At the Chair of Logistics and Supply Chain Management of TUM School of Management we are looking for interested and qualified student groups to work on a Project Study on the topic:

**Designing the Supply Network under Maximum Customer Order Lead Times**

Supply Network Design is a complex problem which is comprised of several decisions such as; selection of suppliers and locations for opening production facilities. While searching for the design with minimum total cost of initiating and using the network, certain requirements of the customers should be taken into account. In environments where the customers are not willing to wait more than a certain amount of time for their order to be delivered, network design and operations must be aligned in such a way that the time spent for production and transportation operations does not exceed this tolerance. With the aim of meeting the lead time expectations of its customers, a company may choose to produce in a make-to-stock fashion and carry inventory in upstream parts of its network while producing in a make-to-order fashion in downstream parts. Thus, only the downstream operations need to be accomplished within the customer order lead time. In this case, the main concern is the positioning of the decoupling point that separates the network into the upstream and downstream parts. The goal of this thesis is to investigate this problem which is of great interest to the automotive industry and therefore will be conducted in cooperation with a leading 1st tier supplier of the automotive industry.

**Selected research tasks:**
- to perform a literature analysis.
- to model the problem and implement in Xpress
- to conduct an extensive numerical study and discuss the results.

**Requirements:**
The Project Study is for Bachelor 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. A background in mathematics and optimization is helpful. The report should be written in English.

**Begin:** as soon as possible

**Advisor:** Miray Közen (miray.koezen@tum.de)

For further questions and selected literature on the topic, please see me in room 1571. Please send your application together with your curriculum vitae and transcripts of records by email.