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|  | <b>FCH-JU-2013-1</b><br><b>Hydrogen acceptance in the transition phase</b><br><b>HYACINTH (621228)</b><br><b>SP1-JTI-FCH.2013.5.3</b> |  |
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| <b>WP7</b>              | <b>Dissemination</b>            |

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### Disclaimer

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## EXECUTIVE SUMMARY

This document has been made for describing the workshops held during the last phase of the project.

The HYACINTH project is aware of the need to disseminate and communicate the results obtained, this work has been carried out with a double purpose. On the one hand, to show to the main drivers of FCH technologies the results obtained within the project, and on the other hand, to obtain feedback of their opinion on them, so that the project can improve the results, as well as improving the developed tool, Social Acceptance Managed Toolbox (SAMT).

A workshop has been held in each of the countries where a project participant belongs, so that information can be presented to all stakeholders at least in each of the study countries.

In each of the workshops, once the general objective of the project has been showed, it has been explained the results of *D 5.2. Integrated Report on general findings on public acceptance*, *D.5.1 Report on results of the stakeholder survey*, countries involved, number of participants, methodology followed and results obtained, as well as the operation of the SAMT.

After then, it has been given questionnaires where the attendees were asked about the project and its results, as well as their interest. Finally, they were asked about their opinion on measures that should be proposed to increase the use of hydrogen technologies and fuel cells.

## ABBREVIATIONS

|         |   |
|---------|---|
| AeH2    | Asociación Española de Hidrógeno (Spanish Hydrogen Association)   |
| CA      | Consortium Agreement  |
| CSA     | Coordination and Support Action   |
| CMO     | Central Management Office   |
| CNG     | Compressed Natural Gas  |
| EC      | European Commission   |
| DX.Y    | Deliverable X.Y   |
| FCH     | Fuel cell and hydrogen  |
| FCH-JU  | Fuel Cell and Hydrogen – Joint Undertaking  |
| GA      | Grant Agreement   |
| IPR     | Intellectual Property Rights  |
| KET     | Key Enabling Technologies   |
| LNG     | Liquefied Natural Gas   |
| MI      | Month I   |
| MSI     | Milestone I   |
| PC      | Project Coordinator   |
| PO      | Project Officer   |
| PTE HPC | Plataforma Tecnológica Española de Hidrógeno y Pilas de Combustible (Spanish Technology Platform for Hydrogen and Fuel Cells) |
| Q       | Question  |
| RC      | Regional Committee  |
| SAMT    | Social Acceptance Management Toolbox  |
| SMC     | Steering Management Committee   |
| SMEs    | Small and Medium Enterprises  |
| TC      | Technical Committee   |
| WP      | Work Package  |
| WPL     | Work Package Leader   |

## 1. INTRODUCTION

The success and impact of HYACINTH Project depends on a large extent on dissemination, communication and promotion activities. In HYACINTH project, dissemination is understood as the process of making the results and deliverables of the project available to the stakeholders and to the general audience. Dissemination of gained knowledge, data and results is one of the essential parts of every project.

However, it is also considered very important to disseminate the results of the HYACINTH project during its execution, so that feedback can be obtained from stakeholders and policy makers. This fact allows enriching the results, not only those obtained in the studies themselves, but also in the development of the SAMT tool that gathers the results of the studies.

Taking into account the above, different workshops were planned in *D 7.1 Dissemination Plan* in the European countries of the entities involved in the project:

- Experimental Workshops.
- Presentation of Project results.
- Presentation of social acceptance studies.
- Presentation of the SAMT toolbox.

## 2. PROJECT RESULTS

The project's overall purpose was to gain a deeper understanding of the social acceptance of hydrogen technologies across Europe as well as to develop a communication and management toolbox to be used in ongoing and future activities aiming at introducing hydrogen into mobility, stationary and energy or backup power supply systems.

Social acceptance of FCH technologies has been investigated via survey research with representative panels across Europe (up to 7,148 European citizens) in 7 countries and, surveys and semi-structured interviews up to 333 selected stakeholders (478 surveys and interviews) in 5 countries. The toolbox provides the necessary background information and understanding of the current state of awareness and acceptance of FCH technologies by the general public and by stakeholder groups (industry, municipalities, researchers, fleet operators...).

The results explained in the workshops are:

- General public awareness and acceptance of FCH technologies.
- Stakeholders acceptance of FCH technologies.
- Toolbox SAMT, Social Acceptance Management Toolbox.

### 3. OBJECTIVES OF THE DELIVERABLE

The main purpose of the present deliverable is to describe the main results of the workshops held in 5 European Countries: France, Germany, Slovenia, Spain and United of kingdom.

During the workshops, the results of awareness and acceptance of the general public and stakeholder acceptance studies have been presented, as well as the tool developed, explaining practical examples of SAMT (best cases).

In addition, once the workshop was over, questionnaires were given with simple questions about their opinion on the results shown and their interests, as well as those measures they would propose for the promotion of use of FCH technologies and that should be carried out by the main drivers of social acceptance:

1. Policy makers.
2. Industry.
3. Research Community.
4. General public.



In addition, during the workshops, information material for the project, leaflets with the general description of the project, general and specific objectives, as well as those related to each of the studies with the main conclusions of the projects, have been given to all the attendees. Complementary, it has been delivered a manual of the SAMT toolbox.

#### 3.1. Workshops planned

Throughout the project life, several workshops and webinars were planned to celebrate as discussion forums where HYACINTH results can be shared in order to present the results on social acceptance across Europe and the toolbox developed in the project. In addition, to promote the exchange of ideas and discussion on different viewpoints and interaction between stakeholders and general public.

The workshops initially planned were:

- **Experimental toolbox session:** practical session to evaluate the actual utility of the toolbox and to discuss ways to improve it.
- **HYACINTH Project Results:** To present HYACINTH project to stakeholders and members of associations, government, regional and local authorities.
- **SAMT Presentation.**

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In addition, at least a webinar was planned to be celebrated by the end of the project aimed to Hydrogen Europe (formerly known as Hydrogen Europe, which is the European Industry Grouping for the FCH JU) jointly with N.ERGHY (New European Research Grouping on FCH). Finally, this webinar is expected to be held in the last three months of 2017. It is analyzing the availability of the target audience in dates close to the FCH JU Program Review Days 2017.

### 3.2. Workshops held

The workshops held during the project have been organized by different partners with the objective to reach the major number of countries and stakeholders. The objective of workshops has been:

- Practical session to review improvements and give final evaluation of the utility of the toolbox.
- To present HYACINTH project results to stakeholders and members of Industry and academic associations (PTE HPC & AeH2, Hydrogen Spanish associations and Hydrogen French Association and Renewable Energies French cluster TENERDIS).
- To join a group of experts of the hydrogen industry to present them the most relevant conclusions of the analysis on social acceptance of H<sub>2</sub> technologies across Europe.
- To bring together a group of stakeholders and local authorities (in this particular case, of the region of Castilla y León in Spain) and the hydrogen industry to present them the most relevant conclusions of the analysis on social acceptance of H<sub>2</sub> technologies across Europe.

The participants are from 5 European countries France, Germany, Slovenia, Spain and UK, thus the workshops have been held in these Countries.

For a major communication and dissemination of workshops, it was sent a digital mailing to all stakeholders with the information about workshops planned, in order to inform them about the event. In addition, in one of them the teleconference has been used.

In this link could find the workshops held. It was sent to a mailing list for reaching a great number of attendees: <http://mailchi.mp/1ab2647534a9/save-the-date-hyacinth-project-workshops-calendar?e=442798b877>





Table 1: Workshops held

| Workshop  | Participant (s)                                    | Location            | Date       | Language        | audience   | Objective   |
|---|--|---------------------|------------|-----------------|------------|---|
| Aberdeen Bus project feedback   | Aberdeen City Council and University of Sunderland | Aberdeen (UK)       | --         | English         | <10 people | Testing the Beta version of SAMT developed in HYACINTH project.   |
| Hyacinth Project results of SAMT toolbox. Practical Session   | University of Sunderland                           | Sunderland (UK)     | 27/04/2017 | English         | <10 people | Practical session to review improvements and give final evaluation of the utility of the toolbox.   |
| Workshop HYACINTH: "what does Europe think about hydrogen and Fuel Cell Technology?"                                    | CNH2, CIEMAT and CIDAUT                            | Madrid (Spain)      | 09/05/2017 | Spanish/English | >50 people | To present HYACINTH project Results to Stakeholders and members of PTE HPC &AeH2  |
| Workshop HYACINTH: Acceptance in Europe of fuel cell and hydrogen technologies. Impact in Castilla y León.              | CIDAUT, CNH2 and University of Sunderland          | Boecillo (Spain)    | 31/05/2017 | Spanish/English | <20 people | Bring together a group of stakeholders and local authorities of Castilla y León of the hydrogen industry to present them the most relevant conclusions of the analysis on social acceptance of H <sub>2</sub> technologies across Europe. Practical session to review the evaluation of the utility of the toolbox. |
| Results workshop of HYACINTH project. Ergebnisworkshop zum Projekt Hydrogen acceptance in the transition phase HYACINTH | FRAUNHOFER   | Stuttgart (Germany) | 16/05/2017 | German          | <50 people | The purpose of this workshop is to reunite a group of experts of the hydrogen industry to present them the most relevant conclusions of the analysis on social acceptance of H <sub>2</sub> technologies across Europe.   |
| Presentation of HYACINTH results to the Cluster Fuel Cell Baden-Wuerttemberg in Freiburg at the Fraunhofer ISE          | FRAUNHOFER   | Freiburg (Germany)  | 09/3/2017  | German          | <25 people | The aim of this workshop is to present the finding results of HYACINTH project.   |



| Workshop  | Participant (s) | Location             | Date       | Language  | audience   | Objective   |
|---|-----------------|----------------------|------------|-----------|------------|---|
| Social Acceptance of Hydrogen Technologies. Hyacinth Project results of SAMT toolbox. | RCVT            | Ljubljana (Slovenia) | 22/05/2017 | Slovenian | <50 people | The purpose of this workshop is to reunite a group of experts of the hydrogen industry to present them the most relevant conclusions of the analysis on social acceptance of H <sub>2</sub> technologies across Europe. |
| HYACINTH Workshop   | I PLUS IFRANCE  | Lyon (France)        | 31/05/2017 | French    | <15 people | The purpose of this workshop is to reunite a group of experts of the hydrogen industry to present them the most relevant conclusions of the analysis on social acceptance of H <sub>2</sub> technologies across Europe. |

## 4. DESCRIPTION OF WORKSHOPS

This section describes briefly the main conclusions of the workshops per country.

### 4.1. United Kingdom workshops.

#### 4.1.1. Aberdeen Bus project feedback

It was deemed to include the testing of the model on an existing known Fuel Cell & Hydrogen project currently being run in Aberdeen. The objective was to receive a feedback on the usability of SAMT and gather the impressions about it, the beta version of the SAMT was sent to five stakeholders in the Aberdeen Bus Project.

Of the five stakeholders, the project team were able to obtain two full responses related to the following questions:

- Q1. The SAMT tool was easy to use:
  - 1 Agree.
  - 1 Strongly Agree.
- Q2. The report is easy to interpret:
  - 1 Agree.
  - 1 Strongly Agree.
- Q3. The results reflected our experience:
  - 1 Neither disagree nor agree
  - 1 Agree.
- Q4. The information provided was useful:
  - 2 Agree.
- Q5. I was able to find the information that I wanted:
  - 2 Agree.

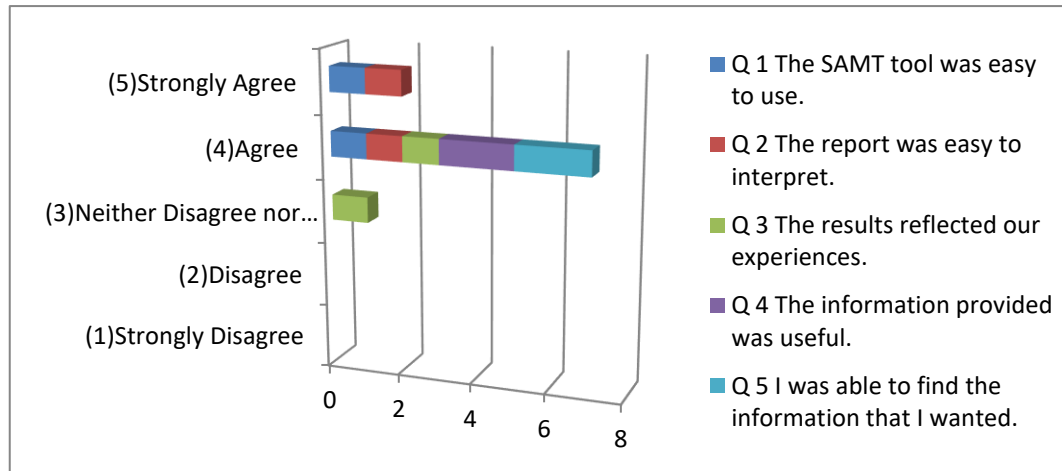


Figure 1: Feedback from Stakeholders in Pilot Study.

**Conclusion:** Taking into account the answers received, the stakeholders in the pilot study were generally happy with SAMT. They deemed being “Agree” or “Strongly Agree” on SAMT tool was easy to use, the report provided by the toolbox was easy to interpret, the information provided was useful and they were able to find the information that they wanted.

Only one of both replied “Neither disagree nor Agree” about the results reflected our experiences.

#### 4.1.2. HYACINTH project results of SAMT toolbox. Practical Session in UK.

**Hyacinth project results of SAMT toolbox. Practical Session**

**Date:** Thursday 27th April 2017

**Place:** Sunderland

**Contact:** [Adrian.Morris@sunderland.ac.uk](mailto:Adrian.Morris@sunderland.ac.uk)

**More info:** <http://hyacinthproject.eu/>

Agenda:

1. Introduction to the Hyacinth Project
2. Explanation of where the data came from and why it has been developed
3. Explanation of the tool box and its operation
4. Opportunity to use the toolbox
5. Demonstration of the worked example/best practice case study






Figure 2: Workshop held at Sunderland. Practical session.

This workshop was managed by University of Sunderland. The objective was to explain the SAMT and to obtain a feedback and final evaluation of the utility of the toolbox. The agenda was:

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1. Introduction to the Hyacinth Project. It was presented the general and specific objectives of the project.
2. Explanation of where the data come from. It was deemed necessary to describe the methodology followed to obtain the data that feed to the SAMT.
3. Explanation of the toolbox and its operation.
4. Opportunity to use the toolbox.
5. Demonstration of the worked example/best practice case of study.



It was attended by only two delegates. However, a further five indicated interest and were sent the link to review the tool box without attending the workshop. The attendees were from different backgrounds. One worked in education, specifically hydrogen safety and use and the other worked in fuel development for internal combustion engines, specifically co-burning of alternative fuels with diesel or gasoline. Between them they had a total of 15 years' experience in FCH technologies.

The workshop consisted of an introduction to the project, a description of the SAMT and its operation. This was followed up with an opportunity for delegates to gain "hands on" experience of using the SAMT via a guided worked example/case study. This allowed the delegates to experience using the SAMT and interpreting the results obtained.

The delegates were asked to provide feedback on the SAMT itself and the experience of using it. The attendees answered to the next questions that have been explained in *Deliverable 6.3. Optimised and Tested SAMT*:

- Q1. Please rate the extent to which you understand the purpose of the SAMT Tool?  
Answers: Well and completely.
- Q2. Please rate your understanding of how to use the SAMT tool Box? Answers:  
Strong.
- Q3. How easy or difficult was the SAMT to use? Answer: Very easy.
- Q4. How easy or difficult was it to interpret the results? Answers: Easy/Very Easy.
- Q5. Were the results you obtained from the tool what you expected? Answers:  
Mostly/Completely.
- Q6. Was the advisory text what you were expecting? Mostly/Completely.
- Q7. Do you think that the results provided by SAMT will be useful in helping you understand potential problems related to FCH technology acceptance?  
Answers: Mostly/Completely.
- Q8. How useful do you think the advisory text will be in helping you to address potential problems? Answers: Completely.

**Conclusion:** Both agreed it would provide an extremely useful toolkit providing clear pathways to develop and map out hydrogen solutions. The industrial stakeholder expressed a wish to see the SAMT extended to other fuels besides

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hydrogen as his company also used compressed natural gas (CNG) and liquefied natural gas (LNG) as co-fuels.

## 4.2. Spain workshops.

### 4.2.1. “What does Europe think about Hydrogen Fuel Cell technology”?

**JORNADA: “¿Qué opina Europa sobre las tecnologías del Hidrógeno y las Pilas de Combustible?”**  
**What does Europe think about Hydrogen and Fuel Cell technology?**

**Date:** Tuesday 9th May 2017, from 9 to 14 a.m.  
**Place:** Sala F del Ministerio de Economía, Industria y Competitividad (Paseo de la Castellana, 162, Madrid).  
**Organizer:** PTE HPC/ AeH2/ CNH2  
**Contact:** [cecilia.lopez@cnh2.es](mailto:cecilia.lopez@cnh2.es)  
**More info:** [http://hyacinthproject.eu/11701\\_2/](http://hyacinthproject.eu/11701_2/)



Figure 3: Workshop held at Madrid. HYACINTH results.

More than 50 attendees took part in this workshop held at Madrid (Spain). The place chosen was the headquarter of the Ministry of Economy, Industry and Competitiveness. The event was organized by National Hydrogen Centre in close collaboration with Spanish National Hydrogen Association (AeH2) and Spanish Platform of Hydrogen and fuel cells (PTE HPC).



**Jornada HYACINTH: “¿Qué opina Europa sobre las tecnologías del Hidrógeno y las Pilas de Combustible?”**

Jornada organizada por:









*Figure 4: Madrid Workshop (Ministry of Economy, Industry and Competitiveness).*

It was presented to the audience the main results of the HYACINTH project being its objective to reach a major knowledge on the acceptance of hydrogen technologies and fuel cells and their applications (stationary and mobile) at European level.

The workshop started with a welcome to the audience of Ms. María Jaén (CNH2 Managing Director and HYACINTH coordinator) and Ms. Marta Maroño (PTE HPC representative) who explained to the audience the objectives, organization and activities that the Platform. Mr. Daniel Sopeña (from CIDAUT) presented to the audience the comparative cross-country analysis of the policies and projects developed in recent years, and Mr. Christian Oltra (CIEMAT CISOT) explained the methodology followed in the project. After the coffee, Mr. Christian Oltra presented the most outstanding results of the report on the public acceptance of hydrogen and fuel cell technologies, and Ms. María Jaén the Report on the acceptance of "stakeholders" in relation to these technologies. One of the most anticipated moments of the day came when Mr. Adrian Morris (from the University of Sunderland UK) explained and showed attendees case studies of the tool developed within the project with the aim of providing practical information to manufacturers and developers of hydrogen technologies and fuel cells, giving them information regarding the opinion of 7,148 respondents among the general public of 7 European countries, 350 respondents among business interest groups, the scientific community and public administrations in 5 European countries. The tool showed results organized according to key issues within the framework of technology acceptance (such as Knowledge and Experience, Confidence, Costs, Risks and Benefits, Consequences of its implementation, Attitude or Initial Acceptance).

The presentations and more information are available in the website of the project.

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### Main results of questionnaires:

The attendees were asked about the HYACINTH project and the SAMT regarding the following questions:

- Q1. Did you know about HYACINTH Project before this workshop?
- 7 Yes.
  - 13 No.
- Q2. Do you think that both studies developed by HYACINTH Project related to the knowledge and social acceptance of FCH technologies are interesting?
- 18 Yes.
  - 1 No.
  - 1 NA.
- Q3. In your opinion, which specific measures need to be developed across different sectors in order to increase the FCH technologies awareness and social acceptance?
- a) Policy makers: Support Policies to these technologies.
  - b) Industry stakeholders: To reduce the costs.
  - c) Research Community: Cooperation Projects.
  - d) General public: A major dissemination.
- Q4. Are you interested in using the toolbox developed by the Project?
- 11 Yes.
  - 2 No.
  - 7 NA.

### Conclusion:

- 20 questionnaires were filled by attendees. Only 7 of them have heard something about the HYACINTH project. Thus, this fact shows that it is necessary to carry out campaigns of dissemination of the HYACINTH results.
- The majority of them consider both studies interesting.
- Regarding the toolbox, the 55% of them are interested in use the SAMT.
- In addition, the opinions and more relevant comments about the measures needed to promote the technology are:
  - a) **Policy makers:** To establish regulation and safety standards related to hydrogen vehicles. To carry out demonstration projects. To support these technologies, it is necessary to highlight the importance of support from governments to industry and major accessibility to the information.
  - b) **Industry stakeholders:** To reduce costs and increase reliability. It would be interesting to make comparative active tests with other technologies.
  - c) **Research community:** To carry out projects in close collaboration with industry. To support R&D programmes and research in low cost materials.
  - d) **General public:** It is important to show technology to society and citizens. It is suggested to carry out: dissemination campaigns,



workshops, information days or seminars to show the technology and applications. In addition, demonstration projects for both applications and it is needed educational and training activities in these technologies for approaching them to general public.

Finally, it was suggested to repeat the study in 5 years because the awareness and acceptance will change in a near future.

#### 4.2.2. Workshop in Valladolid. “HYACINTH project results of SAMT toolbox”



Jornada HYACINTH: Aceptación de las tecnologías del Hidrógeno y las Pilas de combustible en Europa. Impacto en Castilla y León.

Si no puedes acudir a la jornada del proyecto Hyacinth, no pierdas la oportunidad de seguirlo por WEBEX

Conéctate y síguenos! Haz clic [aquí](#).



Hyacinth Workshop 31st May  
Wednesday, May 31, 2017  
11:00 am | Europe Summer Time (Spain), GMT+02:00 | 3 hrs  
Meeting Number (search code): 940 547 700  
Meeting password: 64261246



Jornada HYACINTH: Aceptación de las tecnologías del Hidrógeno y las Pilas de combustible en Europa. Impacto en Castilla y León.

Jornada organizada por:



On May 31, 2017, CIDAUT and CNH2 held a workshop to present the opinion, perception and acceptance of hydrogen technologies and fuel cells in Europe. The workshop was part of the dissemination activities of the European project HYACINTH that aimed to gain a better understanding of the social acceptance of hydrogen and fuel cell technologies and of two of its applications (stationary and mobile) at European level. The number of attendees to this workshop were 22, 10 of them through webex.

In that day, the results of both studies were presented and a real-time demonstration of the tool developed in the project, which has been carried out with the aim of

facilitating the deployment of products and their introduction to the market, being better targeted to the target audience, giving a better response to the expectations and reducing the existing risks or barriers to their acceptance.





*Figure 5: Workshop in Valladolid (Spain).*

Besides, the most interesting part of the day was the fact of bringing together those authorities and local entities of Castilla y León related to Hydrogen and Fuel Cell technologies. The event was attended by personnel from the Development Agency of Castilla y León (ADE), the Regional Energy Agency (EREN), the Municipal Energy Agency of Valladolid (AEMVA), the University of Valladolid (UVA), as well as several companies related to the automotive industry.



*Figure 6: Attendees to workshop in Valladolid (Spain).*

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### Main results of questionnaires:

The attendees were asked about the HYACINTH project and the SAMT regarding the following:

- Q1. Did you know about HYACINTH Project before this workshop?:
- 4 Yes.
  - 5 No.
- Q2. Do you think that both studies developed by HYACINTH Project related to the knowledge and social acceptance of FCH technologies are interesting?:
- 9 Yes.
- Q3. In your opinion, which specific measures need to be developed across different sectors in order to increase the FCH technologies awareness and social acceptance?:
- **Policy makers:** To promote hydrogen technologies in Energy Policy of the country, development these technologies in other sectors such as: vehicle, naval, aircraft and construction. It is deemed interesting to carry out economic and environment analysis. R&D programmes in order to reduce the application costs and to promote the use of these technologies though demonstrative projects in their areas.
  - **Industry stakeholders.** To publicity technology developments through associations, to develop fuel cell with a major efficiency, to put in knowledge of society their prototypes and dissemination among different sectors.
  - **Research Community:** Dissemination activities through R&D projects and communication of research workings and projects.
  - **General public:** Dissemination of demonstration projects and dissemination to general public.
- Q4. Are you interested in using the toolbox developed by the Project?:
- 5 Yes.
  - 2 No.
  - 2 NA.

In addition, it was suggested to show the results of HYACINTH project in more events.

### 4.3. Germany workshops.

#### 4.3.1. “Hydrogen Acceptance in the transition phase”.

Result workshop of HYACINTH project  
Ergebnisworkshop zum Projekt Hydrogen acceptance in the transition phase HYACINTH

**Date:** Tuesday 16th May 2017, from 5 to 7 p.m  
**Place:** Stuttgarter Engineering Park (STEP), Room Dali, Wankelstraße 12, 70563 Stuttgart, Germany  
**Organizer:** Fraunhofer Institute  
**Contact:** [hyacinth@isi.fraunhofer.de](mailto:hyacinth@isi.fraunhofer.de)  
**More info:** <http://www.isi.fraunhofer.de/isi-en/service/events/2017/2017-05-16-hyacinth.php>



Figure 7: Workshop held in Germany.

On 16<sup>th</sup> May was held in Germany a HYACINTH workshop. This event was focus on the presentation of the project results to 25 attendees and then to held a panel discussion with Johannes Daum, NOW GmbH; Dr. Annette Roser, IREES GmbH; Peter Trawitzki, Energiedienst Holding AG and Dr. Elisabeth Dütschke from the project team about: What determines the further diffusion of hydrogen and fuel cell technologies?.



Figure 8: Workshop held in the Stuttgarter Engineering Park.

Dr. Elisabeth Dütschke and Uta Schneider from Fraunhofer ISI presented the survey results at this workshop in the Stuttgarter Engineering Park with a special focus on

German findings. The SAMT was also introduced. This was followed by a lively discussion with the participating experts about the factors that will determine the further diffusion of hydrogen and fuel cell technologies. Special attention was paid to early market phases and how to prepare a market shaped by high prices and little awareness and in how far hydrogen technologies are different from other technologies in this regard.

#### 4.3.2. “Presentation of HYACINTH results to the Cluster Fuel Cell Baden-Wuerttemberg in Freiburg at the Fraunhofer ISE”

Uta Schneider from Fraunhofer presented on 9<sup>th</sup> March 2017 the findings on the social acceptance of mobile H<sub>2</sub> applications to a group of 50 H<sub>2</sub> experts in Freiburg, Germany. The cluster promotes industrialization of both mobile and stationary fuel cell applications. The participants in this meeting were very interested in the findings and some also reported problems with citizen acceptance in their projects. They are looking forward to find out whether Hyacinth outcomes could help them with their work.

### 4.4. Workshop in Slovenia

#### 4.4.1. “Social Acceptance of Hydrogen technologies”

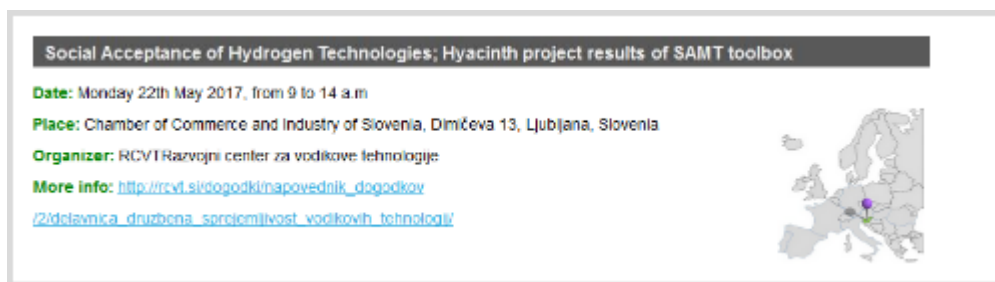




Figure 9: Workshop held in Slovenia.

The purpose of this workshop was to reunite a group of experts of the hydrogen industry to present them the most relevant conclusions of the analysis on social acceptance of H<sub>2</sub> technologies across Europe. In addition, the SAMT toolbox was presented to these stakeholders. The participant responsible of this workshop was RCVT and the workshop had more than 50 attendees.

In addition, at the end of the workshop, a questionnaire was provided to all stakeholders for analysing their interest in the project, results and toolbox.

|  |   |  |
|--|---|--|
|  | <p style="text-align: center;">FCH-JU-2013-1<br/>Hydrogen acceptance in the transition phase<br/>HYACINTH (621228)<br/>SP1-JTI-FCH.2013.5.3</p> |  |
|--|---|--|



Main conclusions of workshop: For handling the surplus of energy in time and space hydrogen technologies are necessary.

At the workshop, experts discussed the challenges and opportunities of Slovenia in the field of hydrogen technology, which irrepressibly coming or are already present. As pointed out in the introduction, by Director General for Energy, the use of hydrogen is one of the possibilities for the economy that energy may be got when the renewable sources do not produce it. Thus, energy can be stored as hydrogen and over the fuel cell back to the power when needed. Slovenian economy should take this opportunity and be involved in developing and manufacturing the components that we are capable of by ourselves. Long-term balance shows that in the next ten years there will be no drastic measures required turning upside down all that we know today. And this means that our economy has about ten years to prepare for the technology to come.

The Hyacinth project and findings on opinions of stakeholders on the social acceptance of hydrogen technologies were presented. The study with Social Acceptance Management Toolbox (SAMT), which concludes within a month, where the general public participated from seven European countries shows that knowledge of these technologies in general public is low. As emphasized that while social acceptability plays a key role in commercialization of hydrogen technologies, public awareness of this issue is very important. Therefore, more support from governments and decision makers, and stakeholder engagement is needed as active support to commercial partners in communication with the general public.

The Slovenian Greenpeace has warned that the incentives to certain technologies caution are necessary. Greenpeace supports the hydrogen technology when it leads to energy transition, mentioning a price and security as questionable points. When there is no longer a big question, the technology will also be better accepted by the general public.

According to the Secretary of State in the Ministry of Infrastructure although Slovenia as a small country, and it is less susceptible to rapid changes in the energy sector, which is reflected in the somewhat longer period of implementation of strategies. The Ministry is currently developing an Action Plan to encourage the use of

alternative fuels, which will also deal with hydrogen. In this way, the state will help hydrogen technology to be widely adopted. The round table discussants agreed that the procurement can be an effective mechanism for the introduction of certain technologies which, by the words of Dr. Ben Todd: “...also was a model in the UK. But we have to think rationally, because hydrogen technology in the short term is not profitable”.



Figure 10: SAMT presentation in Slovenia.



**PROGRAM**

**8.30 – 9.00 Registracija in kava**

**9.00 – 9.30 Uvodni pozdravi**  
mag. Tadej Aver, Razvojni center za vodikove tehnologije (RCVT)  
dr. Marjan Rihac, GZS - Zbornica elektronike in elektroindustrije  
mag. Klemen Poljak, Ministrstvo za infrastrukturo

**9.30 – 11.30 Predstavitve projektov**  
Z vodilcem do trajnostne energetske prihodnosti: predstavitev delovanja FCH JU  
mag. Jane Vindrič, Inesa (članica Hydrogen Europe) in prof. dr. Miran Gaberžak, RI  
Prva vodikova polnilnica v Sloveniji: dr. Marta Svojsak, Petrol in Branik Vrečo, Danijel Pog (TPB)  
Vodik v stacionarnih sistemih in kat del pametnih omrežij  
prof. dr. Mihael Sekavčič, UL FS  
Shranjevanje obnovljive energije s pomočjo vodika: mag. Marko Fenc, Plan-net  
Vodikove tehnologije v sistemih brezrežničnega napajanja: doc. dr. Boštjan Brožnik, UL FS  
Hydrogen & Flexibility - Zero Emission Mobility Corridor: dr. Ben Todd, Ims Ecubes  
"Hydrogen Challenge" - a pioneer's first-hand report: Marianne Schulz, Solutions in energy e.u.  
Projekt HYACINTH: usposobitev o mnostvih deležnikov o družbeni sprejemljivosti vodikovih gorivno-celinskih tehnologij: doc. dr. Mitja Mori, UL FS

**11.30 – 12.15 Odmor s pogostitvijo, mreženje**

**12.15 – 13.30 Omizje "Družbena sprejemljivost vodikovih tehnologij" z moderatorko Alenko Žumbar Klopčič, Energetika.NET in vabljenimi gosti:**  
Jure Leben (MZI), doc. dr. Mitja Mori (UL FS), mag. Gorazd Ažman (ELES), dr. Marta Svojsak (Petrol), dr. Ivan Šimen (Elektro Gorenjska), dr. Ben Todd (Ims Ecubes), mag. Marko Fenc (Plan-net), dr. Dejan Savž (Greenpeace SI)

**13.30 – 14.30 Pogostitev**  
Organizator si pridržuje pravico do spremembe programa.

The event has been organized by:



Main results of questionnaires:

30 questionnaires fulfilled and 99 registered participants at the workshop:

- Q1. Did you know about HYACINTH Project before this workshop?:
- 10 YES (web, RCVT and partners, workshop program dissemination).
  - 20 NO.
- Q2. Do you think that both studies developed by HYACINTH Project related to the knowledge and social acceptance of FCH technologies are interesting?:
- Generally strong YES.
  - YES, but Hydrogen technologies remains only a good idea until high investment costs.
  - Still missing implementation actions.
  - Social acceptance is important condition in technology development.
- Q3. In your opinion, which specific measures need to be developed across different sectors in order to increase the FCH technologies awareness and social acceptance?:
- Stronger subsidy policies, R&D strategy.
  - Industry needs to recognize Hydrogen technology advantages with policy support.
  - More research projects, stronger market implementation, stronger communication between research community and general public.
  - General public has to be a technology promotor as end user (affordable technology), need for a good practice, public awareness, intense public informing, including municipalities, schools, safety issues (if general public uses natural gas then with proper approach hydrogen technology will be accepted as well), SWOT,etc.
- Q4. Are you interested in using the toolbox developed by the Project?:
- 24 YES.
  - 6 NO.

## 4.5. Workshop in France

### 4.5.1. “HYACINTH project Results”

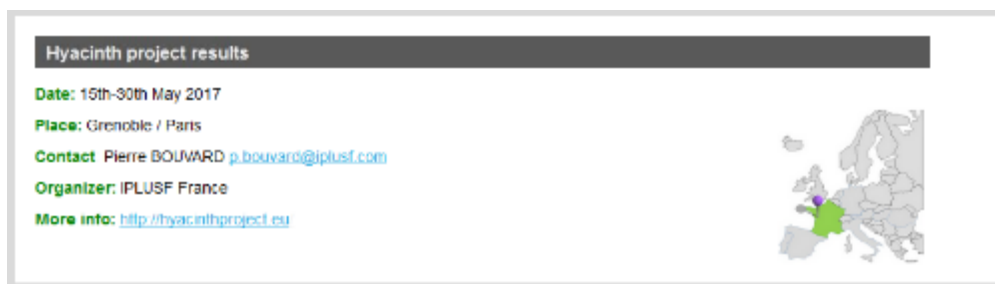


Figure 11: Workshop held in France



IPLUSF organized an information day in Lyon on hydrogen technologies, in collaboration with Ad-Venta, a regional SME focused on hydrogen and pressured gas. This event, called "Hydrogen as a vector of the energy transition", took place in a conference room near the Part-Dieu Business Centre and brought together participants from all types of organizations.

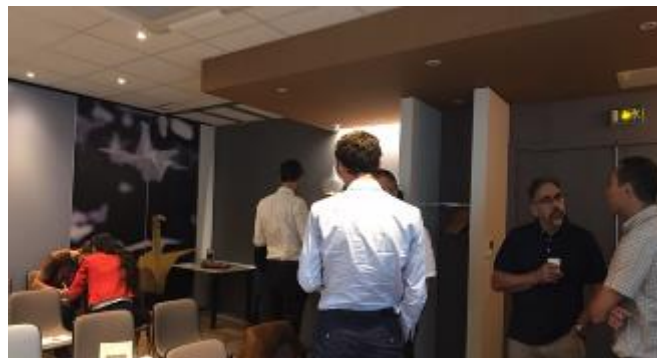


*Figure 12: Workshop in Lyon.*

Among other things, it enabled IPLUSF and AD-VENTA to present to 11 attendees their respective projects related to hydrogen and its social acceptance in Europe. Thus AD-VENTA presented its HyCan project, the objectives achieved and the resulting benefits and IPLUSF presented the Hyacinth project, the context analysis and the result of the studies.

The HyCan project, led by Ad-Venta, has been developing a new hydrogen mini-storage offering for small-power fuel cells (1 to 20W). It aims to enable French manufacturers to break through the "hydrogen energy" market with solutions that are accessible to professionals and the general public.

The event brought together stakeholders from the hydrogen industry to follow-up on the results of the two projects. Participants came from different sectors, some working for leaders in the energy and hydrogen sectors while others were working for start-ups or non-profit associations.



*Figure 13: Conference room Lyon.*

The Hyacinth project was presented to them, and participants expressed great interest in the results obtained and the Toolbox that has been developed thank to the project.

## 5. CONCLUSIONS

The main conclusions of this deliverable are that not only the consortium, but also the participants of the workshops showed interest about the project, the studies and the SAMT developed.

All of them demand a major diffusion of the technologies of hydrogen and fuel cells to the public in general to approach this technology to the society. But they are also aware of the role of the main drivers of these technologies play, such as Policy Makers, Industry, Research Community and the general public.

Their interests and comments are focused on energy policies aligned with these technologies that are considered a great benefit to the environment, support to end users through tax benefits, as well as increase the R&D programs for a major reduction of costs of the applications available in the market and, finally, to increase the number of training and dissemination programs and activities.

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