



Project No.: 736122
Project acronym: COSMHYC

Project title:

COmbined hybrid Solution of Metal Hydride and mechanical Compressors for decentralised energy storage and refuelling stations

Programme: H2020-JTI-FCH-2016-1

Topic: FCH-01-8-2016 - Development of innovative hydrogen compressor technology for small scale decentralized applications for hydrogen refuelling storage

Start date of project: 01.01.2017

Duration: 45 months

Deliverable 7.5

COSMHYC Promotion Materials

Author: Marie-Eve Reinert

Due date of deliverable: 30.06.2020

Actual submission date: 06.03.2020

Deliverable Name	Deliverable 7.5
Deliverable Number	COSMHYC Website online
Work Package	WP7
Associated Task	Task 7.1
Covered Period	M1-M42
Due Date	30.06.2020
Completion Date	05.03.2020
Submission Date	06.03.2020
Deliverable Lead Partner	Steinbeis 2i
Deliverable Author	Melanie Ungemach
Version	1.2

Dissemination Level		
PU	Public	X
PP	Restricted to other programme participants (including the FCH2 JU Services)	
RE	Restricted to a group specified by the consortium (including the FCH2 JU Services)	
CO	Confidential, only for members of the consortium (including the FCH2 JU Services)	



This project has received funding from the Fuel Cells and Hydrogen 2 Joint Undertaking under grant agreement No 736122.
 This Joint Undertaking receives support from the European Union's Horizon 2020 research and innovation programme and Hydrogen Europe and N.ERGHY



CHANGE CONTROL

DOCUMENT HISTORY

Version	Date	Change History	Author(s)	Organisation
1.0	20.02.2020	Document drafted	Melanie Ungemach	Steinbeis 2i
1.1	27.02.2020	Document revised	Marie-Eve Reinert	Steinbeis 2i
1.2	06.03.2020	Last version	Marie-Eve Reinert	Steinbeis 2i
1.3	25.06.2020	Validated Version	David Colomar	EIFER

DISTRIBUTION LIST

Date	Issue	Group
06.03.2020	Revision	Project coordinator
25.06.2020	Submission	FCH2 JU

Table of content

Table of content.....	3
Introduction.....	4
Deviations.....	4
Disclaimer.....	4
1. Overview of COSMHYC Promotional Material	5
2. COSMHYC Promotional Video	7
2.1 Video Development Phase	7
2.2 Storyboard	9
2.3 Shooting the video.....	9
2.4 Video Release.....	12
Main conclusion.....	13

Introduction

The present deliverable describes the promotional materials that were developed for the COSMHYC project serving the main means of communication and dissemination purposes. Among these materials is the project flyer, presentation templates, project roll-up and most importantly the project related promotion video which was released in November 2019. This report will describe detailly the planning and development of the project video as this was the main activity to be performed in the project months 25-36. Descriptions on the other promotional materials such as the project flyer, presentation template and roll-up is already given in Deliverable 7.1 (COSMHYC Corporate Identity) and thus, will not be repeated here.

Deviations

Delivery of the content is in time without any deviations from actions planned until the end of the project in Annex 1 – WP7 – Task 7.1. of Grant Agreement.

Disclaimer

This report was created within the COSMHYC project.

The views and conclusions expressed in this document are those of the involved project partners. Neither the partner(s), nor any of their employees, contractors or subcontractors, make any warranty, expressed or implied, or assume any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, product, or process enclosed, or represent that its use would not infringe on privately owned rights.

FCH JU and the European Union are not liable for any use that may be made of the information contained herewith.

1. Overview of COSMHYC Promotional Material

In order to support the COSMHYC communication activities a promotion kit was developed within the first six months of the project by S2i in cooperation with a professional graphic designer.

The promotion kit consists of the following materials, all designed based on the project's CI:

- Flyer
- Roll Up
- Presentation Templates
- Project Video

A short definition of each material is provided below, more details are available in Deliverable 7.1 (COSMHYC Corporate Identity). Solely the development of the project video will be described more in depth in this report as it only has been finalised in November 2019.

The **project flyer** is an important promotional material summarising the project's main objectives and approach and can be easily distributed during events and conferences to different stakeholders. Design and layout are based on the project's CI.

COSMHYC: THE IMPACT

Technology developments within this project will make an important contribution to the recently started large-scale roll-out of hydrogen passenger vehicles, buses and trains.

More precisely, it will significantly contribute to the achievement of the Fuel Cell and Hydrogen 2 Joint Undertaking (part of the European Research and Innovation programme Horizon 2020) objectives by increasing the energy efficiency of the compression process by at least 20%.

Thanks to the triple effect of energy efficiency, reduction of capital costs and maintenance optimization, COSMHYC will lead to an overall reduction of about 20% of the hydrogen costs at the refuelling station.

The COSMHYC innovative compression concept will meet high flow requirements, while **reducing the noise level below 60 dB at 5 m**. Besides, the COSMHYC compression solution will use neither platinum nor rare earth elements.

Finally, it will also be possible to use the COSMHYC compressor for decentralized energy storage, enabling the **competitive storage of electricity from renewable sources**.

COSMHYC: THE PARTNERS



EIFER European Institute
for Energy Research
www.eifer.kit.edu



MAHYTEC SARL
www.mahytec.com



Nel Hydrogen
www.nelhydrogen.com



Steinbeis 2i GmbH
www.steinbeis-europa.de



Ludwig-Boelkow-
Systemtechnik GmbH
www.lbst.de

CONTACT

David Colomar (Coordinator)
European Institute for Energy Research
Emmy Noether Strasse 11
76131 KARLSRUHE - Germany
Phone: 00 49 721 61 05 1330
E-mail: colomar@eifer.org



For further information and to follow our
project progress please visit www.cosmhye.eu

COSMHYC INNOVATIVE H2 COMPRESSION



**Innovative compression
solutions** for efficient
hydrogen mobility

This project has received funding from the Fuel Cells and Hydrogen 2 Joint Undertaking under grant agreement No 759122. This Joint Undertaking



Figure 1: COSMHYC Flyer

With the **roll-up**, visibility is given to the project by showcasing it at events or conferences. Design and layout are based on the project's CI.



Templates for **presentation and reporting documents** were drafted in line with COSMHYC's CI in order to establish and maintain a unique and coherent visibility to the project.

Table 1: COSMHYC Presentation Templates

COSMHYC INNOVATIVE H2 COMPRESSION	
Project No.: 736122 Project acronym: COSMHYC	
Project title: Combined hybrid solution of metal hydride and mechanical compressors for decentralised energy storage and refuelling stations	
Programme: H2020-JTI-FCW-2016-1 Topic: FCH4-1.6-2016 - Development of innovative hydrogen compressor technology for small scale decentralised applications for hydrogen refuelling storage Start date of project: 01.01.2017 Duration: 36 months	
Deliverable x.x Name of Deliverable	
Author:	Actual submission date: []
Due date of deliverable: 30.09.2020	
Deliverable Name	
Deliverable Number	
Deliverable Type	
Deliverable Period	
Deliverable Date	
Deliverable Status	
Deliverable Description	
Deliverable Owner	
Deliverable Manager	
Deliverable Reviewer	
Deliverable Approval	
März 27, 2017	
Name des Mediums	
Innovative compression solutions for efficient hydrogen mobility	
This project has received funding from the Fuel Cells and Hydrogen 2 Joint Undertaking under grant agreement No 736122. This Joint Undertaking receives support from the European Union's Horizon 2020 research and innovation programme and Hydrogen Europe and H2EU2017	

Figure 2: COSMHYC Roll-Up

2. COSMHYC Promotional Video

Nowadays, videos play a crucial role in communication activities since a broad audience can be reached with this visual media and complex content can be easily broken down and made understandable. Videos easily can be integrated on websites and in social media posts which is another plus of this communication mean. Thus, a promotional video for COSMHYC was produced towards the end of the project with the aim to demonstrate how COSMHYC contributes to the advancement of hydrogen mobility and how the project's innovative compression technology is working. Further, the video will be used to promote the project's approach which is of specific interest in relation to the exploitation of project results.

The development of the COSMHYC video followed specific steps defined by S2i including preparatory steps (idea collection), a content development phase (meeting with filming agency) and finally video shoot and video editing, serving as a guideline and to-do list for a successful implementation of this task.

2.1 Video Development Phase

As responsible partner for WP 7, S2i was in charge of developing the COSMHYC project video, in very close consultation with the whole consortium. A video production company was contracted guaranteeing a professional implementation of the video shoot. The agency was selected based on value for money.

During the 4th COSMHYC project meeting in February 2019 first discussion on the content and approach of the promotional video were made.

As input to the discussion, the consortium was invited to watch three selected videos of other projects ([HyBalance](#) project videos, [Netfficient](#) project video and [Toyota Mirai commercial](#)). Based on this inspiration, the following requirements were set for the COSMHYC video by the consortium:

- Tackle only the general public
- Main Messages:
 - Main benefits of H2 mobility, mainly reduction of environmental impact
 - Compression at HRS: Status-quo is not bad, it is already good and COSMHYC will improve it
- Provide basic information concerning the MC, MHC and hybrid compression solution:
 - Provide simple explanations of how the hybrid combination works

Following the joint communication approach of the projects COSMHYC and COSMHYC XL, the general idea for the video development is to create a mini video series, as in both projects videos are planned. Starting with a more general approach on hydrogen mobility and an overview of the innovative compression technology in the COSMHYC video, the second video in the context of COSMHYC XL will give more technical details and follow up on the COSMHYC video.

Based on the above listed requirements set by the consortium and after discussions between the project coordinator EIFER and S2i, the following briefing concept was prepared summarising the video's main approach and objectives, serving as a guidance document for the video agency. Below an abbreviated version of the briefing note is provided:

Briefing COSMHYC promotional video

Target audience	General Public, Industry, policy stakeholders (scientific community)
Aim	A general public-oriented emphasis on COSMHYC results , explanation how it works (MC + MHC + hybrid solution), how it will advance hydrogen mobility , contribute to emission-free transport & Europe's climate goals- In a 2 nd video (in the context of COSMHYC XL) (2021) more technical details are given...To be continued
Main Message	→ Main benefits of H2 mobility, mainly reduction of environmental impact → H2 compression is at HRS is the key for the breakthrough of H2 mobility → COSMHYC will develop an innovative compression solution improving HRS.
Style	Modern, demonstrating FCEV technology is state-of-the art for clean mobility. → mix of interviews , pictures from the ICT test side and illustrations to explain the concept
Content	→ not too technical, but provide basic information on COSMHYC concept
Shooting sides	Toyota Mirai driving through forest EIFER Laboratory Hydrogen Refuelling station
Interviewee	David Colomar, EIFER Tabea Link, Steinbeis 2i
Duration	2 1/2 minutes max
Voice over	Female voice over, English subtitles
CI/colouring	From COSMHYC Light blue (incl. key visual) towards dark COSMHYC XL blue
Time planning	Video Shoot on Friday 27 September 1 st scene: Total HRS 2 nd scene: Car driving around 3 rd scene: EIFER laboratory at KIT

The Toyota Mirai was chosen as the fuel cell vehicle present in the video, as EIFER has access to this car since it is available at the local car sharing provider "Stadtmobil". EIFER initiated the purchase of a hydrogen vehicle car at Stadtmobil, complementing their car fleet with a hydrogen fuelled vehicle. EIFER not only initiated but also sponsored the purchase of the Toyota Mirai, that is why the EIFER logo appears on the car giving another reason for using the Toyota Mirai in the project video.

By interviewing a female member of the consortium and choosing a female voice over for the speaker test, gender equality specifically was addressed with this video.

2.2 Storyboard

One of the main aims of the COSMHYC video is to increase the visibility of the project by explaining main technical details in an easy to understand way and raise awareness to the importance of the role of hydrogen in the energy transition. When developing the storyboard for the video this approach was followed e.g. by using simple and short sentences.

A storyboard is a sequence of sketches or images mapping out the scenes planned for a video. Additionally, the speaker text corresponding to the scenes is added helping to organise all ideas and thoughts on the video content.

Due to the time limit of the video (max. 3 minutes) and to avoid an abundance of information, not all points discussed with the consortium could be fully considered in the storyboard.

After a first draft of the video's storyboard was discussed with EIFER, S2i met with the video agency in summer 2019 in order to validate the concept. Following, few adaptations were made regarding the shooting scenes and shortening the speaker text. The final storyboard was shared among the consortium for revision and detailly presented in a conference call on 20th August allowing enough time for alterations.

While S2i was fine-tuning on the speaker text of the video and obtained a filming permission from TOTAL for the planned shooting at the hydrogen refuelling station in Karlsruhe, the video agency was searching for shooting sides based on discussions and the storyboard. Above that, S2i was coordinating the interviewee as well as other extras that were needed for the video shoot.

As the project's coordinator EIFER, S2i and the video agency are based in Karlsruhe, Germany, the video shoot was planned in Karlsruhe. All relevant scenes, such as a hydrogen refuelling station, laboratories, a hydrogen car and test sides used in the context of COSMHYC and a wide green scenery for driving shots were available directly in or around Karlsruhe favouring the decision to shoot the video there.

2.3 Shooting the video

Other than originally planned, the video shoot had to be performed on two separate days due to heavy rain on the first shooting day.

The following scenes were shot on the first shooting day on 27th September:

Driving Scene towards Hydrogen Refuelling Station



Drone recordings of hydrogen compressor



Hydrogen refuelling process



Interview with coordinator David Colomar



Work at EIFER laboratory



Interview with Tabea Link at EIFER Laboratory

Luckily the second shooting day on 16th October 2019 was a very sunny autumn day and thus perfect for exterior shoots and driving scenes with the Toyota Mirai through a green landscape underlining the contribution of hydrogen to the energy transition.



Figure 3: Images from COSMHYC video shoot day 2

After all scenes have been shot, the video agency edited the video. Two correction rounds followed the first video draft before the video finally could be released.

2.4 Video Release

The COSMHYC video was released on YouTube and the home section of the project website on 27th November 2019 giving the video a very prominent spot on the website. Additionally, a news article was featured on the website announcing the release of the project video.



Figure 4: COSMHYC Video on the project website

Figure 5: News outlet on COSMHYC website

Preceding the release of the video, a big campaign was launched on the COSMHYC social media channels and short clips giving insights into the project video were shared. The promotion of the video on social media continued after the video was officially launched on YouTube by sharing a link to the video with regular posts. Above that, the communication team of the FCH JU was informed about the video release and encouraged to share the COSMHYC video among their FCH network as well. Same applies to the COSMHYC consortium. Below a few posts shared on Twitter and LinkedIn are exemplary shown:



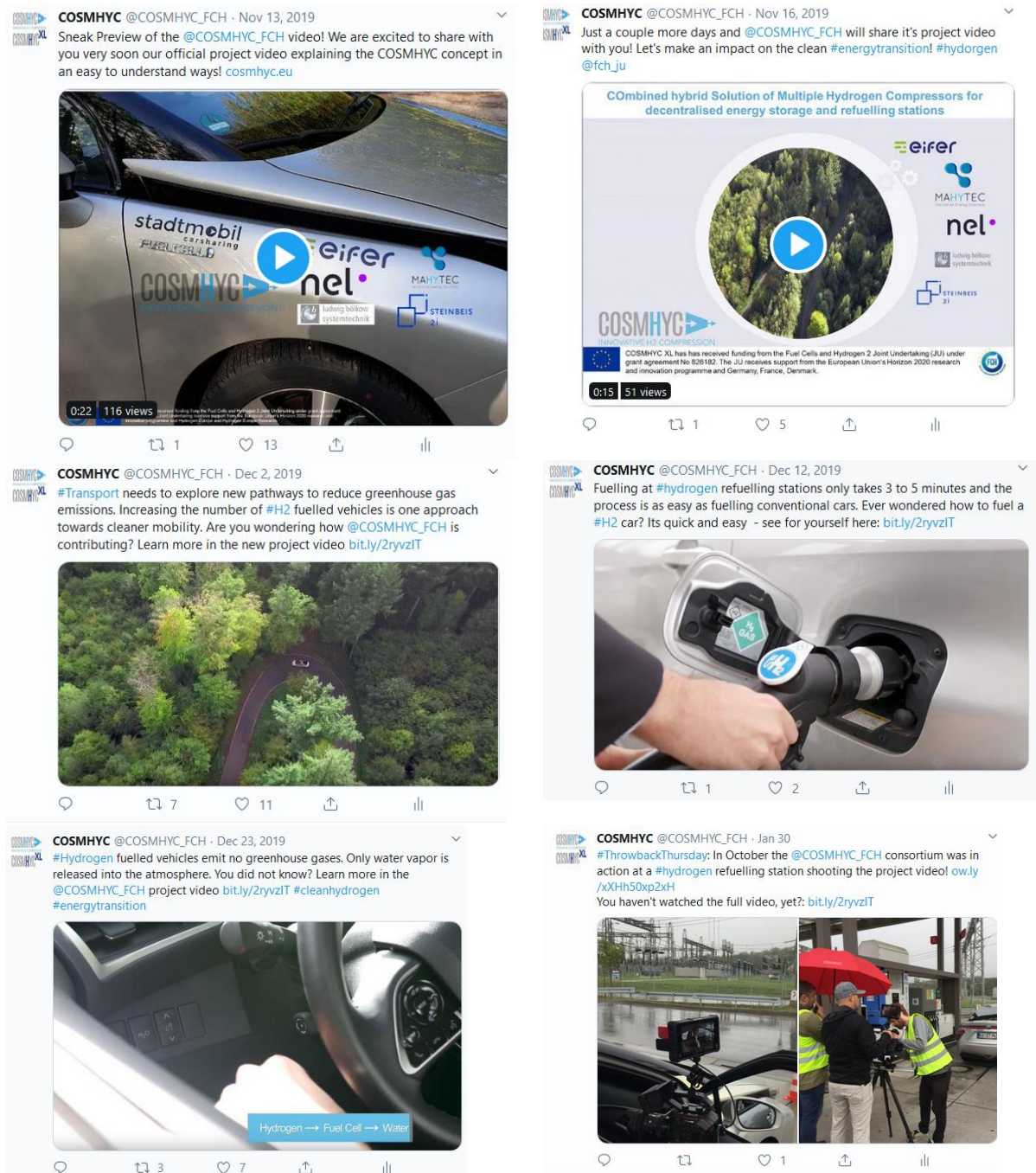


Figure 6: Announcing the COSMHYC video on Social Media

Main conclusion

The COSMHYC promotional kit contains a project flyer, roll-up, presentation templates and a promotional video. All materials are supporting the communication and dissemination activities of the project and were designed based on the project's CI.

This reports summarises in detail all steps performed related to the development and release of the project video as this is one of the main promotional material tools. The video was released on 27th November on the project website and on YouTube and communicates the project in an easy to understand way contributing to the deployment of the project's results. Shortly after its release, end of November, the video was already viewed over 300 times, which is a great success. In order to extend this success, the promotion of the COSMHYC video

continues on social media, in press releases and by showing the video at presentations and conferences. The graphic below shows the video views on YouTube since its release until February 2020. A continuous increase in the views is clearly visible underlining the effectiveness of the video promotion and interest in the video and its topic. **In June 2020, the video has been seen more than 540 times.**

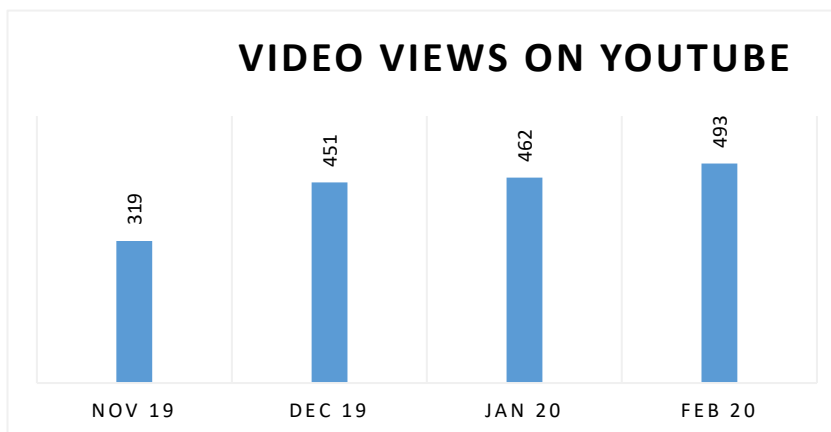


Figure 7: Video Views on Youtube

But not only the impact of the COSMHYC video was high, with the other promotional materials such as flyer or roll-up a high audience informing about the FCH JU funded project COSMHYC, could be reached.

From the project's beginning in January 2017 until February 2020 COSMHYC partners have participated in 17 conferences, trade fairs or other events and meetings disseminating the project's approach. At these events the project flyer was distributed to about 1500 persons. The roll-up was presented at booths of 4 major industrial fairs (among them f-cell in Stuttgart and Hannover Messe) raising special awareness to the COSMHYC project.

All in all, the COSMHYC promotional material contributed to successful and efficient communication and dissemination activities.