



# Newsletter

## Fifth Edition – Summer 2021

We are delighted to share with you our fifth HUGE Project Newsletter. We have now entered our final year of the project and are working hard to deliver on the project tools. Many project team members continue to work from home and the office on a blended model and we continue to have all our meetings virtually, but we do hope to meet in person soon in the Faroe Islands.

We continue to update our Newsflash series every month which brings you highlights of hydrogen stories from across Europe. We have also been running our successful seminar series which invites expert speakers to discuss the role of green hydrogen across different sectors and countries. We hope you continue to enjoy our project outputs and we look forward to sharing our finished tools over the next number of months. Thank you for your continued support.



**Easing Constraints  
and System Redundancy**



**Creating Industry**



**Low Carbon Travel**



**Creating  
Resilient Communities**

In this edition you will find stories highlighting our e-learning courses, a recap of our hydrogen trucks webinar, an introduction to our new Ecosystem Analysis Tool, and an update on our Finnish Case Study.

As always please don't hesitate to get in touch with us via our website or social media channels, all of which can be found on this page.

- Website – [www.Huge-Project.eu](http://www.Huge-Project.eu)
- Twitter – [@HUGE\\_Project\\_EU](https://twitter.com/HUGE_Project_EU)
- Facebook - [@HugeProjectEU](https://www.facebook.com/HugeProjectEU)
- YouTube - The HUGE Project
- LinkedIn - HUGE Project EU
- Email - [info@huge-project.eu](mailto:info@huge-project.eu)







# E-Learning Courses     H<sub>2</sub> Trucks Webinar

The HUGE project is in the process of creating courses for our HTT e-learning platform. The courses are all based on green hydrogen and have significant relevance and impact on the Northern Periphery and Arctic Programme region.

As part of this process we are developing course and mini-courses that go beyond what already exists and are free to use.

The platform will have a broad range of courses including the basic chemistry and physics, environmental impacts, safety, and skills and expertise needed for the various supply change actors.

We have also identified a gap in existing knowledge around hydrogen technical assessments and business models which we are aiming to fulfil utilising our work with the HOT tool and the HUB Model.

We look forward to showcasing our courses and platform and would welcome any contributions from those working in the green hydrogen sector.

*"NUI Galway, as a HUGE project member and leader of the Hydrogen Knowledge and Technology Transfer platform, will promote the use of renewable sources of energy to produce hydrogen by launching free e-learning courses."*

**Roberto Gonzalez** – National University of Ireland, Galway



Our online seminars aim to transfer knowledge of hydrogen technologies to a wider audience, including industry stakeholders, end-users and government agencies, across the Northern Periphery and Arctic region of Europe. Our latest webinar took place in June entitled:

## **Hydrogen trucks:**

### ***An opportunity for heavy vehicles decarbonisation***

The seminar shared the development plans for hydrogen trucks and infrastructure in our partner regions of Ireland and Iceland. Two truck manufacturers shared recent developments on the construction and delivery of trucks and discussed the opportunities they envisaged.

A recording of this webinar, as well as all of our other webinars, can be found on our website under the seminars and workshops tab.



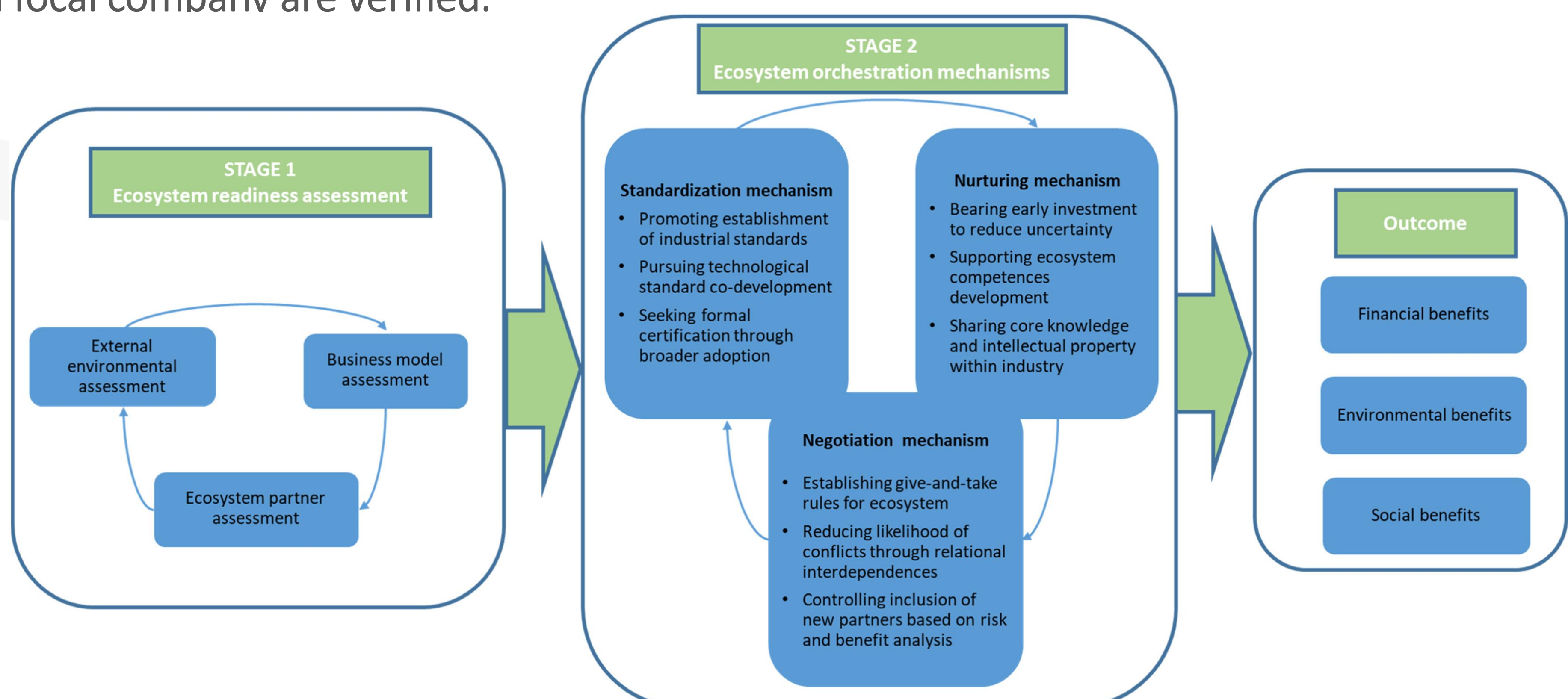


# HUB Model: Ecosystem Analysis Tool

The HUB model will contain generic scenarios, implications and guidance for creating business models for hydrogen product and service development. It will also outline relevant management tools and knowledge required for ecosystem orchestration.

The activities start with stakeholder analysis for which the objective is to identify and analyse customer and business value factors for technology adaptation in different stakeholder groups. The results are incorporated in the following ecosystem analysis, aiming at building a value map. The map for each case region is built based on the collected data. The objective is to develop understanding of existing (or projected) business ecosystem and to create a map depicting business actors and value streams between them, after which the case partners and relevant companies that eventually serves as an input for creating business model for a focal company are verified.

After creating the individual HUB models for specific case region they will be analysed in order to develop the generalized model suitable for multiple applications. To support the analysis of business ecosystems and better understanding of the background (i.e. public opinion in the region) the data collection was conducted during summer 2020. The objective was to capture the attitude of general public towards renewable energy solutions. The specific focus in the survey was placed on residential solutions. The key themes in the survey were environmental attitudes, economical factors affecting the individual's choice, green intentions and social influence. The respondents evaluated several purchase scenarios selecting the most appropriate choice. The survey was conducted in the regions covered by the programme including Finland, Ireland, Northern Ireland, Scotland, Iceland, Norway and Faroe Islands. At the moment, the results are in analysis process and once finished will complement the HUB model development.







# Finnish Case Study Update

LUT university in collaboration with industry partners has finished the feasibility study for perspective synthetic fuel pilot plant. The plant would utilize power-to-x technologies to produce synthetic methanol from recovered industrial carbon dioxide and hydrogen emissions. The methanol could be further refined into carbon-neutral transport fuels. The plant would be located near the city of Joutseno so that it could benefit from the close proximity of industrial partners acting as raw material suppliers (hydrogen and carbon dioxide).

The conducted study revealed the technological and business potential which is also well recognized by companies. The usage of by-product hydrogen and captured carbon dioxide emissions as a source for synthetic methanol production enables industry and transport decarbonization and provide opportunity to reduce the consumption of non-renewable fossil fuel. The project objectives align well with priorities outlined in Finnish National Hydrogen Roadmap published in 2020.

However, the study also demonstrated barriers which might hamper the project implementation and reduce the positive impact it produces. Thus, due to current legislation, the fuel produced from the hydrogen excess is not considered as renewable which reduces its competitiveness over fossil fuel. Another issue is the large-scale production of green hydrogen which is required to achieve the desired level of carbon footprint. Furthermore, the hydrogen production price has significant impact on the final product costs. The price of electricity would play the major role here. Therefore, the further progress in renewable electricity generation is critical to bring the prices of green hydrogen to the competitive level and enable the hydrogen economy advancement.

For more information on the Finnish Case Study please contact [Roman.Teplov@lut.fi](mailto:Roman.Teplov@lut.fi)

