



Procurement & Supply Chain Operations

# Advanced Data Analytics for Procurement Decision-Making

## Course Introduction

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This Training program equips participants with advanced analytical skills and techniques to drive data-based procurement decisions, improve supplier collaboration, and mitigate risks effectively.

## Target Audience

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- Procurement managers and specialists
- Supply chain analysts
- Strategic sourcing professionals
- Category managers
- Data analysts working in procurement
- Operations and supply chain leaders seeking data-driven decision-making capabilities

## Learning Objectives

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- Understand the role and value of data analytics in procurement.
- Apply advanced analytical techniques to procurement processes and decisions.
- Develop data-driven supplier evaluation and risk assessment frameworks.
- Use predictive analytics for demand forecasting and cost modelling.
- Design dashboards and reports to monitor procurement KPIs.
- Leverage analytics for sustainable and strategic sourcing.
- Translate procurement analytics into actionable strategies for business improvement.

# Course Outline

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## • DAY 01

### **Foundations of Advanced Data Analytics in Procurement**

- The evolution of data analytics in supply chain and procurement.
- Types of procurement data.
- Big data and its relevance to procurement decision-making.
- Key concepts: descriptive, diagnostic, predictive, and prescriptive analytics.
- Challenges and opportunities in applying analytics to procurement.
- Data governance and quality in procurement analytics.

### **Data Collection, Cleaning, and Integration**

- Sources of procurement and supplier data.
- Data cleaning techniques to ensure accuracy and consistency.
- Data integration across ERP, SRM, and external systems.
- Handling missing data and outliers in procurement datasets.
- Data normalization and standardization methods.
- Master data management for procurement analytics.
- Tools and technologies for procurement data management.

## • Day 02

### **Advanced Descriptive Analytics for Procurement**

- Spend analysis: techniques and tools.
- Price variance and cost breakdown analysis.
- Supplier performance analytics.
- Purchase order and invoice analytics.
- Contract compliance analytics.
- Visualization of descriptive procurement data.

## **Predictive Analytics for Demand and Price Forecasting**

- Principles of predictive analytics in procurement.
- Forecasting demand using historical procurement data.
- Predicting price trends and market movements.
- Regression analysis for procurement forecasting.
- Time series analysis for procurement planning.
- Identifying leading indicators in supplier markets.
- Predictive tools and platforms in procurement analytics.

### **• Day 03**

## **Risk Management and Supplier Analytics**

- Supplier risk profiling and scoring models.
- Using analytics to monitor supplier financial health.
- Geo-political and market risk analytics.
- Predictive analytics for supply disruption risks.
- Fraud detection using procurement analytics.
- Multi-tier supplier risk visibility through analytics.

## **Advanced Cost Modelling and Should-Cost Analysis**

- Building should-cost models with data analytics.
- Cost drivers identification and analysis.
- Parametric and regression cost models.
- Benchmarking costs using external data.
- Scenario modelling for cost optimization.
- Total cost of ownership (TCO) analytics.
- Dynamic cost models for negotiation preparation.

### **• Day 04**

## **Sustainability and Ethical Sourcing Analytics**

- Data analytics for tracking sustainability KPIs.
- Supplier sustainability performance dashboards.
- Lifecycle analysis through data models.
- Monitoring carbon footprint in procurement.
- Using data to assess ethical sourcing compliance.
- Sustainable procurement risk analytics.
- Reporting on ESG metrics.

## **Dashboard Design and Data Visualization for Procurement**

- Principles of effective data visualization.
- Designing procurement dashboards in BI tools.
- Key procurement KPIs to visualize.
- Interactive charts and drill-down analysis.
- Real-time data visualization for procurement decisions.
- Custom reporting for internal and external stakeholders.

### **• Day 05**

## **Data-Driven Negotiation and Supplier Collaboration**

- Using data analytics to prepare for supplier negotiations.
- Identifying negotiation levers through data insights.
- Data-enabled supplier segmentation and strategies.
- Collaborative analytics for joint value creation.
- Performance-based contracting with analytics support.
- Data transparency in supplier relationships.
- Tools that support analytics-driven collaboration.

## **Developing Procurement Analytics Strategy**

- Developing a procurement analytics roadmap.
- Integrating AI and machine learning in procurement analytics.
- The role of blockchain in procurement data transparency.
- Cloud platforms and data lakes for procurement analytics.
- Building procurement analytics capability within the team.

## Confirmed Sessions

FROM	TO	DURATION	FEES	LOCATION
June 30, 2025	July 4, 2025	5 days	4250.00 \$	UAE - Dubai
Dec. 15, 2025	Dec. 19, 2025	5 days	4250.00 \$	UAE - Dubai
Sept. 22, 2025	Sept. 26, 2025	5 days	5950.00 \$	switzerland - Geneva