POWER BIUSER GROUP SESSION 4 MARCH 24, 2022



Facilitated by: Steve Dunlop

Angus McLeod

Roy Vasher



Agenda

- Opening Remarks and Review of Agenda
- Introductions new attendees only
 - $\,\circ\,$ Name, Company, and level of experience with Power BI
- Presentation by Dennis Rausch, VP Information Technology, Rea Magnet Wire Company
 Enterprise Data Sources
- Presentation by Kyle Smith, IT Supervisor, Nucor
 - $\,\circ\,$ Connection to real-time data to display up-to-date information
- Presentation by DCMME, Student Project Team
 - Building Power BI Dashboard from a sketch Step by Step process
- Google File Sharing vs Teams Option
- Closing Remarks Next Meeting



PowerBI: Enterprise Data Sources Examples from Rea





Microsoft PowerBI Pro - Prerequisites

Versions

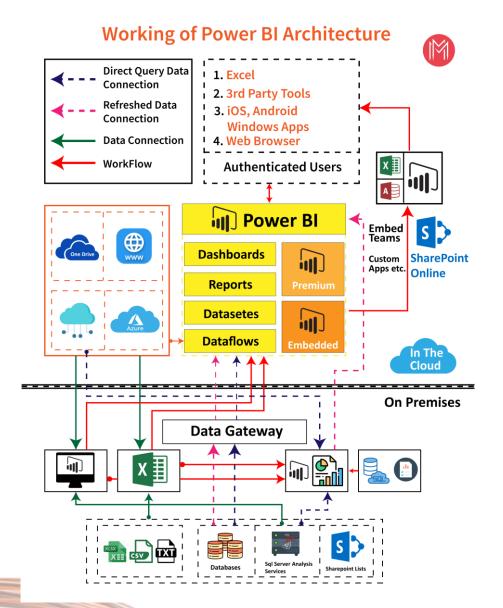
- PowerBI Desktop (Free)
- PowerBl Premium

Prerequisites

- Nature AD
- Notice 365 Suite
- PowerBI Gateway Software installed (free download)



Diagram



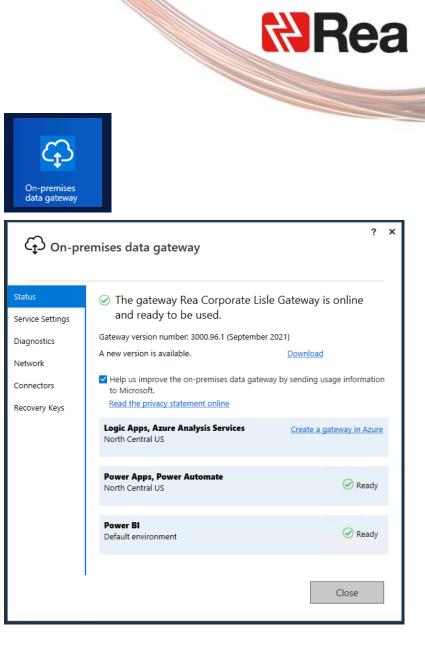
Demonstration will be focused to the data gateway:

- Setup the gateway
- How to connect to these 3 data sources:
 - Nicrosoft SQL
 - Typical ODBC Compliant Database
 - 🛚 Excel
- Publishing to the cloud (mapping the data)
- Scheduling a data refresh

Rea

Live demo: Setup the Gateway

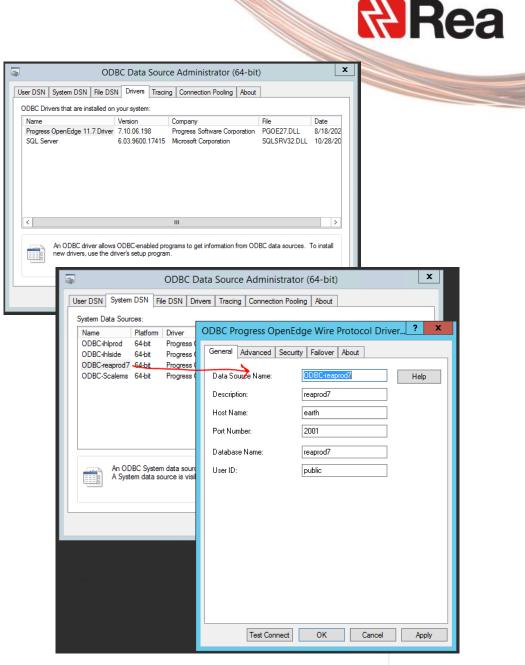
- At Rea, we have the Azure Gateway and the PowerBl Gateway running on the same server
- 。Review Installation and Configuration
- 。Regular Updates
- Gateway runs as a service consider file permissions to things like Excel files on your Enterprise Network – That service account needs to have at least read privileges



Live demo: Setup the Gateway

Also Installed on the Gateway Server

- Install the ODBC Drivers for non-Microsoft SQL databases
- Use ODBC64 (or ODBC32) data source administrator to create a data source
- Provide connection credentials, Test Connection, Save

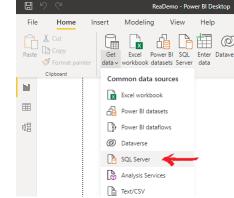




Live Demo: How to Connect to these data sources

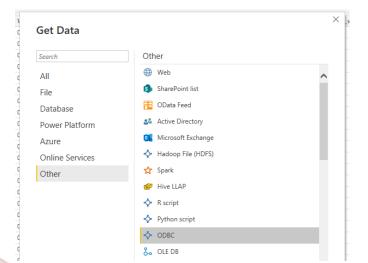
Nicrosoft SQL Server

Get Data → SQL Server

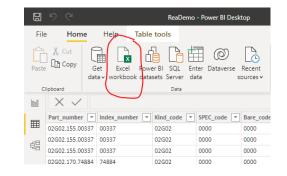


General ODBC Data source

Get Data \rightarrow more... \rightarrow other \rightarrow odbc



🛚 Excel File



Change Drive Letter Mapping to UNC Naming Convention

Example: Change this: s:\powerbi\productiondata\scrapgoals.xlsx

to this:

\\co-fileserver\fw_shared_data\powerbi\productiondata\scrapgoals.xlsx

Rea

Data Source Settings (summary)

Data source settings lanage settings for data sources that you have connected to using Power BI Desktop.	
Data sources in current file O Global permissions	
Gearch data source settings	2.
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odsn=ODBC-ReaProd7	

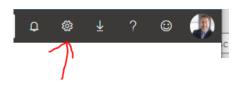
3 Examples Shown

- 🛚 Excel File
- ODBC Data source
- Microsoft SQL database

9

Live Demo: Manage Gateway (in Cloud)

- Navigate to https://powerbi.com
- Authenticate (as needed)
- No to Settings



- Must be an Administrator in PowerBI Cloud
- Review Gateways Clusters
 - Rea just has one Gateway
 - Create your data sources
 - Names can be the same or different
 - Provide credentials as needed

ADD DATA SOURCE
GATEWAY CLUSTERS
💦 Rea Corporate Lisle Gateway 😱
ODBC-Scalems
IT SharePoint Site
AS_MES_DB
ODBC-reaprod7
Laf_MES_db
PDS - Plant Operations DB - Oven Utili
Production Data
CL SQL DB1 ops_reporting
PDS - OEE Database
NH_MES_DB
ODBC-ihlside
Corporate S: Drive
CL CyberQuery Server Share
Test all connections

✓ Connection Successful	
Data Source Name	
Corporate S: Drive	
Data Source Type	
Folder	~
Full path	
\\co-fileserver\fw_shared_data	
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Windows username Windows password Skip Test Connection	ises on the gateway server. <u>Learn mor</u>
Windows password	ises on the gateway server. <u>Learn mor</u>

Live Demo: Mapping Data sources

- Navigate to https://powerbi.com
- Authenticate (as needed)
- Go to the workspace

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II Content Datasets + dataflows			
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🛢 ReaDemo Č		Dataset	Dennis Rausch
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	Cr	reate report	
	Cr	reate paginated rep	ort
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Rea

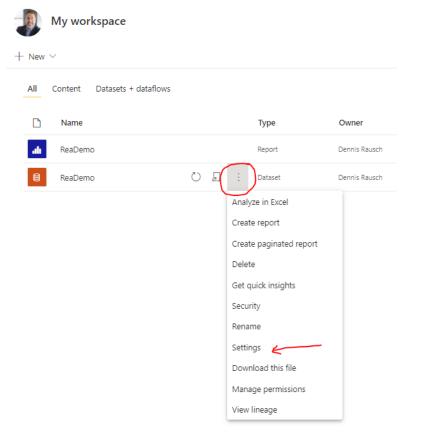
Apply	Discard				
▲ Gateway	connection				
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		tring":"dsn=odbc-reapro		Maps to:	

Map each data source



Live Demo: Schedule a Data Refresh

- Navigate to https://powerbi.com
- Authenticate (as needed)
- 🛚 Go to the workspace



Scheduled refresh

Keep your data up to date



Refresh frequency

Daily

Time zone

(UTC-05:00) Eastern Time (US and Ca 🗸

Time

3 **v** 00 **v** AM **v** X

Add another time

Send refresh failure notifications to
Dataset owner

These contacts:

Enter email addresses

Apply Discard



Questions







KYLE M. SMITH, PMP – IT SUPERVISOR 💷 SCAN ME

INTRODUCTION

NUCOR STEEL INDIANA NUCOR CORPORATION (NUE) CRAWFORDSVILLE, INDIANA

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THE CHALLENGE

- \circ Reactive data
- o IT produces everything
- Traditional paginated reports
- Poor user experience
- Performance issues

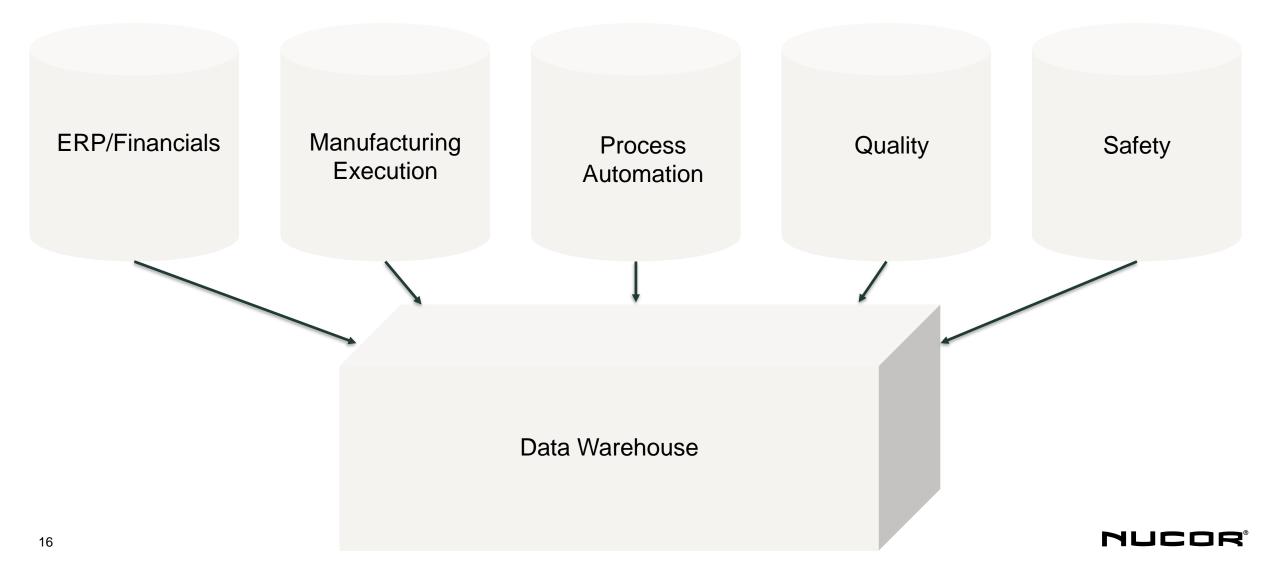


Legacy Reporting System Enterprise Resource Planning & Financials Production Database

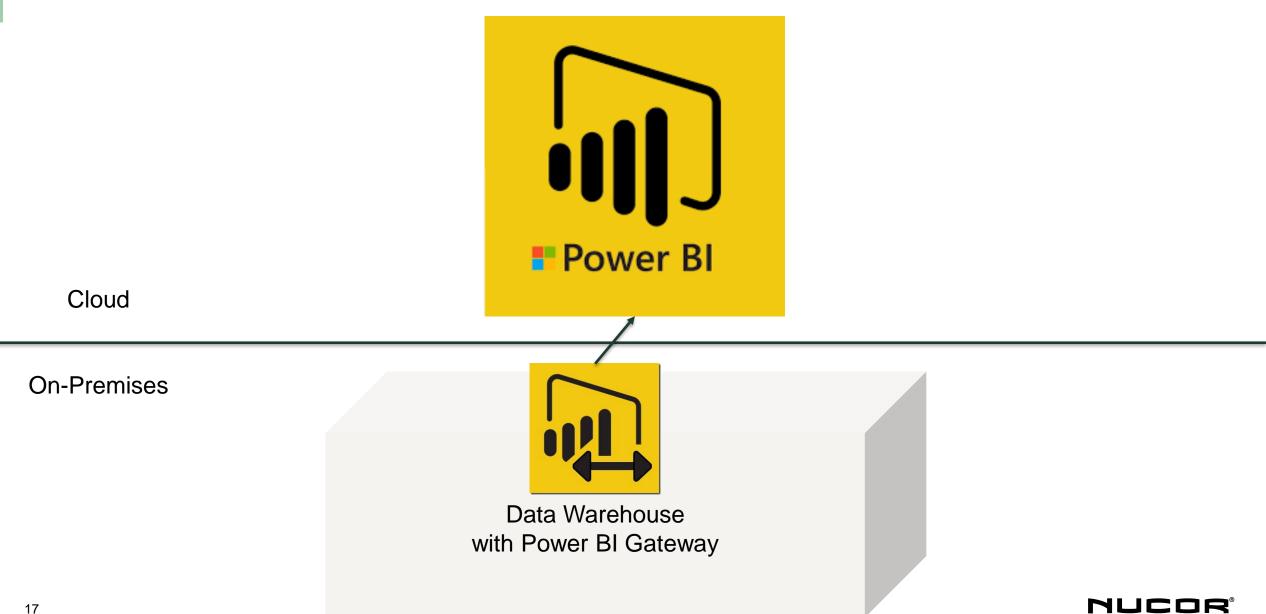
Manufacturing Execution System Production Database



CHANGING THE MODEL: DATA REPLICATION

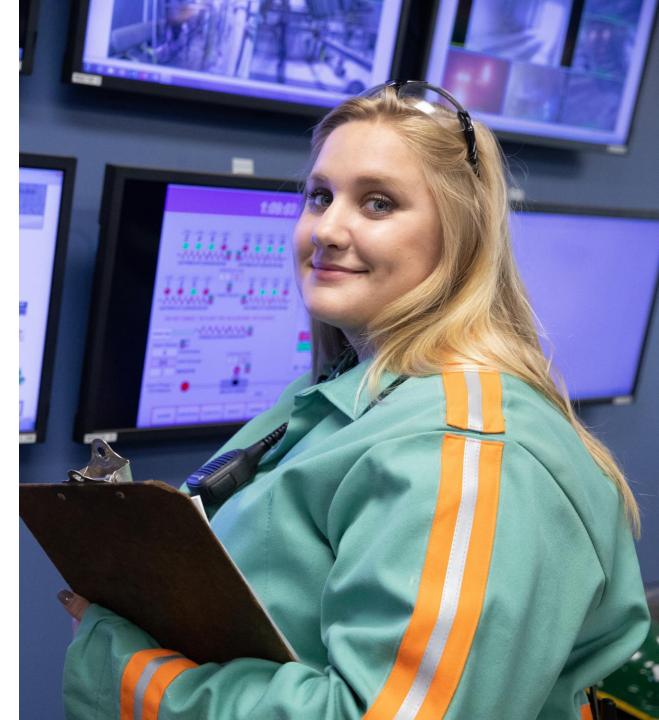


CHANGING THE MODEL: NEW REPORTING TOOL

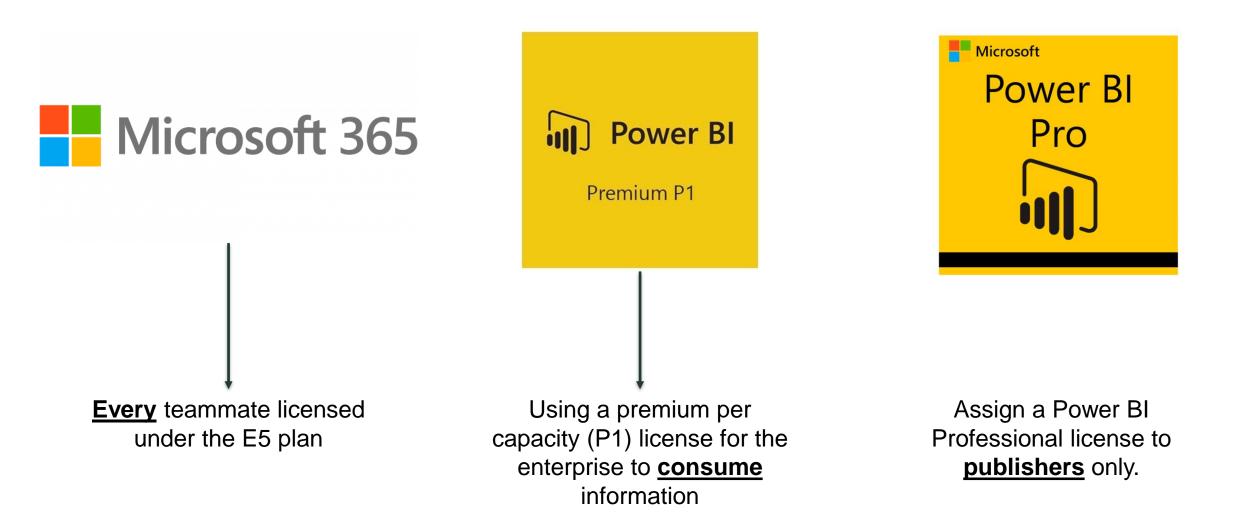


BUILDING THE TEAM – IDENTIFYING NEEDS

- Database Administrator
- Developer focus on ETL (extract, transform, load)
 development
- Developer focus on BI development in Power BI
 Desktop and Power BI Paginated Report Builder
- Data replication tool
- Data warehouse infrastructure
- Power BI gateway
- Office 365 licensing



MICROSOFT LICENSING FOCUS



NUCOR

PREPARING AND CREATING WORKSPACES

- Ask questions
 - Who will consume this data?
 - Who should not see the data?
 - $\circ~$ Who will need to publish updates?
- Create workspaces with deployment pipelines (Dev, Test, QA, Prod)
- Set permissions with Active Directory accounts and security groups
- Convert workspace to Premium Per Capacity

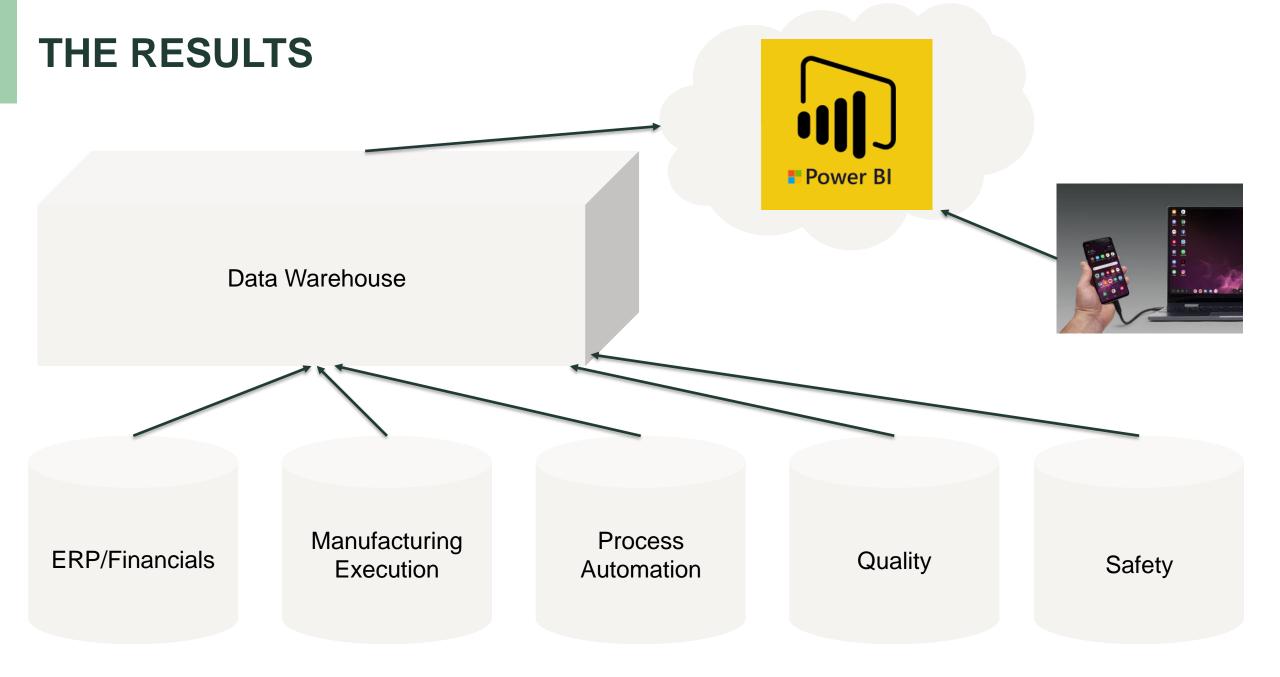


PUBLISHING

- $\circ~$ Publish to production workspace
- Use a Power BI Published App
- Setup e-mail notifications to alert consumers

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NUCOR®

THE RESULTS



- Proactive data
- Publishers build and produce reports
- Real-time visual reports or paginated reports
- AMAZING user experience
- No performance issues
- IT empowering business process experts

POWER BI FOR DATA VISUAL DASHBOARDS

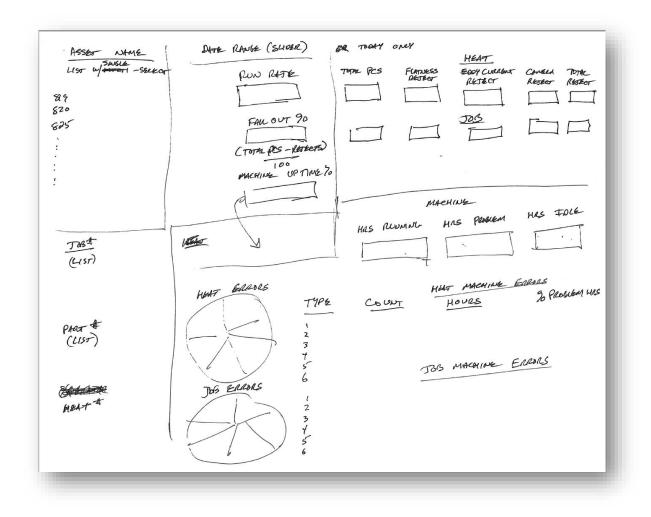
Project: Power BI IIoT Analytics Dashboard



Purdue Student Presentation for MPI

The start

- Data coming from different databases, over 15 tables each running into multiple thousands of rows
- How data from multiple sources is related
- A paper sketch of data visuals expected from this data
- A meeting with the client to understand data and expectations





Power BI vs. Excel

Key Differences

- Visualizations
- Data Discovery:
 - Excel stores data in tabular form
 - Power BI store data in tables
- Automation: ETL (Extract, Transform, Load)

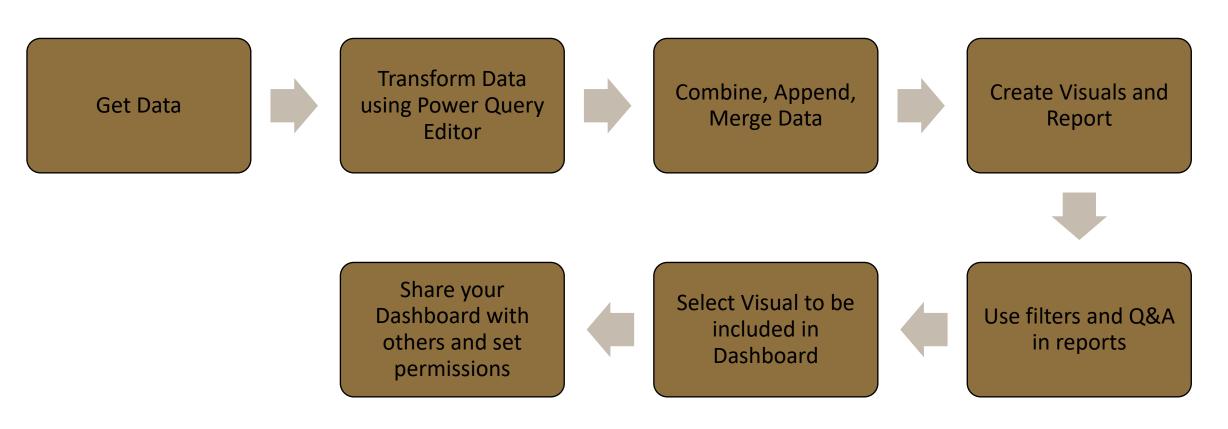
Power BI query editor lets your record each step used to manipulate your data set

Excel is a powerful tool, but Power BI is superior for data visualization and discovery





Steps followed





The dashboard

	Cut Copy Format painter Clipboard	Excel Power BI SQL Enter workbook datasets Server data	Dataverse Recent sources v	visual box visuals	New Quick Sensitivity	Publish	
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Weekly Meeting towards MPI Power BI Project - Zoom

THANK YOU

Vikram Narendra



Rajinder Budhiraja



MS GLOBAL SUPPLY CHAIN MANAGEMENT, PURDUE UNIVERSITY, 2021

MICRO MASTERS IN SUPPLY CHAIN, MASSACHUSETTS INSTITUTE OF TECHNOLOGY, (MIT) 2010

6+ YEARS OF EXPERIENCE IN DEMAND PLANNING AND NETWORK OPTIMIZATION MS GLOBAL SUPPLY CHAIN MANAGEMENT, PURDUE UNIVERSITY, 2021

MBA (FINANCE), INSTITUTE OF CHARTERED FINANCIAL ANALYSTS OF INDIA (ICFAI UNIVERSITY), 2009

10+ YEARS OF EXPERIENCE ACROSS IT, RETAIL, DISTRIBUTION AND HOSPITALITY



Power BI Group – Shared 'DRIVE' Resources

- Idea: Provide a file sharing option for Power BI Users to share resources
 - Option 1: Teams shared folders
 - Option 2: Google Drive see example below

When invited to Join this group (Google DRIVE email) you will be linked to:

https://drive.google.com/drive/folders/12qs80WnuIq7VedGehch1dcNEDZITAhSB?usp=sharing

- You will see a number of named folders that include information files, links, videos, white papers etc., for example:
 - Use Applications (Cases)
 - Starter Resources
 - Intermediate Resources
 - Advanced Skills Resources
 - Glossary of Terms...



Wrap Up

- Open Discussion
- Volunteers for Presenting at next meeting
- Next Meeting June-July?

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