The Chair of Logistics & Supply Chain Management is offering the following

Project Study

in cooperation with a global supplier of tooling, engineered components and advanced materials:

Selecting Facility Locations in East Asia
Using Stochastic Optimization

About the client:
The US-based company is a major supplier in the automotive, aerospace, energy, and general machinery industry. A broad range of high-tech tools and materials and processes is offered. The global firm operates in more than 55 countries and generates sales in equal thirds from North America, Europe and emerging markets.

Problem situation:
Since locating facilities in a foreign continent can be a substantial investment, location decisions are a vital part of global supply chain strategies. Although East Asia in general offers an attractive market, the environment is challenging - also for experienced multi-national organizations. The core question of the project is how to reflect uncertainties in strategic decision making processes for a ‘Chief Supply Chain Officer’. For this purpose, various methods of stochastic modeling techniques shall be explored, applied and tested.
The project aims at selecting facility locations (e.g., production facilities, warehouses) taking uncertainties and potential risks systematically into account. An user-friendly prototypical application helps decision makers to evaluate different scenarios. The project study can build on previous (excellent) student results with the same business partner.

Key project tasks:
The project team is expected:
- to evaluate location analysis methods using stochastic modelling techniques
- to conduct a site search in East Asia based on key factors such as demand, customers and supply locations, geography, transportation, costs, (to some extent also) taxes, sustainability requirements, macroeconomic factors, and others
- to further develop a graphical user interface in order to visualize the recommendations
- to prepare presentations and final reports

The project team will be coached and supervised by Dr. Martin Stößlein. Kick-off and regular milestone meetings are held via telephone conference with the general manager for Mainland China. Due to the confidential and sensitive nature of the project information, each participant is required to sign a Non-Disclosure Agreement.

Requirements:
The project study targets students of the study-program TUM-BWL. Qualified candidates have attended the lecture ‘Global Supply Chain Strategy’ or similar. An interest to ‘deep dive’ into business modelling using stochastic optimization is advantageous (that also prepares for Master studies at our chair). Excellent work attitudes and/or work experience at top consultancies are required. The thesis is be written in English.

Begin: March or April 2013
Advisor: Dr. Martin Stößlein

For further information please see the Dr. Martin Stößlein in room 1547. Any interested student, please send your application (motivation letter, curriculum vitae and transcripts of records) by email to:

martin.stoesslein@tum.de