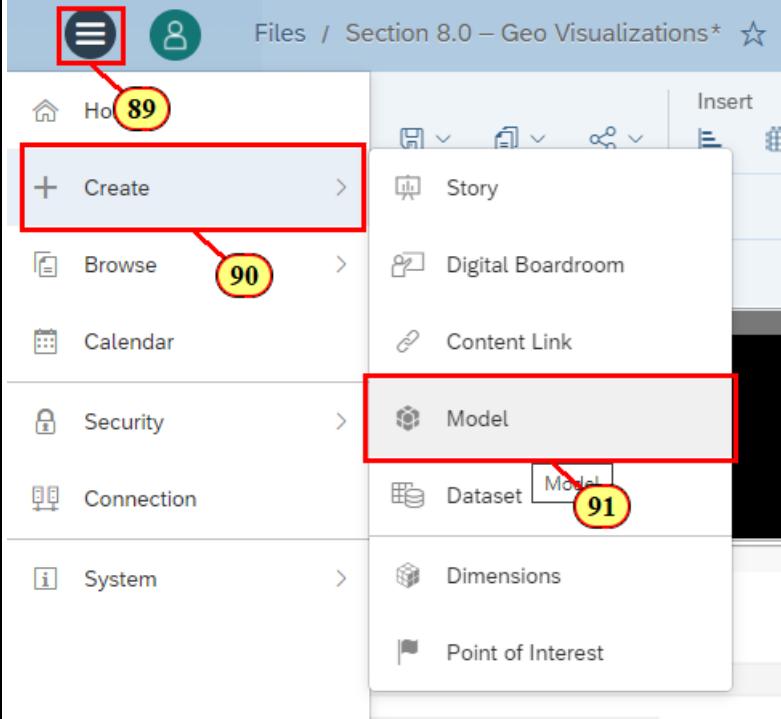
Explanation	Screenshot
<p>👉 We can customize which hierarchy levels are drillable in our choropleth layer. This is a performance best practice tip! Rendering additional hierarchy levels that we are not interested in is both time and resource intensive.</p> <p>68. Click the Hierarchy option for Store Location Analysis</p>	
<p>69. Uncheck Show Region 70. Uncheck Show Sub-Region 1 71. Uncheck Show Sub-Region 2 72. Click Save</p>	
<p>⚠️ Quality check! Does your geo map look like this screenshot? Now, that we have changed the hierarchies, our geo map has reset to the country hierarchy level as the primary level.</p>	
<p>👉 Let us try drilling into Spain and see if we reach our desired hierarchy level.</p> <p>73. Click on Spain 74. Click Drill Down</p>	

Explanation	Screenshot
<p> Quality check! Does your geo map look like this screenshot after drilling down on Spain?</p>	
<p> Let us double check to see if our geo map only displays these two hierarchy levels</p> <p>75. Click Navigate Up/Down the Hierarchy</p> <p>76. Click Store Location Analysis</p>	
<p>77. Click StoreLocation</p>	
<p> As we can see our hierarchy levels for this layer are properly defined. Let us look at the insights on our StoreLocation hierarchy. Definite Gains Gym seems to be an outlier in high delivery times from the La Rioja region and trainingapparel4sale.com is an outlier in low delivery times from the Castilla Leon region.</p>	
<p> Let us display Avg Delivery Time values in our geo map to confirm our observations.</p> <p>78. Right click on the geo map to open the Context Menu</p>	

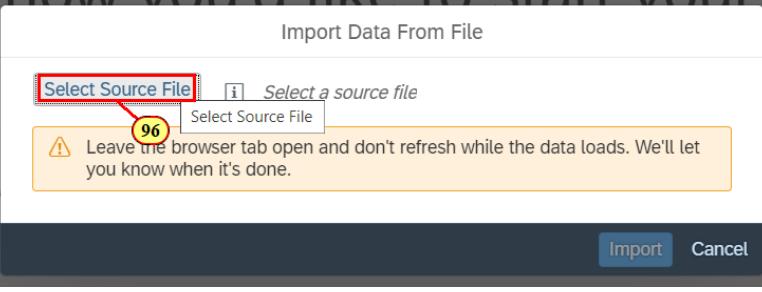
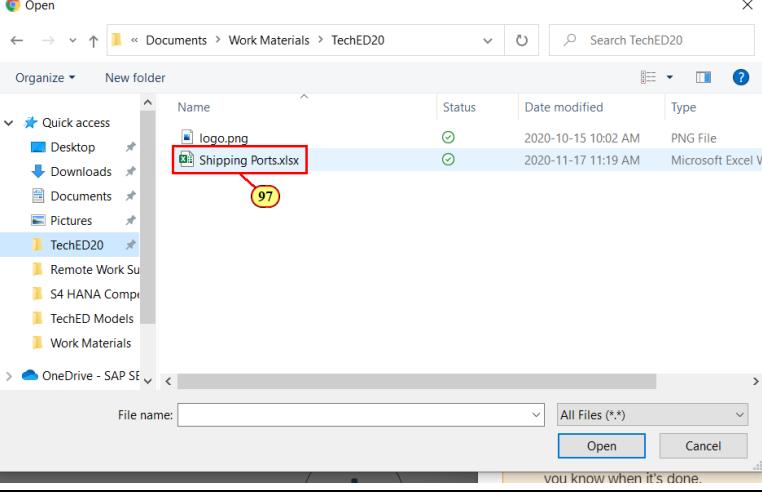
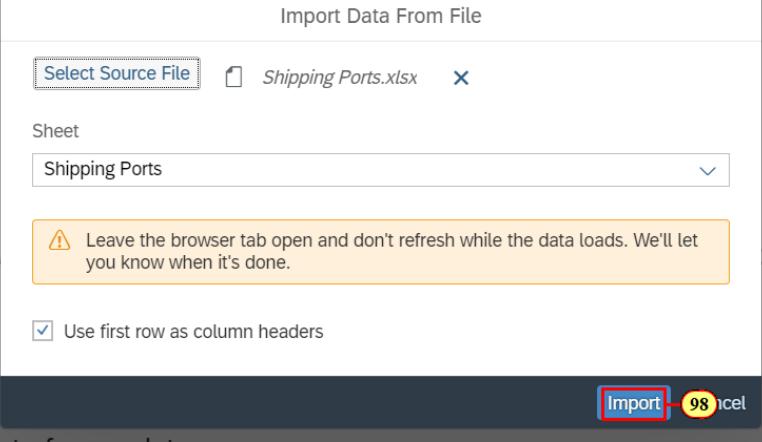
Explanation	Screenshot
<p>79. Hover over Show/Hide</p> <p>80. Hover over Store Location Analysis</p> <p>81. Click Avg Delivery Time (Size)</p>	
<p>⚠️ Quality check! Does your geo map look like this screenshot? We can see from the labels that both stores, Definite Gains Gym and trainingapparel4sale.com, have outlier average delivery times.</p>	
<p>ⓘ We can also display measure values in interactions with the geo map.</p> <p>82. Click Edit Layer for Store Location Analysis</p>	

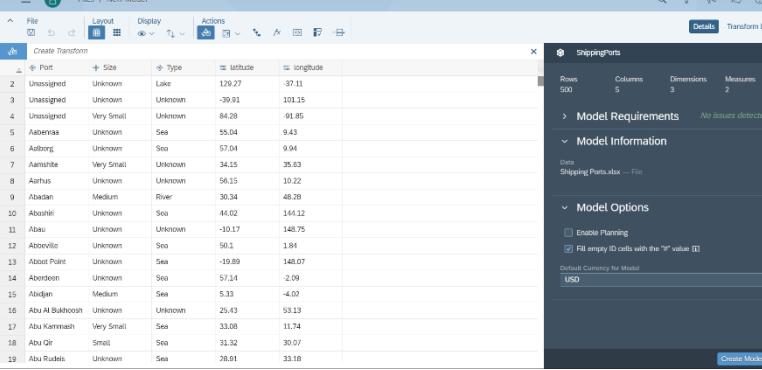
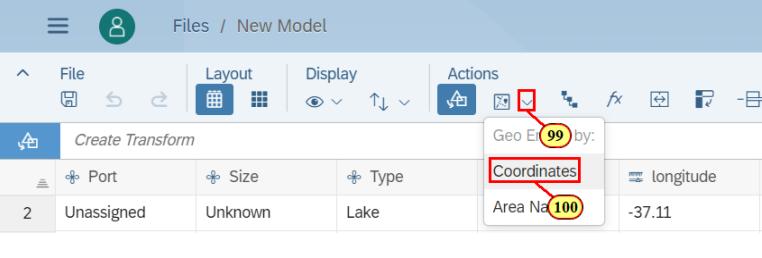
Explanation	Screenshot
<p>👉 Let us add a tooltip for our Average # of Delivered Orders measure.</p> <p>83. Click Add Tooltip</p> <p>84. Click Tooltip Information</p>	
<p>85. Click Add Measures/Dimensions under Tooltip Information</p>	
<p>86. Click Average # of Delivered Orders</p>	

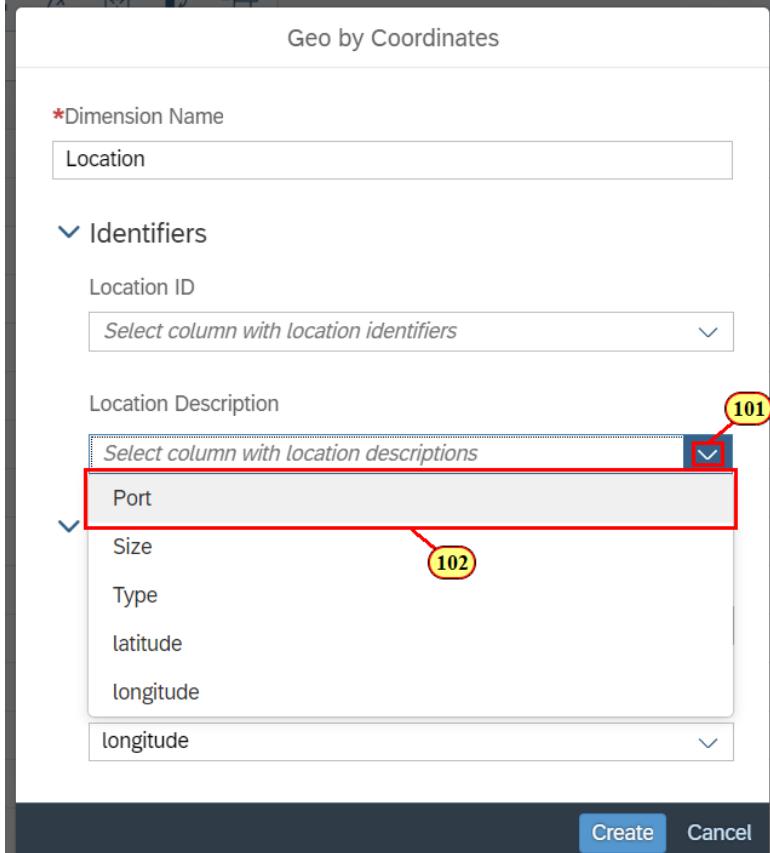
Explanation	Screenshot
87. Click OK	
<p>⚠️ Quality check! Does your geo map look like this screenshot?</p>	

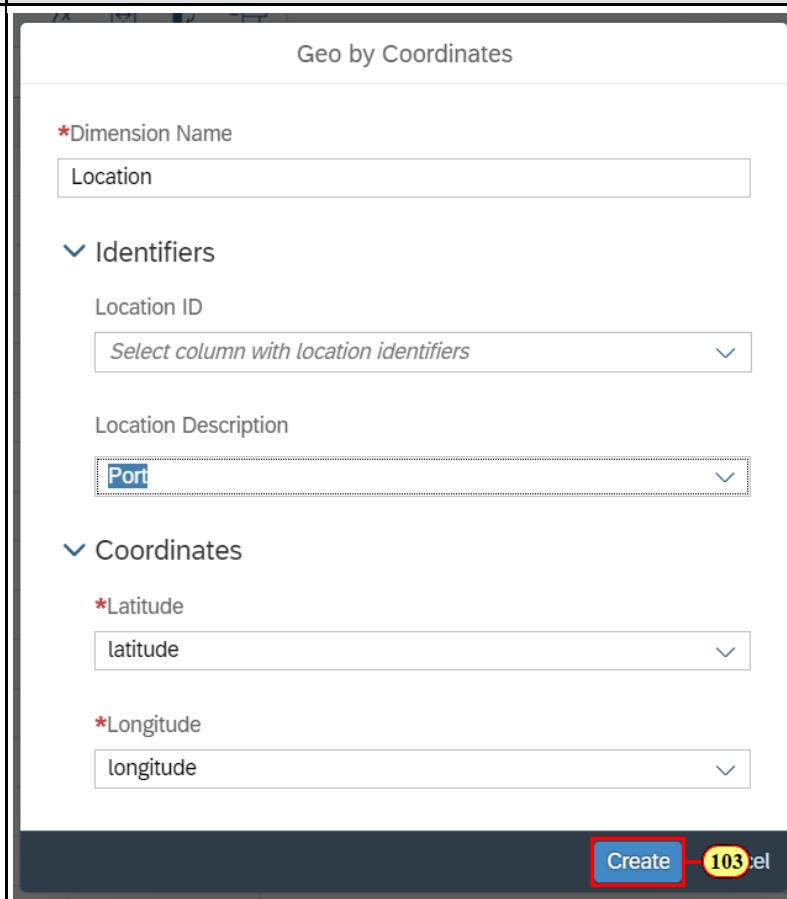
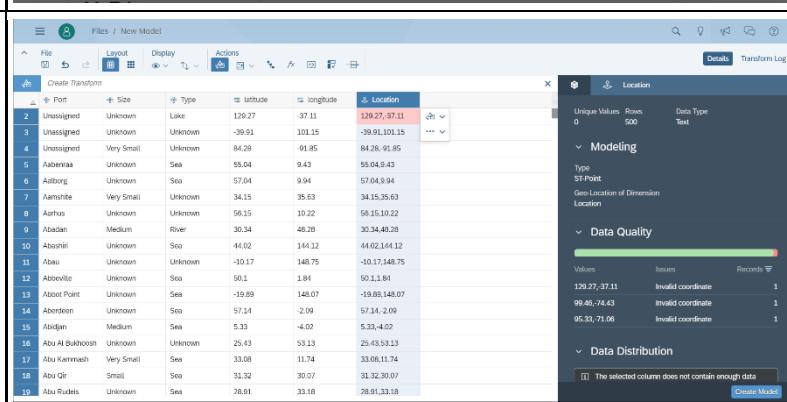
Explanation	Screenshot
<p>👉 Let us see what the tooltip looks like when we hover over a bubble.</p> <p>88. Hover over Definite Gains Gym</p>	
<p>👉 We want to add a new layer for analysis which will require some data preparation.</p> <p>💡 In this next part of the Geo Visualization deep dive we will look at how to create a geo-enriched model. We want to add a geo-enriched model for Shipping Port locations that will be used as the next layer in our geo map analysis.</p> <p>Please save your story by pressing Ctrl + S on your keyboard.</p>	
<p>89. Click Main menu</p> <p>90. Click Create</p> <p>91. Click Model</p>	

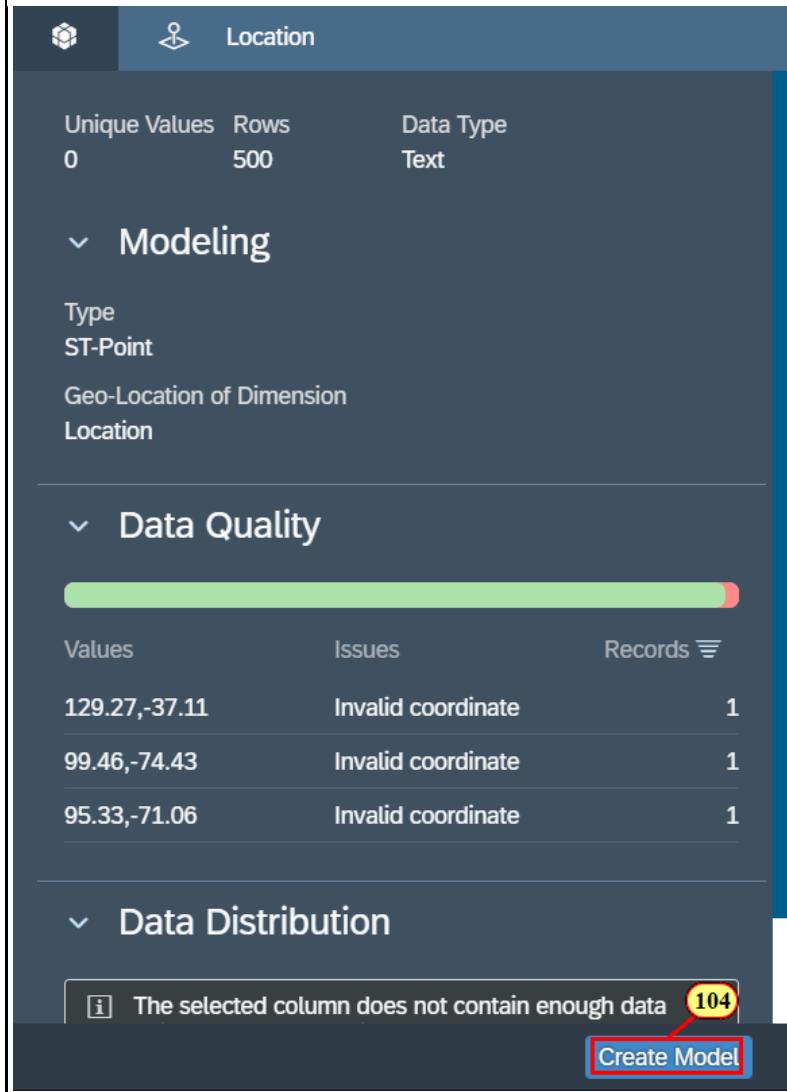
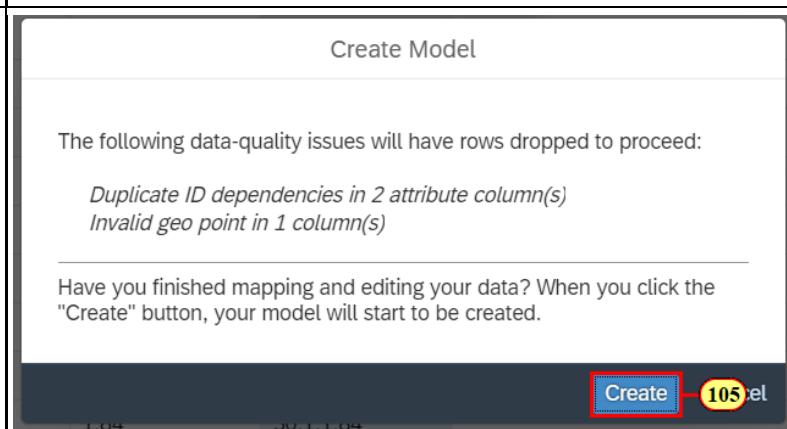
Explanation	Screenshot
<p>👉 We want to start our model based on the Shipping Ports Excel file, which is located in GitHub.</p> <p>92. Click Import a file from your computer</p>	
<p>👉 To access the Shipping Ports file, please navigate to our ANA161 GitHub repository. You can access this at https://github.com/SAP-samples/teched2020-ANA161</p>	
<p>93. Click on the exercises folder.</p>	
<p>94. Click on Shipping Ports.xlsx</p>	

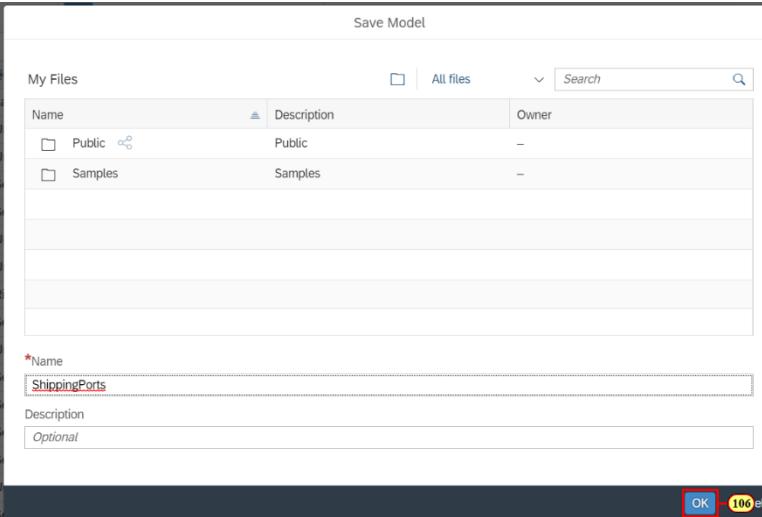
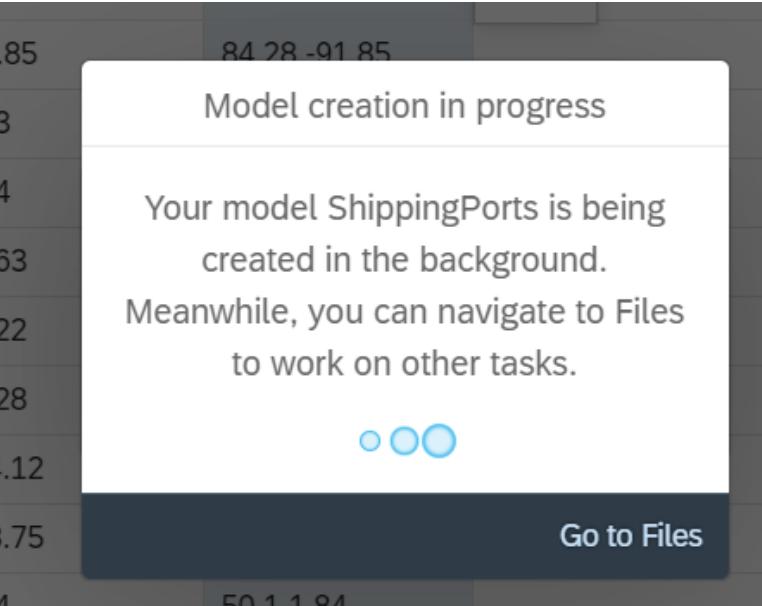
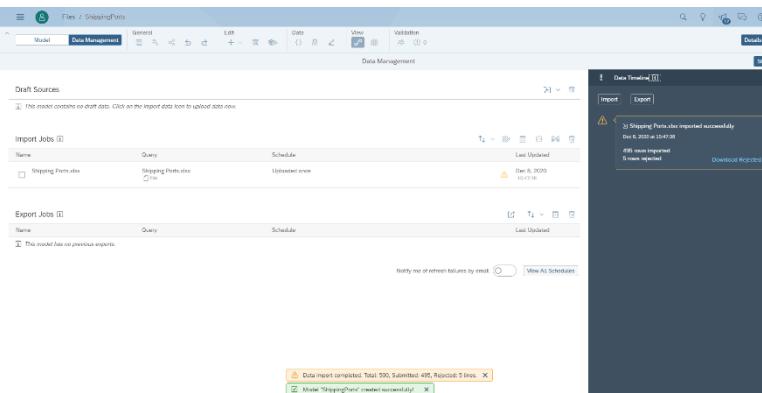
Explanation	Screenshot
<p>👉 Please download the Excel file onto your computer so you can import it into SAP Analytics Cloud as an acquired model.</p> <p>95. Click Download</p>	
<p>👉 Navigate back to SAP Analytics Cloud</p> <p>96. Click Select Source File</p>	
<p>💡 Once the Shipping Ports.xlsx is downloaded, open the Downloads folder on your machine to select the file.</p> <p>97. Double click on Shipping Ports.xlsx</p>	
<p>98. Click Import</p>	

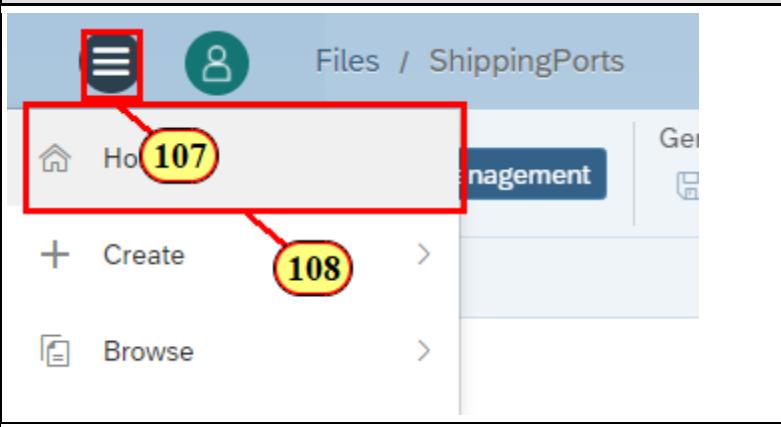
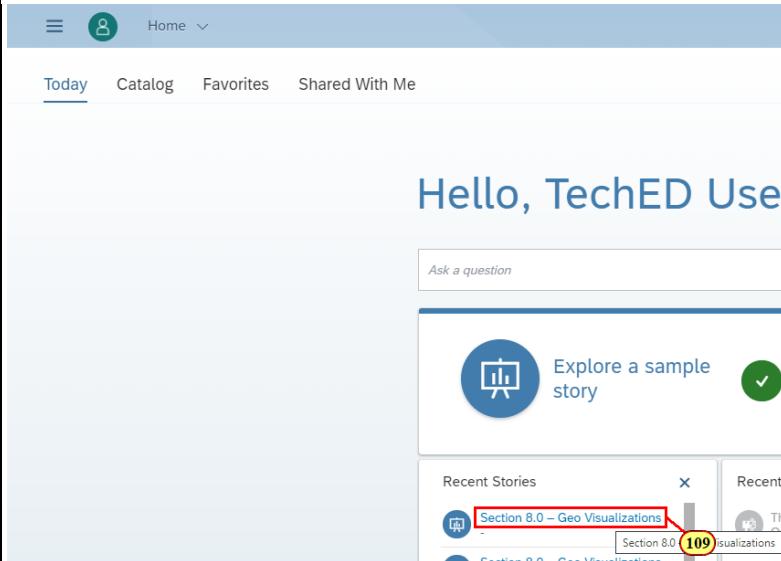
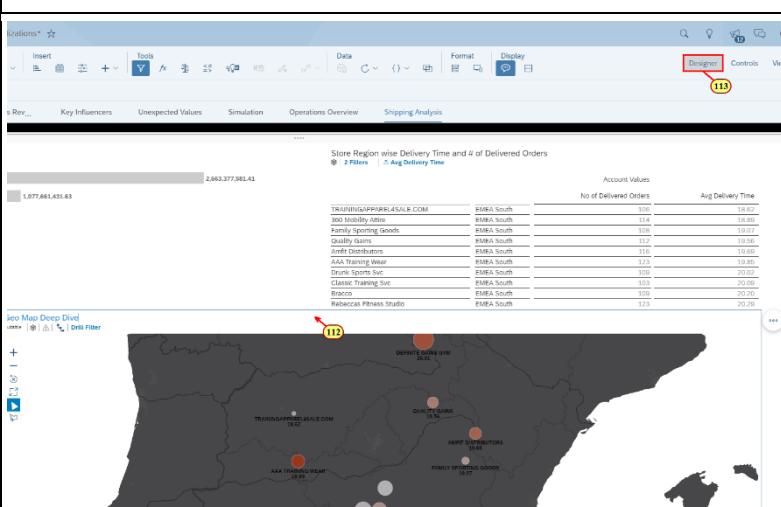
Explanation	Screenshot
<p> Quality Check! Does your imported file bring you to a model creation screen like this screenshot?</p> <p> Welcome to Data Modeling in SAP Analytics Cloud!</p> <p>In this screen, users can assign dimensions and measures, build hierarchies in their data, apply transformations on columns of data, check for and replace wrong data entries, and geo enrich their data. If you are importing a large data set, this screen will show a subset of your data, so it is easier to work with. SAP Analytics Cloud will apply all your requested changes to your entire data set when creating the model.</p>	
<p> Let us geo enrich our model so it can be used in our geo visualization. Model creators can choose to geo enrich their data by coordinates (latitude and longitude) or by location name (country and region name). Country data can be imported by ISO3 and ISO2 codes or by English names.</p> <p>99. Click Geo Enrichment</p> <p>100. Click Coordinates</p>	

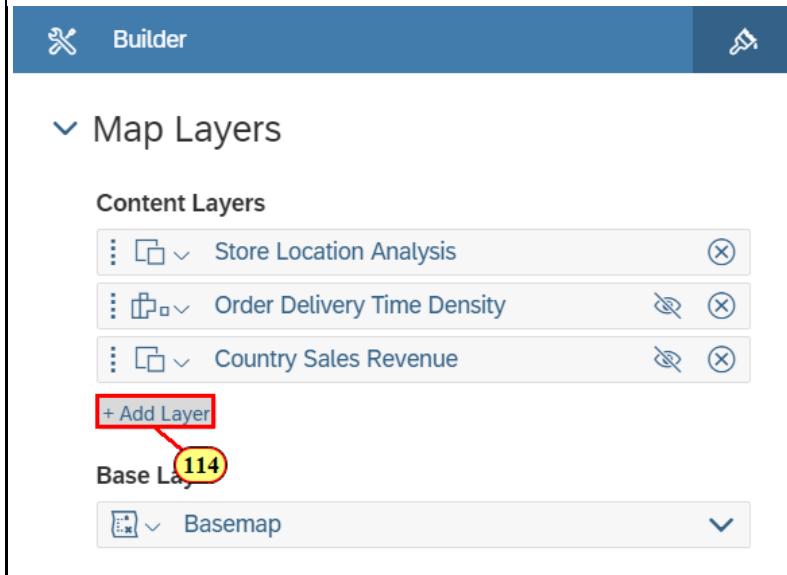
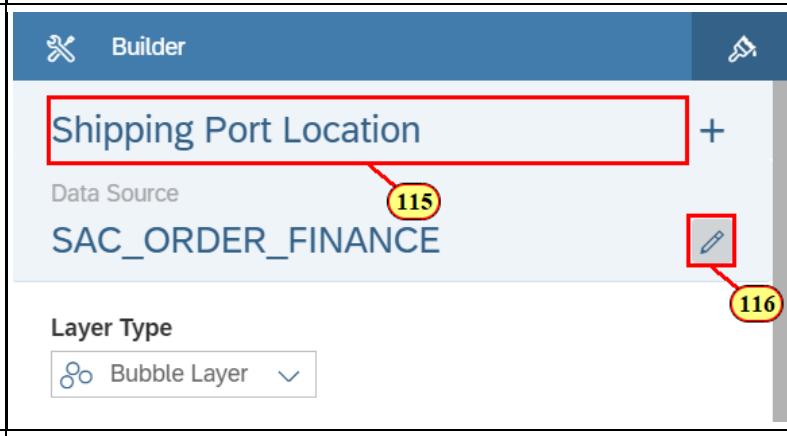
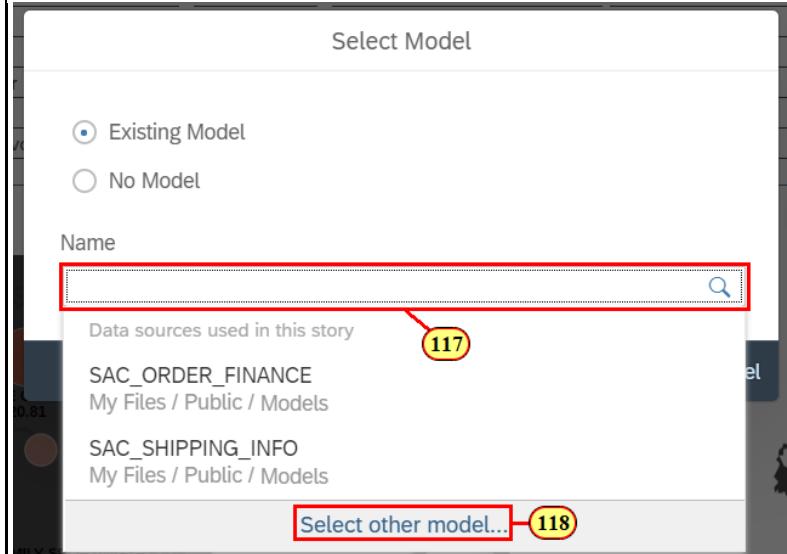
Explanation	Screenshot
<p>Let us choose an Identifier for our geo enriched Location dimension. This will be the label used for each node in a geo map layer. Let us use the Shipping Port names as the description.</p> <p>101. Click Location Description 102. Click Port</p>	 <p>Geo by Coordinates</p> <p>*Dimension Name Location</p> <p>Identifiers</p> <p>Location ID Select column with location identifiers</p> <p>Location Description Select column with location descriptions</p> <p>Port Size Type latitude longitude</p> <p>longitude</p> <p>Create Cancel</p>

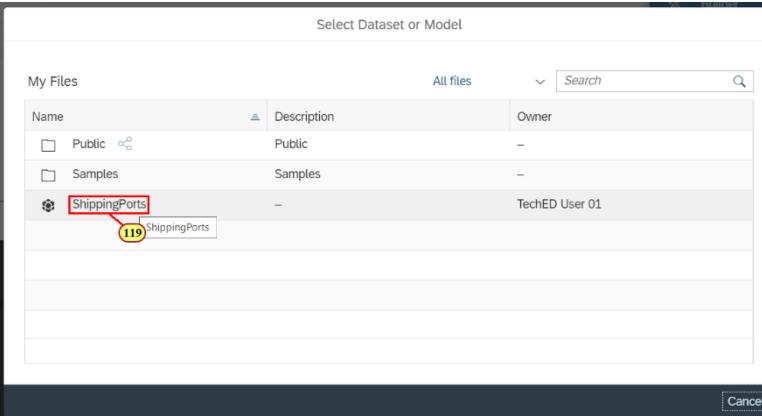
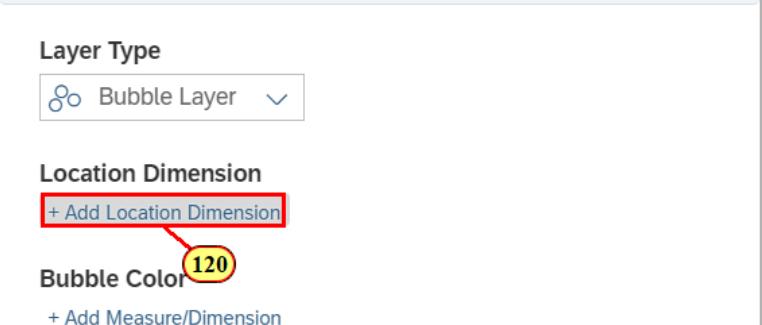
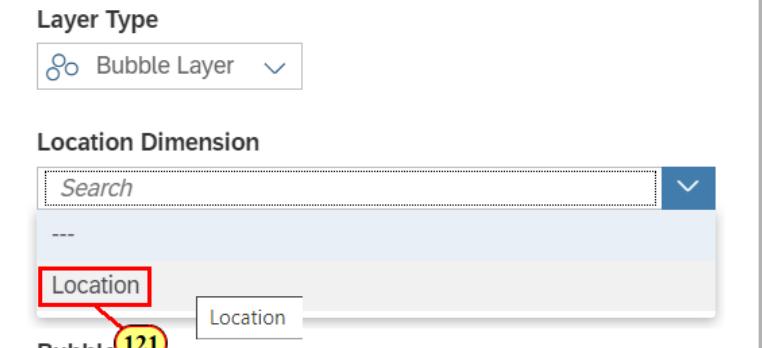
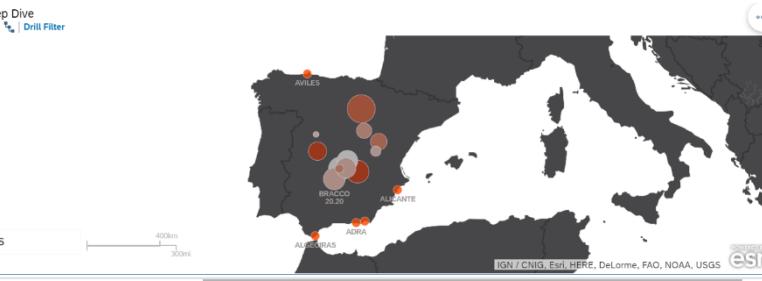
Explanation	Screenshot																																																																																																																																												
<p>103. Click Create</p>	 <p>*Dimension Name Location</p> <p>Identifiers</p> <p>Location ID Select column with location identifiers</p> <p>Location Description Port</p> <p>Coordinates</p> <p>*Latitude latitude</p> <p>*Longitude longitude</p> <p>Create 103</p>																																																																																																																																												
<p>⚠️ Quality check! Does your model creation screen have a new dimension like this Location column in the screenshot?</p>	 <table border="1"> <thead> <tr> <th>File</th> <th>Row</th> <th>Size</th> <th>Type</th> <th>Latitude</th> <th>Longitude</th> <th>Location</th> </tr> </thead> <tbody> <tr><td>1</td><td>Port</td><td>Unknown</td><td>Lake</td><td>129.27</td><td>-37.11</td><td>129.27, -37.11</td></tr> <tr><td>2</td><td>Unassigned</td><td>Unknown</td><td>Unknown</td><td>-39.91</td><td>101.15</td><td>-39.91, 101.15</td></tr> <tr><td>3</td><td>Unassigned</td><td>Very Small</td><td>Unknown</td><td>84.28</td><td>91.95</td><td>84.26, 91.95</td></tr> <tr><td>4</td><td>Unassigned</td><td>Unknown</td><td>Sea</td><td>55.04</td><td>9.43</td><td>55.04, 9.43</td></tr> <tr><td>5</td><td>Aalborg</td><td>Unknown</td><td>Sea</td><td>57.04</td><td>9.94</td><td>57.04, 9.94</td></tr> <tr><td>6</td><td>Aars</td><td>Very Small</td><td>Unknown</td><td>34.15</td><td>35.63</td><td>34.15, 35.63</td></tr> <tr><td>7</td><td>Aarsø</td><td>Unknown</td><td>Unknown</td><td>96.15</td><td>10.22</td><td>96.15, 10.22</td></tr> <tr><td>8</td><td>Aarhus</td><td>Medium</td><td>River</td><td>36.34</td><td>48.20</td><td>36.34, 48.20</td></tr> <tr><td>9</td><td>Abadan</td><td>Unknown</td><td>Sea</td><td>44.02</td><td>14.12</td><td>44.02, 14.12</td></tr> <tr><td>10</td><td>Abschiff</td><td>Unknown</td><td>Sea</td><td>-10.17</td><td>148.75</td><td>-10.17, 148.75</td></tr> <tr><td>11</td><td>Abau</td><td>Unknown</td><td>Unknown</td><td>50.1</td><td>1.84</td><td>50.1, 1.84</td></tr> <tr><td>12</td><td>Abbeville</td><td>Unknown</td><td>Sea</td><td>-19.89</td><td>148.07</td><td>-19.89, 148.07</td></tr> <tr><td>13</td><td>Abbot Point</td><td>Unknown</td><td>Sea</td><td>57.14</td><td>-2.09</td><td>57.14, -2.09</td></tr> <tr><td>14</td><td>Abertem</td><td>Unknown</td><td>Sea</td><td>5.33</td><td>-4.02</td><td>5.33, -4.02</td></tr> <tr><td>15</td><td>Abidjan</td><td>Medium</td><td>Sea</td><td>25.43</td><td>53.13</td><td>25.43, 53.13</td></tr> <tr><td>16</td><td>Abu Al Buhooth</td><td>Unknown</td><td>Unknown</td><td>33.08</td><td>11.74</td><td>33.08, 11.74</td></tr> <tr><td>17</td><td>Abu Karmash</td><td>Very Small</td><td>Sea</td><td>31.32</td><td>30.07</td><td>31.32, 30.07</td></tr> <tr><td>18</td><td>Abu Qir</td><td>Small</td><td>Sea</td><td>28.61</td><td>33.18</td><td>28.61, 33.18</td></tr> <tr><td>19</td><td>Abu Rudis</td><td>Unknown</td><td>Sea</td><td>28.61</td><td>33.18</td><td>28.61, 33.18</td></tr> </tbody> </table> <p>Modeling</p> <p>Data Quality</p> <p>Data Distribution</p>	File	Row	Size	Type	Latitude	Longitude	Location	1	Port	Unknown	Lake	129.27	-37.11	129.27, -37.11	2	Unassigned	Unknown	Unknown	-39.91	101.15	-39.91, 101.15	3	Unassigned	Very Small	Unknown	84.28	91.95	84.26, 91.95	4	Unassigned	Unknown	Sea	55.04	9.43	55.04, 9.43	5	Aalborg	Unknown	Sea	57.04	9.94	57.04, 9.94	6	Aars	Very Small	Unknown	34.15	35.63	34.15, 35.63	7	Aarsø	Unknown	Unknown	96.15	10.22	96.15, 10.22	8	Aarhus	Medium	River	36.34	48.20	36.34, 48.20	9	Abadan	Unknown	Sea	44.02	14.12	44.02, 14.12	10	Abschiff	Unknown	Sea	-10.17	148.75	-10.17, 148.75	11	Abau	Unknown	Unknown	50.1	1.84	50.1, 1.84	12	Abbeville	Unknown	Sea	-19.89	148.07	-19.89, 148.07	13	Abbot Point	Unknown	Sea	57.14	-2.09	57.14, -2.09	14	Abertem	Unknown	Sea	5.33	-4.02	5.33, -4.02	15	Abidjan	Medium	Sea	25.43	53.13	25.43, 53.13	16	Abu Al Buhooth	Unknown	Unknown	33.08	11.74	33.08, 11.74	17	Abu Karmash	Very Small	Sea	31.32	30.07	31.32, 30.07	18	Abu Qir	Small	Sea	28.61	33.18	28.61, 33.18	19	Abu Rudis	Unknown	Sea	28.61	33.18	28.61, 33.18
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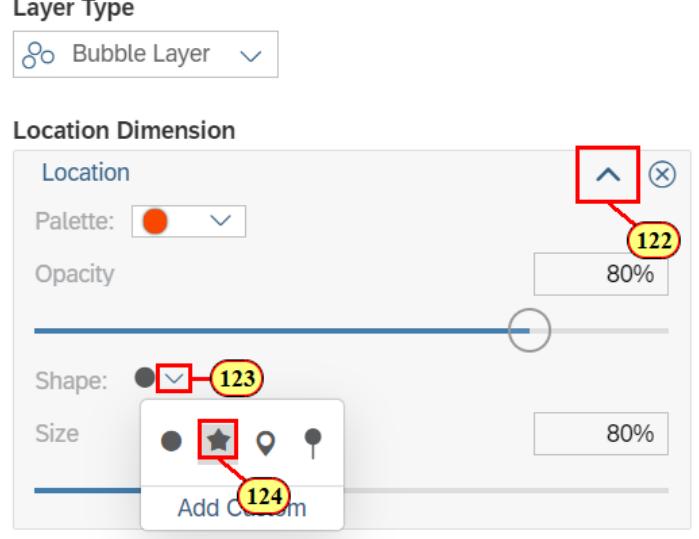
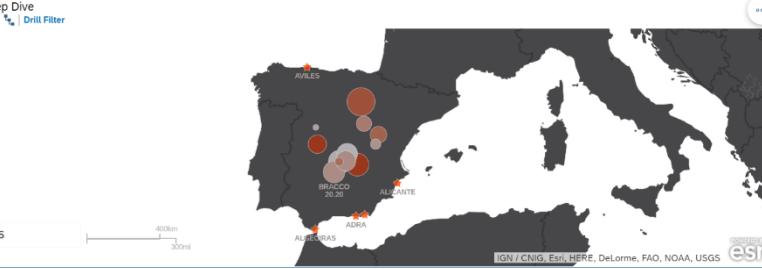
Explanation	Screenshot
<p>Let us now create our model with the geo enriched dimension. You may notice that there are a few invalid data points in our geo enriched dimension due to incorrect longitude and latitude data. SAP Analytics Cloud warns model creators about potential errors in the data. The model can still be created and the rows containing faulty data will be excluded from the model. You can choose to replace these invalid data cells directly in the model creation screen.</p> <p>104. Click Create Model</p>	 <p>The screenshot shows the SAP Analytics Cloud interface. In the top navigation bar, there is a cube icon and a location pin icon followed by the text "Location". Below this, there are three columns: "Unique Values" (0), "Rows" (500), and "Data Type" (Text). A section titled "Modeling" is expanded, showing "Type: ST-Point" and "Geo-Location of Dimension: Location". Another section titled "Data Quality" is expanded, showing a green progress bar. Below the progress bar is a table with three rows, each listing a coordinate pair and an issue: "129.27,-37.11" (Invalid coordinate), "99.46,-74.43" (Invalid coordinate), and "95.33,-71.06" (Invalid coordinate). At the bottom of the screenshot, there is a message: "The selected column does not contain enough data" with a red box around the number "104" and a red box around the "Create Model" button.</p>
<p>105. Click Create</p>	 <p>The screenshot shows the "Create Model" dialog box. It contains a message: "The following data-quality issues will have rows dropped to proceed: Duplicate ID dependencies in 2 attribute column(s) Invalid geo point in 1 column(s)". Below this, there is a message: "Have you finished mapping and editing your data? When you click the 'Create' button, your model will start to be created." At the bottom right of the dialog box is a "Create" button with a red box around it and the number "105" in a yellow circle.</p>

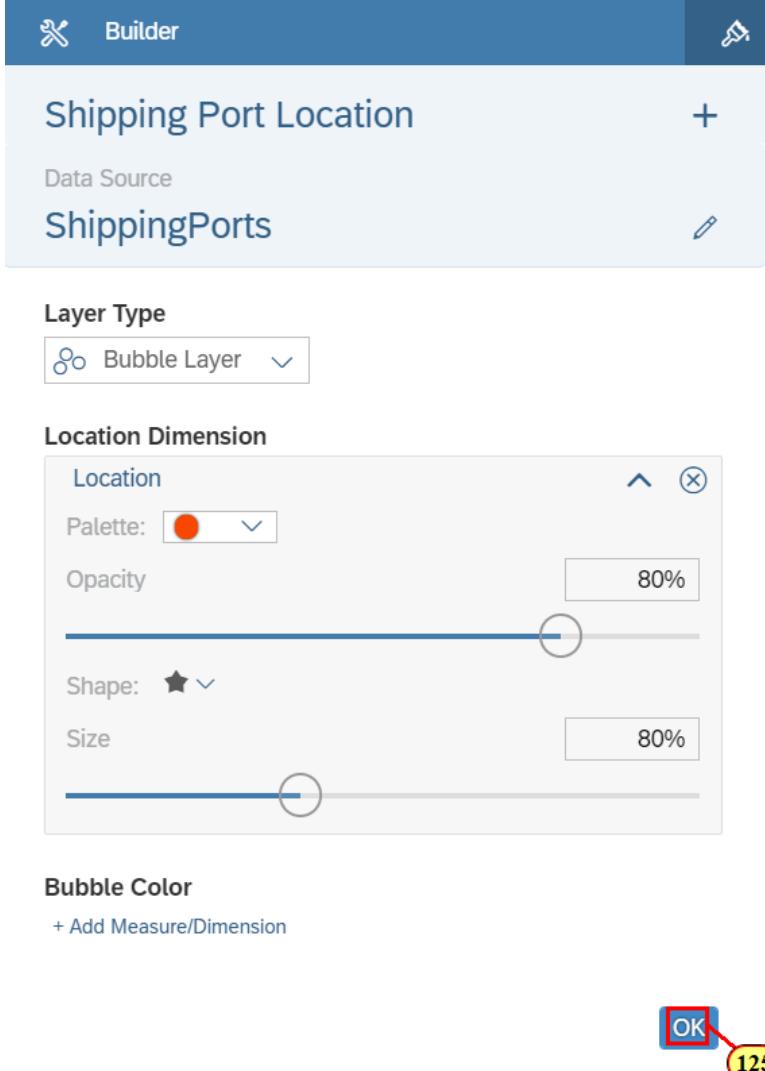
Explanation	Screenshot
<p>👉 Let us name our model ShippingPorts and save it in our My Files directory on the tenant.</p> <p>106. Click OK</p>	
<p>👉 Quality check! Your screen should now display this Model creation in prompt.</p>	
<p>👉 Quality check! Our model creation is successfully complete! Do you see a screen like this screenshot?</p> <p>Note that some of the rows were rejected due to incorrect locations.</p> <p>After this stage, we can navigate back to our Section 8.0 – Geo Visualizations story and continue our analysis with our new ShippingPorts model!</p>	

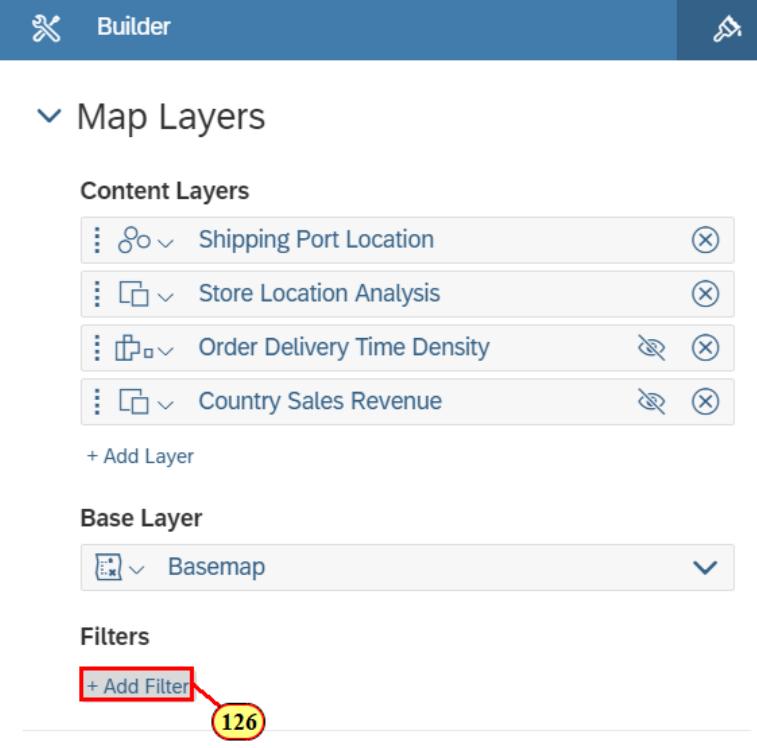
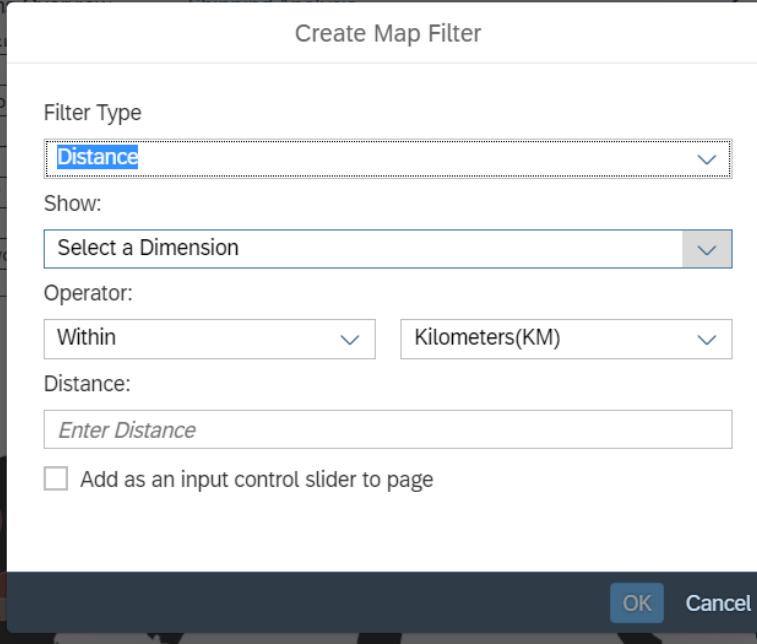
Explanation	Screenshot
<p>Since we just used the Geo story before, we can open it via the recently used stories tiles on the homepage.</p> <p>107. Click Navigation Icon</p> <p>108. Click Home</p>	
<p>109. Select the last story you worked with.</p>	
<p>110. Open Shipping Analysis page</p> <p>111. Click Edit</p>	
<p>112. Select the geo map</p> <p>113. Click Designer</p>	

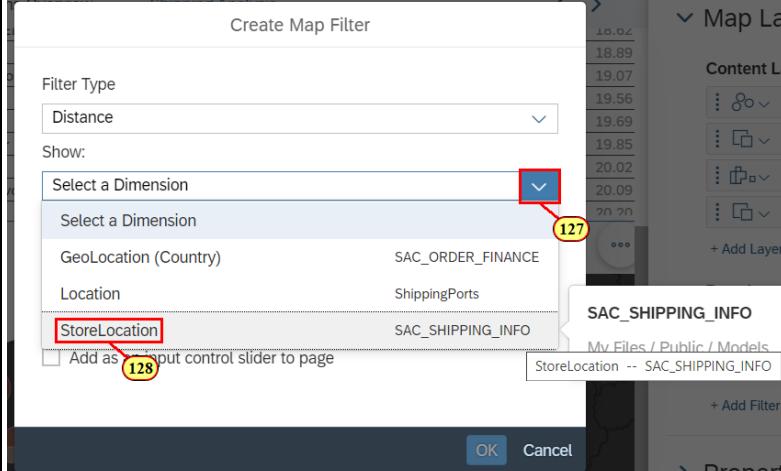
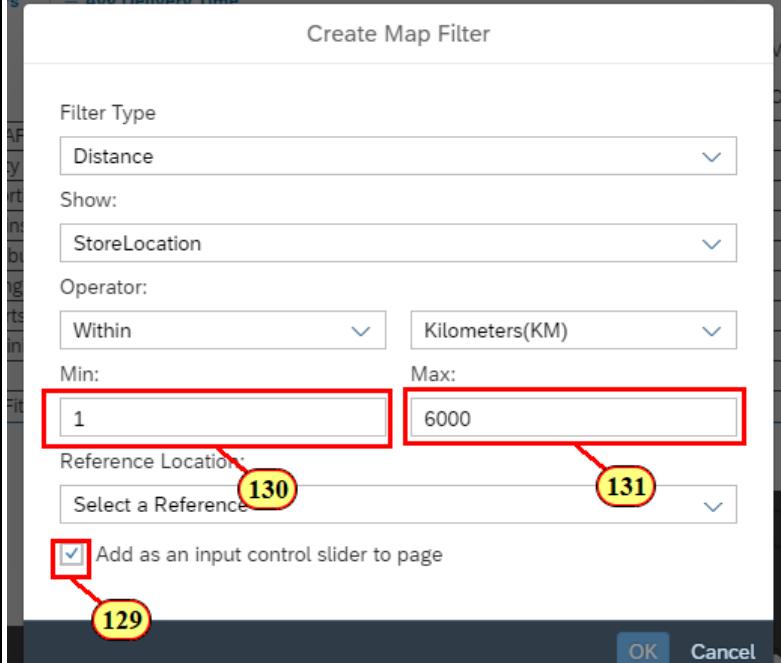
Explanation	Screenshot
<p>Let us add a new layer with our new geo enriched model.</p> <p>114. Click Add Layer</p>	
<p>115. Rename layer to Shipping Port Location</p> <p>116. Click Change Model</p>	
<p> Since our model is new to this story, we will have to select it from our files first.</p> <p>117. Expand Model Name field.</p> <p>118. Click Select other model</p>	

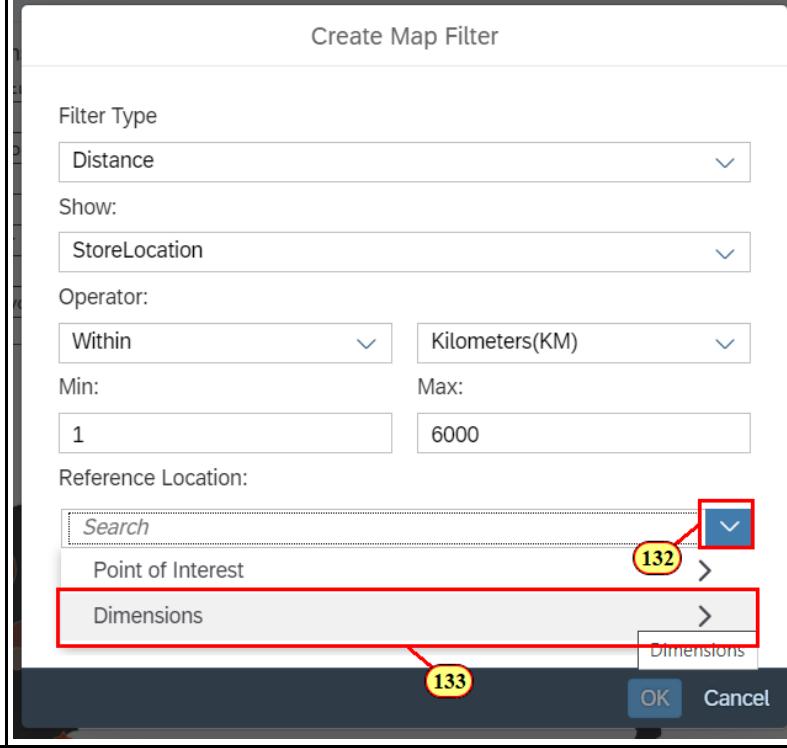
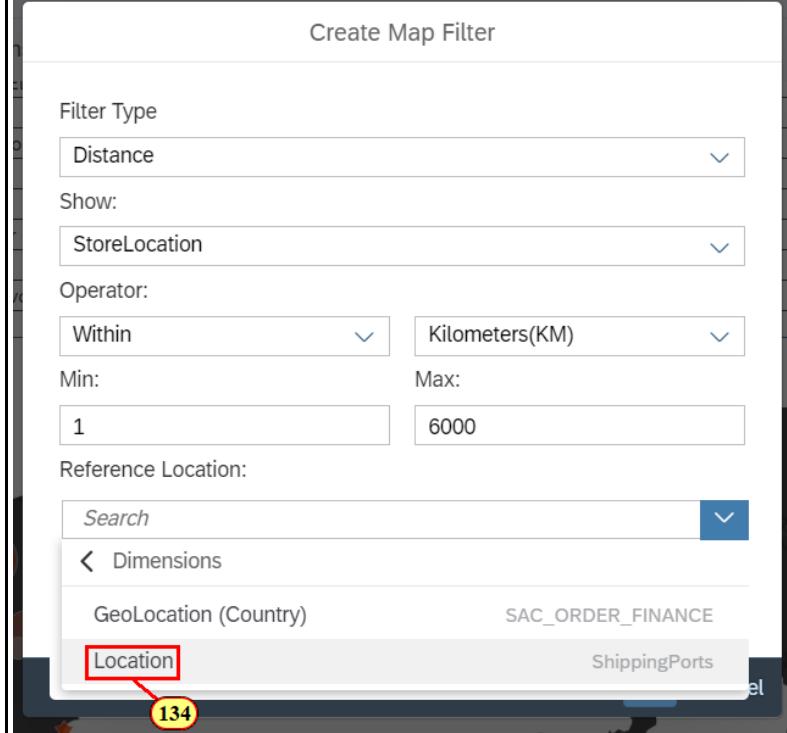
Explanation	Screenshot
<p>👉 Navigate to where you saved the ShippingPorts model (My Files directory).</p> <p>119. Click ShippingPorts model.</p>	
<p>👉 Let us add the geo enriched dimension we created with coordinates.</p> <p>120. Click Add Location Dimension</p>	
<p>121. Click Location</p>	
<p>⚠️ Quality check! Does your geo map now populate with shipping port bubbles like this screenshot?</p>	

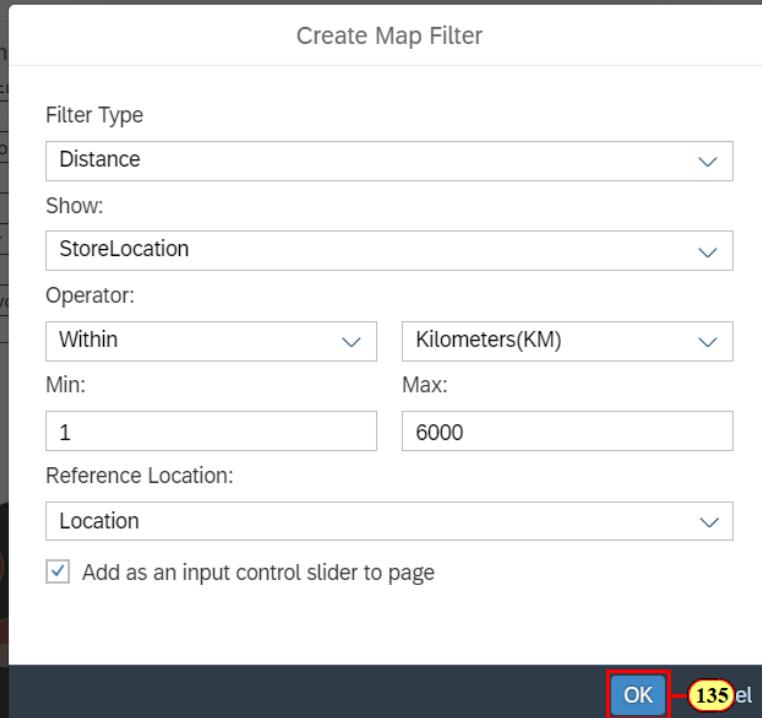
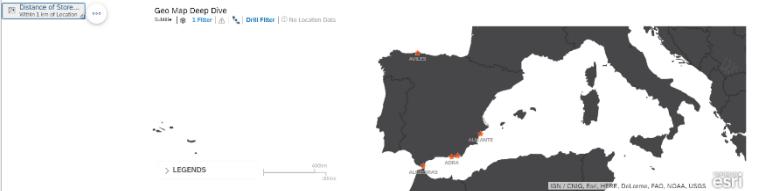
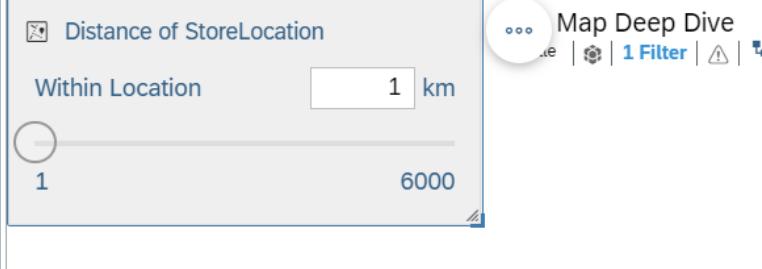
Explanation	Screenshot
<p>👉 Let us change the shape of our shipping port bubbles so they are easily distinguished from our stores.</p> <p>122. Click Expand</p> <p>123. Click Shapes</p> <p>124. Choose the Star shape.</p>	
<p>⚠️ Quality check! Does your geo map look like this screenshot with the shipping port shape changes?</p>	

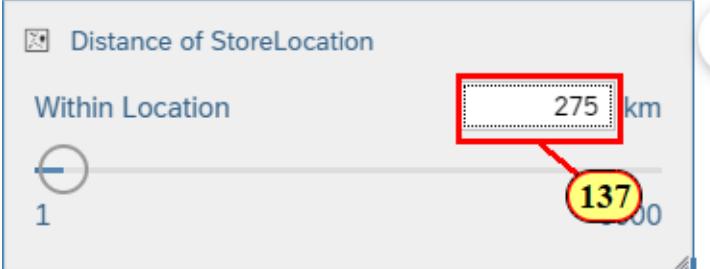
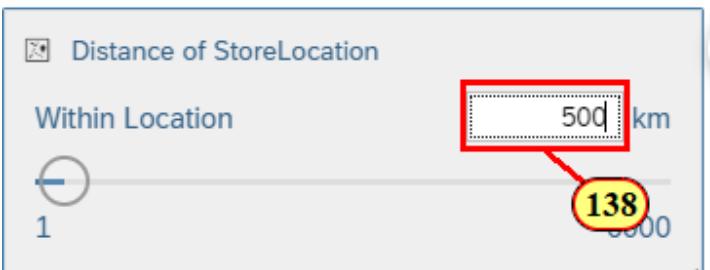
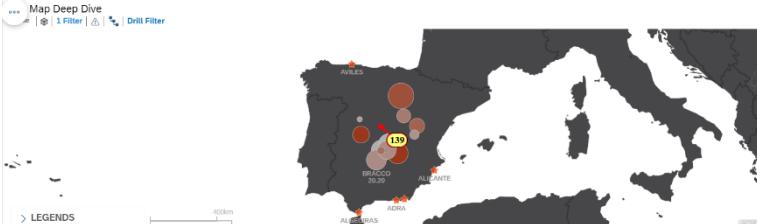
Explanation	Screenshot
125. Click OK	

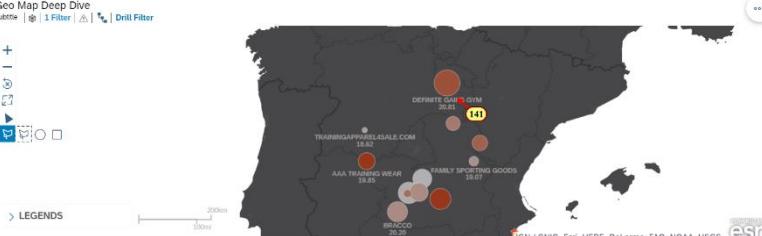
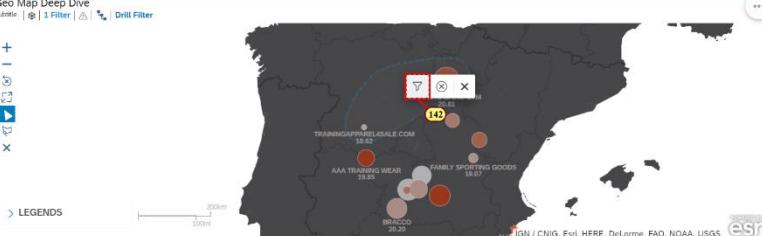
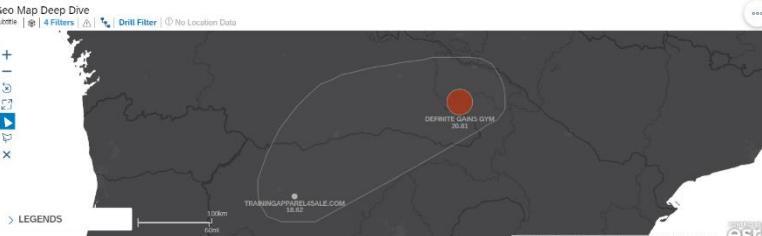
Explanation	Screenshot
<p> We can now choose to add a filter between our two location dimensions, Store Location and Shipping Port Location, to generate additional analysis in our geo visualization.</p> <p>126. Click Add Filter</p>	
<p> We want to test a hypothesis if distance to shipping ports affect delivery times. We will create a distance filter based on the distance from a shipping port. If a store is further from a shipping port than our defined distance, it will be excluded from our geo map.</p>	

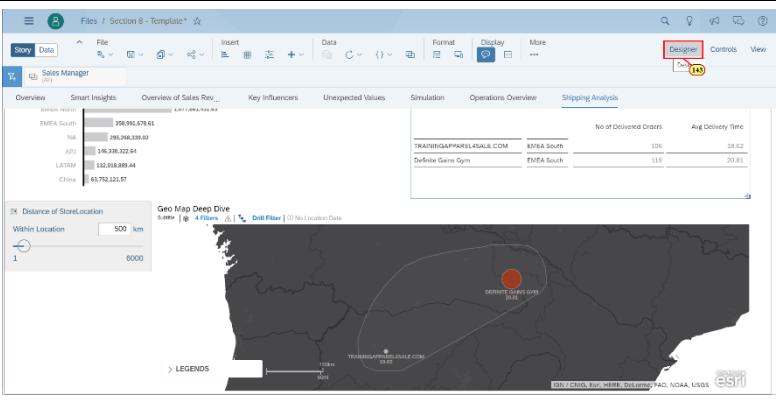
Explanation	Screenshot
<p>👉 Our Show parameter is the dimension that we would like to exclude members based on our distance filter.</p> <p>127. Expand Show Dimension.</p> <p>128. Click StoreLocation as the Show Dimension.</p>	 <p>The screenshot shows the 'Create Map Filter' dialog. In the 'Show:' section, the dropdown menu is open, and the option 'StoreLocation' is highlighted with a red box and a yellow circle containing the number 127.</p>
<p>👉 Let us add an interactive input control slider to our page to dynamically change the distance in distance filter.</p> <p>129. Check Add as an input control slider to page</p> <p>130. Input 1 as Minimum Distance.</p> <p>131. Input 6000 as Maximum Distance.</p>	 <p>The screenshot shows the 'Create Map Filter' dialog with the following settings:</p> <ul style="list-style-type: none"> Filter Type: Distance Show: StoreLocation Operator: Within Min: 1 (highlighted with a red box and yellow circle 129) Max: 6000 (highlighted with a red box and yellow circle 131) Reference Location: Select a Reference (highlighted with a red box and yellow circle 130) <input checked="" type="checkbox"/> Add as an input control slider to page (highlighted with a red box and yellow circle 129)

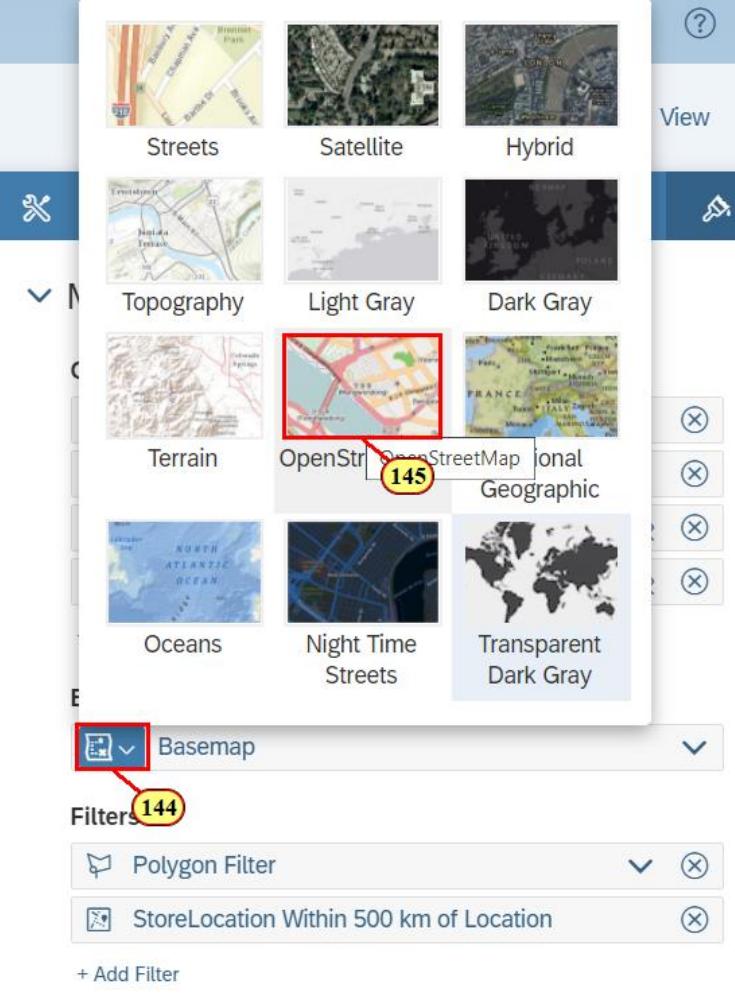
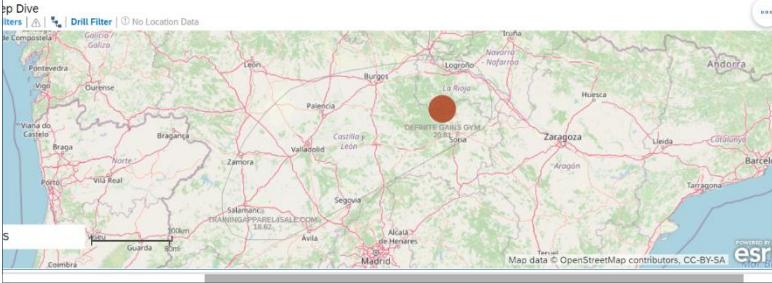
Explanation	Screenshot
<p>Let us choose the Shipping Port locations as our reference location to measure the distance from.</p> <p>132. Click Select a Reference Location</p> <p>133. Click Dimensions</p>	 <p>Create Map Filter</p> <p>Filter Type: Distance</p> <p>Show: StoreLocation</p> <p>Operator: Within Kilometers(KM)</p> <p>Min: 1 Max: 6000</p> <p>Reference Location:</p> <p>Search Point of Interest ></p> <p>Dimensions > Dimensions</p> <p>OK Cancel</p>
<p>134. Choose Location dimension from ShippingPorts model.</p>	 <p>Create Map Filter</p> <p>Filter Type: Distance</p> <p>Show: StoreLocation</p> <p>Operator: Within Kilometers(KM)</p> <p>Min: 1 Max: 6000</p> <p>Reference Location:</p> <p>Search < Dimensions</p> <p>GeoLocation (Country) SAC_ORDER_FINANCE</p> <p>Location ShippingPorts</p> <p>OK Cancel</p>

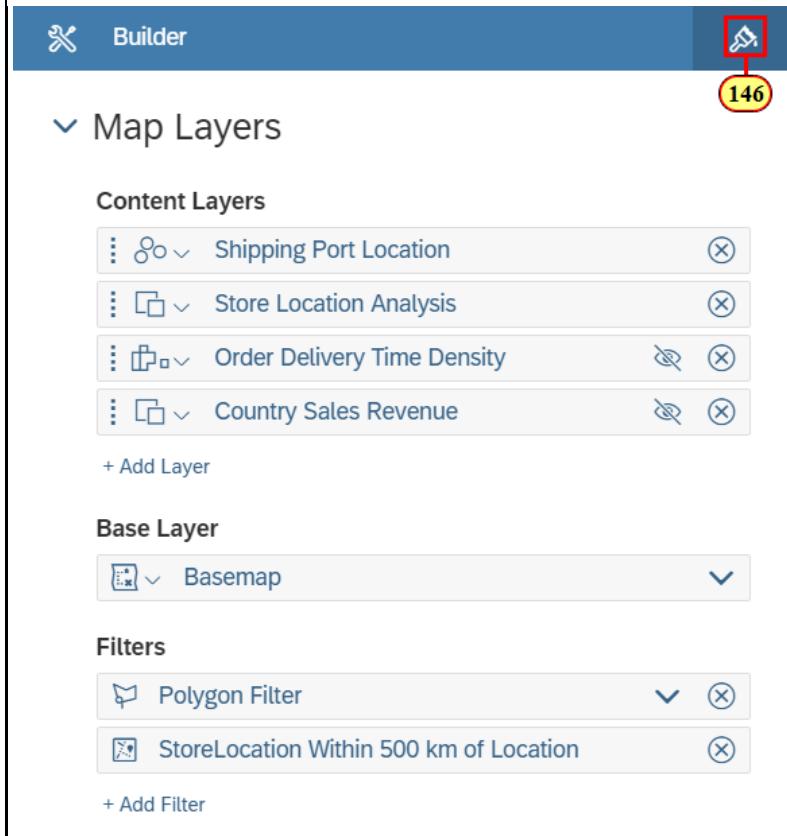
Explanation	Screenshot
135. Click OK	
<p>⚠ Quality check! Does your geo map look like this screenshot? Since our distance filter has defaulted to 1km, there should be no stores displayed on our geo map as they are all excluded currently.</p>	
<p>👉 Let us resize our input control so it is easier to read and dynamically change. 136. Expand the Input Control by dragging on the bottom right corner.</p>	
<p>ℹ Quality check! Does your distance filter input control look like this after resizing?</p>	

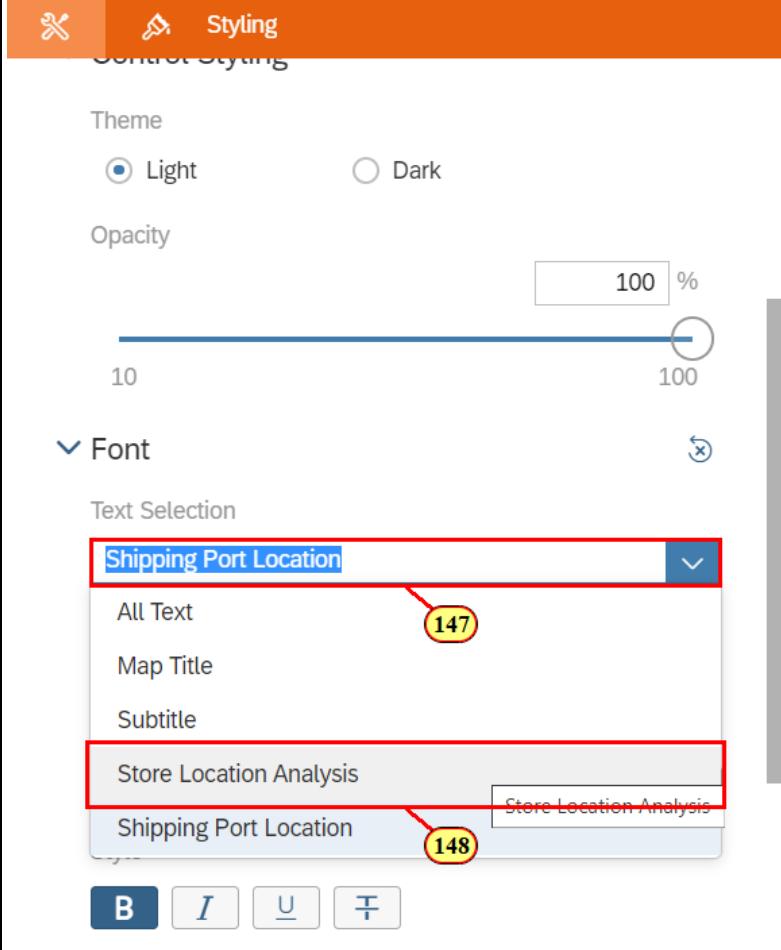
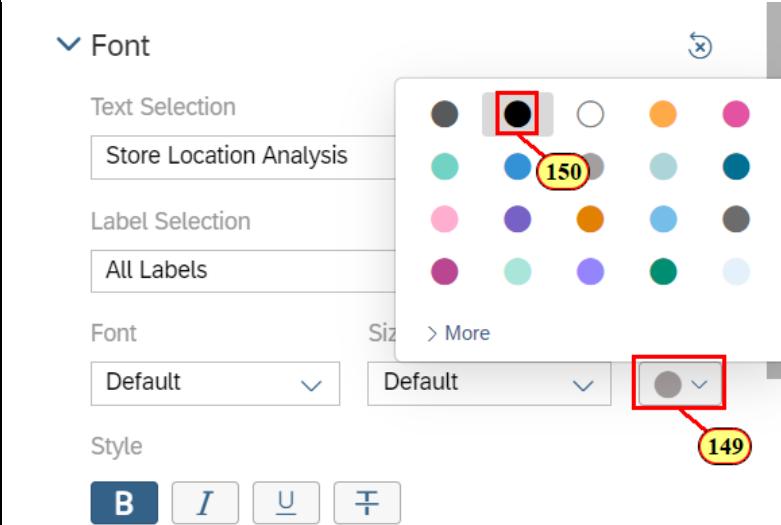
Explanation	Screenshot
<p> Let us start with a medium distance filter.</p> <p>137. Change the Distance Filter to 275</p>	
<p> Quality check! Does your geo map look like this screenshot? Interestingly, our high average delivery time outlier, Definite Gains Gym, shows up but our other low average delivery time outlier, trainingapparel4sale.com, is missing.</p>	
<p> Let us increase the range of our distance filter.</p> <p>138. Change the Distance Filter to 500</p>	
<p> Quality check! Does your geo map look like this screenshot? Now most of our stores in Spain have appeared from the filter.</p>	
<p> Let us filter directly on our two outlier stores for Avg Delivery Time.</p> <p>139. Mouse wheel up in the geo map to zoom in on Spain.</p>	

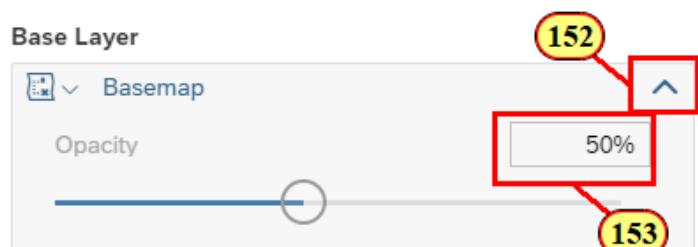
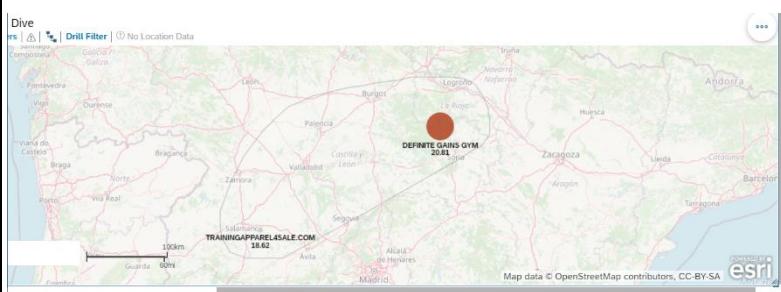
Explanation	Screenshot
<p> We want the ability to be able to select many data points on our geo map directly and easily filter on a selected area. Let us use the lasso functionality in geo maps.</p> <p>140. Click the Lasso Tool</p>	
<p>141. Draw a lasso around Definite Gains Gym and trainingapparel4sale.com</p>	
<p> We can now choose to apply a filter on the bubbles selected by our lasso tool.</p> <p>142. Click the Filter Icon</p>	
<p> Quality check! Does your geo map look like this screenshot after filtering on lasso tool?</p>	

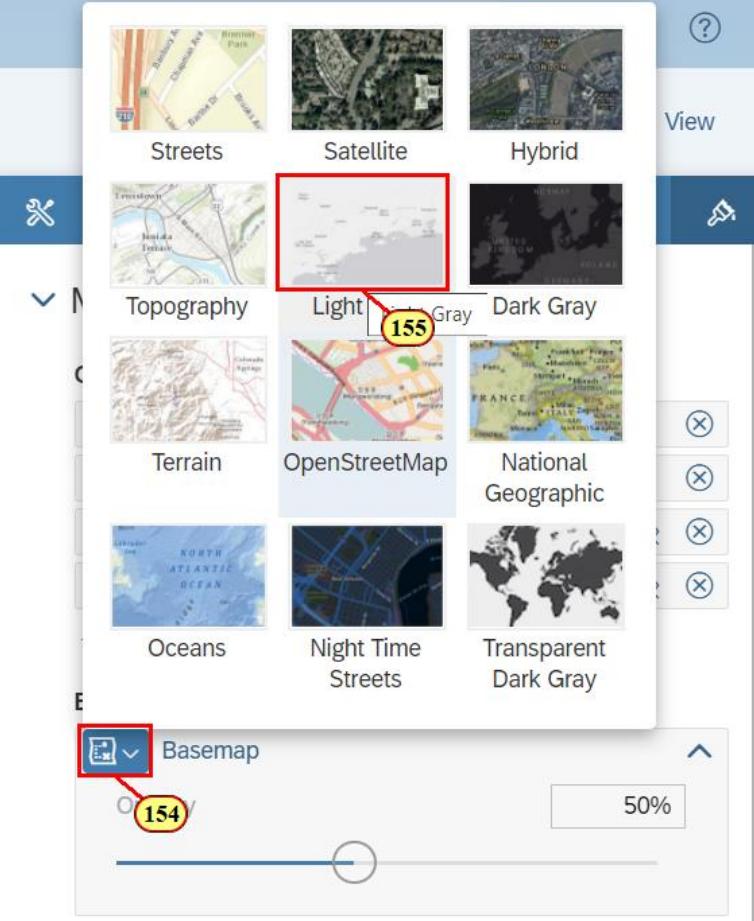
Explanation	Screenshot											
<p>We can also look at our table that is connected to our geo map by linked analysis applied on data point selection. We can see the measures in this table for our two filtered entries.</p>	<p>Store Region wise Delivery Time and # of Delivered Orders 2 Filters Avg Delivery Time</p> <p>Account Values</p> <table border="1"> <thead> <tr> <th></th> <th>No of Delivered Orders</th> <th>Avg Delivery Time</th> </tr> </thead> <tbody> <tr> <td>TRAININGAPPAREL4SALE.COM</td> <td>EMEA South</td> <td>106</td> <td>18.62</td> </tr> <tr> <td>Definite Gains Gym</td> <td>EMEA South</td> <td>119</td> <td>20.81</td> </tr> </tbody> </table>		No of Delivered Orders	Avg Delivery Time	TRAININGAPPAREL4SALE.COM	EMEA South	106	18.62	Definite Gains Gym	EMEA South	119	20.81
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Definite Gains Gym	EMEA South	119	20.81									
<p>Since we did not verify our hypothesis that distance to shipping ports is the cause for a higher average delivery time, let us dive into another tool we can use for analysis in our geo map.</p> <p>143. Select our Geo Map and click on Designer</p>	 <table border="1"> <thead> <tr> <th></th> <th>No. of Delivered Orders</th> <th>Avg Delivery Time</th> </tr> </thead> <tbody> <tr> <td>TRAININGAPPAREL4SALE.COM</td> <td>EMEA South</td> <td>106</td> <td>18.62</td> </tr> <tr> <td>Definite Gains Gym</td> <td>EMEA South</td> <td>119</td> <td>20.81</td> </tr> </tbody> </table>		No. of Delivered Orders	Avg Delivery Time	TRAININGAPPAREL4SALE.COM	EMEA South	106	18.62	Definite Gains Gym	EMEA South	119	20.81
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TRAININGAPPAREL4SALE.COM	EMEA South	106	18.62									
Definite Gains Gym	EMEA South	119	20.81									

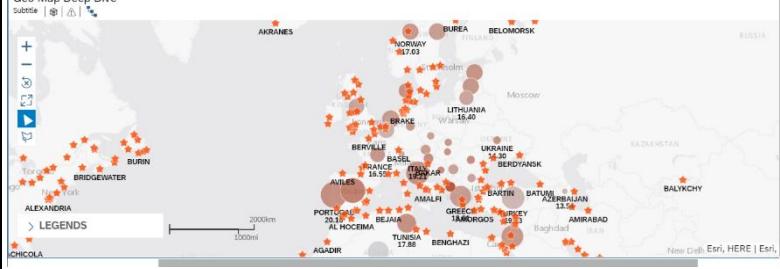
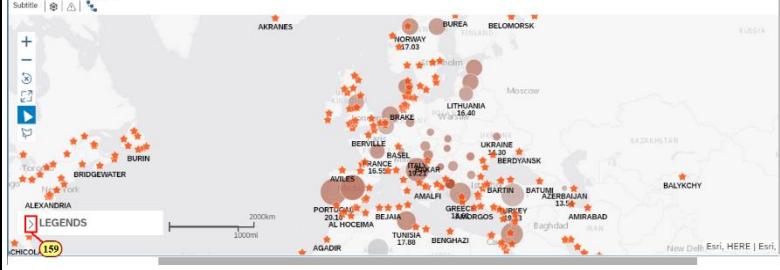
Explanation	Screenshot
<p>We can change the basemap layer in our visualization to better fit the purposes of our analysis. Let us see if there is a geographical reason for the outliers in delivery time. For now, we want to see if there are any insights that we can gather from the street map view in our geo map.</p> <p>144. Click Choose Basemap</p> <p>145. Click OpenStreetMap</p>	
<p>⚠️ Quality check! Does your geo map look like this screenshot after changing the base map? Let us change the formatting to make analyzing this visualization easier.</p>	

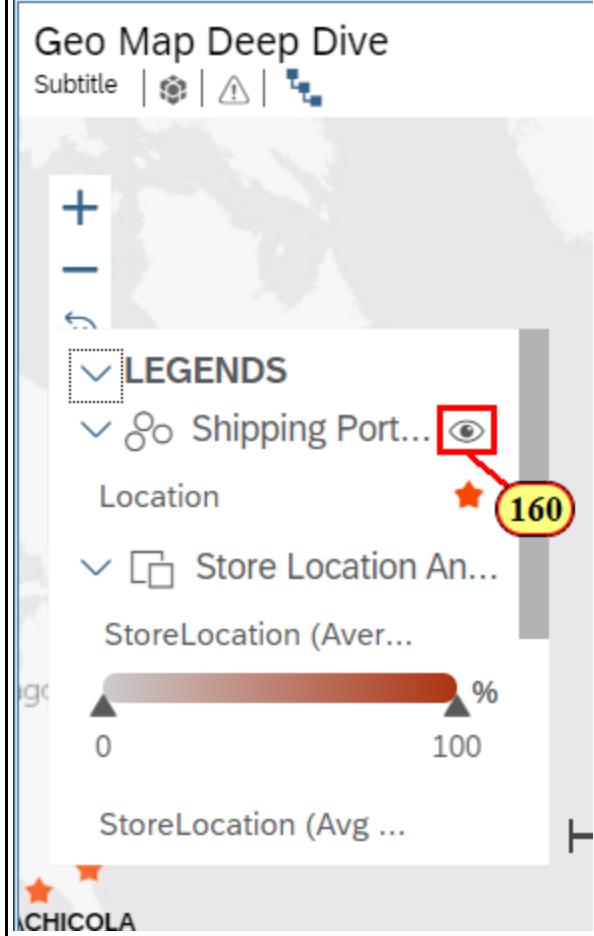
Explanation	Screenshot
<p>👉 First, let us change the font color so it stands out on our base map.</p> <p>146. Click Styling Panel</p>	 <p>The screenshot shows the Tableau Builder interface with the 'Builder' tab selected. In the top right corner, there is a red box highlighting a small icon with the number '146' next to it. Below the header, the 'Map Layers' section is expanded, showing four content layers: 'Shipping Port Location', 'Store Location Analysis', 'Order Delivery Time Density', and 'Country Sales Revenue'. Each layer has a visibility switch and an 'X' button. Below the content layers is a '+ Add Layer' button. The 'Base Layer' section shows 'Basemap' selected. The 'Filters' section contains a 'Polygon Filter' with a condition 'StoreLocation Within 500 km of Location' and a checked checkbox. There is also a '+ Add Filter' button.</p>

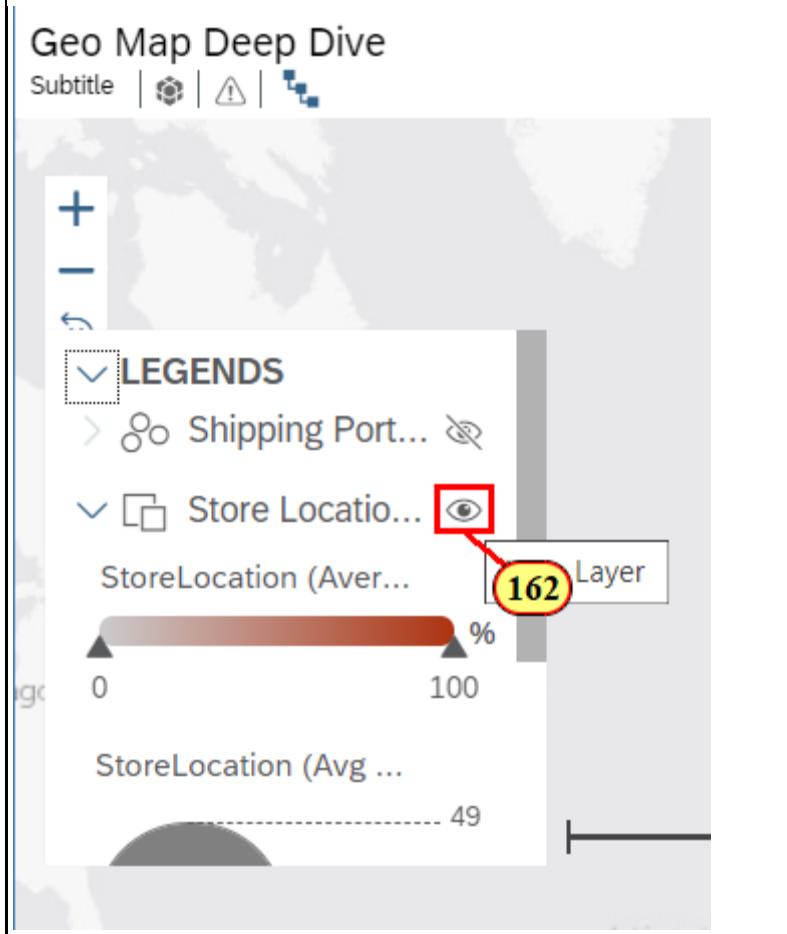
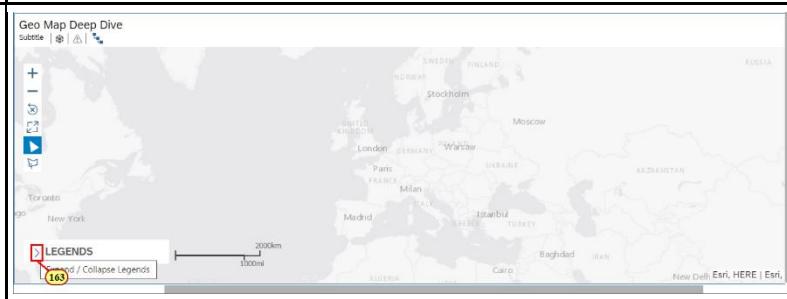
Explanation	Screenshot
<p>We can change formatting options for all text in the geo map or based on individual layers. We want to select the Store layer to change the color on Store name labels.</p> <p>147. Scroll to Font Options and click Text Selection</p> <p>148. Click Store Location Analysis</p>	 <p>The screenshot shows the 'Styling' tab selected in the top navigation bar. Below it, there's a 'Theme' section with 'Light' (selected) and 'Dark' radio buttons, and an 'Opacity' slider set to 100%. Under the 'Font' section, a dropdown menu titled 'Text Selection' is open, listing 'All Text', 'Map Title', 'Subtitle', 'Store Location Analysis' (which is highlighted with a red rectangle and circled in yellow), and 'Shipping Port Location'. At the bottom of the font section are buttons for bold (B), italic (I), underline (U), and align (T).</p>
<p>149. Click Color</p> <p>150. Select Black palette</p>	 <p>The screenshot shows the 'Font' section of the styling panel. It includes 'Text Selection' (set to 'Store Location Analysis'), 'Label Selection' (set to 'All Labels'), 'Font' (set to 'Default'), 'Size' (set to 'Default'), and a 'Style' section with buttons for bold (B), italic (I), underline (U), and align (T). A color palette at the top right shows various colors, with the black square highlighted and circled in yellow. Below the palette is a size dropdown menu with a gray square highlighted and circled in yellow.</p>

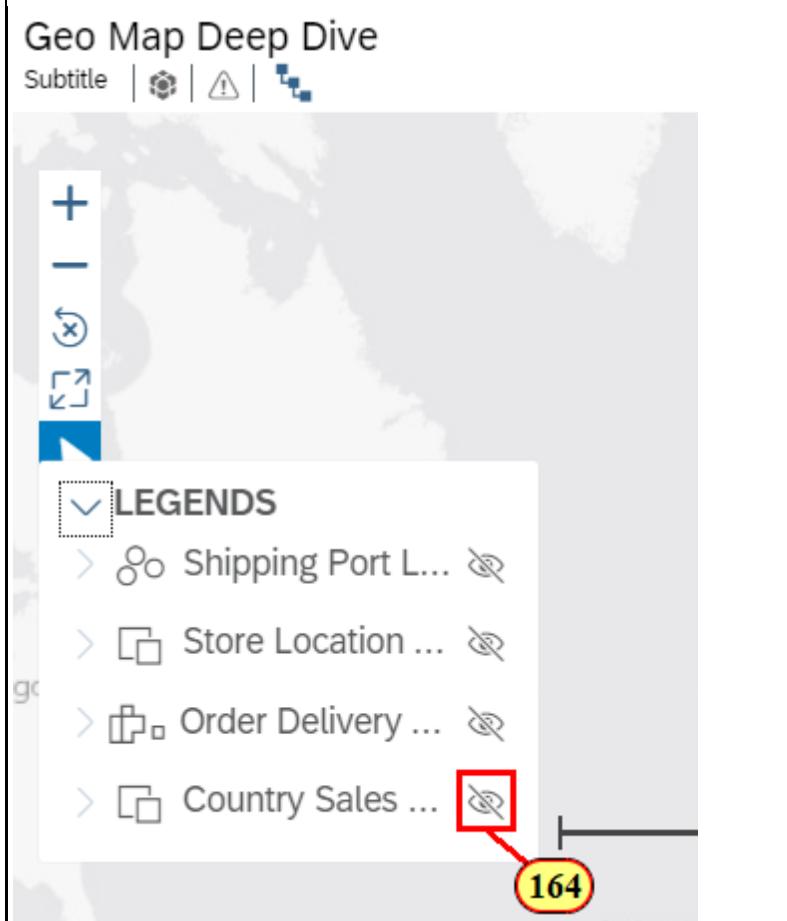
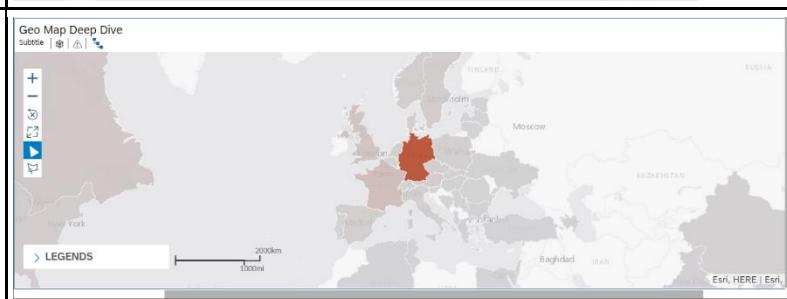
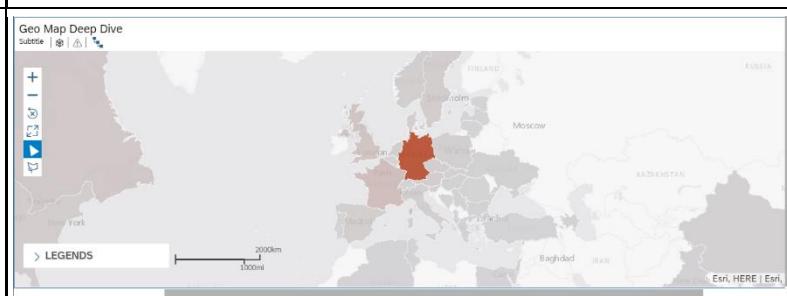
Explanation	Screenshot
<p>👉 Let us now change the Basemap properties to complement our styling change.</p> <p>151. Click Builder Panel</p>	 <p>151. Clicking the Builder Panel icon in the Styling panel.</p> <p>Geo Map</p> <p>Widget</p> <p>Background Color</p> <p>No Border</p>
<p>👉 We can change the Basemap Opacity, so our layers stand out in our geo map.</p> <p>152. Click Expand</p> <p>153. Change Basemap Opacity from 100% to 50%</p>	 <p>Base Layer</p> <p>Basemap</p> <p>Opacity</p> <p>50%</p>
<p>⚠️ Quality check! Does your geo map look like this screenshot after applying styling changes?</p> <p>👉 If we look at the geo map, a new hypothesis for delivery times can be formed. trainingapparel4sale.com is located directly on a major highway connected to Madrid whereas Definite Gains Gym is secluded and much further from major transit routes. This potentially explains our outliers for average delivery times.</p>	 <p>Dive</p> <p>Drill Filter No Location Data</p> <p>100km</p> <p>TRAININGAPPAREL4SALE.COM</p> <p>Map data © OpenStreetMap contributors, CC-BY-SA</p>

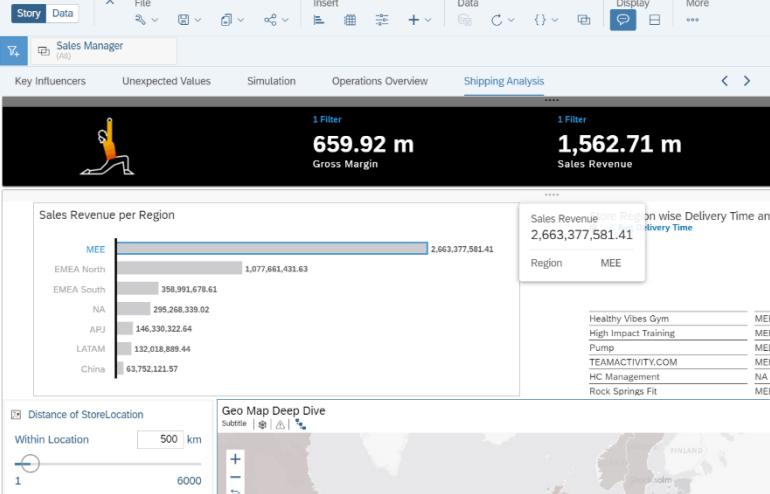
Explanation	Screenshot
<p>👉 Let us move forward and change our Basemap back to a standard template to try out other geo visualization features.</p> <p>154. Click Choose Basemap</p> <p>155. Click Light Gray</p>	
<p>⚠️ Quality check! Does your geo map look like this screenshot after basemap changes?</p>	
<p>👉 We want to look at a different area in the geo map. Let us move back to general view by removing all our applied filters.</p> <p>156. Click Remove Filters</p>	

Explanation	Screenshot
 Let us also drill up to the country hierarchy level. 157. Click on a store bubble. 158. Click Drill Up	
 Quality check! Does your geo map look like this screenshot? 	
 We can also choose to change our layer options in the Legends tab of the geo map. This enables us to change our geo map display in View Mode without accessing the Designer Panel. 159. Click Expand Legends	

Explanation	Screenshot
<p>👉 Let us show the original choropleth layer for sales revenue and hide the other layers we have created. We want to go back to our chart analysis of sales revenue across all regions in our geo map.</p> <p>160. Click Hide Layer for Shipping Port layer.</p>	
<p>161. Click Expand Legends</p>	

Explanation	Screenshot
<p>162. Click Hide Layer for Store Location layer.</p>	 <p>The screenshot shows the 'LEGENDS' panel of the 'Geo Map Deep Dive' application. The 'Store Location' layer is listed with a visibility icon (eye) that is highlighted with a red box and labeled '162'. Below the visibility icon is a 'Layer' button. A color scale bar indicates values from 0 to 100, with '49' marked. A semi-transparent circular gauge at the bottom shows a value of 49. The background map shows geographical features like Europe and Russia.</p>
<p>163. Click Expand Legends</p>	 <p>The screenshot shows the 'Geo Map Deep Dive' interface with the legend expanded. The 'LEGENDS' button is highlighted with a red box and labeled '163'. The map in the background shows various cities and countries in Europe and Asia.</p>

Explanation	Screenshot
<p>164. Click Show Layer for the Country Sales Revenue choropleth layer.</p>	 <p>Geo Map Deep Dive Subtitle ⚙️ ⚠️ 🛍️</p> <p>LEGENDS</p> <ul style="list-style-type: none"> > ⚓ Shipping Port L... > 🏪 Store Location ... > 🚚 Order Delivery ... > 🏭 Country Sales ... <p>164</p>
<p>⚠️ Quality check! Does your geo map look like this visualization?</p>	 <p>Geo Map Deep Dive Subtitle ⚙️ ⚠️ 🛍️</p> <p>LEGENDS</p> <p>2000m 1000m</p>
<p>👉 Please save your story by pressing Ctrl + S on your keyboard!</p>	 <p>Geo Map Deep Dive Subtitle ⚙️ ⚠️ 🛍️</p> <p>LEGENDS</p> <p>2000m 1000m</p>

Explanation	Screenshot																
<p> You have now completed the Geo Visualizations Deep Dive section!</p>	 <p>The screenshot shows a Tableau dashboard titled "Sales Manager". At the top, there are two large numerical values: "659.92 m" (Gross Margin) and "1,562.71 m" (Sales Revenue). Below these are two filters: "1 Filter" for "Sales Revenue" and "1 Filter" for "Gross Margin". The main area features a bar chart titled "Sales Revenue per Region" with the following data:</p> <table border="1"> <thead> <tr> <th>Region</th> <th>Sales Revenue</th> </tr> </thead> <tbody> <tr> <td>MEE</td> <td>2,663,377,581.41</td> </tr> <tr> <td>EMEA North</td> <td>1,077,641,431.63</td> </tr> <tr> <td>EMEA South</td> <td>358,991,678.61</td> </tr> <tr> <td>NA</td> <td>299,268,339.02</td> </tr> <tr> <td>APJ</td> <td>146,330,322.64</td> </tr> <tr> <td>LATAM</td> <td>132,018,889.44</td> </tr> <tr> <td>China</td> <td>63,752,121.57</td> </tr> </tbody> </table> <p>Below the chart is a "Geo Map Deep Dive" section with a map of Europe and a legend listing various locations and their regions:</p> <ul style="list-style-type: none"> Healthy Vibes Gym (MEE) High Impact Training (MEE) Pump (MEE) TEAMACTIVITY.COM (MEE) HC Management (NA) Rock Springs Fit (MEE) <p>At the bottom left, there is a slider for "Distance of Store Location" ranging from 1 to 6000 km, with "Within Location" set to 500 km.</p>	Region	Sales Revenue	MEE	2,663,377,581.41	EMEA North	1,077,641,431.63	EMEA South	358,991,678.61	NA	299,268,339.02	APJ	146,330,322.64	LATAM	132,018,889.44	China	63,752,121.57
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APJ	146,330,322.64																
LATAM	132,018,889.44																
China	63,752,121.57																

Summary

You have completed the entire **Geo Visualizations** section!

You should now be able to:

- Create your own geo-enriched models with acquired data
- Employ heat maps to gather insights on geo data density
- Understand the use of distance filters and the lasso tool in analyzing your hypotheses
- Use tooltips, labels, and overlapping points to enhance the insights in your geo map
- Change your basemap layer to view your geo enriched data in different contexts
- Style your geo map for clear and informative visualizations

Time Analysis: Deep Dive



Objective: Learn how to effectively analyze your time-based data, how to create time-based filters, calculations and visualisations.

Estimated Time: 20 mins

Exercise Description: You as a business analyst, need to assess company's performance this year, compare operational and finance KPIs over time and learn how to enhance the dashboard with interactive capabilities to ensure company's managers can further investigate the data.

Key Features:

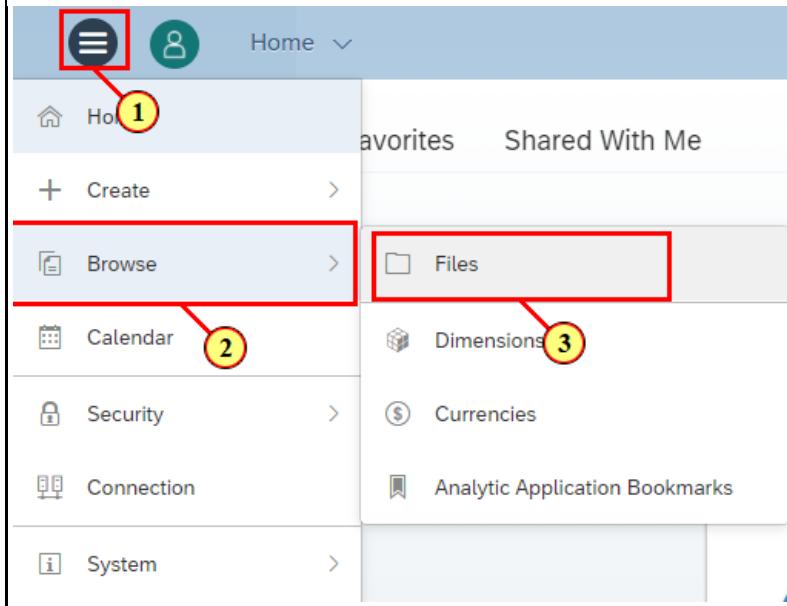
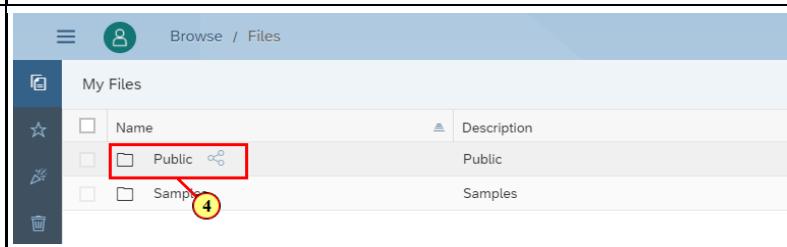
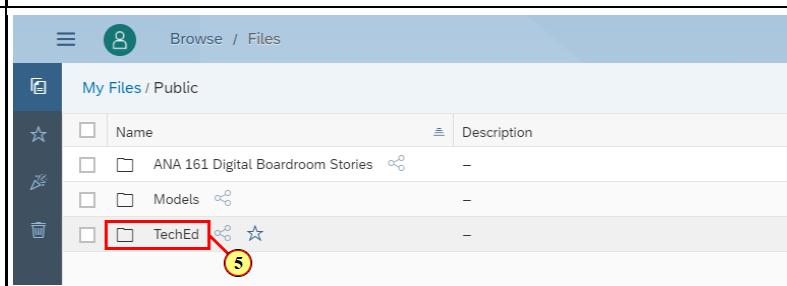
- Create dynamic and fixed date-based story and page filters with multiple ranges
- Learn how to customise “current date” for greater flexibility when analysing time-based data
- Create dynamic calculations such as Year-to-Date (YTD), Year-over-Year (YoY) and others
- Learn how to define date-based hierarchies in SAC that best suit your needs

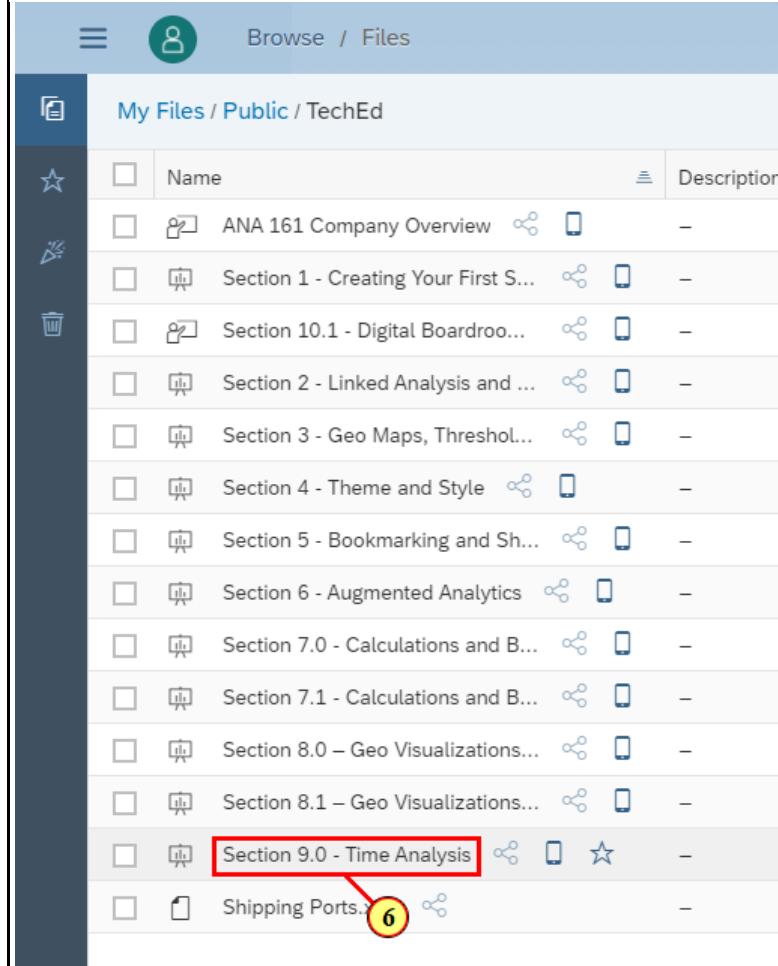
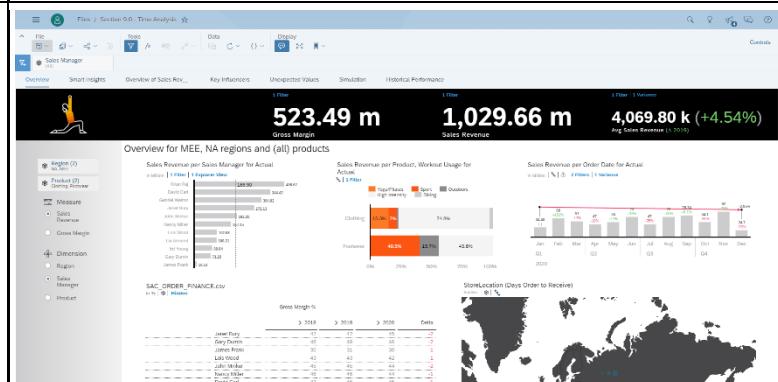


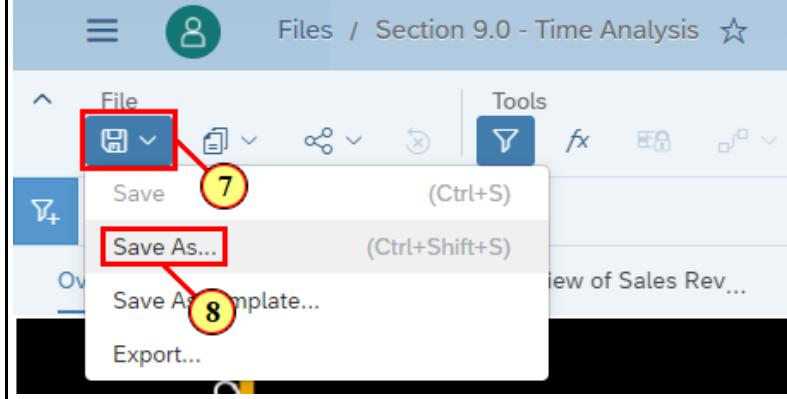
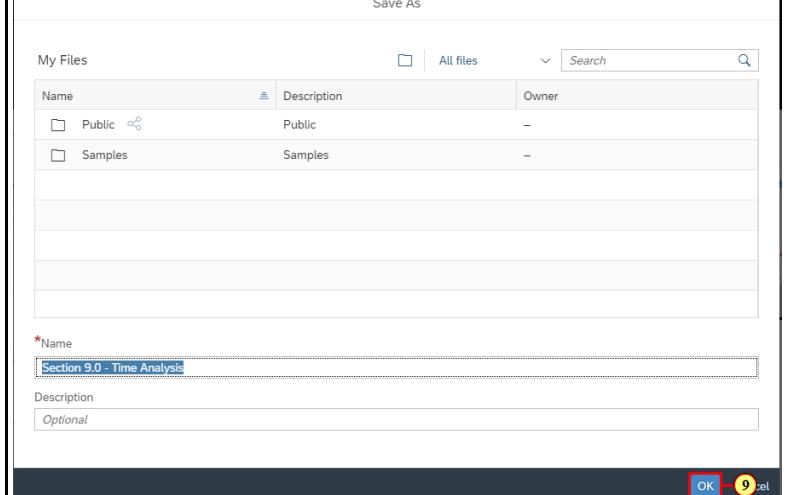
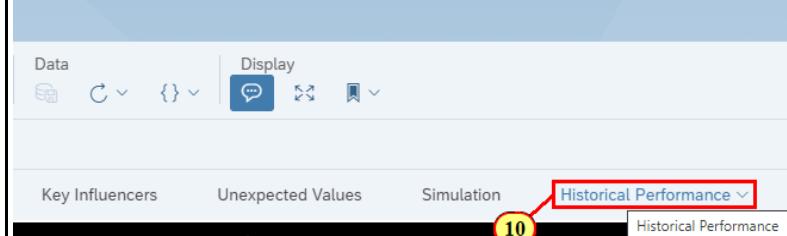
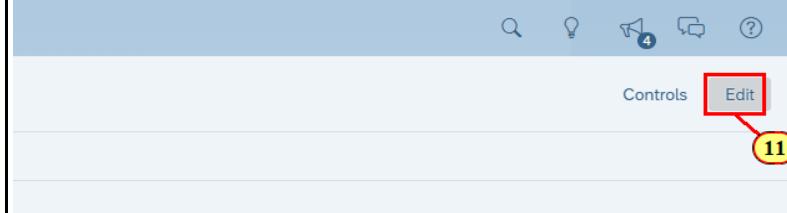
Disclaimer

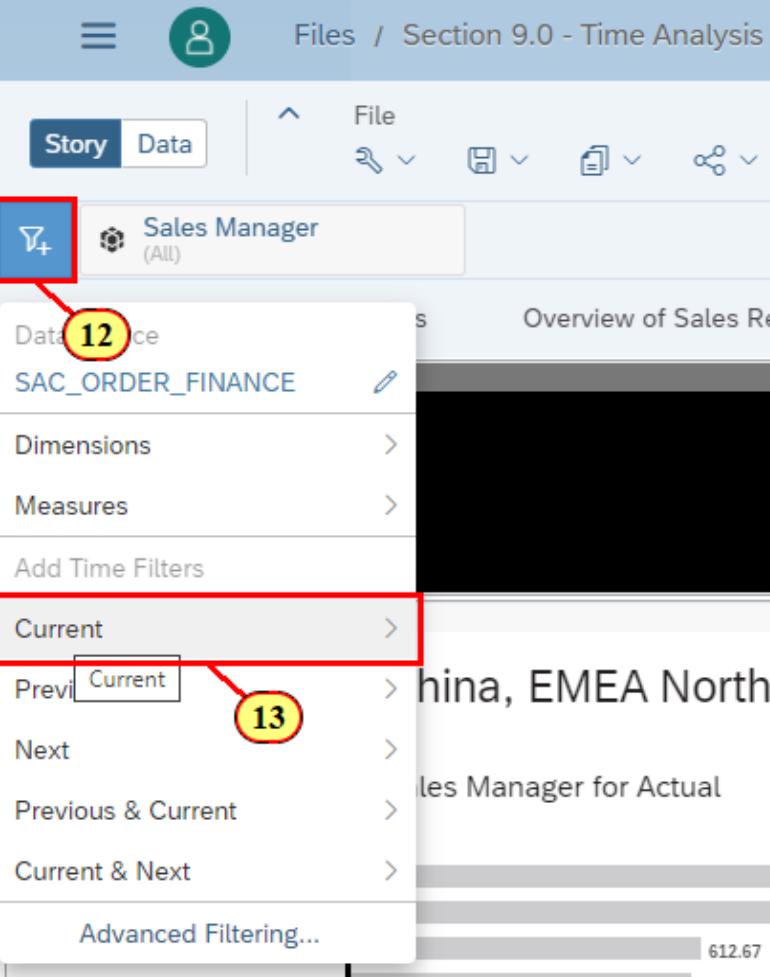
When completing exercises, some data values in the screenshots may not match what you see on your screen. This is because the dynamic time filters that were applied at the time the screenshots were taken is different from the current system date.

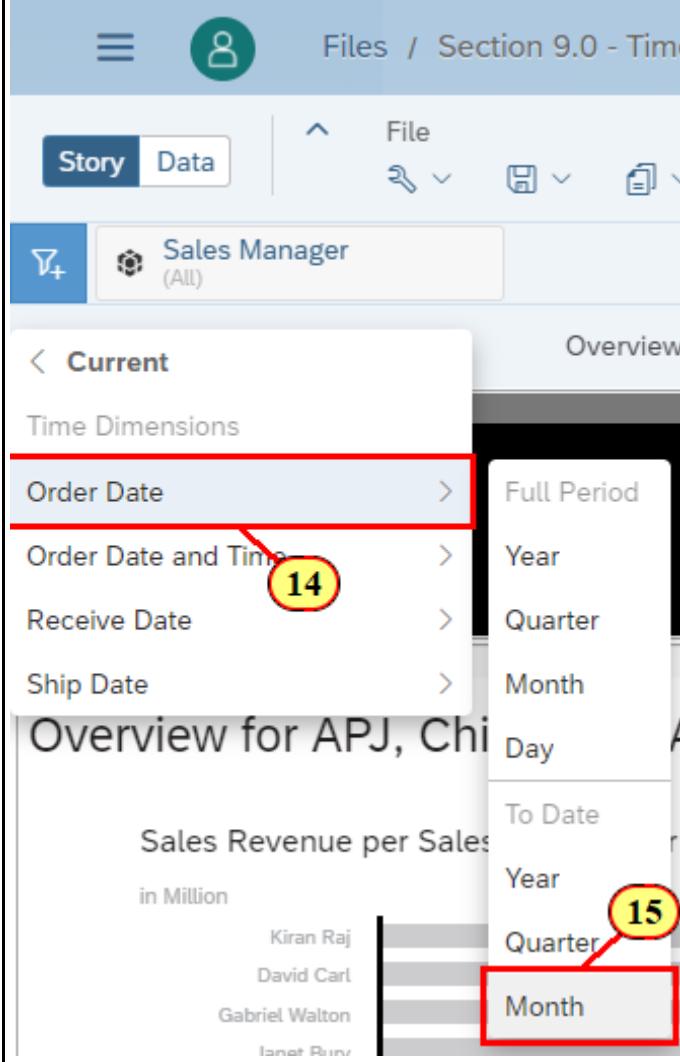
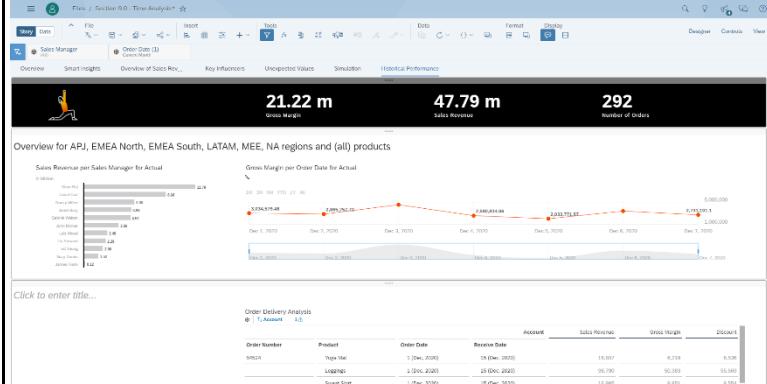
Explanation	Screenshot
<p>👉 Welcome to the Time Analysis Deep Dive! We will also go into greater detail on the analytic capabilities available to story creators and how you can enhance your dashboard to analyze trends over time.</p> <p>For this section you will start with an existing story. Let's open the starting story from the file repository.</p>	<p>The screenshot shows the SAP TechEd Home page. At the top, it says "Hello, TechED User 02!". Below that is a search bar and navigation links for "Today", "Catalog", "Favorites", and "Shared With Me". The main area has three sections: "Recent stories" (listing "Section 0.0 - Time Analysis", "Section 2 - Linear Analyses and In...", "Section 1 - Creating Your First Story", and "Sample - Revenue Results The Best Beer Juice Company"), "Recent Analytic Applications" (with a note "There are no recent analytics yet! Click here to start the first one."), and a "Sample numeric point chart" with the value "28.47". At the bottom left is a "Sample bar chart" showing "Gross Margin (USD)" with bars for "Gallons" (120) and "Sales" (175.43). The SAP logo is at the bottom right.</p>

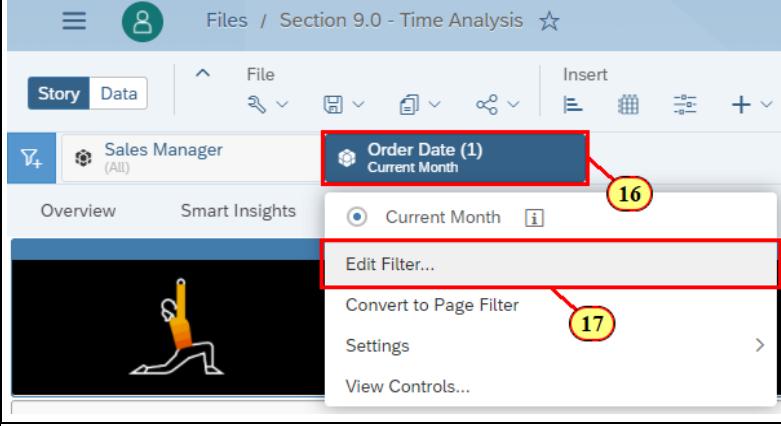
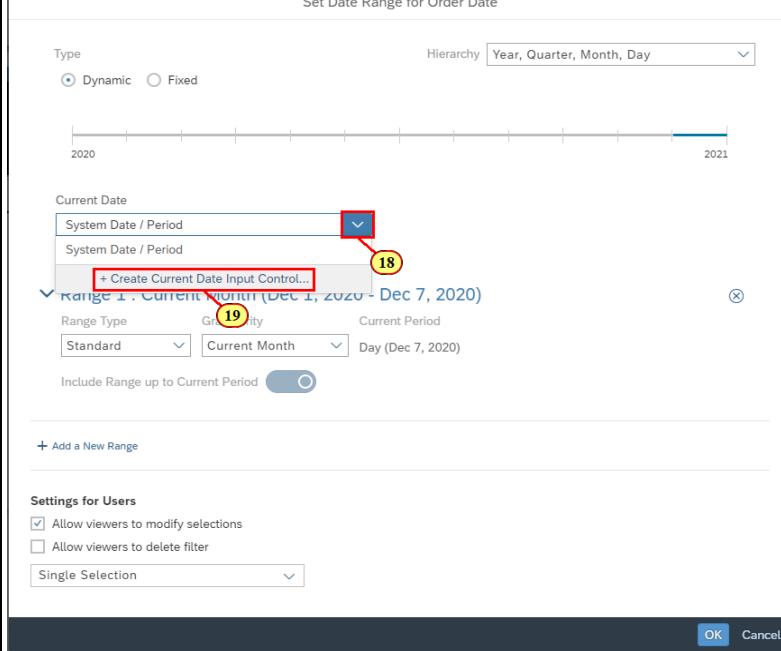
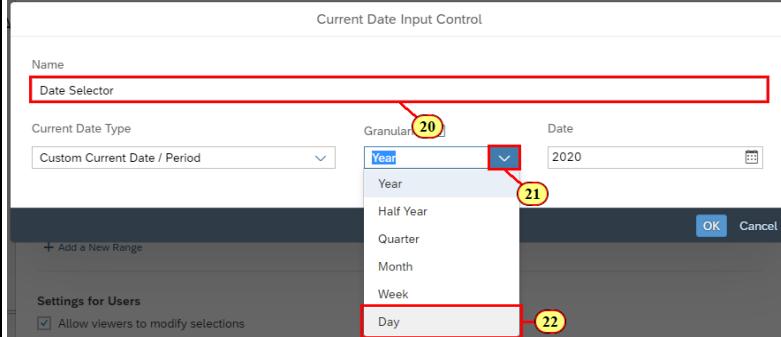
Explanation	Screenshot
1. Click Home icon 2. Click Browse 3. Click Files	
4. Click Public	
5. Click TechEd	

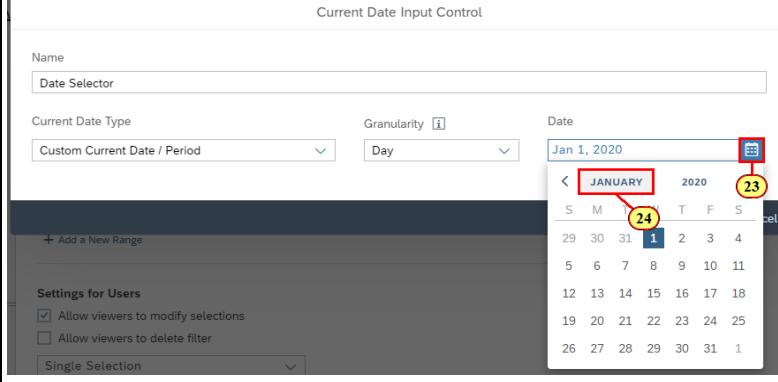
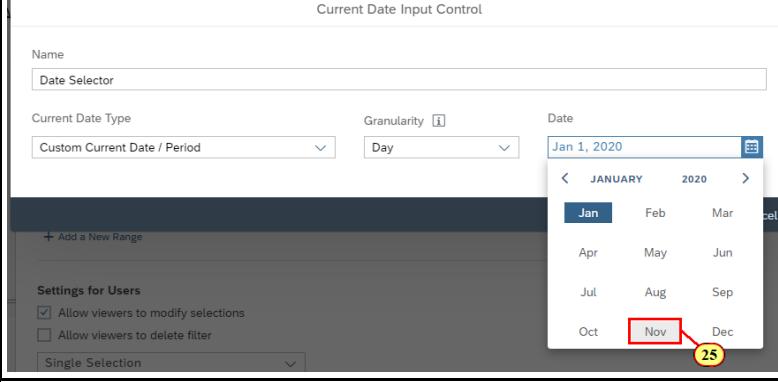
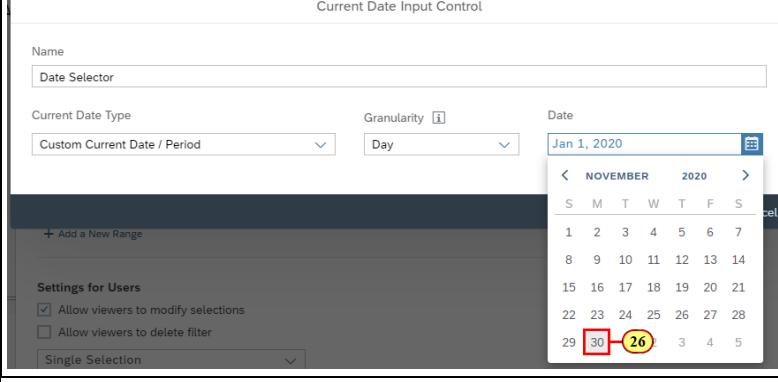
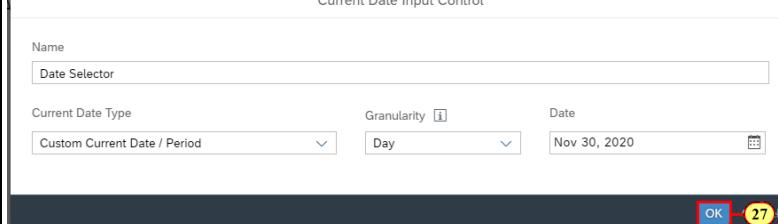
Explanation	Screenshot
<p>6. Click Section 9.0 - Time Analysis</p>	
<p>⚠️ Quality Check! Ensure this story was opened.</p>	

Explanation	Screenshot
<p>👉 As you do not have edit rights to this story, use Save As to create your own copy.</p> <p>7. Click the Save Icon</p> <p>8. Click Save As</p>	
<p>9. Click OK</p>	
<p>👉 Wait for the story to be copied. You want to do the time-based analysis on the Historical Performance tab.</p> <p>10. Select Historical Performance Tab</p>	
<p>👉 Once the Historical Performance tab has been loaded, move into edit mode in order to continue the analysis.</p> <p>11. Click Edit</p>	

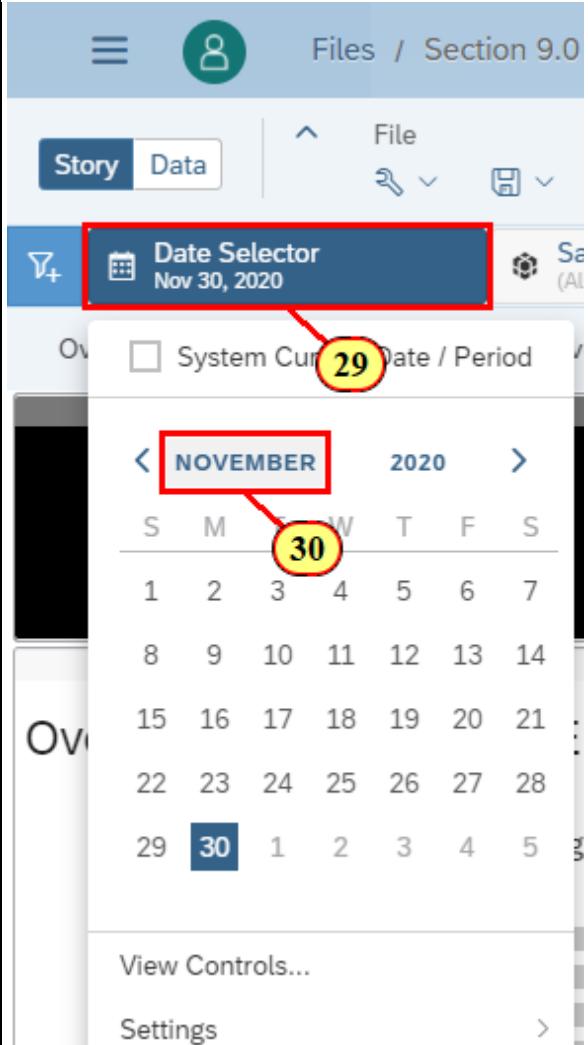
Explanation	Screenshot
<p>Right now, there is no time-based filter on the dashboard, you want to narrow down the data to the current month to date. Let's create a story filter using the quick filter option for time.</p> <p>12. Click Add Story Filter Icon</p> <p>13. Click Current</p>	 <p>The screenshot shows the SAP Analytics Cloud interface with the title 'Files / Section 9.0 - Time Analysis'. The 'Story' tab is selected. In the top right, there are file navigation icons. Below the header, a sidebar for 'Sales Manager (All)' is visible. A dropdown menu is open at the bottom left of the sidebar, titled 'Add Time Filters'. The 'Current' option is highlighted with a red box and a yellow circle containing the number 13. Other options in the dropdown include 'Prev', 'Next', 'Previous & Current', 'Current & Next', and 'Advanced Filtering...'. The main area of the screen shows a dark chart area with some text labels like 'Overview of Sales Re...' and 'SAC_ORDER_FINANCE'.</p>

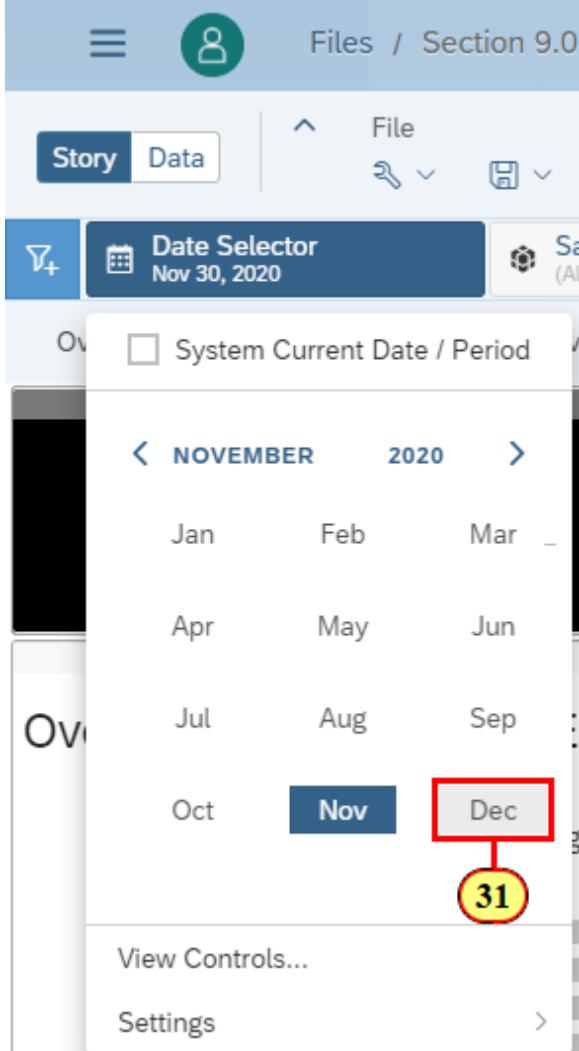
Explanation	Screenshot
<p>14. Click Order Date</p> <p>15. Click Month Under To Date</p>	 <p>The screenshot shows the Tableau interface with a 'Sales Manager (All)' filter selected. A context menu is open over the 'Time Dimensions' field, listing options like Order Date, Order Date and Time, Receive Date, and Ship Date. The 'Order Date' option is highlighted with a red box and a yellow circle containing the number 14. Below the menu, a chart titled 'Overview for APJ, China' displays 'Sales Revenue per Sales' in millions for four salespeople: Kiran Raj, David Carl, Gabriel Walton, and Ianot Raju. The chart has a 'Month' filter applied, which is highlighted with a red box and a yellow circle containing the number 15.</p>
<p>👉 You can see a story filter for the current month to date has been created and the entire dashboard has been filtered from start of this month until today.</p> <p>Note: As this is a dynamic time filter, your data may look different based on today's date.</p>	 <p>The screenshot shows the final state of the Tableau dashboard after applying the filters. The top navigation bar shows 'Story Date' and 'Order Date (1) Current Month'. The dashboard features several key performance indicators (KPIs) and data tables. The 'Sales Revenue per Sales Manager' chart shows revenue for four managers. The 'Gross Margin per Order Date for Actual' chart shows a trend line with specific data points labeled with their values. The 'Order Delivery Analysis' table provides detailed information for specific orders, including Order Number, Product, Order Date, Receive Date, Account, Sales Revenue, Gross Margin, and Profit.</p>

Explanation	Screenshot
<p>Currently the current month is determined based on system time. However, you want to provide your story viewers with the ability to determine what the current day is. For this you can add a custom current date input control.</p> <p>16. Click Order Date Story Filter</p> <p>17. Click Edit Filter...</p>	
<p>While you created the month to date filter via quick options, the dynamic range filter dialog provides a lot of more options. First you want to add the custom current date input control.</p> <p>18. Expand Current Date</p> <p>19. Click + Create Current Date Input Control...</p>	
<p>20. Rename to Date Selector</p> <p>21. Expand Granularity</p> <p>22. Click Day</p>	

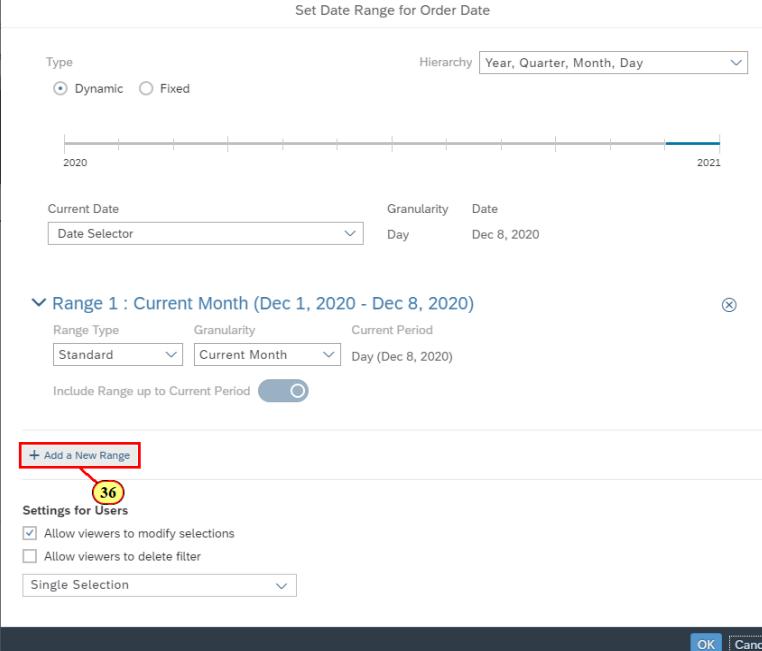
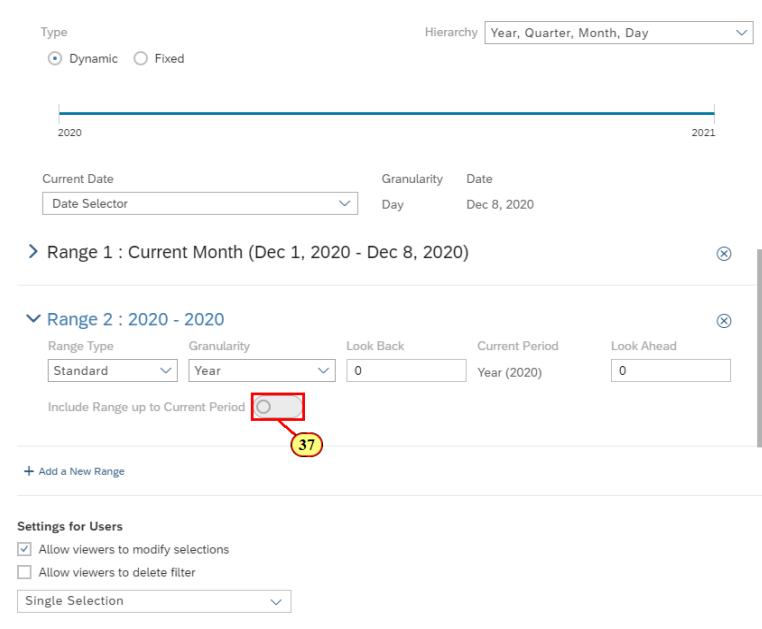
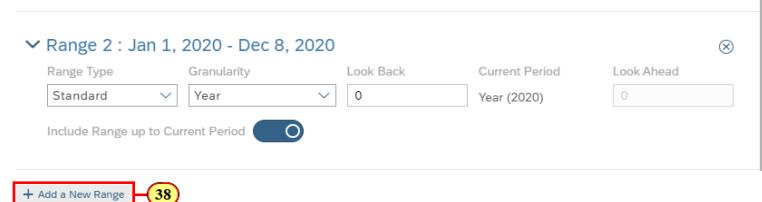
Explanation	Screenshot
<p>👉 Let's set the default current date to November 30th, 2020 as it is the last day of last month.</p> <p>23. Expand Day Granularity</p> <p>24. Click January</p>	
<p>25. Click Nov</p>	
<p>26. Click 30</p>	
<p>27. Click OK</p>	

Explanation	Screenshot
<p>👉 Quality Check! Does your Dynamic Time Filter match the screenshot?</p> <p>Note: Range 1: Current Month may not match due to dynamic time.</p> <p>28. Click OK</p>	
<p>👉 You can see the Date Selector input control was added to the story filter bar. In the time series chart, you can see that the data now show November data until November 30th.</p>	

Explanation	Screenshot
<p>👉 Let's change the Current Date to December 8th, 2020 and see how the dashboard updates.</p> <p>29. Click Date Selector</p> <p>30. Click November</p>	 <p>The screenshot shows a software interface with a blue header bar. Below it is a toolbar with 'Story' and 'Data' buttons. A 'File' menu is open. A 'Date Selector' modal is displayed, showing 'Nov 30, 2020'. A red box highlights the number '29' in the 'System Current Date / Period' field. A yellow circle highlights the number '30' in the calendar grid for November 2020. The calendar grid shows dates from 1 to 30. Below the calendar is a 'View Controls...' button and a 'Settings' button.</p>

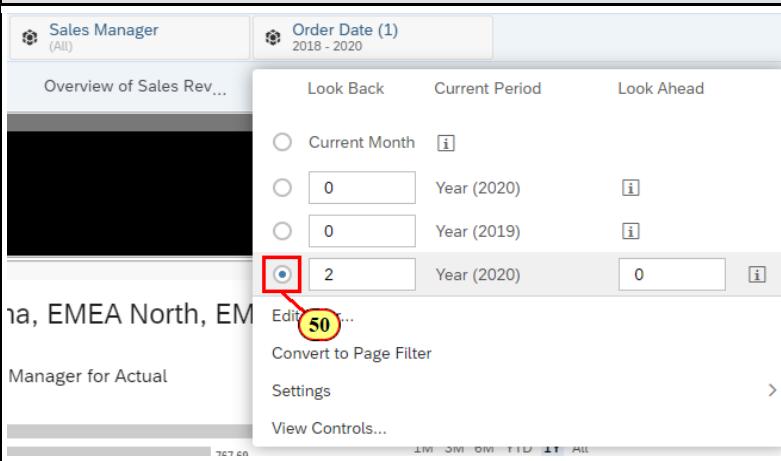
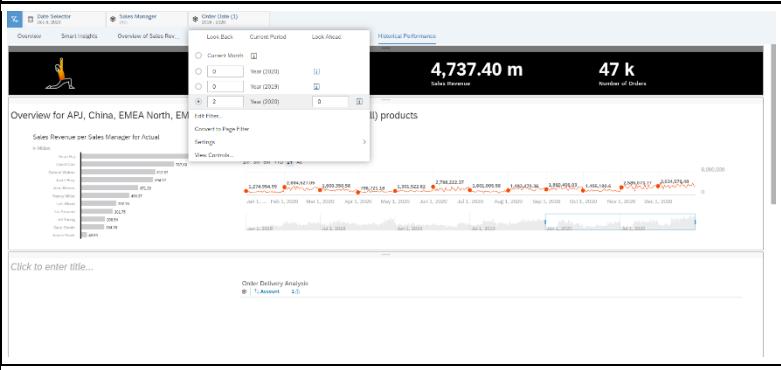
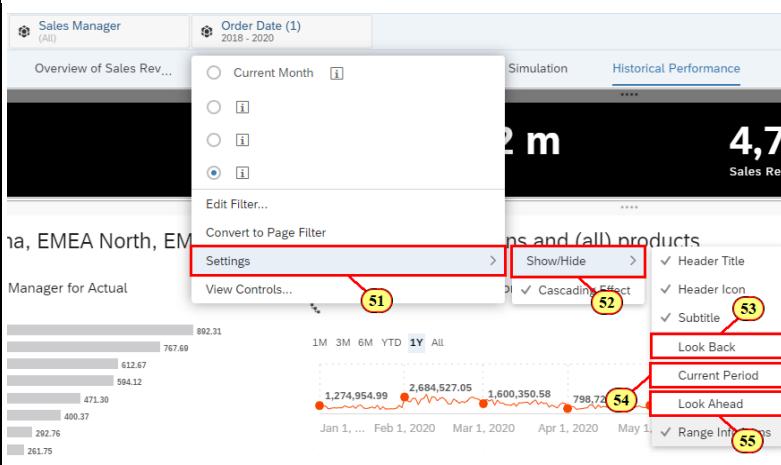
Explanation	Screenshot
31. Click Dec	 <p>The screenshot shows a Date Selector dialog box. At the top, there's a header bar with a person icon, the text "Files / Section 9.0", and tabs for "Story" and "Data". Below the header is a toolbar with icons for File, Search, and Save. The main area is titled "Date Selector" and shows the date "Nov 30, 2020". A checkbox labeled "System Current Date / Period" is checked. The calendar grid displays months from January to December 2020. The month "Dec" is highlighted with a red rectangular selection. The day "31" is highlighted with a yellow circular selection. Navigation arrows are visible at the top of the calendar grid.</p>

Explanation	Screenshot																																
<p>32. Click 8</p> <p>33. Click Outside the Date Selector to Collapse</p>																																	
<p>👉 You can see, especially in the time series chart, that the dashboard has been updated accordingly.</p>	<table border="1"> <thead> <tr> <th>Order Number</th> <th>Product</th> <th>Order Date</th> <th>Receive Date</th> <th>Account</th> <th>Sales Revenue</th> <th>Gross Margin</th> <th>Discount</th> </tr> </thead> <tbody> <tr> <td>2405</td> <td>Wiggle Me!</td> <td>1 (Dec, 2020)</td> <td>1a (Dec, 2020)</td> <td>14 (W/)</td> <td>8,274</td> <td>8,274</td> <td>0 (0%)</td> </tr> <tr> <td>2406</td> <td>Leather</td> <td>1 (Dec, 2020)</td> <td>15 (Dec, 2020)</td> <td>16 (W/)</td> <td>55,700</td> <td>55,563</td> <td>55,563</td> </tr> <tr> <td>2407</td> <td>Grace Guitars</td> <td>1 (Dec, 2020)</td> <td>16 (Dec, 2020)</td> <td>14 (W/)</td> <td>1,140</td> <td>1,140</td> <td>0 (0%)</td> </tr> </tbody> </table>	Order Number	Product	Order Date	Receive Date	Account	Sales Revenue	Gross Margin	Discount	2405	Wiggle Me!	1 (Dec, 2020)	1a (Dec, 2020)	14 (W/)	8,274	8,274	0 (0%)	2406	Leather	1 (Dec, 2020)	15 (Dec, 2020)	16 (W/)	55,700	55,563	55,563	2407	Grace Guitars	1 (Dec, 2020)	16 (Dec, 2020)	14 (W/)	1,140	1,140	0 (0%)
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<p>👉 Next, you want to give your story viewers some more time filtering options. Such as Current Year to Date and Previous Year to Date. Of course, all these options shall be based on the Date Selector for the current date.</p> <p>You can do this by adding additional ranges to the Current Month story filter.</p> <p>34. Click Order Date</p> <p>35. Click Edit Filter</p>																																	

Explanation	Screenshot
<p>The first range to add is beginning of the year up to today's date.</p> <p>36. Click + Add a New Range</p>	
<p>37. Click Include Range up to Current Period</p>	
<p>The next range to add is beginning of last year up to today's date last year. This can be done by applying an offset to the range filter.</p> <p>38. Click + Add a New Range</p>	

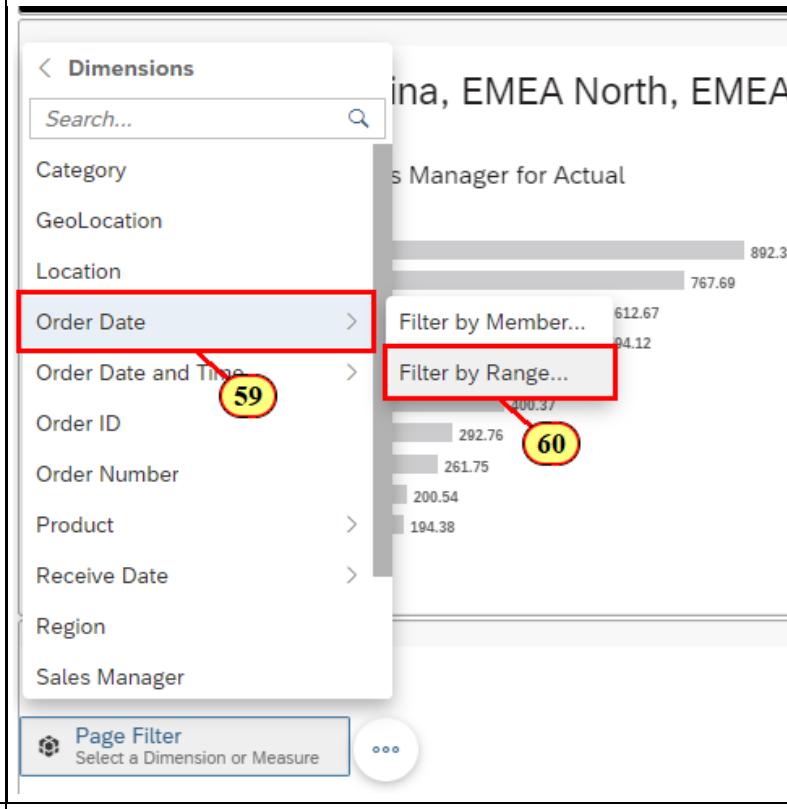
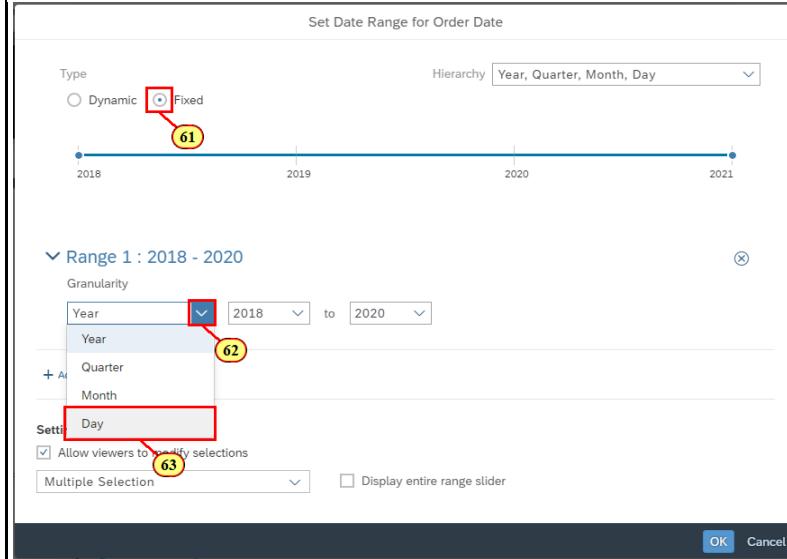
Explanation	Screenshot										
<p>39. Expand Range Type</p> <p>40. Click Offset</p>	<p>Current Date: Date Selector Day: Dec 8, 2020</p> <p>Range 2: Jan 1, 2020 - Dec 8, 2020</p> <p>Range 3: 2020 - 2020</p> <table border="1"> <tr> <td>Range Type: Standard</td> <td>Granularity: Year</td> <td>Look Back: 0</td> <td>Current Period: Year (2020)</td> <td>Look Ahead: 0</td> </tr> <tr> <td>Offset</td> <td>Offset Direction: Current Period</td> <td colspan="3"></td> </tr> </table>	Range Type: Standard	Granularity: Year	Look Back: 0	Current Period: Year (2020)	Look Ahead: 0	Offset	Offset Direction: Current Period			
Range Type: Standard	Granularity: Year	Look Back: 0	Current Period: Year (2020)	Look Ahead: 0							
Offset	Offset Direction: Current Period										
<p>41. Enter 1 as the Offset Amount</p> <p>42. Click Outside the Offset Amount</p>	<p>Current Date: Date Selector Day: Dec 8, 2020</p> <p>Range 2: Jan 1, 2020 - Dec 8, 2020</p> <p>Range 3: 2020 - 2020</p> <table border="1"> <tr> <td>Range Type: Offset</td> <td>Granularity: Year</td> <td>Look Back: 0</td> <td>Offset Period: Year (2020)</td> <td>Look Ahead: 0</td> </tr> <tr> <td>Offset Direction: Look Back</td> <td>Offset Granularity: Year</td> <td>Offset Amount: 1</td> <td>Offset Period: Year (2020)</td> <td>Look Ahead: 0</td> </tr> </table>	Range Type: Offset	Granularity: Year	Look Back: 0	Offset Period: Year (2020)	Look Ahead: 0	Offset Direction: Look Back	Offset Granularity: Year	Offset Amount: 1	Offset Period: Year (2020)	Look Ahead: 0
Range Type: Offset	Granularity: Year	Look Back: 0	Offset Period: Year (2020)	Look Ahead: 0							
Offset Direction: Look Back	Offset Granularity: Year	Offset Amount: 1	Offset Period: Year (2020)	Look Ahead: 0							
<p>43. Enable Include Range up to Offset Period</p> <p>The last range shall be the last 2 years as well as the current year.</p> <p>44. Click + Add a New Range</p>	<p>Current Date: Date Selector Day: Dec 8, 2020</p> <p>Range 3: 2019 - 2019</p> <table border="1"> <tr> <td>Range Type: Offset</td> <td>Granularity: Year</td> <td>Look Back: 0</td> <td>Offset Period: Year (2019)</td> <td>Look Ahead: 0</td> </tr> <tr> <td>Offset Direction: Look Back</td> <td>Offset Granularity: Year</td> <td>Offset Amount: 1</td> <td>Offset Period: Year (2019)</td> <td>Look Ahead: 0</td> </tr> </table> <p>Include Range up to Offset Period: <input checked="" type="checkbox"/> 43</p> <p>+ Add a New Range 44</p>	Range Type: Offset	Granularity: Year	Look Back: 0	Offset Period: Year (2019)	Look Ahead: 0	Offset Direction: Look Back	Offset Granularity: Year	Offset Amount: 1	Offset Period: Year (2019)	Look Ahead: 0
Range Type: Offset	Granularity: Year	Look Back: 0	Offset Period: Year (2019)	Look Ahead: 0							
Offset Direction: Look Back	Offset Granularity: Year	Offset Amount: 1	Offset Period: Year (2019)	Look Ahead: 0							

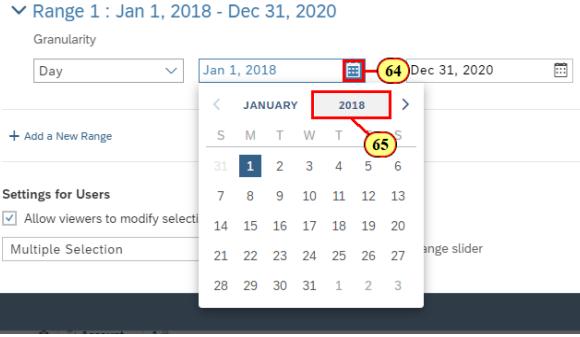
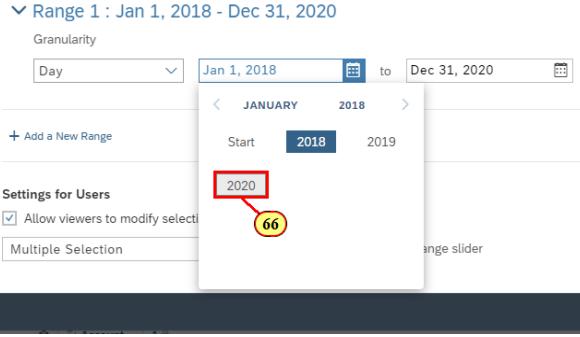
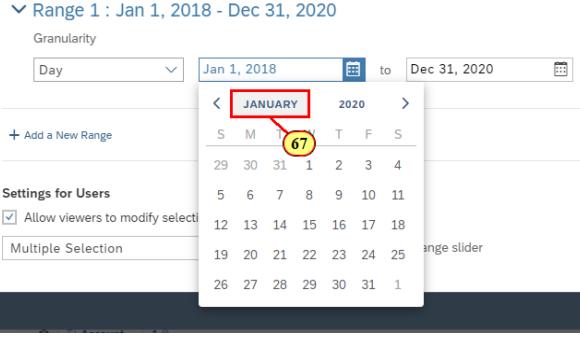
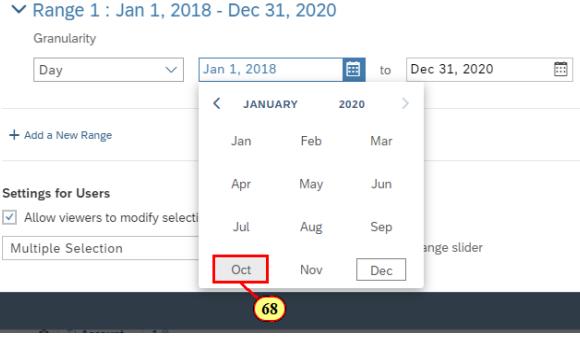
Explanation	Screenshot
<p>45. Enter the Look Back as 2</p> <p>46. Click Outside Look Back to Save Entry</p> <p>👉 You're done with the set up of the 4 time ranges that the story view may choose from.</p> <p>47. Click OK</p>	
<p>👉 Let's review the ranges created. Switch from Current Month to the Current Year filter.</p> <p>48. Click Current Month</p> <p>49. Click the Second Member</p>	
<p>👉 You can see on the time series chart that the filter has been applied. Let's extend to view the last 2 years as well as the current year.</p>	

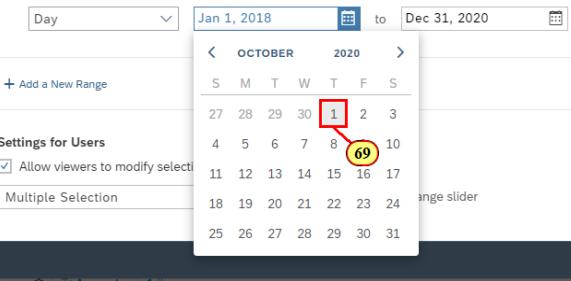
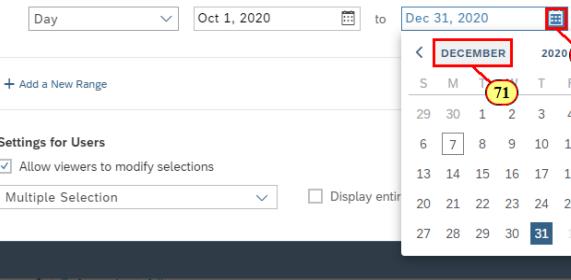
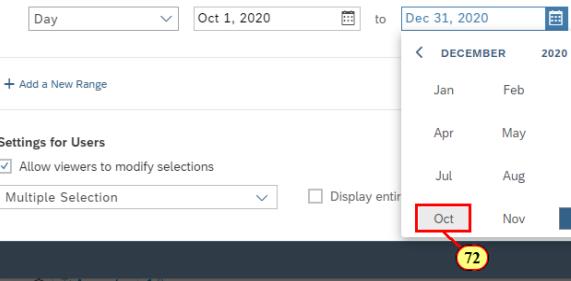
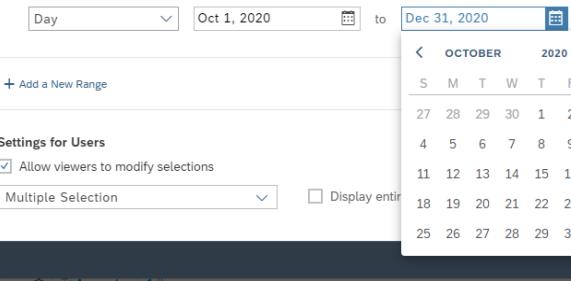
Explanation	Screenshot
<p>50. Select the Last Member</p>	
<p>Again, you can see on the time series chart that the filter has been applied.</p>	
<p>Right now, the story filter has still a lot of options such as configuring the time periods to go back to. You can hide this complexity from the story viewer. Let's do that and only expose the effected time range to the story viewers.</p> <p>51. Click Settings 52. Click Show / Hide 53. Deselect Look Back 54. Deselect Current Period 55. Deselect Look Ahead</p>	

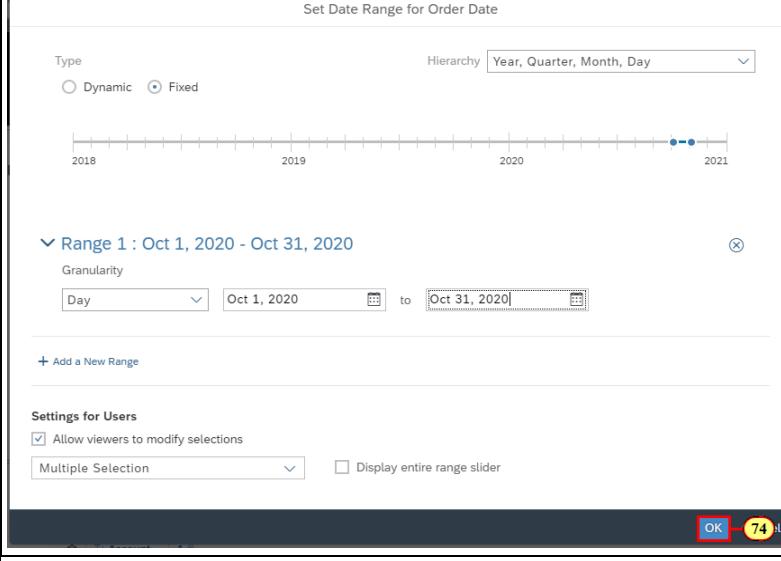
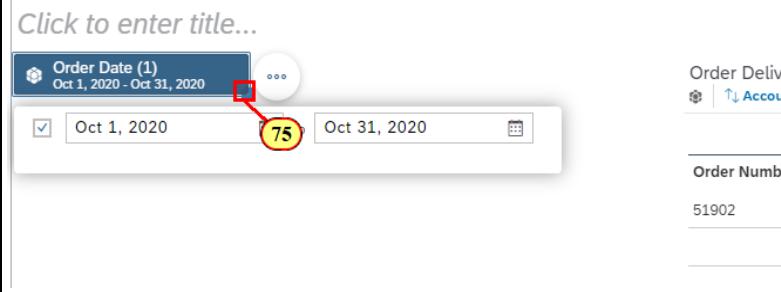
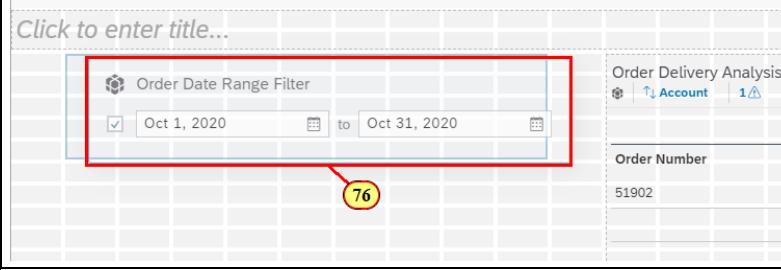
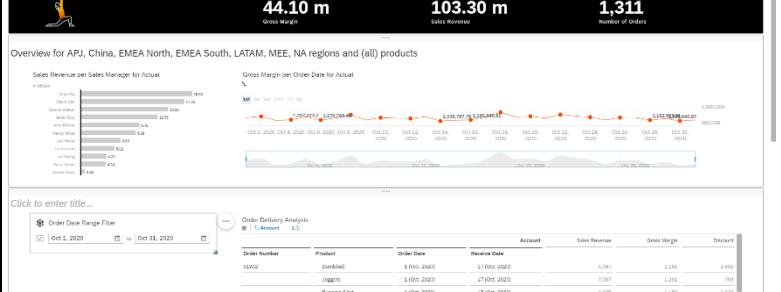
Explanation	Screenshot
<p>👉 You can see that this looks much cleaner.</p>	
<p>👉 Next you want to add some page input controls to investigate, which orders where ordered and received in a certain time frame. These input controls shall be in the lane with the Order Deliver Analysis table. Let's select the lane and add an input control each for Order and Receive Date.</p> <p>56. Click the Third Lane (Row)</p>	

Explanation	Screenshot
<p>57. Click Insert Input Control</p> <p>58. Click Dimensions</p>	<p>The screenshot shows the SAP Analytics Cloud interface. At the top, there's a navigation bar with 'Story' and 'Data' tabs, file icons, and an 'Insert' button. Below the navigation bar, there are three cards: 'Date Selector' (Dec 8, 2020), 'Sales Manager (All)', and 'Order Data (2018 - 2020)' (highlighted with a yellow circle and the number 57). Below these cards is a row of buttons: 'Overview', 'Smart Insights', 'Overview of Sales Rev...', and 'Key Influencers'. The main content area features a chart titled 'Overview for APJ, China, EMEA North, EMEA South, LATAM'. To the left of the chart is a sidebar with a 'Data Source' section showing 'SAC_ORDER_FINANCE' and a 'Dimensions' section (highlighted with a red box and the number 58) containing options like 'Measures', 'Add Time Filters', and time-related filters ('Current', 'Previous', 'Next', 'Previous & Current', 'Current & Next', 'Advanced Filtering...'). At the bottom of the sidebar is a 'Page Filter' section with the placeholder 'Select a Dimension or Measure'.</p>

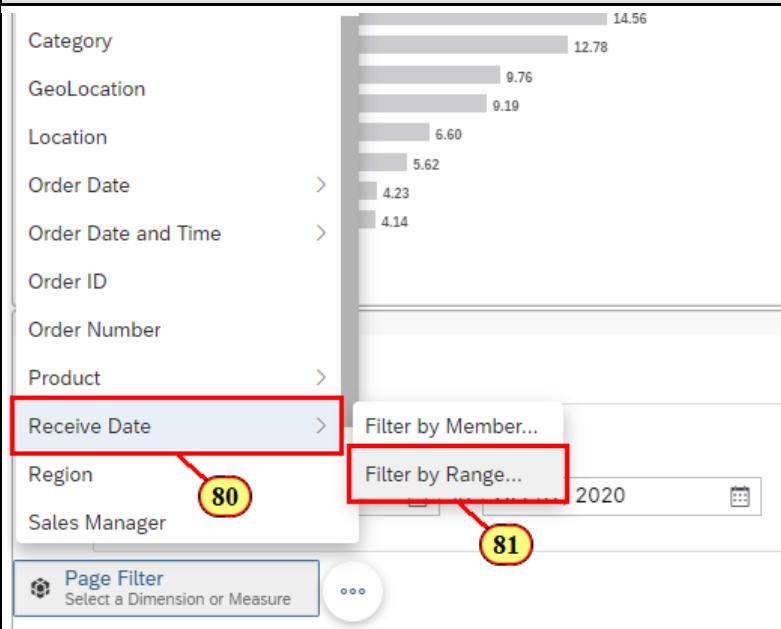
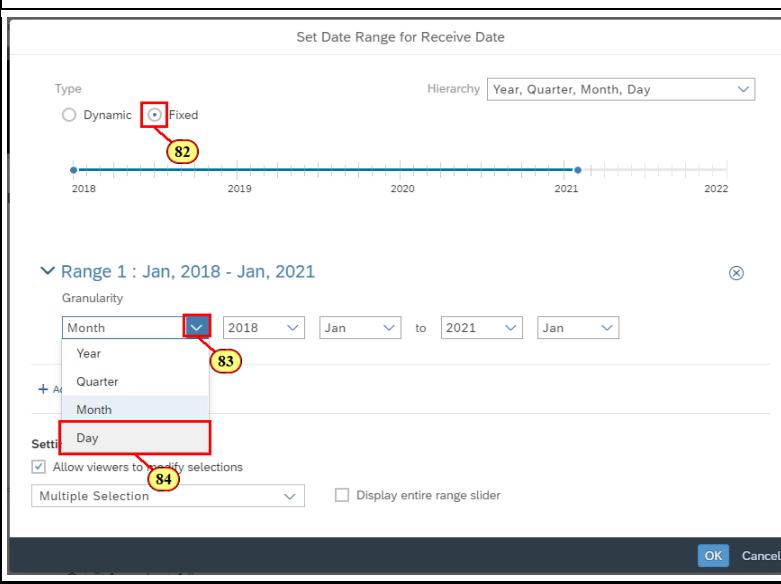
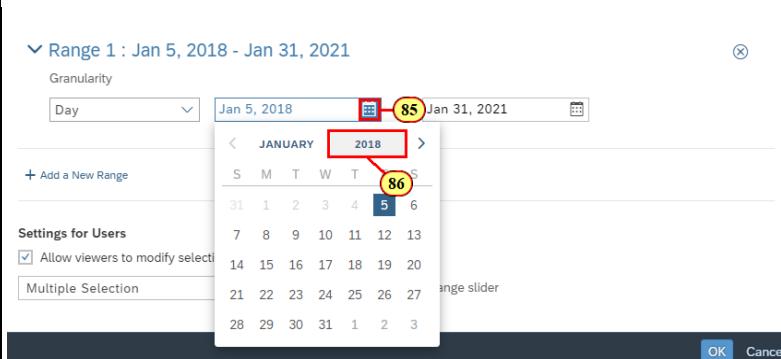
Explanation	Screenshot
<p>59. Click Order Date</p> <p>60. Click Filter by Range...</p>	
<p>👉 This time the range shall be fixed rather than dynamic.</p> <p>61. Click Fixed</p> <p>👉 You want the range of the order to be from October 1st to October 31st, 2020.</p> <p>62. Expand Granularity</p> <p>63. Click Day</p>	

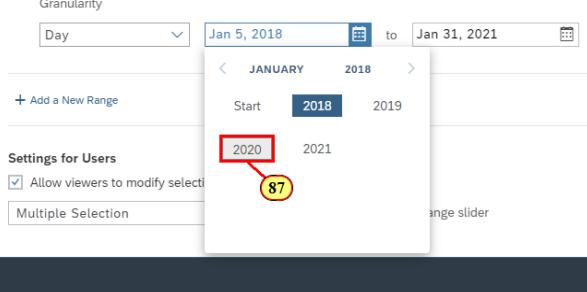
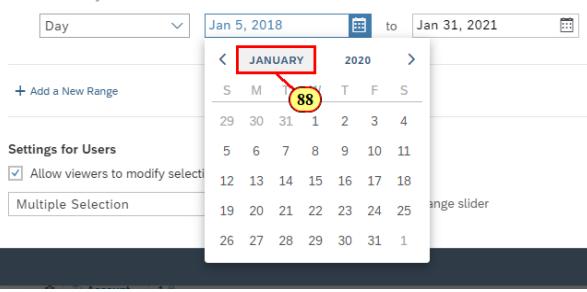
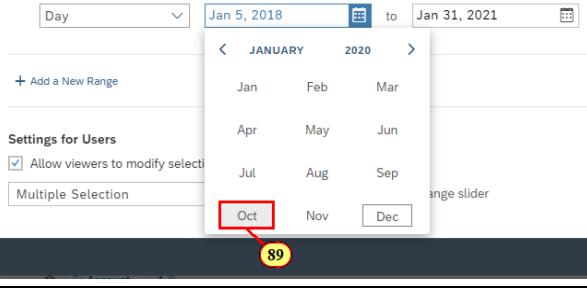
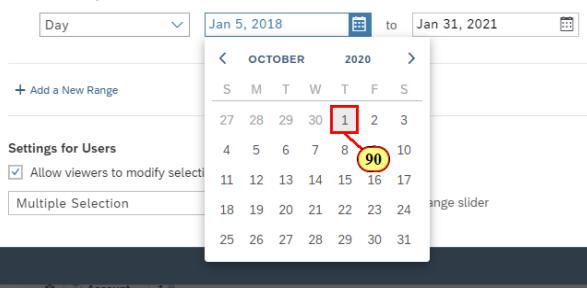
Explanation	Screenshot
<p>64. Expand the Beginning Date Picker</p> <p>65. Click 2018</p>	 <p>Range 1 : Jan 1, 2018 - Dec 31, 2020</p> <p>Granularity</p> <p>Day Jan 1, 2018 to Dec 31, 2020</p> <p>Add a New Range</p> <p>Settings for Users</p> <p>Allow viewers to modify selected</p> <p>Multiple Selection</p> <p>OK Cancel</p>
<p>66. Click 2020</p>	 <p>Range 1 : Jan 1, 2018 - Dec 31, 2020</p> <p>Granularity</p> <p>Day Jan 1, 2018 to Dec 31, 2020</p> <p>Add a New Range</p> <p>Settings for Users</p> <p>Allow viewers to modify selected</p> <p>Multiple Selection</p> <p>OK Cancel</p>
<p>67. Click January</p>	 <p>Range 1 : Jan 1, 2018 - Dec 31, 2020</p> <p>Granularity</p> <p>Day Jan 1, 2018 to Dec 31, 2020</p> <p>Add a New Range</p> <p>Settings for Users</p> <p>Allow viewers to modify selected</p> <p>Multiple Selection</p> <p>OK Cancel</p>
<p>68. Click Oct</p>	 <p>Range 1 : Jan 1, 2018 - Dec 31, 2020</p> <p>Granularity</p> <p>Day Jan 1, 2018 to Dec 31, 2020</p> <p>Add a New Range</p> <p>Settings for Users</p> <p>Allow viewers to modify selected</p> <p>Multiple Selection</p> <p>OK Cancel</p>

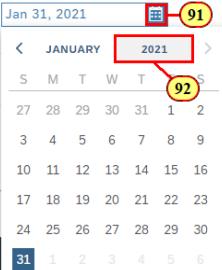
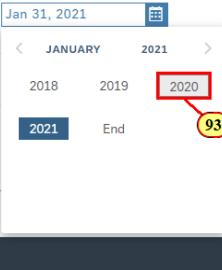
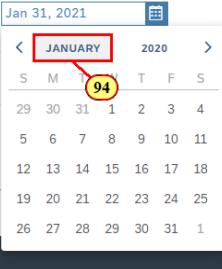
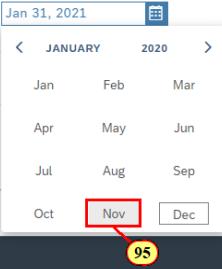
Explanation	Screenshot
69. Click 1	<p>Range 1 : Jan 1, 2018 - Dec 31, 2020</p>  <p>OK Cancel</p>
<p>70. Expand the End Date Picker</p> <p>71. Click December</p>	<p>Range 1 : Oct 1, 2020 - Dec 31, 2020</p>  <p>OK Cancel</p>
72. Click Oct	<p>Range 1 : Oct 1, 2020 - Dec 31, 2020</p>  <p>OK Cancel</p>
73. Click 31	<p>Range 1 : Oct 1, 2020 - Dec 31, 2020</p>  <p>OK Cancel</p>

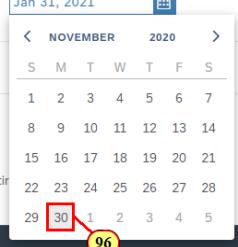
Explanation	Screenshot
<p>⚠️ Quality Check! Does your range match the screenshot (October 1, 2020 - October 31, 2020)?</p> <p>74. Click OK</p>	
<p>👉 The input control was added to the page. Let's expand it and put it into the position.</p> <p>75. Click and Drag the Input Control to Resize</p>	
<p>76. Click and Drag the Input Control to Center</p>	
<p>⚠️ Quality Check! Your dashboard should look like this.</p>	

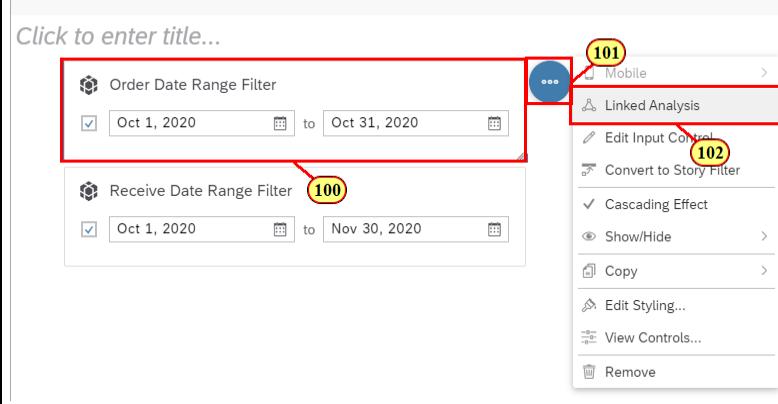
Explanation	Screenshot
<p>👉 Let's create another input control to filter based on the receive dates between October 1st, 2020 and November 30th, 2020.</p> <p>77. Click the Third Lane Border</p>	
<p>78. Click Insert Input Control</p>	
<p>79. Click Dimensions</p>	

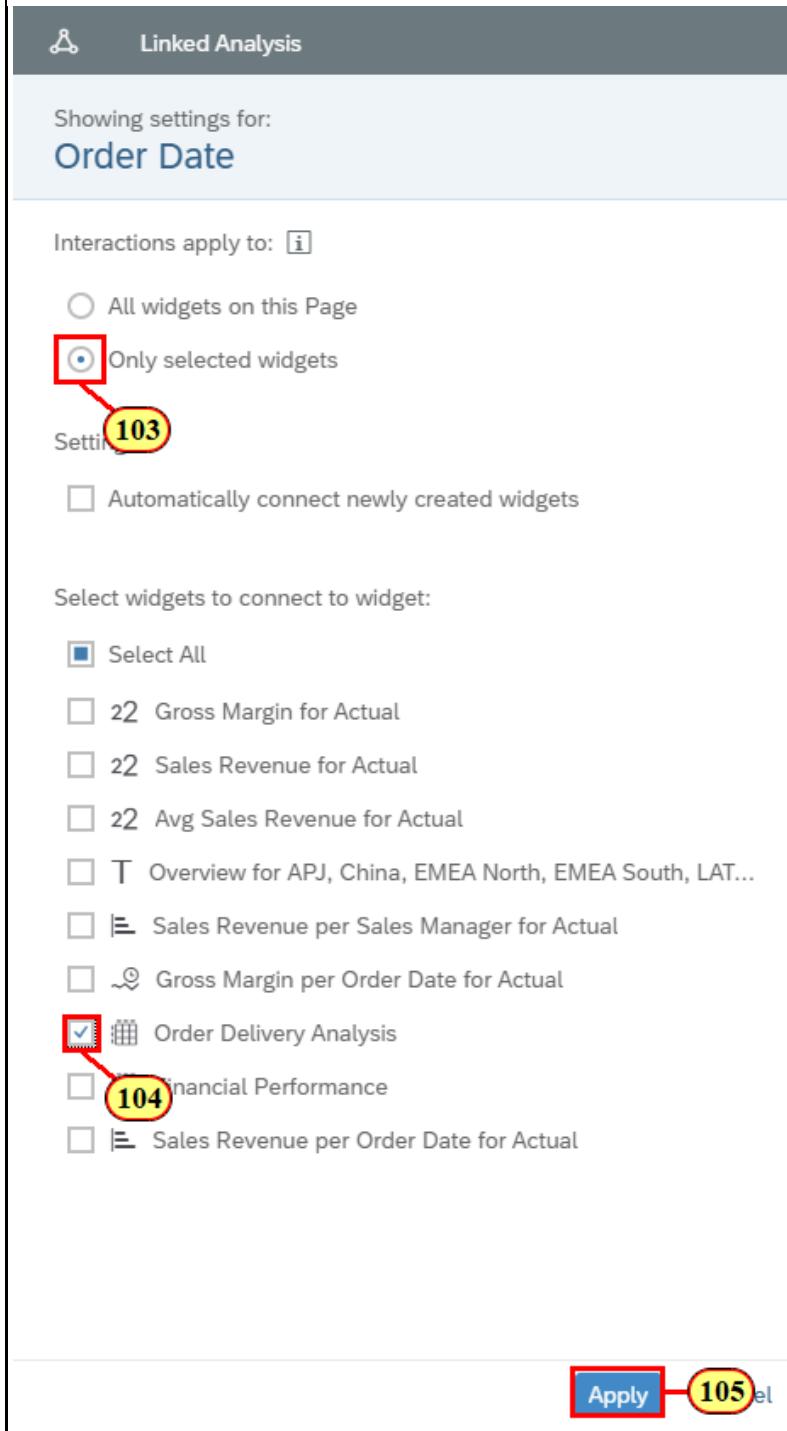
Explanation	Screenshot
<p>80. Click Receive Date</p> <p>81. Click Filter by Range...</p>	
<p>82. Click Fixed</p> <p>83. Expand Granularity</p> <p>84. Select Day</p>	
<p>85. Expand the Beginning Date Picker</p> <p>86. Click 2018</p>	

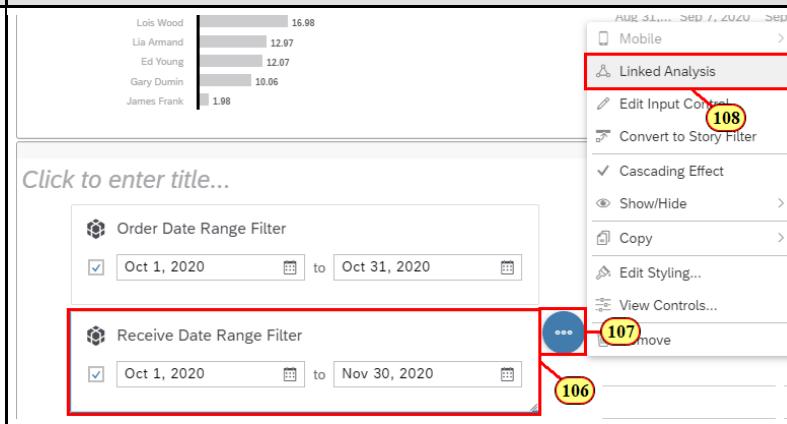
Explanation	Screenshot
87. Click 2020	<p>Range 1 : Jan 5, 2018 - Jan 31, 2021</p>  <p>The screenshot shows a date range selector with the start date set to "Jan 5, 2018" and the end date set to "Jan 31, 2021". A dropdown menu for the year is open, showing "2018" and "2020". The year "2020" is highlighted with a red box, and the number "87" is circled in yellow below it.</p>
88. Click January	<p>Range 1 : Jan 5, 2018 - Jan 31, 2021</p>  <p>The screenshot shows a date range selector with the start date set to "Jan 5, 2018" and the end date set to "Jan 31, 2021". A dropdown menu for the month is open, showing "JANUARY" and "2020". The month "JANUARY" is highlighted with a red box, and the number "88" is circled in yellow below it.</p>
89. Click Oct	<p>Range 1 : Jan 5, 2018 - Jan 31, 2021</p>  <p>The screenshot shows a date range selector with the start date set to "Jan 5, 2018" and the end date set to "Jan 31, 2021". A dropdown menu for the month is open, showing "Oct" and "2020". The month "Oct" is highlighted with a red box, and the number "89" is circled in yellow below it.</p>
90. Click 1	<p>Range 1 : Jan 5, 2018 - Jan 31, 2021</p>  <p>The screenshot shows a date range selector with the start date set to "Jan 5, 2018" and the end date set to "Jan 31, 2021". A dropdown menu for the day is open, showing "1" and "2020". The day "1" is highlighted with a red box, and the number "90" is circled in yellow below it.</p>

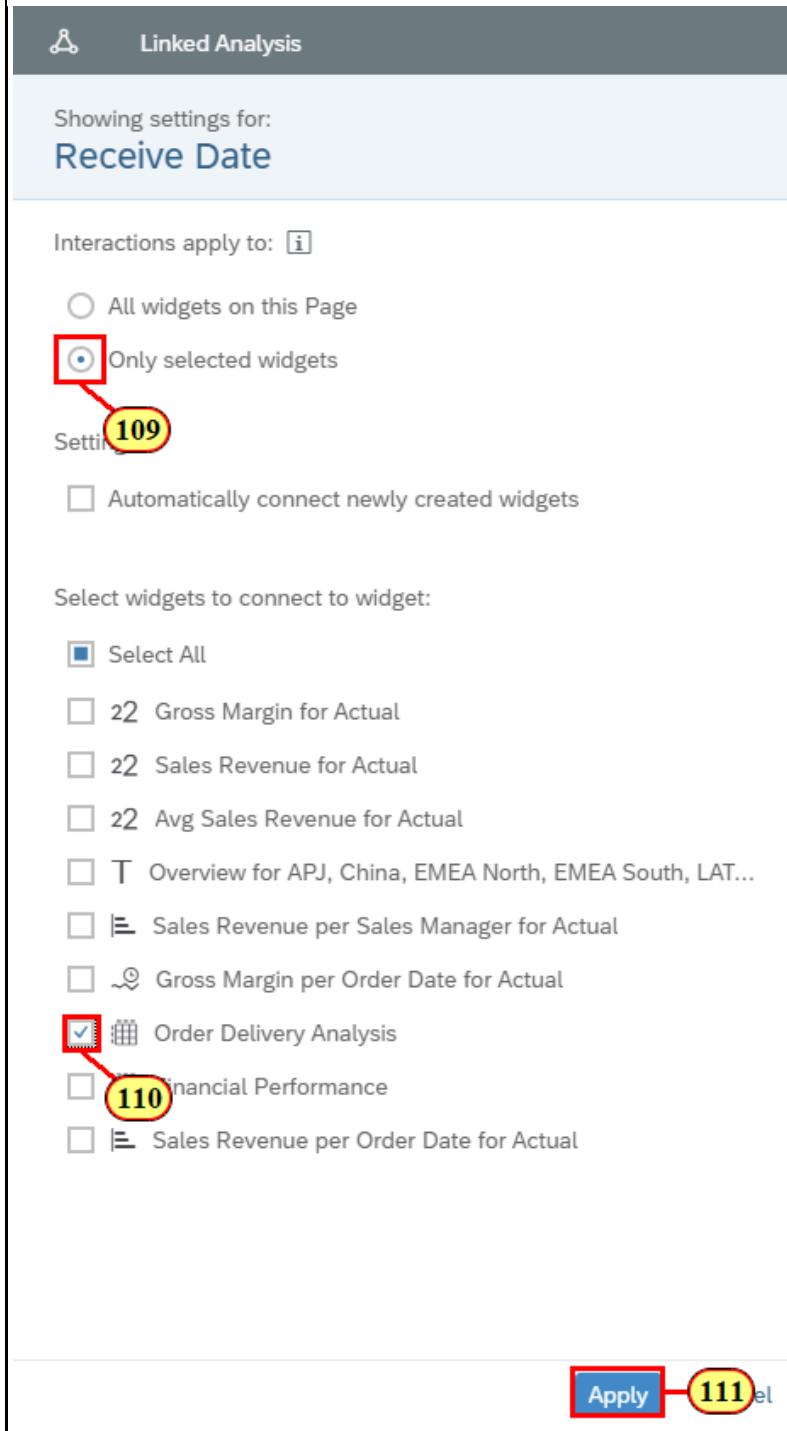
Explanation	Screenshot
<p>91. Expand the End Date Picker</p> <p>92. Click 2021</p>	<p>Range 1 : Oct 1, 2020 - Jan 31, 2021</p> <p>Granularity Day Oct 1, 2020 to Jan 31, 2021</p> <p>+ Add a New Range</p> <p>Settings for Users <input checked="" type="checkbox"/> Allow viewers to modify selections Multiple Selection <input type="checkbox"/> Display entire range</p>  <p>OK Cancel</p>
<p>93. Click 2020</p>	<p>Range 1 : Oct 1, 2020 - Jan 31, 2021</p> <p>Granularity Day Oct 1, 2020 to Jan 31, 2021</p> <p>+ Add a New Range</p> <p>Settings for Users <input checked="" type="checkbox"/> Allow viewers to modify selections Multiple Selection <input type="checkbox"/> Display entire range</p>  <p>OK Cancel</p>
<p>94. Click January</p>	<p>Range 1 : Oct 1, 2020 - Jan 31, 2021</p> <p>Granularity Day Oct 1, 2020 to Jan 31, 2021</p> <p>+ Add a New Range</p> <p>Settings for Users <input checked="" type="checkbox"/> Allow viewers to modify selections Multiple Selection <input type="checkbox"/> Display entire range</p>  <p>OK Cancel</p>
<p>95. Click Nov</p>	<p>Range 1 : Oct 1, 2020 - Jan 31, 2021</p> <p>Granularity Day Oct 1, 2020 to Jan 31, 2021</p> <p>+ Add a New Range</p> <p>Settings for Users <input checked="" type="checkbox"/> Allow viewers to modify selections Multiple Selection <input type="checkbox"/> Display entire range</p>  <p>OK Cancel</p>

Explanation	Screenshot
96. Click 30	<p>Range 1 : Oct 1, 2020 - Jan 31, 2021</p> <p>Granularity</p> <p>Day Oct 1, 2020 to Jan 31, 2021</p> <p>+ Add a New Range</p> <p>Settings for Users</p> <p><input checked="" type="checkbox"/> Allow viewers to modify selections</p> <p>Multiple Selection <input type="button" value="▼"/></p> <p>Display entire range slider <input type="checkbox"/></p>  <p>OK Cancel</p>
<p>⚠️</p> <p>Quality Check! Does your range match the screenshot (October 1, 2020 - November 30, 2020)?</p> <p>97. Click OK</p>	<p>Set Date Range for Receive Date</p> <p>Type: Fixed Hierarchy: Year, Quarter, Month, Day</p> <p>Dynamic Fixed</p> <p>2018 2019 2020 2021 2022</p> <p>Range 1 : Oct 1, 2020 - Nov 30, 2020</p> <p>Granularity</p> <p>Day Oct 1, 2020 to Nov 30, 2020</p> <p>+ Add a New Range</p> <p>Settings for Users</p> <p><input checked="" type="checkbox"/> Allow viewers to modify selections</p> <p>Multiple Selection <input type="button" value="▼"/></p> <p>Display entire range slider <input type="checkbox"/></p> <p>OK 97</p>
<p>👉</p> <p>The input control was added to the page. Let's expand it and put it into the position.</p> <p>98. Align the Receive Date Input Control with Order Date Range</p>	<p>Click to enter title...</p> <p>Order Date Range Filter</p> <p><input checked="" type="checkbox"/> Oct 1, 2020 to Oct 31, 2020</p> <p>Receive Date (1) Oct 1, 2020 - Nov 30, 2020</p> <p>98</p>
99. Resize Receive Date as Wide as Order Date Range Filter	<p>Click to enter title...</p> <p>Order Date Range Filter</p> <p><input checked="" type="checkbox"/> Oct 1, 2020 to Oct 31, 2020</p> <p>Receive Date (1) Oct 1, 2020 - Nov 30, 2020</p> <p>99</p>

Explanation	Screenshot
<p> Quality Check! Your dashboard should look like this.</p>	
<p> You may have noticed that the entire dashboard is filtered on the Order and Receive date input controls that you just added. You only want to apply these to the Order Delivery Analysis table. You can use Linked Analysis to set the scope of the page input controls.</p> <p>100. Click the Order Date Range Filter</p> <p>101. Click the More Action Icon</p> <p>102. Click Linked Analysis</p>	

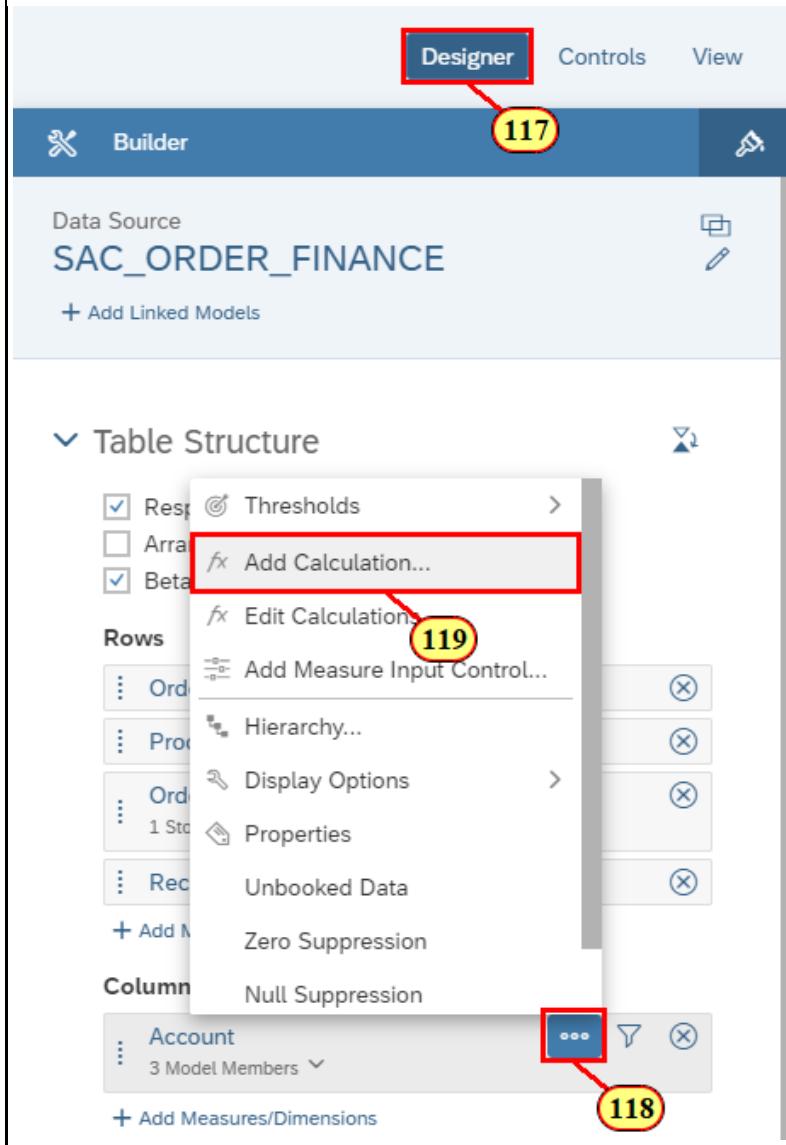
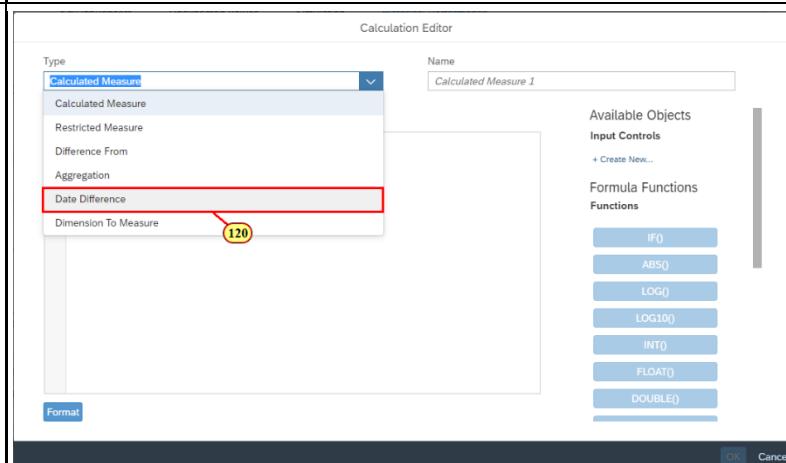
Explanation	Screenshot
<p>103. Click Only Selected Widgets</p> <p>104. Click Order Delivery Analysis</p> <p>105. Click Apply</p>	 <p>Showing settings for: Order Date</p> <p>Interactions apply to: i</p> <p><input type="radio"/> All widgets on this Page <input checked="" type="radio"/> Only selected widgets 103</p> <p><input type="checkbox"/> Automatically connect newly created widgets</p> <p>Select widgets to connect to widget:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Select All <input type="checkbox"/> 22 Gross Margin for Actual <input type="checkbox"/> 22 Sales Revenue for Actual <input type="checkbox"/> 22 Avg Sales Revenue for Actual <input type="checkbox"/> T Overview for APJ, China, EMEA North, EMEA South, LAT... <input type="checkbox"/> E Sales Revenue per Sales Manager for Actual <input type="checkbox"/> G Gross Margin per Order Date for Actual <input checked="" type="checkbox"/> Order Delivery Analysis 104 <input type="checkbox"/> Financial Performance <input type="checkbox"/> E Sales Revenue per Order Date for Actual <p>Apply 105</p>

Explanation	Screenshot												
<p>👉 We want to repeat the steps for the Receive Date Range Filter Input Control.</p> <p>106. Click Receive Date Range Filter</p> <p>107. Click More Action Icon</p> <p>108. Click Linked Analysis</p>	 <p>The screenshot shows a dashboard with a bar chart at the top. The chart has five bars with the following data:</p> <table border="1"> <thead> <tr> <th>Name</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>Lois Wood</td> <td>16.98</td> </tr> <tr> <td>Lia Armand</td> <td>12.97</td> </tr> <tr> <td>Ed Young</td> <td>12.07</td> </tr> <tr> <td>Gary Dumin</td> <td>10.06</td> </tr> <tr> <td>James Frank</td> <td>1.98</td> </tr> </tbody> </table> <p>Below the chart is a text input field with placeholder text "Click to enter title...". Underneath it are two filter controls:</p> <ul style="list-style-type: none"> Order Date Range Filter: Shows date range from Oct 1, 2020 to Oct 31, 2020. Receive Date Range Filter: Shows date range from Oct 1, 2020 to Nov 30, 2020. This control is highlighted with a red box and has a blue "More Action" icon with the number 106 next to it. <p>A context menu is open on the right side of the screen, listing various options. The "Linked Analysis" option is highlighted with a red box and has a yellow circle with the number 108 next to it.</p>	Name	Value	Lois Wood	16.98	Lia Armand	12.97	Ed Young	12.07	Gary Dumin	10.06	James Frank	1.98
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Lia Armand	12.97												
Ed Young	12.07												
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James Frank	1.98												

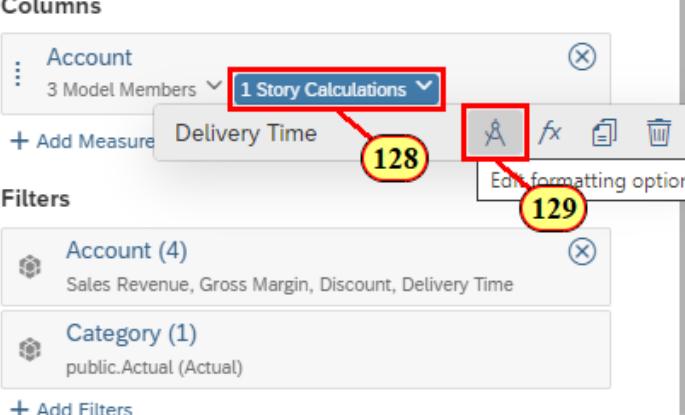
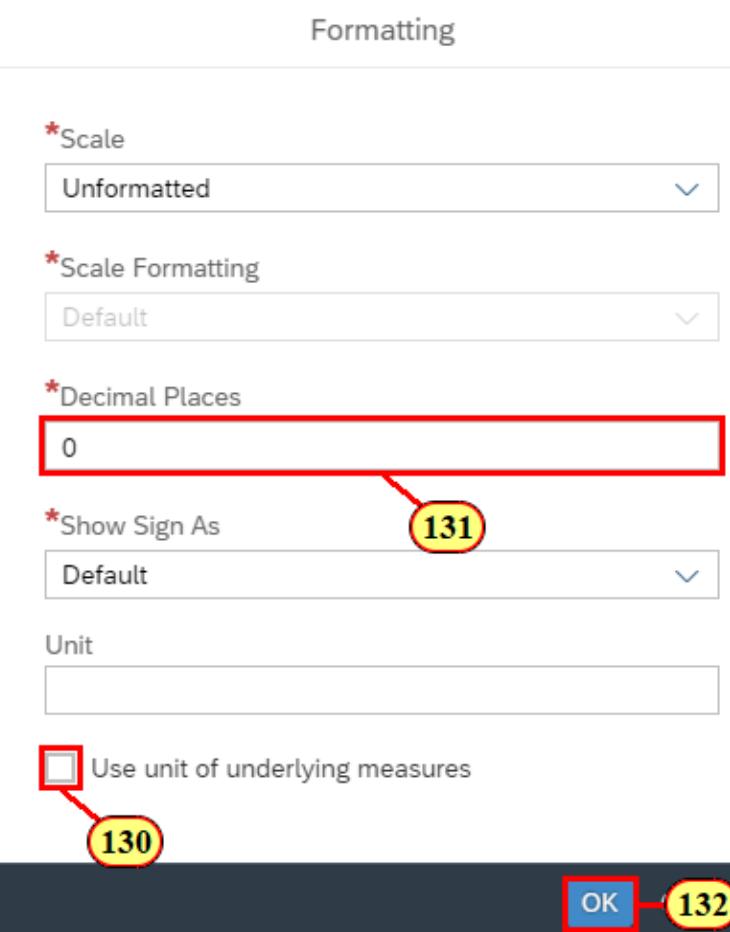
Explanation	Screenshot
<p>109. Click Only Selected Widgets</p> <p>110. Click Order Delivery Analysis</p> <p>111. Click Apply</p>	 <p>Showing settings for: Receive Date</p> <p>Interactions apply to: i</p> <p><input type="radio"/> All widgets on this Page <input checked="" type="radio"/> Only selected widgets 109</p> <p><input type="checkbox"/> Automatically connect newly created widgets</p> <p>Select widgets to connect to widget:</p> <p><input checked="" type="checkbox"/> Select All <input type="checkbox"/> 22 Gross Margin for Actual <input type="checkbox"/> 22 Sales Revenue for Actual <input type="checkbox"/> 22 Avg Sales Revenue for Actual <input type="checkbox"/> T Overview for APJ, China, EMEA North, EMEA South, LAT... <input type="checkbox"/> E Sales Revenue per Sales Manager for Actual <input type="checkbox"/> G Gross Margin per Order Date for Actual <input checked="" type="checkbox"/> Order Delivery Analysis 110 <input type="checkbox"/> Financial Performance <input type="checkbox"/> E Sales Revenue per Order Date for Actual</p> <p>Apply 111</p>

Explanation	Screenshot
<p>⚠️ Quality Check! Your page input controls should only drive the Order Delivery Analysis table.</p>	
<p>👉 Let's find out which orders that were shipped after Oct 1st, 2020 have been received by October 8th, 2020.</p> <p>112. Click the End Date Picker</p>	<p>Click to enter title...</p>
<p>113. Click November</p>	<p>Click to enter title...</p>
<p>114. Click Oct</p>	<p>Click to enter title...</p>

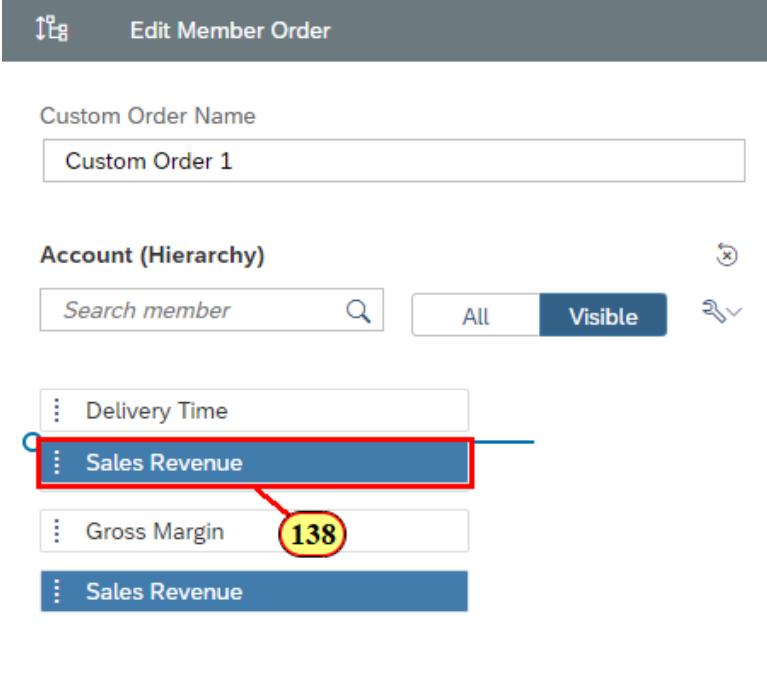
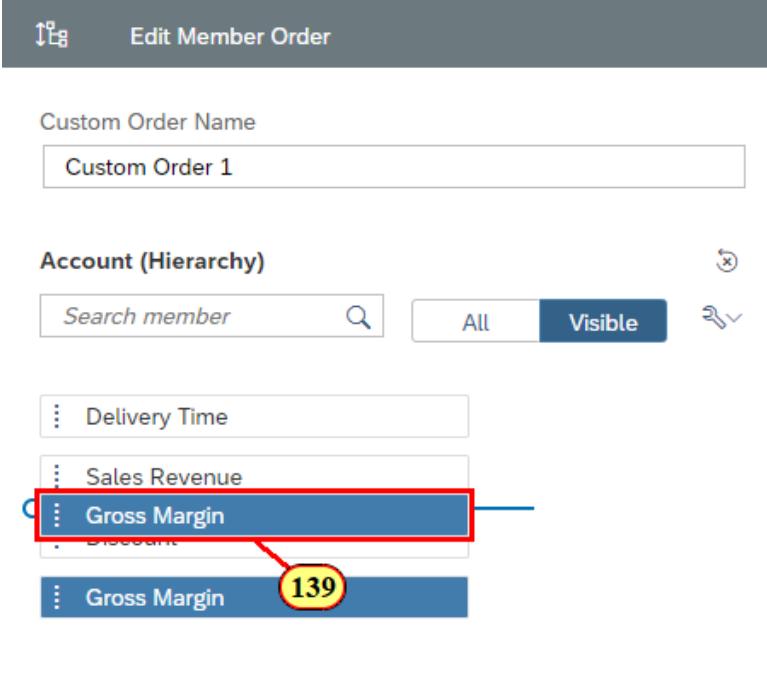
Explanation	Screenshot																																																																								
115. Click 8	<p>Click to enter title...</p> <table border="1"> <thead> <tr> <th>Order Number</th> <th>Product</th> </tr> </thead> <tbody> <tr> <td>51902</td> <td>Dumbbell</td> </tr> <tr> <td>51903</td> <td>Joggers</td> </tr> <tr> <td>51910</td> <td>Running Gilet</td> </tr> <tr> <td>51911</td> <td>Sports Parka</td> </tr> <tr> <td>51912</td> <td>Sports Bra</td> </tr> <tr> <td>51913</td> <td>Running Shoes</td> </tr> <tr> <td>51914</td> <td>Duffel Bag</td> </tr> <tr> <td>51915</td> <td>Baseball Cap</td> </tr> </tbody> </table>	Order Number	Product	51902	Dumbbell	51903	Joggers	51910	Running Gilet	51911	Sports Parka	51912	Sports Bra	51913	Running Shoes	51914	Duffel Bag	51915	Baseball Cap																																																						
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<p>Next you want to calculate the time it takes to deliver your orders. This can easily be done via calculations.</p> <p>116. Click the Order Delivery Analysis Table</p>	<p>Click to enter title...</p> <table border="1"> <thead> <tr> <th>Order Number</th> <th>Product</th> <th>Order Date</th> <th>Receive Date</th> <th>Account</th> <th>Sales Revenue</th> <th>Gross Margin</th> <th>Discount</th> </tr> </thead> <tbody> <tr> <td>51907</td> <td>Yoga Pants</td> <td>8 (Oct, 2020)</td> <td>8 (Oct, 2020)</td> <td></td> <td>8,438</td> <td>3,983</td> <td>2,813</td> </tr> <tr> <td>51913</td> <td>Basketball Shoes</td> <td>1 (Oct, 2020)</td> <td>5 (Oct, 2020)</td> <td></td> <td>31,950</td> <td>13,355</td> <td>3,232</td> </tr> <tr> <td>51919</td> <td>Duffel Bag</td> <td>1 (Oct, 2020)</td> <td>8 (Oct, 2020)</td> <td></td> <td>6,561</td> <td>2,172</td> <td>1,325</td> </tr> <tr> <td>51920</td> <td>Yoga Mat</td> <td>1 (Oct, 2020)</td> <td>8 (Oct, 2020)</td> <td></td> <td>7,344</td> <td>2,424</td> <td>2,370</td> </tr> <tr> <td>51921</td> <td>Bike Shorts</td> <td>1 (Oct, 2020)</td> <td>8 (Oct, 2020)</td> <td></td> <td>6,275</td> <td>1,324</td> <td>2,292</td> </tr> <tr> <td>51922</td> <td>Joggers</td> <td>1 (Oct, 2020)</td> <td>8 (Oct, 2020)</td> <td></td> <td>6,904</td> <td>967</td> <td>782</td> </tr> <tr> <td>51923</td> <td>Sports Bra</td> <td>1 (Oct, 2020)</td> <td>8 (Oct, 2020)</td> <td></td> <td>14,420</td> <td>2,769</td> <td>1,503</td> </tr> <tr> <td>51925</td> <td>Dumbbell</td> <td>1 (Oct, 2020)</td> <td>8 (Oct, 2020)</td> <td></td> <td>4,737</td> <td>1,975</td> <td>4,293</td> </tr> </tbody> </table>	Order Number	Product	Order Date	Receive Date	Account	Sales Revenue	Gross Margin	Discount	51907	Yoga Pants	8 (Oct, 2020)	8 (Oct, 2020)		8,438	3,983	2,813	51913	Basketball Shoes	1 (Oct, 2020)	5 (Oct, 2020)		31,950	13,355	3,232	51919	Duffel Bag	1 (Oct, 2020)	8 (Oct, 2020)		6,561	2,172	1,325	51920	Yoga Mat	1 (Oct, 2020)	8 (Oct, 2020)		7,344	2,424	2,370	51921	Bike Shorts	1 (Oct, 2020)	8 (Oct, 2020)		6,275	1,324	2,292	51922	Joggers	1 (Oct, 2020)	8 (Oct, 2020)		6,904	967	782	51923	Sports Bra	1 (Oct, 2020)	8 (Oct, 2020)		14,420	2,769	1,503	51925	Dumbbell	1 (Oct, 2020)	8 (Oct, 2020)		4,737	1,975	4,293
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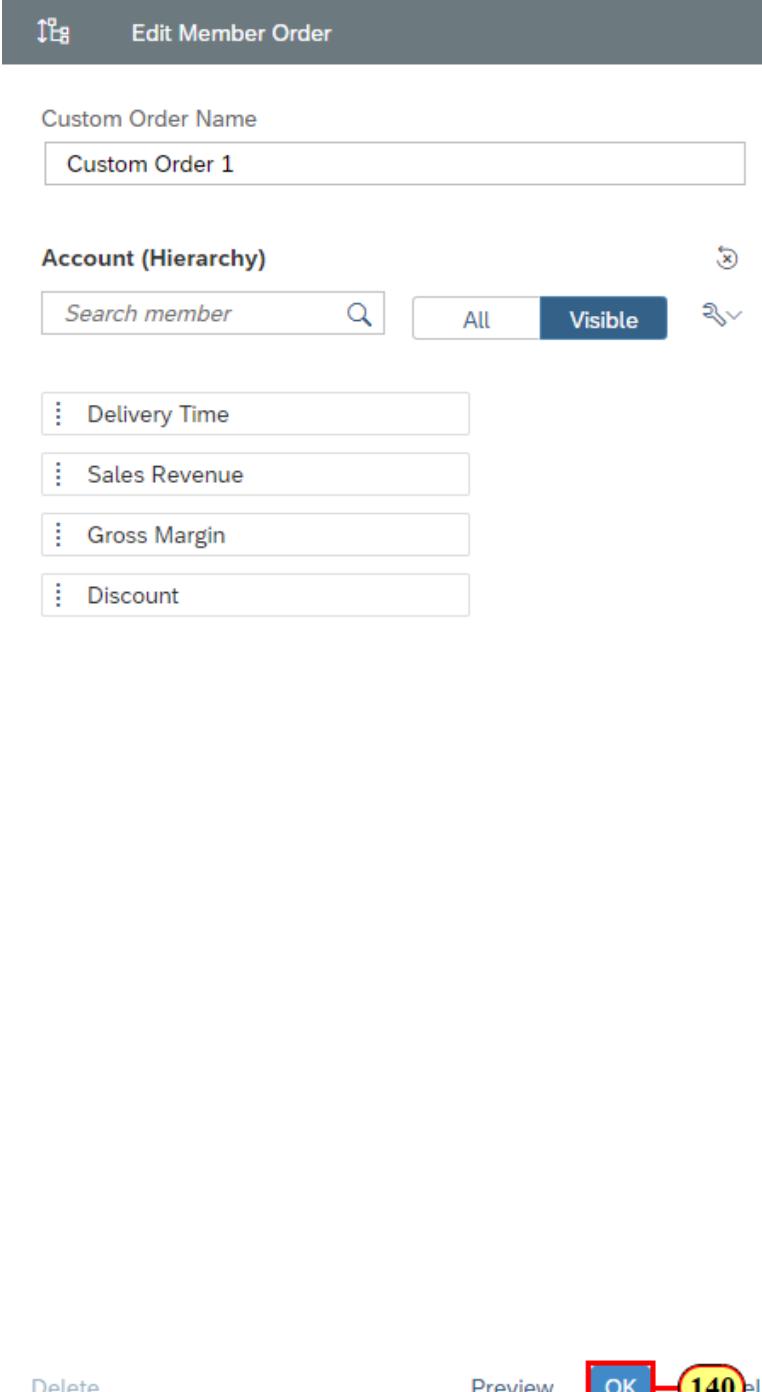
Explanation	Screenshot
<p>117. Click Designer</p> <p>118. Click the More Action icon for Account</p> <p>119. Click Add Calculation</p>	
<p>120. Click Date Difference</p>	

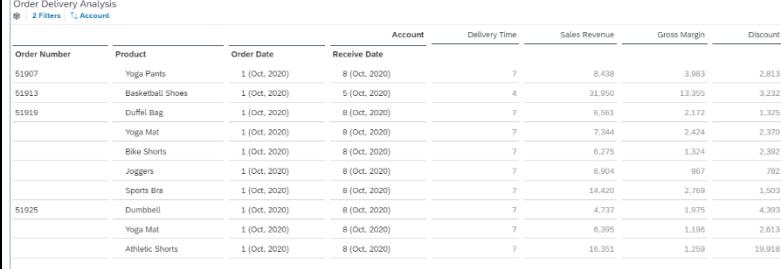
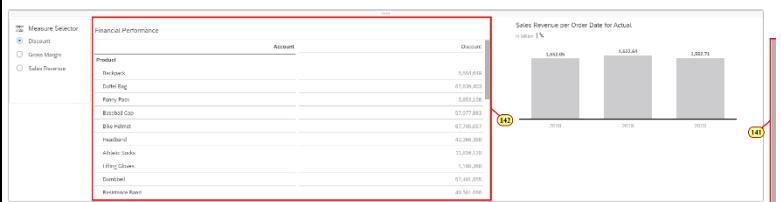
Explanation	Screenshot																																																																																																			
<p>👉 The time to deliver the orders is the difference between Receive Date and Order Date.</p> <p>121. Expand Time (A)</p> <p>122. Click Receive Date</p>																																																																																																				
<p>👉 You must specify the context of the calculation. As the delivery time is based on orders you must use Order ID in the dimension context. Also, in case the chart or table does not include Order ID, then an additional average aggregation will be applied to the calculation.</p> <p>123. Expand Dimension Context</p>																																																																																																				
<p>124. Click Order ID</p> <p>125. Click Outside the Dimension Context Drop Down Menu to Collapse</p> <p>126. Rename Calculation to Delivery Time</p> <p>127. Click OK</p>																																																																																																				
<p>👉 You can see the delivery time has been added to the table.</p> <p>Note: You may need to scroll in the table to see the new calculation.</p>	<table border="1"> <thead> <tr> <th>Order Number</th> <th>Product</th> <th>Order Date</th> <th>Receive Date</th> <th>Account</th> <th>Sales Revenue</th> <th>Gross Margin</th> <th>Discount</th> <th>Delivery Time</th> </tr> </thead> <tbody> <tr> <td>51907</td> <td>Yoga Pants</td> <td>1 (Oct, 2020)</td> <td>8 (Oct, 2020)</td> <td></td> <td>8,438</td> <td>3,983</td> <td>2,813</td> <td>7</td> </tr> <tr> <td>51913</td> <td>Basketball Shoes</td> <td>1 (Oct, 2020)</td> <td>5 (Oct, 2020)</td> <td></td> <td>31,950</td> <td>13,395</td> <td>3,232</td> <td>4</td> </tr> <tr> <td>51919</td> <td>Duffel Bag</td> <td>1 (Oct, 2020)</td> <td>8 (Oct, 2020)</td> <td></td> <td>6,561</td> <td>2,172</td> <td>1,325</td> <td>7</td> </tr> <tr> <td></td> <td>Yoga Mat</td> <td>1 (Oct, 2020)</td> <td>8 (Oct, 2020)</td> <td></td> <td>7,344</td> <td>2,424</td> <td>2,370</td> <td>7</td> </tr> <tr> <td></td> <td>Bike Shorts</td> <td>1 (Oct, 2020)</td> <td>8 (Oct, 2020)</td> <td></td> <td>6,275</td> <td>1,324</td> <td>2,392</td> <td>7</td> </tr> <tr> <td></td> <td>Joggers</td> <td>1 (Oct, 2020)</td> <td>8 (Oct, 2020)</td> <td></td> <td>6,904</td> <td>967</td> <td>782</td> <td>7</td> </tr> <tr> <td></td> <td>Sports Bra</td> <td>1 (Oct, 2020)</td> <td>8 (Oct, 2020)</td> <td></td> <td>14,420</td> <td>2,769</td> <td>1,503</td> <td>7</td> </tr> <tr> <td>51925</td> <td>Dumbbell</td> <td>1 (Oct, 2020)</td> <td>8 (Oct, 2020)</td> <td></td> <td>4,737</td> <td>1,975</td> <td>4,393</td> <td>7</td> </tr> <tr> <td></td> <td>Yoga Mat</td> <td>1 (Oct, 2020)</td> <td>8 (Oct, 2020)</td> <td></td> <td>6,395</td> <td>1,196</td> <td>2,613</td> <td>7</td> </tr> <tr> <td></td> <td>Athletic Shorts</td> <td>1 (Oct, 2020)</td> <td>8 (Oct, 2020)</td> <td></td> <td>16,351</td> <td>1,259</td> <td>19,918</td> <td>7</td> </tr> </tbody> </table>	Order Number	Product	Order Date	Receive Date	Account	Sales Revenue	Gross Margin	Discount	Delivery Time	51907	Yoga Pants	1 (Oct, 2020)	8 (Oct, 2020)		8,438	3,983	2,813	7	51913	Basketball Shoes	1 (Oct, 2020)	5 (Oct, 2020)		31,950	13,395	3,232	4	51919	Duffel Bag	1 (Oct, 2020)	8 (Oct, 2020)		6,561	2,172	1,325	7		Yoga Mat	1 (Oct, 2020)	8 (Oct, 2020)		7,344	2,424	2,370	7		Bike Shorts	1 (Oct, 2020)	8 (Oct, 2020)		6,275	1,324	2,392	7		Joggers	1 (Oct, 2020)	8 (Oct, 2020)		6,904	967	782	7		Sports Bra	1 (Oct, 2020)	8 (Oct, 2020)		14,420	2,769	1,503	7	51925	Dumbbell	1 (Oct, 2020)	8 (Oct, 2020)		4,737	1,975	4,393	7		Yoga Mat	1 (Oct, 2020)	8 (Oct, 2020)		6,395	1,196	2,613	7		Athletic Shorts	1 (Oct, 2020)	8 (Oct, 2020)		16,351	1,259	19,918	7
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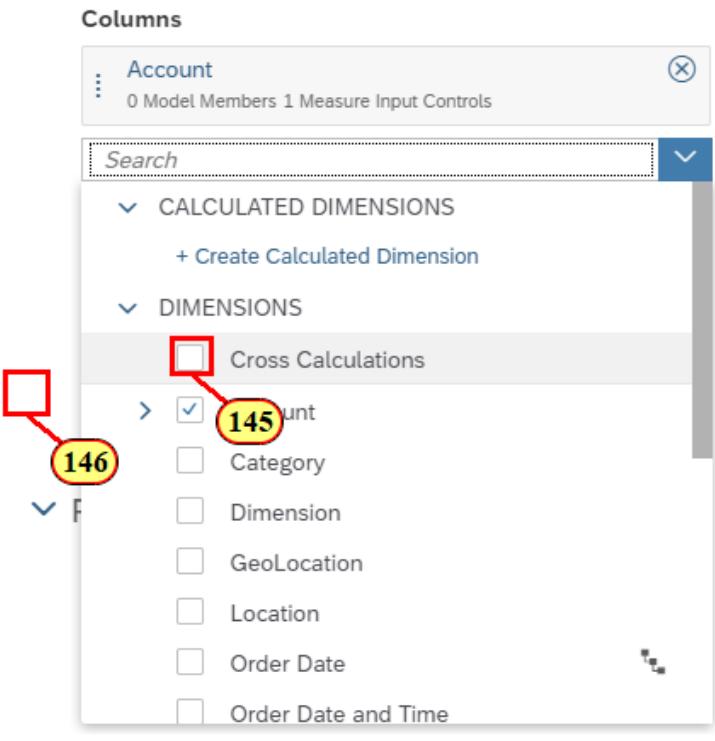
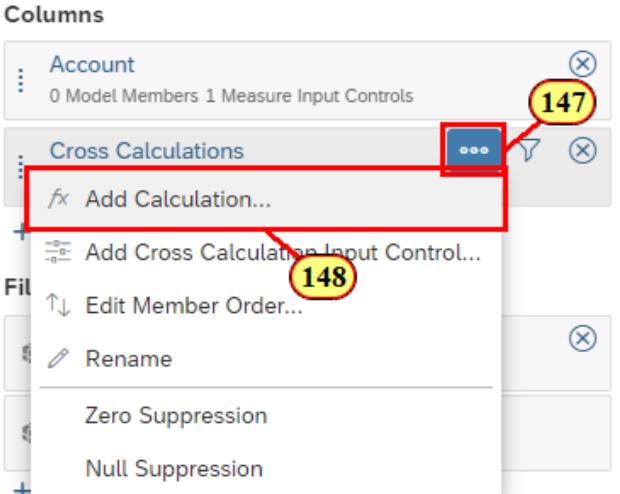
Explanation	Screenshot
<p>👉 Let's format the calculation.</p> <p>128. Click 1 Story Calculations</p> <p>129. Click Edit Formatting</p>	 <p>Columns</p> <ul style="list-style-type: none"> Account (3 Model Members) <ul style="list-style-type: none"> 1 Story Calculations (highlighted by red box 128) Delivery Time + Add Measure <p>Filters</p> <ul style="list-style-type: none"> Account (4) <ul style="list-style-type: none"> Sales Revenue, Gross Margin, Discount, Delivery Time Category (1) <ul style="list-style-type: none"> public.Actual (Actual) <p>+ Add Filters</p>
<p>130. Deselect Use Unit of Underlying Measure</p> <p>131. Set Decimal Places to 0</p> <p>132. Click OK</p>	 <p>Formatting</p> <p>*Scale Unformatted</p> <p>*Scale Formatting Default</p> <p>*Decimal Places 0</p> <p>*Show Sign As Default</p> <p>Unit</p> <p><input type="checkbox"/> Use unit of underlying measures</p> <p>OK (highlighted by red box 132)</p>

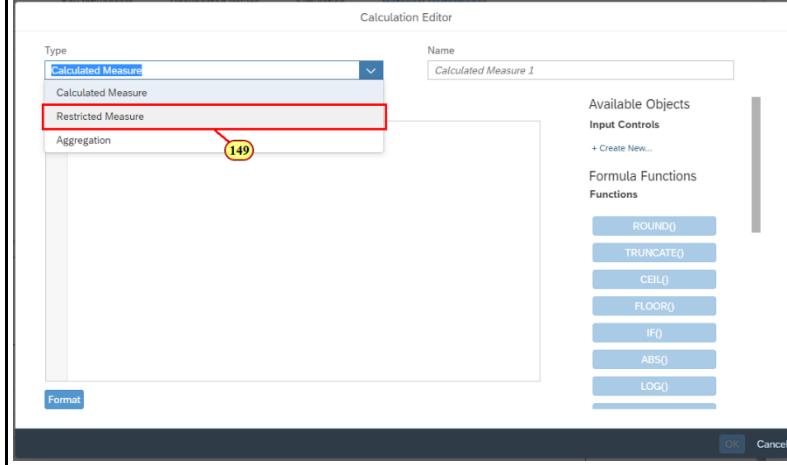
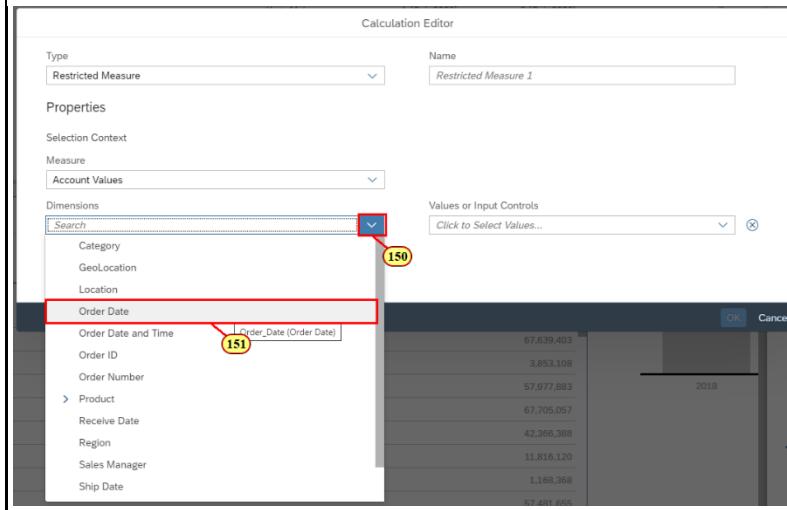
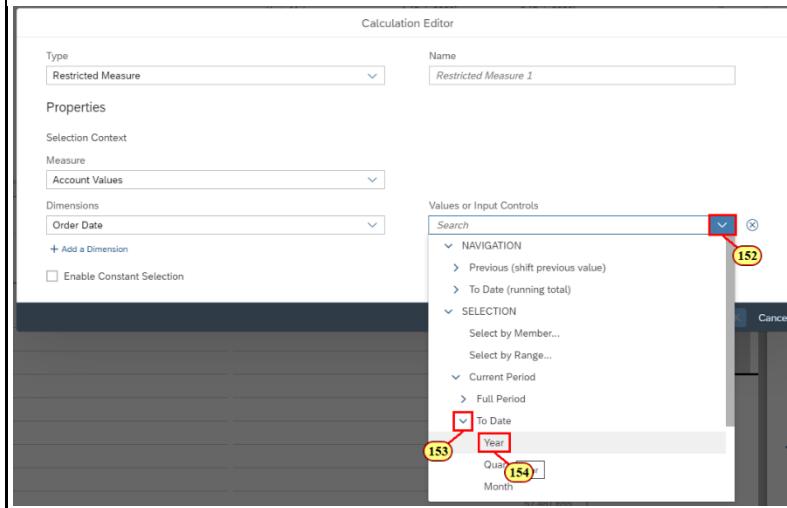
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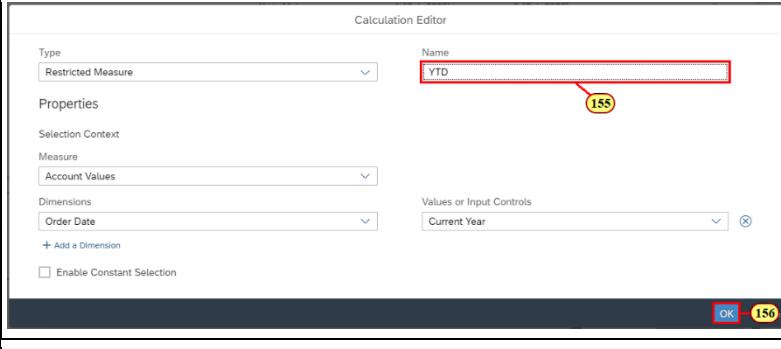
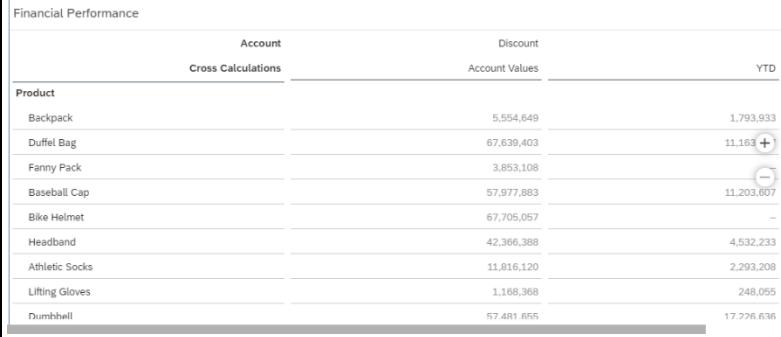
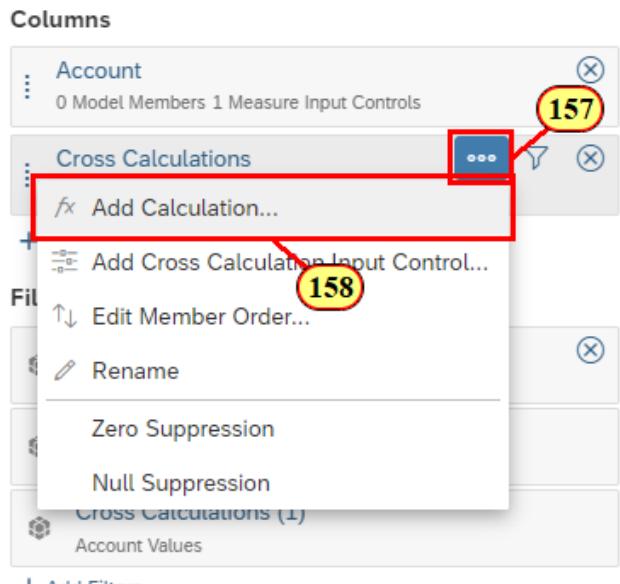
Explanation	Screenshot
138. Click and Drag Sales Revenue Below Delivery Time	 <p>The screenshot shows the 'Edit Member Order' interface. In the 'Account (Hierarchy)' section, there is a list of items: 'Delivery Time', 'Sales Revenue', 'Gross Margin', and 'Sales Revenue'. The 'Sales Revenue' item at the bottom is highlighted with a blue bar and has a red box around it, indicating it is being moved. A yellow circle with the number '138' is placed over the 'Gross Margin' item.</p>
139. Click and Drag Gross Margin Above Discount	 <p>The screenshot shows the 'Edit Member Order' interface. In the 'Account (Hierarchy)' section, there is a list of items: 'Delivery Time', 'Sales Revenue', 'Gross Margin', and 'Discount'. The 'Gross Margin' item is highlighted with a blue bar and has a red box around it, indicating it is being moved. A yellow circle with the number '139' is placed over the 'Discount' item.</p>

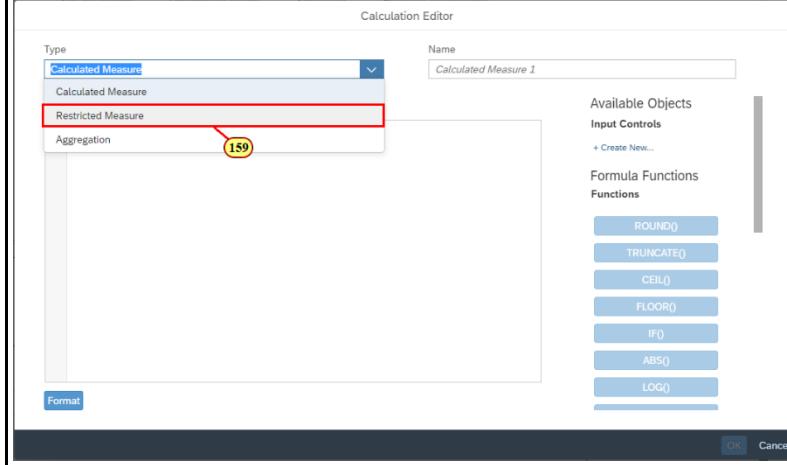
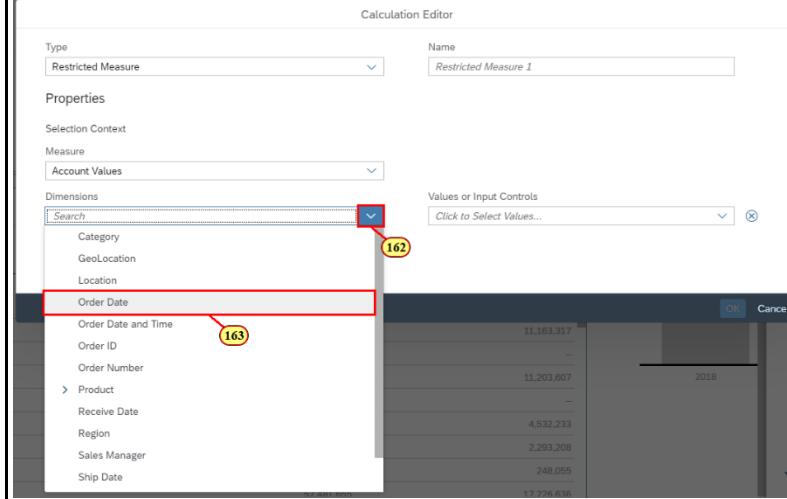
Explanation	Screenshot
	 <p>Custom Order Name Custom Order 1</p> <p>Account (Hierarchy)</p> <p>Search member <input type="button" value="🔍"/> All <input type="button" value="Visible"/></p> <p>Delivery Time</p> <p>Sales Revenue</p> <p>Gross Margin</p> <p>Discount</p> <p>⚠️ Quality Check! Does your custom sort match the screenshot?</p> <p>140. Click OK</p>

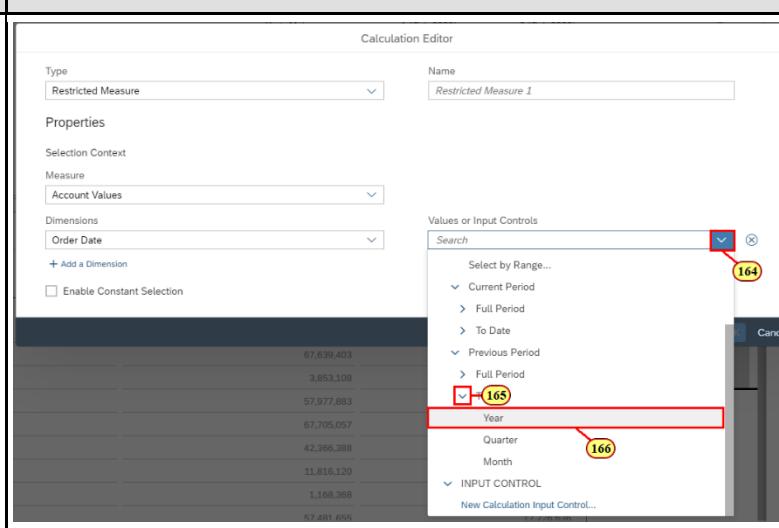
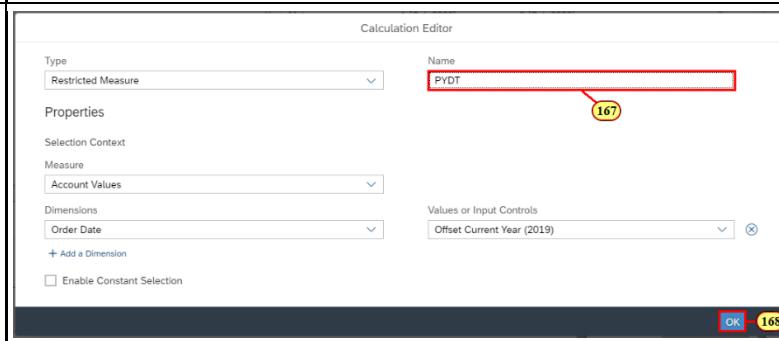
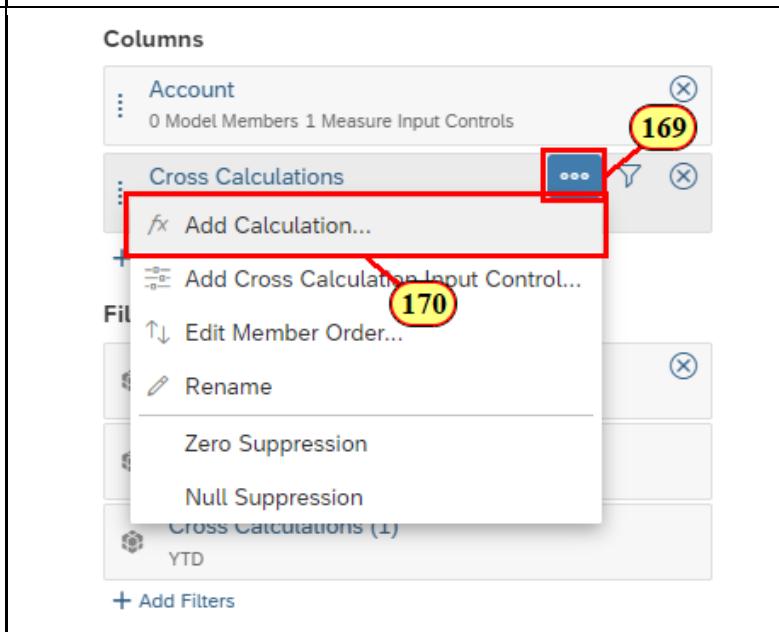
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<p> Next you want to compare the financial performance for this year to the performance from last year during the same period. You will do the analysis on the Financial Performance table. Select the table and open the Builder panel.</p> <p>141. Scroll to the Bottom of the Dashboard</p> <p>142. Click the Financial Performance Table</p>	 <table border="1"> <thead> <tr> <th>Measure Selector</th> <th>Account</th> <th>Measure</th> </tr> </thead> <tbody> <tr><td><input type="radio"/></td><td>Product</td><td>1,154,610</td></tr> <tr><td><input checked="" type="radio"/></td><td>Discount</td><td>41,694,403</td></tr> <tr><td><input type="radio"/></td><td>Gross Margin</td><td>11,689,226</td></tr> <tr><td><input type="radio"/></td><td>Sales Revenue</td><td>57,709,881</td></tr> </tbody> </table> <p>Sales Revenue per Order Date for Actual = value (%)</p> <p>1,154,610 57,709,881 11,689,226</p>	Measure Selector	Account	Measure	<input type="radio"/>	Product	1,154,610	<input checked="" type="radio"/>	Discount	41,694,403	<input type="radio"/>	Gross Margin	11,689,226	<input type="radio"/>	Sales Revenue	57,709,881																																																																																				
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<p>143. Click Designer to Open the Builder Panel</p> <p> The table uses a measure input control. You want to have the time calculations apply automatically to any measures in the table, this can be done using Cross Calculations. Add the Cross Calculation dimension to the table.</p> <p>144. Click + Add Measures/Dimensions</p>	 <p>Designer Controls View</p> <p>Builder 143</p> <p>Data Source: SAC_ORDER_FINANCE</p> <p>+ Add Linked Models</p> <p>Table Structure</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Responsive / flexible column width <input type="checkbox"/> Arrange totals / parent nodes below <input checked="" type="checkbox"/> Beta table  <p>Rows</p> <p>Product </p> <p>+ Add Measures/Dimensions</p> <p>Columns</p> <p>Account </p> <p>0 Model Members 1 Measure Input Controls</p> <p>+ Add Measures/Dimensions 144</p>																																																																																																			

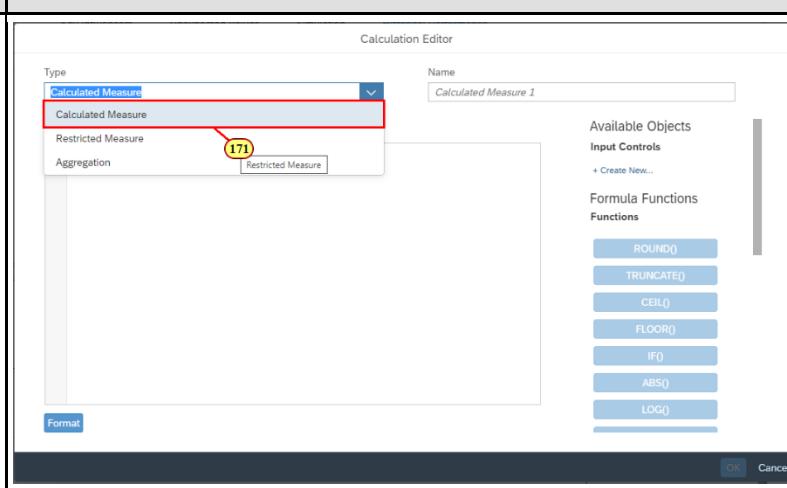
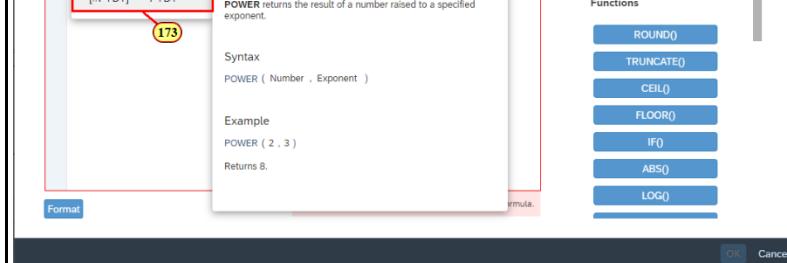
Explanation	Screenshot
<p>145. Click Cross Calculations</p> <p>146. Click Outside the Measures/Dimensions Drop Down Menu to Collapse</p>	
<p>👉 Let's add the first cross calculation as a restricted measure for the year to date time range using order date dimension</p> <p>147. Click the More Actions icon for Cross Calculations</p> <p>148. Click Add Calculations</p>	

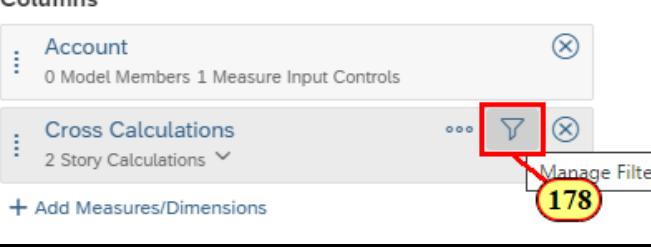
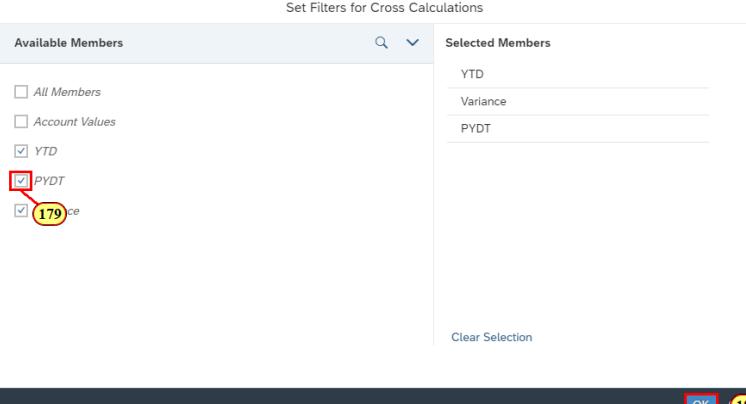
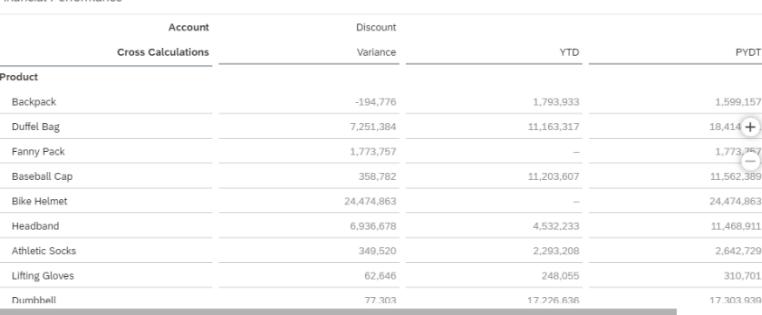
Explanation	Screenshot
149. Click Restricted Measure	
150. Expand Dimensions	
151. Click Order Date	
152. Expand Values or Input Controls	

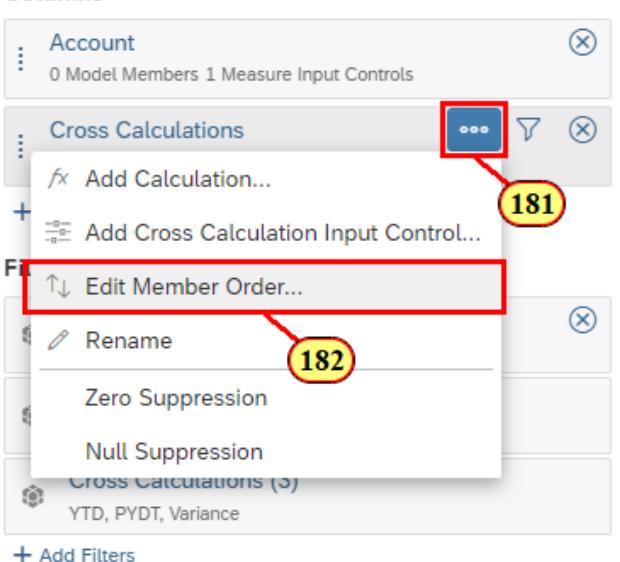
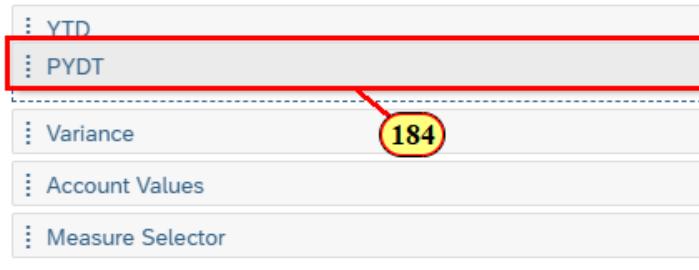
Explanation	Screenshot
<p>155. Rename the Calculation to YTD</p> <p>156. Click OK</p>	
<p> You can see the calculation was added to the table. Let's create an equivalent calculation for the previous year's value.</p>	
<p>157. Click the More Action icon for Cross Calculations</p> <p>158. Click Add Calculations</p>	

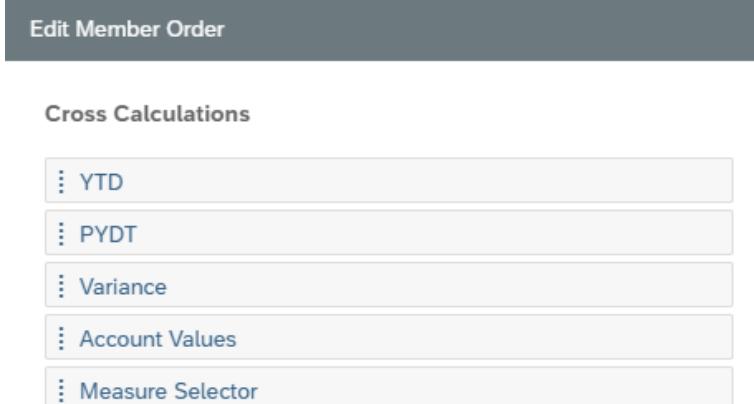
Explanation	Screenshot
159. Click Restricted Measure	
160. Expand Measures 161. Click Account Values	
162. Expand Dimensions 163. Click Order Date	

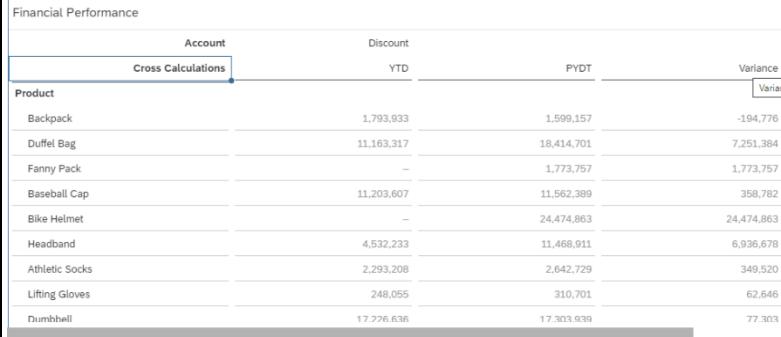
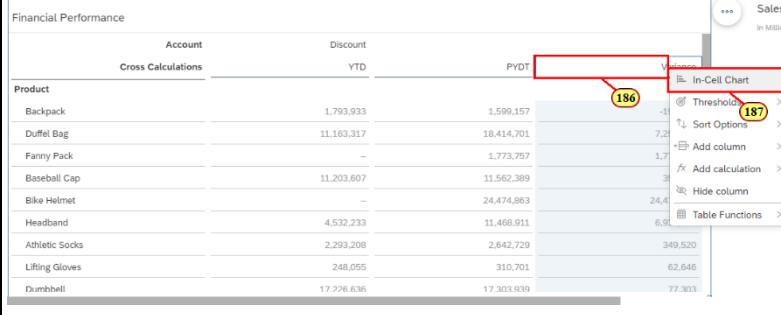
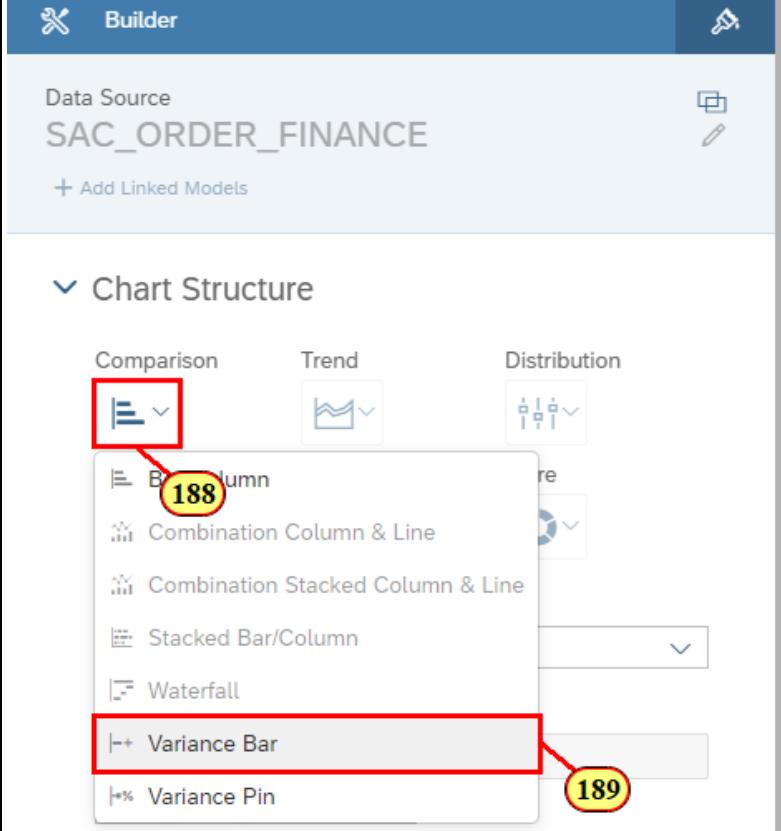
Explanation	Screenshot
<p>164. Expand Values or Input Controls</p> <p>165. Expand To Date Under Previous Period</p> <p>166. Click Year</p>	
<p>167. Rename the Calculation to PYTD</p> <p>168. Click OK</p>	
<p>👉 Next you want to calculate the variance between last years data and this year's data.</p> <p>169. Click the More Actions icon for Cross Calculations</p> <p>170. Click Add Calculation</p>	

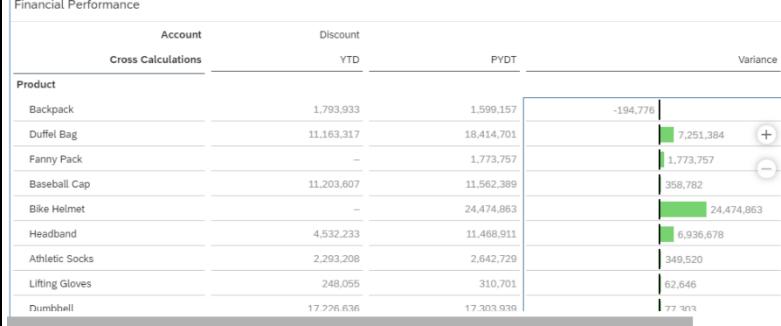
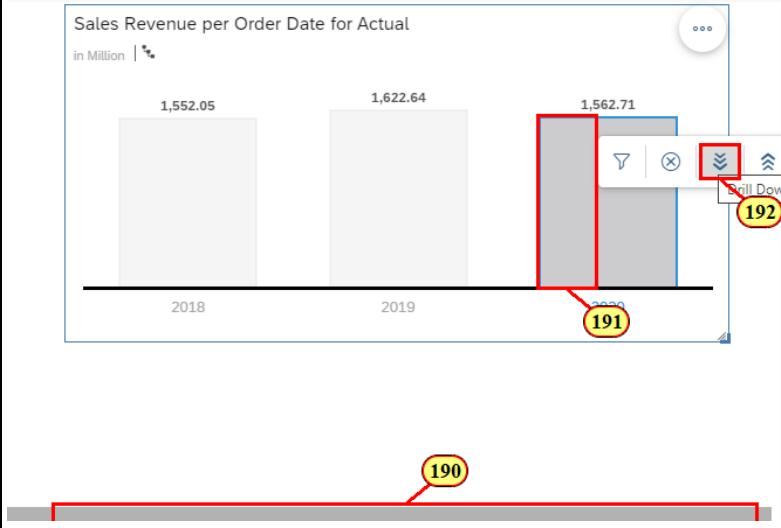
Explanation	Screenshot
171. Click Calculated Measure	
172. Type P	
173. Click PYTD	
174. Type - Y	
175. Click YTD	
176. Rename Calculation to Variance	
177. Click OK	

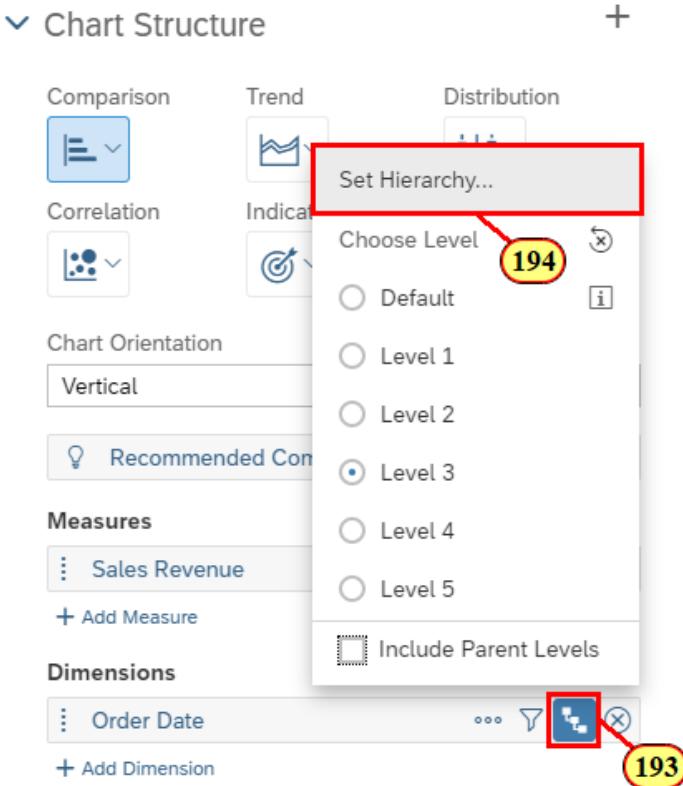
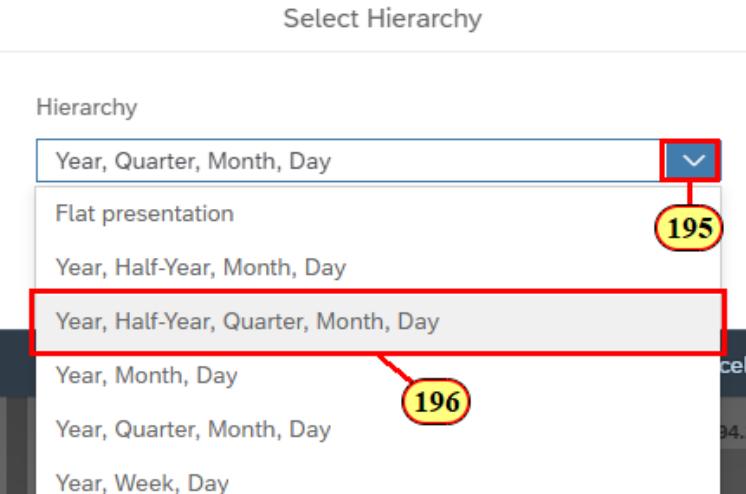
Explanation	Screenshot
<p>👉 Before reviewing the table. Let's make sure we have only the desired calculations selected.</p> <p>178. Click Filter for Cross Calculations</p>	
<p>179. Click PYTD</p> <p>180. Click OK</p>	
<p>⚠️ Quality Check! Does your table look like this?</p> <p>Note: Due to the dynamic time filter the data may vary.</p>	

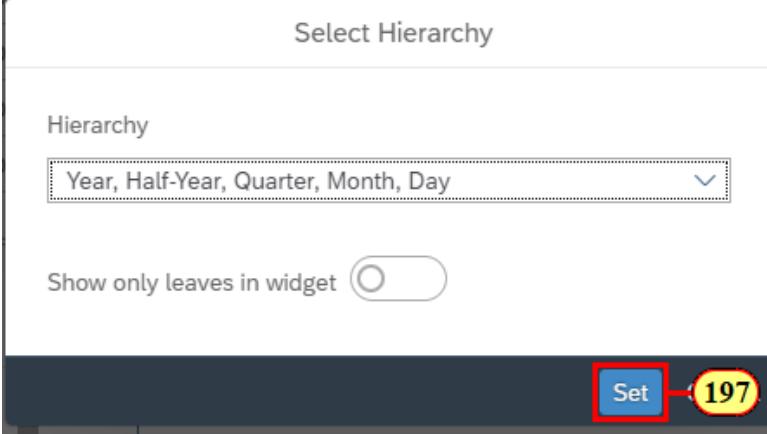
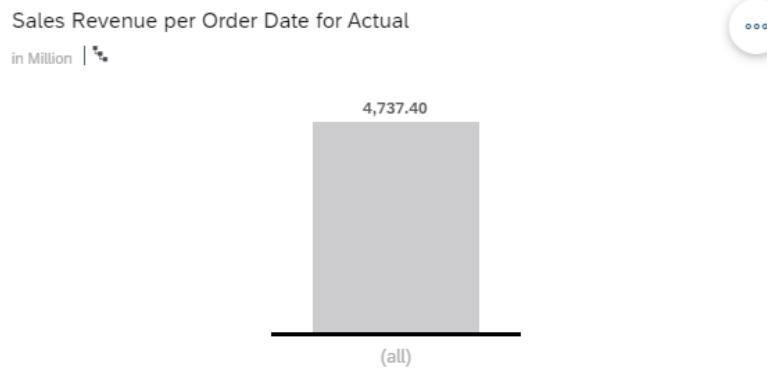
Explanation	Screenshot
<p>👉 Next, you would like to adjust the order of the columns in the table.</p> <p>181. Click the More Actions Icon for Cross Calculations</p> <p>182. Click Edit Member Order...</p>	
<p>183. Click and Drag YTD to the Top</p>	
<p>184. Click and Drag PYDT Below YTD</p>	

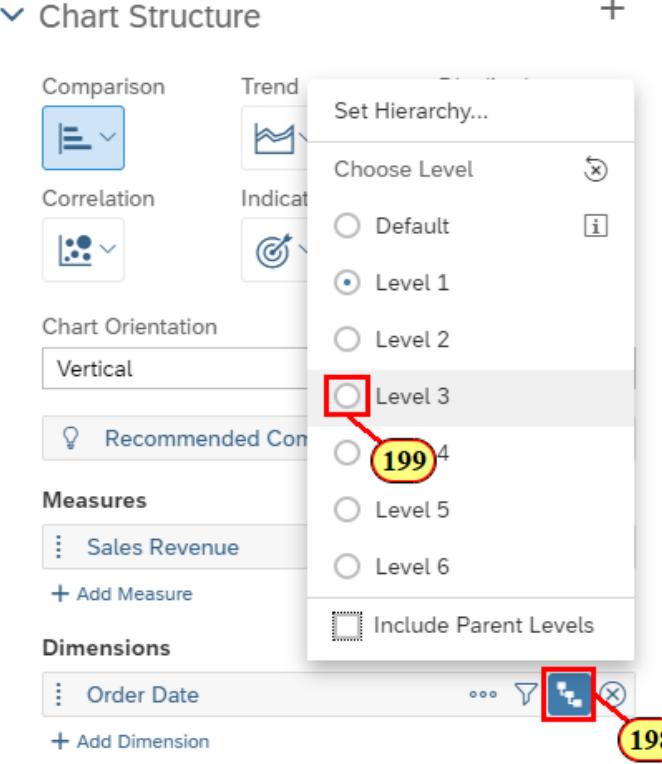
Explanation	Screenshot
<p>⚠️ Quality Check! Does your Edit Member Order match the screenshot?</p> <p>185. Click Done</p>	 <p>The screenshot shows the 'Edit Member Order' interface. At the top, there's a dark grey header bar with the title 'Edit Member Order'. Below it, a section titled 'Cross Calculations' contains five buttons, each with a three-dot icon and a label: 'YTD', 'PYDT', 'Variance', 'Account Values', and 'Measure Selector'. At the bottom right of the screenshot area, there's a blue button labeled 'Done' and a red circle containing the number '185'.</p>

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<p> You want to make the variance stand out more easily indicating where there was an increase or decrease from last year. This can easily be done by turning it into a variance in-cell chart.</p> <p>186. Right Click Variance to Open the Context Menu</p> <p>187. Click In-Cell Chart</p>	 <p>Context menu options shown:</p> <ul style="list-style-type: none"> In-Cell Chart (highlighted) Thresholds (highlighted) Sort Options Add column Add calculation Hide column Table Functions 																																																						
<p>188. Expand the Comparison Tile</p> <p>189. Click Variance Bar</p>	 <p>Comparison tile expanded:</p> <ul style="list-style-type: none"> Comparison (highlighted) Trend Distribution <p>Comparison sub-options shown:</p> <ul style="list-style-type: none"> Bar Column (highlighted) Combination Column & Line Combination Stacked Column & Line Stacked Bar/Column Waterfall Variance Bar (highlighted) Variance Pin 																																																						

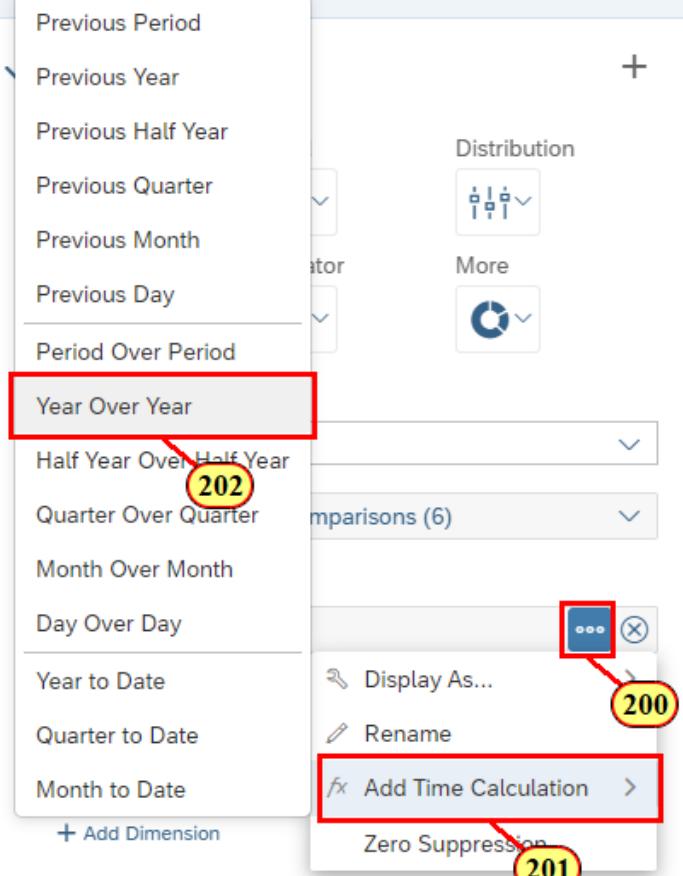
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<p> Next let's look at some time navigation inside a chart. The chart shows the Sales Revenue over time. Let's drill a level down to understand how 2020 is performing.</p> <p>190. Drag the Horizontal Scroll Bar to the Right</p> <p>191. Left Click the 2020 Bar</p> <p>192. Click the Drill Down Icon</p>																																												
<p> You can see the chart now show the Sales Revenue by quarter. However, you're more interested in it for the half year. Let's change the hierarchy via the builder panel.</p>																																												

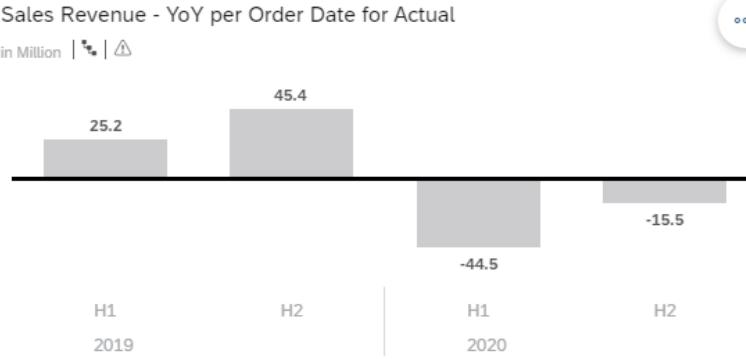
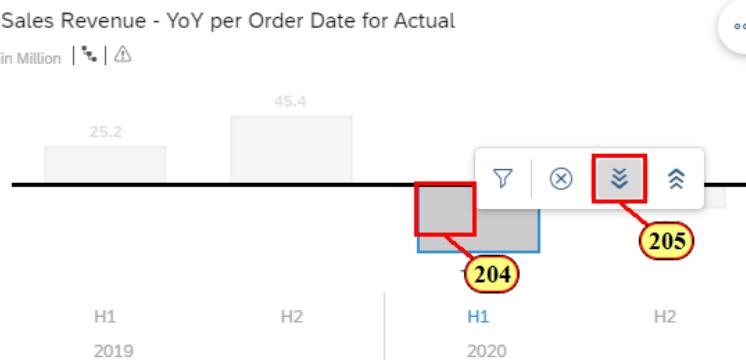
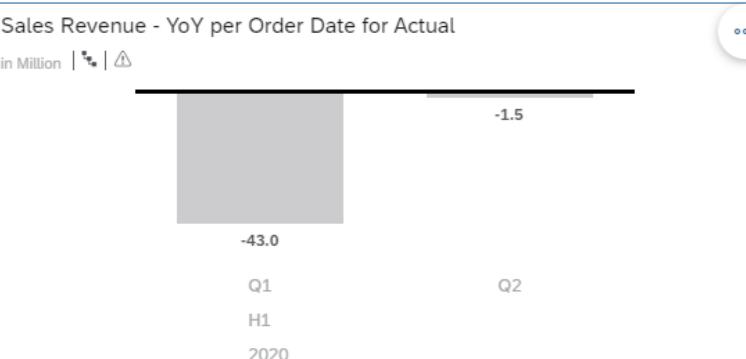
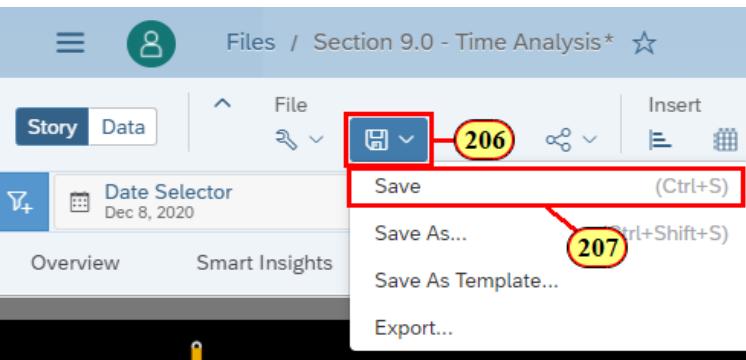
Explanation	Screenshot
<p>193. Click the Drill Icon for Order Date</p> <p>194. Click Set Hierarchy</p>	 <p>The screenshot shows the 'Chart Structure' panel with various options like Comparison, Trend, Distribution, Correlation, and Indicators. Under 'Dimensions', 'Order Date' is selected. A dropdown menu for 'Set Hierarchy...' is open, showing levels from Default to Level 5. The 'Drill' icon next to 'Order Date' is highlighted.</p>
<p>195. Expand Hierarchy</p> <p>196. Click Year, Half-Year, Quarter, Month, Day</p>	 <p>The screenshot shows the 'Select Hierarchy' dialog with a list of hierarchy options: Year, Quarter, Month, Day; Flat presentation; Year, Half-Year, Month, Day; Year, Half-Year, Quarter, Month, Day; Year, Month, Day; Year, Quarter, Month, Day; and Year, Week, Day. The 'Year, Half-Year, Quarter, Month, Day' option is highlighted.</p>

Explanation	Screenshot
197. Click Set	
 <p>The chart has been reset to the new hierarchy. Let's change the level via the builder panel.</p>	

Explanation	Screenshot														
<p>198. Click the Drill Icon for Order Date</p> <p>199. Click Level 3</p>															
<p>⚠️ Quality Check! Does your chart look like this?</p>	<p>Sales Revenue per Order Date for Actual in Million</p> <thead> <tr> <th>Period</th> <th>Revenue (in Millions)</th> </tr> </thead> <tbody> <tr> <td>H1 2018</td> <td>681.53</td> </tr> <tr> <td>H2 2018</td> <td>870.52</td> </tr> <tr> <td>H1 2019</td> <td>706.71</td> </tr> <tr> <td>H2 2019</td> <td>915.94</td> </tr> <tr> <td>H1 2020</td> <td>662.24</td> </tr> <tr> <td>H2 2020</td> <td>900.47</td> </tr> </tbody>	Period	Revenue (in Millions)	H1 2018	681.53	H2 2018	870.52	H1 2019	706.71	H2 2019	915.94	H1 2020	662.24	H2 2020	900.47
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H1 2019	706.71														
H2 2019	915.94														
H1 2020	662.24														
H2 2020	900.47														

" data-bbox="371 508 848 661"/>

Explanation	Screenshot
<p>👉 Now let's look at quickly showing the year over year changes if the Sales Revenue. This can be done via time calculation quick options if time is in the chart.</p> <p>200. Click the More Action Icon for Sales Revenue</p> <p>201. Click Add Time Calculation</p> <p>202. Click Year Over Year</p>	
<p>203. Remove Sales Revenue</p>	

Explanation	Screenshot										
<p> Quality Check! Does your chart look like this?</p>	 <table border="1"> <thead> <tr> <th>Period</th> <th>Revenue (in Million)</th> </tr> </thead> <tbody> <tr> <td>H1 2019</td> <td>25.2</td> </tr> <tr> <td>H2 2019</td> <td>45.4</td> </tr> <tr> <td>H1 2020</td> <td>-44.5</td> </tr> <tr> <td>H2 2020</td> <td>-15.5</td> </tr> </tbody> </table>	Period	Revenue (in Million)	H1 2019	25.2	H2 2019	45.4	H1 2020	-44.5	H2 2020	-15.5
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H2 2019	45.4										
H1 2020	-44.5										
H2 2020	-15.5										
<p> You can see that H1 2020 is significantly lower than H1 2019. Let's drill into this more.</p> <p>204. Click the H1 2020 Bar</p> <p>205. Click Drill Down</p>	 <p>204</p> <p>205</p> <table border="1"> <thead> <tr> <th>Period</th> <th>Revenue (in Million)</th> </tr> </thead> <tbody> <tr> <td>H1 2019</td> <td>25.2</td> </tr> <tr> <td>H2 2019</td> <td>45.4</td> </tr> <tr> <td>H1 2020</td> <td>-44.5</td> </tr> <tr> <td>H2 2020</td> <td>-15.5</td> </tr> </tbody> </table>	Period	Revenue (in Million)	H1 2019	25.2	H2 2019	45.4	H1 2020	-44.5	H2 2020	-15.5
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<p> The major deviation was in Q1 of 2020.</p>	 <table border="1"> <thead> <tr> <th>Period</th> <th>Revenue (in Million)</th> </tr> </thead> <tbody> <tr> <td>Q1 2020</td> <td>-43.0</td> </tr> <tr> <td>Q2 2020</td> <td>-1.5</td> </tr> </tbody> </table>	Period	Revenue (in Million)	Q1 2020	-43.0	Q2 2020	-1.5				
Period	Revenue (in Million)										
Q1 2020	-43.0										
Q2 2020	-1.5										
<p> You have concluded the Time Analysis Section! Save your document.</p> <p>206. Click the Save Icon</p> <p>207. Click Save</p>	 <p>206</p> <p>207</p> <p>Save (Ctrl+S)</p> <p>Save As... (Ctrl+Shift+S)</p> <p>Save As Template...</p> <p>Export...</p>										

Summary

You have completed the entire **Time Analysis** section!

You should now be able to:

- Create dynamic and fixed date-based story and page filters with multiple ranges
- Customise “current date” for greater flexibility when analysing time-based data
- Create dynamic calculations such as Year-to-Date (YTD), Year-over-Year (YoY) and others
- Define date-based hierarchies in SAC that best suit your needs

Digital Boardroom: Deep Dive



Objective: Learn how to create an executive overview of your company's performance by curating selected pages from several Stories in one view with Digital Boardroom.

Estimated Time: 10 mins

Exercise Description: In preparation for an executive meeting coming up at the end of the month, you need to create an overview of all analytic content at your company. You will create a Digital Boardroom with a curated selection of pages from various departments at your company: Finance, HR and Operations. You will then enhance the Digital Boardroom experience by adding interactive functionality to be used during the presentation and try out the executive presentation experience yourself in preparation for the meeting.

Key Features:

- Create a new Digital Boardroom and use selected pages from several Stories
- Customize navigation across different topics of Digital Boardroom
- Add a selection of interactive functionality to be used during the presentation
- Open Digital Boardroom in presentation view and experience the executive presentation functionality for yourself

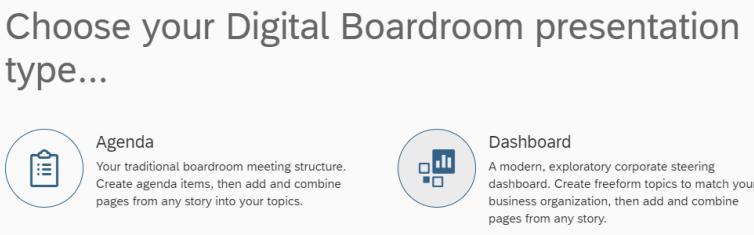
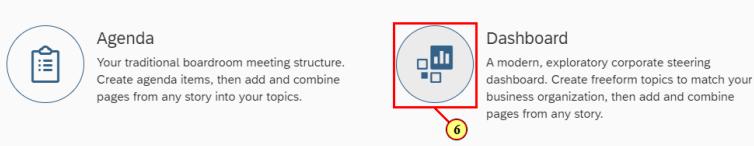
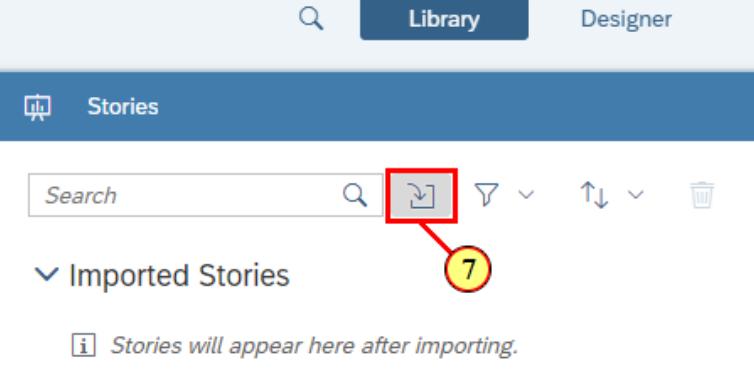
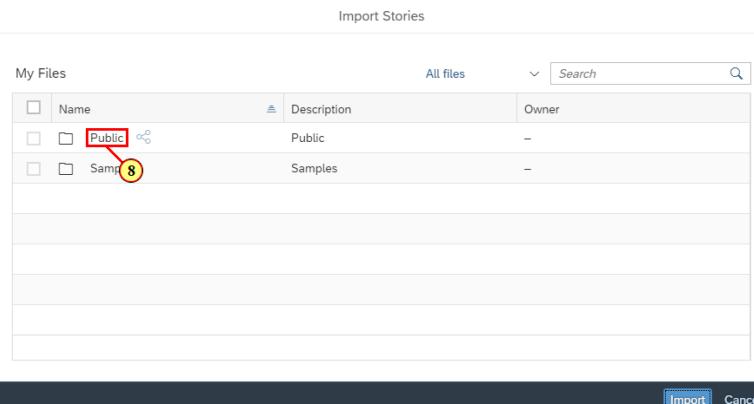


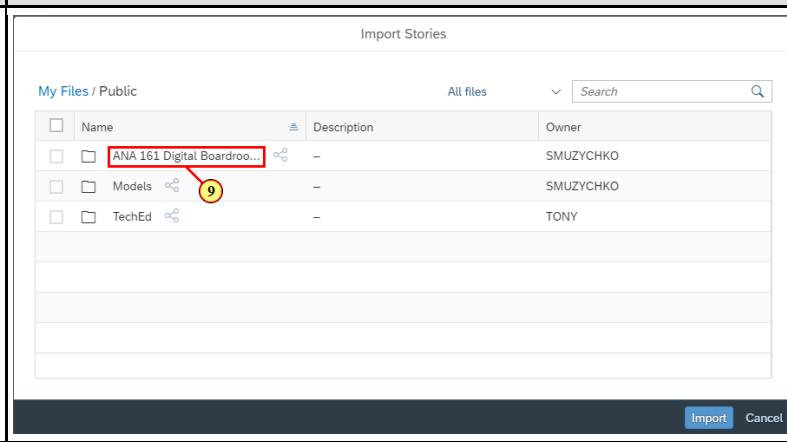
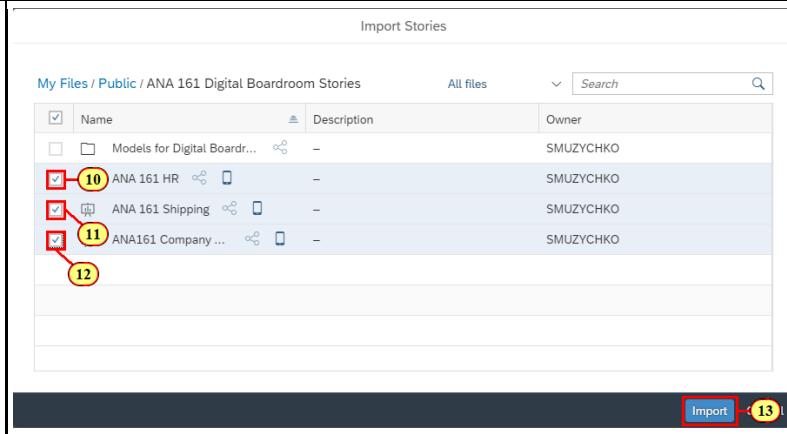
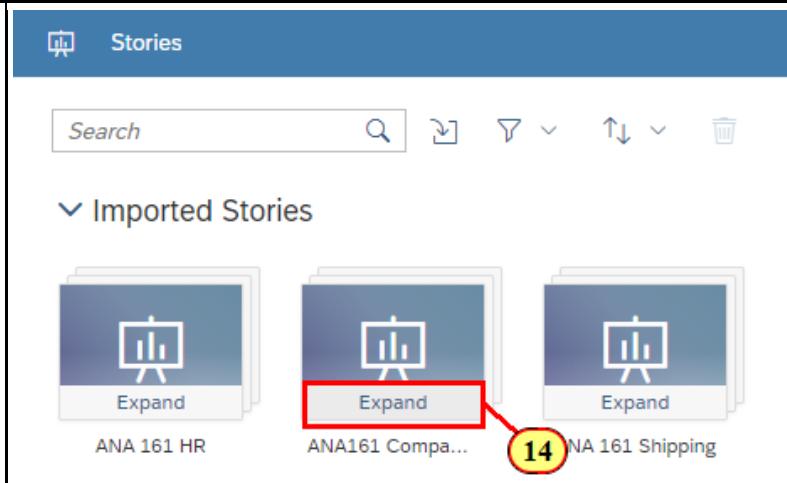
Disclaimer

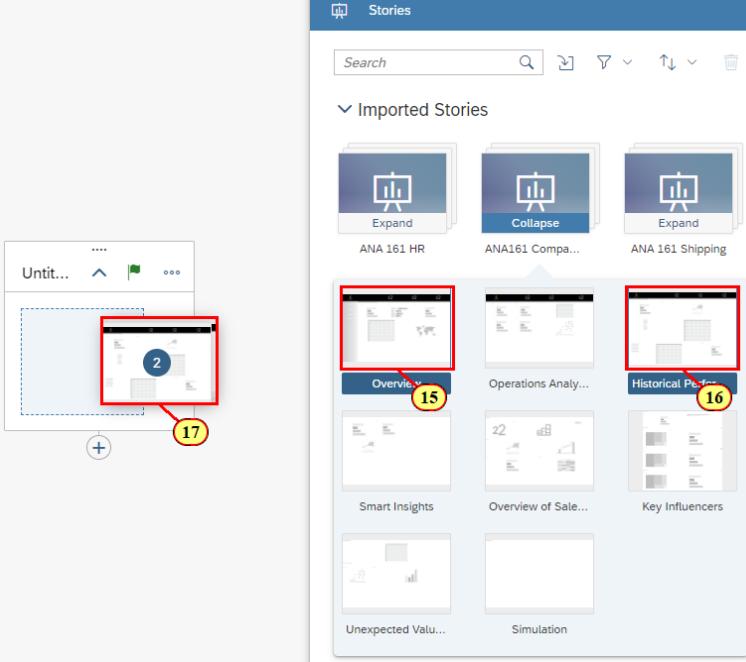
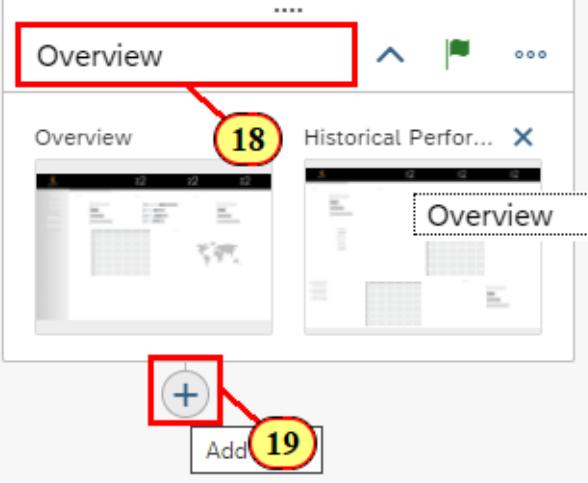
When completing exercises, some data values in the screenshots may not match what you see on your screen. This is because the dynamic time filters that were applied at the time the screenshots were taken is different from the current system date.

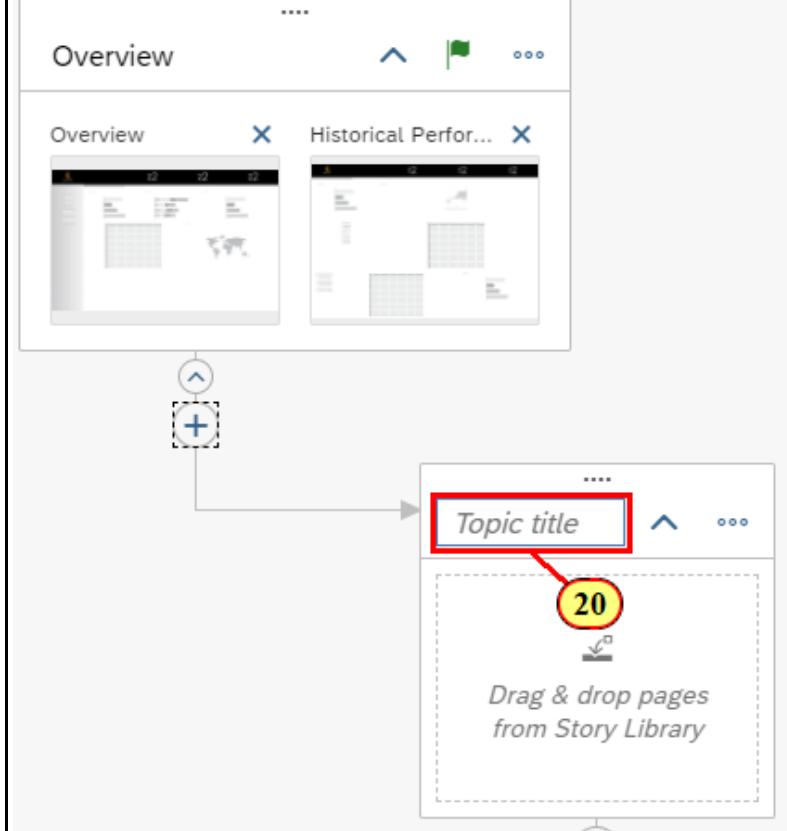
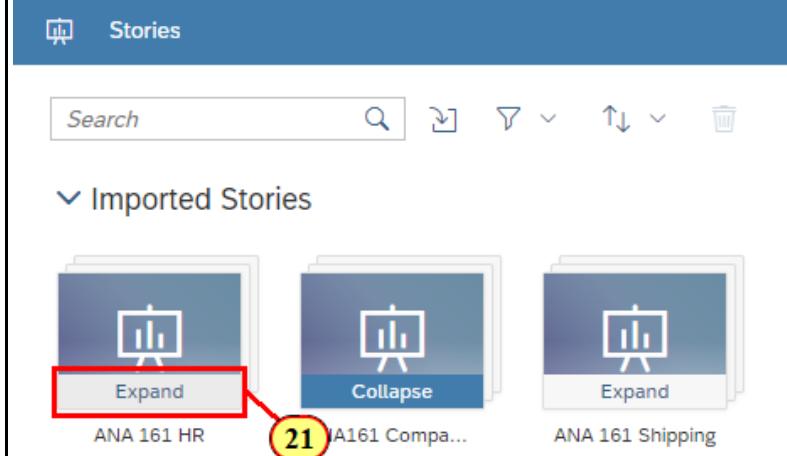
Explanation	Screenshot
<p>👉 With the help of other colleagues, we've created several dashboards that help us analyze the performance of BestRun. However, as these dashboards are currently consumed as individual stories, we want to create a Digital Boardroom that can be used by the executives to analyze the performance of the various departments.</p>	

Explanation	Screenshot
<p>1. Click on the Main Menu Icon</p> <p>2. Click on Create</p> <p>3. Click Digital Boardroom</p>	
<p>4. Name the Digital Boardroom "ANA161 Company Overview"</p> <p>5. Click OK.</p>	

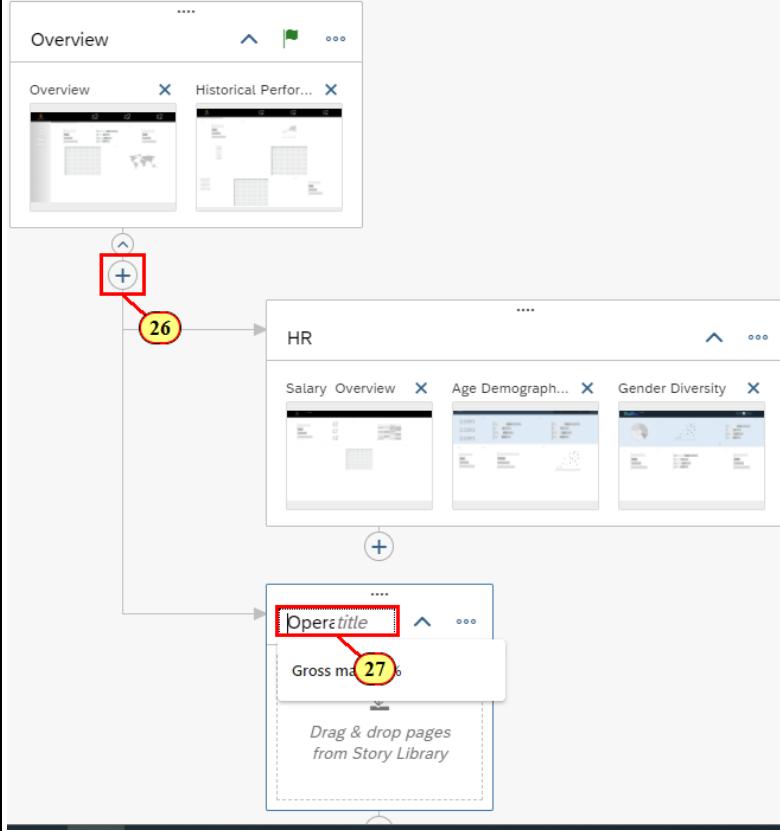
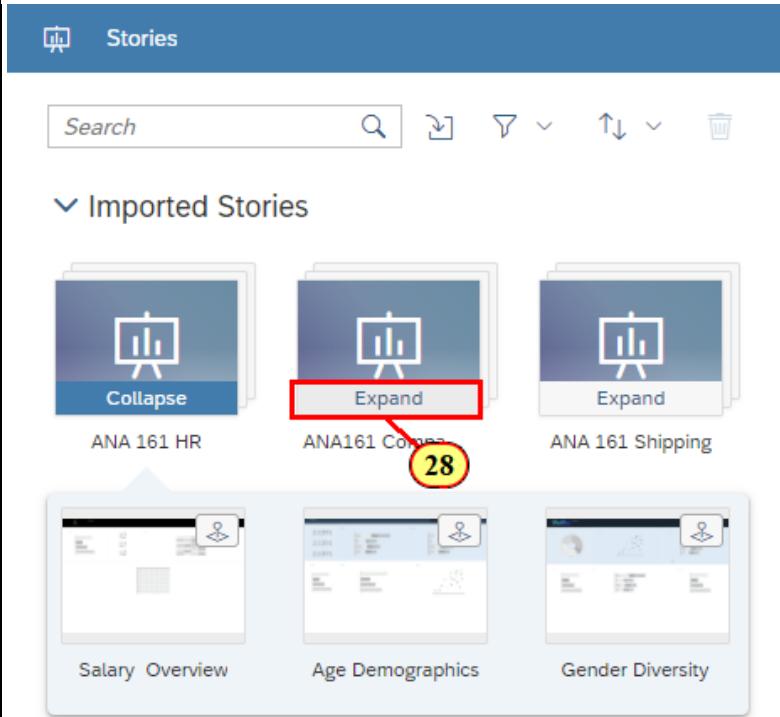
Explanation	Screenshot									
<p> Welcome to the Digital Boardroom!</p> <p>The Digital Boardroom is a place to design a real-time, interactive boardroom presentation.</p> <ul style="list-style-type: none"> • Agenda: it allows you to set various meeting talking points and associate pages from different stories. • Dashboard: it's a more dynamic presentation style in comparison to Agendas. It allows you to present in freeform and jump from topic to topic without having to complete the agenda before moving on. 	<p>Choose your Digital Boardroom presentation type...</p>  <p>Agenda Your traditional boardroom meeting structure. Create agenda items, then add and combine pages from any story into your topics.</p> <p>Dashboard A modern, exploratory corporate steering dashboard. Create freeform topics to match your business organization, then add and combine pages from any story.</p>									
<p> Based on the previous executive meetings, we know that the board members tend to prefer more dynamic presentations instead of fixed agenda. Hence, let's create a Dashboard.</p> <p>6. Click Dashboard</p>	<p>Choose your Digital Boardroom presentation type...</p>  <p>Agenda Your traditional boardroom meeting structure. Create agenda items, then add and combine pages from any story into your topics.</p> <p>Dashboard A modern, exploratory corporate steering dashboard. Create freeform topics to match your business organization, then add and combine pages from any story.</p>									
<p> As we have multiple dashboards that are created by our colleges, we need to import them into the Digital Boardroom.</p> <p>7. Click Import</p>	 <p>Stories</p> <p>Search  Library Designer</p> <p>Imported Stories </p> <p><i>Stories will appear here after importing.</i></p>									
<p>8. Click Public</p>	 <p>Import Stories</p> <p>My Files</p> <table border="1"> <thead> <tr> <th>Name</th> <th>Description</th> <th>Owner</th> </tr> </thead> <tbody> <tr> <td>Public</td> <td>Public</td> <td>-</td> </tr> <tr> <td>Samples</td> <td>Samples</td> <td>-</td> </tr> </tbody> </table> <p>Import Cancel</p>	Name	Description	Owner	Public	Public	-	Samples	Samples	-
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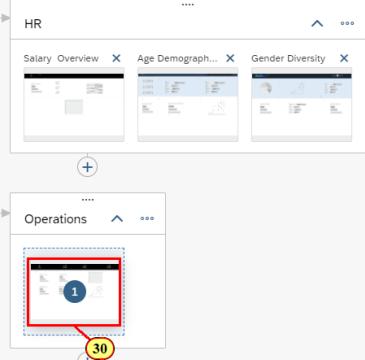
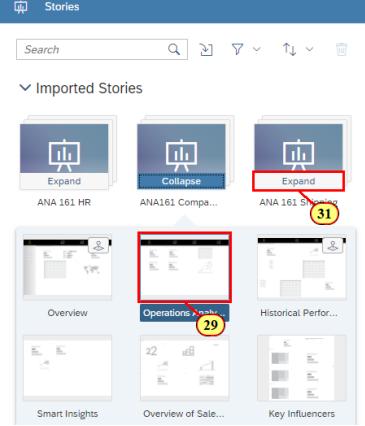
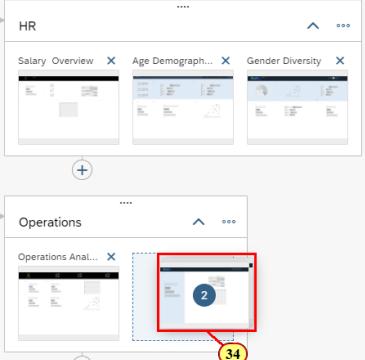
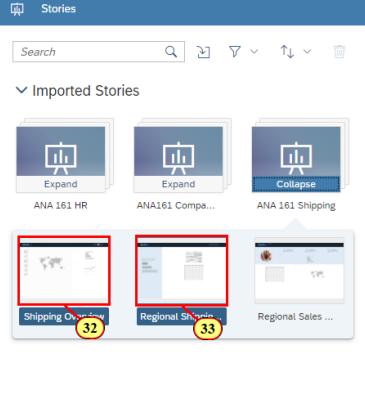
Explanation	Screenshot															
<p>9. Click ANA 161 Digital Boardroom Stories</p>	 <p>Import Stories</p> <p>My Files / Public</p> <table border="1"> <thead> <tr> <th>Name</th> <th>Description</th> <th>Owner</th> </tr> </thead> <tbody> <tr> <td>ANA 161 Digital Boardroom Stories</td> <td>-</td> <td>SMUZYCHKO</td> </tr> <tr> <td>Models</td> <td>-</td> <td>SMUZYCHKO</td> </tr> <tr> <td>TechEd</td> <td>-</td> <td>TONY</td> </tr> </tbody> </table> <p>Import Cancel</p>	Name	Description	Owner	ANA 161 Digital Boardroom Stories	-	SMUZYCHKO	Models	-	SMUZYCHKO	TechEd	-	TONY			
Name	Description	Owner														
ANA 161 Digital Boardroom Stories	-	SMUZYCHKO														
Models	-	SMUZYCHKO														
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<p>10. Click ANA 161 HR</p> <p>11. Click ANA 161 Shipping</p> <p>12. Click ANA 161 Company Shipping</p> <p>13. Click Import</p>	 <p>Import Stories</p> <p>My Files / Public / ANA 161 Digital Boardroom Stories</p> <table border="1"> <thead> <tr> <th>Name</th> <th>Description</th> <th>Owner</th> </tr> </thead> <tbody> <tr> <td>Models for Digital Board...</td> <td>-</td> <td>SMUZYCHKO</td> </tr> <tr> <td>ANA 161 HR</td> <td>-</td> <td>SMUZYCHKO</td> </tr> <tr> <td>ANA 161 Shipping</td> <td>-</td> <td>SMUZYCHKO</td> </tr> <tr> <td>ANA161 Company ...</td> <td>-</td> <td>SMUZYCHKO</td> </tr> </tbody> </table> <p>Import 13</p>	Name	Description	Owner	Models for Digital Board...	-	SMUZYCHKO	ANA 161 HR	-	SMUZYCHKO	ANA 161 Shipping	-	SMUZYCHKO	ANA161 Company ...	-	SMUZYCHKO
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<p>14. Click Expand for ANA161 Company Analysis</p>	 <p>Stories</p> <p>Search</p> <p>Imported Stories</p> <p>ANA 161 HR</p> <p>ANA161 Compa... Expand</p> <p>NA 161 Shipping</p>															

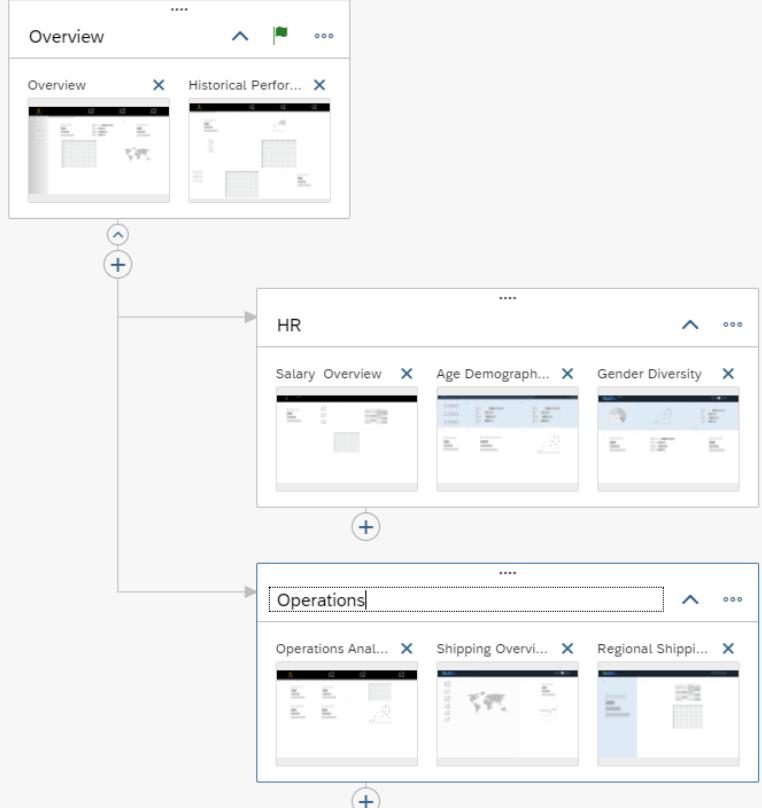
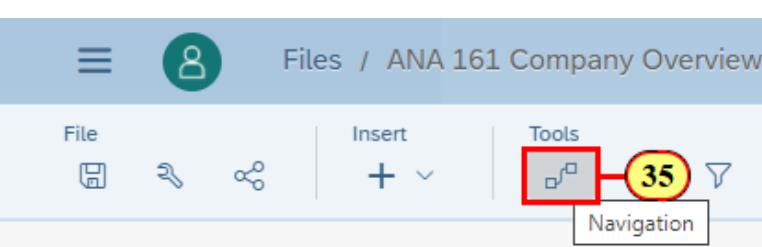
Explanation	Screenshot
<p>👉 We want to structure our Digital Boardroom presentation into multiple topics. We can combine pages from multiple stories into a single topic. For now, we want to provide an overview of our company.</p> <p>15. Click on Overview</p> <p>16. Click on Historical Performance</p> <p>17. Click and Drag the Overview and Historical Performance Pages into the Untitled Topic</p>	
<p>18. Rename the Topic to Overview</p> <p>👉 We now want to create another topic that allows us to analyze the HR Department. We will include several pages here.</p> <p>19. Click Add Topic</p>	

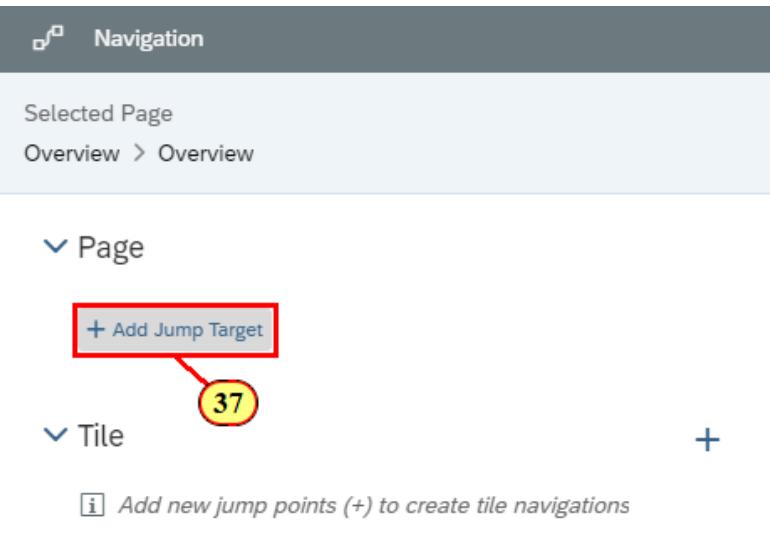
Explanation	Screenshot
20. Rename the Topic Title to HR	 <p>The screenshot shows the Storyline interface. A callout points to the 'Topic title' field, which is highlighted with a red box and has a yellow circle with the number '20' over it. Below the title, there is a dashed box containing the text 'Drag & drop pages from Story Library'. A blue plus sign icon is at the bottom right.</p>
21. Click Expand for ANA 161 HR	 <p>The screenshot shows the 'Stories' library. Under the 'Imported Stories' section, there are three items: 'ANA 161 HR', 'A161 Compa...', and 'ANA 161 Shipping'. The 'ANA 161 HR' item has its 'Expand' button highlighted with a red box and a yellow circle with the number '21' over it. The other two items have their 'Collapse' buttons highlighted with a red box and a yellow circle with the number '21' over it.</p>

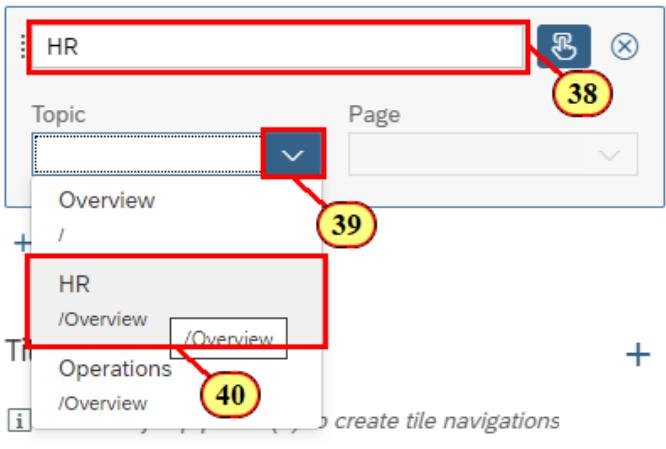
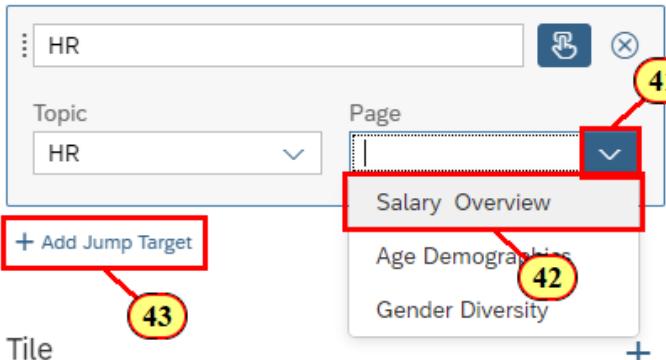
Explanation	Screenshot
<p>22. Click Salary Overview</p> <p>23. Click Age Demographics</p> <p>24. Click Gender Diversity</p> <p>25. Click and Drag the Three Pages into the HR Topic</p>	
<p>⚠️ Quality Check! Does your Digital Boardroom structure look like the screenshot?</p>	

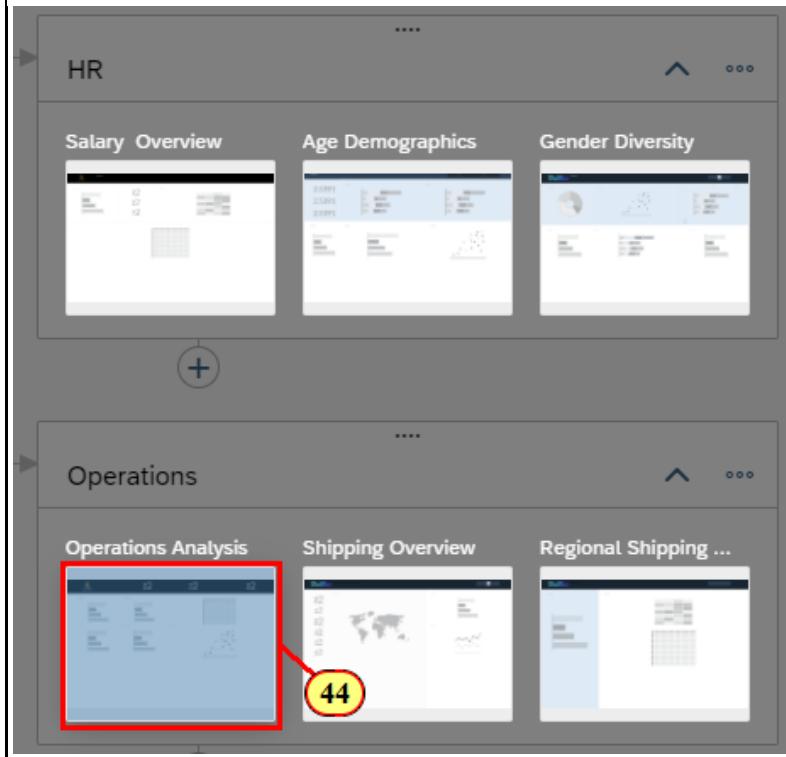
Explanation	Screenshot
<p>Finally, we want our last topic to reflect the Operations Department. We need to add a new Topic to separate the content.</p> <p>26. Click Add Topic</p> <p>27. Rename the Topic Text to Operations</p>	
<p>The Library in Digital Boardroom provides an indicator on pages that are being consumed within your Digital Boardroom!</p> <p>28. Click Expand for ANA 161 Company Overview</p>	

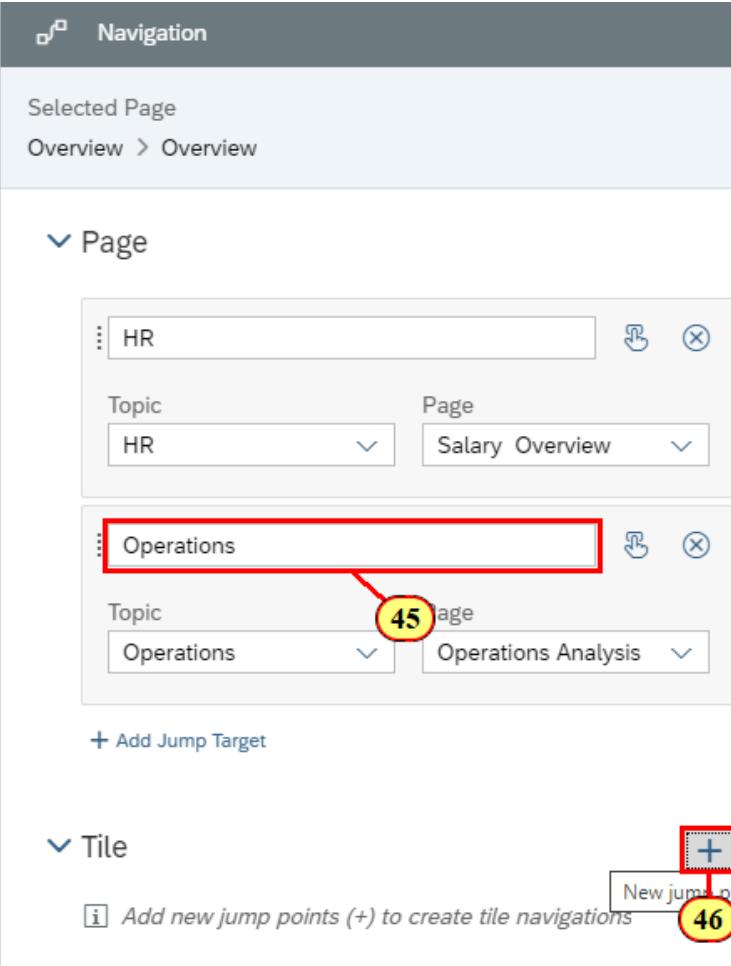
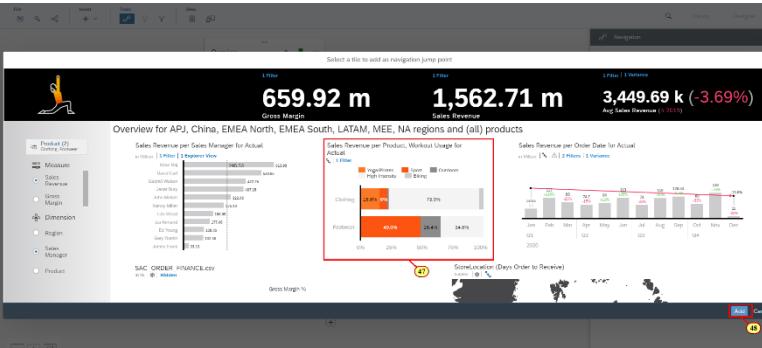
Explanation	Screenshot
<p>29. Click Operations Analysis</p> <p>30. Drag Operations Analysis to the Operations Topic</p> <p>👉 We need to include other pages from our ANA 161 Shipping story under the same topic!</p> <p>31. Click Expand for ANA 161 Shipping</p>	 
<p>32. Click Shipping Overview</p> <p>33. Click Regional Shipping</p> <p>34. Click and Drag the Two Pages into the Operations Topic</p>	 

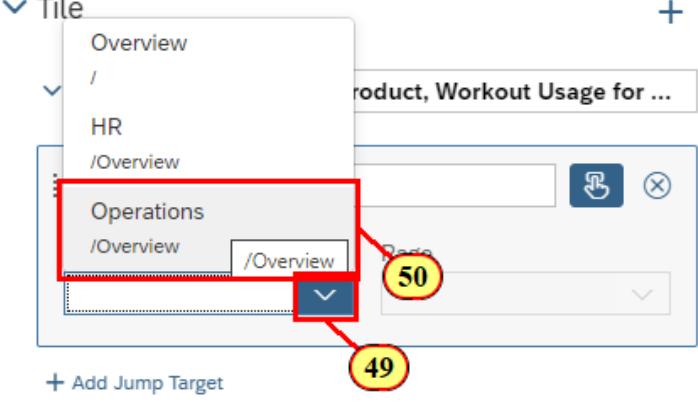
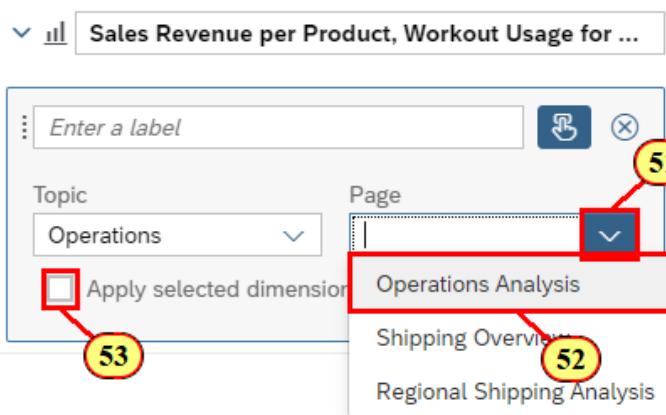
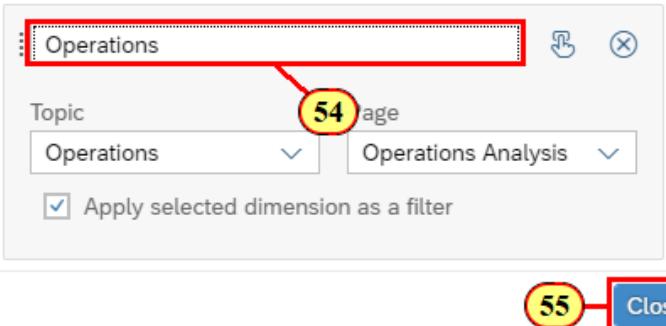
Explanation	Screenshot
<p>⚠️ Quality Check! You have built the base structure of your boardroom. Your presentation should look like this!</p>	
<p>👉 Often our executives jump from one department to another depending on the discussion they're having. To help them quickly jump from one topic to another, let's add jump off points that allow them to switch from one topic to another with a click of a button.</p> <p>35. Click Navigation</p>	

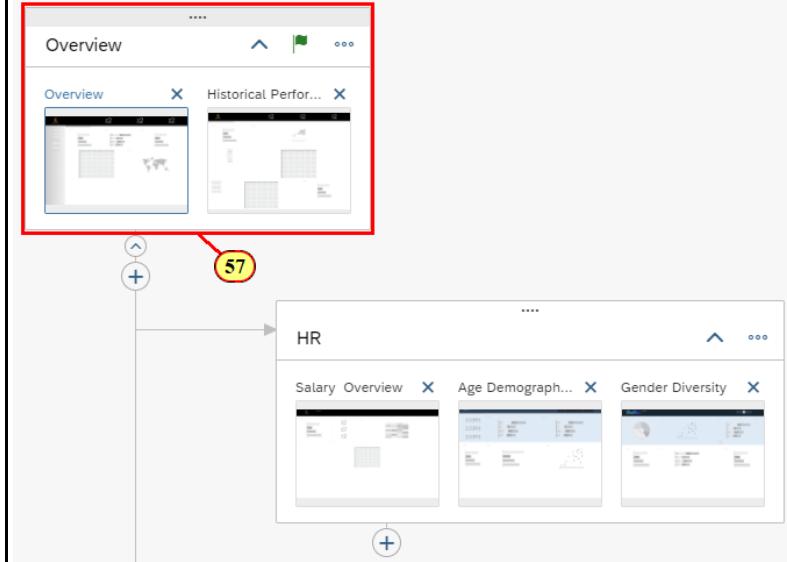
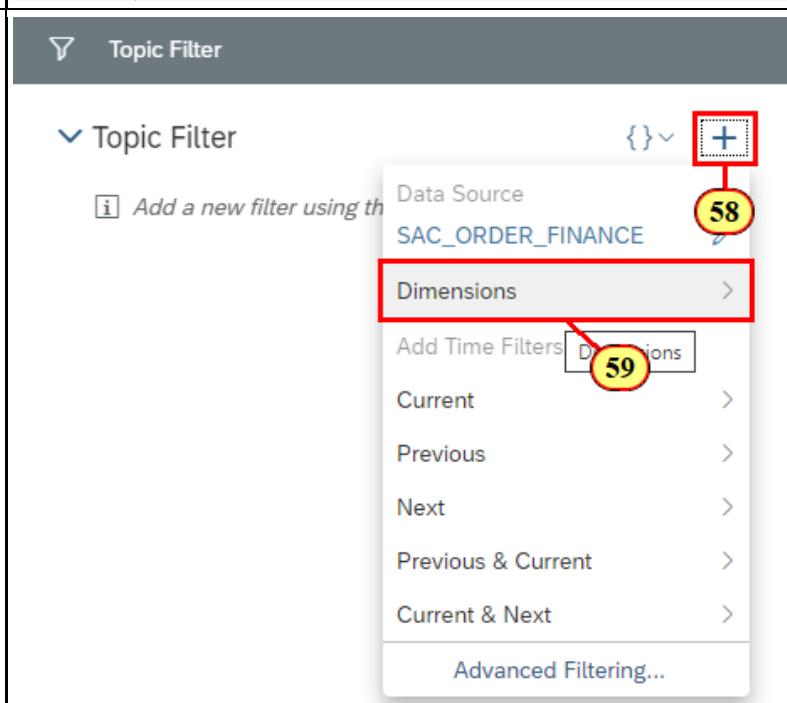
Explanation	Screenshot
36. Click on the Overview Page in the Overview Topic	 The screenshot shows a navigation pane with the title 'Overview'. Inside, there are two tiles: 'Overview' and 'Historical Perform...'. The 'Overview' tile is highlighted with a red box and has a yellow circle with the number '36' pointing to its center.
37. Click + Add Jump Target	 The screenshot shows the 'Navigation' section. Under 'Selected Page', it says 'Overview > Overview'. Below that, under 'Page', there is a blue button labeled '+ Add Jump Target' with a red box around it and a yellow circle with '37' pointing to it. Under 'Tile', there is a note: 'Add new jump points (+) to create tile navigations' with a plus sign icon.

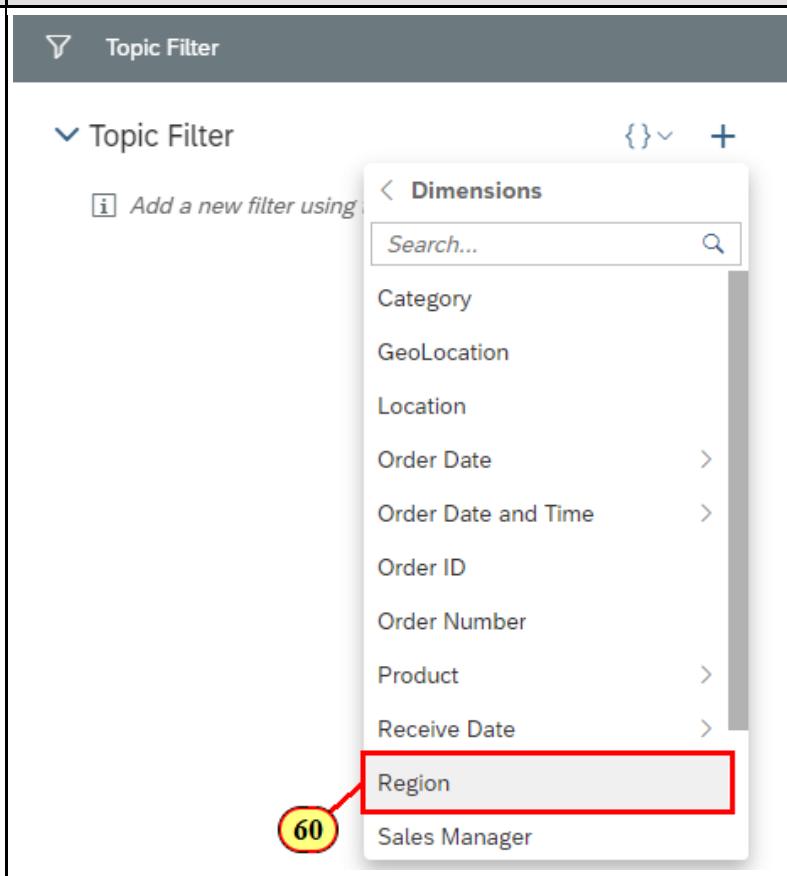
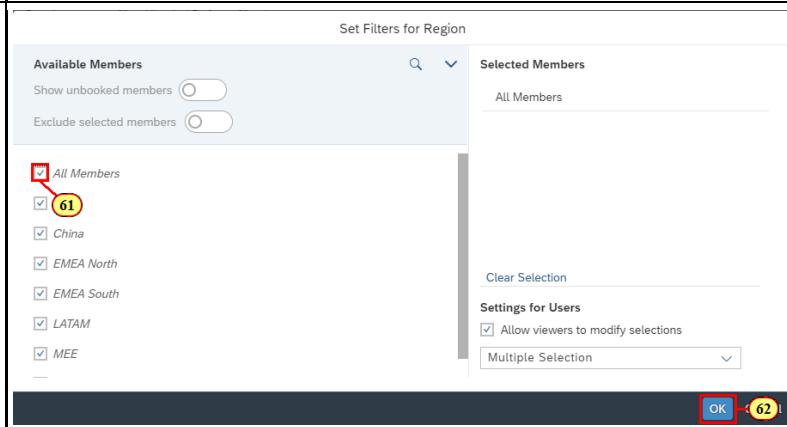
Explanation	Screenshot
<p>👉 We want to provide the executives a quick way to jump to the HR Topic, specifically the Salary Overview page.</p> <p>38. Rename the Label to HR</p> <p>39. Click Expand for Topic</p> <p>40. Click HR</p>	
<p>41. Click Expand for Page</p> <p>42. Click Salary Overview</p> <p>👉 Similarly, we want to provide the executives a quick way to jump to the Operations Topic, specifically the Operational Analysis page.</p> <p>43. Click + Add Jump Target</p>	

Explanation	Screenshot
<p>44. Click Operations Analysis in the Operations Topic</p>	 <p>The screenshot shows a dashboard interface with two main sections: HR and Operations. The HR section contains three cards: Salary Overview, Age Demographics, and Gender Diversity. The Operations section contains three cards: Operations Analysis, Shipping Overview, and Regional Shipping. The 'Operations Analysis' card is highlighted with a red box and has a yellow circle with the number 44 on it.</p>

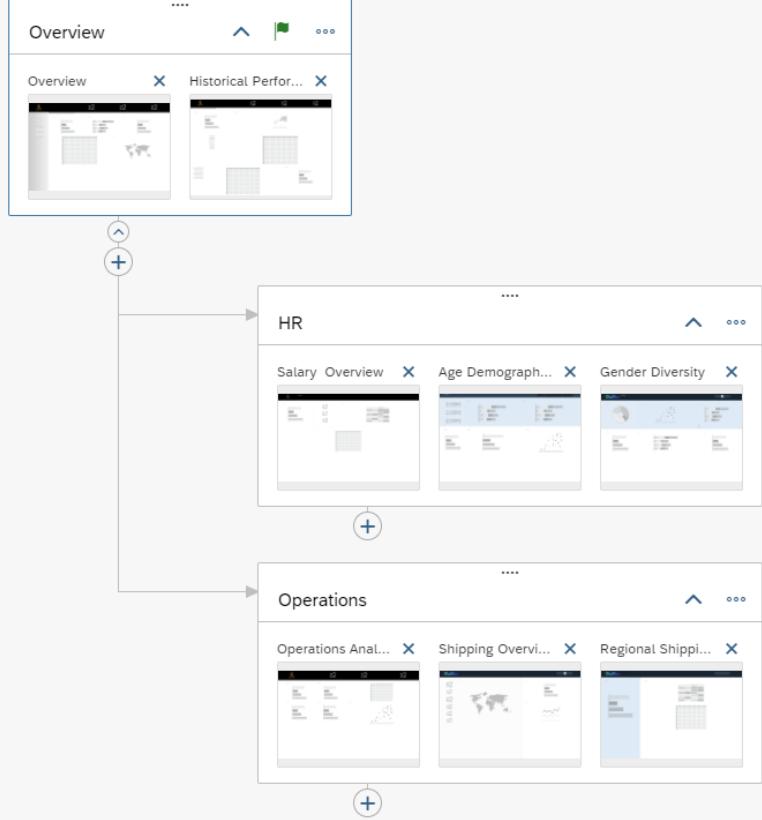
Explanation	Screenshot
<p> Did you notice that the Topic and Page fields for the jump off point was automatically filled?</p> <p>45. Rename the Label to Operations</p> <p> We want to provide the executives more granular control. Hence, we want to allow them to be able to apply a specific workout clothing from a chart as a filter when navigating to a sub-topic.</p> <p>46. Click New Jump Point</p>	
<p> You'll notice that can to preview our dashboard and easily select a chart that we want to use as a jump off point.</p> <p>47. Click the Chart Sales Revenue per Product, Workout Usage for Actual</p> <p>48. Click Add</p>	

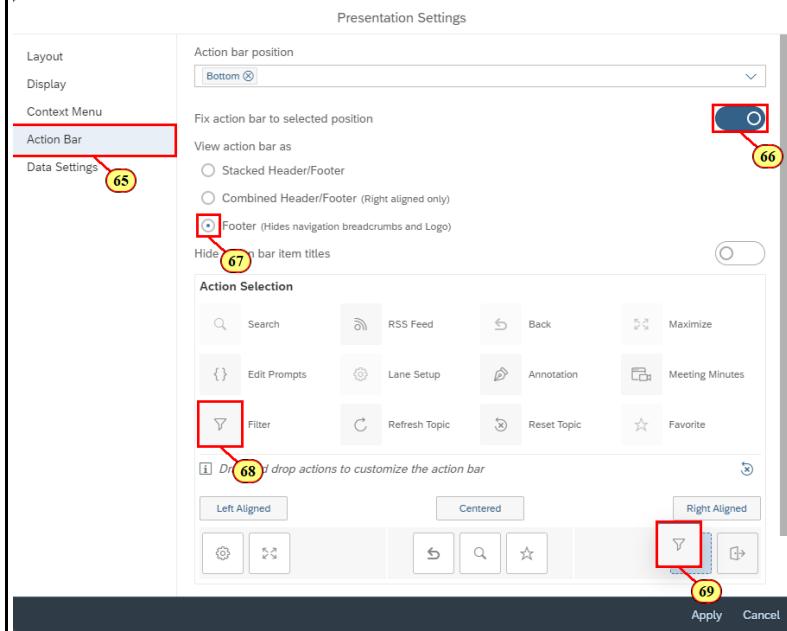
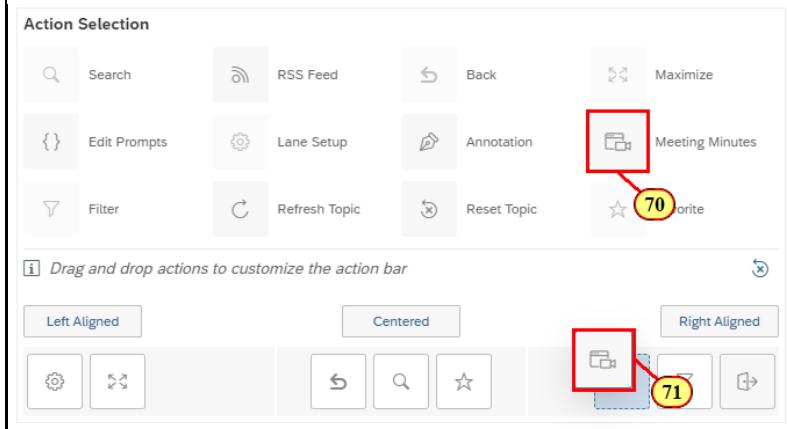
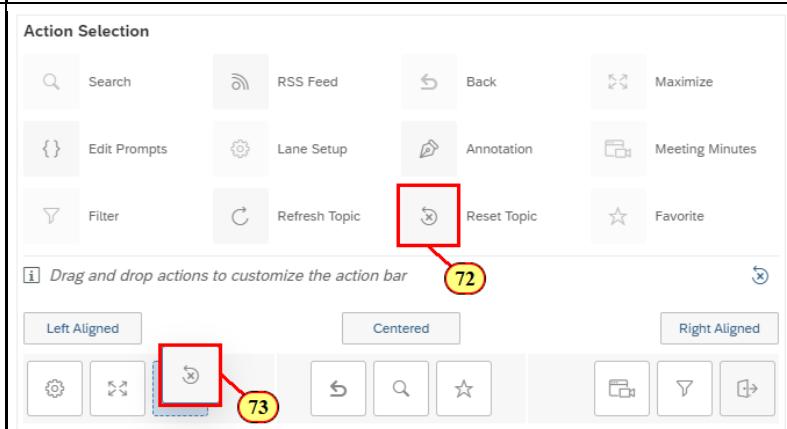
Explanation	Screenshot
<p>49. Click Expand for Topic</p> <p>50. Click Operations</p>	
<p>51. Click Expand for Page</p> <p>52. Click Operations Analysis</p> <p>53. Check Apply Selected Dimension as Filter</p>	
<p>54. Rename the Label to Operations</p> <p>55. Click Close</p>	

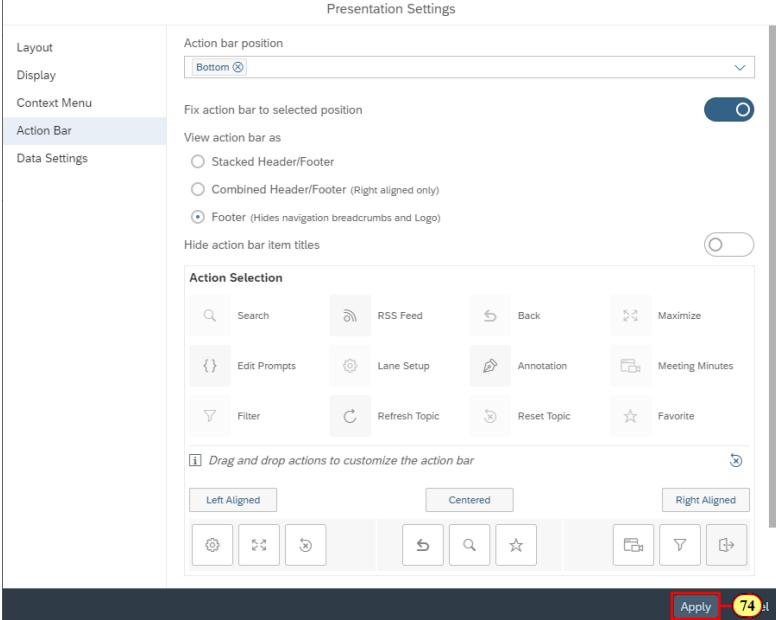
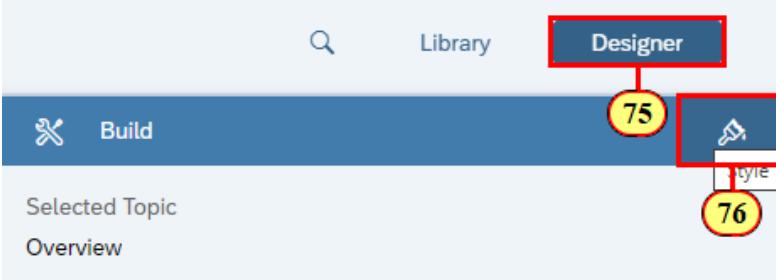
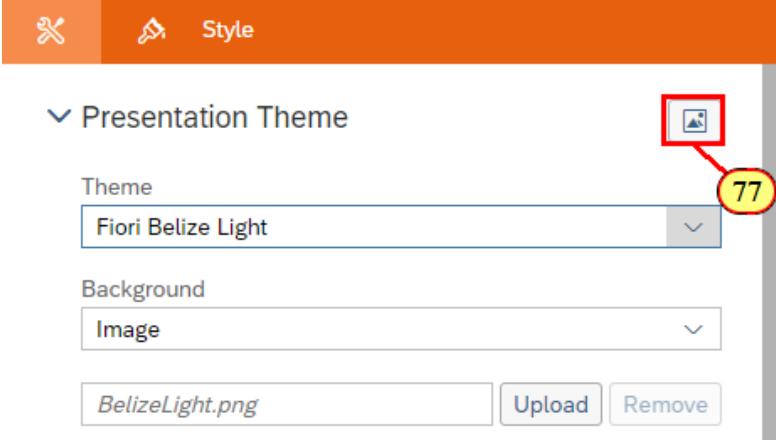
Explanation	Screenshot
<p>👉 As we are consuming pages from various dashboards, we want to ensure that all the data is filtered to the same region. Furthermore, we want to provide our executives the flexibility to modify the filter based on the region they want to analyze.</p> <p>56. Click the Topic Filter Icon</p>	
<p>57. Click on the Overview Topic</p>	
<p>58. Click Add Topic Filter</p> <p>59. Click Dimensions</p>	

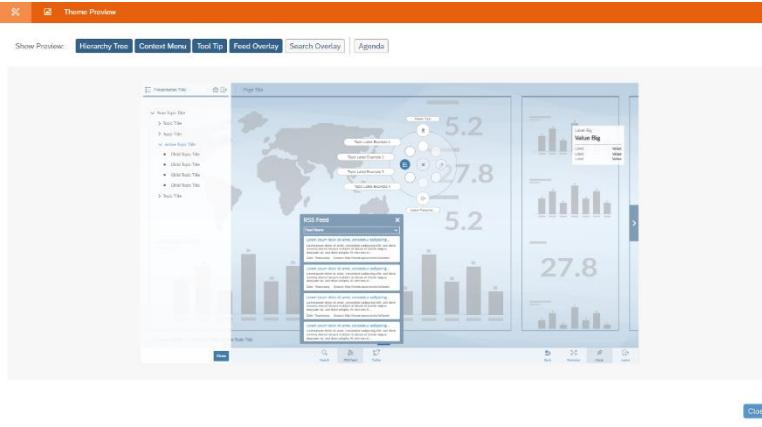
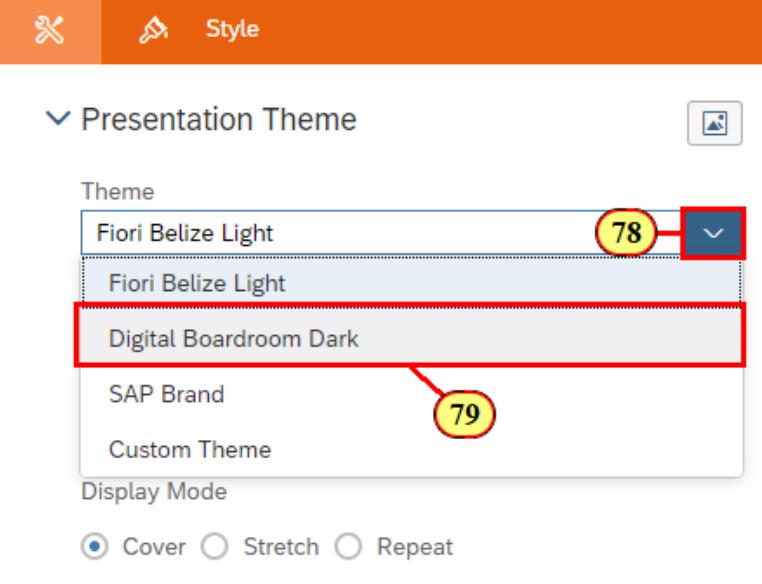
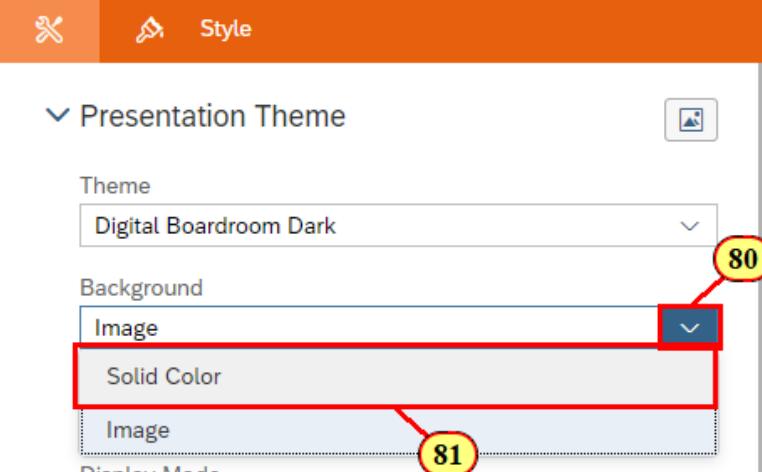
Explanation	Screenshot
60. Click Region	 <p>The screenshot shows the 'Topic Filter' dialog box. On the left, there's a list of dimensions: Category, GeoLocation, Location, Order Date, Order Date and Time, Order ID, Order Number, Product, Receive Date, Region, and Sales Manager. The 'Region' dimension is highlighted with a red box and circled with a yellow circle containing the number '60'.</p>
61. Select All Members 62. Click OK	 <p>The screenshot shows the 'Set Filters for Region' dialog box. Under 'Available Members', the 'All Members' checkbox is checked and highlighted with a red box, circled with a yellow circle labeled '61'. Other options like China, EMEA North, EMEA South, LATAM, and MEE are also listed. On the right, under 'Selected Members', it shows 'All Members'. At the bottom, there are settings for users and an 'OK' button.</p>

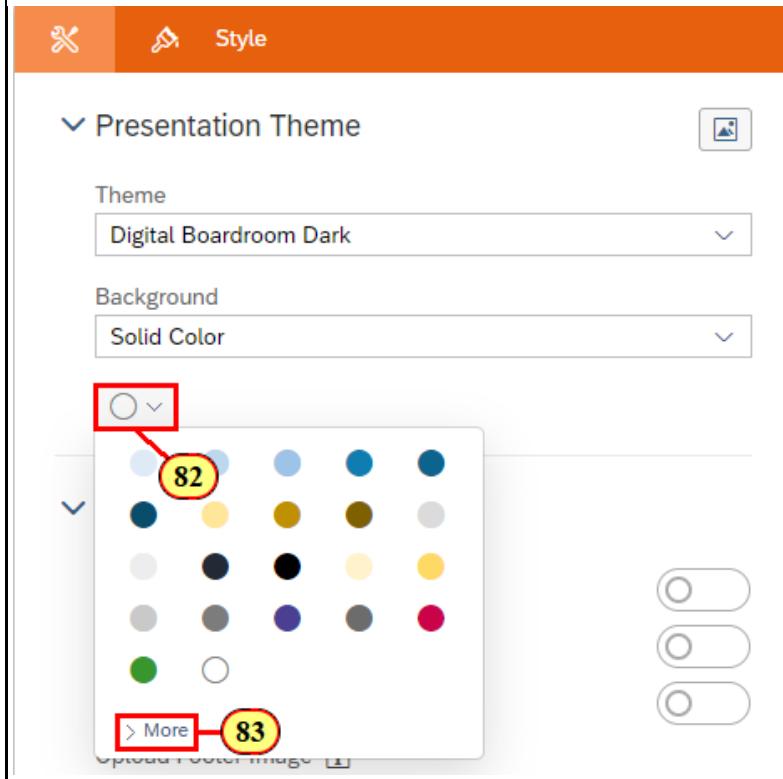
Explanation	Screenshot
63. Click Close	

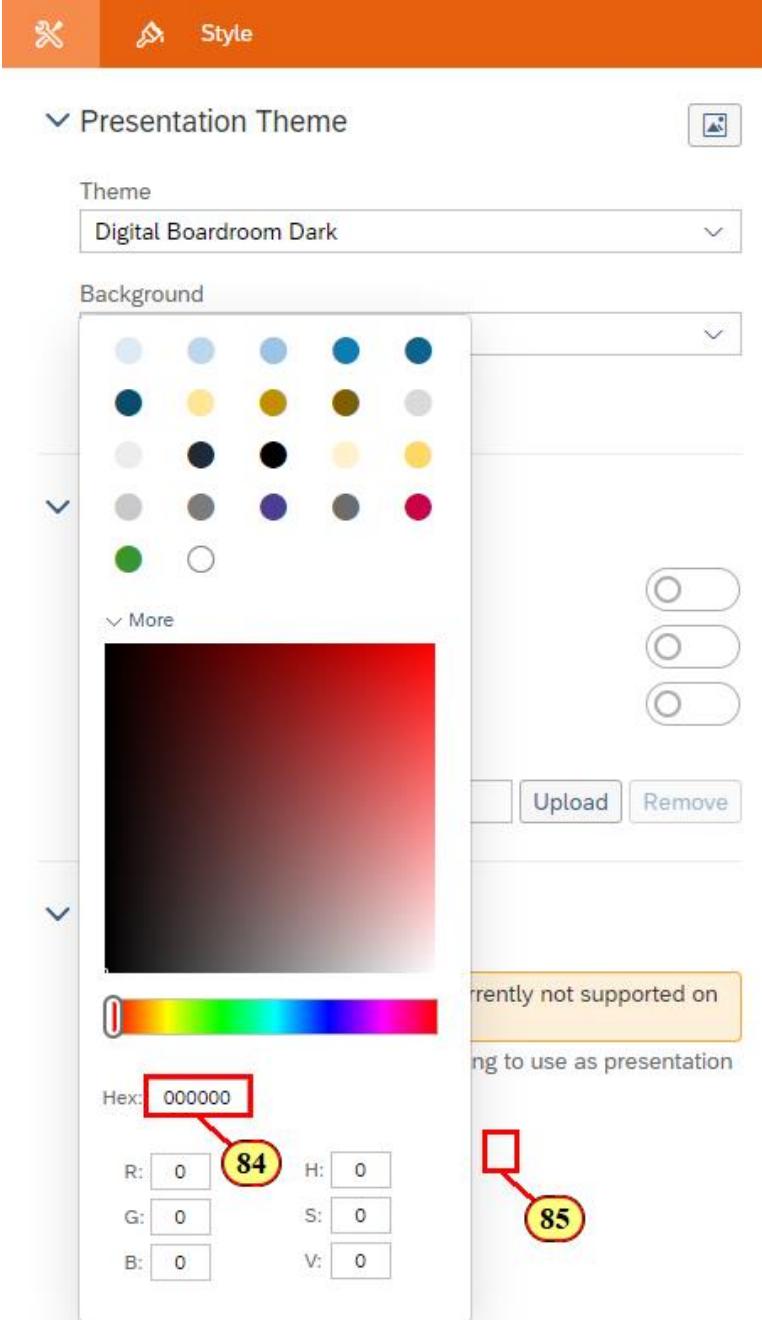
Explanation	Screenshot
<p> Quality Check! Does your Digital Boardroom look like the screenshot?</p>	
<p> We've designed our Digital Boardroom based on the content that our executives need. However, we now want to modify our Digital Boardroom settings to ensure that we provide them with the various tools they need during their meeting.</p> <p>64. Click Presentation Settings</p>	

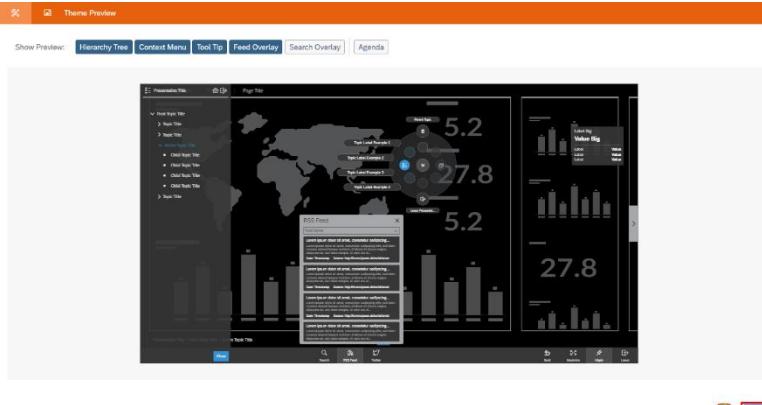
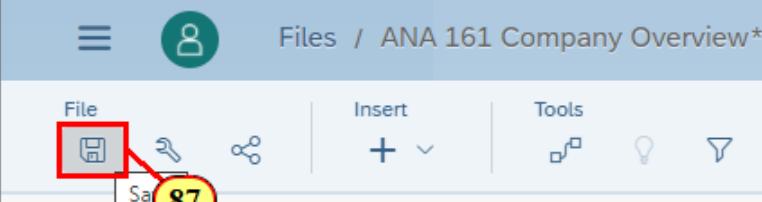
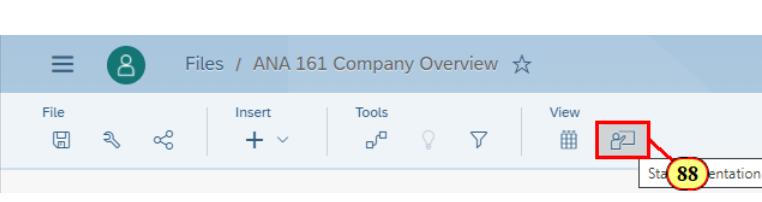
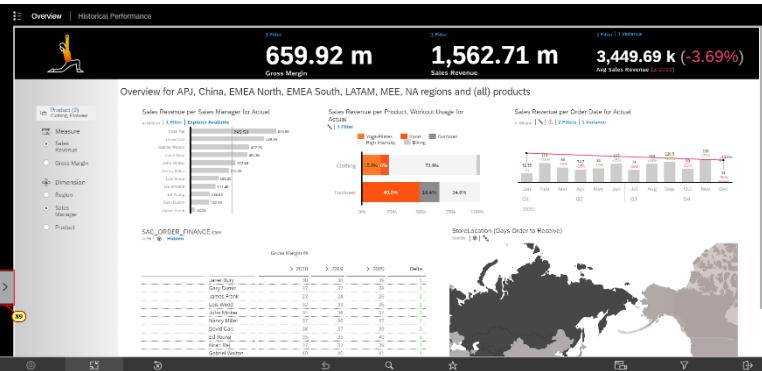
Explanation	Screenshot
<p> We want to make sure that during the presentation we provide the board the ability to take notes during their meeting. Let's add the option to the Action Bar.</p> <p>65. Click Action Bar</p> <p>66. Enable Fix Action Bar to Selected Position</p> <p>67. Select View Action Bar as Footer</p> <p>68. Click and Drag the Filter Action</p> <p>69. Move the Filter Action to the Left of the Exit Action</p>	
<p>70. Click and Drag the Meeting Minutes Action</p> <p>71. Move the Meeting Minutes Action to the Left of the Filter Action</p>	
<p>72. Click and Drag the Reset Topic Action</p> <p>73. Move the Reset Topic Action to the Right of the Fullscreen Action</p>	

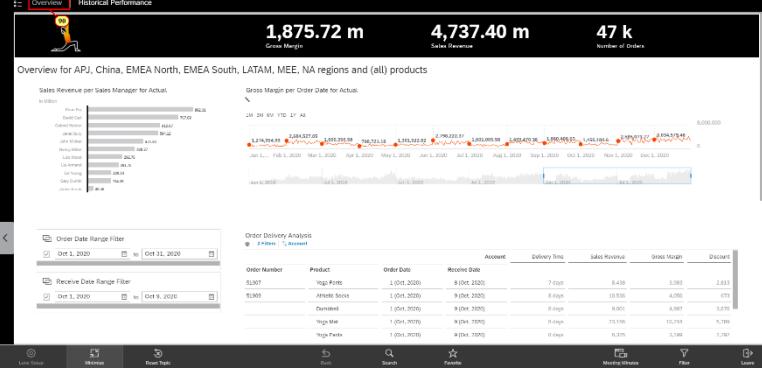
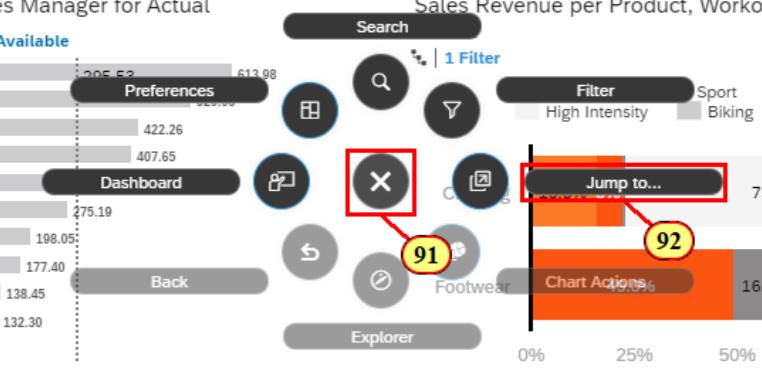
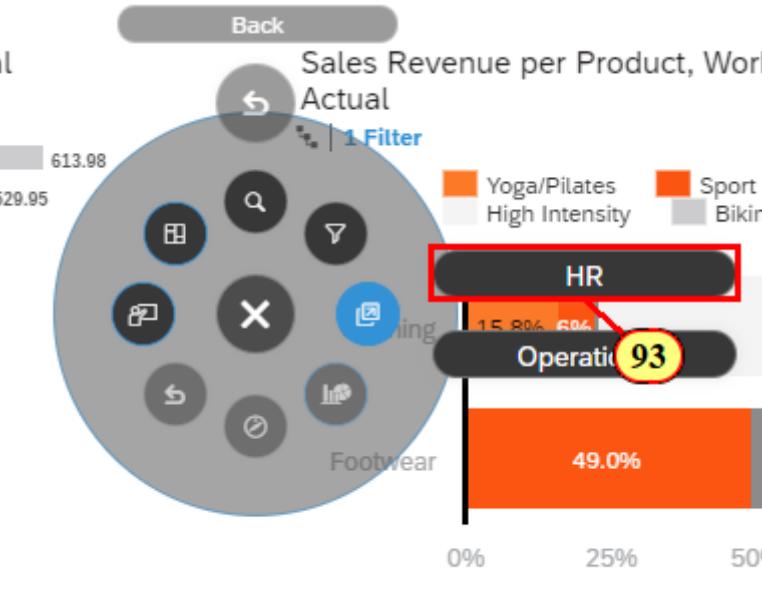
Explanation	Screenshot
<p> Quality Check! Do your presentation settings match the screenshot?</p> <p>74. Click Apply</p>	
<p> We want to ensure that our Digital Boardroom presentation has the correct theme applied to match our corporate colors.</p> <p>75. Click Designer</p> <p>76. Click Styling Panel</p>	
<p>77. Click the Boardroom Preview Icon</p>	

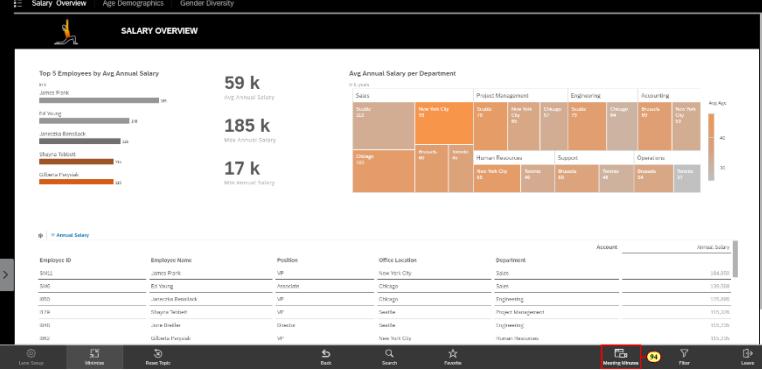
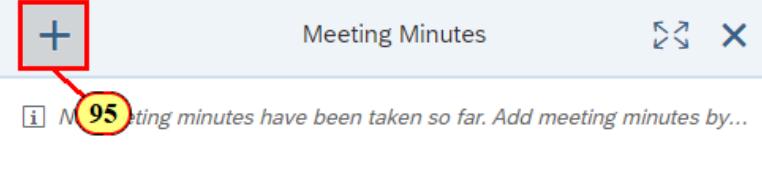
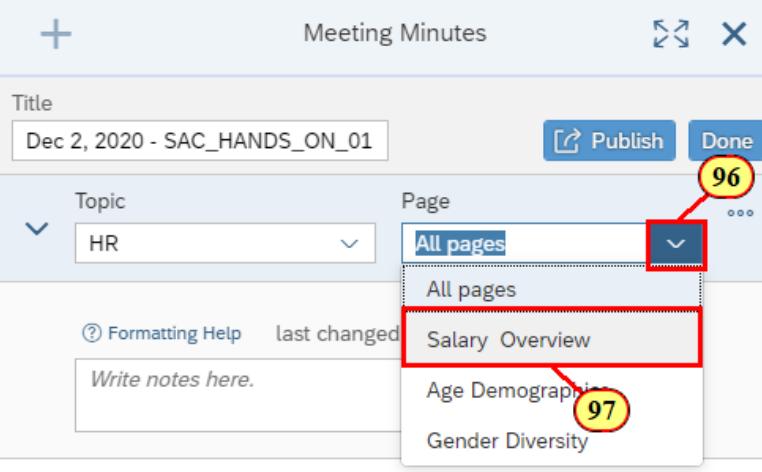
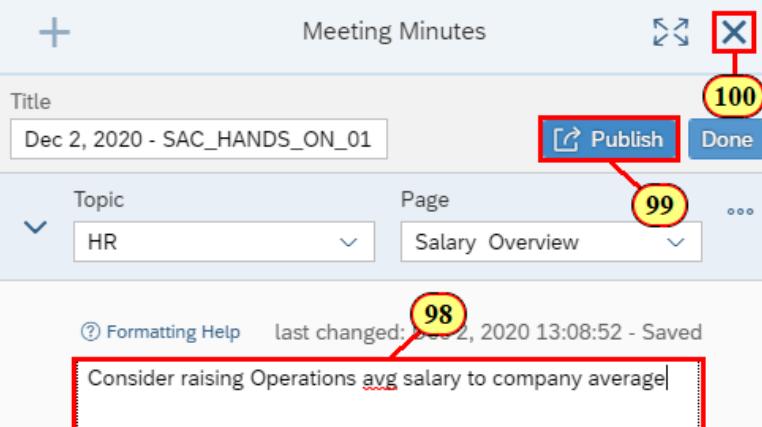
Explanation	Screenshot
<p> The Digital Boardroom Preview allows you to design the way you want to display your boardroom. It also allows you to add a consistent look and feel if your stories have different settings.</p> <p> Based on the guidance provided from our marketing department, we need to select a darker theme.</p>	
<p>78. Click Expand for Theme</p> <p>79. Click Digital Boardroom Dark</p>	
<p>80. Click Expand for Background</p> <p>81. Select Solid Color</p>	

Explanation	Screenshot
<p>82. Click the Color Swatch for Background</p> <p>83. Click More</p>	 <p>The screenshot shows the Microsoft Word ribbon with the 'Style' tab selected. Under the 'Presentation Theme' section, the theme is set to 'Digital Boardroom Dark' and the background is set to 'Solid Color'. A color swatch is highlighted with a red box and labeled '82'. Below it, a 'More' button is highlighted with a red box and labeled '83'.</p>

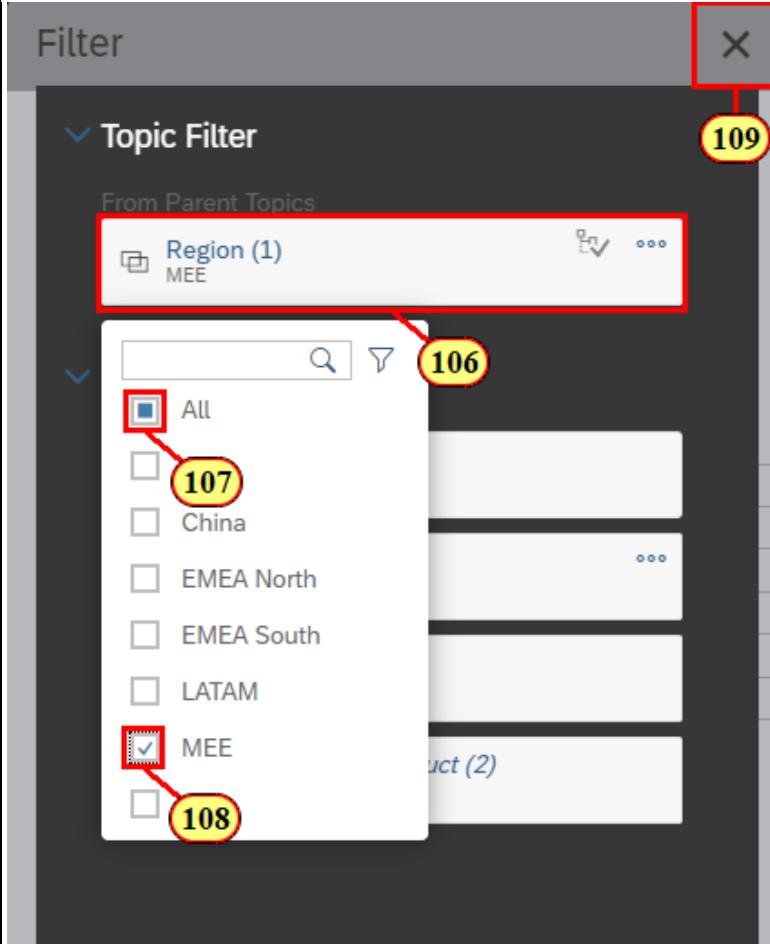
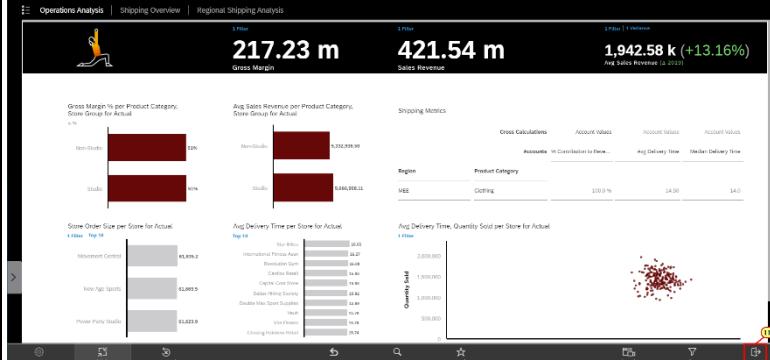
Explanation	Screenshot
<p>84. Enter the Hex Value 000000</p> <p>85. Click Outside the Background Color Menu to Collapse</p>	 <p>The screenshot shows the 'Style' tab in Microsoft Powerpoint. Under 'Presentation Theme', the theme is set to 'Digital Boardroom Dark'. In the 'Background' section, a color palette is visible, followed by a large color picker with a gradient from black to red. The hex value '000000' is displayed in the 'Hex:' field, which is highlighted with a red box and circled with yellow marker '84'. A red box also highlights the background color menu icon, which is circled with yellow marker '85'.</p>

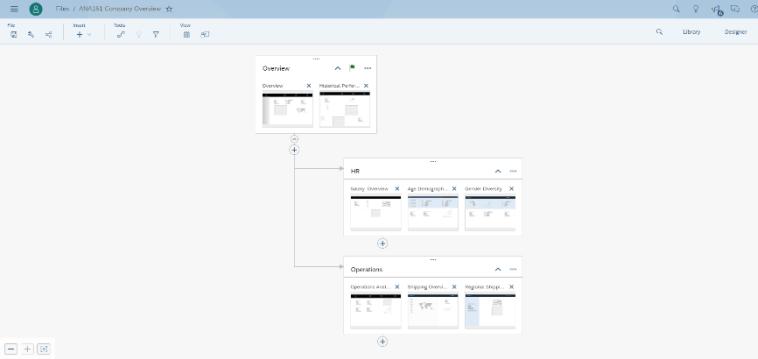
Explanation	Screenshot
<p>⚠️ Quality Check! Does your Theme Preview match the screenshot?</p> <p>86. Click Close</p>	 <p>86 Close</p>
<p>87. Click Save</p>	 <p>87</p>
<p>👉 Before we consume the Digital Boardroom for the executive meeting, we want to ensure that it is designed and functions as we intended.</p> <p>88. Click Start Presentation</p>	 <p>88</p>
<p>👉 We can see that as soon as we open our Digital Boardroom, it displays the Overview of BestRun. Let's ensure that we can navigate to the Historical Performance page.</p> <p>89. Click the Next Page Icon</p>	 <p>89</p>

Explanation	Screenshot
<p>👉 We can see that we had a smooth navigation to the Historical Performance page. The breadcrumb at the top of the Digital Boardroom has updated to reflect the new page. Let's navigate back to the Overview page.</p> <p>90. Click Overview</p>	
<p>👉 Within the Digital Boardroom, the various actions (i.e. filtering, jump to, search, etc.) is available within the Context Menu. We want to ensure that the Jump To Navigate we implemented earlier works as expected!</p> <p>91. Right Click on the Mouse</p> <p>92. Click Jump to...</p>	
<p>👉 We can see that the jump to HR and Operations Topic are both available. Let's jump to the HR Topic.</p> <p>93. Click HR.</p>	

Explanation	Screenshot
<p>👉 We can see that our jump to the HR Topic, specifically the Salary Overview page works as expected. Let's ensure that we can take Meeting Minute notes.</p> <p>94. Click Meeting Minutes</p>	 <p>The screenshot shows the Salary Overview page with various charts and data tables. Key figures include Top 5 Employees by Avg Annual Salary (Janice Pinto, Ed Young, Jennifer Eastman, Sherry Tolcott, Michael Scott) with values 59k, 185k, and 17k respectively. A chart titled 'Avg Annual Salary per Department' shows salaries for Sales, Project Management, Engineering, and Accounting departments across locations like Seattle, New York City, Chicago, and Boston.</p>
<p>95. Click Add</p>	 <p>The screenshot shows the 'Meeting Minutes' creation page. A note at the top states: '95 Meeting minutes have been taken so far. Add meeting minutes by...'. A red box highlights the '+' button to add a new minute.</p>
<p>👉 As we are on the Salary Overview page, we want to ensure that the comments we add are specific to this page.</p> <p>96. Click Expand for Page</p> <p>97. Click Salary Overview</p>	 <p>The screenshot shows the 'Meeting Minutes' creation page expanded for a specific page. The 'Page' dropdown menu is open, showing options: 'All pages' (selected), 'Salary Overview' (highlighted with a red box), 'Age Demographics', and 'Gender Diversity'. A yellow circle labeled '96' points to the 'All pages' option.</p>
<p>98. Add a Note: Consider raising Operations avg salary to company average.</p> <p>99. Click Publish</p> <p>100. Close the Meeting Minutes</p>	 <p>The screenshot shows the 'Meeting Minutes' creation page after publishing. The note 'Consider raising Operations avg salary to company average' is visible in the note area. A yellow circle labeled '98' points to the note text. A yellow circle labeled '99' points to the 'Publish' button. A yellow circle labeled '100' points to the close button.</p>

Explanation	Screenshot
<p>👉 Let's navigate back to the Overview Page to ensure that our Jump To via a chart context works.</p> <p>101. Click the Main Menu icon</p> <p>👉 We can see our Tree Structure that we designed within the Digital Boardroom. Furthermore, we have multiple ways to navigate between pages and topics.</p> <p>102. Click Overview</p>	
<p>👉 Let's test our Jump To navigation with the filter context by selecting Clothing as the product we are interested.</p> <p>103. Click Clothing</p> <p>104. Click the Jump To icon</p>	
<p>👉 We can see that the dashboard has updated to reflect our Clothing Product Category. We can see that based on the table, MEE has the highest contribution to our Revenue. Let's further filter down our data to focus on the MEE region.</p> <p>105. Click Filter in the Action Bar</p>	

Explanation	Screenshot
<p>106. Click Region</p> <p>107. Deselect All</p> <p>108. Select MEE</p> <p>109. Close the Filter Dialogue</p>	
<p>👉 As you can see the dashboard has updated to include only the MEE Region for the Clothing Product Category. Now that we are done validating our Digital Boardroom and familiarized ourselves with the various actions, we are ready to moderate during the board meeting.</p> <p>110. Click Leave in the Action Bar</p>	

Explanation	Screenshot
<p> We're back in the Digital Boardroom Designer and can continue make edits to our Digital Boardroom as needed.</p> <p> You have completed Digital Boardroom Deep Dive.</p>	

Summary

You have completed the entire **Digital Boardroom** section!

You should now be able to:

- Create a new Digital Boardroom and use selected pages from several Stories
- Customize navigation across different topics of Digital Boardroom
- Add a selection of interactive functionality to be used during the presentation
- Open Digital Boardroom in presentation view and use the interactive capabilities