MAWA EVENTS

Address: No. 857, Block A2. Leisure Commerce Square - No 9., 46150 Petaling Jaya, Selangor, Malaysia

Phone: +601116373203 | **Email:** info@mawaevents.net

DYNAMIC SIMULATION OF SUPPLY CHAIN & LOGISTICS

"Optimizing End-to-End Performance Using Modeling, Data, and Scenario Analysis"

Schedule

Date	Venue	Fees (Face-to-Face)
11 – 15 May 2026	Kuala Lumpur, Malaysia	USD 3495 per delegate

► **Available delivery methods:** Face-to-Face & Online Training

Introduction

Modern supply chains are complex, interconnected systems exposed to uncertainty, variability, and risk. To stay competitive, organizations must move beyond static planning tools and adopt dynamic simulation to visualize, test, and optimize supply chain decisions in real time.

This course provides hands-on training in dynamic modeling of supply chains and logistics systems using simulation tools and techniques. Participants will build and run models to evaluate demand fluctuations, bottlenecks, inventory policies, transport disruptions, and strategic design choices—leading to smarter decisions and operational agility.

Objectives

By the end of this course, participants will be able to:

- Understand the principles of dynamic simulation and system behavior modeling
- Build supply chain simulation models using industry-standard software
- Analyze supply chain performance under different scenarios and disruptions
- Identify inefficiencies, bottlenecks, and capacity constraints
- Use simulation to support strategic and tactical supply chain decisions

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Why Attend

- Move beyond spreadsheets and static tools to simulate real-world complexity
- Visualize and solve bottlenecks across supply chain stages
- Test \"what-if\" scenarios without disrupting actual operations
- Support strategic and tactical decision-making with data-driven models
- Gain skills with simulation thinking that applies across sectors

Target Audience

This program is designed for:

- Supply Chain and Logistics Managers
- Operations and Planning Professionals
- Industrial and Systems Engineers
- Business Analysts and Optimization Specialists
- Anyone involved in evaluating and improving supply chain performance

Individual Benefits

Key competencies that will be developed include:

- System thinking and dynamic model development
- Understanding of key drivers in supply chain variability
- Use of simulation software and modeling techniques
- Analytical interpretation of performance metrics
- Scenario planning and risk-based decision making

Organizational Benefits

Upon completing the training course, participants will demonstrate:

- Improved ability to identify and address system inefficiencies
- Data-backed decisions on inventory, routing, and facility planning
- Stronger scenario preparedness for supply chain disruptions
- Cross-functional alignment on logistics optimization strategies
- Reduced operational costs and enhanced customer responsiveness

Instructional Methodology

The course follows a blended learning approach combining theory with practice:

- Strategy Briefings – Simulation concepts and supply chain dynamics
- Case Studies – Real-world applications of simulation in logistics
- Workshops – Build, run, and analyze simulation models
- Peer Exchange – Compare supply chain challenges and modeling solutions
- Tools – Flow diagrams, simulation platforms, Excel-based models

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Course Outline

Training Hours: 7:30 AM – 3:30 PM Daily Format: 3–4 Learning Modules | Coffee breaks: 09:30 & 11:15 | Lunch Buffet: 01:00 – 02:00

Day 1: Simulation Foundations in Supply Chain Management

- Module 1: Introduction to System Dynamics and Simulation (07:30 – 09:30) • Simulation vs traditional modeling, system thinking
- Module 2: Components of a Supply Chain Simulation Model (09:45 – 11:15) • Entities, flows, delays, inventories, and feedback
- Module 3: Modeling Demand Variability and Lead Times (11:30 – 01:00) • Impact of stochastic inputs and data uncertainty
- Module 4: Workshop – Build a Basic Inventory Flow Model (02:00 – 03:30) • Hands-on simulation exercise using spreadsheet or platform

Day 2: Inventory, Procurement, and Fulfillment Dynamics

- Module 5: Inventory Replenishment Strategies (07:30 – 09:30) • ROP, EOQ, safety stock, and service levels in models
- Module 6: Procurement Delays and Bullwhip Effects (09:45 – 11:15) • Causes and mitigation through simulation
- Module 7: Fulfillment Centers and Distribution Flow (11:30 – 01:00) • Simulation of warehousing, pick-pack-ship cycles
- Module 8: Workshop – Simulate an Inventory Replenishment Scenario (02:00 – 03:30) • Test various reorder policies and lead time variability

Day 3: Transportation, Routing, and Bottleneck Analysis

- Module 9: Transport Network Simulation (07:30 – 09:30) • Route planning, multi-modal flow, disruptions
- Module 10: Queues, Constraints, and Facility Throughput (09:45 – 11:15) • Modeling warehouse and port congestion
- Module 11: Bottleneck Identification and Resolution (11:30 – 01:00) • Theory of Constraints and resource balancing
- Module 12: Workshop – Simulate a Logistics Network (02:00 – 03:30) • Model regional transport and fulfillment trade-offs

Day 4: Scenario Analysis and Optimization Techniques

- Module 13: Running “What-If” Simulations (07:30 – 09:30) • Supply shocks, demand surges, and policy changes
- Module 14: KPIs and Performance Dashboards (09:45 – 11:15) • Throughput, service levels, cost-to-serve, utilization
- Module 15: Optimization Within Simulated Environments (11:30 – 01:00) • Trade-offs and tuning using simulation results
- Module 16: Workshop – Simulate and Optimize a Sourcing Scenario (02:00 – 03:30) • Model supplier failure and resilience strategies

Day 5: Building a Simulation-Driven Decision Culture

- Module 17: Integrating Simulation into Planning Processes (07:30 – 09:30) • Strategic, tactical, and operational use cases
- Module 18: Change Management and Adoption (09:45 – 11:15) • Getting stakeholder buy-in for simulation models
- Module 19: Case Study – End-to-End Supply Chain Simulation (11:30 – 01:00) • Model, analyze, and present full-chain scenarios
- Module 20: Final Workshop – Build Your Simulation Roadmap (02:00 – 03:30) • Develop a plan for using simulation in your organization

Certification

Participants will receive a Certificate of Completion in Dynamic Simulation of Supply Chain & Logistics, confirming their capability to model, analyze, and improve supply chain performance using dynamic simulation tools and scenario planning techniques.

Why Choose MAWA Events

- **Global Expertise:** More than 17 years of experience in professional training and consulting.
- **Industry-Leading Faculty:** Courses delivered by seasoned professionals with hands-on experience.
- **Practical Insights:** Learn to turn theory into actionable strategies for real-world business impact.
- **Client-Focused Solutions:** Customized programs designed to achieve your organisation’s unique goals.

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In-House / Customized Training Interested in running this course for your team? Please contact us:	TEL: **+601116373203**	EMAIL: **info@mawaevents.net**