EnTranCe: Centre of Expertise Energy

“If we want things to stay as they are, things will have to change.”

Dr. Ir. Jan-jaap Aue
Hanze University of Applied Sciences

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Hanze University of Applied Sciences Groningen

• Established in 1798

• Policy plan 2012-2016 rated “Excellent” by ministry: extra governmental funding.

• Professionally oriented higher education

• 70+ Bachelor programmes, 18 Master programmes;

• 17 Schools with each their own atmosphere;

• 3 focal areas: Energy, Healthy Ageing, Entrepreneurship

• Partner in the Energy Academy Europe

• 26,500 students choose our university; 10% international, 72 nationalities
Hanze University of Applied Sciences has been ranked in the top 25 educational institutions in the world, for its applied research according to U-Multirank 2016.
Economic view of the region
Cooperation of Businesspartners, Hanze University of Applied Sciences, University of Groningen)

- Urgent energy challenges (global warming, energy security, economic growth) for public and private sector.
- **Open model in education / research / innovation**
- **Focus on transition** to sustainable, reliable and affordable energy

Facing these challenges requires:
- Vital **knowledge and experience** in energy matters
- A continuous supply of properly trained **personnel**
- High quality **multi-disciplinary approach** in education and research

- Energy Transition: new business opportunities!
- Fieldlab of Energy Academy Europe at Hanze UAS: **EnTranCe** (The Energy Transition Center)

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October 2015 Opening by King Willem Alexander

EnTranCe is open

Our talent. move the world.

EnTranCe
Energy Transition Centre

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2015 : Commissioner Sefcovic @EnTranCe
Mission

At the Centre of Expertise Energy, we speed up innovations needed for the transition towards a sustainable energy society. We contribute by applied research and education.

In co-creation, students, researchers, companies and societal organisations work together on realising the energy transition. In this learning community we develop and share new applicable knowledge and create business opportunities.
Goals 2022

- Together with partners and local communities, we develop concepts for (at least) 5 sustainable (Emission Neutral) communities in our region.
- In 2022 we educated 1500 EAE certified Energy Students.
- We realised 25 Energy Startups per year.
- We induced 25 million Euros of investments in our region based on our concepts.
Speeding up innovations

- Inter-disciplinary
- Multi-Level
- Co-ownership
- Young People
- ‘Just do it’
- Show options and their impact
- Stakeholders Dialogue

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Position: Bridging Two Worlds

Hanze UAS

Decentral when possible, central when necessary

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Educational programmes
- Energy Routes in 10 schools leading to EAE certification
- Learning Community
- Master (MSc) portfolio
  - European Master Renewable Energy
  - Master Sustainable Energy System management
  - Master Energy 4 society (under dev)

Applied Research
- Hybrid energy system design & Management
- Alternative gases and hybrid-fuels
- Energy interventions and behaviour, public support and communication
- New economic realities, labour market, governance and legal aspects in the energy sector
- Sustainable communities and local initiatives

Facilities
- Energy Value Chain
- Energy Barn
- EnTranCe

Partners
- Business partners
- Governmental partners
- Societal partners
- stakeholders
Example: Hybrid Energy System Design
Toolkit & Power2X

- HydroGen
- LNG
- BioFuels
- Power2X

Balancing

Smart → Storage → Conversion → Generation

Tool box → Tools

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Example: Clean Energy Design Model

- Renewable energy planner
- Energy production village
- Energy production house
- Solar PV economics
- Energy saver house
- House insulation model
- Global warming prediction model
- NPV

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Example: Clean Energy Design Model
What’s on offer?

- Collective Intelligence: brains of co-creation
- Office- and workspace
- Active network of energy related companies
- Access to knowledge and experience on energy
- A Stage to the world (8000+ visitors expected this year)
- Students!
- Access to Workshops (mechanical, electronics, chemical)
- Experimental test facilities: energy value chain
- Access to launching customers
Change Agency Ameland in Transition

short video on EnTranCe and the island of Ameland

Long video on Entrance and the island of Ameland
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