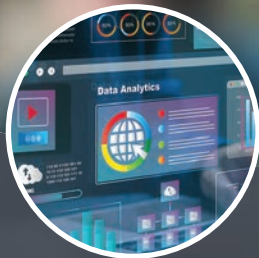




# 2024 WICPA ACCOUNTING TECHNOLOGY CONFERENCE

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TUESDAY, DEC. 10 | WICPA OFFICE & WICPA CPE LIVESTREAM

# 2024 WICPA ACCOUNTING TECHNOLOGY CONFERENCE

## MATERIALS AT A GLANCE

The following materials are from the afternoon sessions of the 2024 WICPA Accounting Technology Conference held on Tuesday, Dec. 10, including:

- Data Analytics With Microsoft Power BI
- Get Ready for Microsoft Copilot
- Ask the Experts

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A person is working at a desk. In the foreground, there is a laptop, a calculator, and a pair of glasses. The person's hands are visible, one holding a pen and the other holding a piece of paper. The background is slightly blurred, showing a coffee cup and some papers.

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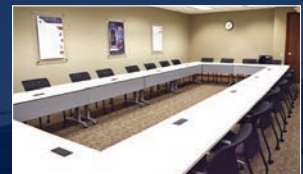
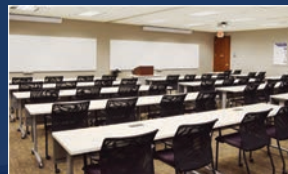
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1 – 2 p.m.

# Data Analytics With Microsoft Power BI

**John Higgins, CPA, CITP**, *Strategic Technology Advisor,*  
*Higgins Advisory, LLC*



**Wisconsin Institute of  
Certified Public Accountants**

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# Get Started With Power BI

Developed by Bryan L. Smith, CPA.CITP, CISA



## Bryan L. Smith, CPA.CITP, CISA

---

- Owner DataSmithPro, LLC
- Co-founder of CPA Crossings, LLC
- Strategic technology advisor to CPAs w/ 40+ years of experience
- Nationally recognized author and presenter on CPA technology
- Extensive knowledge and experience in proper Excel design techniques as well as helping CPAs build spreadsheets that are accurate
- As a Certified Information Systems Auditor (CISA), spent a considerable amount of time auditing and validating thousands of Excel spreadsheets
- Developed various data analysis and Microsoft Power BI courses and has worked with multiple organizations to train and coach staff on proper data analysis techniques
- Masters of Science in Information Assurance (MSIA)



# Presentation Outline

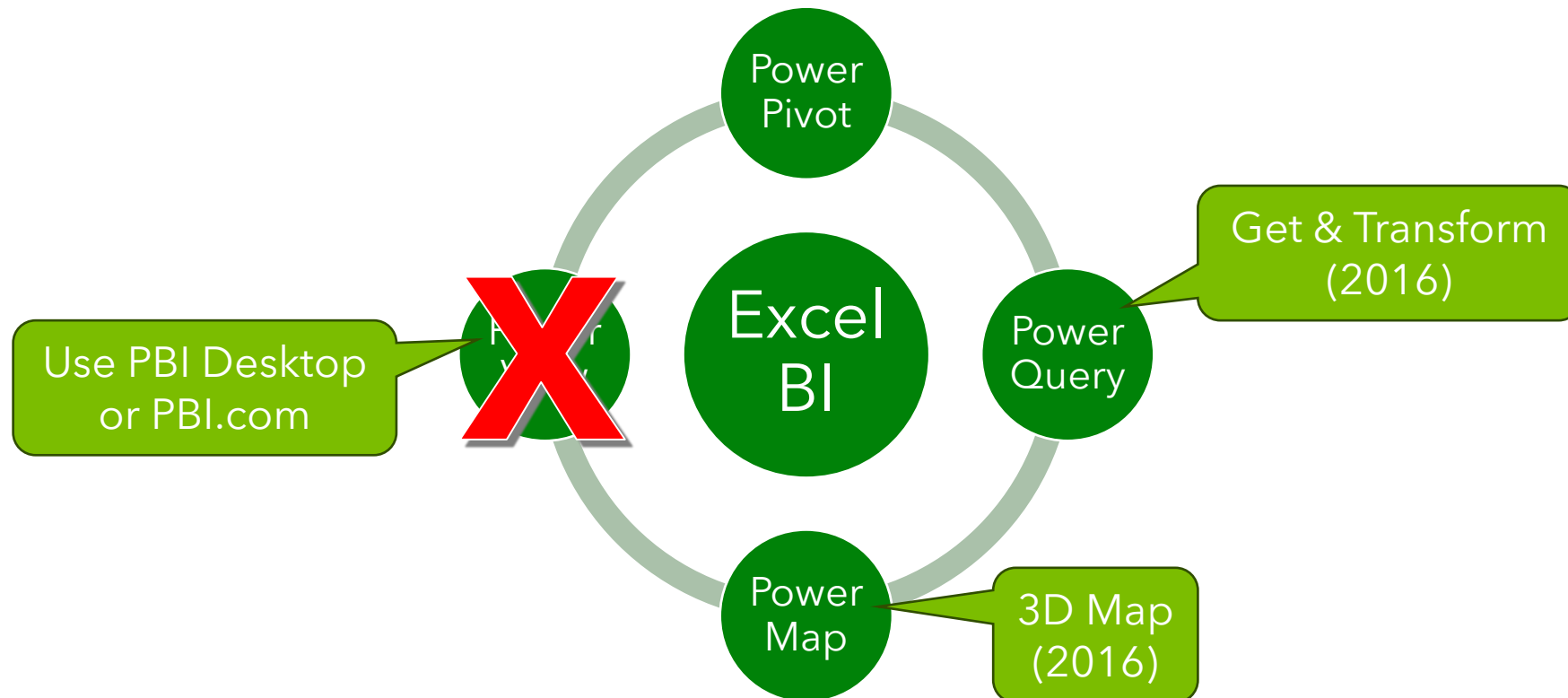
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- [Overview of the Power BI Tools](#)
- [Tour of the Tools](#)
- [Comparative Analysis](#)
- [Wrap-Up](#)

# Overview of the Power BI Tools



# Family of Excel BI Products





# Power Pivot

A data modeling tool

- Import data from multiple sources
- Relate tables / data

Eliminates complexity of getting data into Excel

Designed for users with no SQL experience

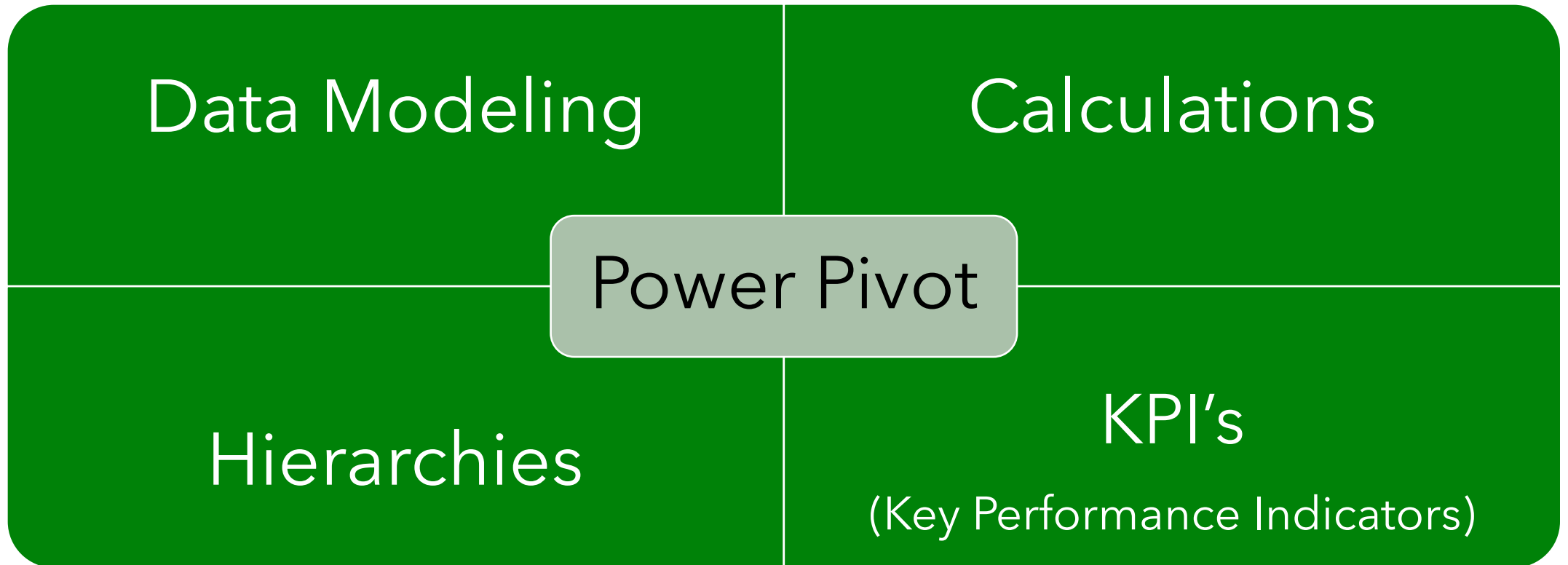
Uses PivotTables to analyze data

Adv calcs with Data Analysis eXpressions (DAX)

Hierarchy and KPI feature



# Power Pivot Features





# Power Query

## Power Query solves 2 BIG problems

- Messy data
- Integrating data from multiple sources is tedious

## Connect to multiple different data sources

- CSV, Excel, Text, DB, etc.

## Automation of data imports

## Combine and extract data

## “Unpivot” a table

## Custom calculations with M formula language [Click Here](#)



# Power Map (3D Map)

3D visualization tool for mapping data

Create an interactive, guided cinematic tour of your data on a map

See time-stamped data change over time

Automatically recognizes geographical data

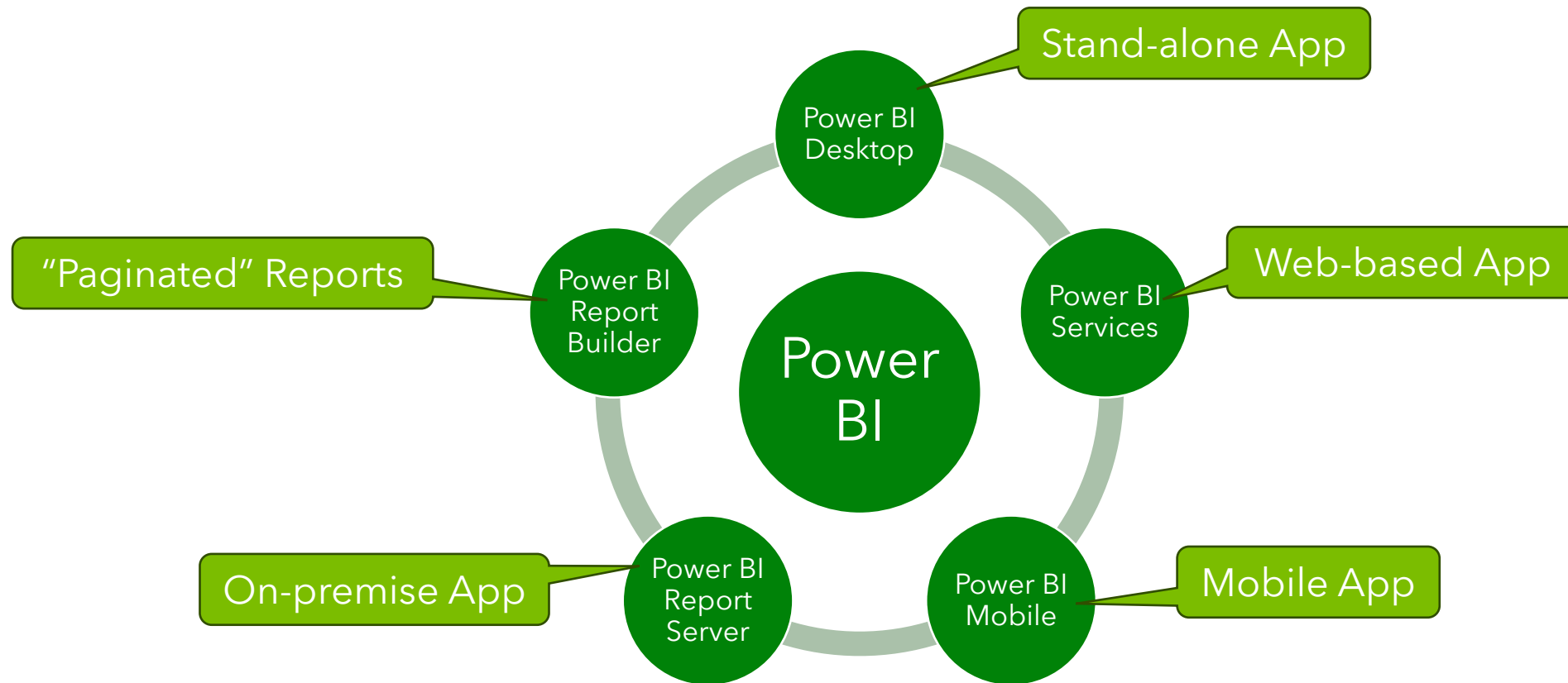
Plots associated values to points on a Bing map

Requires "high-performance" computer

3D Maps in Excel 2016 [Click Here](#)



# Family of Power BI Products





# Power BI Desktop

Data analysis for Excel & non-Excel users

Data modeling tool (*Power Pivot*)

Data Querying tool (*Power Query*)

Interactive visualizations (*Power View*)

Same data "engine" as Power Pivot

Import from Power Pivot

Connect to PowerBI.com

Monthly updates with new features



# PowerBI.com

Cloud-based business analytics service

Robust data connector but not a data modeling tool

Use Power BI Desktop or Power Pivot to create data model

Create interactive visuals reports

Create dashboards

Mobile App to allow interactivity on mobile devices

Power BI Embedded to connect to custom applications

Share visuals inside and outside your organization



# Power BI Mobile

Mobile apps for different devices

iOS, Android, Windows, Phone, Tablet

Works with Power BI Services & Report Server

Interact with visuals on reports and dashboards

Visuals can be created specifically for mobile devices

Allows anywhere, anytime access to analysis

Setup Alerts to get push notifications

Data security with Microsoft Intune management capabilities



# Power BI Report Server

Publish Power BI reports on-premises

Leverages SQL Server Reporting Services (SSRS)

Distribute reports behind your organization's firewall

Entry Point is a secure web portal

Cloud-ready to provide anywhere, anytime access

Build reports with Power BI Desktop

Publish Power BI Desktop reports to PBI Report Server

Part of Power BI Premium





# Power BI Report Builder

Paginated reports are designed to be printed or shared

Create reports that are formatted to fit on a page

Used for operational reports

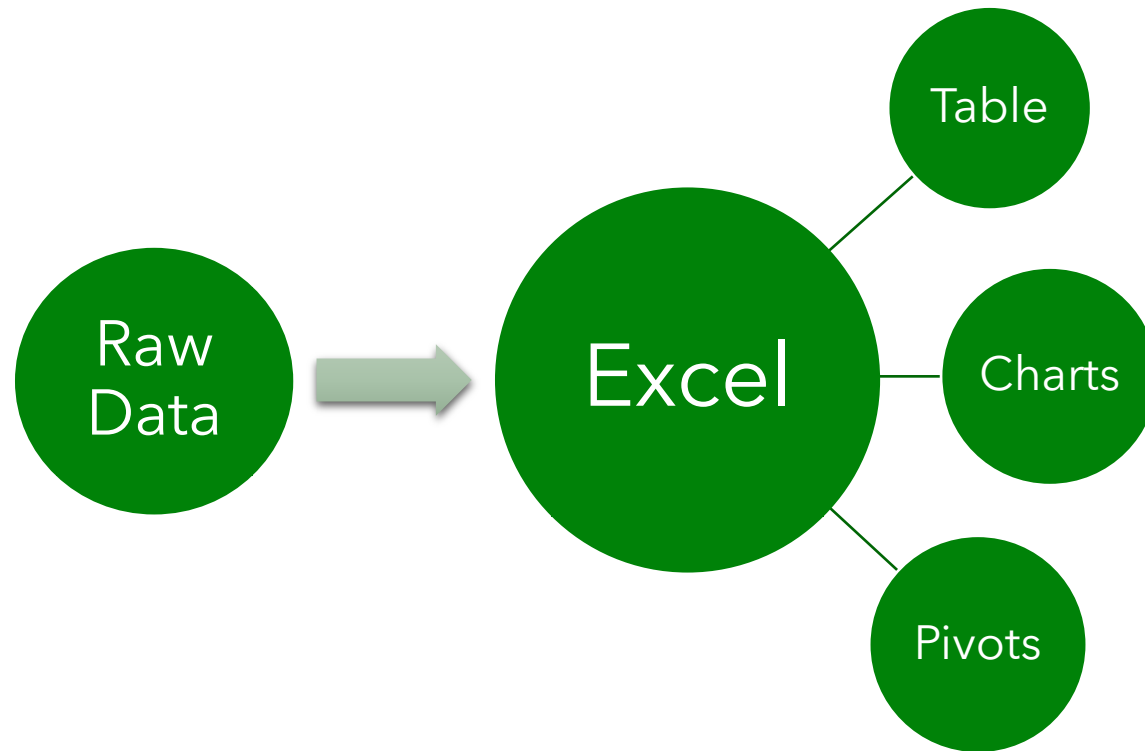
Used for printing forms, such as invoices

Share on Power BI Services with Power BI Pro license

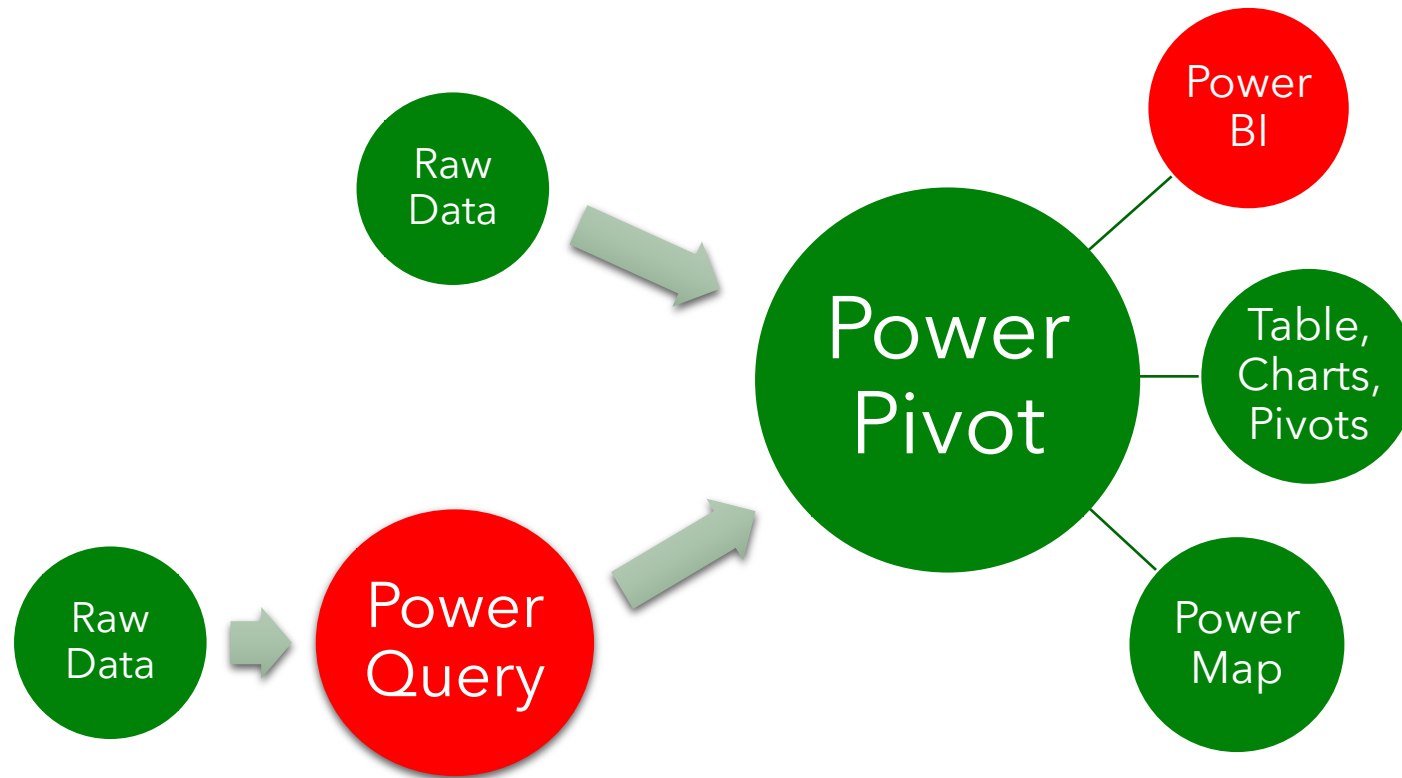
Display data in a table to span multiple pages

Standalone tool for authorizing paginated reports

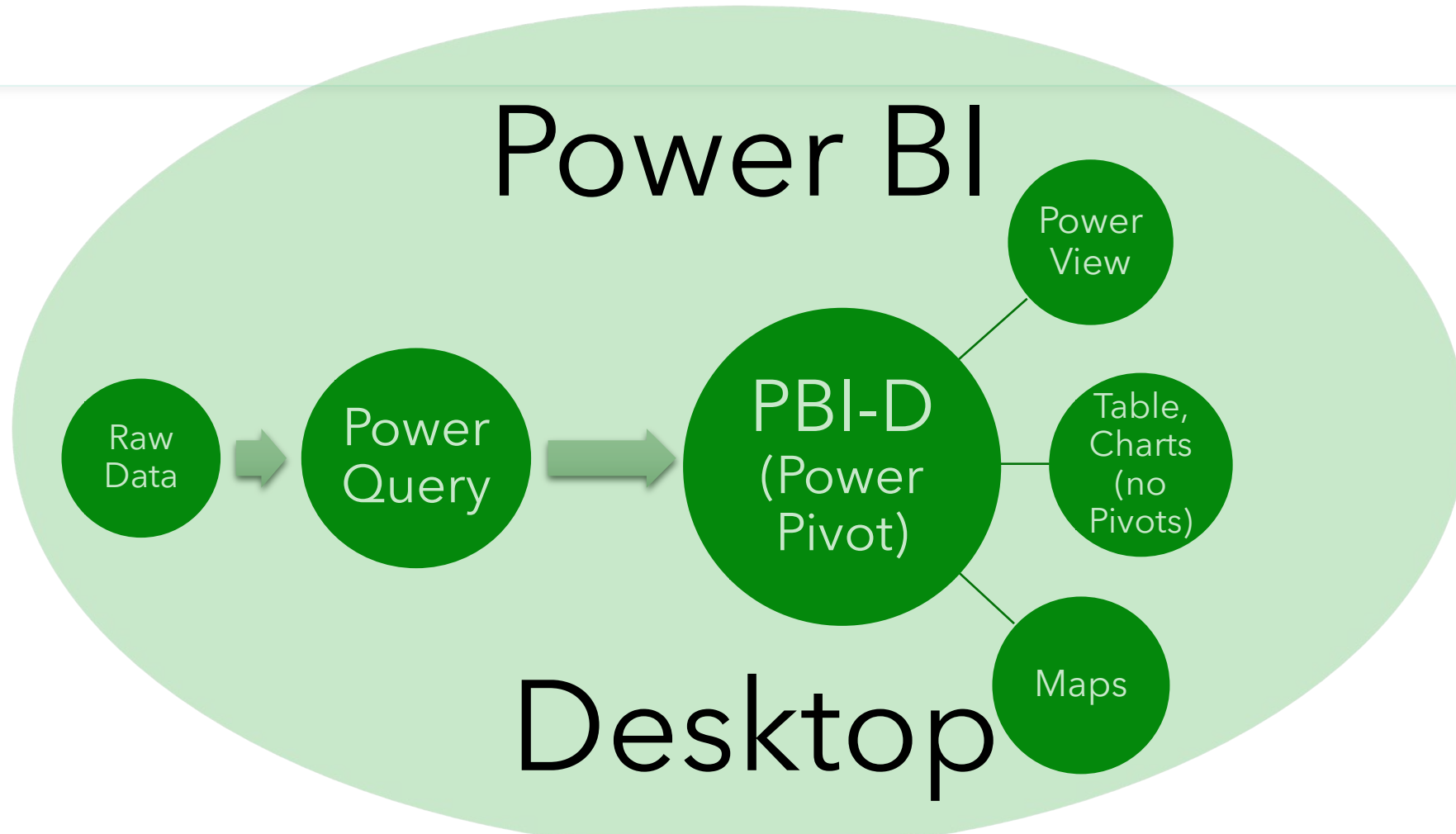
# Traditional Data Analysis



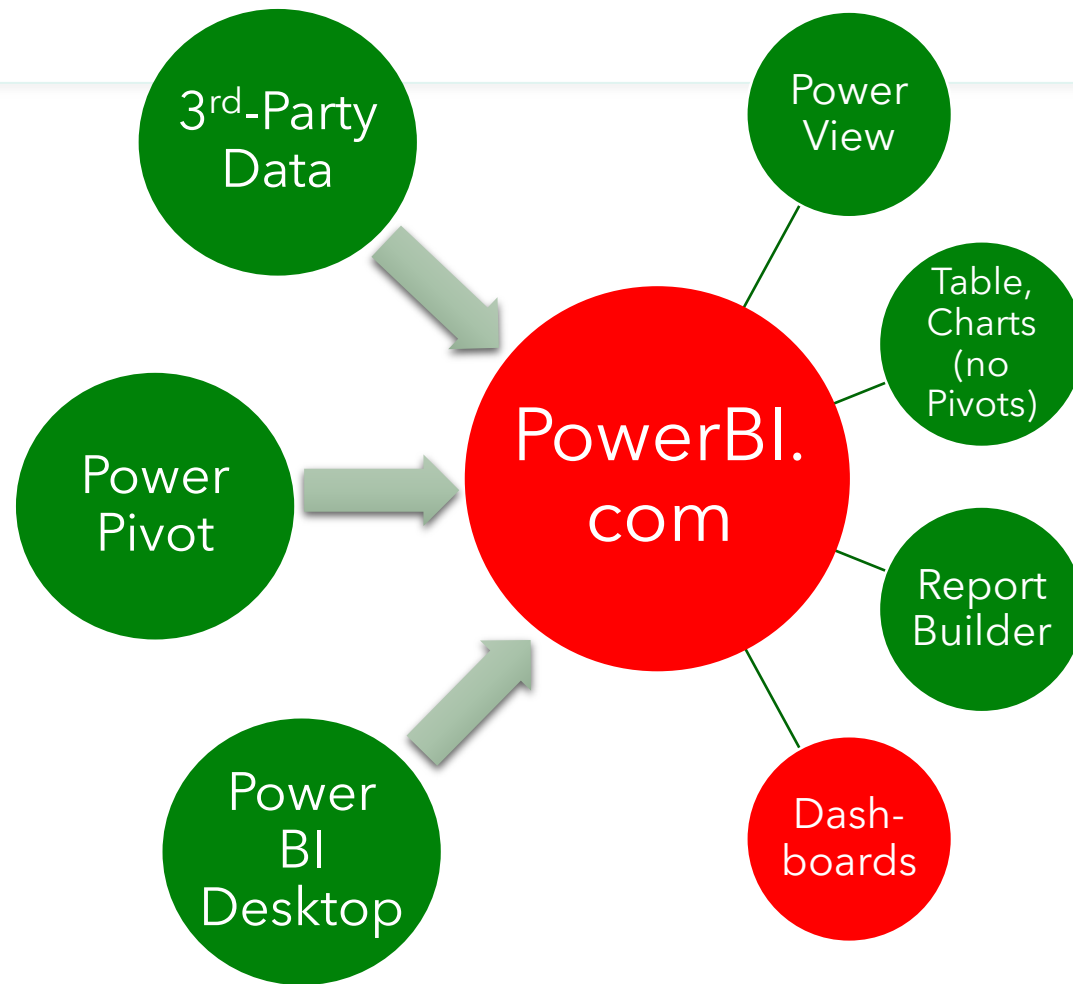
# The New Excel Data Analysis Paradigm



# Power BI Desktop Analysis



# Web-Based Analysis





# Availability of the **Excel** Power BI Tools

- Prior to Office 2019 very confusing
- Now, included in most Desktop versions of Excel for Windows
- Microsoft 365 gets regular updates
- Excel for Mac
  - Power Query available on Microsoft 365
  - Power Pivot and 3D Map are NOT available in any version
    - ❖ Must use a virtual Windows machine and run Excel for Windows
- For best results install 64-bit version of Office

# Availability of the Power BI Tools

- Power BI Desktop (PBI-D) - Free
  - Installs 64-bit version even if you have 32-bit Office
- PowerBI.com
  - Version comparison [Click Here](#)
  - Free version
  - Power BI Pro
    - ❖ \$10/user/month stand along
    - ❖ Included in Microsoft 365 E5
  - Power BI Premium
    - ❖ Per User \$20/user/month includes Power BI Pro
    - ❖ Capacity pricing per node/month (starts at \$5k/month)

# Availability of the Power BI Tools

## (continued)

### ➤ Power BI Report Builder - Free

- Standalone application
- To download [Click Here](#)
- App is FREE BUT ...
  - ❖ Can only use in “personal” My Workspace
  - ❖ To “share” MUST pay for Power BI Pro (you AND shared users), same as Power BI Desktop



# Tour of the Tools



The slides in this presentation contain many screenshots of the Power BI application in order to demonstrate particular features and functionality.

These screenshots were taken during the development of this course. However, Microsoft updates the apps regularly and it becomes difficult to constantly update the screenshots. Therefore, please note that screenshots may vary from your actual version, but the overall functionality remains the same.

Note About Screen Shots

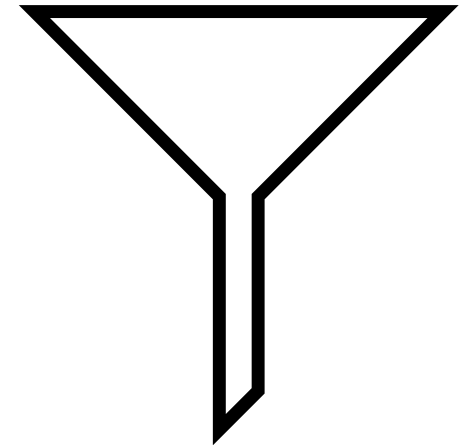


# Application Interfaces

---

- Power Query
- Power Pivot
- 3D Map
- Power BI Desktop
- PowerBI.com
- Power BI Mobile
- Power BI Report Builder

# Power Query



# Get & Transform Data

The image shows the Microsoft Excel interface with the 'Data' ribbon selected. The 'Get & Transform Data' group is highlighted with a red box. A dropdown menu is open, showing various data source categories. A green callout bubble on the left, labeled 'Connector Categories', points to the main menu items: 'From File', 'From Database', 'From Azure', 'From Power Platform', 'From Other Sources', 'Combine Queries', 'Launch Power Query Editor...', 'Data Source Settings...', and 'Query Options'. A second green callout bubble on the right, labeled 'Individual Connectors', points to the sub-menu items: 'From Excel Workbook', 'From Text/CSV', 'From XML', 'From JSON', 'From PDF', and 'From Folder'.

# Get / "Load" Data

The screenshot shows the Power BI Desktop interface. On the left, the Navigator pane displays a list of tables from the 'AdventureWorks' data source. 'TblSalesPerson' is selected. The main area shows a preview of the 'TblSalesPerson' table with the following data:

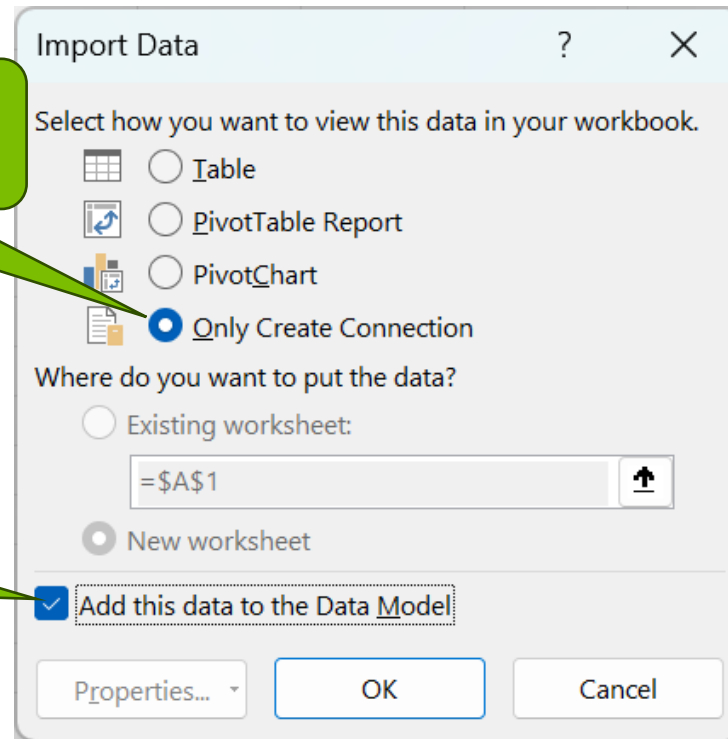
| SalesPersonID | ContactID | Title                | FirstName | MiddleName |
|---------------|-----------|----------------------|-----------|------------|
| 280           | 1014      | Sales Representative | Pamela    | O          |
| 283           | 1015      | Sales Representative | David     | R          |
| 287           | 1027      | Sales Representative | Tete      | A          |
| 275           | 1026      | Sales Representative | Michael   | G          |
| 277           | 1016      | Sales Representative | Jillian   | n          |
| 276           | 1018      | Sales Representative | Linda     | C          |
| 281           | 1017      | Sales Representative | Shu       | K          |
| 279           | 1019      | Sales Representative | Tsvi      | Michael    |
| 278           | 1021      | Sales Representative | Garrett   | R          |
| 282           | 1020      | Sales Representative | José      | Edvaldo    |
| 286           | 1022      | Sales Representative | Ranjit    | R          |

At the bottom, a context menu is open over the 'Load' button. The menu options are 'Load' and 'Load To...'. A callout points to 'Load' with the text: "Load" adds data to a worksheet. Another callout points to 'Load To...' with the text: "Load To" for options. A third callout points to the 'Transform Data' button with the text: Edit in Power Query.

# "Load To" Options

Load to a table or just create a connection

Add to Data Model for use with Power Pivot



# Query Panel

The screenshot displays the Power BI Query Panel interface. On the left, a table titled 'TblSales' is shown with columns: SalesOrderID, CustomerID, ProductID, OrderDate, OrderQty, UnitPrice, and UnitPriceDisc. Below the table, there are sections for 'Columns [9]', 'Last refreshed' (1:04 PM), 'Load status' (Loaded to Data Model), and 'Data Sources' (Loading). At the bottom of the table view are buttons for 'VIEW IN WORKSHEET', 'EDIT', and 'DELETE'. On the right, the 'Queries & Connections' pane lists four queries: TblCustomers (19,185 rows loaded), TblProducts (295 rows loaded), TblSales (121,317 rows loaded), and TblSalesPerson (14 rows loaded). The 'TblSales' query is highlighted in green.

| SalesOrderID | CustomerID | ProductID | OrderDate | OrderQty | UnitPrice | UnitPriceDisc |
|--------------|------------|-----------|-----------|----------|-----------|---------------|
| 43659        | 676        | 773       | 7/1/2001  | 2        | 2039.994  | 0             |
| 43659        | 676        | 714       | 7/1/2001  | 3        | 28.8404   | 0             |
| 43659        | 676        | 778       | 7/1/2001  | 1        | 2024.994  | 0             |
| 43659        | 676        | 777       | 7/1/2001  | 3        | 2024.994  | 0             |
| 43659        | 676        | 711       | 7/1/2001  | 4        | 20.1865   | 0             |
| 43659        | 676        | 776       | 7/1/2001  | 1        | 2024.994  | 0             |
| 43659        | 676        | 774       | 7/1/2001  | 1        | 2039.994  | 0             |
| 43659        | 676        | 709       | 7/1/2001  | 6        | 5.7       | 0             |
| 43659        | 676        | 771       | 7/1/2001  | 1        | 2039.994  | 0             |

Columns [9]  
SalesOrderID, CustomerID, ProductID, OrderDate, OrderQty, UnitPrice, UnitPriceDiscount, LineTotal, SalesPersonID

Last refreshed  
1:04 PM

Load status  
Loaded to Data Model

Data Sources  
Loading

VIEW IN WORKSHEET EDIT ... DELETE

Queries & Connections

Queries | Connections

4 queries

- TblCustomers  
19,185 rows loaded.
- TblProducts  
295 rows loaded.
- TblSales  
121,317 rows loaded.
- TblSalesPerson  
14 rows loaded.

View details of selected query

Queries are listed in the Query Panel



# Power Query Interface

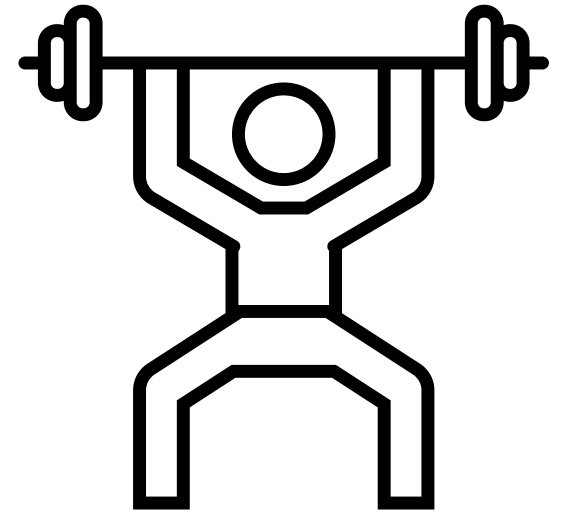
The screenshot displays the Power Query Editor interface for a query named 'TblSales'. The ribbon includes tabs for File, Home, Transform, Add Column, and View. The Transform tab is active, showing various options like 'Combine', 'Manage Parameters', and 'Data source settings'. The formula bar contains the following M language code:

```
= Table.TransformColumnTypes(#"Renamed Columns",{{"SalesOrderID", Int64.Type}, {"CustomerID", Int64.Type}, {"ProductID", Int64.Type}, {"OrderDate", type date}, {"OrderQty", Int64.Type}, {"UnitPrice", type number}, {"DiscPct", Percentage.Type}, {"LineTotal", type number}, {"SalesPersonID", Int64.Type}})
```

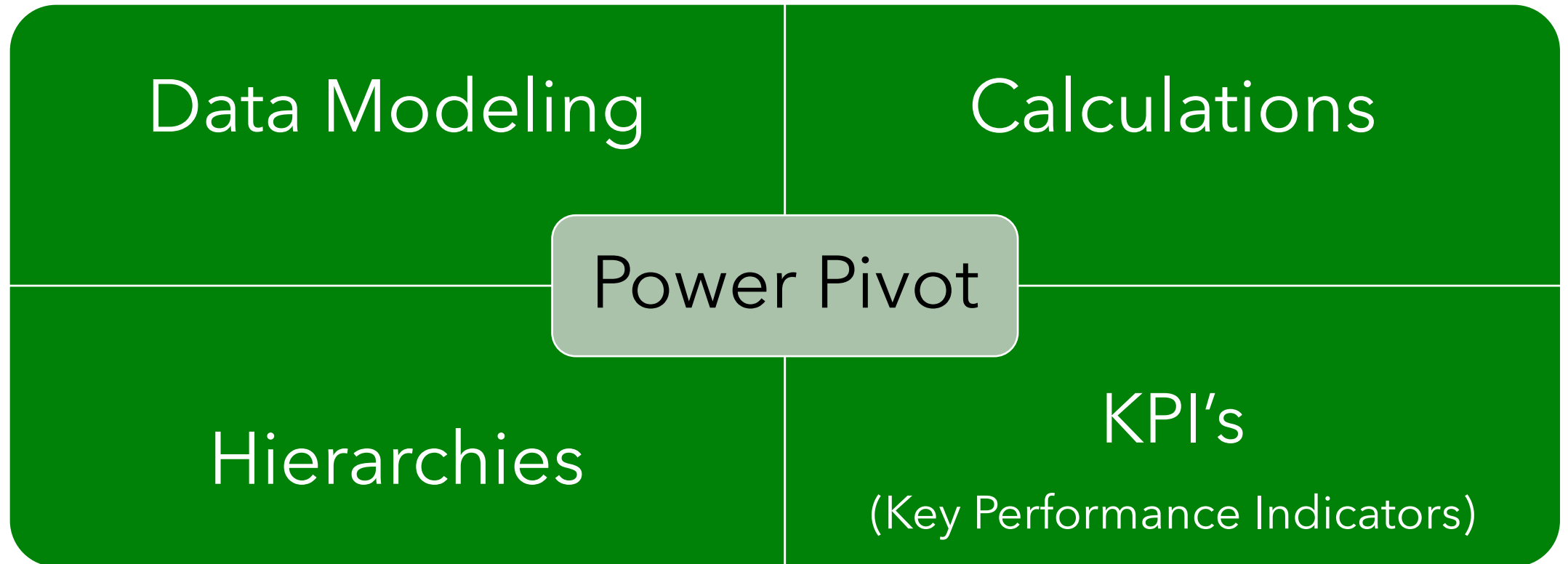
The data table below the formula bar shows columns for SalesOrderID, CustomerID, ProductID, OrderDate, and OrderQty. A green callout bubble points to the formula bar with the text: "Formula using 'M' language". Another green callout bubble points to the 'Changed Type' step in the 'APPLIED STEPS' pane on the right, with the text: "Making changes to the query creates 'step' so data is updated on refresh".

| SalesOrderID | CustomerID | ProductID | OrderDate | OrderQty |
|--------------|------------|-----------|-----------|----------|
| 676          | 773        | 714       | 7/1/2001  |          |
| 676          | 778        | 777       | 7/1/2001  |          |
| 676          | 711        | 776       | 7/1/2001  |          |
| 676          | 774        | 709       | 7/1/2001  |          |
| 676          | 771        | 772       | 7/1/2001  |          |
| 43659        | 772        | 773       | 7/1/2001  |          |
| 7            | 43659      | 676       | 7/1/2001  |          |
| 8            | 43659      | 676       | 7/1/2001  |          |
| 9            | 43659      | 676       | 7/1/2001  |          |
| 10           | 43659      | 676       | 7/1/2001  |          |
| 11           | 43659      | 676       | 7/1/2001  |          |
| 12           | 43659      | 676       | 7/1/2001  |          |
| 13           | 43660      | 117       | 7/1/2001  |          |
| 14           | 43660      | 117       | 7/1/2001  |          |
| 15           | 43661      | 442       | 7/1/2001  |          |
| 16           | 43661      | 442       | 7/1/2001  |          |
| 17           | 43661      | 442       | 7/1/2001  |          |
| 18           | 43661      | 442       | 7/1/2001  |          |
| 19           | 43661      | 442       | 7/1/2001  |          |

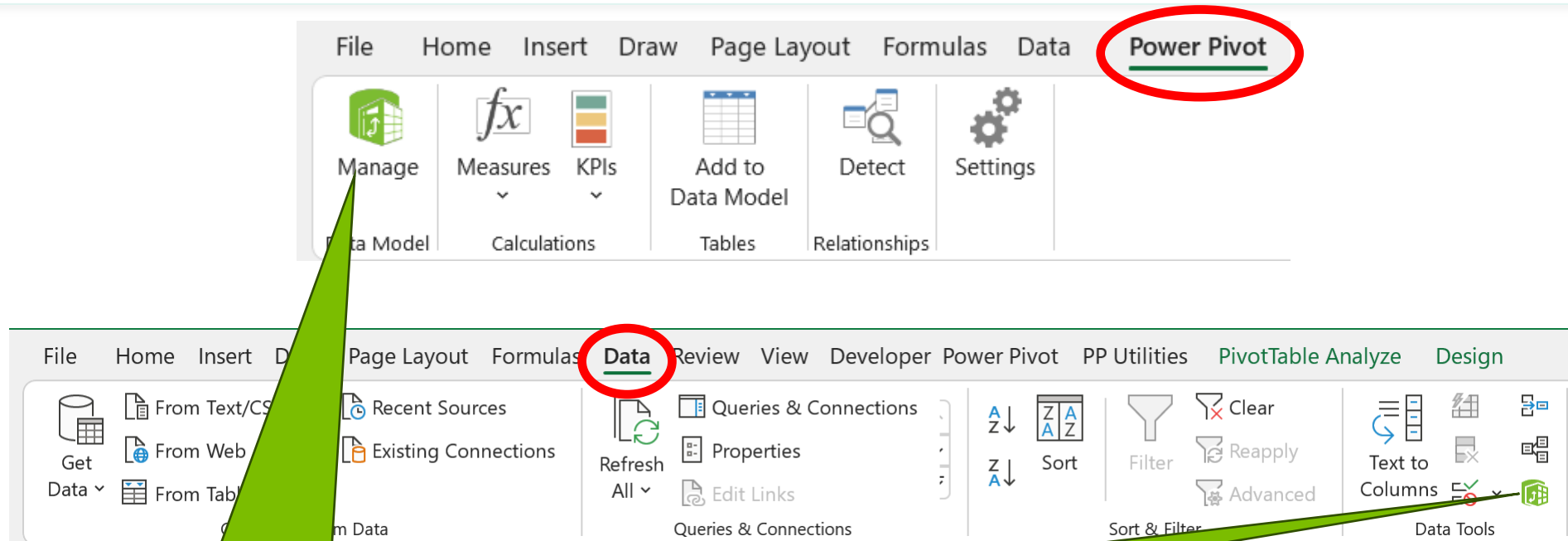
# Power Pivot



# Power Pivot Features



# Power Pivot Ribbon Bar



Most of the Power Pivot work will be done in Manage Data Model

# Manage Data Model Interface - Data View

The screenshot displays the Power Pivot for Excel interface. The ribbon includes File, Home, Design, and Advanced. The Advanced ribbon is active, showing options like Data Type, Format, Clear All Filters, Sort by Column, Find, AutoSum, Create KPI, Diagram View, Show Hidden, and Calculation Area. The data table below has the following columns and values:

|                         | SalesOrderID | CustomerID | ProductID | OrderDate            | OrderQty | UnitPrice | DiscPct | LineTotal | SalesPerson |
|-------------------------|--------------|------------|-----------|----------------------|----------|-----------|---------|-----------|-------------|
| 1                       | 51178        | 11245      | 870       | 7/1/2003 12:00:00 AM | 1        | 4.99      | 0       | 4.99      |             |
| 2                       | 51180        | 16313      | 870       | 7/1/2003 12:00:00 AM | 1        | 4.99      | 0       | 4.99      |             |
| 3                       | 51191        | 12390      | 870       | 7/2/2003 12:00:00 AM | 1        | 4.99      | 0       | 4.99      |             |
| 4                       | 51196        | 18906      | 870       | 7/2/2003 12:00:00 AM | 1        | 4.99      | 0       | 4.99      |             |
| 5                       | 51197        | 11448      | 870       | 7/2/2003 12:00:00 AM | 1        | 4.99      | 0       | 4.99      |             |
| 6                       | 51198        | 11006      | 870       | 7/2/2003 12:00:00 AM | 1        | 4.99      | 0       | 4.99      |             |
| 7                       | 51199        | 21440      | 870       | 7/2/2003 12:00:00 AM | 1        | 4.99      | 0       | 4.99      |             |
| 8                       | 51203        | 18208      | 870       | 7/3/2003 12:00:00 AM | 1        | 4.99      | 0       | 4.99      |             |
| 9                       | 51205        | 11240      | 870       | 7/3/2003 12:00:00 AM | 1        | 4.99      | 0       | 4.99      |             |
| 10                      | 51206        | 11400      | 870       | 7/3/2003 12:00:00 AM | 1        | 4.99      | 0       | 4.99      |             |
| 11                      | 51207        | 11338      | 870       | 7/3/2003 12:00:00 AM | 1        | 4.99      | 0       | 4.99      |             |
| 12                      | 51214        | 19765      | 870       | 7/3/2003 12:00:00 AM | 1        | 4.99      | 0       | 4.99      |             |
| 13                      | 51216        | 11117      | 870       | 7/3/2003 12:00:00 AM | 1        | 4.99      | 0       | 4.99      |             |
| 14                      | 51223        | 26826      | 870       | 7/3/2003 12:00:00 AM | 1        | 4.99      | 0       | 4.99      |             |
| SumSales: \$109,846,381 |              |            |           |                      |          |           |         |           |             |

At the bottom of the window, the task pane shows the data model with tables: TblCustomers, TblProducts, TblSales (selected), and TblSalesPerson. The status bar indicates 'Record: 1 of 121,317'.

This is where you manage the Data Model

# Manage Data Model Interface - Diagram View

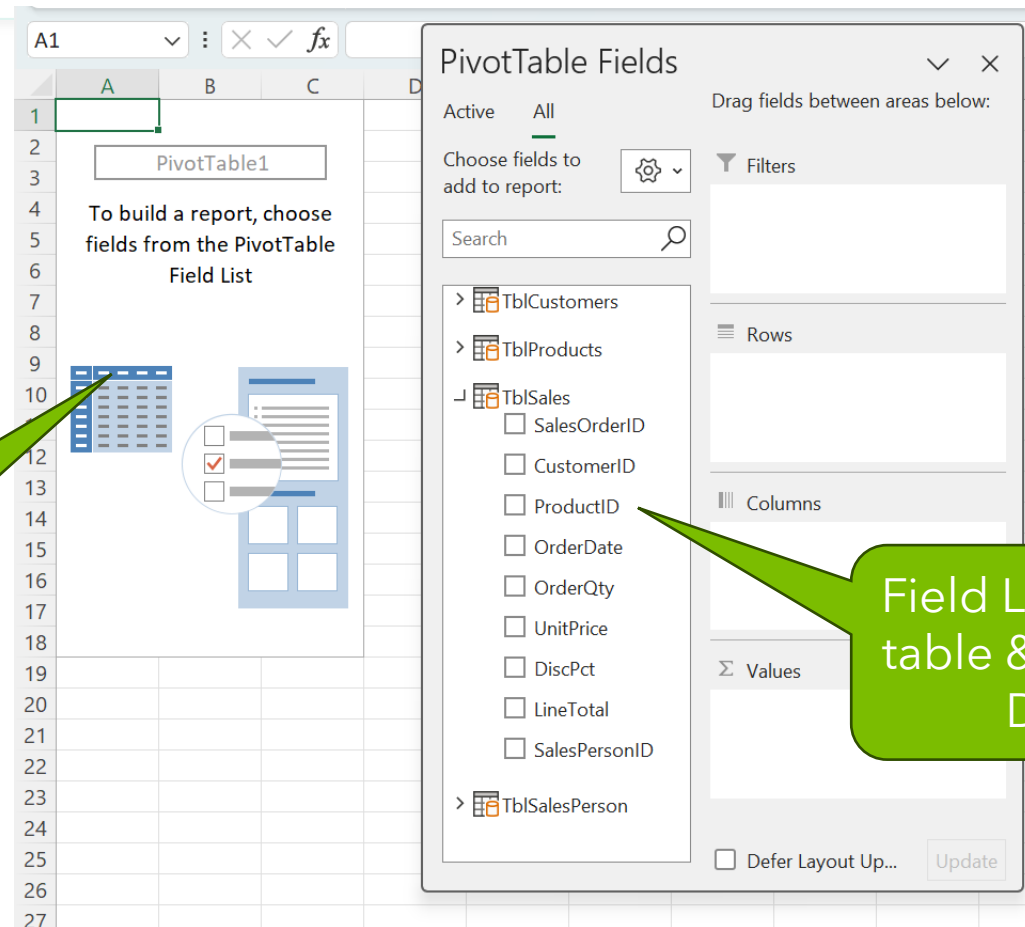
The screenshot displays the Power Pivot for Excel - Book1 interface in Diagram View. The ribbon includes File, Home, Design, and Advanced tabs. The Design tab is active, showing options for From Database, From Data Service, From Other Sources, Existing Connections, Refresh, and PivotTable. The Diagram View ribbon is also visible, with options for Data View, Diagram View, Show Hidden, and Calculation Area. The main area shows a data model with four tables: TblSales, TblCustomers, TblProducts, and TblSalesPerson. TblSales is connected to TblProducts with a 1-to-many relationship. TblProducts is connected to TblSalesPerson with a 1-to-many relationship. A callout box in the bottom right corner states: "This is where you create relationships between tables".

# Getting Data from Power Pivot to Excel

The screenshot shows the Microsoft Excel interface with the Home tab selected. The ribbon includes options for Paste, Get External Data (From Database, From Data Service, From Other Sources), Existing Connections, Refresh, and PivotTable. The PivotTable button is highlighted, and its dropdown menu is open, showing options: PivotTable, PivotChart, Chart and Table (Horizontal), Chart and Table (Vertical), Two Charts (Horizontal), Two Charts (Vertical), Four Charts, and Flattened PivotTable. A green callout bubble points to the PivotTable button with the text: "Select Home - PivotTable, the select PivotTable type and data will be added to New Worksheet".

|   | Custo... | Sales_StoreNam   |
|---|----------|------------------|
| 1 | 11015    | Young, Chloe     |
| 2 | 11024    | Xie, Russell     |
| 3 | 11064    | Reed, Chase      |
| 4 | 11065    | Henderson, Jessi |
| 5 | 11085    | Johnson, Emily   |
| 6 | 11086    | Brown, Ryan      |

# PivotTable in Excel



Familiar PivotTable interface

Field List includes each table & the fields in the Data Model



# Creating a PivotTable

| Sum of LineTotal          | Accessories | Bikes       | Clothing    | Components  | Grand Total |
|---------------------------|-------------|-------------|-------------|-------------|-------------|
| Ansman-Wolfe              | 13394.47581 | 2806092.98  | 55672.8657  | 449942.2724 | 3325102.594 |
| Blythe                    | 41061.33209 | 7683632.904 | 161348.4847 | 1407860.283 | 9293903.004 |
| Campbell                  | 14661.06905 | 3111693.744 | 59112.8519  | 544477.6839 | 3729945.349 |
| Carson                    | 73574.54921 | 8363411.054 | 219209.359  | 1409608.578 | 10065803.54 |
| Ito                       | 36838.89997 | 5365753.705 | 108683.2474 | 915729.7018 | 6427005.554 |
| Mensa-Annan               | 12884.49014 | 1938479.496 | 41752.29298 | 319429.4113 | 2312545.69  |
| Mitchell                  | 69083.44718 | 8660468.697 | 234493.7513 | 1402961.531 | 10367007.43 |
| Pak                       |             |             |             |             |             |
| Active Life Toys          | 1001.281    | 176802.984  | 3683.0827   | 18526.0183  | 200013.366  |
| Bikes for Kids and Adults | 60.55956    | 25675.4953  | 2711.106    | 1203.95     | 29651.11086 |
| Bikes for Two             | 100.373     | 3893.6376   | 610.0185    | 3119.85     | 7723.8791   |
| Camping and Sports        |             |             |             | 20.32155    | 343349.7833 |
| Certified Sports Su       |             |             |             | 66.736      | 5297.718    |
| Citywide Service ar       |             |             |             |             | 2999.466    |
| Commuter Bicycle          |             |             |             | 276.3       | 2612.256    |
| Corner Bicycle Sup        |             |             |             | 17.438      | 1691.88     |
| Courteous Bicycle         |             |             |             | 96.329      | 1439.1808   |
| Eastside Parts Sho        |             |             |             | 014.18      | 12224.87903 |
| Economy Center            |             |             |             | 29.958      | 196449.4375 |
| Efficient Cycling         |             |             |             | 90.0212     | 215723.1491 |
| Farthest Bike Store       |             |             |             | 2825.0203   | 11038.0303  |
| Finer Riding Supplie      |             | 8213.01     |             | 202.332     | 202.332     |
| Future Bikes              |             |             |             | 4320.6922   | 8399.993774 |
| Gear-Shift Bikes Limited  | 1608.019    |             | 2471.282574 | 34281.298   | 318177.5925 |
| General Industries        | 4653.46     | 269744.3664 | 9498.46812  | 1775.5765   | 66347.35137 |
| General Supplies          |             | 60945.1632  | 3626.611668 |             |             |
| Greater Bike Store        |             |             |             |             |             |

### PivotTable Fields

Active All

Choose fields to add to report: [Search]

Filters

Rows: LastName, Sales\_StoreName

Columns: Production\_ProductCategoryNa...

Values: Sum of LineTotal

Fields: TblCustomers (Sales\_StoreName checked), TblProducts

Tables are "linked" in the Data Model, so you can select any field to populate the PivotTable

Select fields exactly the same way as a regular PivotTable

# Calculation in Power Pivot

- Data Analysis Expression (DAX) formula language
- Many are similar to Excel functions
- Time-Intelligent Functions
  - CLOSINGBALANCEYEAR (MONTH QTR)
  - NEXTDAY, NEXTMONTH, NEXTYEAR
  - PREVIOUSDAY, PREVIOUSMONTH, PREVIOUSYEAR
  - TOTALMTD, TOTALQTD, TOTALYTD ... & more

# Calculations ("Measures") in the Data Model

[SalesOrderID]    fx    PeriodSales:=IF( COUNTROWS( VALUES( DimPeriod[Period]))=1,  
 IF( VALUES( DimPeriod[Period]) = "Current", [Sales],  
 IF( VALUES( DimPeriod[Period]) = "MTD", [Sales](DATESMTD(DimDate[Datekey])),  
 IF( VALUES( DimPeriod[Period]) = "QTD", [Sales](DATESQTD(DimDate[Datekey])),  
 IF( VALUES( DimPeriod[Period]) = "YTD", [Sales](DATESYTD(DimDate[Datekey])),  
 IF( VALUES( DimPeriod[Period]) = "LastYear", [Sales](DATEADD(DimDate[Datekey],-1,YEAR)),  
 IF( VALUES( DimPeriod[Period]) = "PriorYearMTD", [Sales](DATEADD(DATESMTD(DimDate[Datekey]),-1,YEAR)),  
 IF( VALUES( DimPeriod[Period]) = "PriorYearQTD", [Sales](DATEADD(DATESQTD(DimDate[Datekey]),-1,YEAR)),  
 IF( VALUES( DimPeriod[Period]) = "PriorYearYTD", [Sales](DATEADD(DATESYTD(DimDate[Datekey]),-1,YEAR)),  
 BLANK())))))).[Sales])

| SalesOrderID | Custo... | Prod... | OrderDate          | OrderQty | UnitPrice  | UnitPriceDiscount | LineTot |
|--------------|----------|---------|--------------------|----------|------------|-------------------|---------|
| 1            | 43659    | 676     | 1/2001 12:00:00 AM | 1        | \$2,039.99 | \$0.00            | 203     |
| 2            | 43659    | 676     | 1/2001 12:00:00 AM | 1        | \$2,039.99 | \$0.00            | 203     |
| 3            | 43659    | 676     | 1/2001 12:00:00 AM | 1        | \$2,024.99 | \$0.00            | 202     |
| 4            | 43659    | 676     |                    |          | \$2,039.99 | \$0.00            | 203     |
| 5            | 43659    | 676     |                    |          | \$28.84    | \$0.00            | 28      |
| 6            | 43659    | 676     |                    |          | \$2,024.99 | \$0.00            | 202     |
| 7            | 43659    | 676     |                    |          | \$5.19     | \$0.00            | 1       |

DistinctOrders: 31,465.00  
 SumLineTotal: \$109,846,381...  
 AvgPerOrder: \$3,491.07  
 PeriodSales: \$109,846,381....  
 Sales: \$109,846,381.40  
 InternetSales: \$29,358,677...

Use the formula bar similar to Excel but use DAX functions, here we are using some of the Time-Intelligent functions

# Measures in the PivotTable

|    | A               | B             | C           | D          | E              | F           | G              | H               | I               |
|----|-----------------|---------------|-------------|------------|----------------|-------------|----------------|-----------------|-----------------|
| 1  | Date            | 09            |             |            |                |             |                |                 |                 |
| 2  |                 |               |             |            |                |             |                |                 |                 |
| 3  | PeriodSales     | Column Labels |             |            |                |             |                |                 |                 |
| 4  | Row Labels      | Current       | LastYear    | MTD        | PriorYearMTD   | QTD         | PriorYearQTD   | YTD             | PriorYearYTD    |
| 5  | 7/9/2004        |               |             |            |                |             |                |                 |                 |
| 6  | ⊕ Europe        | \$308.63      | \$16,056.57 | \$3,140.81 | \$508,392.45   | \$3,140.81  | \$508,392.45   | \$6,759,815.77  | \$2,707,664.66  |
| 7  | ⊖ North America | \$572.99      | \$3,475.16  | \$8,662.71 | \$2,284,621.97 | \$8,662.71  | \$2,284,621.97 | \$15,728,354.75 | \$13,918,143.71 |
| 8  | ⊕ CA            | \$133.53      | \$2,319.99  | \$3,266.22 | \$514,561.88   | \$3,266.22  | \$514,561.88   | \$3,056,302.24  | \$2,982,858.66  |
| 9  | ⊖ US            | \$439.46      | \$1,155.17  | \$5,396.49 | \$1,770,060.09 | \$5,396.49  | \$1,770,060.09 | \$12,672,052.50 | \$10,935,285.06 |
| 10 | Central         |               |             |            | \$216,803.66   |             | \$216,803.66   | \$1,323,769.09  | \$1,476,757.18  |
| 11 | Northeast       |               |             |            | \$190,499.66   |             | \$190,499.66   | \$1,059,022.59  | \$1,715,250.06  |
| 12 | Northwest       | \$248.39      |             | \$3,307.76 | \$402,987.80   | \$3,307.76  | \$402,987.80   | \$3,918,788.09  | \$2,166,645.87  |
| 13 | Southeast       |               |             | \$38.98    | \$177,763.10   | \$38.98     | \$177,763.10   | \$1,181,679.14  | \$1,253,029.36  |
| 14 | Southwest       | \$191.07      | \$1,155.17  | \$2,049.75 | \$782,005.86   | \$2,049.75  | \$782,005.86   | \$5,188,793.60  | \$4,323,602.58  |
| 15 | ⊕ Pacific       | \$163.98      |             |            |                | \$2,479.96  | \$136,613.48   | \$3,304,034.43  | \$1,341,568.22  |
| 16 | Grand Total     | \$1,045.60    |             |            |                | \$14,283.48 | \$2,929,627.91 | \$25,792,204.95 | \$17,967,376.59 |

The calculated fields become "measures" to place in the Values area

# Power BI Desktop

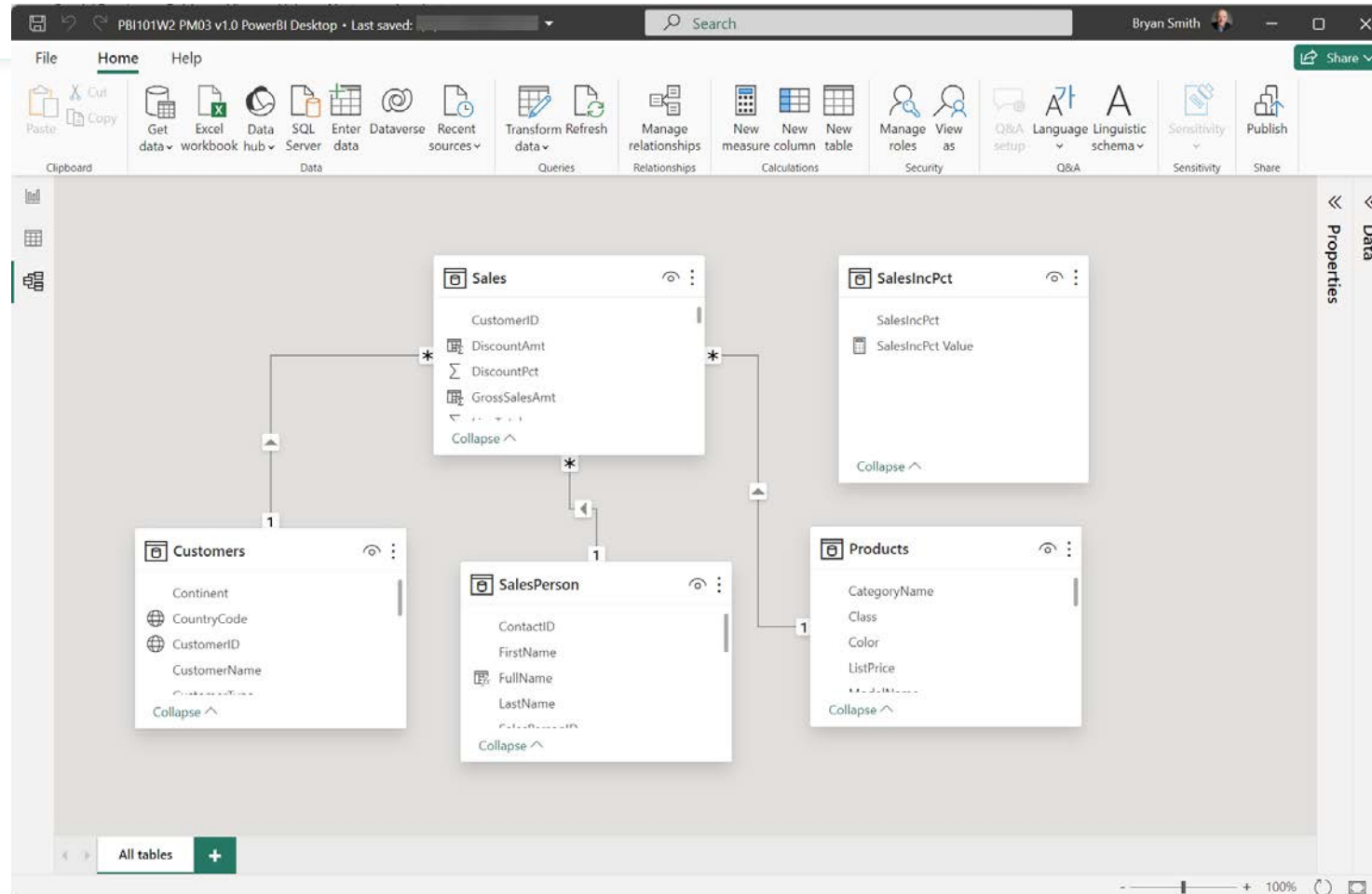


# Power BI Desktop Data Model

Table: Sales (121,317 rows)

| SalesOrderID | CustomerID | ProductID | OrderDate | OrderQty | UnitPrice | DiscountPct | LineTotal | SalesPersonID | GrossSalesAmt | DiscountAmt |
|--------------|------------|-----------|-----------|----------|-----------|-------------|-----------|---------------|---------------|-------------|
| 51178        | 11245      | 870       | 7/1/2003  | 1        | \$4.990   | 0.00%       | \$4.99    |               | \$4.99        |             |
| 51180        | 16313      | 870       | 7/1/2003  | 1        | \$4.990   | 0.00%       | \$4.99    |               | \$4.99        |             |
| 51191        | 12390      | 870       | 7/2/2003  | 1        | \$4.990   | 0.00%       | \$4.99    |               | \$4.99        |             |
| 51196        | 18906      | 870       | 7/2/2003  | 1        | \$4.990   | 0.00%       | \$4.99    |               | \$4.99        |             |
| 51197        | 11448      | 870       | 7/2/2003  | 1        | \$4.990   | 0.00%       | \$4.99    |               | \$4.99        |             |
| 51198        | 11006      | 870       | 7/2/2003  | 1        | \$4.990   | 0.00%       | \$4.99    |               | \$4.99        |             |
| 51199        | 21440      | 870       | 7/2/2003  | 1        | \$4.990   | 0.00%       | \$4.99    |               | \$4.99        |             |
| 51203        | 18208      | 870       | 7/3/2003  | 1        | \$4.990   | 0.00%       | \$4.99    |               | \$4.99        |             |
| 51205        | 11240      | 870       | 7/3/2003  | 1        | \$4.990   | 0.00%       | \$4.99    |               | \$4.99        |             |
| 51206        | 11400      | 870       | 7/3/2003  | 1        | \$4.990   | 0.00%       | \$4.99    |               | \$4.99        |             |
| 51207        | 11338      | 870       | 7/3/2003  | 1        | \$4.990   | 0.00%       | \$4.99    |               | \$4.99        |             |
| 51214        | 19765      | 870       | 7/3/2003  | 1        | \$4.990   | 0.00%       | \$4.99    |               | \$4.99        |             |
| 51216        | 11117      | 870       | 7/3/2003  | 1        | \$4.990   | 0.00%       | \$4.99    |               | \$4.99        |             |
| 51223        | 26826      | 870       | 7/3/2003  | 1        | \$4.990   | 0.00%       | \$4.99    |               | \$4.99        |             |
| 51228        | 11402      | 870       | 7/4/2003  | 1        | \$4.990   | 0.00%       | \$4.99    |               | \$4.99        |             |
| 51230        | 11292      | 870       | 7/4/2003  | 1        | \$4.990   | 0.00%       | \$4.99    |               | \$4.99        |             |
| 51237        | 11061      | 870       | 7/4/2003  | 1        | \$4.990   | 0.00%       | \$4.99    |               | \$4.99        |             |
| 51246        | 25625      | 870       | 7/4/2003  | 1        | \$4.990   | 0.00%       | \$4.99    |               | \$4.99        |             |
| 51247        | 11249      | 870       | 7/5/2003  | 1        | \$4.990   | 0.00%       | \$4.99    |               | \$4.99        |             |
| 51249        | 11334      | 870       | 7/5/2003  | 1        | \$4.990   | 0.00%       | \$4.99    |               | \$4.99        |             |
| 51250        | 19360      | 870       | 7/5/2003  | 1        | \$4.990   | 0.00%       | \$4.99    |               | \$4.99        |             |
| 51259        | 11433      | 870       | 7/5/2003  | 1        | \$4.990   | 0.00%       | \$4.99    |               | \$4.99        |             |
| 51260        | 25618      | 870       | 7/5/2003  | 1        | \$4.990   | 0.00%       | \$4.99    |               | \$4.99        |             |
| 51262        | 11340      | 870       | 7/6/2003  | 1        | \$4.990   | 0.00%       | \$4.99    |               | \$4.99        |             |
| 51267        | 11456      | 870       | 7/6/2003  | 1        | \$4.990   | 0.00%       | \$4.99    |               | \$4.99        |             |
| 51282        | 11008      | 870       | 7/7/2003  | 1        | \$4.990   | 0.00%       | \$4.99    |               | \$4.99        |             |
| 51291        | 11447      | 870       | 7/8/2003  | 1        | \$4.990   | 0.00%       | \$4.99    |               | \$4.99        |             |
| 51298        | 27949      | 870       | 7/8/2003  | 1        | \$4.990   | 0.00%       | \$4.99    |               | \$4.99        |             |

# Power BI Desktop Relationships



# Power BI Desktop Visuals

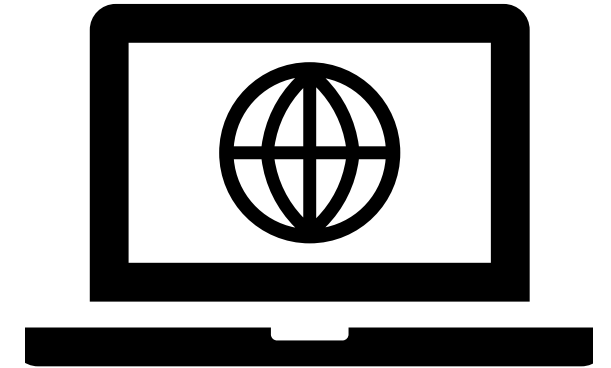
The screenshot displays the Power BI Desktop interface with the following components:

- Top Bar:** File, Home, Insert, Modeling, View, Optimize, Help. Search bar and user profile (Bryan Smith).
- Home Ribbon:** Clipboard (Paste, Copy, Format painter), Data (Get data, Excel workbook, Data hub, SQL Server, Enter data, Dataverse, Recent sources), Queries (Transform data, Refresh data), Insert (New visual, Text box, More visuals), Calculations (New measure, Quick measure), Sensitivity, and Share.
- Main Canvas:** Three visualizations: a pie chart titled 'Components' showing 'Bikes' as the largest category; a grouped bar chart showing sales from 2001 to 2004 for categories like Accessories, Bikes, Clothing, and Components; and a grouped bar chart comparing 'SumSales', 'TotalShoCost', and 'UnitPrice' for Bikes, Components, Clothing, and Accessories.
- Visualizations Pane:** Shows 'Build visual' options, a search bar, and a list of data sources (Customers, Products, Sales, SalesIncPct, SalesPerson). A green callout bubble points to the 'Values' section, which includes 'Add data fields here', 'Drill through', 'Cross-report', and 'Keep all filters'.
- Bottom Bar:** Page 1, Visuals, Formatting, Slicers/Bookmarks, Grouping, ColorSizeTT, Buttons, Cond'l, and a plus sign for more options.

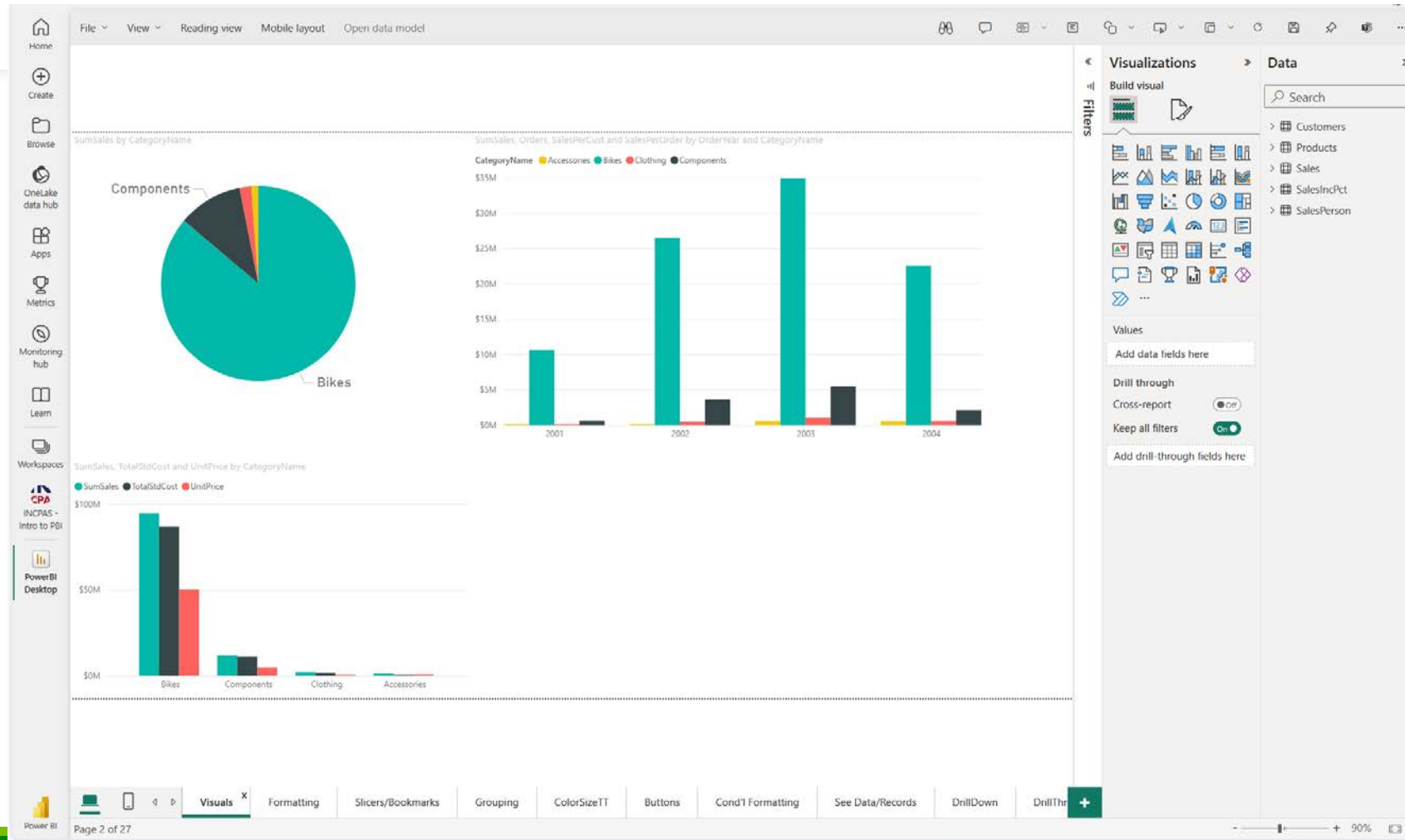
Lots of Visualization choices



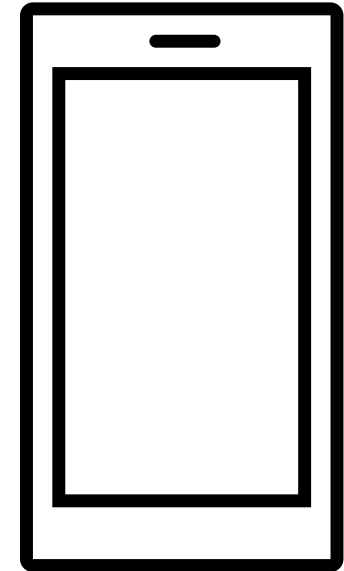
PowerBI.com



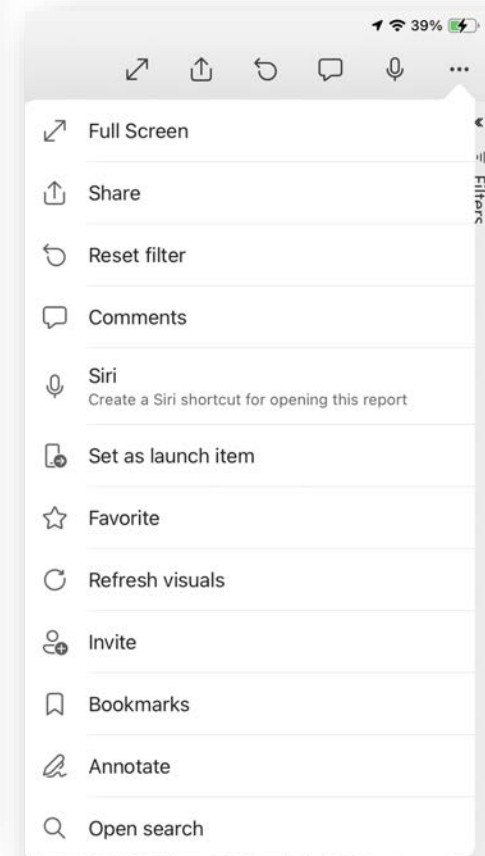
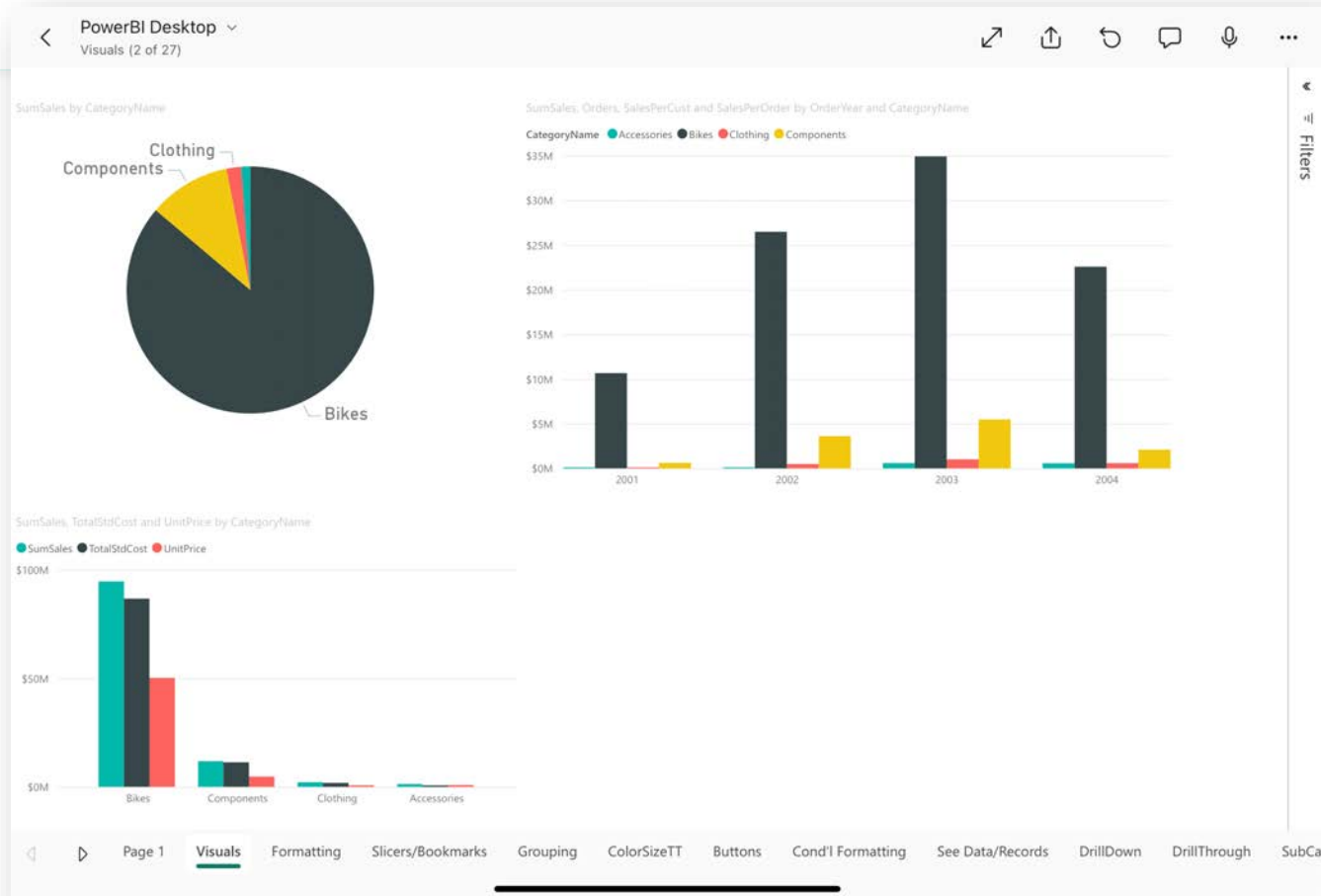
# PowerBI.com Interface



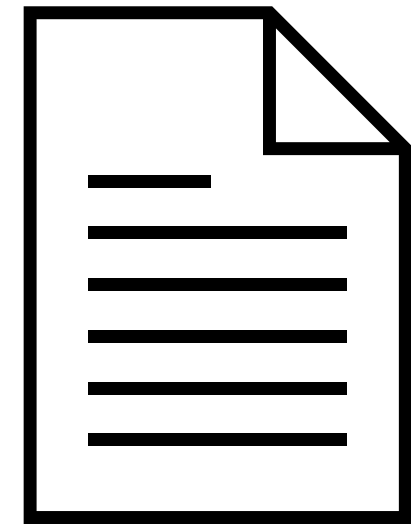
# Power BI Mobile



# Power BI Mobile Interface



# Power BI Report Builder



# Power BI Report Builder Interface

The screenshot displays the Power BI Report Builder interface for a report titled 'Buying Group Account Statement'. The interface includes a top navigation bar with 'Power BI', 'My Workspace', and 'WWI - Account Statement v2'. Below this is a filter bar showing 'File', 'Export', and 'Parameters' with a page indicator '560 of 563'. The main content area is divided into sections for report configuration and data display.

**Report Configuration:**

- Buying Group: Tailspin Toys
- Location: Absecon, NJ, Aceituna...
- Invoices From Date: 05/01/2016
- Invoices To Date: 05/31/2016
- Invoice Range: May 01, 2016 to May 31, 2016
- Buying Group: Tailspin Toys, 201 Customers Selected
- Address: Floor 20, Import Plaza, 105 Silk Road, Tradesville, WA 99999
- Company Logo: Wide World Importers

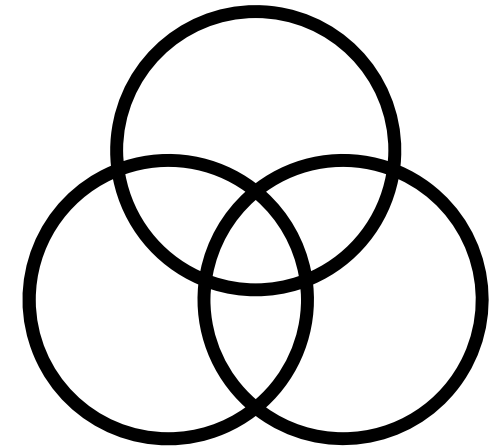
**Invoice Details:**

- Invoice No: **73507-70431**
- Invoice 2 of 3
- Invoice Date: May 31, 2016
- Purchase Order No: 16826
- Billed To: Tailspin Toys (Head Office)
- Delivery Information: Suite 150, 1959 Sarma Road
- Delivery Time: Received By:

**Itemized Invoice Table:**

| Item  | Quantity | Unit Price | Tax             | LineTotal         |
|---|----------|------------|-----------------|-------------------|
| DBA joke mug - you might be a DBA if (White)        | 7        | \$13.00    | \$13.65         | \$104.65          |
| Ogre battery-powered slippers (Green) XL            | 8        | \$32.00    | \$38.40         | \$294.40          |
| Packing knife with metal insert blade (Yellow) 18mm | 15       | \$2.40     | \$5.40          | \$41.40           |
| "The Gu" red shirt XML tag t-shirt (White) 3XS      | 48       | \$18.00    | \$129.60        | \$993.60          |
| <b>TOTAL</b>  |          |            | <b>\$187.05</b> | <b>\$1,434.05</b> |

# Comparative Analysis



# Excel Power BI Tools

## Limitations

- Need current version of Excel
- Need to run 64-bit version
  - May require uninstall and reinstall of all Office products
- Need to know Excel and PivotTables
- May have stability issues
- May not have all the DAX functions

## Strengths

- Familiar interface for Excel users
- Included with Excel if you have the correct version of Office
- Don't have to install another app on all user's computers
- Build data model in Excel and share with PowerBI.com
- Allows the use of OLAP (Online Analytical Processing) features/functions



# Power BI Desktop

## Limitations

- Requires installation of a new app on all computers
- IT may not allow installation
- Need to learn something new
- No PivotTables for Excel “experts”
- PivotTables are easier to use when validating calculations

## Strengths

- Don’t need to be an Excel “expert”
- Don’t have to worry about Office version
- Can install 64-bit version even when your Office version is 32-bit
- More stable than Excel and Power Pivot
- Monthly updates
- More data connectors

# Power BI Services (PowerBI.com)

## Limitations

- Hosted by Microsoft
- Need the \$10/month Pro version to be useful
- Sharing with others requires them to have Pro version
- Configuration can be complicated in enterprise environments
- Need to build Data Model in another tool

## Strengths

- Ability to share work
  - Reports
  - Dashboards
  - Data Models
- Can build Data Model in Power Pivot and then visuals on PBI.com
- Maintain multiple Data Models in one place

# Which Power BI Tool is Right for You?

## Power Pivot

- Own the correct version of Excel
- Have a “high-powered” computer
  - Fast processor, lots of RAM
- Want to stick with Excel
- Rely heavily on PivotTables
- Don’t want to install another application

## Power BI Desktop

- Don’t have the correct version of Excel
- Not an Excel “expert”
- Willing to learn something new
- Want the latest and greatest
- Need the formula functions that aren’t available in Power Pivot

# Wrap-Up



# Presentation Wrap-Up

Microsoft provides Excel and stand-alone tools

Knowledge gained is transferable to other tools

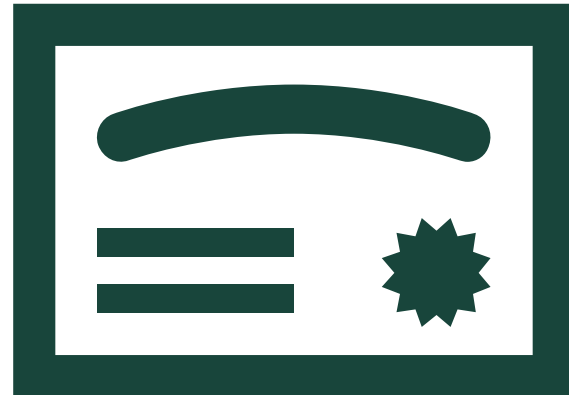
Access large amounts of data very fast

Tools provide data modeling, measures, visualizations and sharing

Use Power BI Services to share data models

# Questions?





# Thank You!!



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ONE FINAL NOTE



# Glossary (1 of 4)

## ➤ Data Analysis

- Data analysis, also known as analysis of data or data analytics, is a process of inspecting, cleansing, transforming, and modeling data with the goal of discovering useful information, suggesting conclusions, and supporting decision-making.

## ➤ Power Pivot

- Power Pivot is an Excel add-in you can use to perform powerful data analysis and create sophisticated data models. With Power Pivot, you can mash up large volumes of data from various sources, perform information analysis rapidly, and share insights easily.

## ➤ Power Query

- Power Query enhances self-service business intelligence (BI) for Excel and Power BI Desktop with an intuitive and consistent experience for discovering, combining, and refining data across a wide variety of sources including relational, structured and semi-structured, OData, Web, Hadoop, and more.

# Glossary (2 of 4)

## ➤ Power Map

- Microsoft Power Map for Excel is a three-dimensional (3-D) data visualization tool that lets you look at information in new ways. A power map lets you discover insights you might not see in traditional two-dimensional (2-D) tables and charts.
- With Power Map, you can plot geographic and temporal data on a 3-D globe or custom map, show it over time, and create visual tours you can share with other people.

## ➤ Power BI Desktop

- Power BI Desktop is a free application you can install on your local computer that lets you connect to, transform, and visualize your data. With Power BI Desktop, you can connect to multiple different sources of data and combine them (often called modeling) into a data model that lets you build visuals, and collections of visuals you can share as reports, with other people inside your organization. Most users who work on Business Intelligence projects use Power BI Desktop to create reports, and then use the Power BI service to share their reports with others.

# Glossary (3 of 4)

## ➤ Power BI Services

- Power BI. Power BI is a business analytics service provided by Microsoft. It provides interactive visualizations with self-service business intelligence capabilities, where end users can create reports and dashboards by themselves, without having to depend on information technology staff or database administrators.

## ➤ Power BI Mobile

- Power BI offers a set of mobile apps for iOS, Android, and Windows 10 mobile devices. In the mobile apps, you connect to and interact with your cloud and on-premises data.

## ➤ Power BI Report Server

- Power BI Report Server is an on-premises report server with a web portal in which you display and manage reports and KPIs. Along with it come the tools to create Power BI reports, paginated reports, mobile reports, and KPIs. Your users can access those reports in different ways: viewing them in a web browser or mobile device, or as an email in their in-box.

# Glossary (4 of 4)

## ➤ Power BI Report Builder

- Power BI Report Builder is a tool that allows users to create paginated reports in Power BI. These reports are ideal for printing or sharing and are highly formatted. They are often referred to as "pixel-perfect" because of the precise control users have over how the content is displayed, such as tables, charts, and text.

## ➤ Hierarchies

- Hierarchies allow aggregating data on different levels - for example users may drill down into a date-hierarchy from the year-level to quarters, months and days.

## ➤ KPI (Key Performance Indicators)

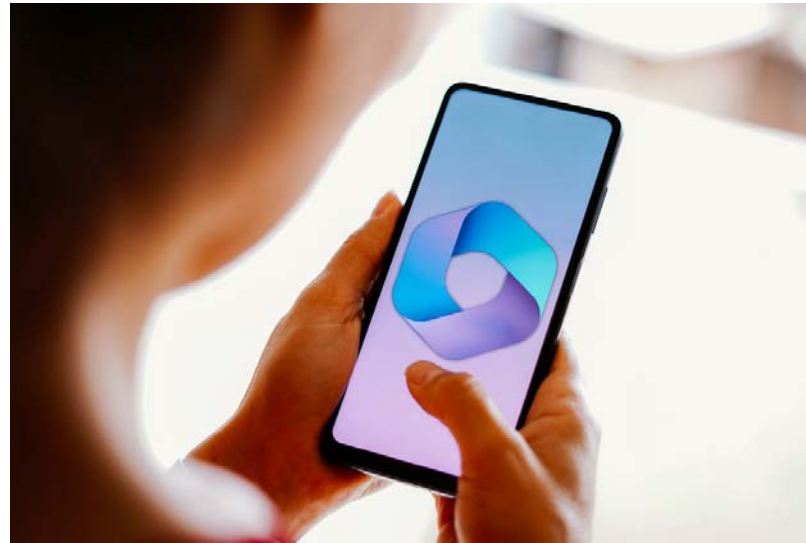
- A Key Performance Indicator (KPI) is a visual cue that communicates the amount of progress made toward a measurable goal.

2:15 – 3:25 p.m.

# Get Ready for Microsoft Copilot

**John Higgins, CPA, CITP, Strategic Technology Advisor,**  
*Higgins Advisory, LLC*

# Copilot for Microsoft 365 – Get Ready to Boost Your Productivity



Presented By  
John H. Higgins, CPA.CITP  
Rochester, Michigan

# Learning Goals



- Recognize the potential for Microsoft 365 Copilot to transform the way you use everyday applications.
- Identify the steps you can take to prepare your organization to leverage the full value of Copilot.

# Presentation Outline

- [Microsoft Copilot Ecosystem Overview](#)
- [Copilot for Microsoft 365 Deep Dive](#)
- [Preparing Your Organization For Copilot](#)
- [Wrap-up](#)



# MICROSOFT COPILOT ECOSYSTEM OVERVIEW





# Things to Know About Microsoft Copilot

Copilot is ChatGPT technology embedded into Microsoft applications

Microsoft owns a 49% stake in OpenAI the creator of ChatGPT

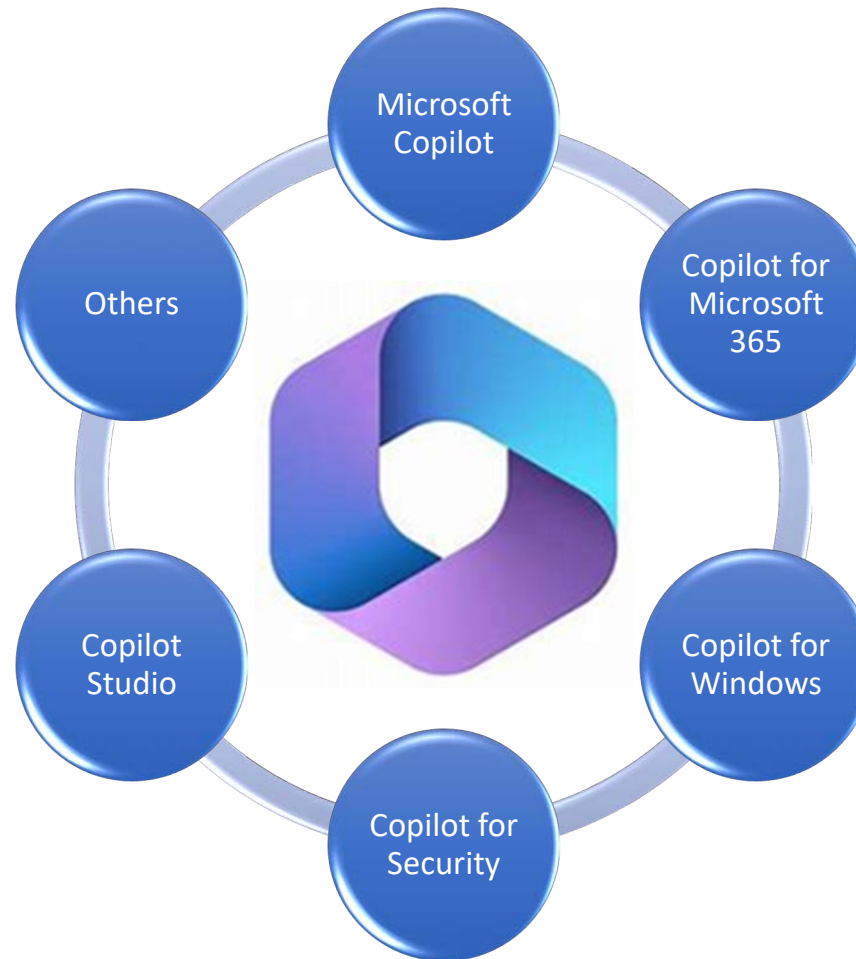
There are multiple Copilot products

Copilot for Microsoft 365 requires Business Standard, Premium, E3 or E5 subscription

Copilot for Microsoft 365 is \$30 per user, per month license fee

Microsoft [Commercial Data Protection](#) secures your data privacy in Copilot

# Microsoft Copilot Apps



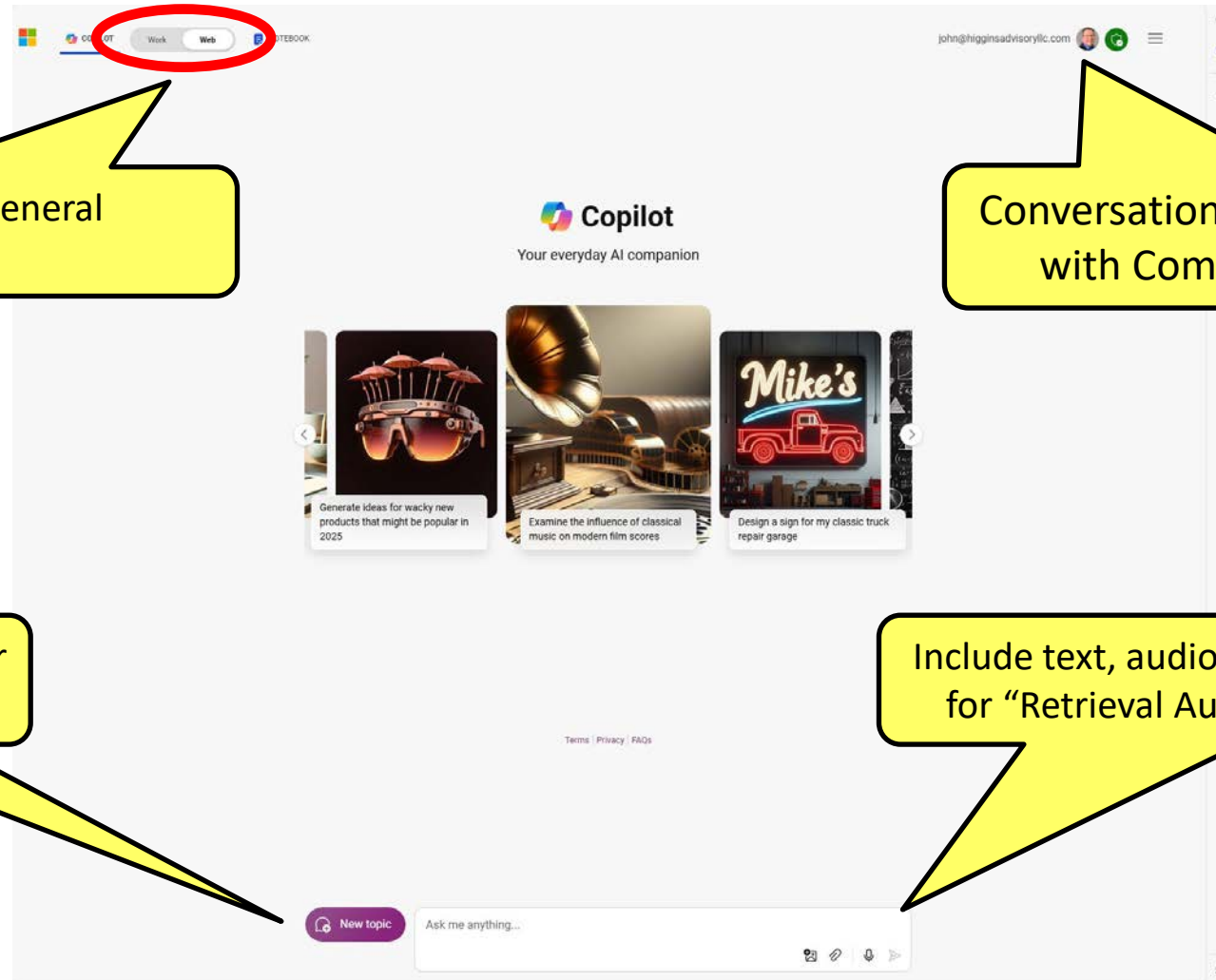


# Microsoft Copilot

- Essentially ChatGPT rebranded as Copilot
- Free version vs. Copilot Pro \$20 per month
- Chat with text, voice and images
- Summarize documents and web pages
- Image creation
- Web grounding (access current data via web)
- Commercial Data Protection with Microsoft Entra ID



# Copilot Prompt Screen - Web

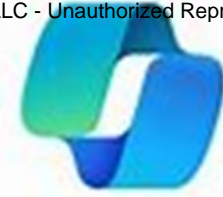


“Web” is free and is used for general prompting / chatting

Conversations and data are kept private with Commercial Data Protection

Prompt data is not saved or used for LLM training

Include text, audio, images and files with prompt for “Retrieval Augmented Generation” (RAG)



# Copilot Web Example

The screenshot displays the Copilot Web interface. At the top left, the 'Work' and 'Web' tabs are visible, with the 'Web' tab highlighted by a red circle. The main content area shows a job opportunity for a Staff Accountant. The text includes:

**You**  
Create an online ad for a staff accountant for our chain of retail florist stores with headquarters located in Rochester, Michigan. This is a hybrid position. Our primary software applications are Shopify, Sage Intacct and Microsoft 365.

**Copilot**  
**Job Opportunity: Staff Accountant**  
**Location:** Rochester, Michigan (Hybrid Position)  
**Company:** [Your Florist Chain Name]

**About Us:** We are a thriving chain of retail florist stores with a passion for delivering beautiful floral arrangements and exceptional customer service. Our headquarters is located in Rochester, Michigan, and we are looking for a dedicated Staff Accountant to join our dynamic team.

**Position Overview:** As a Staff Accountant, you will play a crucial role in managing our financial operations. This hybrid position offers the flexibility of working both remotely and from our Rochester headquarters. You will be responsible for maintaining accurate financial records, preparing reports, and ensuring compliance with accounting standards.

**Key Responsibilities:**

- Manage day-to-day accounting operations, including accounts payable and receivable.
- Reconcile bank statements and general ledger accounts.
- Prepare monthly, quarterly, and annual financial statements.
- Assist with budgeting and forecasting processes.
- Ensure compliance with financial regulations and standards.
- Collaborate with other departments to support financial decision-making.

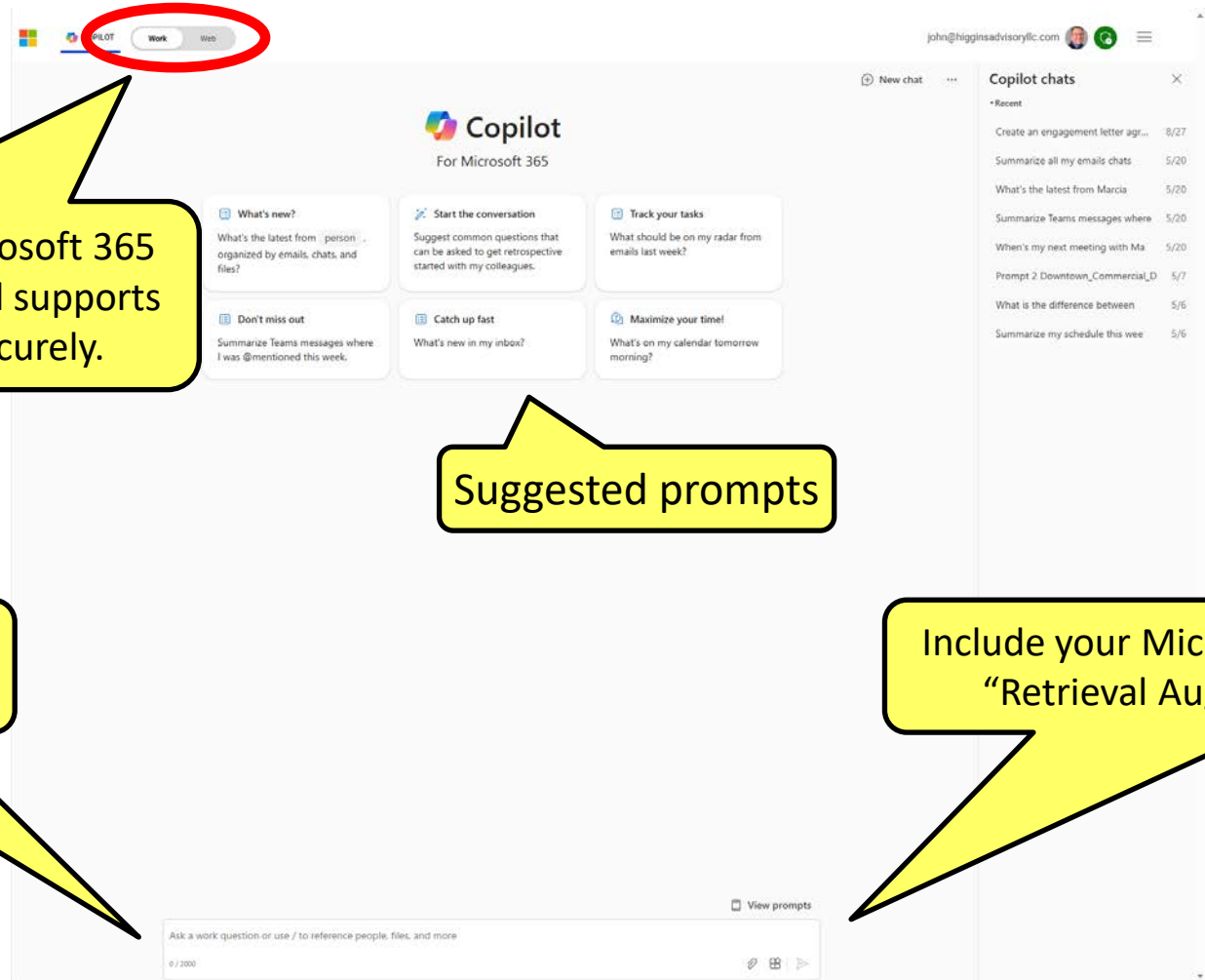
**Qualifications:**

- Bachelor's degree in Accounting, Finance, or a related field.
- Proven experience as a Staff Accountant or in a similar role.
- Proficiency in Shopify, Sage Intacct, and Microsoft 365.
- Strong analytical and problem-solving skills.
- Excellent attention to detail and organizational abilities.
- Ability to work independently and as part of a team.

At the bottom, there is a text input field with the placeholder text 'Ask me anything...' and a microphone icon.



# Copilot Prompt Screen - Work



“Work” requires Copilot for Microsoft 365 subscription (\$30 per month) and supports prompting your company data securely.

Chat conversations are retained

Suggested prompts

Prompt data is not used for LLM training

Include your Microsoft 365 data with prompt for “Retrieval Augmented Generation” (RAG)

# Copilot Work Example



Work Web

Copilot  
List the upcoming flights I ha...

August 30, 2024 at 09:08 AM

List the upcoming flights I have scheduled with Delta in my Outlook calendar

Sure, here are your upcoming flights with Delta as per your Outlook calendar:

- Delta Air Lines flight 3971 to Milwaukee (G5RX3U): Departs on September 11th, 2024 at 7:59 PM from Detroit (DTW) and arrives at 8:10 PM in Milwaukee (MKE) [1](#).
- Delta Air Lines flight 1173 to Atlanta (G5RX3U): Departs on September 12th, 2024 at 7:33 PM and arrives at 9:35 PM [2](#).
- Delta Air Lines flight 1232 to Detroit (G5RX3U): Departs on September 13th, 2024 at 9:20 PM and arrives at 11:12 PM [3](#).
- Delta Air Lines flight 334 to Las Vegas (GU7CEU): Departs on September 30th, 2024 at 8:30 AM and arrives at 12:59 PM [4](#).
- Delta Air Lines flight 421 to Detroit (GU7CEU): Departs on October 5th, 2024 at 6:10 PM and arrives at 10:09 PM [5](#).
- Delta Air Lines flight 1171 to Boston (G3J8XY): Departs on November 5th, 2024 at 3:50 PM and arrives at 5:50 PM [6](#).
- Delta Air Lines flight 2061 to Detroit (G3J8XY): Departs on November 7th, 2024 at 5:40 PM and arrives at 8:06 PM [7](#).
- Delta Air Lines flight 3971 to Milwaukee (G3J8XY): Departs on November 7th, 2024 at 8:43 PM and arrives at 9:59 PM [8](#).
- Delta Air Lines flight 3697 to Detroit (G3J8XY): Departs on November 8th, 2024 at 6:04 PM and arrives at 7:20 PM [9](#).
- Delta Air Lines flight 2476 to Washington (GU5BFV): Departs on November 10th, 2024 at 10:20 AM and arrives at 11:48 AM [10](#).

You have a total of 11 flights scheduled. Please check your calendar for the complete list. Is there anything else you would like to know?

1 Delta Air Lines flight 3971 ... 2 Delta Air Lines flight 1173 ... 3 Delta Air Lines flight 1232 ... +7

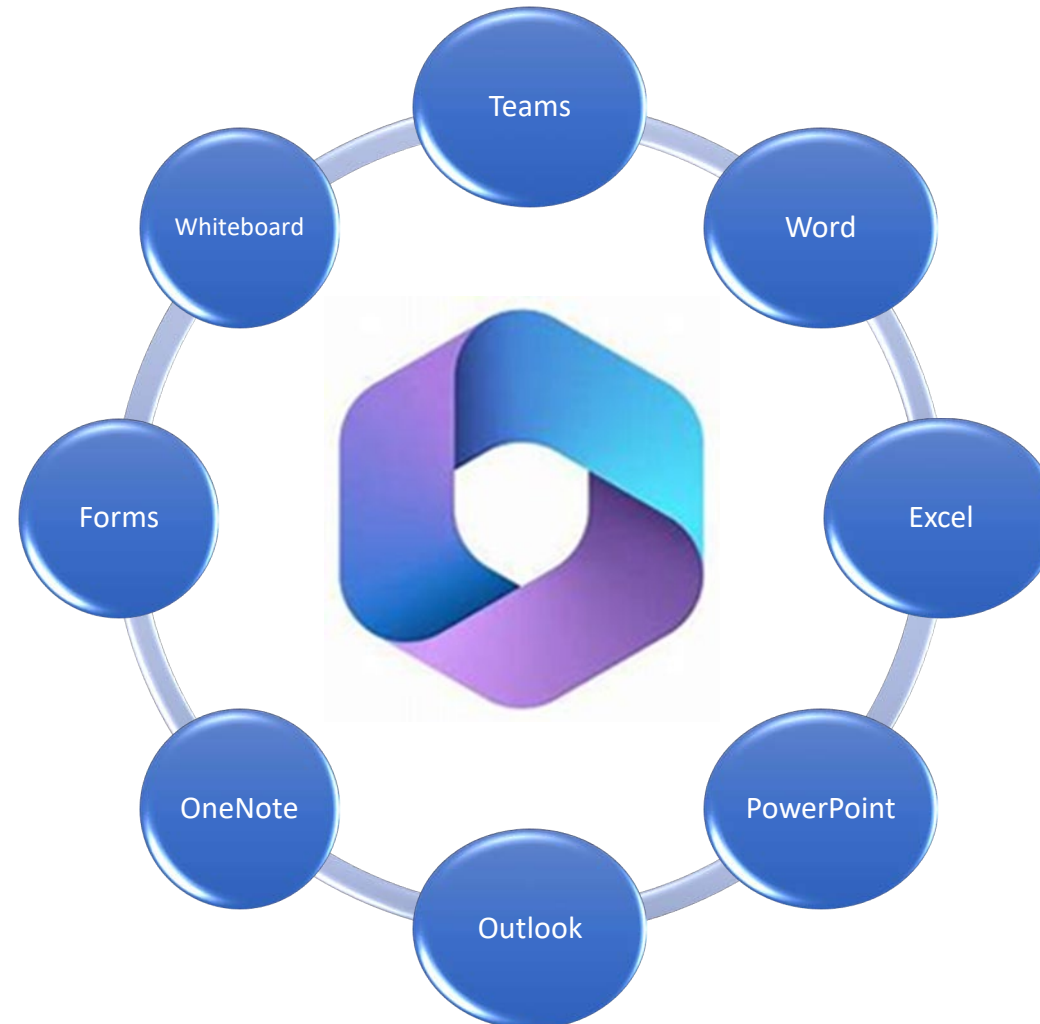
Copy 1 of 30 responses AI-generated content may be incorrect

Can you summarize my flights for the next month? What is the duration of my flight to Las Vegas?

Are there any layovers for my flight to Boston?



# COPILOT FOR MICROSOFT 365 DEEP DIVE

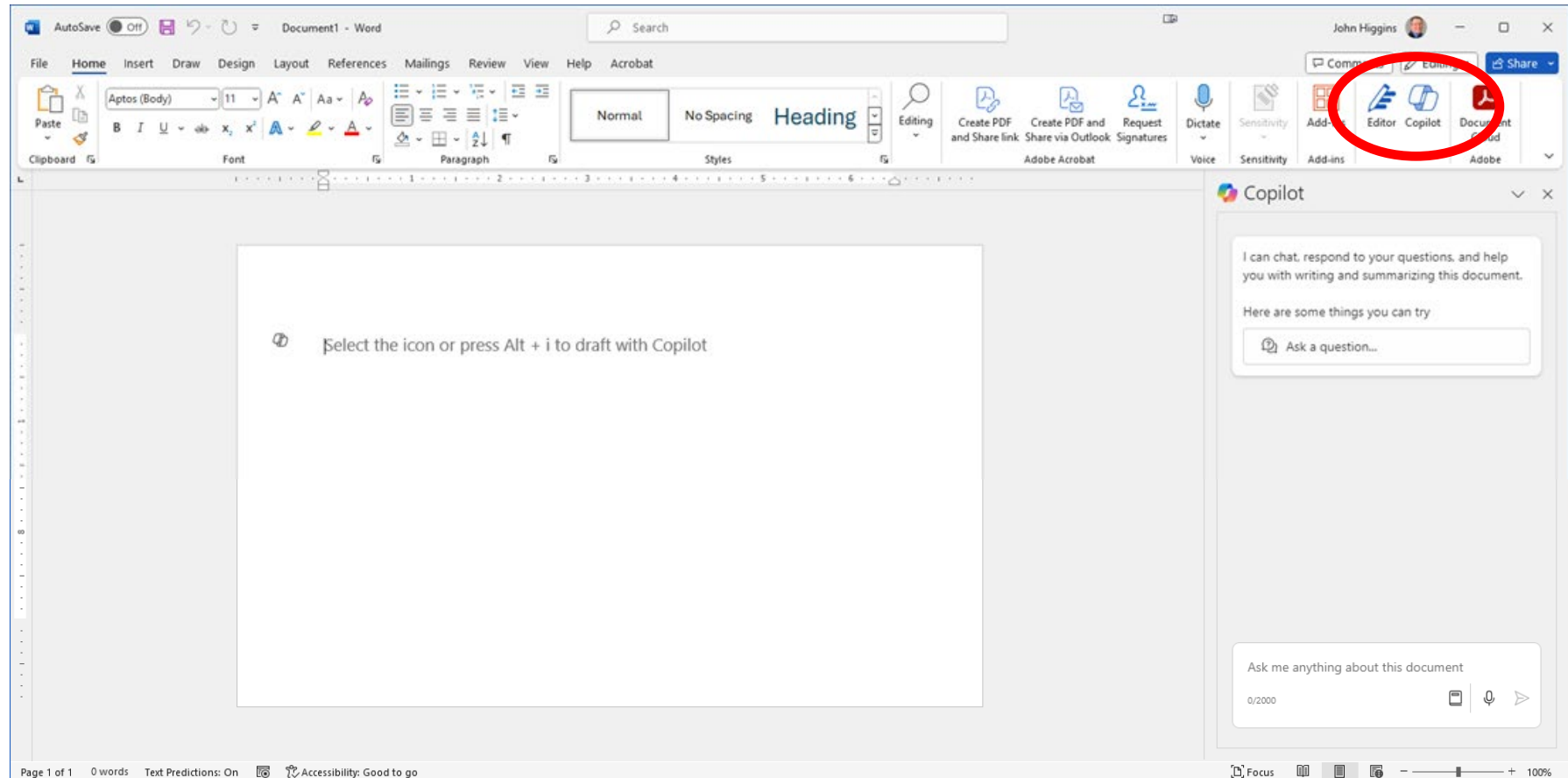


# Copilot for Word



- Create first draft of documents
- Rewrite an existing document
- Transform text into table format
- Research from within existing document
- Summarize a document

# Copilot for Word

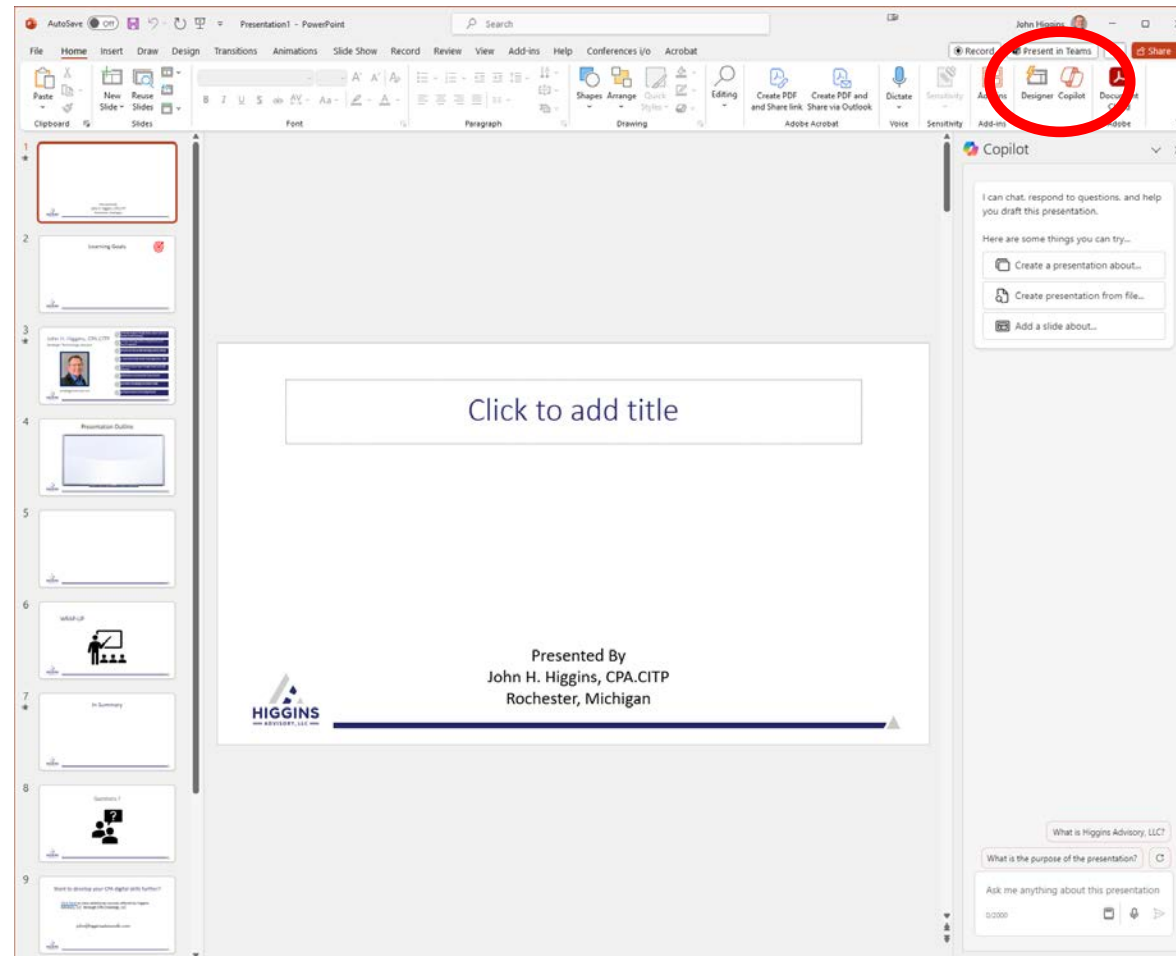
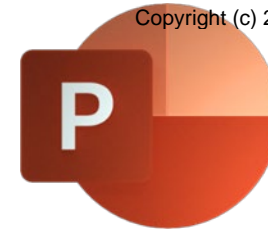




# Copilot for PowerPoint

- Create new presentation slide deck w/ images
- Summarize an existing presentation
- Reorganize an existing presentation
- Integrate your company's branding into a presentation

# Copilot for PowerPoint



# Copilot for Excel



- Only works with data formatted as a table
- Create table column formulas
- Sort and filter table data
- Analyze table data

# Copilot for Excel



The screenshot shows the Microsoft Excel interface with a data table. The 'Copilot' button in the ribbon is circled in red. The Copilot pane on the right is titled 'Copilot (Preview)' and contains several options: 'Create', 'Add formula columns', 'Edit', 'Highlight', 'Sort and filter', and 'Understand'. Below these options, there are prompts like 'Show data insights', 'Show a suggestion for a formula column', and 'How can I highlight, filter, and sort data?'. At the bottom of the Copilot pane, there is a text input field with the placeholder 'Ask a question or make a request about data in a table' and a '0/2000' character count.

| Region | Country        | Group          | Product Name  | Product Category      | Order Date | Order Quantity | Unit Price | Total Product Cost | Sales Amount | Tax Amt | Freight |   |
|--------|----------------|----------------|---------------|-----------------------|------------|----------------|------------|--------------------|--------------|---------|---------|---|
| 110    | Germany        | Germany        | Europe        | Classic Vest, L       | Vests      | 11/8/2011      | 1          | 63.5               | 23.749       | 63.5    | 5.08    | 1 |
| 120    | United Kingdom | United Kingdom | Europe        | Classic Vest, L       | Vests      | 8/31/2011      | 1          | 63.5               | 23.749       | 63.5    | 5.08    | 1 |
| 100    | France         | France         | Europe        | Classic Vest, L       | Vests      | 3/17/2011      | 1          | 63.5               | 23.749       | 63.5    | 5.08    | 1 |
| 160    | Northwest      | United States  | North America | Classic Vest, L       | Vests      | 12/19/2010     | 1          | 63.5               | 23.749       | 63.5    | 5.08    | 1 |
| 160    | Northwest      | United States  | North America | Classic Vest, L       | Vests      | 11/6/2010      | 1          | 63.5               | 23.749       | 63.5    | 5.08    | 1 |
| 130    | Canada         | Canada         | North America | Classic Vest, L       | Vests      | 10/22/2010     | 1          | 63.5               | 23.749       | 63.5    | 5.08    | 1 |
| 100    | France         | France         | Europe        | Classic Vest, M       | Vests      | 12/5/2011      | 1          | 63.5               | 23.749       | 63.5    | 5.08    | 1 |
| 160    | Northwest      | United States  | North America | Classic Vest, M       | Vests      | 11/7/2011      | 1          | 63.5               | 23.749       | 63.5    | 5.08    | 1 |
| 110    | Germany        | Germany        | Europe        | Classic Vest, M       | Vests      | 10/10/2011     | 1          | 63.5               | 23.749       | 63.5    | 5.08    | 1 |
| 100    | France         | France         | Europe        | Classic Vest, M       | Vests      | 4/8/2011       | 1          | 63.5               | 23.749       | 63.5    | 5.08    | 1 |
| 130    | Canada         | Canada         | North America | Classic Vest, M       | Vests      | 3/24/2011      | 1          | 63.5               | 23.749       | 63.5    | 5.08    | 1 |
| 160    | Northwest      | United States  | North America | Classic Vest, M       | Vests      | 3/12/2011      | 1          | 63.5               | 23.749       | 63.5    | 5.08    | 1 |
| 130    | Canada         | Canada         | North America | Classic Vest, M       | Vests      | 2/8/2011       | 1          | 63.5               | 23.749       | 63.5    | 5.08    | 1 |
| 100    | France         | France         | Europe        | Classic Vest, M       | Vests      | 1/15/2011      | 1          | 63.5               | 23.749       | 63.5    | 5.08    | 1 |
| 110    | Germany        | Germany        | Europe        | Classic Vest, M       | Vests      | 12/1/2010      | 1          | 63.5               | 23.749       | 63.5    | 5.08    | 1 |
| 120    | United Kingdom | United Kingdom | Europe        | Classic Vest, M       | Vests      | 11/27/2010     | 1          | 63.5               | 23.749       | 63.5    | 5.08    | 1 |
| 110    | Germany        | Germany        | Europe        | Classic Vest, M       | Vests      | 8/11/2010      | 1          | 63.5               | 23.749       | 63.5    | 5.08    | 1 |
| 130    | Canada         | Canada         | North America | Classic Vest, M       | Vests      | 5/2/2010       | 1          | 63.5               | 23.749       | 63.5    | 5.08    | 1 |
| 130    | Canada         | Canada         | North America | Classic Vest, M       | Vests      | 2/4/2010       | 1          | 63.5               | 23.749       | 63.5    | 5.08    | 1 |
| 210    | Canada         | Canada         | North America | Classic Vest, M       | Vests      | 12/16/2009     | 1          | 63.5               | 23.749       | 63.5    | 5.08    | 1 |
| 220    | United Kingdom | United Kingdom | Europe        | Classic Vest, S       | Vests      | 11/6/2011      | 1          | 63.5               | 23.749       | 63.5    | 5.08    | 1 |
| 230    | Germany        | Germany        | Europe        | Classic Vest, S       | Vests      | 2/27/2011      | 1          | 63.5               | 23.749       | 63.5    | 5.08    | 1 |
| 240    | France         | France         | Europe        | Classic Vest, S       | Vests      | 1/26/2011      | 1          | 63.5               | 23.749       | 63.5    | 5.08    | 1 |
| 210    | Germany        | Germany        | Europe        | Classic Vest, S       | Vests      | 10/1/2010      | 1          | 63.5               | 23.749       | 63.5    | 5.08    | 1 |
| 260    | Germany        | Germany        | Europe        | Classic Vest, S       | Vests      | 7/31/2010      | 1          | 63.5               | 23.749       | 63.5    | 5.08    | 1 |
| 270    | France         | France         | Europe        | Half-Finger Gloves, L | Gloves     | 12/30/2011     | 1          | 24.49              | 9.1593       | 24.49   | 1.9592  | 0 |
| 280    | Northwest      | United States  | North America | Half-Finger Gloves, L | Gloves     | 12/17/2011     | 1          | 24.49              | 9.1593       | 24.49   | 1.9592  | 0 |
| 290    | Canada         | Canada         | North America | Half-Finger Gloves, L | Gloves     | 11/24/2011     | 1          | 24.49              | 9.1593       | 24.49   | 1.9592  | 0 |
| 160    | Northwest      | United States  | North America | Half-Finger Gloves, L | Gloves     | 11/2/2011      | 1          | 24.49              | 9.1593       | 24.49   | 1.9592  | 0 |
| 100    | France         | France         | Europe        | Half-Finger Gloves, L | Gloves     | 10/17/2011     | 1          | 24.49              | 9.1593       | 24.49   | 1.9592  | 0 |
| 160    | Northwest      | United States  | North America | Half-Finger Gloves, L | Gloves     | 9/29/2011      | 1          | 24.49              | 9.1593       | 24.49   | 1.9592  | 0 |
| 100    | France         | France         | Europe        | Half-Finger Gloves, L | Gloves     | 9/11/2011      | 1          | 24.49              | 9.1593       | 24.49   | 1.9592  | 0 |
| 100    | France         | France         | Europe        | Half-Finger Gloves, L | Gloves     | 7/27/2011      | 1          | 24.49              | 9.1593       | 24.49   | 1.9592  | 0 |
| 100    | France         | France         | Europe        | Half-Finger Gloves, L | Gloves     | 6/8/2011       | 1          | 24.49              | 9.1593       | 24.49   | 1.9592  | 0 |
| 120    | United Kingdom | United Kingdom | Europe        | Half-Finger Gloves, L | Gloves     | 5/29/2011      | 1          | 24.49              | 9.1593       | 24.49   | 1.9592  | 0 |
| 130    | Canada         | Canada         | North America | Half-Finger Gloves, L | Gloves     | 5/12/2011      | 1          | 24.49              | 9.1593       | 24.49   | 1.9592  | 0 |
| 120    | United Kingdom | United Kingdom | Europe        | Half-Finger Gloves, L | Gloves     | 5/4/2011       | 1          | 24.49              | 9.1593       | 24.49   | 1.9592  | 0 |
| 130    | Canada         | Canada         | North America | Half-Finger Gloves, L | Gloves     | 4/29/2011      | 1          | 24.49              | 9.1593       | 24.49   | 1.9592  | 0 |
| 110    | Germany        | Germany        | Europe        | Half-Finger Gloves, L | Gloves     | 3/28/2011      | 1          | 24.49              | 9.1593       | 24.49   | 1.9592  | 0 |
| 110    | Germany        | Germany        | Europe        | Half-Finger Gloves, L | Gloves     | 3/21/2011      | 1          | 24.49              | 9.1593       | 24.49   | 1.9592  | 0 |
| 130    | Canada         | Canada         | North America | Half-Finger Gloves, L | Gloves     | 2/14/2011      | 1          | 24.49              | 9.1593       | 24.49   | 1.9592  | 0 |
| 130    | Canada         | Canada         | North America | Half-Finger Gloves, L | Gloves     | 12/19/2010     | 1          | 24.49              | 9.1593       | 24.49   | 1.9592  | 0 |
| 140    | United Kingdom | United Kingdom | Europe        | Half-Finger Gloves, L | Gloves     | 10/6/2010      | 1          | 24.49              | 9.1593       | 24.49   | 1.9592  | 0 |
| 100    | France         | France         | Europe        | Half-Finger Gloves, L | Gloves     | 9/8/2010       | 1          | 24.49              | 9.1593       | 24.49   | 1.9592  | 0 |
| 100    | France         | France         | Europe        | Half-Finger Gloves, L | Gloves     | 7/31/2010      | 1          | 24.49              | 9.1593       | 24.49   | 1.9592  | 0 |
| 130    | Canada         | Canada         | North America | Half-Finger Gloves, L | Gloves     | 7/1/2010       | 1          | 24.49              | 9.1593       | 24.49   | 1.9592  | 0 |
| 100    | France         | France         | Europe        | Half-Finger Gloves, L | Gloves     | 6/29/2010      | 1          | 24.49              | 9.1593       | 24.49   | 1.9592  | 0 |
| 110    | Germany        | Germany        | Europe        | Half-Finger Gloves, L | Gloves     | 5/19/2010      | 1          | 24.49              | 9.1593       | 24.49   | 1.9592  | 0 |
| 130    | Canada         | Canada         | North America | Half-Finger Gloves, L | Gloves     | 5/18/2010      | 1          | 24.49              | 9.1593       | 24.49   | 1.9592  | 0 |
| 110    | Germany        | Germany        | Europe        | Half-Finger Gloves, L | Gloves     | 5/8/2010       | 1          | 24.49              | 9.1593       | 24.49   | 1.9592  | 0 |
| 130    | Canada         | Canada         | North America | Half-Finger Gloves, L | Gloves     | 4/10/2010      | 1          | 24.49              | 9.1593       | 24.49   | 1.9592  | 0 |
| 120    | United Kingdom | United Kingdom | Europe        | Half-Finger Gloves, M | Gloves     | 10/25/2011     | 1          | 24.49              | 9.1593       | 24.49   | 1.9592  | 0 |
| 160    | Northwest      | United States  | North America | Half-Finger Gloves, M | Gloves     | 10/4/2011      | 1          | 24.49              | 9.1593       | 24.49   | 1.9592  | 0 |
| 110    | Germany        | Germany        | Europe        | Half-Finger Gloves, M | Gloves     | 9/2/2011       | 1          | 24.49              | 9.1593       | 24.49   | 1.9592  | 0 |

# Copilot for Outlook



A screenshot of the Microsoft Outlook interface. The main window shows an email composition screen with fields for 'To', 'Cc', and 'Subject'. The email content includes a signature for John Higgins, CPA.CITP, Strategic Technology Advisor, with contact information. A 'Book time to meet with me' button is visible. On the right side, the Copilot sidebar is open, displaying three suggestions: 'Understand' (Tell me more about [topic]), 'Find something' (Find the file that [person shared last week about]), and 'Stay on top' (Summarize recent emails where I was @mentioned). A red circle highlights the Copilot icon in the top right corner of the Outlook window.





# Copilot for Outlook

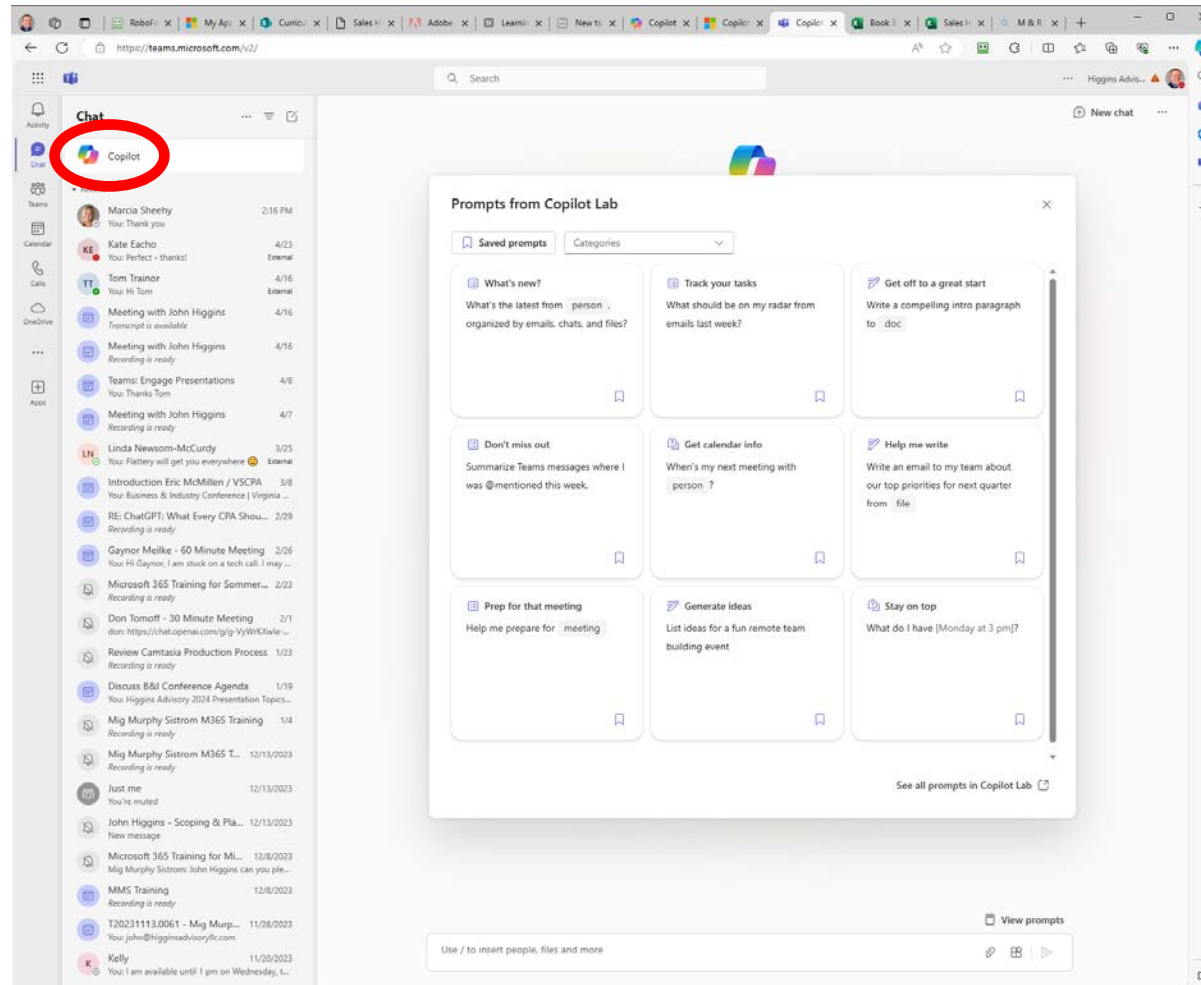
- Compose new email messages
- Compose email replies
- Analyze / summarize email messages



# Copilot for Teams

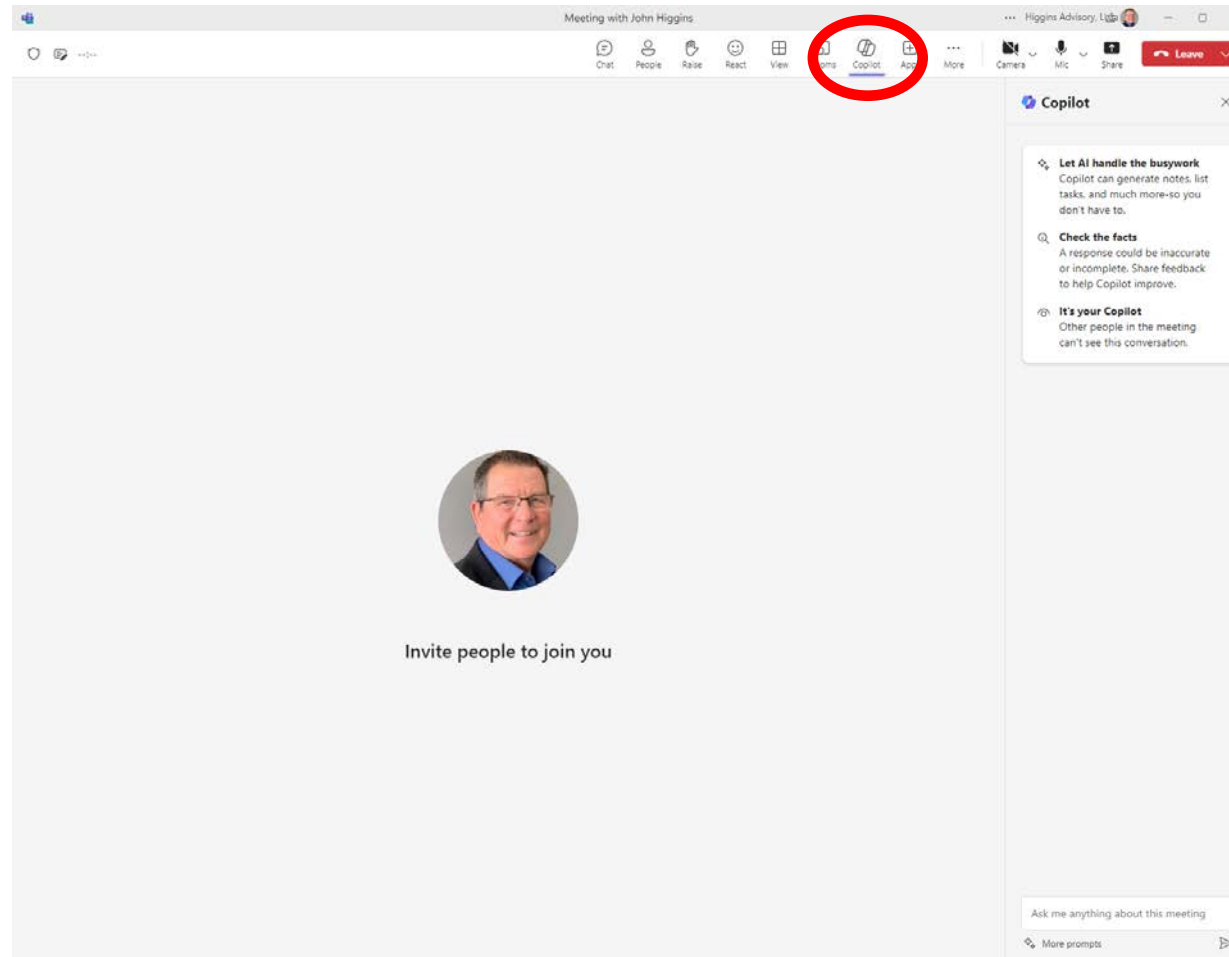
- Summarize meeting or call data in real time
- Summarize chat conversations for main points, action items and decisions
- Summarize data across all Teams data; emails, documents, notes, contacts and more

# Copilot for Teams





# Copilot for Teams Meetings





# Copilot for Teams Meetings

**Content**

Attendance

Notes AI notes Mentions Transcript

Generated by AI. Be sure to check for accuracy. Copy all

**Meeting notes**

- > **Teams and SharePoint Integration:** John explained the process of integrating Teams and SharePoint, focusing on how to move files between the two platforms and the importance of understanding the corresponding SharePoint site for a team. This was part of a broader discussion on maximizing the use of Teams for collaboration.
- > **File Sharing and Security:** John and Richard discussed the nuances of sharing files within Teams and SharePoint, emphasizing the importance of selecting the appropriate sharing settings to ensure security and control over who can access the files. This included a detailed explanation of sharing options and the implications of each choice.
- > **Collaboration in Real-Time:** John demonstrated real-time collaboration on an Excel file with Richard, showcasing the ability to work simultaneously on a document and the visibility of each participant's actions within the file. This highlighted the potential for efficient teamwork and the importance of the autosave feature.
- **Version Control and File Recovery:** Annette inquired about recovering previous versions of a file after changes were made, leading to a brief explanation by John on how to access version history in SharePoint. This discussion underscored the value of SharePoint's version control for managing document revisions and ensuring data integrity.

Are these notes useful? 🗨️ 🗑️


**Follow-up tasks**

- **File Sharing:** Review and update the shared Excel file as requested (Richard)
- **Meeting Follow-up:** Solicit input from the team for topics to cover in the last training session (Richard)
- **SharePoint Training:** Prepare to cover SharePoint version history and file recovery in the next session (John)

Are these tasks useful? 🗨️ 🗑️







# Microsoft Copilot Products

## Copilot – your AI assistant



Copilot for Microsoft 365

Word Outlook Excel PowerPoint Teams Chat



Better Q&A and task completion

Better reading and writing assistance

Better e-mail management


Better data analysis

Better presentations

Better Meetings


Better knowledge management

Windows Copilot




Better interaction with OS, apps, and files

Copilot for Sales  
Copilot for Service




Better sales and customer support

Fabric Copilot




Better data analytics and business intelligence

Security Copilot




Better threat detection, identification, and mitigation

GitHub Copilot



Better code development

Power Platform Copilot



Better creation of apps, workflows, and agents

# Preparing Your Organization for Copilot

- Get your Microsoft 365 data governance managed
- Store files in SharePoint and OneDrive
- Use Teams & Channels vs. Chats
- Use Teams Meetings vs. Zoom
- Educate your staff on Generative AI & Copilot

# WRAP-UP





# In Summary

- The Copilot ecosystem adds significant capabilities to Microsoft 365 to increase your productivity
- We are in the first generation of Copilot, expect substantial advancements
- Most importantly, Copilot protects the security and privacy of your company data while it is being used with generative AI
- Get started today!

# Thank you!!!

Let's connect on LinkedIn →



3:40 – 4:40 p.m.

## Ask the Experts

**John Higgins, CPA, CITP**, *Strategic Technology Advisor,  
Higgins Advisory, LLC*

**Bryan Smith, CPA, CITP, CISA**, *Owner, DataSmith Pro, LLC*



