



European Institute of
Innovation & Technology

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EIT

Community good practices in Education

Case studies from:

EIT Manufacturing
2023

EDU

EIT Manufacturing

EIT Manufacturing's Teaching Factory Competition (TFC) addresses the needs of both educational organisations and industries. For universities and Vocational Education and Training (VET) organisations, the TFC provides improved teaching tools and hands-on teaching activities that develop students' entrepreneurship. For industries, it brings knowledge and innovative concepts (particularly in green manufacturing) through potential future employees.

The "teaching factory" educational methodology involves exposing students (grouped as "solver teams") to real-life manufacturing challenges within a real industry. Companies (participating as "challenge owners") gain access to the new methods and approaches from academia, helping them improve their manufacturing processes and final products. Industry-academia cooperation is supported through the AGORA IT platform, the main communication tool between companies and students during the competition.

A Good First Pool of TFC Applicants

For the first edition of the TFC in 2022, EIT Manufacturing put together:

- Six companies (to be "challenge owners")
- Eight universities and VETs, each with five team members (one mentor/tutor and four students)
- 70 AGORA platform users (five per organisation)

These indicators should increase for future TFCs.



Students Directly Respond to the Challenges of the Companies

The activity starts with a call for expressions of interest from companies, universities, and VET schools. After screening the proposals, EIT Manufacturing matches the proposed challenges to the proposed student solving teams. The "challenge owners" elaborate a specific, real-life challenge related to their manufacturing process with a focus on "green manufacturing". The universities and VET organisations nominate their solving teams to address these challenges.

Students first go through some initial training including on how to use the AGORA IT platform and how to pitch proposals. They then get about eight weeks to work on their industrial challenge, deliver their results package, and be evaluated by a jury. The jury selects the best solving proposal for each challenge to be invited to participate in the final competition and award ceremony.

The TFC is a Win for All Participants

While the long-term impact of the TFC cannot yet be fully measured, interviewed participants and managers claim there is already evidence of achieved impacts including:

- Improved entrepreneurial and soft skills among students
- Increased employability of students in the industry
- Improved manufacturing practices and branding for participating companies
- New ideas for future collaboration between the companies and universities

The TFC helped EIT Manufacturing by promoting its activities outside of its existing network and helping test and improve its administration and management tools, including the AGORA platform.

The TFC Benefits from a Strong Entrepreneurship Orientation and Good Communication

Satisfaction with this first TFC edition was overall very high. Best practices and lessons learnt include:

- Developing entrepreneurial skills seemed to be the most important attraction point for the students, and students came out of the TFC more confident in their abilities to start their own businesses in the future
- Students and companies were more likely to interact with the EIT in the future, and to see opportunities in aligning their work with EU policies
- Initial workshops for university mentors and tutors increases the efficiency of the solver teams
- Keeping challenge owners aware of changes in the solver teams allows them to better manage communication and expectations for the final outcome
- Bi-weekly (at minimum) communication between solver teams and the challenge owner proved so teams receive enough information to solve the challenge
- AGORA will need to be further upgraded to become more user-friendly



Manufacturing

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Replicable if Open to New Partnerships and Real World Challenges are Emphasised

The programme can be replicated across other KICs as long as they are open to working outside of their existing EIT networks. This will lead to better choices of candidates and allows for interdisciplinary approaches that add value to the programme. As the programme works best when there are more applicants and participants, communications activities are extremely important for its success. Well-structured initial workshops and trainings are recommended for participants so they can agree on future processes and communication lines.

It is equally important for the programme to replicate the sector's business environment as closely as possible and link up with European policy priorities so that students can benefit from practical experience and partners can benefit from different EU support programmes.

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