FestMan Data School

Power BI Bootcamp

Power BI Report Guide

Showing Single metric

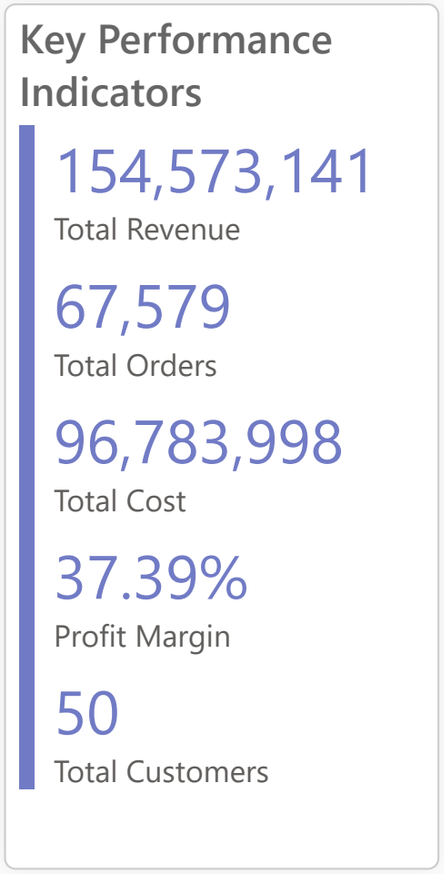
CARD VISUAL

Single number cards display a single fact, a single data point.

The **card visual** is used to track a key **metric** or **KPI** in a dashboard or report, such as Total Sales, **Market share**, **YoY Revenue growth** etc

Showing Single metric

MULTI-ROW CARD



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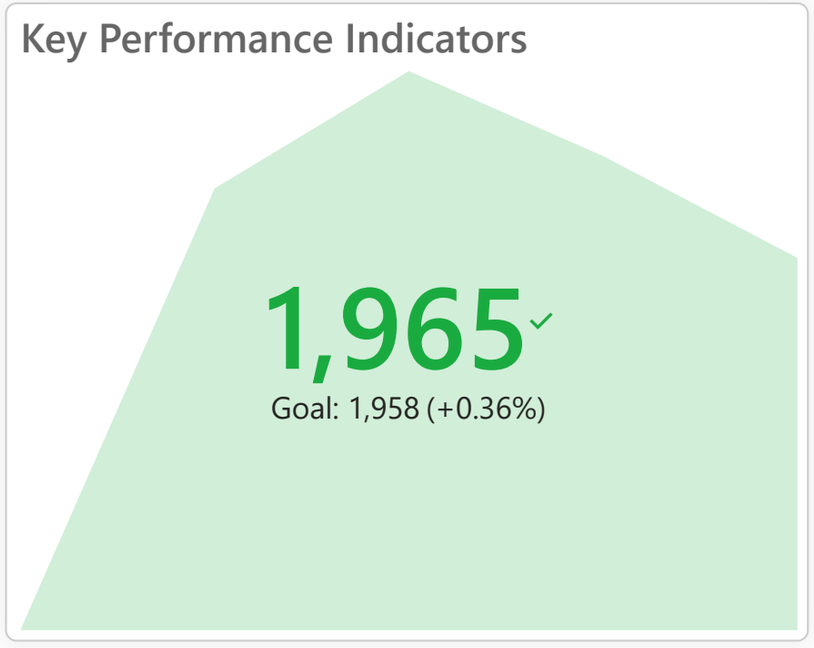
The **card visual** is used to track a key **metric** or **KPI** in a dashboard or report, such as Total Sales, **Market share**, **YoY Revenue growth** etc

Multi row cards display one or more data points, one per row.

Showing Single metric

KPI VISUAL



A Key Performance Indicator (KPI) is a visual cue that communicates the amount of progress made toward a measurable goal.

When to use a KPI

KPIs are a great choice:

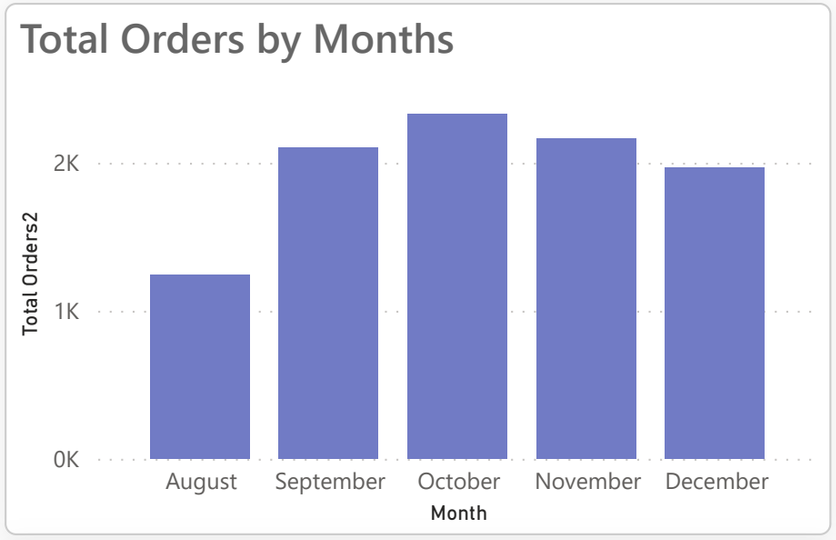
- To measure progress. Answers the question, "What am I ahead or behind on?"

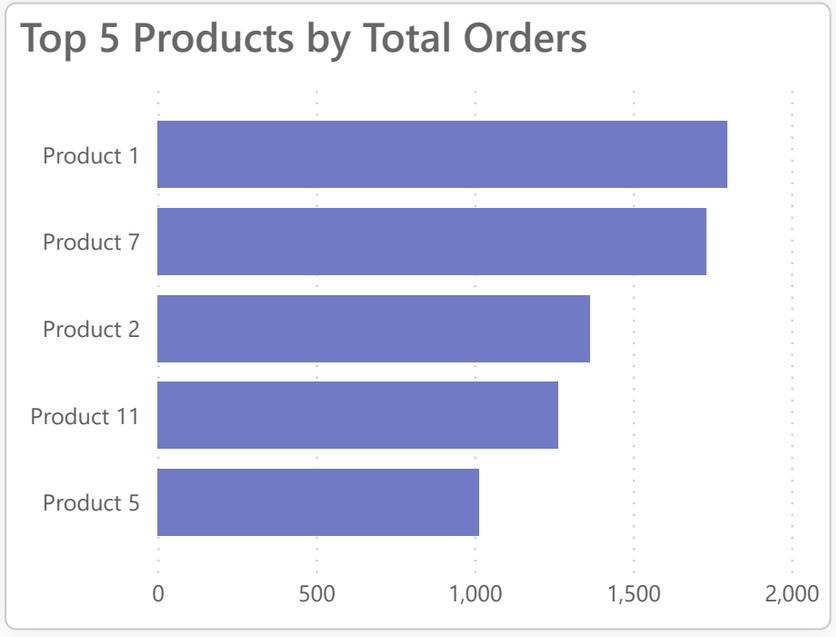
- To measure distance to a goal. Answers the question, "How far ahead or behind am I?"

The intention of the KPI is to help you evaluate the current value and status of a metric against a defined target. A KPI visual requires a *base* measure that evaluates to a value, a *target* measure or value, and a *threshold* or *goal*.

Comparison

COLUMN AND BAR CHARTS



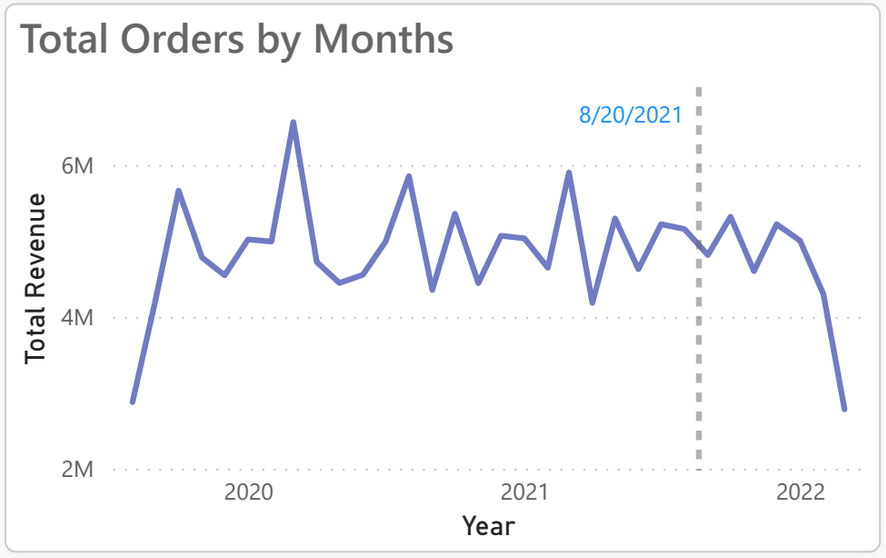


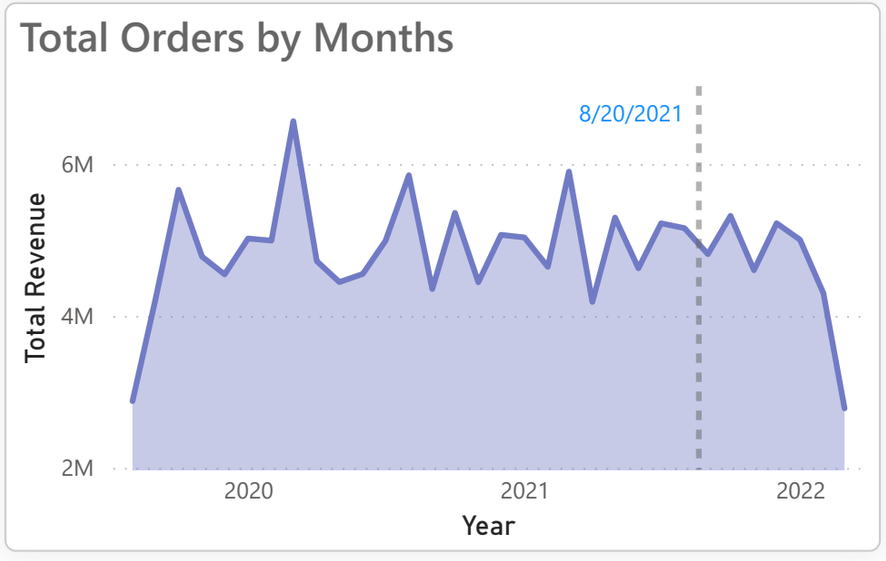
Bar charts are the standard for looking at a specific value across different categories. Must start at zero and good when the data is not time series data.

Column Chart is also standard visual for comparing values. Must also start at zero.

Change over time

LINE AND AREA





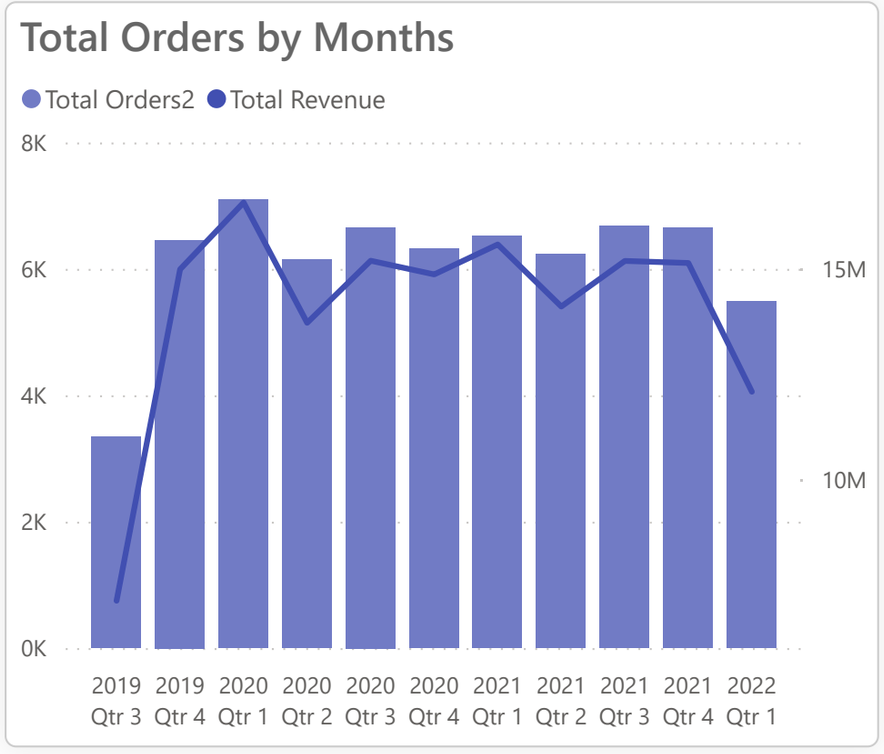
Line and area charts emphasize the magnitude of **change over time**, and can be used to draw attention to the total value across a **trend**.

When to use a basic area chart

Basic area charts are a great choice:to see and compare the volume trend across time seriesfor individual series representing a physically countable set.

Change over time

COMBO CHART



A combo chart is a single visualization that combines a line chart and a column chart. Combining the 2 charts into one lets you make a quicker comparison of the data. Combo charts can have one or two Y axes

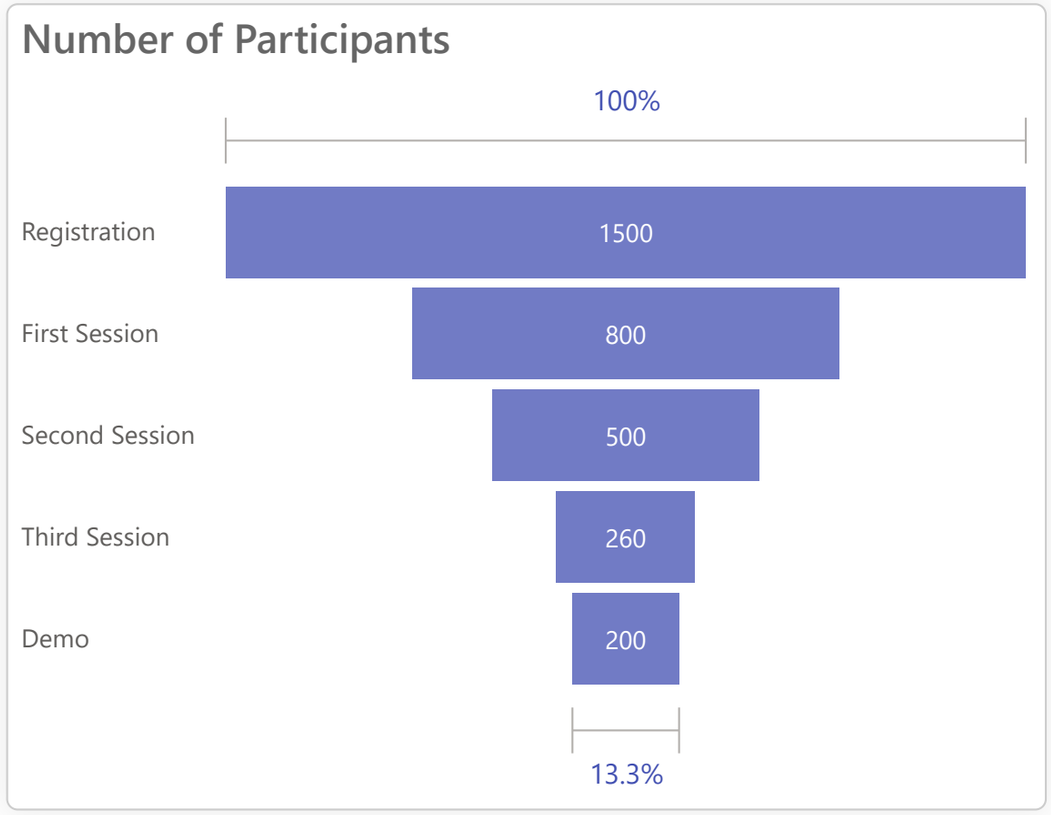
When to use a Combo chart

Combo charts are a great choice:

- When you have a line chart and a column chart with the same X axis.
- To compare multiple measures with different value ranges.
- To illustrate the correlation between two measures in one visualization.
- To check whether one measure meet the target which is defined by another measure
- To conserve canvas space.

Flow

FUNNEL CHART



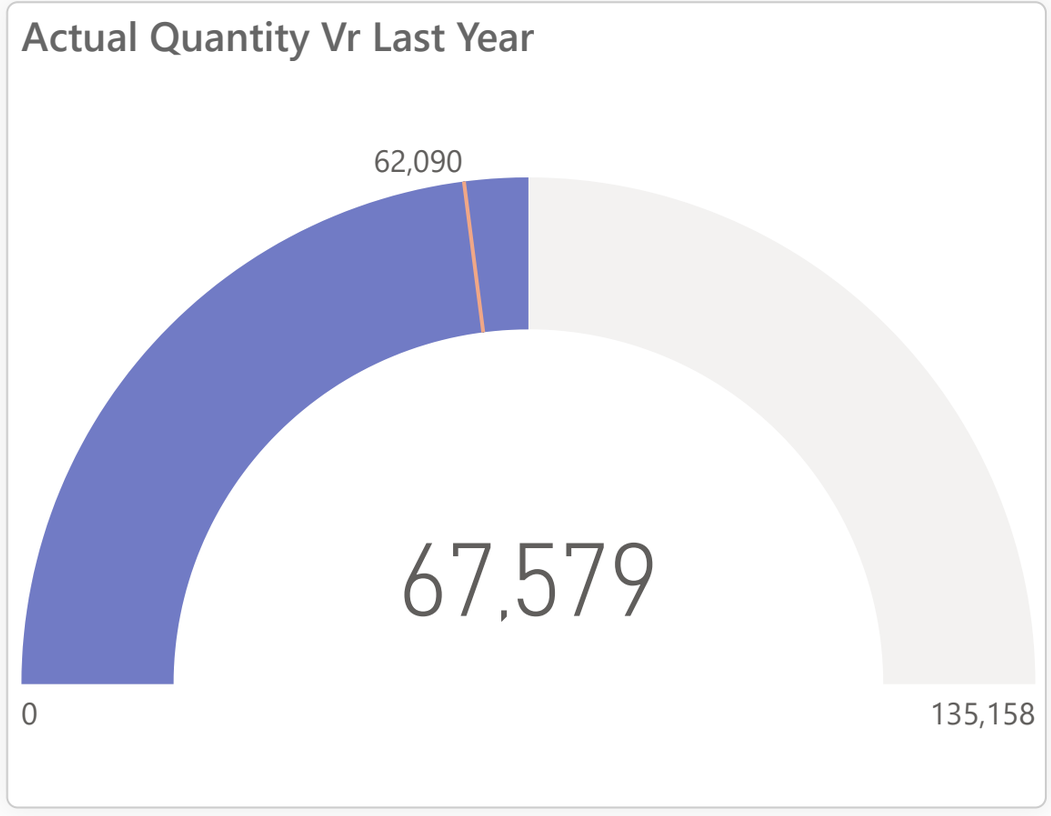
A funnel chart helps you visualize a linear process that has sequential connected stages. For example, a sales funnel that tracks customers through stages: **Lead** > **Qualified Lead** > **Prospect** > **Contract** > **Close**.

When to use a funnel chart

Funnel charts are a great choice:

- When the data is sequential and moves through at least 4 stages.
- When the number of "items" in the first stage is expected to be greater than the number in the final stage.
- To calculate and track conversion and retention rates.
- To reveal bottlenecks in a linear process..

GAUGE



A radial gauge chart has a circular arc and shows a single value that measures progress toward a goal or a Key Performance Indicator (KPI).

The line (or *needle*) represents the goal or target value.

The shading represents the progress toward that goal.

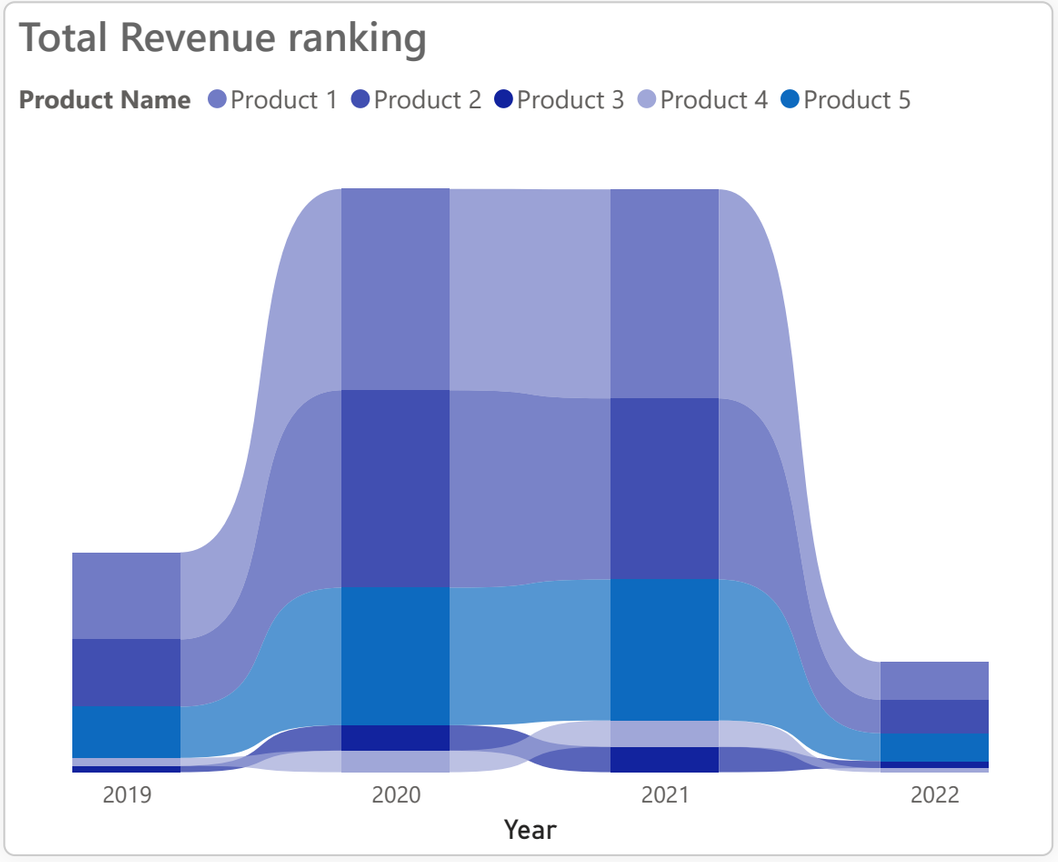
The value inside the arc represents the progress value.

When to use a radial gauge

- Show progress toward a goal.
- Show the health of a single measure.
- Display information you can quickly scan and understand

Ranking

RIBBON

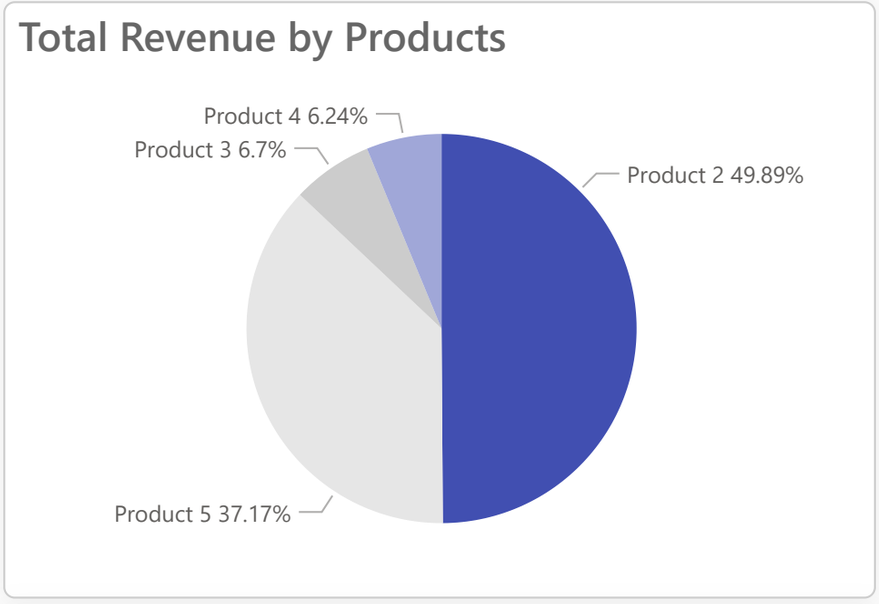


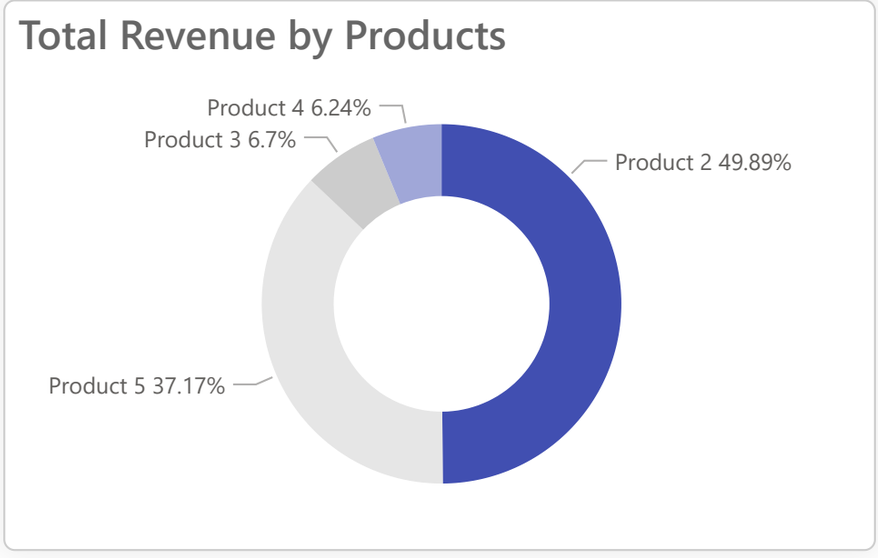
The ribbon charts help to visualize data, and quickly discover which data category has the highest rank (largest value).

Ribbon charts are effective at **showing rank change**, with the highest range (value) always displayed on top for each time period

Part -to - Whole

Pie and Doughnut





Pie charts show the relationship of parts to a whole. **A doughnut chart** is similar to a pie chart in that it shows the relationship of parts to a whole.

👍Protips

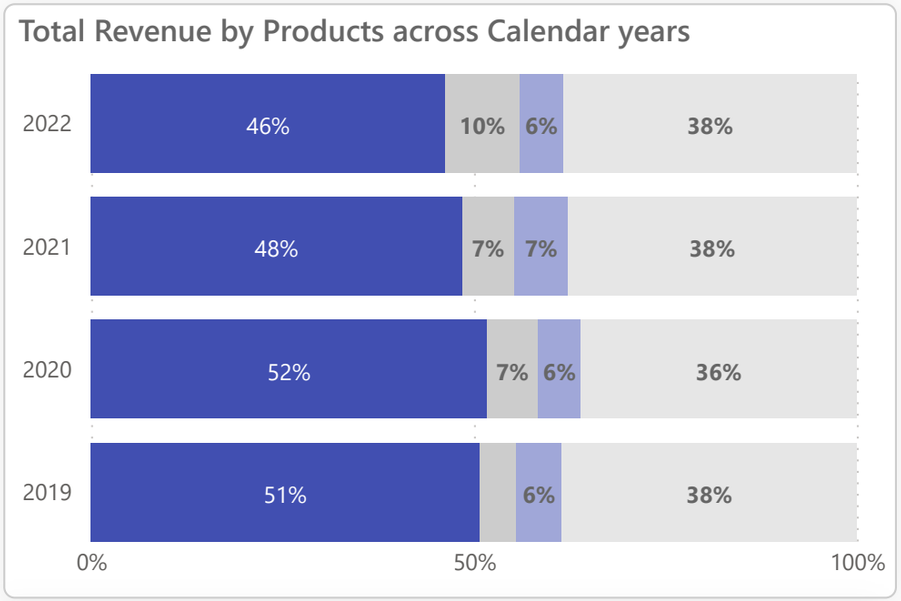
✓The sum of the doughnut chart values must add up to 100%.

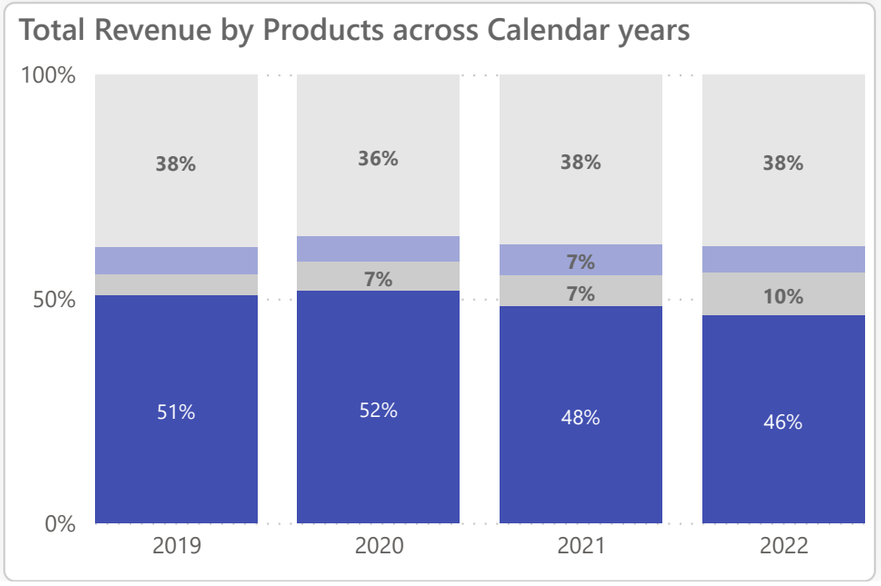
✓ Too many categories make it difficult to read and interpret.

✓ **Pie and doughnut charts** are best used to compare a particular section to the whole, rather than comparing individual sections with each other.

Part -to - Whole

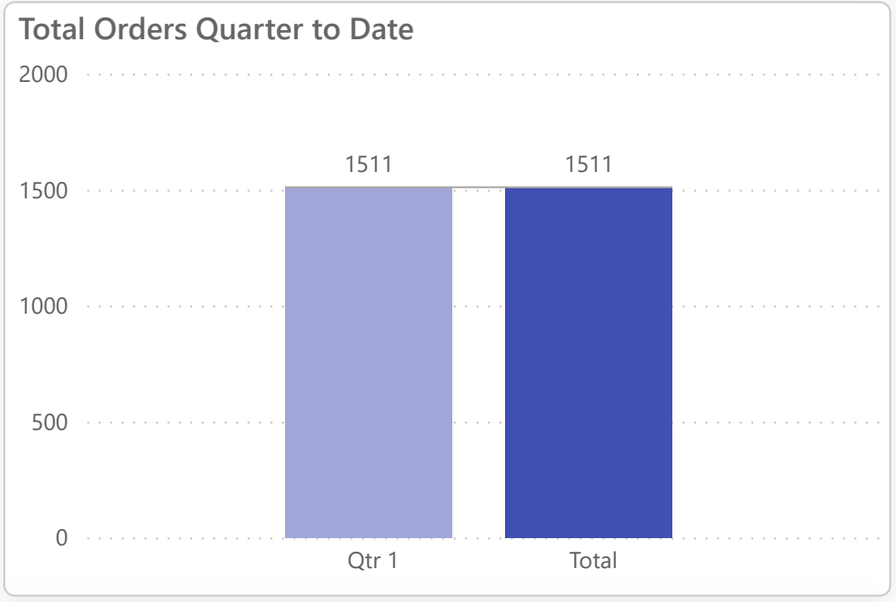
100% STACKED BAR AND COLUMN CHART

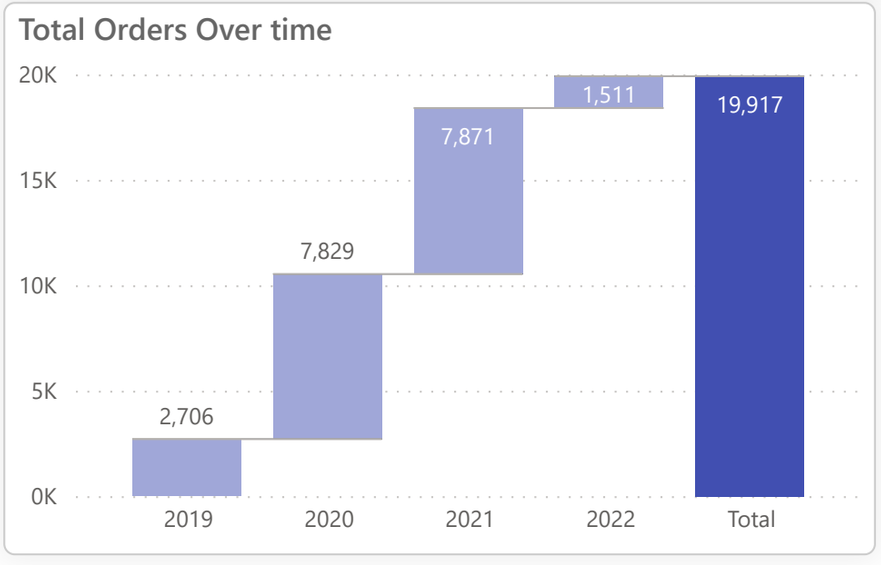




100% stacked bar or Column chart is used to display relative percentage of multiple data series in stacked bars, where the total (cumulative) of each stacked bar always equals 100%.

WATERFALL





A waterfall chart shows a **running total** as values are added or subtracted.

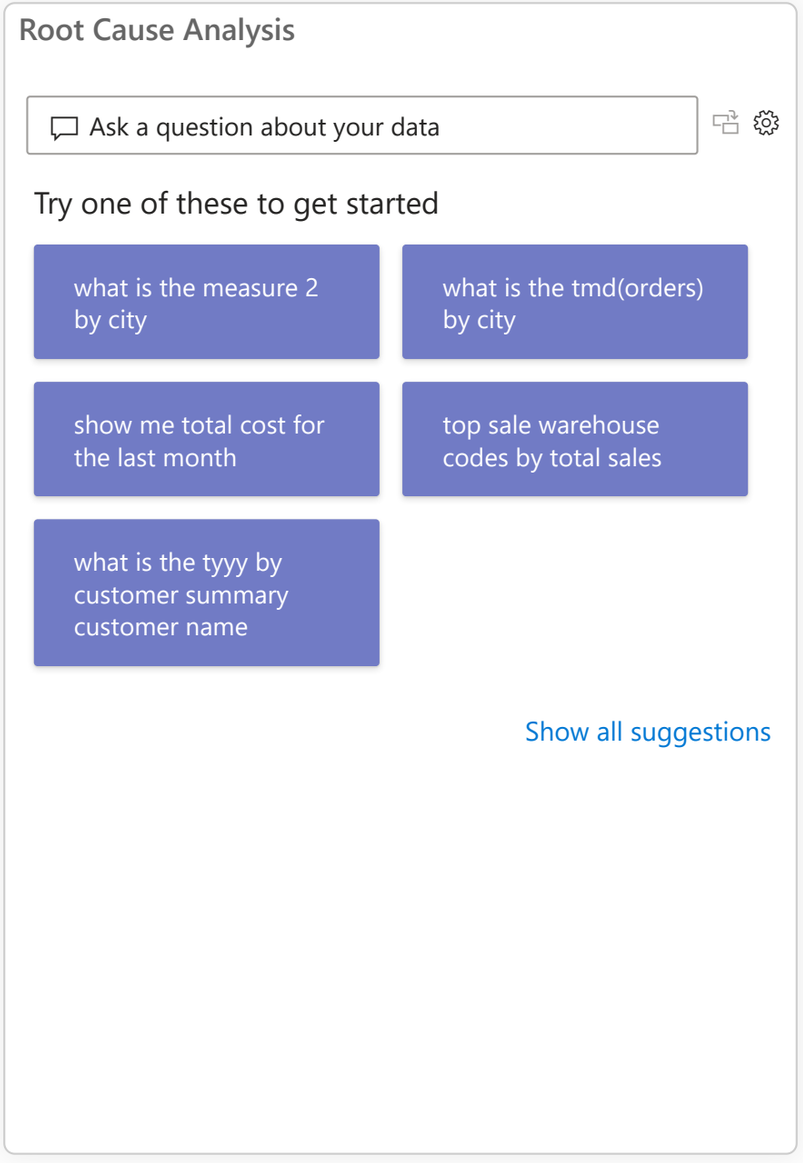
It's useful for understanding how an initial value (for example, net income) is affected by a series of positive and negative changes.

Waterfall charts are a great choice:

- When you have changes for the measure across time or across different categories.
- To audit the major changes contributing to the total value.
- To plot your company's annual profit by showing various sources of revenue and arrive at the total profit (or loss).
- To illustrate the beginning and the ending headcount for your company in a year.

AI Visuals

Q AND A



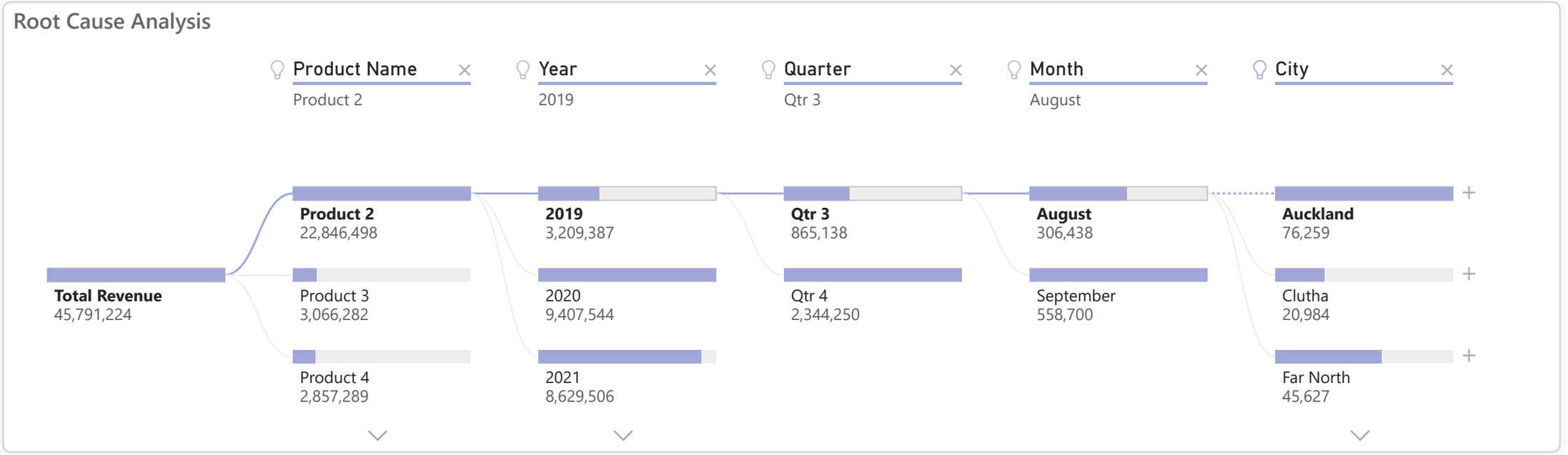
Sometimes the fastest way to get an answer from your data is to ask a question using natural language. For example, "what were total sales last year."

Using **Q&A**, you can explore your data using intuitive, **natural language capabilities** and receive answers in the form of charts and graphs.

Q&A is different from a search engine -- Q&A only provides results about the data in Power BI.

AI Visuals

DECOMPOSITION TREE

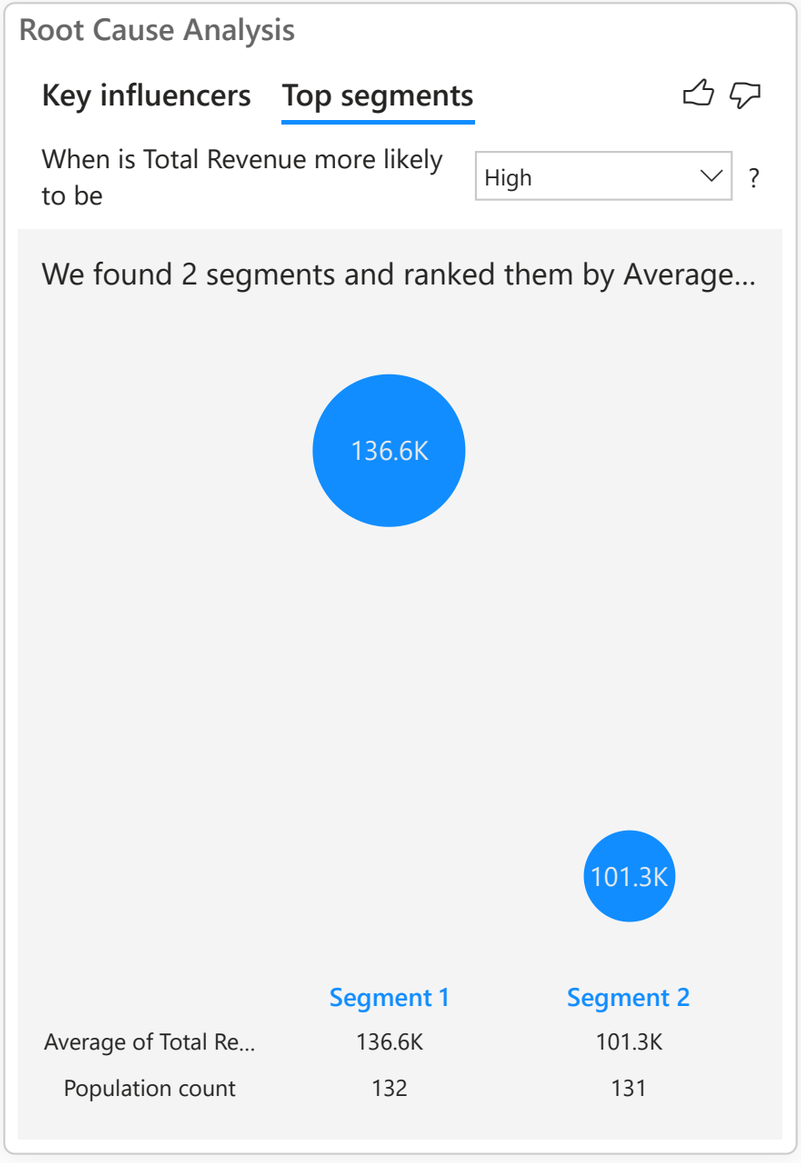


The decomposition tree visual lets you visualize data across **multiple dimensions**. It automatically aggregates data and enables drilling down into your dimensions in any order.

It is also an artificial intelligence (AI) visualization, so you can ask it to find the next dimension to drill down into based on certain criteria. This makes it a valuable tool for **ad-hoc exploration** and **conducting root cause analysis**.

AI Visuals

KEY INFLUENCERS



The key influencers visual helps you understand the factors that drive a metric you're interested in. It analyzes your data, ranks the factors that matter, and displays them as key influencers.

For example, suppose you want to figure out what influences employee turnover, which is also known as churn. One factor might be employment contract length, and another factor might be commute time.

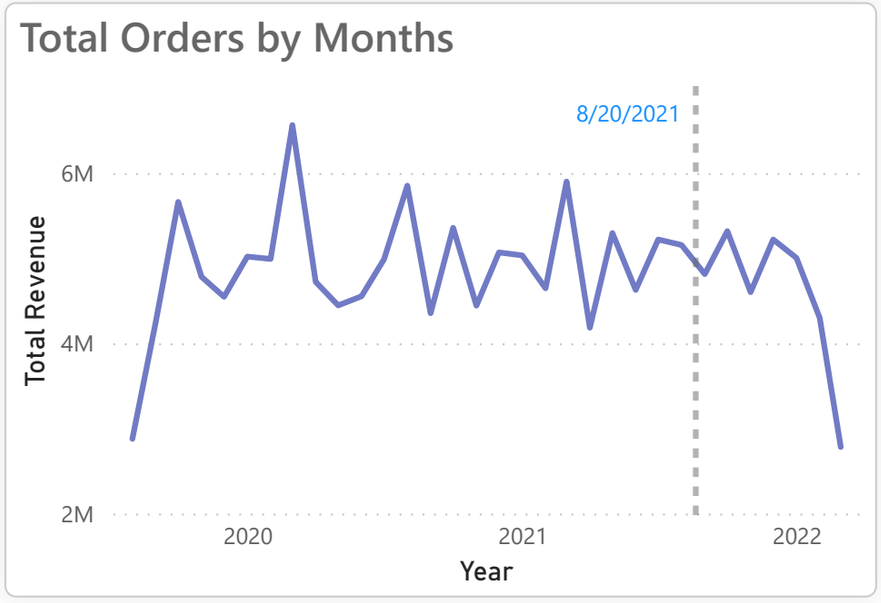
When to use key influencers

The key influencers visual is a great choice if you want to:

- See which factors affect the metric being analyzed.
- Contrast the relative importance of these factors. For example, do short-term contracts affect churn more than long-term contracts?

AI Visuals

SMART NARRATIVE



Total Revenue trended down, resulting in a 3.32% decrease between August 2019 and March 2022.

Total Revenue started trending down on January 2022, falling by (2,221,190.70) in 3 months.

Total Revenue dropped from 5,003,392.50 to 2,782,201.80 during its steepest decline between January 2022 and March 2022.

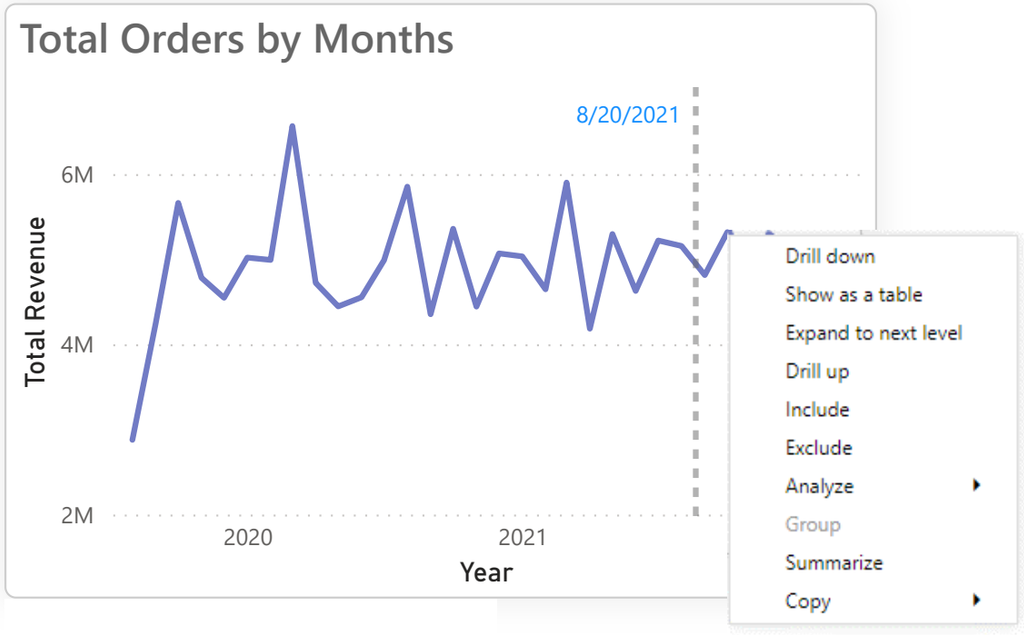
The smart narrative visualization helps you quickly summarize visuals and reports. It provides relevant innovative insights that you can customize.

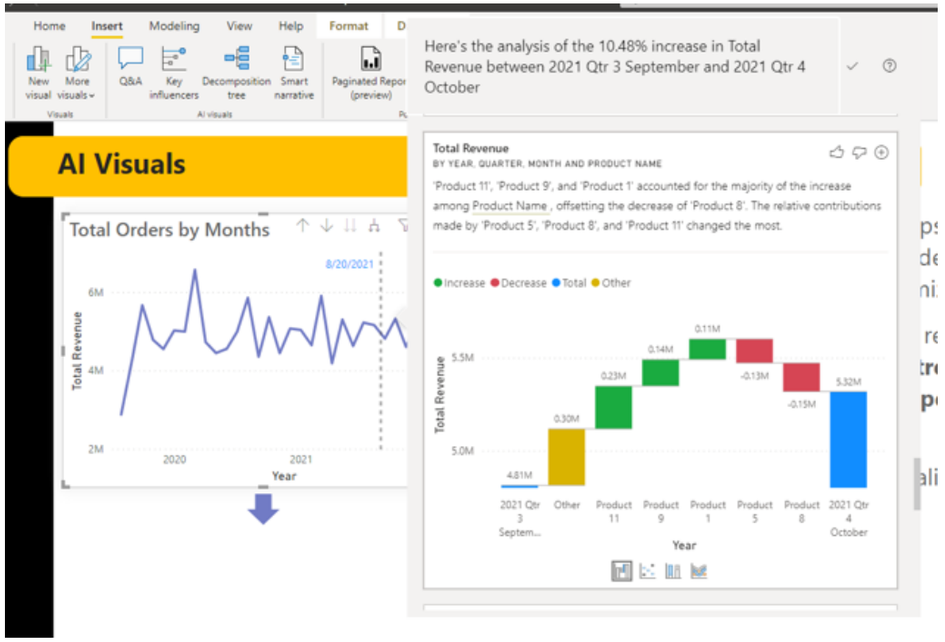
Use smart narrative summaries in your reports to address **key takeaways**, to **point out trends**, and **to edit the language and format for a specific audience**.

To generate a smart narrative of a visualization, **right-click** it and then **select Summarize.**

AI Visuals

Explain Increase





Often in report visuals, you see a large increase and then a sharp drop in values, and wonder about the cause of such fluctuations. With Analyze in the Power BI, you can learn the cause with just a few clicks.

You can ask the Power BI to explain increases, decreases, or unusual distributions in visuals, and get fast, automated, insightful analysis about your data. **Right-click** on a data point, and select **Analyze > Explain the decrease (or increase, if the previous bar was lower)**, or **Analyze** > F**ind where this distribution is different** and the insight is delivered to you in an easy-to-use window.