PAD SYNERGY CONSULTANCY SDN BHD
HRD CORP REGISTERED TRAINING PROVIDER

DATA ANALYTICS TRAINING PROGRAMME

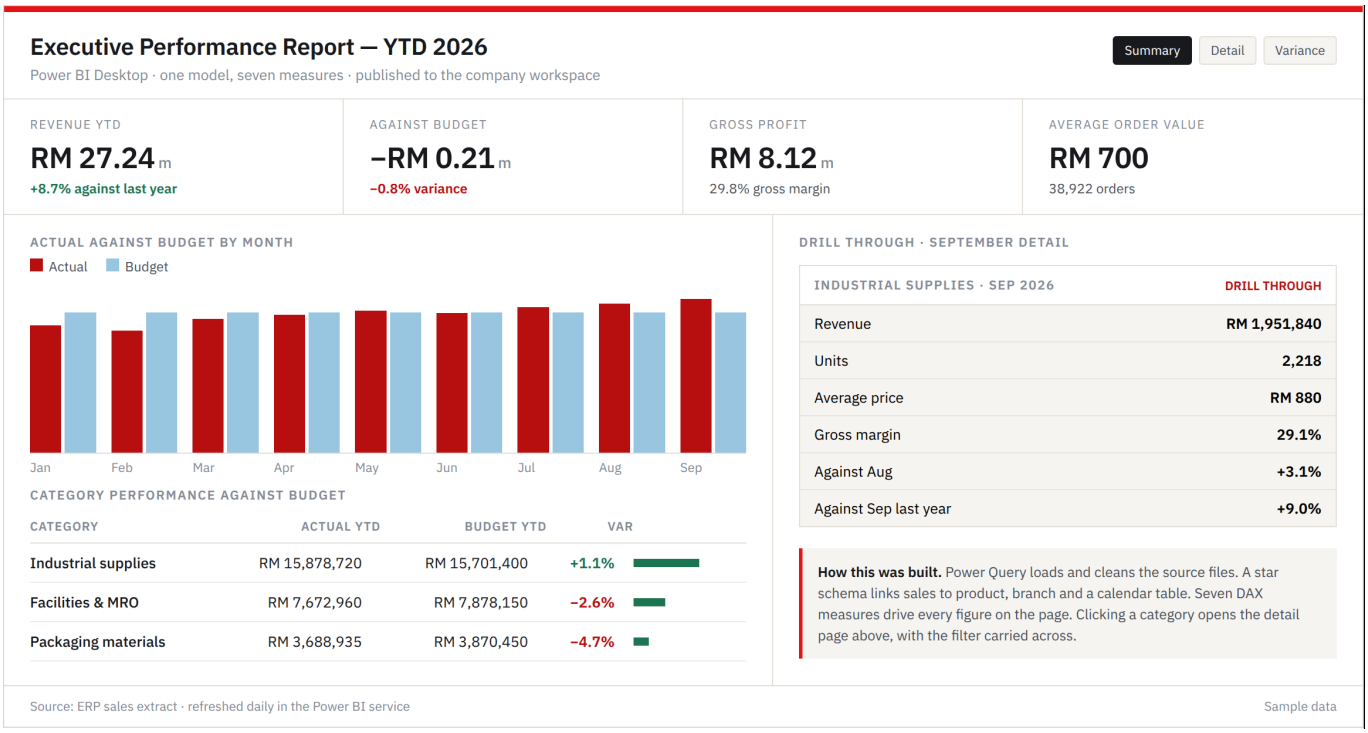
Reporting and analytics with Power BI Desktop

Power BI – Enterprise Data Modelling & Business Intelligence from raw export to a published dashboard

DURATION	MODE	LEVEL
2 Days (14 Hours)	**In-house or Public Training**	**Intermediate to Advanced**

STEP 1	STEP 2	STEP 3	STEP 4	STEP 5	STEP 6	STEP 7
Prepare	**Model**	**Measure**	**Compare**	**Explore**	**Design**	**Publish**

WHAT YOU WILL HAVE BUILT BY THE END OF THE PROGRAMME



Example only. Built from the sample data used in class. You will build the same thing using your own numbers.

01 Programme Overview

Most companies in Malaysia already report in Excel. The numbers come out of the accounting system or the ERP, someone tidies them by hand, and the same report is rebuilt every month. It works until the file gets too big, or until management asks the same question a different way and the whole thing has to be done again.

This programme moves that work into Power BI. Over two days you connect and clean your data with Power Query, build a proper data model, write DAX measures, and turn them into a report management can click through. You start from raw exports and finish with a dashboard published to the Power BI service.

The focus is on building something that refreshes. You go home with a working model, your measures written down, and a report that updates when the source data changes.

02 Learning Objectives

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

- Connect to Excel, CSV, database and web sources and load clean data with Power Query.
- Build a structured data model with fact and dimension tables and correct relationships.
- Explain the difference between a calculated column and a measure, and choose the right one.
- Write DAX measures for revenue, cost, profit and margin using CALCULATE and filter context.
- Produce year-to-date, same period last year and month-on-month comparisons.
- Build budget against actual reports that show the size and the direction of a variance.
- Create interactive reports using slicers, drill down, drill through and tooltip pages.
- Publish to the Power BI service, set up refresh and share reports safely.

03 Training Methodology

- ☐ The trainer shows every step first. Participants then do it themselves.
- ☐ Hands-on practice in every module, using your own files or the sample files we provide.
- ☐ A ready-made reference sheet, so you leave with steps that work, not just notes.
- ☐ Group discussion and sharing, so you see how others solve the same problem.
- ☐ Examples taken from real Malaysian workplace situations, not textbook cases.
- ☐ An open clinic at the end of the programme. Bring your own work problem and we solve it together.

04 Programme Outline

MODULE 1 Power Query — Data Preparation and ETL

- ☐ What ETL means: extract, transform, load, and why it replaces copying by hand
- ☐ Connecting to Excel files, CSV and text, databases and web sources
- ☐ The Query Editor: ribbon, navigator pane, preview grid and the applied steps list
- ☐ Setting data types correctly so totals and dates behave
- ☐ Removing duplicates, replacing errors and handling null values
- ☐ Splitting and merging columns, and unpivot against pivot columns
- ☐ Appending a folder of monthly files into one table that refreshes
- ☐ Loading to the model against loading to a table, and when each is right

HANDS-ON ACTIVITY

- ☐ Clean and transform a multi-source operational data set
- ☐ Combine twelve monthly files into one structured reporting table
- ☐ Add a new file to the folder, refresh, and confirm nothing breaks

MODULE 2 Data Modelling and Relationship Management

- ☐ What a data model is, and why one wide flat table stops working
- ☐ Fact tables and dimension tables, and how to tell them apart
- ☐ The star schema explained in plain terms
- ☐ Creating relationships between tables
- ☐ One-to-many relationships, and why they are the normal case
- ☐ Cardinality and cross-filter direction, and what each setting changes
- ☐ Spotting and avoiding circular relationships
- ☐ Practical ways to keep a model small and fast

HANDS-ON ACTIVITY

- ☐ Build a structured sales and product model from the cleaned tables
- ☐ Set the relationships and test that a filter flows in the right direction

fx MODULE 3 DAX Fundamentals and Measure Development

- ☐ Calculated column against measure: what each one costs and when to use it
- ☐ Implicit and explicit measures, and why explicit measures win
- ☐ Core aggregations: SUM, COUNT, DISTINCTCOUNT and AVERAGE
- ☐ CALCULATE, the function almost everything else depends on
- ☐ Filter context: what the visual is actually asking the measure
- ☐ Row context against filter context, with a worked example
- ☐ Writing measures you can reuse instead of repeating the same logic
- ☐ Naming, display folders and comments so the model stays readable

HANDS-ON ACTIVITY

- ☐ Build the core KPIs: revenue, cost, profit and margin
- ☐ Create dynamic performance measures that respond to slicers

MODULE 4 Time Intelligence and Variance Analysis

- ☐ Why a calendar table is needed before any date comparison works
- ☐ Building a date table and marking it as the date table
- ☐ Year-to-date and quarter-to-date
- ☐ Same period last year, and the trap of an incomplete month
- ☐ Month-on-month and rolling period comparisons
- ☐ Variance in value and variance in percentage
- ☐ Bringing budget data into an existing model
- ☐ Showing whether a variance is good or bad, not only how big it is

HANDS-ON ACTIVITY

- ☐ Build a year-to-date sales dashboard
- ☐ Create a budget against actual variance report with comparison indicators

MODULE 5 Interactive Reporting and Drill-Through Analysis

- ☐ Choosing the right visual for the question being asked
- ☐ Standard visuals and custom visuals, and the risk of relying on custom ones
- ☐ Formatting and layout that people can read in a few seconds
- ☐ Slicers, and syncing them across report pages
- ☐ Drill down for exploring a hierarchy
- ☐ Drill through for jumping to the detail behind a single number
- ☐ Passing filter context between pages so the detail matches the summary
- ☐ Tooltip pages and the basics of bookmark navigation

HANDS-ON ACTIVITY

- ☐ Create a summary dashboard for management
- ☐ Build a drill-through page for detailed transaction analysis
- ☐ Add interactive KPI navigation and test it the way a user would

MODULE 6 Dashboard Design and Storytelling

- ☐ What a KPI card should show, and what it should leave out
- ☐ Comparative visuals: against target, against last year, against budget
- ☐ Conditional formatting inside visuals
- ☐ Alignment, spacing and using a layout grid
- ☐ Ordering a page so the story reads from top left to bottom right
- ☐ Writing titles that state the finding, not the name of the field
- ☐ Using colour for meaning rather than decoration
- ☐ Designing one executive page that answers the three questions management asks

HANDS-ON ACTIVITY

- ☐ Design a complete executive dashboard
- ☐ Build an interactive reporting solution from scratch

MODULE 7 Publishing, Refresh and Sharing Insights

- ☐ Publishing a report to the Power BI service
- ☐ Workspaces, and deciding who belongs in one
- ☐ Setting up scheduled refresh
- ☐ Gateways, and when your data source needs one
- ☐ Sharing a report securely instead of emailing a file
- ☐ Apps and workspace roles, explained simply
- ☐ PDPA and company data rules once a report leaves your laptop
- ☐ Governance: who owns the model and who fixes it when it breaks

HANDS-ON ACTIVITY

- ☐ Publish the completed dashboard to a workspace
- ☐ Set up a scheduled refresh and simulate sharing it with a colleague

05 Target Participants

This programme is suitable for:

- ☐ Finance and operations managers who prepare monthly management reports
- ☐ Analysts and executives who rebuild the same Excel reports every month
- ☐ Heads of department who track KPIs, cost, sales or production
- ☐ Advanced Excel users moving into a business intelligence or reporting role
- ☐ IT and data staff asked to support reporting for the rest of the business
- ☐ Business owners and directors who want one clear view of performance
- ☐ Anyone who joins data from several systems by hand before they can report on it

06 What You Need to Bring

- ☐ A laptop, not a tablet, with Power BI Desktop installed. It is free from Microsoft and we send the link before the programme.
- ☐ One real data export from your own system, in Excel or CSV. Use our sample files if you cannot bring one.
- ☐ A second export that relates to the first, such as products, branches, customers or staff.
- ☐ The three questions your management actually asks about performance.

07 Expected Training Outcome

You leave with a working Power BI report built from your own data or from the sample data we provide. Behind it sits a clean data model, a calendar table and a set of DAX measures you wrote yourself and can explain. You will be able to do it again on a different data set without help, and you will know how to check a figure against the source before anyone else sees it. For the company, management reporting becomes faster, consistent from month to month, and no longer dependent on one person's spreadsheet.

100% HRD Corp claimable. Applications should be submitted at least 14 days before the training dates.