INTERNATIONAL TRAINING INSTITUTE

DATA VISUALIZATION
& BUILDING DASHBOARDS



Course Overview

This course introduces participants to the fundamentals of data visualization and dashboard creation using Microsoft Excel and Power BI. It focuses on practical, hands-on learning to help participants turn raw data into clear and meaningful insights.

Participants will begin by learning how to prepare and transform data using Excel and Power Query. They will then create charts, analyse data using Pivot Tables, and build interactive dashboards in Excel. The course also provides an introduction to Power BI, where participants will create simple visual reports and dashboards.

Participants will also be introduced to modern tools, including AI-assisted features, to support data analysis, formula generation, and reporting tasks.

The training emphasises real-world application, allowing participants to work with datasets and develop dashboards step by step. No advanced technical background or coding is required.

By the end of the course, participants will be able to organise data, create effective visualisations, and build basic dashboards to support reporting and decision-making.

Learning Outcomes

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

1. Understand the role of data visualization in supporting decision-making
2. Prepare, clean, and transform data using Excel and Power Query
3. Analyse data using Pivot Tables and summarisation techniques
4. Create charts and visual representations of data in Excel
5. Design and build simple, interactive dashboards in Excel
6. Use filters and slicers to enhance dashboard interactivity
7. Develop basic reports and visualisations using Power BI
8. Present data in a clear, structured, and professional format
9. Apply practical techniques to improve efficiency when working with data
10. Use AI-assisted tools to support data analysis, formula generation, and reporting tasks

Module 1: Introduction to Data and Visualization

Topics Covered:

- Understanding data and its importance
- Types of data and basic concepts
- How data is used in organisations
- Introduction to data visualization
- Purpose of dashboards

Learning Outcome:

Participants will understand the importance of data in decision-making and be able to identify the key features of effective data visualizations and dashboards.

Module 2: Data Preparation and Transformation (Power Query)

Topics Covered:

- Understanding raw data structure
- Introduction to Power Query
- Importing data from different sources
- Removing duplicates and errors
- Handling missing or incomplete data
- Data transformation (splitting, merging, formatting)
- Cleaning and reshaping data
- Loading data into Excel for analysis

Learning Outcome:

Participants will be able to clean, transform, and organise raw data using Power Query, making it ready for accurate analysis and reporting.

Module 3: Data Analysis and Dashboard Building in Excel

Topics Covered:

- Creating Pivot Tables
- Summarising and grouping data
- Filtering and sorting data
- Creating charts from Pivot Tables
- Choosing the right chart types
- Designing a dashboard layout
- Creating key summary metrics (KPIs)
- Adding slicers and filters for interactivity
- Formatting and improving dashboard presentation

Learning Outcome:

Participants will be able to analyse data using Pivot Tables and create a simple, interactive dashboard in Excel to present insights clearly.

Module 4: Introduction to Power BI

Topics Covered:

- Overview of Power BI and its uses
- Understanding the Power BI interface
- Importing data into Power BI
- Creating charts and summary tables for data analysis
- Building a simple report and dashboard
- Basic formatting and layout design
- Introduction to sharing and publishing reports

Learning Outcome:

Participants will be able to create simple reports and dashboards using Power BI and understand how they support data analysis and decision-making.

Practical Activities

Participants will work with sample datasets throughout the workshop to apply the concepts learned. Activities will include data cleaning, analysis, and building dashboards step by step.

Who Should Attend?

- Anyone working with data and reports
- Professionals using Excel in their daily work
- Office, finance, and administrative staff
- Business owners and team leaders
- Students and graduates seeking practical skills

Prerequisites

No prior experience in data analysis or Power BI is required. Basic familiarity with Microsoft Excel will be helpful but is not essential.

Course Duration

- Duration: 1 Day – 9 AM TO 5 PM
- Mode: Face-to-face / Instructor-led
- Includes hands-on practical sessions

Certification

Participants who successfully complete the workshop will be awarded a Certificate of Attainment.