

GreenSkillsforH2

Paving the way for a **clean hydrogen economy**
in Europe



Funded by
the European Union



Why is a hydrogen Blueprint needed?

Political and industrial commitments to develop a strong hydrogen ecosystem:

- Ambitious European and national strategies for hydrogen have been developed. Increased targets with the REPowerEU Plan: 10 Mt of domestic renewable hydrogen production and 10 Mt of imports by 2030.
- Development of an enabling and supportive legal framework for hydrogen to thrive in (Fit for 55, Gas Package, etc.)
- Commitment of industrial stakeholders to develop a strong hydrogen ecosystem expressed in various fora (e.g. the Clean Hydrogen Partnership, the Clean Hydrogen Alliance, Electrolyser Partnership, etc.)

The development of a hydrogen value chain will lead to new skills needs in various sectors: energy production, transport & storage, as well as in end-uses sector.

Consequently, existing jobs will include a hydrogen dimension in the future, and new jobs will emerge.

Why is a hydrogen Blueprint needed?

The rapid development of the European Hydrogen Value Chain over the coming years is expected to generate approximately **1 million highly skilled jobs by 2030, and up to 5.4 million by 2050.**

EXHIBIT 3: BENEFITS OF HYDROGEN FOR THE EU

Ambitious scenario
2050 hydrogen vision



~24%
of final energy
demand¹



~560 Mt
annual CO₂
abatement²



~EUR 820 bn
annual revenue
[hydrogen and
equipment]



~15%
reduction of local
emissions [No_x]
relative to road transport



~5.4 m
jobs [hydrogen,
equipment, supplier
industries]³

¹ Incl. feedstock
² Compared to the Reference Technology Scenario
³ Excl. indirect effects

Source: Hydrogen Roadmap Europe : A sustainable pathway for the European Energy Transition, 2019.

**GreenSkills4H2 aims at addressing
the growing skills needs of the hydrogen industry.**

33 Partners in 15 countries



5 Industry Stakeholders



11 Higher Education & Research organisation
4 VET Providers



6 National and European networks



3 Local / Regional stakeholders



2 Clusters



Communication / Digital Expert



Market analysis and Skills Expert



Transitioning regions represented by stakeholders



Objectives of GreenSkillsforH2

- Create a **sustainable partnership of key European stakeholders** within the Hydrogen Value Chain who will cooperate to develop and implement new strategic approaches to address the current and future skills gap in the sector.
- Develop a common methodology for **identifying existing and emerging skills needs** for high demand job profiles in the Hydrogen sector and define a sectoral **Skills Strategy**.
- **Design an innovative VET curriculum** focused on competences and job profiles to enable the rapid upskilling / reskilling of both young people and adults, fast tracking candidates into specific technical and engineering roles in the Hydrogen sector.
- **Test and refine a VET training programme** aimed at addressing the emerging skills needs of the sector in the medium and long term in order to meet the growing demand for highly skilled technical jobs.
- **Encourage the adoption of the VET training programme across Europe** and the widespread dissemination of project results and best practice guides, leading to the highest possible uptake and significant impact.

Key deliverables in 2023

- Mapping of skills and occupational profile needs
- Mapping of training needs
- **Hydrogen Skills Strategy (June 2023)**
- Implementation of urgent trainings



NHL Stenden and Drenthe college GreenSkills4H₂



Role of NHL Stenden and Drenthe college GreenSkills4H₂

- Educational Stakeholders located in the Province of Drenthe, NL.
- To develop a blueprint that will address the skills needed for workers in declining sectors and transition regions to provide them with upskilling and reskilling opportunities that will enable them to access new employment opportunities.
- Rollout of VET training programme to meet existing and emerging skills needs in the H₂ sector
- To run 1-year pilot testing of 10 training programmes across Europe (9 countries) aimed at different target groups facilitated by 12 higher education institutions and VET training providers.

Educational training program at Greenwise Campus



Hydrogen: Get started!

NHL Stenden of Applied Sciences

- Follow-up urgent training “Masterclass: Hydrogen in One Day”
- Business case analysis and development within own organizations:
- Focused on decision-makers public and private organizations.

Hydrogen Academy: Hydrogen Expert

Drenthe College

- Hydrogen Value Chain: Production to application is discussed in depth.
- All physical, safety, legal and economic aspects discussed
- Focused on Technical Engineers/VETstudents

GreenSkills4H₂ basis for



- Greenwise Campus is the regional knowledge hub.
 - Small-scale hydrogen value chain lab facility
- This is where knowledge, education and business come together and give direction to a smart and sustainable future for the region.
- Single joint innovation agenda in various attractive hybrid environments.
- Greenwise Campus is an initiative of:



provincie Drenthe



Auvergne-Rhône-Alpes



Develop training program and shaping talents for a positive future

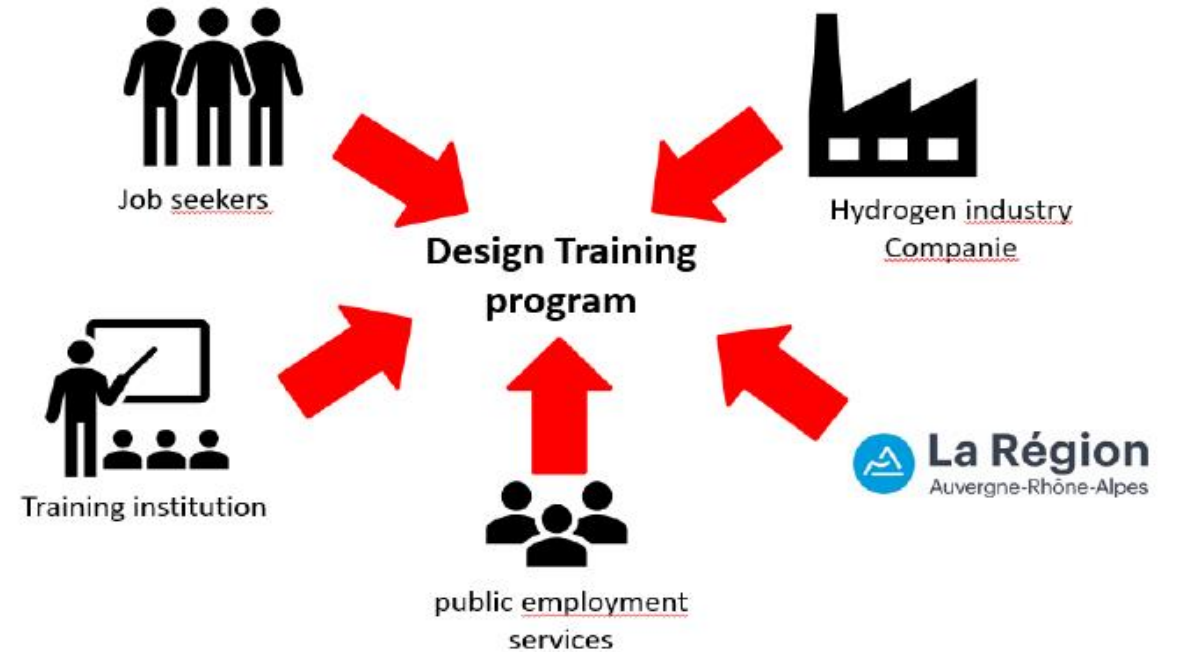
Partnership between manufacturers and training institutes to develop training programs for job seekers will integrate the hydrogen sector



Cofinancé par l'Union européenne



La Région Auvergne-Rhône-Alpes



40 job seekers trained to become fuel cell operators



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Thank you!

Find out more:

<https://greenskillsforhydrogen.eu/>



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