

Module 18 “Digital Supply Chain”

Supervisor	Prof. Dr. Christine Rutherford
Inputs	Prof. Phil Greening Prof. Rod Franklin Prof. Omera Khan
Learning path	Workload: 6 ECTS / 180 hours 40 hours attendance (5 dates) in 10 weeks
Recommended semester	Freely selectable
Exam / grading	Presentation and learning journal graded

Contents

Introduction to logistics, supply chain and supply chain management:

- Development of a customer-oriented supply chain strategy
- Physical network planning and logistics cost optimization
- Global procurement strategies and strategic supplier selection

The impact of disruptive technologies: understanding the risks and opportunities for the logistics industry and global supply chains:

- Artificial Intelligence (AI) and Machine Learning (ML);
- Blockchain technology and the transformation of world trade;
- Cloud-based computing, big data and big data analytics;
- The physical Internet (PI) and the Internet of Things (IoT);

Managing new supply chain risks and creating resilient supply chains in a digital world.

The environmental imperative:

- Strategies to reduce the environmental impact of logistics;
- Reverse logistics;
- Omni-channel retailing and its impact on logistics;
- Intelligent products, intelligent cities and urban logistics;
- Logistics and supply chain management in a circular economy.

Learning objectives

1. Understand how companies formulate their logistics and supply chain strategy for competitive advantage
2. Understand how organizations develop global sourcing and supplier selection strategies
3. Critically assess how various disruptive technologies affect or may affect the logistics and supply chain sector
4. Develop an understanding of the risks and vulnerabilities of the supply chain in a networked digital world
5. Critically describe the latest advances in sustainable logistics and the impact of logistics on the environment
6. Understand the concept of the physical Internet and the opportunities it offers for transport and logistics
7. Appreciate the role of logistics and supply chain management in the digital environmental service sector