

Improving the Knowledge in Hydrogen and Fuel Cell Technology for Technicians KnowHy

621222

PV Aravind

Technical University Delft

www.knowhy.eu



PROJECT OVERVIEW

- Call topic: **SP1-JTI-FCH.2013.5.2: Training on H2&FC technologies for operation & maintenance**
- Application Area: Cross-cutting issues
- Duration: 1st Sept 2014 - 31st Aug 2017
- Budget:
 - Total estimated budget: EUR 1,437,062.40
 - FCH JU contribution: EUR 1,000,000.00
 - Additional income: Training course fee



PROJECT OVERVIEW

The primary objective of the project is to create a sustainable training offer targeting professionals. The features of this training program are:

- Specific focus on market roll-out applications
 - Comfortable **online with hands on** format for active technicians
 - **Practical training** and **Serious Games** complementing the lessons
 - 7 Languages
 - Low admission fees
 - Easily adaptable to new applications
 - A **joint venture** to continue to offer the courses
- Stage of implementation: **38.89 %**

PROJECT TARGETS AND ACHIEVEMENTS

Programme objective/target	Project objective/target	Project achievements to-date	Expected final achievement
MAIP			
<p>Projects that will ensure the human capital necessary in developing FC&H2 technology in the mid-term is developed</p>	<ul style="list-style-type: none"> • One core course and five specialization courses based on FC&H2 technology applications • Train atleast 1000 technicians throughout Europe 	<ul style="list-style-type: none"> • Survey conducted amongst several leading FC&H2 industries to realize the main application areas for course development and improve visibility of the project • Course format finalised 	<ul style="list-style-type: none"> • Test course (core course + one specialization module) will be released in December end • First set of trainings released in March 2016 by TUD, U'Bham and FHA

PROJECT TARGETS AND ACHIEVEMENTS

Programme objective/target	Project objective/target	Project achievements to-date	Expected final achievement
MAIP			
<p>Projects that will ensure the human capital necessary in developing FC&H2 technology in the mid-term is developed</p>	<ul style="list-style-type: none"> • Involve industry as final users of the results • Disseminate best practices among the educational sector 	<ul style="list-style-type: none"> • Training content created for the core module and one specialization course • Dissemination documents: flyers, poster and ppt created • Events for dissemination identified 	<ul style="list-style-type: none"> • All courses will be created by March 2016 and correspondingly training sessions held

PROJECT TARGETS AND ACHIEVEMENTS

Programme objective/target	Project objective/target	Project achievements to-date	Expected final achievement
MAIP			
<p>Projects that will ensure the human capital necessary in developing FC&H2 technology in the mid-term is developed</p>	<ul style="list-style-type: none">• Involve industry as final users of the results• Disseminate best practices among the educational sector	<ul style="list-style-type: none">• Curriculum, courses and target group defined• Online platform has been set up• Official website is launched along with a LinkedIn page	<ul style="list-style-type: none">• All courses will be created by March 2016 and correspondingly training sessions held

PROJECT TARGETS AND ACHIEVEMENTS

- State of the Art:
 - Unique development since currently no online training exists for FC&H2 applications for technicians
- Targets:
 - The learning content for all courses to be created in line with the course format
 - Short lecture videos
 - Serious games
 - Practical sessions
 - Assessment
 - Reading material
 - Train at least 1000 technicians by the project end

PROJECT TARGETS AND ACHIEVEMENTS

- **Targets:**
 - Translate the courses in six other languages
 - Identify audience
 - Disseminate
- **Achievements:**
 - Survey conducted amongst leading FC&H2 industries and correspondingly the main course topics defined
 - Course content mostly created for 2 courses in all (core module and one specialization)
 - Online portal set up
 - Official website launched
 - Dissemination activities started
 - Complete course format finalised along with assessment approach

RISKS AND MITIGATION

Nature of target	Nature of bottleneck	Remedial Action taken	Nature of revision of original targets
Conducting the test course	<ul style="list-style-type: none">• Delayed by about 2-3 months• Will be conducted in December end 2015	<ul style="list-style-type: none">• The delay utilized to create more effective and interactive learning format	<ul style="list-style-type: none">• Test course will be released in December 2015 and correspondingly the actual course released• This bottleneck isn't estimated to affect the overall timeline of the project

SYNERGIES WITH OTHER PROJECTS AND INITIATIVES

- Project to be interfaced for facilities use and feedback on target group definition and content developed
 - TrainHy
- Interactions with any international-level projects or initiatives:
 - Interest from DOE (US), India, Poland and Canada

HORIZONTAL ACTIVITIES

- Training activities organised by the project
 - Test course starts on 28th Dec, practical session in January
 - Actual course begins Feb/March 2016

DISSEMINATION ACTIVITIES

- Events:
 - Hannover Messe, Germany (April 2015)
 - European technical school, Greece (June 2015)
 - EDEN project final dissemination event, Trento (Sept 2015)
 - Smart mobility world, Monza (Oct 2015)
 - FC&H2 conference, Belgium (Oct 2015)
 - European FC technology & application, Naples (Dec 2015)

DISSEMINATION ACTIVITIES

- Published at the following links:
 - <http://aragonhoy.aragon.es/index.php/mod.imagenes/mem.detalleCompleto/id.49118>
 - <http://www.eleconomista.es/interstitial/volver/228730102/aragon/noticias/6452670/02/15/La-Fundacion-Hidrogeno-Aragon-formara-a-1000-tecnicos-en-tecnologias-del-hidrogeno.html#.Kku8Fu2MyaW9d23>
 - http://bimag.it/news-italia/lue-finanzia-la-formazione-sulle-tecnologie-dell-idrogeno_371403/
 - http://www.fast.mi.it/pdf/scienza%20tecnica%201%202_2015.pdf

EXPLOITATION PLAN/EXPECTED IMPACT

- Main target is development of self-sustainable training
- This experience will help partners take advantage of the experience to continue the training
- Joint venture formed after the project end
- Enable flexible online course with practical sessions: blended education courses for FC&H2 technicians. This doesn't exist currently
- Scope of expanding the training to other countries and languages: Interest is expressed by DOE, Canada, Poland and India

Thank You!