

Hydrogen at HAN University of Applied Sciences



June 24th, 2020

HAN University of Applied Sciences

- 35,000+ students; 3,700 staff
- organized in 14 academies around health, economical studies, engineering & technology and education
- 46 research groups: applied science with education and industry
- located in Arnhem and Nijmegen, The Netherlands
- Three focal points:
 1. Health
 2. Smart Regions
 3. Sustainable Energy and Environment
- Hydrogen in Academy of Engineering & Automotive

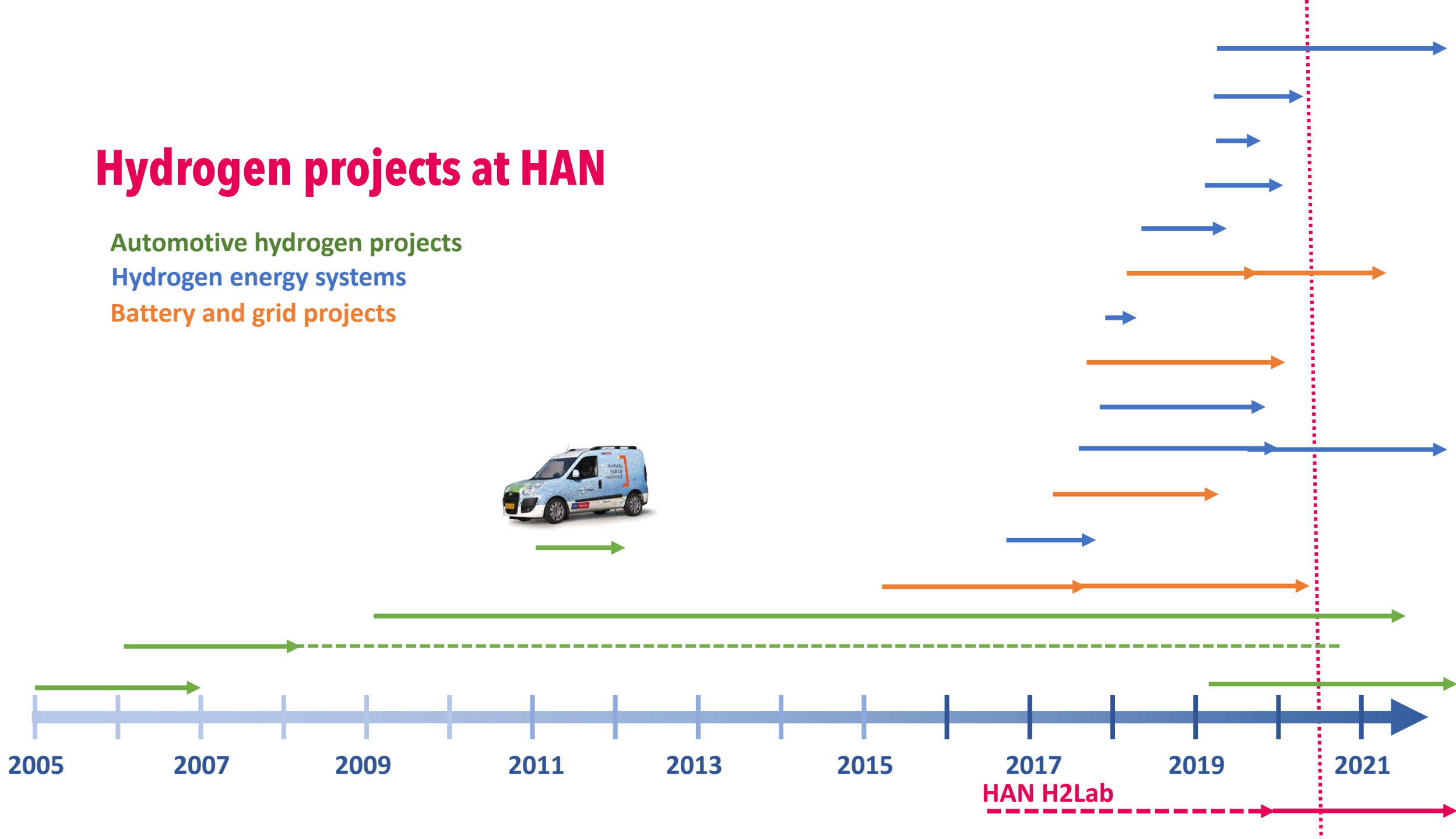


Hydrogen projects at HAN

Automotive hydrogen projects

Hydrogen energy systems

Battery and grid projects



HAN hydrogen expertise

People and education

- Research groups: Automotive Research, Sustainable Energy, Control systems
- Engineering researchers (Ph.D.'s), lecturers
- related Bachelor and Master programs

Areas of Expertise

- automotive engineering
- systems engineering
- applied electrochemistry
- feasibility studies

Engineering approach

- design
- modeling & simulation
- construction
- testing & validation



HAN H2Lab

- regional shared facility & hybrid learning environment: research, education and industry at one location
- Focus on small and intermediate hydrogen applications for transport and clean energy solutions:
 - design, simulate, develop, test & validate H2-systems
 - test H2-components
- Close link with regional hydrogen cluster, relevant companies
- Located at greenest industrial park in The Netherlands



Sponsors



Partners



Master Engineering Systems

- an applied, technical Master program with a focus on applied research, systems modeling & engineering design
- 4 Master tracks
 - Automotive
 - Control Systems
 - Embedded Systems
 - Sustainable Energy
- acknowledged by Dutch government
- duration: 1.5 yr, fulltime
- open for international students (all-english)



The Sustainable Energy Master track

This track deals with engineering solutions within the energy transition:

- need for new clean-tech energy-innovations
- design, construct and validate smart technical solutions
- socio-economical consequences
- reliable – sustainable – achievable – affordable
- Basic modules: systems modelling and applied control
- Choice modules: sustainable energy systems, smart power supply and data analysis
- Hydrogen technology is included within the program



HAN UNIVERSITY OF APPLIED SCIENCES

Applied research into small/medium sized hydrogen systems

- for local energy storage
- for grid balance
- for green mobility



Experience

- > 12 yrs hydrogen systems
- system engineering
- control systems
- applied electrochemistry
- feasibility studies



Facilities

- dedicated H2 lab at industrial park
- hybrid learning environments



People

- 3 research groups: Sustainable Energy, Automotive Research, Control Systems
- experienced researchers, Ph.D.'s
- engineering students (BSc & MSc)



What we do

- design
- modeling & simulation
- construction
- testing & validation



Close collaboration with industry

- hydrogen cluster Arnhem
- Centres of Expertise Seece, Ace
- Kiemt network
- NWBA



More information

For more information about HAN University of Applied Sciences, please see:

[HAN UAS](#)

For more information on the Master Program Engineering Systems, see:

[Master Engineering Systems](#)

If you would like specific information about collaborations, the HAN H2Lab or the Master track Sustainable Energy, please feel free to contact us at:

sustainable.energy@han.nl

Thank you!