



DATA MANAGEMENT AND BUSINESS INTELLIGENCE

Data Science for Operational Excellence

Course code: DMBI-016

SPARK TRAINING

Professional training courses for leaders, specialists, and organizations seeking practical capability development.

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— Workshop Overview

Operational excellence depends on efficient processes, reliable decisions, continuous improvement, and the ability to respond quickly to change. Data science enables organizations to uncover inefficiencies, predict outcomes, optimize resources, and improve performance using evidence rather than assumptions. This course provides participants with practical tools to apply data science concepts, analytics techniques, and digital technologies to achieve stronger operational results.

Why Attend

This course uses an interactive and practical approach through presentations, case studies, analytics workshops, group discussions, dashboards exercises, process improvement activities, and real business examples.

Who Should Attend

Operations Managers
Process Improvement Professionals
Business Analysts
Supply Chain Managers
Quality Managers
Project Managers
Anyone responsible for performance improvement

— Learning Objectives

- Understand the relationship between data science and operational excellence
- Use data for smarter operational decision-making
- Improve data quality, governance, and reporting practices
- Apply analytics to optimize processes and workflows
- Use forecasting for planning capacity and resources
- Integrate Lean improvement with data-driven methods
- Build a sustainable culture of continuous improvement
- Align analytics initiatives with business strategy

— Course Outline

DAY
1

Foundations of Data Science and Operational Excellence

- Growth of data in modern organizations
- Principles of operational excellence
- Why data-driven decisions outperform intuition alone
- Sources of operational data: internal and external
- Descriptive, predictive, and prescriptive analytics overview
- Successes and failures of analytics in operations
- Key tools and technologies used in data science
- Building a data-driven culture foundation

DAY
2

Tools, Techniques, and Data Management

- Data collection, storage, and governance essentials
- Improving data accuracy, consistency, and timeliness
- Data visualization for operational clarity
- Introduction to analytics platforms and tools
- Dashboards for real-time operational monitoring
- Statistical methods for process control and improvement
- Managing large datasets and unstructured information
- Ethical and responsible use of data

DAY
3

Applying Data Science to Process Optimisation

- Using data to identify bottlenecks and waste
- Combining Lean Six Sigma with analytics
- Predictive analytics for demand and resource planning
- Machine learning concepts for workflow optimisation
- KPIs for operational excellence
- Practical exercise: analyse an operations dataset
- Supply chain optimisation through analytics
- Designing a data-led improvement roadmap

DAY
4

Driving Continuous Improvement with Analytics

- Embedding analytical thinking across departments
- Advanced analytics for risk management and resilience

- Automation and AI opportunities in operations
- Presenting insights to decision-makers effectively
- Overcoming resistance to data adoption
- Building sustainable improvement systems
- Solving operational problems with data methods
- Reflection and workplace application planning

DAY
5

Strategic Integration and Future Readiness

- Integrating data science into long-term operations strategy
- Aligning analytics with goals and performance targets
- Advanced forecasting for capacity, risk, and resources
- Scaling successful initiatives across business functions
- Governance for sustainable data-driven operations
- Continuous improvement through analytics maturity
- Final case study and action plan
- Course review and next steps

— Upcoming Classroom Dates

DATE	LOCATION	FEE
5 - 9 October 2026	Istanbul - Türkiye	€1,425
12 - 16 October 2026	Kuala Lumpur - Malaysia	€1,400
9 - 13 November 2026	Amsterdam - Netherlands	€2,125
16 - 20 November 2026	London - United Kingdom	€2,100
7 - 11 December 2026	Kuala Lumpur - Malaysia	€1,400
14 - 18 December 2026	Amsterdam - Netherlands	€2,125
21 - 25 December 2026	London - United Kingdom	€2,100
18 - 22 January 2027	Dubai - UAE	€2,625

— Certificate and Registration

Participants who attend and complete the full programme receive a SPARK Training Certificate of Completion. For registration, in-house delivery, or availability questions, contact info@sparktraining.eu or +31 85 115 0004.