



Developing a Dashboard using Power BI: Data Analysis & Reporting

18 – 22 October 2027
Kigali (Rwanda)



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Introduction

The Developing a Dashboard using Power BI: Data Analysis & Reporting course develops practical knowledge of using Power BI for data analysis, visualization, and business reporting. It introduces participants to the process of connecting data sources, preparing information, and developing structured analytical models. It explains how to transform raw data into meaningful reports, interactive dashboards, and performance indicators. Participants explore Power Query, data relationships, DAX measures, filters, slicers, and effective visualization techniques. The program addresses dashboard design principles that improve clarity, usability, and decision-making. Participants will understand how Power BI supports professional data analysis and interactive business intelligence reporting.

Targeted Groups

This Developing a Dashboard using Power BI: Data Analysis & Reporting training targets professionals seeking knowledge and skills:

- Business analysts developing interactive reports.
- Data analysts working with business datasets.
- Managers monitoring performance indicators.
- Finance professionals analyzing financial data.
- Marketing teams tracking campaign performance.
- HR professionals analyzing workforce information.
- Reporting specialists preparing management reports.
- Professionals seeking Power BI data analysis skills.

Course Objectives

Participants will achieve the following objectives by completing the Developing a Dashboard using Power BI: Data Analysis & Reporting course:

- Understand Power BI concepts and reporting capabilities.
- Identify suitable data sources for analysis.
- Import and organize business data effectively.
- Apply basic data transformation techniques.
- Build relationships between related datasets.
- Develop structured data models for reporting.
- Create calculated columns and DAX measures.
- Select suitable visuals for different data types.
- Design interactive Power BI dashboards.
- Apply filters, slicers, and drill-down functions.
- Analyze trends, comparisons, and performance indicators.
- Build meaningful KPI-based reports.
- Improve dashboard layout and visual consistency.
- Interpret analytical results for business decisions.
- Publish and organize reports within Power BI.
- Present insights through clear and effective visual reporting.

Targeted Competencies

Participants will gain the following competencies during the Developing a Dashboard using Power BI: Data Analysis & Reporting program:

- Power BI dashboard development.
- Data preparation and transformation.
- Power Query fundamentals.
- Data modeling and relationships.
- DAX calculation development.
- Data visualization selection.
- Interactive report creation.
- KPI and performance analysis.
- Dashboard layout design.
- Filter and slicer management.
- Business intelligence reporting.
- Analytical interpretation.
- Trend and variance analysis.
- Data-driven reporting.
- Professional dashboard presentation.

Studying Scenarios

In this Developing a Dashboard using Power BI: Data Analysis & Reporting training, participants develop skills through the following scenarios:

- Analyzing monthly sales and revenue performance.
- Comparing regional sales results through interactive visuals.
- Monitoring departmental KPIs and performance indicators.
- Reviewing customer trends and purchasing patterns.
- Building management reports from structured business data.
- Identifying trends, variances, and performance gaps.

Course Content

Unit 1: Power BI Fundamentals and Data Preparation

- Understand Power BI and its main features.
- Explore the Power BI interface and working areas.
- Connect Excel, CSV, databases, and other data sources.
- Import and organize data for analysis.
- Identify missing, duplicate, and incorrect data.
- Clean and transform data using Power Query.
- Prepare accurate data for dashboard development.

Unit 2: Data Modeling and Analytical Foundations

- Build structured data models for accurate analysis.
- Understand tables, fields, dimensions, and measures.
- Create relationships between related tables.
- Manage relationships between different datasets.
- Organize data using fact and dimension tables.
- Prepare data for time-based analysis.
- Check data models for accuracy and consistency.

Unit 3: DAX, Measures, and Data Analysis

- Learn DAX for calculations and data analysis.
- Create calculated columns for reporting requirements.
- Create measures for totals, averages, percentages, and ratios.
- Analyze sales, revenue, costs, and other business metrics.
- Compare monthly, quarterly, and yearly results.
- Analyze targets, variances, and performance results.
- Convert analytical results into meaningful business insights.

Unit 4: Visualization and Interactive Dashboard Design

- Select appropriate charts and visuals for different data types.
- Display key performance indicators clearly.
- Compare results and identify important trends.
- Use filters and slicers for focused data analysis.
- Explore detailed information through drill-down analysis.
- Arrange dashboard visuals for clear navigation.
- Apply consistent formatting, labels, and themes.

Unit 5: Reporting, Dashboard Analysis, and Business Insights

- Combine data, visuals, measures, and filters into reports.
- Build interactive dashboards for monitoring business performance.
- Track KPIs, targets, trends, and performance variances.
- Identify patterns, opportunities, and performance gaps.
- Present information according to business requirements.
- Communicate findings through clear visual reports.
- Publish and organize reports using Power BI Service.

Final Insights & Key Takeaways

Participants will develop the knowledge to transform structured business data into interactive Power BI dashboards and meaningful analytical reports. The course strengthens their ability to combine data preparation, modeling, DAX, visualization, and reporting techniques to support informed business decisions.