

THRUST is a venture  
building program by



# THRUST

Progress Report 2019-2022

GIVING THE ENERGY TRANSITION ON  
WATER A PUSH FORWARD

01

Our theory of change

P7 – P9

03

Portfolio

P12 – P26

05

Looking forward

P32 – P33

07

Together is more

P35 – P37

Introduction

P3 – P6

02

Highlights

P10 – P11

04

Venture portfolio P14 – P22

Customer projects P23 – P26

Research

P27 – P31

06

Our team

P34

08

# Dear reader...

When Enviu started out with THRUST in 2019, the idea of zero-emission fuels was still new and foreign. Discussions centered around the practicalities and mechanics of hydrogen as a fuel, illustrating a clear knowledge gap to be overcome before any talk of adoption could begin. We have come a long way since those first conversations.

Today, 3 years later, the landscape is radically different. The focus is no longer on the potential for adoption but on adopting on time so as to not get left behind. And we have been working hard on providing the industry with the tools to adopt!

From building the world's first hydrogen fueled water taxi to a green energy refueling station, from circular ship dismantling to zero-emissions b2b logistics over canals. In this report will take you along on our journey of building ventures that are paving the way for change.

However, our shipping program is not and will not be the sole executor of change in an industry with a value greater than some national economies.

What we can do is get the ball rolling. We are bringing together partners, technologies, and solutions that can start a transition the planet desperately needs.

A zero-footprint maritime industry might sound like an impossibility. However, we firmly believe with the fundamental knowledge, motivated partners, and working examples, the momentum we and our partners started will continue to grow. The will is there, the means are closer to market than ever before, and we will be there to give it a push along the way.

We hope that this report inspires you to think big, start small and scale fast - and to (continue to) work with us to develop concrete solutions towards a zero-footprint maritime industry!

Sincerely,

**Your Enviu Team**

**“The pessimist complains about the wind; the optimist expects it to change; the realist adjusts the sails.”**

– William Arthur Ward



# THE SECTOR IS IN DIRE NEED OF CHANGE...

The shipping industry is responsible for 90% of the world's trade and produces 3% of all greenhouse gases. If it were counted as a country it would be among the top six global producers of greenhouse gases. Just 17 of the world's biggest ships produce as much Sulphur dioxide as all the world's cars combined.

Shipbreaking is also an alarming issue of the sector. Since 2009, globally, there have been 7073 ships broken apart directly on the beach instead of on an industrial site, having caused 430 deaths and 354 injuries. South Asia is the busiest ship-breaking region where the vast majority of the world's end-of-life fleet, full of toxic substances are dismantled, by hand, on their beaches.

# ... AND THE SECTOR IS WILLING TO CHANGE

INTRODUCTION



The Port of Rotterdam says it can, with companies, supply Northwestern Europe with 4.6 million tonnes of hydrogen annually by 2030



Shipping giant Maersk to become major green hydrogen consumer as it embraces methanol fuel  
Danish company has ordered 12 methanol-powered container vessels from shipbuilder Hyundai Heavy Industries



The International Maritime Organization (IMO) has introduced a new fuel regulation that limits sulfur emissions to 0.5% from January 1, 2020. Thus, all seagoing vessels must reduce the sulfur dioxide by 85%.



The SRTI is a 'one stop shop' online platform to report information on ship recycling against a set of pre-defined disclosure criteria

Shipowners can publicly disclose their ship recycling policies, practices and progress through the SRTI, thereby holding themselves to account before key stakeholders - including customers, investors, governments and NGOs - and for the benefit of the wider public.



SUSTAINABLE ENERGY

The race to make green hydrogen competitive is on. And Europe is building industrial-scale electrolyzers to help



SHARE f t in e



### Lack of regulation



Hydrogen is not currently used as a fuel. As such, the regulation around using and implementing hydrogen and other alternative fuels is not yet fully developed.

### Unproven technology



Whilst many technologies have been validated, they have often not yet been demonstrated in an operational environment or at a mature scale.

### Globalism



The shipping industry is not tied to one region. So, change in one port, or even the ports of one country is not sufficient.

*(For example, if one were to restrict vessels running on fossil fuels from entering the Port of Rotterdam, all maritime traffic would simply shift to an adjacent port, like Hamburg or Antwerp. What's more, ships can only sail on alternative fuels between ports that also have the required infrastructure.)*

### Business case for alternative fuels



Higher prices of alternative fuels in combination with untaxed fossil fuels makes it operationally impossible to compete due to a lack of level playing field. Given the low margins, switching to sustainable fuels without any alternative business model or incentive scheme equals signing your bankruptcy papers.

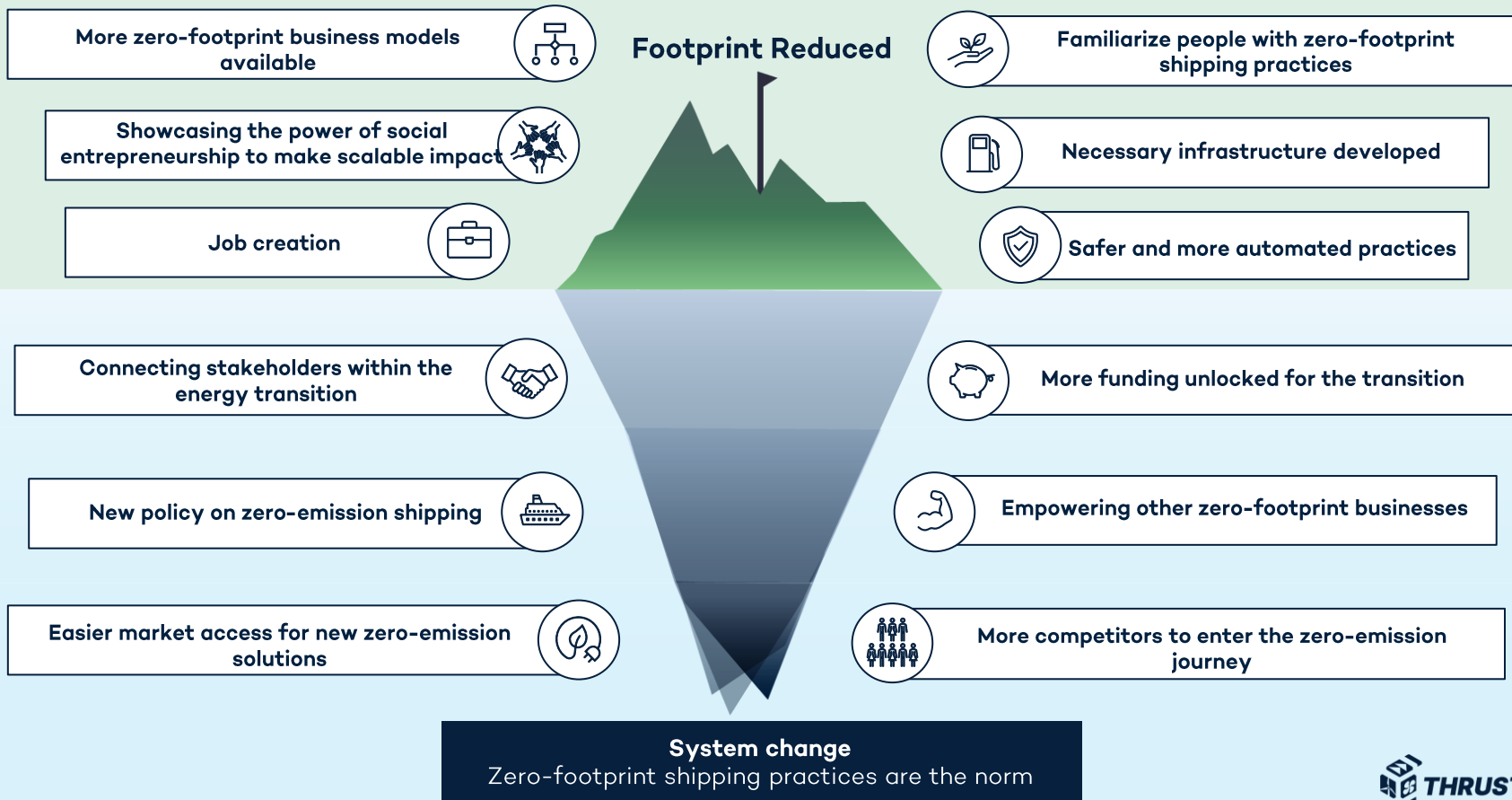
### Low development budgets



Operating on thin margins, shipping companies have limited development budgets. This means the development of sustainable alternatives from within the sector is highly limited.

# WE BELIEVE BUILDING VENTURES IS KEY TO DRIVE CHANGE

WE BUILD COMPANIES TO TRANSITION THE MARITIME INDUSTRY TOWARDS ZERO-FOOTPRINT





# WE BUILD COMPANIES THAT PAVE THE WAY

FOCUSING ON THE FOLLOWING INTERVENTION POINTS



## Zero-emission fuels

Green hydrogen is key, but not the holy grail; innovative storage and transport solutions are needed for zero-emission ships to go the distance.



## Enabling infrastructure

New technologies cannot drive system change alone, supporting infrastructure is required to transition on- and off-board.



## Circular lifecycles

Modularity, standardization, and lifecycle management are crucial toward zero-footprint.

# USING OUR PROVEN ENVIU METHODOLOGY

WE BUILD COMPANIES THAT DRIVE MARKET CHANGE

Enviu's market driven solutions



We **identify** root causes, leverage points and opportunities.



We **ideate** and validate multiple potentially system-changing models.



We **build** companies that create direct positive impact.



These companies **influence** and **inspire** market participants by showcasing new models.



This drives the economy towards a '**new**' normal, serving people and planet.

What we have been doing

## Knowledge Development

- Know-how is available to enable commercial use of hydrogen: based technologies
- Maritime specific zero-emission technologies are being developed

## Business Model Validation

- Clean, effective technologies are being tested in live environments
- Demonstration projects show potential at scale & results are publicly shared
- Zero-emission operational pilots prove feasibility for market entry

## Market Entry

- Technology reaches commercial readiness and access to capital for scaling
- Operational models are competitive to traditional ones
- Attractive business cases spur companies along value chains to go fossil -fuel free

## Awareness

- The maritime sector is seen globally as key to create fossil fuel free value chains
- Wide recognition of economic & environmental opportunities offered by:
  - Sustainable waterborne transportation & logistic chains
  - Circular ship life cycles



# HIGHLIGHTS IN NUMBERS

**3** **Hydrogen propelled ships enabled** in the Port of Rotterdam

**2** **Ventures exited** (Future Proof Shipping, Portago)

**2** **Ventures in development** (CMT, SWIM)

**3 000 000** **tonnes of CO2 aimed to be reduced** with current venture portfolio **by the end of 2050**

**>20** **Major industry players** involved

**3** **Ventures were selected for reputable awards**  
Maritime Innovation Platform Award (2 ventures),  
Maritime Innovation Award (1 venture)

**5** **White Papers published** on fundamental solutions for the maritime.



# MEDIA EXPOSURE

WE FEATURED IN A WIDE RANGE OF MEDIA INCLUDING RADIO, PODCAST, DIGITAL AND PRINTED NEWSPAPERS

AD.nl



'Portcast  
Wie wat  
waterstof'  
(Port of  
Rotterdam)



havenrotterdam Eva is stagiair bij het Havenbedrijf Rotterdam, en trekt er regelmatig met collega's op uit om de haven te ontdekken. Onlangs ging ze met Celwin mee tijdens podcast opnames voor *Wie?* Wat? Waterstof! Hierin bezochten zij de watertaxi die binnenkort op waterstof door de Rotterdamse haven vaart. Ben je benieuwd geworden? Luister dan naar aflevering 3 van de podcast via de link in bio!

BNR Nieuwsradio



Innovation  
Quarter



Change Inc.



Envio



# VENTURES

THESE VENTURES ARE PAVING THE WAY



## FUTURE PROOF SHIPPING BV.

Zero-emission shipping services

INITIATED  
2018

STATUS  
Exited in 2019

OUR ROLE  
Initiator, business case validation

IMPACT POTENTIAL  
Reduce greenhouse gas emissions by offering zero-emission container transport



## CIRCULAR MARITIME TECHNOLOGIES

Circular ship dismantling technologies

INITIATED  
2020

STATUS  
Piloting

OUR ROLE  
Co-founder, funding & stakeholder mgt, business & impact building

IMPACT POTENTIAL  
Solve the problem of unsustainable shipbreaking



## SWIM

Hydrogen-electric drivetrains & watertaxi

INITIATED  
2020

STATUS  
Market Entry

OUR ROLE  
Initiator, project lead, business development

IMPACT POTENTIAL  
Reduce greenhouse gas emissions by offering complete tech. solutions for zero-emission propulsion



## PORTAGO

Zero-emission last-mile B2B logistics services over water

INITIATED  
2021

STATUS  
Exited in 2022

OUR ROLE  
Validation, piloting, business case validation

IMPACT POTENTIAL  
Create zero-emission waterborne city logistics for last mile delivery



# OUR CUSTOMER PORTFOLIO

## IMPACT-DRIVEN CONSULTANCY PROJECTS



### GREEN ENERGY REFUELING STATION

Hydrogen supply for maritime application

INITIATED  
2019

STATUS

Consession tender published

OUR ROLE

Feasibility study, market consultation, technical concept design

IMPACT POTENTIAL

Making hydrogen accessible for maritime application



### VESSELIQ

Real-time data on ship performance, driving efficiency of fuel consumption

INITIATED  
2019 - 2022

STATUS

Piloting

OUR ROLE

Act as strategic partner during the pilot phase by structuring and evaluating the pilot and aiding the development toward investment readiness.

IMPACT POTENTIAL

VesseliQ provides the optimal balance between hire, fuel and claim costs and benefits for charterers



### AB INITIO

Feasibility study for new sustainable educational vessel for STC Group

INITIATED  
2021 - 2022

STATUS

Completed

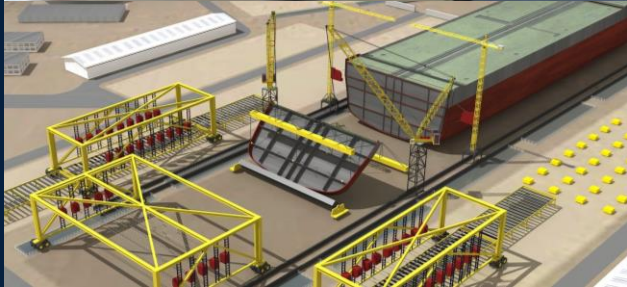
OUR ROLE

Conducted feasibility study and advice on including a hydrogen fuel cell system on board

IMPACT POTENTIAL

Educating and inspiring the work force of the future: preparing young sailors to sail on hydrogen propelled vessels and operating and maintaining hydrogen-powered propulsion systems

# VENTURES



# CIRCULAR MARITIME TECHNOLOGIES

Circular dismantling technologies to transform end-of-life-vessels & re-purpose them into sustainable products (steel, metals, energy)

## WHY IS IT ESSENTIAL?

Current shipbreaking practices have a negative impact on people and planet. European and Dutch shipowners face a real challenge to abide to International and European laws whilst not having attractive alternatives to dismantle their assets in an environmentally sustainable and safe way. THRUST is part of a strong Dutch consortium that has taken on this challenge and developed a solution. CMT will show that a combination of clean, electrically powered technologies can make the sector cleaner and safer. A fully operational yard has the potential to save over 2,000k t CO2 on a yearly basis, across the value chain and avoid injuries, casualties and long-term health issues.

STATUS:  
Piloting

## SPECIAL ACHIEVEMENTS

- Secured investment of €500k
- Awarded subsidy of €1.7M
- Executed first feasibility study

## PARTNERS

**DAMEN**

**JANSEN**  
RECYCLING GROUP

**ASECO EUROPE**  
STEEL RECYCLING GROUP

**KCI** THE ENGINEERS.

**Huisman**

**Grimbergen**  
Industrial Systems





## WHAT'S NEXT?

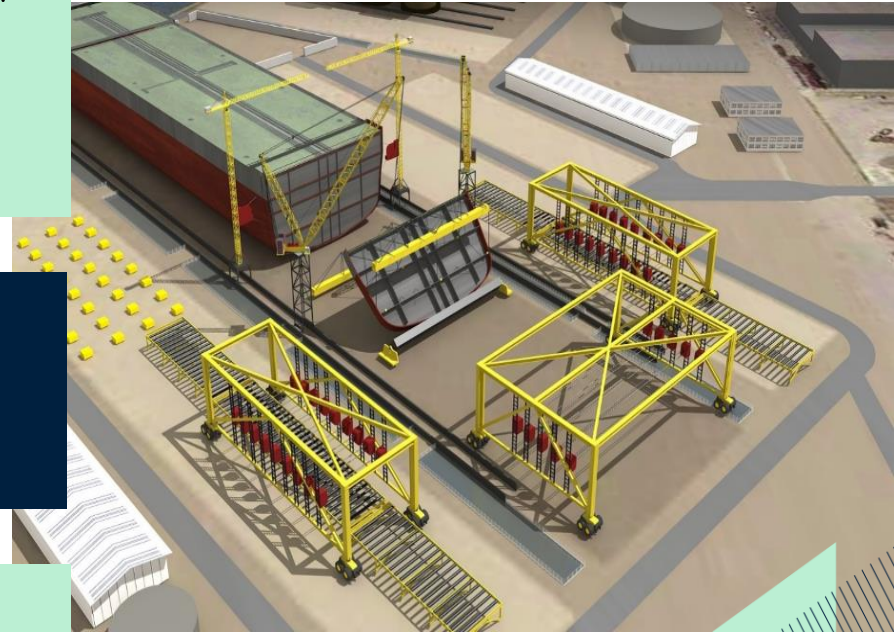
- Finalise business & technology development plans.
- Structure governance and execute financing round.
- Reach financial close for industrial scale pilot.
- Develop test & demo project in Rotterdam Botlek.
- Carry out second feasibility study for yard outside of NL

## IMPACT AMBITION

- The first CMT yard will reduce over 2,000,000t CO2 yearly.

## WHAT ARE WE LOOKING FOR?

- Investment of EUR40M for large scale demo project in Rotterdam.





# SWIM



Hydrogen-electric propulsion systems that pave the way for zero-emission sailing. The first SWIM system is installed in the worlds first hydrogen-electric water taxi. Our system is durable and built to last and becomes available in various power categories. Compact and flexible, it's designed to handle demanding operations and varying use cases

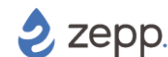
### WHY IS IT ESSENTIAL?

The water taxi with the first SWIM system is the first operational hydrogen-propelled ship in the port of Rotterdam. This creates the initial demand for hydrogen as a fuel, and accelerates the energy transition in the entire port area.

### STATUS

Market Entry

### PARTNERS

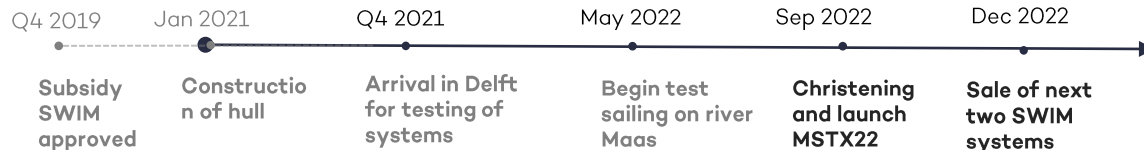


Gemeente Rotterdam

provincie Zuid-Holland

### SPECIAL ACHIEVEMENTS

- Built the world first hydrogen-powered water taxi
- Selected for the Maritime Innovation (Platform) Award
- Total investment >EUR 500k



**WHAT'S NEXT?**

- Christening & demonstrate the innovation to the public during Wereldhavendagen 2022
- Start at least 2 new projects for customers of the SWIM hydrogen electric drive train

**IMPACT AMBITION**

- Expanding the number of ships sailing with zero-emission drive trains.

**WHAT ARE WE LOOKING FOR?**

- Customers for hydrogen-electric drivetrains and investors in SWIM





# Future Proof Shipping



Zero-emissions shipping services to enable players across the value chain make the transition to zero-emission

## WHY IS IT ESSENTIAL?

FPS shows that zero-emission shipping is not only possible but achievable at a reasonable cost

## STATUS

Market Entry

*N.B. Enviu/THRUST only played a role in the inception of FPS*

## PARTNERS



Rijkdienst voor Ondernemend Nederland



## SPECIAL ACHIEVEMENTS

- Led SH2IPDRIVE consortium securing EUR24,2M from the R&D Mobility Fund in 2022
- Received Central Commission for the Navigation of the Rhine (CCNR) recommendation that FPS Maas can sail on hydrogen



## WHAT'S NEXT?

- Having completed months of energy profiling, the first container vessel FPS Maas will be retrofitted to run 100% on hydrogen in February 2023.
- Since 2022 FPS has joined the FLAGSHIPS consortium, a leading European innovation project. Together with FLAGSHIPS, FPS will bring the second zero-emissions inland container vessel, the FPS Waal, to Europe's waterways.
- FPS Rijn, the third inland container vessel, is coming soon.

## IMPACT AMBITION

- Within the next 5 years, FPS aims to build a fleet of 10 zero-emissions inland and short-sea vessels

## WHAT ARE THEY LOOKING FOR?

- FPS is always on the lookout for new customers that want to ship their goods zero-emission.  
For more info: <https://futureproofshipping.com/>





# PORTAGO

Efficient and scalable system for maritime city logistics, making cities more liveable and offering a competitive alternative to the road

## WHY IS IT ESSENTIAL?

30,000 delivery vans and 4,000 lorries drive through Amsterdam daily. Whilst fulfilling many needs, this creates many negative side effects as well. Hindrance, damages, safety concerns and pollution to name a few. With Portago we offer an efficient zero emission alternative to road transport, by enabling the waterways for last-mile logistical distribution. Starting at a hub at the outskirts of a city, transporting the goods by boat into the city centre and moving the last-yard from quay to store. By doing so Portago accelerates a truly multimodal logistical transport future, enabling a system change for all ecosystem players.



## STATUS

Piloting

*N.B. Enviu/THRUST has exited Portago in 2022*

## SPECIAL ACHIEVEMENTS

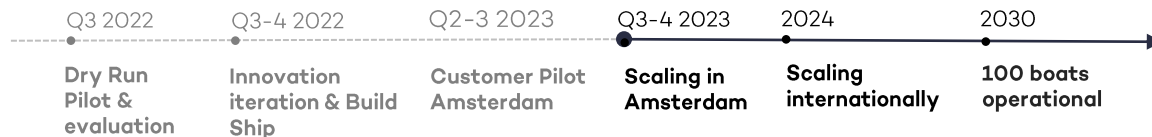
- Selected by Start-up in Residence Amsterdam

## PARTNERS

- X Gemeente Amsterdam
- X



Dimitri Hettinga



### WHAT'S NEXT?

- Portago starts in Amsterdam with the municipality and a major supermarket as launching partner, running a full-scale customer pilot in 2023.

### IMPACT AMBITION

- Build 10 boats by 2025, 50 boats by 2028, 100 boats by 2030. Emission saved is expected to equal emissions from trucks needed for equivalent cargo transport.

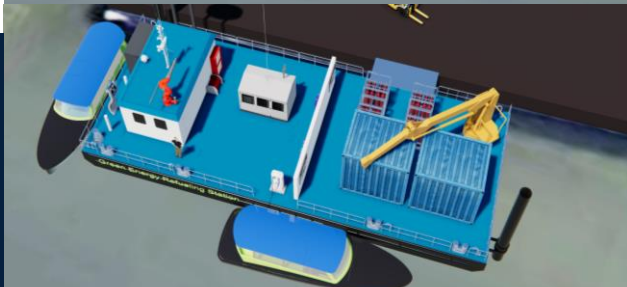
### WHAT ARE *THEY* LOOKING FOR?

- Portago is looking for additional customers and financing for the customer pilot.
- For more info: <https://portagomarine.com/>



# CUSTOMER PROJECTS





# Green Energy Refueling Station for maritime application (GERS)

GERS

If SWIM is the egg - GERS is the chicken! Initial green hydrogen refueling station that will become available for maritime transport in Rotterdam, lowering practical hurdles to start sailing zero-emission

## WHY IS IT ESSENTIAL?

- Building a hydrogen ecosystem in Rotterdam will lower the hurdles for shipowners to start sailing on hydrogen, thereby increasing demand that can lead to a flourishing green hydrogen market for maritime application, starting in Rotterdam and inspiring ports globally
- The SWIM Watertaxi offers the first concrete demand for hydrogen in Rotterdam and triggered the development of the first permanent green hydrogen fueling station for vessels, initiated by Enviu and now accelerated by Port of Rotterdam

## OUR ROLE

- Concept design, market study suppliers, operators, users, benchmark alternative solutions, analysis on required hydrogen pricing and business case.

## PARTNERS

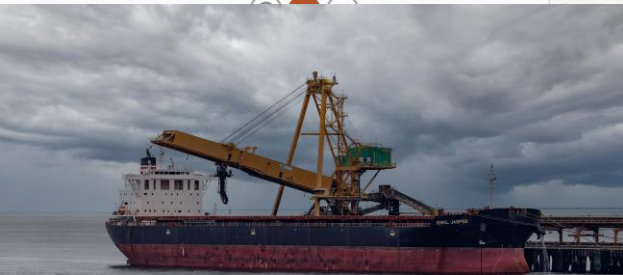
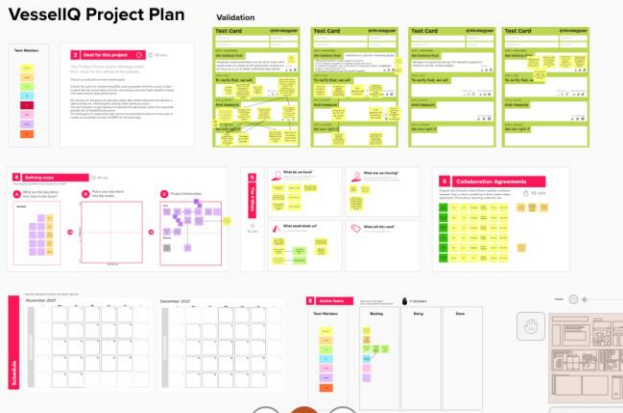


## STATUS

- One of Port of Rotterdam's 'flagship' hydrogen projects
- Concession tender published

## UPDATES

<https://www.tenderned.nl/aankondigingen/overzicht/268735/details>



## VESSELIQ: Data driven efficiency



VesseliQ gives charterers near real-time insight in Charter Party performance, provides detailed instructions to save fuel and gives detailed emissions reports. Working with a unique digital twin of the ship and predicted weather, VesseliQ improves insight and efficiency, providing the optimal balance between hire, fuel and claim costs and benefits for charterers.

### WHY IS IT ESSENTIAL?

Time-charterers now pay a whopping 23bn USD of vessels' fuel costs per year. They manage this cost through daily vessel instructions, often without having good performance data. Consequently, most vessels still sail on charter-party derived speeds or propellor revolutions every day, to avoid claim situations. This results in significant hire and fuel costs for time-charterers, as well as corresponding emissions, that we know can be avoided.

### STATUS

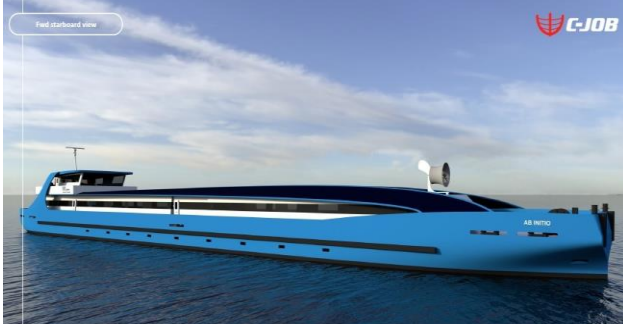
Piloting

### OUR ROLE

Enviu was asked to help VesseliQ run its two step validation pilot, while simultaneously developing the product to a minimal viable version. We provided structure for the pilots, helping to detail out the critical assumptions and the tests needed to validate those. Additionally, we helped with strategic positioning of the VesseliQ company with regards to investment and partners.

### WEBSITE

<http://vesseliq.online/>  
(will be launched soon)



## AB INITIO: Feasibility study for sailing on hydrogen

Feasibility study for the new training vessel for STC-Group in Rotterdam. The ship is newly built and provides students the ability to experience sailing with all modern shipping elements. Including zero-emission shipping.

### WHY IS IT ESSENTIAL?

The sailors of the future need to be able to work with the propulsion systems of the future. That's why it is important that a training vessel for the shipping school in Rotterdam let's students experience sailing on diesel, batteries and hydrogen. Pupils and students can learn all practical and theoretical skills. In addition, the ship is comfortable, safe and complies with current regulations.

### OUR ROLE

Enviu carried out a feasibility study on including hydrogen as a fuel onboard the new training vessel. A positive outcome resulted in the installation of a fuel cell system to complement the battery and diesel engines.

### STATUS

Completed

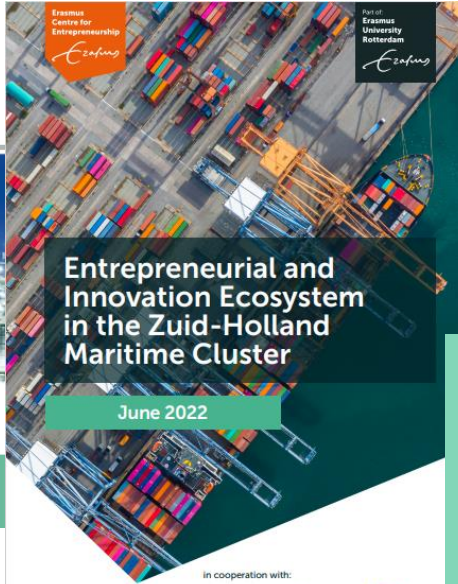
### UPDATES

The Ab Initio will start sailing in Q4 2022

# FUNDAMENTAL RESEARCH WITH LEADING SCIENTISTS AND R&D

# WE'VE BEEN ACTIVELY CONTRIBUTING TO RESEARCH ON INNOVATION, ZERO-EMISSION FUELS AND CIRCULARITY IN THE MARITIME SECTOR

RESEARCH



WATERSTOF IN BINNENVAART EN SHORT SEA  
EEN INVENTARISATIE VAN INNOVATIEPROJECTEN



<https://doi.org/10.1595/205651321X16043240667033>

Johnson Matthey Technol. Rev., 2021, 65, (2), 275–290

## JOHNSON MATTHEY TECHNOLOGY REVIEW

[www.technology.matthey.com](http://www.technology.matthey.com)

### The Position of Ammonia in Decarbonising Maritime Industry: An Overview and Perspectives: Part I

**Technological advantages and the momentum towards ammonia-propelled shipping**

**Tuğçe Ayvalı, S. C. Edman Tsang\***

Wolfson Catalysis Centre, Department of  
Chemistry, University of Oxford, Oxford, OX1  
3QR, UK

**Tim Van Vrijaldenhoven**

Enviu, Pannekoekstraat 100, 3011 LL,  
Rotterdam, The Netherlands

\*Email: [edman.tsang@chem.ox.ac.uk](mailto:edman.tsang@chem.ox.ac.uk)

#### 1. Introduction

Climate change is the most pressing environmental challenge of our time. Transport, particularly shipping, has a huge carbon footprint with around 1 billion tonnes of CO<sub>2</sub> equivalent every year (1). If no further action is taken, then estimates from the IMO (2) and European Parliament (3) suggest that the CO<sub>2</sub> emissions from international shipping could grow between 50–250% by 2050, accounting for 17% of global emissions. In 2018,

## A SELECTION

# The Position of Ammonia in Decarbonising Maritime Industry: An Overview and Perspectives (2021)

### IN A NUTSHELL

It is about:

- General properties of ammonia
- Current Ammonia production technologies
- Their safety and environmental aspects
- Challenges for the adaptation of technology to maritime structure
- An insight about estimated costs of energy transition
- A roadmap for future development of the technologies.

### KEY FINDINGS

An effective energy transition in the maritime industry can only be achieved through engagement and synchronization of three sectors (science and technology, industry and business, governance and policy).

### NEXT STEPS

To make an effective energy transition come true, a multisectoral effort is vital. Local and international authorities need to join forces to bring innovative ideas collectively that can disrupt the conservativeness and fragmented nature of the maritime sector and help them change for a better future and business opportunities.



## TECHNOLOGY OVERVIEW POSSIBILITIES FOR HYDROGEN IN THE MARITIME INDUSTRY

Authors:  
Klaas Visser, Maarten Fonteijn, Lindert van Biert

# A SELECTION IEA's Hydrogen TCP Task 39 HYDROGEN IN THE MARITIME Final Report (October, 2021), Chapter 1

## IN A NUTSHELL

An overview of hydrogen storage and power systems in the maritime industry

## KEY FINDINGS

- Hydrogen is the key to zero-emissions maritime transport, but it will require a variety of hydrogen carriers for storage in various specific applications.
- Hydrogen can be stored as a compressed gas or a cryogenic liquid, in an organic liquid, or chemically bound in organic and inorganic compounds.
- Low and high-temperature fuel cells enable clean and efficient power generation for ships, but hydrogen may also fuel advanced marine combustion engines.

## NEXT STEPS

Collective effort is needed to develop technology for hydrogen, a robust and highly potential fuel

# WE WERE RECOGNIZED IN THESE OVERVIEW PAPERS

AS PIONEERING ORGANIZATION STRIVING TOWARDS AN EMISSION FREE MARITIME SECTOR

## Overview of Hydrogen Projects in the Netherlands

(Peter de Laat, June 2022)



## Overview of Hydrogen Projects in the Netherlands

Peter de Laat for TKI Nieuw Gas

June 2022

### SH2IPDRIVE

#### Sustainable Hydrogen Integrated Propulsion Drives

SH2IPDRIVE aims for the development of reliable, safe, standardized, scalable and cost-effective solutions for zero-emission propulsion and energy systems for hydrogen-powered ships. Research on the development of safe technologies for hydrogen in four different forms: compressed hydrogen gas, liquid hydrogen, liquid organic hydrogen carriers and biohydrogen. Another important area of research are fuel cells systems with a higher power density and longer life, the use of waste heat and the upscaling of fuel cells.

	<p>Category: knowledge, mobility &amp; transport</p> <p>Capacity: scalable</p> <p>Process phase: concepts, Feasibility studies</p> <p>Project period: 2021 - 2025</p> <p>Project costs: 34M€ (RDM 24M€ grant)</p> <p>Contact: L.vanBierl@tudelft.nl</p>
--	---

Partners:

### SWIM

#### Hydrogen Watertaxi

Development of a water taxi running entirely on hydrogen. The first passengers are expected to be able to board in 2022. This project is developed within the zero-emission shipping program called THRUST. All hydrogen-related components are to be developed by zepp.solutions.

Category:	end use: mobility & transport
Capacity:	12 passengers
Process phase:	execution
Project period:	2020 - 2023
Project costs:	40M€ (RDCB grant)
Contact:	http://swim2.com/

Partners o.a.:

## Blue Insight Low Carbon Shipping Fuels & Energy Guide 2020

(BLUE Communication)





# LOOKING FORWARD

# SCALING OUR IMPACT

BUILDING ON THE KNOWLEDGE, EXPERTISE AND PROGRESS MADE WITH THE WORK SHOWCASED IN THIS REPORT, WE AIM TO SCALE UP OUR POSITIVE IMPACT THROUGH THE FOLLOWING ACTIVITIES



## SCALE THE VENTURES IN OUR PORTFOLIO

With SWIM entering the market, CMT starting the full scale test & demo, the ventures in our portfolio are moving towards realizing their potential.



## GROW OUR PORTFOLIO

We are currently considering to focus on circular mobility opportunities also beyond maritime to maximise our impact, doing what we do best: start world changing companies. Stay tuned for news on our strategy going forward.



## HELP OTHERS

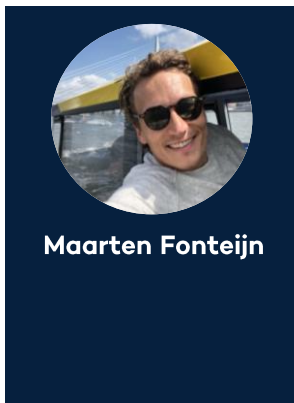
With the knowledge that we have acquired over the years, we are in a perfect position to help others transition to zero-footprint. That's why we will increase the number of customer projects to further scale our impact.

# The THRUST dream team

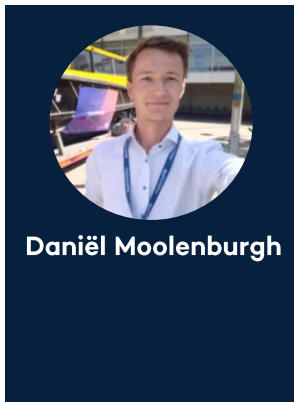
Our team exists of an energetic group of professionals who are driven to make the maritime sector a zero-footprint one.

A combination of Venture Builders, PR, Legal, Finance and Engineering professionals: analytical minds, corporate & start-up experience with a network in the shipping and adjacent sectors and the hands-on entrepreneurial spirit to make things happen!

Maarten and Daniel are currently leading the team, with colleagues with various types of expertise supporting specific ventures and projects.



**Maarten Fonteijn**



**Daniël Moolenburgh**



**Michiel Elich**



**Ankie Van Wersch**



**Micke Magnusson**



**Thea Van Unen**



**Tim Van Vrijaldenhoven**



**Siegfried Kruger**



**Kostas Dasopoulos**



**Patricia Mulder**



**Astrid Eisheuer**



**Ed Berkel**



**Elise Lippens**



**Trang Nguyen**

# TOGETHER IS MORE

A BIG THANK YOU TO OUR PARTNERS FOR THEIR SUPPORT AND CONSTRUCTIVE COLLABORATION!

## Funding partners



## Business partners\*



## Knowledge partners\*



\*It is impossible to list all our partners so also a sincere thanks to all the ones that are not listed here

# THANK YOU

WE LOOK FORWARD TO CREATING  
MORE *THRUST* GOING FORWARD!

**“To change something,  
BUILD A NEW MODEL  
that makes the existing  
model obsolete**

-Buckminster Fuller

Contact us for more information:

Maarten Fonteijn  
Program Manager THRUST  
maarten@enviu.org

Website: [thrust.enviu.org](http://thrust.enviu.org)

LinkedIn: THRUST (a program by Enviu)

Subscribe to our newsletter [here](#)



A venture building  
program by:

