MARIN

proudly hosts:

H_2 Symposium

Blue Week 2025, Friday 11 April

Sh2ipdrive and HyUSE are two large research initiatives (respectively from RVO and GroenVermogen) aiming at accelerating the energy transition and the implementation of Hydrogen in our economy and society. To achieve this ambitious target they brought together the best Dutch expertise in two open, co-operative and active consortia.

Sh2ipdrive is focused on the maritime sector and its main focus is to study how to make hydrogen as a realistic fuel alternative for ships. It is at its last year of activities. Most of the work is performed or at an advanced stage of completion.

HyUSE is focused on the industry as a whole (transport on-and-off shore but also heavy industry applications). It is still at the very beginning of its journey (official start date is 1st May 2024). Most of the technical and administrative work is started and ideas are flowing.

Seen the obvious connections between the mission of the two projects, MARIN, together with Dirk de Jong (overall Sh2ipdrive coordinator) and Frank Willems (overall HyUSE coordinator) had the ambition of bringing the two consortia together to create an opportunity to exchange knowledge, generate synergies and connections between the experts involved. It will be a further enrichment of the Sh2ipdrive activities, passing on lessons learnt and experiences to the HyUSE working group that, in turn, will find new ideas and inspirations from the Sh2ipdrive experts.

MARIN is honoured to organise a H_2 Symposium at its headquarter in Wageningen where this initiative can be realized. This H_2 Symposium will take place on Friday 11th April 2025, during the activities of the Blue Week 2025 (https://blueforum.org/).

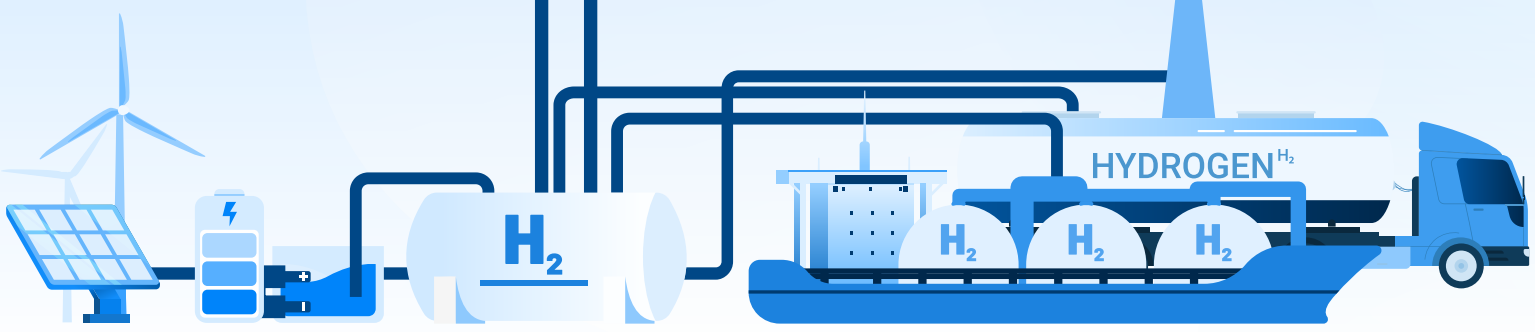
The event will be divided in two main phases. A first phase aiming at sharing lessons learnt, achievements or failures in the different work packages / tasks of the two initiatives. A second phase of socialization where participants will be free to meet each other, create connections and discuss more details of the interventions of the first phase.

The event is public, so not only for project members but also for other experts willing to get more information around the status of research around hydrogen. Everybody is most welcome to be part of it. Your presence will add value and expertise to an initiative that is based on the importance of sharing knowledge!

Registration to the event

We hope that the event will see a large number of interested participants. Note that attendance is possible only upon registration on https://blueforum.org/.

Any problem or question? Feel free to contact Christian Lena (c.lena@marin.nl).



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SH2IPDRIVE HYDROGEN FOR MARITIME

HyUSE

Agenda of the day

09.00 - 09.30 hrs Welcome at MARIN!

09.30 - 09.40 hrs Welcome pitch Speaker: Christian Lena (Coordinator of MARIN activities within Sh2ipdrive and HyUSE)
09.40 - 09.50 hrs Sh2ipdrive mission Speaker: Dirk de Jong (Overall coordinator of Sh2ipdrive)
09.50 - 10.00 hrs HyUSE mission Speaker: Frank Willems (Overall coordinator of HyUSE)

10.00 - 12.00 hrs Lessons learnt from Sh2ipdrive Work Package leaders (including 20 min. break). Duration of each intervention: 10 minutes per WP. The WP leaders will share 2-3 of the biggest challenges, achievements, failures that they faced in their work in their WP.

List of Sh2ipdrive work packages and their main focus:

WP 1: Bunker systems for Hydrogen, development of standard CH2 and LH2 storage container designs as well as the various bunker and handling systems suitable for the maritime application.
WP 2: Hydrogen carriers, focused on the development of alternative H2 carriers, such as LOHC and BH solutions.
WP 3: Hydrogen fuel cells, with the aim to develop Fuel cell technology with increased power density and power output using PEM and SO FC technology.
WP 4: Data collection onboard ships, operation and power load profiles, calibration of components numerical models. This WP is focused on the data collection and data models used to predict the performance of new system, including verification by using digital twins.
WP 5: Integration of numerical model components. Smart integration of new technology within the existing power systems, including the development of smart PMS systems.
WP 6: Numerical or experimental modular tests of components. Onboard testing of new systems, allowing validation in an actual operational conditions.
WP 7: Influence of hydrogen power plants on the design of ships. Investigating the impact of integration of the new power systems within the design of a variety of ship designs.
WP 8: Safety of hydrogen power plants. Research of various safety aspects related to H2 bunkering, storage, distribution and usage onboard vessels.

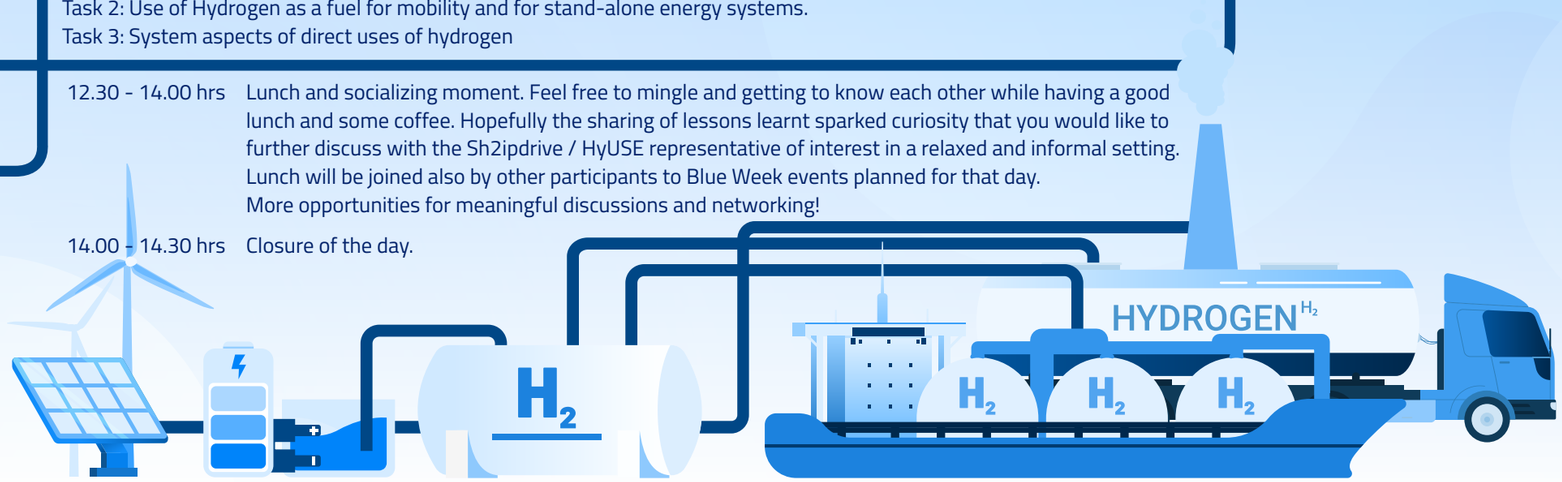
12.00 - 12.30 hrs Ambitions from HyUSE Task leaders. Duration of each intervention: 10 minutes per representative. The task leads will share the identified challenges, selected focal research areas and anticipated outcomes that will accelerate the deployment and reduce costs of hydrogen applications.

List of HyUSE tasks and their main focus:

Task 2: Use of Hydrogen as a fuel for mobility and for stand-alone energy systems.
Task 3: System aspects of direct uses of hydrogen

12.30 - 14.00 hrs Lunch and socializing moment. Feel free to mingle and getting to know each other while having a good lunch and some coffee. Hopefully the sharing of lessons learnt sparked curiosity that you would like to further discuss with the Sh2ipdrive / HyUSE representative of interest in a relaxed and informal setting. Lunch will be joined also by other participants to Blue Week events planned for that day. More opportunities for meaningful discussions and networking!

14.00 - 14.30 hrs Closure of the day.



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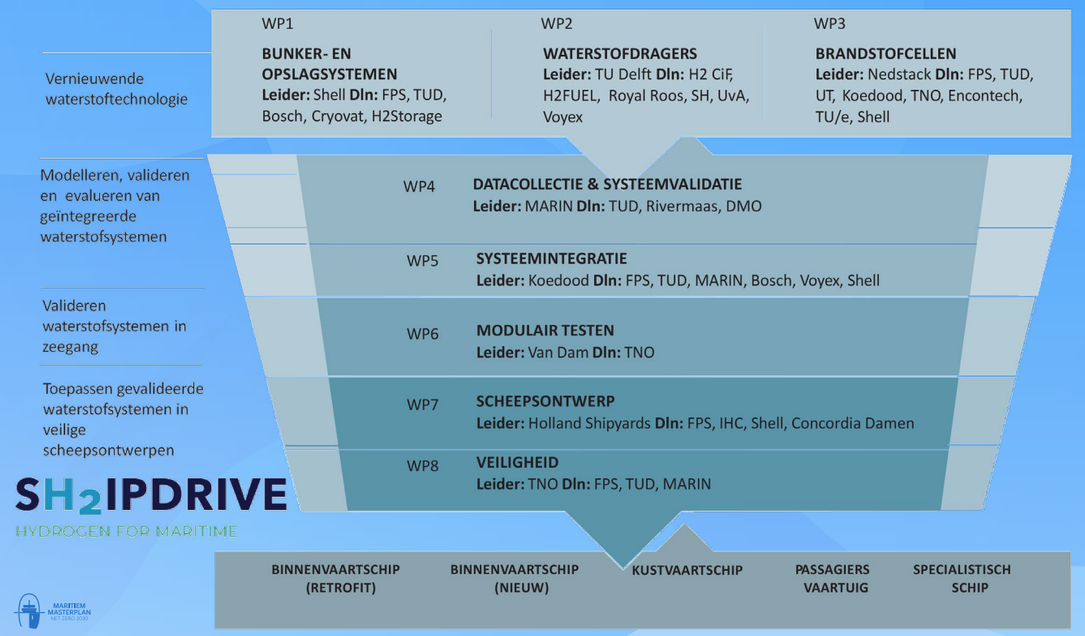
project organisation



HyUSE

project organisation