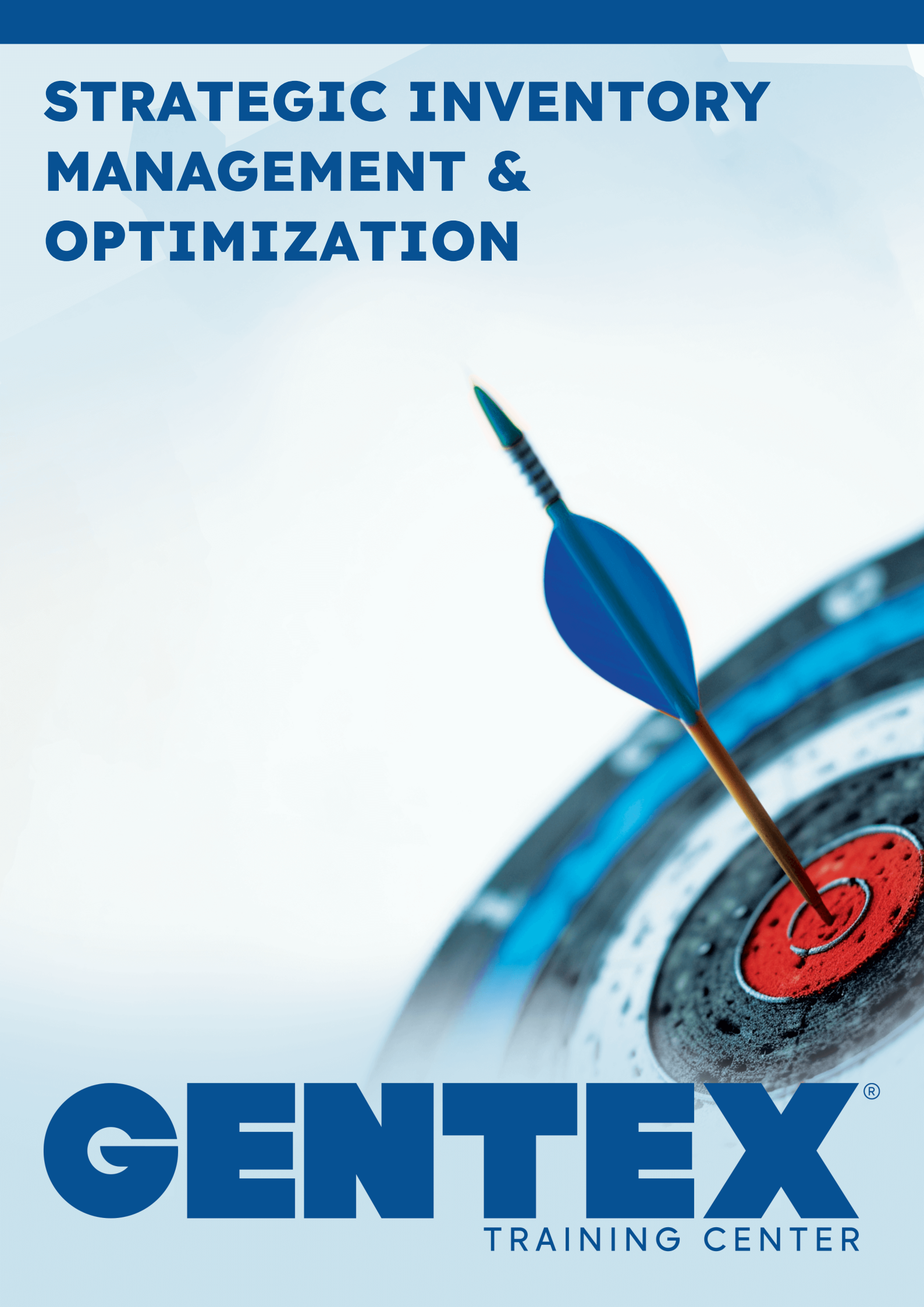
STRATEGIC INVENTORY MANAGEMENT & OPTIMIZATION



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TRAINING CENTER

GENTEX Training Center LLC | Orlando - FL, USA
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Introduction

Inventory sits at the meeting point of cash, service, and risk, and treating it as routine housekeeping leaves money and customers exposed. A strategic view asks different questions: where should stock sit, how much uncertainty can the business absorb, and which items deserve protection at any cost. This Strategic Inventory Management & Optimization Training Course gives supply chain managers, planners, and inventory analysts an advanced method to connect inventory policy to business strategy. Participants learn to classify items by multiple criteria, model demand and its randomness, optimise safety stock and order quantities quantitatively, and design policies across a multi-echelon network. Furthermore, the course integrates inventory with sales and operations planning, risk management, and continuous improvement.

Strategic Inventory Management & Optimization Course Objectives

- Link inventory policy to business goals, service level, cost, and capital employed.
- Build multi-criteria classification combining value, demand variability, and operational criticality.
- Model demand patterns and quantify randomness and forecast uncertainty.
- Optimise inventory parameters using economic order quantity and service level models.
- Set safety stock from demand and lead time variability with differentiated service targets.
- Design multi-echelon network policies across central warehouses and branches.
- Optimise stock positioning through pooling, transfer rules, and postponement.
- Manage intermittent, critical, and slow-moving items with proportionate methods.
- Integrate inventory decisions into S&OP and supply chain risk management.
- Measure performance using turnover, cash cycle, return on inventory, and obsolescence rate.

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Course Methodology

- Facilitated sessions built on real inventory, demand, and network data.
- Spreadsheet modelling to compare policy scenarios and service-cost trade-offs.
- Case workshops on policy failure, unbalanced network stock, and surplus build-up.
- Simulation of a strategic review session on inventory policy and positioning.
- Group exercise on an optimisation plan with service, cost, and capital targets.

Who Should Take This Course

- Supply chain and inventory managers.
- Demand and supply planners.
- Inventory analysts and stock controllers.
- Warehouse and distribution managers.
- Sales and operations planning officers.
- Finance and audit staff reviewing inventory and working capital.

Strategic Inventory Management & Optimization Course Outlines

Day 1: Inventory as a Strategic Decision

- The role of inventory in business strategy and competitiveness.
- Balancing service level, cost, and capital employed.
- Inventory strategies: centralised, distributed, and postponed.
- Multi-criteria classification: value, variability, criticality, and lead time.
- Setting policy objectives per class and product family.

- Inventory cost structure and carrying cost rate.
- Linking inventory to financial performance indicators.

Day 2: Demand Modelling and Uncertainty Analysis

- Demand patterns, time series analysis, trend, and seasonality.
- Advanced forecasting methods and triple exponential smoothing.
- Intermittent demand: Croston's method and period averaging.
- Forecast error, bias, tracking signal, and forecast value added.
- Quantifying demand randomness and variability sources.
- Demand scenarios and probabilistic planning.
- Effect of forecast accuracy on buffer size and total cost.

Day 3: Optimising Inventory Parameters

- Economic order quantity with supplier constraints and quantity discounts.
- Safety stock under differentiated service levels by class.
- Lead time variability and supplier risk scenarios.
- Modelling shortage cost against holding cost.
- Quantitative policy optimisation and scenario testing.
- Periodic versus continuous review policies and when each fits.
- Periodic parameter tuning and review governance.

Day 4: Network Inventory Policy and Specialised Stock

- Distribution requirements planning and network stock levels.
- Inventory pooling and its effect on required safety stock.
- Policy design for branches, central warehouses, and distribution centres.

- Intermittent, critical, and emergency items.
- Postponement and final assembly on demand.
- Strategic spare parts inventory and slow-moving items.
- Inventory governance, ownership, and decision authority.

Day 5: Integration, Measurement, and Continuous Improvement

- Integrating inventory into sales and operations planning.
- KPIs: turnover, days of inventory, cash cycle, return on inventory, and fill rate.
- Ageing analysis, surplus inventory, and disposal planning.
- Supply chain risk management and its effect on inventory policy.
- Optimisation techniques, analytical tools, and the role of systems.
- Annual policy review linked to budgeting.
- Building a strategic inventory optimisation roadmap.

Conclusion

By successfully completing the Strategic Inventory Management & Optimization Training Course, participants will have acquired advanced working knowledge of multi-criteria classification, demand modelling, inventory parameter optimisation, multi-echelon network policy, integration with sales and operations planning, and strategic performance measurement. They will leave able to design inventory policy that serves business goals, balance service, cost, and capital consciously, and lead measurable continuous improvement. Gentex Training Center delivers this programme with supply chain practitioners who shape inventory policy in live operations.

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FAQs for the Strategic Inventory Management & Optimization course

Q1 What is the "Strategic Inventory Management & Optimization" course about?

It is a five-day programme on designing inventory policy as a strategic decision rather than a daily task. It covers multi-criteria classification, demand modelling and uncertainty, parameter optimisation, multi-echelon network policy, S&OP integration, and strategic performance measurement.

Q2 What are the key benefits of the "Strategic Inventory Management & Optimization" course?

Participants balance service, cost, and capital deliberately instead of by habit, cut both excess stock and shortages, and set buffers from measured demand and lead time variability. They also gain a policy review cycle that keeps inventory aligned with business goals and the budget.

Q3 What skills will I gain from the "Strategic Inventory Management & Optimization" course?

You will gain multi-criteria inventory classification and strategy design, demand modelling and uncertainty analysis, inventory parameter optimisation with service level targeting, and multi-echelon network policy design with strategic performance measurement.

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Q4 What tools, methods, or standards are covered in the "Strategic Inventory Management & Optimization" course?

The course works with multi-criteria classification matrices combining ABC, XYZ and criticality, time series analysis with triple exponential smoothing, Croston's method for intermittent demand, forecast error measures including bias, tracking signal and forecast value added, economic order quantity models with quantity discounts and supplier constraints, safety stock formulas under differentiated service levels, periodic and continuous review policy models, distribution requirements planning, inventory pooling analysis, postponement strategies, and inventory KPIs including turnover, cash cycle, and return on inventory.

Q5 How is the "Strategic Inventory Management & Optimization" course applied in real-world practice?

Teams apply it when resetting inventory policy for a product family, deciding where to hold stock across a network, reviewing service level targets against carrying cost, planning buffers before a demand season, and presenting the annual inventory plan alongside the budget. It also guides surplus disposal decisions and parameter reviews in the ERP.