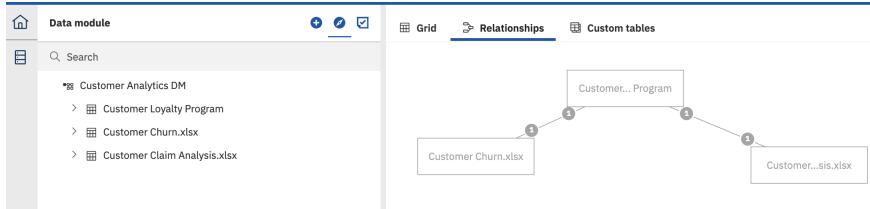


Cognos Reporting

Que vamos a construir

For this exercise we are going to use the data module, that we have created, in the Data module exercise



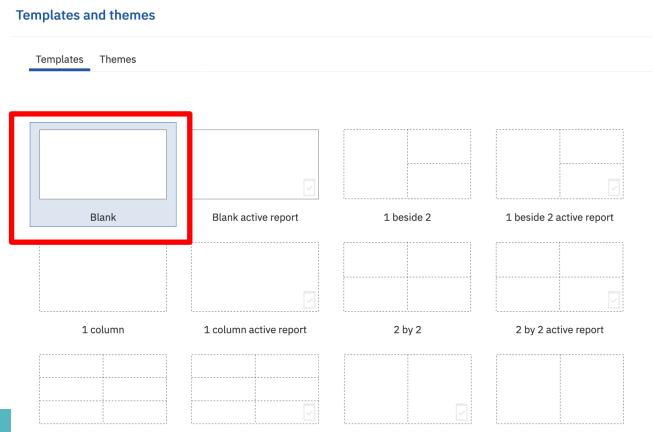
Que vamos a construir



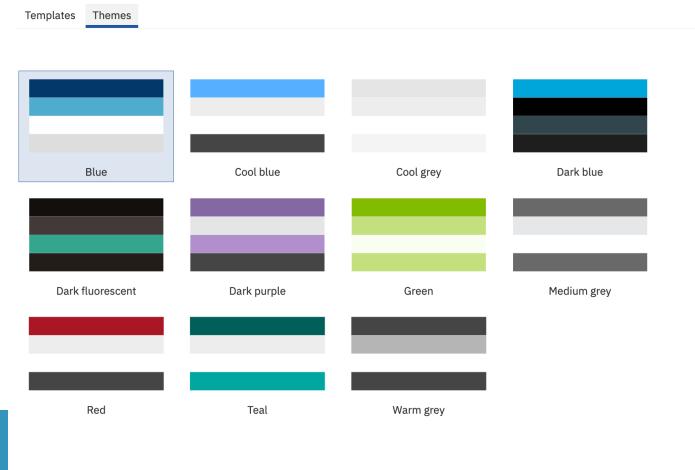
Creating reports

Create a new report coming from Customer Analysis DM

The screenshot shows the IBM Cognos Analytics interface. In the top navigation bar, there's a 'My content' section. Below it, a search bar contains the text 'Customer Analytics DM'. A context menu is open over this item, with the 'Create report' option highlighted. The left sidebar includes links for Home, My content, Team content, and Recent.

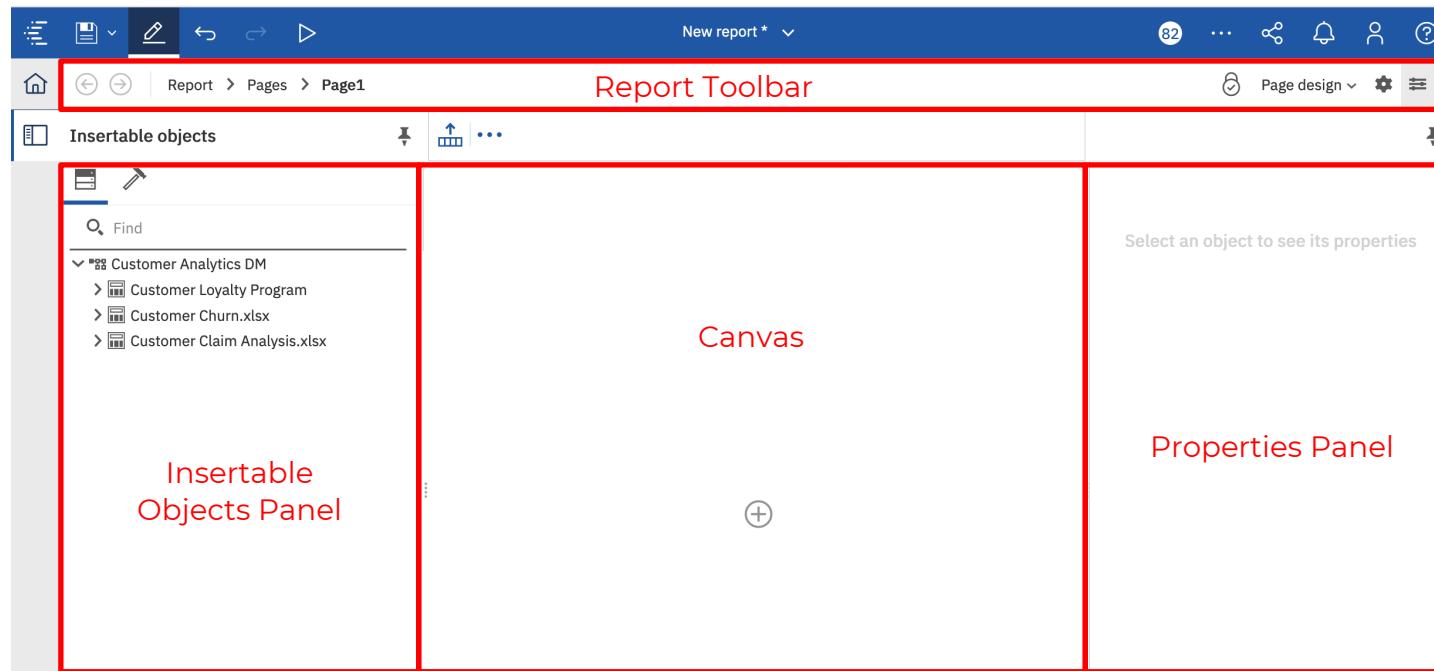


There are a set of Templates that we can use, select the Blank one



Creating reports

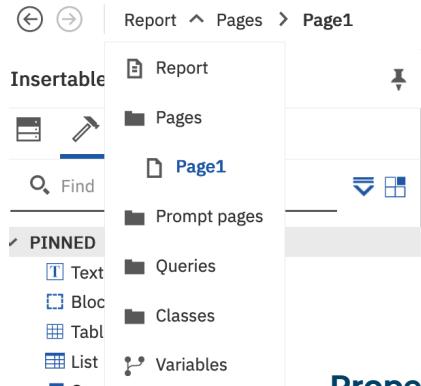
The template opens in the Report Authoring User Interface. This new User Interface puts everything report authors need right at their fingertips



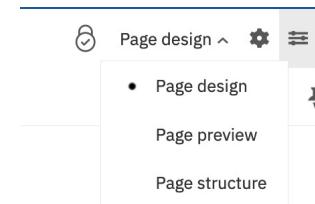
Creating reports: User interface

The Report toolbar provides the user quick and easy access to navigate around their report sections, lock the report from editing, set the edit mode to work in, provide additional options for working with the report, and ability to expose/hide the Report Properties. These capabilities are outlined in more detail below:

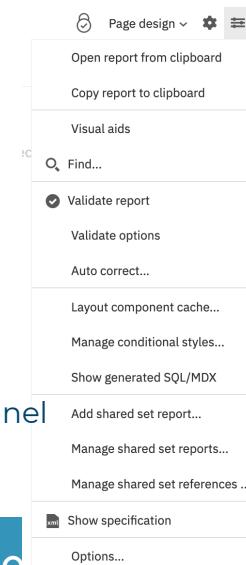
Report Navigation. Allows users one-click to access any section of their report. All of the report objects are listed in one easy to navigate dropdown.



Page View. Allows users to toggle between design mode, preview mode and page structure views



Options. Provides quick access to frequently used Authoring functions

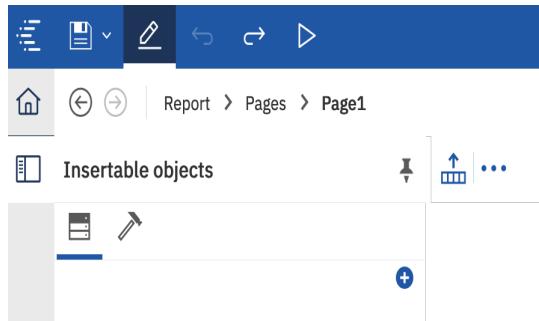


Properties. Expands and collapses the Properties Panel
Canvas. Design space for report content

Creating reports: User interface

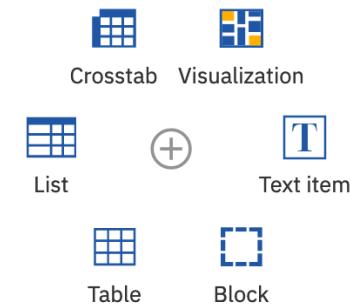
Properties. Expands and collapses the Properties Panel

Insertable Objects Panel.

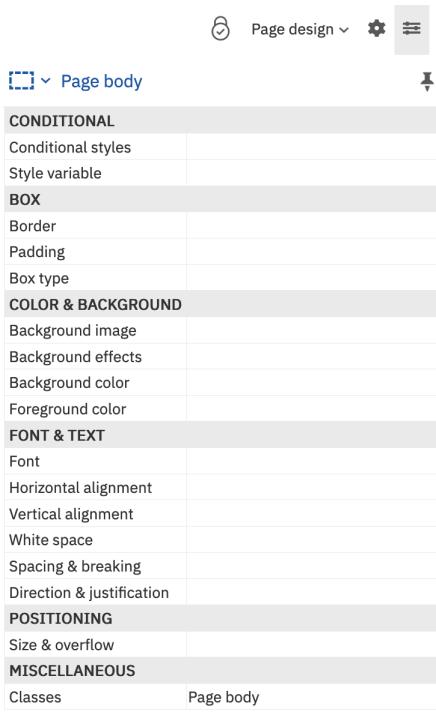


- Sources. Data source panel.
- Toolbox. Pick list for insertable objects into the report.
- Pin/Unpin. Allows user to Pin/unpin objects to their Pin Library.
- More. Additional report objects such as Headers and Footers.

Canvas: Design space for report content

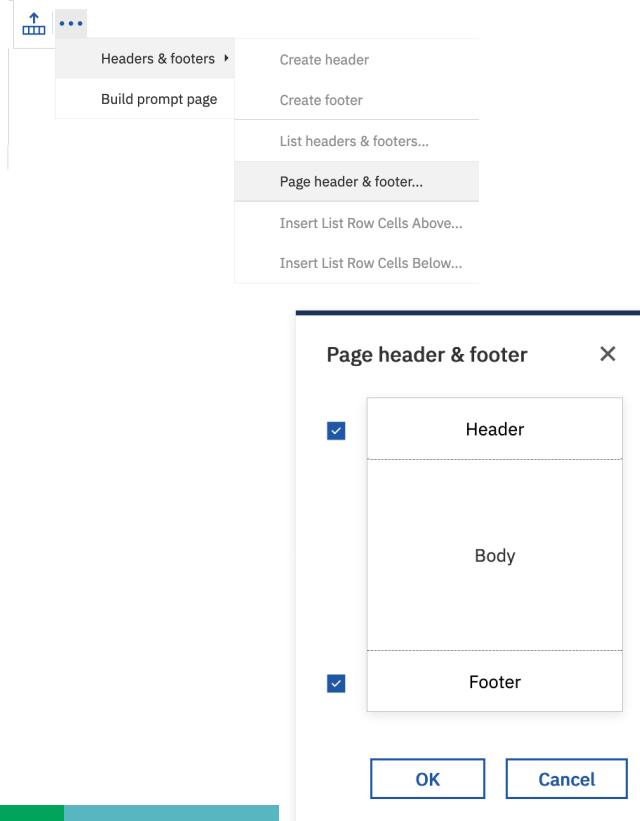


Creating reports: User interface

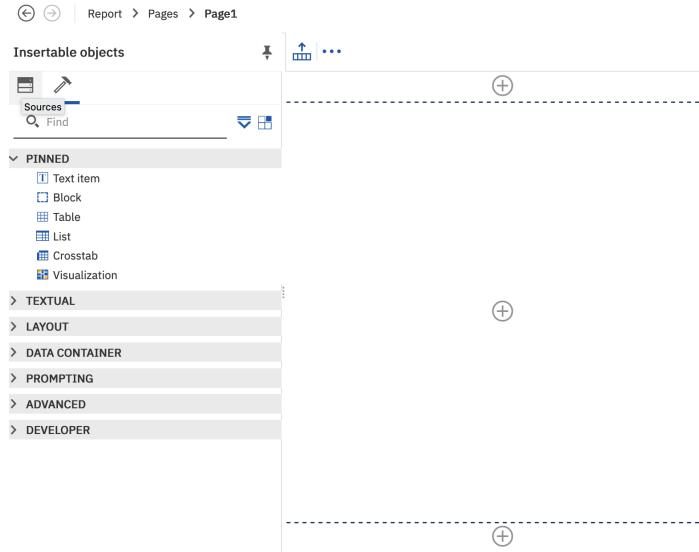


Properties Panel. Provides property setting options for report parts. The Property settings shown is based on which report object or part is in focus. In the sample below, the Properties panel is rendering for the Page Body of the report. You will begin to see properties render as you build your report

Creating reports: Headers and Footers

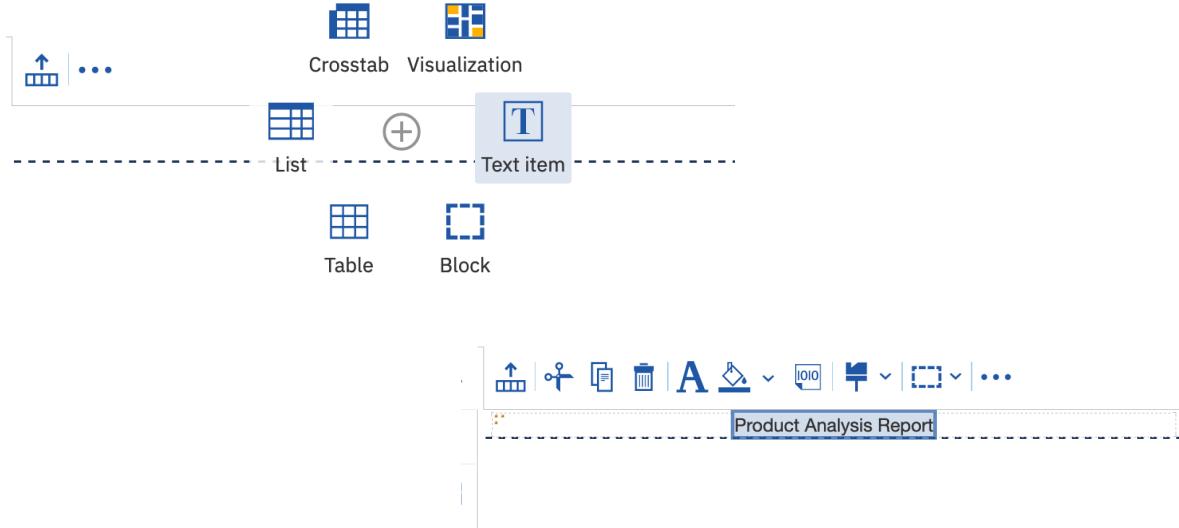


You now see that the report canvas has three distinct areas for the Header, Body and Footer for the report. Each area has an Add button to easily start inserting objects to build out your report.



Creating reports: Headers and Footers

Create a Text in the header with the text: **Product Analysis Report**



You can view the default color palette, change the palette, and create your own palettes in the dashboard properties. You may choose the predefined colors from the Grid Tab OR you can create custom colors from the Wheel Tab. The color Wheel allows custom color settings for RGB, CMYK, HSB and HEX codes

Creating reports: Headers and Footers

Create a Custom Styles and color Palettes



From the Text tab, change the Style name to Page Header.

- Change the Font settings to the following:
- Change Font Size to 24.
- Set Weight to Bold.
- Under Alignment, select center for both Horizontal and Vertical.

Companies has a standard set of Corporate colors which are used for all official reporting. You will create a custom color palette with these colors so that you may adhere to the corporate branding standards of your organization. Once created, you may apply this color palette Style to your report

Style

Style name: Page Header

Text tab selected.

Font

- Family: (Default)
- Size: 24 px
- Weight: Bold (radio button selected)
- Style: (Default)
- Effects: Underline, Overline, Line-through (checkboxes)

Color

Favorites

Alignment

Horizontal and Vertical alignment buttons.

Creating reports: Headers and Footers

Create a Custom Styles and color Palettes

Style

Style name: Page Header

Text Size and positioning Background Box

Font

Family: (Default) Size: 24 px

Weight: (Default) Normal Bold

Style: (Default) Normal Italic

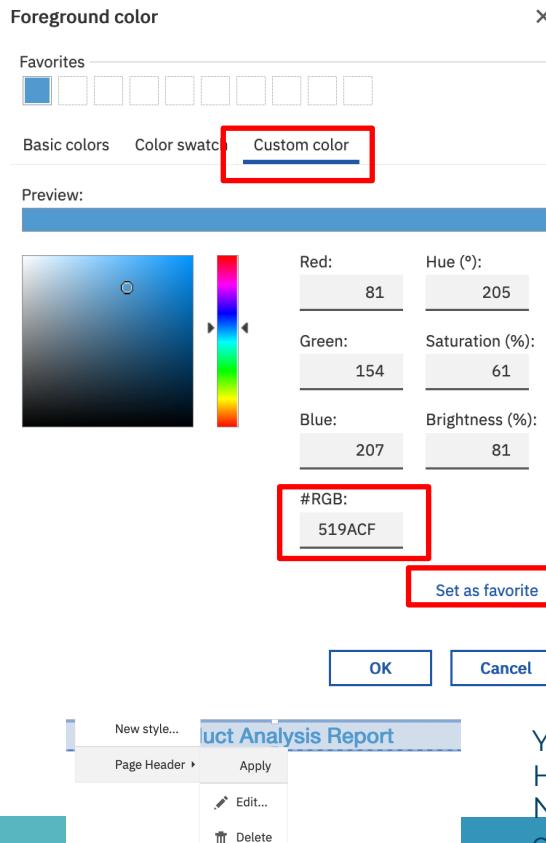
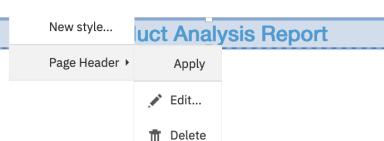
Effects: Underline Overline Line-through

Color: (Red box)

Favorites: (Red box)

Alignment

Horizontal Vertical



The Custom Color dialog box allows you select your exact RGB colors. You may enter the Red-Green-Blue color codes, or the #RGB value. You have been given the RGB value 519ACF for the standard corporate blue. Enter the value 519ACF into the #RGB box. The individual RGB values have been populated as was the Hue, Saturation and Brightness of your RGB color value. Click Apply and then Save style

You will now see that your Header has updated to your New Style with the custom color.

Exploitation y visualización

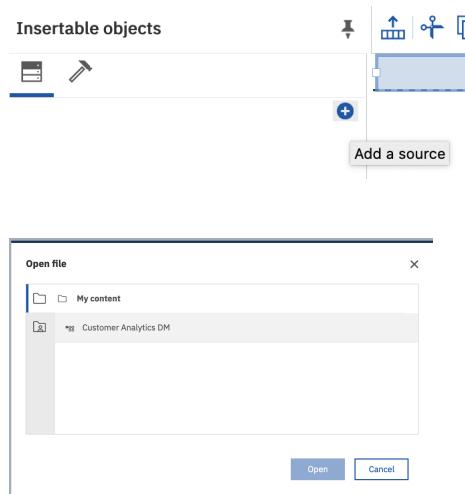
Creating reports: Headers and Footers

Save the report

The screenshot shows a reporting application interface. On the left, a 'Save as' dialog box is open, displaying a list of saved reports under 'My content'. The list includes 'Customer Analytics DM', 'Customer Churn.xlsx', 'Customer Claim Analysis.xlsx', and 'CustomerLoyaltyProgram_Full.csv'. Below this list, the 'Destination' is set to 'My content' and the 'Save as' field contains the name 'Product Analysis'. At the bottom of the dialog are 'Save' and 'Cancel' buttons. To the right of the dialog, the main report editor window is visible. The title bar of the editor says 'Report > Pages > Page1' and the main area is titled 'Product Analysis Report'. The editor interface includes a toolbar with various icons for formatting and layout, and a sidebar on the left labeled 'Insertable objects' which lists categories like PINNED, TEXTUAL, LAYOUT, and DATA CONTAINER.

Creating reports: Summary Widgets

Select the source



The screenshot shows the report builder interface. On the left, the 'Insertable objects' pane is open, showing a tree view of data sources. The 'Customer Analytics DM' node is expanded, and its child node 'Quantity Sold' is highlighted with a red box. A red arrow points from this highlighted node to a drop zone on the right side of the screen. The drop zone is a light blue rectangular area where a data item is currently being placed. To the right of the drop zone, the report page is visible, showing a placeholder for the summary widget with the text '<Quantity Sold>' and the label 'Quantity Sold' below it. The title of the report is 'Product Analysis Report'.

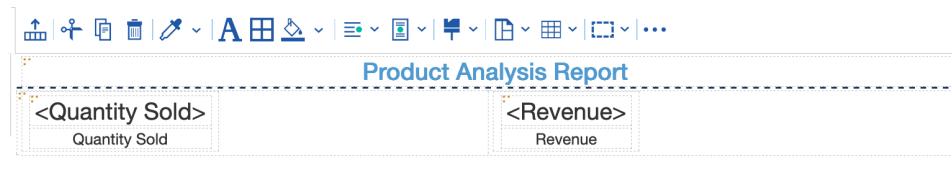
Notice that the data item shows the data field information, not the actual values. This is because you are currently working in Page Design mode. Many report authors prefer this mode while building reports so that the report is not constantly retrieving data during the build. You will change this to Page Preview Mode later in the workshop so that you can view the report with data.

Creating reports: Summary Widgets

Drag Revenue to the top-right of the report body, under the title, when you see the drop zone shown below.



The reporting tool automatically creates a table and positions the second widget to the right of the first widget



THE DROP ZONE IS DYNAMIC AND WILL RENDER BASED ON THE LOCATION OF YOUR CURSOR ON THE SCREEN. EXISTING WIDGETS WILL AUTOMATICALLY ADJUST TO MAKE ROOM FOR THE NEW WIDGET WHILE STILL MAINTAINING THE FIXED LAYOUT

Creating reports: Summary Widgets

Drag Unit Cost between Quantity Sold and Revenue, as follow

The screenshot shows a report titled "Product Analysis Report". It contains four summary widgets arranged horizontally:

- <Quantity Sold>
Quantity Sold
- <Unit Cost>
Unit Cost
- <Margin>
Margin
- <Revenue>
Revenue

The "Unit Cost" widget is currently highlighted with a dashed border.

Now that your KPIs are in place, you want to view the actual data for the report. You will switch from Page Design mode, into Page Preview mode.

The screenshot shows the interface for switching between Page Design and Page Preview modes. A red box highlights the "Page preview" option in the dropdown menu.

The report preview shows the following data:

Product Analysis Report			
194,337 Quantity Sold	\$31,331,316.20 Unit Cost	\$5,529,055.80 Margin	\$109,332,506.00 Revenue

Save the Report

Creating reports: Summary Widgets

Apply new styles:

Select all the spaces between the metrics and apply the center style

A screenshot of a report interface titled "Product Analysis Report". The report contains four summary widgets: "Quantity Sold" (194,337), "Unit Cost" (\$31,316.20), "Margin" (\$5,529,055.80), and "Revenue" (\$109,332,506.00). A context menu is open over the "Quantity Sold" widget, showing options: Default, Left, Center, Right, and Justify. The "Center" option is highlighted.

Click on the Quantity Sold widget to bring it into focus, Click the container select object button (three dots in upper left corner of the widget) to highlight the summary widget

A screenshot of a report interface titled "Product Analysis Report". The "Quantity Sold" widget (194,337) is highlighted with a red border around its three-dot selection handle in the top-left corner. The other three summary widgets are visible but not selected.

A screenshot of a report interface showing a summary widget for "Quantity Sold" (194,337). A context menu is open, with the "New style..." option highlighted by a red box. Other menu items include "Page Header" and a currency symbol.

Creating reports: Summary Widgets

Create a new style, “by the number”

Table Header

Style

style name **by the numbers**

Table preview **Text** Size and positioning Background Box

Font

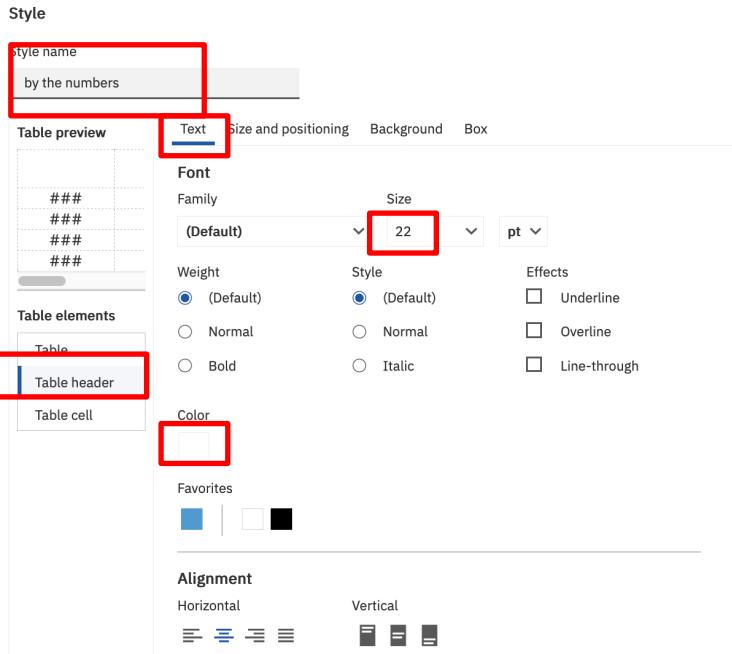
Family (Default) Size 22 pt

Weight (Default) Style (Default) Effects Underline
 Normal Overline
 Bold Italic Line-through

Color

Table elements Table **Table header** Table cell

Alignment Horizontal Vertical



Style

style name **by the numbers**

Table preview **Text** Size and positioning **Background** Box

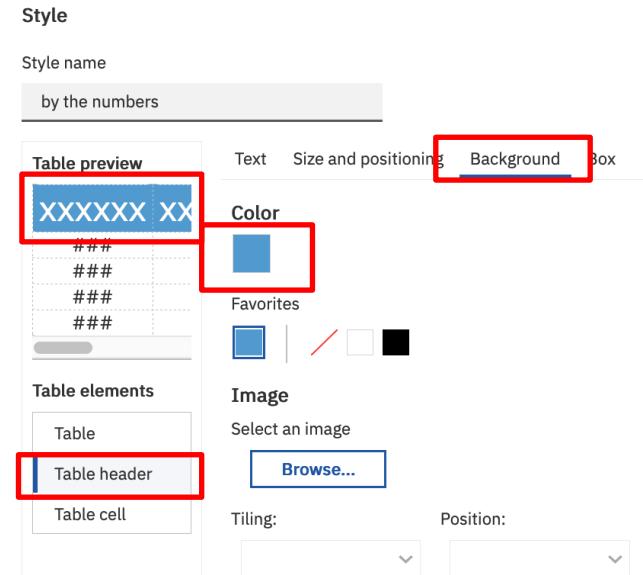
Color **XXXXXX XX**

Favorites

Table elements Table **Table header** Table cell

Image Select an image **Browse...**

Tiling: Position:



Creating reports: Summary Widgets

Table Cell

Style

Style name

by the numbers

Table preview

Text

Size and positioning Background Box

XXXXXX	XX
###	
###	
###	
###	

Table elements

Table

Table header

Font

Family

(Default)

Size

10

pt

Weight

(Default)

Normal

Bold

Style

(Default)

Normal

Italic

Effects

Underline

Overline

Line-through

Color



Favorites



Alignment

Horizontal Vertical

Creating reports: Summary Widgets

Table

Style

Style name
by the numbers

X

Table preview

Text Size and positioning Background Box

Border

Style Solid line Thickness 1 pt

Line arrangement

Table elements

Table AaBbCc

Table header

Table cell Color

Favorites

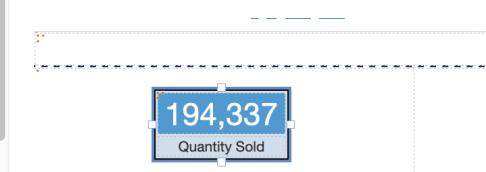
Margin

Top 20 px Bottom 20 px

Left 20 px Right 20 px

The screenshot shows a 'Style' dialog box for a table. It includes sections for 'Table preview', 'Text', 'Size and positioning', 'Background', and 'Box'. Under 'Box', there are options for 'Style' (Solid line), 'Thickness' (1 pt), and 'Line arrangement'. The 'Table elements' section has dropdowns for 'Table', 'Table header', and 'Table cell', each with a color swatch. The 'Margin' section is highlighted with a red box and contains fields for Top (20 px), Bottom (20 px), Left (20 px), and Right (20 px). A preview window on the right shows a table with a blue header and white cells.

You've now set the style for each section of the table. Click on Apply and then Save style. Click Close.



Creating reports: Summary Widgets

Apply the style to all the metrics

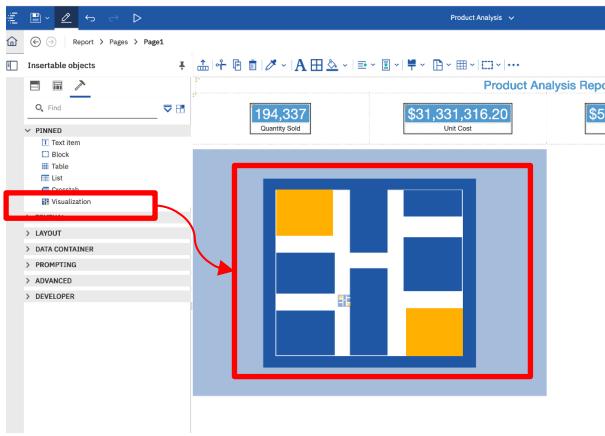
The screenshot shows a dashboard titled "Product Analysis Report" with four summary widgets. The first widget displays "194,337" under "Quantity Sold". The second widget displays "\$1,316.20" under "Unit Cost". The third widget displays "\$5,529,055.80" under "Margin". The fourth widget displays "\$109,332,506.00" under "Revenue". A context menu is open over the first widget, with the "by the numbers" style option highlighted and a red box. Other options in the menu include "New style...", "Apply", "Edit...", and "Delete".



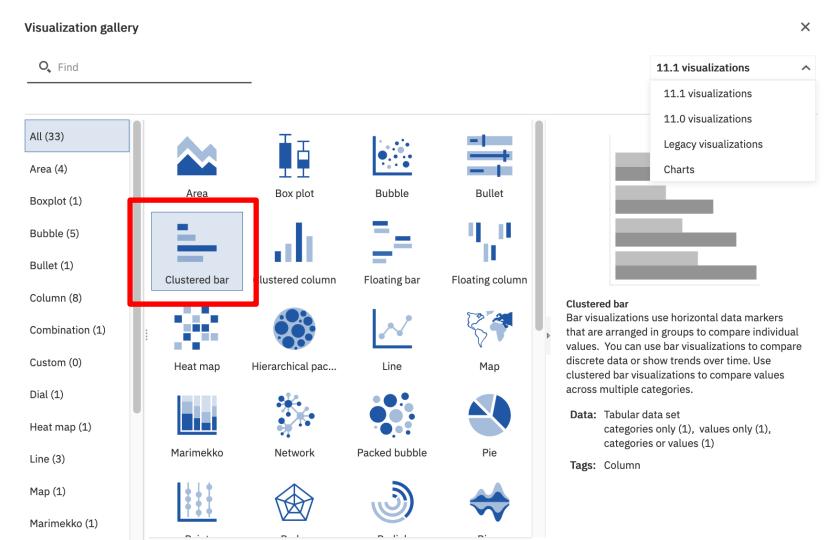
Save the Report

Creating reports: Adding a visualization

Add a visualization to the canvas



The Visualization Gallery will open. Select Clustered Bar. Cognos Analytics will present information regarding the selected visualization including a detailed description, data used to build the visualization and type tag. Notice also on the upper left, you may select from different visualization galleries from both current and previous releases of Cognos.

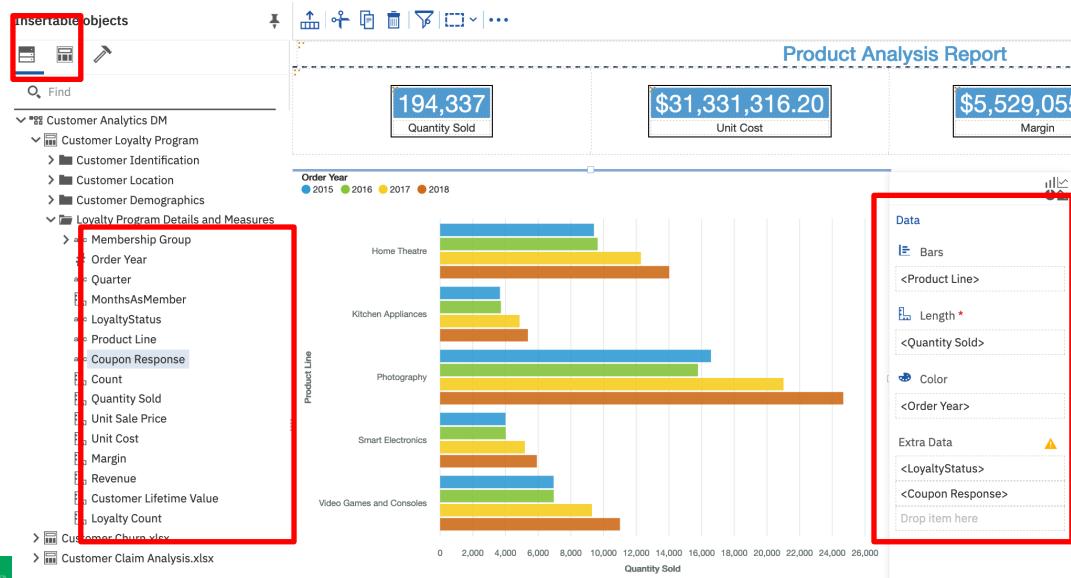


Creating reports: Adding a visualization

Select Sources from the Insertable Objects panel on the left to access data items from the data module. Expand the Customer Loyalty Program table and Loyalty Program Details and Measures folder.

Select the following data items and build your visualization as follows:

- Drag Product Line to the Bars Slot.
- Drag Quantity Sold to the Length Slot.
- Drag Order Year to the Colors Slot.

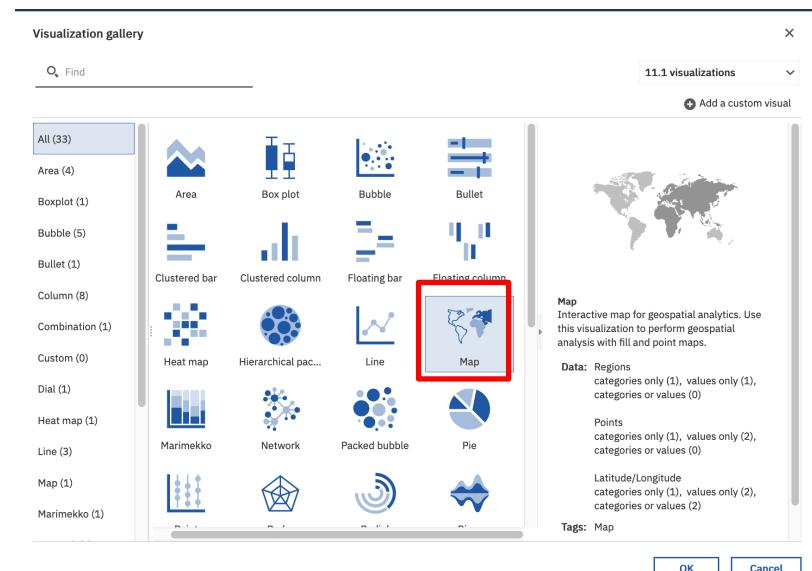
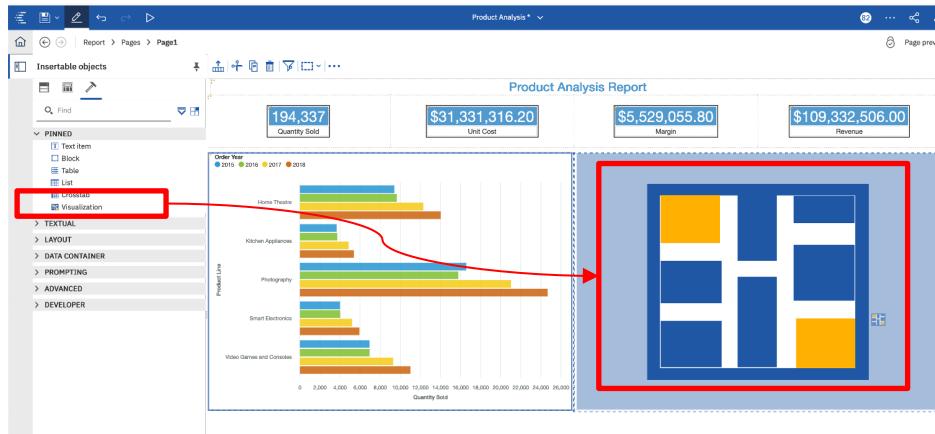


You also want to add 'Extra Data' to the visualization to help your consumers with extra filtering capabilities. These items will not be displayed on the chart, but users can use them for filtering when consuming the report later.
Drag Loyalty Status to the Extra Data Slot.

Drag Coupon Response to the Extra Data Slot

Creating reports: Add a Map

Add a visualization to the canvas



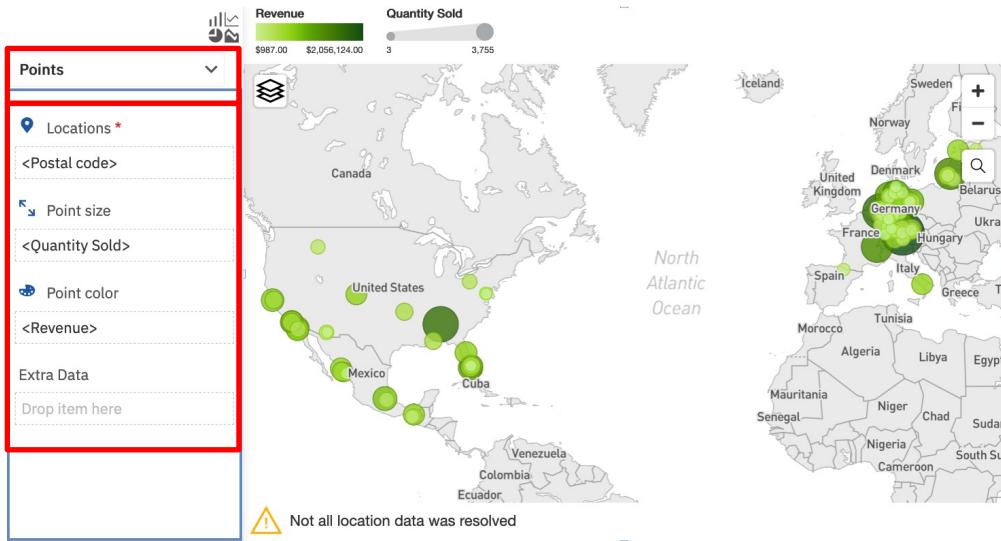
Creating reports: Add a Map

Expand the Customer Loyalty Program table and Customer Location folder. Select the following data item to build your visualization:

- Drag Postal code to the Locations Slot.

Expand the Loyalty Program Details and Measures folder, select the following data items and build your visualization as follows:

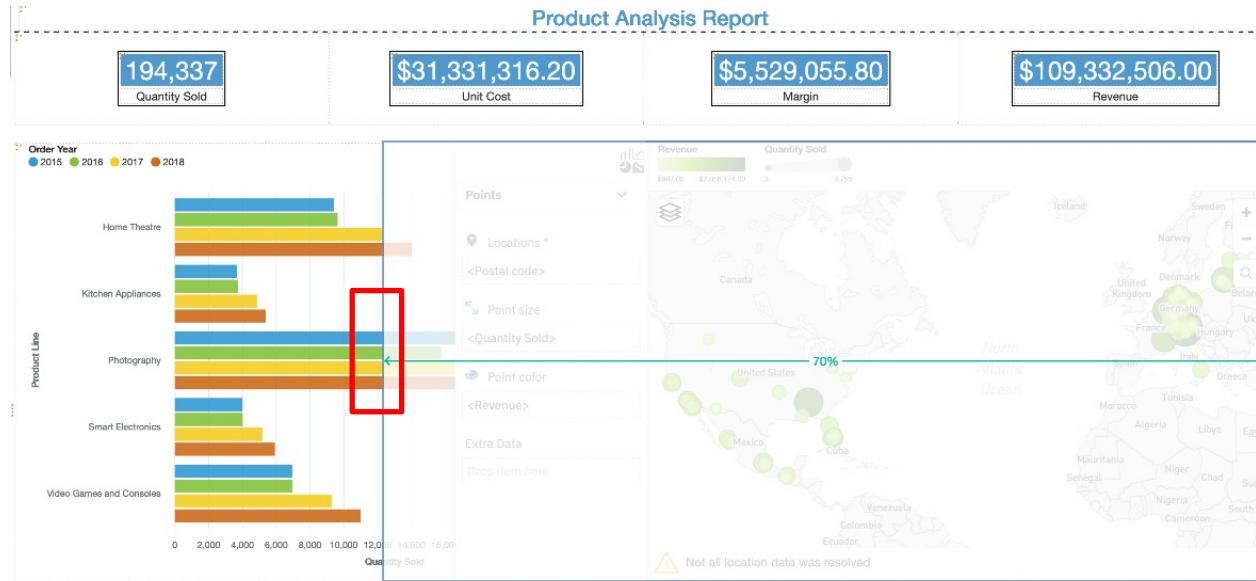
- Drag Quantity Sold to the Point Size Slot.
- Drag Revenue to the Point Color Slot.



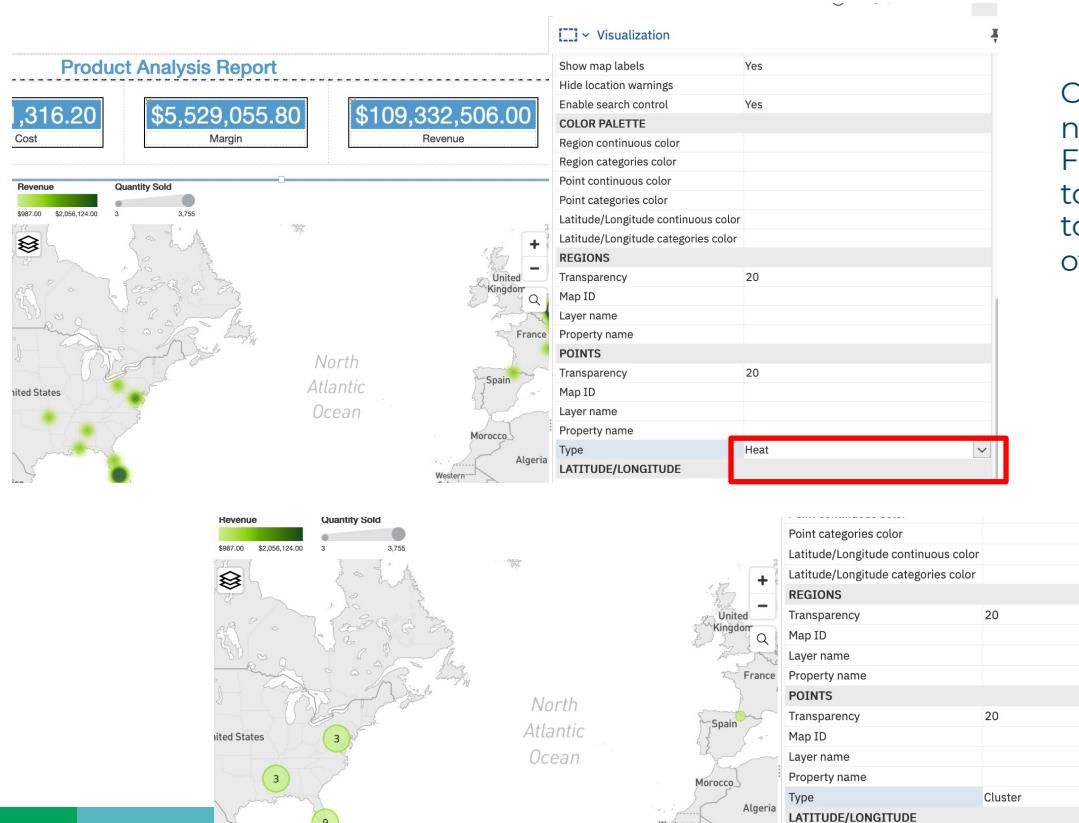
NOTE THE CAUTION INDICATOR AND MESSAGE AT THE BOTTOM OF THE MAP. COGNOS ANALYTICS HAS IDENTIFIED DATA POINTS THAT COULD NOT BE RESOLVED. YOU MAY CLICK ON THE CAUTION ICON TO GET ADDITIONAL INFORMATION ON UNRESOLVED LOCATIONS

Creating reports: Add a Map

You would like the Map to occupy 70% of the width. Use the left grab handle to re-size the visualization directly on the screen. As you drag the edge of the widget, a sizing bar will render to assist you in sizing the layout to your desired size.



Creating reports: Add a Map

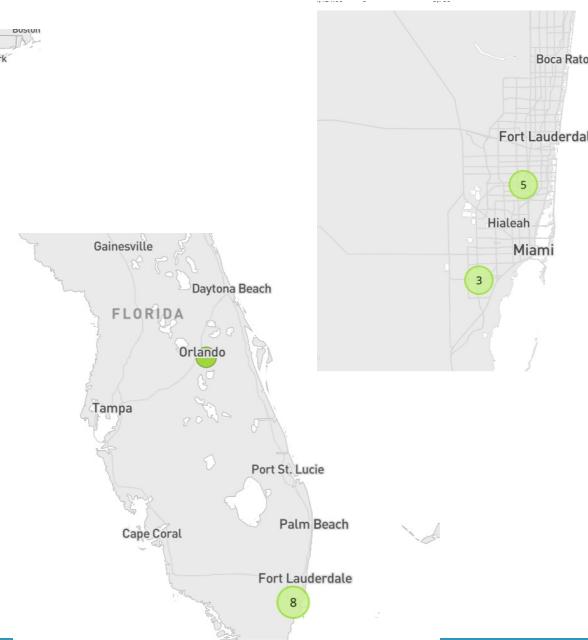
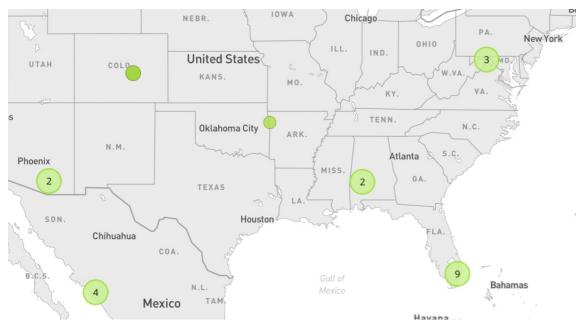


Click on Map to bring it into focus if needed. Open the Properties panel . From the Properties panel, scroll down to the Points section. Change the Type to Heat. This will give you a heat overlay of the points.

Next, change the Type to Cluster. This smartly Clusters the Points so you may see the total data points aggregated on the map

Creating reports: Add a Map

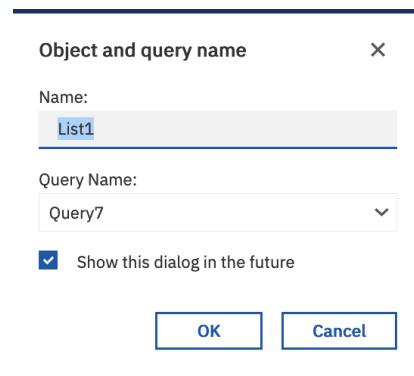
Using the center wheel on your mouse, you can zoom in/out on the map to drill into the information. As you do so, the clusters separate the Points, down to the individual data points. Zoom in over the US, then southern Florida to see the clusters separate.



Creating reports: Adding a list

To give some additional context you will add a list to the bottom of the report to show the metrics by Product Line. From the toolbox, drag a List to the bottom center of the report body, below the two visualizations.

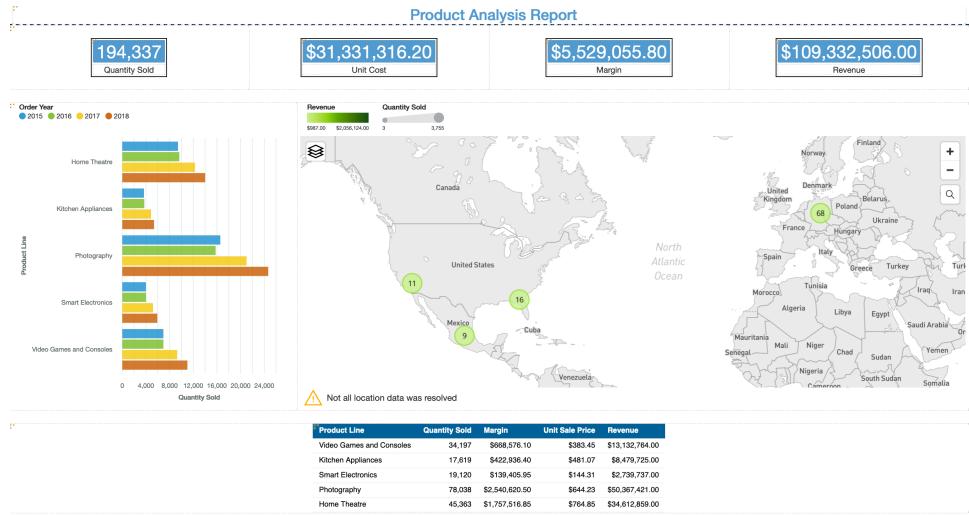
The screenshot shows the Power BI Report Designer interface. On the left, the 'Insertable objects' toolbox is open, with the 'List' item highlighted and selected, indicated by a red box and a red arrow pointing to it. The main area displays a 'Product Analysis Report' with four summary measures at the top: '194,337 Quantity Sold', '\$31,331,316.20 Unit Cost', '\$5,529,055.80 Margin', and '\$109,332,506.00 Revenue'. Below these are two stacked bar charts. The first chart, titled 'Order Year', compares revenue and quantity sold across years 2015, 2016, 2017, and 2018. The second chart, titled 'Product Line', shows quantity sold for categories like Home Decor, Kitchen Appliances, Photography, Smart Electronics, and Video Games and Consoles. A note at the bottom of the report body states: '⚠ Not all location data was resolved'.



In the Object and query name dialog box, change both the Name and Query Name to "Product Metrics List" and click OK

Creating reports: Adding a list

To give some additional context you will add a list to the bottom of the report to show the metrics by Product Line. From the toolbox, drag a List to the bottom center of the report body, below the two visualizations.



The list will populate on the bottom portion of the report body

Save the report

Explotación y visualización

Creating reports: Report Output

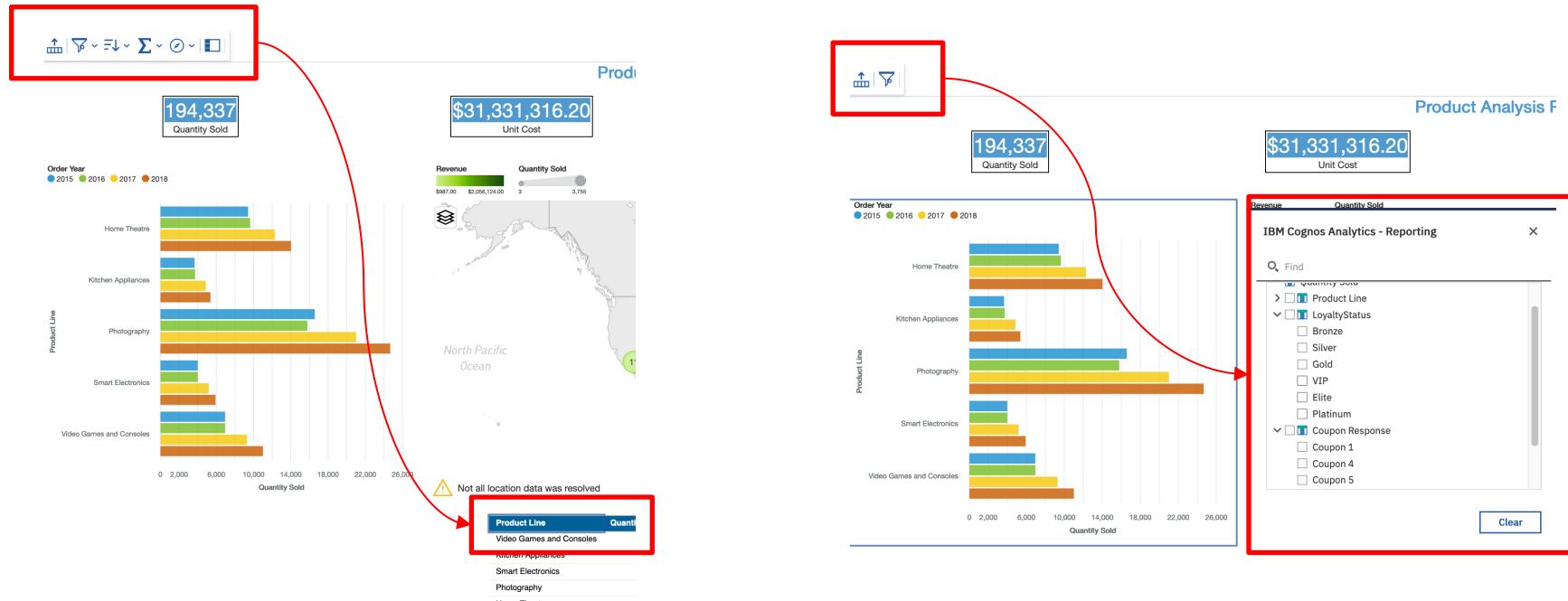
To give some additional context you will add a list to the bottom of the report to show the metrics by Product Line. From the toolbox, drag a List to the bottom center of the report body, below the two visualizations.

The screenshot shows the Power BI desktop application. The ribbon at the top has tabs for Home, Insert, Page, and Report. The Report tab is selected. A red box highlights the 'Run HTML' button in the ribbon. The toolbox on the left is expanded, showing categories like Insertable objects, Customer Analysis, and Custom. Under 'Customer Analysis', 'Customer' is expanded, showing options for Run CSV and Run XML. Under 'Custom', there are options for abc COUR, abc PROV, and abc CITY, along with a 'Show run options' link. The report body contains four cards: 'Quantity Sold' (194,337), 'Unit Cost' (\$31,331,316.20), 'Margin' (\$5,529,055.80), and 'Revenue' (\$109,332,506.00). Below these are two visualizations: a bar chart titled 'Product Line' showing quantity sold for various categories across years 2015-2018, and a world map titled 'Product Analysis Report' showing revenue by country. A callout bubble on the map states 'Not all location data was resolved'. At the bottom, a table lists product line metrics:

Product Line	Quantity Sold	Margin	Unit Sale Price	Revenue
Video Games and Consoles	34,197	\$668,576.10	\$383.45	\$13,132,764.00
Kitchen Appliances	17,619	\$422,036.40	\$481.07	\$84,797,725.00
Smart Electronics	19,120	\$139,405.95	\$144.31	\$2,795,737.00
Photography	78,038	\$2,540,620.50	\$644.23	\$50,367,421.00
Home Theatre	45,363	\$1,757,516.85	\$794.85	\$34,812,859.00

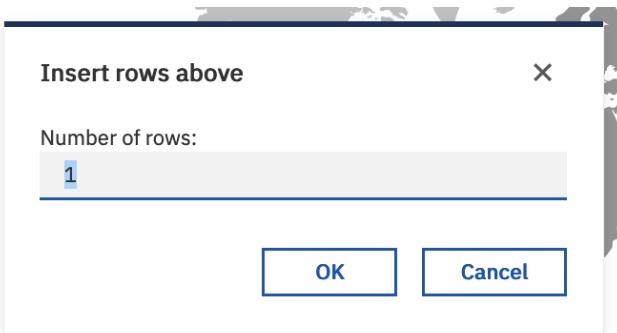
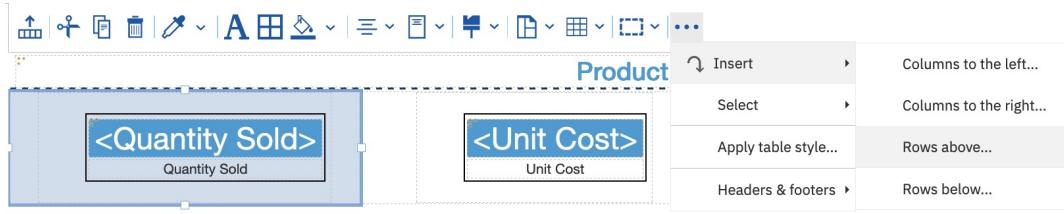
Creating reports: Report Output

Once rendered, you can interact with the various sections of your report. From the List, Click on the Product Line Header to bring it into focus and bring up the on-demand toolbar. Hover over each of the options to view the User's capabilities to interact with the report

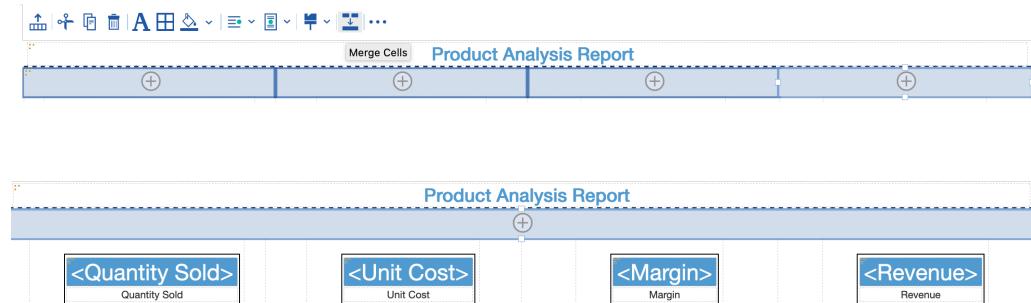


Creating reports: Prompts

Filter all the objects (queries) with a value coming from a combo box

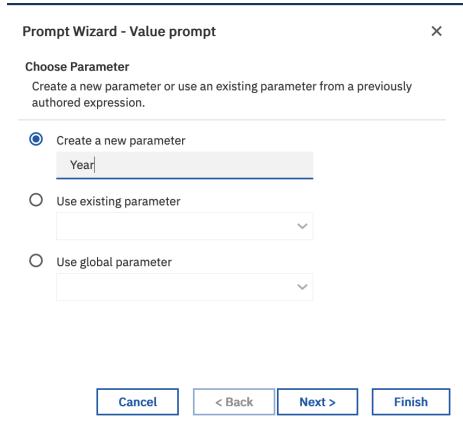


Create a row above the row where the metrics are displayed.
And Merge all the cells in a single one

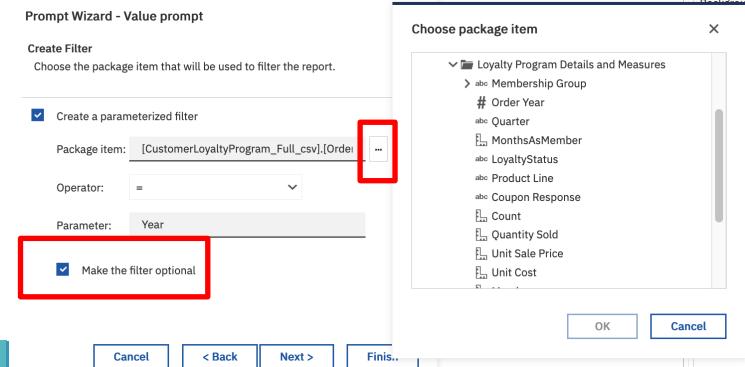


Creating reports: Prompts

The screenshot shows the Power BI Report Designer. On the left, there's a ribbon with tabs like Insertable objects, PINNED, TEXTUAL, LAYOUT, DATA CONTAINER, and PROMPTING. Under PROMPTING, there are four options: Text box prompt, Value prompt, Date & time prompt, and Date prompt. The 'Value prompt' option is highlighted with a red box. A red arrow points from this box to a value prompt control on the main canvas. The value prompt control has a blue header 'Quantity Sold' and a text box below it containing 'Quantity Sold'. The main canvas features a bar chart with several grey bars.



Drag and drop from the toolbar a vale prompt to the cell created.
Create a parameter with the values coming from Order Year. Make sure to make it optional



Creating reports: Prompts

Prompt Wizard - Value prompt

Apply filter

Which queries do you want to filter?

Queries:

- Query1
- Query2
- Query3
- Query4

[Cancel](#) [< Back](#) [Next >](#) [Finish](#)

Select the queries that you want to filter with the prompt, select all of them

Prompt Wizard - Value prompt

Populate control

What values do you want to pick from? Use values are the retrieved data, and Display values are the selectable values that the user sees.

Create new query

Name:

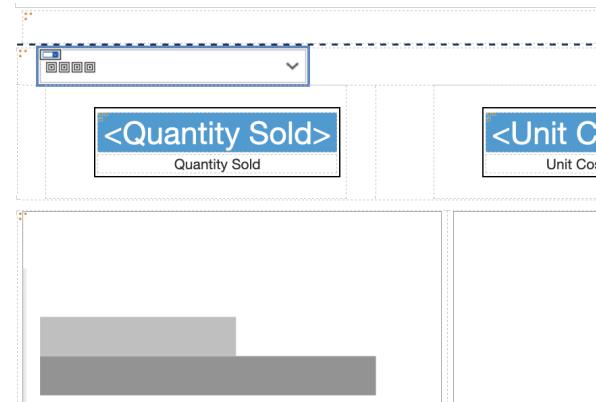
Values to use: [...](#)

Values to display: [...](#)

Cascading source:

[Cancel](#) [< Back](#) [Next >](#) [Finish](#)

A query will be created with the values for Order Year



Creating reports: Prompts

Make sure to change the properties for the value prompt as follow

age1

Value prompt

CONDITIONAL

- Style variable
- Render variable

DATA

- Sorting
- Data format
- Query Year
- Use value Order Year
- Display value
- Static choices
- Rows per page 5000
- Properties

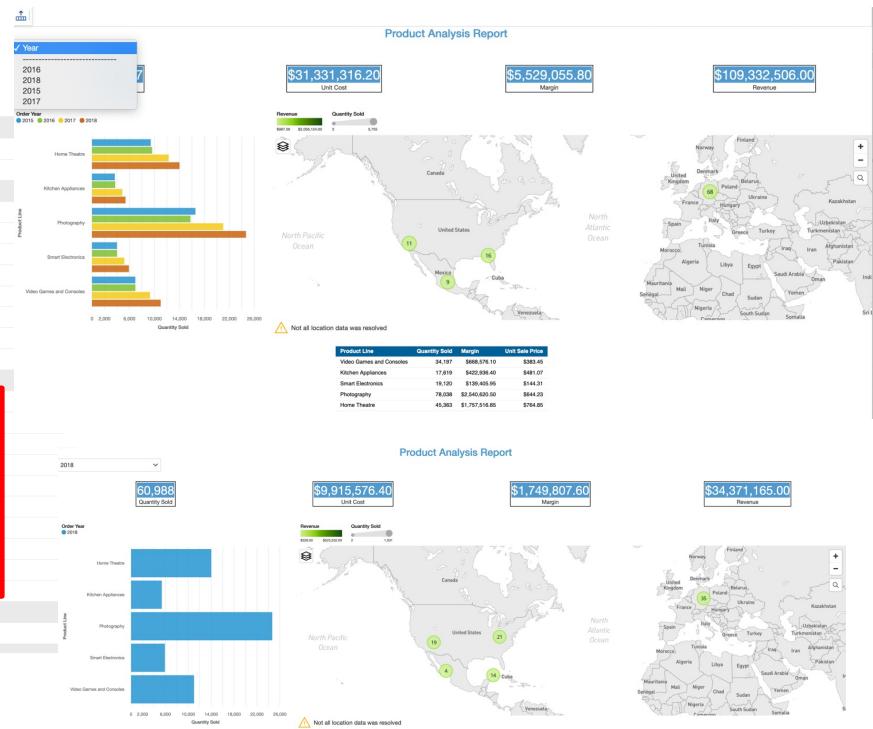
GENERAL

- Required No
- Multi-select No
- Select UI Drop down list
- Auto-submit Yes
- Cascade source
- Pre-populate No
- Hide adornments Yes
- Range No
- Parameter Year

BOX

Box type COLOR & BACKGROUND

Run the report and change the values



Creating reports: Prompts

Order the years in the combo. Access to the year query and order it

Page1

The screenshot shows the Power BI Report View with a dropdown menu open for a prompt labeled "Year". The menu includes options like "Select", "Apply table style...", "Headers & footers", "Convert to Select & Search Prompt", and "Go to query". A red box highlights the dropdown menu. To the right, the report displays a chart with a legend for the years 2015, 2016, 2017, and 2018, with 2018 selected. Below the chart, a "Revenue" card shows \$31,3. On the left, the Power BI ribbon is visible, along with the "Insertable objects" pane containing "Data Items" and "Detail Filters". The "Data Items" pane shows an item named "Order Year" with the expression "[CustomerLoyaltyProgram_Full_csv].[Order_Year]". A red box highlights the "Pre-sort" dropdown in the "Data Item" settings, which is set to "Sort ascending".

Quantity Sold

Quantity Sold

Report > Queries > Year

Data Item

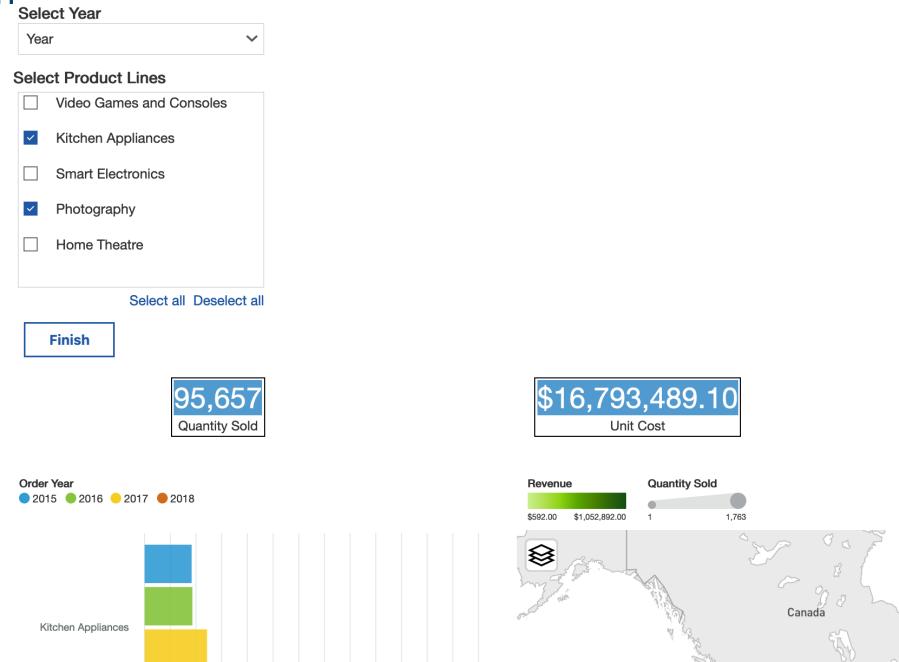
DATA ITEM

Type	Data Item
Name	Order Year
Label	
Expression	[CustomerLoyaltyProgram_Full_csv].[Order_Year]
Detail aggregation	None
Summary aggregation	Default
Pre-sort	Sort ascending
Detail	
Calculation intersection	
Solve order	

xplotación y visualización

Creating reports: Prompts

Practice: Add a combo check box that control de items displayed in Product lines



Creating reports: Conditional Blocks

Practice: Add a combo that control what are the objects to display



Product Analysis Report

194,337 Quantity Sold

\$31,331,316.20 Unit Cost

Product Line Quantity Sold Margin Unit Sale

Video Games and Consoles 34,197 \$668,576.10 \$3

Kitchen Appliances 17,619 \$422,936.40 \$4

Smart Electronics 19,120 \$139,405.95 \$1

Photography 78,038 \$2,540,620.50 \$6

Home Theatre 45,363 \$1,757,516.85 \$7