CONCEPT

Logistics and Distribution Management: Network Design, Transport and Cost-to-Serve

19 – 23 September 2027
Riyadh - KAFD district five-star



Logistics and Distribution Management: Network Design, Transport and Cost-to-Serve

Ref: 1278_16591 **Date:** 19 – 23 September 2027 **Location:** Riyadh - KAFD district five-star **Fees:** 20000 SAR

Technical depth: Practitioner · **Practical mode:** Modelling build

Introduction

Distribution is often the largest share of logistics cost, yet networks, depots and delivery routes frequently reflect past decisions rather than current demand. Rising freight rates, tighter delivery windows and pressure to report transport emissions expose that gap. This Core Concept course equips logistics professionals to analyse a distribution operation in numbers: where to hold stock, which mode and carrier to use, how to route vehicles and what each customer costs to serve. Participants build a Distribution Network and Transport Improvement Model for an operation in their own organisation.

Course Objectives

- Analyse a distribution operation's cost, service and emissions baseline using landed cost and OTIF data
- Evaluate distribution network options, including depot location, cross-docking and outsourcing to third-party logistics providers
- Select transport modes, carriers and Incoterms 2020 rules that balance landed cost, lead time and risk
- Plan vehicle routes, loads and fleet capacity using routing heuristics and transport management system data
- Quantify transport greenhouse gas emissions in line with ISO 14083 and the GLEC Framework
- Produce a Distribution Network and Transport Improvement Model with a costed recommendation

Target Audience

- Logistics and distribution managers responsible for depots, fleets and delivery performance
- Transport managers overseeing own fleets and contracted carriers
- Supply chain managers accountable for service levels and logistics cost
- Third-party logistics and freight forwarding managers designing client solutions
- Operations managers in retail, manufacturing, healthcare and public-sector supply networks
- Logistics analysts supporting network, tender and fleet decisions

Course Outline

Day 1: Logistics and Distribution Context

- Logistics Cost Structure and Total Landed Cost Analysis
- Distribution Channel Models: Direct, Depot, Cross-Dock and Drop-Ship
- Customer Service Levels and OTIF Measurement
- SCOR Fulfill and Return Processes in Distribution
- Current-State Logistics Baseline Data Pack

Day 2: Network, Transport and Trade Frameworks

- Distribution Network Design Principles and Service Radius Analysis
- Centre-of-Gravity Method for Depot Location
- Transport Mode Comparison: Road, Rail, Sea, Air and Multimodal
- Incoterms 2020 Selection for Domestic and International Shipments
- 3PL and 4PL Outsourcing Models and Service Level Agreements

Day 3: Transport Planning and Execution

- TMS Functions: Load Planning, Carrier Selection and Freight Audit
- Vehicle Routing with the Clarke-Wright Savings Heuristic
- Load Consolidation and Vehicle Fill Optimisation
- Fleet Sizing and Vehicle Cost-per-Kilometre Model
- Last-Mile Delivery Models and Electronic Proof of Delivery

Day 4: Cost, Risk, Sustainability and Optimisation

- Cost-to-Serve Analysis by Customer and Channel
- Transport Emissions Accounting Under ISO 14083 and the GLEC Framework
- Road Traffic Safety Management Under ISO 39001
- Cargo Security Controls Aligned to ISO 28000
- Carrier Performance Scorecard and Freight Tender Evaluation

Day 5: Modelling Build and the Improvement Model

- Food Distribution Case: Depot Consolidation Option Model
- Industrial Spares Case: Mode Shift and Service Trade-Off Model
- Network and Route Model Build for an Own Operation
- Distribution Network and Transport Improvement Model Finalisation
- Management Review Panel and Recommendation Defence

Skills You Will Gain

- Logistics Cost Analysis
- Network Optimisation
- Carrier Management
- Transport Scheduling
- Freight Procurement
- Logistics Emissions Reporting
- Service Level Management
- Logistics Data Modelling

Why Attend This Course

- Return to work with a Distribution Network and Transport Improvement Model populated with your own cost and service data
- Show which customers, lanes and delivery patterns cost more to serve than they earn
- Negotiate with carriers and logistics providers from evidence on rates, vehicle fill and performance
- Test your approach against logistics managers from other sectors and countries

Conclusion

Distribution decisions lock in cost and service for years, so they deserve the same rigour as any capital decision. This course moves from the logistics cost baseline and channel models, through network design, mode selection, Incoterms and outsourcing, to routing, fleet and last-mile planning, and then to cost-to-serve, emissions, safety and carrier performance. The final day assembles a Distribution Network and Transport Improvement Model that participants take back as the basis for a costed recommendation to management.