



**EXECUTIVE COURSE IN DATA ANALYSIS, VISUALIZATION,
AND DEVELOPING INTERACTIVE DASHBOARDS USING
POWER BI**

Contact Persons

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COURSE INFORMATION

Course Name:	Data Analysis, Visualization, and Developing Interactive Dashboards Using Power BI
Total Course hours:	30 hours (In class=20, Exercises=10)
Language:	English
Training type:	Practical Hands-on training and use of case studies
Assessment:	Two Mandatory assessments

INTRODUCTION

Power BI is an interactive data visualization software product developed by Microsoft with a primary focus on business intelligence. It is part of the Microsoft Power Platform. Power BI is a useful tool in making data insightful and actionable and as such enable busy M&E professionals to set up simplified data analysis and interpretation systems. It helps program managers, professionals, and organizations to devote their time to making decisions and taking corrective actions and become result-based basing on what they see and understand. The analytics platform is transforming the way people use data to solve problems.

This course will provide a thorough understanding of the data management process, and pragmatic step-by-step for conducting data analysis, visualization, and development of dashboards using advanced features of Power BI.

WHO SHOULD ATTEND?

This training is ideal for professionals including officers, managers, and researchers from development organizations, foundations, governments, and non-governmental organizations, as well as students. It's for people wanting to have a wide exposure to the use of technologies for enhanced project and programme planning, management, monitoring, evaluation, and learning. ***Prior Advanced Excel knowledge is required.***

LEARNING OBJECTIVES

- To equip trainees with the understanding of concepts, tools, and processes for designing visuals and other analytic tools for creating analysis dashboards
- To equip participants with skills of ensuring quality assurance while using technology in data collection, management, and Analysis.
- To share knowledge, experiences & best practices in data management, and analysis as well as project monitoring, evaluation, and learning.

COURSE SESSIONS

Session 0: Introduction to the course

- Registration, Introduction, Expectations, General norms.
- Workshop goals & Time table

Session 1: Introduction to Big Data and Power Query

- Overview of Big Data concepts and challenges
- Microsoft Power BI Desktop installation
- Introduction to Power BI and its components

- Understanding data sources and connections
- Importing and transforming data
- Introduction to Power Query and its capabilities
- Cleaning and shaping data for analysis

Session 2: Advanced Data Modeling

- Creating relationships between data tables
- Designing efficient data models
- DAX (Data Analysis Expressions) basics
- Implementing calculated columns and measures
- Using advanced DAX functions for complex calculations

Session 3: Data Analysis and Visualization with Power BI

- Creating interactive visualizations using Power BI Desktop
- Building reports and dashboards
- Using filters, slicers, and hierarchies for data exploration
- Creating calculated tables and measures in Power BI
- Applying advanced visualizations and customizations

Session 4: Advanced Techniques and Real-World Applications

- Data modeling best practices and performance optimization
- Advanced data transformation techniques with Power Query
- Integrating external data sources and APIs-Creating connections to KoboTool Box,google sheets
- Creating interactive and dynamic reports with Power BI

Session 5: Exporting, Publishing, and Sharing Dashboards

- Publish to Power BI Server and Share over the Web
- Exporting as Images
- Publish to Reader
- Packaged Workbooks
- Publish to Office
- Publish to PDF

Session 6: Workshop Closure

- Final assessment
- Final workshop evaluation