

# GreenSkills4H2

EU Hydrogen Research Days, 16 November 2023

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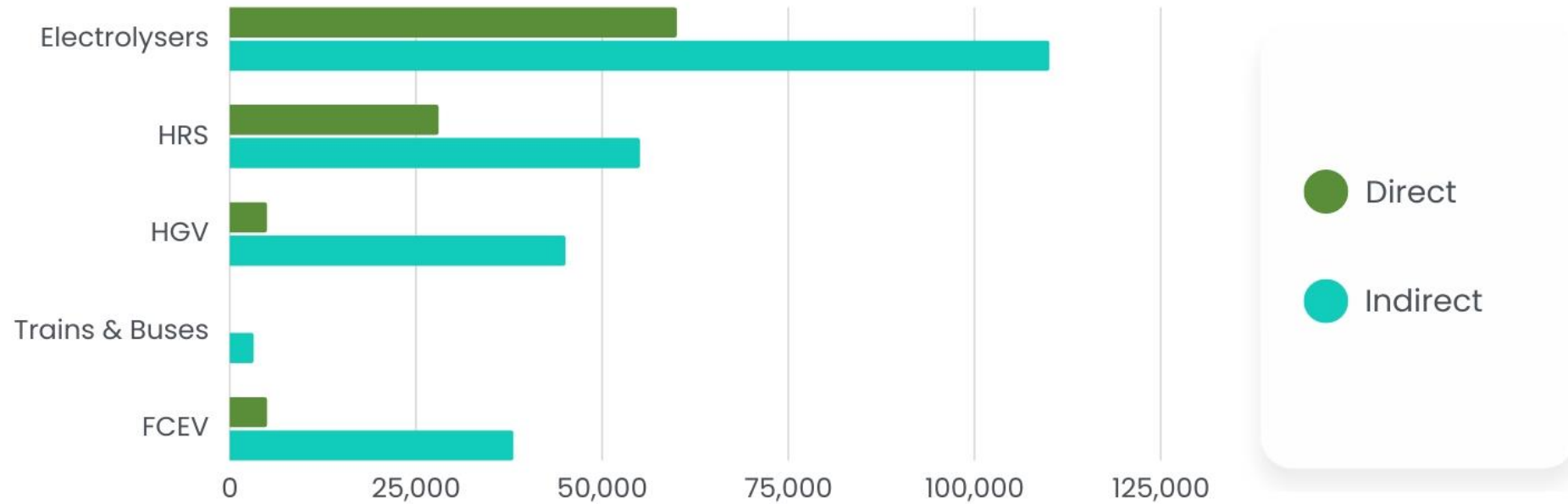
*“Instead of millions of people looking for jobs, millions of jobs are looking for people”*

European Commission President, Ursula von der Leyen  
State of the Union Speech, 13 September 2023



# Estimated number of jobs created in Europe by 2030

Hydrogen sector will generate **249,000** (98,000 direct and 151,000 indirect) by 2030



# How to prepare our workers?

GreenSkills4H2 project – 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

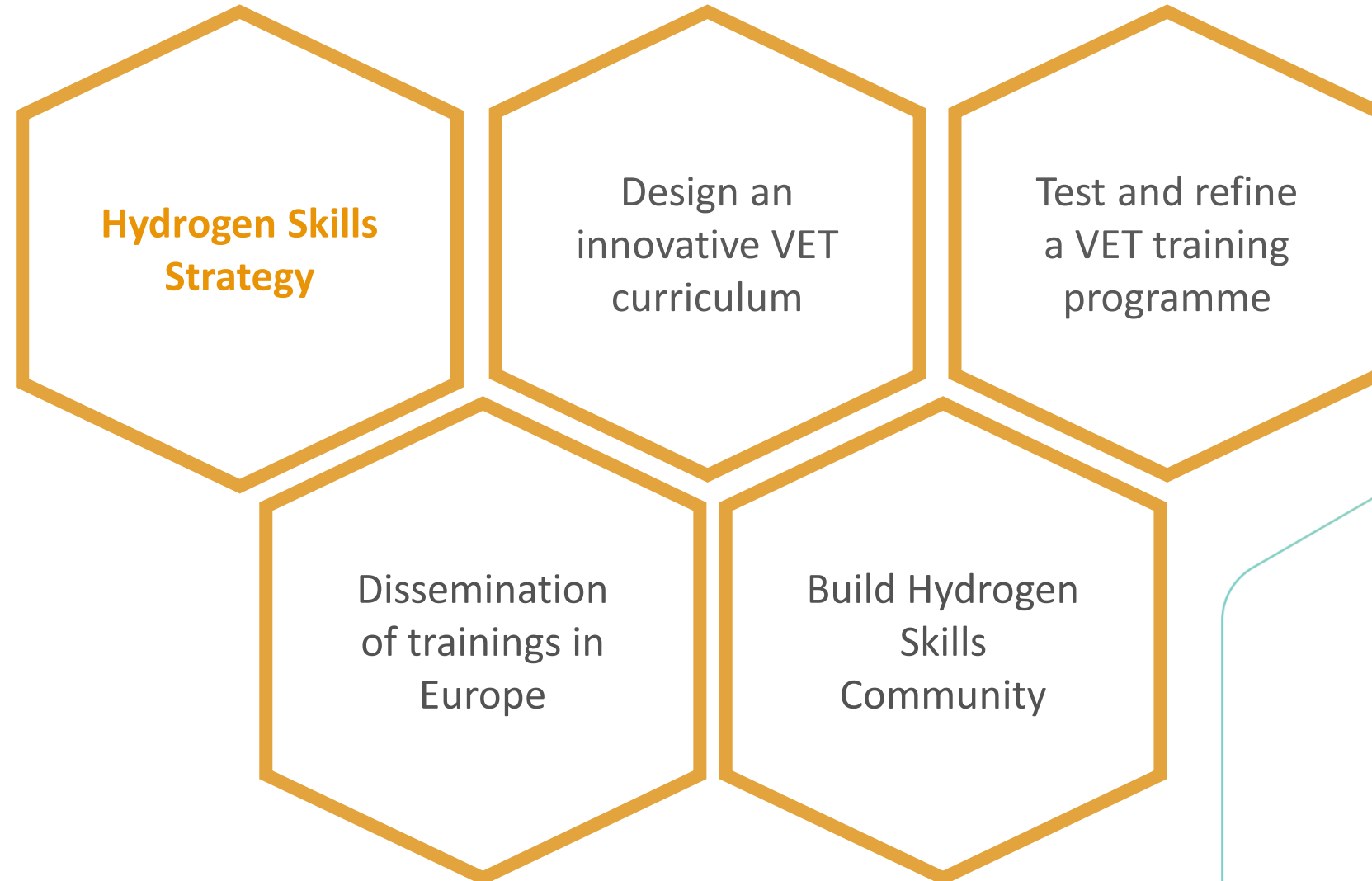


Transitioning regions represented by stakeholders



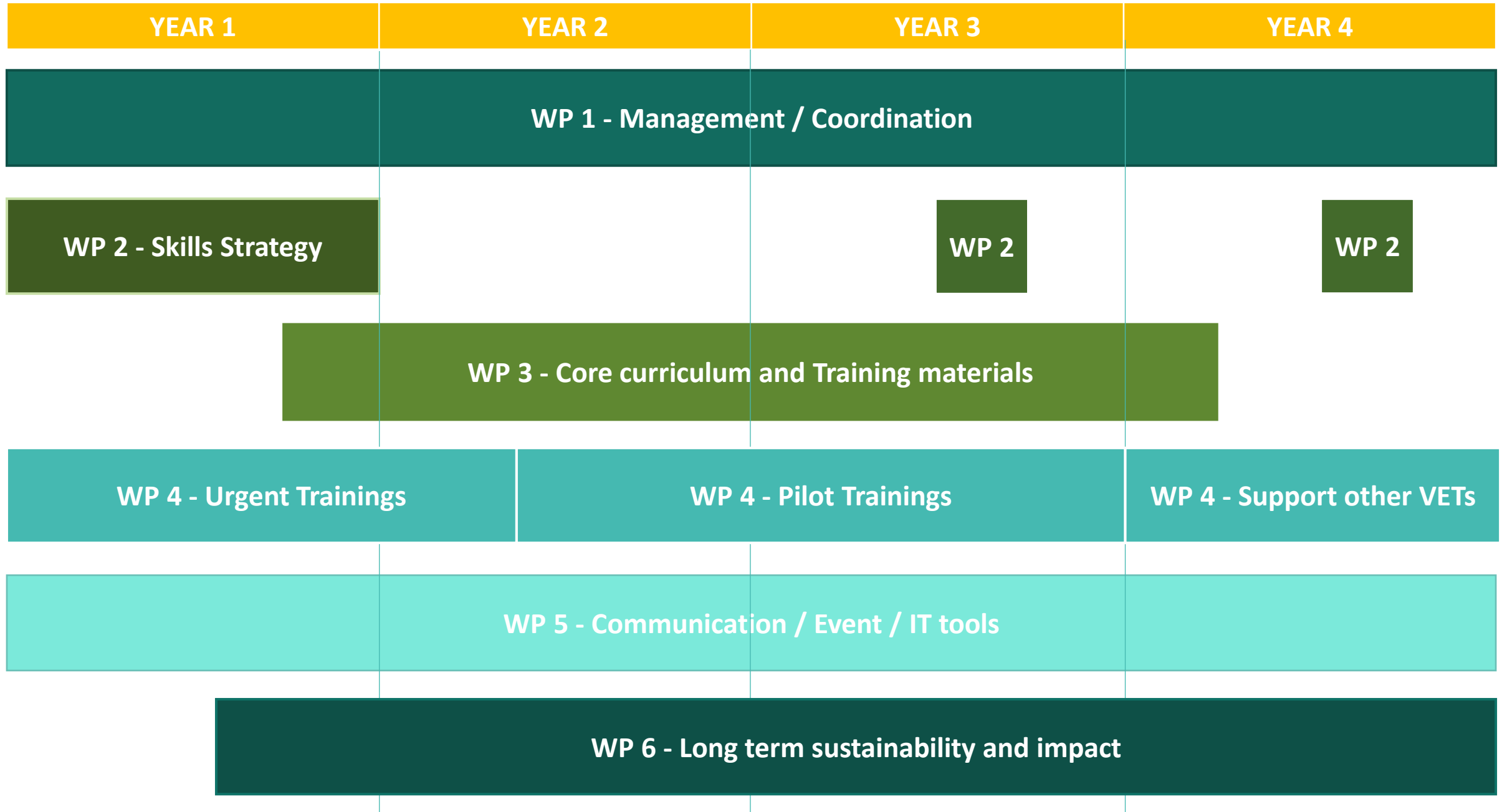
[GreenSkillsforH2](#)

## Main deliverables



**GREEN  
SKILLS  
FOR  
HYDROGEN**

# Timeline



# Hydrogen Skills Strategy

## 2 interview campaigns on:

- Occupational profiles in the hydrogen sector: demand and criticality
- Skills needs and hydrogen knowledge required
- Existing training offers
- Difficulties and drivers to establishing hydrogen training & education



**23**

**Countries covered**



**146**

**Stakeholders interviewed**



[Hydrogen Skills Strategy](#)

# Jobs in demand in hydrogen

Mechanical engineer

Power electronics engineer  
System production engineer  
**Design engineer / Project designer**  
Sales engineer  
**Administrative staff from public institutions : governments, regions, municipalities**

**Electrical engineer**  
**Automation engineer**  
**H2 production specialist**  
**H2 storage specialist**  
**Fuel cell specialist**  
Robotics engineer  
**Electrochemical engineer**  
Industrial chemists  
**Certification experts**  
**H2 experts**

Level of H2 knowledge required: **Low**, **Medium**, **High**  
**Bold** = urgent need

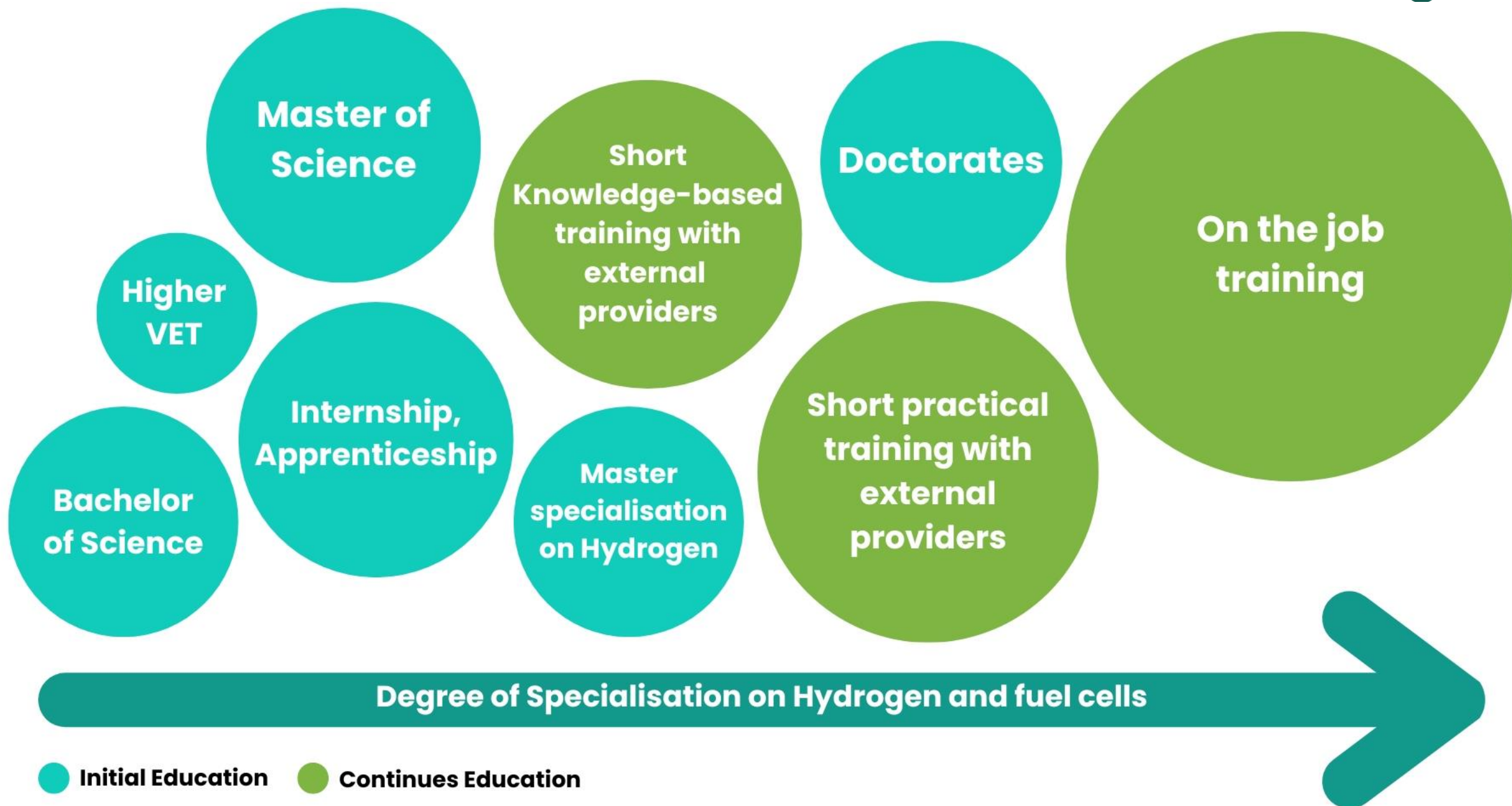


# Skills & knowledge required



Operation  
**Hazards** Storage  
Legal & permitting  
**Production**  
Systems Fuel cell  
Refuelling Transport  
Maintenance  
Electrolysis

# Training of Current Workers in the field of Hydrogen

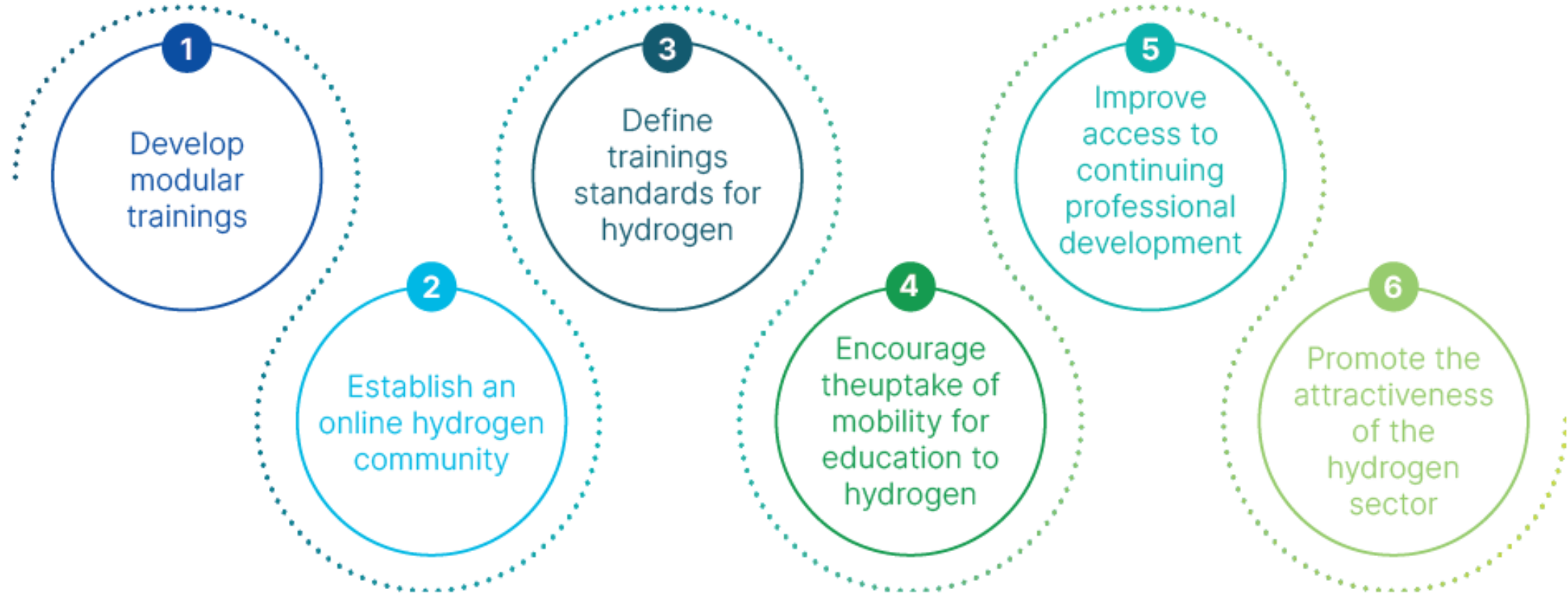


# Challenges to the development of hydrogen training & education



- **Shortage of qualified teachers and trainers.**
- **Lack of infrastructures** accessible and equipment available to deliver practical hands-on education.
- Absence of established **training standards** on safety.
- **Time constraints** faced by workers to attend training as part of continuing education.
- Lack of sustained **funding**.
- **Lack of flexibility in educational pathways** to introduce new topics such as hydrogen.
- Fear of **limited financial viability** of training and education programmes.

# Hydrogen Skills Strategy – areas for collective action



## Next steps

- Ongoing urgent training taking place in **Greece, the Netherlands and Bulgaria.**
- Design **innovative VET curricula and training materials** focused on the skills and job profiles identified as in demand, to enable the rapid upskilling / reskilling of both young people and adults.
- **Test the training materials** with different target audiences across countries and update the materials based on the feedback received.
- Encourage the adoption of the training programme across Europe and **disseminate the content developed.**

**Get in touch!**

# Thank You



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