

Announcement Master Thesis:

Smart Inland Waterway Management

Context

Waterway transportation emits three times less CO₂ than road transport. Transport by barge is predominantly used for big-volumes, as a barge replace a lot of trucks. Effective logistics engineering is essential to ensure cargo consolidation, requiring an accurate synchronisation between operators and a collaborative approach demanding organisational and behavioural change from logistics professionals. One of the requirements for a modern logistics communication infrastructure in inland waterway transport is that it should make supply chain management possible beyond company boundaries. Information in the form of documents or databases must be exchanged in closed user groups. The co-operation of the stakeholders (consignors, inland waterway operators, owner-operator, post-carriage forwarder, consignees, and customs) must be carried out in a common, partly open electronic infrastructure.

Tasks

Students are expected after an extended literature review on the topic to describe the state of the art of information management in the European inland waterway network and design instruments to do a field research in order to gather relevant information about the requirements for smart Inland Waterway Management Systems. Further, to define the concept-guidelines for new information technologies or processes to foster a collaborative, efficient, secure and transparent work-synchronization between supply chain operators. Students should put emphasis on concept-simplicity, but enabling cargo consolidation and smooth transshipment between other transportation modes (truck, train, ship).

Applicants

Students are expected to demonstrate good study performance, high motivation and capability to work, under tutor's guidance, independently and target-oriented on the theme. Finally, applicants should have proficiency and good communications skills in English and German. Students will benefit from a singular opportunity to work with TUL-partners-organizations, leaders on the waterway and road transportation sector which will exchange their know-how and experience during this research.

Contact

Melissa Szymiczek, M. Sc.

Telephone +49 203 379-7711

E-mail: melissa.szymiczek@uni-due.de

Duisburg, 9th January 2018

Prof. Dr.-Ing. Bernd Noche

Transport Systems and Logistics, University Duisburg-Essen