HyResponder
European Hydrogen Train the Trainer programme for Responders
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Project Overview

- Call year: 2019
- Call topic: FCH-04-1-2019 - Training of Responders
- Project dates: 1st January 2020 - 31st May 2023
- % stage of implementation 01/11/2023: 100%
- Total project budget: 1M €
- Clean Hydrogen Partnership max. contribution: 1M €
- Partners: 16 Partners from 10 countries encompassing Fire and Rescue Services and Associations, Academia, Industry, and Virtual Reality experts
HyResponder objectives

- Develop updated, operational, virtual reality, and educational training for trainers of responders to reflect the state-of-the-art in hydrogen safety.
- Establish a Pan-European Network of Responder Trainers
- Train trainers from at least 10 European Countries in hydrogen safety
- Make teaching materials available in 8 languages
- Support trainers to deliver regional workshops in 10 countries
- Ensure sustainability of the training programme through the availability of translated materials on an educational platform
- Update the European Emergency Response Guide
- Establish an International Forum of Responders
Training package for trainers

Threefold approach represented on HyResponder e-Platform

1. Operational training
   - Unique hand-on training facility at ENSOSP, France
   - Extended within HyResponder to include cryogenic spills

2. Educational training
   - Lectures revised, **stratified**, trialled, **and translated**

3. Virtual Reality training (extended)
   - Scenarios extended to include LH2
   - Used to inform training sequences

Training is underpinned by the revised European emergency response guide
Responder led identification of four learning levels across Europe aligned to EQF

- Framework used as a basis to stratify the Lectures into up to 4 levels by responders
- Level 1 supports a standardised training framework to support recognition of the training
1. HyResponse European Emergency Response Guide updated
2. Guide intended to be used by emergency response personnel, both by front-liners and commanders
3. Revisions include events related to LH2
4. Multiple contributions from the wide consultation

Step 1: Train National Leads (2021-2022)
• Virtual training for trainers from 10 partner countries June 2021
• Face to face operational and virtual reality training June 2022 (ENSOSP)
• Unique approach to manage online delivery “training sequences”

Step 2: Train trainers at a local level (2022-2023)
• Training delivered within 10 countries through a range of formats
• Using materials available in 8 languages

Step 3: Ensure sustainable training beyond HyResponder (2023-???)
• Plan in place for a standard module but no “one-size fits all”
Training took place through 11 activities in 10 countries.

Trainers introduced the translated training in Czech, Dutch, English, French, German, Italian, Norwegian, & Spanish.

Approach was different from country to country to align to local needs.

In all regions a plan is in place for beyond HyResponder.

<table>
<thead>
<tr>
<th>Country</th>
<th>Austria</th>
<th>Norway</th>
<th>Italy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Training lead</td>
<td>Landes Feuerwehrverschule Tirol</td>
<td>University of South Eastern Norway</td>
<td>Università degli Studi di Roma &quot;La Sapienza&quot;</td>
</tr>
<tr>
<td>Language</td>
<td>German</td>
<td>Norwegian</td>
<td>Italian</td>
</tr>
<tr>
<td>Format</td>
<td>Two online courses basic knowledge and specialist</td>
<td>Hybrid</td>
<td>Face to face with small operational facility</td>
</tr>
<tr>
<td>Impact to date</td>
<td>Over 200 responders enrolled in the basic course</td>
<td>In person and online workshops delivered</td>
<td>Firefighters from across Italy trained</td>
</tr>
<tr>
<td>Next steps</td>
<td>800 participants by the end of 2023</td>
<td>Funding for follow up hybrid training</td>
<td>National working group established</td>
</tr>
</tbody>
</table>
National training activities

NORSK HYDROGEN-SIKKERHETS WORKSHOP

Hva skjer etter HyResponder workshop?

H2Konstabel kommer hjem til døra

Som en norsk videreføring av HyResponder har Norges Forskningsråd finansiert videreførings-prosjektets H2Konstabel.

H2Konstabel vil oppsøke kommunene brann og redningssteter som ønsker en innføring i hydrogenåkerhet og en presentasjon av opphøringsmateriell for å begynne eget arbeid med hydrogenåkerhet.

Besøket varer en dag og prosjektet dekker material, bevertning, reise og opphold (for instruktørene). Deres lokale etat må stille med lokaler og deltagere.


Kontaktinfo og spørsmål

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HyResponder

Clean Hydrogen Partnership

Hydrogen Week

Co-funded by the European Union
<table>
<thead>
<tr>
<th>Region</th>
<th>Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td>Ongoing, sustainable online training modules, by the end of 2023, 800 people will have completed the basic knowledge course</td>
</tr>
<tr>
<td>Belgium</td>
<td>Over 2.1k views of webinar to date, Over the next 5 years training will be built upon further, ultimately targeting up to 16k firefighters across 4 learning levels</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>Plans for operational facility. A national working group is in place to look at how and where the hydrogen training can be embedded and built upon going forward.</td>
</tr>
<tr>
<td>France</td>
<td>The unique facility at ENSOSP being utilised by responders and industry representatives from across Europe. Plans in place, and underway to grow the use of this facility.</td>
</tr>
<tr>
<td>Italy</td>
<td>It is planned that a course will be prepared as one of the standard courses offered to the officers by the National Fire Academy. An Italian working group is in place</td>
</tr>
<tr>
<td>Norway</td>
<td>Operational facility under development. Plans for both online and physical workshops and to start a training program.</td>
</tr>
</tbody>
</table>
HyResonder e-Platform

- Materials for trainers beyond HyResponder
- Stratified lectures
- Training sequences with videos
- Online tools
- EERG
- Translated materials

- https://hyresonder.eu/e-platform
The International Association of Fire and Rescue Services, CTIF, led development of a framework for recognition of **firefighter level** training.

Seeks to enable the wide diversity of first responders to seek and secure localised arrangements using HyResponder training outcomes

Aligns to European Qualification Framework Level 2

Equivalent to 20 hours of guided study and practice

The Framework is intended to be flexible and to complement and support local training arrangements.

https://ctif.org/commissions-and-groups/hyresponder-european-hydrogen-train-trainer-programme-responders
Challenges and lessons learnt

- Pandemic!
- No one size fits all
- Locally adaptable arrangements key to sustainability
- Translation underestimated the scale of the task
- Public forum not supported
- Not all questions addressed yet
- Strong will by all countries to continue the activities
Impacts of HyResponder

- e-Platform available to facilitate access to information
- Unique operational training platform available at ENSOSP - sharing expertise
- Online training sequences available to support local training
- Roadmap for standard training package with a defined module at firefighter level
- Stratified training materials available to freely access online across 4 levels
- Translated materials online and freely available in 8 languages
- Trainers from 10 countries trained in Hydrogen Safety
- Responders and trainers in 10 regions trained by HyResponder trainers
- Online tools to support training available to all stakeholders
- Revised EERG available for use globally
- Plans for each region beyond the project