CORE CONCEPT

Rail Freight Operations and Intermodal Terminals Course: Train Planning, Wagons and Rail-Port Links

6 – 10 September 2027
Dubai - Five-star CBD venue

Rail Freight Operations and Intermodal Terminals Course: Train Planning, Wagons and Rail-Port Links

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Introduction:

Rail freight operations and intermodal terminals, covering train planning, wagons and rail-port links, is a 1-week course for freight service planners, wagon fleet controllers and terminal and dry port leads, ending with a Rail Freight Service and Terminal Plan for a case organisation. Rail corridors lose cargo to trucks when slots go unused, wagons sit idle in sidings and containers wait days between quay and train. Nominees schedule freight trains, allocate wagons or run terminal shifts, and learn through case studies on train graphs, wagon records and terminal yard data. CoreConcept Training Center delivers this rail freight operations course.

Course Objectives:

- Design rail freight services by choosing between unit train, wagonload and intermodal shuttle models for each cargo flow and customer
- Build freight tariffs and contract rates from line-haul, terminal handling, wagon hire and empty return costs
- Plan freight train paths, slot requests, train length and gross weight within loading gauge and axle load limits
- Raise wagon fleet productivity through turnaround analysis, empty wagon repositioning and condition-based wagon upkeep
- Organise container and bulk loading, stacking and dispatch at intermodal rail terminals and dry ports linked to seaports
- Track rail freight KPIs such as wagon turnaround, terminal dwell and on-time train arrival, and act on the gaps

Target Audience:

- Freight service planners responsible for train plans, slot requests and customer service schedules
- Wagon fleet controllers responsible for wagon allocation, repositioning and maintenance releases
- Intermodal terminal and dry port leads responsible for yard, crane and gate operations
- Rail-port interface coordinators responsible for quay-to-rail container transfer and shuttle trains
- Commercial managers responsible for rail freight tariffs, contracts and shipper accounts
- Logistics managers responsible for moving bulk or container volumes onto rail corridors

Course Outline:

Day 1: Rail Freight Market, Cargo Flows and Service Models

- Unit Train, Wagonload and Intermodal Service Model Comparison
- Cargo Flow Mapping for Minerals, Grain, Petrochemicals and Containers
- Rail Versus Truck Cost Curve and Break-Even Haul Distance
- Shipper Requirement Profiles for Transit Time and Reliability
- Current-State Freight Corridor Review Using Tonne-Kilometre Data

Day 2: Freight Service Design, Tariffs and Rolling Stock Constraints

- Loading Gauge, Axle Load and Maximum Train Length Limits
- Hopper, Flat, Well and Tank Wagon Type Selection
- Double-Stack Container Feasibility and Clearance Checks
- Freight Tariff Build From Line-Haul and Handling Cost Elements
- Take-or-Pay and Volume Commitment Clauses in Rail Haulage Contracts

Day 3: Freight Train Planning, Slot Allocation and Wagon Fleet Control

- Freight Train Graph and Path Request Preparation
- Slot Sharing With Passenger Services and Night Path Windows
- Wagon Turnaround Cycle Calculation From Loading to Return
- Empty Wagon Repositioning Plan and Fleet Sizing Worksheet
- Wagon Maintenance Release Planning Using Mileage and Condition Records

Day 4: Intermodal Terminals, Dry Ports and the Rail-Port Interface

- Intermodal Terminal Layout With Loading Tracks and Container Stacks
- Reach Stacker, Gantry Crane and Straddle Carrier Productivity Rates
- Bulk Loading Silos, Rotary Dumpers and Hopper Discharge Pits
- Quay-to-Rail Shuttle Scheduling Between Seaport and Inland Container Depot
- Terminal Dwell, Gate Congestion and Demurrage Exposure Diagnosis

Day 5: Case Study Work on the Rail Freight Service and Terminal Plan

- Container Shuttle Case With Idle Wagons and Missed Slots
- Mineral Unit Train Case With Loading Silo Bottleneck
- Dry Port Case With Customs Hold and Yard Overflow
- Rail Freight KPI Dashboard for Turnaround, Dwell and Punctuality
- Rail Freight Service and Terminal Plan Completion and Peer Review

Skills You Will Gain:

- Freight Service Model Selection
- Rail Haulage Costing
- Freight Path Planning
- Wagon Turnaround Analysis
- Empty Wagon Repositioning
- Terminal Handling Productivity
- Quay-to-Rail Shuttle Scheduling
- Freight KPI Diagnosis

Why Attend This Course:

- Deliver a Rail Freight Service and Terminal Plan to the operations director and commercial lead as the basis for next season's train plan
- Decide which cargo flows suit unit trains, wagonload or container shuttles, and at what tariff
- Avoid idle wagons, unused slots, terminal dwell and demurrage charges that push shippers back onto trucks
- Coach planners, terminal supervisors and fleet controllers on turnaround, slot and dwell measures

Conclusion:

Back at work, the participant gives the operations director, the commercial lead and the terminal manager a Rail Freight Service and Terminal Plan. Commercial staff use its cost build and service choices to quote shippers, planners use its slot and wagon figures to set the next train plan, and terminal and dry port leads use its handling rates to staff cranes and gates. After the first full month of operation, the team should review wagon turnaround, terminal dwell and train punctuality against the plan and reset fleet size or slots where needed.

Frequently Asked Questions FAQ:

What should participants know before a rail freight operations and intermodal terminals course?

Participants should already plan freight trains, allocate wagons, run terminal shifts or sell rail haulage. Bringing anonymised train plans, wagon records or terminal yard data lets them apply the costing, slot and turnaround exercises to their own corridor.

How does a rail freight operations and intermodal terminals course differ from a general railway operations course?

It concentrates on cargo: service design, tariffs, wagon fleets, terminal handling and the link to seaports. General railway operations courses cover signalling, passenger timetables, control centres and track maintenance, which appear here only where they limit freight paths.

Why do rail freight operations depend so much on intermodal terminals?

Transfers between road, rail and ship often cost more than the train journey itself. Slow crane moves, long terminal dwell and poor gate flow erase rail's cost advantage, so terminal productivity decides whether a corridor competes with trucks.

What do participants take back from the rail freight operations and intermodal terminals course?

Participants take back a Rail Freight Service and Terminal Plan for a case organisation, with a tariff build, slot and wagon fleet worksheet, terminal handling capacity check and a KPI dashboard they can adapt to their own operation.