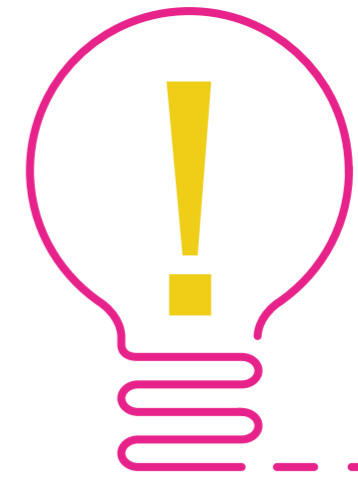


BEST PRACTICE 2019



Marco Bertoni

Involving Work Integration Social Enterprises as case study providers for innovation projects to leverage social sustainability in engineering education.

Training engineering graduates in sustainable development literacy is an urgent task for academic institutions. Even though environmental and social considerations are critical dimensions to be leveraged when designing quality advanced design-implement (D-I) experiences for students, sustainability is often confined to environmental protection and suffers from the under-development of the social dimension.

An opportunity to leverage social sustainability in engineering education is to involve Work Integration Social Enterprises (WISE, Arbetsintegrerande Sociala Företag in Swedish) as case study providers for innovation projects. WISE are an enterprise form that, besides the commercial imperative of providing product and services (e.g., cafés, laundries, recycling centers, and others), offers employment and training opportunities for those individuals considered less able to compete in mainstream labor markets.

Between 2016 and 2018, 9 student projects were conducted in collaboration with WISE in the Blekinge region within the MT2554 Value Innovation course. The latter introduces students to the Design Thinking (DT) methodology framework and is designed with an overarching project work that stretches along the entire period of the study (8 weeks).

WISE-based projects have shown to bring forward additional characteristics compared with more 'traditional' engineering experiences. Students were able to expand the scope and depth of their problem identification and formulation activities, due to the continuous dialogue with a broad range of stakeholders, enthusiasts, and volunteers. Most of the project teams showed good awareness on the use of 'social sustainability lenses' to measure the goodness of proposed solution concepts, as well as on the existence of competing value systems for the problem at hand. WISE represented also an eye-opening experience for students, who recognized that generating 'value' is not merely a matter of building a solution (feasibility), but also of addressing how customer and stakeholders will react (desirability) and of ensuring that the solution is sound in a business sense (viability).

