



Microsoft

Power BI

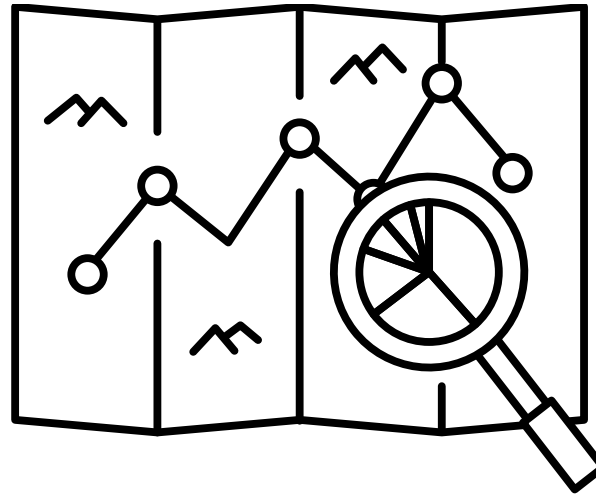
Zero to beautiful

Using data visualization to tell a story



Using data visualization to tell a story

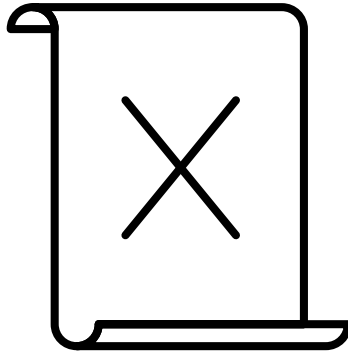
You know which charts best represent your data, and you understand best practices for sharing insights. Now it's time to bring the insights and charts together to explore the stories hidden in all the raw information: ***time to ask questions and challenge assumptions.***



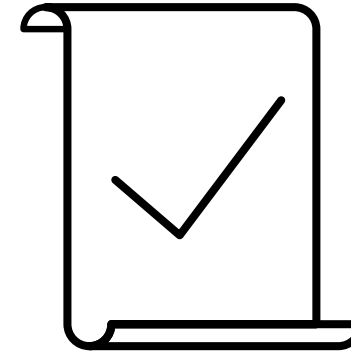
It's well understood that human brains are wired for stories.* The greatest stories work because they sustain our attention by developing tension in the narrative. Love stories and spy thrillers do this easily on the big screen. But when you're using data, the drama is best revealed by exploration.

*<https://hbr.org/2014/10/why-your-brain-loves-good-storytelling>

Not all stories are created equal.
Which story is more interesting?



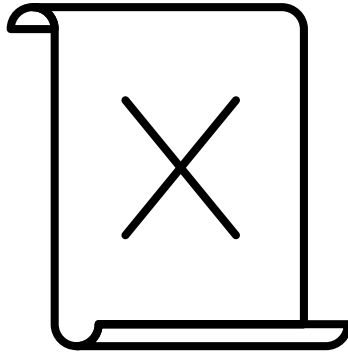
This quarter, we did well and had good revenue. We concluded that we are good at our jobs.



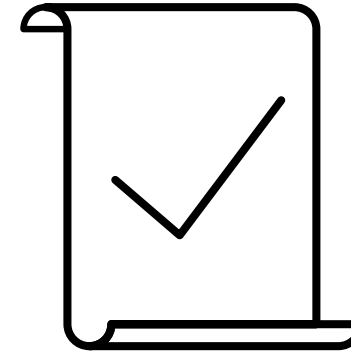
This quarter, we had an underperforming sales unit, so we looked at their data. It turns out they were servicing an industry that has unique needs. We suggested that the sales unit focus on a relevant feature, and now several accounts have moved into purchase negotiations.

Confirmation bias is the mortal enemy of effective data visualization and storytelling.

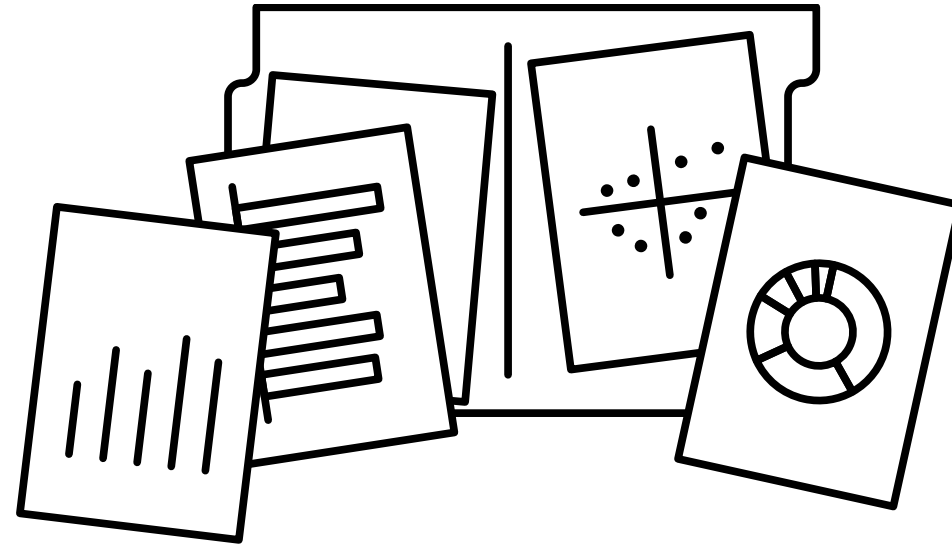
Why tell a story that doesn't reveal anything?



If we look to confirm the fact that our business is successful, revenue is green, and we're good at our jobs, we don't learn anything from the data.



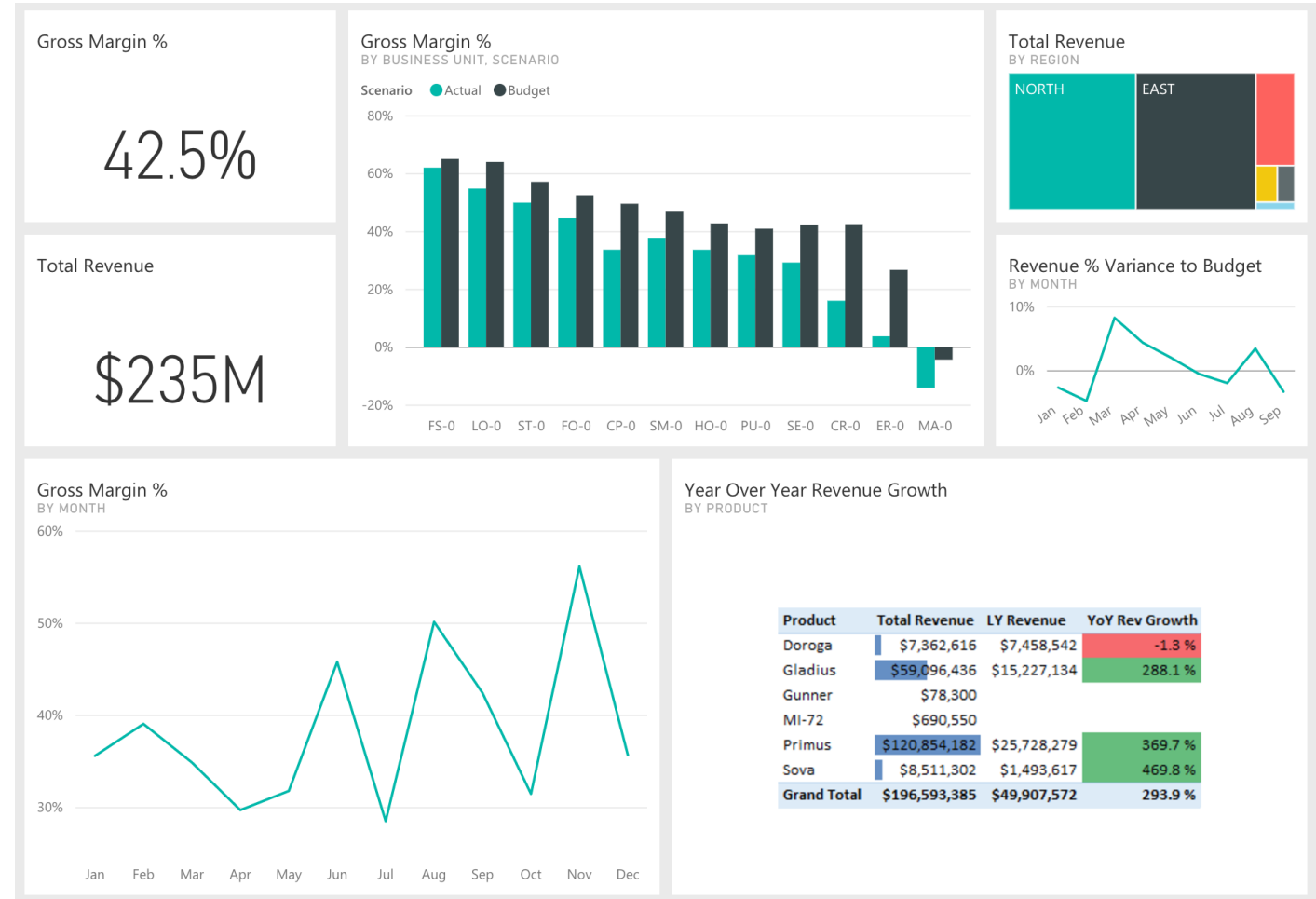
If we try to undermine our own assumptions and gain new information by questioning what happened and why, we can find new ways to improve.



Department heads are under continuous pressure to demonstrate value. Metrics for performance, efficiency, and satisfaction can be shown from a variety of data sources. Reporting on “what happened” is the most basic form of reporting.

Everyone loves data

The real power of data visualization lies in combining multiple sources that allow business leaders to see a single report through several lenses, prompting questions like “Why did this happen?” and “Is there something that can be done to improve the situation?”

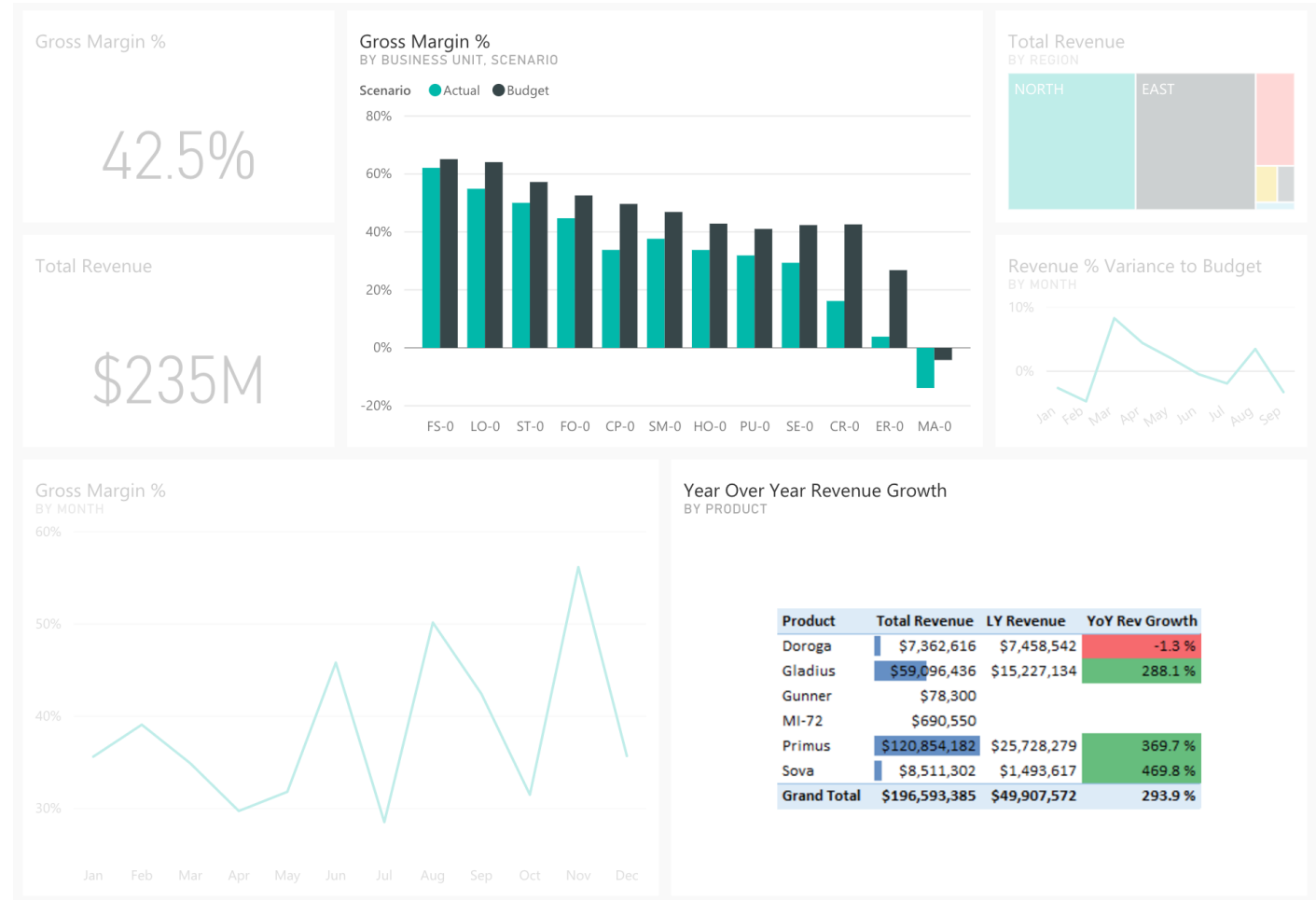


This sample dashboard brings operations and sales together to demonstrate customer profitability.

Stories need drama

Many potential stories are contained in this sample dashboard. At a quick glance, year-over-year performance seems good. But looking more closely at the visualizations may raise questions such as:

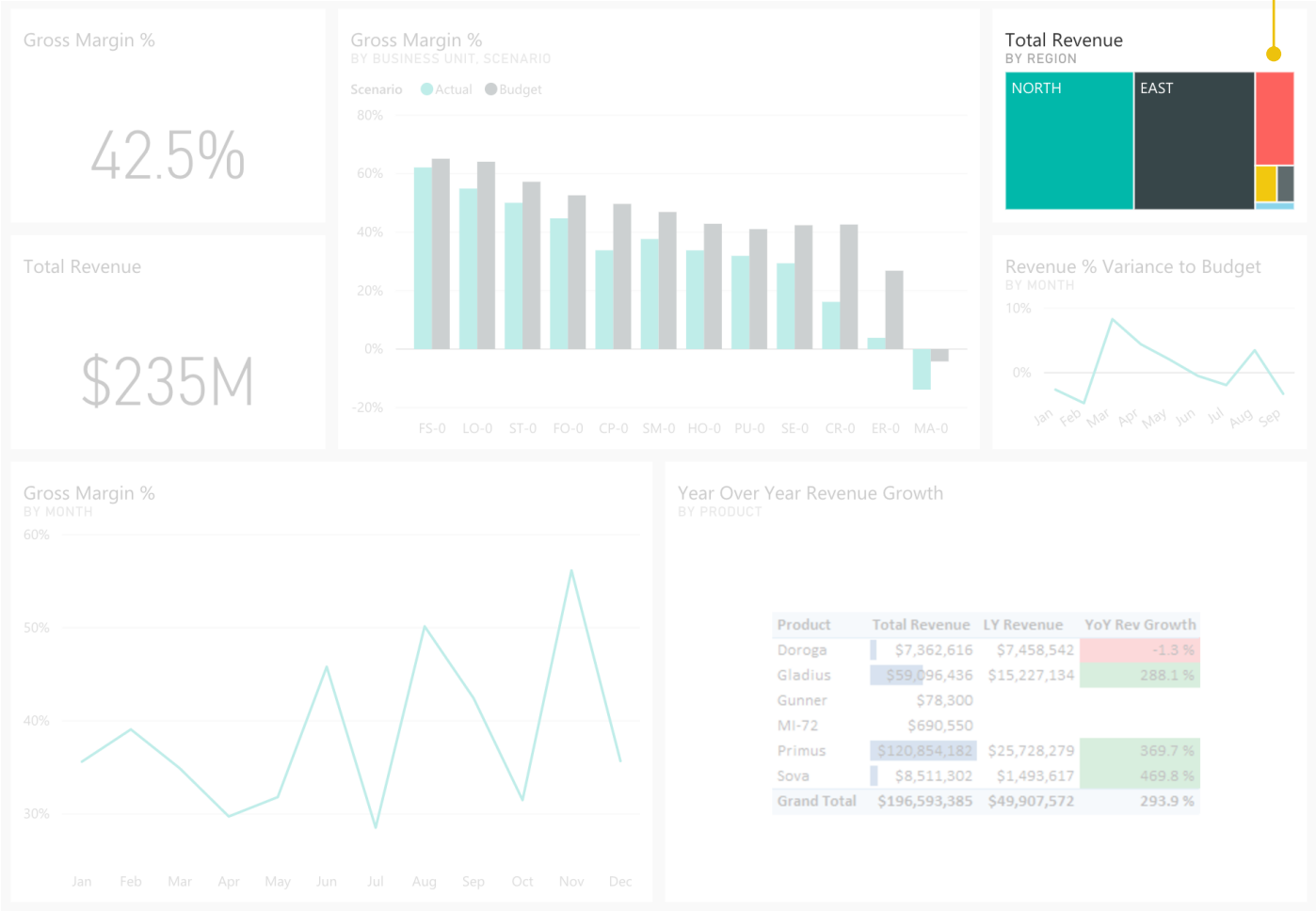
- Why is our actual gross margin under budget?
- Is there a pattern to the types of customers returning the best margins?
- Is there a region we should pay more attention to?



Stories need drama

With the north and east regions dominating total revenue performance, there is likely a story about which products or executives are contributing to such weighted performance.

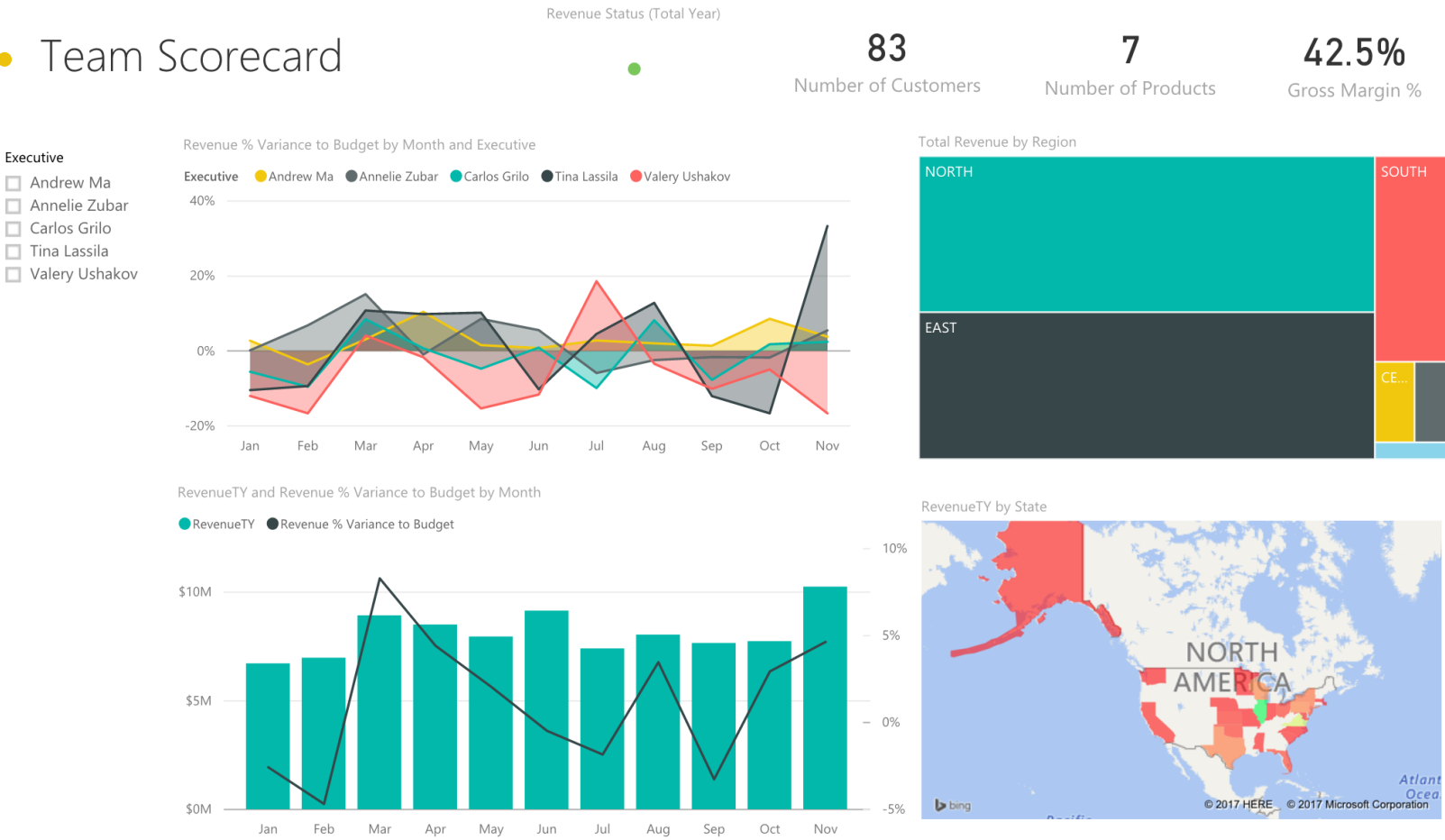
Clicking into the regional report brings up the team scorecard.



Stories need drama

From the main dashboard, it's easy to drill down into sections with full interactivity. This section displays a team scorecard.

Team Scorecard



Stories need drama

Team Scorecard

Revenue Status (Total Year)



49
Number of Customers

5
Number of Products

44.9%
Gross Margin %



Executive

- Andrew Ma
- Annelie Zubar
- Carlos Grilo
- Tina Lassila
- Valery Ushakov

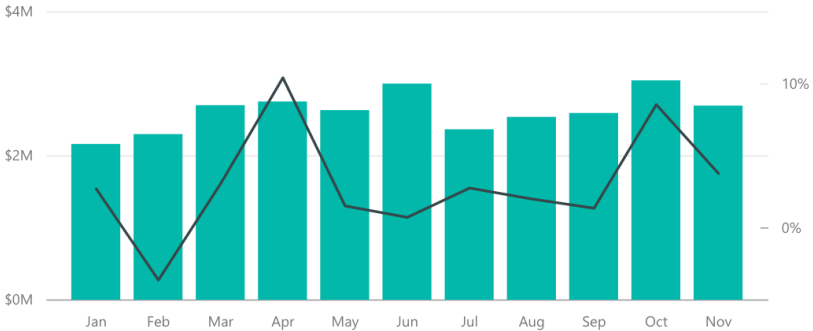
Revenue % Variance to Budget by Month and Executive

Executive Andrew Ma

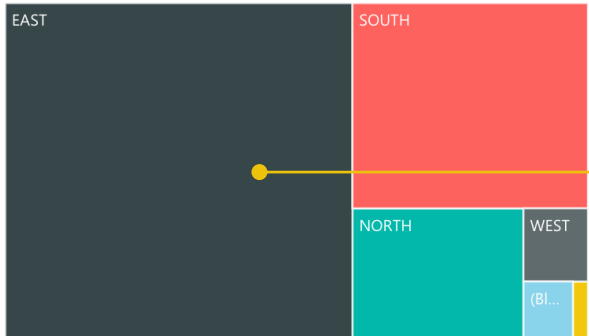


RevenueTY and Revenue % Variance to Budget by Month

RevenueTY Revenue % Variance to Budget

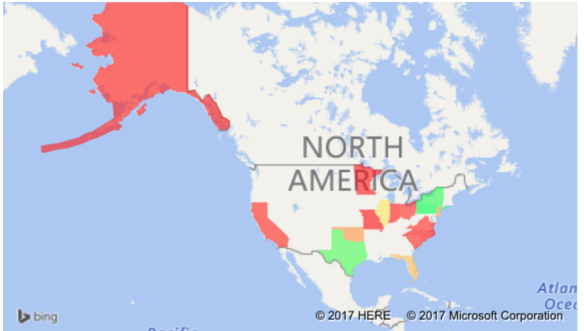


Total Revenue by Region



Perhaps business leaders should consider making that territory his main focus.

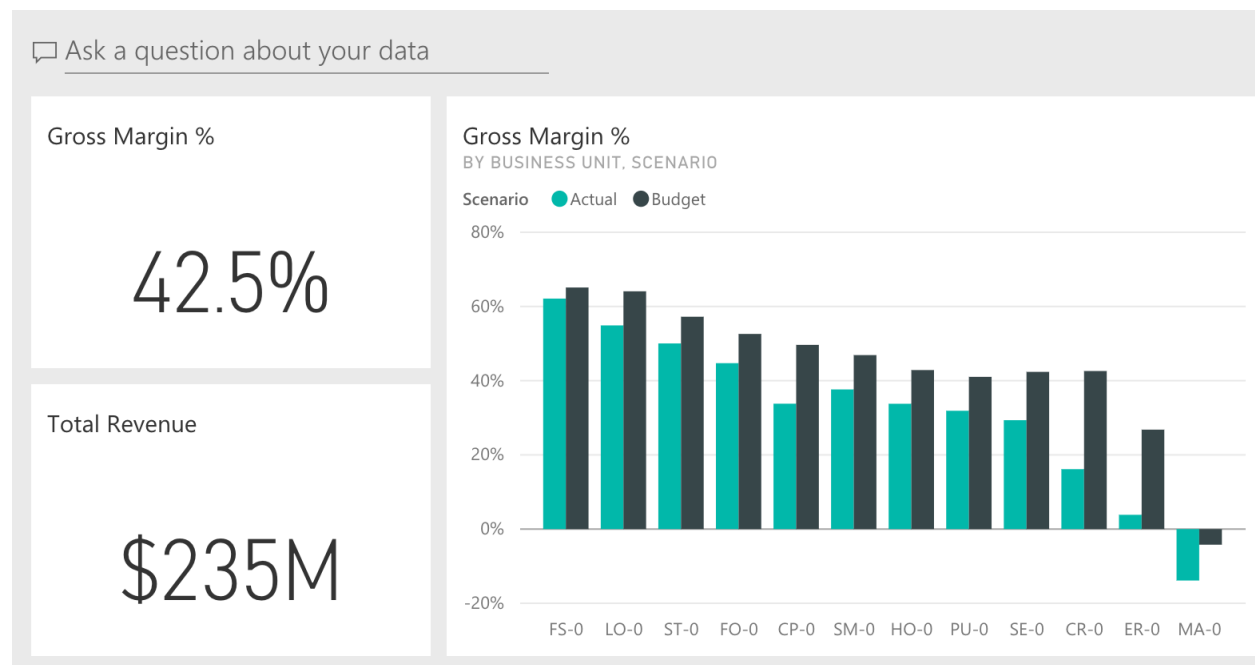
RevenueTY by State



Drilling further down into the data for executive Andrew Ma reveals that over half of the revenue for which he is responsible comes from the east region.

Data provides answers

An impressive way to tell a story is to do it in real time, by asking natural-language questions. In Microsoft Power BI, a number of suggestions help guide the user, but nearly infinite variations of questions can be asked.



Data provides answers

One possibility might be to ask the data to show you:

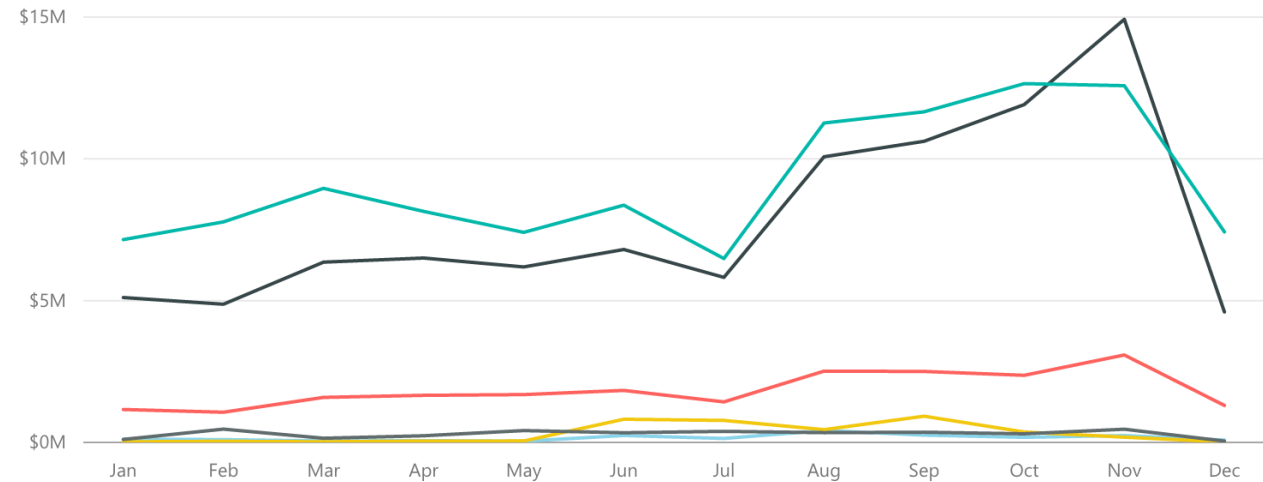
Total revenue by region by month as a line.

Looking at the data this way shows that two regions contributed to the majority of revenue in the second half of the year.

☐ Total revenue by region by month as a line

Total Revenue by Month and Region

Region (Blank) CENTRAL EAST NORTH SOUTH WEST



Data provides answers

Knowing what happened by region, you might be curious about how each executive compared:

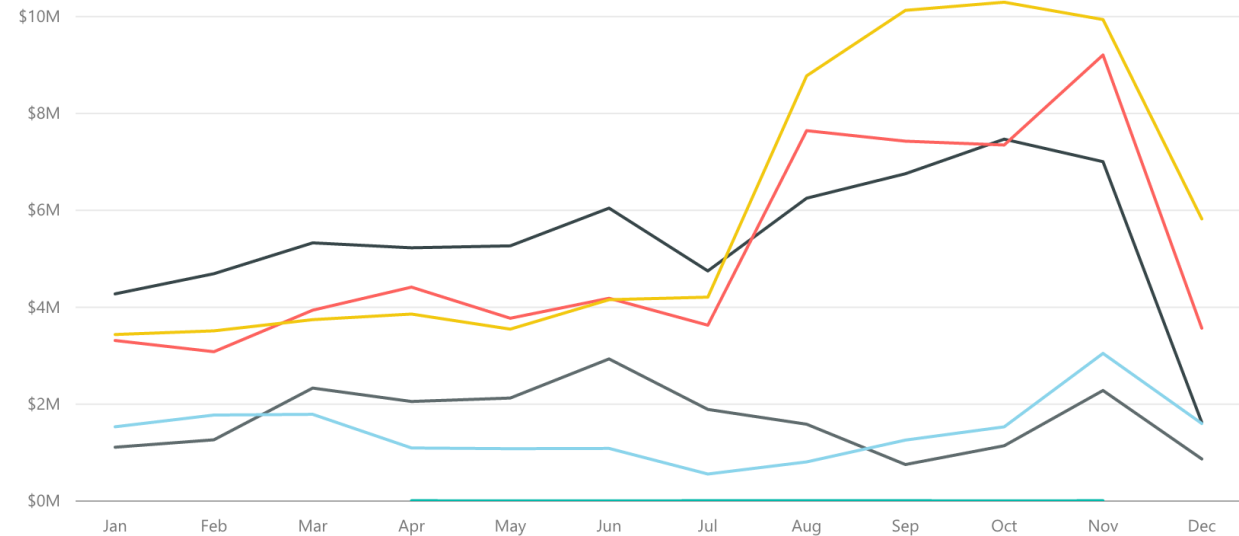
Total revenue by month by executive as a line.

It's clear that top-performing executives demonstrate strong revenue in the second half of the year. Perhaps a future business decision would give key executives ownership of exclusive regions.

total revenue by month by executive as a line

Total Revenue by Month and Executive

Executive Allan Guinot Andrew Ma Annelie Zubar Carlos Grilo Tina Lassila Valery Ushakov



Insights can drive action



Data visualization and storytelling can distill millions of rows of data into a single compelling story. Many of these stories have inspired people and organizations to make meaningful changes that improve performance, efficiency, and satisfaction.

Keep learning

To delve deeper into the variety of data visualizations:

- Get started with Power BI and work with sample data.
- Join the Power BI community.
- Read other chapters of the Zero to Beautiful series, including best practices and choosing charts.

