Universities and Large Scale Research Facilities

NORDTEK 2013

Lund
Universities and Large Scale Research Facilities

Welcome address

• Prof. Anders Axelsson
  Rector LTH, Faculty of Engineering of Lund University

• Prof Torbjørn Digernes
  Rector, Norwegian University of Science and Technology, President of NORDTEK
Welcome to Lund, LTH, Lund University!
Welcome back 2016 and 2020
ESS Scandinavia and Max IV

- The **European Spallation Source** (ESS) will be built in Lund and will be used by several European countries (17 member countries).
- A multi-scientific research facility based on the world's most powerful neutron source, estimated to be fully operational in 2020.
- **Max IV** is a Nordic synchrotron research facility using X-rays to study materials at the atomic scale. Ready to start 2016.
Education, research and innovation

Anders Axelsson, Dean,
LTH  Faculty of Engineering
Lund University
Lund University
One of Scandinavia’s Largest Universities

- Founded in 1666
- 47,000 students
- 3,000 doctoral students
- 6,800 employees
- 650 professors (18% women)
- 8 faculties
- Several campuses
- EUR 730 million turnover
- Ranked among top 100
Faculties within a comprehensive university

• Engineering
• Science
• Medicine
• Law
• Social Sciences
• Economics and Management
• Humanities and Theology
• Fine and Performing Arts
LTH – Key Figures

Sweden’s 3rd largest engineering faculty

- 8800 students (6500 HST)
- 1 600 employees
- 500 PhD students
- 160 professors
- 16 Master of Science in Engineering programmes
- EUR 160 million turnover
- Ca 1 100 degrees awarded annually:
  Engineering
  Architecture & Design
  PhD

> 80% of education within professional degrees
World-leading research at LTH

- Combustion
- Modeling and simulation
- Automatic Control
- Aerosol Sciences
- Nano Science
- Laser Physics
- Building and Architecture
- Immunotechnology
- Functional Food
- Biotechnology & Biofuels
- Biomedical Engineering
- ICT & Mobile Communication
- etc, etc
Strategy

• To utilise the comprehensive faculty within the comprehensive university

• Cross-disciplinary approach in research and education

• Internationalisation

• etc
Engineering programmes
Master of Science in Engineering at LTH

- Biotechnology
- Chemical Engineering
- Electrical Engineering
- Computer Science & Technology
- Information & Communication Engineering
- Civil Engineering
- Surveying
- Environmental Engineering
- Mechanical Engineering
- Industrial Management & Engineering
- Engineering Physics
- Engineering Mathematics
- Engineering Nano-Science
- Biomedical Engineering
The Öresund Science Region
Innovation

• Lund University’s innovation system converts research into products and services that are useful for society

• Ideon Science Park – 330 companies, of which the majority have their origins in research at Lund University

• Medicon Village – AstraZeneca’s previous site. Now 700 employees in 70 organisations/companies
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SESSION I: National, Nordic and European strategies and ventures - Politics, Strategies and Instruments

• 9.20-12 / Chairman: Anders Axelsson, Rector, Faculty of Engineering LTH, Lund University

• “The Nordic Agenda for cooperation on research infrastructure.”
  Anders Geertsen
  Head of Department, Nordic Council of Ministers

• “University of Excellence“
  Rik De Doncker
  Prof. Director E.ON Energy Research Centre, RWTH Aachen

• 10-10.30 Coffee
SESSION I (cont) 10.30-12

• “Impact of Research facilities at a regional scale and cooperation with universities”
  Kurt N. Clausen, Prof. Vice Director the Paul Scherrer Institute, Switzerland.

• “The Norwegian research infrastructure initiative”
  Asbjørn Mo, Director, the Research Council of Norway

• “Will ESS and MaxIV create a new CERN in Lund?”
  Colin Carlile
  Professor, Former CEO at ESS AB

• “A walk in the future” - Presentation of the Max IV project and visit to Max IV Installation plant.
  Jesper Andersen, Professor, Deputy Director, Max Lab
SESSION II: Universities and Large Scale Facilities - Synergies and Experiences of Collaboration in Research, Education and Innovation

13.30-14.10 / Chairman: Eskild Holm Nielsen, Dean Aalborg University

• CERN - “Students as a bridge building link”
  Hans Danielsson, Dr. Senior Physicist, CERN
  Santeri Laurila, Student, Aalto University, Institute of physics

• “Use of Large Scale International facilities: The Danish Perspective”
  Robert Feidenshansl
  Prof. Institute Leader Niels Bohr Institute and Director Danish Centre for the use of Synchrotron X-ray and Neutron facilities (DanScatt), Copenhagen University.

14.10 - 14.30  COFFEE
SESSION II (cont.) 14.30-15.30

- 14.30-15.30 / Chairman: Eskild Holm Nielsen, Dean Aalborg University

- “University - a bridge building link between Industry and Research Facilities” - the 3rd Mission.

  Henning Friis Poulsen, Prof. DTU, Project Director for “ESS and MAX IV as vehicles of growth for the Capitol of Denmark”

  Richard B. Larsen, Senior Advisor Dansk Industri

- “The university and large research facilities – the challenge”

  Sven Lidin, Prof. Material Chemistry Lund University/LTH-
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• 15.30-16.45  Panel discussion
   Panel leader Per Warfvinge
   Professor, Assistant Dean for Education and International Relations, Faculty of Engineering LTH, Lund University

• 16.45-17  Conclusions & proposals

  17.00  End

  18.30  Conference dinner
         Museum of Sketches