

Accelerating the new hydrogen economy in the Midlands

Evaluating the skills gap in the Hydrogen economy.





Funded by



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Regional focus, national impact, internationally networked

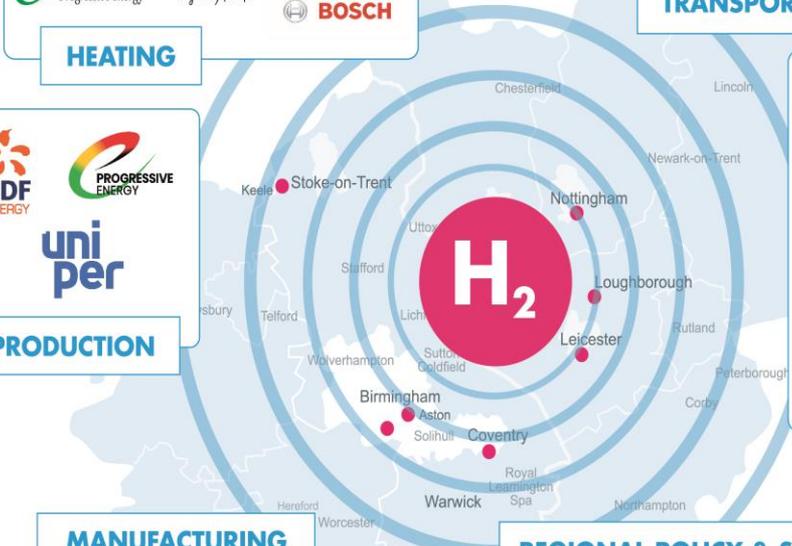
- Access to large scale demonstrator and test facilities
- Support for technology development and R&D
- Support for IP development and commercialisation
- Development of hydrogen skills and expertise in businesses
- Civic engagement and policy activities to build understanding
- Development of access to international markets and inward investment



HEATING

PRODUCTION

TRANSPORT



INTERNATIONAL ACADEMIC PARTNERS

ERA UNIVERSITY PARTNERS

MANUFACTURING

REGIONAL POLICY & SKILLS



Hydrogen Skills Survey 2022

- A survey (~15 questions) was conducted in November 2022 to inform the priorities for addressing hydrogen skills for industry
- Over 50 responses were received from a range of industries

About our respondents

- Over half the organisations surveyed were based in the Midlands.
- One fifth had an international or global presence.
- Respondents from a range of companies from SMEs to large multi-nationals.
- Broad level of experience covered, from those that were just thinking about how hydrogen economy could affect their business to those that had been actively involved in the Hydrogen economy for more than 10 years.
- The majority of responders' interest in hydrogen related to **project development** or **research and development**.
- Other areas of interested included:
 - engineering, procurement and construction
 - consultancy
 - suppliers
 - client end use
 - local government

Expertise & increase in readiness is needed



Greater expertise is required

- Over half of participants stated that there was insufficient expertise and capacity in their organisation that could be deployed on ongoing or upcoming Hydrogen projects.
- Majority stated that lacking was personnel who specialised in Hydrogen and those with technical skills relating to Hydrogen.

Majority organisations stated that the maturity of the Hydrogen economy represented a potential risk for them.

- Over half declared that the below areas presented a potential risk to their business:
 - Technology readiness
 - Supply chain readiness
 - Lack of understanding on the benefits of Hydrogen
- With 46% viewing the lack of supply of skilled workers as a potential risk

What technical competences are considered essential for the Hydrogen economy?



Hydrogen storage



Hydrogen Safety



Regulatory knowledge



Hydrogen production design

What technical competencies do we need?



- Over 75% of companies viewed **Hydrogen storage, Hydrogen Safety** and **Regulatory knowledge** as essential for the Hydrogen economy.
- Over 70% viewed **Hydrogen production** design as essential.

What should training include?



Policy/Regulations



System Integration



Energy Modelling tools



Climate change and sustainability



Future industry growth



Best way to deliver training

- Apprenticeships did not appear to be highly sought-after or desirable.
- Vast majority (over 70%) did not value credit bearing courses more highly than CPD/Micro credentials style courses.
- Hybrid was considered the method most suitable to teach about renewable energies and hydrogen technologies



Next Steps

- Develop and deliver training from HyDEX partners aligned with priorities
- Inform development of wider hydrogen skills base
- Continue the dialogue – build partnerships



Any Questions?

<https://hydex.ac.uk/skills/>
k.north@lboro.ac.uk



Lead academic
partners

