

Data Analysis for Project Managers: Moving beyond Excel

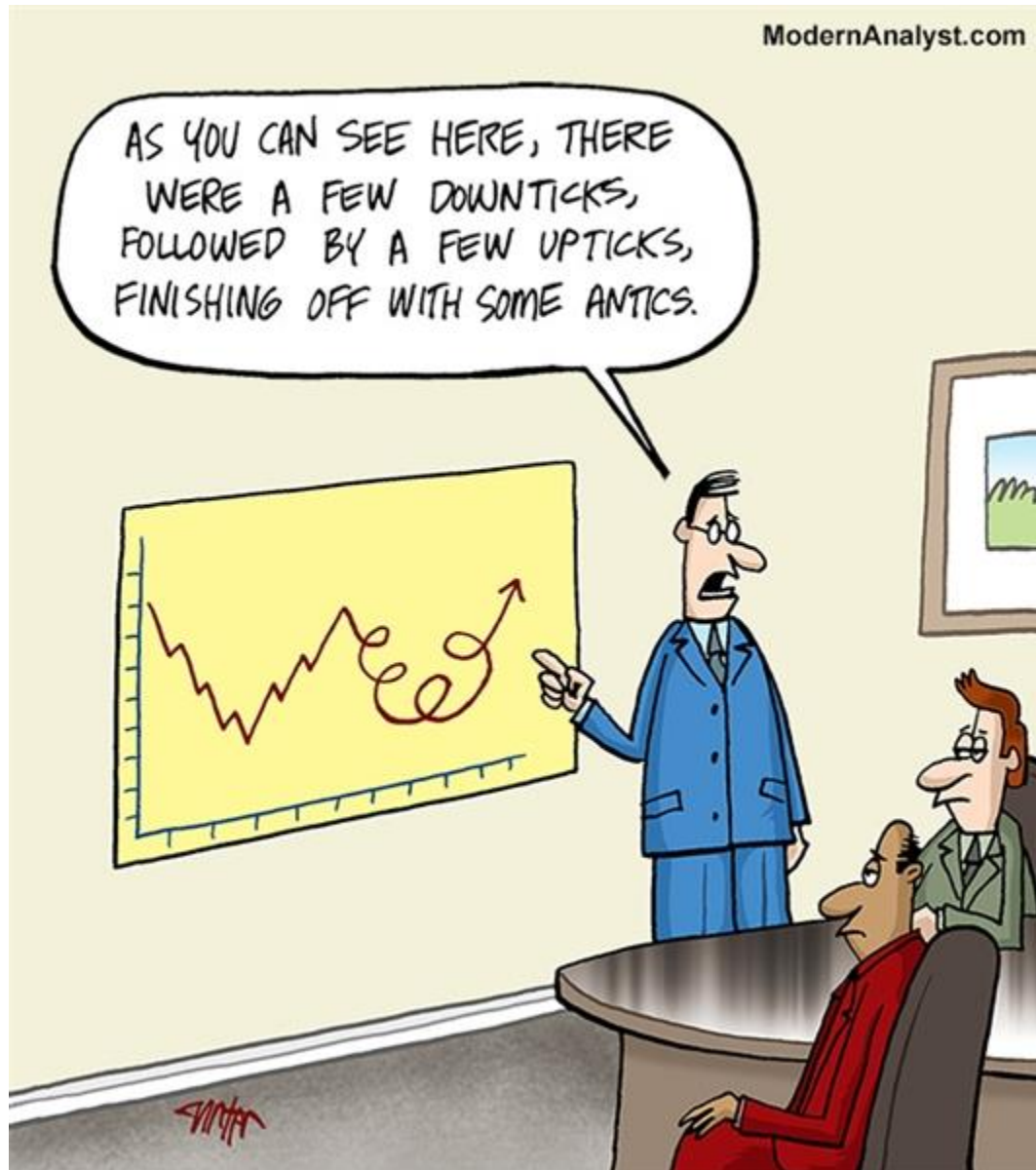
Brian van der Voort, P Eng., PMP

“I never guess. It is a capital mistake to theorize before one has data. Insensibly one begins to twist facts to suit theories, instead of theories to suit facts.”

- *Sir Arthur Conan Doyle*



Is this your Project Status Meeting?



Objective

- Data analysis is important to PMs.
- Power BI can help with PM reporting
- Raise awareness effective data visualization concepts

Quick Show of Hands

How many people use Excel on a regular basis?

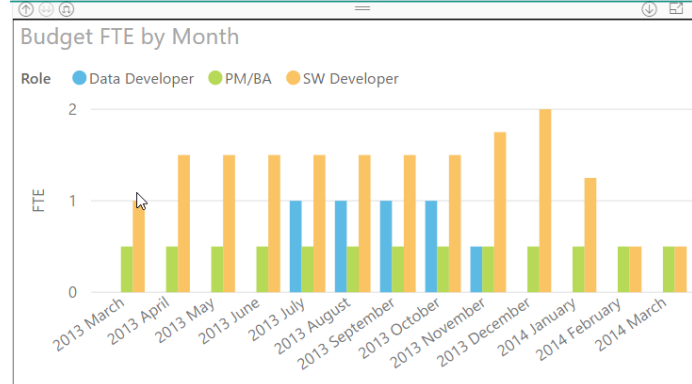
How many people use Excel as their primary tool for project reporting and data analysis?

What is Power BI?

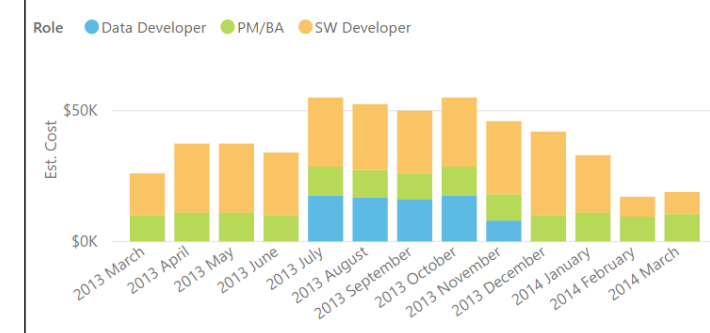


Microsoft's latest business analytics tools

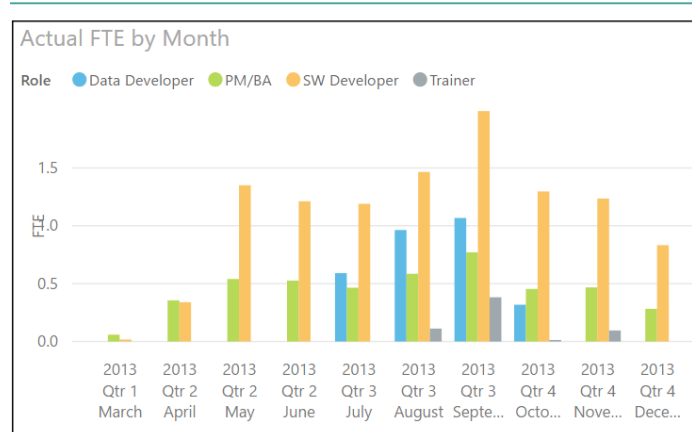
Budget



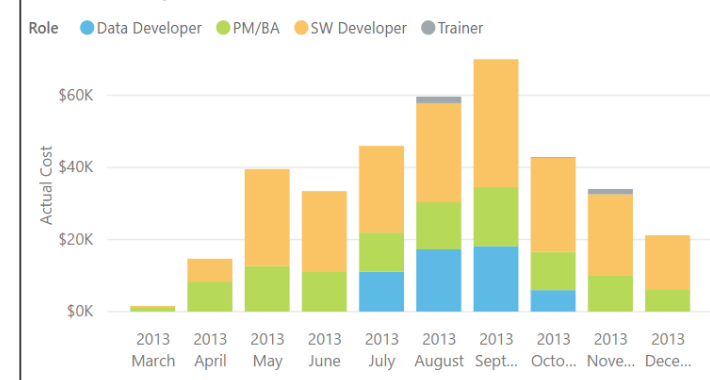
Budget Cost by Month



Actual



Actual Cost by Month



Benefits of Power BI

- Free desktop analysis tool
- Supports numerous data sources
- Facilitates preparation of data
- Understands data relationships
- Extensive “Excel-like” calculations
- Highly interactive reports
- Wide range of visualizations
- Easier to current share information
- Scheduled data refresh

Why Data Analysis

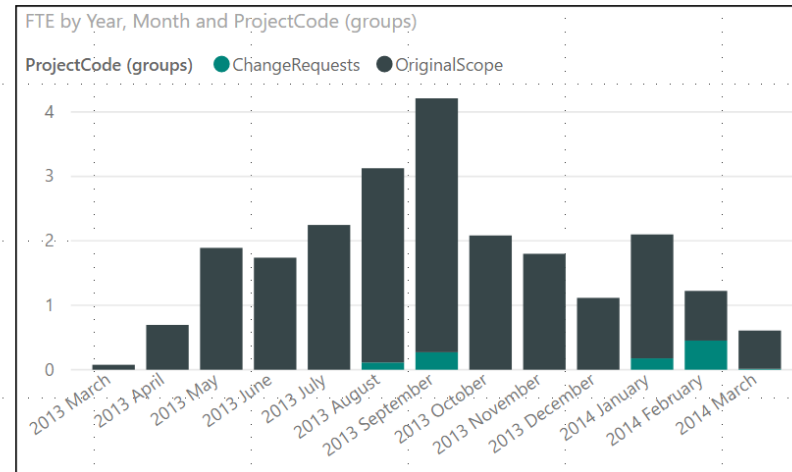
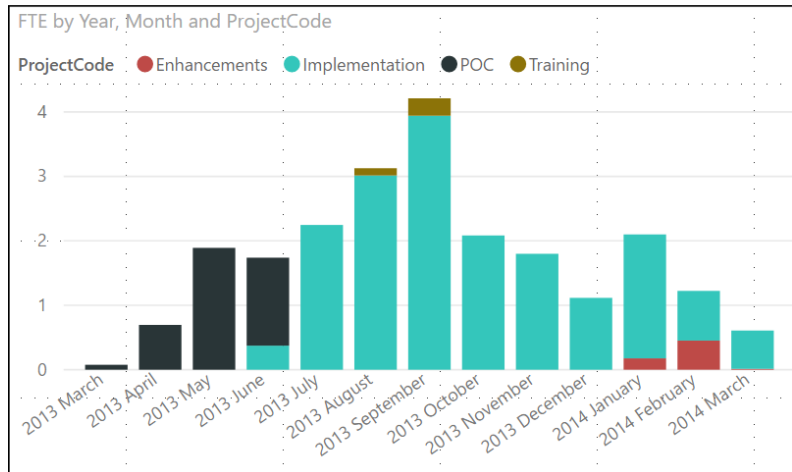
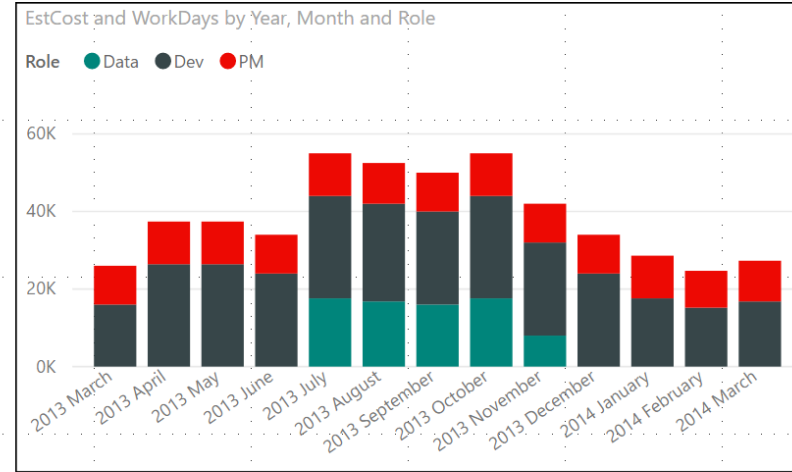
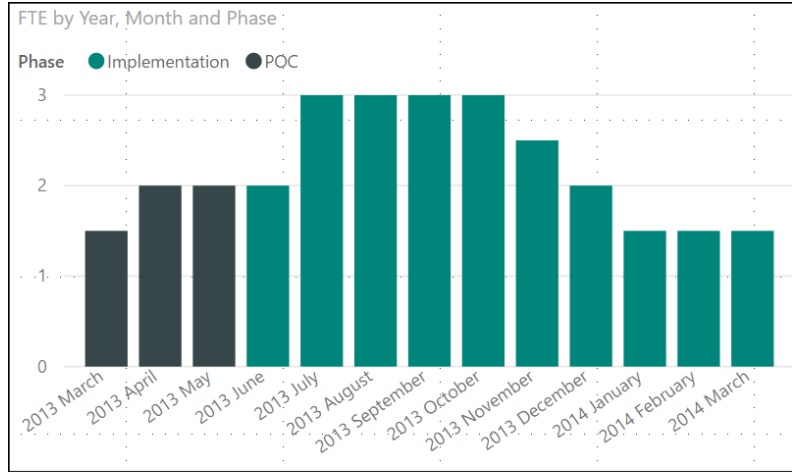
Why do PMs need to perform data analysis?

- Progress reporting
- Monitoring performance
- Project financials
- Resource management
- Quality management

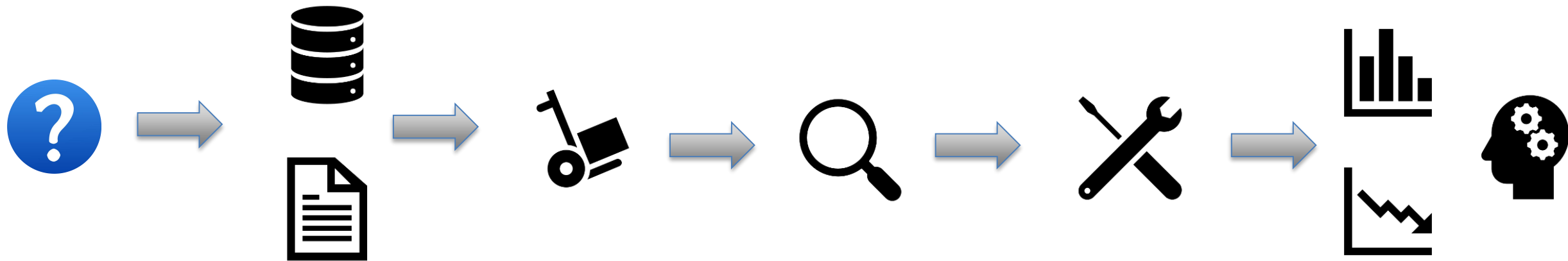
Typical Questions

- What is project burn rate?
- How are project resources being utilized?
- Is the project on budget?
- Why are we behind?
- What is my project cost forecast

Demonstration with Power BI



Data Analysis Process



Questions

Data
Sources

Load
Data

Explore
Data

Prep
Data

Visualize
Data

Data Preparation Demonstration

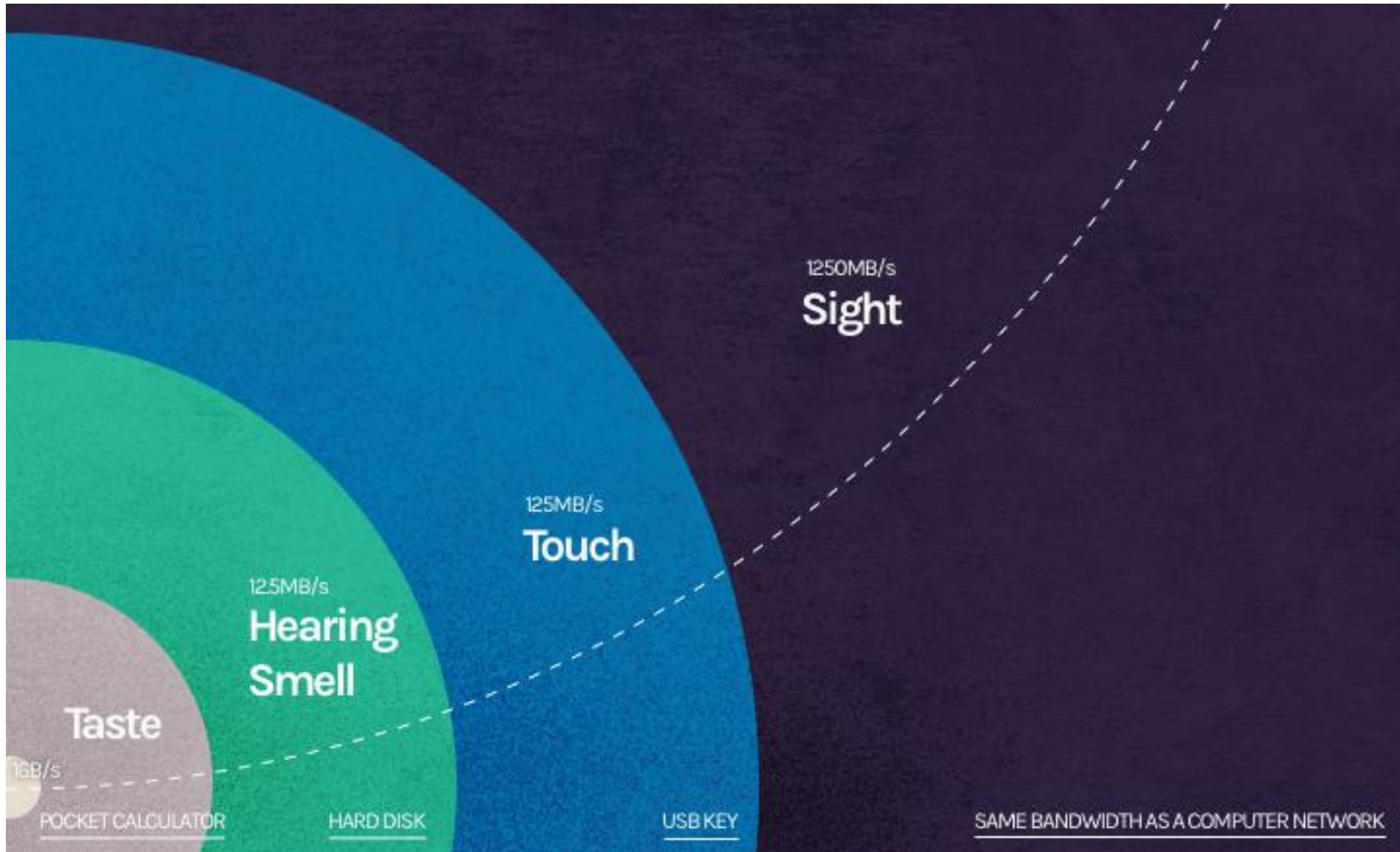
The screenshot displays the 'PMI Data Analysis Demonstration - Query Editor' application. The interface is divided into three main sections:

- Queries [10]:** A sidebar on the left lists various data sources: Resources, TimeSheet, StatHolidays, POC Estimates, Implementation Estimates, ProjectEstimates, Backlog, Change Request Estimates, ScopeType, and Forecasts. 'Resources' is currently selected.
- Data Table:** A central table with 4 columns and 8 rows. The columns are 'ID', 'Name', 'Role', and 'Rate'. The data is as follows:

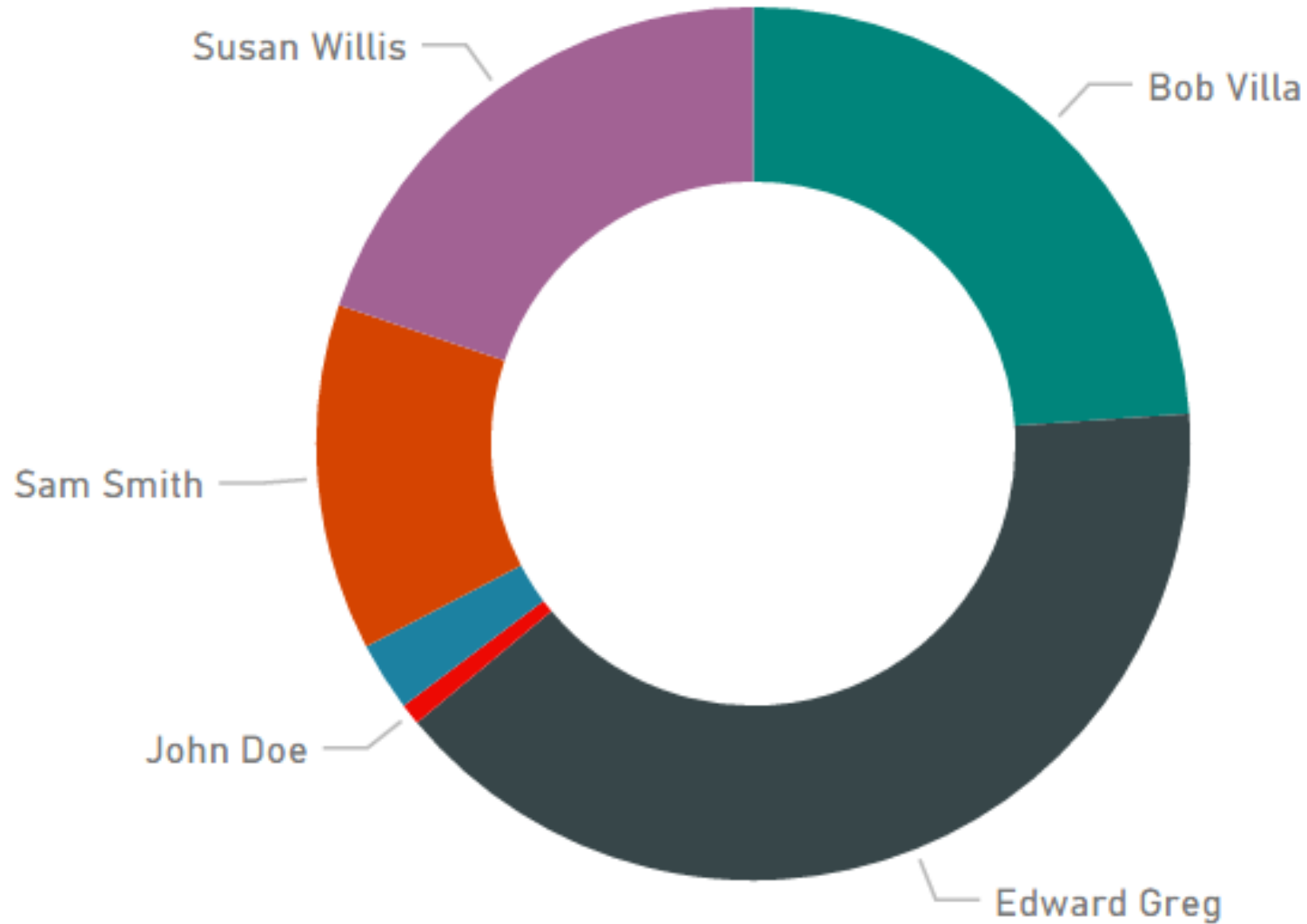
ID	Name	Role	Rate
1	Bob Villa	PM/BA	125
2	John Doe	SW Developer	100
3	Susan Willis	SW Developer	100
4	Edward Greg	SW Developer	110
5	Rick Morris	Trainer	90
6	Sam Smith	Data Developer	100
7	Mark Harris	SW Developer	125
8	Paul Miller	Data Developer	125
- Query Settings:** A panel on the right showing configuration options. Under 'PROPERTIES', the 'Name' is set to 'Resources'. Under 'APPLIED STEPS', the following steps are listed: Source, Navigation, Promoted Headers, and 'Changed Type' (which is currently selected and highlighted).

At the bottom of the window, the status bar indicates '4 COLUMNS, 8 ROWS' on the left and 'PREVIEW DOWNLOADED AT 8:43 AM' on the right.

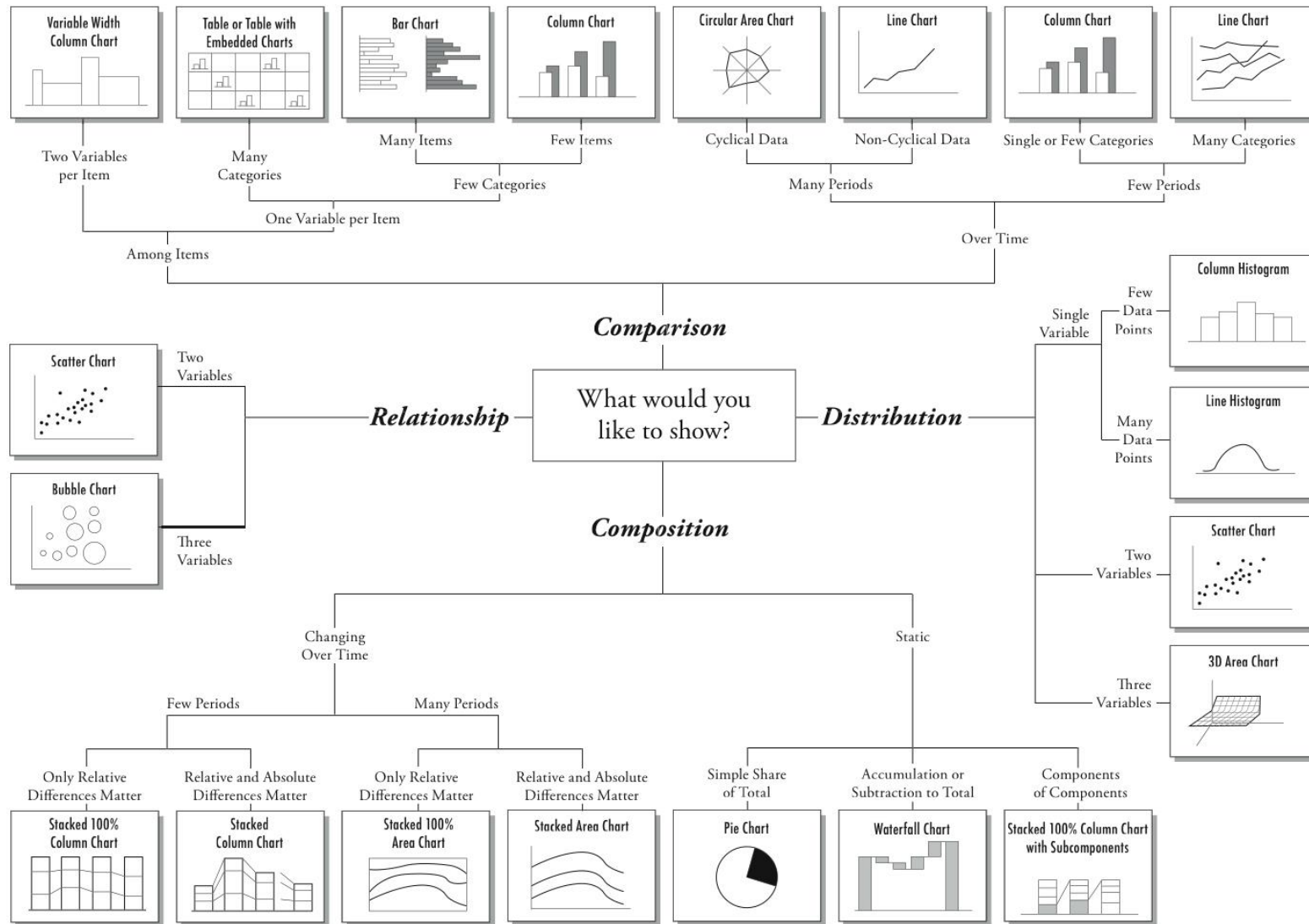
Getting your Point Across



Effective Visualization Demonstration



Visualization Guidelines



www.extremepresentation.com

Summary

- PMs need data analysis skills to effectively monitor their projects
- Power BI is a compelling tool for analyzing data and sharing your insights in a consistent and impactful manner



Thanks for your Time



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