CONCEPT

Lean Warehousing and Distribution: Pull, Cross-Docking and Kaizen in the DC

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Introduction:

Lean warehousing and distribution tackles the hidden losses of a distribution centre: pallets moved twice, pickers walking empty aisles, trucks waiting at doors and vehicles leaving half full. These losses rarely show in a warehouse report, yet they drive overtime, missed cut-offs and freight cost. This Core Concept course shows DC and transport supervisors how to see waste on the dock and in the aisle, map the order-to-delivery flow and redesign slotting, replenishment, dock and route patterns around pull. Participants produce a DC Lean Transformation Roadmap with a future-state order-to-delivery map.

Course Objectives:

- Identify transport, inventory, motion, waiting and handling waste on DC docks, aisles, packing benches and delivery routes
- Map the order-to-delivery value stream from order release to proof of delivery and quantify dwell, touch and queue time
- Redesign slotting, pick paths and pick-face replenishment so that forward locations are refilled by pull signals
- Set up cross-dock lanes, dock appointment slots and milk-run loops that cut dwell time and raise vehicle fill
- Write standard work for receiving, picking, packing and loading tasks and balance labour to the order pace
- Prepare a DC Lean Transformation Roadmap with kaizen events, visual controls and flow measures for their own site

Target Audience:

- Distribution centre shift supervisors responsible for receiving, picking, packing and dispatch output
- Transport and yard supervisors responsible for dock doors, trailer turns and delivery routes
- Continuous improvement coordinators supporting logistics sites and fulfilment centres
- Inventory and replenishment coordinators responsible for pick-face availability
- Third-party logistics operations supervisors running client contracts on shared sites
- Engineering and layout staff responsible for rack, aisle and dock configuration

Course Outline:

Day 1: Lean Thinking on the Dock and in the Aisle

- Lean Principles Translated to Distribution: Value, Flow and Pull From the Customer Order
- Distribution Waste Catalogue: Double Handling, Empty Travel, Dock Dwell and Excess Buffer Stock
- Touch Count Analysis per Order Line From Receipt to Despatch
- Order Profile Analysis: Lines per Order, Units per Line and Cube Mix
- DC Gemba Walk Route and Waste Tally Sheet

Day 2: Mapping the Order-to-Delivery Value Stream

- Order-to-Delivery Value Stream Map: Material and Information Flow Icons
- Dock-to-Dispatch Timeline: Dwell, Queue and Process Time Capture
- Customer Order Pace and Wave Release Rhythm Calculation
- Just-in-Time and Pull Scheduling Logic for Outbound Waves
- Future-State Design Rules for a Distribution Value Stream

Day 3: Flow, Pull and Standard Work Inside the DC

- Velocity-Based Slotting and Golden Zone Placement
- Pick-Path Design: S-Shape, Return and Largest-Gap Routing
- Two-Bin and Kanban Card Replenishment of Forward Pick Faces
- Standard Work Sheets for Pick, Pack and Load Stations
- Labour Balancing to Order Pace With Yamazumi Charts

Day 4: Lean Transport, Cross-Docking and Visual Control

- Cross-Dock Lane Design and Flow-Through Sortation
- Milk-Run Loop Design for Inbound Collection and Store Delivery
- Load Fill and Cube Utilisation Measurement per Trailer
- Dock Appointment Scheduling and Trailer Turn Time Control
- DC Floor Markings, Location Labels and Shift Performance Boards

Day 5: DC Walkthroughs, Kaizen and the Transformation Roadmap

- Grocery Distribution Centre Walkthrough: Replenishment Starvation and Picker Travel
- Spare-Parts Cross-Dock Walkthrough: Sort Errors and Dock Congestion
- Rapid Kaizen Event Charter for a Pick Zone or Dock Area
- Lean Distribution Scorecard: Order Cycle Time, Dock Dwell, Units per Labour Hour and Load Fill
- DC Lean Transformation Roadmap Drafting and Peer Challenge

Skills You Will Gain:

- Distribution Waste Diagnosis
- Order Flow Mapping
- Slotting Design
- Pull Replenishment Control
- Dock and Yard Scheduling
- Route Loop Planning
- Station Standard Work
- Kaizen Event Facilitation

Why Attend This Course:

- Return with a DC Lean Transformation Roadmap and future-state order-to-delivery map built around your own site
- Cut picker walking, double handling and dock waiting that overtime budgets currently absorb
- Run a focused kaizen event in a pick zone or dock area with your own shift team
- Compare distribution practice with supervisors from retail, industrial, healthcare and third-party logistics sites

Conclusion:

A lean distribution centre moves each order through the fewest touches, the shortest travel and the least waiting between receipt and delivery. This course moves from lean principles applied to docks and aisles, through order-to-delivery mapping, to slotting, pull replenishment and station standard work, and then to cross-docking, milk runs, load fill and dock scheduling. The final day applies these methods in DC walkthroughs and produces a DC Lean Transformation Roadmap that supervisors can take into their next kaizen event.