

## **Dr. Ir. Ana Valencia (Postdoctoral Researcher)**

**Project Title:** Assessment Practices in inter-program CBL Education: The case of the innovation Space Bachelor End Project (ISBEP)

**Period:** 2019-2022

**Research Team:** Prof.Dr.Ir. Isabelle Reymen (TU/e innovation Space), Dr.Ir. Miguel Bruns (TU/e innovation Space/ID), Dr. Ir. Peter Ruijten-Dodoiu (TU/e innovation Space/HTI), Prof. Dr. Birgit Pepin (ESoE).

Since September 2017, TU/e innovation Space offers Bachelor students the opportunity to do an interdisciplinary Bachelor End Project (ISBEP). ISBEP is an alternative to the individual Bachelor End Project (BEP) within their own discipline. ISBEP has characteristics that differ from traditional BEPs:

- It is interdisciplinary: Teams are formed with students from multiple disciplines,
- Students work on open-ended challenges (i.e., Challenge-Based Learning, CBL): Challenges relate to real-life situations, which are brought forward by companies, artists, scientific staff, or student teams. Open-ended means that students analyze the challenges and independently identify a problem/scope to be tackled.
- Projects are solution oriented: There is high focus on results that are of societal and/or environmental relevance.
- It is a multi-stakeholder project: Students interact with several actors, such as challenge owners, supervisors at their own faculty, coaches within the innovation space, assessors, and their own team members.
- It is inter-program: Different programs (e.g., distinct learning goals, rules, assessment criteria), collaborate to set up the learning experience.

These characteristics lead to challenges in terms of the assessment for the individual student:

- The final assessment is conducted by academic coaches at each of the departments using the criteria for a traditional/individual BEP.
- Currently, a large part of this assessment consists of professional skills (communication, teamwork, reflection, planning, organizing and dealing with (scientific) information) and on the development of domain-specific knowledge.
- The interdisciplinarity of the project, the openness of the challenges, and multi-stakeholder set-up, are currently not acknowledged in the assessment.

### **Objective and expected outcomes**

The above challenges are addressed in a research project. The ambition of the project is to investigate and propose assessment procedures that are well aligned with interdisciplinary, inter-program challenge-based education in the context of ISBEP. First, by studying the context and identifying key aspects affecting the assessment within ISBEP. Second, by conducting a literature review into state-of-the-art assessment of interdisciplinary open (engineering) challenges. Third, by developing generic assessment approaches in collaboration with stakeholders (students/coaches/examination committees) for interdisciplinary, challenge-based, Bachelor End Projects. A pilot assessment will be conducted in the academic year 2021-2022 and evaluated. The results of this project will be proposed as assessment approach for future editions of the ISBEP and similar projects, also university-wide and at the master level.