

Power BI for Business Reporting & Analytics – 4 Days (32 Hrs.)

Training Note:

The training will be conducted using a **sample business data** for demonstrations and hands-on exercises. The examples and practical exercises are intended to provide a broad understanding of Power BI concepts and reporting capabilities. The training is **not focused on any specific department, function, or business domain**.

Day 1 – Power BI Fundamentals & Data Preparation

Module 1: Introduction to Business Intelligence and Power BI

- Understanding Business Intelligence and Data Analytics
- Role of Data in Business Decision-Making
- Introduction to Power BI
- Power BI Desktop and Power BI Service
- Reports, Dashboards and Datasets
- Overview of Power BI Workflow

Module 2: Getting Started with Power BI Desktop

- Power BI Desktop Interface
- Report, Data and Model Views
- Importing Data into Power BI
- Understanding Data Refresh
- Saving and Managing Power BI Files

Module 3: Connecting to Data Sources

- Working with Excel Files
- CSV/Text Files
- Introduction to Database Connectivity
- Connecting Power BI to a Database
- Data Source Settings

Module 4: Data Preparation using Power Query

- Introduction to Power Query
- Understanding Query Steps
- Data Profiling
- Cleaning Data
- Handling Blank and Null Values
- Removing Duplicates and Errors
- Changing Data Types
- Renaming and Reordering Columns
- Sorting and Filtering Data

Hands-on: Import and prepare **sample data** for reporting.

Day 2 – Data Modeling & Basic DAX

Module 5: Data Transformation

- Splitting and Merging Columns
- Extracting and Replacing Values
- Conditional Columns
- Custom Columns
- Group By
- Merge Queries
- Append Queries
- Pivot and Unpivot

Module 6: Data Modeling Fundamentals

- Understanding Data Models
- Fact and Dimension Tables
- Introduction to Star Schema
- Creating Relationships
- Relationship Cardinality

- Understanding Filter Direction
- Basic Data Modeling Best Practices

Module 7: DAX Fundamentals

- Introduction to DAX
- Calculated Columns vs Measures
- Basic Aggregation Functions
- Mathematical Functions
- Logical Functions
- Basic Date Functions
- Creating Business Calculations
- Understanding Basic Filter Context

Hands-on:

- Build a data model
 - Create measures such as:
 - Total Sales
 - Total Quantity
 - Average Sales
 - Number of Orders
 - Profit/Margin-related KPIs
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Day 3 – Visualizations, KPIs & Interactive Reports

Module 8: Creating Effective Visualizations

- Choosing the Right Visual
- Tables and Matrix
- Bar and Column Charts
- Line Charts
- Pie/Donut Charts

- Cards and KPI Visuals
- Combo Charts
- Basic Geographic Visuals
- Formatting Visuals

Module 9: Interactive Reporting

- Visual-Level Filters
- Page-Level Filters
- Report-Level Filters
- Slicers
- Drill Down and Drill Up
- Drill-through — Introduction
- Report Interactions
- Tooltips

Module 10: Dashboard Design & Data Storytelling

- Principles of Effective Dashboard Design
- Designing Management Dashboards
- KPI-Based Reporting
- Layout and Alignment
- Themes and Formatting
- Consistent Design Standards
- Storytelling with Data
- Creating Actionable Insights
- Dashboard Best Practices

Hands-on: Build an **interactive business dashboard** using AdventureWorks data.

Day 4 – DAX for Business Analysis, Power BI Service & Final Dashboard

Module 11: DAX for Business Reporting

- CALCULATE – Introduction and Practical Use
- FILTER – Basic Business Scenarios
- ALL – Basic Use
- Percentage and Contribution Analysis
- Growth Analysis
- Basic Year-to-Date Analysis
- Basic Month-to-Date Analysis
- Ranking – Introduction
- Practical Business KPI Calculations

Module 12: Enhancing Reports

- Conditional Formatting
- Dynamic Titles – Introduction
- Bookmarks
- Buttons and Navigation

Module 13: Power BI Service

- Publishing Reports to Power BI Service
- Understanding Workspaces
- Creating Dashboards
- Sharing Reports and Dashboards
- Collaboration

Module 14: End-to-End Business Reporting Exercise

- Understand a business reporting requirement
- Prepare the data
- Build the data model
- Create KPIs and measures

- Develop interactive visuals
- Apply filters and slicers
- Design a management dashboard
- Present key business insights

Final Hands-on: Participants create and present a **business reporting dashboard using sample dataset.**