At the Chair of Logistics and Supply Chain Management of TUM School of Management we are looking for interested and qualified students to conduct his/her Master Thesis on the topic: Simulation of City Logistics Systems

City logistics tries to reduce congestion and pollution in urban areas by introducing new organizational and business models for the transportation of goods in urban areas. This shall be achieved by consolidating and coordinating the goods that are transported through the city. To improve utilization, one key aspect is to share the resources in such a system.

One general model is the two-tier city logistics system. Goods are consolidated at the border of the city in city distribution centers. From there they are transported to so-called satellites in the city, which operate as cross-docks. At the satellites, city freighters (for example electric vehicles) do the final distribution to the customers.

Solution methods and different model aspects are not yet considered in the literature. The goal of this project is to use an AnyLogic Simulation to build such a system and use Simulation Optimization to improve the system.

Several topics are available under the general setting of city logistics. Own ideas from practice are also welcome.

Starting literature:

Selected research tasks (several topics available):
- to make a literature analysis on city logistics
- to extend existing models
- to implement in AnyLogic

Requirements:
The thesis is for Master students of the study-program TUM-BWL. Qualified candidates have a major in Supply Chain Management. The ability to work independently as well as analytical skills are required. Good knowledge of programming and/or modelling is essential for this topic. The thesis should be written in English.

Begin: ongoing

Advisor: Dr. Pirmin Fontaine

Application: Email with curriculum vitae and transcripts of records to logtheses.wi@tum.de