

# Microsoft Power BI

A Brief History & Overview



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**Power BI: Introduction to Business Analytics**

*Course Author: Joshua Michalik*

# Brief History

2010 *Power Query/Pivot*

2011 *Project Crescent*

2013 Renamed to *Power BI*

2015 *Power BI Desktop*



# Why Power BI?

Many Data Sources

Powerful Data Engine

Huge Selection of  
Visualizations



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# Powerful features for any user!

Robust Visualization Tool

Extremely Customizable

Self-Service Data Analysis Tool

Supports On-Prem & Cloud-based data

Cloud-Based Report Sharing

Build star-schemas

Vast Support of Data Sources

Data Measures

Powerful Data Query Engines

Calculated Columns

Publish Dashboards to the Cloud

...much much more



# Data Sources

Access

Excel

DB2

GitHub

DB2

And many more...

Data sources



# Data Engine

Relate Data

Calculated Columns

Measured Columns

Filter and Edit Data

The screenshot shows the Power Query Editor window with a data table. The table has columns: Cost of living, Crime, Culture, Health care quality, and Weather. The 'Health care quality' column is selected, and a context menu is open. The 'Change Type' option is highlighted, and its submenu is also open, showing various data types. The 'Text' option is checked in the submenu. The 'QUERY SETTINGS' pane on the right shows the 'PROPERTIES' and 'APPLIED STEPS' sections. The 'APPLIED STEPS' section shows the 'Source' step. The status bar at the bottom indicates '9 COLUMNS, 50 ROWS' and 'PREVIEW DOWNLOADED AT 3:30 PM'.



# Visualizations

Bar Graphs

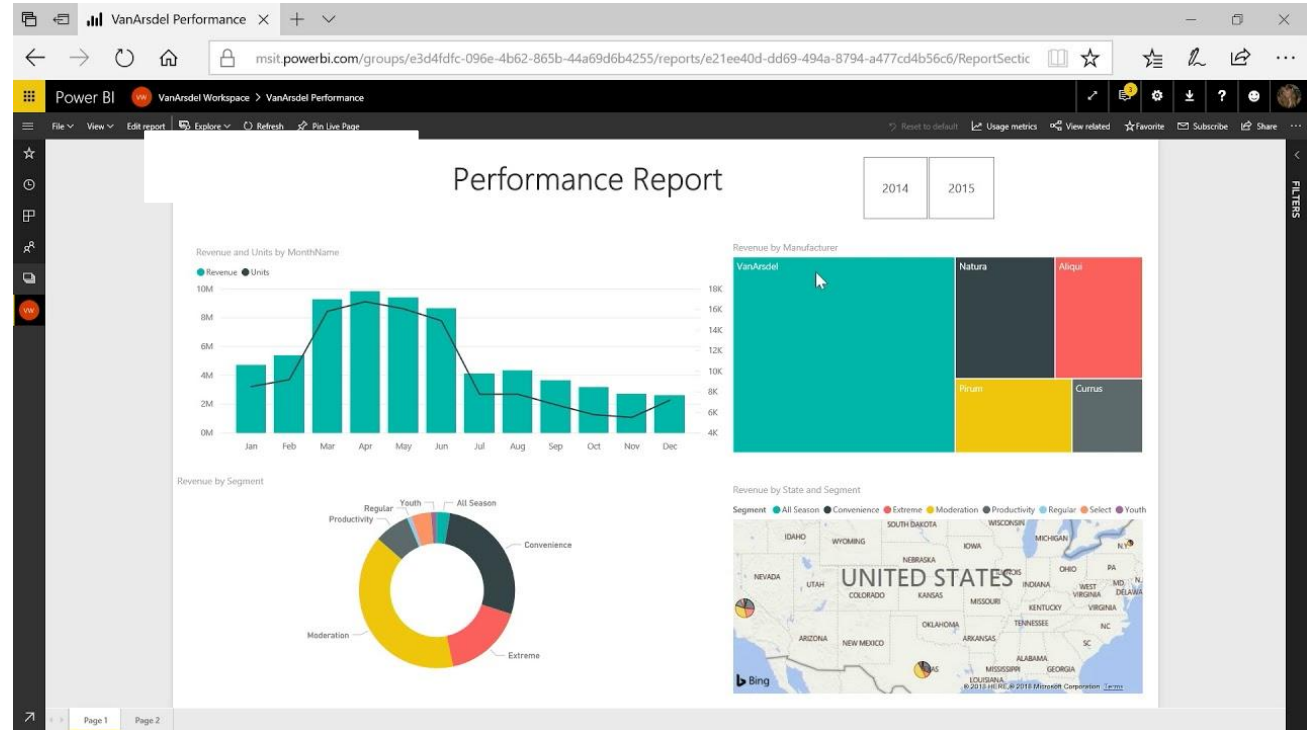
Waterfall Graphs

Pie Chart

Scatter Chart

3rd Party

Customizable



# Power Components

**Power Query**

**Power Pivot**

**Power View**

**Power Map**

**Power Q&A**



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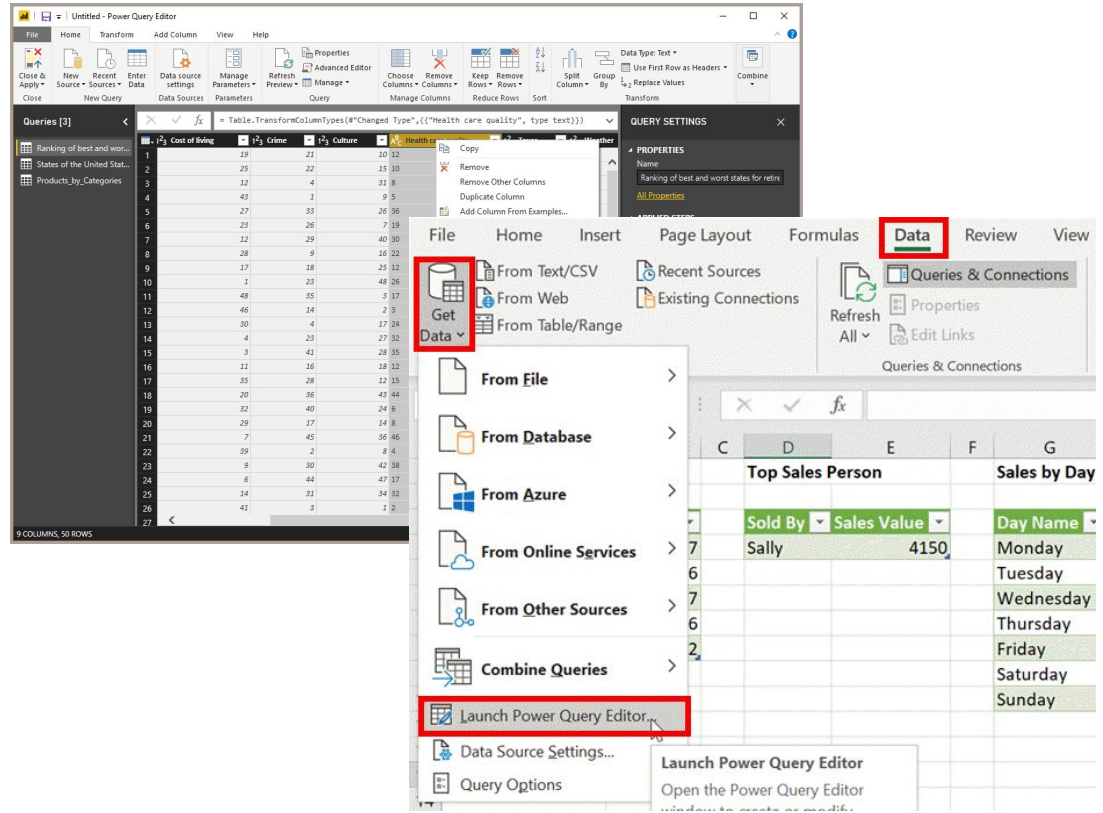
# Power Query

Extract data from various sources

Transform data as needed for your usage

Extensive UI

Powered by M language



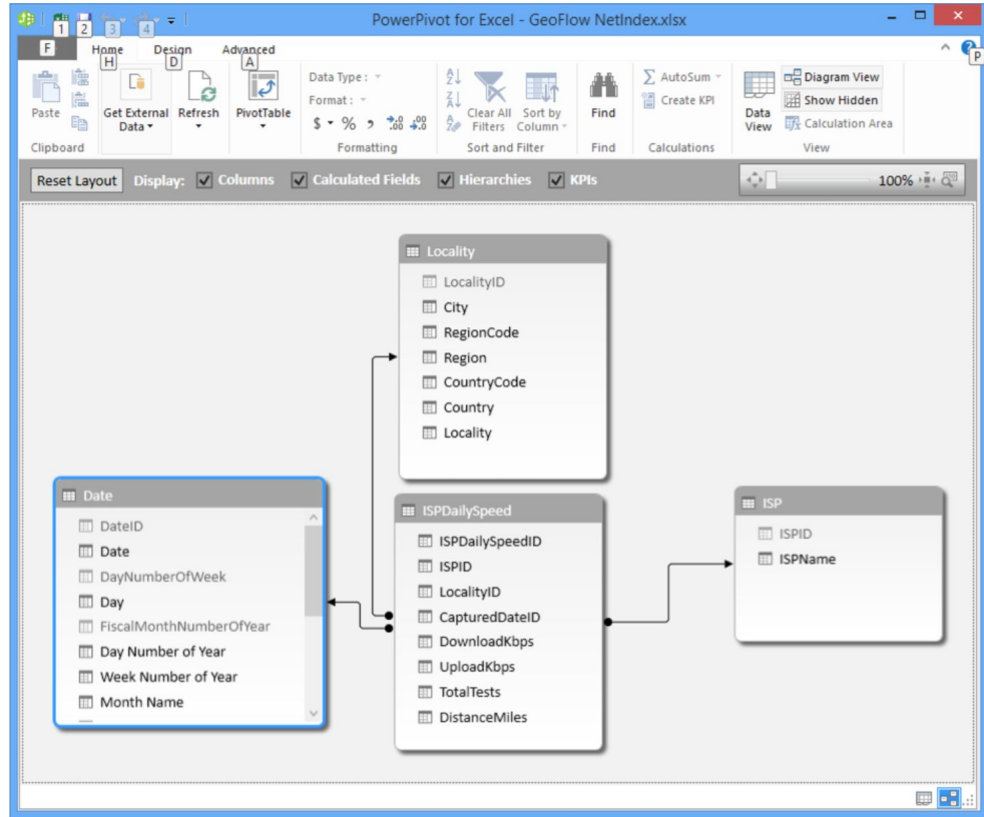
# Power Pivot

Build relationships into data

Build measured columns

Create calculated columns

Powered by DAX



# Power View

Connect to data  
sources

Fetch metadata for  
analysis

Filter data for a visual  
element

Interactive!

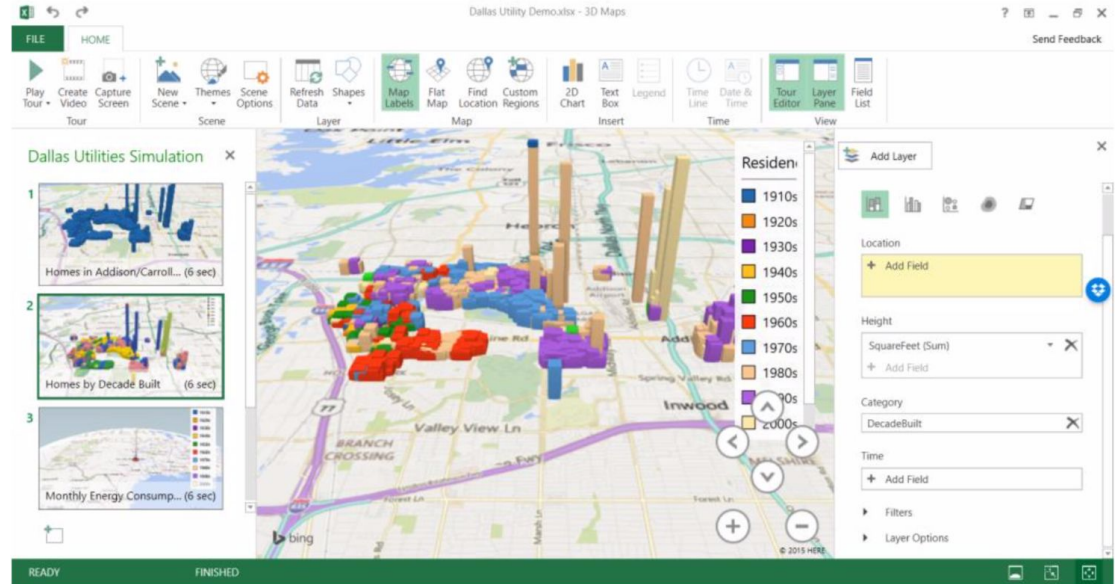


# Power Map

3D Geospatial data  
visualization tool

Visualize geographical  
maps, heat maps based  
on address or GPS  
coordinates

Power by Bing Maps

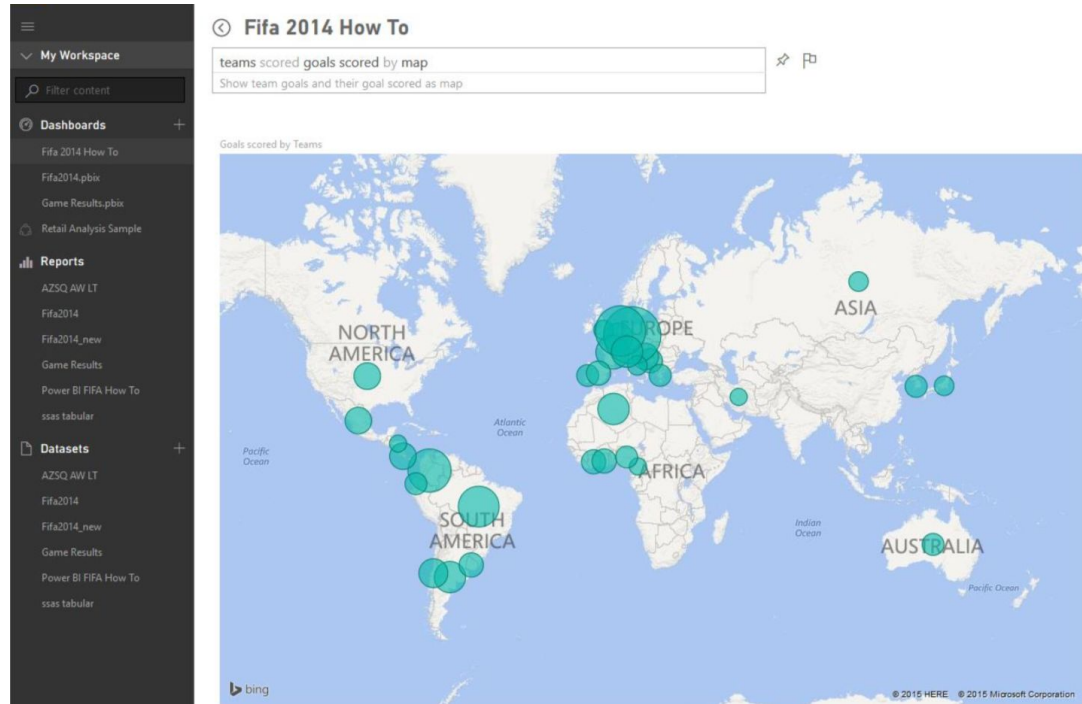


# Power Q&A

Natural Language  
question and  
answering engine

Ask questions based on  
data

Creates visuals for  
questions



# Power BI Applications

**Power BI Desktop**

**Power BI Web**

**Power BI Mobile**



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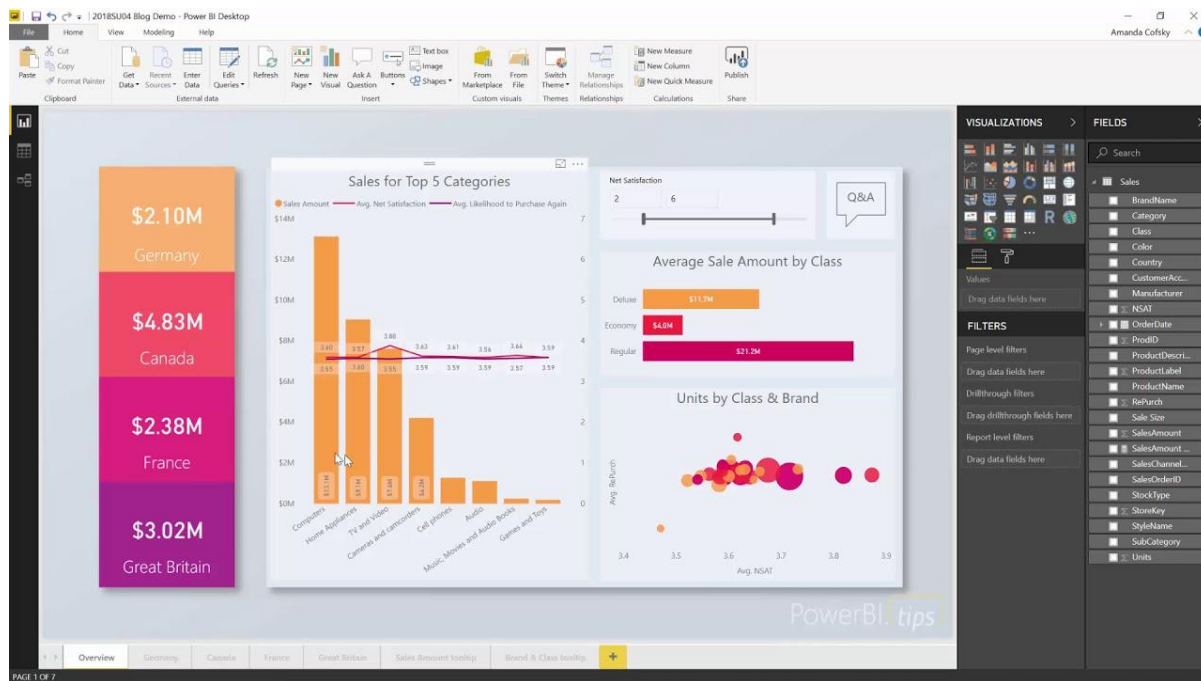
# Power BI Desktop

Power Query

Power Pivot

Power View

Power Map



# Power BI Mobile

Power View

Power Map





# Power BI Web

Power View

Power Map

Power Q&A

