

SUPPLY CHAIN MANAGEMENT

MGT-526

Credits: 4

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Prof. Ralf Seifert

Odyssea 1.03

ralf.seifert@epfl.ch

Teaching Assistants

Mr. Qi Yi

Odyssea 4.16, Station 5

qi.yi@epfl.ch

Dr. Dimitrios Logothetis

Odyssea 2.18, Station 5

dimitrios.logothetis@epfl.ch

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Course Moodle: <https://moodle.epfl.ch/course/MGT-526>

Office hours: by appointment

COURSE OVERVIEW

Supply chain management has gained tremendous momentum over the past decade and is rightfully seen as a competitive imperative in today's far-reaching and increasingly more complex supply networks. However, moving on from the old era of functional excellence to state-of-the-art supply chain management practice requires executive understanding of how integrated supply chains can delight customers, how to overcome adverse supply chain dynamics and organizational barriers, as well as how to preserve superior supplier relationships. Advancing supply chain management can deliver dramatic results; it can put you ahead or leave you behind of competition.

Our course will use a combination of cases from various industries, two simulation exercises, a road mapping exercise, videos, lectures and group discussions as well as industry guest speakers to best augment your understanding of key supply chain concepts and to gain appreciation of how the concepts can be successfully implemented. It will provide guidelines on questions such as: Why does an integrated view of the supply

chain matter to today's companies? How to align their strategy and their supply chain? How to integrate product and information flows? We will provide a short introduction to inventory policy and the main trade-offs in inventory management. We will cover foundational topics in supply chain management, introduce core concepts and basic frameworks still important today. We will also explore advanced topics in supply chain management, including industry 4.0, digital supply chains, as well as sustainability, and discuss implementing challenges.

DIDACTIC APPROACH AND CLASS ATTENDANCE

An important share of the course relies on case studies, simulations and interactive exercises. The latter then serve as a basis for discussion in class to reveal key concepts and to provide a theoretical perspective. We will not be using or following any particular textbook and the course slides won't reflect all class discussions nor give you access to the simulation outside class. Accordingly, students are expected to attend our classes (except if prevented by illness) and to participate in the case discussions and simulations. This is simply how this course has been conceived. The grading essentially aims to evaluate the preparation and the understanding of the cases as well as the ability to assimilate them and make propositions in a final essay writing challenge.

LEARNING OUTCOMES

- Assess/evaluate supply chain case examples
- Judge supply chain management practices
- Analyze decision alternatives
- Propose solution options
- Present solution approaches
- Model inventory control problems

MATERIALS

Company case studies which you need to prepare for our weekly sessions will be provided free of charge via the Harvard Business Publishing webpage. These materials are all copyrighted and EPFL pays the corresponding copyright fees for these cases and simulation runs per student and per copy. Please refrain from distributing the electronic materials or from printing multiple hardcopies. All handouts (i.e., session slides) will be distributed via Moodle by the end of each lecture.

FORM OF EXAMINATION & GRADING

The grading will be based on:

- 15% on **one** written assignment of type 1 (see below)
- 2x20% = **two** individual written assignments of type 2 (flexible timing)
- 45% = a **final individual essay writing challenge (open book, no AI)**

The written assignments (total of 55%) are intended to advance the learning process as well as the experience-sharing in class. Please submit them via email for our review. Please use the following convention to label both email subject line and file name:

“FirstnameLastnameCaseStudyName.pdf” (e.g. HansMeierLego).

Assignment 1 (15%): Please detail your response to the first assignment question corresponding to the *Sports Obermeyer* case: “Using the sample data given in Exhibit 10, make a recommendation for how many units of each style Wally Obermeyer should order during the initial phase of production. ...” You are encouraged to complete this assignment **in groups of two.**

Deadline: Prior to the Obermeyer session, i.e., by noon on March 18, 2026.

Assignment 2 (2 x 20%): Please submit your written response of 2 to 3 pages (max) to the set of assignment questions corresponding to two of the cases that we shall discuss. Timing is flexible in that you can pick your two cases according to your time and subject matter preference, out of the upcoming cases, and then submit the assignment prior to the corresponding class. The eligible cases are: **7-Eleven Japan, Lego, Tesco vs. Ocado, Unilever, Tetra Pak, and Zalando.** You need to pick two out of those six options. **This is an individual writing assignment.**

Deadline: In advance of the respective session you choose. See the course schedule below.

Assignment 3 (45%): A final individual essay writing challenge will be given in class during the last regular session. You will have to individually analyze a new one-page case and write a comprehensive supply chain analysis / recommendation on it. This will take place at EPFL on **May 27 between 13:15 and 16:00.** The final essay will be open-book, open-notes, but you won’t have Internet access and will NOT be allowed to use any GenAI tool for this assignment.

Please note that all essays are checked for plagiarism using iThenticate. Except for Assignment 1, you must work on them individually.

COURSE SCHEDULE: A QUICK OVERVIEW OF THE SESSIONS

Session	Date	Topics	Pre-Reading
1.	18/02/26	Introduction to Supply Chain	
2.	25/02/26	Supply Chain Simulation: <i>The Beer Game</i>	
3.	04/03/26	Leveraging Information Flows (<i>7-Eleven Japan Case</i>)	7-Eleven Japan Case
4.	11/03/26	Introduction to Inventory Control Models	
5.	18/03/26	Designing for Supply-Chain-Responsiveness	Sports Obermeyer Case <i>Submission of Assignment 1</i>
6.	25/03/26	Global Supply Chain Management Simulation	Global Supply Chain Management Manual
7	01/04/26	Designing the Supply Chain to Match Value	Tesco vs. Ocado (one case)
	08/04/26	<i>Easter Break</i>	
8.	15/04/26	Rebuilding the Logistics Platform	Lego A-Case
9.	22/04/26	Industry Speakers (E. Plazol)	
10.	29/04/26	Supply Chain Environmental Management	Unilever A-Case
11.	06/05/26	Building an Industry 4.0 Roadmap: <i>SmarterChains</i>	
12.	13/05/26	Digitally-Enabled Supply Chains	Tetra Pak Case
13.	20/05/26	A Digital Foundation for Fashion Supply Chain Success	Zalando Case
14.	27/05/26	FINAL INDIVIDUAL WRITTEN SUPPLY CHAIN ESSAY	

A WORD ON AI

You can use AI for Proofreading and Editing of your individual and group assignments, i.e., utilize AI tools for grammar checks, sentence structure improvements, and ensuring clarity in your writing. This can help polish your assignments to a professional standard. You can also use it for **background research**, context to assignments and to organize your ideas, but not to answer assignment questions or analyses for the assignments 1 and 2 as such, nor for the final essay writing challenge.

Do Not Use AI to Plagiarize: Never pass off AI-generated content as your own original work. This is a form of plagiarism and undermines the learning process. **Do Not Use AI to answer assignment questions or data/case analyses unless specifically authorized by the faculty:** The primary goal is to develop and showcase your own critical thinking and problem-solving skills. **Do Not Substitute AI for Learning Fundamental Concepts:** While AI can assist in understanding complex concepts, ensure that you have a solid grasp of the fundamental theories and principles taught in your courses. **Do Not Overlook Copyright Laws:** Do not cut and paste or upload copyrighted material (articles, cases including exhibits, etc.) into any AI tool.

If you see the need to make any citations, which we do not foresee per se please check the following link on how to cite:

<https://www.epfl.ch/campus/library/services/services-students/master-citation-copyright-basic-rules/>

DETAILED COURSE OUTLINE

Session 1 – Introduction to Supply Chain

After a short introduction to supply chain management, we'll discuss global supply chain trends and their relevance for turning your supply chain into a competitive advantage. The supply chain agenda has not changed: it has grown. This is the clear message from a decade of data gathered in a Global Supply Chain Survey. The basics still matter. Leaders still need to get the fundamentals, such as lean processes, quality management, inventory and supplier management, right. That will earn them compounding interest. But in 2026 and beyond, it's imperative to understand the strategic nature of supply chain, to invest in technology roadmaps that enable systemic transformation, and to align internal and external partners on customer outcomes. Exclusive data from this supply chain survey shows that, despite significant efforts over the past decade, important gaps between strategic ambition and execution capabilities remain across industries and across a broad set of topics.

No preparation required.

Session 2 – Supply Chain Simulation Exercise (*The Beer Game*)

In this session, we introduce you to the functioning of a supply chain, some of its important features and dynamics, using an interactive supply chain simulation called The Beer Game.

No preparation required, but we **need you to be on time to make the simulation work for all**,

i.e., be able to start jointly! You will need **your laptop** to play the simulation.

Session 3 – Leveraging Information Flows for Competitive Advantage (*7-Eleven Japan case*)

This session emphasizes the need to address and better coordinate information flows to benefit product flow. Special focus will be placed on understanding key success factors with respect to making effective use of information flows, getting value from IT investments and developing an information-centric organizational culture to systematically benefit supply chain execution to outgrow competition. The session will be based on the 7-Eleven Japan case study.

Readings:

7-Eleven Japan case study

Seven-Eleven Japan Case Study – Assignment Questions:

1. What are key factors in the supply/demand chain of Seven-Eleven Japan that have allowed the company to outgrow competition, including McDonalds Japan in fast food?
2. How does Seven-Eleven's approach to information management and the use of information differ compared to traditional practice?
3. How easily can competitors replicate Seven-Eleven's information system and information management approach?

Session 4 – Introduction to Inventory Control Models

We will go over key trade-offs and costs involved in the efficient control of inventory and present the most basic inventory control models. These basic models often serve as starting points to model more complex inventory management problems.

No preparation required.

Session 5 – Designing for Superior Supply-Chain-Responsiveness (*Obermeyer Case*)

During this session, the Obermeyer case study is analyzed. In particular, we discuss the ordering policy to best accommodate the seasonal demand, with the company's production and distribution capacity. Insights are provided on how to align the supply chain components with the characteristics of the products it ships.

Readings:

Sports Obermeyer case study.

Submission:

Complete your written Assignment #1, submitting your quantitative response to question #1 below, prior to this session. **You are encouraged to work on this assignment in student pairs.**

Sports Obermeyer Case Study – Assignment Questions:

Using the sample data given in Exhibit 10, make a recommendation for how many units of each style Wally Obermeyer should order during the initial phase of production. Assume that all ten styles in the sample

problem are made in Hong Kong and that Obermeyer's initial production commitment must be at least 10,000 units. Ignore price differences among styles in your initial analysis.

Session 6 – Global Supply Chain Management Simulation

Global Supply Chain Management Simulation provided by Harvard University. **You will need your laptop to play the simulation.** Please read the How to Play Guide (Manual) in advance.

Readings:

Global Supply Chain Management Manual v2

Session 7 – Designing the Supply Chain to Match Value (Ocado Case)

In this session we will revisit the importance of supply chain management and discuss its relevance for competitive advantage with the case of Ocado, a British internet retailer. We analyze and discuss its business model and its supply chain, and how the latter is designed to match the value of Ocado. The Ocado model is also compared to the Tesco.com model for online grocery shopping.

Readings:

Tesco and Ocado: Contrasting online grocery supply chain models, IMD-7-2553

1. What are the pros and cons of each model – the Ocado model vs. the Tesco.com model?
2. Weighing all the pros and cons, which supply chain model is superior?

Session 8 – Rebuilding the Logistics and Distribution Platform (Lego Case)

Half-way through the implementation of a bold plan to close down all existing local and regional logistics operations to consolidate those activities in one central location in the Czech Republic, the Logistics Manager for Europe and Asia, Egil Møller Nielsen, finds himself fighting battles on several different fronts. His management team is challenging the need and feasibility to move forward with Phase 2 of the implementation given the recent development of the business. Meanwhile the Lego organization itself is resisting the closure of the Lego facilities and challenging the rationale. To make things worse, Phase 1 of the outsourcing implementation with DHL had not gone well, revealing important shortcomings of the original plan. Should Nielsen, a mere two years with the company, attempt to push his plan through or is it time to step back and reconsider his alternatives?

Readings:

Lego case study (A)

Lego Case Study – Assignment Questions:

1. Which option would you recommend Lego pursues – why?

Session 9 – Industry Speakers

Emmanuel Plazol is the former global Head of Supply Chain of L'Oreal. He spent over 30 years with L'Oreal in France, the U.S., and China. His responsibilities have spanned the entire value chain from manufacturing to customer collaboration. In his final role he led L'Oreal's successful initiatives in implementing best-in-class ecommerce/D2C capabilities globally.

Emmanuel will share with the class the L'Oreal supply chain structure, its organizational transformation that he spearheaded and, using the example of L'Oreal China, the strategic role supply chain plays in developing and executing a successful e-commerce/DC strategy.

Session 10 Supply Chain Environmental Management (*Unilever Case*)

As concerns regarding the environment increase, supply chain management has to incorporate them in order to comply with increasingly stringent regulation and satisfy customers' and other pressure groups' (e.g. NGOs) expectations. Indeed, supply chain is on the frontline in this matter, as it involves most of the company's impact on the environment. We show that an integrated view of the supply chain is needed, in order to assess the global environmental impact of a company and to potentially decrease this impact.

Readings:

Case: Unilever Tea (A): Revitalizing Lipton's supply chain

Assignment Questions:

1. What lessons can be learned from the Unilever initiative to shift its entire supply to tea from Rainforest Alliance Certified farms? What are the challenges, risks and opportunities posed by the initiative?
2. How should companies approach the selection of third-party certification partners or “eco- labels” in general?
3. Can Unilever rely on the Rainforest Alliance to monitor ongoing compliance with certification over time? How exposed is Unilever if the standard for the certification is raised?

Session 11 Building an Industry 4.0 Roadmap: SmarterChains (*not a case / no pre-reading*)

In this session we will deepen our discussion of digital manufacturing and Industry 4.0 trends and how to leverage those to improve margin, generate cash, and drive customer centricity. We will review current industry practices in applying transformative technologies (the WHAT) and most importantly will discuss (the HOW) how technologies can be integrated in a capability master strategy. We will see how integrating multiple vectors from the human factor to operational excellence, and technological choices, brings to life the ability to orchestrate and progress operations to excellence.

Session 12 – Digitally-Enabled Supply Chains (*Tetra Pak Case*)

During this session we will explore Tetra Pak's Digitally-Enabled Supply Chain transformation project. The corresponding case study (see reference below) details why Tetra Pak undertook this effort: how they organized the program; how they identified and selected technologies to implement; which steps they took

to overcome implementation challenges. The case structures Tetra Pak's voyage around their three priorities, i.e., Connected Solutions, Advanced Analytics, and a Connected Workforce. We will place emphasis on the value proposition of Industry 4.0 and Supply Chain Digitalization for both Tetra Pak and their customers as well as how Tetra Pak management went about embarking on this transformation journey.

Readings:

Tetra Pak Case Study: Digitally-Enabled Supply Chain as a Competitive Advantage

Tetra Pak Case Study – Assignment Questions:

1. How might a company like Tetra Pak go about identifying the business drivers and match them with the right technology solutions?
2. How did Tetra Pak go about building the business case for their digital supply chain program if at all?
3. How did Tetra Pak overcome organizational inertia, scalability and resistance to change?

Session 13 – A Digital Foundation for Fashion Supply Chain Success (*Zalando Case*)

This case describes the ways in which the e-commerce giant Zalando has used big data, analytics, and machine learning to deliver supply chain excellence, optimize working capital, and manage a complex distribution network, all while supporting the company's ambitions and growth. Through its platform business model and partner-facing fulfillment solutions, Zalando attracts various other players to the Zalando platform making it the destination for fashion for consumers across Europe.

Readings:

Zalando Case Study: A Digital Foundation for Fashion Supply Chain Success

Zalando Case Study – Assignment Questions:

1. What major supply chain challenges are e-commerce companies exposed to while serving more customers at scale with ever-increasing expectations?
2. What are the main pillars of Zalando's growth strategy? How well are they implemented?
3. What are the pros and cons of developing internal IT solutions to the front-end (platform) and the back-end (warehouse management system)?
4. What are the key reasons returns occur in e-commerce? What are the impacts of returns on the company's supply chain? What can be done to minimize them and what are key trade-offs to consider?

Session 14 – Final Essay (Open-Book)

A final individual written essay challenge will be given during the last regular class session on May 27th between 13:15 and 16:00. You will have to individually analyze a new one-page case and write a comprehensive analysis / set of recommendations for it. This must take place in class. It will be **open-book**, **open-notes**, utilizing your laptops to complete the write-up BUT **access to the Internet and/or any GenAI tool will not be allowed**.