BLACKBIRD FOR TRAINING

Advanced Business Intelligence & Data-Driven Decision Making

28 February – 4 March 2027
Cairo (Egypt)



Advanced Business Intelligence & Data-Driven Decision Making

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Introduction

This 1-week intensive course offers participants a comprehensive understanding of modern Business Intelligence BI, data management, analysis, visualization, and reporting techniques. It is designed to help professionals transform raw data into meaningful and actionable insights that support effective business decision-making and improve organizational performance.

The course covers the complete BI process, from data extraction, cleaning, validation, and transformation to data visualization, interactive dashboards, KPI reporting, advanced analysis, and predictive insights. Participants will develop practical skills using leading BI platforms such as Power BI and Tableau, with a strong focus on creating professional dashboards, management reports, and data-driven solutions.

By combining theoretical knowledge with practical applications, the course enables participants to effectively analyze business data, communicate insights, and support strategic and operational decision-making.

Course Objectives

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

- Understand the key concepts, frameworks, and methodologies of Business Intelligence.
- Understand the role of BI in modern business decision-making.
- Identify and work with different business data sources and extraction techniques.
- Apply data cleaning, validation, profiling, and transformation techniques.
- Manage data quality, consistency, accuracy, and integrity.
- Prepare datasets for analysis, visualization, and reporting.
- Apply effective data visualization and data storytelling techniques.
- Create interactive dashboards and professional reports using Power BI and Tableau.
- Apply filters, slicers, drill-down, and drill-through functionality.
- Develop KPI dashboards and management reports.
- Apply dashboard design best practices.
- Explore advanced analytical and predictive techniques for business insights.
- Transform analytical findings into actionable business recommendations.
- Publish, share, and present BI reports effectively to different stakeholders.



Course Outlines

Day 1: Foundations of Business Intelligence & Data Management

- Overview of Business Intelligence concepts, frameworks, and methodologies.
- The role of BI in modern business decision-making.
- Understanding the BI lifecycle and how organizations transform data into actionable insights.
- Introduction to data management and data-driven business environments.
- Introduction to data warehousing and data modeling.
- Understanding different business data sources and data structures.
- Overview of leading BI tools such as Power BI and Tableau.
- Understanding how BI platforms support analysis, visualization, reporting, and decision-making.
- Identifying business requirements and translating them into BI solutions.

Day 2: Data Extraction, Preparation & Transformation Techniques

- Understanding data sources and data extraction techniques.
- Importing and connecting data from different sources.
- Data cleaning, validation, and profiling.
- Identifying and handling missing, duplicate, and inconsistent data.
- Managing data quality, consistency, accuracy, and integrity.
- Preparing datasets for analysis and reporting.
- Understanding ETL Extract, Transform, Load processes in BI workflows.
- Applying data transformation techniques.
- Combining and integrating data from multiple sources.
- Preparing reliable and analysis-ready datasets for visualization and dashboard development.

Day 3: Data Visualization, Storytelling & Interactive Dashboards

- Principles of effective business data visualization.
- Selecting appropriate charts, graphs, and visual elements.
- Applying data storytelling techniques to communicate business insights.
- Creating dynamic dashboards using Power BI and Tableau.
- Developing interactive reports and dashboards.
- Applying filters and slicers to enhance dashboard interactivity.
- Using drill-down and drill-through functionality.
- Developing KPI dashboards and management reports.
- Applying dashboard design best practices.
- Improving dashboard usability, clarity, and visual impact.



Practical Session

- Building interactive dashboards in Power BI/Tableau.
- Developing management reporting solutions.
- Creating KPI dashboards.
- Applying filters, slicers, drill-down, and drill-through functionality.
- Presenting data through effective visual storytelling.
- Publishing and sharing reports.

Day 4: Advanced Analysis Techniques & Predictive Analytics

- Introduction to advanced data analysis techniques.
- Exploring relationships, patterns, and trends within business data.
- Introduction to regression and clustering techniques.
- Applying advanced analytical techniques to business problems.
- Introduction to predictive analytics for forecasting and trend analysis.
- Identifying future trends, opportunities, and potential business risks.
- Understanding the role of predictive analytics in business decision-making.
- Exploring the integration of advanced analytics with BI tools.
- Interpreting analytical and predictive outputs.
- Transforming advanced analysis into actionable business insights.

Practical Session

- Performing advanced analysis on business datasets.
- Identifying trends and patterns.
- Applying basic forecasting and predictive analysis techniques.
- Interpreting analytical results and developing business recommendations.

Day 5: Delivering Business Insights & Effective Reporting Strategies

- Transforming data analysis into actionable business insights.
- Best practices for presenting data-driven business insights.
- Developing effective management reports.
- Customizing reports and dashboards for different business stakeholders.
- Selecting and presenting relevant business KPIs.
- Communicating complex data insights to non-technical audiences.
- Preparing professional reports for decision-makers.
- Publishing and sharing BI reports and dashboards.
- Collaboration and stakeholder communication in BI environments.
- Presenting business findings and actionable recommendations.
- Final review of BI techniques and best practices.



Practical Session

- Developing a complete management dashboard using Power BI/Tableau.
- Integrating data preparation, visualization, KPIs, and interactive features.
- Creating and presenting a professional management report.
- Publishing and sharing the completed BI solution.
- Presenting key findings and actionable recommendations to decision-makers.

Why Attend This Course: Wins & Losses!

- Gain a comprehensive understanding of modern Business Intelligence concepts and methodologies.
- Develop practical skills in data extraction, preparation, transformation, and quality management.
- Learn how to transform raw data into actionable insights that improve business performance.
- Build interactive dashboards and professional reports using Power BI and Tableau.
- Master filters, slicers, drill-down, drill-through, and KPI dashboard functionality.
- Strengthen data visualization and storytelling skills.
- Develop effective management reporting and data presentation capabilities.
- Explore advanced analytics and predictive techniques for business decision-making.
- Improve the ability to communicate data-driven insights to different stakeholders.
- Learn how to publish, share, and collaborate on BI reports and dashboards.
- Strengthen decision-making capabilities through effective use of Business Intelligence.

Conclusion

This course provides participants with a comprehensive and practical approach to Business Intelligence, covering the full journey from data extraction and preparation to visualization, dashboard development, advanced analysis, and actionable business insights.

Through practical applications using Power BI and Tableau, participants will develop the skills required to create interactive dashboards, KPI reports, management reporting solutions, and professional data-driven presentations. The course also introduces advanced analytical and predictive techniques that enable participants to identify trends and support better business decisions.

By the end of the course, participants will be better equipped to transform business data into reliable insights, communicate findings effectively, and contribute to data-driven strategic and operational decision-making.



Questions & Answers

1. What is Business Intelligence and why is it important for organizations?

Business Intelligence is the process of collecting, preparing, analyzing, and visualizing data to generate meaningful insights that support business decision-making. It enables organizations to understand performance, identify trends, monitor KPIs, and make informed strategic and operational decisions.

2. How do Power BI and Tableau support Business Intelligence?

Power BI and Tableau are leading BI platforms that enable users to connect to different data sources, prepare and analyze data, create interactive visualizations, develop dashboards and reports, and communicate business insights effectively to stakeholders.

3. Why are data quality and data preparation important in BI?

Reliable insights depend on reliable data. Data cleaning, validation, profiling, and transformation help ensure that information is accurate, consistent, complete, and suitable for analysis. High-quality data leads to more reliable reports, dashboards, and business decisions.

4. What are interactive dashboards and how do they support decision-making?

Interactive dashboards provide a visual overview of important business information and allow users to explore data using features such as filters, slicers, drill-down, and drill-through. They help decision-makers quickly identify trends, monitor KPIs, and investigate business performance.

5. How can advanced analytics and predictive analytics enhance Business Intelligence?

Advanced and predictive analytics can help organizations identify patterns, forecast future trends, recognize potential risks and opportunities, and generate deeper insights from business data. When combined with BI tools, these techniques can support more proactive and data-driven decision-making.

