



The Nordic Engineering Hub

Co-funded by the
Erasmus+ Programme
of the European Union



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**



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THANK YOU!

Contact:

E-mail: ipo@ida.dk

 @NordicEngineers  Association of Nordic Engineers

or

Dr. Lena Gumaelius, Associate Professor

E-Mail: lenagu@kth.se

Website: www.nordenhub.org

