The Norwegian University of Science and Technology, NTNU, is presently developing the framework for its educational programmes in technology and engineering for the future beyond 2025. NTNU educates about 87% of students in 5-year integrated MSc engineering programmes in Norway, and approximately 27% of BSc engineering students. The project “Technology Education of the Future” has been given the mandate to analyze current strengths and weaknesses, establish future ambitions and needs, and propose instruments for implementation.

In the project’s first phase we have established desired competence profiles for future bachelor, master, and PhD students in engineering, technology, and technology-related science programs. We have also proposed principles and guidelines for future program organization and design. Both strengths and weaknesses have been identified, in close contact with relevant Norwegian stakeholders and well-recognized technical universities in Europe and the US.

In later phases we will develop a practical and organizational framework for realization of the desired program portfolio and provide advice on required change processes. This includes establishing appropriate and continuous quality development routines, ensuring periodic content revision, supporting pedagogical development of faculty, and aligning administrative routines to support students’ learning.

One of the biggest challenges seen is the necessity of establishing a broader and more multidimensional understanding of student competencies, including aspects such as non-technical professional skills (collaborative, communicative, ethical...), and the need to integrate training of such skills across the curriculum. We will address how we have designed the process, what experiences we have made, and how to proceed further.