AI IN PROCUREMENT & SUPPLY CHAIN



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Introduction

Artificial intelligence has moved from a future promise to a working tool in procurement and supply chain operations. It reads thousands of supplier invoices, forecasts demand for volatile items, flags unusual pricing patterns, and suggests alternatives when a source is disrupted. This AI in Procurement & Supply Chain Training Course gives procurement, planning, and analytics professionals a practical method for applying these tools to real decisions. Participants learn how to choose the right use cases, prepare the data they need, build forecasting and classification models, and run spend and risk analytics. Furthermore, the course covers AI governance, output verification, and data protection.

AI in Procurement & Supply Chain Course Objectives

- Identify realistic AI use cases across procurement and supply chain operations.
- Prepare and clean data to feed analysis and forecasting models.
- Apply machine learning to spend analysis, supplier classification, and fraud detection.
- Build demand forecasts with statistical methods and machine learning, and compare their accuracy.
- Use text analytics to read contracts, invoices, and correspondence.
- Run fraud and anomaly detection across transactions and supplier records.
- Apply generative AI tools to drafting specifications, reports, and summaries.
- Improve inventory and planning parameters with predictive analytics.
- Manage supplier and supply risk using predictive models and dashboards.
- Apply AI governance: data safety, output verification, and accountability.

Course Methodology

- Facilitated sessions built on real procurement, inventory, and supplier data.
- Hands-on exercises in data preparation, model building, and result evaluation.

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- Case workshops on fraud detection, forecast improvement, and failed use cases.
- Simulation of an analytics-supported purchasing decision with human review.
- Group exercise on an AI adoption plan for a procurement function.

Who Should Take This Course

- Procurement managers and category managers.
- Supply chain analysts and demand planners.
- Digital transformation and process improvement officers.
- Risk and compliance staff in procurement.
- Data and business intelligence analysts in the sector.
- Internal audit staff reviewing transactions and controls.

AI in Procurement & Supply Chain Course Outlines

Day 1: AI Fundamentals and the Supply Chain

- Definitions: artificial intelligence, machine learning, deep learning, and generative AI.
- Descriptive, predictive, prescriptive, and decision analytics compared.
- Use case map across procurement, planning, inventory, and logistics.
- Data maturity as a precondition for any application.
- Data sources: ERP, WMS, TMS, and supplier data.
- Business case calculation: cost, benefit, time, and payback.
- Realistic risks and limits of artificial intelligence.

Day 2: Data and Descriptive Analytics

- Data extraction, cleaning, and handling of missing values.

- Automated spend cube construction and category classification.
- Supplier performance analysis and price benchmarking.
- Procurement and supply chain dashboards.
- Automated ageing and surplus inventory analysis.
- Data-driven performance indicators and sources of truth.
- Data quality and master data governance.

Day 3: Predictive Analytics and Forecasting

- Machine learning basics: supervised and unsupervised learning.
- Building demand forecasts with machine learning against statistical methods.
- Model accuracy evaluation and performance validation.
- Supplier classification and risk scoring with predictive models.
- Price volatility and supply risk forecasting.
- Inventory and spare parts demand forecasting.
- Model limits and human verification at the point of application.

Day 4: Text Analytics, Generative AI, and Automation

- Text analytics for reading contracts and extracting key clauses.
- Automated extraction of invoice and document data.
- Automatic classification of correspondence, complaints, and tickets.
- Generative AI for drafting specifications, reports, and summaries.
- Writing effective prompts and verifying outputs.
- Workflow automation: approvals, alerts, and recurring reports.
- Fraud and anomaly detection across transactions and suppliers.

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Day 5: Governance, Adoption, and Value Measurement

- AI governance: roles, accountability, and usage boundaries.
- Data privacy, confidentiality, and protection of commercial information.
- Output verification, bias, and transparency.
- Risk of over-reliance on automated tools.
- Change management, training, and building team confidence.
- Value measurement: savings, cycle time, accuracy, and risk.
- Building a multi-year AI adoption roadmap.

Conclusion

By successfully completing the AI in Procurement & Supply Chain Training Course, participants will have acquired a practical command of AI use cases, data preparation, descriptive and predictive analytics, text analytics, generative AI, fraud detection, and governance. They will leave able to apply intelligent tools to purchasing, planning, and inventory decisions, verify their outputs, and prove value in numbers. Gentex Training Center delivers this programme with procurement and analytics practitioners who apply these tools in live organisations.

FAQs for the AI in Procurement & Supply Chain course

Q1 What is the "AI in Procurement & Supply Chain" course about?

It is a five-day programme on applying artificial intelligence to procurement and supply chain decisions. It covers use case selection, data preparation, descriptive and predictive analytics, text analytics, generative AI, fraud detection, and governance.

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Q2 What are the key benefits of the "AI in Procurement & Supply Chain" course?

Participants cut manual effort in spend analysis and data classification, improve forecast accuracy and inventory decisions, and detect fraud and anomalies faster. They also gain clear governance for safe and accountable use of intelligent tools.

Q3 What skills will I gain from the "AI in Procurement & Supply Chain" course?

You will gain AI use case selection and data preparation, descriptive and predictive analytics with model evaluation, text analytics, generative AI, and workflow automation, and AI governance, output verification, and value measurement.

Q4 What tools, methods, or standards are covered in the "AI in Procurement & Supply Chain" course?

The course works with supervised and unsupervised machine learning, data preparation and missing value handling, automated spend cube construction and category classification, supplier performance records and price benchmarking, procurement and supply chain dashboards, demand forecasting models with accuracy metrics, supplier risk classification, price volatility assessment, spare parts demand forecasting, text analytics for contract clause and invoice extraction, generative AI for specification and report drafting, prompt writing, approval and alert automation, fraud and anomaly detection, and AI governance with data protection.

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Q5 How is the "AI in Procurement & Supply Chain" course applied in real-world practice?

Teams apply it when building an automated spend cube, improving demand forecasts for a product group, screening supplier invoices automatically, reading long contracts and extracting obligations, building a supplier risk dashboard, and measuring the effect of automation on cycle time and cost.