



The northernmost University of Technology in Scandinavia
World-class research and education

Welcome to Luleå University of Technology

***Diego Galar
Professor***

LULEÅ
UNIVERSITY
OF TECHNOLOGY



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Our location



Luleå
***170 km south of
the Arctic circle***

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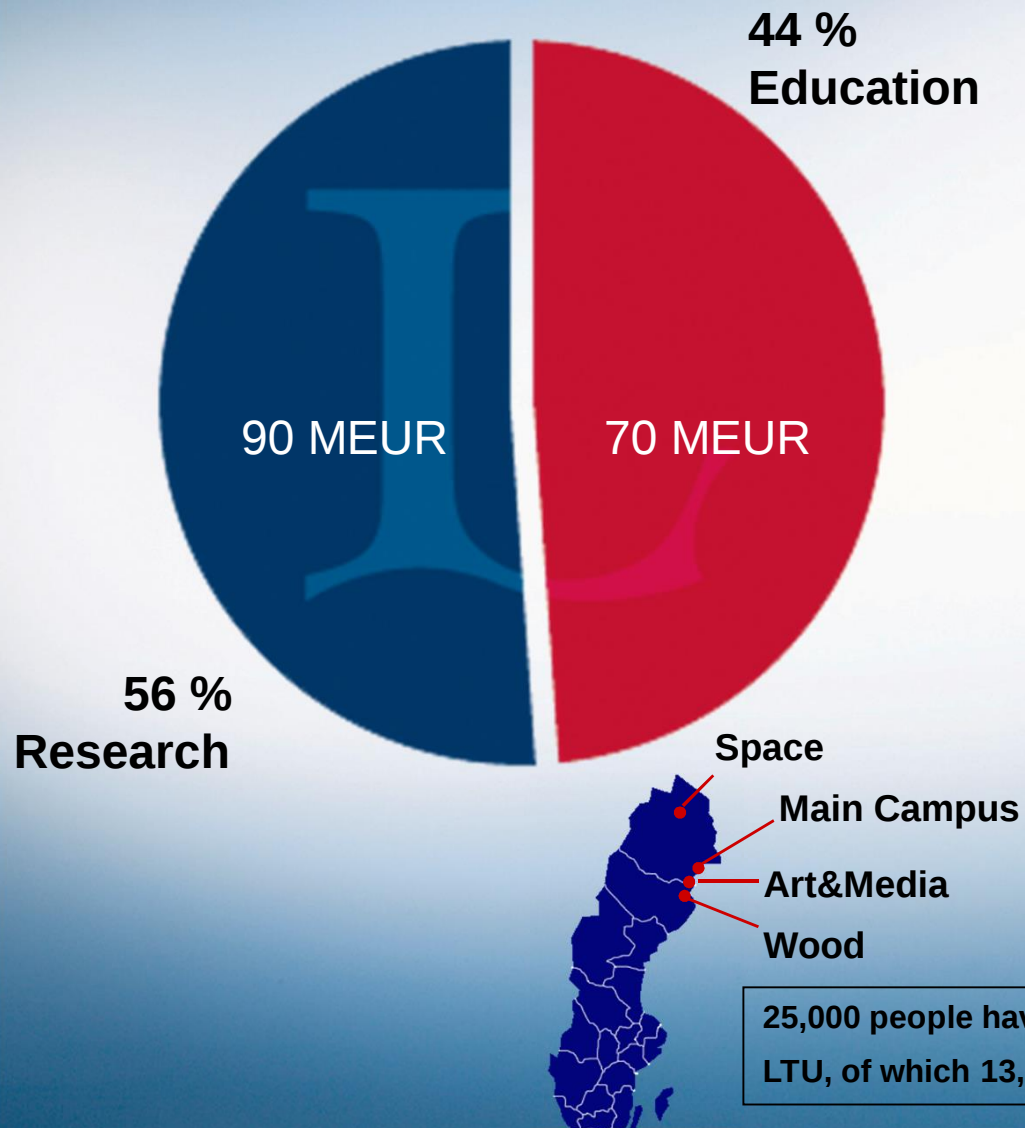
The University – our strengths

- Leading-edge research ñ in cooperation
- Applied research
- Multidisciplinary
- Strategic research and innovation areas
- Our geographical location - climate
- Warm and welcoming



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Luleå University of Technology



Facts about

Luleå University of Technology

- Founded 1971
- Turnover EUR 160 million
- 16 000 students
- 1,570 employees
 - 180 professors
 - 530 teachers & researchers
 - 580 PhD students
- 70 research subjects in 9 research areas

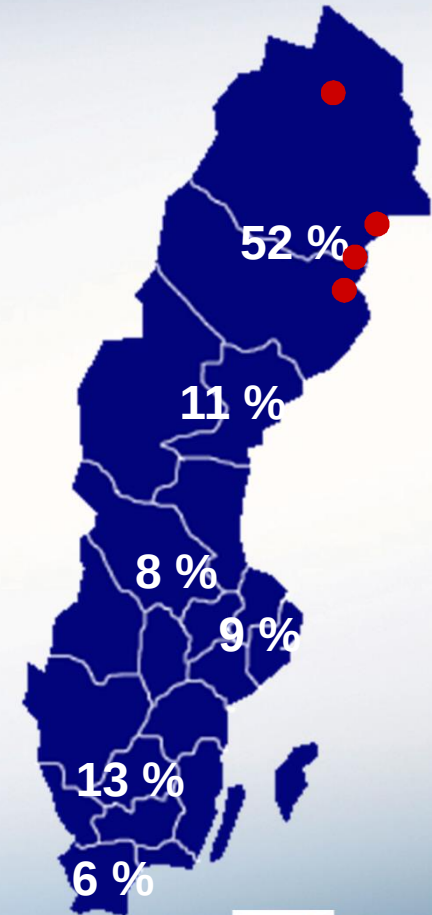
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We offer study programmes in..

- Engineering
- Health science
- Music, media and theatre
- Social and behavioural science
- School of teaching
- Interdisciplinary studies



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Strong research and innovation areas at LTU

- ***Attractive built environment***
- ***Effective innovation and organisation***
- ***Future mining***
- ***Renewable energy***
- ***Innovative art and technology***
- ***Sustainable transports***
- ***Intelligent industrial processes***
- ***Enabling ICT***
- ***Smart machines and materials***



Research centres- an excellent way of cooperation

Organizational model for leading edge research through close cooperation between the university and external parties within the private and/or the public sector.

- ***Tied to a department at the university***
- ***Board dominated by external representatives***
- ***External chairman of the board***
- ***Manager employed by the university***
- ***Projects mainly manned by university personnel***
- ***Financing dominated by external funding***
- ***All participant contribute in cash or kind***



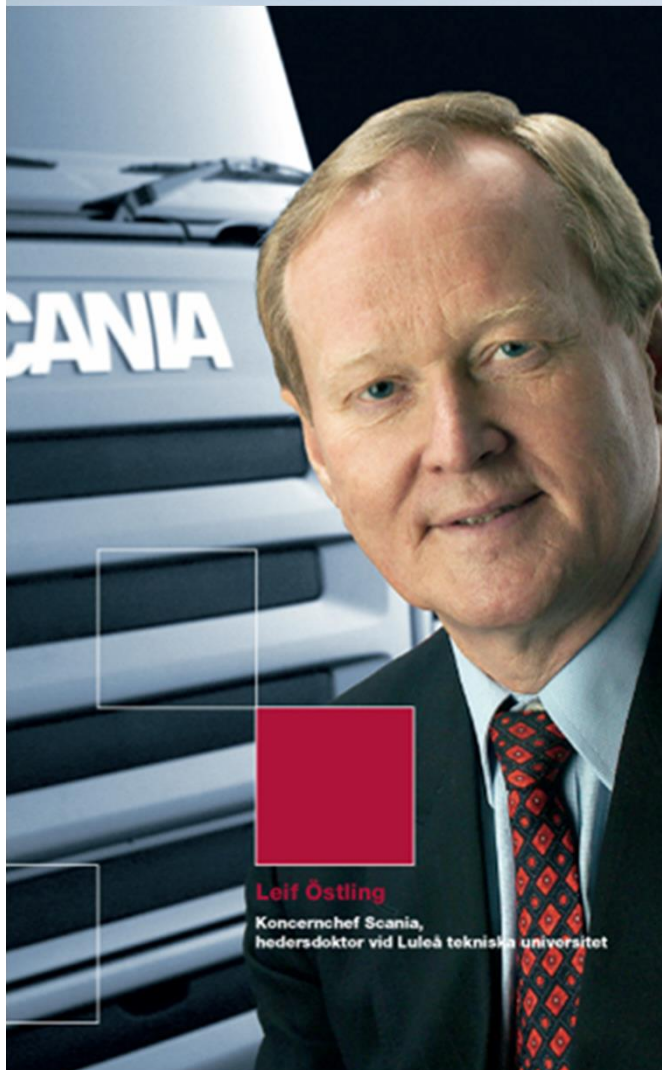
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- Luleå University of Technology's strength is its leading-edge research, with close ties to industry, in important growth areas such as product development and high-performance steel.

Leif Östling, CEO Scania

Examples of leading research

- Mining engineering and metallurgy
- Tribology
- Energy technology and renewable energy
- Sustainable resources
- Process IT
- High-performance steel
- Materials Science



Leif Östling

Koncernchef Scania,
hedersdoktor vid Luleå tekniska universitet

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Division of Operation and Maintenance Engineering





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Division Research



Operation & Maintenance

- Railway
- Mining
- Production
- Aviation

Condition Monitoring

Simulation & Vibration
measurement

RAMS eMaintenance



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Centres of Excellence



COMPETENCE CENTRE
**Centre for Maintenance
and Industrial Services**

- Ç Vattenfall
- Ç LKAB
- Ç UTEK
- Ç Underhållsföretagen
- Ç Boliden
- Ç Saab Aerotech
- Ç SKF CMS
- Ç DynaMate
- Ç Gestamp HardTech
- Ç Smurfit Kappa Kraftliner

www.cmis.se



Luleå Railway Research Center



- Ç Trafikverket
- Ç Vossloh
- Ç Duroc
- Ç Jernbaneverket
- Ç LKAB
- Ç EuroMaint Rail
- Ç ÅF-Rail
- Ç WSP
- Ç ALSTOM Transport-Paris
- Ç Norrteknologi AS, Narvik
- Ç Etteplan-Sverige

Strategic research center of TrV for R & D in
maintenance of railway system

www.jvtc.ltu.se

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Research Programs

R&D Program

- RAMS(Reliability, Availability, Maintainability, Safety)
- Condition Monitoring
- Product Support/Service Engineering
- **Production assurance**
- Data to Decision
- Design for/out maintenance
- Remaining Useful Life
- Maintenance optimization
- eMaintenance solutions

Railway



- RAMS
- Condition Monitoring
- Data to Decision
- Design for Maintenance
- Remaining Useful Life

Manufacturing



- RAMS
- Design for/ out Maintenance
- Remaining Useful Life

Mining



- Condition Monitoring
- Production Assurance
- Remaining Useful Life

Aviation



- Data to Decision
- eMaintenance
- Maintenance Program
- Development



Learn more at
www.ltu.se

Thank You!