



Research School for Operations
Management and Logistics

Optimization problems in synchromodal transportation

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This PhD focuses on optimization problems in a synchromodal transport setting. Synchromodal transport focuses on fully integrated transport solutions considering all available transport modes in a real-time and flexible manner. As such, the real-time dynamics and flexible nature of synchromodal transport should be taken into account in the underlying optimization problems (long-haul service selection, train load planning, scheduling drayage operations, etc.). Therefore, in this PhD models and heuristic solution techniques will be developed for solving these optimization problems in a synchromodal setting. Moreover, while current decision support models in intermodal/synchromodal transport typically take the perspective of a single decision maker, the use of high-capacity modes in intermodal and synchromodal transport involves the bundling of freight flows to achieve economies of scale. This PhD will explore the magnitude of and conditions for achieving benefits of cooperation among different parties.