H2Excellence – Fuel Cells and Green Hydrogen Centers of Vocational Excellence Towards Affordable, Secure, and Sustainable Energy for Europe

Newsletter 3-2026

Introduction

Over the past year, H2Excellence has made significant progress in strengthening hydrogen skills development across Europe. Following the completion, refining, and piloting of the project's training modules, partners have focused on deploying educational resources, expanding international cooperation, organizing mobility and site visits and increasing the visibility of hydrogen skills through workshops, conferences, and research activities.

The period between October 2025 and September 2026 has been marked by important milestones, including the completion of the training activities, the expansion of the H2Excellence network through new Satellite Centres of Vocational Excellence (Satellite CoVEs), launch of microcredential pilots, international events in Portugal, Spain, and Canada, and several scientific publications advancing knowledge in hydrogen technologies and education.

Discover the key achievements, milestones and opportunities from the past year!

From Development to Implementation: Piloting Hydrogen Training Across Europe

One of the most important achievements during the reporting period has been the launch of the H2Excellence piloting phase.

The consortium has begun testing course modules developed for:

- Vocational Education and Training (EQF 3-5)
- Higher Education (EQF 6-8)
- Lifelong Learning

Pilots have been conducted in Finland and progressively rolled out across Spain, Portugal, Italy, France, and Poland. Through the H2Excellence Online Learning Platform, learners, educators, and professionals have gained access to specialized training covering hydrogen production, storage, transport, safety, fuel cells, systems integration, and sustainability.

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Successful participants receive certificates, digital badges, and academic credits, helping build the skilled workforce required for Europe's hydrogen economy.

To access the learning catalogue, scan this **QR code**:

Microcredentials: Turning Flexible Learning into Career Opportunities

A major milestone was the launch of the **University Micro-Credential in Hydrogen Technologies** by the **University of Málaga (UMA)**. The programme equips professionals and learners with practical hydrogen knowledge focused on production technologies, industrial applications, decarbonization strategies, and real-world case studies.

Complementing these activities, researchers from ISQ Portugal published the scientific article: **" Micro-credentials within the institutional and regulatory framework of the European Union: a systematic review of literature".**

Published in *Indagatio Didactica*, the study concludes that microcredentials can significantly improve educational flexibility and lifelong learning opportunities but require stronger quality assurance, transparency, and employer confidence to reach their full potential.

Together, these activities strengthen the role of microcredentials as an important tool for workforce upskilling within the hydrogen sector.



Building Capacity: Train-the-Trainers Programme

To ensure the long-term sustainability of hydrogen education, H2Excellence launched its first international Train-the-Trainers programme.

The programme provided educators with:

- Technical knowledge of hydrogen and fuel cell technologies
- Digital teaching methodologies
- Experience with virtual laboratories and learning management systems
- Guidance on integrating H2Excellence materials into existing curricula

By empowering teachers and trainers, the programme multiplies the impact of H2Excellence far beyond the project's duration.

Bringing Learners and Industry Together: European Hydrogen Academy

One of the project's major highlights was the first **H2Excellence European Hydrogen Academy**, organized by LNEG in Lisbon, Portugal.

The three-day event brought together:

- Students
- Young professionals
- Researchers
- Industry representatives

Participants attended lectures, workshops, networking sessions, and technical site visits, gaining first-hand exposure to hydrogen technologies and career opportunities.

The Academy demonstrated how collaboration between education, research, and industry can accelerate hydrogen skills development in Europe.

Exploring Hydrogen Innovation: European Site Visits

Knowledge exchange remained a central element of H2Excellence activities.

Major events included:

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French Site Visit

Hosted by **Pôle Véhicule du Futur (PVF)** in Belfort in December 2025, the partners had the occasion to discover the hydrogen ecosystem in the city, such as Mincatec, H2 SYS or even the FC Lab. Moreover, partners took part of the 'Hydrogen Career Day' organized in collaboration with the Green SKHy project, which gathered more than 250 participants.



Portuguese Site Visit

Participants explored hydrogen-related facilities and innovation ecosystems surrounding Lisbon, such as **HyChem**.



Spanish CoVE Visit

Hosted by CIEMAT in Madrid, the event combined technical workshops on emerging hydrogen technologies with visits to advanced research infrastructures including IMDEA Energía.



Strengthening Industry Engagement: SME Training

During the year, consortium partners organized a series of specialized workshops for small and medium sized enterprises (SMEs).

Topics included:

- Hydrogen roadmaps and value chains
- Safety and regulations
- Cogeneration and fuel cells
- Maritime hydrogen applications
- Business opportunities in the hydrogen economy

Online Training Workshops were organized by **VAMK and Merinova (Finland), LNEG (Portugal), ENEA (Italy), ATENA (Italy), and PVF (France)**.

These activities help ensure that hydrogen education remains closely aligned with industry needs.

Beyond Europe: Expanding International Cooperation

H2Excellence continued extending its global reach and collaboration.

Montréal Exploratory Mission

Hosted by **Polytechnique Montréal (PM)**, Canada, the mission brings together educators, researchers, companies, and policymakers to:

- Explore Canada's hydrogen ecosystem
- Visit leading research facilities
- Attend networking activities
- Participate in fuel cell training

The mission strengthens international collaboration and creates new opportunities for future partnerships between Europe and North America.





Supporting the Hydrogen Transition: Research and Innovation

From academic contributions and global outreach to student-led innovation and cross-sectoral partnerships, H2Excellence continues to lead in shaping Europe's green hydrogen skills agenda. Through its evolving network of CoVEs and strong ties to research and industry, the project remains committed to equipping the workforce for a sustainable hydrogen future.

Seminar on Waste-to-Hydrogen Technologies

An international seminar at **the University of Málaga (UMA)** highlighted advances in:

- Waste-to-energy pathways
- Wastewater-based hydrogen production
- Artificial intelligence applications
- Sustainable energy systems

These activities reflect the project's strong connection between education and research excellence.

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Recognizing Excellence: H2Excellence Best Thesis Awards

The first and second H2Excellence Best Thesis Awards competitions successfully concluded during the European Fuel Cells Conferences in Capri, Italy in September 2025 and 2026.

The competitions received:

- 171 submissions
- Participants from 15+ countries
- Master's and PhD research in hydrogen technologies

The awards recognized outstanding contributions in:

- Hydrogen production
- Storage technologies
- Fuel cells
- Hydrogen transport
- Energy system decarbonization

Building on this success, the second edition of the competition has been launched, continuing support for emerging hydrogen researchers.

Reaching Further: Growing the H2Excellence Community

The expansion of the H2Excellence network continued throughout the year.

New organizations joined the project as **Satellite Centres of Vocational Excellence (Satellite CoVEs)**, broadening geographical coverage and increasing access to hydrogen education and training.



H2Excellence Satellite CoVEs Map: countries (in yellow), part of the Satellite CoVEs

Universities, vocational institutions, industry representatives, and public authorities from 10 new countries (**Ireland, Norway, Estonia, Denmark, Netherlands, Austria, Slovenia, Bulgaria, Germany, and Greece**) are now contributing to the development of Europe's hydrogen skills ecosystem.

This growing network strengthens collaboration and increases the long-term impact of project results.

Global Dissemination Activities

Project partners also promoted H2Excellence internationally through:

- Scientific seminar in **Brazil**
- Collaboration with researchers in **Vietnam**
- International conferences on hydrogen technologies
- Global networking events such as the **COP CoVE Forum in Graz, Austria**

These activities demonstrate the growing visibility of the project worldwide.

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Looking Ahead

- Deployment of training modules
- Delivering mobility and exchange opportunities
- Strengthening cooperation with Satellite CoVEs
- Expanding the international partnership network
- Supporting hydrogen education through microcredentials
- Increasing engagement with industry and SMEs
- Preparing sustainable exploitation of project results

The consortium remains committed to supporting Europe's green transition through excellence in hydrogen skills, innovation, and collaboration



For more information about the project, visit us at:

https://h2excellence.eu/

https://h2excellenceplatform.eu/

LinkedIn page

YouTube Channel

Other Useful Links

COPCOVEs Forum: https://www.copcoves.eu/
Hydrogen Europe: https://hydrogeneurope.eu/
European Hydrogen Week: https://euhydrogenweek.eu/



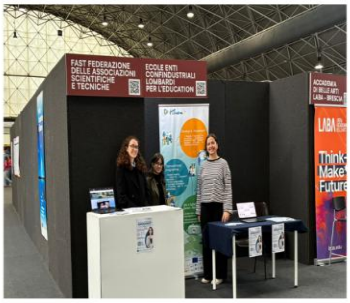








H2Excellence
at
SALONE DELLO STUDENTE E DEL PROF DI MILANO 2026
15 e 16 Ottobre 2026,
Parco Esposizioni, Novegro (Milano)









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For More Information

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