Reporting and Analytics with Power BI

CPD 24 units | 24 PL credits

Online Prework + 3 Days Classroom **or** 6 Virtual Sessions **or** Online Self-Paced

dbrown CONSULTING

CFA Society Nigeria | CPD MEMBER The CPD Certification Service | FMI FINANCIAL MODELING INSTITUTE | AFM

dbrownconsulting focuses on helping organizations and individuals achieve more with their data. We partner with CFA Society Nigeria to deliver world-class learning and professional development solutions to its members and candidates in Nigeria. We are also an accredited training provider of the Financial Modeling Institute based in Canada, Microsoft partners, a member of CPD UK.

Overview

Power BI is a suite of business analytics tools that deliver insights throughout your organization. Connect to hundreds of data sources, simplify data prep, and drive ad hoc analysis.

This course will introduce all the Power BI technologies including: Power Query, DAX, Data Modelling (Power Pivot), M. We will go through a methodology for automating all your reporting needs and how to create beautiful reports and dashboards giving you a 360 degree view of your business.

Participants will use Microsoft's free Power BI Desktop Application which hosts all Power Bi Technologies to build a detailed reporting model from scratch. They then publish this report to the powerbi.com service to share insights with everyone.

The course is designed by a Microsoft MVP and includes free online access to chat with him and colleagues as you implement the skills back on the job.

This course is also available on our online platform at: *www.OfficeTrainingHub.com*.

Learning Outcomes

By the end of the course participants will be able to:

- Recall the Power BI Technologies and ecosystem
- Demonstrate working knowledge of Power Query
- Use a framework for building a Data Model
- Assess various data visualisation options in Power BI Desktop
- Make sense of the DAX formula Language
- Produce typical business reports using DAX formulas you will build on a Power BI Data Model
- Incorporate budget data to your reporting Building budget variable analysis reports
- Produce a complete reporting solution from scratch in a full Day Case Study Session

Online Pre-Work

- Participants will be given access to this course's online pre-work platform on *www.OfficeTrainingHub.com*
- All activities must be completed before attending the classroom sessions for the course.
- This platform also serves to introduce participants to their instructors via the discussion forum.
- The platform includes basic knowledge and definitions as well as short videos to get participants effectively prepared for the course.
- Participants are also expected to document their expectations.
- The Courses digital certificate of completion will also be issued via this platform.

Overview of Power BI Desktop
- Intro to the Power BI Desktop interface
- Review of Power BI Desktop visuals
- Choosing the right visual
- Building your first report

Framework for Building a Data Model
- What is a Data Model
- Big picture view of your reporting needs
- Why you need FACT files and DIMENSION files
- Reviewing a step by step methodology • How to create relationships
- Secrets for optimizing your reporting model
- The importance of implementing a plan on paper first Draft your first Power BI Data Model Build Plan

Building a Data Model in Power BI Desktop
- Implementing your Data Model Build plan
- Loading data into Power BI Desktop
- How to create relationships
- Review of Facts, dimensions and relationships
- Use of implicit DAX measures
- Build reports in Power BI (Simple Visualizations using Implicit Measures)

Review of the DAX Formula Language
- Why is DAX so great for Analysts
- How DAX Works, the Vertipaq Engine
- The 3 Core DAX Measures
- DAX functions vs Excel Functions
- Introduction to CALCULATE - Why it is the most important DAX Function
- Overview of the Filter Context

Time Intelligence Calculation in DAX
- Examples The concept of a calendar
- Year to Date (YTD)
- Same Period Last Year (SPLY)
- Same Period Last Month (SPLM)

Variance Calculations in DAX
- Year on Year Variance in ₦ (YoY)
- Year on Year Variance %age (YoY)
- Month on Month Variance ₦ (MoM)
- Month on Month Variance %age (MoM)
- Other variance calculations

Utilising Quick Measures
- Using Quick Measures • Interpreting Quick Measures • Modifying Quick Measures

Comparisons to Budget
- Incorporate budget data in the Data Model Compare budget to Actuals

Power BI Standard & Custom Visualisations
- Building Standard Visualisations
- Formatting Visuals
- Techniques for deciding on a Visual
- Introduction to Custom Visualisations
- Comparative Analysis

Introduction to Power Query
- Review of the Power Query interface
- Clean-up Exercise using Power Query
- Appending Data from a Folder
- Using "M" code to correct errors in Data

Practice - Case Study Application
- Reviewing your Case Studies
- Drawing up your Data Model paper Plans
- Transforming your Data with Power Query
- Building your Data Model
- Incorporating simple DAX Formulas to your Data
- Incorporating Quick Measures to your Reports
- Connecting budget information into your model
- Carrying our Variance Reporting and Analytics
- Building a Dashboard

Overview of Advanced Features in Power BI
- Inserting Bookmarks
- Inserting Buttons
- Using Q&A
- Telling a Story with the Scatterplot visual Using Quick measure

Publishing to PowerBI.com
- Publishing to PowerBI.com
- Personal vs On-Prem Gateway for data refresh
- Creating a Dashboard from your reports
- Creating Groups, Content Packs and other collaboration tools

To learn more and register, please scan the QR code or contact us by phone, email or visit our website

Training Center:
70A Adeyemo Akapo Street, Omole Phase 1, Agidingbi, Ikeja, Lagos, Nigeria

Sales +234 812 333 4364, +234 904 254 5520
+234 700TRAINING (+23470087246464)
training@dbrownconsulting.net
engage@dbrownconsulting.net
www.dbrownconsulting.net
www.OficeTrainingHub.com

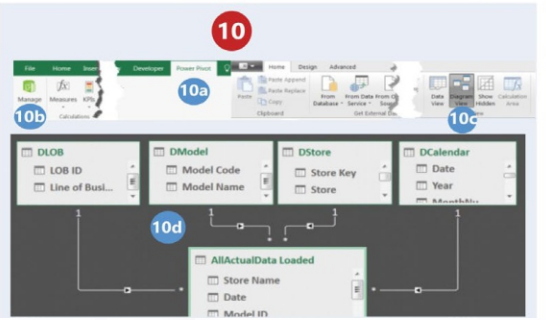
...learning anywhere, everywhere.

Building a Power BI Model

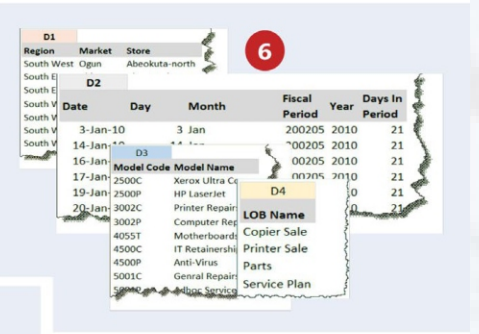
Best Practice build steps in Excel & Power BI Desktop

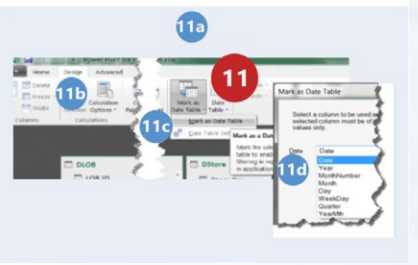
dbrown CONSULTING

1. **Identify all Report fields:** These are all the column headers in tables and elements of charts used in all your reports, list them out in a table and create 4 more columns.
2. **Categorize the fields:** into "Report lines" (R) or Values (V), Report lines are mostly text that give context to the aggregations of Value fields in your reports. You can think of Value fields as "money fields" or simple counts.
3. **Group "R" Reporting Lines (Hierarchies):** Many reporting lines form natural hierarchies, find and group them (D1, D2 …). Note: Sometimes no hierarchies exist.
4. **Dimension Key:** identify the fields in each grouped reporting line that has the lowest granularity. Label that field as R_K .They are Keys of your Dimension tables.
5. **Identify Fact Table Fields:** Your fact tables contain your daily transactions or activities; it grows in size every day. The Fields that make it up are Dimension Key Fields (R_K) and all Value Fields (V).
6. **Create Dimension Tables:** Use the groups (Hierarchies) identified in step 3 to create dimension tables. Note, you must remove duplicates. You may be able to get these tables from your IT department and just connect to them. It is advisable that you have a very robust Date Table, check out one of our templates or great ones online. If you are using Excel, then save each dimension table as a separate Excel Workbook.
7. **Create your Fact Table:** Use the fields identified in Step 5 to create your fact tables. Preferably this should be a direct connection to a database (SQL, Salesforce, etc). If you only have Excel or CSV data, then we advice you use the Connect to Folder Option in Power Query and automate the consolidation of multiple CSV files to form your Fact Table
8. **Load Fact Folder to the Data Model:** use Power Query to upload all data in the Fact file folder to the data model. Do a thorough review of the data types for each column. This table needs to be as slim as possible.
9. **Load Dimension Files to the Data Model:** Use Power Query to load all dimension files from reliable sources or Excel Workbooks to the Data model.
10. **Create Relationships:** Go to the Model view and connect Report line Keys (RK in Step 4) by dragging them from the Fact table to the corresponding Keys in each Dimension Table.
11. **Mark Date as Date Table:** Go to the report or data view and select the date table from the field list. Under the Table Tools, select "Mark as Date Table" then select the Column that represents date, most likely called date.



Report Fields	2	3	4	5
Region	R	D1		
Market	R	D1		
Store	R	D1	R_K	F
Date	R	D2	R_K	F
Day	R	D2		
Month	R	D2		
Fiscal Period	R	D2		
Model ID	R	D3	R_K	F
Year	R	D2		
Model Name	R	D3		
Line of Business	R	D4	R_K	F
Revenue	V	V		F
Units Sold	V	V		F
Days In Period	R	D2		





+234 700TRAINING | training@dbrownconsulting.net
www.dbrownconsulting.net | www.OfficeTrainingHub.com