Digital Supply Chain in Construction Training Course

Professional Development Training Course Outline

Category	Architectural Engineering	**Duration**	5 Days
Base Fee	$1,500 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

The construction industry is undergoing a rapid transformation driven by Digital Supply Chain Management, Industry 4.0, BIM integration, AI-driven logistics, IoT-enabled tracking, and real-time data analytics. Traditional supply chain models in construction are often fragmented, cost-intensive, and delay-prone. Digital Supply Chain in Construction Training Course provides a structured pathway to understand how digitalization, automation, cloud platforms, and predictive analytics are reshaping procurement, materials management, project delivery, and contractor coordination in modern construction ecosystems.

With increasing pressure on cost efficiency, sustainability, project transparency, and risk reduction, organizations are adopting advanced digital supply chain ecosystems. This course equips professionals with practical knowledge of smart procurement systems, blockchain-enabled traceability, digital twins, ERP integration, and AI-powered demand forecasting. Participants will learn how to optimize construction supply chains for faster delivery, reduced waste, improved collaboration, and enhanced project performance across large-scale infrastructure and building projects.

Programme Curriculum

Digital Supply Chain in Construction Training Course

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Course Duration

5 days

Course Objectives

1. Understand Digital Supply Chain Transformation in Construction
2. Apply BIM-integrated supply chain workflows
3. Master AI-driven procurement optimization
4. Implement IoT-based material tracking systems
5. Develop real-time construction logistics visibility
6. Utilize cloud-based ERP supply chain platforms
7. Analyze predictive demand forecasting models
8. Improve supplier collaboration through digital ecosystems
9. Reduce project delays using automation & analytics
10. Enhance cost control via smart procurement strategies
11. Apply blockchain for construction material traceability
12. Integrate digital twin technology in project supply chains
13. Build resilience through risk-aware supply chain planning

Target Audience

1. Construction Project Managers
2. Supply Chain & Procurement Officers
3. Civil Engineers & Site Engineers
4. BIM Managers & Coordinators
5. Infrastructure Consultants
6. Logistics & Warehouse Managers
7. Real Estate Developers
8. Government Infrastructure Planners

Course Modules

Module 1: Digital Transformation in Construction Supply Chains

- Evolution from traditional to digital supply chains
- Key Industry 4.0 technologies in construction
- Digital ecosystem architecture
- Role of data-driven decision making
- Case Study: Smart infrastructure project transformation in UAE mega construction sector

Module 2: BIM-Integrated Supply Chain Management

- BIM for procurement planning
- 4D/5D BIM integration in logistics
- Material quantity automation
- Clash detection impact on supply planning
- Case Study: BIM-driven metro rail construction project optimization

Module 3: AI & Predictive Analytics in Procurement

- AI models for demand forecasting
- Supplier performance prediction
- Cost optimization algorithms
- Machine learning in purchase planning
- Case Study: AI-based procurement efficiency in highway construction project

Module 4: IoT & Smart Material Tracking

- RFID and sensor-based tracking systems
- Real-time inventory monitoring
- Smart warehouse systems
- Cold-chain and sensitive materials tracking
- Case Study: IoT-enabled smart construction site logistics in smart city project

Module 5: Cloud ERP & Construction Supply Platforms

- ERP integration for construction workflows
- Centralized procurement dashboards
- Vendor management systems
- Data synchronization across sites
- Case Study: Cloud ERP implementation in multi-site real estate development

Module 6: Blockchain in Construction Supply Chains

- Material traceability systems
- Smart contracts in procurement
- Fraud prevention and transparency
- Secure supplier verification systems
- Case Study: Blockchain-based cement supply chain transparency project

Module 7: Digital Twin & Simulation in Supply Chain

- Digital twin modeling for construction sites
- Scenario simulation for logistics planning
- Risk forecasting models
- Resource allocation optimization
- Case Study: Digital twin usage in airport expansion project logistics

Module 8: Sustainable & Resilient Supply Chains

- Green procurement strategies
- Carbon footprint tracking
- Circular construction supply chains
- Risk mitigation strategies

- Case Study: Sustainable supply chain model in eco-friendly residential project

Training Methodology

This course employs a participatory and hands-on approach to ensure practical learning, including:

- Interactive lectures and presentations.
- Group discussions and brainstorming sessions.
- Hands-on exercises using real-world datasets.
- Role-playing and scenario-based simulations.
- Analysis of case studies to bridge theory and practice.
- Peer-to-peer learning and networking.
- Expert-led Q&A sessions.
- Continuous feedback and personalized guidance.

Register as a group from 3 participants for a Discount

Send us an email: info@fineskilltrainingcenter.org or call *+254769199797*

Certification

Upon successful completion of this training, participants will be issued with a globally- recognized certificate.

Tailor-Made Course

We also offer tailor-made courses based on your needs.

Key Notes

a. The participant must be conversant with English.

b. Upon completion of training the participant will be issued with an Authorized Training Certificate

c. Course duration is flexible and the contents can be modified to fit any number of days.

d. The course fee includes facilitation training materials, 2 coffee breaks, buffet lunch and A Certificate upon successful completion of Training.

e. One-year post-training support Consultation and Coaching provided after the course.

f. Payment should be done at least a week before commence of the training, to Fineskill Training Center account, as indicated in the invoice so as to enable us prepare better for you.

Upcoming Scheduled Sessions

Start Date	End Date	Location	Price
23 Nov 2026	27 Nov 2026	Online	$1,000
23 Nov 2026	27 Nov 2026	Physical	$1,500

Start Date	End Date	Location	Price
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$4,500
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$6,000

Ready to enroll or request a customized program? Book online or contact us:

Register Online Now

Email: info@fineskilltrainingcenter.com | Website: www.fineskilltrainingcenter.com