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# The H2Excellence Project - Fuel Cells and Green Hydrogen Centers of Vocational Excellence towards affordable, secure, and sustainable energy for Europe

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## INTRODUCTION

The demand for green hydrogen (H<sub>2</sub>) and related technologies is expected to increase in the coming years mainly framed by drivers such as climate change and energy security of supply amid the European and global energy crises. REpowerEU Plan<sup>[1]</sup> called for an intensification of hydrogen delivery targets, that will bring large-scale adoption of hydrogen production and applications in various sectors, stressing the need for a skilled workforce in the emergent hydrogen markets. To that end, the Erasmus+ European H2Excellence transnational project<sup>[2]</sup> has gathered 24 partners across the EU, to establish a Platform of Vocational Excellence in the field of fuel cells and green hydrogen technologies, with an educational and training offer that will tackle identified skill gaps and implement life-long learning opportunities. The project aims to become a benchmark in training and knowledge transfer, contributing to the integration of quality employment into green hydrogen local innovative systems approaching the entire hydrogen value chain.

## OBJECTIVES

The project started in 2023 and will create a set of national Centers of Vocational Excellence (CoVE's) dedicated to fuel cells and green hydrogen technologies, establishing a collaborative transnational network to bridge industry skill gaps in the field. The Portuguese partners include Inst. Politécnico de Portalegre (IPP), Inst. de Soldadura e Qualidade (ISQ), EnergyIN, and Lab. Nacional de Energia e Geologia (LNEG), which will contribute to implementing a solid collaborative education-business-research network at a pan-European scale, through an international online platform/knowledge hub for e-learning, and onsite training sharing on green hydrogen technologies. The project structure is shown in Fig. 1.

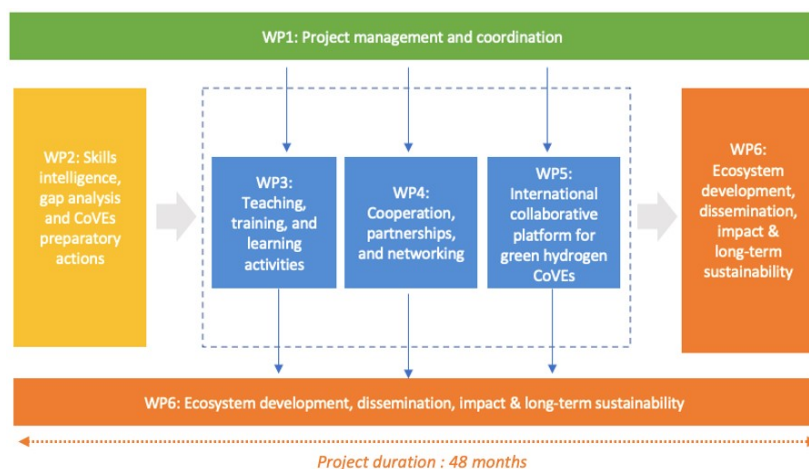


Fig 1. - Project development structure and workplan.

## EXPECTED IMPACTS OF PROJECT RESULTS

During the 4 years of the project's duration, it is expected to develop and deliver custom training tools, using e-learning and onsite methodologies, and provide education and training that will upskill and reskill the hydrogen sector workforce, directed towards enforcing competencies, in line with market requirements. It will also promote collaboration and mobility of employees, supporting SME's needs across the value chain.

## CONCLUSION

The Erasmus+ European H2Excellence Project's strategic and specific objectives concern the development of custom advanced training and tools for students, young engineers, and staff of companies related to the green hydrogen industry. Aims to provide alignment of those manpower skills with the market needs, fostering the key role of clean hydrogen as a building block in the energy transition and challenges of decarbonization.

## REFERENCES

1. European Commission, Implementing the Repower EU Action Plan, <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52022SC0230>, 2024
2. H2Excellence - Green skills for the future workforce in fuel cells and green hydrogen sector, <https://h2excellence.eu/>, 2024

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