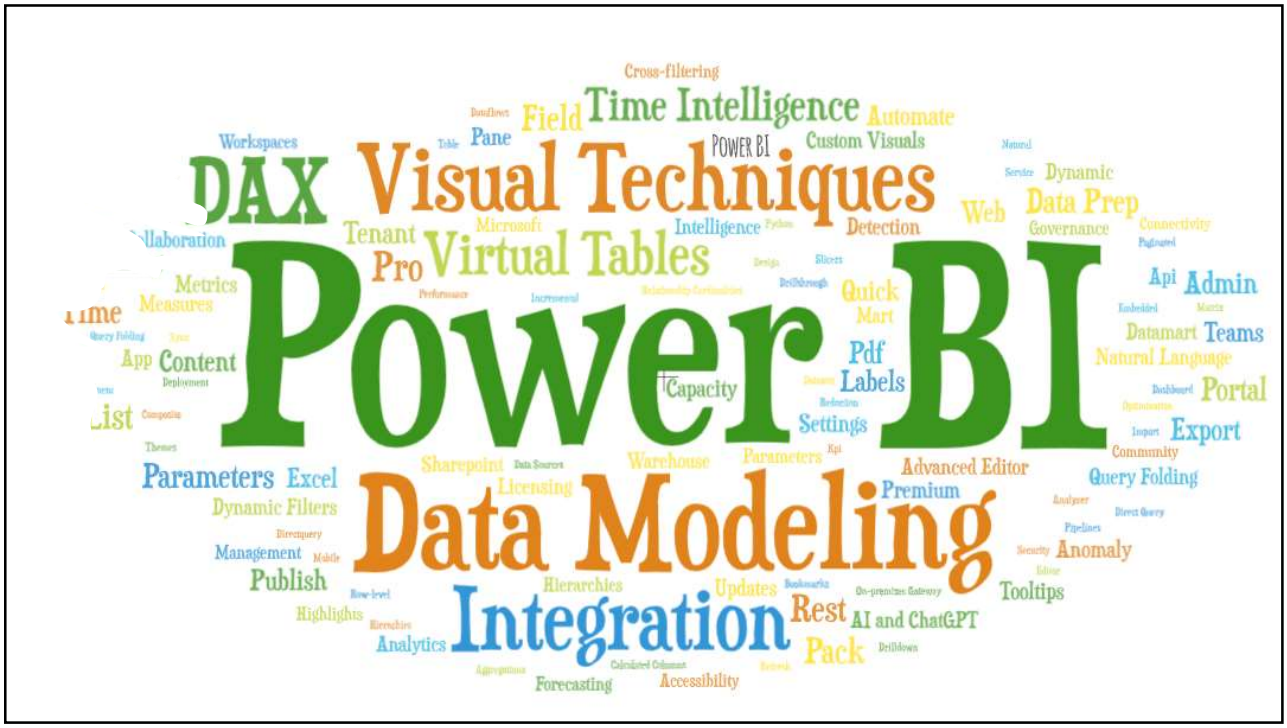
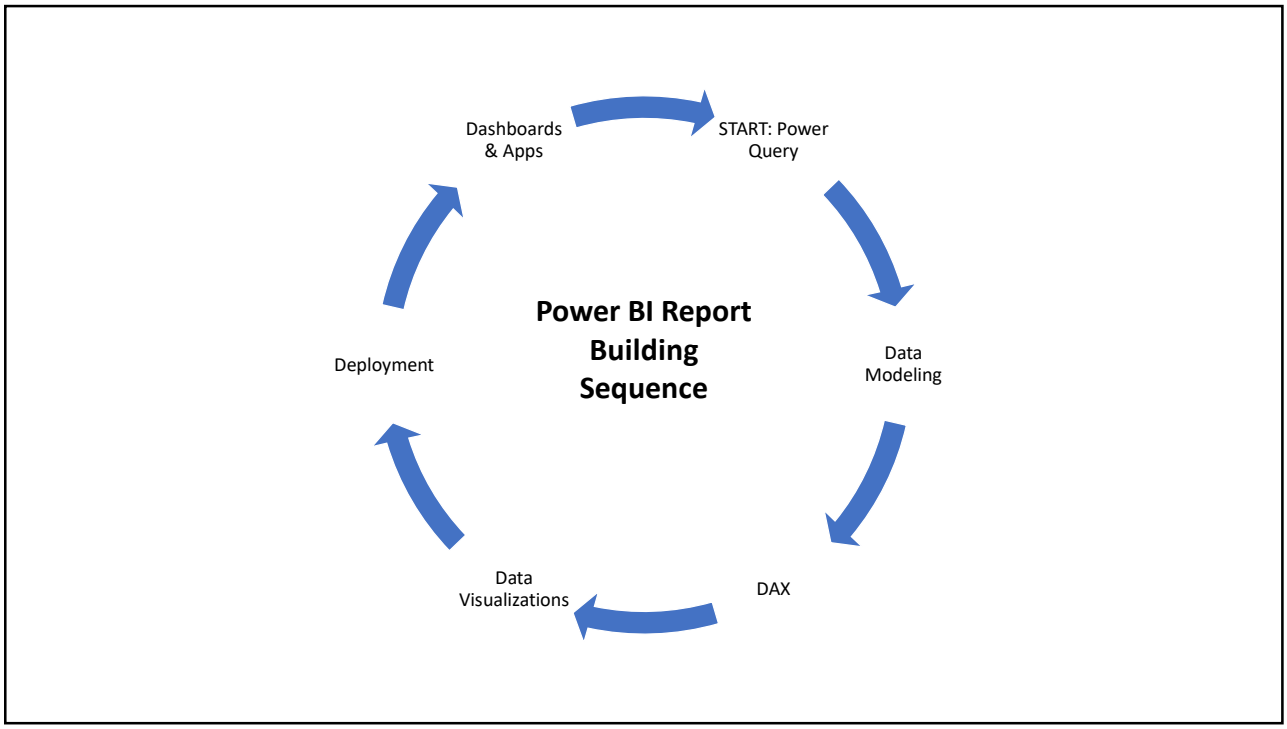
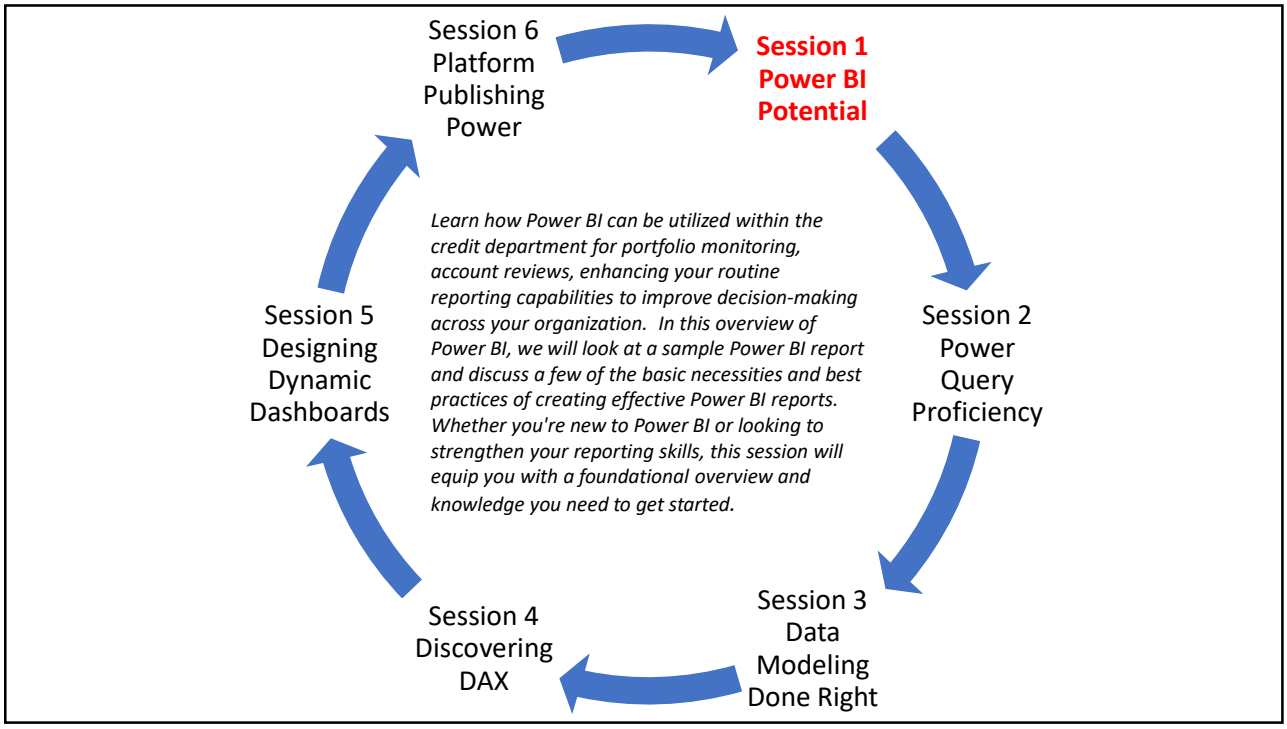
NACM'S 129TH CREDIT CONGRESS & EXPO Cleveland
MAY 18-21, 2025

The Potential of Power BI for Credit Managers

Presented by: Rebekyah Brewer
Date: May 20, 2025
Session: #37033

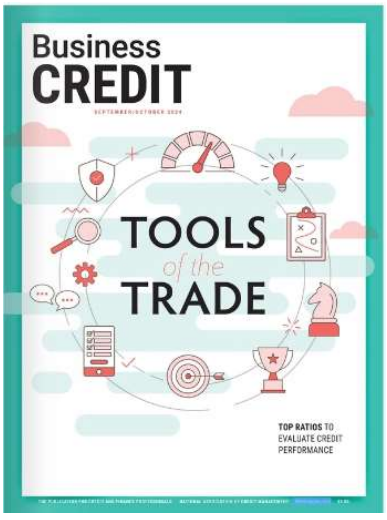



Power BI Report Building Sequence
START: Power Query
Data Modeling
DAX
Data Visualizations
Deployment
Dashboards & Apps


Session 1 Power BI Potential
Session 2 Power Query Proficiency
Session 3 Data Modeling Done Right
Session 4 Discovering DAX
Session 5 Designing Dynamic Dashboards
Session 6 Platform Publishing Power
Learn how Power BI can be utilized within the credit department for portfolio monitoring, account reviews, enhancing your routine reporting capabilities to improve decision-making across your organization. In this overview of Power BI, we will look at a sample Power BI report and discuss a few of the basic necessities and best practices of creating effective Power BI reports. Whether you're new to Power BI or looking to strengthen your reporting skills, this session will equip you with a foundational overview and knowledge you need to get started.

"Power BI is simple, but it's not easy."

- POWER BI COMMUNITY



Top Ratios	Formula
1. Days Sales Outstanding (DSO)	Ending Total Receivables x Number of Days/Sales
2. Percent of Age Category (30,60,90, Future, Current, Past-Due Buckets)	Total Amount in Chosen Age Category and Above/Total Receivables x 100
3. Average Days Delinquent (Add)	Days Sales Outstanding – Best Possible Days Sales Outstanding
4. Bad Debt as a Percent of Sales	Bad Debt Net of Recoveries/Sales x 100
5. Cash Collected as a Percent Available to Collect for the Month	Amount Collected within the month/amount available to collect (E.G. Current Receivables + Past Dues – Deductions) x 100

Capabilities of Power BI for a Credit Manager

Data Consolidation and Integration	Integrates data from various sources (ERP, CRM, Excel, databases) into one platform; supports real-time data connections for up-to-date insights.
Advanced Analytics and Reporting	Customizable dashboards and interactive reports allow for deep dives into key metrics like DSO, overdue amounts, and payment behaviors.
Risk Assessment and Monitoring	Analyzes credit risk, tracks payment patterns, and visualizes data to predict defaults or late payments; identifies trends in customer behavior.
Automation and Alerts	Automates report distribution and sets alerts for critical thresholds like exceeding credit limits or high overdue balances.
Collaboration and Sharing	Enables collaborative workspaces for co-creating reports; controls access to sensitive data for authorized personnel only.

Capabilities of Power BI for a Credit Manager

Predictive Analytics	Integrates with Azure Machine Learning for predictive analytics, helping forecast payment behaviors and identify high-risk customers.
Visualization of Financial Data	Visualizes financial statements, debt collection performance, and other financial metrics, aiding in better decision-making.
Scenario Analysis	Conducts "What-If" analysis to simulate various credit scenarios, such as changing credit terms or adjusting credit policies.
Data Auditing & Traceability	Power BI maintains a clear audit trail of all data transformations and reports generated, making it easier to track changes and verify data integrity.
Secure Data Handling	Power BI provides robust security features, such as role-based access controls and data encryption, which help protect sensitive financial data. This is crucial for meeting data privacy regulations and ensuring that only authorized personnel can access sensitive information.

Prerequisites: System Requirements

Minimum Requirements:
These specifications will allow Power BI to run, but performance may be limited, especially with complex data models or large datasets.
- **Processor:** 1.6 GHz or faster, dual-core processor.
- **RAM:** 4 GB (8 GB is preferred for better performance).
- **Storage:** At least 2 GB of available disk space for installation.
- **Operating System:** Windows 10, Windows 11, or Windows Server 2019 and above.
- **.NET Framework:** .NET 4.7.2 or later.
- **Display:** At least 1440x900 resolution or higher, 16-bit color depth.

Additional Considerations:
- **64-bit Version:** Always use the 64-bit version of Power BI Desktop if possible, as it handles larger models and datasets better than the 32-bit version.
- **Power BI Premium Features:** For specific advanced features like paginated reports or AI functionalities, more robust specs might be beneficial.
- **Performance Tuning:** Ensure drivers and Power BI Desktop are regularly updated to benefit from performance enhancements.

Recommended Requirements:
These specifications ensure that Power BI runs smoothly, especially when working with complex models, large datasets, or creating visually intensive reports.
- **Processor:** 2.5 GHz or faster quad-core processor (Intel i5, i7, i9, or AMD Ryzen 5, 7 series).
- **RAM:** 16 GB (more is preferred for handling large datasets).
- **Storage:** SSD (Solid State Drive) with at least 10 GB of free space for better performance.
- **Graphics:** A dedicated graphics card is not mandatory, but having one can improve performance, especially with data visualization.
- **Operating System:** Latest version of Windows 10 or Windows 11 for compatibility with updates.
- **Internet Connection:** Reliable internet connection, particularly for Power BI Service and for accessing data sources online.

If you work extensively with large datasets, complex calculations, or visuals, investing in higher specifications (like more RAM or a faster processor) will significantly enhance your experience.

Prerequisites: Licensing

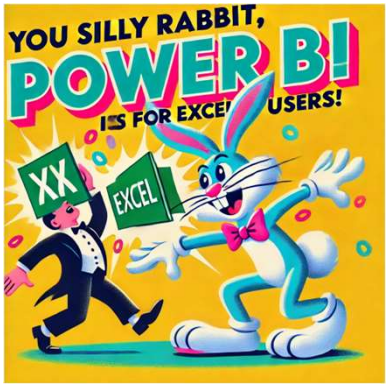
License Type	Cost	Key Features	Ideal For
Power BI Free	Free	- Create reports and dashboards - Limited to personal use - No sharing or collaboration capabilities	Individuals exploring Power BI on a personal level
Power BI Pro	~$13 per user/month	- Share and collaborate on reports - Up to 8 data refreshes per day - Integrates with Microsoft Teams	Teams and organizations needing report sharing
Power BI Premium Per User (PPU)	~$20 per user/month	- All Pro features - Advanced AI, paginated reports - Larger data capacity - Incremental refresh	Power users needing advanced analytics features
Power BI Premium (Capacity-Based)	Starting at ~$4,995/month	- Organizational capacity - Unlimited sharing without Pro license - Enhanced performance and capacity	Large enterprises needing scalable solutions
Power BI Embedded	Pay-as-you-go	- Embedding Power BI visuals in apps - Customizable reports - No collaboration features	Developers and ISVs embedding analytics into apps

Usage Levels

	Power BI Tenant Settings	Power BI Desktop	Power BI Workspace	Power BI Service/Dashboard	Power BI App
IT Professional	X	X	X	X	X
Data Wizard		X	X	X	X
Business User				X	X
Decision Maker					X

Many of these usage levels overlap. A Credit Manager may be the Data Wizard, the Managerial Business User and the Decision Maker.

Each one of these services offers immense value to the user.



There is a special relationship between Excel Expert & Power BI User:

- **Excel Origins**: Power BI was born out of Excel. It is composed of Power Query, Power Pivot and Power View for. Power Pivot is the data modeling technology used in Power BI. All Microsoft did was get rid of the Excel wrapping paper.
- **DAX Language Similarity**: Power BI uses Data Analysis Expressions (DAX), which is very similar to Excel formulas. It's just a matter of create a formula for an entire column vs a single field.
- **Familiar Interface**: The interface of Power BI shares similarities with Excel, including ribbon menus and drag-and-drop functionalities, which reduces the learning curve.
- **Seamless Data Import**: Power BI supports importing data directly from Excel files, allowing users to start working with their existing data immediately.
- **Enhanced Data Connectivity**: Power BI expands on Excel's connectivity options, linking to a broader range of data sources, including databases, web services, and cloud-based platforms
- **Interactive Reports and Dashboards**: It extends Excel's capabilities by offering interactive visualizations and dashboards, which provide a more dynamic and engaging way to present data.

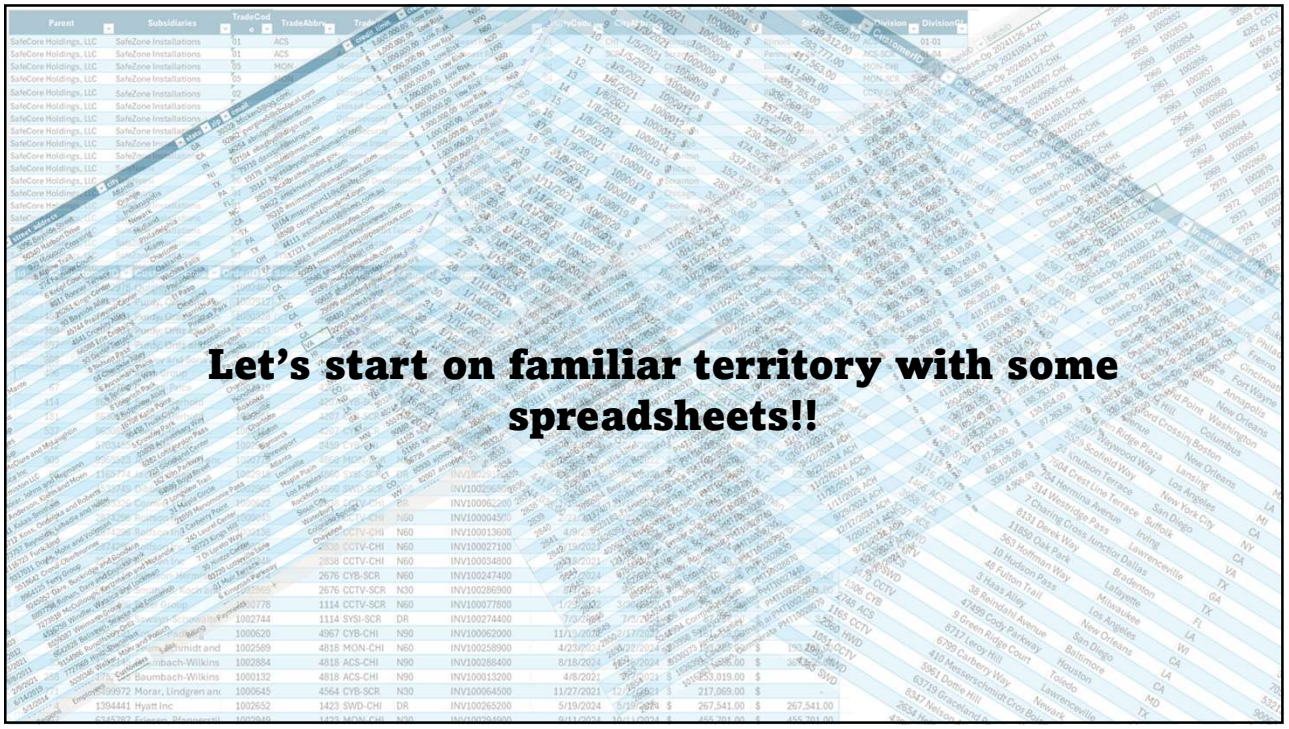
Who is Power BI for?

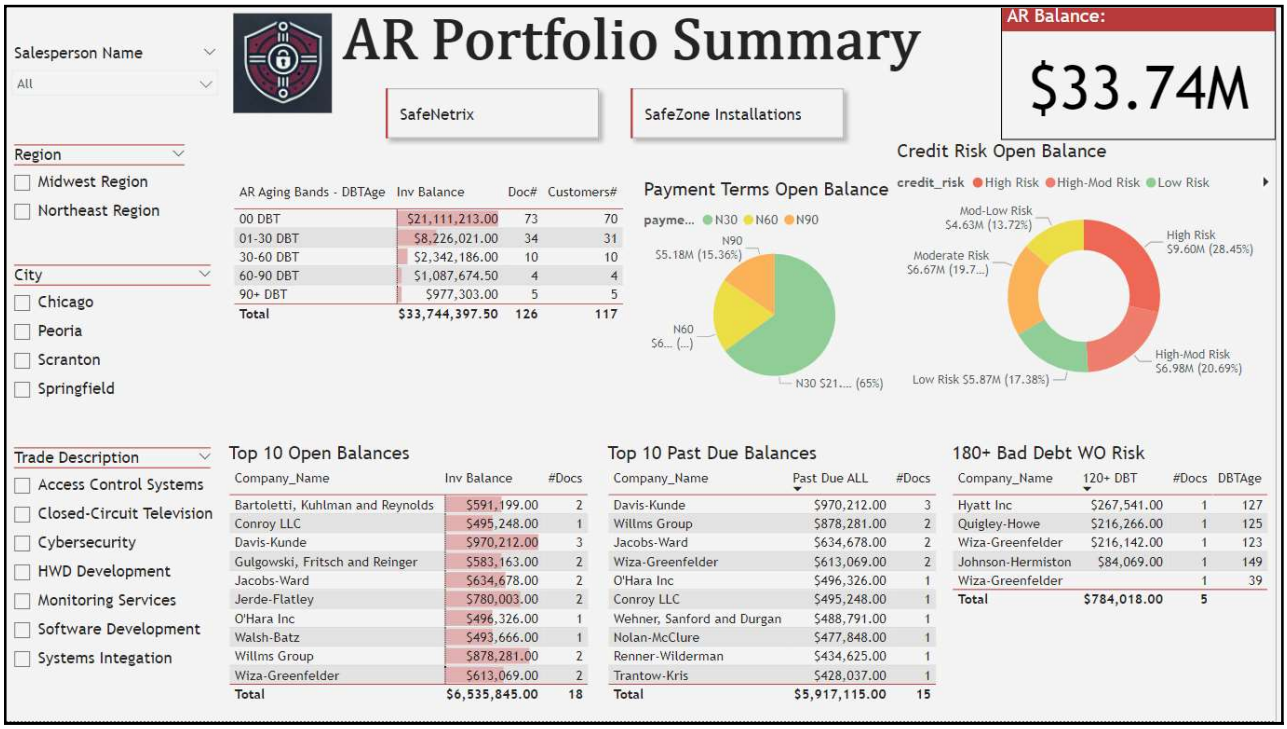
Power BI caters to a wide variety of users, from data analysts and business intelligence professionals to non-technical business users and executives.

For **data analysts aka data wizards**, Power BI offers advanced data modeling, DAX (Data Analysis Expressions) for complex calculations, and powerful tools for data transformation through Power Query.

IT professionals and developers can use Power BI's APIs for custom integrations, automation, and embedding reports into applications.

For **business users and decision-makers**, Power BI's intuitive interface allows them to interact with pre-built reports, drill down into data, and gain insights without needing technical expertise. The tool's accessibility on multiple devices—desktop, web, and mobile—ensures that users at all levels can easily access data, make informed decisions, and collaborate effectively across the organization.



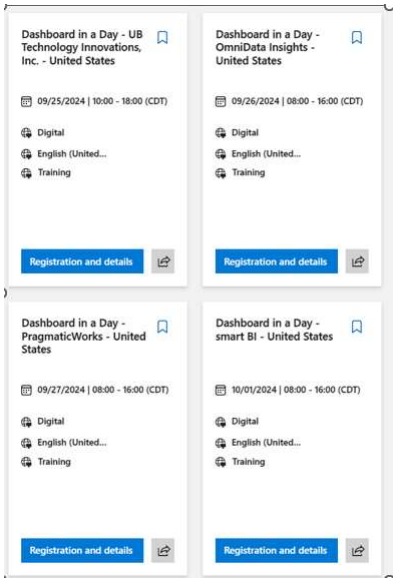


Resources to Learn

- G.K. CHESTERTON

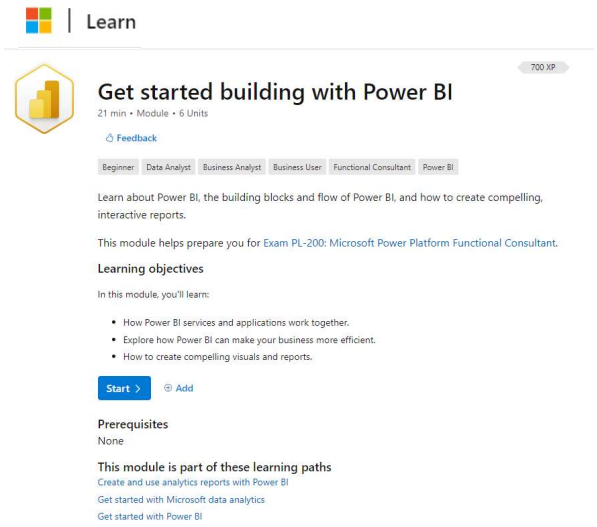
"If a thing is worth doing, it is worth doing badly."

Attend a Free 1 Day Event Workshop:
Microsoft Dashboard in a Day



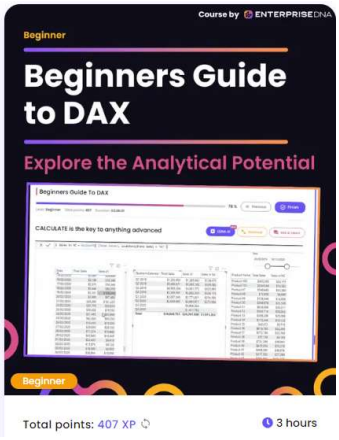
- Hands-On, Practical Learning Experience
- Rapid Skill Acquisition
- Guided Instruction from Experts
- Structured Learning Agenda
- Real-World Application of Skills
- Access to Workshop Materials & Resources
- Networking Opportunities
- Personalized Feedback & Support
- Boosts Confidence with Power BI
- Preparation for Advanced Learning
- Cost-Effective Training Option
- Immediate Insight into Power BI's Capabilities
- Exposure to Power BI Service Features

Pragmatic Works DAX Cheat Sheet for Beginners



Click to start: Microsoft Learn

- Free Access to High-Quality Content
- Structured Learning Paths
- Hands-on Labs and Interactive Exercises
- Official and Up-to-Date Content
- Integration with Certifications
- Gamified Learning Experiences (Points, Badges)
- Self-Paced Learning
- Community and Q&A Integration
- Comprehensive Coverage of Power BI Features
- Scenario-Based Learning Modules



FREE COURSE - Ultimate Beginners Guide To Power BI - http://portal.enterprisedna.co/p/ultimate-beginners-guide-to-power-bi
FREE COURSE - Ultimate Beginners Guide To DAX - http://portal.enterprisedna.co/p/ultimate-beginners-guide-to-dax
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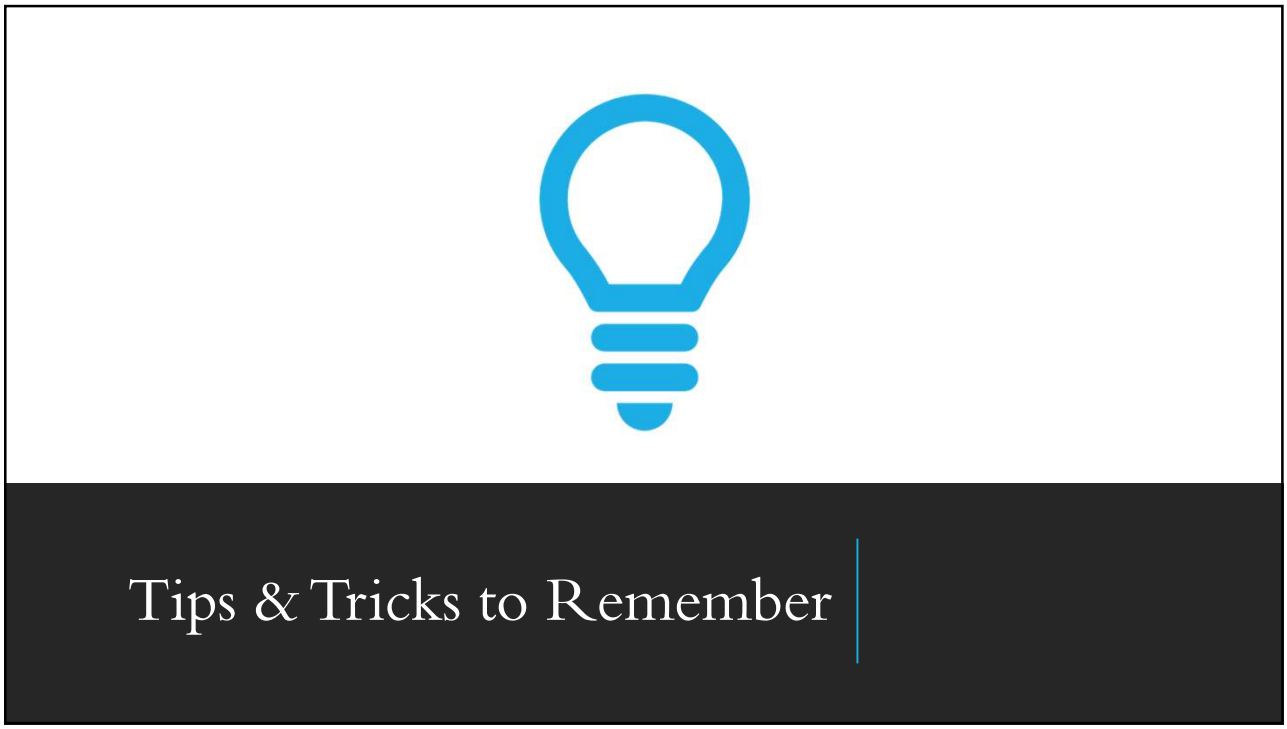
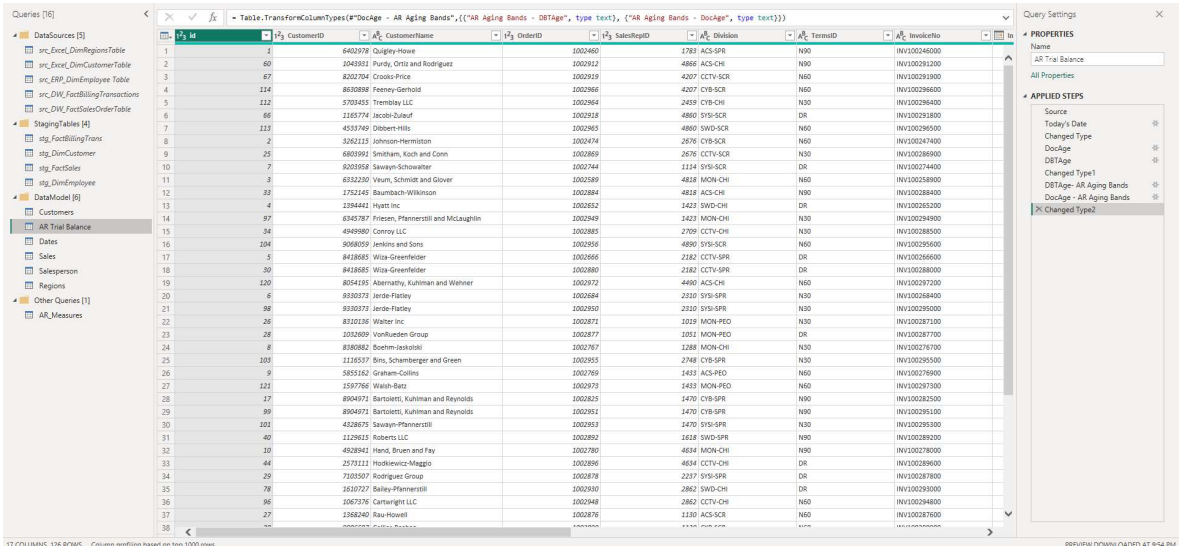
  - Finance Focused
- Comprehensive Course Catalog
- Access to Learning Summits & Workshops
- Extensive Resource Library
  - Power BI .pbix file downloads
- Customized Learning Paths
- Innovative Data Challenges & Projects
- Supportive Community Forum
- Access to Power BI Showcases
- Focus on Advanced Analytics & AI Integration
- On-Demand, Self-Paced Learning
- Gamified Learning Experience (Points & Badges)
- Certification Programs
- Emphasis on Visualization & Design

Tips & Tricks to Remember



Power Query Tips

1. Design with the Star Schema Data Model in Mind and Normalize Data Where Possible
2. Ensure Data Types Are Correct
3. Use Web data type for Excel Files (Use File, Infor, Copy Path and delete after .xlsx)
4. Reference Source Files in a Staging File Instead of Editing Source Files Directly
5. Organize Your Queries into Groups for Easy Navigation
6. Use Prefixes to Clearly Identify Query Types (src…stg…)
7. Disable Loading for Source and Staging Queries
8. Use Only the Necessary Data by Filtering Rows and Removing Columns
9. Rename Query Steps for Clarity
10. Add Annotations to Explain Key Steps
11. Be Careful When Deleting Steps



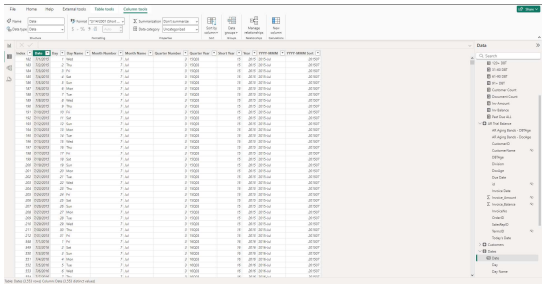
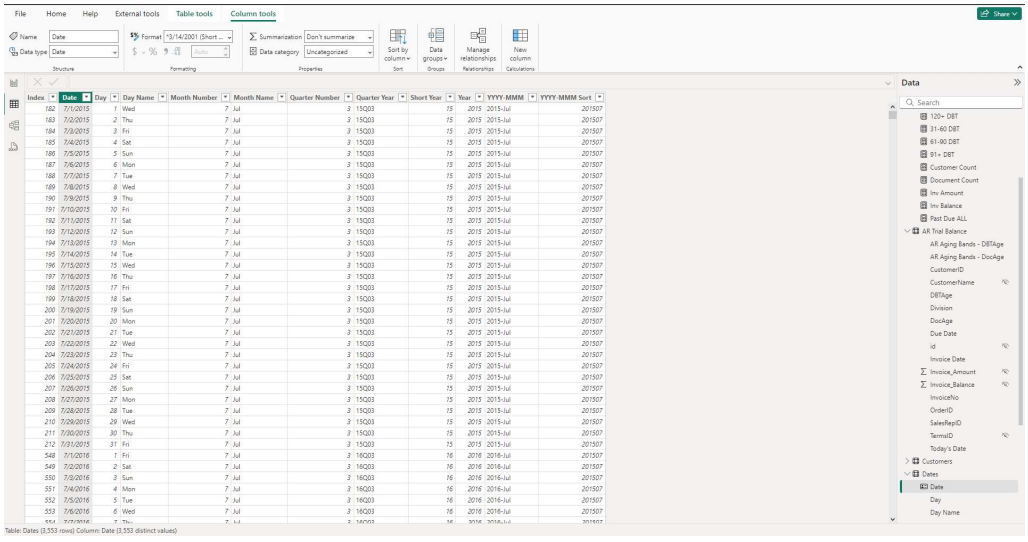


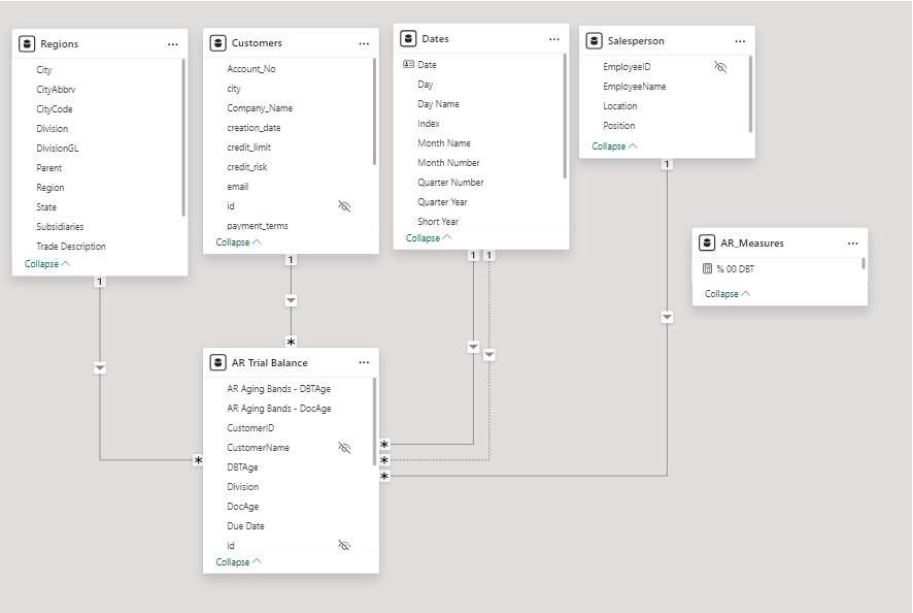
Table View | PowerPivot Tips

- Reformat all dates to "short date"
- Format all index keys, id's, zips as "Don't summarize" so they are treated as text
- Make sure all Amounts are "Currenty" and Decimal point is 2 for rounding purposes
- Make your Date Table is marked as a date Table under Table Tools
- Use Sort by Column to Sort your Date Table Month's name by month number so they appear
  in correct order on visuals.
- Hide any unnecessary columns like key columns and id's, implicit measures.



Data Modeling Tips

1. Understand and Use the Star Schema Design, 1 Fact Table, Multiple Dimension Tables
2. Avoid Snowflake Schema
3. Always create a dedicated Date table with no missing dates and mark it as the official date table
4. Use surrogate keys (id, index, system generated) for dimension tables instead of business keys based on application data (e.g., customer names).
5. Establish Correct Relationships and Cardinality (Many to one (*:1))
6. Reduce Columns and Rows Where Possible
7. Avoid Using Bi-Directional Relationships
8. Name Tables, Columns, and Measures Clearly
9. Keep the same granularity of data
10. Keep the Fact Tables Thin



Attribute	Dimension Table	Fact Table
Purpose	Contains descriptive information attributes (e.g., Product Name, Customer Region)	Contains quantitative data (measures) and foreign keys (e.g., Sales Amount, ProductID).
Data Type	Contains textual or categorical data such as names, categories, or descriptions.	Contains numeric data, primarily used for aggregations like sums or averages.
Primary Key	Has a primary key that uniquely identifies each row (e.g., ProductID, CustomerID).	Contains foreign keys that link to the primary keys of dimension tables.
Granularity	Lower granularity; represents the "who," "what," "where," "when," and "how" of data.	Higher granularity; represents individual transactions or events.
Data Volume	Typically smaller in volume; fewer rows compared to fact tables.	Typically larger in volume; can have millions of rows due to transactional data.
Relationships	Acts as a lookup table that connects to one or more fact tables.	Connected to multiple dimension tables via foreign key relationships.
Usage in Reports	Used to filter, slice, and categorize data in reports and dashboards.	Used to perform calculations, aggregations, and derive key metrics.
Aggregation	Rarely aggregated; primarily used for slicing data in aggregations.	Frequently aggregated to provide meaningful insights (e.g., total sales).
Changes Over Time	Slowly Changing Dimensions (SCD) can track changes in data over time.	Generally not used to track changes directly; instead reflects real-time or historical transactional data.

DAX TIPS

1. Use Explicit Measures for Aggregations (SUM, DIVIDE, AVERAGE, MIN, MAX)
2. Organize Measures in a Dedicated Measure Table for Easy Navigation
3. Start with Basic Measures (SUM, DISTINCTCOUNT, DIVIDE)
4. Familiarize Yourself with Filter Functions Next (CALCULATE, FILTER, RELATED)
5. Utilize Cheat Sheets and Online Resources
6. Use Comments in DAX Code (//) for notes and documentation
7. Format DAX Measures with Line Breaks and Indenting for Readability when Debugging (CTRL+SHFT+ENTR)
8. Pay Attention to Context: Row vs. Filter Context
9. Test Your Measures with Different Scenarios
10. Learn to Use Time Intelligence Functions

Data Visualizations Tips

1. Understand Your Audience
2. Choose the Right Chart Types, Bars, Trends or Pies
3. Keep it Simple & Avoid Clutter
4. Use Consistent Meaningful Color Schemes (Colors Communicate)
5. Use Labels and Titles Effectively
6. Group Related Items and Use White Space to Improve Readability
7. Maintain a Logical Flow and Layout
8. Highlight Key Data Points
9. Incorporate Visual Hierarchy (Size, Space to prioritize important info)
10. Leverage Tooltips & Drillthrough for details
11. Study Data Visualization Techniques (Google: Data Visualization Cheat Sheet to start) Coolinfographics.com/dataviz.guides

Power BI Service/Dashboards & Apps

1. Organize Workspaces Wisely for Reports, DataSets by Project
2. Set Appropriate Permissions & Access Levels (Admin, Member, Contributor, Viewer)
3. Schedule Data Refreshes Appropriately
4. Leverage Power BI Apps for Sharing Reports
5. Monitor Performance with Usage Metrics
6. Set Up Data Alerts for Real-Time Monitoring
7. Set Up Subscriptions for Automated Report Delivery
8. Use Row-Level Security (RLS) to Restrict Data Access
9. Take Advantage of Power BI's Q&A Feature
10. Pin Important Reports and Dashboards