

Power BI



PRESENTACIONES



ÍNDICE

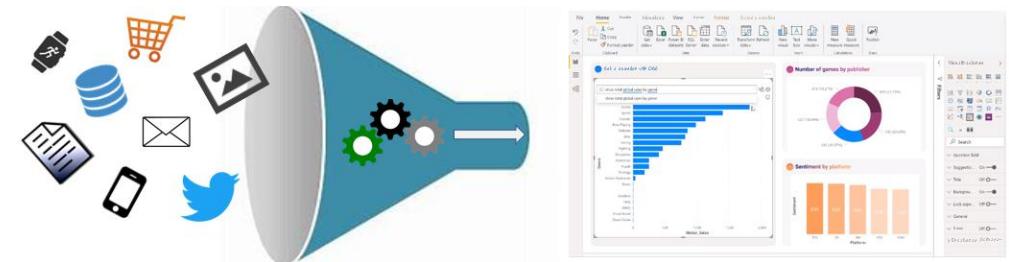
- Preparar los datos
- Modelar los datos
- Visualizar los datos
- Analizar los datos
- Implementar y mantener entregables



Power BI Desktop

CASOS DE USO

- Seguimiento del inventario
- Identificación de hábitos de compra
- Detección de tendencias y patrones de usuarios
- Recomendación de compras
- Definición de optimizaciones de precios
- Identificación y detención del fraude



TIPOS DE ANÁLISIS

- Descriptivo
- Diagnóstico
- Predictivo
- Prescriptivo
- Cognitivo



ROLES

- Analista de negocios
- Analista de datos
- Ingeniero de datos
- Científico de datos
- Administrador de base de datos



Analista de negocios



Analista de datos



Ingeniero de datos



Científico de datos



Base de datos
Administrador



Preparación

Modelo

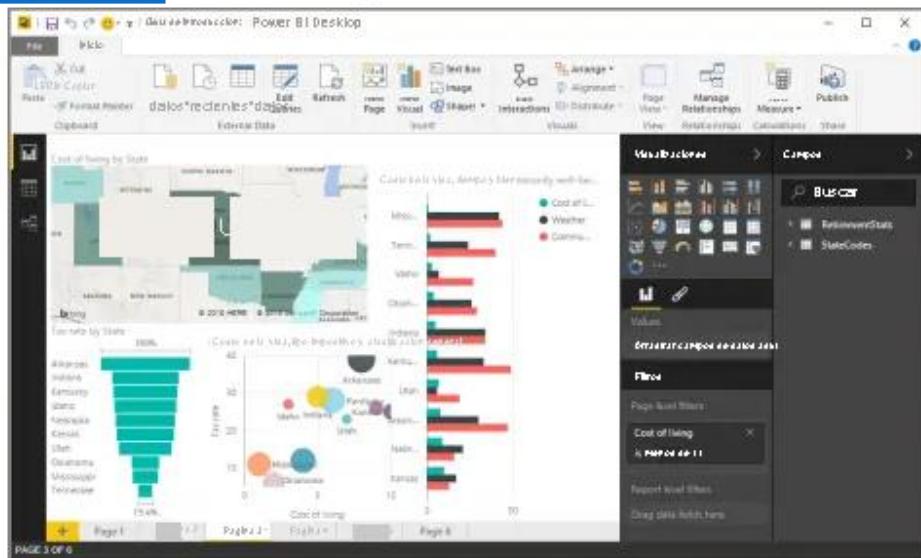
Visualización

Análisis

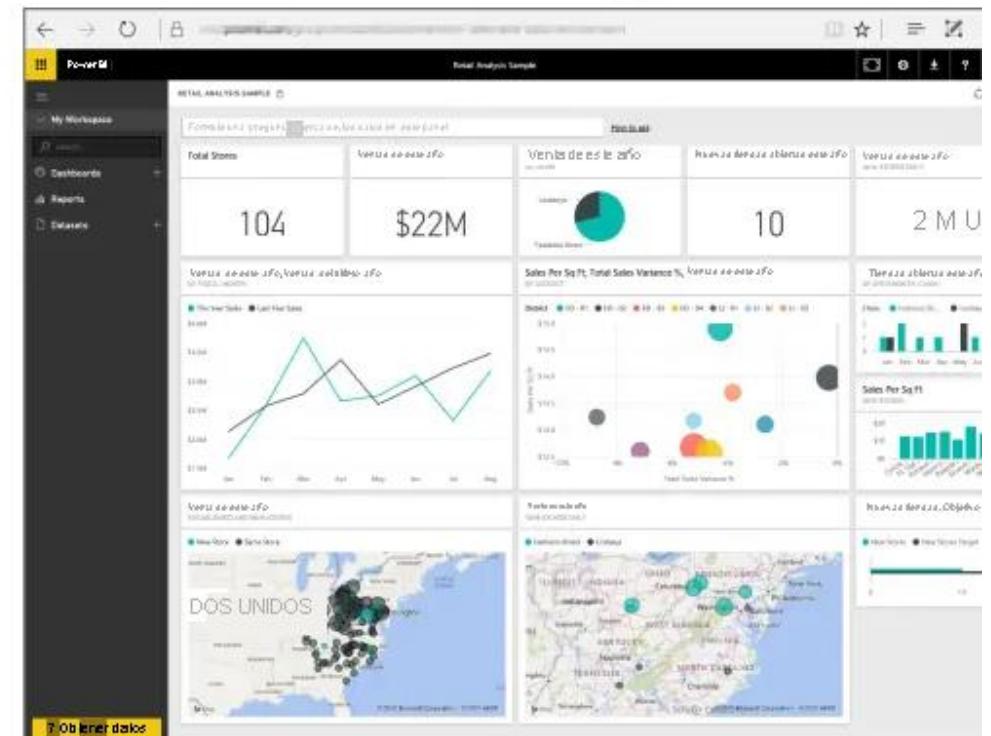
Administración

TAREAS

Power BI Desktop

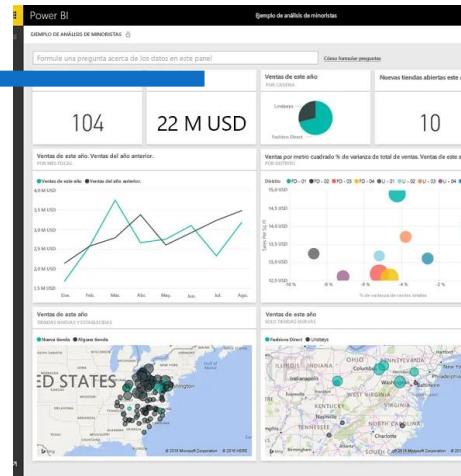


Servicio Power BI

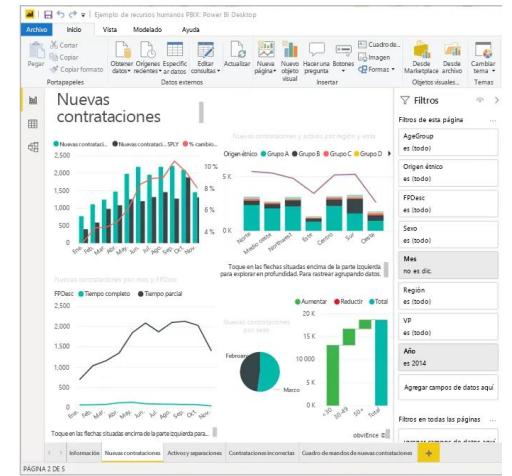


Power BI Mobile



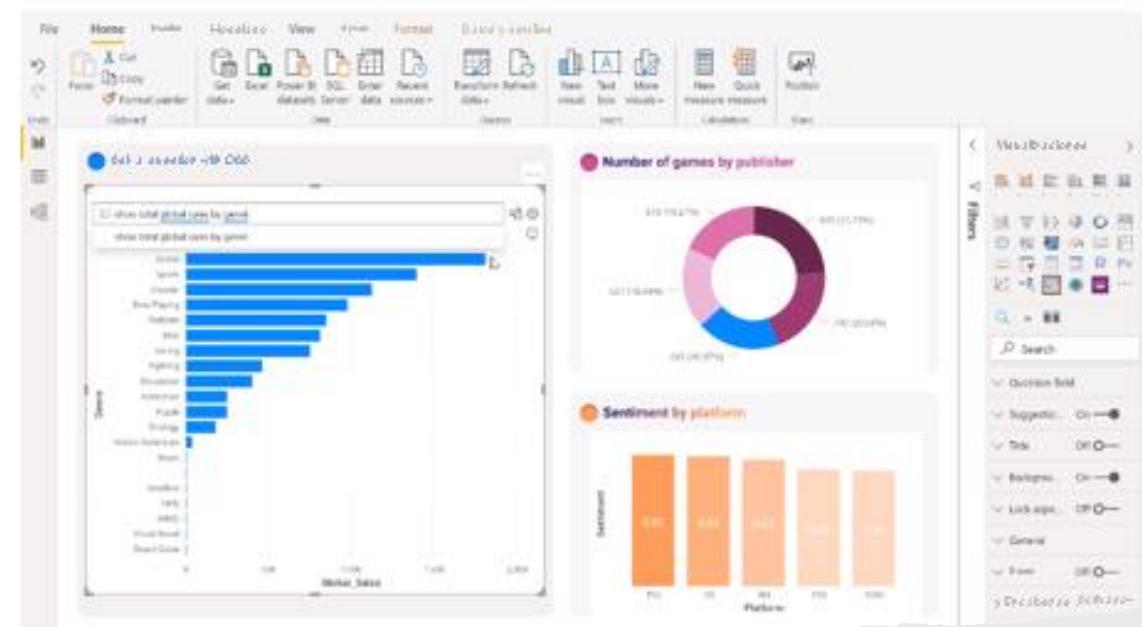


C	D	E	F	G	H	
Month	Month Name	Calendar Month	Births	Births Per Day	Births (Normal)	
4	1 January	1/1/2004	2,937	94.7	97.0	
4	2 February	2/1/2004	2,824	97.4	96.5	
4	3 March	3/1/2004	3,128	100.9	97.0	
4	4 April	4/1/2004	2,896	96.5	97.0	
4	5 May	5/1/2004	3,008	97.0	97.0	
4	6 June	6/1/2004	3,047	101.6	97.0	
4	7 July	7/1/2004	2,981	96.2	97.0	
4	8 August	8/1/2004	3,079	99.3	97.0	
4	9 September	9/1/2004	3,219	107.3	97.0	
4	10 October	10/1/2004	3,547	114.4	97.0	
4	11 November	11/1/2004	3,365	112.2	97.0	
4	12 December	12/1/2004	3,143	101.4	97.0	
5	1 January	1/1/2005	2,921	94.2	97.0	
5	2 February	2/1/2005	2,699	96.4	97.0	
5	3 March	3/1/2005	3,024	97.5	97.0	
5	4 April	4/1/2005	3,037	101.2	97.0	
5	5 May	5/1/2005	3,231	104.2	97.0	
5	6 June	6/1/2005	3,163	105.4	97.0	
5	7 July	7/1/2005	3,119	100.6	97.0	
5	8 August	8/1/2005	3,156	101.8	97.0	
5	9 September	9/1/2005	3,439	114.6	97.0	



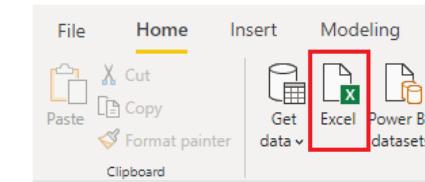
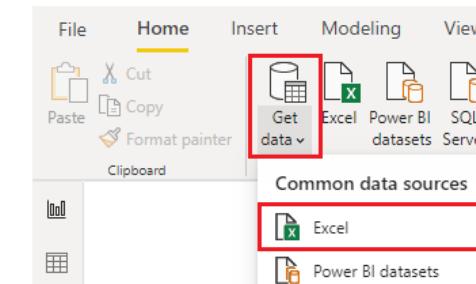
BLOQUES DE CREACIÓN

- Visualizaciones
- Conjuntos de datos
- Informes
- Paneles
- Iconos

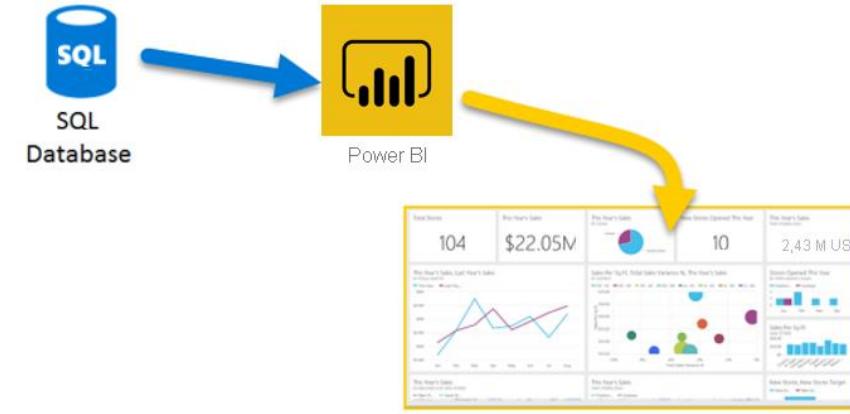
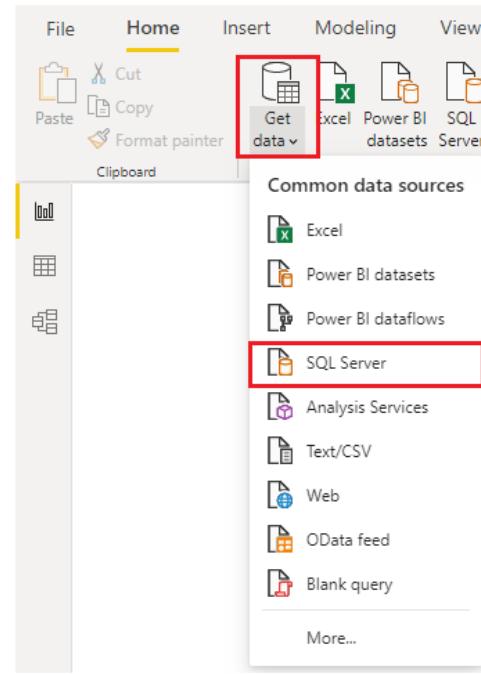


FUENTES DE DATOS

- Obtención de datos de archivo.
- Obtención de datos de orígenes de datos relacionales
- Obtención de datos de una base de datos NoSQL
- Obtención de datos de servicios en línea



OBTENCION DE DATOS DE ARCHIVO



SQL

Preparación de datos en Power BI



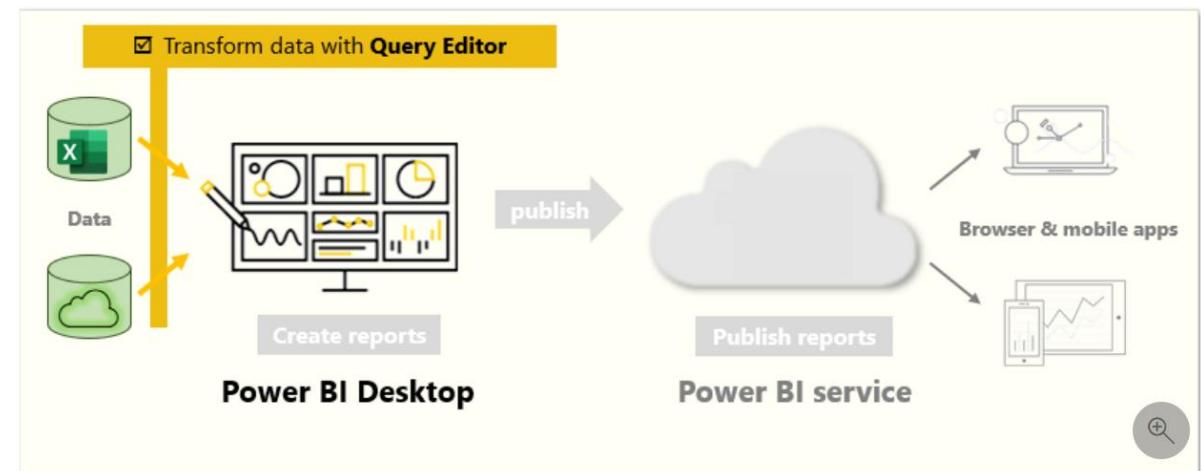
MODO DE ALMACENAMIENTO

Avanzado

Modo de almacenamiento

- Importar
- Importar
- DirectQuery
- Dual

POWER QUERY



Merge

Select a table and matching columns to create a merged table.

Sales Orders

orderid	custid	empid	orderdate	requireddate	shippeddate	shipperid	freight	shipname
10248	85	5	7/4/2014	8/1/2014	7/16/2014	3	32.38	Ship to 85-B
10249	79	6	7/5/2014	8/16/2014	7/10/2014	1	11.61	Ship to 79-C
10250	34	4	7/8/2014	8/5/2014	7/12/2014	2	65.83	Destination SCQ
10251	84	3	7/8/2014	8/5/2014	7/15/2014	1	41.34	Ship to 84-A

Sales OrderDetails

orderid	productid	unitprice	qty	discount
10248	11	14.00	12	0
10248	42	9.80	10	0
10248	72	34.80	5	0
10249	14	18.60	9	0
10249	51	42.40	40	0

Join Kind

Left Outer (all from first, matching from second)

Use fuzzy matching to perform the merge

Fuzzy matching options

✓ The selection matches 830 of 830 rows from the first table.

OK Cancel

Append

Concatenate rows from three or more tables into a single table.

Two tables Three or more tables

Available tables

- Production Suppliers
- Sales Customers
- HR Employees

Tables to append

- Production Suppliers
- Sales Customers
- HR Employees

Add >>

OK Cancel

APPEND Y MERGE

EDITOR AVANZADO

Sales Orders

Display Options...

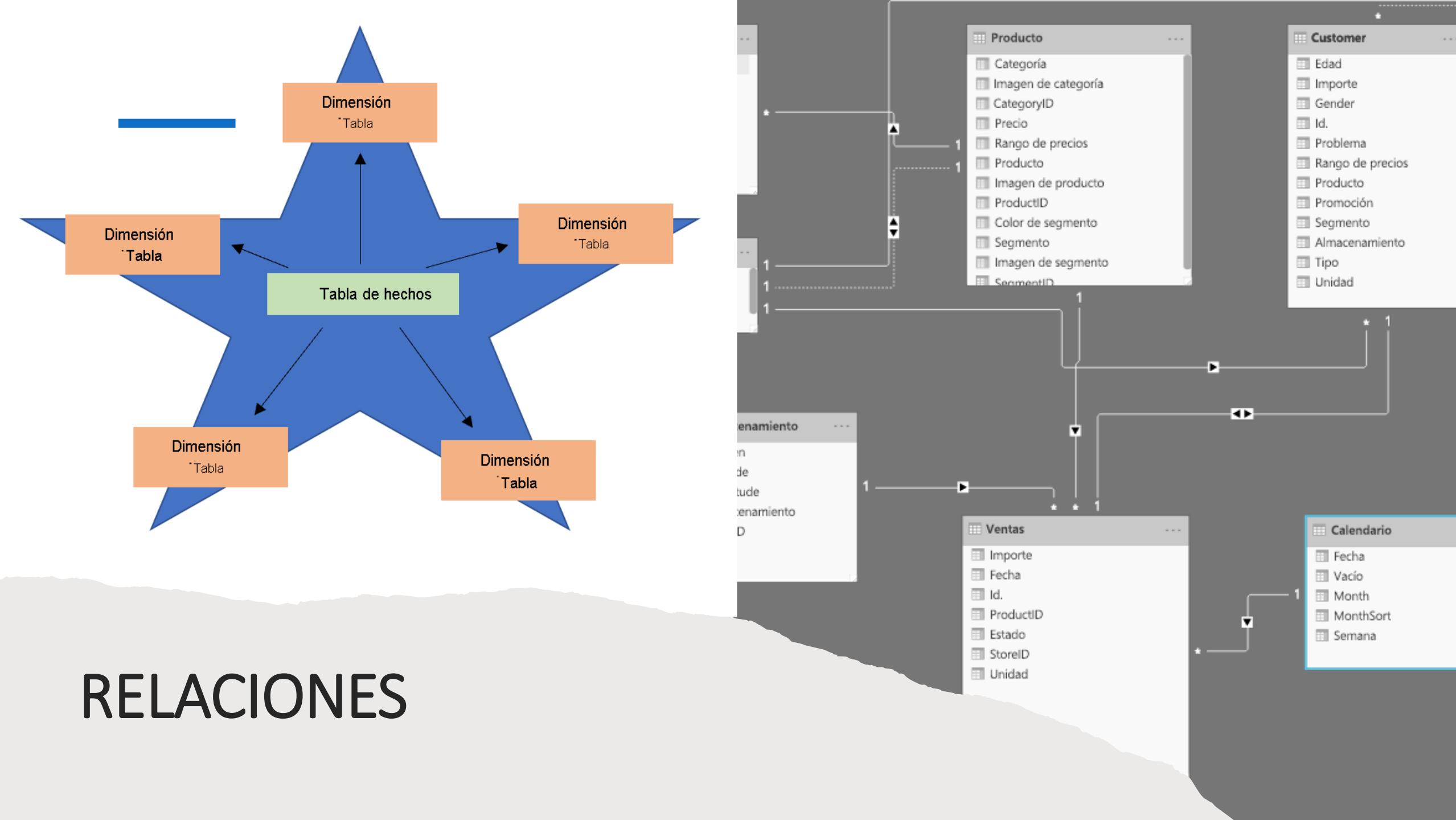
```
let
    Source = Sql.Database("localhost", "tsqlv4"),
    Sales_Orders = Source{[Schema="Sales",Item="Orders"]}[Data],
    #"Split Column by Delimiter" = Table.SplitColumn(Sales_Orders, "shipaddress", Splitter.SplitTextByDelimiter(",", QuoteStyle.Csv), {"shipaddress.1", "shipaddress.2"}),
    #"Changed Type" = Table.TransformColumnTypes(#"Split Column by Delimiter",{{"shipaddress.1", type text}, {"shipaddress.2", type text}})
in
    #"Changed Type"
```

No syntax errors have been detected.

Done Cancel



Carga de datos en Power BI



Date

Año

Trimestre

Month

Día

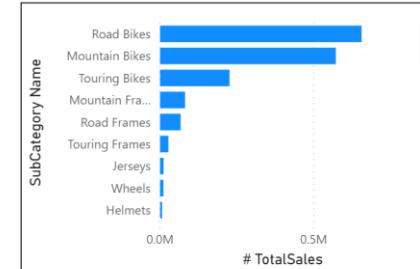
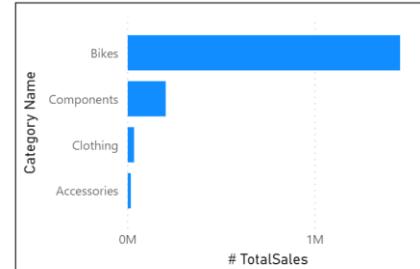
✓ ✗

✗

✗

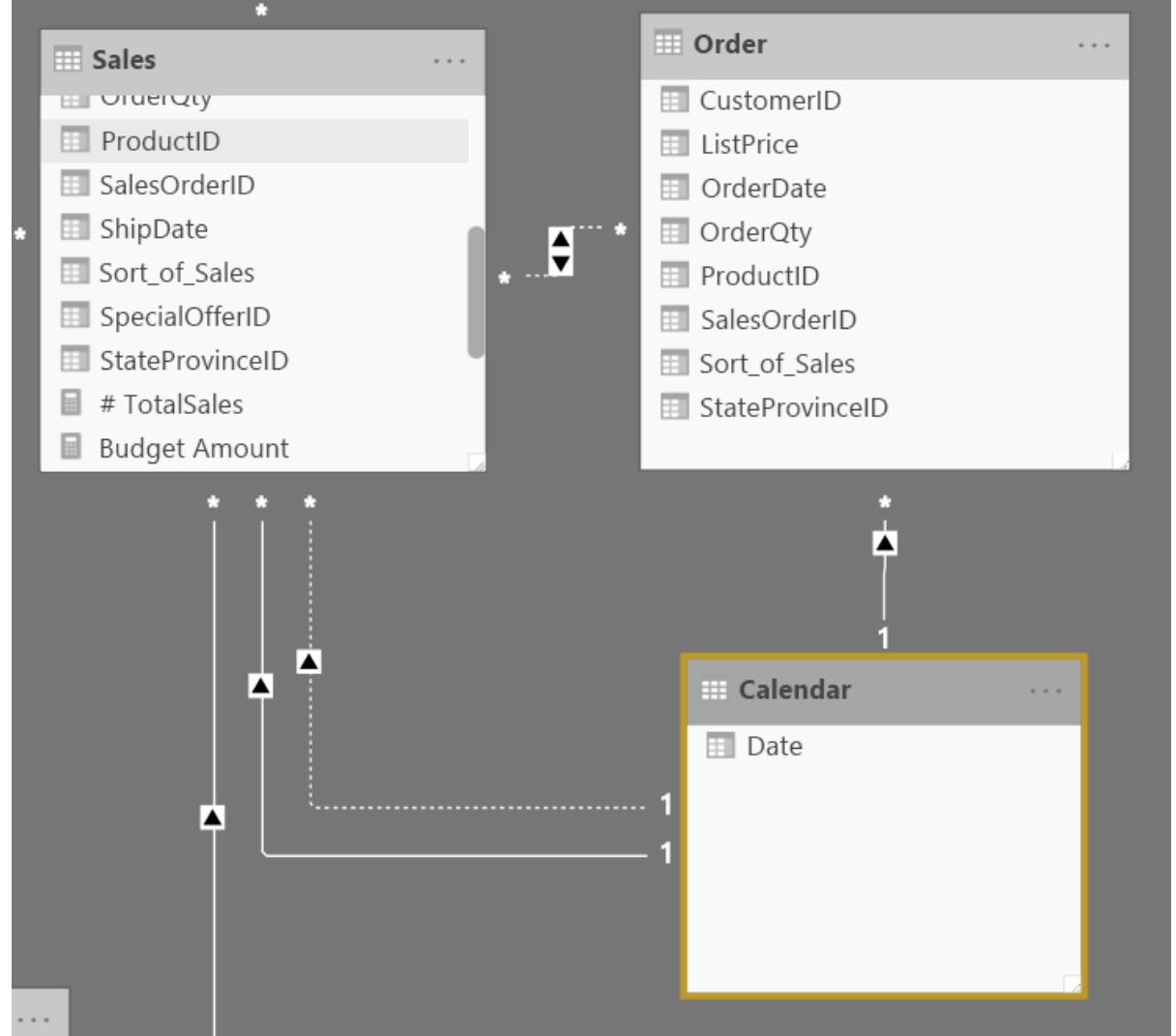
✗

✗

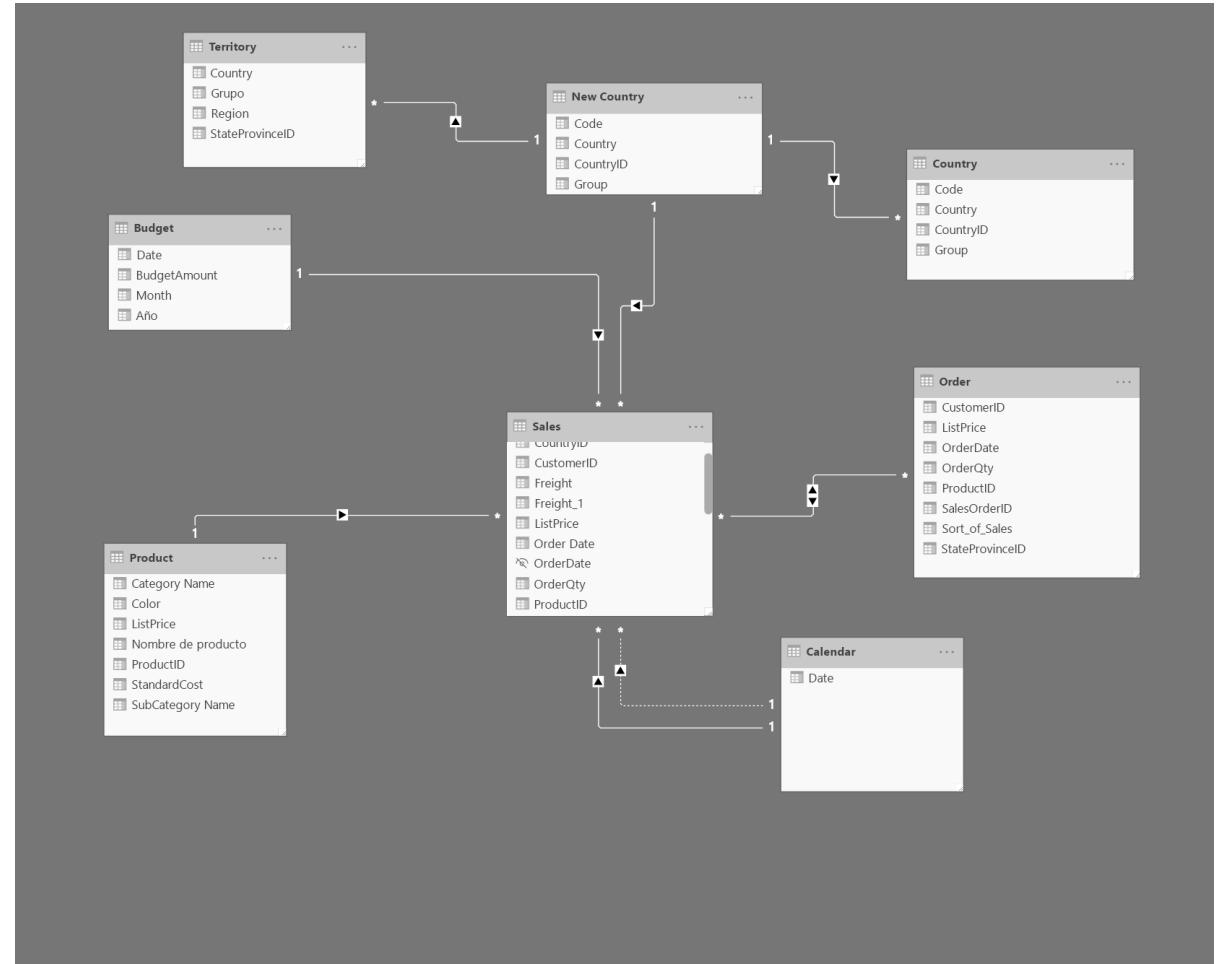


JERARQUIAS

DIMENSIONES REALIZADORAS DE ROLES



CARDINALIDAD



DIRECCIÓN DE FILTRO CRUZADO

Con una dirección de filtro cruzado única:

- Solo se puede usar una tabla de una relación para filtrar los datos. Por ejemplo, la Tabla 1 se puede filtrar por la Tabla 2, pero la Tabla 2 no se puede filtrar por la Tabla 1.
- En el caso de una relación de uno a varios o de varios a uno, la dirección del filtro cruzado será desde el lado "uno", lo que significa que el filtrado se producirá en la tabla que tiene muchos valores.

Con **ambas direcciones de filtro cruzado** o el **filtrado cruzado bidireccional**:

- Una tabla de una relación se puede usar para filtrar la otra. Por ejemplo, se puede filtrar una tabla de dimensiones a través de la tabla de hechos y las tablas de hechos se pueden filtrar a través de la tabla de dimensiones.
- Es posible que el rendimiento sea menor al usar el filtrado cruzado bidireccional con relaciones de varios a varios.

Modelado de datos en Power BI

COLUMNAS CALCULADAS

The screenshot shows a data grid interface with a toolbar at the top featuring tabs for 'Estructura' (Structure), 'Formato' (Format), 'Propiedades' (Properties), and 'Ordenar' (Sort). A search bar labeled 'Columna =' is positioned above the grid. The grid displays six rows of data with four columns each. The columns are represented by icons: a document icon for the first column, a magnifying glass for the second, a chart for the third, and a dollar sign for the fourth. The data is as follows:

10248	11	12	\$14
10248	42	10	\$9.8
10248	72	5	\$34.8
10249	14	9	\$18.6
10249	51	40	\$42.4
10250	41	10	\$7.7

MEDIDA RAPIDA

The screenshot shows the Power BI interface with three main panes:

- Filtros (Filters):** Displays various filters applied to the page, such as Chain, City (Ciudad), District, Nombre, Open Month, and Store Type.
- Visualizaciones (Visualizations):** Shows a grid of visualization icons.
- Campos (Fields):** Lists fields like Ventas, District, Elemento, and Store. A context menu is open for the 'Average Sellin.' field, with the 'Nueva medida rápida' (Quick measure) option highlighted.

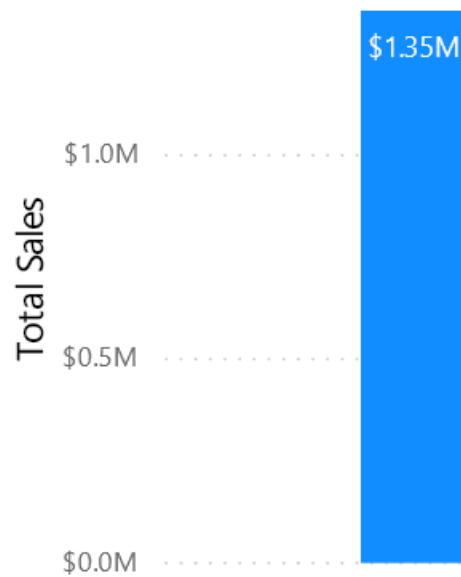
A pink box highlights the 'Nueva medida rápida' option in the context menu.



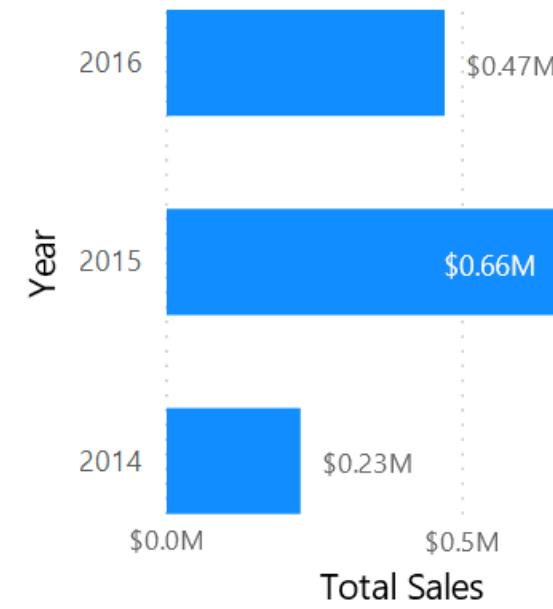
MEDIDA

CONTEXTO

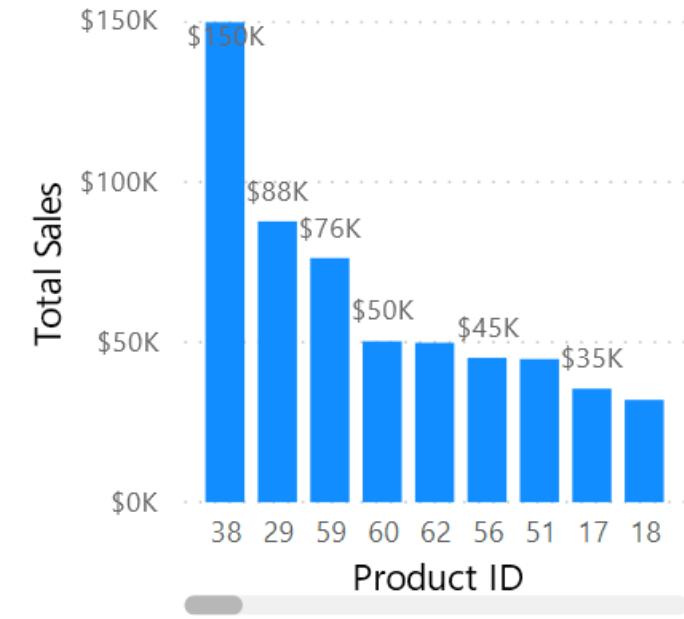
Total Sales



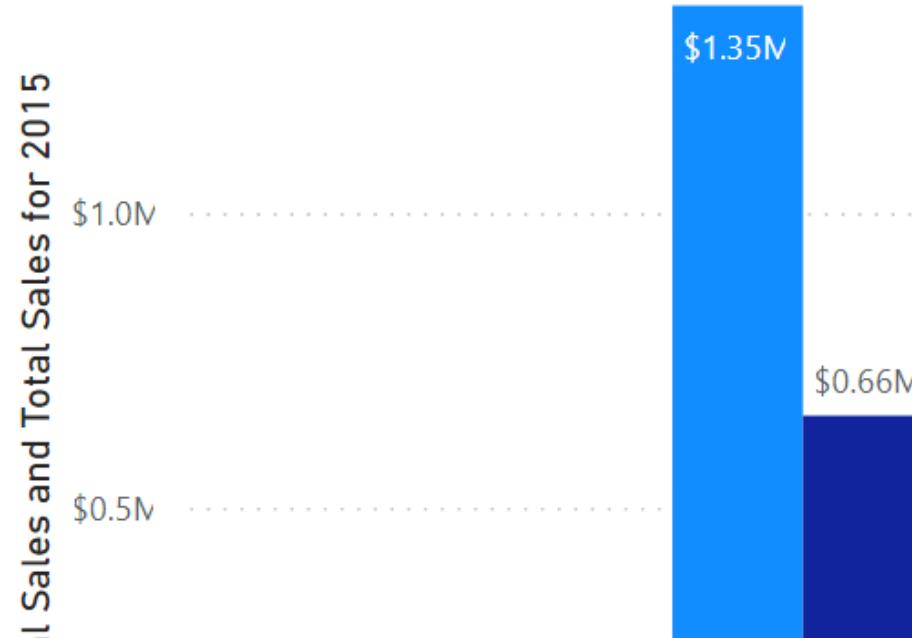
Total Sales by Year



Total Sales by Product ID



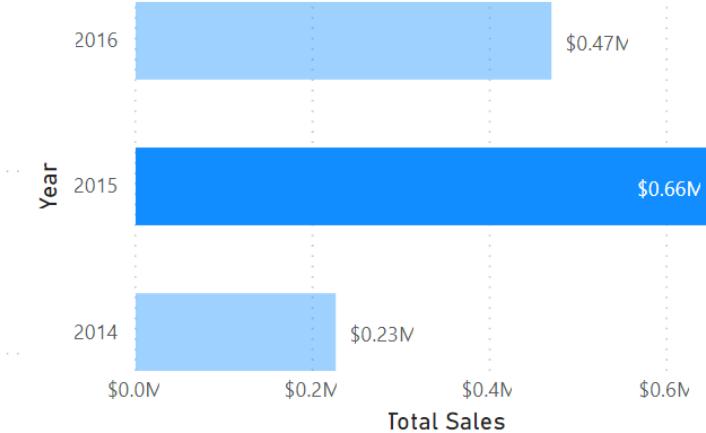
Total Sales Total Sales for 2015



and Total Sales for 2015

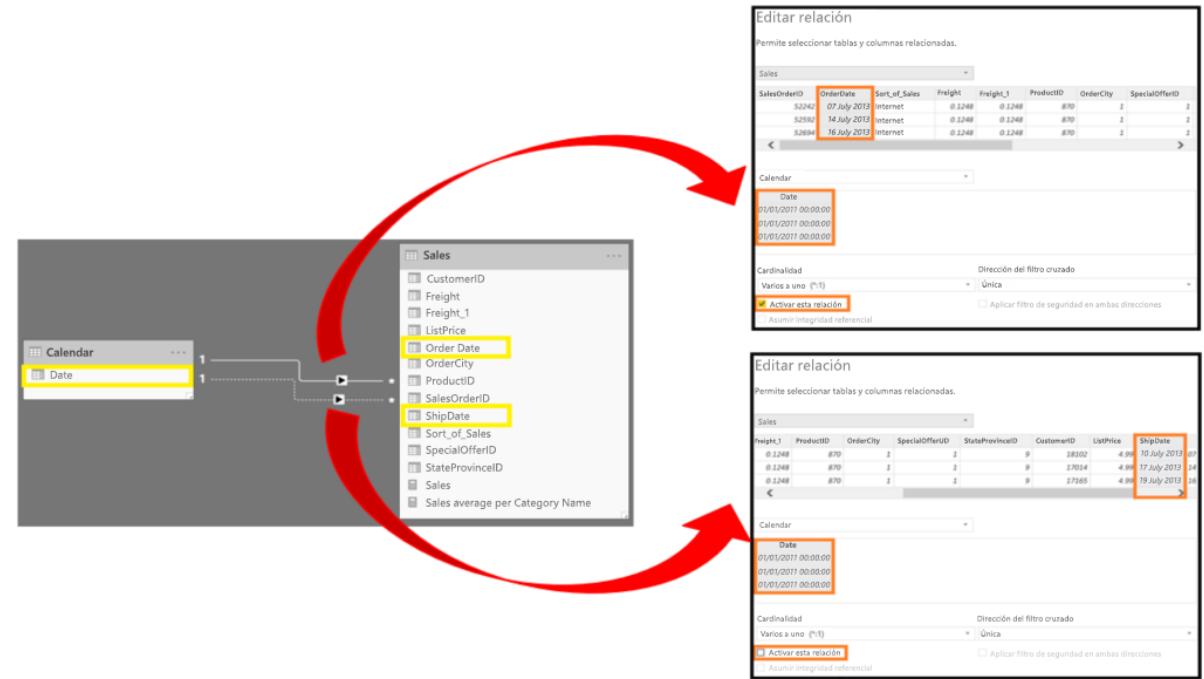
Total Sales for 2015

Total Sales by Year



CALCULATE

USERELATIONSHIP





Creación de cálculos DAX en Power BI

TIME INTELLIGENCE

Year	Month	Total Sales	Total Sales Previous Month
2015	March	\$39,979.9	\$41,207.2
2015	April	\$55,699.39	\$39,979.9
2015	May	\$56,823.7	\$55,699.39
2015	June	\$39,088	\$56,823.7
2015	July	\$55,464.93	\$39,088
2015	August	\$49,981.69	\$55,464.93
2015	September	\$59,733.02	\$49,981.69
2015	October	\$70,328.5	\$59,733.02
2015	November	\$45,913.36	\$70,328.5
2015	December	\$77,476.26	\$45,913.36

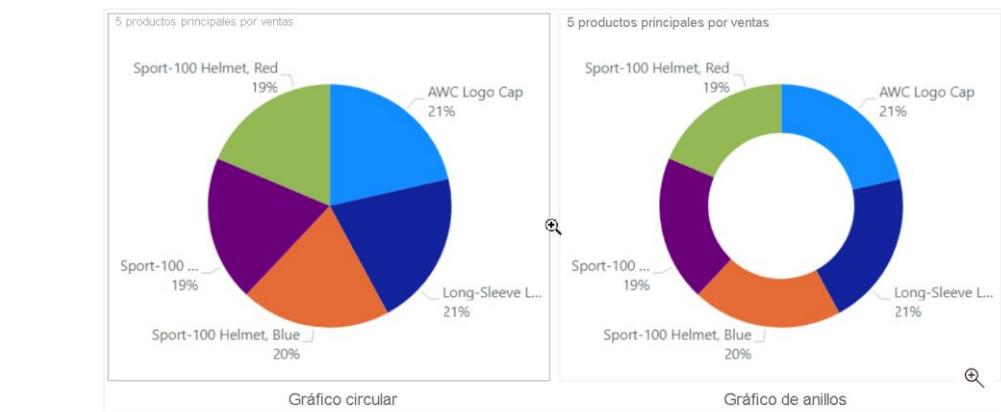
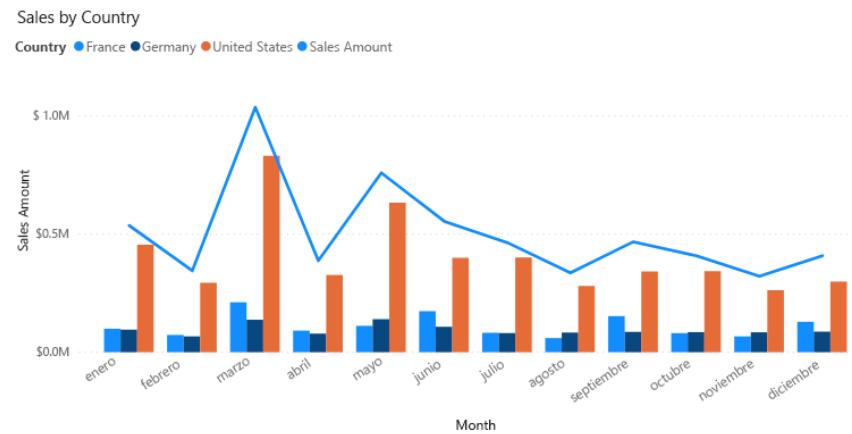
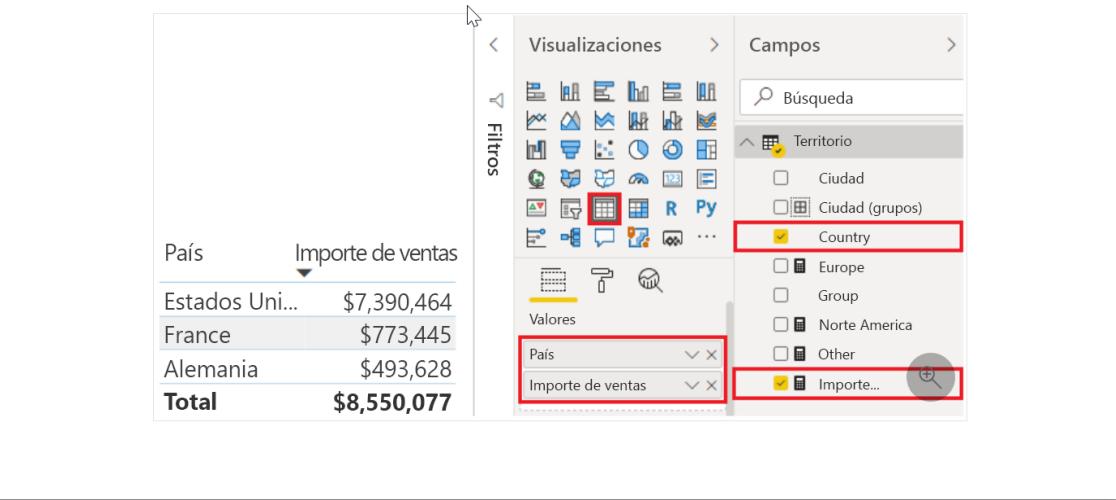
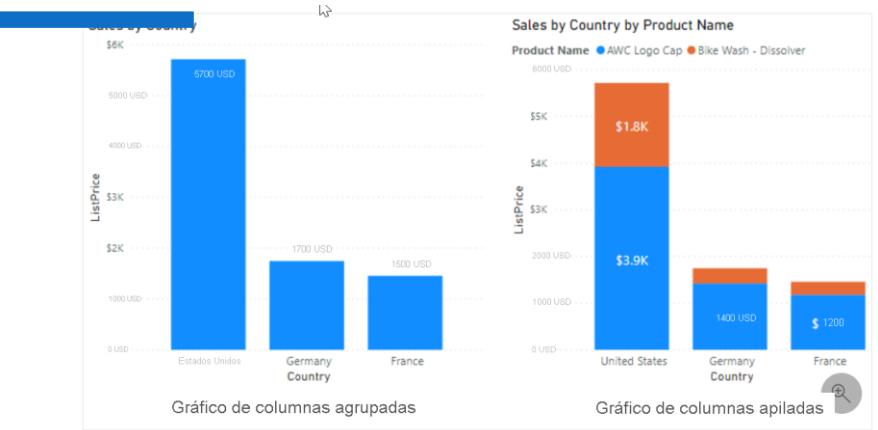
Creación de cálculos DAX en Power BI II

$$\frac{\partial^2 u}{\partial t^2} = c^2 \frac{\partial^2 u}{\partial x^2}$$

$$\frac{df}{dt} = \lim_{h \rightarrow 0} \frac{f(t+h) - f(t)}{h}$$



VISUALIZACIONES





FORMATO

The screenshot shows two windows side-by-side. On the left is the 'Visualizations' pane from Power BI, showing various visualizations like Date, Geography, Manufacturer, Product, and Sales. A red arrow points from the 'Get more visuals' button in the 'Visualizations' pane to the 'Add' button on the right. On the right is the 'AppSource' page for the 'Bullet Chart' app by Microsoft Corporation. The 'Add' button is highlighted with a red box. Other visible elements include the search bar, navigation links, and the 'Overview' and 'Ratings + reviews' sections.

Visualizations > Fields

Build visual

Get more visuals

Import a visual from a file

Remove a visual

Restore default visuals

AppSource | Apps for Power BI visuals

Apps

Bullet Chart

Microsoft Corporation

3.6 (36)

PBI Certified

Overview Ratings + reviews

A bar chart with extra visual elements

PERSONALIZADO



R & PYTHON

Diseño de un informe en Power BI I

MARCADORES

TAILWIND TRADERS

Main Dashboard

Variance Chart

Categoría de producto:

Top 10 Products:

Top 10 Customer:

Gross Sales by Year to Date:

Net Sales by Country:

Net Sales: \$184.46M
Gross Sales: \$170.96M
Cost of Sales: \$13.56M
Gross Profit: \$49.01K
Gross Profit YTD: \$16.49M
Sales by Year: 2014, 2013, 2012, 2011, 2010
Sales by Month: Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec
Sales by Quarter: Q1, Q2, Q3, Q4
Sales by Year: 2014, 2013, 2012, 2011, 2010
Sales by Month: Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec
Sales by Quarter: Q1, Q2, Q3, Q4"/>

Selección

Crear subcapas Crear subsección Agregar Dorver

Films **Paralíptico** **Hasta el cielo**

Variance chart

Impresión general

Paralíptico

Sig. para U. C. P. d. d. d. d. d.

Supervisar en línea

Slicer

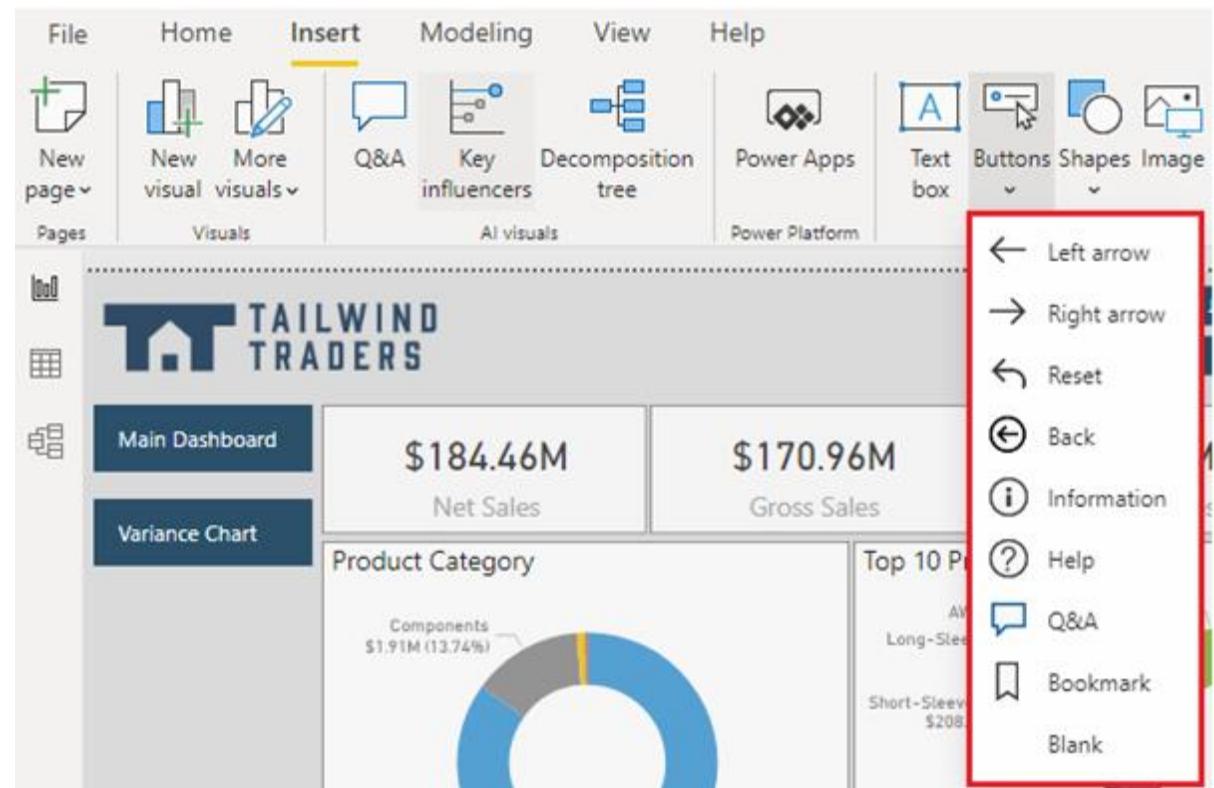
Orden de ventas

Categoría de producto

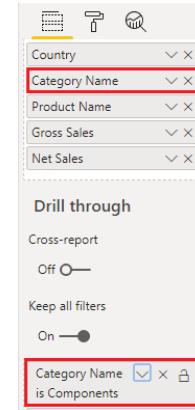
Principales 10 clientes

Venta neta por país

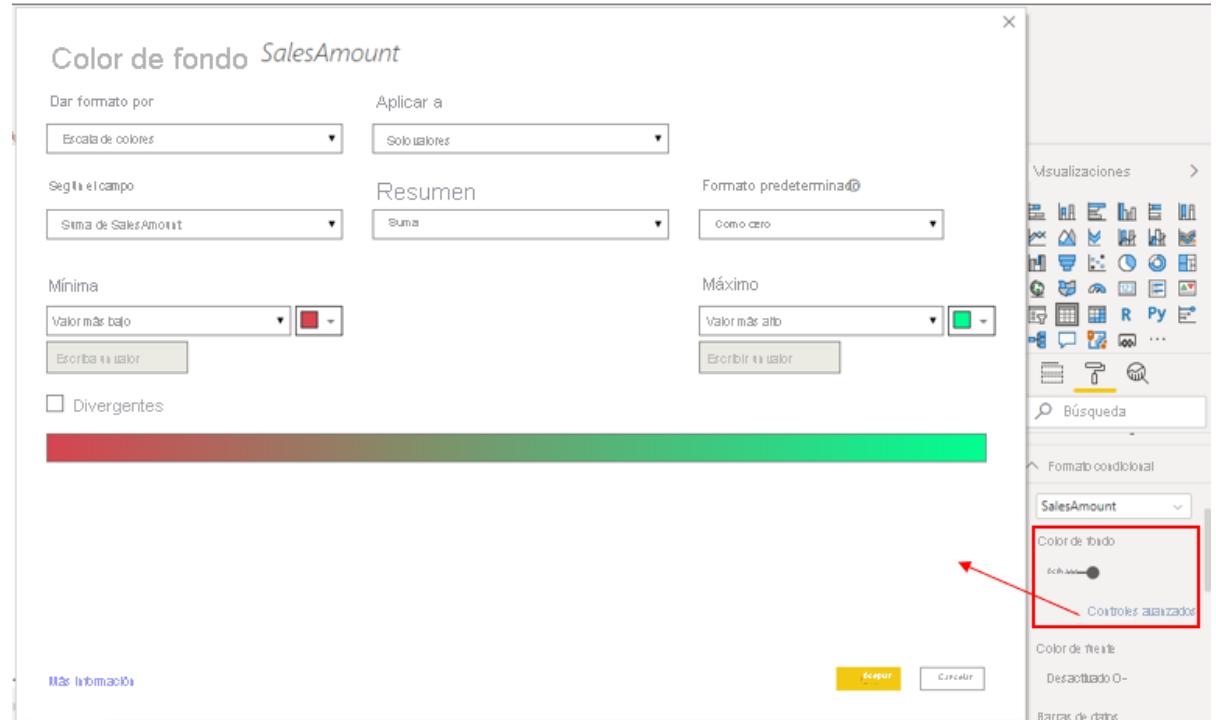
BOTONES



OBTENCIÓN DE DETALLES



FORMATO CONDICIONAL



FILTROS

The screenshot shows the Power BI 'Filters' pane on the left and the 'Fields' pane on the right.

Filters (Left):

- Buscar: Filtros en este objeto visual
- Region es (Todo)
- SalesAmount is (All)
- Agregar campos de datos aquí
- Búsqueda
- Filtros de esta página
- DueDate - Year es (Todo)
 - Tipo de filtro: Filtrado avanzado
 - Mostrar elementos cuando el valor:
 - es mayor que

Visualizaciones (Top Center):

Cards, Line, Bar, Stacked Bar, Area, Scatter, Map, Timeline, Heatmap, Gauge, Donut, Pie, Table, R, Py, ...

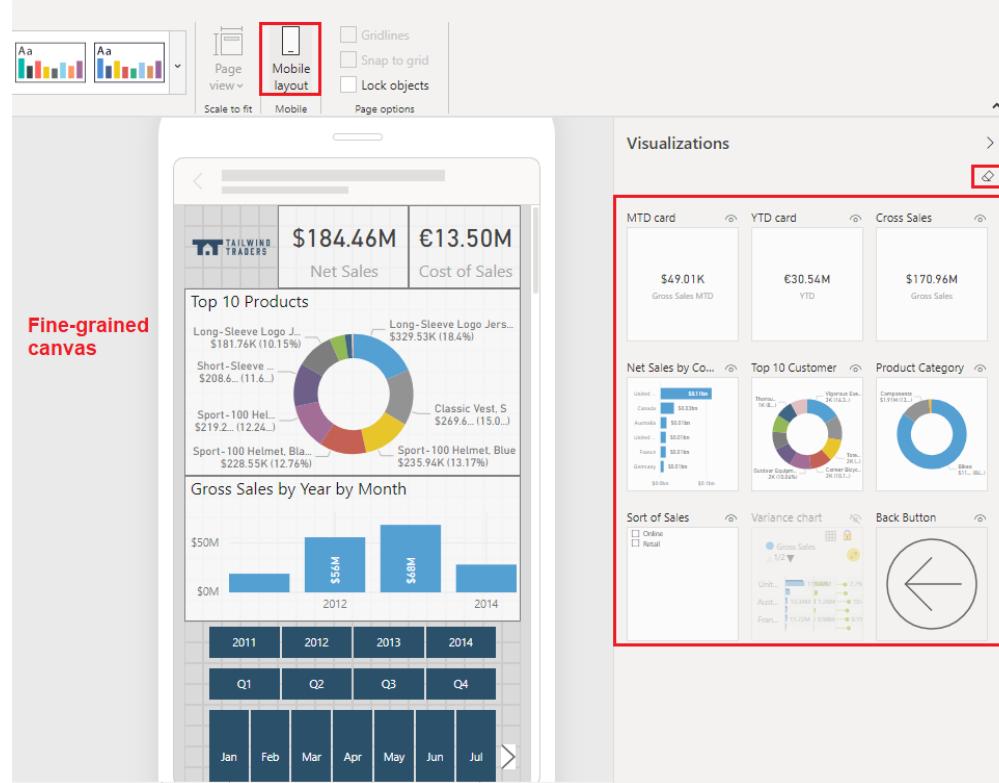
Campos (Right):

- SalesDataByRegi... (Selected)
- DueDate
- Date Hier...
- Year (Selected)
- Quarter
- Ous Mes
- Day
- EmployeeKey
- OrderDate
- OrderQuan...
- ProductKey
- PromotionK...
- Region
- ResellerKey
- SalesAmount (Selected)
- SalesOrderL...
- SalesOrder...
- SalesTerrito...

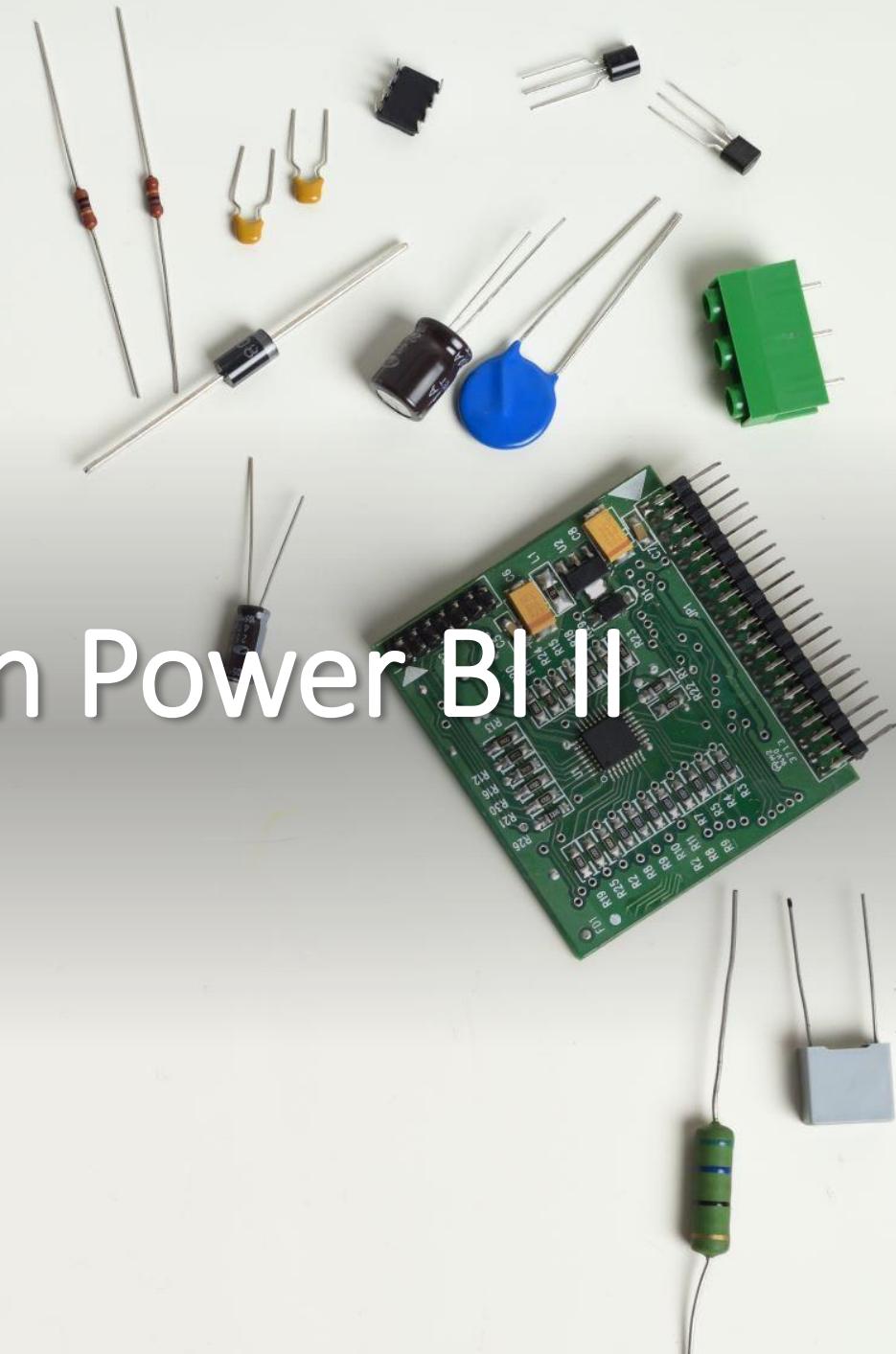
PUBLICACIÓN



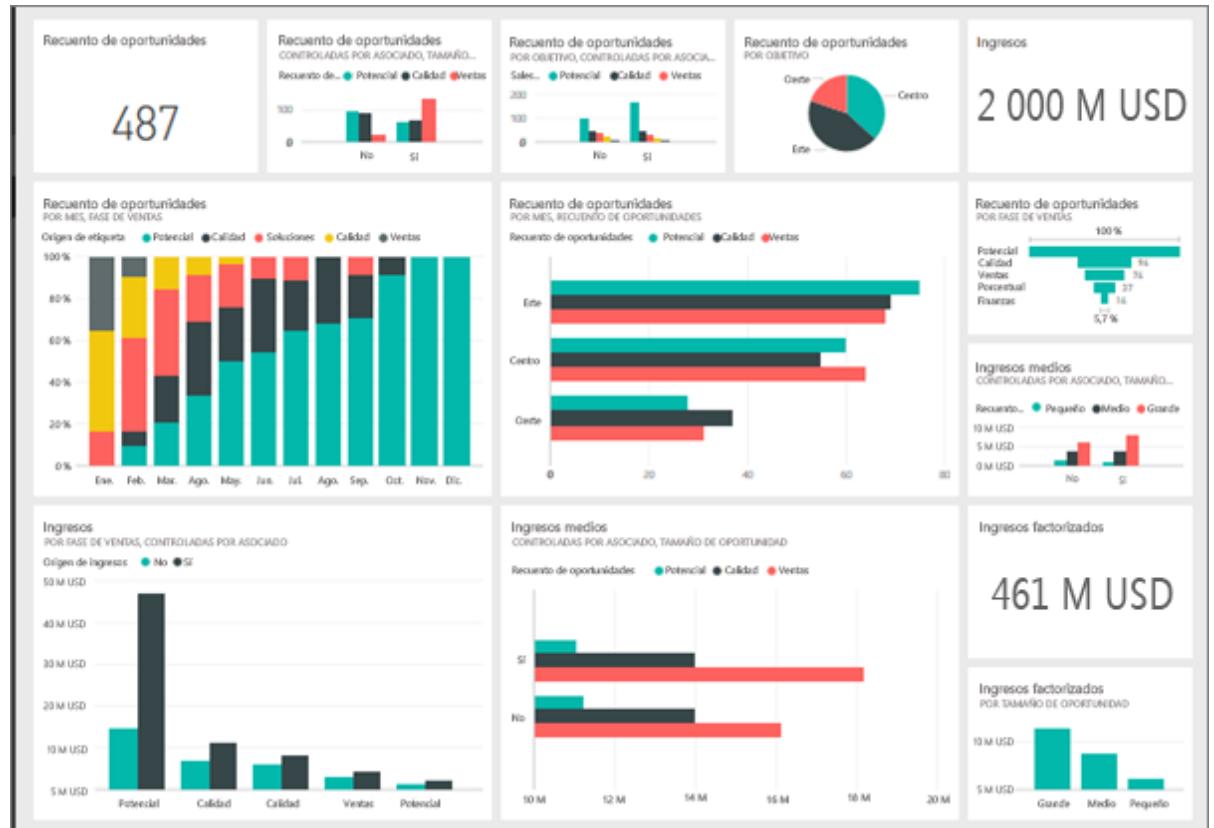
MÓVILES



Diseño de un informe en Power BI II



PANELES



ANCLAR ICONO

Orders over Time

Count of Sales...

0 200

0 20

Anclar al panel

Seleccione un panel existente o cree uno nuevo.

¿Dónde le gustaría anclarlo?

Panel existente

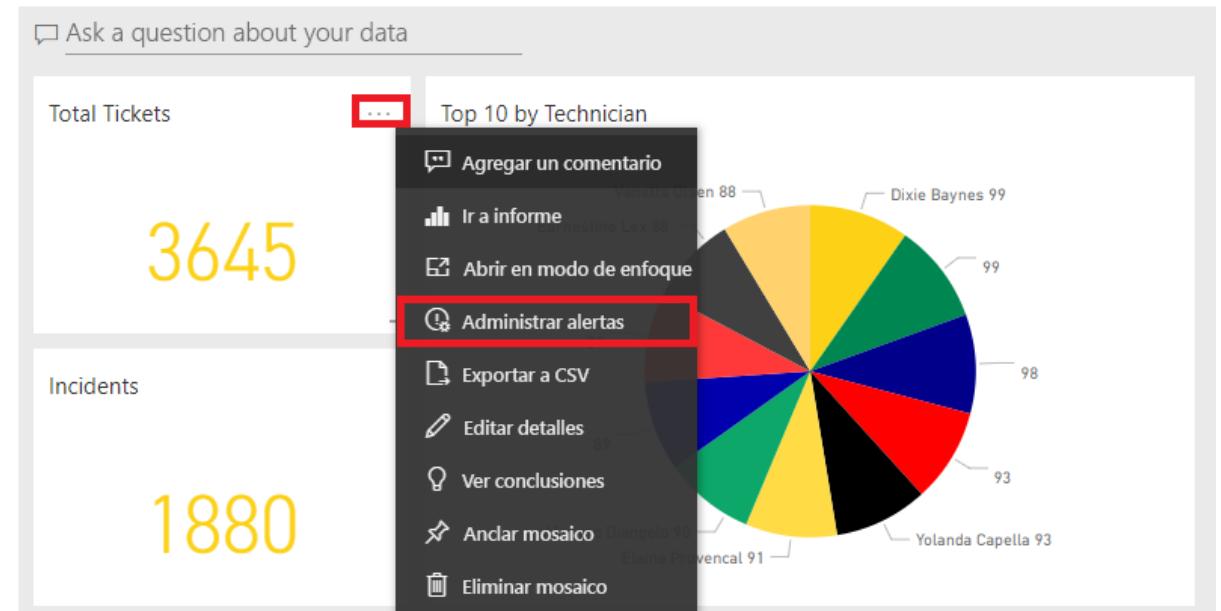
Nuevo panel

Seleccionar el panel existente

Categoría

Anclar Cancelar

ALERTAS



Q&A

[⟨ Salir de Preguntas y respuestas](#)

 Nueva experiencia de Preguntas y respuestas activada

 Ask a question about your data

Pruebe una de estas opciones para comenzar

what is the sales by order
date by product category
name

show me sales average
per category name for the
last year

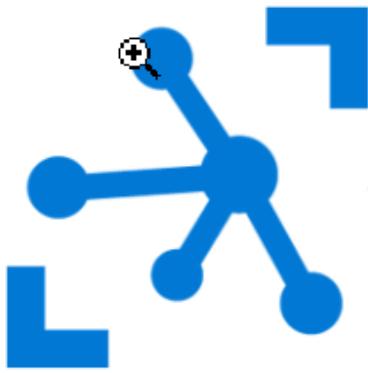
show me sales average
per category name for the
last week

top colors by sale sales
amount

what is the sales by ship
date by color

top product category
names by march sales

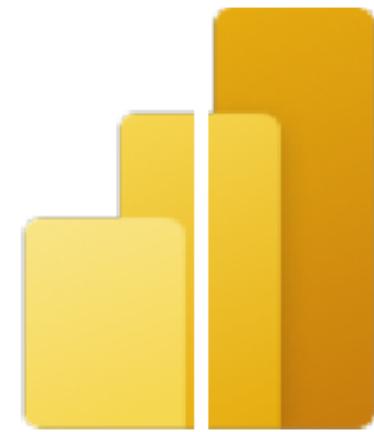
[Mostrar todas las sugerencias](#)



IoT Hub



Azure Stream Analytics



Power BI

REAL TIME



Creación de un panel de Power BI

Análisis de datos en Power BI

61.6 %: 99.19

104.19

86.72



Aplicación de seguridad de nivel de
fila