SUPPLY CHAIN & LOGISTICS OPTIMIZATION



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Introduction

Optimisation means making the whole chain perform better, not making one department look efficient. A warehouse that cuts its own cost by holding less stock can push cost and risk onto production, and a transport team that always chooses the cheapest lane can damage service. This Supply Chain & Logistics Optimization Training Course gives supply chain, logistics, and operations professionals a complete working method for whole-chain improvement. Participants learn network and flow analysis, inventory and transport optimisation, warehouse and process design, modelling techniques, and performance measurement.

Supply Chain & Logistics Optimization Course Objectives

- Apply end-to-end supply chain mapping and flow analysis.
- Optimise network structure: facilities, lanes, and distribution nodes.
- Apply inventory optimisation: ABC, safety stock, and service level trade-offs.
- Optimise transport: mode selection, consolidation, and route design.
- Design warehouse layout and picking for throughput and accuracy.
- Apply lean methods to remove waste across logistics processes.
- Apply modelling and simulation techniques to optimisation decisions.
- Apply demand and supply balancing through S&OP.
- Apply cost-to-serve analysis by customer, channel, and product.
- Measure performance with cost per order, lead time, and perfect order rate.

Course Methodology

- Facilitated sessions built on real network maps, cost data, and process records.

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- Case workshops on network redesign, transport cost spikes, and inventory imbalance.
- Inventory, transport, and cost-to-serve calculation exercises with live data.
- Process mapping and lean improvement labs across logistics activities.
- Group exercise on a supply chain optimisation plan with quantified targets.

Who Should Take This Course

- Supply chain and logistics managers.
- Distribution and transport planners.
- Inventory and warehouse supervisors.
- Operations and process improvement analysts.
- Network design and planning specialists.
- Finance business partners covering logistics cost.

Supply Chain & Logistics Optimization Course Outlines

Day 1: Supply Chain Mapping and Diagnosis

- End-to-end mapping from supplier to customer.
- Material, information, and financial flow analysis.
- Lead time and variability mapping.
- Constraint and bottleneck identification.
- Cost structure analysis across the chain.
- Benchmarking against industry practice.
- Optimisation opportunity identification and prioritisation.

Day 2: Network and Inventory Optimisation

- Network design: centralised, regional, and multi-echelon.
- Facility location and total cost modelling.
- Inventory positioning across the network.
- ABC and criticality classification for stock policy.
- Safety stock, service level, and reorder point optimisation.
- Multi-echelon inventory and risk pooling.
- Working capital and inventory turns improvement.

Day 3: Transport and Distribution Optimisation

- Mode selection and modal shift analysis.
- Load consolidation and vehicle fill improvement.
- Route design, milk runs, and delivery frequency.
- Cross-docking and flow-through distribution.
- Carrier selection and freight cost control.
- Last-mile optimisation and delivery scheduling.
- Transport KPIs and cost per unit shipped.

Day 4: Warehouse and Process Optimisation

- Warehouse layout and slotting optimisation.
- Picking method selection: zone, batch, and wave.
- Storage system selection and space utilisation.
- Receiving, put-away, and dispatch process design.
- Lean methods: 5S, standard work, and waste removal.
- Automation and technology options assessment.
- Labour planning and productivity measurement.

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Day 5: Modelling, Control, and Performance

- Demand and supply balancing through S&OP.
- Modelling and simulation for optimisation decisions.
- Cost-to-serve analysis by segment and channel.
- KPIs: cost per order, lead time, fill rate, and perfect order rate.
- Continuous improvement routines and daily management.
- Risk and resilience considerations in optimisation.
- Building a supply chain optimisation roadmap with targets.

Conclusion

By successfully completing the Supply Chain & Logistics Optimization Training Course, participants will have acquired a thorough working knowledge of supply chain mapping and diagnosis, network and inventory optimisation, transport and distribution improvement, warehouse and process design, modelling techniques, and performance measurement. They will leave able to find where the chain loses cost and time, improve it without shifting the problem elsewhere, and prove the benefit in service and cost terms. Gentex Training Center delivers this programme with supply chain and logistics practitioners working in live operations.

FAQs for the Supply Chain & Logistics Optimization course

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Q1 What is the "Supply Chain & Logistics Optimization" course about?

It is a five-day programme on improving performance across the whole supply chain rather than inside one department. It covers mapping and diagnosis, network and inventory optimisation, transport and distribution improvement, warehouse and process design, modelling, and performance measurement.

Q2 What are the key benefits of the "Supply Chain & Logistics Optimization" course?

Participants cut cost and lead time together instead of trading one for the other, avoid improvements that push cost into another part of the chain, and prioritise opportunities by measured value rather than visible discomfort. They also report optimisation results in service, cash, and cost terms.

Q3 What skills will I gain from the "Supply Chain & Logistics Optimization" course?

You will gain supply chain mapping and diagnosis, network and inventory optimisation, transport, distribution, warehouse, and process optimisation, and modelling, cost-to-serve analysis, and supply chain performance management.

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

The course works with end-to-end supply chain mapping, material, information and financial flow analysis, lead time and variability mapping, constraint and bottleneck analysis, cost structure analysis across the chain, benchmarking against industry practice, centralised, regional and multi-echelon network design, facility location and total cost modelling, inventory positioning across the network, ABC and criticality classification, safety stock, service level and reorder point optimisation, multi-echelon inventory and risk pooling, working capital and inventory turns analysis, mode selection and modal shift analysis, load consolidation and vehicle fill improvement, route design and milk runs, cross-docking and flow-through distribution, carrier selection and freight cost control, last-mile optimisation, warehouse layout and slotting optimisation, picking method selection covering zone, batch and wave picking, storage system selection and space utilisation, receiving, put-away and dispatch process design, lean methods including 5S and standard work, automation and technology assessment, labour planning and productivity measurement, demand and supply balancing through S&OP, modelling and simulation techniques, cost-to-serve analysis by segment and channel, and KPIs covering cost per order, lead time, fill rate and perfect order rate.

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

Teams apply it when diagnosing why lead time varies across a distribution network, evaluating a move to a regional distribution model, consolidating deliveries into milk runs, reshaping a warehouse picking area after a productivity drop, running a cost-to-serve analysis by customer segment, and reviewing cost per order and perfect order rate at a quarterly review.