

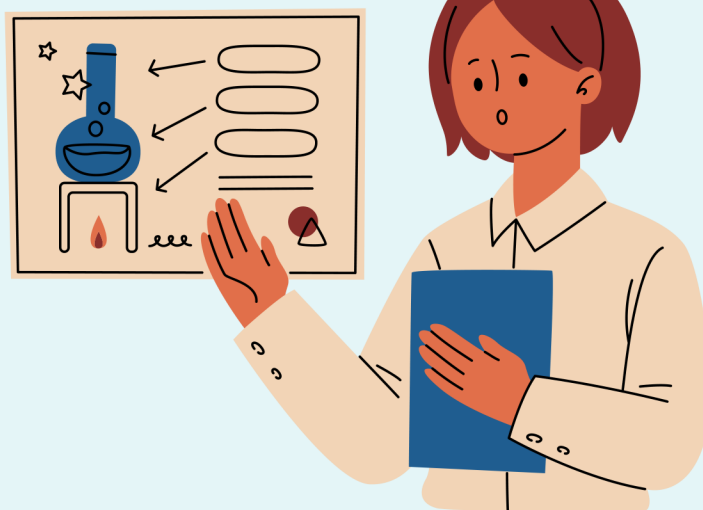
16
partners

8
countries

7M
EU-funds



**DEcentralised Cloud labs fOr
inDustrialisation of Energy materials**



Discover our project!

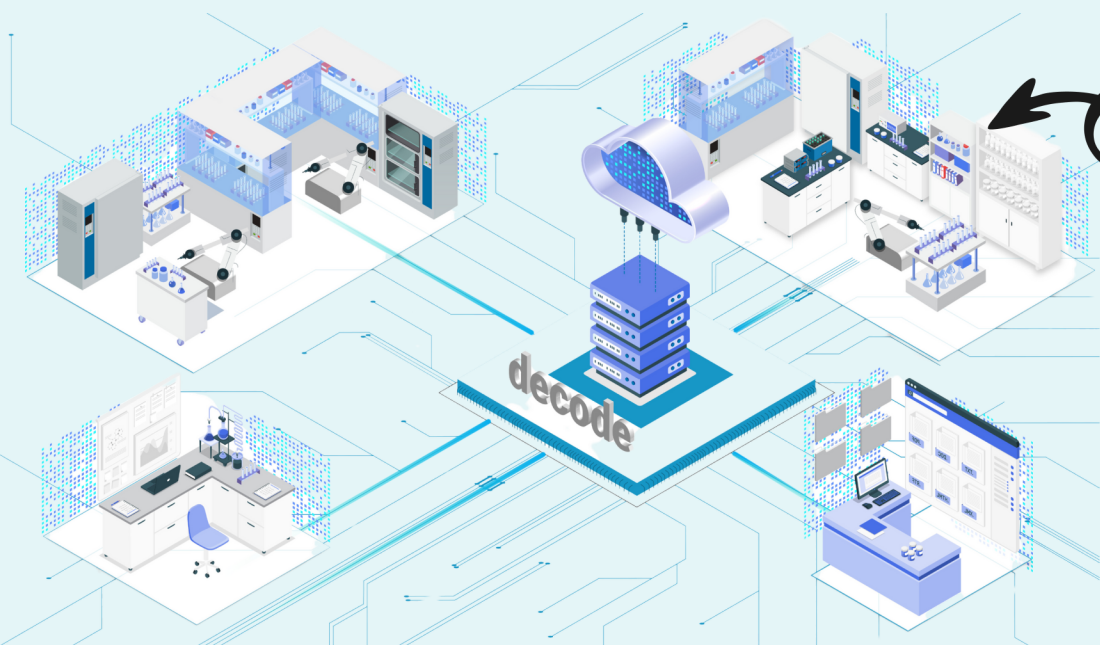


CONTEXT

The clean energy technology sector is facing a major challenge: the pace of development is lagging behind ambitious commercialisation targets.



The fundamental reason for this is that laboratories with complementary capabilities **continue to operate largely separately**, with a lack of coordination between their efforts.



The DECODE project aims to break down these barriers by creating a decentralised and adaptive cloud-connect labs concept.



OUR OBJECTIVES



Revolutionise the process by which materials and functional components for clean energy technologies are developed, integrated and assessed.

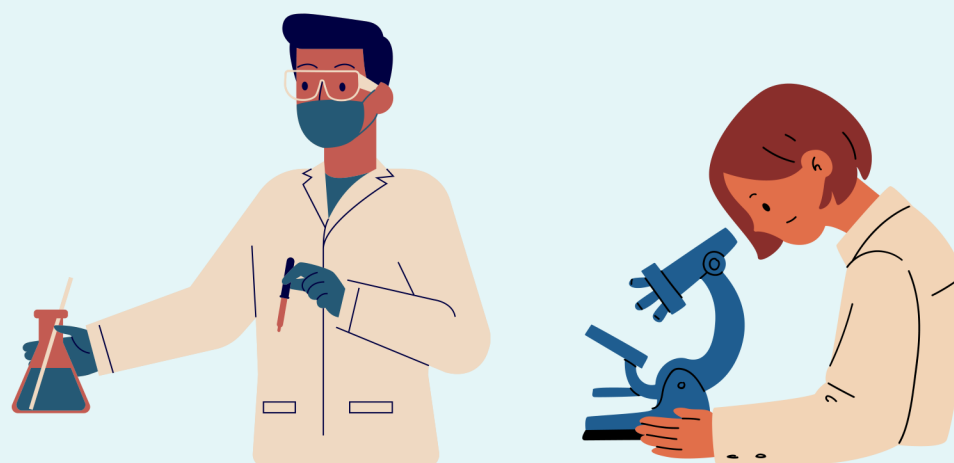


Thus, contribute to Europe's transition to a sustainable, green future.





#DiscoverOurProject!



DECODE PLATFORM

DECODE
FABRIC

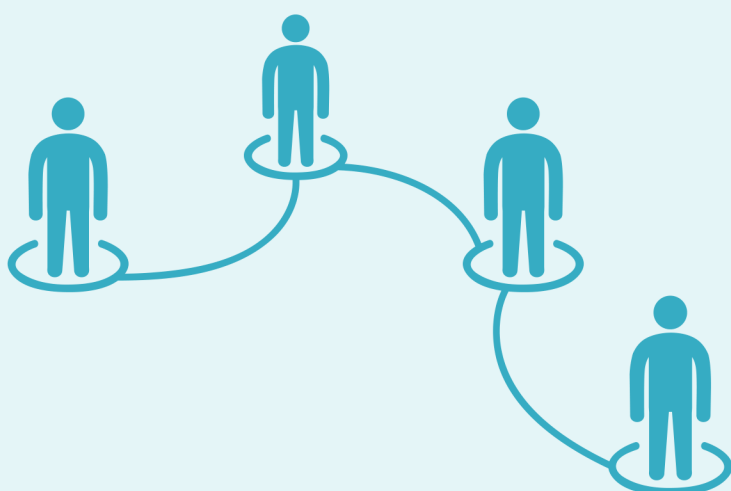
For connecting
and evaluating
existing or under
development
methods and tools.

DECODE IRL
Assessment

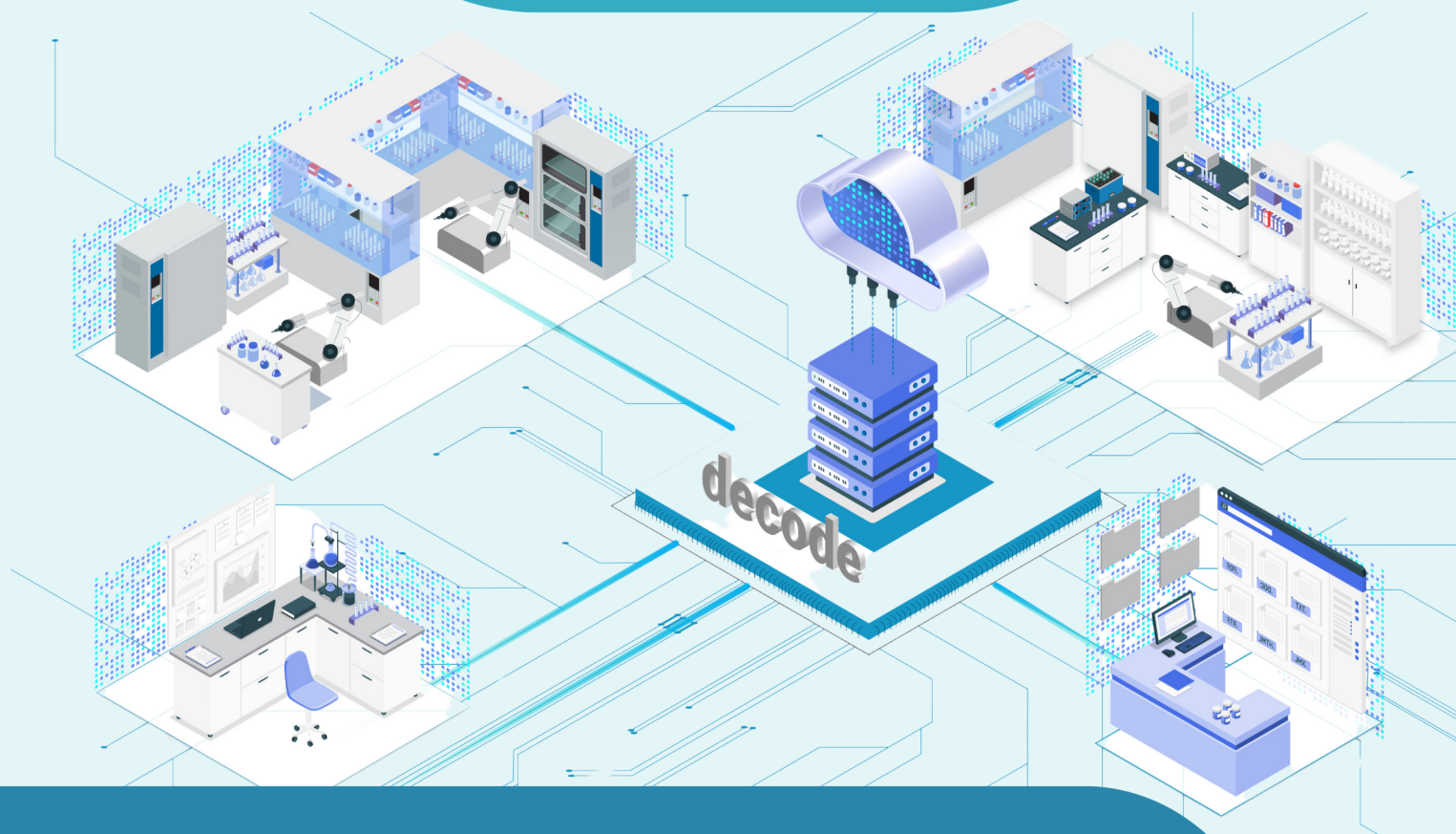
For scoring
modelling and
characterisation
suites in terms of
their IRL.

DECODE CPU

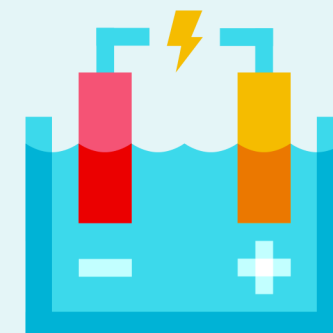
(AI-enabled
central unit).
For orchestrating
the entire
workflow.



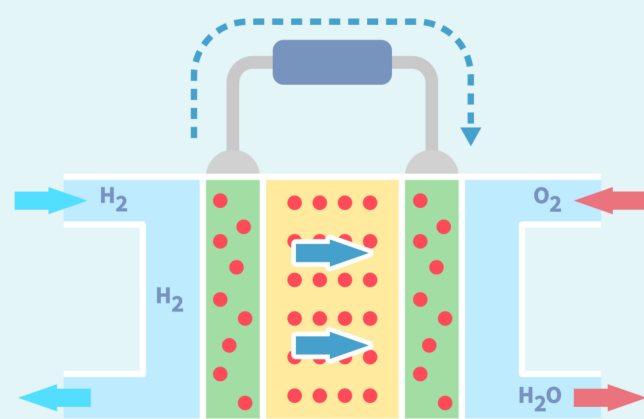
OUR DEMONSTRATION



DECODE will carry out case studies and focus on a fundamentally well-understood technology for which there are many existing data sets and polymer electrolyte fuel cells (PEFCs).



The proper use case will be to integrate novel-fluorine-free ionic polymers into catalyst layers of these cells. The same integration challenge will be evaluated on other technologies.



DECODE EXPECTED OUTCOMES



Develop methodologies of multi-scale and multi-technique characterisation and modelling

Develop a cloud-based platform for workflow orchestration, assessment, and recommendation of modelling & characterisation methods and tools

Benchmark DECODE cloud-based future lab concept

Demonstrate and validate the DECODE decentralised platform

Ensure the exploitation of the project results towards alternative materials feedstocks and a circular economy.

Prioritise and tackle critical gaps in materials-related knowledge

