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Topic description of the Distance Learning Seminar 2026

Navigating nascent green tech ecosystems - Business model challenges and opportunities around battery-electric and hydrogen heavy-duty transport technologies

The Distance Learning Seminar is an international cooperative course between i. University of Lodz, Poland, ii. Europa-Universität Flensburg, Schleswig-Holstein, Germany, iii. University of Applied Sciences Kempten, Bavaria, Germany and iv. Radboud University Nijmegen, The Netherlands. The seminar is designed to acquaint participants with theoretical and practical knowledge of the field as specified below. Further, participants gain experience in cooperating in an international research team regarding the related topics.

The general aims and objectives lie in:

- to experience working in an intercultural and interdisciplinary team
- to integrate knowledge from different modules and apply it into a research study
- to learn how to set up a small empirical research
- to learn how to present the research results
- to experience working in a hybrid learning format

In 2026, the course deals with the challenges of business model design in green technology ecosystems illustrated for sustainable heavy-duty transport technologies. The transition toward more sustainable heavy-duty transport affects diverse sectors from logistics to energy. This seminar explores how emerging ecosystems around battery-electric and green hydrogen-powered heavy trucks create challenges as well as certain opportunities for established firms, new entrants, and infrastructure providers. The aim is to develop an in-depth understanding of how different actors collectively shape emerging green ecosystems — and how business models evolve to enable the transition toward sustainable heavy-duty mobility and what the challenges are.

Student groups will analyse and compare business models across different actors in exemplary ecosystems of interest. The course focuses on understanding how these actors collaborate, compete, and co-evolve in the context of high technological, regulatory, and infrastructural uncertainty.

Through lectures, case studies, academic literature, and group activities, participants will develop an in-depth understanding of nascent ecosystems dynamics, economic implications of decarbonizing heavy transport as well as business model innovation and ecosystem strategies for green technologies. The aim is that by the end of the seminar, students will be able to critically assess emerging business opportunities and strategic challenges in the transition to sustainable heavy transport technologies.

Each student group will be assigned a case study focusing on a key actor within the emerging battery-electric or green hydrogen heavy transport ecosystem. Each group's task is to analyse the assigned actor's activities, strategies, and collaborations, and to assess how these contribute to the establishment and evolution of the nascent ecosystem.

Case I	<p>Milence – Building Europe’s Charging Infrastructure for Electric Trucks</p> <p>This case asks students to analyse how Milence contributes to the formation of a new business ecosystem around battery-electric trucking and how infrastructure provision creates value across stakeholders.</p>
Case II	<p>H2 MOBILITY Deutschland – Building the Hydrogen Refuelling Backbone for Heavy-Duty Transport</p> <p>This case asks students to examine how a collaborative infrastructure venture contributes to the formation of a hydrogen ecosystem for heavy-duty mobility and how such an actor navigates complex stakeholder interdependencies.</p>
Case III	<p>Einride – Transforming Road Freight through Electric and Autonomous Transport</p> <p>This case asks students to analyse how Einride contributes to the emergence of a new freight transport ecosystem based on electric and autonomous trucks and how its integrated technology platform creates value for multiple stakeholders.</p>
Case IV	<p>GenH2 Truck – Building a Liquid Hydrogen Ecosystem for Heavy-Duty Transport</p> <p>This case asks students to analyse how liquid hydrogen technology may contribute to the emergence of a new business ecosystem for zero-emission long-haul trucking and how infrastructure provision creates value across stakeholders.</p>
Case V	<p>DB Schenker – Electrifying and Decarbonizing Freight Logistics</p> <p>This case asks students to analyse how a large logistics company adapts its business model, operational processes, and partnerships in the face of technological change and uncertain ecosystem structures.</p>
Case VI	<p>Hylane – Leasing-Based Adoption of Hydrogen and Battery-Electric Trucks</p> <p>This case asks students to analyse how Hylane contributes to the formation of a zero-emission trucking ecosystem by providing access to both hydrogen and battery-electric trucks and how its pay-per-kilometre model creates value across logistics and infrastructure stakeholders.</p>

The analyses should address the following topics (you may set a specific focus for your paper):

- The actor’s role within the value chain/network and its business model logic
- If/how the actor creates and captures value in the context of decarbonising heavy transport
- Interactions and dependencies with other stakeholders (e.g., vehicle manufacturers, energy suppliers, logistics operators, or policymakers)
- Opportunities and challenges arising from technological, infrastructural, and regulatory developments/the uncertainty of these developments

In order to achieve this, the **initial task for all groups** is to *map the value creation activities* by the case company (which also may be a joint venture). This is your focal actor within an ecosystem who has

made some conscious decisions on what to do/what not to do/how to create value. On the base of this mapping exercise the topics to be addressed are to be elaborated (with your chosen focus).

The final objective of this course is the production of a research paper that analyses one of the assigned cases or focal actors. Each paper will be developed collaboratively by student teams composed of participants from different partner universities (see the course guidelines for preparing the paper with detailed specifications). In addition to submitting the written paper, each group is required to present their findings both online and in person during the seminar. Beyond the regular credit points awarded at the participating universities, all students will receive a joint certificate of participation, co-signed by the partner institutions, recognizing their contribution to the collaborative project.