In order to meet ambitious CO₂ reduction and energy efficiency targets, new construction materials are required. While promising materials are being developed, they have to be evaluated from a technology and a market perspective. Embedded in an industry project, this thesis will evaluate one or more new construction materials and at the same time improve the methodological framework for this kind of technology evaluation. In the course of the thesis, the student will analyze certain elements of the overall framework (e.g. market potential analysis, technology readiness) in more detail or deep-dive into a selected material/technology (e.g. new insulation materials, new concrete composites, and new bio-based materials).

We are looking for a student who can contribute to this project by focusing either on elements of the framework or on a particular case study of the aforementioned materials. The student’s tasks will primarily comprise of:

- Literature review of the
  - selected framework element(s), or
  - existing technical and market characteristics of chosen case study material
- Collecting archival data, conducting expert interviews, and analysis of data
- Deriving implications that aim to
  - improve the overall framework, or
  - foster an understanding of the chosen case study material.

The project is in collaboration between SusTec and BASF, one of the largest global chemical producers. Thus, your research benefits from the close collaboration with industry leaders for sustainable construction materials.

We are looking for excellent students who are highly motivated, are able to work independently, and have a passion for sustainability and technology. Strong communication and project management skills, industry experience as well as a background in engineering or economics are additional assets. The selected student will be an integrated part of the dynamic SusTec team in Zurich advised by a PhD student.

Please send your CV, a short letter of motivation (max. one page), and transcripts of obtained degrees to David Grosspietsch (dgrosspietsch@ethz.ch). Applications from non-ETH students are welcome.

We look forward to receiving your applications.

David Grosspietsch,

Group for Sustainability and Technology, D-MTEC, ETH Zurich

Zurich, October 2018