

Global Online Certification Course

Modelling and Building Digital Supply Chain Twins using anyLogistix 2024

Dedicated Hands-on Sessions using anyLogistix!

Course Schedule:

- 15th - 18th April'24 & 21st - 23rd April'24
- 6:00 PM – 9:00 PM IST
- 21 hours duration

Early bird Registration Deadline:
31st March 2024



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About the Course

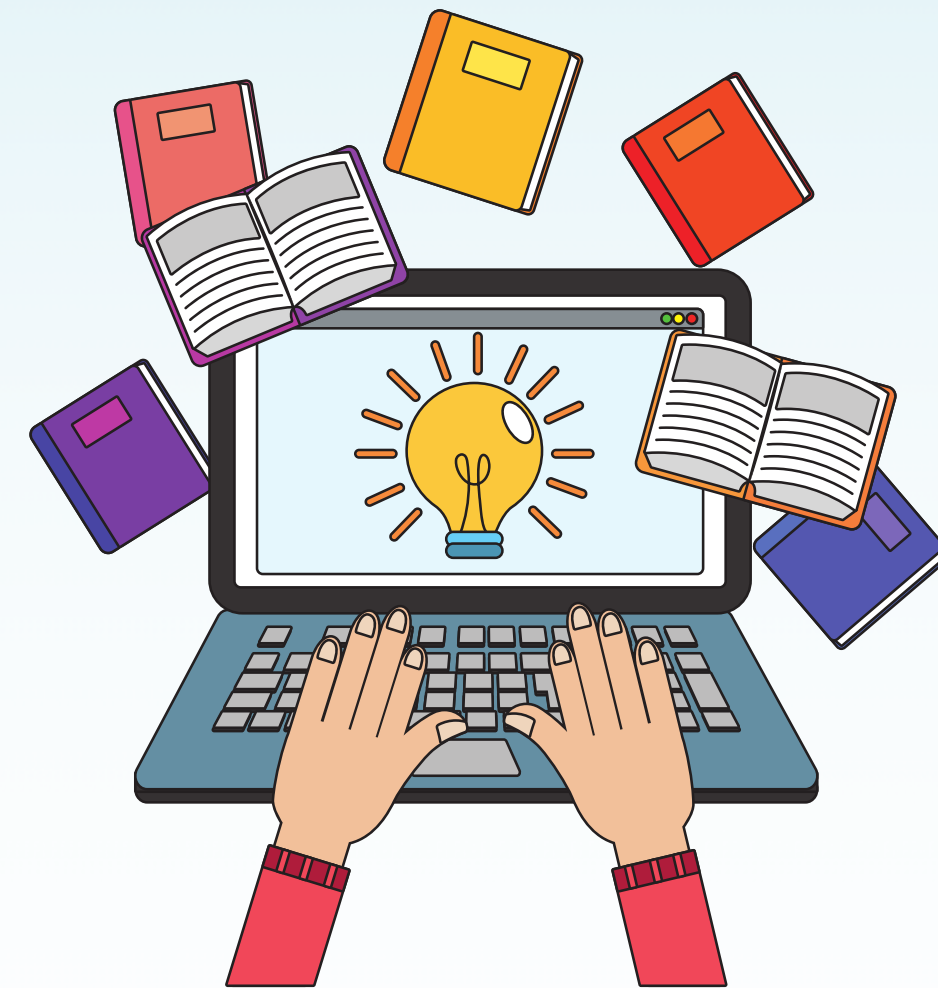


Supply chain decisions significantly impact a company's success. Research in Supply Chain Management aims to provide data, tools, and models for informed choices. The digital twin concept offers a virtual representation of systems, using real-time data, simulation, and machine learning to aid decision-making.

This course, designed to empower participants with practical skills, integrates dedicated hands-on sessions, accounting for more than **40%** of the program, utilizing anyLogisticx software. These sessions will provide an immersive learning experience, allowing participants to navigate Greenfield Analysis, Network Optimization, and Simulation using anyLogistix.

Additionally, participants will learn how to build a Digital Twin from scratch, gaining a comprehensive understanding of the process. The course will introduce the concepts and principles of supply chain management by applying them to real-world scenarios. Through case studies, participants will actively engage in building anyLogistix models for supply chain design and resilience analysis.

With the rapid growth in IoT and cloud computing, and mounting needs to cut costs and reduce product development time, the digital twin is one of the fastest-growing concepts in Industry 4.0. This course can provide you with the foundation on how to structure, model, and solve real management problems in Supply Chain and Operations, ensuring that you are well-equipped to thrive in the dynamic landscape of modern business.



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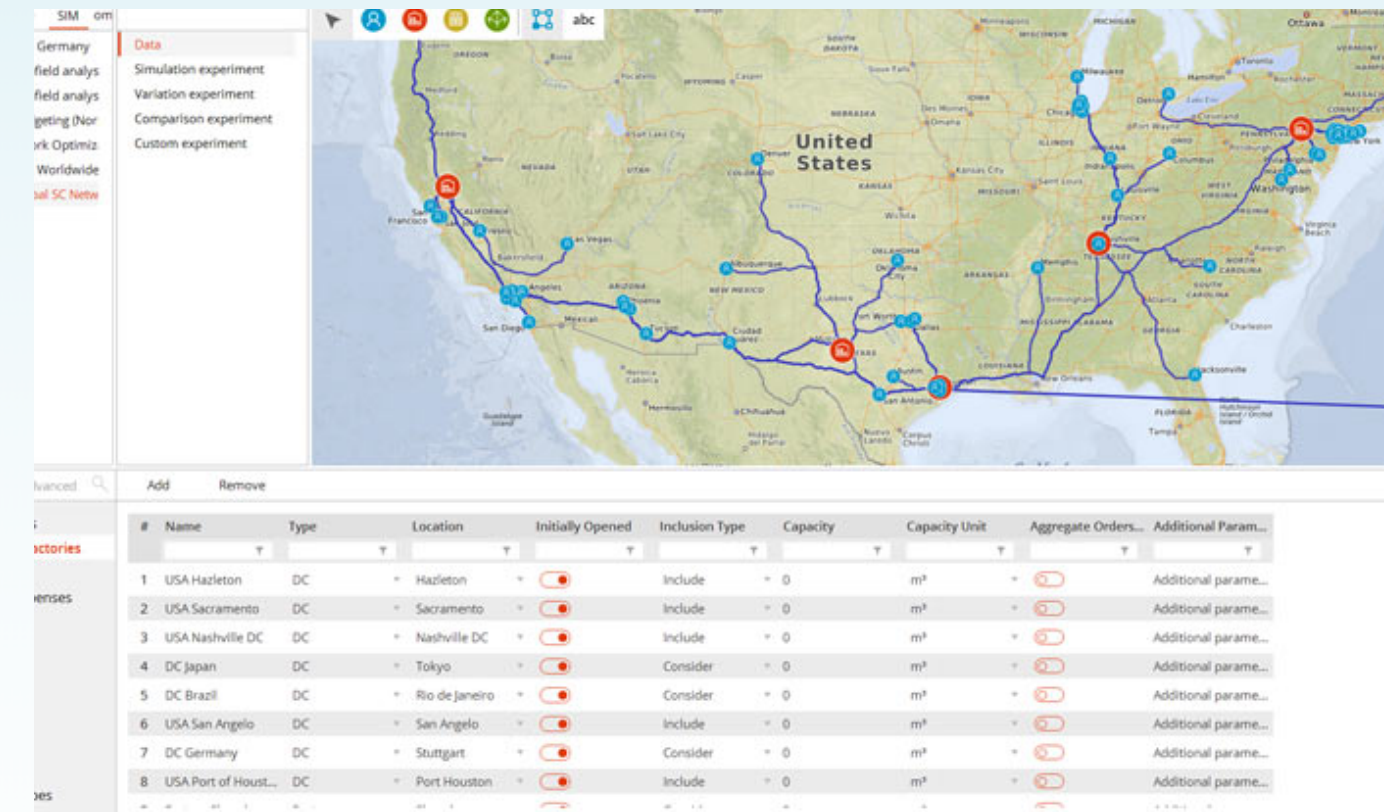
About anyLogistix

anyLogistix (ALX), by The AnyLogic Company, is a supply chain analytics software used for designing, optimizing and analyzing a company's supply chain. ALX combines powerful analytical optimization approaches together with innovative dynamic simulation technologies to offer a comprehensive set of tools for end-to-end supply chain analytics.



Features of anyLogistix:

- **Network Design & Optimization:** Carrying out Greenfield analysis to find the number of facilities and their locations with minimum data input.
- **What-if Scenario Dynamic Simulation:** Analyze time dependent factors, random events, actual system behavior, and dynamic interactions between elements of your supply chain.
- **Supply Chain Digital Twin:** Automatically gather data about your supply chain and configure your supply chain model's objects, processes, and entities.



- **Inventory Optimization:** Safety stock estimation experiment will help to find a balance between service level and cost-effectiveness.
- **Transportation Optimization:** Plan your transportation logistics at strategic and tactical levels.



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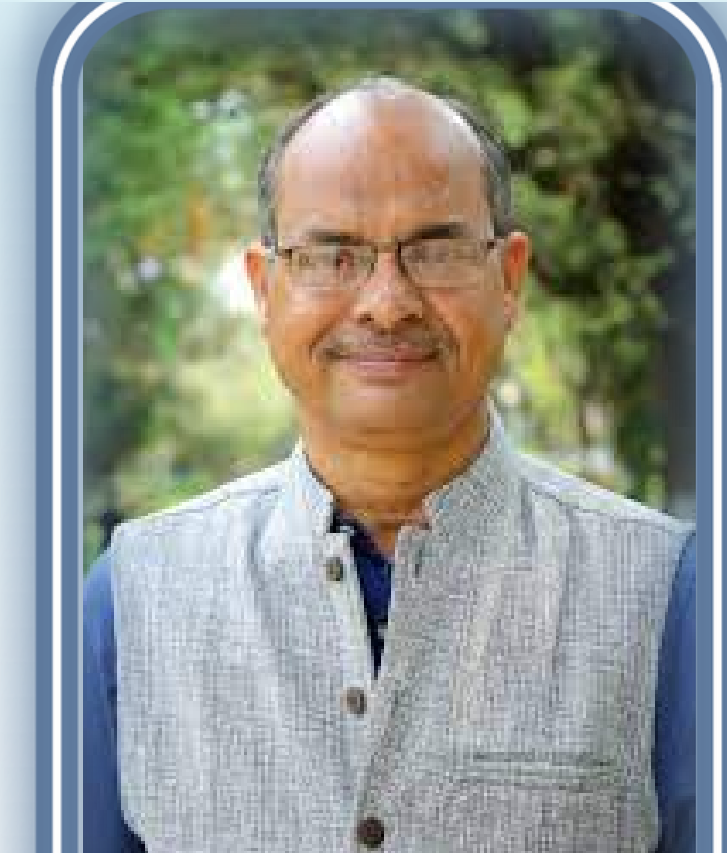
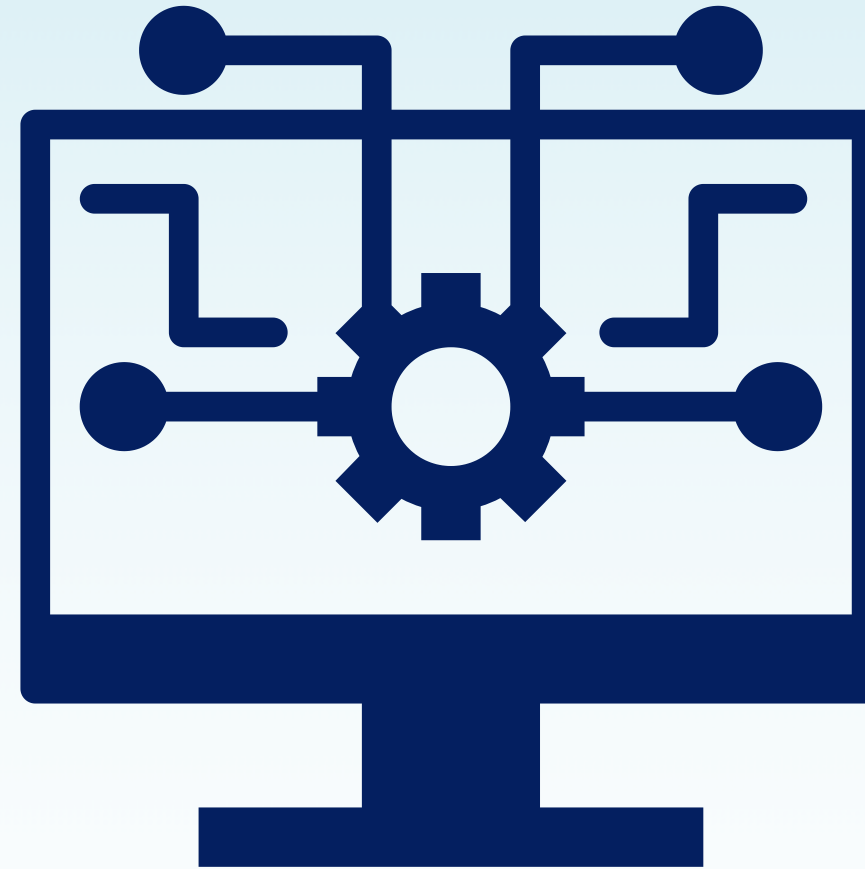
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Course Instructors



Prof. Dmitry Ivanov

Professor, Supply Chain and Operations Management
Faculty Director, M.A. Global Supply Chain and
Operations Management Program
Berlin School of Economics and Law, Germany



Prof. Manoj Kumar Tiwari

Director,
Indian Institute of Management Mumbai
India



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Course Highlights and Structure



Structure

- 15th - 18th April'24 & 21st - 23rd April'24
- 6:00 PM - 9:00 PM IST
- 21 Hours Course, 7 Sessions
- Live Via Webex



Highlights

- Lecture recordings will be provided for 1 week.
- Learn decision making techniques through exhaustive case studies.
- Perform Real-time Simulation to build and optimize global supply chains.
- Lecture slides and supplementary materials about SC modelling and digital twins.

Upon completion of the course, all registered participants will receive a Certificate of Completion from IIM Mumbai signed jointly by Prof. Dmitry Ivanov and Prof. Manoj K. Tiwari. Lecture attendance and quiz attempts will be the criteria for course completion.



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Course Focus and Outcomes



Focus

- Facility Location Planning
- Supply Chain Design
- Inventory Control Policy
- Sourcing Policy
- Shipment Policy
- Supply Chain Resilience



Outcomes

- Perform analysis to determine an optimal location for a new warehouse.
- Compare alternative network designs using Network Optimization.
- Perform simulations of real time supply chain and operations management scenarios.
- Test the models using Validation and comparison experiments.
- Analyse supply chain behaviour under uncertainty and disruption.



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Course Content

Lecture 1 - Introduction to Supply Chain Optimization and Simulation

- Supply Chain Network Optimization
- Supply Chain Simulation
- Digital Supply Chain Twins

Lecture 2 - Introduction to anyLogistix and Digital Supply Chain Twins

- Concepts and models used in anyLogistix
- Technical part of anyLogistix
- Practical, educational and research projects using anyLogistix
- anyLogistix as a Digital Supply Chain Twin

Lecture 3 - Supply chain network design using anyLogistix

- Greenfield Analysis
- Network Optimization

Lecture 4 - Supply chain simulation using anyLogistix

- Inventory and Transportation Control
- Supply Chain Performance Analysis

Lecture 5 - Supply chain resilience and its modelling

- Principles and concepts of resilience
- Modelling of Supply Chain Resilience

Lecture 6 - Supply chain resilience analysis using anyLogistix

- Principles and technical skills
- Examples of Resilience Simulations

Lecture 7 - Future trends

- Digital Supply Chain
- Industry 5.0



About Indian Institute of Management Mumbai



IIM Mumbai, has a rich history dating back to its establishment in 1963 with support from the government of India, UNDP, and ILO. Renowned for its commitment to excellence, the institute has earned the impressive rank of 7th among Indian management schools in 2023 according to NIRF. Specializing in industrial management, supply chain, and operations, IIM Mumbai distinguishes itself through its focus on transformative education and industry-inspired research.

The institute boasts robust connections across private, public, and academic sectors, facilitating a holistic learning environment. With a strategic vision, IIM Mumbai aims to propel Indian businesses onto the global stage, dedicated to supporting the dynamic sectors of the Indian economy. By aligning its vision and activities with current and future needs, the institute stands as a beacon for fostering innovation, leadership, and global competitiveness in the field of management education.



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About Prof. Dmitry Ivanov

- Prof. Dmitry Ivanov is a professor of Supply Chain and Operations Management at the Berlin School of Economics and Law (HWR Berlin) and faculty director of M.A. Global Supply Chain and Operations Management program at HWR Berlin.
- His research explores structural dynamics and control in complex networks, with applications to supply chain resilience, scheduling in Industry 4.0 systems, supply chain simulation, risk analytics and digital supply chain twins.
- He has authored leading textbooks such as “Global Supply Chain and Operations Management”, “Introduction to Supply Chain Resilience”, and several research books such as “Digital Supply Chain”, “Supply Networks Dynamics and Control”, “Structural Dynamics and Resilience in Supply Chain Risk Management”, “Scheduling in Industry 4.0 and Cloud Manufacturing”, and “Handbook of Ripple Effects in the Supply Chain”.
- He is a recipient of the IISE Transactions Best Paper Award 2021, Best Paper and Most Cited Paper Awards of the International Journal of Production Research (2018, 2019, 2020, 2021), OMEGA Best Paper Award 2022, Annual Reviewer Award of the International Journal of Production Economics (2020), Clarivate Highly Cited Researcher Award (2021, 2022). He is listed in the German WiWo ranking 2018, 2020, and 2022 as “The Best Researchers in Business and Management” in categories TOP 50 (ranked #5 in 2022).



Prof. Dmitry Ivanov

Professor, Supply Chain and Operations Management
Faculty Director, M.A. Global Supply Chain and
Operations Management Program
Berlin School of Economics and Law, Germany

Profile Website -: <https://blog.hwr-berlin.de/ivanov/>



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Prof. Manoj Kumar Tiwari



- Prof. Manoj K Tiwari, Director-IIM Mumbai, is on-lien from his post as Professor, Department of Industrial and Systems Engineering at the Indian Institute of Technology, Kharagpur.
- He has been ranked 1 among the top 100 individual researchers across the world who had published research articles in the International Journal of Production Research (1985-2010), the top leading author for Supply Chain Analytical Techniques (Computer & Industrial Engineering), among Top 20 most productive authors in the area of Production and Operations Management in the last 50 years (Int. Journal of Production Economics, 2009) and rated 2nd among many researchers working in Logistics and Supply Chain Management in India (Analysis of the logistics Research in India-White paper published in TU Dortmund University, Dortmund Germany-2012).
- He is the recipient of “Most Influential Researcher Award” in the domain of Operations and Supply Chain Management.
- He was recently awarded the David F. Baker Distinguished Research Award from the Institute of Industrial & Systems Engineers (IISE, USA).
- Optimization, Simulation, and Computational Intelligence are the main techniques adopted by Prof. Tiwari to automate the decision support system for complex and large scale problems in Manufacturing and Logistics System.
- Profile on IIM Mumbai Website - Prof. Manoj Kumar Tiwari
- [LinkedIn Profile - https://www.linkedin.com/in/manoj-tiwari-5050a634/](https://www.linkedin.com/in/manoj-tiwari-5050a634/)



Prof. Manoj K. Tiwari

Director, IIM Mumbai



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Course Fees



Course fees for individual registration (With Early Bird Offer on or before 31st March 2024)

Category	Fee Category	Course fee	GST (18%)	Total Fee (incl. of taxes)
Participants from India	Students	₹ 4,500	₹ 810	₹ 5,310 (Register here)
	Academician / Faculty	₹ 9,000	₹ 1,620	₹ 10,620 (Register here)
	IIM Mumbai Alumni	₹ 14,400	₹ 2,592	₹ 16,992 (Register here)
	Industry Professionals / Others	₹ 16,200	₹ 2,916	₹ 19,116 (Register here)
Foreign Participants	Any	270 USD (Incl. of all)** (Register here)		

Course fees for bulk registration (With Early Bird Offer on or before 31st March 2024)

Students				Industry Professionals			
Slabs	Course fee	GST (18%)	Total Fee (inclusive of taxes)	Slabs	Course fee	GST (18%)	Total Fee (inclusive of taxes)
25+ Students	₹ 3,600	₹ 648	₹ 4,248	12+ Professionals	₹ 14,400	₹ 2,592	₹ 16,992



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Course Fees



Course fees for individual registration (Without early bird offer)

Category	Fee Category	Course fee	GST (18%)	Total Fee (incl. of taxes)
Participants from India	Students	₹5,000	₹ 900	₹ 5,900 (Register here)
	Academician / Faculty	₹ 10,000	₹ 1,800	₹ 11,800 (Register here)
	IIM Mumbai Alumni	₹ 16,000	₹ 2,880	₹ 18,880 (Register here)
	Industry Professionals / Others	₹ 18,000	₹ 3,240	₹ 21,240 (Register here)
Foreign Participants	Any	300 USD (Incl. of all)** (Register here)		

Course fees for bulk registration (Without early bird offer)

Students				Industry Professionals			
Slabs	Course fee	GST (18%)	Total Fee (inclusive of taxes)	Slabs	Course fee	GST (18%)	Total Fee (inclusive of taxes)
25+ Students	₹ 4,000	₹ 720	₹ 4,720	12+ Professionals	₹ 16,000	₹ 2,880	₹ 18,880



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Success of Previous Courses

IIM Mumbai has completed Global Online Certification Courses on Digital SCM Transformation 2021, Supply Chain Transformation through Digitization 2021 and Modelling and Building Digital Supply Chain Twins using anyLogistix 2022, Modelling and Building Digital Supply Chain Twins using anyLogistix 2023. All the courses have received an overwhelming response from reputed national and international organisations.

Some prominent academic institutions include the IITs, IIMs, IIFT, University of London, University of Warwick, and some eminent organisations include P&G, HUL, GE, ITC, Amul, Deloitte, Micron, Mondelez, Cipla, John Deere and many more.

Digital SCM 2021

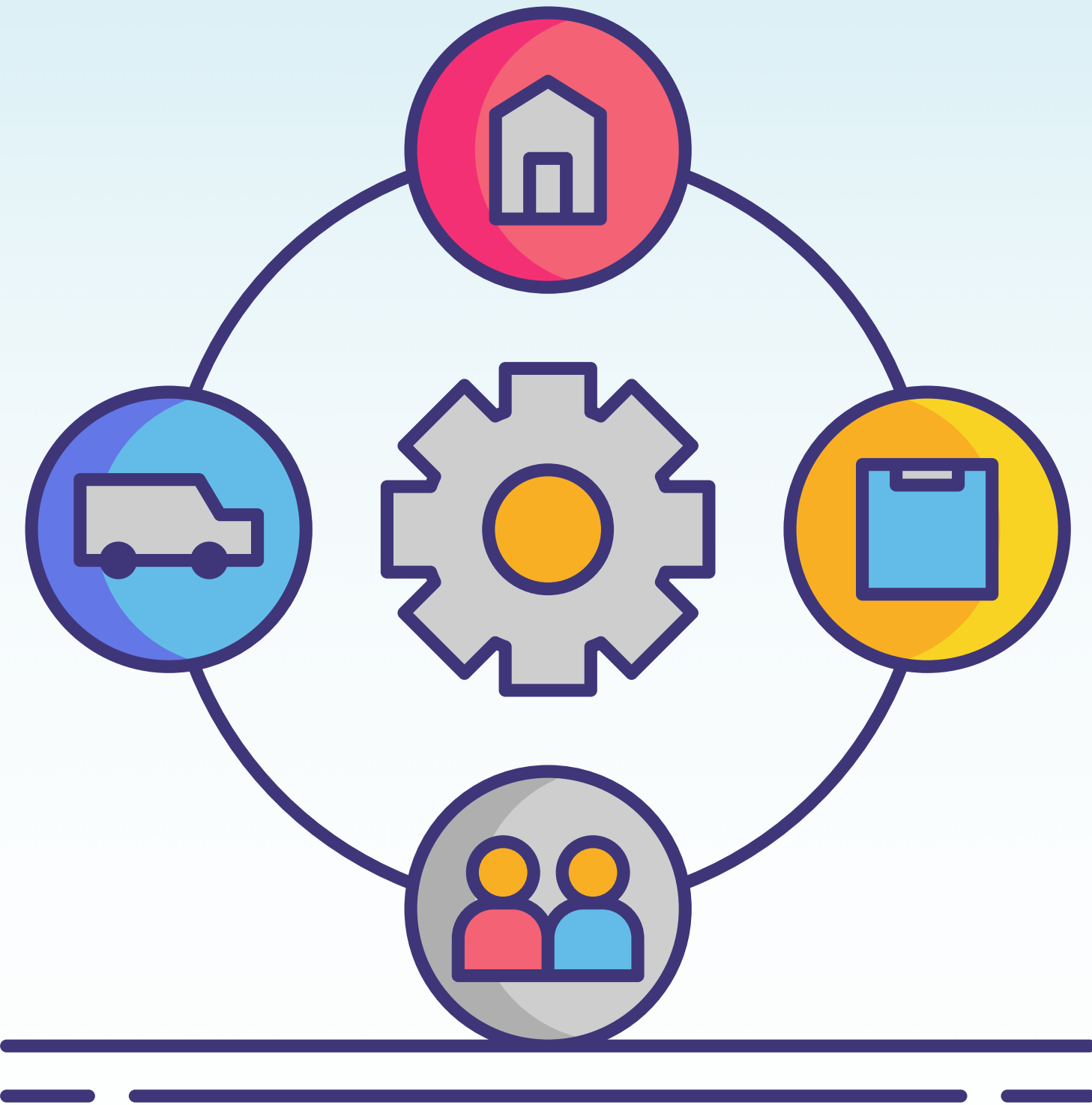
SCM Transformation 2021

Digital SC Twin 2022



About IIM Mumbai's Centre of Excellence in Logistics and Supply Chain Management

- Shri Piyush Goyal inaugurated the Centre of Excellence in Logistics and Supply Chain Management at IIM Mumbai on 23rd September 2021.
- This center acts as a driving force to train and launch top quality programs to disseminate advanced knowledge and promote Digitization, Analytics, and IoT Application and Decision Support Systems through Artificial Intelligence and Machine Learning applications and Digital Twin and Control towers, to strengthen the monitoring and analysis of complex logistics operations.
- It helps the logistics sector become more cost-effective, make the sector more competitive, create new jobs, export more, engage better with the world markets, expand outreach and bring more economic activity to India.



PM Gati Shakti Initiative

The PM Gati Shakti - National Master Plan was announced in 2021 with an aim to celebrate 75 years of a progressive India and the glorious history of its people, culture, and achievements. The objective is to break departmental silos and lay the foundation for holistic infrastructure development to address the multi-modal and last-mile connectivity issues pertaining to supply chain and demand management.

The Global Online Certification Course on Modelling and Building Digital Supply Chain Twins using anyLogistix explores digital twin concepts using anyLogistix software for real-time data analysis, simulation, and decision-making in supply chain optimization. It covers Greenfield Analysis, Network Optimization, and Simulation techniques through case studies, addressing contemporary needs to cut costs and reduce product development time in Industry 4.0.

This course aims to provide participants with a profound understanding of leveraging technology to improve operational efficiency and decision-making across the supply chain to accelerate the idea of the Gati Shakti Master plan.



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Coordinating Team

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Student Coordinators from IIM Mumbai



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Mr. Krishna Dighe



Mr. Shankha Shubhra Sarkar



Ms. Maneesha Joshi



Ms. Sandra Mary Jacob

