



The Nordic Engineering Hub

Inese Podgaiska, Secretary General of the Association of Nordic Engineers
Meeting with DIGITALEUROPE Digital Skills Working Group
28th January 2020

About ANE

- Established May 2007 - cooperation organisation for **engineering associations** (trade unions) in the **Nordic Region**
- Represents **interests of 500.000 engineers**
- Platform for **1) sharing know-how, 2) influencing policy 3) generating new knowledge**

About NordenHub



- **Consortium: 5 HEI, ANE and NORDTEK**
- **Point of reference** for generating and disseminating new ideas on **STEM education**
- Objectives: 1) **modernize engineering education**; 2) **raise interest for STEM education**; 3) establish a **stakeholders' network**, including business, policy and academia representatives



Context

- Lack of STEM specialists
- Unclear competences demand versus competences supply
- Contemporary challenges: 1) sustainability, 2) digitalization, 3) employability
- Slow process of transformation and adaptability to new requirements in HEI
- Tensions between different traditions of engineering educations
- Lack of commonly shared theoretical and conceptual framework to engineering education



What is the status?

**Phase 1:
Research analysis
2018-2021**

**Conducted interviews
with academia**

3 trends

**Student-centred learning
approach,
Contextual and practice
experiences,
Use of digital tools.**

Questions:

- **How will these trends influence engineering education in the future?**
- **How will the trends influence academic research?**
- **Will there be a parallel development of research and education?**
- **What possible directions can be identified for engineering education in 2030?**



Preliminary results from the academic core

I see the risk of lack of competences in the future, everyone is trying to be a generalist. It is a contradiction with having in-depth knowledge

I hope the education will evolve regarding the format, I see a clear demand for flexible learning

2 categories:

Category 1: Importance of Change

- > Large variation of perceptions linked to disciplines: reluctance to change and focus on deep-content knowledge in the more science-dominated engineering disciplines, versus a need for change as vital for disciplines that are closer to production

Category 2: The role of future engineering institutions

- > Clear variation of perceptions – universities will adapt to societal change to a large extent versus more passive role for universities (administration and quality control)

!!! Sustainability is seen as the biggest challenge



Next steps



Involving business representatives

Forming policy recommendations

Final results presented at the conference Spring-summer 2021

Preparing phase 2 Operational and sustainable Hub post 2021

Established a solid network – point of reference on STEM in the Nordic Region



What do we wish from you?



1
**Provide your opinion
by participating in
interviews**

2
**Be part of the
Advisory Board**

3
**Become partner in
the network**



THANK YOU!

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Engineering Hub