BIKES SALES

Dashboard Title: Bike Sales

Autor: David Cruz Gómez

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1. Introduction

The purpose of this dashboard is the monitoring and analysis of bicycle sales.

Analysts, managers, or supervisors will be able to benefit from its use, as well as access the information from the data warehouse.

This dashboard is based on a data model built from the data warehouse, which is organized according to the according to the medallion layer architecture (bronze, silver, gold). The visualizations feed exclusively the Gold layer, ensuring that the data is clean, reliable and ready for analytical use.

The data sources are:

- fact_sales: fact table where records of sales transactions are tracked, including products, net and gross sales amounts, taxes, delivery status and billing status.
- dim_business_partners: information about customers and business partners related to sales.
- dim_employees: list of employees who handle orders.
- dim_products: catalog of the products sold with detailed category, weight and price.
- dim_date: time dimension that allows grouping and filtering the analysis by day, month, quarter or year.

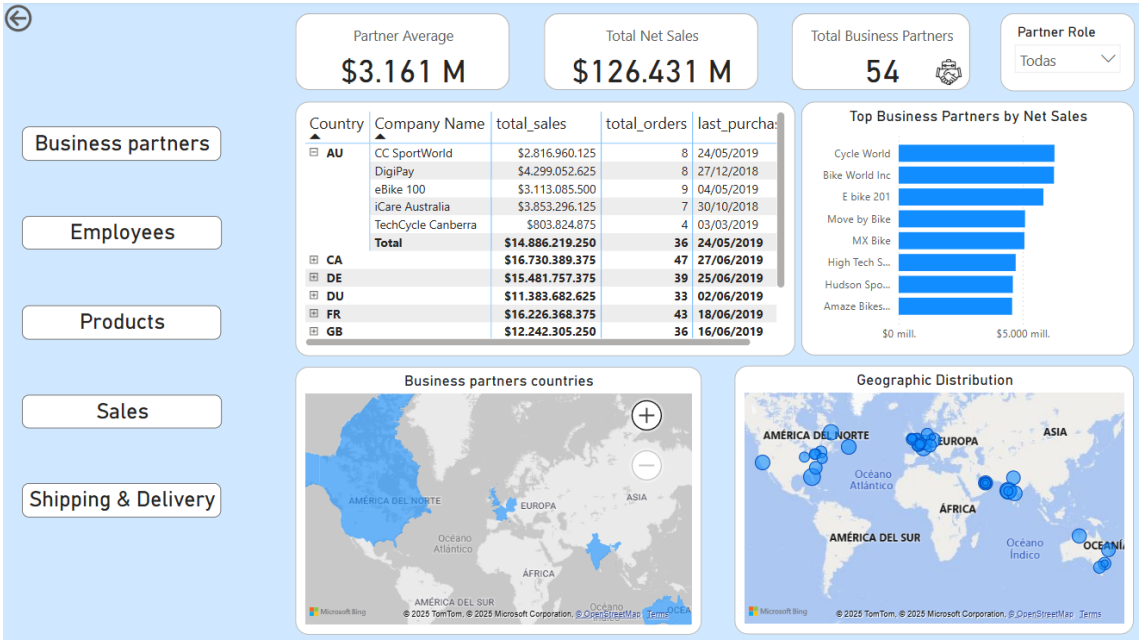
The data comes from ETL (Extract, Transform, Load) processing to load the various transactional sources into the analytical environment.

2. Dashboard Structure

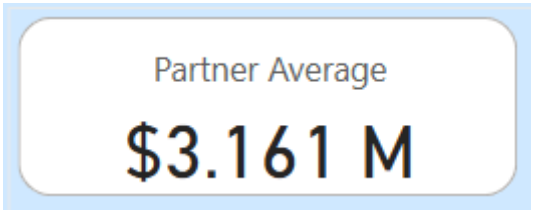
Marker	Description
Business partners	Sales performance and distribution through business partners
Employees	Individual employee sales performance and contribution.
Products	Product sales performance, trends, and top sellers by quantity and revenue.
Sales	Overall sales performance, top clients, employee comparison, order status, and monthly trends.
Shipping & Delivery	Order status, trends by country and month, and delivery details.

3. Dashboard Visuals

3.1 Business Partners



Visual: Partner Average



Visual Description

- **Type:** Card.
- **Name:** Partner Average.
- **Purpose:** Displays the average net sales per business partner.
- **Unit:** In millions of dollars (M).

DAX Measures Used

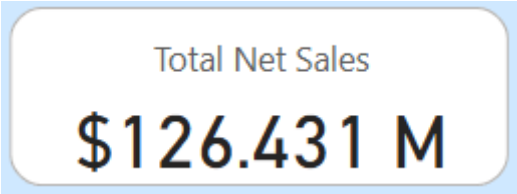
1. Base calculation of average per partner:

```
partner_average =
AVERAGEX(
    VALUES(dim_business_partners[company_name]),
    CALCULATE(SUM(fact_sales[order_net_amount]))
)
```

2. Formatted version for display in millions:

```
partner_average_M =
"$" & FORMAT([partner_average] / 1000000, "#,0") & " M"
```

Visual: Total Net Sales



Visual Description

- **Type:** Card.
- **Name:** Total Net Sales.
- **Purpose:** Displays the total net revenue from all sales transactions.
- **Unit:** In millions of dollars (M).

DAX Measures Used

1. Base calculation of the sum of all net sales amounts formatted for display in millions:

```
1 total_net_sales_formatted =
2 "$" & FORMAT(SUM([order_net_amount]) / 1000000, "#,0") & " M"
```

Visual: Total Business Partners

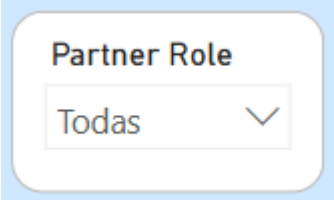
Visual Description

- **Type:** Card.
- **Name:** Total Business Partners.
- **Purpose:** Displays the total number of distinct business partners (clients/customers) involved in sales.

Calculations Used

- Applied **Count (Distinct)** to the field business_partner_key from the dim_business_partners table.

Visual: Partner Role



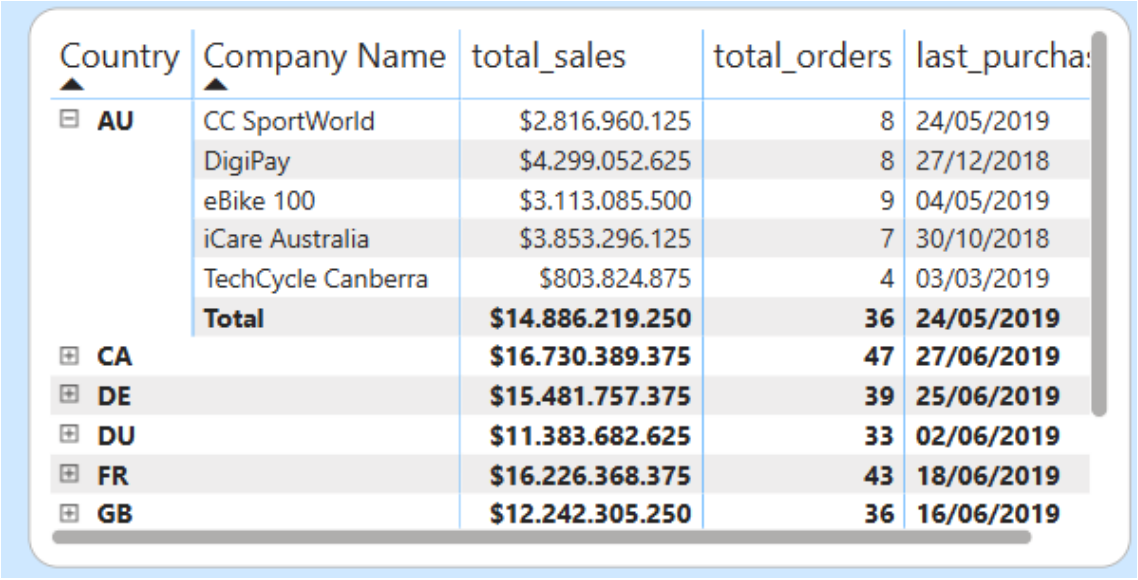
Visual Description

- **Type:** Slicer (Dropdown).
- **Name:** Partner Role.
- **Purpose:** Allows users to filter the dashboard based on the role assigned to each business partner.
- **Field:** partner_role from the dim_business_partners table.

Filter Logic Used

Dynamic filter to the entire dashboard based on the selected partner role. If "All" is selected, no filter is applied.

Visual: Partner Sales Overview



Country	Company Name	total_sales	total_orders	last_purcha
⊟ AU	CC SportWorld	$2.816.960.125	8	24/05/2019
	DigiPay	$4.299.052.625	8	27/12/2018
	eBike 100	$3.113.085.500	9	04/05/2019
	iCare Australia	$3.853.296.125	7	30/10/2018
	TechCycle Canberra	$803.824.875	4	03/03/2019
	Total	**$14.886.219.250**	**36**	**24/05/2019**
⊞ CA		**$16.730.389.375**	**47**	**27/06/2019**
⊞ DE		**$15.481.757.375**	**39**	**25/06/2019**
⊞ DU		**$11.383.682.625**	**33**	**02/06/2019**
⊞ FR		**$16.226.368.375**	**43**	**18/06/2019**
⊞ GB		**$12.242.305.250**	**36**	**16/06/2019**

Visual Description

- **Type:** Matrix
- **Name:** Partner Sales Overview
- **Purpose:** Displays a hierarchical breakdown of total sales, number of orders, and last purchase date per company, grouped by country.
- **Fields Used:**
  - Rows: Country, Company Name
  - Values:
    - total_sales
    - total_orders
    - last_purchase

DAX Measures Used

1. Base calculation of total net sales per company:

```
total_sales =
CALCULATE(SUM(fact_sales[order_net_amount]))
```

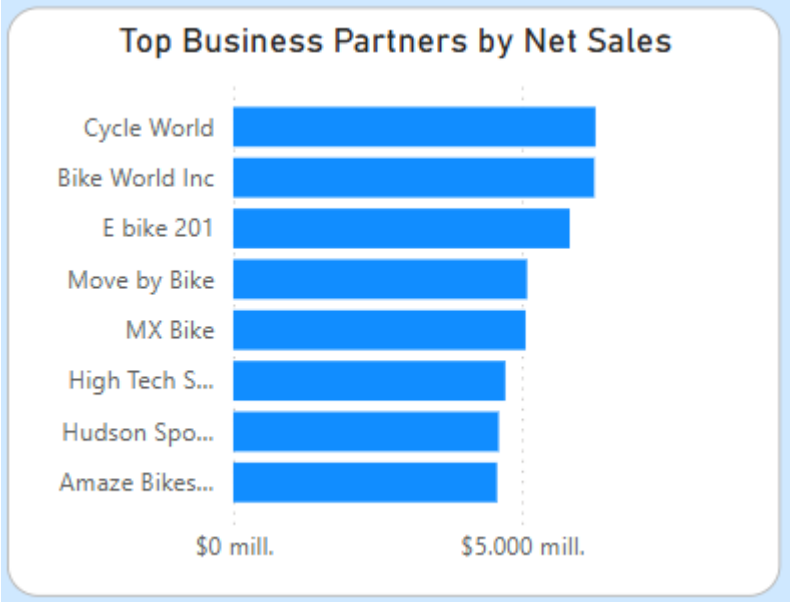
2. Total number of unique orders per company:

```
total_orders =
CALCULATE(DISTINCTCOUNT(fact_sales[order_id]))
```

3. Most recent purchase date per company:

```
last_purchase =
CALCULATE(MAX(fact_sales[order_created_at]))
```

Visual: Top Business Partners by Net Sales



Visual Description

- **Type:** Bar Chart
- **Name:** Top Business Partners by Net Sales
- **Purpose:** Displays the top-performing business partners based on total net sales.
- **Field used (Axis):** company_name
- **Field used (Value):** total_sales

DAX Measures Used

1. Base calculation of total net sales per company:

```
total_sales =
CALCULATE(SUM(fact_sales[order_net_amount]))
```

Filter Logic Used

The visual displays the Top 8 business partners by total net sales, using a Top N filter on company_name based on the total_sales value.

Visual: Business partners countries

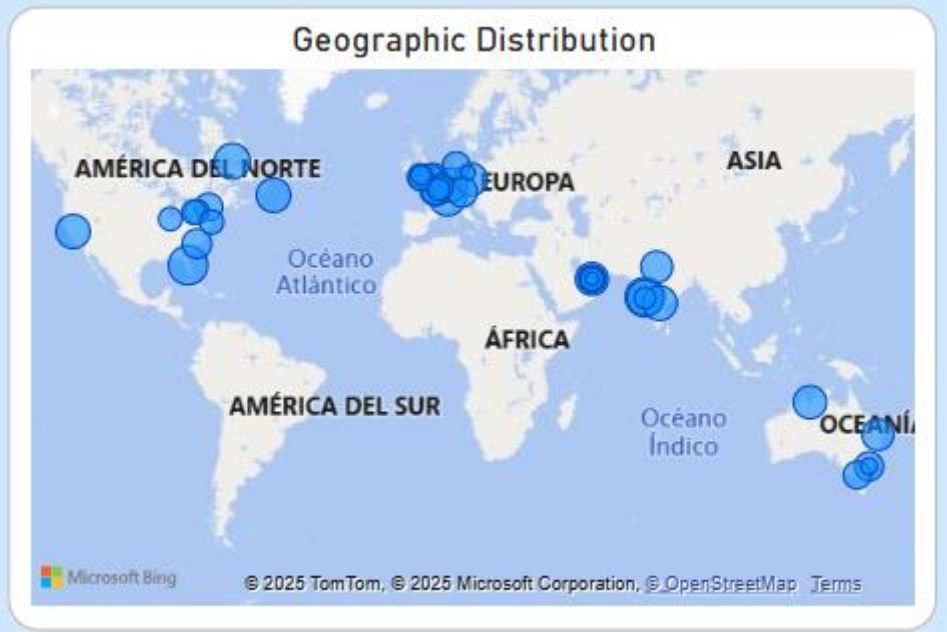
Visual Description

- **Type:** Map
- **Name:** Business Partners Countries
- **Purpose:** Displays the countries where business partners are located, based on geographic data.
- **Field used (Location):** addr_country
- **Dataset source:** dim_business_partners

Filter Logic Used

The map automatically aggregates and highlights partner presence by country. Selecting a country filters all connected visuals to show data only for business partners located in that country.

Visual: Geographic Distribution



Visual Description

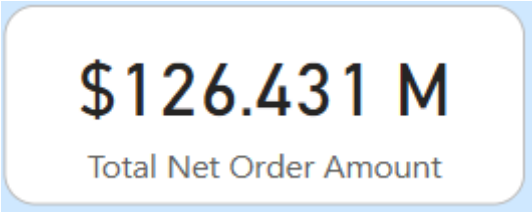
- **Type:** Map (bubble/map chart)
- **Name:** Geographic Distribution
- **Purpose:** Shows the precise geographic locations of business partners based on latitude and longitude coordinates.
- **Fields used:**
  - **Location:** addr_latitude and addr_longitude
  - **Category:** company_name, addr_country, addr_city (optional, for tooltips or markers)
- **Dataset source:** dim_business_partners

Filter Logic Used

Locations can be clicked on the map to filter the report. This interaction filters other visuals to show data only for the selected location.

3.2 Employees

Visual: Total Net Order Amount



Visual Description

- **Type:** Card.
- **Name:** Total Net Order Amount.
- **Purpose:** Displays the total net value of all orders processed across the selected filters (e.g., date range, employee).
- **Unit:** In millions of dollars (M).

DAX Measures Used

1. Base calculation of the sum of all net sales amounts formatted for display in millions:

```
1  total_net_sales_formatted =
2  "$" & FORMAT(SUM([order_net_amount]) / 1000000, "#,0") & " M"
```

Visual: Employee Average Ticket

Visual Description

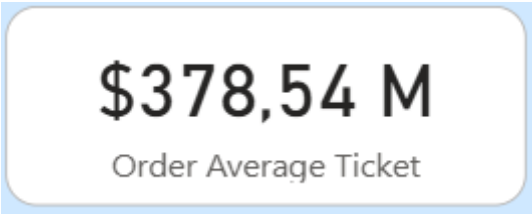
- **Type:** Card
- **Name:** Employee Average Ticket
- **Purpose:** Displays the average value of net sales per order across all employees.
- **Unit:** In millions of dollars (M)

DAX Measures Used

1. Base calculation of average ticket per employee formatted for display in millions:

```
employee_average_ticket_formatted =
VAR avg_employee_ticket =
    DIVIDE(
        SUM(fact_sales[order_net_amount]),
        COUNTROWS(fact_sales)
    )
RETURN
FORMAT(avg_employee_ticket / 1000000, "$#,0.00") & " M"
```

Visual: Order Average Ticket



Visual Description

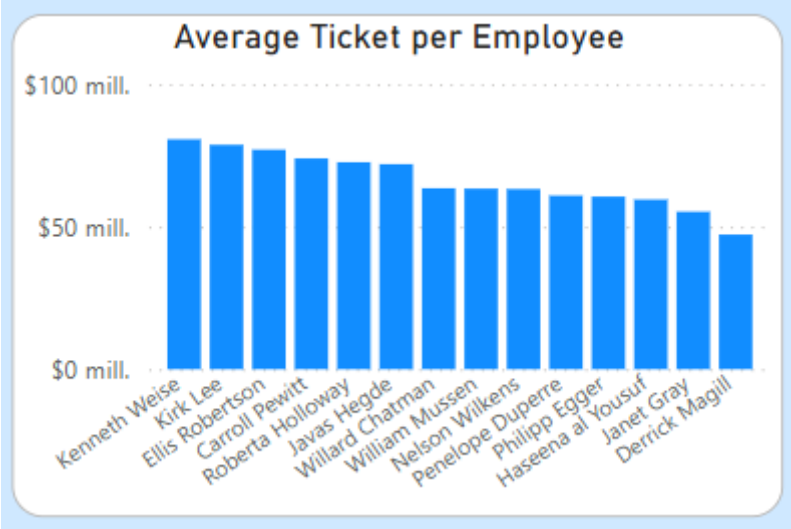
- **Type:** Card
- **Name:** Order Average Ticket
- **Purpose:** Shows the average net value of each individual order across all employees.
- **Unit:** In millions of dollars (M)

DAX Measures Used

- Base calculation of the average order value formatted for display in millions:

```
order_average_ticket_formatted =
VAR avg_ticket =
    DIVIDE(
        SUM(fact_sales[order_net_amount]),
        DISTINCTCOUNT(fact_sales[order_id])
    )
RETURN
FORMAT(avg_ticket / 1000000, "$#,0.00") & " M"
```

Visual: Average Ticket per Employee



Visual Description

- **Type:** Column Chart
- **Name:** Average Ticket per Employee
- **Purpose:** Shows the average value of orders handled by each employee.
- **Axis:** full_name
- **Values:** average_ticket

Dax Measures Used

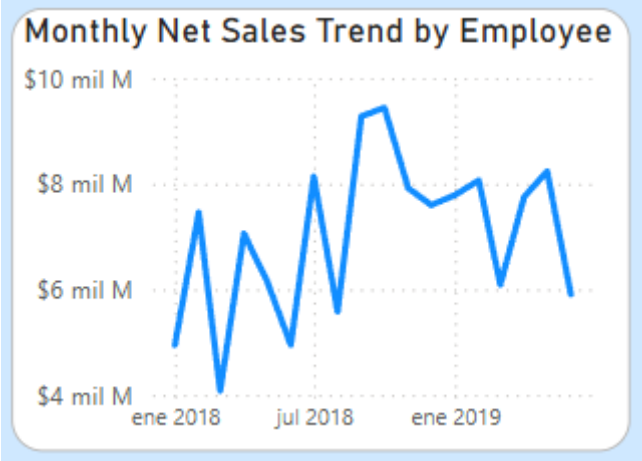
1. Full Name field creation:

```
full_name = [first_name] & " " & [last_name]
```

2. Average Ticket (per employee):

```
employee_average_ticket =
DIVIDE(
    SUM(fact_sales[order_net_amount]),
    COUNTROWS(fact_sales)
)
```

Visual: Monthly Net Sales Trend by Employee



Visual Description

- **Type:** Line Chart
- **Name:** Monthly Net Sales Trend by Employee
- **Purpose:** Shows how net sales evolve over time, segmented by employee.
- **Axis (X):** Month (month_start_date)
- **Values (Y):** Total Net Sales (total_sales)

DAX Measures Used

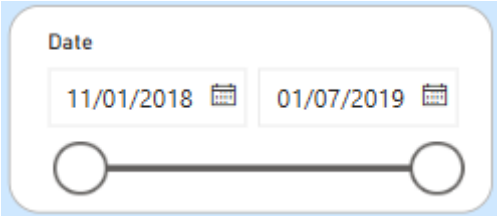
1. Month start date (used for grouping):

```
month_start_date = DATE(YEAR('dim_date'[only_date]), MONTH('dim_date'[only_date]), 1)
```

2. Base calculation of total net sales per company:

```
total_sales =
CALCULATE(SUM(fact_sales[order_net_amount]))
```

Visual: Date



Visual Description

- **Type:** Slicer (Between)
- **Name:** Date
- **Purpose:** Allows users to filter all visuals on the page based on a specific time range.
- **Field Used:** only_date from the dim_date table

DAX Measures Used

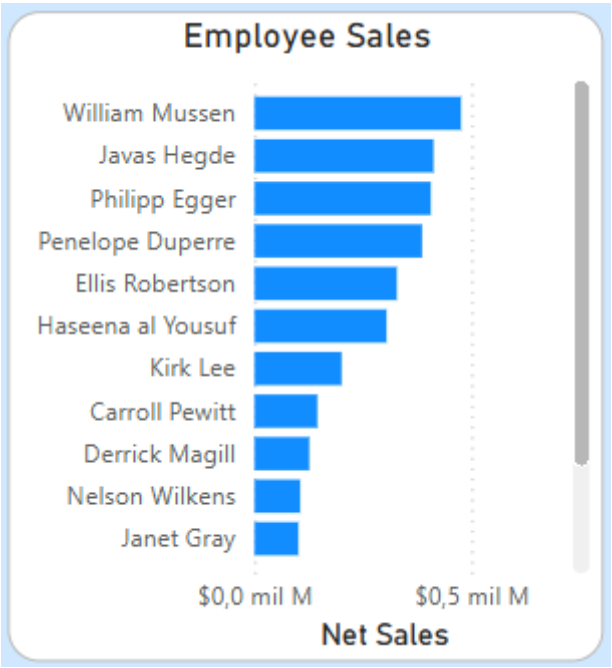
1. Date simplification (to remove time):

```
only_date = DATEVALUE('dim_date'[date])
```

Filter Logic Used

This slicer filters all visuals based on the selected date range.

Visual: Employee Sales



Visual Description

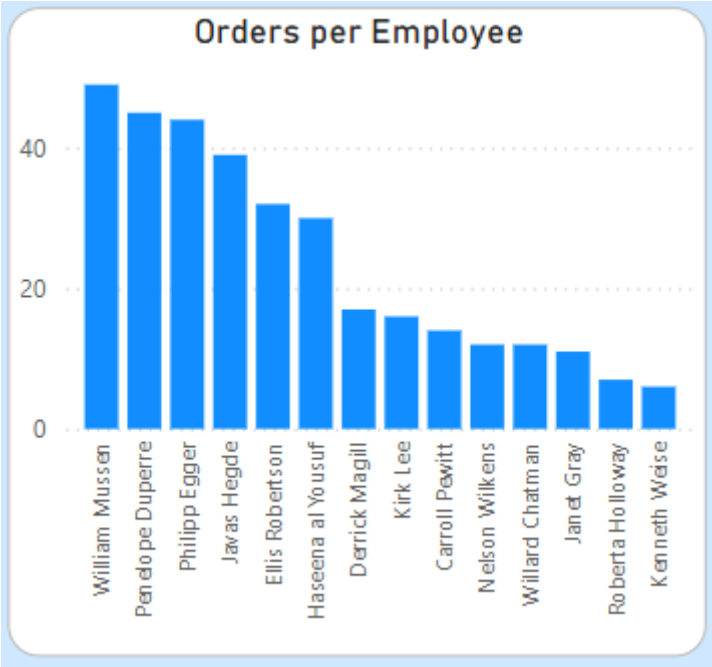
- **Type:** Bar Chart
- **Name:** Employee Sales
- **Purpose:** Displays the total net sales generated by each employee.

- **Axis (Y):** Full Name
- **Values (X):** Net Sales

Dax Measures Used

1. Full Name field creation:
```
full_name = [first_name] & " " & [last_name]
```
2. Sum of the field sls_order_net_amount from the fact_sales table.

Visual: Orders per Employee



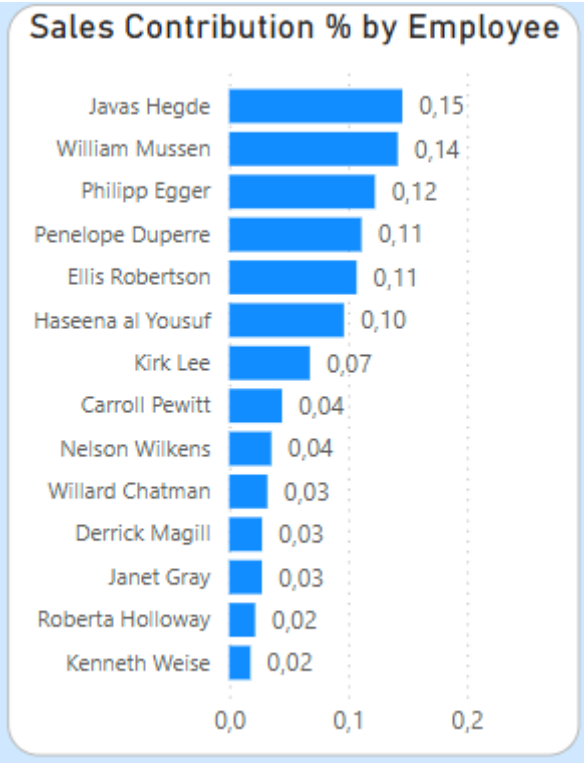
Visual Description

- **Type:** Column Chart
- **Name:** Orders per Employee
- **Purpose:** Displays the number of orders handled by each employee.
- **Axis (X):** Full Name
- **Values (Y):** Orders (order_id distinct count)

Calculations Used

- Orders**:** Count of order_id field from fact_sales.
- Full Name field creation:
```
full_name = [first_name] & " " & [last_name]
```

Visual: Sales Contribution % by Employee



Visual Description

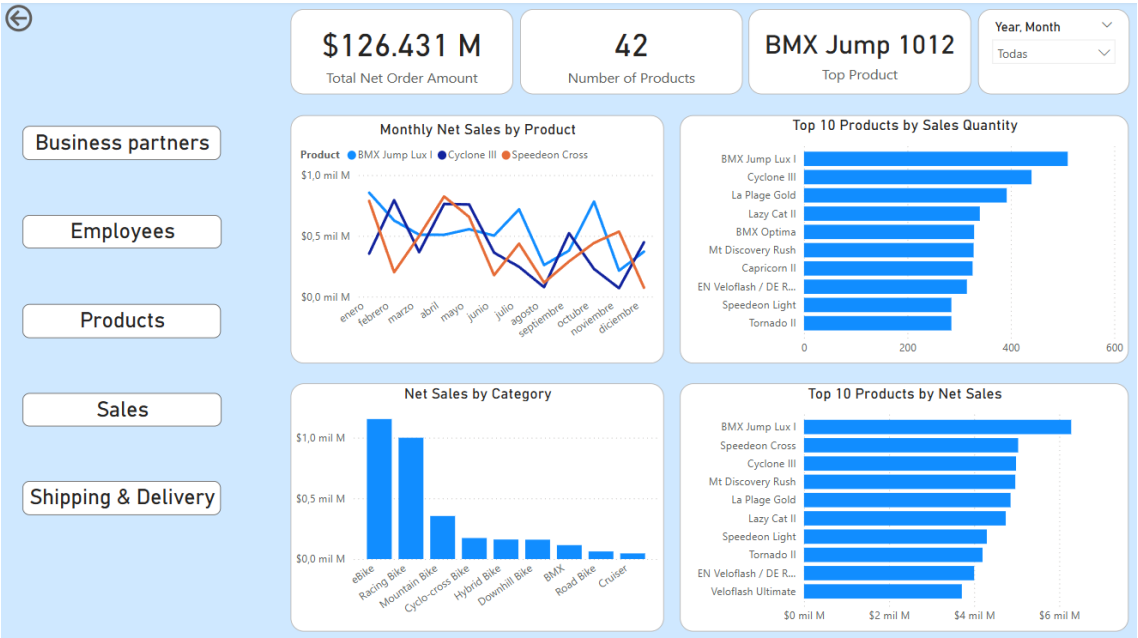
- **Type:** Bar Chart
- **Name:** Sales Contribution % by Employee
- **Purpose:** Displays each employee's contribution to total net sales as a percentage.
- **Axis (Y):** Full Name
- **Values (X):** employee_sales_contribution_percentage

DAX Measures Used

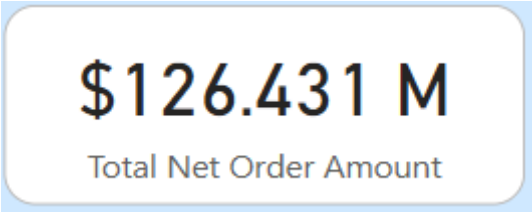
1. Sales Contribution Percentage

```
employee_sales_contribution_percentage =
DIVIDE(
    SUM(fact_sales[order_net_amount]),
    CALCULATE(
        SUM(fact_sales[order_net_amount]),
        ALL(fact_sales)
    )
)
```

3.3 Products



Visual: Total Net Order Amount



Visual Description

- **Type:** Card.
- **Name:** Total Net Order Amount.
- **Purpose:** Displays the total net value of all orders processed across the selected filters (e.g., date range, employee).
- **Unit:** In millions of dollars (M).

DAX Measures Used

2. Base calculation of the sum of all net sales amounts formatted for display in millions:

```
1  total_net_sales_formatted =
2  "$" & FORMAT(SUM([order_net_amount]) / 1000000, "#,0") & " M"
```

Visual: Number of Products

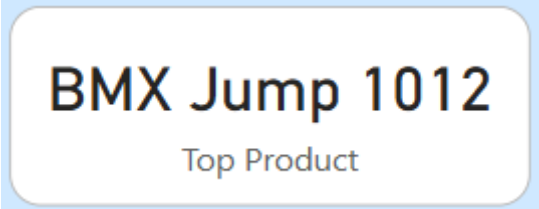
Visual Description

- **Type:** Card.
- **Name:** Number of Products.
- **Purpose:** Displays the total number of distinct products available in the product catalog.
- **Unit:** Count.

Calculations Used

- Distinct count of product_id

Visual: Top Product



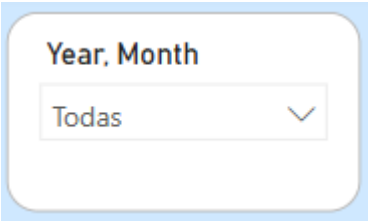
Visual Description

- **Type:** Card
- **Name:** Top Product
- **Purpose:** Displays the name of the product with the highest total sales or quantity sold.
- **Unit:** product_short_description (text)

Filter Logic Used

- The visual is filtered using a **Top N** condition based on order_quantity, with the value field being product_short_description.

Visual: Date



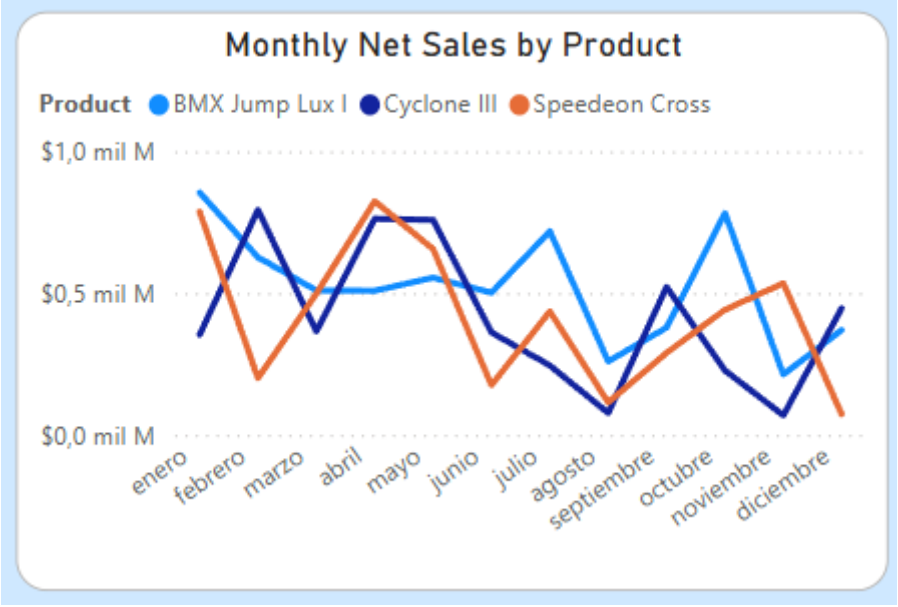
Visual Description

- **Type:** Slicer (Dropdown)
- **Name:** Year, Month
- **Purpose:** Allows users to filter all visuals on the page based on a selected year and month combination.
- **Field Used:** Year and month_name from the dim_date table

Filter Logic Used

- This slicer filters all visuals by the selected year and month, enabling comparisons and trends by narrowing the reporting period to specific calendar months.

Visual: Monthly Net Sales by Product



Visual Description

- **Type:** Line Chart
- **Name:** Monthly Net Sales by Product
- **Purpose:** Displays the trend of net sales over months for selected products.
- **X-Axis:** order_created_at month
- **Y-Axis:** sls_order_net_amount (Sum)
- **Legend:** product_short_description

DAX Measures Used

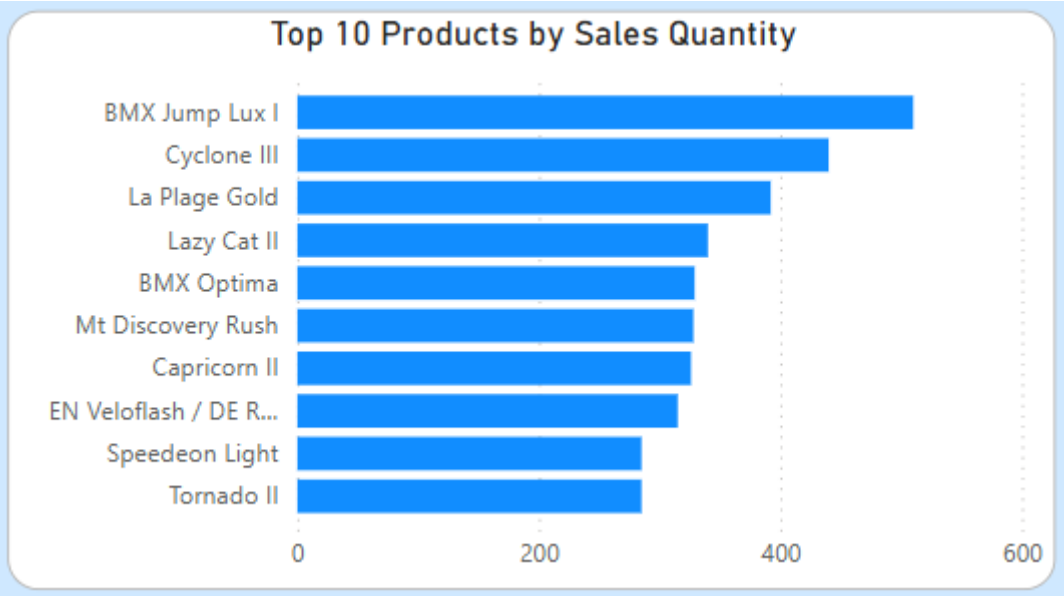
1. Base calculation of total net sales:

```
total_sales =
CALCULATE(SUM(fact_sales[order_net_amount]))
```

Filter Logic Used

- The line chart is filtered by Year-Month and Top N condition based on the sum of order_net_amount, with the value field being product_short_description, showing only the Top 3 products by net sales on the selected period.

Visual: Top 10 Products by Sales Quantity



Visual Description

- **Type:** Bar Chart
- **Name:** Top 10 Products by Sales Quantity
- **Purpose:** Displays the top 10 best-selling products based on total quantity sold.
- **Axis (Y):** product_short_description
- **Values (X):** order_quantity

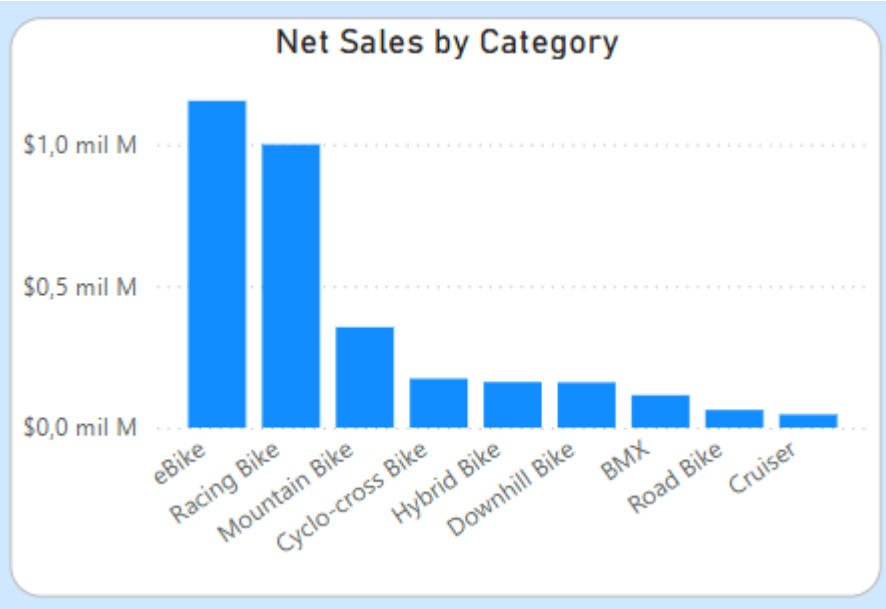
Calculations Used

- Sum of order_quantity

Filter Logic Used

Tis chart uses a Top N filter applied to product_short_description by de sum of order_quantity to show only the top 10 products ranked by total quantity sold (order_quantity).

Visual: Net Sales by Category



Visual Description

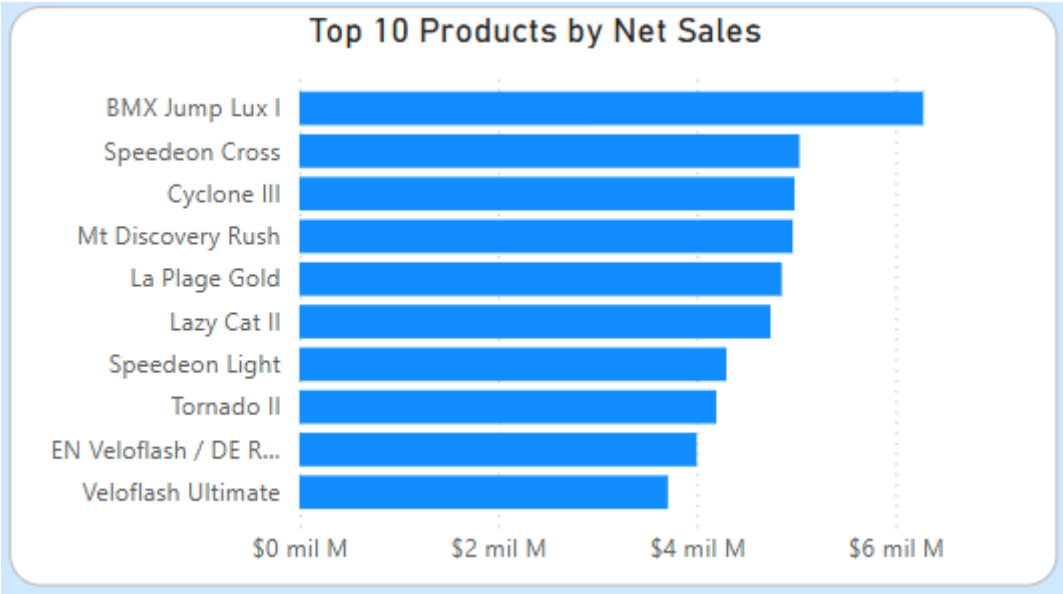
- **Type:** Column Chart
- **Name:** Net Sales by Category
- **Purpose:** Displays total net sales grouped by product category.
- **Axis (X):** category_short_description
- **Values (Y):** Net Sales (sum of sls_order_net_amount)

Dax Measures Used

1. Base calculation of the Sum of sls_order_net_amount from the fact_sales table:

```
1 total_sales =
2 CALCULATE(SUM(fact_sales[order_net_amount]))
```

Visual: Orders per Employee



Visual Description

- **Type:** Bar Chart
- **Name:** Top 10 Products by Net Sales
- **Purpose:** Displays the top 10 products ranked by total net sales amount.
- **Axis (Y):** product_short_description
- **Values (X):** sls_order_net_amount

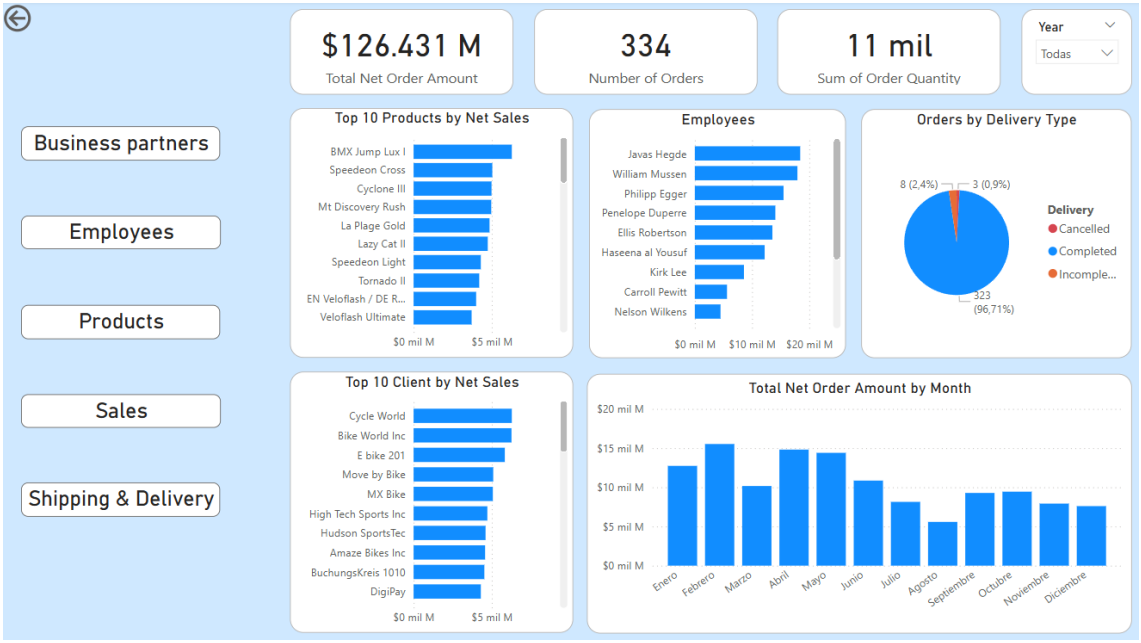
Calculations Used

- Sum of order_net_amount

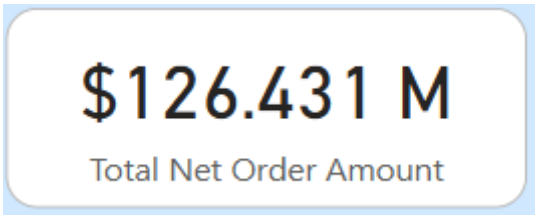
Filter Logic Used

This chart uses a Top N filter applied to product_short_description by de sum of order_net_amount to show only the top 10 products ranked by total net amount sold (order_net_amount).

3.4 Sales



Visual: Total Net Order Amount



Visual Description

- **Type:** Card.
- **Name:** Total Net Order Amount.
- **Purpose:** Displays the total net value of all orders processed across the selected filters (e.g., date range, employee).
- **Unit:** In millions of dollars (M).

DAX Measures Used

3. Base calculation of the sum of all net sales amounts formatted for display in millions:

```
1  total_net_sales_formatted =
2  "$" & FORMAT(SUM([order_net_amount]) / 1000000, "#,0") & " M"
```

Visual: Number of Orders

Visual Description

- **Type:** Card
- **Name:** Number of Orders
- **Purpose:** Displays the total number of unique orders placed.
- **Unit:** Count

Calculations Used

- Distinct count of order_id

Visual: Sum of Order Quantity

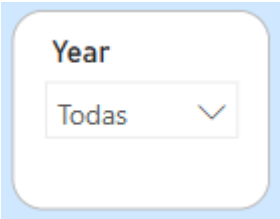
Visual Description

- **Type:** Card
- **Name:** Sum of Order Quantity
- **Purpose:** Shows the total quantity of items ordered across all transactions.
- **Unit:** Quantity (rounded display as “mil” for readability)

Calculations Used

- Sum of Order Quantity.

Visual: Date



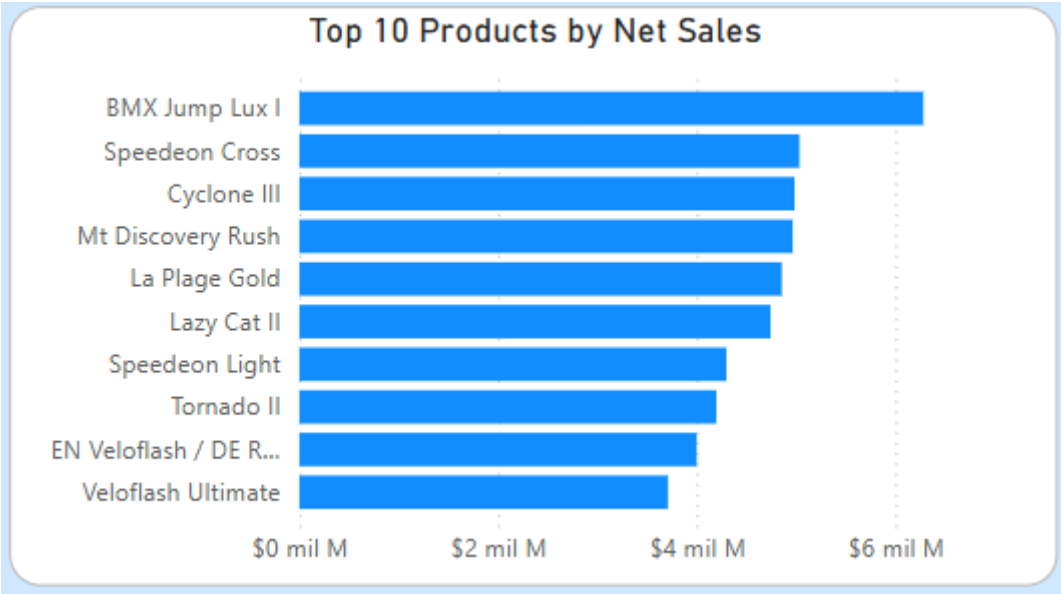
Visual Description

- **Type:** Slicer (Dropdown)
- **Name:** Year
- **Purpose:** Filters the entire report page based on the selected year.
- **Field Used:** year from dim_date

Filter Logic Used

- This slicer filters all visuals by the selected year, enabling comparisons and trends by narrowing the reporting period to specific year.

Visual: Top 10 Products by Net Sales



Visual Description

- **Type:** Bar Chart
- **Name:** Top 10 Products by Net Sales
- **Purpose:** Displays the top 10 products ranked by total net sales amount.
- **Axis (Y):** product_short_description
- **Values (X):** sls_order_net_amount

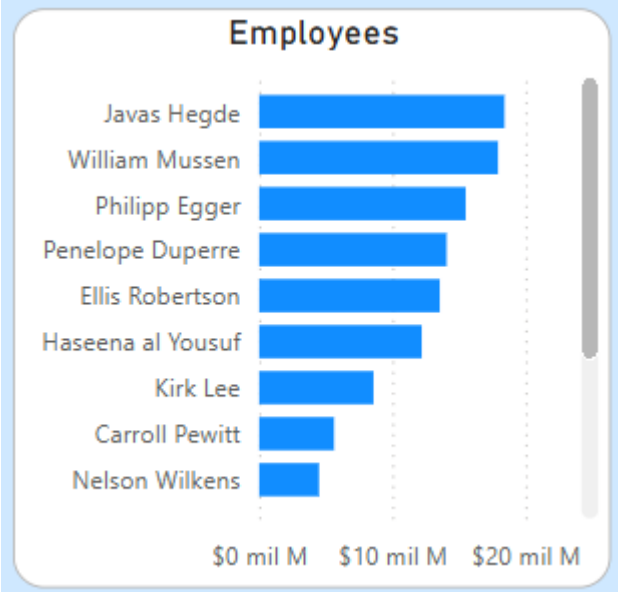
Calculations Used

- Sum of order_net_amount

Filter Logic Used

This chart uses a Top N filter applied to product_short_description by de sum of order_net_amount to show only the top 10 products ranked by total net amount sold (order_net_amount).

Visual: Employees



Visual Description

- **Type:** Bar Chart
- **Name:** Employees
- **Purpose:** Displays total net sales achieved by each employee.
- **Axis (Y):** Full Name (concatenation of first_name + last_name)
- **Values (X):** Sum of sls_order_net_amount

DAX Measures Used

1. Base calculation of total net sales:

```
total_sales =
CALCULATE(SUM(fact_sales[order_net_amount]))
```

2. Full Name field creation:

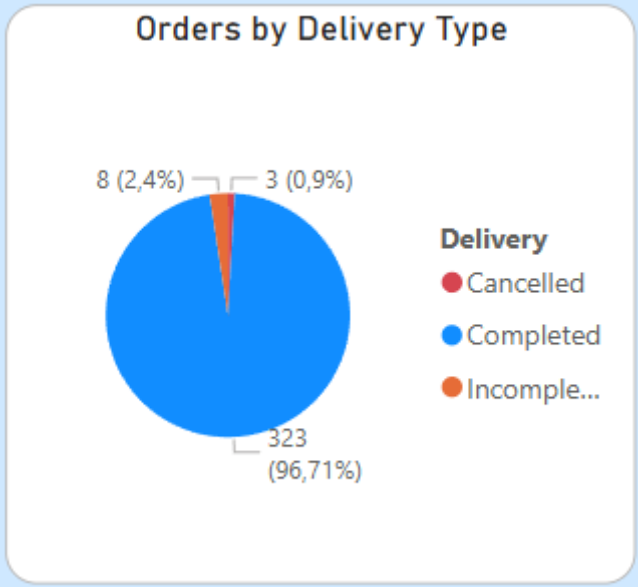
```
full_name = [first_name] & " " & [last_name]
```

Filter Logic Used

- The line chart is filtered by Year-Month and Top N condition based on the sum of order_net_amount, with the value field being product_short_description,

showing only the Top 3 products by net sales on the selected period.

Visual: Orders by Delivery Type



Visual Description

- **Type:** Pie Chart
- **Name:** Orders by Delivery Type
- **Purpose:** Shows the distribution of orders by delivery status (Completed, Cancelled, Incompleted).
- **Legend:** delivery_status
- **Values:** Count of order_id

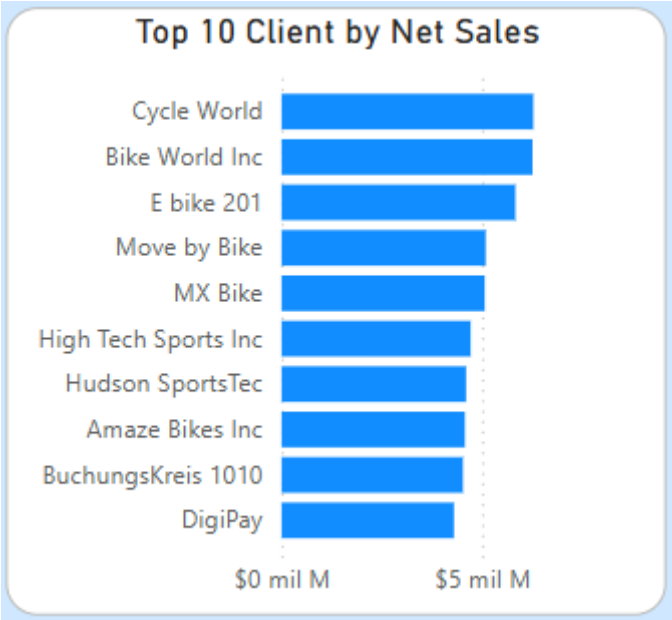
Calculations Used

- Count of order_id

Filter Logic Used

The pie segments are grouped by the delivery type.

Visual: Top 10 Clients by Net Sales



Visual Description

- **Type:** Bar Chart
- **Name:** Top 10 Clients by Net Sales
- **Purpose:** Ranks the top 10 clients based on the total value of net sales.
- **Axis (Y):** company_name (from dim_business_partners)
- **Values (X):** sls_order_net_amount

Dax Measures Used

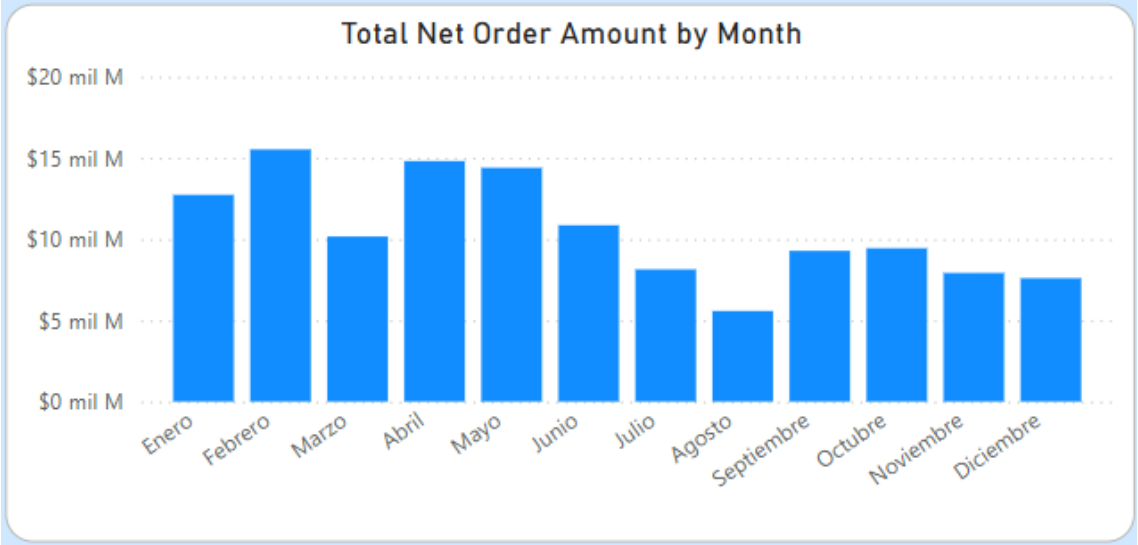
2. Base calculation of the Sum of sls_order_net_amount from the fact_sales table:

```
1 total_sales =
2 CALCULATE(SUM(fact_sales[order_net_amount]))
```

Filter Logic Used

A Top N filter is applied to show only the 10 clients with the highest net sales.

Visual: Total Net Order Amount by Month



Visual Description

- **Type:** Column Chart
- **Name:** Total Net Order Amount by Month
- **Purpose:** Displays the total net order value distributed across each month.
- **Axis (X):** month_name (from dim_date)
- **Values (Y):** Sum of sls_order_net_amount

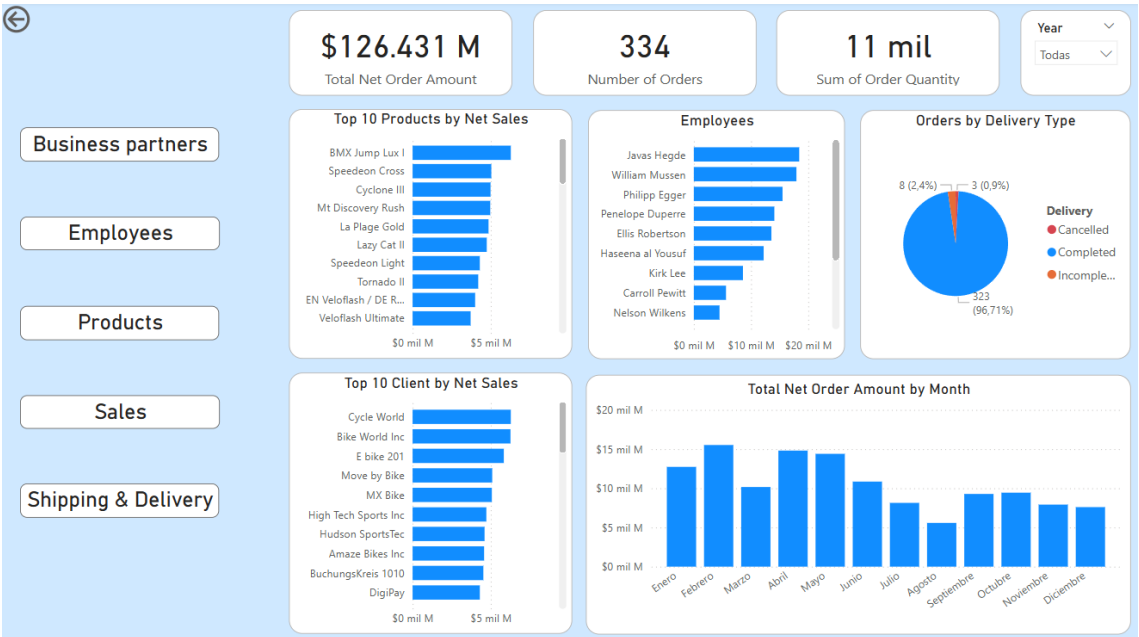
Calculations Used

- Sum of order_net_amount

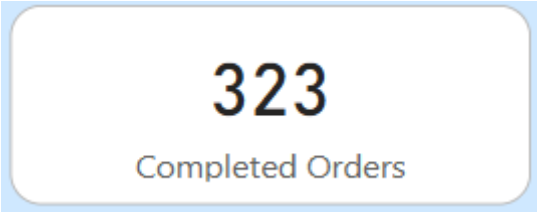
Filter Logic Used

This visual shows Sum of sls_order_net_amount grouped by month.

3.5 Shipping & Delivery



Visual: Completed Orders



Visual Description

- **Type:** Card.
- **Name:** Completed Orders
- **Purpose:** Shows the count of orders with delivery status "Completed".
- **Unit:** Count of orders

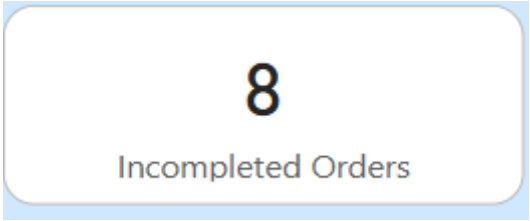
Calculations Used

Distinct count of order_id

Filter Logic Used

delivery_status = "Completed"

Visual: Incompleted Orders



Visual Description

- **Type:** Card.
- **Name:** Incompleted Orders
- **Purpose:** Shows the count of orders with delivery status "Incompleted".
- **Unit:** Count of orders

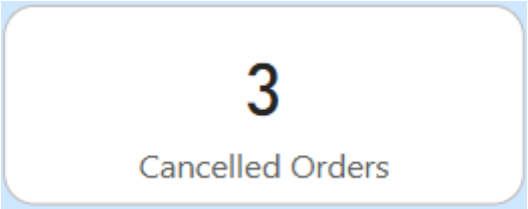
Calculations Used

Distinct count of order_id

Filter Logic Used

delivery_status = "Incompleted"

Visual: Cancelled Orders



Visual Description

- **Type:** Card.
- **Name:** Cancelled Orders
- **Purpose:** Shows the count of orders with delivery status "Cancelled".
- **Unit:** Count of orders

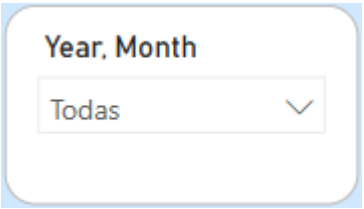
Calculations Used

Distinct count of order_id

Filter Logic Used

delivery_status = "Cancelled"

Visual: Number of Orders



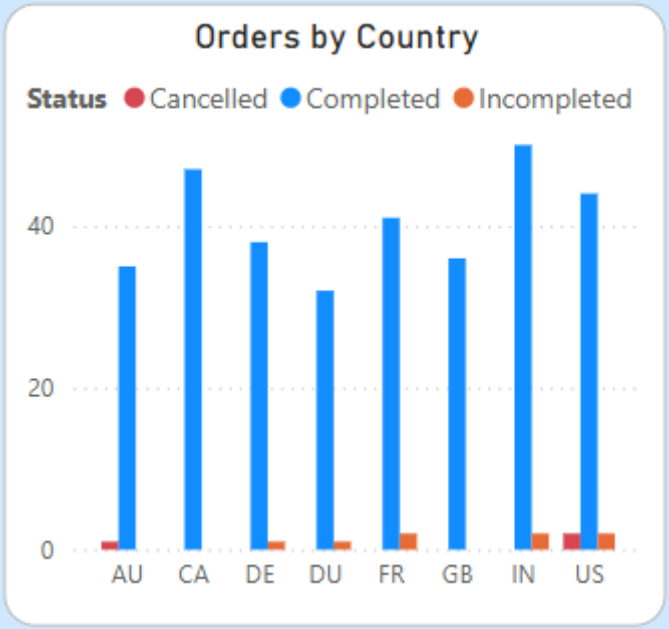
Visual Description

- **Type:** Dropdown Slicer
- **Name:** Year, Month
- **Purpose:** Allows users to filter the dashboard data by specific year-month combinations.
- **Source Field:** Year and Month from the dim_date table.

Filter Logic Used

When a value is selected from the slicer, all visuals on the page are filtered to show data only for that month and year.

Visual: Orders by Country



Visual Description

- **Type:** Clustered Column Chart
- **Name:** Orders by Country
- **Purpose:** Shows the distribution of order statuses (Cancelled, Completed, Incompleted) across different countries.
- **X-Axis:** country (from dim_business_partners)
- **Legend:** delivery_status
- **Y-Axis:** Count of order_id

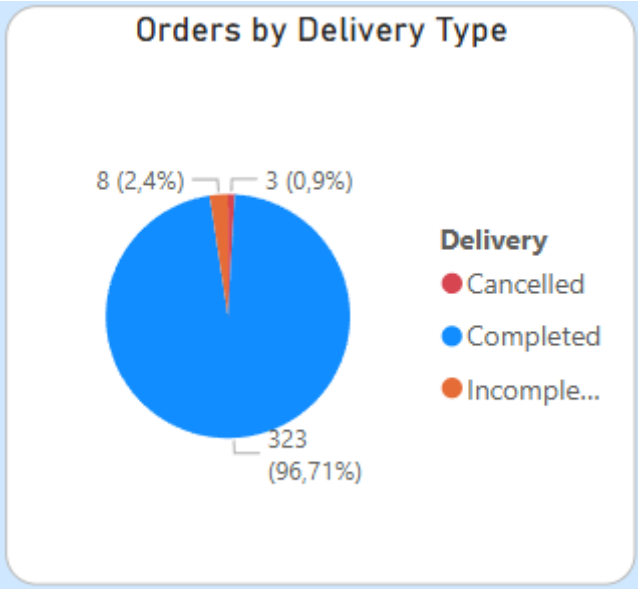
Calculations Used

Distinct count of order_id

Filter Logic Used

Values are grouped by country and split by delivery_status.

Visual: Orders by Delivery Type



Visual Description

- **Type:** Pie Chart
- **Name:** Orders by Delivery Type
- **Purpose:** Shows the distribution of orders by delivery status (Completed, Cancelled, Incompleted).
- **Legend:** delivery_status
- **Values:** Count of order_id

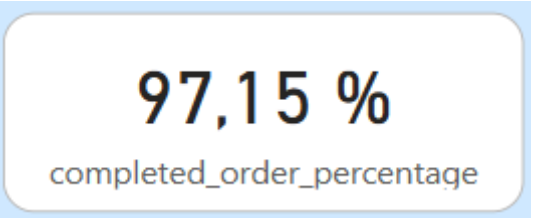
Calculations Used

- Count of order_id

Filter Logic Used

The pie segments are grouped by the delivery type.

Visual: Completed Order %



Visual Description

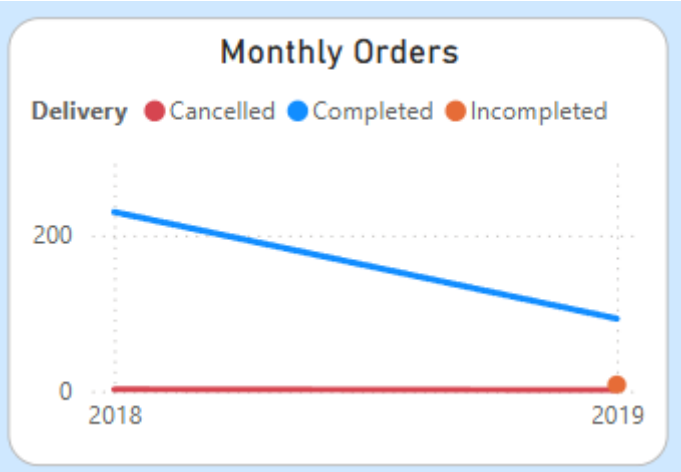
- **Type:** Card
- **Name:** Completed Order %
- **Purpose:** Displays the percentage of orders that were successfully completed out of the total orders.
- **Format:** Percentage (##.## %)

DAX Measures Used

1. Ratio of orders with delivery_status completed:

```
completed_order_percentage =
DIVIDE(
    CALCULATE(
        COUNT(fact_sales[order_id]),
        FILTER(fact_sales, fact_sales[delivery_status] = "Completed")
    ),
    COUNT(fact_sales[order_id])
)
```

Visual: Monthly Orders



Visual Description

- **Type:** Line chart
- **Name:** Monthly Orders
- **Purpose:** Displays the trend of total orders over time, grouped by delivery status (Cancelled, Completed, Incompleted).
- **Legend:** Delivery status
- **X-axis:** Year
- **Y-axis:** Number of orders

Filter Logic Used

- Each line represents a delivery_status category filtered in the visual.
- Data is grouped by month, allowing comparison across time.

Visual: Detailed Orders

Orders	Company	Delivery Status	Mes	Día	Gross Amount
1	Amaze Bikes Inc	Cancelled	mayo	19	$1.100.256
1	Bike World Inc	Incompleted	mayo	24	$99.786
1	Eiffel Bikes	Incompleted	mayo	30	$399.050
1	A to Z Fitness	Incompleted	junio	2	$2.880
1	Atlanta Corp Inc	Incompleted	junio	17	$68.264
1	Meine Bicycle	Incompleted	junio	25	$25.386
1	Tires On Fire	Incompleted	junio	5	$869.099
1	Tires On Fire	Incompleted	junio	27	$82.880
1	Unolab Manufacturing	Incompleted	junio	18	$22.032
1	DigiPay	Cancelled	julio	10	$622.040
1	Bike World Inc	Cancelled	septiembre	29	$133.008
11					**$3.424.681**

Visual Description

- **Type:** Table
- **Name:** Detailed Orders
- **Purpose:** Provides a detailed view of each order, including company name, delivery status, order created date (month and day), and gross amount.
- **Total Gross Amount:** Automatically calculated and displayed at the bottom.

Calculations Used

- Count of order_id
- Sum of order_gross_amount

Filter Logic Used

This table reflects the details of incomplete and cancelled orders.