AALTO UNIVERSITY

SCHOOL OF CHEMICAL ENGINEERING

CHEM 2017-2020 Strategy implementation plan

January, 2017

Deans executive summary

Aalto University revised its strategy for the time period 2017-2020. The entire faculty and staff had the possibility to participate in the revision work. The revised strategy has been discussed in schools and the various parts have been under discussion in working groups. The paper you hold in your hand is a summary of the implementation plan for the revised strategy at Aalto University School of Chemical Engineering. This plan was also reviewed by our external evaluation board, SAB (scientific advisory board).

The strategic objectives at Aalto University are:

- Research excellence for academic and societal impact
- Renewing society by art, creativity and design
- Educating game changers
- Transforming our campus into a unique collaboration hub
- Excellence in advancing and supporting our core goals

School of Chemical Engineering answers these objectives and strives towards our Vision 2020:

The School of Chemical Engineering carries out world class research and education with multidisciplinary mindset in the science and engineering of natural resources for circular economy and bioeconomy.

The actions for reaching our goals have already started in 2016 by the restructuring of our departmental structure. The actions in research, education, artistic activities, campus development, and support services are well on their way forward and we will continue to follow their development during the strategy period.

Dean Janne Laine

Aalto University—Shaping the future

We are building a competitive edge by combining knowledge from different disciplines to identify and solve complex challenges, and to educate future visionaries and experts.

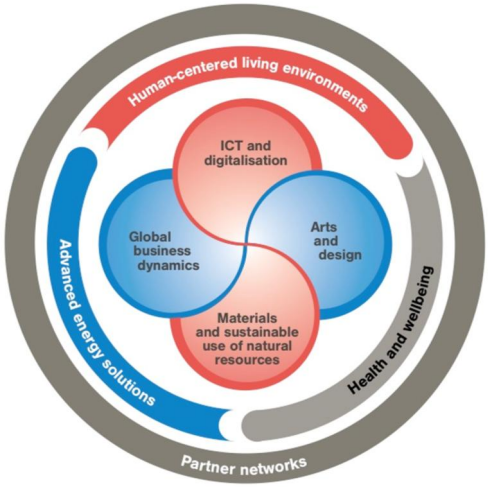
Our vision:

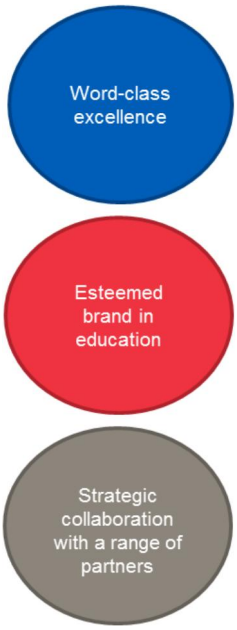
Innovative society

The way forward

Aalto University's research is based on four key research areas and three integrative multidisciplinary themes addressing major global and national challenges.

Our positive impact on societal and industrial development relies on interactive networks with our partners.

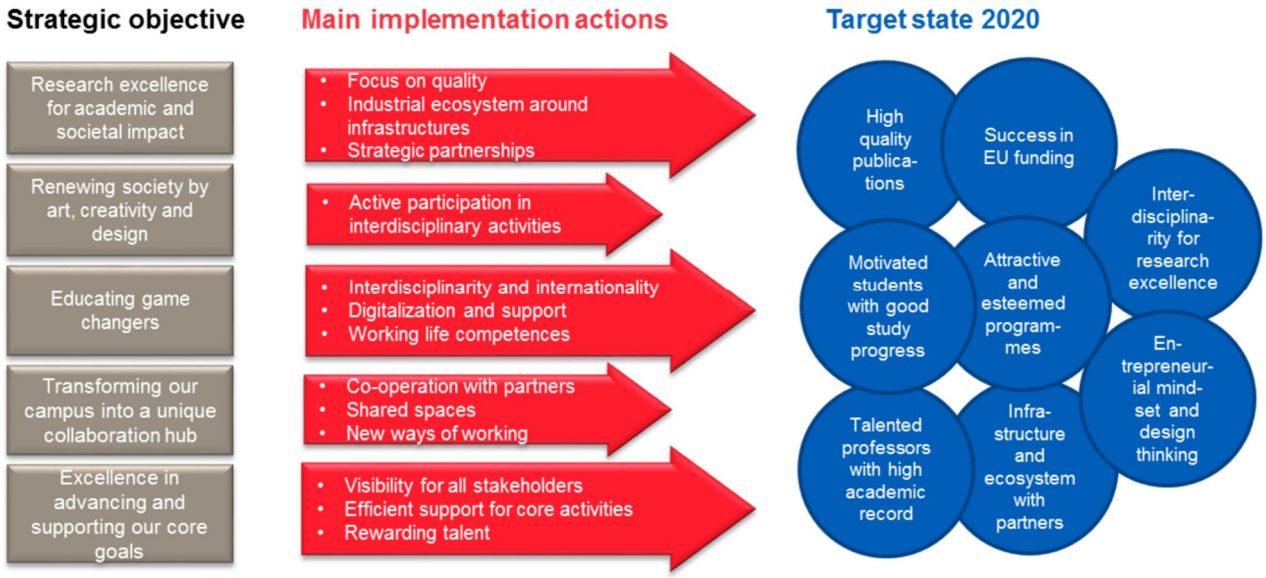




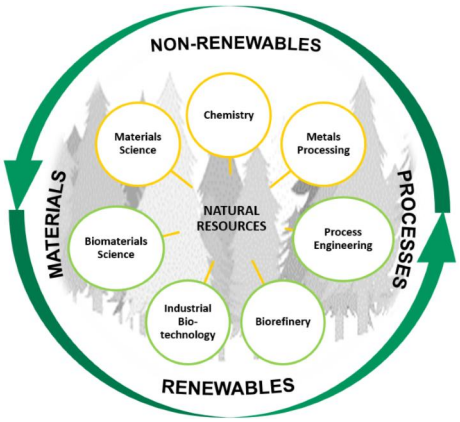
CHEM Towards 2020

Restructuring of departments, facilities, services, and technical support to reach research excellence and study progress of the educational programmes

- A large number of rising talented (champion) professors with excellent scientific records
- High success in EU funding through more efficient networking, active tutoring (ERC) and efficient support services
- Attractive and esteemed educational programmes which graduate experts with a wide range of employment opportunities with a well-known brand in the industry
- Graduated students have good working life skills through collaboration with employer organizations
- Novel openings with the industry through CHEM strategic partnerships
- CHEM has an internationally attractive ecosystem around infrastructures, research themes, and education in Center for Bioeconomy and Circular Economy
- CHEM has a solid mechanism for interdisciplinary collaboration at Aalto



School's profile



Non-renewable materials and their processing

Focus in the non-renewable materials science has in CHEM moved from traditional metal forming towards advanced functional materials as well as materials for energy production and storage. There is a strong link between the basic chemistry (inorganic materials chemistry, electrochemistry, computational chemistry) and the non-renewable material science. Materials processing concentrates on sustainable solutions with metallic materials processing and recycling in focus.

Biomaterials and their processing

We are adjusting our activities in chemical and process engineering to the massive change from fossil-based economy towards bioeconomy. Our traditional forest products-based research (papermaking and wood technology) has changed over to biorefinery, containing novel bio-based materials, chemicals and biofuels. In the area of industrial biotechnology, we have put effort on the emerging field of synthetic biology.

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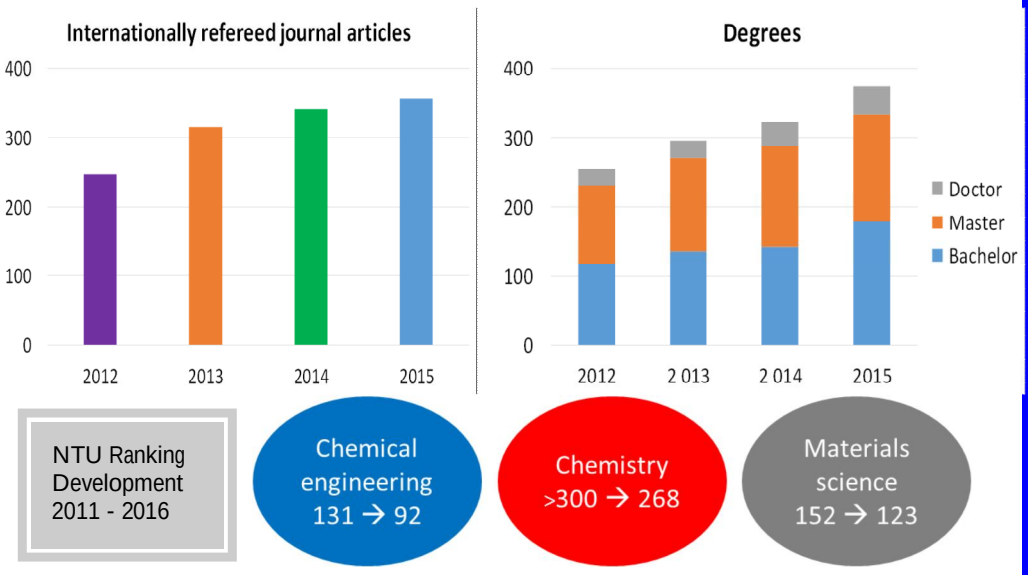

New departmental structure based on key competencies